# S660, S670, S680, S685, S690 and HillMaster™ Combines

## OPERATOR'S MANUAL

## S660, S670, S680, S685, S690 and HillMaster™ Combines

**OMHXE65373 ISSUE H3 (ENGLISH)**

If this product contains a gasoline engine:

**⚠ WARNING**

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

Additional Proposition 65 Warnings can be found in this manual.

**John Deere GmbH & Co. KG John Deere Werk Zweibrücken**

**European Edition**

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# Introduction

## Foreword

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages (see your John Deere dealer to order).

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

SETTING FUEL DELIVERY BEYOND PUBLISHED factory specifications or otherwise overpowering will result in loss of warranty protection for this machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection. After operating for the first 20 to 50 hours, schedule an after-sale inspection with your dealer to ensure best performance.

THIS COMBINE IS DESIGNED SOLELY for use in customary agricultural or similar operations ("INTENDED USE"). Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

THIS COMBINE SHOULD BE OPERATED, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times. Any arbitrary modifications carried out on this combine will relieve the manufacturer of all liability for any resulting damage or injury.

OUO6075,00001E9 -19-22SEP08-1/1

## Identification View




H107110 —UN—28FEB13

OUO6075,00013F0 -19-28FEB13-1/1

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*Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.*

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A John Deere ILLUSTRUCTION ® Manual

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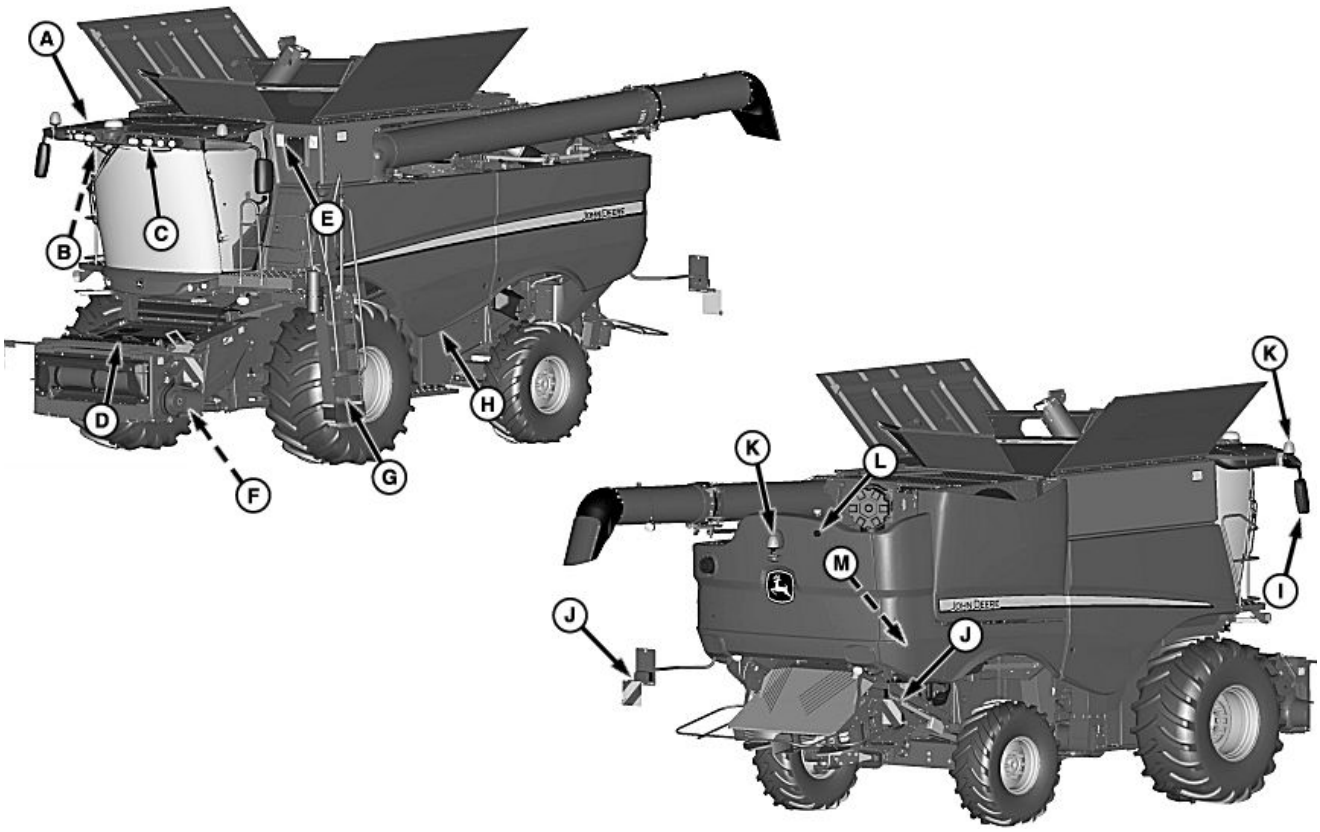
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## Machine Safety Features




*Front View/Rear View Safety Features*

**A—Cab Safety Features: Operator's Presence System, Electronic Engine Start Lockout, Seat Belts, Horn, Emergency Exit Window, Park Brake, Turn Signals**
**B—Handholds**
**C—Headlights**
**D—Slip Resistant Skid Mats**
**E—Safety Signs**
**F—Mechanical Safety Stop (Feeder House)**
**G—Slip Resistant Steps and Platform with Handrails**
**H—Shields**
**I— Rear View Mirrors**
**J— Warning Lights and Reflective Tape**
**K—Beacon Lights**
**L—Back-Up Alarm**
**M—Slip Resistant Service Platform with Handrails**

In addition to the safety features shown here, other components and systems, safety lights on the machine, and safety messages and instructions in the operator's manual contribute to the safe operation of this machine when combined with the care and concern of a capable operator.

OUO6075,00013F1 -19-28FEB13-1/1

## Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



T81389 —UN—28JUN13

DX,ALERT -19-29SEP98-1/1

## Understand Signal Words

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.




TS187 —19—30SEP88

DX,SIGNAL -19-03MAR93-1/1

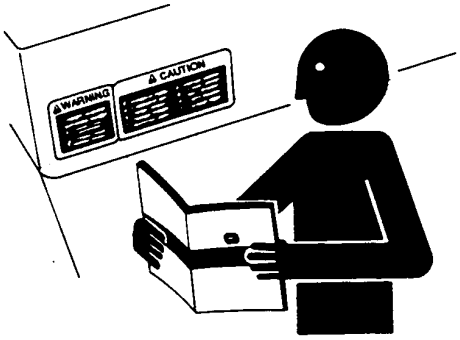
## Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.




TS201 —UN—15APR13

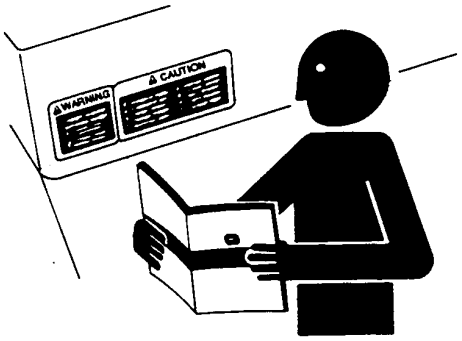
If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

DX,READ -19-16JUN09-1/1

## Replace Safety Signs

Replace missing or damaged safety signs. Use this operator's manual for correct safety sign placement.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.




TS201 —UN—15APR13

DX,SIGNS -19-18AUG09-1/1

## Driving the Machine

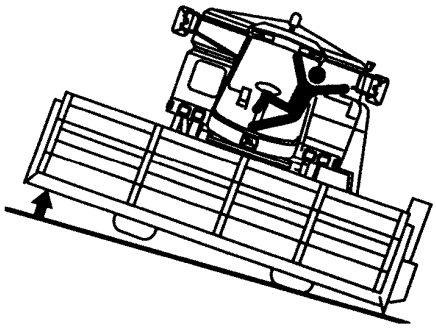
Operate machine only when all guards are correctly installed.

Before moving away, always check immediate vicinity of machine (e.g. for children). Ensure adequate visibility. Use the horn as a warning immediately before moving away.

Always adapt ground speed to road or field conditions. Avoid making sharp turns when driving up or down slopes or when driving across a slope. Be especially careful when turning on slopes with full grain tank.

Follow instructions in header Operator's Manual when attaching or detaching the header.

When making turns, always take into consideration the width of the attachment and the fact that the rear end of the machine swings out. Attachments and ground conditions affect the driving characteristics of the combine.



ZX002461

ZX002461 —UN—16JUN95

Reduce ground speed when driving on slopes or over uneven ground and before making sharp turns. Before descending a steep hill, shift to a lower gear.

Avoid holes, ditches and obstructions which may cause the combine to tip, particularly on hillsides.

OUO6075,0000AB7 -19-21FEB07-1/1

## Observe Road Traffic Regulations

Always observe local road traffic regulations when using public roads.

OUO6075,0000032 -19-22JAN01-1/1

## Check Machine Safety

Always check the road and general operating safety of the machine before using.

FX,READY -19-28FEB91-1/1

## Keep Riders and Children Off Machine

Only allow the operator on the machine. Keep riders off the machine except for periods of training or short periods of observation.

Riders are subject to injury such as being thrown off the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

Children should never be allowed on the machine or in the combine cab when the engine is running.

The instructional seat should only be used for instruction or short periods of machine observation, and not for the accommodation of children.



TS253 —UN—23AUG88

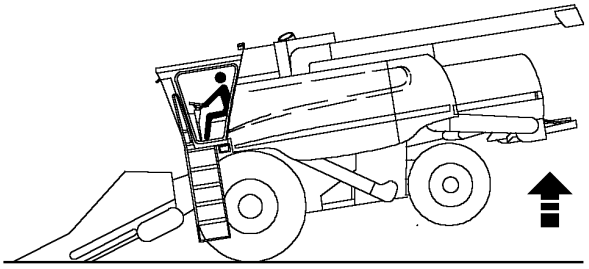
HX,AG,SF6904 -19-22JUL99-1/1

## Ballasting for Safe Ground Contact

Operating, steering and braking performance of combine can be considerably affected by heavy front end attachments which alter the center of gravity of the combine.

To maintain the necessary ground contact, ballast the combine at the rear end as necessary.

Observe the maximum permissible axle loads and total weights.



H51907 —UN—10FEB99

HX,AG,SF6782 -19-05FEB99-1/1

## Roadway Transport with Header Attached

Observe national and local laws regarding operation of the combine on public roadways.

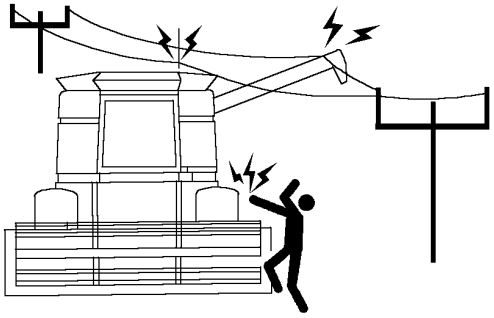
This combine has been approved for roadway transport in Germany with a Geringhoff 8 row folding header and a Kemper 8 row folding header. Roadway transport in Germany with other heads must be approved by your local TUEV to achieve a road permission.

OUO6075,0003B9B -19-03NOV04-1/1

## Avoid Electrical Power Lines

Put the grain tank unloading auger in transport position and lower the grain tank access handrail before driving on public roads.

Secure radio aerial in its transport position before driving on public roads, it may come into contact with low-hanging electrical cables. This would result in the operator suffering a severe electrical shock.



H52022 —UN—14APR99

HX,STSSA,D -19-22JUL99-1/1

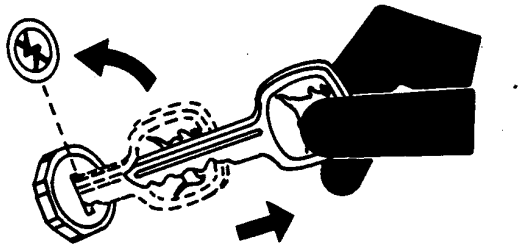
## Parking and Leaving the Machine

Lower harvesting unit to the ground.

Before leaving machine, disengage harvesting unit and separator. Move multi-function lever to neutral position and shut OFF machine. Apply parking brake, remove key, and lock the operator's cab.

Never leave machine unattended as long as engine is running.

Never leave the operator's cab when driving.



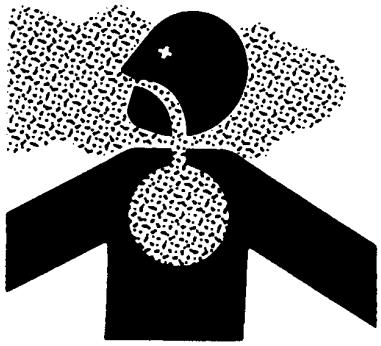
TS230 —UN—24MAY89

OUO6075,0000AEB -19-30JUN11-1/1

## Work In Ventilated Area

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.



TS220 —UN—15APR13

DX,AIR -19-17FEB99-1/1

## Handle Fuel Safely—Avoid Fires

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.



TS202 —UN—23AUG88

Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.

DX,FIRE1 -19-12OCT11-1/1

## In Case of Fire

Stop harvesting immediately at first sign of fire. This may be the smell of smoke or the sight of smoke or flames.

Do not risk personal injury. If a fire is too far advanced, do not try to extinguish it.

If fire can be safely extinguished, proceed carefully and follow these guidelines:

1. Remove fire extinguisher from bracket and carry to area of fire.
2. Approach area of fire with wind to your back.
3. Pull safety pin from top of extinguisher.
4. Hold extinguisher upright by handles and aim hose at base of flames.
5. Squeeze handles to discharge fire extinguisher.
6. Move nozzle back and forth, covering flames with a cloud of powder or water.



TS227 —UN—15APR13

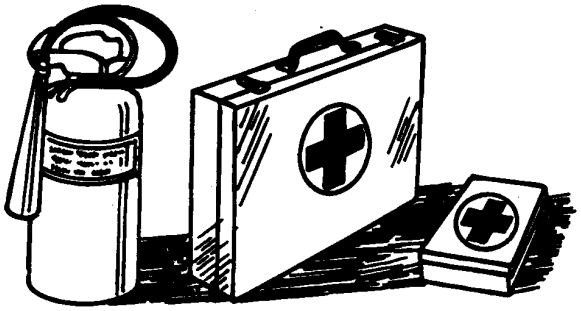
OUO6075,00001DE -19-18SEP08-1/1

## Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



TS291 —UN—15APR13

DX,FIRE2 -19-03MAR93-1/1

## Handle Starting Fluid Safely

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. Keep starting fluid away from batteries and cables.

To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.



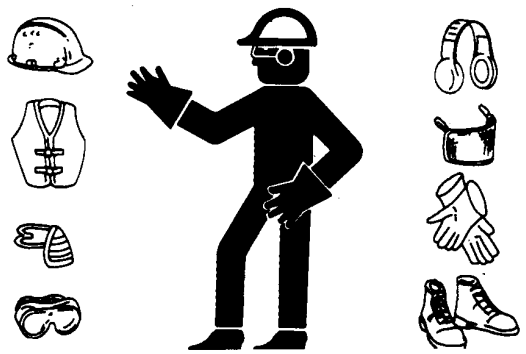
TS1356 —UN—18MAR92

DX,FIRE3 -19-16APR92-1/1

## Wear Protective Clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



TS206 —UN—15APR13

DX,WEAR2 -19-03MAR93-1/1

## Stay Clear of Harvesting Units

Cutterbar, auger, reel and feed rolls cannot be completely shielded due to their function. Stay clear of these moving elements during operation. Always disengage main clutch, shut off engine, set parking brake and remove key before servicing or unclogging machine.




ES118704 —UN—21MAR95

OUO6075,00009E5 -19-28SEP10-1/1

## Keep Hands Away From Knives

Never attempt to clear obstructions in front of or on header unless separator is disengaged, parking brake is set, engine is shut off and key is removed.

Everyone must be clear of machine before starting engine.



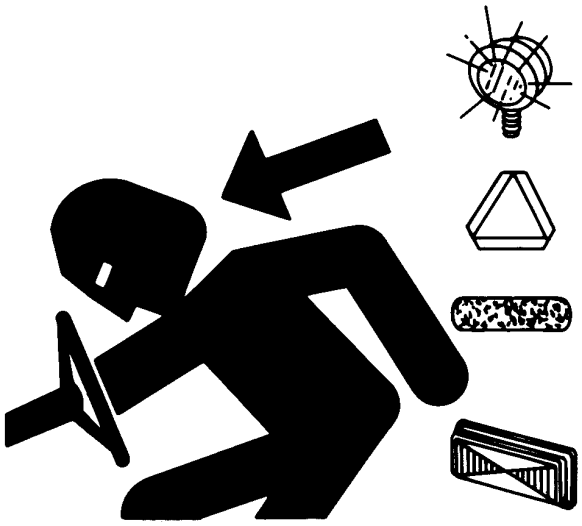
TS254 —UN—23AUG88

OUO6075,00009E6 -19-28SEP10-1/1

## Use Safety Lights and Devices

Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns and use turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean and in good working order. Replace or repair lighting and marking that has been damaged or lost.

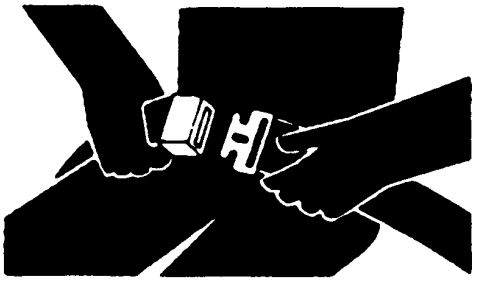


TS951 —UN—12APR90

HX,STSSA,O -19-22JUL99-1/1

## Use Seat Belts

Use the seat belt whenever you operate the combine or ride as an observer.



H47137

H47137 —UN—25OCT95

HX,STSSA,I -19-22JUL99-1/1

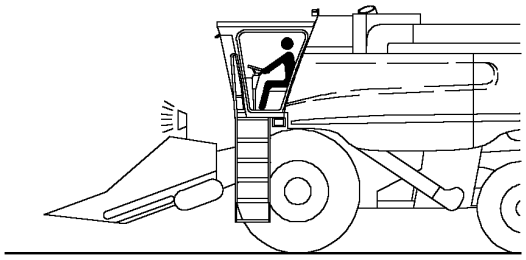
## Transport Combine With Header Safely

Whenever possible avoid transporting on public roadways with the header attached.

If the combine must be transported with the header attached, make sure that the flashing warning lights on the header are operating and the reflective material is clean and visible.

The use of a spotter or pilot vehicle is recommended on busy, narrow or hilly roads and when crossing bridges.

Drive at a speed that is safe for conditions.



H51909 —UN—07MAY99

OUO6075,0000034 -19-22JAN01-1/1

## Prevent Machine Runaway or Unexpected Movement

Avoid injury or death from unexpected movement of machine or components.

Do not start engine by shorting across starter or solenoid terminals. Machine or components may move if the normal circuitry is bypassed.



H58737 —UN—08JUL99

AG,OUO1035,792 -19-08JUL99-1/1

## Practice Safe Maintenance

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet , and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.



TS218 —UN—23AUG88

DX,SERV -19-17FEB99-1/1

## Welding Near Electronic Control Units

**IMPORTANT: Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.**

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.



TS953 —UN—15MAY90

6. After welding, reverse Steps 1—5.

DX,WW,ECU02 -19-14AUG09-1/1

## Remove Paint Before Welding or Heating

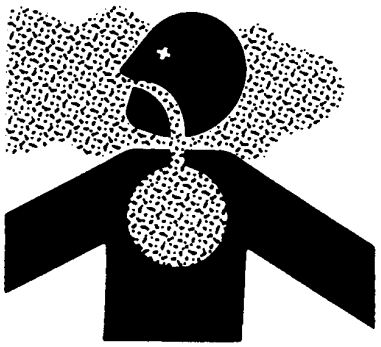
Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.



TS220 —UN—15APR13

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.

DX,PAINT -19-24JUL02-1/1

## Avoid Heating Near Pressurized Fluid Lines

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.



TS953 —UN—15MAY90

DX,TORCH -19-10DEC04-1/1

## Avoid Contact With Moving Parts

Keep hands, feet and clothing away from power driven parts. Never clean, lubricate or adjust machine when it is running.



TS256 —UN—23AUG88

H01,9000SA,E -19-15JUN90-1/1

## Cleaning Grain Tank and Removal of Blockages Safely

Avoid serious injury or death from entanglement in the grain tank cross augers. For functional purposes the cross augers cannot be completely covered. Do not enter the grain tank when the engine is running. Before entering the tank to clean out residual grain, always shut off the engine, set parking brake and remove the key

If grain bridges and fails to flow into the cross augers, shut off the engine, remove the key and from a position on the engine compartment door use a rod, broom or shovel to break the bridge and restore grain flow.



TS256 —UN—23AUG88

OUO6043,00015E2 -19-24MAY04-1/1

## Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep all shields in place at all times. Make sure rotating shields turn freely.

Wear close-fitting clothing. Stop the engine and be sure that all rotating parts and drivelines are stopped before making adjustments, connections, or performing any type of service on engine or machine driven equipment.



TS1644 —UN—22AUG95

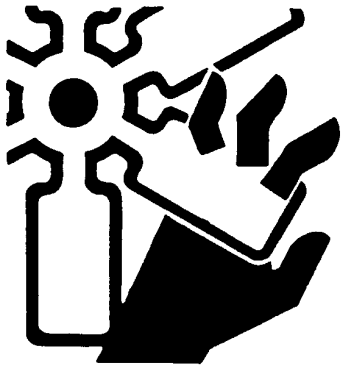
DX,ROTATING -19-18AUG09-1/1

## Install All Shields and Guards

Rotating fans, belts, pulleys, and drives can cause serious injury.

Keep all shields and guards in place at all times during operation.

Wear close-fitting clothes. Stop the engine and be sure fans, belts, pulleys, and drives are stopped before making adjustments, connections, or cleaning near fans and their drive components.



TS677 —UN—21SEP89

OUO6075,0000C23 -19-03MAY11-1/1

## Avoid High-Pressure Fluids

Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

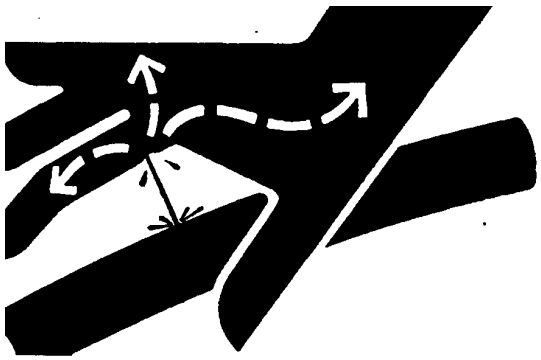
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.



X9811 —UN—23AUG88

DX,FLUID -19-12OCT11-1/1

## Do Not Open High-Pressure Fuel System

High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt repair of fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system.

Only technicians familiar with this type of system can perform repairs. (See your John Deere dealer.)



TS1343 —UN—18MAR92

DX,WW,HPCR1 -19-07JAN03-1/1

## Service Accumulator Systems Safely

Escaping fluid or gas from systems with pressurized accumulators that are used in air conditioning, hydraulic, and air brake systems can cause serious injury. Extreme heat can cause the accumulator to burst, and pressurized lines can be accidentally cut. Do not weld or use a torch near a pressurized accumulator or pressurized line.

Relieve pressure from the pressurized system before removing accumulator.

Relieve pressure from the hydraulic system before removing accumulator. Never attempt to relieve hydraulic system or accumulator pressure by loosening a fitting.

Accumulators cannot be repaired.



TS281 —UN—15APR13

DX,WW,ACCLA2 -19-22AUG03-1/1

## Protect Against High Pressure Spray

Spray from high pressure nozzles can penetrate the skin and cause serious injury. Keep spray from contacting hands or body.

If an accident occurs, see a doctor immediately. Any high pressure spray injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



TS1343 —UN—18MAR92

DX,SPRAY -19-16APR92-1/1

## Service Tires Safely

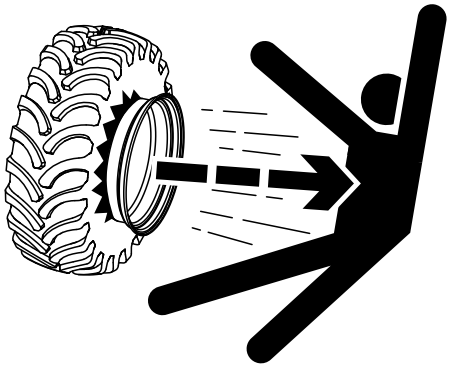
Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.



RXA0103438 —UN—11JUN09

DX,WW,RIMS -19-19AUG09-1/1

## Dispose of Waste Properly

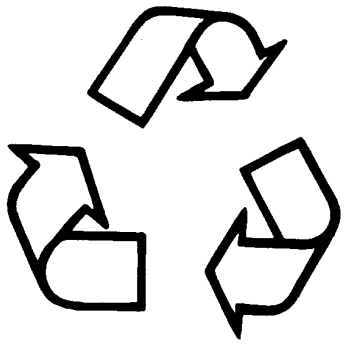
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



TS1133 —UN—15APR13

DX,DRAIN -19-03MAR93-1/1

## Service Cooling System Safely

Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine, set parking brake and remove key. Allow system to cool before opening cap. Slowly loosen cap to relieve pressure before removing completely.



TS281 —UN—15APR13

OUO6075,0000ABC -19-21FEB07-1/1

## Remove Accumulated Crop Debris

The build up of chaff and crop debris in the engine compartment, on the engine, and near moving parts is a fire hazard. Check and clean these areas frequently. Before performing any inspection or service, shut off the engine, set the parking brake and remove the key.



TS227 —UN—15APR13

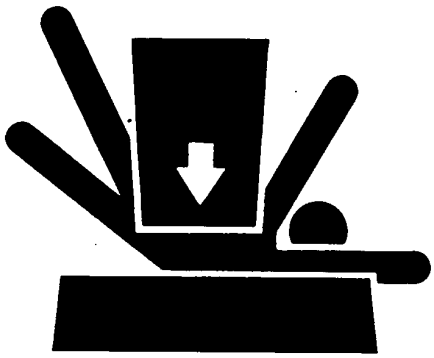
HX,9010SA,B -19-23AUG97-1/1

## Support Machine Properly

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.



TS229 —UN—23AUG88

DX,LOWER -19-24FEB00-1/1

## Store Attachments Safely

Stored attachments such as dual wheels, cage wheels, and loaders can fall and cause serious injury or death.

Securely store attachments and implements to prevent falling. Keep playing children and bystanders away from storage area.



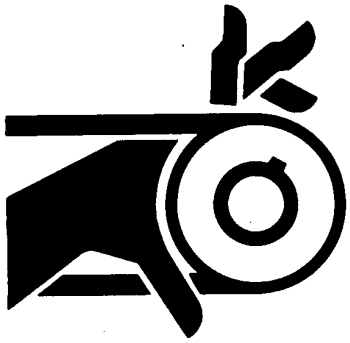
TS219 —UN—23AUG88

DX,STORE -19-03MAR93-1/1

## Service Drive Belts Safely

When servicing drive belts always observe these precautions:

- Avoid serious injury from hand or arm entanglement. Never attempt to clean, check or adjust belts while the machine is running. Always shut off the engine, set the parking brake and remove the key.
- Do not attempt to clean belts with flammable cleaning solvents.



TS285 —UN—23AUG88

OUO6075,00026A4 -19-06FEB03-1/1

## Handle Electronic Components and Brackets Safely

Falling while installing or removing electronic components mounted on equipment can cause serious injury. Use a ladder or platform to easily reach each mounting location. Use sturdy and secure footholds and handholds. Do not install or remove components in wet or icy conditions.

If installing or servicing a RTK base station on a tower or other tall structure, use a certified climber.

If installing or servicing a global positioning receiver mast used on an implement, use proper lifting techniques and wear proper protective equipment. The mast is heavy and can be awkward to handle. Two people are required when mounting locations are not accessible from the ground or from a service platform.



TS249 —UN—23AUG88

DX,WW,RECEIVER -19-24AUG10-1/1

## Avoid Backover Accidents

Before moving machine, be sure that all persons are clear of machine path. Turn around and look directly for best visibility. Use a signal person when backing if view is obstructed or when in close quarters.

Do not rely on a camera to determine if personnel or obstacles are behind the machine. The system can be limited by many factors including maintenance practices, environmental conditions, and operating range.



PC10857XW —UN—15APR13

DX,AVOID,BACKOVER,ACCIDENTS -19-30AUG10-1/1

## Handling Batteries Safely

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

**Avoid hazards by:**

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

**If acid is spilled on skin or in eyes:**

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

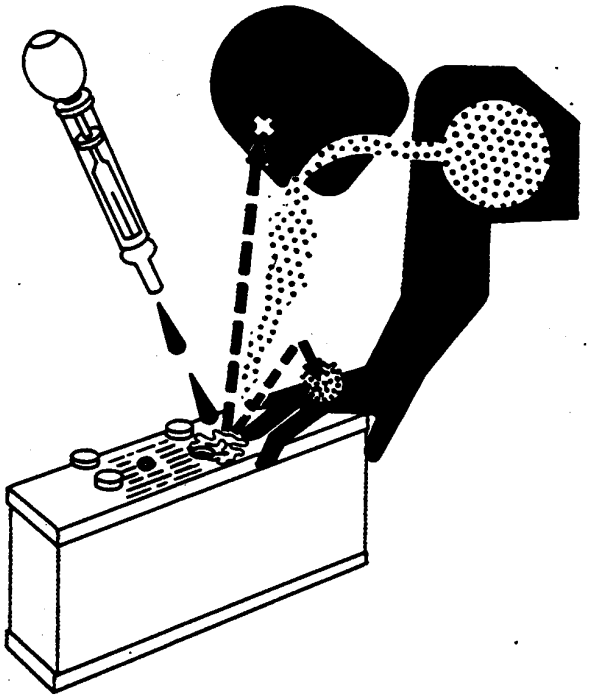
**If acid is swallowed:**

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).
3. Get medical attention immediately.

**WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**



TS204 —UN—15APR13



TS203 —UN—23AUG88

DX,WW,BATTERIES -19-02DEC10-1/1

## Clean Exhaust Filter Safely

During exhaust filter cleaning operations, the engine may run at elevated idle and hot temperatures for an extended period of time. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite or melt common materials.

Keep machine away from people, animals, or structures which may be susceptible to harm or damage from hot exhaust gases or components. Avoid potential fire or explosion hazards from flammable materials and vapors near the exhaust. Keep exhaust outlet away from people and anything that can melt, burn, or explode.

Closely monitor machine and surrounding area for smoldering debris during and after exhaust filter cleaning.

Adding fuel while an engine is running can create a fire or explosion hazard. Always stop engine before refueling machine and clean up any spilled fuel.

Always make sure that engine is stopped while hauling machine on a truck or trailer.

Contact with exhaust components while still hot can result in serious personal injury.

Avoid contact with these components until cooled to safe temperatures.

If service procedure requires engine to be running:

- Only engage power-driven parts required by service procedure
- Ensure that other people are clear of operator station and machine

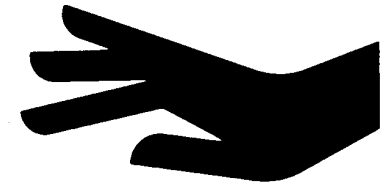
Keep hands, feet, and clothing away from power-driven parts.

Always disable movement (neutral), set the parking brake or mechanism and disconnect power to attachments or tools before leaving the operator's station.

Shut off engine and remove key (if equipped) before leaving the machine unattended.

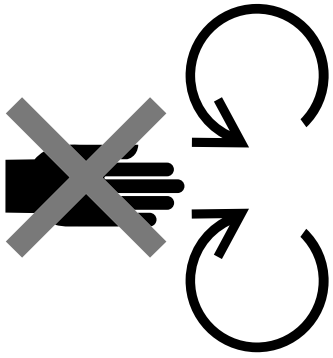


TS227 —UN—15APR13





TS271 —UN—23AUG88



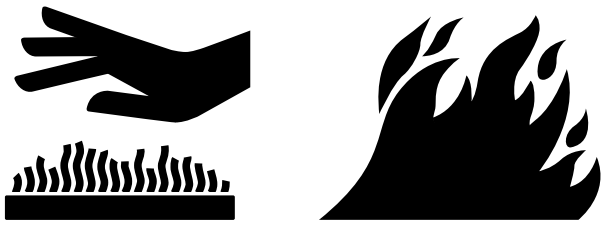
TS1693 —UN—09DEC09

OUO6075,0000E81 -19-07FEB12-1/1

## Avoid Hot Exhaust

Servicing machine or attachments with engine running can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.

Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.



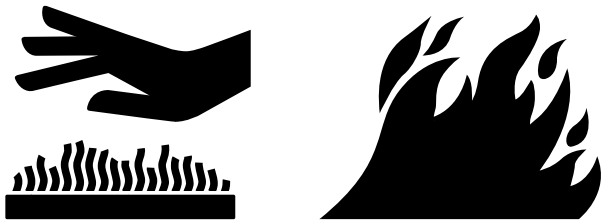
RG17488 —UN—21AUG09

DX,EXHAUST -19-20AUG09-1/1

## Exhaust Filter Cleaning

Servicing machine or attachments during exhaust filter cleaning can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.

During auto or manual/stationary exhaust filter cleaning operations, the engine will run at elevated idle and hot temperatures for an extended period of time. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite, or melt common materials.



RG17488 —UN—21AUG09

DX,FILTER -19-20JAN10-1/1

# Safety Sign Location

## Pictorial Safety Signs

At several important places on this machine safety signs are affixed intended to signify potential hazards. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety signs, their placement on the machine and a brief explanatory text are shown below.

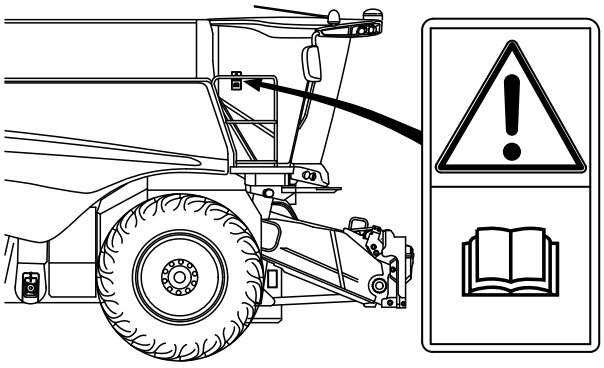



TS231 —19—07OCT88

OUO6075,0001163 -19-19JUN12-1/1

## Operator's Manual

This operator's manual contains all important information necessary for safe machine operation. Carefully observe all safety rules to avoid accidents.

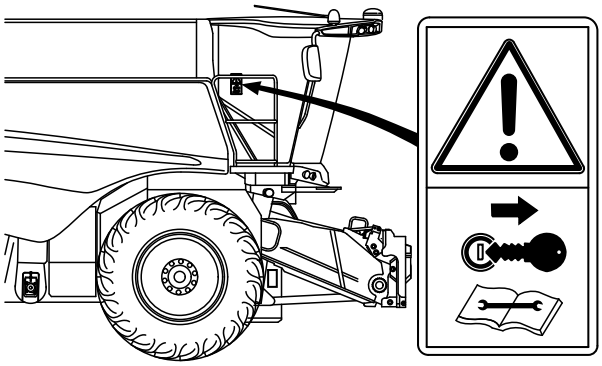


H97195 —UN—14JUN11

OUO6075,00015D7 -19-09AUG13-1/1

## Repair and Maintenance

Before carrying out repair and maintenance work, shut off engine, set parking brake and remove key. Refer to operator's manual for all maintenance work.

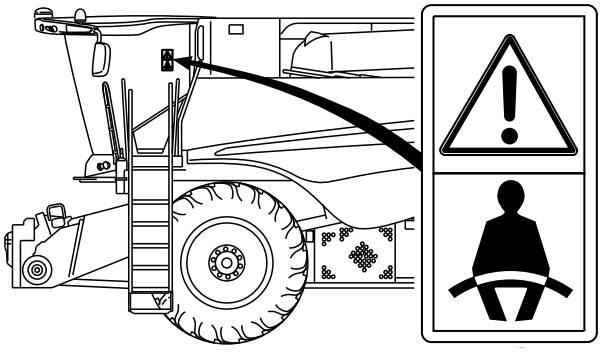


H97196 —UN—13JUN11

OUO6041,0000453 -19-03SEP10-1/1

## Seat Belt

The instructional seat is for training operators or diagnosing machine problems. Keep all other riders and children off. Use the seat belt whenever operating the machine or riding as an observer.



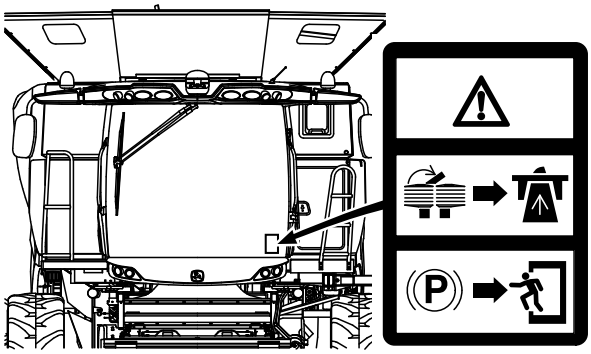
H97197 —UN—13JUN11

OUO6041,0000454 -19-03SEP10-1/1

## Parking Brake

Set parking brake before leaving machine.

Lock service brakes together before driving on roadway.



H104579 —UN—25JAN12

OUO6075,0000DE8 -19-24JAN12-1/1

## Hydraulic Oil and Gas Under Pressure

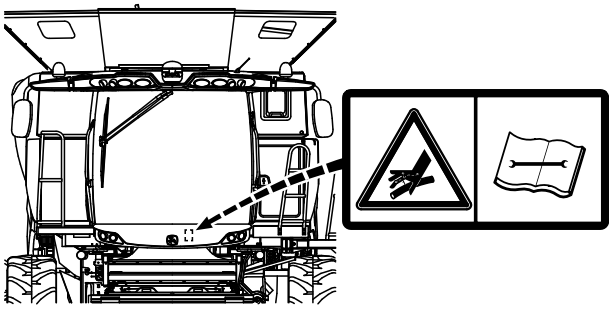
*NOTE: Decal is located on cab support and is only on ProDrive™ transmission machines.*

Avoid serious injury from contact with hydraulic oil and gas under pressure.

Before removing hydraulic components, disassembling or charging accumulators:

1. Relieve system hydraulic pressure. Refer to operator's manual and repair manual for system information.
2. Stop engine and remove key.

Use only DRY NITROGEN for recharging accumulator. See your local John Deere dealer.



H108688 —UN—01AUG13

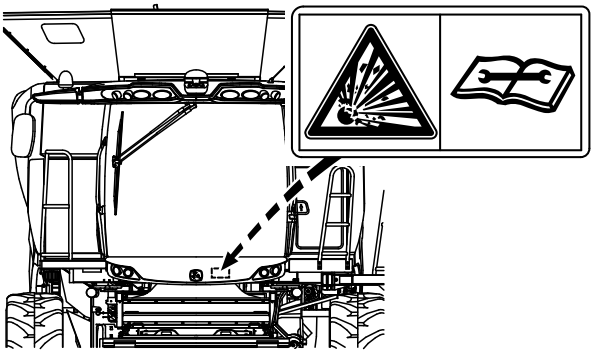
OUO6075,00015C0 -19-05AUG13-1/1

## Accumulator

*NOTE: Decal is located on cab support and is only on ProDrive™ transmission machines.*

To prevent the risk of injury as well as possible damage to the accumulator or hydraulic system, maintain recommended nitrogen gas pressure.

Charge only with dry nitrogen. Rated working pressure is 21,500 kPa (3120 psi), see your John Deere dealer.

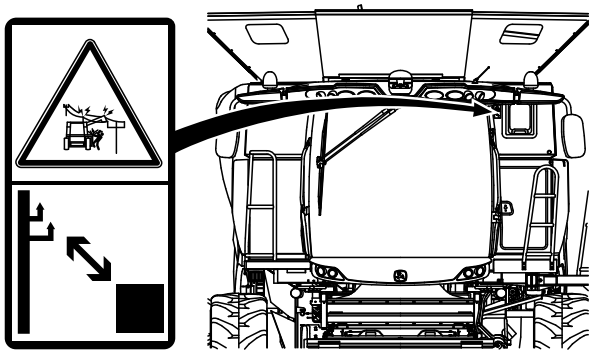


H105072 —UN—23MAR12

OUO6075,00010F3 -19-18JUN13-1/1

## Avoid Low Hanging Power Lines

Avoid serious injury or death from electrocution. Do not contact electric lines. Lower grain tank covers when operating near low hanging power lines.

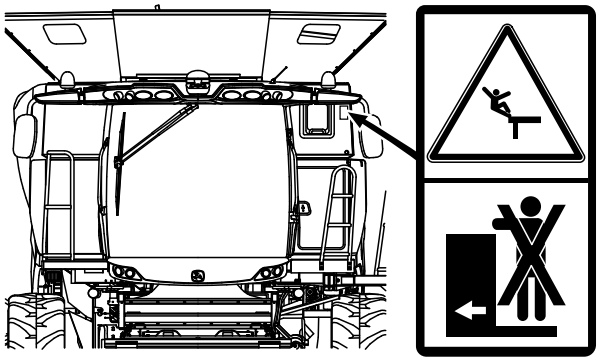


H96811 —UN—03AUG10

OUO6041,00003F6 -19-03SEP10-1/1

## Grain Tank

Avoid serious injury from falling. Do not enter grain tank in this area.

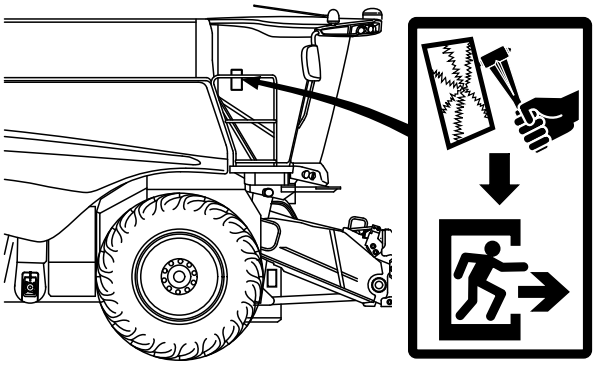


H96812 —UN—02SEP10

OUO6041,00003F7 -19-03SEP10-1/1

## Emergency Exit

Remove hammer and hit window to break glass to exit cab. See your John Deere dealer for window replacement.

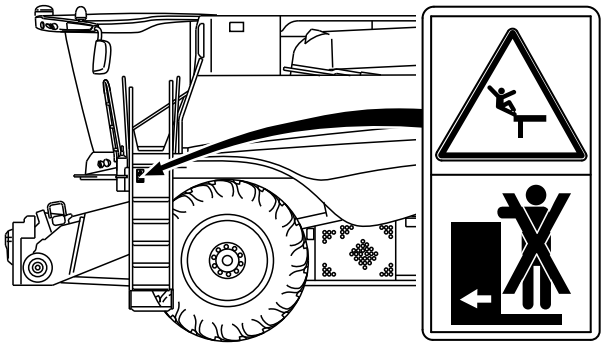


H97852 —UN—13JUN11

OUO6041,0000455 -19-14SEP10-1/1

## Cab/Platform Access Ladder

Avoid serious injury from falling. Do not allow riders on ladder or platform area while machine is moving.

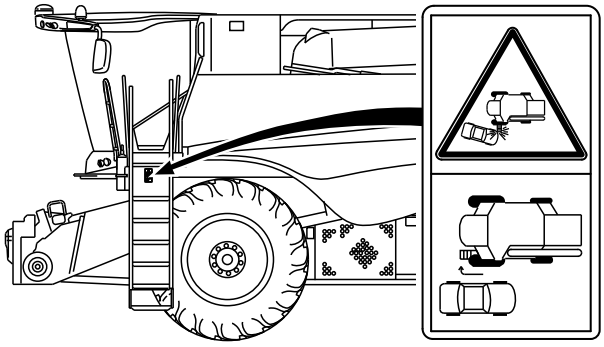


H96816 —UN—03AUG10

OUO6041,0000404 -19-03SEP10-1/1

## Avoid Motor Vehicle Collisions

Avoid motor vehicle collision and serious injury or death. Always swing ladder to forward locked position before driving machine on roadway.



H96815 —UN—03AUG10

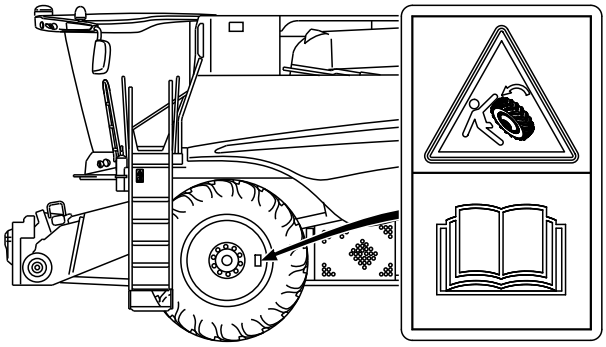
OUO6041,0000403 -19-03SEP10-1/1

## Dual Wheels (If Equipped)

*NOTE: Decal is located on dual wheels and on both sides of machine.*

The dual wheels have an offset center of weight. Be careful when removing. Wheels require two people to install or remove.

To avoid bodily injury, special pilot studs are provided for removal and installation. See instructions provided with dual wheels.



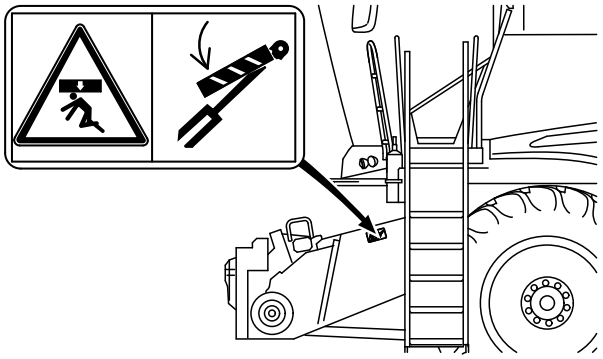
H100876 —UN—04APR11

OUO6075,00015C1 -19-31JUL13-1/1

## Feeder House Safety Stop

*NOTE: Decal is located on outside and inside of shielding and on both sides of feeder house.*

Avoid crushing injury. Rest header on ground or set safety stop, located on feeder house lift cylinder before getting under header.

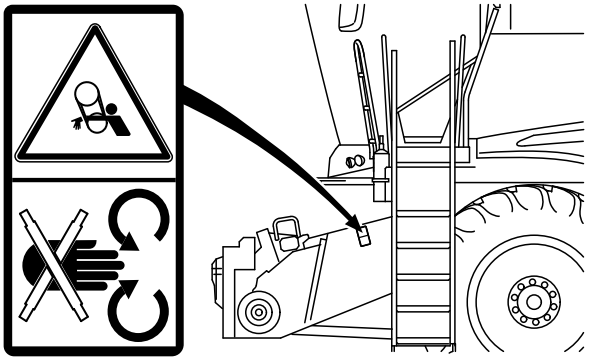


H96814 —UN—03AUG10

OUO6041,0000405 -19-03SEP10-1/1

## Feeder House Guard

Avoid serious injury or death from entanglement. Never raise shield with engine running. Stop engine and remove key.



H108691 —UN—08AUG13

OUO6075,00015C4 -19-09AUG13-1/1

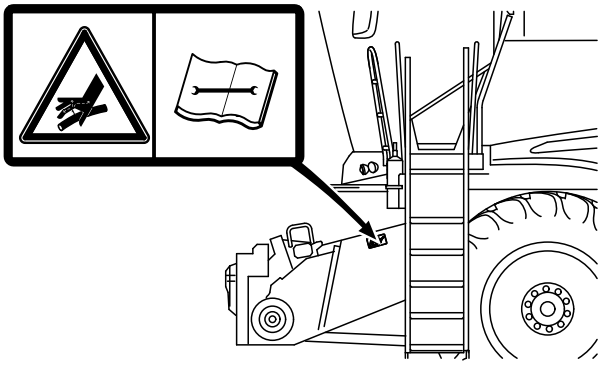
## Hydraulic Oil and Gas Under Pressure

Avoid serious injury from contact with hydraulic oil and gas under pressure.

Before removing hydraulic components, disassembling or charging accumulators:

1. Relieve system hydraulic pressure. Refer to operator's manual and repair manual for system information.
2. Stop engine and remove key.

Use only DRY NITROGEN for recharging accumulator. See your local John Deere dealer.

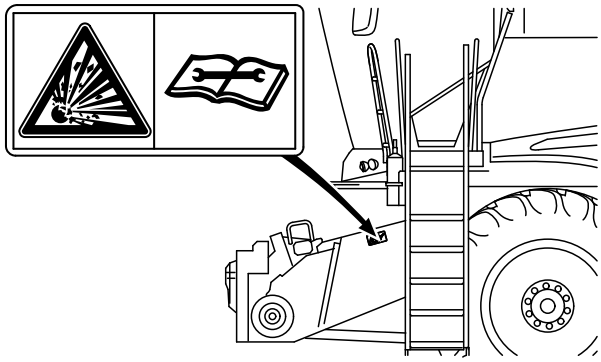



OUO6075,00015C3 -19-31JUL13-1/1

## Accumulator

To prevent the risk of injury as well as possible damage to the accumulator or hydraulic system, maintain recommended nitrogen gas pressure.

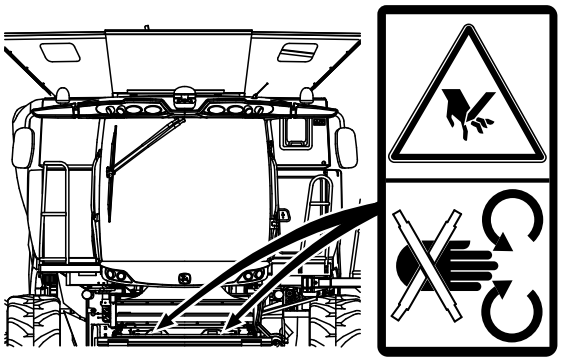
Charge only with dry nitrogen. Rated working pressure is 21,500 kPa (3120 psi), see your John Deere dealer.




OUO6075,000091B -19-18JUN13-1/1

## Feeder House Conveyor Chain

Potential hazard caused by rotating machine parts.

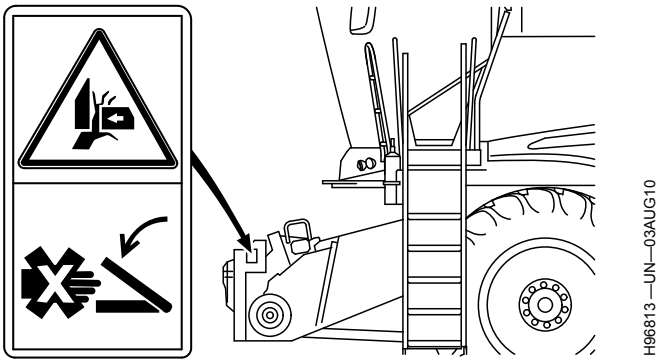



OUO6075,00015C5 -19-31JUL13-1/1

## Feeder House Tilt Frame

*NOTE: Decal is located on both sides of feeder house.*

Header can tilt causing serious injury or death. Avoid crushing injuries. Stay clear when engine is running.

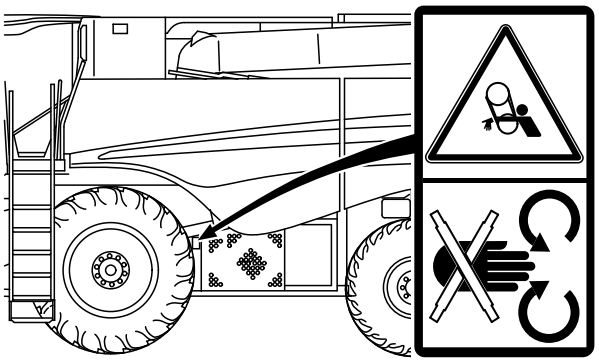


H96813 —UN—03AUG10

OUO6041,00003F8 -19-03SEP10-1/1

## Left-Hand Guard

Avoid serious injury or death from entanglement. Never raise shield with engine running. Stop engine and remove key.

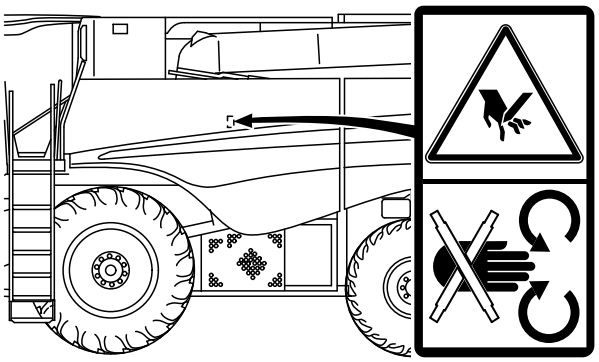


H96824 —UN—04AUG10

OUO6041,0000407 -19-03SEP10-1/1

## Grain Tank Cleanout Doors

Avoid serious injury or death from entanglement. Stop engine and remove key before opening cleanout doors.



H96825 —UN—04AUG10

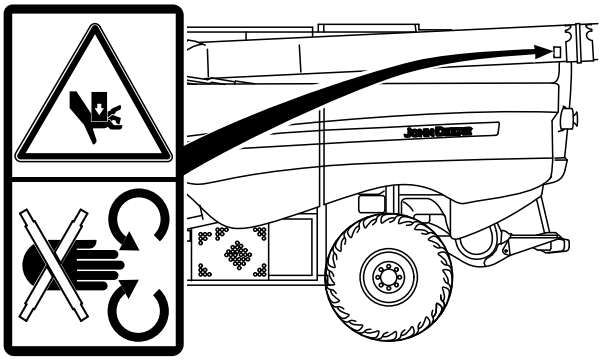
OUO6041,0000406 -19-03SEP10-1/1

## Powered Folding Unloading Auger (If Equipped)

If unloading auger actuator should fail, place unloading auger lock-out pin in locked position (see Grain Tank section).

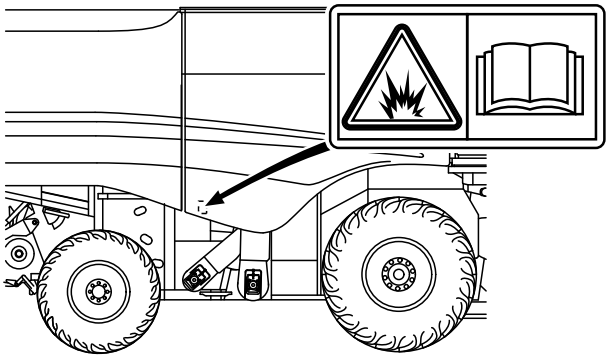
Use a ladder or equivalent with an appropriate load rating to access lock-out pin. Do not attempt to access auger from engine platform.

Avoid bodily injury from auger hinge components. Keep hands away from pinch points when actuator is removed as unintended auger movement may occur.

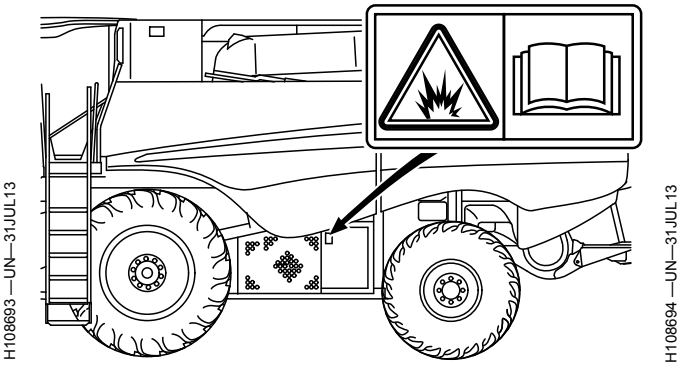



OUO6041,00003F9 -19-03SEP10-1/1

## Battery Box



*S660 and S670*




*S680, S685 and S690*

Avoid serious injury or death from explosion. High levels of hydrogen gas can accumulate if battery box is not vented properly. Always reinstall vent tubes after performing service or maintenance on batteries or battery box.

OUO6075,00015C6 -19-31JUL13-1/1

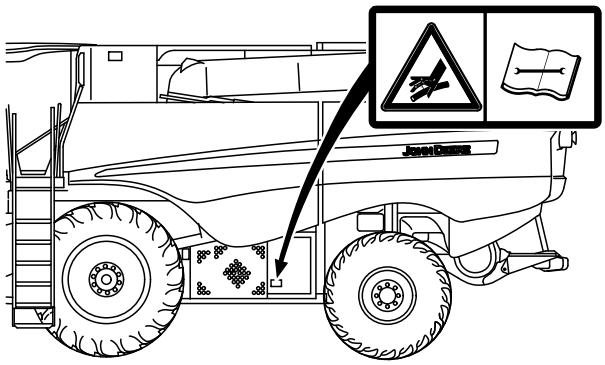
## Hydraulic Oil and Gas Under Pressure

Avoid serious injury from contact with hydraulic oil and gas under pressure.

Before removing hydraulic components, disassembling or charging accumulators:

1. Relieve system hydraulic pressure. Refer to operator's manual and repair manual for system information.
2. Stop engine and remove key.

Use only DRY NITROGEN for recharging accumulator. See your local John Deere dealer.



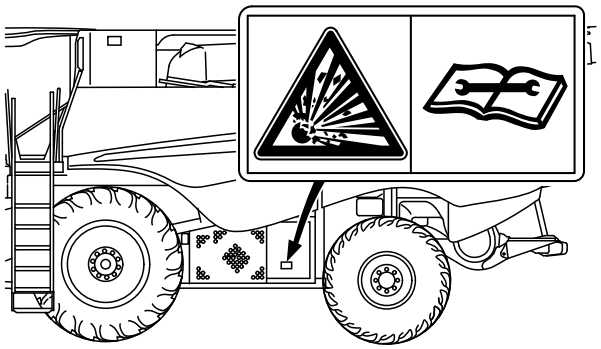

*S660 and S670*

OUO6075,00015C7 -19-09AUG13-1/1

## Accumulator

To prevent the risk of injury as well as possible damage to the accumulator or hydraulic system, maintain recommended nitrogen gas pressure.

Charge only with dry nitrogen. Rated working pressure is 21,500 kPa (3120 psi), see your John Deere dealer.

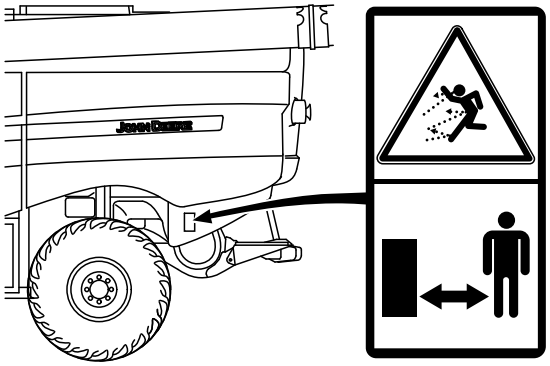


H96902 —UN—04AUG10

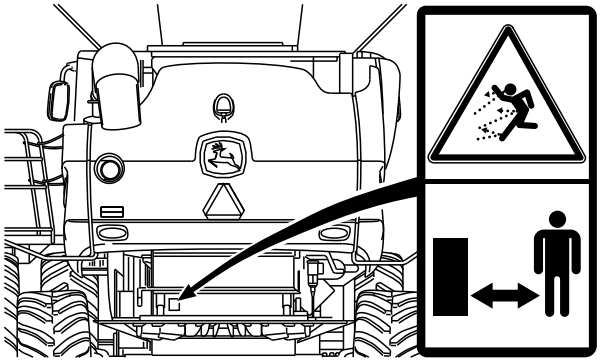
*S660 and S670*

OUO6075,00015D8 -19-09AUG13-1/1

## Chopper



H96831 —UN—04AUG10



H108697 —UN—09AUG13

*NOTE: Decal is located on both sides of chopper.*

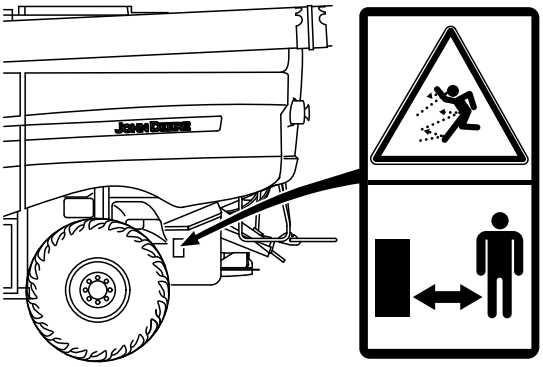
Avoid serious injury from thrown objects. Stay clear while engine is running.

OUO6075,00015D4 -19-09AUG13-1/1

## Spreader

*NOTE: Decal is located on both sides of spreader.*

Avoid serious injury from thrown objects. Stay clear while engine is running.



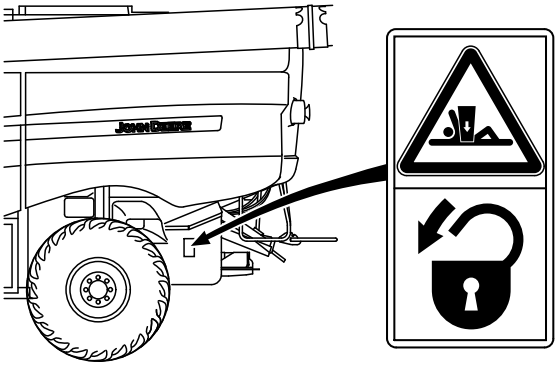
H96832 —UN—04AUG10

OUO6041,000040D -19-03SEP10-1/1

## Spreader Lock-Out

*NOTE: Decal is located on both sides of spreader.*

Avoid serious injury or death from crushing. Before performing service or maintenance on raised spreader, fully insert lock-out pin into place.

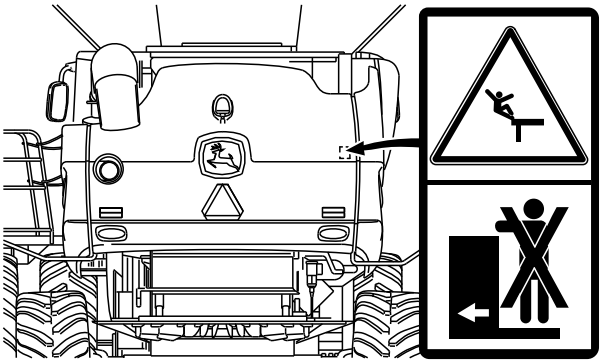


H96833 —UN—04AUG10

OUO6041,00003FA -19-03SEP10-1/1

## Rear Access Ladder and Service Platform

Avoid serious injury from falling. Do not ride ladder while machine is moving.

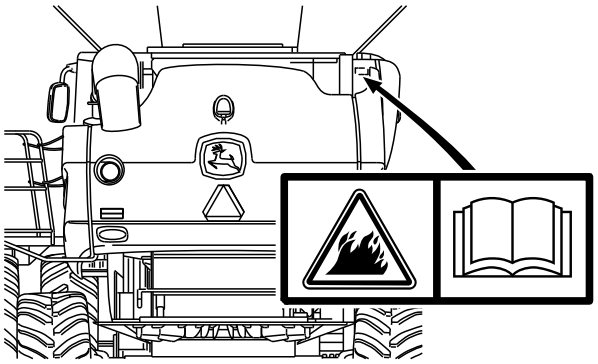


H96847 —UN—04AUG10

OUO6041,00003FB -19-03SEP10-1/1

## Avoid Fires

Avoid equipment fires. The accumulation of chaff, leaves and other crop material in the engine compartment, on the engine or near moving parts can cause a fire. Inspect and clean these areas frequently.

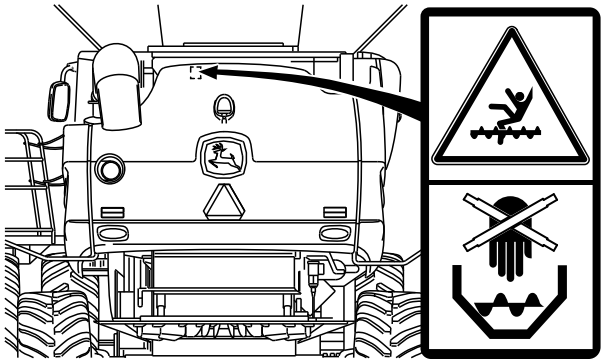


H108698 —UN—08AUG13

OUO6075,00015CA -19-31JUL13-1/1

## Grain Tank

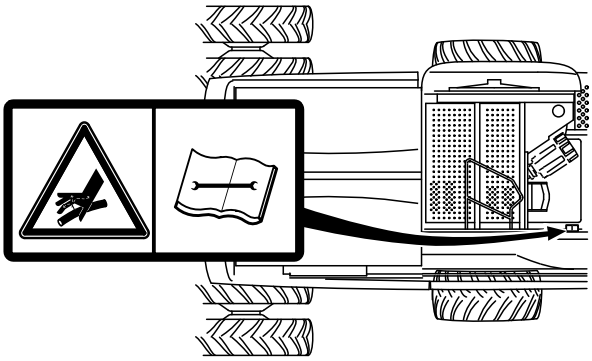
Avoid serious injury or death from entanglement. Do not enter grain tank when engine is running.



H96845 —UN—04AUG10

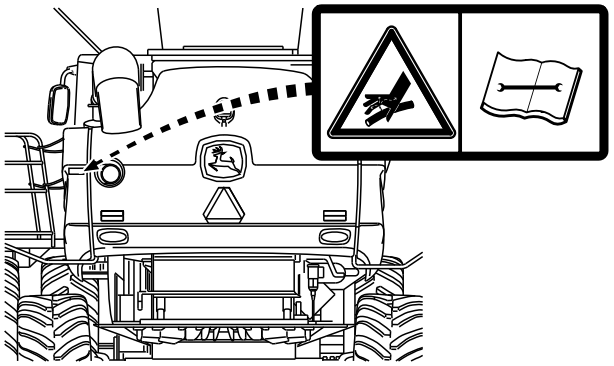
OUO6041,000040A -19-03SEP10-1/1

## Hydraulic Oil and Gas Under Pressure



H108703 —UN—08AUG13

*(Located on Hydraulic Reservoir)*



H108801 —UN—09AUG13

*S680, S685 and S690*
*(Located Near Primary Control Valve)*

Avoid serious injury from contact with hydraulic oil and gas under pressure.

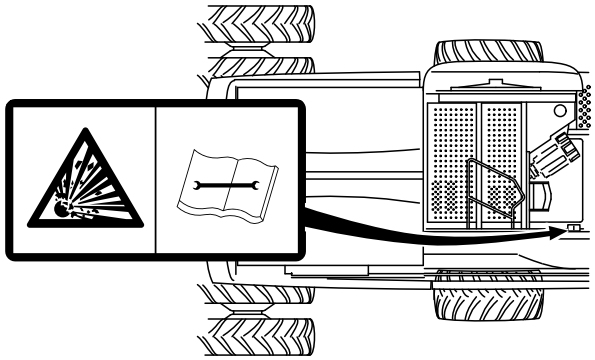
Before removing hydraulic components, disassembling or charging accumulators:

1. Relieve system hydraulic pressure. Refer to operator's manual and repair manual for system information.
2. Stop engine and remove key.

Use only DRY NITROGEN for recharging accumulator. See your local John Deere dealer.

OUO6075,00015D5 -19-09AUG13-1/1

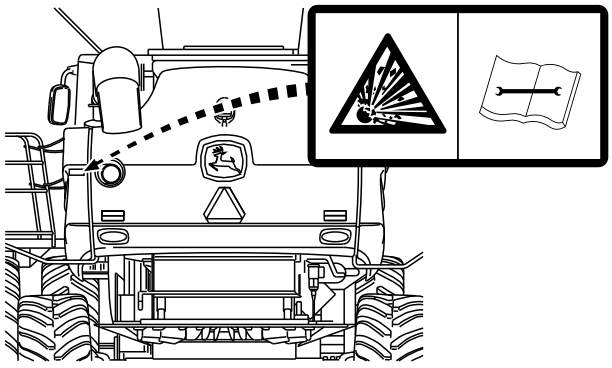
## Accumulator



*(Located on Hydraulic Reservoir)*

H108700 —UN—08AUG13

To prevent the risk of injury as well as possible damage to the accumulator or hydraulic system, maintain recommended nitrogen gas pressure.



*S680, S685 and S690*
*(Located Near Primary Control Valve)*

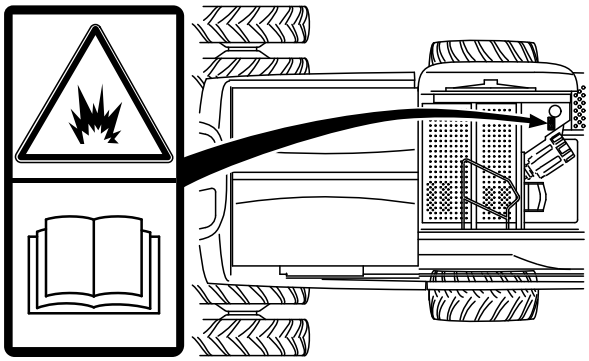
H108802 —UN—09AUG13

Charge only with dry nitrogen. Rated working pressure is 21,500 kPa (3120 psi), see your John Deere dealer.

OUO6075,00015D6 -19-09AUG13-1/1

## Cooling System

Pressurized cooling system. To prevent burn injury due to uncontrolled release of steam and hot coolant, wait until system is cool. Loosen cap slowly. Allow pressure to release before removing cap.

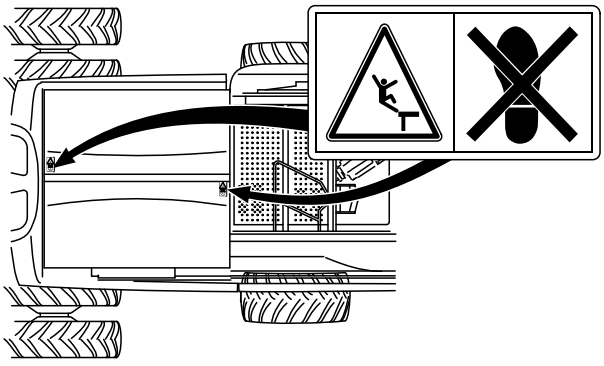


H96859 —UN—05AUG10

OUO6041,0000402 -19-03SEP10-1/1

## Avoid Grain Tank

Avoid serious injury from falling. Do not stand or walk on grain tank covers.

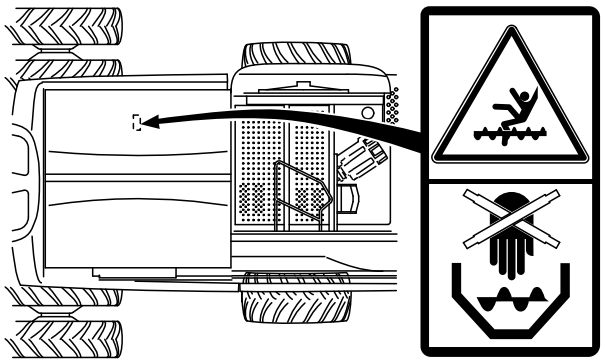


H96857 —UN—03SEP10

OUO6041,000040F -19-03SEP10-1/1

## Avoid Clean Grain Loading Auger

Avoid serious injury or death from entanglement. Do not enter grain tank when engine is running.

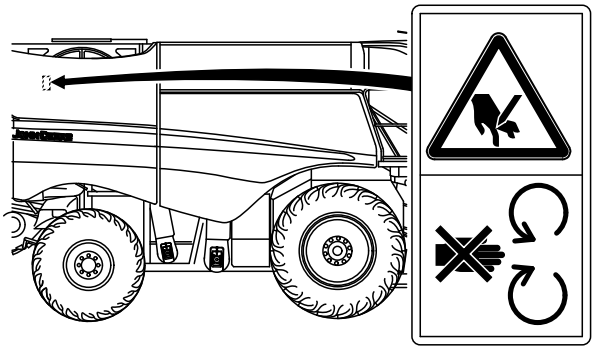


H96858 —UN—05AUG10

OUO6041,0000410 -19-03SEP10-1/1

## Rotary Screen Door and Radiator Fan

Avoid bodily injury from rotating fan and screen components. Shut engine off and remove key before opening rotary screen door.

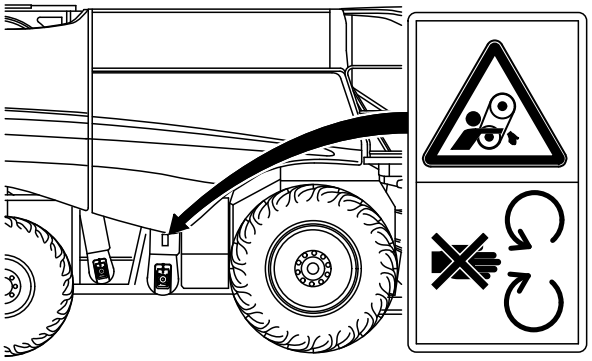


H96851 —UN—05AUG10

OUO6041,00003FF -19-03SEP10-1/1

## Clean Grain Elevator

Avoid serious injury or death from entanglement. Never raise shield with engine running. Stop engine and remove key.

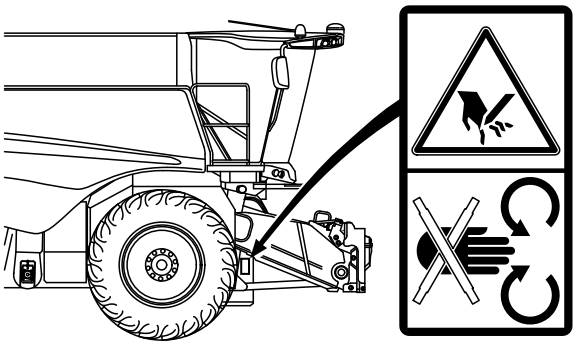


H96849 —UN—01JUN11

OUO6041,00003FE -19-03SEP10-1/1

## Stone Trap

Avoid serious injury from entanglement with feed accelerator. Feed accelerator turns when separator is engaged and will run down after separator is disengaged. Do not clean out stone trap until all separator motion has stopped.



H96854 —UN—05AUG10

OUO6041,0000457 -19-03SEP10-1/1

## Hydraulic Oil and Gas Under Pressure

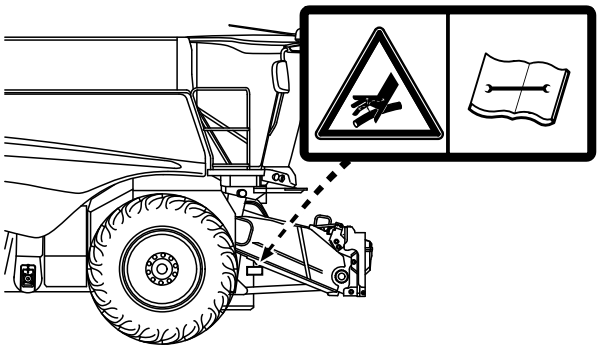
*NOTE: Decal is located on stone trap door and is only on ProDrive™ transmission machines.*

Avoid serious injury from contact with hydraulic oil and gas under pressure.

Before removing hydraulic components, disassembling or charging accumulators:

1. Relieve system hydraulic pressure. Refer to operator's manual and repair manual for system information.
2. Stop engine and remove key.

Use only DRY NITROGEN for recharging accumulator. See your local John Deere dealer.



H108701 —UN—01AUG13

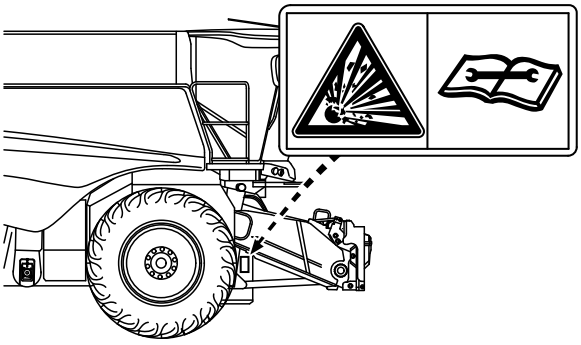
OUO6075,00015CF -19-31JUL13-1/1

## Accumulator

*NOTE: Decal is located on stone trap door and is only on ProDrive™ transmission machines.*

To prevent the risk of injury as well as possible damage to the accumulator or hydraulic system, maintain recommended nitrogen gas pressure.

Charge only with dry nitrogen. Rated working pressure is 21,500 kPa (3120 psi), see your John Deere dealer.



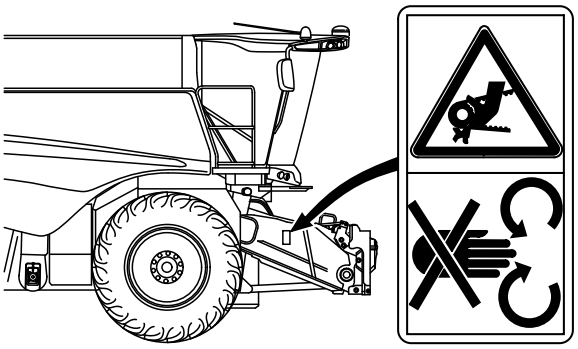
H97866 —UN—03SEP10

OUO6075,0000921 -19-01JUL13-1/1

## Feeder Conveyor Drive Guard

*NOTE: Decal is located on outside and inside of shielding and on both sides of feeder house.*

Do not open guard when the engine is running.



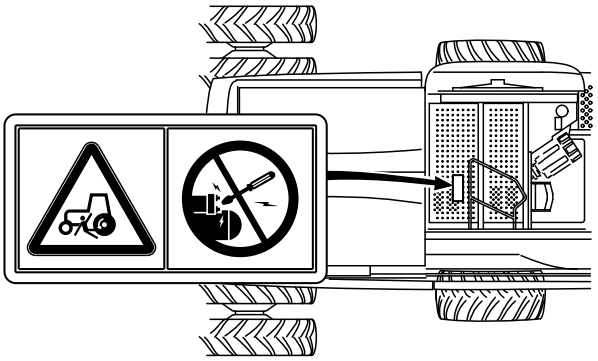
H97201 —UN—05AUG10

OUO6041,0000458 -19-03SEP10-1/1

## Starter

*NOTE: Decal is located on starter.*

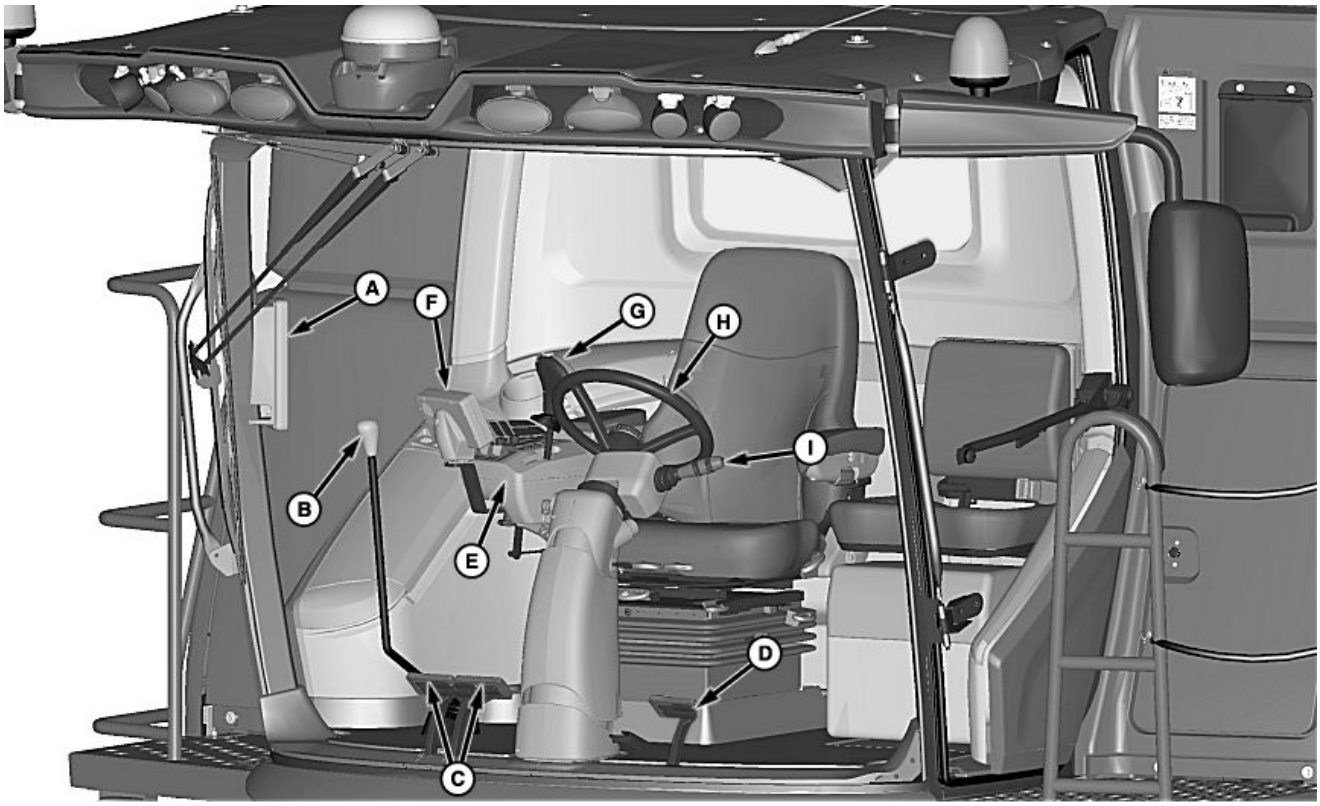
Do not start engine by shorting across starter or solenoid terminals. Machine or components may move if normal circuitry is bypassed.



H97206 —UN—05AUG10

OUO6075,00015D0 -19-31JUL13-1/1

## General View of Controls and Instruments



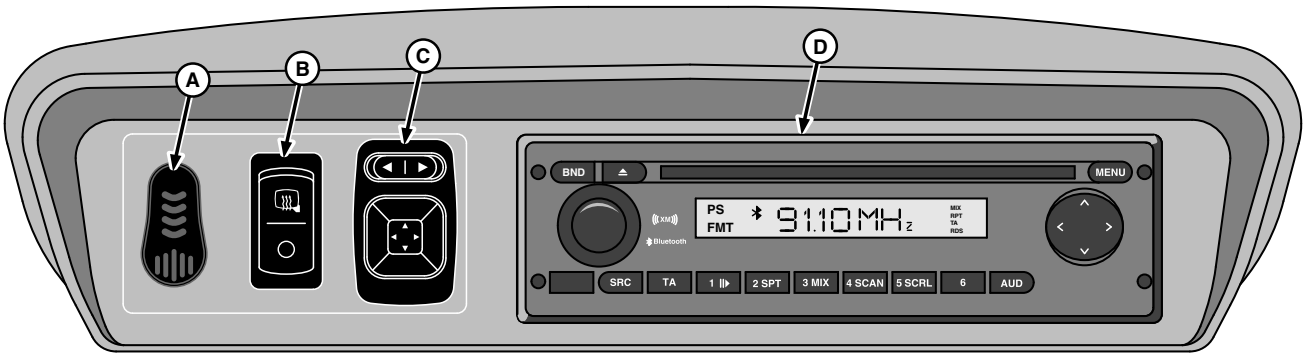

H94806 —UN—15JUL10

**A—CommandTouch™ Cab Cornerpost**
**B—Gearshift Lever (If Equipped)**
**C—Brake Pedals**
**D—Manual Parking Brake (If Equipped)**
**E—CommandTouch™ Armrest Console**
**F—CommandCenter™ Display**
**G—Multi-Function Lever**
**H—Steering Column**
**I— Turn Signal/Light Selection Lever**

*CommandTouch is a trademark of Deere & Company*
*CommandCenter is a trademark of Deere & Company*

OUO6075,0000495 -19-10DEC10-1/1

## Overhead Control Panel




H105037 —UN—16MAR12

**A—Microphone (Optional)**
**B—Mirror Heater Switch (Optional)**
**C—Mirror Control Switch (Optional)**
**D—Radio (Optional)**

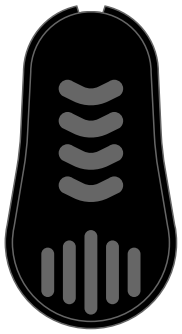
OUO6075,00010DA -19-19MAR12-1/1

## Microphone (Optional)

*NOTE: Key switch must be ON or machine must be running for microphone to work.*

Operator uses microphone in overhead panel to communicate hands-free using a Bluetooth® cell phone (Bluetooth must be enabled).

*NOTE: Bluetooth is a short-range communications technology that allows a person to connect wirelessly with a cell phone.*



H97351 —UN—14JUL10

*Bluetooth is a trademark of Bluetooth SIG*

OUO6075,000089A -19-14JUL10-1/1

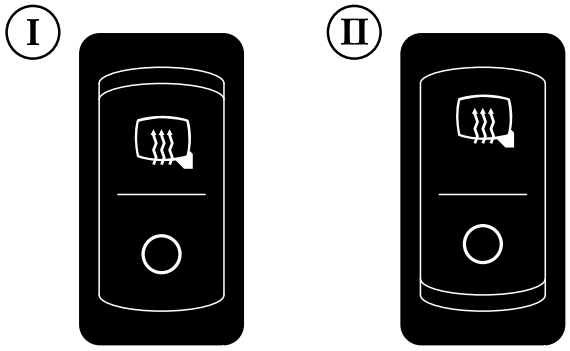
## Mirror Heater Switch (Optional)

*NOTE: Key switch must be ON or machine must be running to adjust mirrors.*

Mirrors are equipped with heaters to remove ice and fog.

Mirror heater switch (I) (bottom switch pressed in) shuts power OFF. Mirror heater switch (II) (top switch pressed in) heats mirrors.

**I— Mirror Heater Switch (OFF)** **II— Mirror Heater Switch (ON)**




H97712 —UN—23AUG10

OUO6075,00008AE -19-20AUG10-1/1

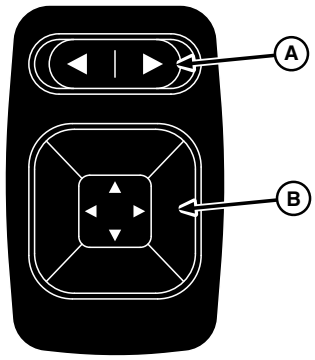
## Mirror Control Switch (Optional)

*NOTE: Key switch must be ON or machine must be running to adjust mirrors.*

Mirror control switch (A) transfers power to left-hand or right-hand mirror. Press left side of switch to power left-hand mirror or press right side of switch to power right-hand mirror.

Mirror adjust switch (B) moves selected mirror up or down and left or right.

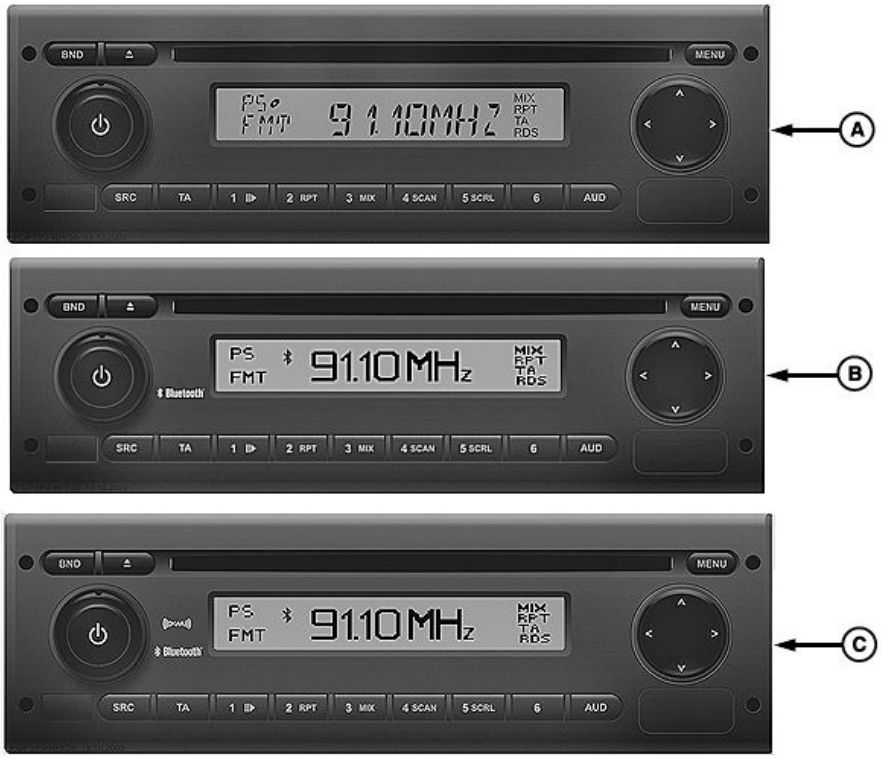
**A—Mirror Control Switch** **B—Mirror Adjust Switch**




H97350 —UN—14JUL10

OUO6075,00003F6 -19-14JUL10-1/1

## Radio Types (Optional)




H105321 —UN—01MAY12

| Main Features | Radio | Connection of external devices | CD | CD, MP3/WMA | USB | Bluetooth® | Sat Radio |
|---|---|---|---|---|---|---|---|
| (A)—Deluxe Radio System with CD | X | X | X | X | | | |
| (B)—Premium Radio System (European/Export) | X | X | X | X | X | X | |
| (C)—Premium Radio System (North America) | X | X | X | X | X | X | X |

*Bluetooth is a registered trademark of Bluetooth SIG*

OUO6075,0001045 -19-25JUN12-1/1

## After Market Radios

**IMPORTANT: If installing or replacing an aftermarket radio, see your John Deere dealer for further information.**

OUO6075,0000B6E -19-21MAR11-1/1

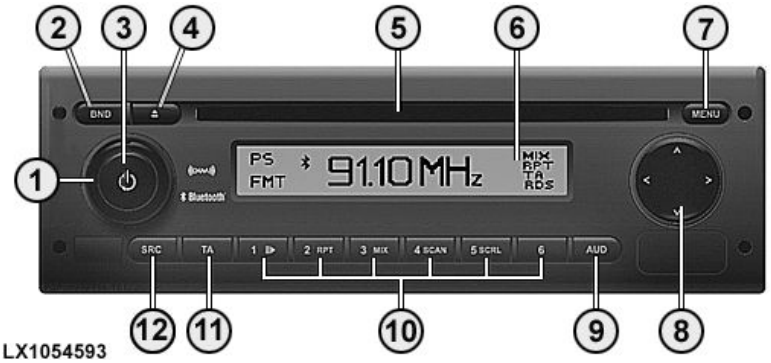
## Program Radio for Local Area Frequency

*NOTE: If a different tuner frequency is needed for the radio, see your John Deere dealer for further information.*

| Wave Bands (United States/Canada) | | Wave Bands (Europe) | |
|---|---|---|---|
| FM | 87.7—107.9 MHz | UKW (FM) | 87.5—108.0 MHz |
| AM | 530—1710 kHz | MW | 522—1629 kHz |
| WX | 162.4—162.55 MHz | LW | 153—279 kHz |

OUO6075,0001165 -19-25JUN12-1/1

## Radio Controls




LX1054593 —UN—25AUG11

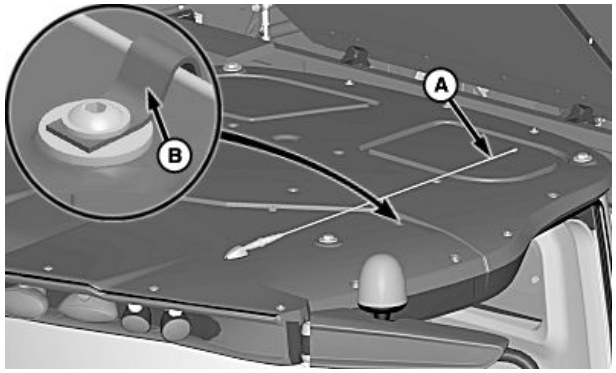
**1— Volume Control**
**2— Band (BND) Key**
**3— Power/Mute Key**
**4— Eject Key**
**5— CD Slot**
**6— Radio Display**
**7— Menu Key**
**8— Multi-Function Rocker Switch**
**9— Audio (AUD) Key**
**10— Key Block (1—6)**
**11— Traffic Announcements (TA) Key**
**12— Source Select (SRC) Key**

OUO6075,0001047 -19-17MAY12-1/1

## Antenna

If radio is not used or machine is being transported, pull radio antenna (A) down and retain with clip (B).

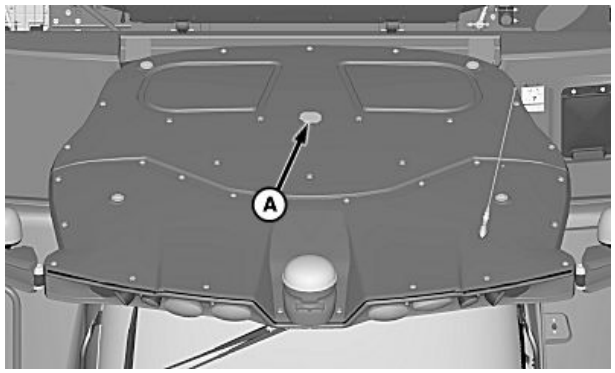
**A—Radio Antenna**
**B—Clip**



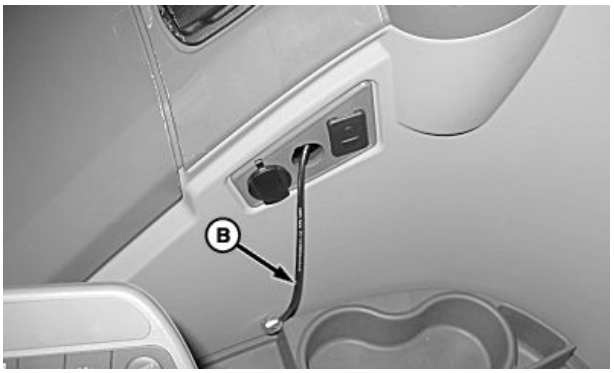

H94462 —UN—01NOV10

OUO6075,00003FA -19-01NOV10-1/1

## Communications/CB Radio Mounting



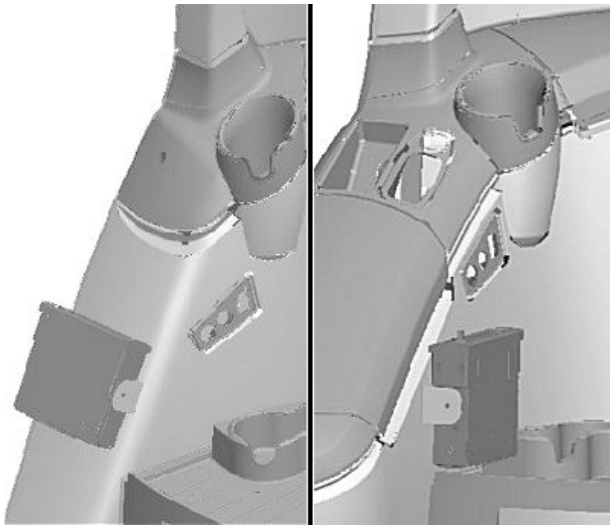

H94464 —UN—14MAY10




H96333 —UN—14MAY10



*Rear Cornerpost Location (Right-Hand Rear)*



H101604 —UN—18MAY11

H101603 —UN—18MAY11

*Deluxe Cab Location/Premium Cab Location*

**A—Antenna Mount** **B—Antenna Cable**

**IMPORTANT: Do not install a radio requiring more than 3 amps or electrical system may malfunction.**

To install additional communications radio, see your John Deere dealer.

Antenna mount (A) is located in center of cab roof.

1. Remove dust cap from antenna base.
2. Remove brass nut from antenna base.
3. Discard rubber washer.
4. Reinstall antenna base with O-ring facing downward.
5. Install antenna.

*NOTE: Remove cup holder to locate antenna cable and route though opening.*

Antenna cable (B) is located on right-hand side of cab under armrest console.

**IMPORTANT: Cornerpost cover must be removed before drilling. Be careful not to damage wiring harnesses and coolant hoses in locations shown when drilling holes or installing hardware.**

Use bracket supplied by manufacturer as a template to locate and drill holes as required in various locations shown. Use self-tapping screws or cap screws with nuts to mount bracket.

*NOTE: Certain broadcast bands may cause interference with the position receiver. Select a different broadcast band or see your John Deere dealer if signal losses are noticed with the position receiver.*

OUO6075,00014A9 -19-18APR13-1/1

## Armrest Display Navigation (GreenStar™ 3 CommandCenter™ Non-Touchscreen)

There are two methods of navigating around display screens.

**Selection Dial and Confirm Switch Method:**

Use selection dial (K) to highlight desired icons (A—J).

Once desired icon is highlighted, use the following dial and switches:

- **Selection Dial (K):** Rotate dial to:
  - Scroll through available items on selected page
  - Increase or decrease values in a selected item
- **Confirm Switch (L):** Once available item is selected, use selection dial and press switch to:
  - Select item
  - Toggle between available selections within item
  - Enter/Save values
- **Cancel Switch (M):** Press switch to cancel current selection.

**Shortcut Switch Method:**

Shortcut switches (A—J) allow a one-touch selection of desired input field or corresponding item on display.

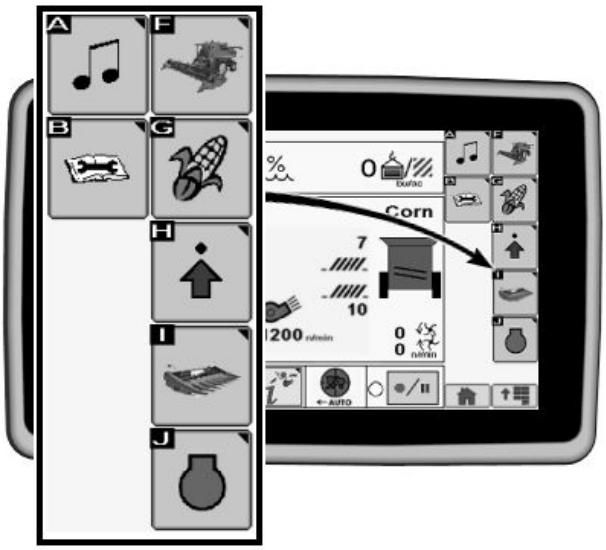
- **Shortcut Switches (A—J):** Press to select corresponding icon on armrest display or GreenStar™ Display (if equipped).

**Navigational Switches:**

- **Main Menu Switch (N):** Press switch to change active application that display is running. Applications include:
  - Message Center
  - Display Settings
  - Layout Manager
  - Combine
  - Performance Monitor
  - GreenStar™
  - Video
  - Access Manager
- **Home Switch (O):** Displays user defined home screen. If multiple screens are defined, pressing home switch multiple times toggles through each defined home screen.




H94422 —UN—04MAR10




H1067777 —UN—04FEB13

*GreenStar is a trademark of Deere & Company*
*CommandCenter is a trademark of Deere & Company*

OUO6075,00013B4 -19-04FEB13-1/1

## Armrest Display Navigation (GreenStar™ 3 CommandCenter™ Touchscreen)

There are three methods of navigating around display screens.

**Selection Dial and Confirm Switch Method:**

Use selection dial (K) to highlight desired icons (A—J).

Once desired icon is highlighted, use the following dial and switches:

- **Selection Dial (K):** Rotate dial to:
  - Scroll through available items on selected page
  - Increase or decrease values in a selected item
- **Confirm Switch (L):** Once available item is selected, use selection dial and press switch to:
  - Select item
  - Toggle between available selections within item
  - Enter/Save values
- **Cancel Switch (M):** Press switch to cancel current selection.




H94422 —UN—04MAR10

**Shortcut Switch Method:**

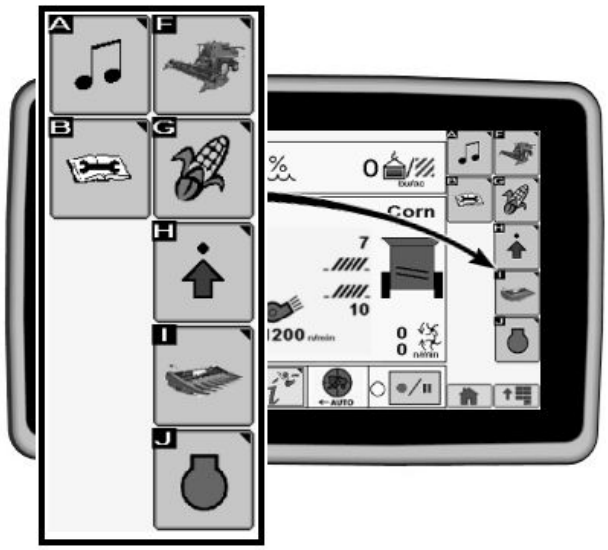
Shortcut switches (A—J) allow a one-touch selection of desired input field or corresponding item on display.

- **Shortcut Switches (A—J):** Press to select corresponding icon on armrest display or GreenStar™ Display (if equipped).

**Touchscreen Method:**

**IMPORTANT: Under no circumstance should touchscreen be contacted with an object harder or sharper than a fingertip (pen, pencil point, or any metal objects). Heavy pressure damages underlying components and voids warranty. Light amounts of pressure, if exerted continuously, can degrade touchscreen reliability.**

- Select and touch desired icon on display.




H1106777 —UN—04FEB13

**Navigational Switches:**

- **Main Menu Switch (N):** Press switch to change active application that display is running. Applications include:
  - Message Center
  - Display Settings
  - Layout Manager
  - Combine
  - Performance Monitor
  - GreenStar™
  - Video
  - Access Manager
- **Home Switch (O):** Displays user defined home screen. If multiple screens are defined, pressing home switch multiple times toggles through each defined home screen.

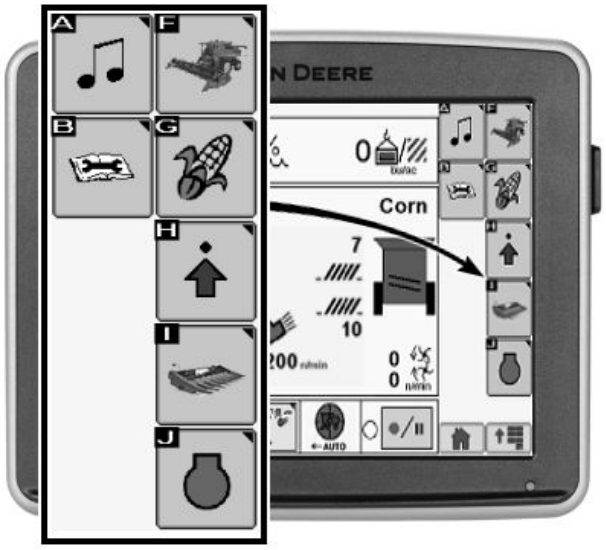
*GreenStar is a trademark of Deere & Company*
*CommandCenter is a trademark of Deere & Company*

OUO6075,00013B5 -19-04FEB13-1/1

## Armrest Display Navigation (GreenStar™ 3 2630 Display)




H94422 —UN—04MAR10




H106778 —UN—04FEB13

*NOTE: GreenStar™ 2 2600 display is not a supported armrest configuration. GreenStar™ 2 2600 display can only be mounted to the cornerpost.*

*If GreenStar™ 3 2630 display is mounted as a second display on cornerpost, user interface module (UIM) will not control the navigation on the screen. Display on cornerpost only functions as a touchscreen.*

**Selection Dial and Confirm Switch Method:**

Use selection dial (K) to highlight desired icons (A—J).

Once desired icon is highlighted, use the following dial and switches:

- **Selection Dial (K):** Rotate dial to:
  - Scroll through available items on selected page
  - Increase or decrease values in a selected item
- **Confirm Switch (L):** Once available item is selected on display using selection dial, press switch to:
  - Select item
  - Toggle between available selections within item
  - Enter/Save values
- **Cancel Switch (M):** Press switch to cancel a current selection.

**Shortcut Switch Method:**

Shortcut switches (A—J) allow a one-touch selection of desired input field or corresponding item on display.

- **Shortcut Switches (A—J):** Press to select corresponding icon on armrest display or GreenStar™ Display (if equipped).

**Touchscreen Method:**

**IMPORTANT: Under no circumstance should touchscreen be contacted with an object harder or sharper than a fingertip (pen, pencil point, or any metal objects). Heavy pressure damages underlying components and voids warranty. Light amounts of pressure, if exerted continuously, can degrade touchscreen reliability.**

- Touch desired icon on display.

**Navigational Switches:**

- **Main Menu Switch (N):** Press switch to change active application that display is running. Applications include:
  - Message Center
  - Display Settings
  - Layout Manager
  - Combine
  - Performance Monitor
  - GreenStar™
  - Video
  - Access Manager
- **Home Switch (O):** Displays user defined home screen. If multiple screens are defined, pressing home switch multiple times toggles through each defined home screen.

*GreenStar is a trademark of Deere & Company*

OUO6075,00013B6 -19-04FEB13-1/1

## Display Navigation Layouts

| Infotainment (A) |
|---|
| Diagnostic and Calibrations (B) |
| Combine Main (F) |
| Harvesting Information (G) [a] |
| Combine Setup (H) |
| Header Setup (I) [b] |
| Engine Information (J) |

[a] *Icon switches between corn and wheat based on type of header connected to machine.*
[b] *Icon changes based on type of header connected to machine.*

Touch or press confirm switch when desired icon is highlighted to advance to next display screen. See following information for further screen navigation.




H95608 —UN—30APR10

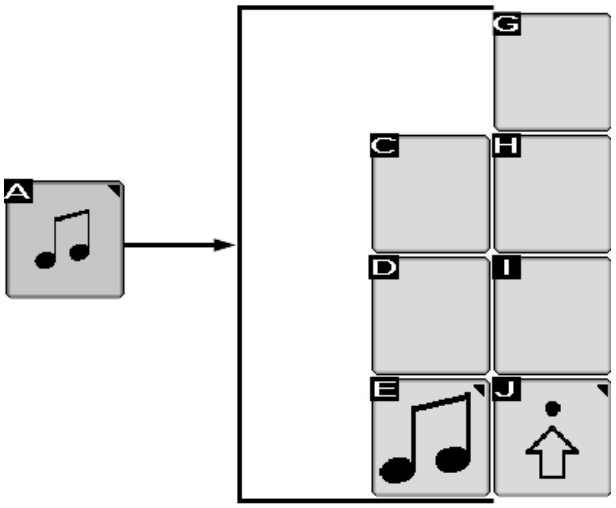
OUO6075,00015AB -19-02AUG13-1/8

### Infotainment

*NOTE: Icons within Infotainment will vary depending on what audio source was selected.*

| **Infotainment (A)** |
|---|

Touch or press confirm switch when desired icon is highlighted to advance to next display screen. See following information for further screen navigation.




H105326 —UN—01MAY12

**Continued on next page**

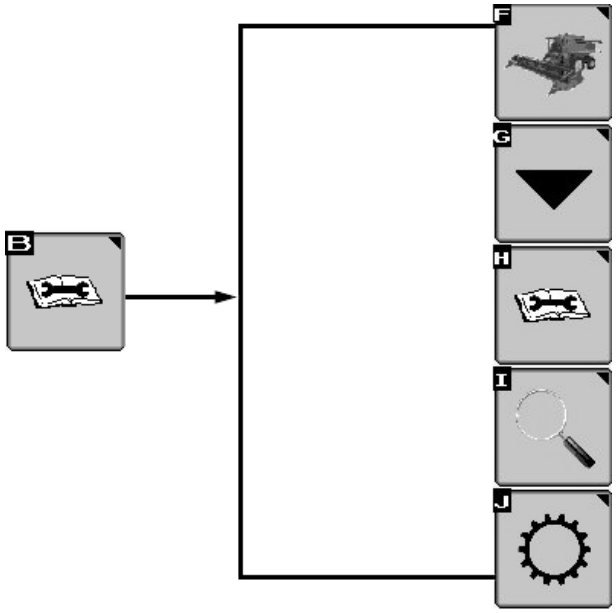
OUO6075,00015AB -19-02AUG13-2/8

## Diagnostic and Calibrations

| Diagnostic and Calibrations (B) | | |
|---|---|---|
| **Icon (F)** | **Icon (G)** | **Icon (H)** |
| Combine Main | Calibrations | Diagnostic Readings |
| | | |
| **Icon (I)** | **Icon (J)** [a] | |
| Special Tests | Tow Mode Setup | |

[a] *Only appears with ProDrive™ and push-button shift transmission machines.*

Touch or press confirm switch when desired icon is highlighted to advance to next display screen. See following information for further screen navigation.




H95605 —UN—05MAR10

OUO6075,00015AB -19-02AUG13-3/8

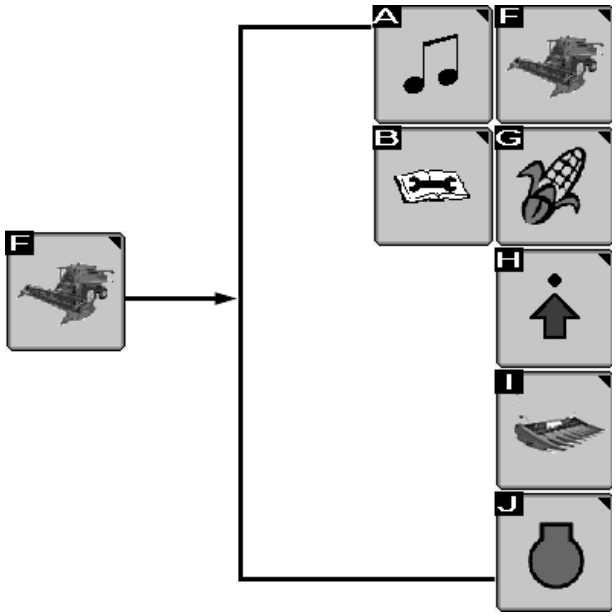
## Combine Main

*NOTE: Combine main icon appears on all display screens. Allows operator to navigate back to combine main screen.*

| Combine Main (F) | |
|---|---|
| **Icon (A)** | Infotainment |
| **Icon (B)** | Diagnostic and Calibrations |
| **Icon (F)** | Combine Main |
| **Icon (G)** | Harvesting Information[a] |
| **Icon (H)** | Combine Setup |
| **Icon (I)** | Header Setup[b] |
| **Icon (J)** | Engine Information |

[a] *Icon switches between corn and wheat based on type of header connected to machine.*
[b] *Icon changes based on type of header connected to machine.*

Touch or press confirm switch when desired icon is highlighted to advance to next display screen. See following information for further screen navigation.




H95612 —UN—30APR10

**Continued on next page**

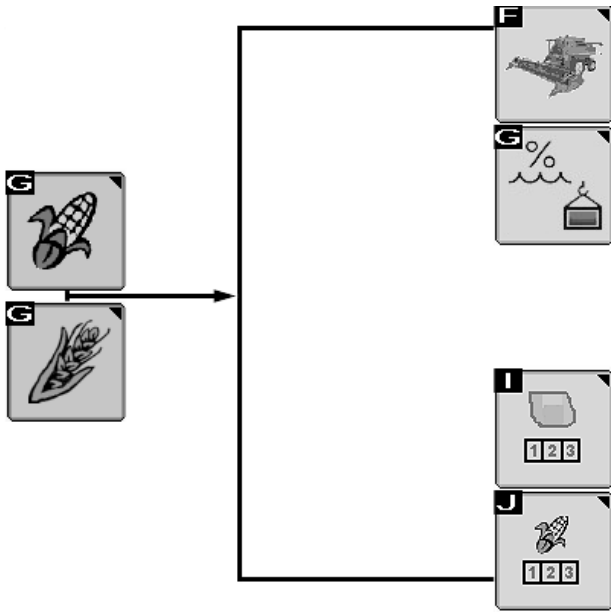
OUO6075,00015AB -19-02AUG13-4/8

## Harvesting Information

| Harvesting Information (G) [a] | |
|---|---|
| **Icon (F)** | **Icon (G)** |
| Combine Main | Yield Information |
| | Moisture Information |
| | Change Cut Width/Rows[b] |
| | |
| **Icon (I)[c]** | **Icon (J)[c]** |
| Field Totals | Crop Totals |

*[a]Icon switches between corn and wheat based on type of header connected to machine.*
*[b]If GreenStar™ display is installed, cut width/rows are adjusted through GreenStar™ display and only shown on armrest display.*
*[c]If GreenStar™ display is installed, Field Totals page and Crop Totals Page will not be available. Totals will be viewed in GreenStar™ display.*

Touch or press confirm switch when desired icon is highlighted to advance to next display screen. See following information for further screen navigation.




H95601 —UN—04OCT10

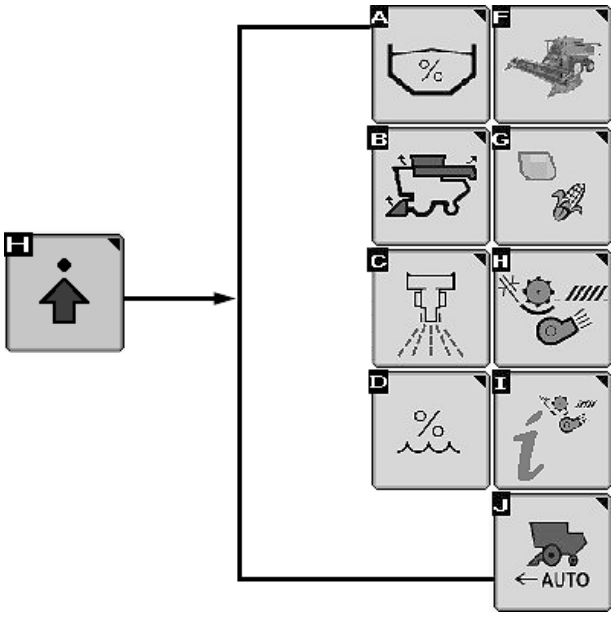
OUO6075,00015AB -19-02AUG13-5/8

## Combine Setup

| Combine Setup (H) | | |
|---|---|---|
| **Icon (A)** | **Icon (B)** | **Icon (C)** |
| Grain Tank Level Setup | Folding Functions Setup[a] | Residue Management Setup[b] |
| | | |
| **Icon (D)** | **Icon (F)** | **Icon (G)** |
| Moisture Alarm | Combine Main | Crop Setup[c] |
| Moisture Correction (Offset) | | Grain Loss Calibration |
| Yield Units | | Advanced Grain Loss Setup |
| | | |
| **Icon (H)** | **Icon (I)** | **Icon (J)** |
| Automatic Combine Adjust Setup | Interactive Combine Adjustment[d] | Harvest Smart™ Feed Rate Setup[e] |

*[a]If equipped with folding grain tank covers.*
*[b]If equipped with Premium Flex Residue Chopper/Spreader.*
*[c]If GreenStar™ display is installed, Crop will be setup in GreenStar™ display.*
*[d]If equipped with Interactive Combine Adjustment.*
*[e]If equipped with Harvest Smart™ Feed Rate.*

Touch or press confirm switch when desired icon is highlighted to advance to next display screen. See following information for further screen navigation.




H1105780 —UN—05DEC12

**Continued on next page**

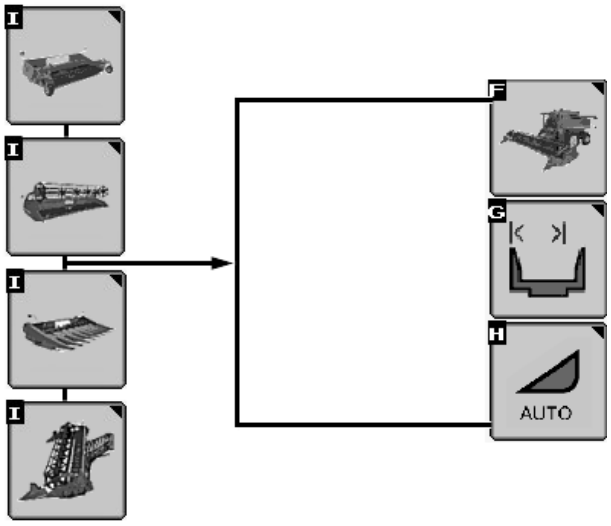
OUO6075,00015AB -19-02AUG13-6/8

## Header Setup

| Header Setup (I) [a] | |
|---|---|
| **Icon (F)** | **Icon (G) [a]** |
| Combine Main | Header Width Setup |
| | Header Hours |
| | Record Stop Height |
| | |
| **Icon (H)** | |
| Automatic Header Height Modes | |

[a] *Icon changes based on type of header connected to machine.*

Touch or press confirm switch when desired icon is highlighted to advance to next display screen. See following information for further screen navigation.




H95603 —UN—30APR10

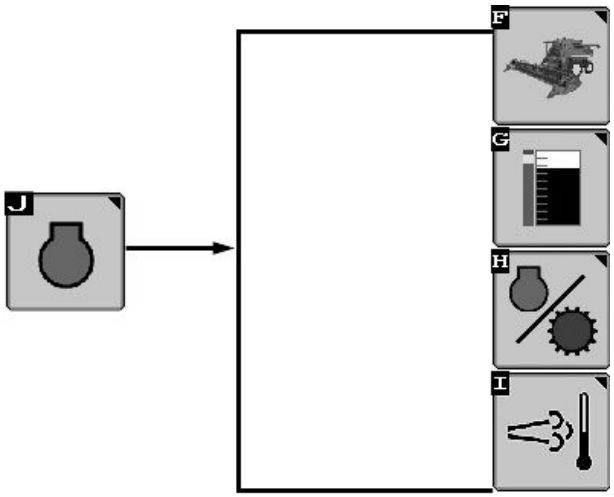
OUO6075,00015AB -19-02AUG13-7/8

## Engine Information

| Engine Information (J) | |
|---|---|
| **Icon (F)** | **Icon (G)** |
| Combine Main | Engine and Separator Hours |
| | Power Meter |
| | Exhaust Filter Cleaning[a] |
| | |
| **Icon (H)** | **Icon (I)** |
| Engine Speed Management[b] | Engine Cool Down Progress[c] |

[a] *Appears when equipped with Interim Tier 4/Stage III B or Final Tier 4/Stage IV engines.*
[b] *Appears when equipped with a ProDrive™ transmission.*
[c] *Appears when equipped with Final Tier 4/Stage IV engines and when a cool down is in progress.*

Touch or press confirm switch when desired icon is highlighted to advance to next display screen. See following information for further screen navigation.




H108616 —UN—26JUL13

OUO6075,00015AB -19-02AUG13-8/8

## Display Icon Identification

**Home (1):** displays current machine settings previously set by operator.

**Harvesting Information (2):** displays current harvest monitor information, performance/productivity, totals and allows operator to adjust desired settings.

**Setup (3):** displays current machine settings, grain loss sensitivity (seed size), current header width, moisture setup and Harvest Smart setup (if equipped).

**Diagnostics and Calibration (4):** displays machine calibrations, diagnostic readings templates and special tests (templates).

**Area Harvested (5):** displays amount of area harvested.

**Distance Harvested (6):** displays total distance traveled for current active load.

**Generic Cleaning Shoe Element (7):** displays a generic icon for both chaffer/sieve elements settings on home page.

**Chaffer (8):** displays current chaffer position.

**Sieve (9):** displays current sieve position.

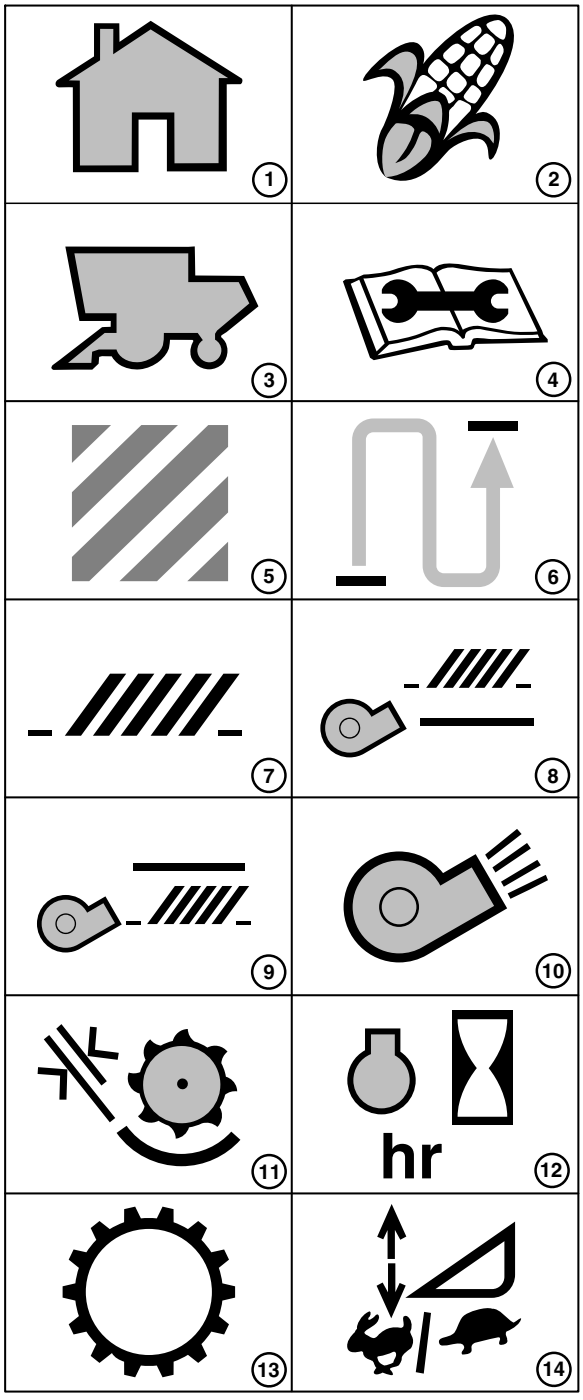
**Cleaning Fan (10):** displays current fan speed.

**Threshing Speed/Clearance (11):** displays current rotor speed and clearance.

**Engine Hours (12):** displays accumulated engine hours.

**CommandTouch Multi-Speed Feeder House Gear (If Equipped) (13):** displays selected gear for feeder house speed.

**Header Height Rate and Sensitivity (14):** displays current rate and sensitivity settings.




H90897 —UN—28FEB08

Continued on next page

OUO6075,00003FE -19-28SEP10-1/3

**Recording ON/OFF (15):** displays if recording is ON/OFF.

**Vane Angle (if Equipped) (16):** displays current vane angle position.

**Enter/Accept (17:)** allows operator to enter/accept desired information or settings.

**Calibrate (18):** allows operator to calibrate certain features.

**Next Step (19):** allows operator to view next page of information.

**Yield (20):** displays average or instantaneous crop yield.

**Moisture (21):** displays average or instantaneous moisture.

**Threshing Speed (22):** displays current threshing speed.

**Backshaft Speed (23):** displays current backshaft speed.

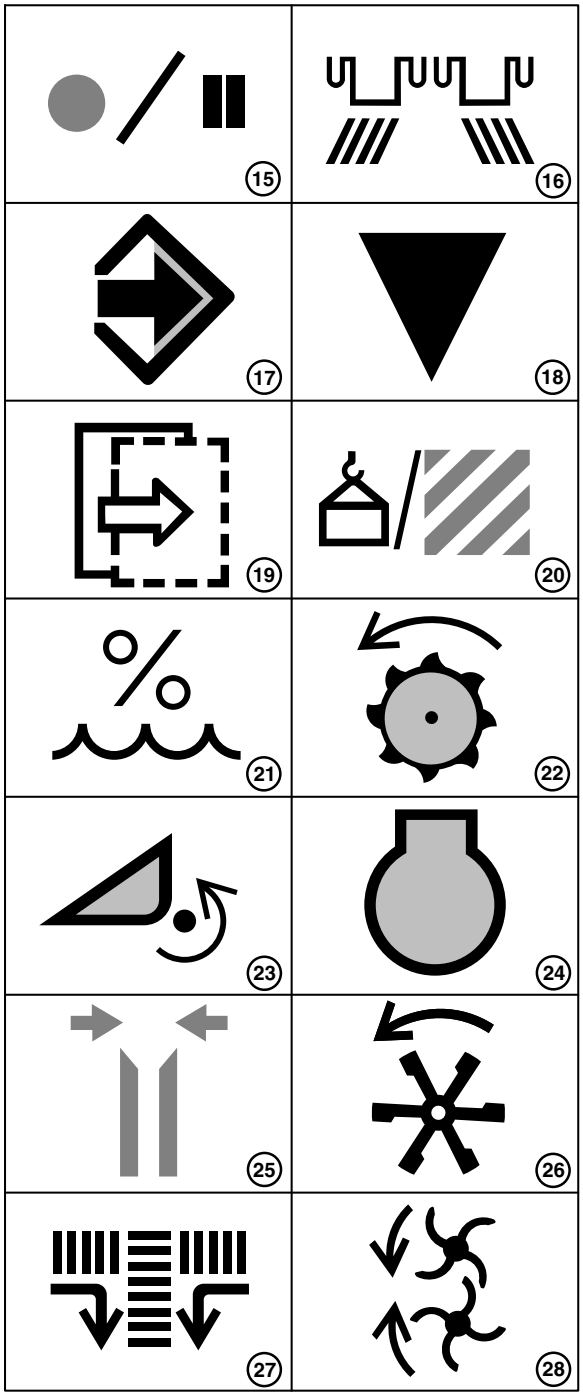
**Engine Speed (24):** displays current engine speed.

**Deck Plate Spacing (25):** displays current deck spacing position.

**Reel Speed (26):** displays current reel speed.

**Draper Speed (27):** displays current draper speed (if equipped).

**Spreader Speed (28):** displays current spreader speed (if equipped).




H90898 —UN—28FEB08

Continued on next page

OUO6075,00003FE -19-28SEP10-2/3

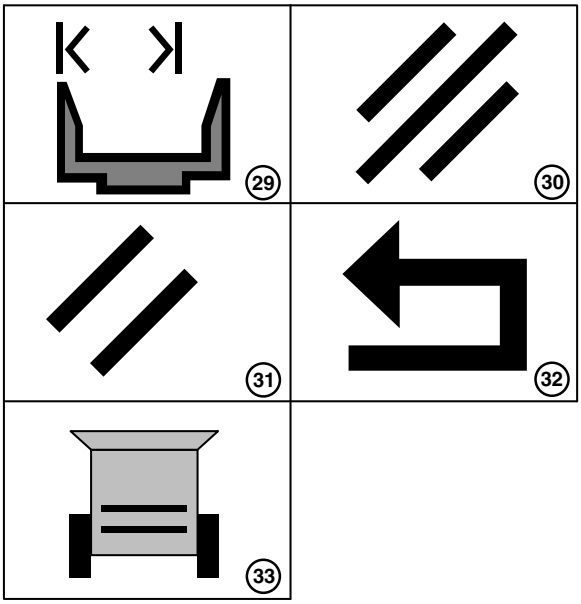
**Cut Width (29):** displays current cut width position.

**Cancel (30):** allows operator to cancel desired information or settings.

**Clear (31):** allows operator to clear desired information or settings.

**Return/Back (32):** allows operator to view previous page.

**Self-Leveling Shoe (If Equipped) (33):** displays current angle for chaffer/sieve elements.




H90899 —UN—28FEB08

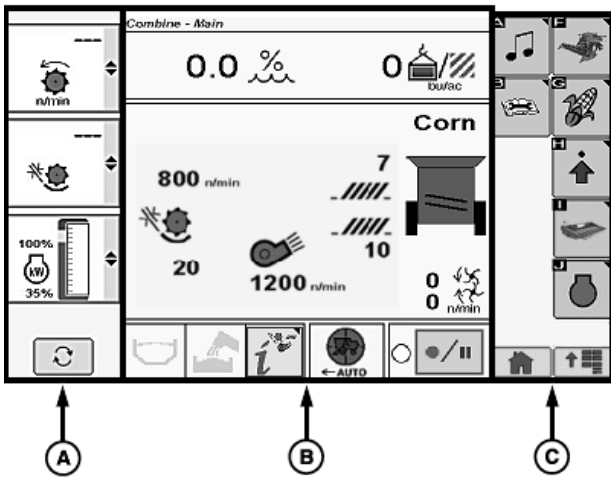
OUO6075,00003FE -19-28SEP10-3/3

## Display Region Layouts

*NOTE: Displayed screen shown is reference only. Screens will appear differently due to machine options.*

Display is divided into three regions:

- **Left Region (A):** allows operator to monitor and toggle between the following:
  - Detail Machine Settings
  - Guidance Information
  - Performance Monitor Settings
- **Center Region (B):** allows operator to view and change machine settings in a wide variety of applications.
- **Right Region (C):** displays icon options available to operator from current screen.
  - Selecting desired icon in right region displays a new screen, function, or allows changing of settings.




H105825 —UN—14JAN13

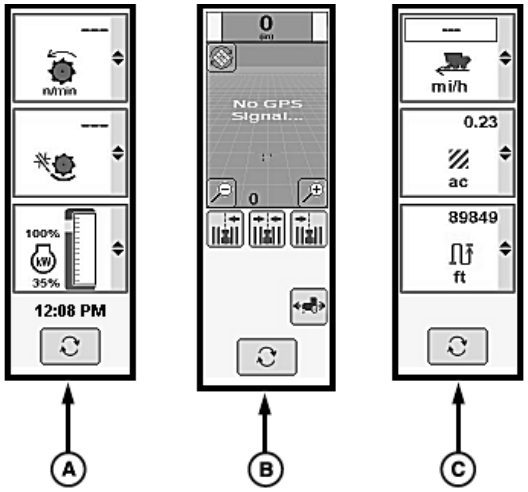
OUO6075,00011C1 -19-19SEP12-1/1

## Display Left Region Layouts

*NOTE: Displayed screen shown is reference only. Screens will appear differently due to machine options.*

*Display clock only appears on the detail machine settings region when equipped with a GreenStar™ 3 CommandCenter™ Touchscreen or GreenStar™ 3 CommandCenter™ Non-Touchscreen armrest display.*

- **Detail Machine Settings (A):** allows operator to choose and monitor three left region boxes at one time. Each box displays an ongoing function or specific machine status.
- **Guidance Information (B):** allows operator to view and change guidance settings.
- **Performance Monitor Settings (C):** allows operator the ability to choose and monitor three left region boxes at one time. Each box displays an ongoing function or specific machine status.



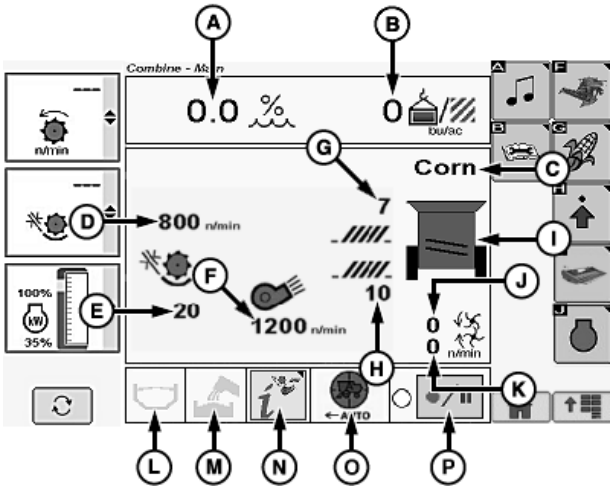

H1105837 —UN—19SEP12

OUO6075,00011C2 -19-05DEC12-1/1

## Combine—Main Screen

*NOTE: Viewable machine readings only.*

- Moisture (If Equipped) (A)
- Yield (If Equipped) (B)
- Crop (C)
- Machine Settings
  - Threshing Speed (D)
  - Threshing Clearance (E)
  - Fan Speed (F)
  - Chaffer Clearance (G)
  - Sieve Clearance (H)
  - Self-Leveling Shoe (If Equipped) (I)
- Spreader Speed/Chopper Vane Angle Setting 1 (If Equipped) (J)
- Spreader Speed/Chopper Vane Angle Setting 2 (If Equipped) (K)
- Grain Tank 3/4 and Full Status (L)
- Unloading Auger Out/Engage Status (M)
- Interactive Combine Adjustment Indicator (N)
- Harvest Smart™ Feed Rate Status (OFF, Smart, or Capacity) (If Equipped) (O)

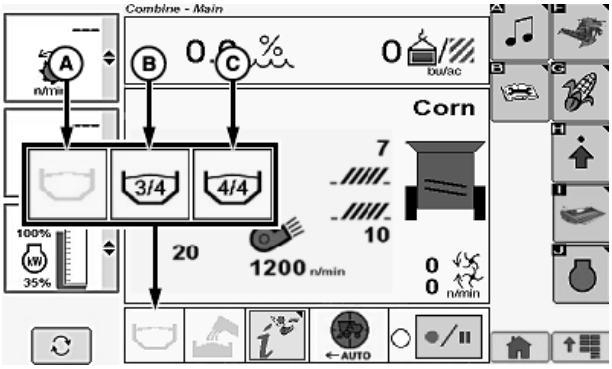



H1105821 —UN—14JAN13

- Manual Recording (ON/OFF) (P)

OUO6075,00011C3 -19-13JUN13-1/1

## Grain Tank Fill Sensor (System Monitoring Icons)




H106527 —UN—14JAN13

Grain Tank Fill Sensor Icons:

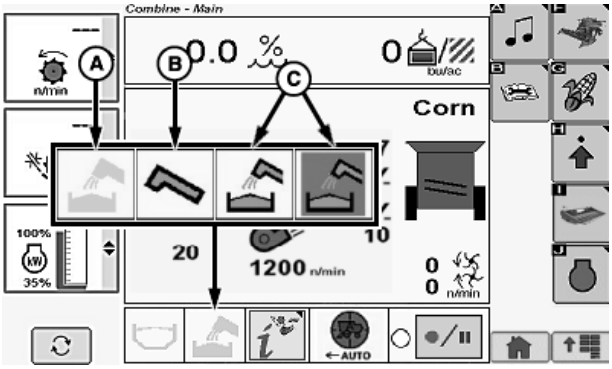
- (A) Icon - indicates that grain tank level has not reached the 3/4 full or 4/4 full sensor
- (B) Icon - indicates that grain tank level has reached the 3/4 full sensor

  *NOTE: Every 30 seconds 4/4 full icon flashes for 8 seconds indicating grain tank is full and MUST be unloaded.*

- (C) Icon - indicates that grain tank level has reached the 4/4 full sensor

OUO6075,000138C -19-15JAN13-1/1

## Unloading Auger (System Monitoring Icons)




H106528 —UN—14JAN13

Unloading Auger Icons:

- (A) Icon - indicates unloading auger is not swung out and unload system is not engaged
- (B) Icon - indicates unloading auger is swung out

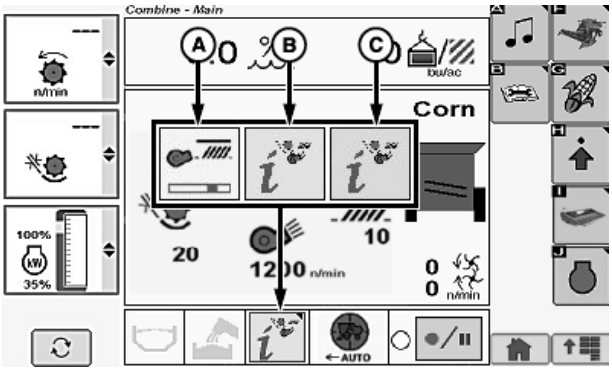
  *NOTE: Every 3 minutes icon changes to a blue background and flashes for 8 seconds indicating unloading auger is engaged.*

- (C) Icons - indicate unloading auger is swung out and unload system is currently engaged

OUO6075,000138D -19-16JAN13-1/1

## Interactive Combine Adjustment (System Monitoring Icons)

*NOTE: It takes 30 seconds for Interactive Combine Adjustment icon to appear on display.*



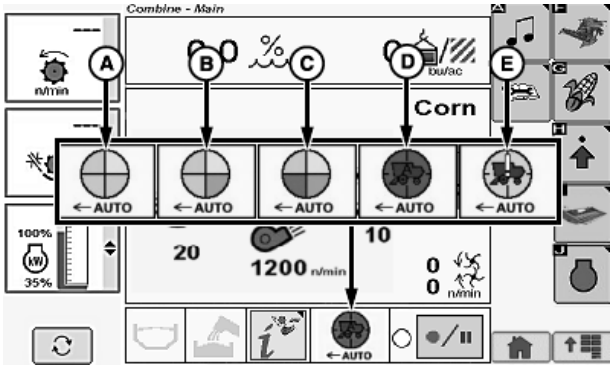

H106295 —UN—14JAN13

Interactive Combine Adjustment Indicators:

- (A) Indicator (System Busy) - indicates system adjustments are being performed. Green segment underneath icon moves back and forth indicating that machine is applying settings and waiting for system to stabilize.
- (B) Indicator (Yellow Indicator) - indicates system is ready for verification of improvement settings. Icon with a yellow background flashes or turns solid (flashes for 30 seconds and turns solid) indicating that system made adjustments and is waiting for operator feedback (rating of performance parameters).
- (C) Indicator (Red Indicator) - indicates system has detected a condition shift. Icon with a red background indicates to operator that system has detected a change in machine performance. System believes that operator should evaluate performance of machine and consider optimizing the machine settings.

OUO6075,000135F -19-13JUN13-1/1

## Harvest Smart™ Feed Rate (If Equipped) (System Monitoring Icons)




H106523 —UN—14JAN13

Harvest Smart™ Feed Rate Icons:

- (A) Icon - system is installed on machine, but currently OFF
- (B) Icon - system has been placed in a valid operating mode (Smart or Capacity)
- (C) Icon - system is ready to be activated by the operator
- (D) Icon - system is active and working normally
- (E) Icon - system is limited by ground speed setting of multi-function lever

Refer to Harvest Smart™ Feed Rate—Status Identifications in the Harvest Smart™ Feed Rate section for further information.

OUO6075,000138A -19-16JAN13-1/1

## Manual Recording ON/OFF

Recording screen shows data recording status (ON/OFF).

To start recording data, all the following must occur or be turned ON manually:

- Separator engaged
- Header engaged
- Engine at high idle
- Header lowered to recording position
- Client, Farm, and Field must be named

To stop recording, one of the following must occur:

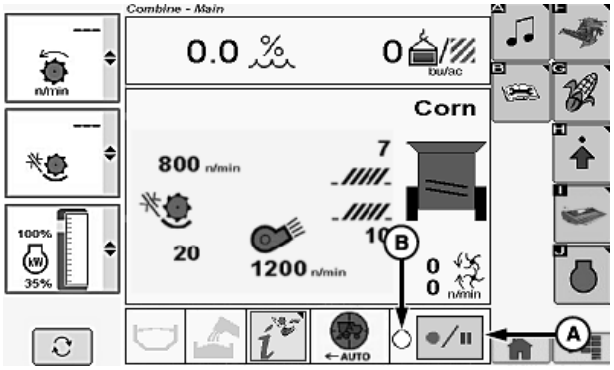
- Header raised past record stop height setpoint
- Header is disengaged
- Recording is manually turned OFF

Recording can be manually stopped and restarted without raising header or disengaging separator (example; when approaching headlands or end rows already harvested, waterways for which recording data is not desired).

Touch or press confirm switch when recording ON/OFF icon (A) is highlighted.

Recording ON/OFF indicator (B) toggles between an open or filled circle.

- Open circle - Recording OFF




H105822 —UN—14JAN13

**A—Recording ON/OFF Icon** **B—ON/OFF Indicator**

- Filled flashing circle - Recording ON

Touch or press confirm switch again to turn recording ON and manually resume recording. Push header lower button on multi-function lever (slight touch of header lower button starts recording).

OUO6075,00011C4 -19-19SEP12-1/1

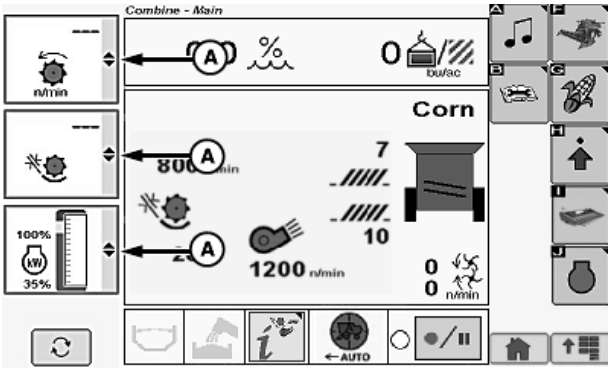
## Reconfigure Detail Machine Settings

*NOTE: Shows detailed machine settings. Allows operator to reconfigure screen and provides the ability to monitor three items at once. Items vary depending upon machine configuration.*

Touch or press confirm switch when desired machine setting icon (A) is highlighted.

Machine settings menu displays the following:

- Moisture
- Yield
- Cleaning Fan Speed
- Threshing Speed
- Threshing Clearance
- Chaffer Clearance
- Sieve Clearance
- Backshaft Speed
- CommandTouch™ Multi-Speed Feeder House Gear (If Equipped)
- Deck Plate Spacing
- Reel Speed
- Draper Speed
- Spreader Speed
- Harvested Weight Counter




H105823 —UN—14JAN13

**A—Machine Setting Icons**

- Productivity (Yield per hour)
- Grain Tank Level (%)
- Vehicle/Separator Hours
- Power Meter

Touch or press confirm switch when desired machine setting is highlighted.

Repeat procedure on remaining menus as desired.

OUO6075,00011C5 -19-19SEP12-1/1

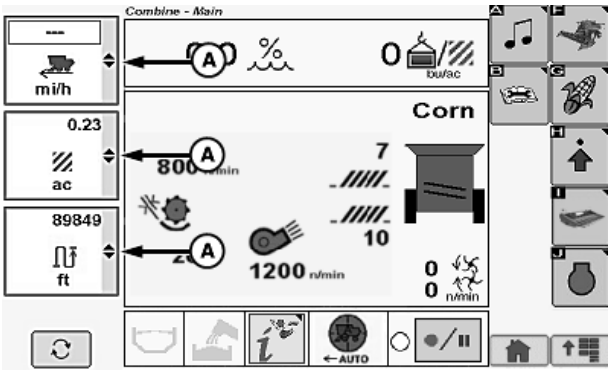
## Reconfigure Performance Monitor Settings

*NOTE: Shows detailed performance monitor settings. Allows operator to reconfigure screen and provides the ability to monitor three items at once. Items vary depending upon machine configuration.*

Touch or press confirm switch when desired performance monitor setting icon (A) is highlighted.

Performance monitor setting menu displays the following:

- Vehicle Ground Speed
- Global Position Satellite (GPS) Speed
- Engine Speed
- Fuel Per Hour
- Fuel Per Area
- Area Per Hour
- Area Counter
- Battery Voltage
- Distance Counter
- Crop Weight Counter
- Crop Moisture Counter
- Total Machine Area Counter




H105824 —UN—14JAN13

**A—Performance Monitor Setting Icons**

Touch or press confirm switch when desired performance monitor setting is highlighted.

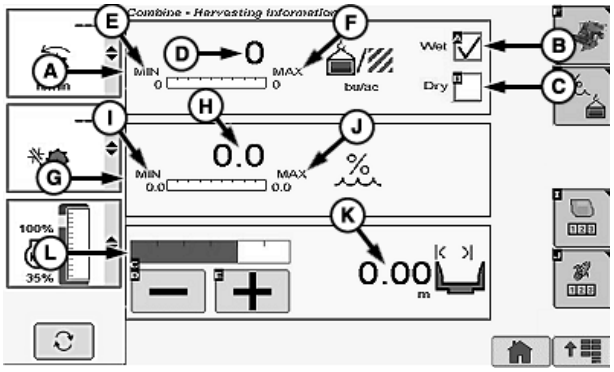
Repeat procedure on remaining menus as desired.

OUO6075,00011C6 -19-19SEP12-1/1

## Harvesting Information Screen

**Harvesting Information:**

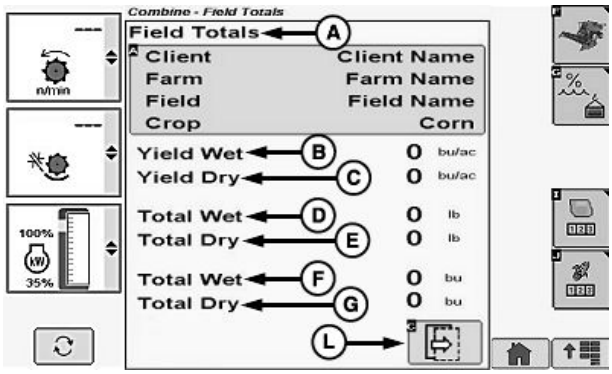
- Yield (A)
  - Wet (B)
  - Dry (C)
  - Instantaneous (Recording ON) (D)
  - Average (Recording OFF) (D)
  - Minimum (E)
  - Maximum (F)
- Moisture (G)
  - Instantaneous (Recording ON) (H)
  - Average (Recording OFF) (H)
  - Minimum (I)
  - Maximum (J)
- Cut Width (K)



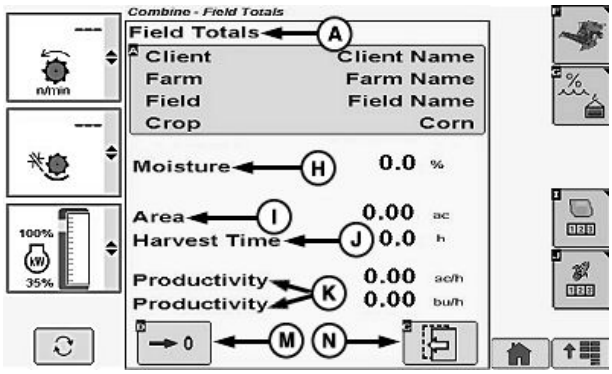

H94540 —UN—05OCT10

  - Increase/Decrease (L)

OUO6075,000040E -19-24MAY11-1/3




H94542 —UN—07OCT10




H94543 —UN—05OCT10

**Field Totals:**

*NOTE: Farm/Field naming is setup in the GreenStar application. Refer to GreenStar manual for further information.*

*The following appears on GreenStar display (if equipped) instead of on armrest display.*

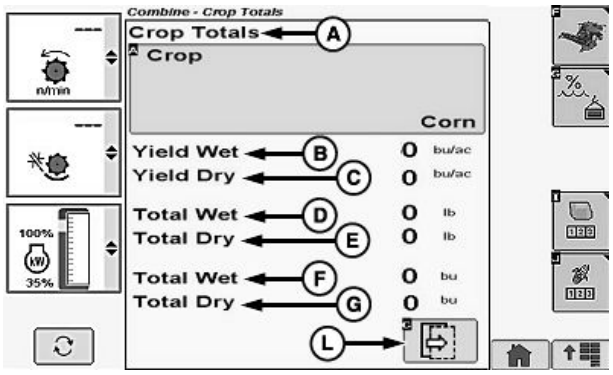
*If machine is not equipped with moisture sensor, only the following Field Totals information appears:*

- *Area*
- *Harvest Time*
- *Productivity*

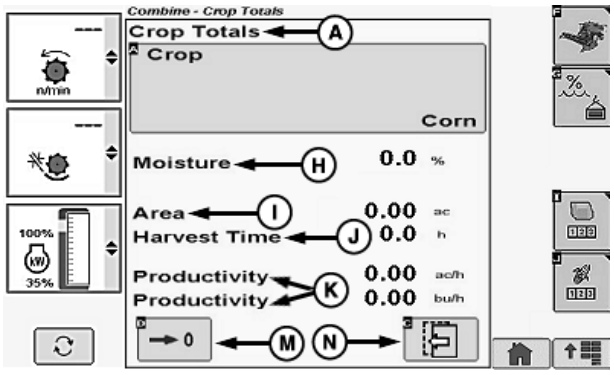
- Field Totals (A)
- Yield Wet (B)
- Yield Dry (C)
- Total Wet (Weight lb. or kg) (D)
- Total Dry (Weight lb. or kg) (E)
- Total Wet (Yield Units) (F)
- Total Dry (Yield Units) (G)
- Moisture (H)
- Area (I)
- Harvest Time (J)
- Productivity (K)
- Items to select
  - Next Page Icon (L)
  - Clear Totals Icon (M)
  - Previous Page Icon (N)

**Continued on next page**

OUO6075,000040E -19-24MAY11-2/3




H94544 —UN—05OCT10




H94545 —UN—05OCT10

**Crop Totals:**

*NOTE: Farm/Field naming is setup in the GreenStar application. Refer to GreenStar manual for further information.*

*The following appears on GreenStar display (if equipped) instead of on armrest display.*

*If machine is not equipped with moisture sensor, only the following Field Totals information appears:*

- *Area*
- *Harvest Time*
- *Productivity*

- Crop Totals (A)
  - Yield Wet (B)
  - Yield Dry (C)
  - Total Wet (Weight lb. or kg) (D)
  - Total Dry (Weight lb. or kg) (E)
  - Total Wet (Yield Units) (F)
  - Total Dry (Yield Units) (G)
  - Moisture (H)
  - Area (I)
  - Harvest Time (J)
  - Productivity (K)
- Items to select
  - Next Page Icon (L)
  - Clear Totals Icon (M)
  - Previous Page Icon (N)

OUO6075,000040E -19-24MAY11-3/3

## Select Yield Wet or Dry and Cut Width Change

**Yield Wet or Dry:**

*NOTE: Harvesting information icon switches between corn and wheat based on type of header connected to machine.*

Touch or press confirm switch when harvesting information icon is highlighted.

Touch or press confirm switch when yield information icon (A) is highlighted.

Touch or press confirm switch when desired yield wet box (B) or yield dry box (C) is highlighted.

Box displays a checkmark indicating which was selected.

- Yield Wet - shows number of yield units per number of area units at current harvesting conditions.
- Yield Dry - shows number of yield units per number of area units after taking into consideration the removal of moisture.

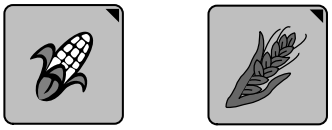
**Cut Width:**

*NOTE: If GreenStar display is installed, cut width/rows are adjusted through GreenStar display and only shown on armrest display.*

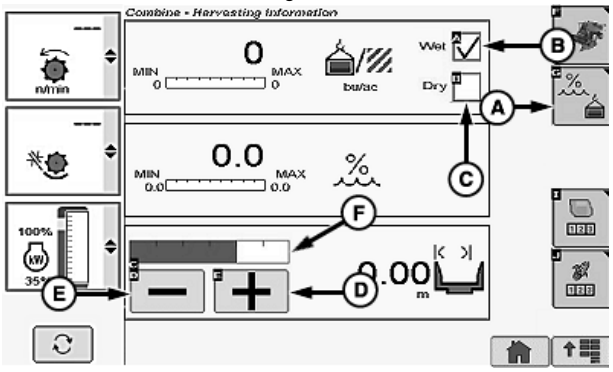
Touch or press confirm switch when plus (+) icon (D) or minus (-) icon (E) is highlighted. Desired cut width is represented on bar graph (F).

*NOTE: Cut width number updates depending on which icon was selected.*

H96262 —UN—04MAY10



*Harvesting Information Icon*




H105591 —UN—27JUN12

**A—Yield Information Icon**
**B—Yield Wet Box**
**C—Yield Dry Box**
**D—Plus Icon**
**E—Minus Icon**
**F—Cut Width Adjust Bar Graph**

OUO6075,000040F -19-27JUN12-1/1

## Clear Field Totals

*NOTE: The following appears on GreenStar display (if equipped) instead of on armrest display.*

*If machine is not equipped with moisture sensor, only the following Field Totals information appears:*

- *Area*
- *Harvest Time*
- *Productivity*

*Harvesting information icon switches between corn and wheat based on type of header connected to machine.*

Touch or press confirm switch when harvesting information icon is highlighted.

Touch or press confirm switch when field totals icon (A) is highlighted.

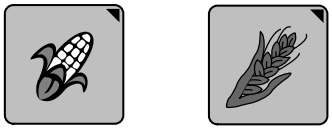
Touch or press confirm switch when next page icon (B) is highlighted to advance to next page.

Touch or press confirm switch when desired icon is highlighted:

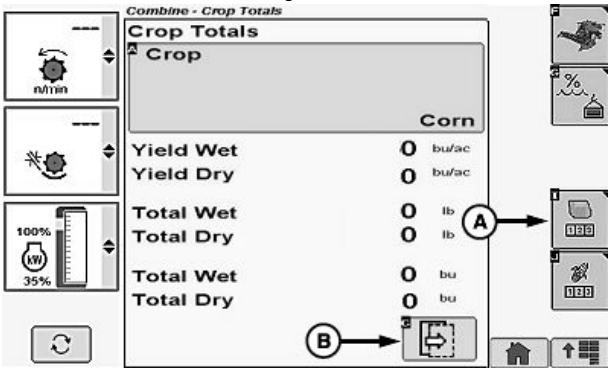
- Field Totals Reset Icon (C) - deletes field totals for selected farm/field/crop.
- Previous Page Icon (D) - allows operator to view previous page.

**A—Field Totals Icon**
**B—Next Page Icon**
**C—Field Totals Reset Icon**
**D—Previous Page Icon**

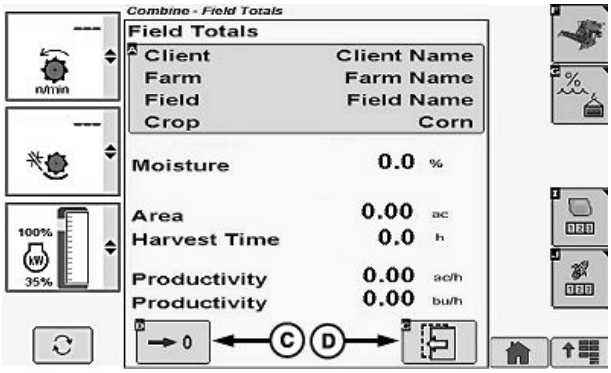
H96262 —UN—04MAY10



*Harvesting Information Icon*




H94548 —UN—05OCT10




H94549 —UN—05OCT10

OUO6075,0000411 -19-03MAY10-1/1

## Clear Crop Totals

*NOTE: The following appears on GreenStar display (if equipped) instead of on armrest display.*

*If machine is not equipped with moisture sensor, only the following Field Totals information appears:*

- *Area*
- *Harvest Time*
- *Productivity*

*Harvesting information icon switches between corn and wheat based on type of header connected to machine.*

Touch or press confirm switch when harvesting information icon is highlighted.

Touch or press confirm switch when crop totals icon (A) is highlighted.

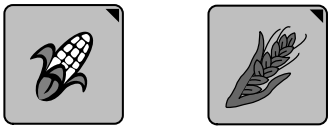
Touch or press confirm switch when next page icon (B) is highlighted to advance to next page.

Touch or press confirm switch when desired icon is highlighted:

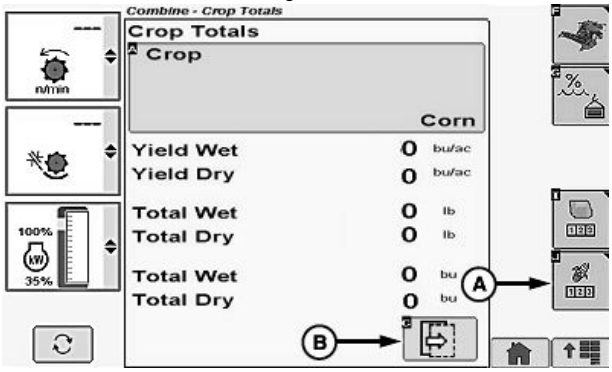
- Crop Totals Reset Icon (C) - deletes crop totals for selected crop.
- Previous Page Icon (D) - allows operator to view previous page.

**A—Crop Totals Icon**
**B—Next Page Icon**
**C—Crop Totals Reset Icon**
**D—Previous Page Icon**

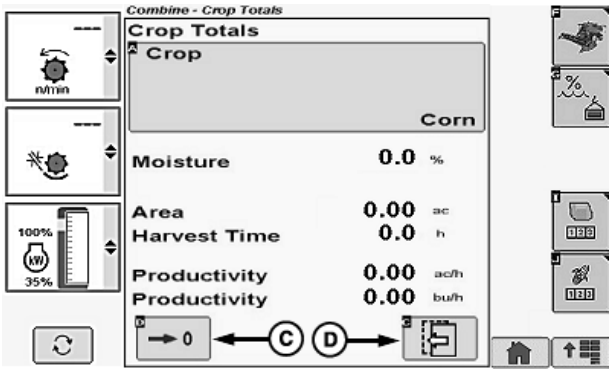
H96262 —UN—04MAY10



*Harvesting Information Icon*




H94550 —UN—05OCT10




H94551 —UN—05OCT10

OUO6075,0000412 -19-03MAY10-1/1

## Combine Setup Screen

**Grain Tank Level Settings:**

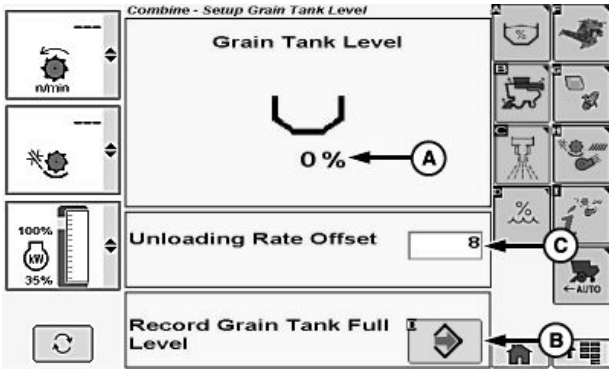
*NOTE: Allows operator to calibrate desired grain tank fullness level.*

- Grain Tank Level Percentage (A)
- Save Icon (B) - Allows operator to save grain tank full level

**Unloading Rate Offset Settings:**

*NOTE: Allows operator to change calculated unloading rate offset values.*

- Unloading Rate Offset (C)
  - Offset Rate (-15 to 15)




H105793 —UN—05DEC12

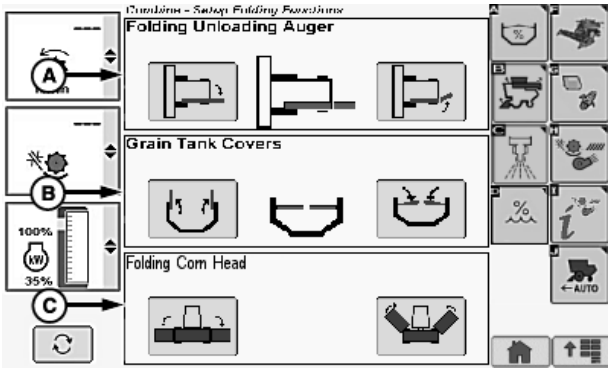
**Continued on next page**

OUO6075,00015B1 -19-30JUL13-1/8

**Folding Function Settings:**

*NOTE: Shows all optional folding features if equipped.*

- Folding Unloading Auger (A) (If Equipped)
  - Auger Position Indicator
  - Unfold Icon
  - Fold Icon
- Grain Tank Covers (B) (If Equipped)
  - Grain Tank Position Indicator
  - Unfold Icon
  - Fold Icon
- Kemper Corn Head (C) (If Equipped)
  - Unfold Icon
  - Fold Icon

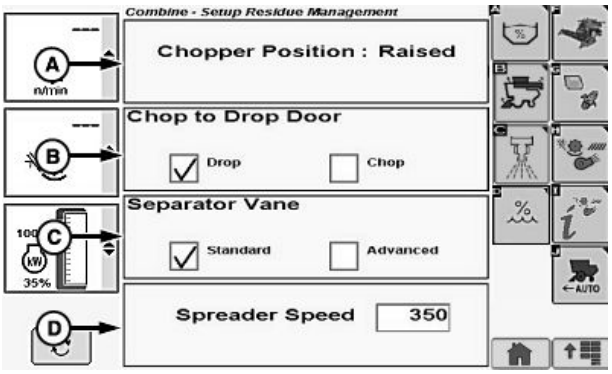



H105794 —UN—05DEC12

OUO6075,00015B1 -19-30JUL13-2/8

**Residue Management Settings:**

- Chopper Position (A) (If Equipped)
  - Raised
  - Lowered
- Chop-to-Drop Door Position (B) (If Equipped)
  - Open
  - Closed
- Separator Vane Position (C) (If Equipped)
  - Standard
  - Advanced
- Spreader Speed (D) (Advanced PowerCast™ Spreader)
  - 350 - 550 rpm (Corn) (Default 500 rpm)
  - 600 - 800 rpm (Small Grain) (Default 700 rpm)




H105795 —UN—05DEC12

OUO6075,00015B1 -19-30JUL13-3/8

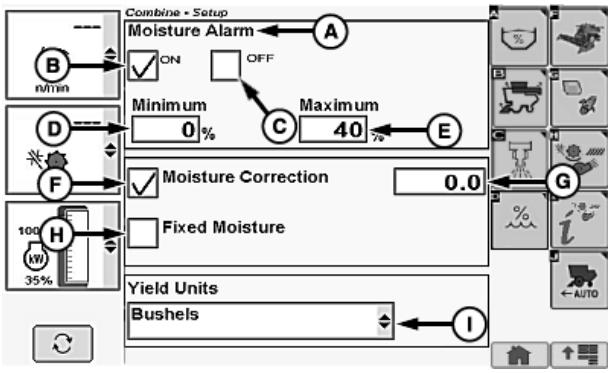
**Moisture Settings:**

*NOTE: Only appears if equipped with moisture sensor.*

- Moisture Alarm (A)
  - ON (B)
  - OFF (C)
  - Minimum Alarm (1 - 50%) (D)
  - Maximum Alarm (1 - 60%) (E)
- Moisture Correction (-25.0 to 25.0, increments of 0.1) (F)
  - Manual Offset Setting (G)
  - Fixed Moisture (H)

**Yield Units Settings:**

- Harvesting Yield Units (I)
  - Fixed List




H105789 —UN—05DEC12

**Continued on next page**

OUO6075,00015B1 -19-30JUL13-4/8

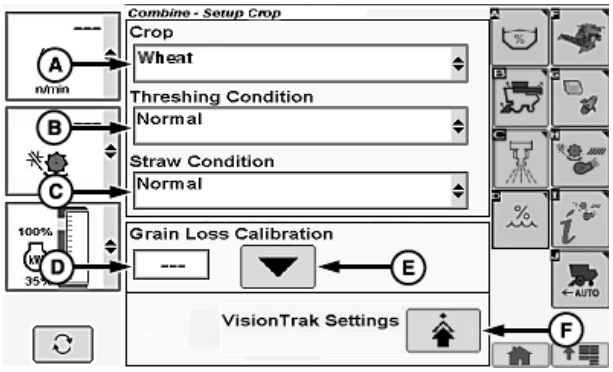
**Crop Settings:**

*NOTE: Farm/Field naming is setup in the GreenStar™ application. Refer to GreenStar™ manual for further information.*

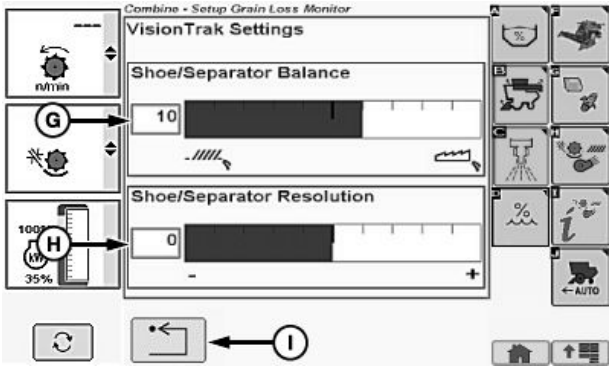
- Crop (A)[1]
  - Fixed List
- Threshing Condition (B)
  - Fixed List
- Straw Condition (C)
  - Fixed List

**Grain Loss Calibration:**

- Grain Loss Calibration
  - Calibration Reference Number (D)
  - Calibration Icon (E)
- VisionTrak™ Settings Icon (F) - Allows operator to advance to next page to fine-tune shoe/separator losses for selected crop
  - Shoe/Separator Balance (-50, default is 0, 50) (G)
  - Shoe/Separator Resolution (-50, default is 0, 50) (H)
- Return/Back Icon (I) - Allows operator to return to previous page




H108624 —UN—26JUL13




H108630 —UN—26JUL13

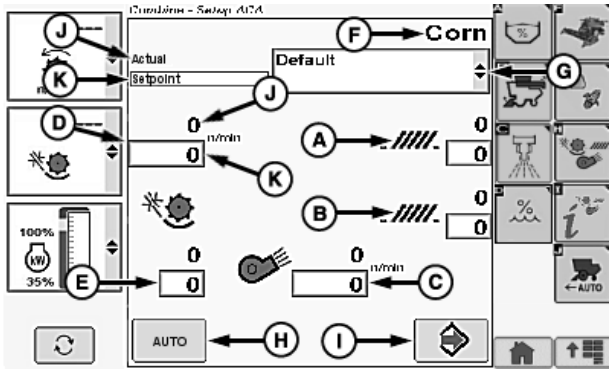
[1]*Appears on GreenStar™ display (if equipped) instead of on armrest display.*

OUO6075,00015B1 -19-30JUL13-5/8

**Machine Settings:**

- Automatic Combine Adjust (ACA) (Numeric Entry)
  - Chaffer Position (A)
  - Sieve Position (B)
  - Fan Speed (C)
  - Threshing Speed (D)
  - Threshing Clearance (E)
  - Harvested Crop (Viewable Only) (F)
- Crop Modifiers (G)
  - Default
  - Dry (Default)
  - Wet (Default)
  - New
  - Cleanout
- Auto Icon (H) - Desired machine settings are chosen by operator and automatically adjust to settings shown on display
- Save Icon (I) - Allows operator to save personal machine settings if new was chosen from crop modifiers menu

*NOTE: Personalizing machine settings will not overwrite factory settings.*




H105787 —UN—05DEC12

- Actual (setpoint value in black) (J) - indicates current setpoint value of machine
- Setpoint (setpoint value in blue) (K) - setpoint value automatically increases or decreases when plus (+) or minus (-) symbol is touched or selection dial is turned

*NOTE: Machine automatically adjusts to operator setpoint value.*

**Continued on next page**

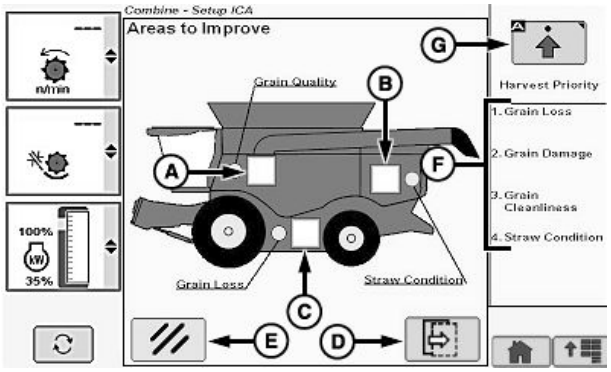
OUO6075,00015B1 -19-30JUL13-6/8

**Interactive Combine Adjustment (Improvement Targets):**

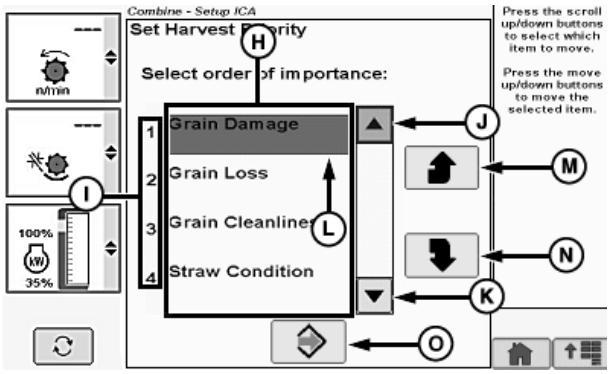
- Areas to Improve - Allows operator to modify area of machine performance that is not satisfactory
  - Grain Quality (A)
  - Straw Condition (B)
  - Grain Loss (C)
- Next Page Icon (D) - Allows operator to advance to next page to fine-tune specific harvest issues
- Cancel Icon (E) - Allows operator to cancel interactive combine adjustment setup and return to combine main screen
- Harvest Priority Order (F) - Displays current order of harvest priority list
- Setup Harvest Priority Icon (G) - Allows operator to advance to next page to change order of harvest priority list

**Interactive Combine Adjustment (Harvest Priority Settings):**

- Harvest Priority List (H) - Allows operator to change preferences of how machine will be optimized
  - Grain Loss
  - Grain Damage
  - Grain Cleanliness
  - Straw Condition
- Harvest Priority Order (I)
  - 1. Highest Priority
  - 2. High Priority
  - 3. Low Priority
  - 4. Lowest Priority
- Up Arrow Icon (J) - Allows operator to move highlighted region upward
- Down Arrow Icon (K) - Allows operator to move highlighted region downward




H108640 —UN—29JUL13



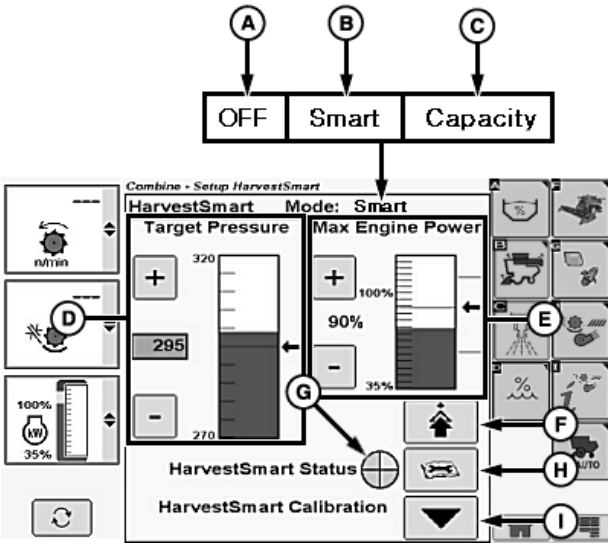

H108641 —UN—29JUL13

- Highlighted Region (L) - Allows highlighted item in list to be moved higher or lower
- Selection Up Icon (M) - Allows operator to move selected harvest priority upward within listing
- Selection Down Icon (N) - Allows operator to move selected harvest priority downward within listing
- Save Icon (O) - Allows operator to save harvest priority list changes

OUO6075,00015B1 -19-30JUL13-7/8

**Harvest Smart™ Feed Rate Settings (If Equipped):**

- Current Mode of Operation
  - OFF (A)
  - Smart (B)
  - Capacity (C)
- Target Pressure (30 - 420, increments of 1) (D)
- Max Engine Power (60 % - 106 %, increments of 1) (E)
- Advanced Setup Icon (F) - allows operator to advance to next page to set maximum harvest speed and sensitivity
  - Max Harvest Speed 2.0 - 14.0 km/h (1.2 - 8.6 mph), increments of 0.1 km/h (0.1 mph)
  - Sensitivity (1 - 100, increments of 1)
- Harvest Smart™ Status Indicator (G) - allows operator to view what state Harvest Smart™ is currently in
- Diagnostic Readings Icon (H) - assists operator in providing more information about machine subsystem for troubleshooting
- Harvest Smart™ Calibration (I) - allows operator to enter current Harvest Smart™ operating characteristics into memory




H106423 —UN—03JAN13

OUO6075,00015B1 -19-30JUL13-8/8

## Grain Tank Level and Unloading Rate Offset Setup

**Grain Tank Level Setup:**

*NOTE: Allows operator to calibrate desired grain tank fullness level setting.*

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when grain tank level setup icon (A) is highlighted.

Grain tank level percentage (B) is a visual guide as the grain tank fills.

Operate machine until desired grain tank level is reached.

Touch or press confirm switch when enter/accept icon (C) is highlighted.

*NOTE: Operator can save a lower grain tank setting to avoid spilling grain over the sides when operating in hilly conditions.*

**Unloading Rate Offset Setup:**

*NOTE: Different crops, weights, and moisture can affect grain tank level sensor readings. Unloading rate offset value has a range of -15 to 15.*

- Decrease offset value if grain remains in tank when grain tank level reads 0%.
- Increase offset value if grain tank is emptied before grain tank level reads 0%.

Touch or press confirm switch when unloading rate offset menu (D) is highlighted.

Touch or press confirm switch when desired digits are highlighted.

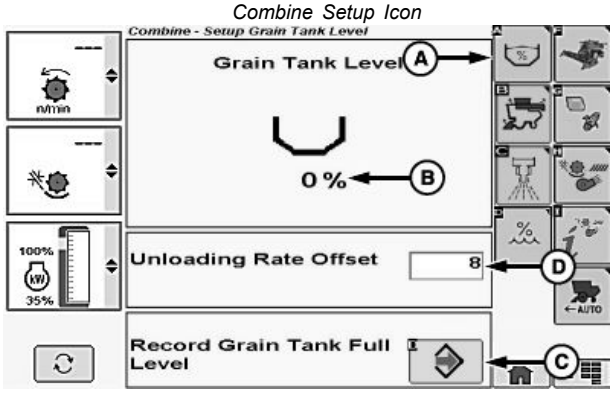
*NOTE: Repeat procedure until desired unloading rate offset value is shown.*

Touch or press confirm switch when enter/accept icon (E) is highlighted.

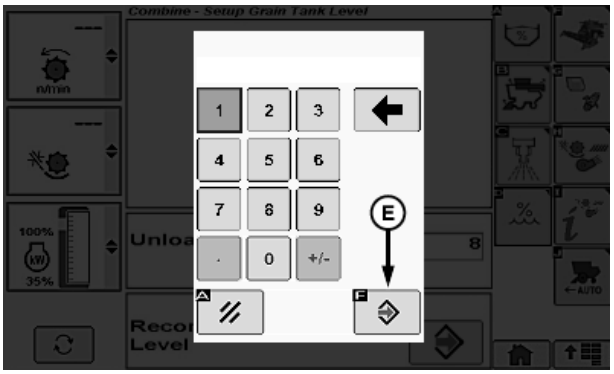
H94473 —UN—31MAR10



*Combine Setup Icon*




H105810 —UN—05DEC12




H105811 —UN—05DEC12

**A—Grain Tank Level Setup Icon**
**B—Grain Tank Level Percentage**
**C—Enter/Accept Icon**
**D—Unloading Rate Offset Menu**
**E—Enter/Accept Icon**

OUO6075,000119E -19-17JUN13-1/1

## Folding Functions Setup

*NOTE: Screen shows all optional folding features. Folding feature always defaults to top portion of screen depending on options.*

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when folding functions setup icon (A) is highlighted.

**Folding Unloading Auger (If Equipped)**

Touch or press confirm switch when desired icon is highlighted.

- Unfold Icon (B)
- Fold Icon (C)
- Auger Position Indicator (D)

*NOTE: Folding unloading auger is an automatic feature. Auger begins to fold or unfold automatically when desired icon is selected.*

*Screen indicates if unloading auger has not reached the following:*

- *Complete unfolded (field) position. Unloading auger will not work unless fully unfolded.*
- *Complete folded (transport) position after operator folds unloading auger.*

**Grain Tank Covers (If Equipped):**

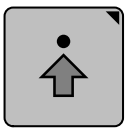
**⚠ CAUTION: Avoid power line entanglement. Grain tank covers must be closed before transporting machine.**

*NOTE: Grain tank covers must be opened all the way in order to engage separator.*

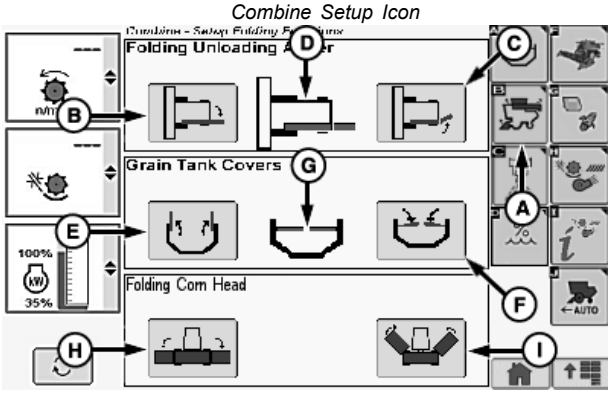
Touch or press and hold confirm switch when desired icon is highlighted.

- Unfold Icon (E)
- Fold Icon (F)
- Grain Tank Position Indicator (G)

H94473 —UN—31MAR10



*Combine Setup Icon*




H1056812 —UN—05DEC12

**A—Folding Functions Setup Icon**
**B—Unfold Icon**
**C—Fold Icon**
**D—Auger Position Indicator**
**E—Unfold Icon**
**F—Fold Icon**
**G—Grain Tank Position Indicator**
**H—Unfold Icon**
**I— Fold Icon**

Covers unfold or fold depending on which icon was selected.

*NOTE: Covers automatically fold or unfold when desired icon is touched or confirm switch is pressed.*

**Folding Corn Head (If Equipped):**

Touch or press confirm switch when desired icon is highlighted.

- Unfold Icon (H)
- Fold Icon (I)

Corn head unfolds or folds depending on which icon was selected.

OUO6075,000119F -19-20SEP12-1/1

## Residue Management Setup

*NOTE: Display shows all optional residue management features if equipped.*

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when residue management setup icon (A) is highlighted.

**Chopper Position (B) (If Equipped):**

Displays current position of chopper.
- Raised
- Lowered

**Chop-to-Drop Door Position (If Equipped):**

*NOTE: Separator must be OFF when changing position of chop-to-drop door.*

Touch or press confirm switch when desired box is highlighted.

- Open (C) - allows operator to automatically open chop-to-drop door.
- Closed (D) - allows operator to automatically close chop-to-drop door.

Box displays a checkmark indicating which was selected.

Chop-to-drop door automatically opens or closes depending on which box was selected.

**Separator Vane Position (If Equipped):**

*NOTE: Separator must be OFF when changing position of separator vanes.*

Touch or press confirm switch when desired standard box or advanced box is highlighted.

- Standard (E) - allows operator to run separator vanes in the standard position.

  *NOTE: Running separator vanes in advanced position may increase grain losses in certain crop and conditions. Crop dwell time in separator is reduced to improve straw quality.*

- Advanced (F) - allows operator to change position of separator vanes to improve straw quality.

Box displays a checkmark indicating which was selected.

Separator vanes automatically open to desired position depending on which box was selected.

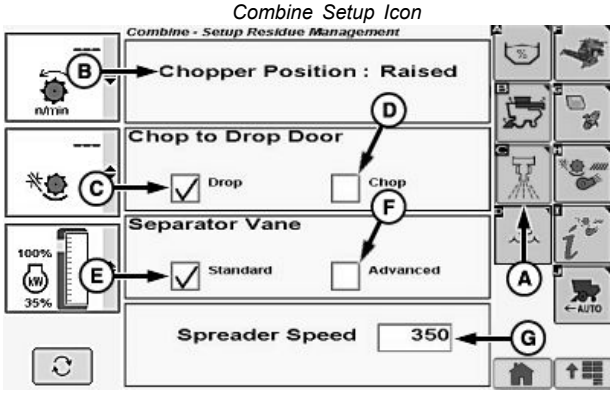
**Advanced PowerCast™ Spreader Speed (If Equipped):**

Touch or press confirm switch when spreader speed box (G) is highlighted.

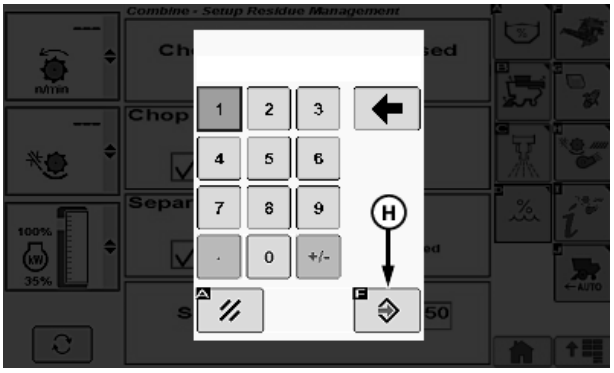
H94473 —UN—31MAR10



*Combine Setup Icon*




H105813 —UN—05DEC12




H105814 —UN—05DEC12

**A—Residue Management Setup Icon**
**B—Chopper Position**
**C—Chop-to-Drop Door Position (Open)**
**D—Chop-to-Drop Door Position (Closed)**
**E—Separator Vane Position (Standard)**
**F—Separator Vane Position (Advanced)**
**G—Spreader Speed Box**
**H—Enter/Accept Icon**

Touch or press confirm switch when desired digits are highlighted.

*NOTE: Spreader speed has a range of:*

- *350 - 550 rpm (Corn) (Default 500 rpm)*
- *600 - 800 rpm (Small Grain) (Default 700 rpm)*

*Repeat procedure until desired spreader speed value is shown.*

Touch or press confirm switch when enter/accept icon (H) is highlighted.

OUO6075,00011A0 -19-20SEP12-1/1

## Change Moisture Settings and Yield Units Settings

**Moisture Sensor Settings:**

*NOTE: Page appears if equipped with moisture sensor.*

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when moisture setup icon (A) is highlighted.

Touch or press confirm switch when ON box (B) or OFF box (C) is highlighted.

Box displays a checkmark indicating which was selected.

- Moisture Alarm ON Box - moisture alarm sounds when value drops below minimum setting or above maximum setting (operator presets).
- Moisture Alarm OFF Box - moisture alarm will not sound when value drops below minimum setting or above maximum setting (operator presets).

Touch or press confirm switch when minimum box (D) or maximum box (E) is highlighted.

*NOTE: This determines setpoint (minimum and maximum) for activation of moisture alarm.*

- Minimum Moisture Alarm Box - operator selects moisture percentage for alarm to sound when value drops below preset value.
- Maximum Moisture Alarm Box - operator selects moisture percentage for alarm to sound when value is above preset value.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired value on numeric display. Touch enter/accept icon to save value.

**Moisture Correction/Fixed Moisture Settings:**

Touch or press confirm switch when moisture correction box (F) or fixed moisture box (G) is highlighted.

Box displays a checkmark indicating which was selected.

**IMPORTANT: Changing moisture correction will not change data already saved. After changes are made, all harvest information collected from that point will reflect the changes.**

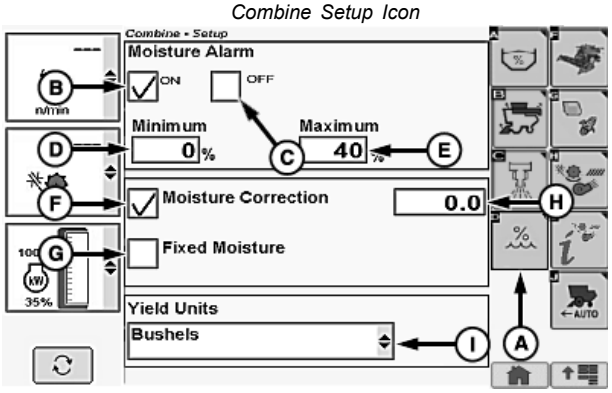
- Moisture Correction Box - set moisture correction to difference between combine moisture sensor and elevator certified moisture sensor (example: elevator moisture (13%) minus combine measured moisture (12%) = moisture difference (+1%)

  *NOTE: Moisture difference can be a positive or negative number.*

H94473 —UN—31MAR10



*Combine Setup Icon*




H105807 —UN—05DEC12

**A—Moisture Setup Icon**
**B—ON Box**
**C—OFF Box**
**D—Minimum Box**
**E—Maximum Box**
**F—Moisture Correction Box**
**G—Fixed Moisture Box**
**H—Value/Change Box**
**I— Yield Units Menu**

- Fixed Moisture Box - moisture sensor reading is disabled and forces preset moisture values.

Touch or press confirm switch when value/change box (H) is highlighted.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired value on numeric display. Touch enter/accept icon to save value.

**Yield Units Settings:**

Touch or press confirm switch when yield units menu (I) is highlighted.

Yield units menu displays the following:

| | | |
|---|---|---|
| Bushels | Hundred Weight | Metric Tons |
| Barrels | Pounds | Tons |
| Sacks | Kilograms | |

Once desired yield unit is chosen, touch or press confirm switch.

OUO6075,000119C -19-13SEP12-1/1

## Yield Calibration

**IMPORTANT: Calibration must be performed every year and in every crop that is harvested to achieve accurate grain weight measurements.**

**For best results also verify that vibration calibration has been performed for each crop.**

**Achieving High Accuracy Calibrations:**

*NOTE: Do NOT turn around on end rows or crossing waterways while preforming calibration.*

- Keep a consistent flow rate within the calibration load (monitor flow rate on VisionTrak™ performance monitor and adjust ground speed accordingly).
- Calibrate loads at different flow rates (know what each calibration load characteristic is in case one must be deleted or more loads must be added).
- Keep all calibration loads approximately the same weight.

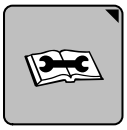
Touch or press confirm switch when diagnostic icon is highlighted.

Touch or press confirm switch when calibration icon (A) is highlighted.

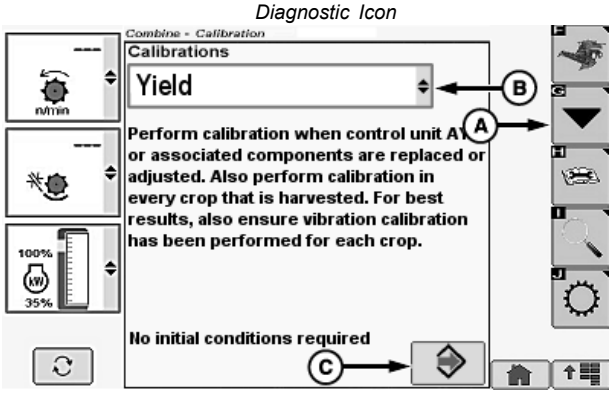
Touch or press confirm switch when calibrations menu (B) is highlighted.

Touch or press confirm switch when **Yield** is highlighted.

H94478 —UN—31MAR10



*Diagnostic Icon*




H106041 —UN—30OCT12

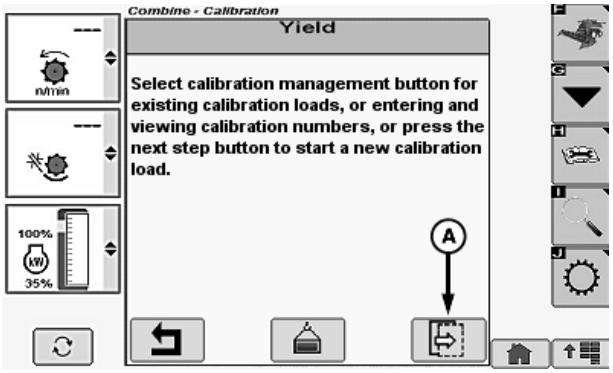
**A—Calibration Icon**
**B—Calibrations Menu**
**C—Enter/Accept Icon**

Touch or press confirm switch when enter/accept icon (C) is highlighted.

OUO6075,00012DF -19-19FEB13-1/12

Touch or press confirm switch when next page icon (A) is highlighted.

**A—Next Page Icon**




H106174 —UN—14NOV12

**Continued on next page**

OUO6075,00012DF -19-19FEB13-2/12

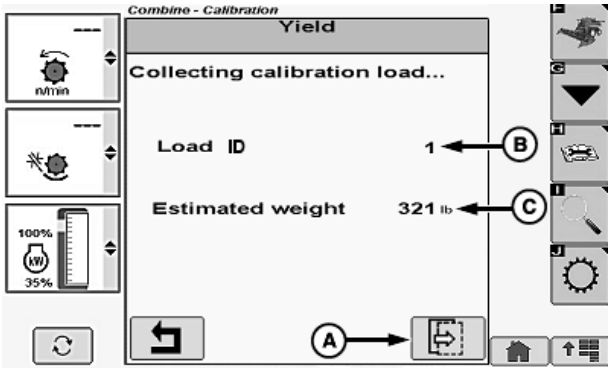
Touch or press confirm switch when next page icon (A) is highlighted.

- Load ID (B) - shows current load ID number during calibration.

  *NOTE: A minimum 1,360 kg (3,000 lb.) of crop must be harvested for calibration to be accepted.*

- Estimated Weight (C) - shows combine collected weight for load collected by mass flow system during calibration.

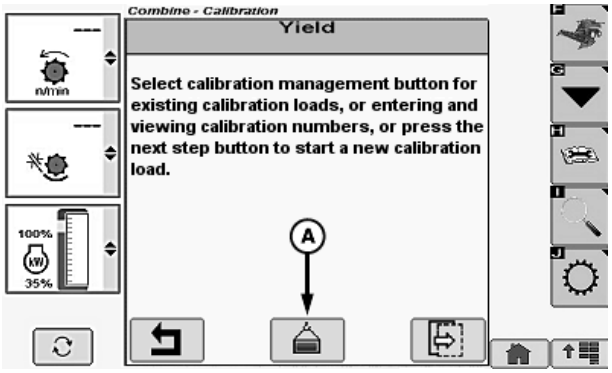
**A—Next Page Icon**
**B—Load ID**
**C—Estimated Weight**




OUO6075,00012DF -19-19FEB13-3/12

Touch or press confirm switch when calibration management icon (A) is highlighted.

**A—Calibration Management Icon**




OUO6075,00012DF -19-19FEB13-4/12

- Load Identification (A) - shows collected load ID numbers for future references.
- Estimated Weight (B) - shows weight for load collected by mass flow system during calibration.
- Actual Weight (C) - shows operator entered load weight.
- Percent Error (D) - shows percentage of difference between estimated weight and actual weight.

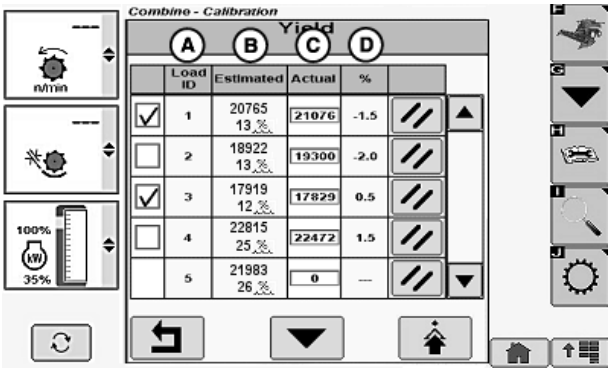
**Formula:**

Error % = 100 x (Estimated - Actual) ÷ Actual

**Example:**

0.5% = 100 x (17919 - 17829) ÷ 17829

**A—Load Identification**
**B—Estimated Weight**
**C—Actual Weight**
**D—Percent Error**




**Continued on next page**

OUO6075,00012DF -19-19FEB13-5/12

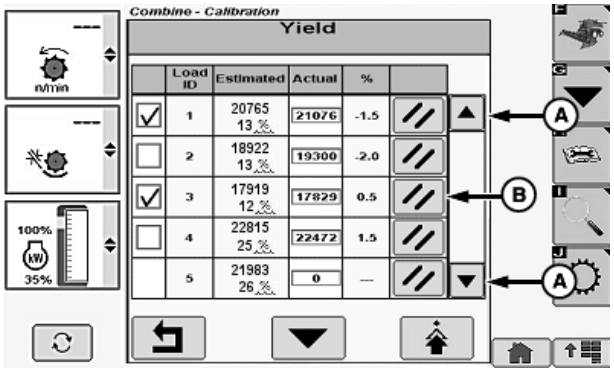
**Clear Load ID and Yield Values:**

*NOTE: 13 load identification numbers can be saved before memory is full and one or more calibration loads must be deleted before another load can be collected.*

Touch or press confirm switch when up/down arrow icons (A) are highlighted to scroll list until desired load ID is shown.

Touch or press confirm switch when desired load ID clear icon (B) is highlighted.

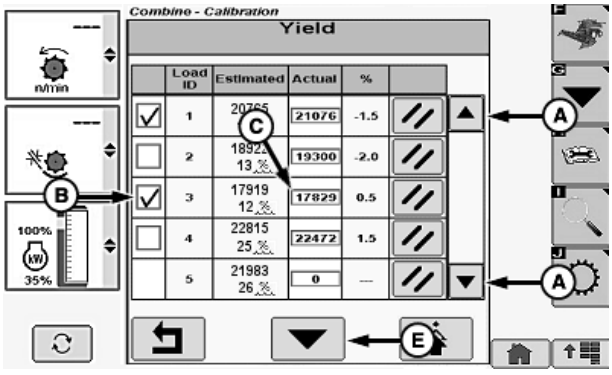
**A—Up/Down Arrow Icons** **B—ID Clear Icon**



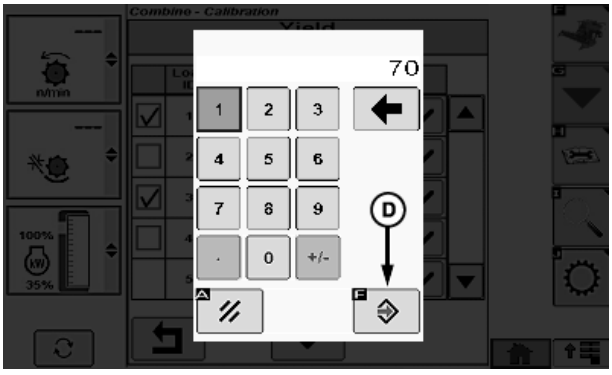

H106048 —UN—30OCT12

OUO6075,00012DF -19-19FEB13-6/12

**Update Actual Weight Values:**




H106046 —UN—30OCT12




H106047 —UN—30OCT12

**A—Up/Down Arrow Icons**
**B—Calibration Selection Box**
**C—Actual Weight Menu**
**D—Enter/Accept Icon**
**E—Calibration Icon**

Touch or press confirm switch when up/down arrow icons (A) are highlighted to scroll list until desired load ID is shown.

*NOTE: Checkbox remains unavailable until actual scale weight is entered by operator.*

- Limited Accuracy - user calibration procedure has not been performed. System defaults to a fixed internal calibration value which may not be adequate for different machine and field conditions.
- Single Point Calibration - user performed calibration procedure and collected one to three calibration loads. Usually adequate for fields where yields are fairly consistent, which allows consistent flow rate.
- Multi-Point Calibration - user performed calibration procedure and collected four or more calibration loads. Calibration accuracy is better for fields where there are large varying yield conditions, where flow rate is not kept consistent.

*NOTE: Refer to Single Point Yield Calibration Or Multi-Point Yield Calibration later in this section for further information.*

Touch or press confirm switch when desired calibration selection box (B) is highlighted.

Touch or press confirm switch when desired actual weight menu (C) is highlighted.

Touch or press confirm switch when desired digits are highlighted.

*NOTE: Repeat procedure until actual weight value is shown.*

Touch or press confirm switch when enter/accept icon (D) is highlighted.

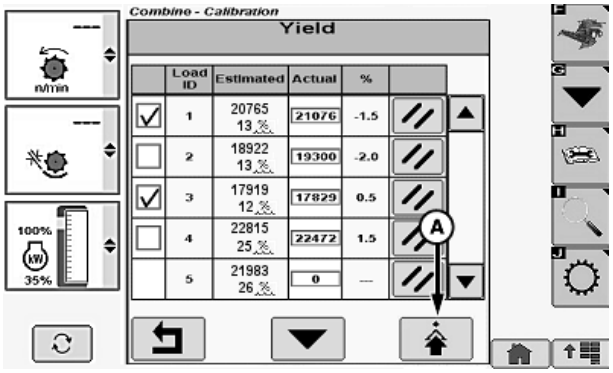
*NOTE: Calibration icon must be selected to update yield calibration values. If return/back icon is highlighted, values are not saved or updated.*

Touch or press confirm switch when calibration icon (E) is highlighted to update yield calibration values.

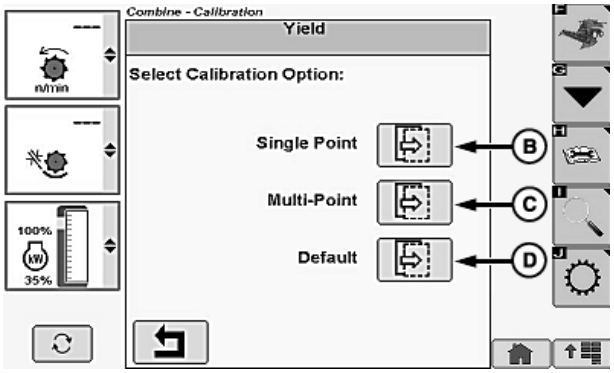
**Continued on next page**

OUO6075,00012DF -19-19FEB13-7/12

**Advanced Calibration Setup:**




H106049 —UN—30OCT12




H106050 —UN—30OCT12

*Load Management Screen*

**A—Advanced Setup Icon**
**B—Single Point Next Page Icon**
**C—Multi-Point Next Page Icon**
**D—Default Next Page Icon**

Touch or press confirm switch when advanced setup icon (A) is highlighted.

*NOTE: Entering calibration factors is mainly to help transfer calibration values between multiple machines within the same field. It is not advisable to make up entirely new calibrations.*

- *Use default calibration to restore factory calibration values in case of entering errors that are not correctable.*
- *Entering calibration number C11 while performing a single point calibration forces a linear (single point) calibration even if the previous calibration was multi-point calibration.*
- *Adjusting calibration number C11 during a multi-point calibration proportionally adjusts all other calibration numbers C1—C10 based on calibration number C11 adjustment. A nonlinear calibration characteristic is preserved, but with a different intensity. Example, if calibration number C11 is increased by 10% (0.1), calibration numbers C1—C10 also increase by 10%.*
- *If non-proportional adjustments are needed (multi-point only), all calibration numbers must be adjusted individually.*

- Single Point (B) - calibration can be modified by adjusting calibration number C11.
- Multi-Point (C) - calibration can be modified by adjusting calibration number C11 only or adjusting C11 and then adjusting all 10 calibration numbers.
- Default (D) - restores factory initial calibration numbers.

Touch or press confirm switch when desired calibration option (B—D) is highlighted.

OUO6075,00012DF -19-19FEB13-8/12

**Default Calibration:**

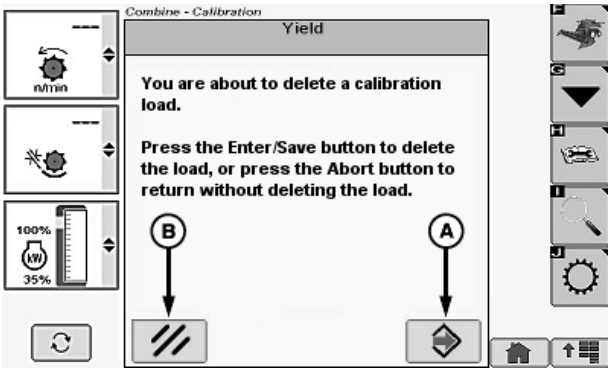
*NOTE: The following warning message will appear:*

*You are about to reinstate factory initial calibration numbers.*

*Press the Enter/Save button to continue, or press Abort button to return to the load management screen without changes.*

Touch or press confirm switch when enter/accept icon (A) is highlighted to reinstate factory initial calibration numbers.

*NOTE: Touch or press confirm switch when cancel icon (B) is highlighted to return to load management screen without changes.*



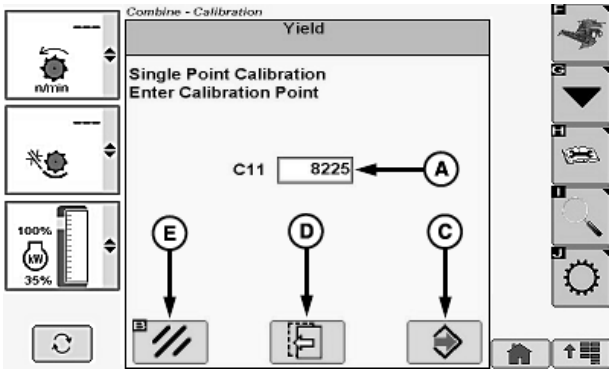

H106079 —UN—01NOV12

**A—Enter/Accept Icon**
**B—Cancel Icon**

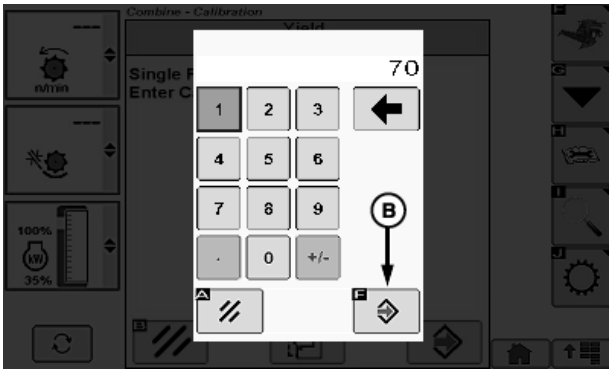
**Continued on next page**

OUO6075,00012DF -19-19FEB13-9/12

**Single Point Calibration:**




H106051 —UN—31OCT12




H106053 —UN—31OCT12

**A—Calibration Number C11**
**B—Enter/Accept Icon**
**C—Enter/Accept Icon**
**D—Previous Page Icon**
**E—Cancel Icon**

*NOTE: Calibration number can be adjusted manually, if magnitude of mass flow error is known.*

**Formula:**

New C11 = Old C11 x Actual Weight ÷ Estimated Weight

**Example:**

9048 = 8225 x 6600 ÷ 6000

Touch or press confirm switch when calibration number C11 (A) is highlighted.

*NOTE: Calibration number ranges:*

- *C1: -250 to 15000*
- *C2—C11: 0 to 15000*

Touch or press confirm switch when desired digits are highlighted.

*NOTE: Repeat procedure until desired calibration value is shown.*

Touch or press confirm switch when enter/accept icon (B) is highlighted.

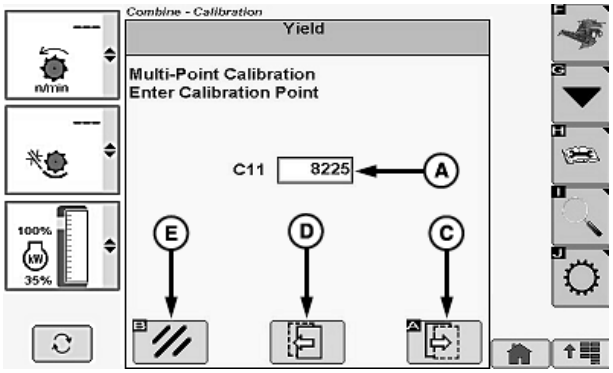
Touch or press confirm switch when enter/accept icon (C) is highlighted to save calibration value and return to load management screen.

*NOTE: Enter/accept icon must be selected to update calibration values. If cancel icon (E) is highlighted, values are not saved or updated. Display returns to load management screen.*

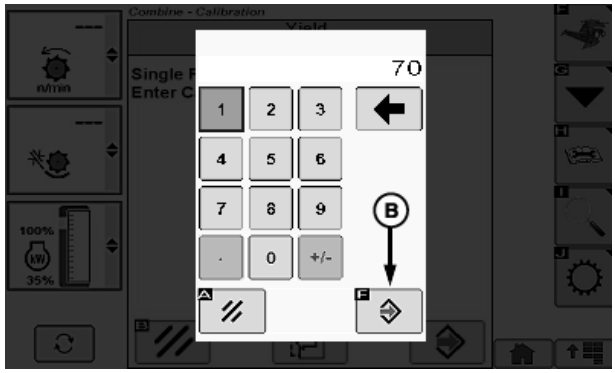
Touch or press confirm switch when previous page icon (D) is highlighted to return to previous page if needed.

**Continued on next page**

**Multi-Point Calibration (C11 Only):**




H106070 —UN—31OCT12




H106053 —UN—31OCT12

**A—Calibration Number C11**
**B—Enter/Accept Icon**
**C—Next Page Icon**
**D—Previous Page Icon**
**E—Cancel Icon**

*NOTE: Calibration number can be adjusted manually, if magnitude of mass flow error is known.*

**Formula:**

New C11 = Old C11 x Actual Weight ÷ Estimated Weight

**Example:**

7477 = 8225 x 6000 ÷ 6600

Touch or press confirm switch when calibration number C11 (A) is highlighted.

*NOTE: Calibration number ranges:*

- *C1: -250 to 15000*
- *C2—C11: 0 to 15000*

Touch or press confirm switch when desired digits are highlighted.

*NOTE: Repeat procedure until desired calibration value is shown.*

Touch or press confirm switch when enter/accept icon (B) is highlighted.

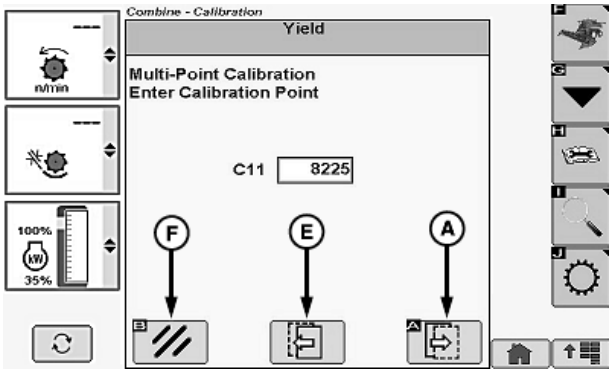
Touch or press confirm switch when enter/accept icon (C) is highlighted to save calibration value and return to load management screen.

*NOTE: Enter/accept icon must be selected to update calibration values. If cancel icon (E) is highlighted, values are not saved or updated. Display returns to load management screen.*

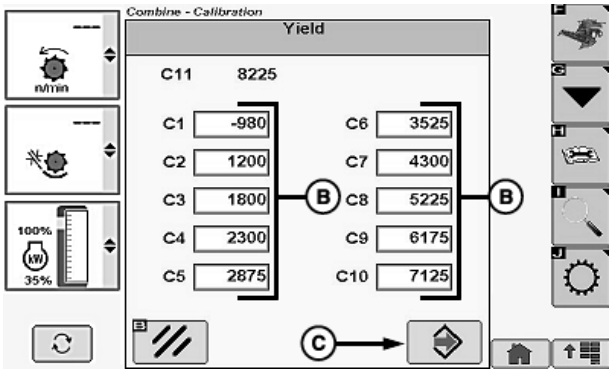
Touch or press confirm switch when previous page icon (D) is highlighted to return to previous page if needed.

**Continued on next page**

**Multi-Point Calibration (C1—C10):**




H106071 —UN—01NOV12




H106072 —UN—01NOV12

*NOTE: C1—C10 calibration factors are scaled with C11 value. Any time C11 is updated on previous screen, C1—C10 will be automatically adjusted.*

Touch or press confirm switch when next page icon (A) is highlighted.

Touch or press confirm switch when desired calibration numbers (B) are highlighted.

*NOTE: Calibration Number Ranges:*

- *C1: -250 to 15000*
- *C2—C11: 0 to 15000*

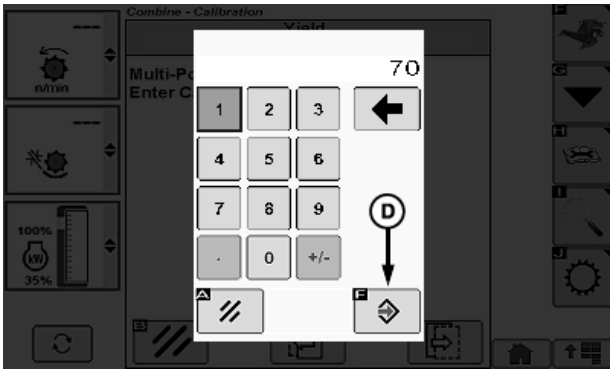
*Calibration numbers C1—C10 MUST be entered in ascending order to be accepted.*

Touch or press confirm switch when desired digits are highlighted.

*NOTE: Repeat procedure until desired calibration value is shown.*

Touch or press confirm switch when enter/accept icon (C) is highlighted.

Touch or press confirm switch when enter/accept icon (D) is highlighted to save calibration value and return to load management screen.




H106073 —UN—01NOV12

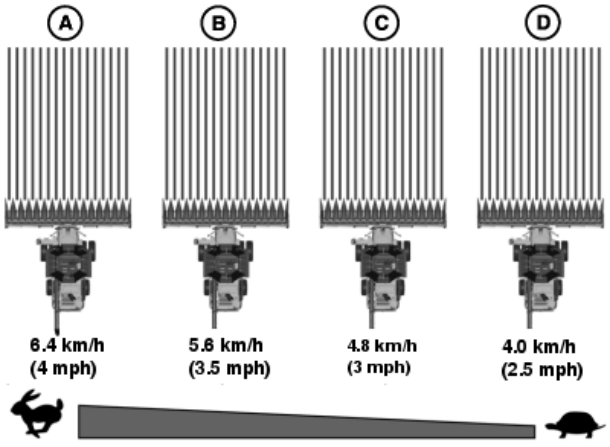
**A—Next Page Icon**
**B—Calibration Numbers (C1—C10)**
**C—Enter/Accept Icon**
**D—Enter/Accept Icon**
**E—Previous Page Icon**
**F—Cancel Icon**

*NOTE: Enter/accept icon must be selected to update calibration values. If cancel icon (F) is highlighted, values are not saved or updated. Display returns to load management screen.*

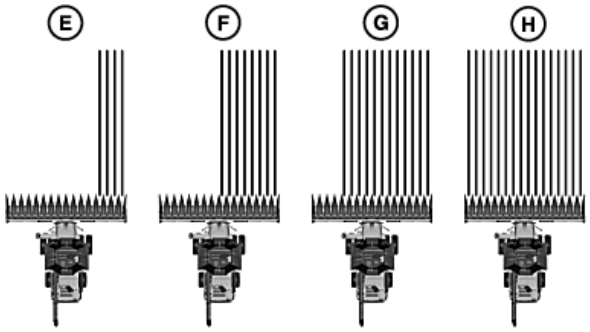
Touch or press confirm switch when previous page icon (E) is highlighted to return to previous page if needed.

OUO6075,00012DF -19-19FEB13-12/12

## Single Point Yield Calibration Or Multi-Point Yield Calibration




H105056 —UN—19MAR12




H105057 —UN—19MAR12

**A—Load 1**
**B—Load 2**
**C—Load 3**
**D—Load 4**
**E—Minimum Flow**
**F—Medium Flow**
**G—Medium Flow**
**H—Maximum Flow**

*NOTE: Varying machine ground speed is the best way to vary the flow rate.*

*The best way to keep the flow rate constant is to monitor the VisionTrak™ display and adjust machine ground speed accordingly.*

### Single Point Yield Calibration

Single point yield calibration is performed when one or up to three calibration loads are collected.

This type of calibration is suggested when the harvested field has a fairly consistent yield and machine is operated at a constant ground speed with very little flow variation.

To collect a calibration load, harvest approximately 2,722 kg (6,000 lb.) at the maximum harvest speed.

Running one or two additional loads is not required, but it may allow the system to average the overall error.

### Multi-Point Yield Calibration

Multi-point yield calibration is used when the harvested field is expected to have varying yields or machine is operated at varying speeds with varying grain flows.

This type of calibration collects each calibration load at each expected flow condition.

For each calibration load, harvest approximately 2,722 kg (6,000 lb.).

Run at least **four** calibration loads over various ground speeds (A—D) or at different cut widths to simulate four different flow rates (E—H).

OUO6075,00013D5 -19-19FEB13-1/1

## Change Tire Radius Code

It will be necessary to recalibrate system if tires or final drives are changed from what was originally shipped from the factory. Verify that correct tire code is entered into memory.

**IMPORTANT: When changing drive wheels, tire radius may also change. CAB control unit MUST be set to new tire radius. See your John Deere dealer for further information.**

**Failure to calibrate system will result in inaccurate Harvest Monitor Yields.**

OUO6075,0001111 -19-11APR12-1/1

## Moisture Sensor Temperature Calibration

Touch or press confirm switch when diagnostic icon is highlighted.

Touch or press confirm switch when calibration icon (A) is highlighted.

Touch or press confirm switch when calibrations menu (B) is highlighted.

Touch or press confirm switch when **Moisture Sensor Temperature** is highlighted.

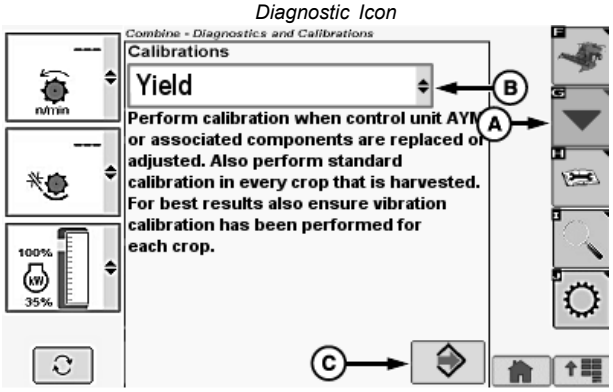
Touch or press confirm switch when enter/accept icon (C) is highlighted.

**A—Calibration Icon**
**B—Calibrations Menu**
**C—Enter/Accept Icon**

H94478 —UN—31MAR10



*Diagnostic Icon*




H94928 —UN—11OCT10

OUO6075,0000746 -19-05OCT10-1/2

*NOTE: Calibration must be done before harvesting begins and when moisture sensor is empty.*

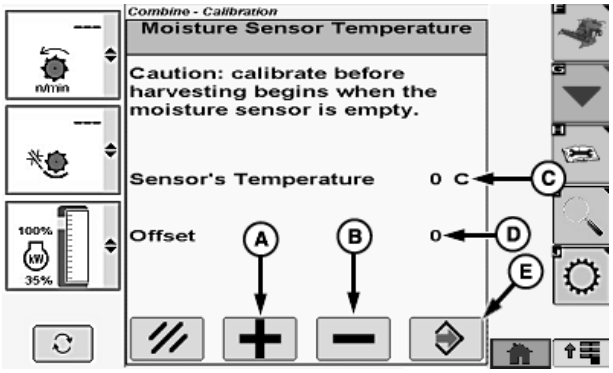
Touch or press confirm switch when plus (+) icon (A) or minus (-) icon (B) is highlighted.

*NOTE: Sensor temperature must be set to the current ambient air temperature.*

Increase or decrease until desired sensor temperature (C) is shown.

*NOTE: Offset (D) automatically adjusts when ambient sensor temperature is set.*

Touch or press confirm switch when enter/accept icon (E) is highlighted to save sensor temperature.




H96030 —UN—05OCT10

**A—Plus (+) Icon**
**B—Minus (-) Icon**
**C—Sensor Temperature**
**D—Offset**
**E—Enter/Accept Icon**

OUO6075,0000746 -19-05OCT10-2/2

## Payable Moisture and Density Chart

| Crop | Standard Moisture (%) | Crop Density (lbs/bushel) | Crop Density (kg/bushel) |
|---|---|---|---|
| Alfalfa | 12.0 | 60 | 27 |
| Barley | 14.0 | 48 | 22 |
| Barley (Winter) [a] | 14.5 | 48 | 22 |
| Barley (Spring) [a] | 14.5 | 48 | 22 |
| Canola | 10.0 | 52 | 24 |
| Chickpeas [a] | 12.0 | 61 | 27 |
| Corn (Dry or Wet) | 15.0 | 56 | 25 |
| Edible Beans | 14.5 | 60 | 27 |
| Flax | 7.0 | 56 | 25 |
| Grass Seeds | 12.0 | 22 | 10 |
| Lentils | 10.5 | 60 | 27 |
| Lupins [a] | 12.0 | 53 | 24 |
| Millet | 11.0 | 50 | 23 |
| Mustard | 8.0 | 60 | 27 |
| Navy Beans | 14.5 | 62 | 28 |
| Oats | 14.0 | 32 | 15 |
| Oats [a] | 15.0 | 32 | 15 |
| Peas | 10.5 | 60 | 27 |
| Peas [a] | 12.0 | 60 | 27 |
| Popcorn | 14.0 | 60 | 27 |
| Popcorn [a] | 15.5 | 60 | 27 |
| Rape Seed (Dry or Wet) [a] | 10.0 | 52 | 24 |
| Rice | 14.0 | 45 | 20 |
| Rye | 14.0 | 56 | 25 |
| Safflower | 6.0 | 45 | 20 |
| Sorghum | 13.0 | 56 | 25 |
| Soybeans | 13.0 | 60 | 27 |
| Sunflower | 14.0 | 29 | 11 |
| Sunflower [a] | 9.0 | 20 | 11 |
| Triticale [a] | 14.5 | 58 | 26 |
| Wheat (Spring) | 13.0 | 60 | 27 |
| Wheat (Winter) | 13.0 | 60 | 27 |

[a] *European crop listing only.*

OUO6075,0000E89 -19-22MAR12-1/1

## Standard Weights Chart

| Unit | Weight (lb) | Weight (kg) |
|---|---|---|
| Barrels | 162.0 | 73.5 |
| Sacks | 100.0 | 45.4 |
| Hundred Weight | 100.0 | 45.4 |
| Pounds (lb) | 1.0 | 0.454 |
| Kilograms (kg) | 2.204 | 1.0 |
| Metric Tons | 2204.0 | 1000.0 |
| Tons | 2000.0 | 907.0 |

OUO6075,0000435 -19-15APR10-1/1

## Change Crops and Grain Loss Settings

**Crop Menu:**

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when crop setup icon (A) is highlighted.

Touch or press confirm switch when crop menu (B) is highlighted.

Crop menu displays the following:

| | | |
|---|---|---|
| Alfalfa | Lentils | Rye |
| Barley | Lupins | Safflower |
| Barley - Spring[a] | Millet | Sorghum |
| Barley - Winter[a] | Mustard | Soybeans |
| Canola | Navy Beans | Sunflower |
| Chickpeas | Oats | Triticale[a] |
| Corn | Peas | Wheat[a] |
| Edible Beans | Popcorn | Wheat-Spring |
| Flax | Rape Seed[a] | Wheat-Winter |
| Grass Seeds | Rice | |

[a] *European crop listing.*

Once desired crop is chosen, touch or press confirm switch.

**Threshing Condition:**

Threshing condition menu (C) displays the following:

- Easy
- Normal
- Difficult

Once desired threshing condition is chosen, touch or press confirm switch.

**Straw/Cob Condition:**

Straw/Cob condition menu (D) displays the following:

- Brittle
- Normal
- Difficult

Once desired straw/cob condition is chosen, touch or press confirm switch.

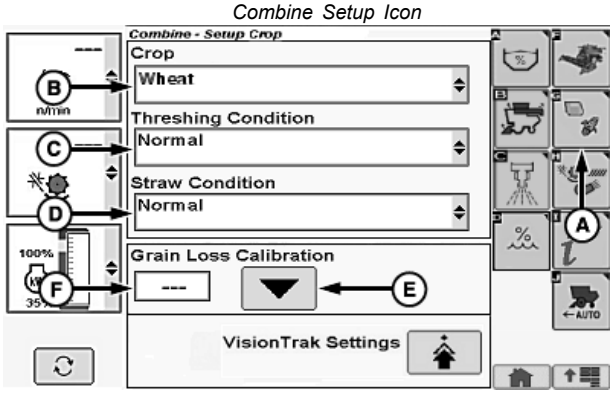
**Grain Loss Calibration:**

Adjust machine and header to acceptable loss levels for particular crop and condition.

H94473 —UN—31MAR10



*Combine Setup Icon*




H108626 —UN—26JUL13

**A—Crop Setup Icon**
**B—Crop Menu**
**C—Threshing Condition Menu**
**D—Straw/Cob Condition Menu**
**E—Grain Loss Calibration Icon**
**F—Grain Loss Calibration Value**

Touch or press confirm switch when grain loss calibration icon (E) is highlighted.

*NOTE: This enters current operating characteristics into memory and centers total loss activity indicator on cornerpost.*

**Calibration Reference Number:**

Touch or press confirm switch when grain loss calibration value (F) is highlighted.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired calibration reference value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired calibration reference value on numeric display. Touch enter/accept icon to save value.

**Continued on next page**

**Shoe/Separator Balance**

Adjusts balance of bars between shoe loss indicator and separator loss indicator located on VisionTrak™ display. Adjustment can be used to fine-tune display if losses appear to come from one area of the machine, but more losses are displayed in other area of machine due to crop conditions.

Touch or press confirm switch when VisionTrak™ settings icon (A) is highlighted.

Touch or press confirm switch when shoe/separator balance box (B) or shoe/separator balance bar graph (C) is highlighted.

**Shoe/Separator Balance Box Adjustment:**

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired shoe/separator balance value is shown. Press confirm switch to save value.

**Touchscreen Only:** Touch or press confirm switch when plus (+) icon or minus (-) icon is highlighted until desired shoe/separator balance value is shown.

**Shoe/Separator Balance Bar Graph Adjustment:**

**Non-Touchscreen or Touchscreen:** Rotate selection dial to increase or decrease shoe/separator balance bar graph to desired value. Press confirm switch to save value.

**Touchscreen Only:** Touch or press confirm switch when plus (+) icon or minus (-) icon is highlighted until desired shoe/separator balance value is shown.

Touch or press confirm switch when return/back icon (F) is highlighted to return to previous page.

**Shoe/Separator Resolution**

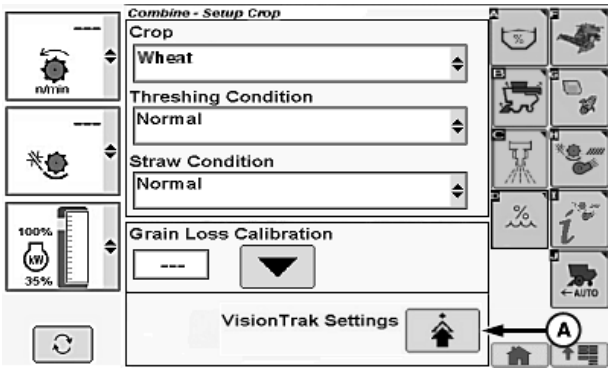
Allows operator to modify number of bars shown on VisionTrak™ display for shoe loss indicator and separator loss indicator (independent of number of center bars).

Touch or press confirm switch when VisionTrak™ settings icon (A) is highlighted.

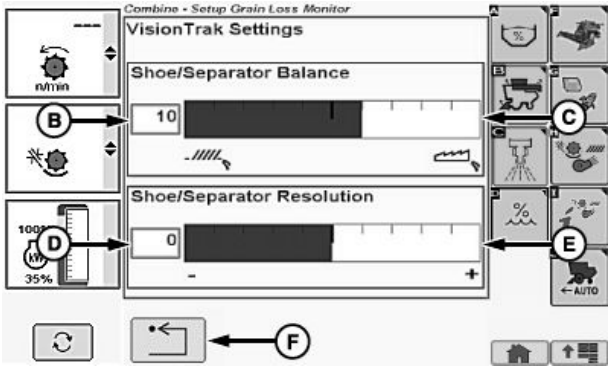
Touch or press confirm switch when shoe/separator resolution box (D) or shoe/separator resolution bar graph (E) is highlighted.

**Shoe/Separator Resolution Box Adjustment:**

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired shoe/separator resolution value is shown. Press confirm switch to save value.




H108627 —UN—26JUL13




H108629 —UN—26JUL13

**A—VisionTrak™ Settings Icon**
**B—Shoe/Separator Balance Box**
**C—Shoe/Separator Balance Bar Graph**
**D—Shoe/Separator Resolution Box**
**E—Shoe/Separator Resolution Bar Graph**
**F—Return/Back Icon**

**Touchscreen Only:** Touch or press confirm switch when plus (+) icon or minus (-) icon is highlighted until desired shoe/separator resolution value is shown.

**Shoe/Separator Resolution Bar Graph Adjustment:**

**Non-Touchscreen or Touchscreen:** Rotate selection dial to increase or decrease shoe/separator resolution bar graph to desired value. Press confirm switch to save value.

**Touchscreen Only:** Touch or press confirm switch when plus (+) icon or minus (-) icon is highlighted until desired shoe/separator resolution value is shown.

Touch or press confirm switch when return/back icon (F) is highlighted to return to previous page.

OUO6075,00015B2 -19-31JUL13-2/2

## Change Machine Settings

**Actual Setting or Setpoint Setting:**

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when machine settings icon (A) is highlighted.

- Actual Setting (B) (setpoint value in black) - indicates current setpoint value of machine.
- Setpoint Setting (C) (setpoint value in blue) - machine automatically adjusts to operator setpoint value.

**Machine Settings:**

Touch or press confirm switch when one of the following is highlighted:

- Threshing Speed (D)
  - 200 - 1000 rpm, increments of 10 rpm
- Threshing Clearance (E)
  - 0 - 40 mm, increments of 1 mm[1]
- Fan Speed (F)
  - 620 - 1350 rpm, increments of 10 rpm
- Chaffer Clearance (G)
  - 0 - 22 mm (General Purpose) and 0 - 30 mm (Deep Tooth), increments of 1 mm[1]
- Sieve Clearance (H)
  - 0 - 20 mm (General Purpose and Deep Tooth), increments of 1 mm[1]

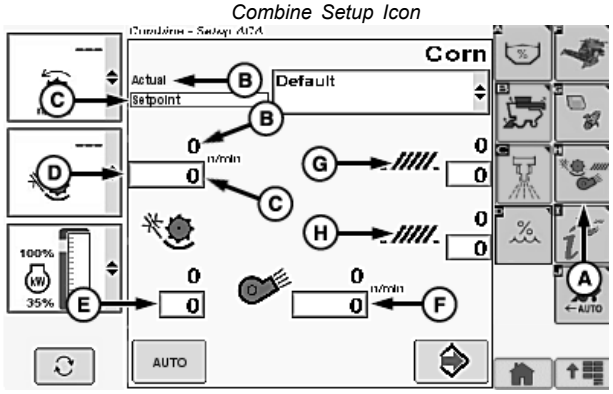
**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired machine value is shown. Press confirm switch to save value.

*[1]Manual operation is allowed above actual setting value (shown in black) and setpoint setting value (shown in blue), which is indicated by the word MAX. MAX is displayed until a decrease is indicated by operator.*

H94473 —UN—31MAR10



*Combine Setup Icon*




H105848 —UN—05DEC12

**A—Machine Settings Icon**
**B—Actual Setting**
**C—Setpoint Setting**
**D—Threshing Speed**
**E—Threshing Clearance**
**F—Fan Speed**
**G—Chaffer Clearance**
**H—Sieve Clearance**

**Touchscreen Only:** Enter desired machine value on numeric display. Touch enter/accept icon to save value.

Repeat as needed for other machine settings.

**Continued on next page**

**Change Crop Modifiers Menu:**

Touch or press confirm switch when crop modifiers menu (A) is highlighted.

Crop modifiers menu displays the following:

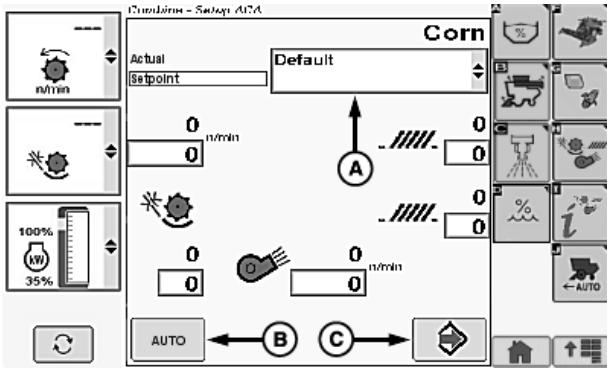
- Default - displays factory default settings for selected crops.
- Dry (Default) - displays factory default settings for corn.
- Wet (Default) - displays factory default settings for corn.
- New - select when a set of custom/personal crop settings will be entered.
- Clean Out - displays factory default settings allowing machine to be cleaned out.

Once desired crop modifier is chosen, touch or press confirm switch.

**Auto or Save Icon:**

Touch or press confirm switch when auto icon (B) or save icon (C) is highlighted.

- Auto - Desired machine settings are chosen by operator and automatically adjust to settings shown on screen.
- Save - Allows operator to save personal machine settings if new was chosen from crop modifiers menu.




H105849 —UN—05DEC12

**A—Crop Modifiers Menu**
**B—Auto Icon**
**C—Save Icon**

*NOTE: Operator is allowed to save 20 custom crop settings with a limit of 20 characters, each. Personalizing machine settings will not overwrite factory settings.*

OUO6075,000119A -19-10DEC12-2/2

## Name Customized Crops

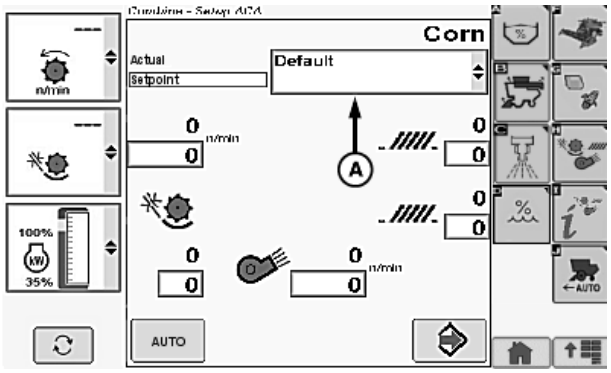
*NOTE: Operator is allowed to save 20 custom crop settings with a limit of 20 characters, each. Personalizing machine settings will not overwrite factory settings.*

Touch or press confirm switch when crop modifiers menu (A) is highlighted.

Crop modifiers menu displays the following:

- Default - displays factory default settings for selected crops.
- Dry (Default) - displays factory default settings for corn.
- Wet (Default) - displays factory default settings for corn.
- New - select when a set of custom/personal crop settings will be entered.
- Clean Out - displays factory default settings allowing machine to be cleaned out.

Touch or press confirm switch when New is highlighted.

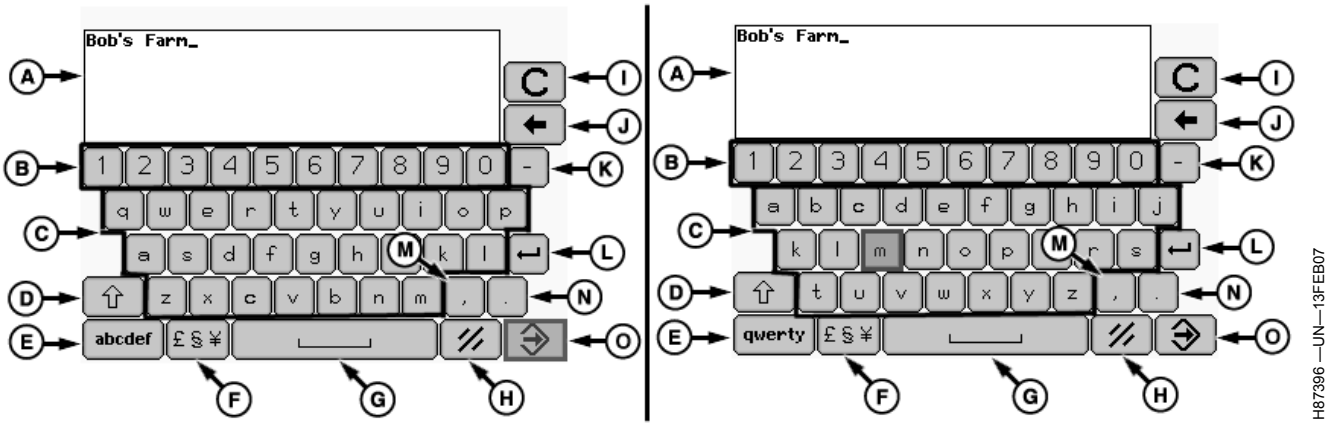



H106316 —UN—10DEC12

**A—Crop Modifiers Menu**

**Continued on next page**

OUO6075,000135E -19-10DEC12-1/2




*QWERTY Keyboard Layout/ABC Keyboard Layout*

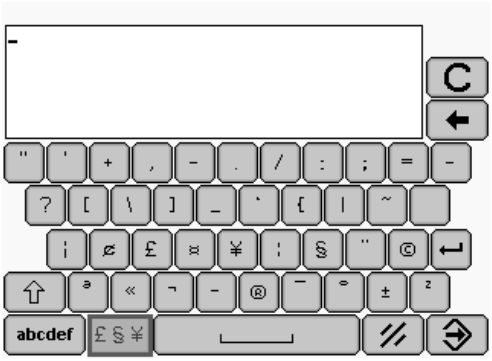
**A—Custom Name Display**
**B—Numeric Keys**
**C—Alpha Keys**
**D—Caps Lock/Shift Key**
**E—QUERTY (Standard Typewriter Keyboard Layout) or ABC Key**
**F—Symbols Key**
**G—Space Key**
**H—Cancel Key**
**I— Clear All Key**
**J— Backspace Key**
**K—Hyphen Key**
**L— Enter/Return Key**
**M—Comma Key**
**N—Period Key**
**O—Enter/Accept Icon**

Alphanumeric screen appears and allows you to custom name crops.

Touch or press confirm switch when desired icon is highlighted on display keyboard.

Repeat procedure as needed to name custom crop.

Once desired custom crop is named, touch or press confirm switch when enter/accept icon (O) is highlighted.




*Symbols Keyboard Layout*

OUO6075,000135E -19-10DEC12-2/2

## Interactive Combine Adjustment

*NOTE: Interactive Combine Adjustment system will be deactivated by an engine shut down (key OFF cycle), canceling system, or when Optimization Complete state is obtained. System does not retain past machine recommendations when Interactive Combine Adjustment is restarted.*

Touch or press confirm switch when combine setup icon is highlighted.

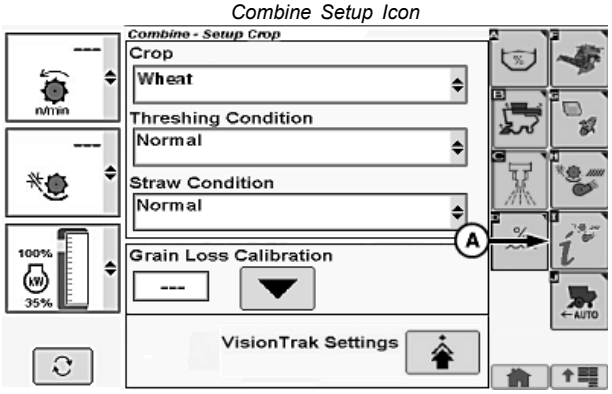
Touch or press confirm switch when Interactive Combine Adjustment icon (A) is highlighted.

**A—Interactive Combine Adjustment Icon**

H94473 —UN—31MAR10



*Combine Setup Icon*




H1108631 —UN—26JUL13

OUO6075,00015B3 -19-31JUL13-1/12

**Combine Improvement Targets:**

*NOTE: Operator can select one, two, or all three types of combine improvement target boxes.*

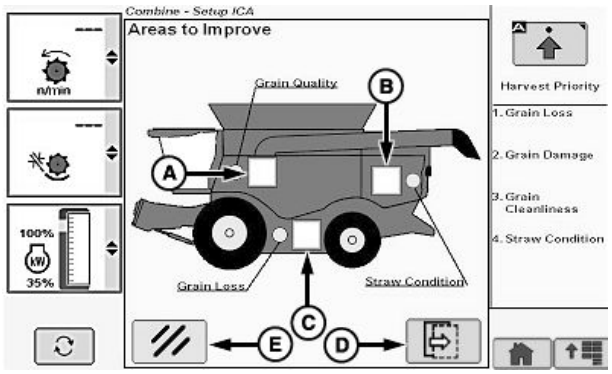
*Selected area of combine changes from green to yellow.*

Touch or press confirm switch when desired combine improvement target box or boxes are highlighted.

- Grain Quality (A)
  - Broken Grain
  - Chaff/Husks
  - Straw Pieces/Cobs
  - Unthreshed Material
  - Excess Tailings
- Straw Condition (B)
  - Straw Condition
- Grain Loss (C)
  - Separator Loss
  - Shoe Loss
  - Unthreshed Loss

Box displays a checkmark indicating which issue item or items were selected.

*NOTE: Next page icon (D) is not selectable until a combine improvement target box is selected.*




H1108632 —UN—29JUL13

**A—Grain Quality**
**B—Straw Condition**
**C—Grain Loss**
**D—Next Page Icon**
**E—Cancel Icon**

*Touch or press confirm switch when cancel icon (E) is highlighted to cancel interactive combine adjustment setup and return to combine setup screen.*

**Continued on next page**

OUO6075,00015B3 -19-31JUL13-2/12

**Harvest Priority Settings:**

*NOTE: Setup harvest priority icon only needs to be pressed if harvest priorities have changed.*

Touch or press confirm switch when setup harvest priority icon (A) is highlighted to rearrange harvest priority (B).

Touch or press confirm switch when up/down arrow icon (C) is highlighted to move highlighted region (D).

Move highlighted region to desired item within harvest priority list (E).

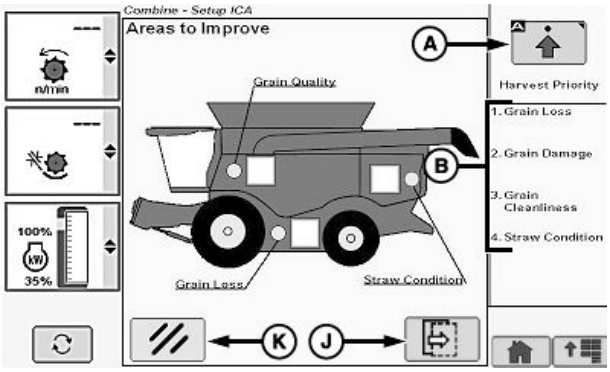
Touch or press confirm switch when selection up icon (F) or selection down icon (G) is highlighted to move selected highlighted item higher or lower in priority order (H).

1. Highest Priority
2. High Priority
3. Low Priority
4. Lowest Priority

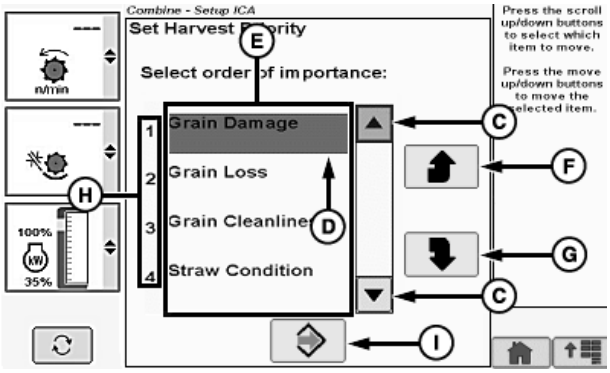
Repeat until list is prioritized as needed.

Touch or press confirm switch when save icon (I) is highlighted to save priority list order and return to previous screen.

Touch or press confirm switch when next page icon (J) is highlighted to advance to next page or cancel icon (K) to cancel interactive combine adjustment setup and return to combine setup screen.




H108634 —UN—26JUL13




H106218 —UN—05DEC12

**A—Setup Harvest Priority Icon**
**B—Harvest Priority List**
**C—Up/Down Arrow Icon**
**D—Highlighted Region**
**E—Harvest Priority List**
**F—Selection Up Icon**
**G—Selection Down Icon**
**H—Priority Order**
**I— Save Icon**
**J— Next Page Icon**
**K—Cancel Icon**

OUO6075,00015B3 -19-31JUL13-3/12

**Grain Loss Improvement:**

*NOTE: Screen only appears if grain loss was previously checkmarked. Select any combination of grain loss improvement for recommended machine changes.*

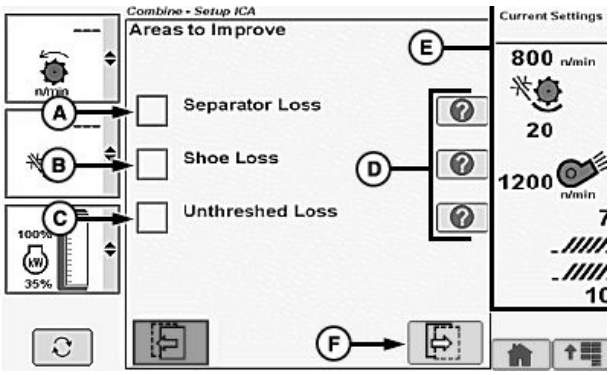
Touch or press confirm switch when desired grain loss improvement box or boxes are highlighted:

- Separator Loss (A)
- Shoe Loss (B)
- Unthreshed Loss (C)

*NOTE: Touch or press confirm switch when desired help icon (D) is highlighted. Information area (E) switches from current machine settings to help information area which provides more details on improvements.*

Touch or press confirm switch when next page icon (F) is highlighted to advance to next page.

*NOTE: Touch or press confirm switch when previous page icon is highlighted to return to previous page if needed.*




H105855 —UN—05DEC12

**A—Separator Loss**
**B—Shoe Loss**
**C—Unthreshed Loss**
**D—Help Icons**
**E—Informational Area**
**F—Next Page Icon**

**Continued on next page**

OUO6075,00015B3 -19-31JUL13-4/12

**Grain Quality Improvement:**

*NOTE: Screen only appears if grain quality was previously checkmarked. Select any combination of grain quality improvements for recommended machine changes.*

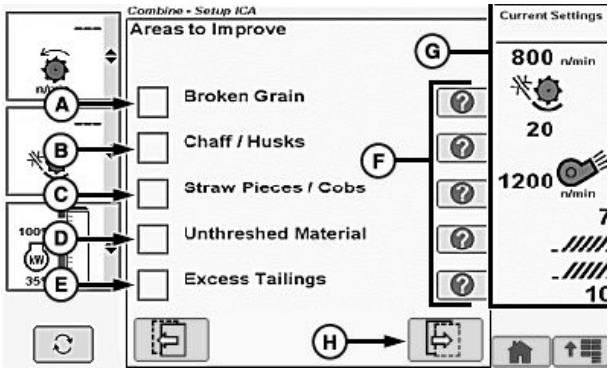
Touch or press confirm switch when desired grain quality improvement box or boxes are highlighted:

- Broken Grain (A)
- Chaff/Husks (B)
- Straw Pieces/Cobs (C)
- Unthreshed Material (D)
- Excess Tailings (E)

*NOTE: Touch or press confirm switch when desired help icon (F) is highlighted. Information area (G) switches from current machine settings to help information area which provides more details on improvements.*

Touch or press confirm switch when next page icon (H) is highlighted to advance to next page.

*NOTE: Touch or press confirm switch when previous page icon is highlighted to return to previous page if needed.*




H105856 —UN—05DEC12

**A—Broken Grain**
**B—Chaff/Husks**
**C—Straw Pieces/Cobs**
**D—Unthreshed Material**
**E—Excess Tailings**
**F—Help Icons**
**G—Informational Area**
**H—Next Page Icon**

OUO6075,00015B3 -19-31JUL13-5/12

**Recommended Machine Changes:**

Current recommendation area (A) displays the recommended machine setting changes.

*NOTE: Next recommendation icon or previous recommendation icon may be grayed out if there are no more recommendations.*

Touch or press confirm switch when next recommendation icon (B) or previous recommendation icon (C) is highlighted to advance to next recommendation or return to previous recommendation.

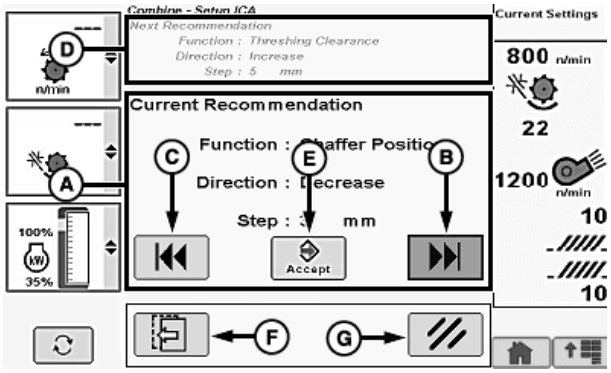
*NOTE: Next recommendation area (D) displays upcoming adjustment proposed by the system.*

Touch or press confirm switch when enter/accept icon (E) is highlighted to make proposed machine adjustment.

Touch or press confirm switch when previous page icon (F) is highlighted to return to previous page.

*NOTE: Touch or press confirm switch when cancel icon (G) is highlighted to cancel recommendation. Previous machine adjustments will be retained.*

*Interactive Combine Adjustment system will be deactivated by an engine shut down (key OFF cycle), canceling system, or when Optimization Complete state is obtained. System does not retain past machine recommendations when Interactive Combine Adjustment is restarted.*




H108635 —UN—26JUL13

**A—Current Recommendation Area**
**B—Next Recommendation Icon**
**C—Previous Recommendation Icon**
**D—Next Recommendation Area**
**E—Enter/Accept Icon**
**F—Previous Page Icon**
**G—Cancel Icon**

**Continued on next page**

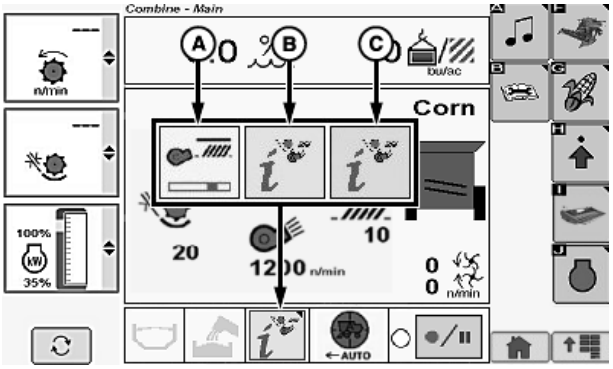
OUO6075,00015B3 -19-31JUL13-6/12

**Interactive Combine Adjustment (System Monitoring):**

*NOTE: It takes 30 seconds for Interactive Combine Adjustment icon to appear on display.*

Touch or press confirm switch when Interactive Combine Adjustment indicator (A—C) is highlighted.

- (A) Indicator (System Busy) - indicates system adjustments are being performed. Green segment underneath icon moves back and forth indicating that machine is applying settings and waiting for system to stabilize.
- (B) Indicator (Yellow Indicator) - indicates system is ready for verification of improvement settings. Icon with a yellow background flashes or turns solid (flashes for 30 seconds and turns solid) indicating that system made adjustments and is waiting for operator feedback (rating of performance parameters).
- (C) Indicator (Red Indicator) - indicates system has detected a condition shift. Icon with a red background




H106295 —UN—14JAN13

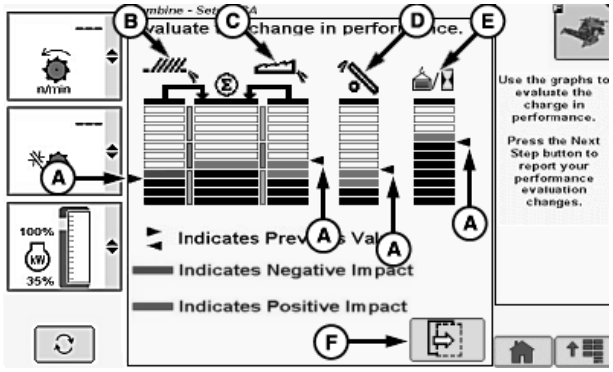
indicates to operator that system has detected a change in machine performance. System believes that operator should evaluate performance of machine and consider optimizing the machine settings.

OUO6075,00015B3 -19-31JUL13-7/12

Arrow indicators (A) display previous values before Interactive Combine Adjustment system made recommended machine setting changes.

*NOTE: Bar graphs are a visual guide to see if an increase or decrease occurs over a certain period of time.*

- Shoe Loss Indicator (B)
  - Green bars indicate that loss levels are lower than they previously were and that performance has improved.
  - Red bars indicate that loss levels are higher than they previously were.
- Separator Loss Indicator (C)
  - Green bars indicate that loss levels are lower than they previously were and that performance has improved.
  - Red bars indicate that loss levels are higher than they previously were.
- Tailings Volume Indicator (D)
  - Green bars indicate that less tailings volume is being monitored.
  - Red bars indicate that more tailings volume is being monitored.
- Mass Flow Indicator (E)
  - Green bars indicate that feedrate has increased.




H108636 —UN—26JUL13

**A—Arrow Indicators**
**B—Shoe Loss Indicator**
**C—Separator Loss Indicator**
**D—Tailings Volume Indicator**
**E—Mass Flow Indicator**
**F—Next Page Icon**

  - Red bars indicate that feedrate has decreased.

Touch or press confirm switch when next page icon (F) is highlighted to advance to next page.

**Continued on next page**

OUO6075,00015B3 -19-31JUL13-8/12

**Verify Improvement Settings:**

*NOTE: This is an example of a possible condition. Always follow information shown on display.*

Allows operator to answer a series of questions on each parameter to help improve previous loss and quality conditions.

Touch or press confirm switch when desired parameter menu (A) is highlighted:

- Broken Grain
- Chaff/Husks
- Straw Pieces/Cobs
- Unthreshed Material
- Straw Condition
- Separator Loss
- Shoe Loss
- Unthreshed Loss
- Excess Tailings

Each parameter menu displays the following:

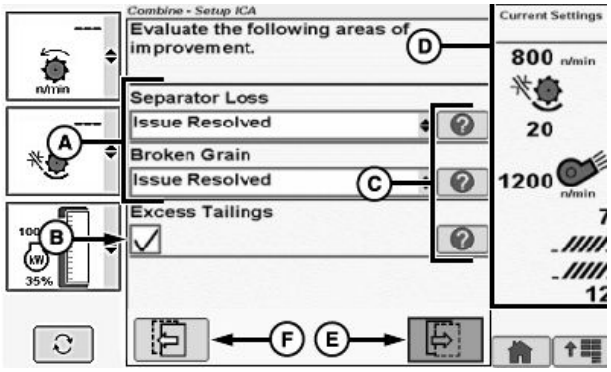
- Issue Resolved
- Better
- No Change
- Worse

Once desired selection is chosen, touch or press confirm switch.

Repeat as needed on remaining parameter menus.

Touch or press confirm switch when excess tailings box (B) is highlighted.

- Checked - excess tailings continues to exist.




H105860 —UN—06DEC12

**A—Parameter Menus**
**B—Excess Tailings Box**
**C—Help Icons**
**D—Informational Area**
**E—Next Page Icon**
**F—Previous Page Icon**

- Unchecked - excess tailings condition improved.

*NOTE: Touch or press confirm switch when desired help icon (C) is highlighted. Information area (D) switches from current machine settings to help information area which provides more details on improvements.*

Touch or press confirm switch when next page icon (E) is highlighted to advance to next page.

*NOTE: Touch or press confirm switch when previous page icon (F) is highlighted to return to previous page if needed.*

**Continued on next page**

OUO6075,00015B3 -19-31JUL13-9/12

**Verify Previously Acceptable Parameter Settings:**

*NOTE: This is an example of a possible condition. Always follow information shown on display.*

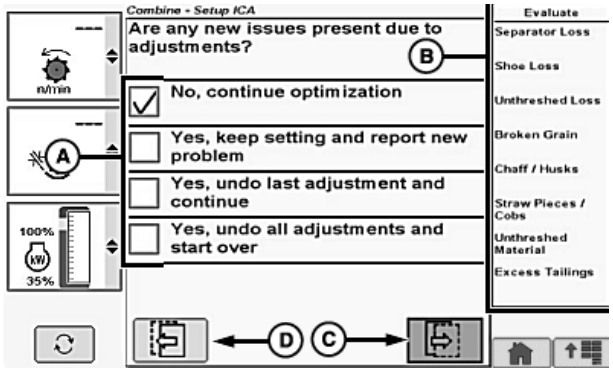
Allows operator to verify that parameters not previously selected are still acceptable or are now unacceptable.

Touch or press confirm switch when desired system evaluation box (A) is highlighted:

- No, continue optimization - allows operator to continue to optimize system. System continues to give recommended machine changes.
- Yes, keep setting and report new problem - allows operator incorporate a new issue with an existing issue(s). System continues to give recommended machine changes.
- Yes, undo last adjustment and continue - allows operator to undo previous recommended machine change and continue with other recommendations.
- Yes, undo all adjustments and start over - allows operator to undo all recommended machine changes performed by system and will exit Interactive Combine Adjustment.

Parameters not previously selected (B):

- Broken Grain
- Chaff/Husks
- Straw Pieces/Cobs
- Unthreshed Material
- Straw Condition




H108680 —UN—30JUL13

**A—System Evaluation Box**
**B—Parameters Not Previously Selected**
**C—Next Page Icon**
**D—Previous Page Icon**

- Separator Loss
- Shoe Loss
- Unthreshed Loss
- Excess Tailings

Touch or press confirm switch when next page icon (C) is highlighted to advance to next page.

*NOTE: Touch or press confirm switch when previous page icon (D) is highlighted to return to previous page if needed.*

**Continued on next page**

**Recommended Machine Changes:**

Current recommendation area (A) displays the recommended machine setting changes.

*NOTE: Next recommendation icon or previous recommendation icon may be grayed out if there are no more recommendations.*

Touch or press confirm switch when next recommendation icon (B) or previous recommendation icon (C) is highlighted to advance to next recommendation or return to previous recommendation.

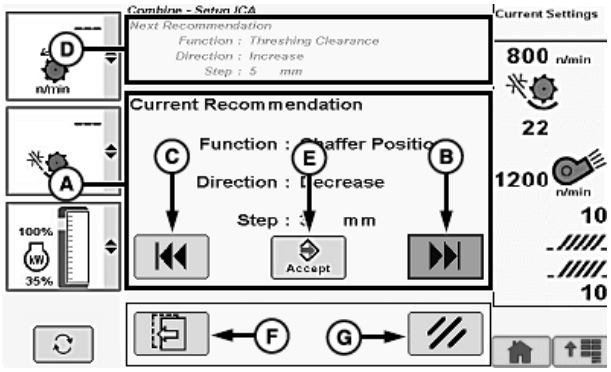
*NOTE: Next recommendation area (D) displays upcoming adjustment proposed by the system.*

Touch or press confirm switch when enter/accept icon (E) is highlighted to make proposed machine adjustment.

Touch or press confirm switch when previous page icon (F) is highlighted to return to previous page.

*NOTE: Touch or press confirm switch when cancel icon (G) is highlighted to cancel recommendation. Previous machine adjustments will be retained.*

*Interactive Combine Adjustment system will be deactivated by an engine shut down (key OFF cycle), canceling system, or when Optimization Complete state is obtained. System does not retain past machine recommendations when Interactive Combine Adjustment is restarted.*




H108635 —UN—26JUL13

**A—Current Recommendation Area**
**B—Next Recommendation Icon**
**C—Previous Recommendation Icon**
**D—Next Recommendation Area**
**E—Enter/Accept Icon**
**F—Previous Page Icon**
**G—Cancel Icon**

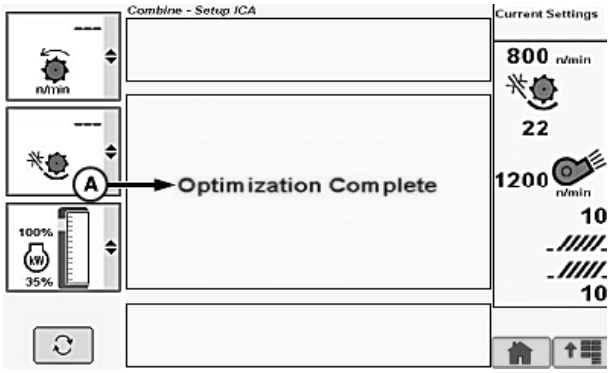
OUO6075,00015B3 -19-31JUL13-11/12

**Optimization Complete:**

Optimization complete (A) appears on display when no further machine recommendations are needed.

*NOTE: As yield and field conditions change throughout the day, Interactive Combine Adjustment parameters MUST be restarted and adjusted.*

**A—Optimization Complete**




H106314 —UN—10DEC12

OUO6075,00015B3 -19-31JUL13-12/12

## Harvest Smart™ Feed Rate (If Equipped)

*NOTE: Only appears if equipped with Harvest Smart™ Feed Rate.*

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when Harvest Smart™ Feed Rate setup icon (A) is highlighted.

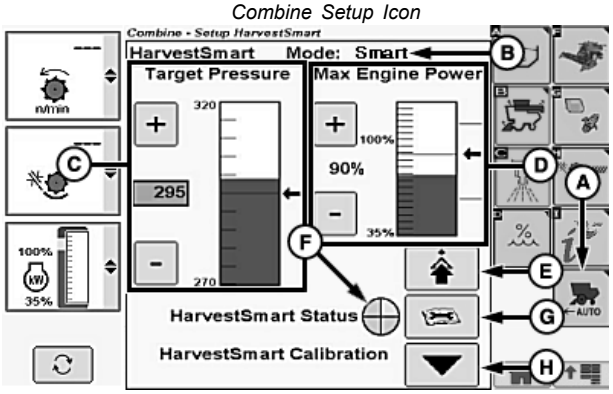
Refer to Harvest Smart™ Feed Rate section for further information on operating the following:

- Operating Mode (B)
  - OFF
  - Smart
  - Capacity
- Target Pressure (C)
- Max Engine Power (D)
- Advanced Setup Icon (E)
  - Max Harvest Speed
  - Sensitivity
- Harvest Smart™ Status Indicator (F)
- Diagnostic Readings Icon (G)
- Harvest Smart™ Calibration Icon (H)

H94473 —UN—31MAR10



*Combine Setup Icon*

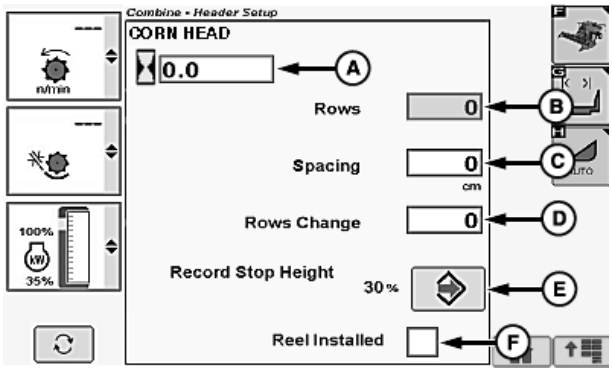



H106433 —UN—03JAN13

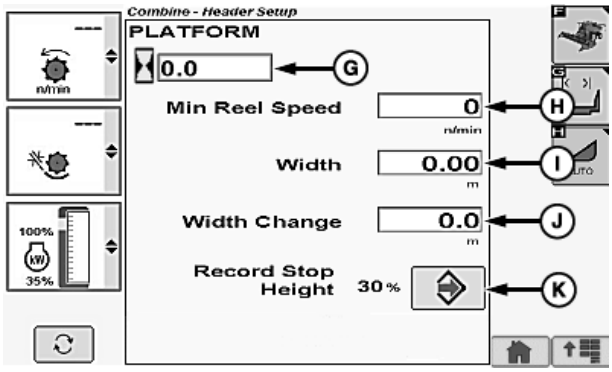
**A—Harvest Smart™ Feed Rate Setup Icon**
**B—Operating Mode**
**C—Target Pressure**
**D—Max Engine Power**
**E—Advanced Setup Icon**
**F—Harvest Smart™ Status Indicator**
**G—Diagnostic Readings Icon**
**H—Harvest Smart™ Calibration Icon**

OUO6075,000119D -19-09JAN13-1/1

## Header Setup Screen




H94605 —UN—05OCT10




H94606 —UN—05OCT10

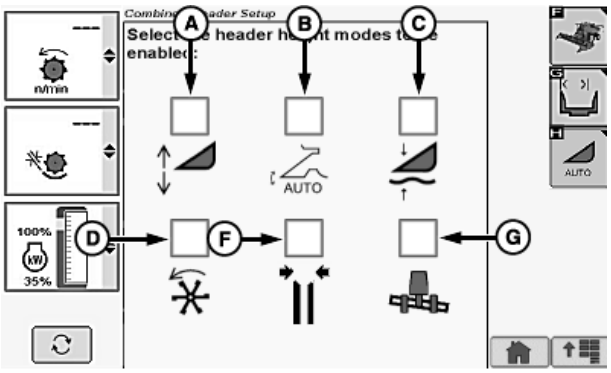
**Header Settings:**

- Corn Head and Hour Counter [1] (A)
  - Header Type (Auto Detection)
  - Total Rows (Rows, Based on Type, Numeric Entry) (B)
  - Row Spacing (C)
  - Row Change (Decrease Cut Rows) (D)
  - Record Stop Height (Height Setup for Turning Recording ON/OFF) (E)
- Reel Installed Box (F)
- Draper/Platform/Belt Pickup and Hour Counter [1] (G)
  - Header Type (Auto Detection)
  - Minimum Reel or Belt Pickup Speed (H)
  - Total Width (Total Width, Based on Type, Numeric Entry) (I)
  - Width Change (Decrease Cut Width) (J)
  - Record Stop Height (Height Setup for Turning Recording ON/OFF) (K)

[1]*For information on resetting header hours, see your John Deere dealer.*

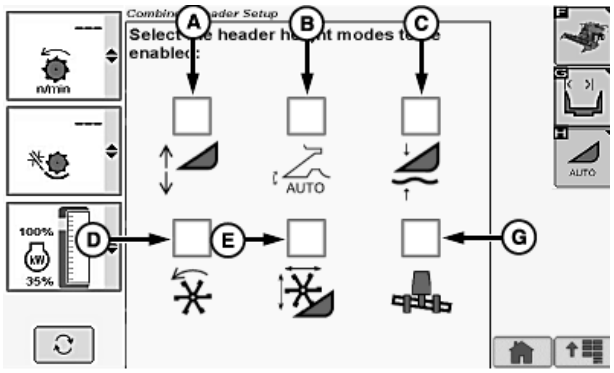
**Continued on next page**

OUO6075,000042C -19-24AUG10-1/2




H100558 —UN—03MAR11

*Corn Head Display*




H96215 —UN—05OCT10

*Platform Display*

**Automatic Header Control (AHC) Settings:**

- Header Height Sensing Enable (A)
- Header Height Resume Enable (B)
- Active Header Float Enable (C)
- Dial-A-Speed Enable (D)
- Reel Position Resume Enable[1] (E)
- Deck Plate Position Resume Enable[2] (F)
- Lateral Tilt Enable[3] (G)

*[1]If connected to a platform machine with a reel.*
*[2]If connected to a corn head with adjustable deck plates.*
*[3]If equipped with Lateral Tilt.*

OUO6075,000042C -19-24AUG10-2/2

## Change Header Settings

*NOTE: Header setup icon changes based on type of header connected to machine.*

Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when header width setup icon (A) is highlighted.

Touch or press confirm switch when one of the following is highlighted:

**Corn Head Display:**

- Rows Box (B) - allows operator to set number of rows on corn head.
- Spacing Box (C) - allows operator to set row spacing on corn head.
- Rows Change Box (D) - allows operator to set row changes (not harvesting full width).
- Reel Installed Box (E) - allows operator in down or tangled crop conditions to enable a corn head reel system.

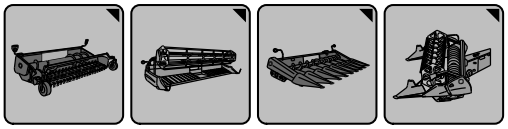
**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired header value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired header value on numeric display. Touch enter/accept icon to save value.

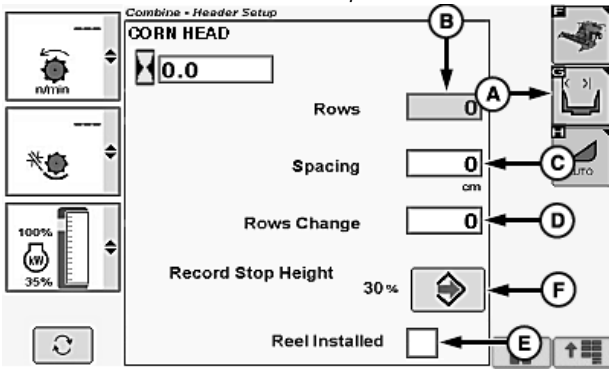
**Recording Stop Height:**

*NOTE: Recording automatically turns OFF at and above preset height and turns ON below preset height, provided all other conditions are met (separator/header engaged, engine at high idle, farm/field is setup), see Manual Recording ON/OFF in this section for information on temporarily overriding.*

H96245 —UN—03MAY10



*Header Setup Icons*




H94622 —UN—05OCT10

**A—Header Width Setup Icon**
**B—Rows Box**
**C—Spacing Box**
**D—Row Change Box**
**E—Reel Installed Box**
**F—Record Stop Height Enter/Accept Icon**

*If Header Height Sensing or Active Header Float are active, record stop height setting is irrelevant and recording turns ON, provided all other conditions are met (separator/header engaged, engine at high idle, farm/field is setup).*

Raise or lower header to desired record stop height.

Touch or press confirm switch when record stop height enter/accept icon (F) is highlighted to save value.

**Continued on next page**

**Draper/Platform/Belt Pickup Display:**

- Minimum Reel or Belt Pickup Speed Box (B) - allows operator to set minimum reel or belt pickup speed.
- Width Box (C) - allows operator to set cut width on platforms.
- Width Change Box (D) - allows operator to set cut width changes (not harvesting full width).

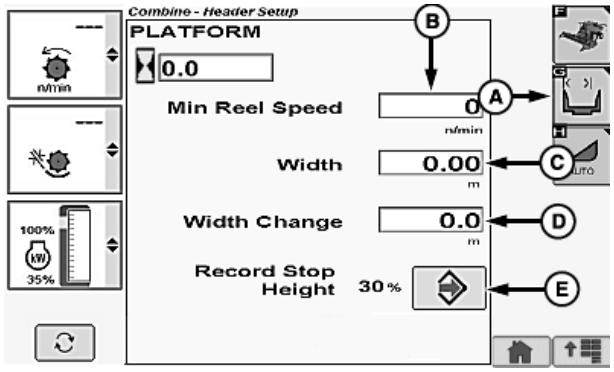
**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired header value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired header value on numeric display. Touch enter/accept icon to save value.

**Recording Stop Height:**

*NOTE: Recording automatically turns OFF at and above preset height and turns ON below preset height, provided all other conditions are met (separator/header engaged, engine at high idle, farm/field is setup), see Manual Recording ON/OFF in this section for information on temporarily overriding.*

*If Header Height Sensing or Active Header Float are active, record stop height setting is irrelevant and recording turns ON, provided all other conditions are met (separator/header engaged, engine at high idle, farm/field is setup).*




**A—Header Width Setup Icon**
**B—Minimum Reel or Belt Pickup Speed Box**
**C—Width Box**
**D—Width Change Box**
**E—Record Stop Height Enter/Accept Icon**

Raise or lower header to desired record stop height.

Touch or press confirm switch when record stop height enter/accept icon (E) is highlighted to save value.

OUO6075,0000428 -19-27JUN12-2/2

## Automatic Header Control (AHC) Settings

*NOTE: Header setup icon changes based on type of header connected to machine.*

Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

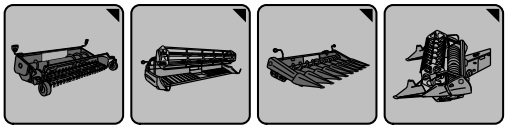
Touch or press confirm switch when one of the following is highlighted:

- Header Height Sensing Enable (B)
- Header Height Resume Enable (C)
- Active Header Float Enable (D)
- Dial-A-Speed Enable (E)
- Deck Plate Position Resume Enable[1] (F)
- Reel Position Resume Enable[2] (G)
- Lateral Tilt Enable[3] (H)

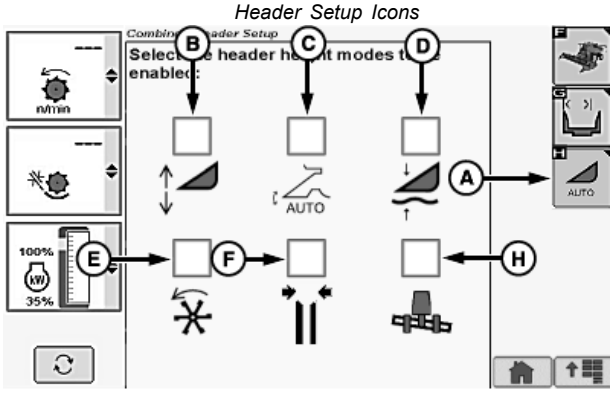
Box displays a checkmark indicating which icons will be enabled or disabled displayed on cornerpost.

*NOTE: If boxes are grayed out that option is not available on your machine.*

H96245 —UN—03MAY10

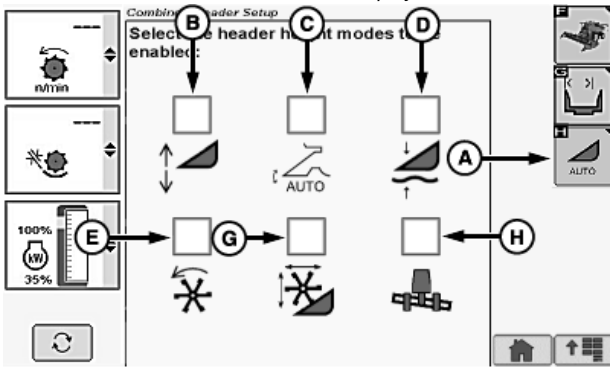


*Header Setup Icons*




H94938 —UN—05OCT10

*Corn Head Display*




H94937 —UN—05OCT10

*Platform Display*

[1]*If connected to a corn head with adjustable deck plates.*
[2]*If connected to a platform machine with a reel.*
[3]*If equipped with Lateral Tilt.*

OUO6075,00004BF -19-01DEC10-1/1

## Engine Information Screen

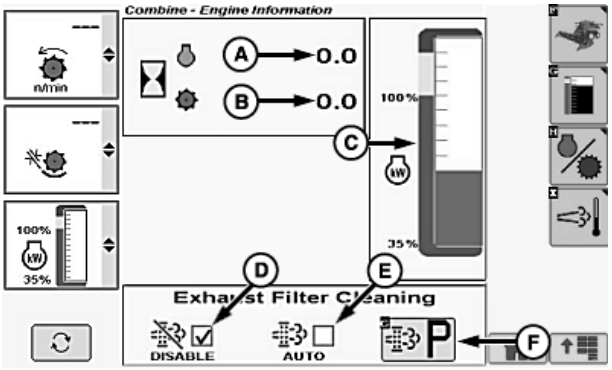
**Engine Settings:**

- Engine Hours (A)
- Separator Hours (B)
- Engine Power Meter (C)
  - Green Region (35 to 100%)
  - Yellow Region (101 to 107%)
  - Red Region (108 to 114%)

**IMPORTANT: If indicator moves into red region, engine power is maximized and machine could potentially stall. Reduce load on machine until indicator moves back into green and yellow regions.**

- Disable Exhaust Filter Cleaning Mode (D) [1]

[1]*Appears when equipped with Interim Tier 4/Stage III B or Final Tier 4/Stage IV engines.*




H108617 —UN—26JUL13

- AUTO Exhaust Filter Cleaning Mode (E) [1]
- Parked Exhaust Filter Cleaning Icon (F) [1]

OUO6075,00015AC -19-26JUL13-1/1

## Exhaust Filter Cleaning (Interim Tier 4/Stage III B)

Touch or press confirm switch when engine information icon is highlighted.

Touch or press confirm switch when one of the following is highlighted:

*NOTE: System defaults to AUTO mode every time key switch is cycled. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See When to Disable Exhaust Cleaning System in Operating the Engine section.*

- Disable Exhaust Filter Cleaning Mode (A) - allows exhaust filter cleaning system to be disabled. Disabling the system is not recommended. Only to be used in certain conditions or emergency situations. See When to Disable Exhaust Cleaning System in Operating the Engine section for more detailed information.
- AUTO Exhaust Filter Cleaning Mode (B) - allows exhaust filter cleaning system to intelligently perform a filter cleaning as required. Cornerpost display indicator and armrest display provide operator information related to exhaust filter system activity.

  *NOTE: Exhaust filter cleaning indicator on cornerpost display illuminates when exhaust filter system is actively performing a filter cleaning.*

- Parked Exhaust Filter Cleaning Icon (C) - is an automated process which allows the system to clean the exhaust filter when required. During the process, engine speed is controlled by the system and the machine must remain parked to complete this procedure. Time required for the parked exhaust filter cleaning is dependent upon the level of exhaust filter restriction, ambient temperatures, and current exhaust gas temperature. Armrest display provides an estimated time to completion.

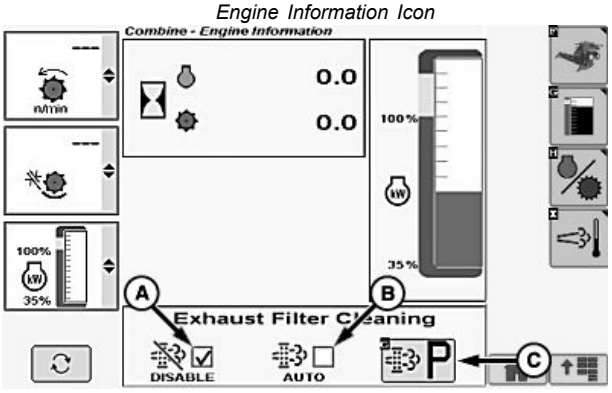
  *NOTE: Parked exhaust filter cleaning icon may be active or inactive (grayed out) depending on exhaust filter restriction level. See Parked Exhaust Filter Cleaning in Operating the Engine section.*

  *System defaults to AUTO mode when parked exhaust filter cleaning is complete. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See When to Disable Exhaust Cleaning System in Operating the Engine section.*

H94480 —UN—31MAR10



*Engine Information Icon*




H108618 —UN—26JUL13

OUO6075,00015B7 -19-29JUL13-1/1

## Engine Speed Management (ProDrive™ Machines)

*NOTE: Engine speed management is software-controlled and activated with road transport disconnect switch.*

Engine speed management reduces fuel consumption and increases fuel efficiency.

- Fuel consumption is reduced in low load conditions with a reduction in engine speed.
- Maintain high load capabilities by dynamically increasing engine speed when needed.
- Ground speed is maintained during engine speed changes through varying hydrostatic displacements.
- Engine speed stays at low idle when machine is not moving.
- Engine speed is approximately 1600 rpm when machine is on flat ground or with low ground speeds.
- Engine speed changes between approximately 1600 rpm and maximum high idle depending on the engine load.

*NOTE: Engine speed indicator lights will turn OFF after a transition to field mode if the engine is not at low idle speed during the transition. Engine will remain at its current speed until one of the idle buttons is pressed.*

Operator limits maximum engine speed through engine speed switches.

- Low Engine Speed - engine speed stays at 1250 rpm.
- Medium Engine Speed - engine speed will not exceed 1870 rpm.
- High Engine Speed - engine speed changes between approximately 1600 rpm and maximum high idle.

Touch or press confirm switch when engine information icon is highlighted.

Touch or press confirm switch when engine speed management icon (A) is highlighted.

Touch or press confirm switch when diagnostic readings icon (B) is highlighted.

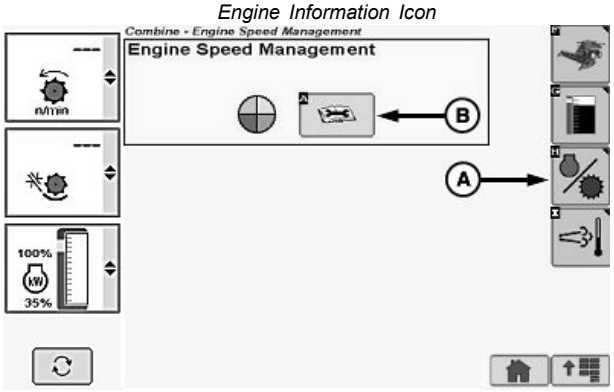
Engine speed management screen displays the following condition and status:

- ProDrive™ Transmission

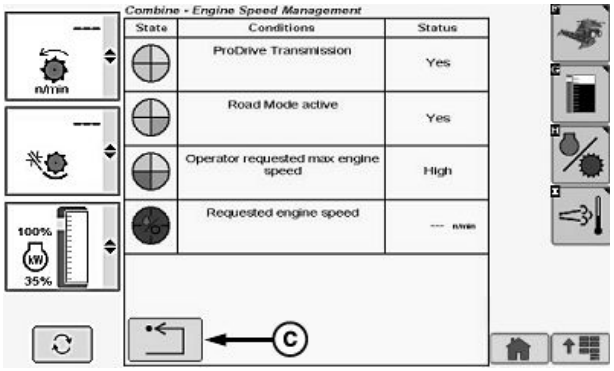
H94480 —UN—31MAR10



*Engine Information Icon*




H108619 —UN—26JUL13




H108620 —UN—26JUL13

**A—Engine Speed Management Icon**
**B—Diagnostic Readings Icon**
**C—Return/Back Icon**

- Road Mode Active
- Operator Requested Max Engine Speed
- Requested Engine Speed

Touch or press confirm switch when return/back icon (C) is highlighted to return to previous page.

OUO6075,00015AE -19-26JUL13-1/1

## Diagnostic and Calibrations Screen

**Calibrations:**

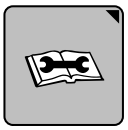
*NOTE: Calibrations are done using instructions shown on screen. Operator selects which calibration and highlights calibrate icon, and is guided through procedure.*

Touch or press confirm switch when diagnostic icon is highlighted.

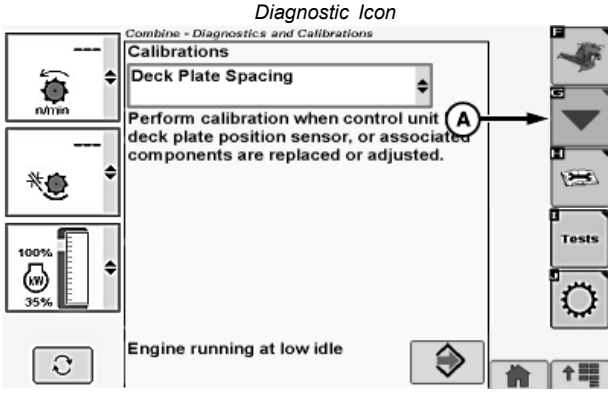
Touch or press confirm switch when calibration icon (A) is highlighted.

- Refer to When to Calibrate in Calibration Procedures section for listing of calibrations.

H94478 —UN—31MAR10



*Diagnostic Icon*




H94638 —UN—05OCT10

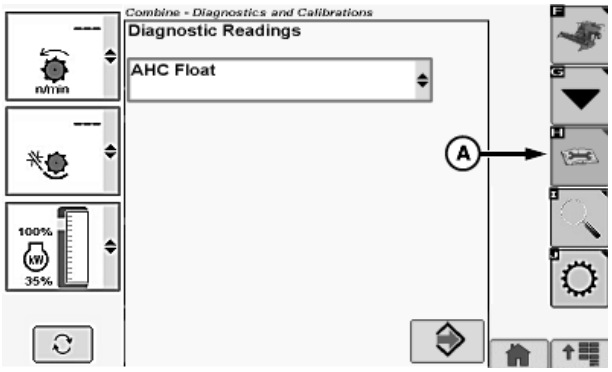
*Calibrations*

OUO6075,000042B -19-02SEP10-1/4

**Diagnostic Readings:**

Touch or press confirm switch when diagnostic readings icon (A) is highlighted.

- Diagnostic Readings - assists in providing more information about a machine subsystem for troubleshooting. Display gathers data from diagnostic addresses and displays collected information on one page.




H94639 —UN—05OCT10

*Diagnostic Readings*

OUO6075,000042B -19-02SEP10-2/4

**Special Tests:**

*NOTE: Cleaning Fan Speed Adjust special test may not perform correctly if cleaning fan speed slowdown kit was installed.*

Touch or press confirm switch when diagnostic special tests icon (A) is highlighted.

- Diagnostic Special Tests - helps minimize amount of time required to diagnose an issue by leading operator or technician through a special set of instructions. Machine automatically checks as the operator is guided through the special tests.




H94640 —UN—05OCT10

*Special Tests*

Continued on next page

OUO6075,000042B -19-02SEP10-3/4

**Tow Mode Setup** [1]**:**

**IMPORTANT: Do not tow machine except in an emergency for a short distance at 8 km/h (5 mph). See Towing Machine in Transporting section for further information.**

*NOTE: Tow Mode Setup allows operator in emergency modes to select the following.*

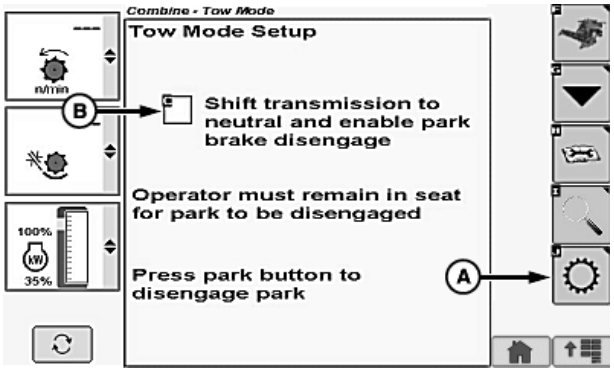
Touch or press confirm switch when tow mode setup icon (A) is highlighted.

Touch or press confirm switch when box is highlighted.

- Shift transmission to neutral and enable park brake disengaged Box (B) - shifts machine to neutral position and enables park brake disengage.

*NOTE: Operator must remain in seat for park brake to be disengaged.*

[1]*Only appears with ProDrive and push button shift transmission machines.*




H94941 —UN—05OCT10

Press park brake switch on armrest to release brakes before towing machine.

OUO6075,000042B -19-02SEP10-4/4

## Radio Source Select

Touch or press confirm switch when infotainment icon or audio application icon is highlighted.

Touch or press confirm switch when source select icon (A) is highlighted.

Touch or press confirm switch when desired source icon is highlighted:

- MW (B)
- FM (C)
- LW (D)
- CD/MP3 (E)
- Universal Serial Bus (USB) (Premium Radio Only) (F)
- Auxiliary (AUX) (G)
- Bluetooth® Audio (Premium Radio Only) (H)

**Radio OFF;** selecting Infotainment Icon or Audio Application Icon navigates to source select screen. Selecting a source from this screen turns radio ON to selected source.

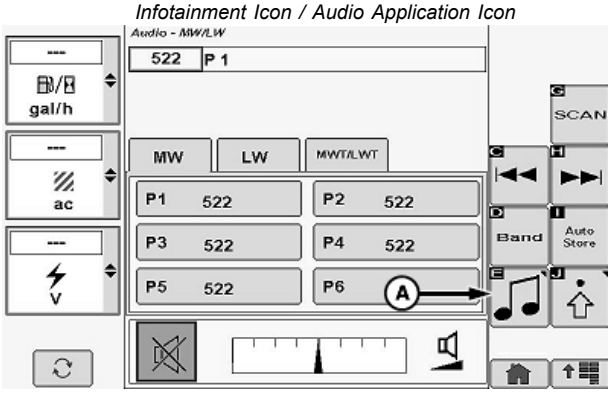
**Radio ON;** selecting Infotainment Icon or Audio Application Icon navigates to currently selected source's home page.

Selecting source icon from a radio home page will navigate to source select screen. Selecting a source from this screen will change radio to selected source.

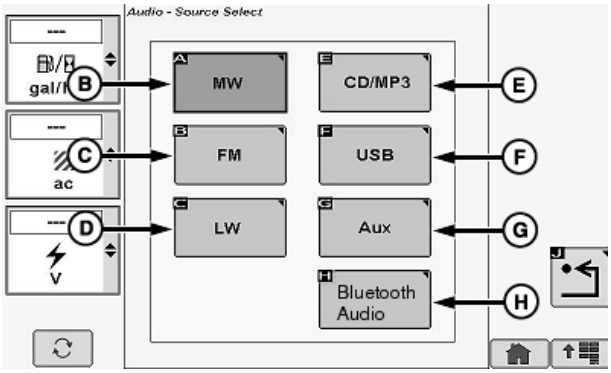


*Infotainment Icon / Audio Application Icon*

H105093 —UN—28MAR12




H105097 —UN—28MAR12




H105096 —UN—28MAR12

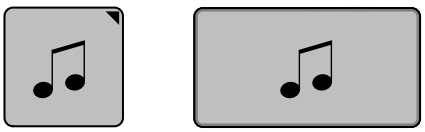
*Bluetooth is a registered trademark of Bluetooth SIG*

OUO6075,000112C -19-25JUN12-1/1

## MW/LW Home Page

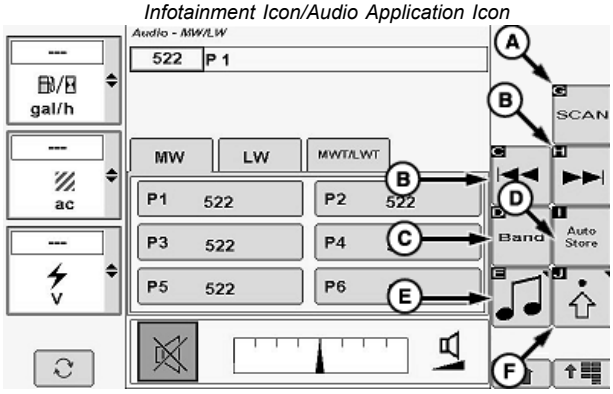
*NOTE: FM and LW home pages are similar to MW home page.*

Touch or press confirm switch when infotainment icon or audio application icon is highlighted.



*Infotainment Icon/Audio Application Icon*

H105093 —UN—28MAR12




H105271 —UN—26APR12

**Scan Icon (A)**

*NOTE: Scan is disabled by touching or pressing confirm switch when icon is highlighted.*

Allows operator to scan through available stations on selected radio band. Current station plays four—eight seconds (depending on time to produce audio) before scanning again.

Touch or press confirm switch when scan icon is highlighted.

**Station SEEK Up/Down Icons (B)**

*NOTE: While in scan mode, scan is disabled by touching or pressing confirm switch when icons are highlighted.*

Station SEEK Up/Down allows operator to find broadcast stations with strong signals.

*NOTE: Manual tuning can be performed from radio faceplate and armrest switches.*

Touch or press confirm switch when desired channel up icon or channel down icon is highlighted.

**Band Icon (C)**

Allows operator to toggle through MW, LW, MWT, LWT.

Touch or press confirm switch when band icon is highlighted to toggle through available radio bands.

**Auto Store Icon (D)**

Auto store allows operator to store the 6 strongest frequencies in the MWT and LWT band.

Touch or press confirm switch when auto store icon is highlighted to store the 6 strongest frequencies.

*NOTE: Press and hold Band (BND) key on radio for two seconds to start Auto Store.*

**Source Select Icon (E)**

Allows operator to directly change to a broadcast or other audio source (see Radio Source Select in this section for additional information).

Touch or press confirm switch when select source icon is highlighted to cycle through available choices.

**Audio Settings Icon (F)**

Allows operator to change desired audio settings. Refer to Audio Settings later in this section for further information.

**Continued on next page**

OUO6075,0001521 -19-18JUN13-1/2

**Mute Icon (A)**

Allows operator to mute radio sound level.

Touch or press confirm switch when mute icon is highlighted.

**Volume Bar Graph Area (B)**

Allows operator to adjust current sound level.

Touch plus (+) symbol or minus (-) symbol or rotate selection dial to increase or decrease bar graph settings.

**Channel Presets 1—6 (C)**

Allows operator to select preset stations (lowest frequency available is default).

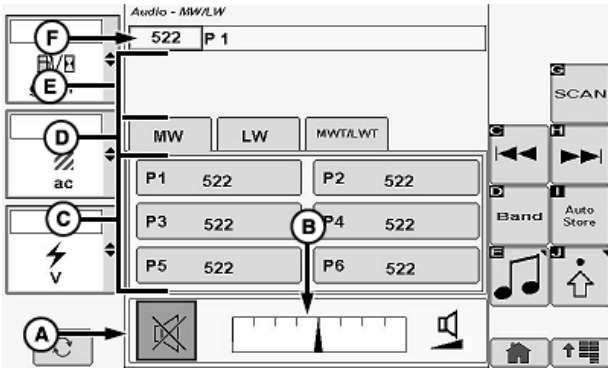
Touch or press confirm switch when desired preset station is highlighted.

Press and hold screen icon or confirm button for two seconds to store active station frequency to preset.

Radio and display buttons are synchronized.

**Radio Band Tabs (MW/LW) (D)**

Allows operator to cycle through additional preset stations on other tabs (if previously saved into memory).




H105272 —UN—03MAY12

Touch or press confirm switch when desired tab is highlighted to cycle through additional preset stations (if previously saved into memory).

**Artist/Song Name Display Area (E)**

Allows operator to view artist name and song name (if available) from current radio station.

**Radio Station Frequency Display Area (F)**

Allows operator to view radio station frequency and channel preset number (if previously saved into memory).

OUO6075,0001521 -19-18JUN13-2/2

## CD/MP3 Home Page

Touch or press confirm switch when infotainment icon or audio application icon is highlighted.



H105093 —UN—28MAR12

*Infotainment Icon/Audio Application Icon*

**Folder Select Icon (A)**

*NOTE: Folder select icon and folder name icon are not available when playing a non-MP3 format CD.*

Allows operator to view the folder select page (if MP3 CD contains a folder structure).

Touch or press confirm switch when folder select icon is highlighted. Radio begins playing first song in each folder upon navigation.

**Pause/Play Icon (B)**

Allows operator to pause audio and resume playing audio.

Touch or press confirm switch when pause/play icon is highlighted.

**Fast Reverse/Fast Forward Icon (C)**

Allows operator to fast forward or fast reverse currently playing audio.

Touch and hold icon or press and hold confirm switch when fast reverse or fast forward icon is highlighted to fast forward or fast reverse through audio file. Play resumes upon release.

**Previous Track/Next Track Icon (D)**

Allows operator to select the previous song or advance to the next song.

Touch or press confirm switch when desired previous track or next track icon is highlighted.

**Random Folder/Random All (E)**

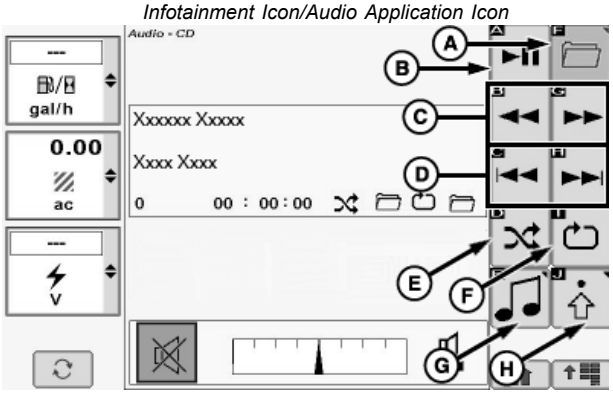
Allows operator to cycle through the following choices:

- Random Folder (MP3 CD only)
- Random All
- Random Off

Touch or press confirm switch when random icon is highlighted to cycle through choices.

**Repeat Track/Repeat Folder/Repeat All Icon (F)**

Allows operator to cycle through the following:




H105275 —UN—26APR12

- Repeat Track
- Repeat Folder (MP3 CD only)
- Repeat Off

Touch or press confirm switch when repeat icon is highlighted to cycle through available choices.

**Source Select Icon (G)**

Allows operator to directly change to a broadcast or other audio source (see Radio Source Select in this section for additional information).

Touch or press confirm switch when source select icon is highlighted to cycle through available choices.

**Audio Settings Icon (H)**

Allows operator the ability to change audio settings (see Radio Settings in this section for additional information).

Touch or press confirm switch when select audio settings icon is highlighted.

**Continued on next page**

OUO6075,0001517 -19-17JUN13-1/3

**Mute Icon (A)**

Allows operator to mute radio and shows current sound level.

Touch or press confirm switch when mute icon is highlighted.

**Volume Bar Graph Area (B)**

Allows operator to adjust current sound level.

Touch plus (+) symbol or minus (-) symbol or rotate selection dial to increase or decrease bar graph settings.

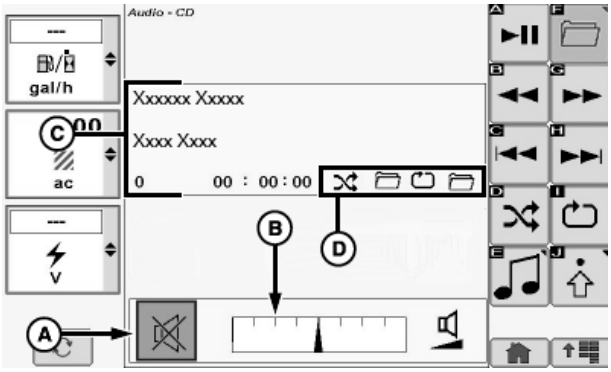
**Display Area (C)**

Allows operator to view the following:

- Artist Name
- Album Name
- Song Name
- Track Number
- Elapsed Time

**Indicator Icon Area (D)**

*NOTE: Random folder icon and repeat folder icon only appear when playing a MP3 CD.*




H105276 —UN—02MAY12

Allows operator to view which of the following icons were previously selected:

- Random Track
- Random Folder
- Repeat Track
- Repeat Folder

OUO6075,0001517 -19-17JUN13-2/3

**Folder Icon (A)**

Allows operator to navigate to the previous folder (if available).

Touch or press confirm switch when folder icon is highlighted.

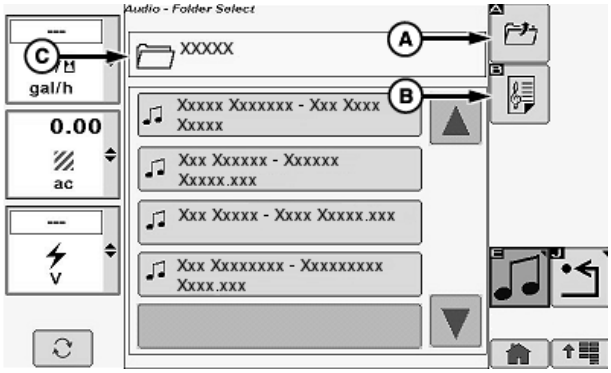
**Playlist Enable/Disable Icon (B)**

Allows operator to enable/disable playlist mode (if available).

Touch or press confirm switch when playlist enable/disable icon is highlighted.

**Folder Name (C)**

Allows operator to view folder name (if folder was previously named).

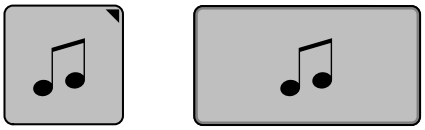



H105088 —UN—27MAR12

OUO6075,0001517 -19-17JUN13-3/3

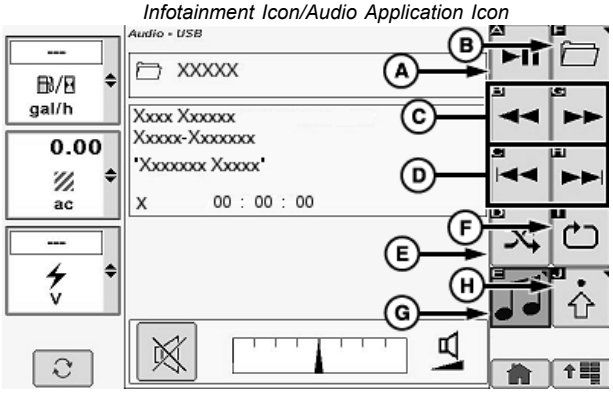
## USB Home Page (Premium Radio)

Touch or press confirm switch when infotainment icon or audio application icon is highlighted.



Infotainment Icon/Audio Application Icon

H105093 —UN—28MAR12




H105277 —UN—26APR12

**Pause/Play Icon (A)**

Allows operator to pause audio and resume playing audio.

Touch or press confirm switch when pause/play icon is highlighted. Radio begins playing first song in each folder upon navigation.

**Folder Select Icon (B)**

Allows operator to view the folder select page.

Touch or press confirm switch when folder select icon is highlighted.

**Fast Reverse/Fast Forward Icon (C)**

Allows operator to fast forward or fast reverse currently playing audio.

Touch and hold icon or press and hold confirm switch when fast reverse or fast forward icon is highlighted to fast forward or fast reverse through audio file. Play resumes upon release.

**Previous Track/Next Track Icon (D)**

Allows operator to select the previous song or advance to the next song.

Touch or press confirm switch when desired previous track or next track icon is highlighted.

**Random Folder/Random All (E)**

Allows operator to cycle through the following choices:

- Random Folder
- Random All
- Random Off

Touch or press confirm switch when random icon is highlighted to cycle through choices.

**Repeat Track/Repeat Folder/Repeat All Icon (F)**

Allows operator to cycle through the following:

- Repeat Track
- Repeat Folder
- Repeat Off

Touch or press confirm switch when repeat icon is highlighted to cycle through available choices.

**Source Select Icon (G)**

Allows operator to directly change to a broadcast or other audio source (see Radio Source Select in this section for additional information).

Touch or press confirm switch when source select icon is highlighted to cycle through available choices.

**Audio Settings Icon (H)**

Allows operator the ability to change audio settings (see Radio Settings in this section for additional information).

Touch or press confirm switch when select audio settings icon is highlighted.

**Continued on next page**

OUO6075,0001518 -19-17JUN13-1/3

**Mute Icon (A)**

Allows operator to mute radio and shows current sound level.

Touch or press confirm switch when mute icon is highlighted.

**Volume Bar Graph Area (B)**

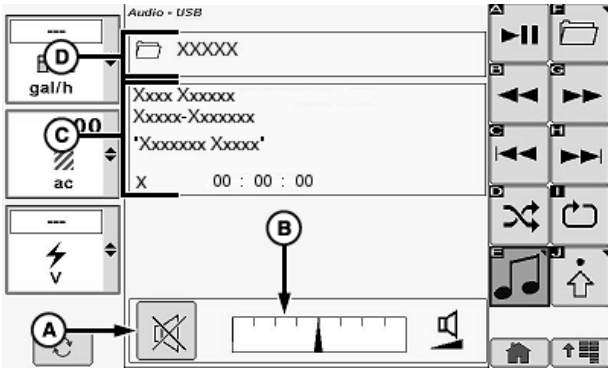
Allows operator to adjust current sound level.

Touch plus (+) symbol or minus (-) symbol or rotate selection dial to increase or decrease bar graph settings.

**Display Area (C)**

Allows operator to view the following:

- Artist Name
- Album Name
- Song Name
- Track Number




H105278 —UN—02MAY12

- Elapsed Time

**Folder Name (D)**

Allows operator to view folder name (if folder was previously named).

OUO6075,0001518 -19-17JUN13-2/3

**Folder Icon (A)**

Allows operator to navigate to the previous folder (if available).

Touch or press confirm switch when folder icon is highlighted.

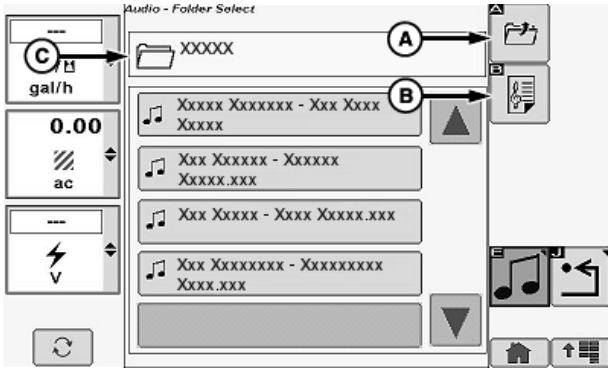
**Playlist Enable/Disable Icon (B)**

Allows operator to enable/disable playlist mode (if available).

Touch or press confirm switch when playlist enable/disable icon is highlighted.

**Folder Name (C)**

Allows operator to view folder name (if folder was previously named).




H105088 —UN—27MAR12

OUO6075,0001518 -19-17JUN13-3/3

## Auxiliary (AUX) Home Page

Touch or press confirm switch when infotainment icon or audio application icon is highlighted.

**Remote Auxiliary (AUX) (A)**

Indicates that an external device is connected to the stereo auxiliary port (3.5 mm) and is selected as the audio source (see Radio Source Select in this section for additional information).

**Mute Icon (B)**

Allows operator to mute radio sound level.

Touch or press confirm switch when mute icon is highlighted.

**Volume Bar Graph Area (C)**

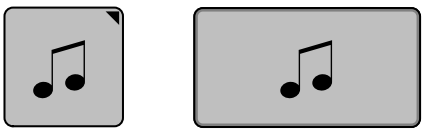
Allows operator to adjust current sound level.

Touch plus (+) symbol or minus (-) symbol or rotate selection dial to increase or decrease bar graph settings.

**Source Select Icon (D)**

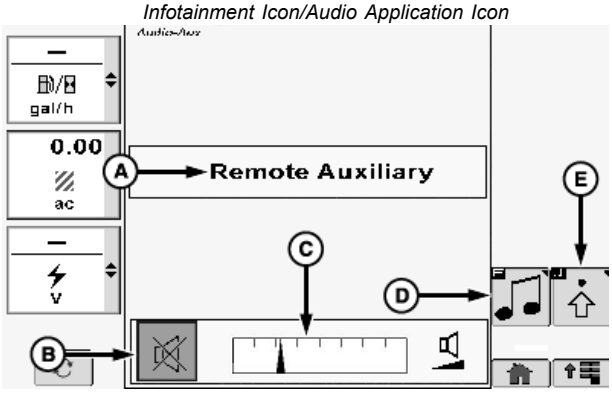
Allows operator to directly change to a broadcast or other audio source (see Radio Source Select in this section for additional information).

Touch or press confirm switch when source select icon is highlighted to cycle through available choices.



H105093 —UN—28MAR12

*Infotainment Icon/Audio Application Icon*




H105352 —UN—03MAY12

**Audio Settings Icon (E)**

Allows operator to change desired audio settings. Refer to Audio Settings later in this section for further information.

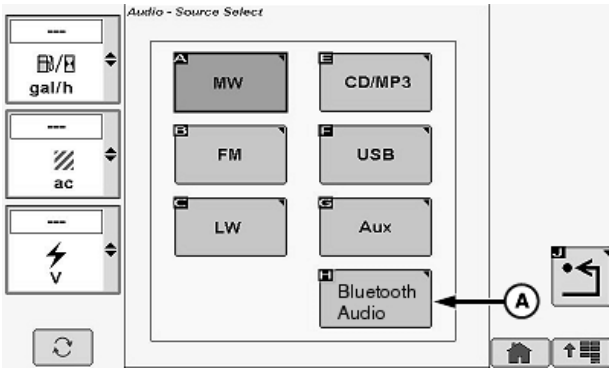
OUO6075,000151F -19-17JUN13-1/1

## Bluetooth® Audio

Touch or press confirm switch when Bluetooth® Audio icon (A) is highlighted.

Refer to Radio Operator's Manual for further information on pairing any Bluetooth® device with radio.

*NOTE: Radio function switches located on CommandARM also control Bluetooth® device that was paired.*




H105444 —UN—21MAY12

*Bluetooth is a registered trademark of Bluetooth SIG*

OUO6075,0001143 -19-25JUN12-1/1

## Radio Settings

Touch or press confirm switch when infotainment icon or audio application icon is highlighted.

Touch or press confirm switch when advanced settings icon (A) is highlighted to access audio settings.



*Infotainment Icon / Audio Application Icon*

H105093 —UN—28MAR12

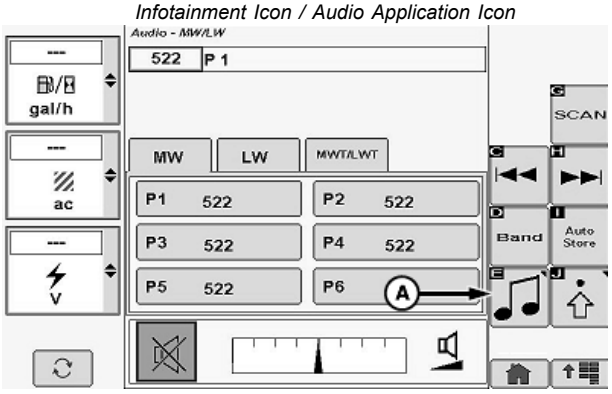
**Audio Settings**

Allows operator to change different sound settings.

Touch or press confirm switch when desired audio setting is highlighted:

- Bass (B)
- Treble (C)
- Middle (D)
- Balance (E)

Once desired audio setting is highlighted, touch plus (+) symbol or minus (-) symbol or rotate selection dial to increase or decrease bar graph settings.

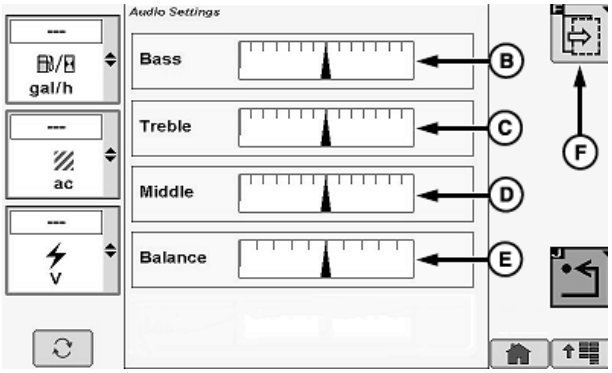



H105097 —UN—28MAR12

**Next Page Icon (F)**

Allows operator to advance to the next page.

Touch or press confirm switch when next page icon is highlighted.




H105099 —UN—03MAY12

**Alternative Frequency (AF) Icon (G)**

Alternative frequency is a Radio Data System (RDS) function that allows operator to stay tuned to a program even if the radio frequency changes.

Touch or press confirm switch when alternative frequency (AF) icon is highlighted to enable this feature.

**Alternative Frequency (AF) Box (H)**

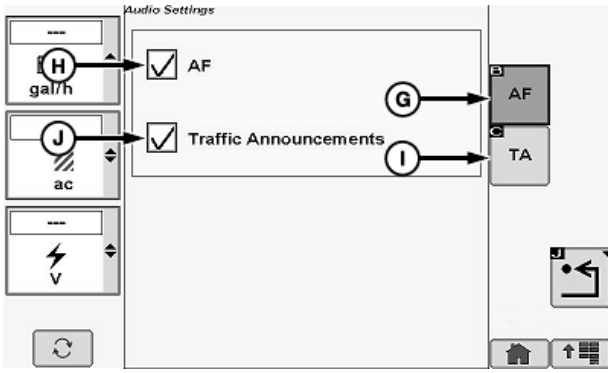
Box displays a checkmark indicating that alternative frequency (AF) is enabled.

**Traffic Announcements (TA) Icon (I)**

*NOTE: Traffic announcement (TA) volume can be set by using the menu key and volume control on the radio.*

Traffic announcements is a function that allows operator to hear various traffic reports.

Touch or press confirm switch when traffic announcements (TA) icon is highlighted to enable this feature.



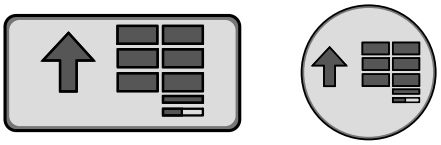

H105100 —UN—03MAY12

**Traffic Announcements Box (K)**

Box displays a checkmark indicating that traffic announcements is enabled.

OUO6075,0001130 -19-07MAY12-1/1

## Operating the Phone (Premium Radio)



H95878 —UN—29MAR10

*Main Menu Icon (Display) / Main Menu Switch (Armrest)*



H105093 —UN—28MAR12

*Phone Application Icon*

*NOTE: Phone buttons on this page are disabled while the phone is syncing the phone book with the radio.*

Press main menu icon or switch.

Touch or press confirm switch when phone application icon is highlighted.

**Transfer Call Icon (A)**

Allows operator to transfer a call to a connected phone for privacy.

Touch or press confirm switch when transfer call icon is highlighted.

**Phone Book Icon (B)**

Allows operator to view a synchronized phone book (see Phone Book in this section for further information).

Touch or press confirm switch when phone book icon is highlighted.

**Call History Icon (C)**

Allows operator to view missed calls, dialed call, and received call (see Call History in this section for further information).

Touch or press confirm switch when call history icon is highlighted.

**Bluetooth® Settings Icon (D)**

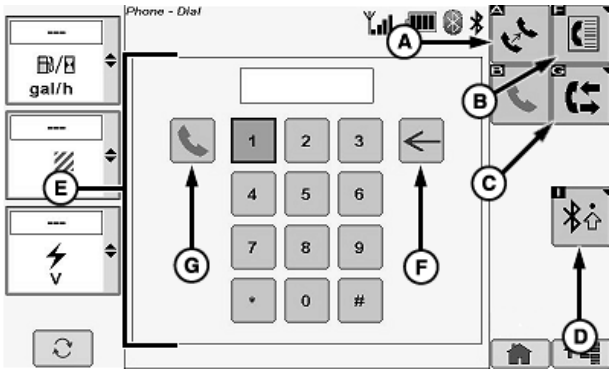
Allows operator the ability to change Bluetooth® settings (see Phone Settings (Premium Radio) in this section for additional information).

Touch or press confirm switch when Bluetooth® settings icon is highlighted.

**Telephone Numeric Keypad (E)**

Allows operator to dial a telephone number using the display screen.

*Bluetooth is a registered trademark of Bluetooth SIG*




H105090 —UN—27MAR12

Touch or press confirm switch when desired numbers are highlighted. Repeat until desired telephone number is shown.

**Delete Icon (F)**

Allows operator to delete a number while dialing a telephone number.

Touch or press confirm switch when delete icon is highlighted.

**Call Icon (G)**

*NOTE: Screen appears with contacts name and telephone number while call is being made.*

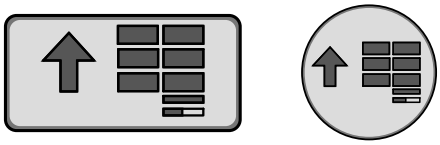
*Certain icons are not available while in a call. Use your cell phone if you need to use numbers while in a call.*

Allows operator to dial the telephone number previously entered using the telephone numeric keypad.

Touch or press confirm switch when call icon is highlighted.

OUO6075,0000E4B -19-25JUN12-1/1

## Phone Book (Premium Radio)



H95878 —UN—29MAR10

*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

H105094 —UN—28MAR12



*Phone Application Icon*

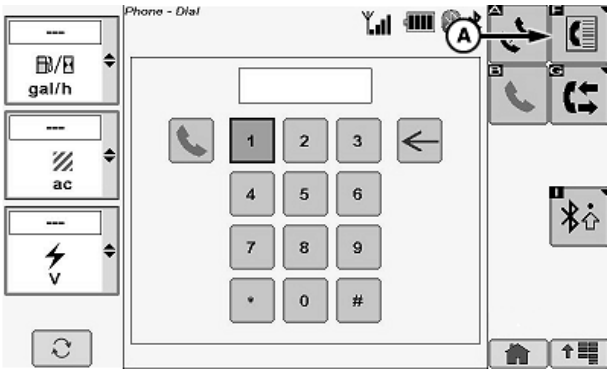
*NOTE: If a new contact is made in your cell phone, the phone must be re-synced with radio Bluetooth® (see Phone Settings in this section for further information).*

*A contact entry CANNOT be edited through armrest display. Contact must be edited through cell phone, and phone must be re-synced with radio Bluetooth® (see Phone Settings in this section for further information).*

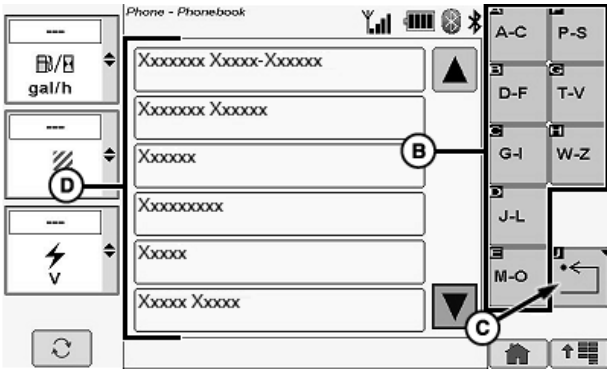
Press main menu icon or switch.

Touch or press confirm switch when phone application icon is highlighted.

Touch or press confirm switch when phone book icon (A) is highlighted.




H104857 —UN—27MAR12




H104858 —UN—27MAR12

**Alphabetic Softkeys (B)**

Allows operator to narrow the number of names in the contact list to those names beginning with selected letter icon.

Touch or press confirm switch when desired alphabetic icon is highlighted.

**Return/Back Icon (C)**

Allows operator to return to the previous page.

Touch or press confirm switch when return/back icon is highlighted.

**Phone Book Contact List (D)**

*NOTE: Maximum number of phone book entries is 650. Maximum number of characters in a phone number is 20. Maximum number of characters in a phone book name is 20.*

*Selecting a number on the phone book entry page will directly call that number.*

*Some phones will not correctly sync with the radio Bluetooth®. When this happens a call cannot be made from the Phone Book page.*

Allows operator to select a contact from the listing and will bring up a phone book entry page listing the contacts phone numbers (cell, work, home).

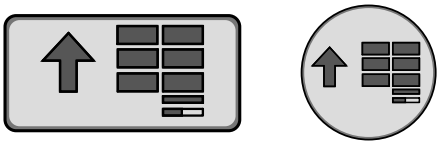
Touch or press confirm switch when desired contact is highlighted.

Alphabetic sorting of contacts by first and last name follows the cell phone's sorting preference.

*Bluetooth is a registered trademark of Bluetooth SIG*

OUO6075,0001519 -19-12JUN13-1/1

## Phone Directories (Premium Radio)



*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

H95878 —UN—29MAR10

H105094 —UN—28MAR12



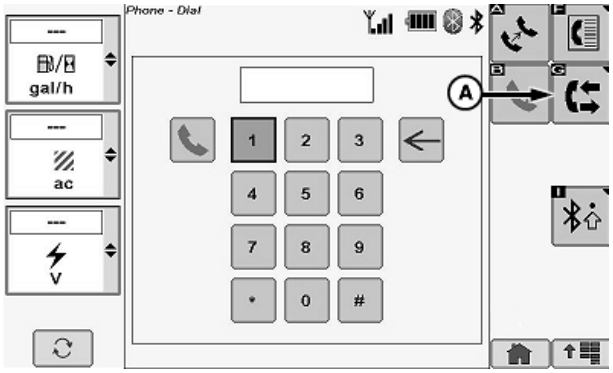
*Phone Application Icon*

Press main menu icon or switch.

Touch or press confirm switch when phone application icon is highlighted.

*NOTE: Touch or press confirm switch when directories icon (A) is highlighted. An incoming call from a contact shows the contacts name and telephone number. An incoming call received from an unknown contact appears on display as* **Unknown**.

*A missed call screen appears with the callers name and phone number (if caller is listed in phone book).* **Unknown** *appears on screen if caller was not listed in phone book.*



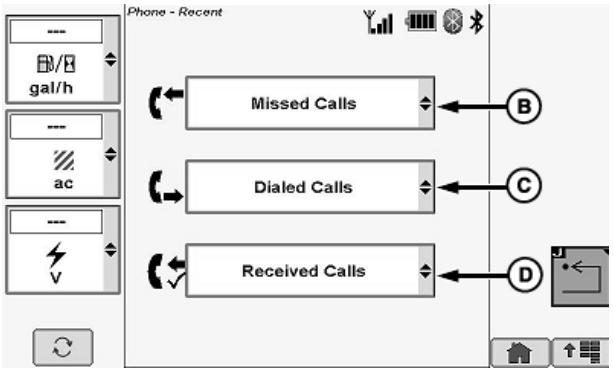

H104863 —UN—27MAR12

The directories page allows operator to review the following:

- Missed Calls (B)
- Dialed Calls (C)
- Received Calls (D)

Touch or press confirm switch when desired calls menu is highlighted.

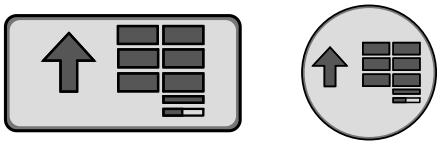
*NOTE: A call list appears from the previously selected menu. The persons name and telephone number appears (if caller is listed in phone book) with an exact time. Operator can choose from the desired listing to call that person or number back.*




H104864 —UN—28MAR12

OUO6075,0000E4D -19-02APR12-1/1

## Phone Settings (Premium Radio)



*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

Touch or press confirm switch when phone application icon is highlighted.

Touch or press confirm switch when Bluetooth® settings icon (A) is highlighted.

**Bluetooth® Enable/Disable Icon (B)**

*NOTE: When radio Bluetooth® feature is enabled, Bluetooth® enable indicator icon (C) flashes on display while phone and radio are synchronizing.*

Allows operator to enable/disable Bluetooth® feature.

Touch or press confirm switch when Bluetooth® enable/disable icon is highlighted.

**Add Phone Icon (D)**

*NOTE: Not ALL cell phones will be able to use the radio Bluetooth® feature.*

Allows operator to add a different cell phone.

1. Select Add Phone icon.
2. **Adding Phone** is displayed in message box (E) followed by a pin number “PIN XXXX”.
3. From your cell phone, select **Add New Device** in Bluetooth® menu.
4. Select **Bosch-BT** from list of available Bluetooth® devices on your cell phone.
5. Select **Bond With Device** on your cell phone.
6. Enter PIN shown in message box (E) (pin also displays on radio faceplate).
7. Paired Bluetooth® indicator is active when a cell phone is actively connecting to the radio.
8. **Phone Connected** is shown in message box when cell phone is connected successfully.

*NOTE: The cells phone book automatically syncs with the radio phone book.*

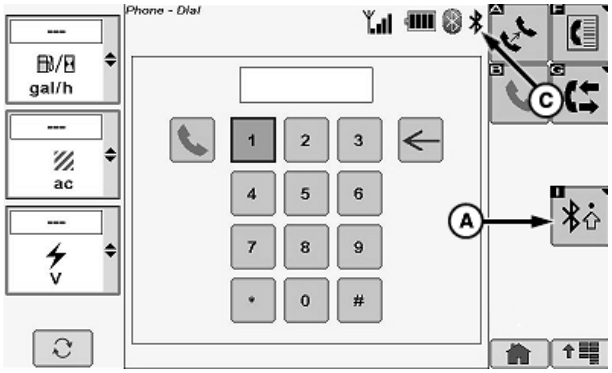
*Bluetooth is a registered trademark of Bluetooth SIG*

H105094 —UN—28MAR12

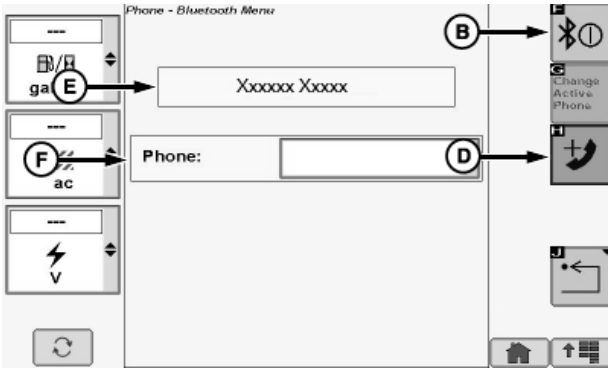
H95878 —UN—29MAR10



*Phone Application Icon*




H108313 —UN—17JUN13




H108314 —UN—17JUN13

*Radio sends a “BT phonebook” request before sync starts. If that request is not accepted on your phone, the phone book feature will be disabled.*

**Phone Device List (F)**

Allows operator to select a different cell phone from the list.

Touch or press confirm switch when phone device list is highlighted.

Touch or press confirm switch when desired phone device is highlighted in menu.

**Continued on next page**

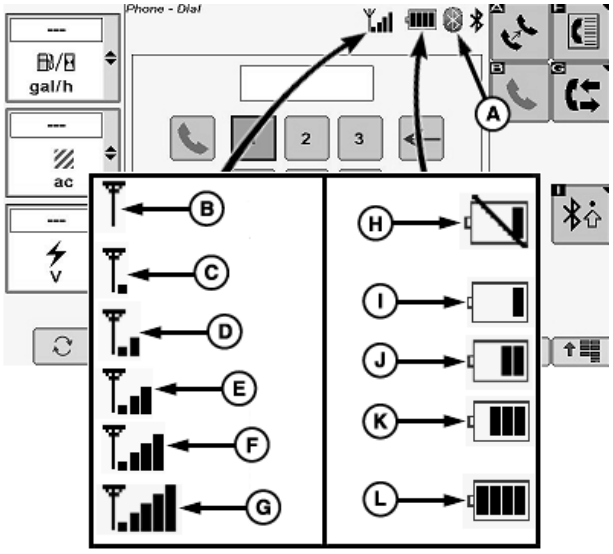
**Bluetooth® Enabled Cell Phone Indicator (A)**

Indicates that cell phone and radio are paired together.

**Signal Strength and Battery Indicators**

Phone displays the following:

| Signal Strength | | Battery Power | |
|---|---|---|---|
| B | No Signal | H | No Battery Power |
| C | 5—20 % | I | 5—25 % |
| D | 25—40 % | J | 30—50 % |
| E | 45—70 % | K | 55—80 % |
| F | 75—90 % | L | 85—100 % |
| G | 100 % | | |




H108316 —UN—17JUN13

*Bluetooth is a registered trademark of Bluetooth SIG*

OUO6075,000151E -19-17JUN13-2/3

**Change Active Phone Icon (A)**

*NOTE: First phone in phone device list is the current active phone.*

*Up to 5 cell phone pairings can be stored*

Allows operator to select a different cell phone from the phone device list. Once desired cell phone is selected from list, select change active phone icon.

**Return/Back Icon (B)**

Allows operator to return to the previous page.

Touch or press confirm switch when return/back icon is highlighted.

**Re-sync Cell Phone**

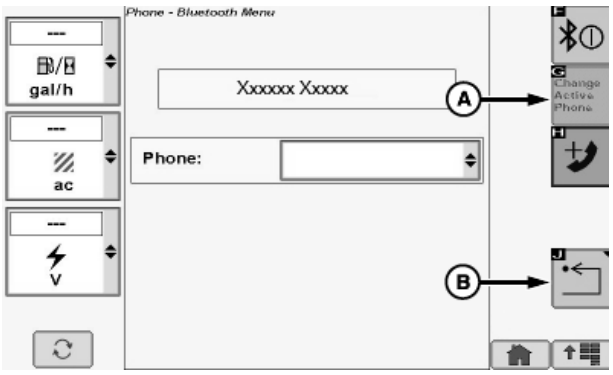
*NOTE: Make sure that cell phone's Bluetooth® is enabled when trying to pair a cell phone to the radio Bluetooth®.*

- Turn cell phone OFF and then back ON.

**Disconnect From All Phones**

Turn Bluetooth® OFF.

*Bluetooth is a registered trademark of Bluetooth SIG*




H108315 —UN—17JUN13

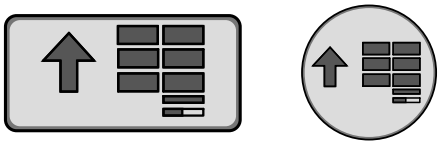
Touch or press confirm switch when Bluetooth® enable/disable icon is highlighted to disable Bluetooth®.

**Disconnect A Single Phone**

Within Bluetooth® setup menu, select unpair/disconnect from Bosch Radio.

OUO6075,000151E -19-17JUN13-3/3

## Brightness Level and Boundary Box Color

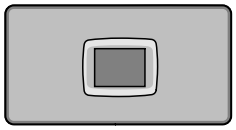


*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95849 —UN—31MAR10

H95878 —UN—29MAR10



*Display Application Icon*

Touch or press confirm switch when display settings icon is highlighted.

OUO6075,0001511 -19-11JUN13-1/6

**Brightness Level:**

Allows operator to control brightness level of screen.

Touch or press confirm switch when brightness icon (A) is highlighted.

With brightness bar graph (B) highlighted, touch plus (+) or minus (-) symbol or rotate selection dial to select brightness level of screen.

- Increase bar graph to brighten screen.
- Decrease bar graph to darken screen.

**Day/Night Settings:**

*NOTE: Day/Night icon only appears in standalone mode.*

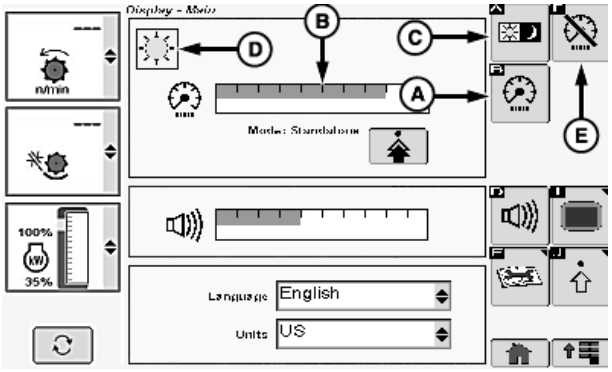
Allows operator to toggle between day or night settings.

Touch or press confirm when day/night icon (C) is highlighted to toggle between day or night settings (D).

**Dim Mode:**

Allows operator to quickly darken screen to reduce glare.

Touch or press confirm switch when dim mode icon (E) is highlighted to quickly darken screen.



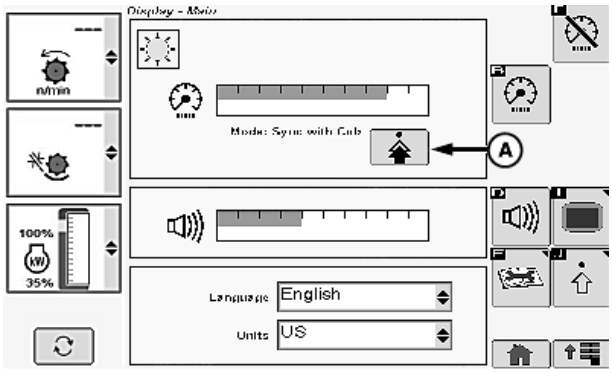

H108230 —UN—11JUN13

**A—Brightness Icon**
**B—Brightness Bar Graph**
**C—Day/Night Icon**
**D—Day/Night Settings**
**E—Dim Mode Icon**

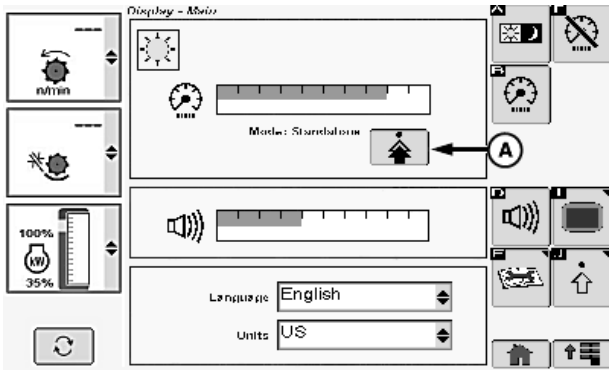
*NOTE: Dim mode temporarily darkens screen to reduce glare. Screen resumes normal brightness when an alarm exists or any armrest switch is selected.*

**Continued on next page**

OUO6075,0001511 -19-11JUN13-2/6




*Sync with Cab Mode*




*Standalone Mode*

**Sync With Cab/Standalone Modes:**

Allows operator to synchronize screen with cab lighting or allows screen to work independently from cab lighting.

Touch or press confirm switch when advanced settings icon (A) is highlighted to advance to next screen.

Touch or press confirm switch when sync with cab box (B) is highlighted.

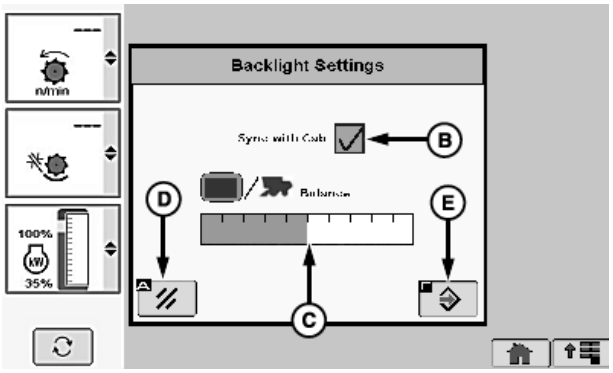
- Checked - synchronizes screen and cab backlighting together.
- Unchecked - screen and cab backlighting work independently from each other.

Touch or press confirm switch when balance bar graph (C) highlighted.

Touch plus (+) or minus (-) symbol or rotate selection dial to select balance level of screen.

- Increase bar graph to brighten backlighting.
- Decrease bar graph to darken backlighting.

*NOTE: Touch or press confirm switch when cancel icon (D) is highlighted to clear balance levels.*




**A—Advanced Settings Icon**
**B—Sync With Cab Box**
**C—Balance Bar Graph**
**D—Cancel Icon**
**E—Enter/Accept Icon**

Touch or press confirm switch when enter/accept icon (E) is highlighted to return to previous screen.

OUO6075,0001511 -19-11JUN13-3/6

**Alarm Volume Setting:**

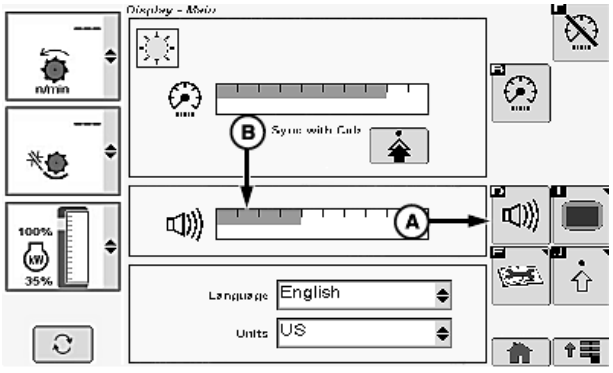
Allows operator to set a desired alarm volume.

Touch or press confirm switch when volume icon (A) is highlighted.

Touch or press confirm switch when alarm volume bar graph (B) is highlighted.

Touch plus (+) or minus (-) symbol or rotate selection dial to adjust alarm volume.

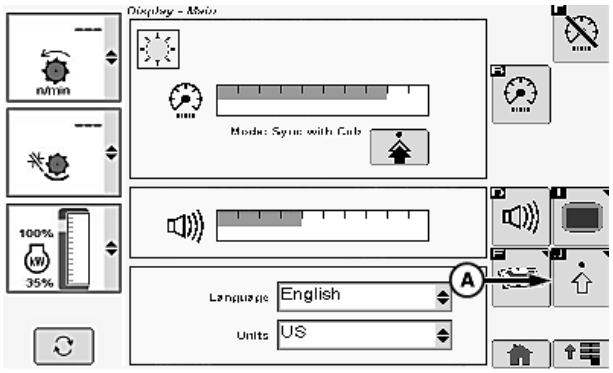
- Increase bar graph to increase alarm volume.
- Decrease bar graph to decrease alarm volume.



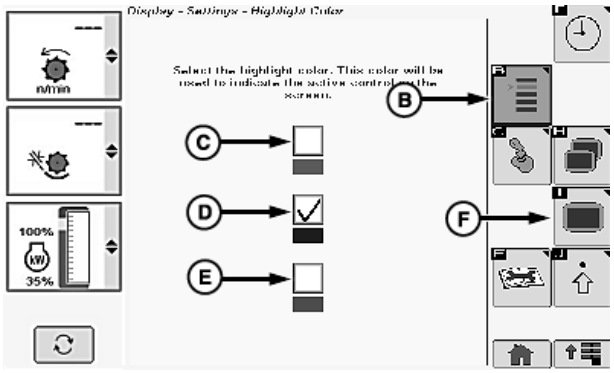

**A—Volume Icon**
**B—Alarm Volume Bar Graph**

**Continued on next page**

OUO6075,0001511 -19-11JUN13-4/6




H108235 —UN—11JUN13




H95738 —UN—05OCT10

**A—Advanced Settings Icon**
**B—Highlight Icon**
**C—Green Highlight**
**D—Blue Highlight**
**E—Red Highlight**
**F—Display Icon**

**Boundary Box Color Settings:**

Allows operator to choose color of boundary box.

*NOTE: Color defaults to red at initial power-up of screen.*

Touch or press confirm switch when advanced settings icon (A) is highlighted.

Touch or press confirm switch when highlight icon (B) is highlighted.

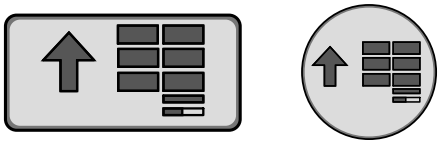
Touch or press confirm switch when desired color box is highlighted.

- Green (C)
- Blue (D)
- Red (E)

Box displays a checkmark indicating which color was selected.

Touch or press confirm switch when display icon (F) is highlighted to return to previous screen.

OUO6075,0001511 -19-11JUN13-5/6

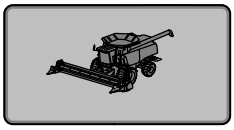


H95878 —UN—29MAR10

*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95845 —UN—31MAR10

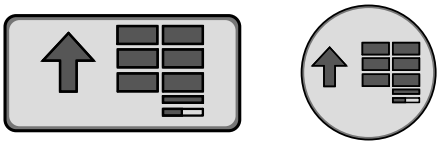


*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,0001511 -19-11JUN13-6/6

## Regional Settings, Languages, Time/Date Settings, Units of Measurement

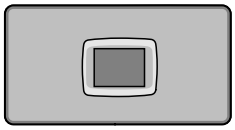


*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95849 —UN—31MAR10

H95878 —UN—29MAR10



*Display Application Icon*

Touch or press confirm switch when display settings icon is highlighted.

OUO6075,0001512 -19-11JUN13-1/5

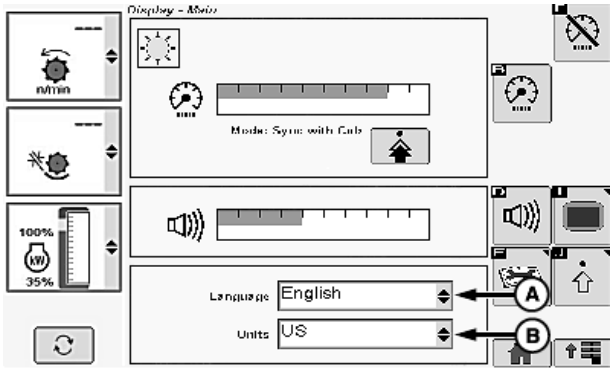
**Regional/Languages/Units Menu Settings:**

Touch or press confirm switch when desired menu is highlighted:

- Language Menu (A)
- Units Menu (B)

Once desired choice is made from menu, touch or press confirm switch.

**A—Language Menu** **B—Units Menu**




H108236 —UN—11JUN13

**Continued on next page**

OUO6075,0001512 -19-11JUN13-2/5

**Advanced Settings:**

Touch or press confirm switch when advanced settings icon (A) is highlighted.

Touch or press confirm switch when desired menu is highlighted:

- Country Menu (B)
- Language Menu (C)
- Numeric Format Menu (D)
- Units Menu (E)

Once desired choice is made from menu, touch or press confirm switch.

Touch or press confirm switch when advanced settings icon (F) is highlighted.

Touch or press confirm switch when desired menu is highlighted:

- Distance Menu (G)
- Area Menu (H)
- Volume Menu (I)
- Mass Menu (J)
- Temperature Menu (K)
- Pressure Menu (L)
- Force Menu (M)

Once desired choice is made from menu, touch or press confirm switch.

*NOTE: Touch or press confirm switch when cancel icon (N) is highlighted to return to previous screen.*

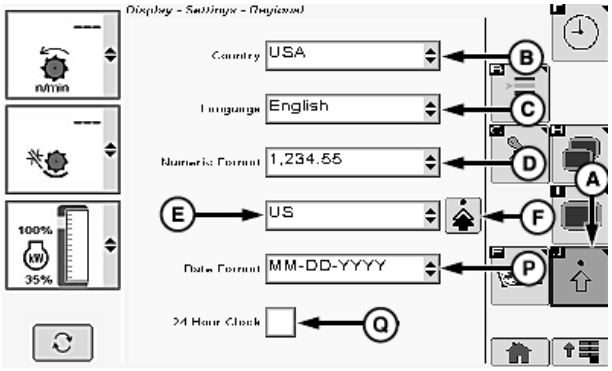
Touch or press confirm switch when enter/accept icon (O) is highlighted to return to previous screen.

Touch or press confirm switch when desired menu is highlighted:

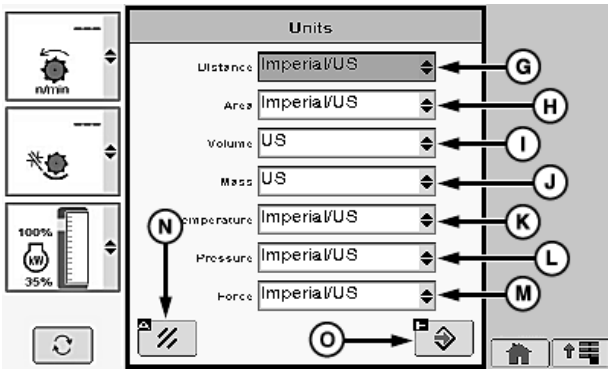
- Date Format Menu (P)

Once desired choice is made from menu, touch or press confirm switch.

Touch or press confirm switch when 24 hour box (Q) is highlighted.




H95741 —UN—05OCT10




H95742 —UN—05OCT10

**A—Advanced Settings Icon**
**B—Country Menu**
**C—Language Menu**
**D—Numeric Format Menu**
**E—Units Menu**
**F—Advanced Settings Icon**
**G—Distance Menu**
**H—Area Menu**
**I— Volume Menu**
**J— Mass Menu**
**K—Temperature Menu**
**L— Pressure Menu**
**M—Force Menu**
**N—Cancel Icon**
**O—Enter/Accept Icon**
**P—Date Format Menu**
**Q—24 Hour Box**

- Checked - time is displayed as military time (24 hour clock).
- Unchecked - time is displayed in standard time (12 hour clock).

**Continued on next page**

**Global Position Satellite (GPS) Date/Time Settings:**

Touch or press confirm switch when clock icon (A) is highlighted.

*NOTE: If a Global Position Satellite (GPS) position receiver is detected, checkbox appears and GPS date and time will be available automatically from the receiver.*

*If no position receiver is detected, date and time must be entered manually.*

Touch or press confirm switch when GPS time and date box (B) is highlighted.

- Checked - date and time menus are not selectable. Date and time is set to GPS system.
- Unchecked - date and time menus are selectable. Date and time are not set to GPS system.

Touch or press confirm switch when time zone icon (C) is highlighted.

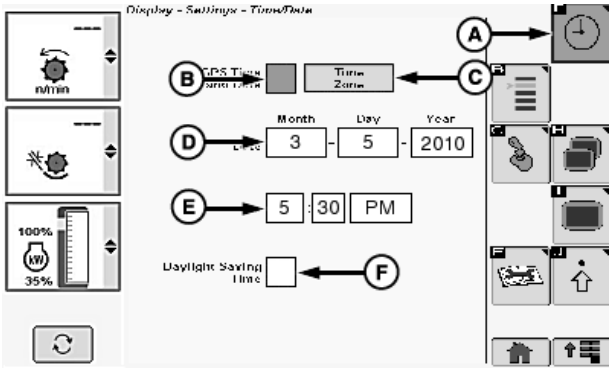
*NOTE: Time zones are shown based off Greenwich Mean Time (GMT).*

| | | |
|---|---|---|
| Argentina -2 | Denmark +1 | Moscow +3 |
| Austria +1 | Germany +1 | Samara +4 |
| Australia | Estonia +2 | Orenburg +5 |
| Brisbane +10 | France 0 | Omsk +6 |
| Adelaide +10 | Finland +2 | Krasnoyarsk +7 |
| Perth + 9 | Greece +2 | Switzerland +1 |
| Melbourne +11 | Iceland 0 | Slovakia +1 |
| Bulgaria +2 | Italy +1 | South Africa +2 |
| Sao Paulo -3 | Hungary +1 | Sweden +1 |
| Mato Grosso -4 | Central America -5 | United Kingdom 0 |
| Vancouver -7 | Latvia +2 | Ukraine +2 |
| Calgary -6 | Lithuania +2 | Turkey +2 |
| Winnipeg -5 | Netherlands +1 | Los Angeles -7 |
| Toronto -4 | Norway +1 | Denver -6 |
| Halifax -3 | Poland +1 | Chicago -5 |
| Czech Republic +1 | Portugal 0 | Atlanta -4 |
| Croatia +1 | Romania +2 | |

Once appropriate time zone is chosen from menu, touch or press confirm switch.

**Date Settings:**

Touch or press confirm switch when desired date menu (D) is highlighted:




H95744 —UN—05OCT10

**A—Clock Icon**
**B—GPS Time and Date Box**
**C—Time Zone Icon**
**D—Date Menu (Month, Day, Year)**
**E—Time Menu (Hours, Minutes, A.M. or P.M.)**
**F—Daylight Savings Time Box**

- Month
- Day
- Year

Once desired choice is made from menu, touch or press confirm switch.

**Time Settings:**

Touch or press confirm switch when desired time menu (E) is highlighted:

- Hours
- Minutes
- A.M. or P.M.

Once desired choice is made from menu, touch or press confirm switch.

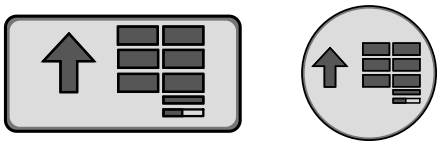
Touch or press confirm switch when daylight savings time box (F) is highlighted.

- Checked - time automatically updates if daylight savings time is used in your country/region.
- Unchecked - time must be updated manually when daylight savings time changes.

**Continued on next page**

OUO6075,0001512 -19-11JUN13-4/5

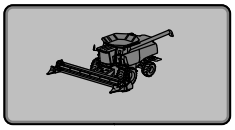
H95845 —UN—31MAR10



*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95878 —UN—29MAR10



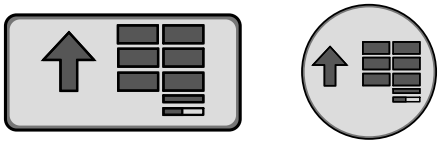
*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,0001512 -19-11JUN13-5/5

## Diagnostic Readings, About, Display Tests

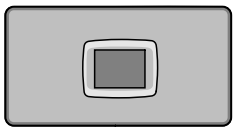
H95849 —UN—31MAR10



*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95878 —UN—29MAR10



*Display Application Icon*

Touch or press confirm switch when display settings icon is highlighted.

OUO6075,0001513 -19-11JUN13-1/5

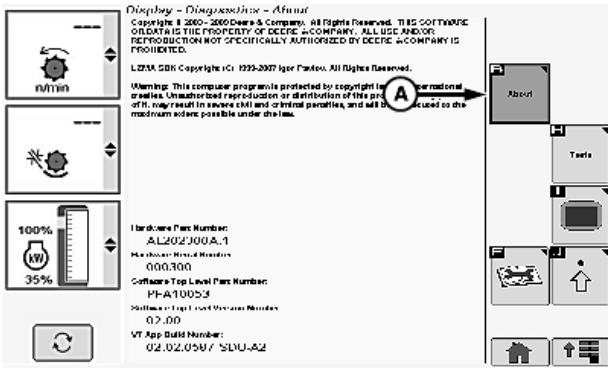
**About Menu:**

Touch or press confirm switch when about menu icon (A) is highlighted.

Screen displays the following:

- Copyright Information
- Software and Hardware Information
  - Hardware Part Number
  - Hardware Serial Number
  - Software Part Number
  - Software Version Number
  - Application Build Number

**A—About Menu Icon**




H95747 —UN—05OCT10

**Continued on next page**

OUO6075,0001513 -19-11JUN13-2/5

**Display Tests:**

Touch or press confirm switch when tests icon (A) is highlighted.

**Display Color Test:**

Touch or press confirm switch when display color test icon (B) is highlighted.

- Display tests color of screen (diagram appears with red, blue, and green).
- If you do not see test colors, see your John Deere dealer.

**Touchscreen Test:**

*NOTE: Only works if equipped with a touchscreen display.*

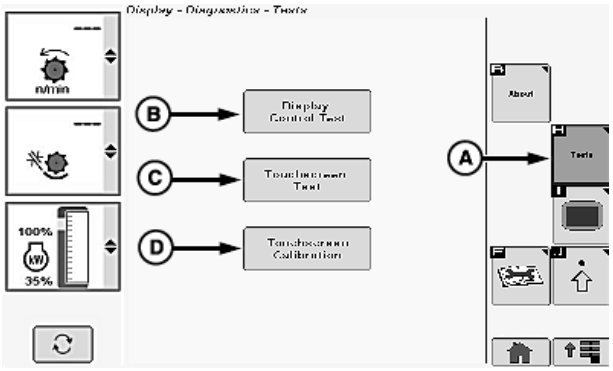
Touch or press confirm switch when touchscreen test icon (C) is highlighted.

- Test allows operator to identify pixel problems on screen.
  a. When screen is touched a sighting target appears on area touched.
  b. Continue to touch screen around area of suspected pixel malfunction and see if sighting target appears.
  c. If sighting target does not appear, see your John Deere dealer.

**Touchscreen Calibration:**

*NOTE: Only works if equipped with a touchscreen display.*

Touch or press confirm switch when touchscreen calibration icon (D) is highlighted.




H95748 —UN—05OCT10

**A—Tests Icon**
**B—Display Color Test Icon**
**C—Touchscreen Test Icon**
**D—Touchscreen Calibration Icon**

1. Another screen appears with an X in upper right corner.
2. Press screen at X and continue to follow X's around screen. Always press screen directly at center of X.

*NOTE: Touchscreen calibration cancels any saved calibrations and allows operator to start over and perform a new calibration.*

OUO6075,0001513 -19-11JUN13-3/5

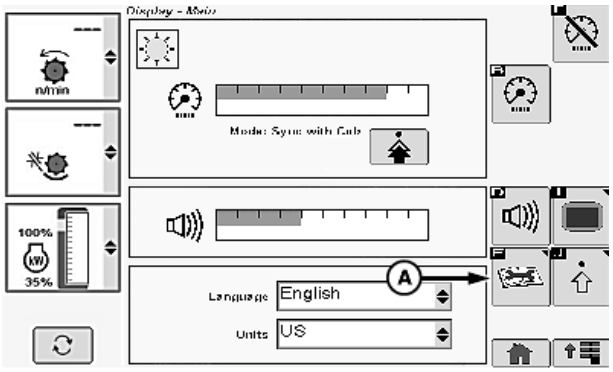
**Diagnostic Readings:**

Touch or press confirm switch when diagnostic icon (A) is highlighted.

Screen displays the following:

- Unswitched Voltage
- Switched Voltage
- CAN High Voltage (Vehicle Bus)
- CAN High Voltage (Implement Bus)
- CAN Low Voltage (Vehicle Bus)
- CAN Low Voltage (Implement Bus)
- Display Operation Hours
- USB Present

*NOTE: Universal Serial Bus (USB) connector is located under armrest. Connector is used for basic diagnostic readings and to transfer data. Do not plug phone or audio devices into this connector. This connector is NOT for charging consumer devices.*



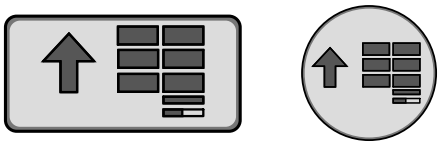

H108237 —UN—11JUN13

**A—Diagnostic Icon**

**Continued on next page**

OUO6075,0001513 -19-11JUN13-4/5

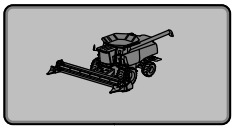
H95845 —UN—31MAR10



*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95878 —UN—29MAR10



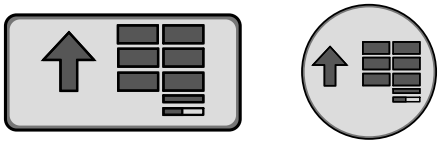
*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,0001513 -19-11JUN13-5/5

## Connecting Multiple Displays and Auxiliary Controls

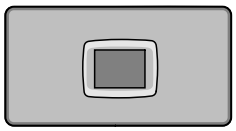
H95849 —UN—31MAR10



*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95878 —UN—29MAR10



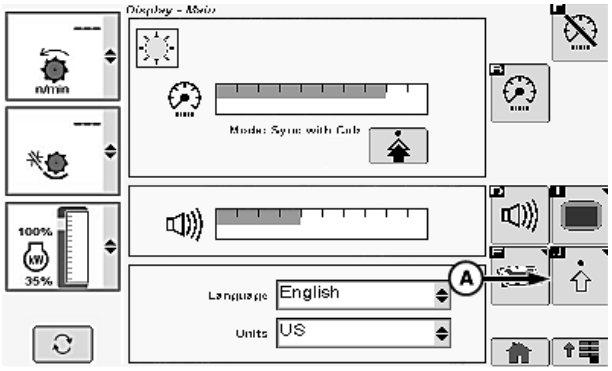
*Display Application Icon*

Touch or press confirm switch when display settings icon is highlighted.

OUO6075,0001514 -19-11JUN13-1/4

Touch or press confirm switch when advanced settings icon (A) is highlighted.

**A—Advanced Settings Icon**




H108235 —UN—11JUN13

**Continued on next page**

OUO6075,0001514 -19-11JUN13-2/4

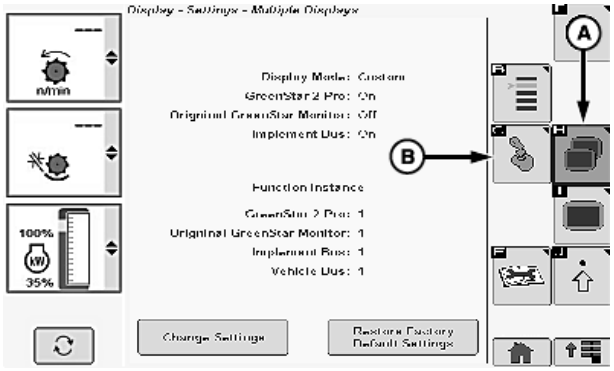
**Connecting Multiple Displays:**

*NOTE: Software automatically detects if another display is connected. See your John Deere dealer for further information before changing any settings or if system does not detect connected display.*

**Auxiliary Controls:**

*NOTE: Auxiliary controls feature is not available.*

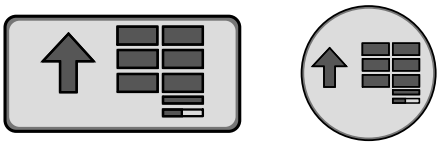
**A—Multiple Displays Icon** **B—Auxiliary Controls Icon**




H96256 —UN—05OCT10

OUO6075,0001514 -19-11JUN13-3/4

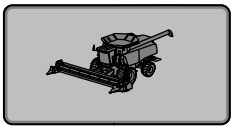
H95845 —UN—31MAR10



H95878 —UN—29MAR10

*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.



*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,0001514 -19-11JUN13-4/4

## Message Center Application

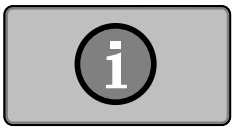
H95846 —UN—31MAR10



H95878 —UN—29MAR10

*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.



*Message Center Application Icon*

Touch or press confirm switch when message center icon is highlighted.

**Continued on next page**

OUO6075,0000652 -19-26AUG10-1/3

**Message Center Icon (A):**

Touch or press confirm switch when message center icon is highlighted.

Displays messages or active trouble codes to operator if any are available.

**Diagnostic Address Icon (B):**

*NOTE: If equipped with optional GreenStar display, do not attempt to access diagnostic address information on both displays at the same time.*

Touch or press confirm switch when diagnostic address icon is highlighted.

Allows operator to select desired control units and make address modifications/changes or view addresses (see your John Deere Dealer).

**Diagnostic Trouble Codes Icon (C):**

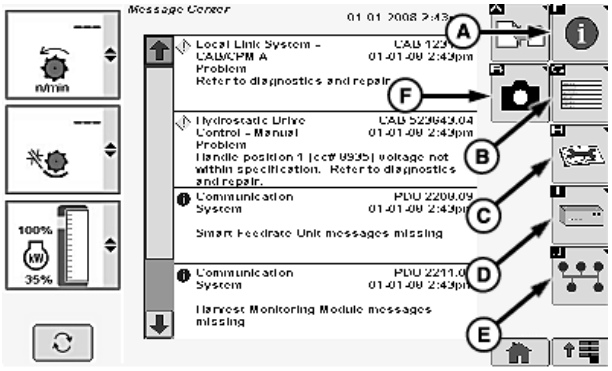
*NOTE: If equipped with optional GreenStar display, do not attempt to access diagnostic trouble codes on both displays at the same time.*

Touch or press confirm switch when diagnostic trouble codes icon is highlighted.

Allows operator to view control units, trouble code addresses, code (active or not), and counts how many times code is displayed (refer Accessing Diagnostic Trouble Codes Menu in Diagnostic Trouble Codes Section for further information.

**Electronic Control Unit Information (ECU) Icon (D):**

Touch or press confirm switch when electronic control unit information icon is highlighted.




H95965 —UN—05OCT10

Allows operator to view control units, addresses, message counts, control unit part numbers and serial numbers, software part numbers and versions (see your John Deere Dealer).

**CAN Bus Information Icon (E):**

Touch or press confirm switch when CAN bus information icon is highlighted.

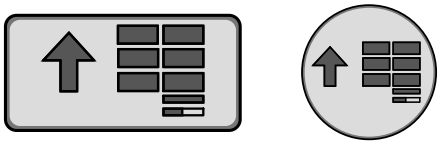
Allows operator to view if network status is active or not active, total message counts, and CAN high or low voltages (see your John Deere Dealer).

**Transfer Debug Files Icon (F):**

Touch or press confirm switch when transfer debug file icon is highlighted.

Almost any screen may be saved to internal memory and then copied to a Universal Serial Bus (USB) memory device (see your John Deere Dealer).

OUO6075,0000652 -19-26AUG10-2/3

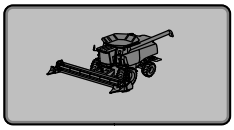


H95878 —UN—29MAR10

*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95845 —UN—31MAR10

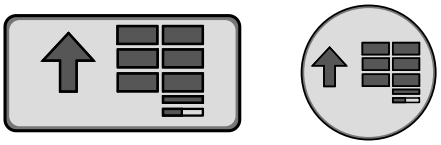


*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,0000652 -19-26AUG10-3/3

## Performance Monitor Application

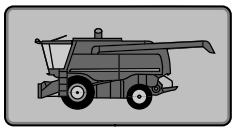


*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95847 —UN—12OCT10

H95878 —UN—29MAR10



*Performance Monitor Application Icon*

Touch or press confirm switch when performance monitor icon is highlighted.

OUO6075,00006F9 -19-07OCT10-1/5

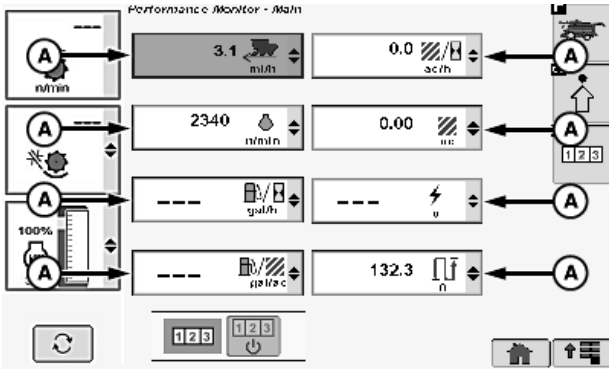
**Performance Monitor Menu:**

Touch or press confirm switch when desired performance monitor menu (A) is highlighted.

Reconfigured performance monitor menu appears with the following:

- Average Fuel Consumption Per Area (gal./acre, L/ha, gal./ha, L/acre)
- Instantaneous Area Per Hour
- Average Area Per Hour
- Area Harvested (Accumulates with recording ON)
- Distance (Accumulates at all times. Not dependent on recording status)
- Instantaneous Fuel Consumption Per Hour (gal./hr., L/hr)
- Harvesting Productivity Per Hour (Volume or Weight)
- Weight Counter
- Moisture Counter

Touch or press confirm switch when desired menu option is highlighted.

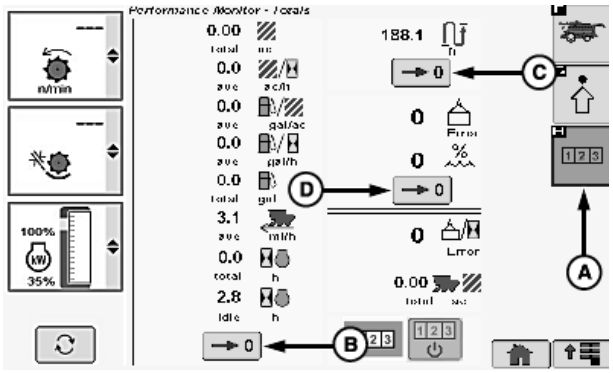



H95803 —UN—05OCT10

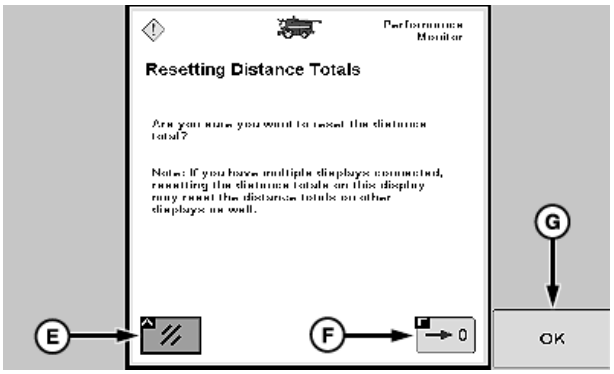
**A—Performance Monitor Menu**

**Continued on next page**

OUO6075,00006F9 -19-07OCT10-2/5




H95810 —UN—05OCT10




H95811 —UN—23MAR10

**A—Totals Icon**
**B—Area Counter Reset Icon**
**C—Distance Counter Reset Icon**
**D—Weight and Moisture Reset Icon**
**E—Cancel Icon**
**F—Reset Icon**
**G—OK Icon**

**Performance Monitor Clearing:**

Touch or press confirm switch when totals icon (A) is highlighted.

Touch or press confirm switch when desired counter reset icon is highlighted:

*NOTE: Clearing area, distance, weight and moisture numbers from this screen will not clear Client, Farm, Field, and Crop Totals.*

*Only counters on this screen are cleared.*

- Area Counter Reset Icon (B)
  - Shows total area traveled since being reset.
- Distance Counter Reset Icon (C)
  - Shows total distance traveled since being reset.
- Weight and Moisture Counter Reset Icon (D)
  - Shows weight and moisture numbers since being reset.

Warning screen appears asking if you want to reset desired total.

**IMPORTANT: If multiple displays are connected, resetting totals on this screen may reset totals on other displays as well.**

*NOTE: Touch or press confirm switch when cancel icon (E) is highlighted to cancel and return to previous screen.*

Touch or press confirm switch when reset icon (F) or OK icon (G) is highlighted to zero totals.

**Continued on next page**

**Performance Monitor Advanced Settings:**

Touch or press confirm switch when advanced settings icon (A) is highlighted.

- Auto Width Box (B)

  *NOTE: Should always be checked and disabled from operator.*

- Header Width Box (C)

  *NOTE: Should always be disabled from operator.*

  - Automatically detected from settings made in Header Setup Screen.

- Recording ON/OFF Status (D)

  *NOTE: Should always be disabled from operator.*

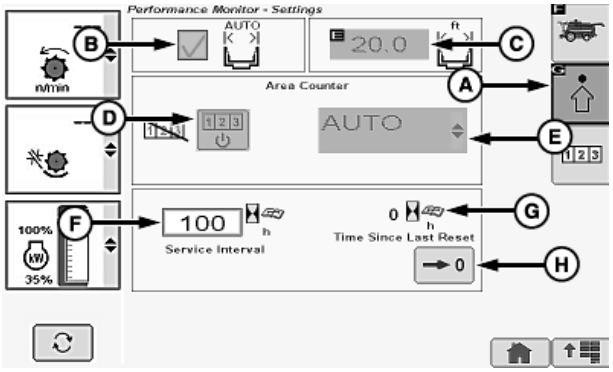
- Recording Menu (E)

  *NOTE: Should always be disabled from operator and always set to AUTO.*

- Service Interval (F)

  *NOTE: Alarm sounds and message appears on display within 20 hours of service interval setting.*

  - Interval is adjustable between 0 - 999 hours. Service interval must be reset to zero after service is performed.

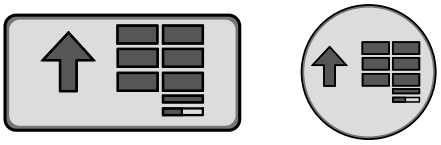



H95813 —UN—05OCT10

**A—Advanced Settings Icon**
**B—Auto Width Box**
**C—Header Width Box**
**D—Recording ON/OFF Status**
**E—Recording Menu**
**F—Service Interval**
**G—Time Since Last Reset**
**H—Reset Icon**

- Time Since Last Reset (G)
  - Shows number of engine hours since service was last reset.
- Reset Icon (H)
  - Clears hours since last service counter.

OUO6075,00006F9 -19-07OCT10-4/5

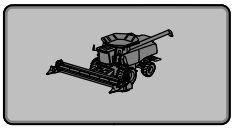


H95878 —UN—29MAR10

*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95845 —UN—31MAR10

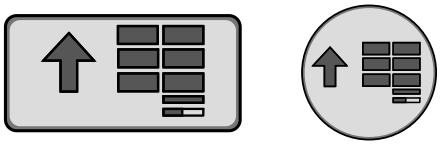


*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,00006F9 -19-07OCT10-5/5

## Layout Manager Application

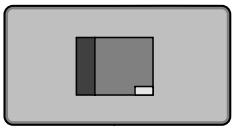


*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95850 —UN—31MAR10

H95878 —UN—29MAR10



*Layout Manager Application Icon*

Touch or press confirm switch when layout manager application icon is highlighted.

OUO6075,0001272 -19-11OCT12-1/3

**Home Page Region Setup:**

Allows operator to show different home pages.

Touch or press confirm switch when region menu (A) is highlighted.

Screen displays the following:

- Home Page 1
- Home Page 2
- Home Page 3

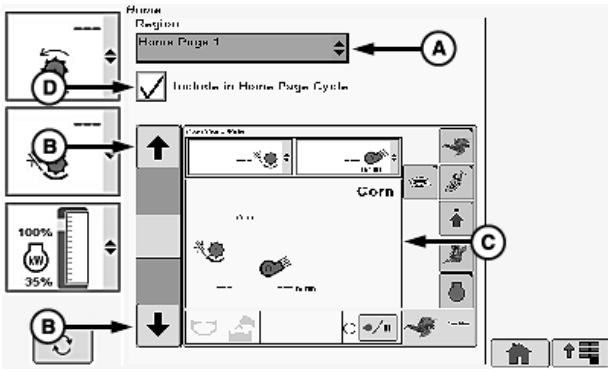
Once desired home page is chosen, touch or press confirm switch.

Touch or press confirm switch when up/down arrow icons (B) are highlighted to scroll through home pages (C).

Choose desired home page.

Touch or press confirm switch when include in home page cycle box (D) is highlighted.

- Checked - selected home page is included in home page cycle.
- Unchecked - selected home page will not be included in home page cycle.




H95818 —UN—05OCT10

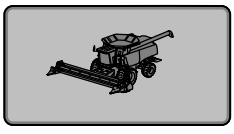
**A—Region Menu**
**B—Up/Down Arrow Icons**
**C—Different Home Pages**
**D—Include in Home Page Cycle Box**

*NOTE: Touch or press confirm switch when home icon on any screen is highlighted to cycle through selected home pages. Home page switch on armrest also cycles through selected home pages.*

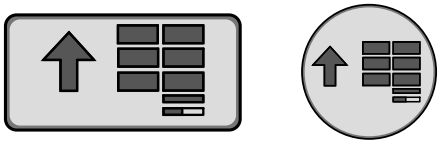
OUO6075,0001272 -19-11OCT12-2/3

H95845 —UN—31MAR10

H95878 —UN—29MAR10



*Combine Main Application Icon*



*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,0001272 -19-11OCT12-3/3

## Video Interface Capability

*NOTE: GreenStar™ 2 2600 Display is not video capable.*

*Connectors labeled ADU 01, ADU 02, ADU 03 feed video signals to the display on the armrest.*

*Connector labeled CPDU 01 feeds a video signal for an optional display on the cornerpost.*

Machine is equipped with four camera video inputs which are located at the right-hand side of operator's station.

*NOTE: GreenStar™ 3 CommandCenter™ display on armrest supports one video signal.*

*GreenStar™ 3 2630 display on armrest supports three video signals.*

Video input (A—C) feeds video signals to the armrest display.

Video input (D) connects to the GreenStar™ 3 2630 Display (optional) mounted on the cornerpost.

Video inputs are protected with an in-line fuse (E).

See your John Deere dealer for further information on video compatible camera solutions.




H108461 —UN—03JUL13

**A—Video Input (Armrest)**
**B—Video Input (Armrest)**
**C—Video Input (Armrest)**
**D—Video Input (Cornerpost)**
**E—In-Line Fuse**

*GreenStar is a trademark of Deere & Company*
*CommandCenter is a trademark of Deere & Company*

OUO6075,00015A7 -19-03JUL13-1/1

## Video Safety

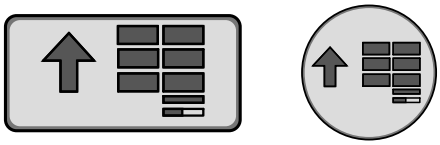
**CAUTION: Do not rely on a camera for collision avoidance or bystander detection. To avoid possible injury or death to operator or others, always remain alert and aware of surroundings when operating machine. Read and understand Avoid Backover Accidents in Safety section.**

**IMPORTANT:**

- **Correctly understand whether camera or video application is "mirrored".**
- **Mount camera in a sturdy and secure location.**
- **Understand camera's field of view.**
- **Keep camera properly serviced.**
- **Keep camera lens clean.**

OUO6075,00013B2 -19-31JAN13-1/1

## Video Application (If Equipped)

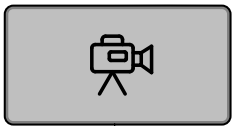


*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95851 —UN—31MAR10

H95878 —UN—29MAR10



*Video Application Icon*

Touch or press confirm switch when video icon is highlighted.

OUO6075,00013B1 -19-31JAN13-1/4

**Contrast Adjusting:**

Allows operator to lighten or darken video display.

Touch or press confirm switch when desired icon is highlighted:

- Increase Icon (A) - brightens video display.
- Decrease Icon (B) - darkens video display.

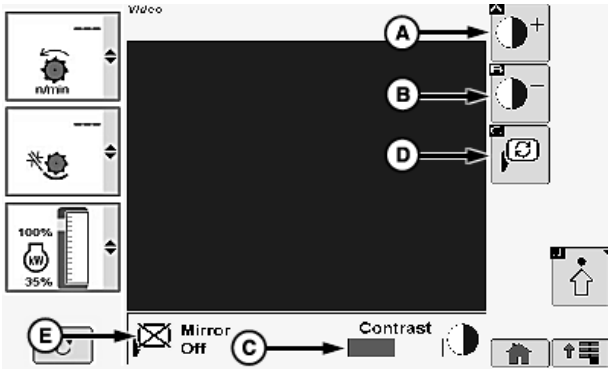
*NOTE: Contrast bar graph (C) increases or decreases depending on which icon was selected.*

**Mirror Settings:**

Allows operator to mirror image on screen.

Touch or press confirm switch when mirror icon (D) is highlighted.

*NOTE: Mirror ON/OFF (E) toggles to alert operator which angle is displayed.*

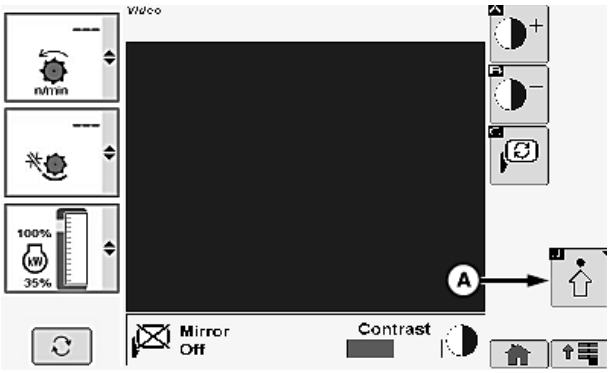



H96255 —UN—05OCT10

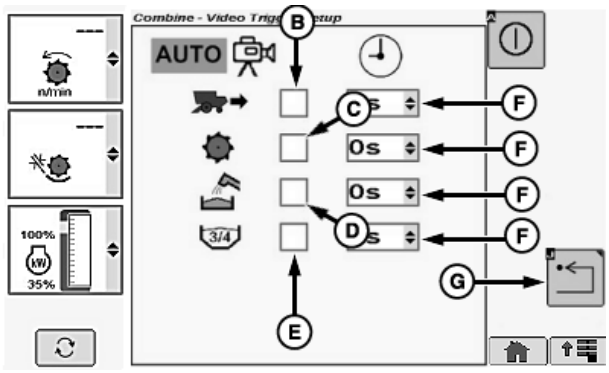
**A—Contrast Increase Icon**
**B—Contrast Decrease Icon**
**C—Contrast Bar Graph**
**D—Mirror Icon**
**E—Mirror ON/OFF**

**Continued on next page**

OUO6075,00013B1 -19-31JAN13-2/4




H96254 —UN—05OCT10




H95821 —UN—05OCT10

**A—Advanced Settings Icon**
**B—Rear Video Trigger**
**C—Separator Video Trigger**
**D—Unloading Auger Video Trigger**
**E—Grain Tank Video Trigger**
**F—Time Menu**
**G—Return/Back Icon**

**Video Setup:**

*NOTE: Multiple video triggers are supported on the armrest display.*

Allows operator to setup and view different areas around machine.

Touch or press confirm switch when advanced settings icon (A) is highlighted.

Screen displays the following:

- Rear View Video Trigger (B)
- Separator Video Trigger (C)
- Unloading Auger Video Trigger (D)
- Grain Tank Video Trigger (E)

*NOTE: Video automatically appears on display when a trigger condition is met (example: rear view video appears on display when machine is moved rearward).*

Touch or press confirm switch when desired video trigger boxes are highlighted.

- Checked - displays video.
- Unchecked - will not display video.

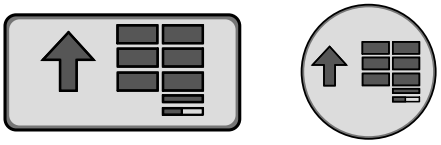
Touch or press confirm switch when time menu (F) for desired video box is highlighted.

Touch or press confirm switch when desired time is highlighted.

*NOTE: Allows camera to remain viewable for an extended time after condition changes (example: rear video remains viewable an extended time even after multi-function lever is moved forward).*

Touch or press confirm switch when return/back icon (G) is highlighted.

OUO6075,00013B1 -19-31JAN13-3/4

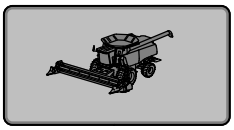


H95878 —UN—29MAR10

*Main Menu Icon (Display)/Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95845 —UN—31MAR10

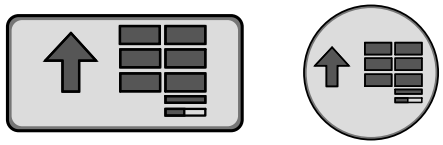


*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,00013B1 -19-31JAN13-4/4

## Access Manager Application



*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95852 —UN—31MAR10

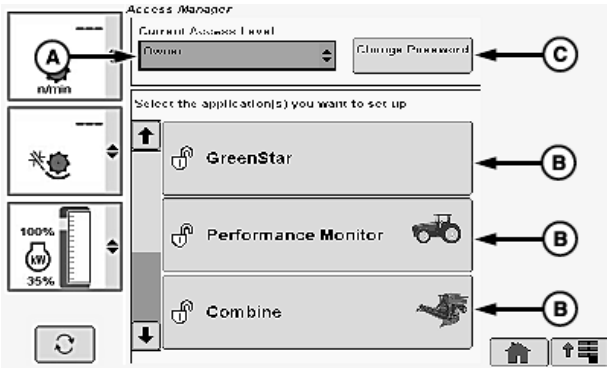
H95878 —UN—29MAR10



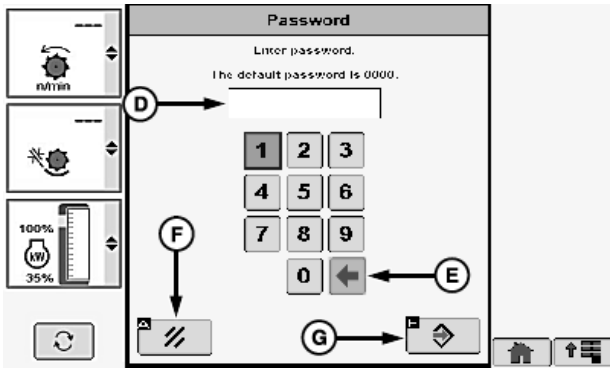
*Access Manager Application Icon*

Touch or press confirm switch when access manager icon is highlighted.

OUO6075,00006F8 -19-07OCT10-1/5




H95814 —UN—05OCT10




H95823 —UN—05OCT10

**A—Access Level Menu**
**B—Application**
**C—Change Password Icon**
**D—Password Menu**
**E—Back Arrow Icon**
**F—Cancel Icon**
**G—Enter/Accept Icon**

### Access Level Settings:

Allows owner of machine to lock/unlock certain features. If feature is locked, only the owner is able to make changes/adjustments. If feature is unlocked, both the owner and operator are able to make changes/adjustments.

Touch or press confirm switch when access level menu (A) is highlighted.

Screen displays the following:

*NOTE: Must be in owner mode to lock/unlock application (B). Password is required when changing from operator mode back to owner mode.*

- Operator Mode - certain changes/adjustments are made available when set by owner.
- Owner Mode - determines which changes/adjustments are made available to operators.

Touch or press confirm switch when desired access level is highlighted.

### Change Password:

Allows owner of machine to set password preventing operator from making changes/adjustments previously set by owner.

*NOTE: If password is lost or forgotten, see your John Deere dealer for further information.*

Touch or press confirm switch when change password icon (C) is highlighted.

Touch or press confirm switch to enter digits from calculator into password menu (D).

*NOTE: Touch or press confirm switch when back arrow icon (E) is highlighted to delete digits if a mistake is made.*

*Touch or press confirm switch when cancel icon (F) is highlighted to cancel and return to previous screen.*

Touch or press confirm switch when enter/accept icon (G) is highlighted.

**Continued on next page**

OUO6075,00006F8 -19-07OCT10-2/5

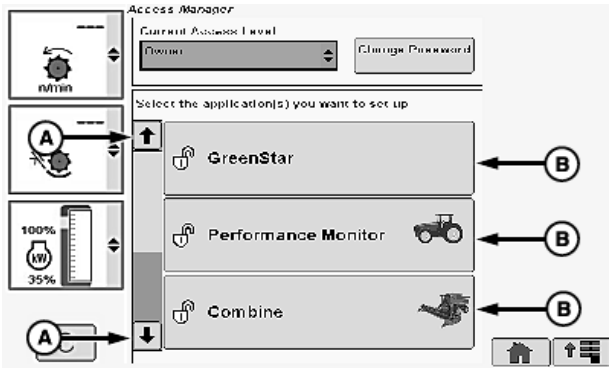
**Lock/Unlock Applications:**

Allows owner the ability to lock/unlock certain features. When locked only certain features are made visible to operator.

Touch or press confirm switch when up/down arrow icon (A) is highlighted to scroll through different applications.

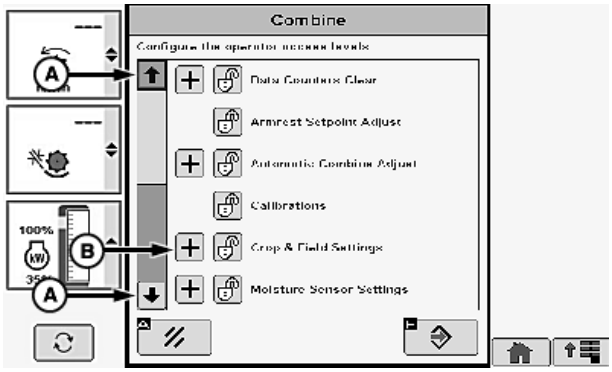
| | |
|---|---|
| Combine | Display |
| Message Center | Layout Manager |
| Performance Monitor | Video |
| GreenStar | Access Manager |

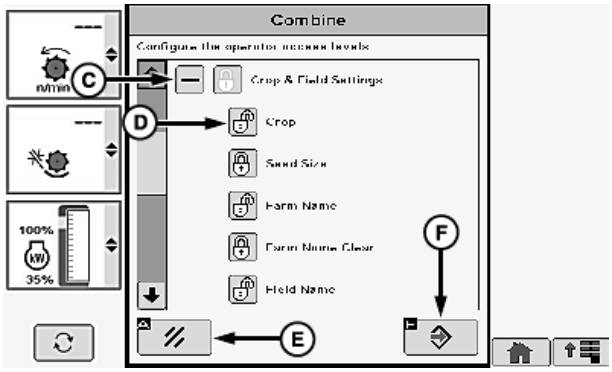
Touch or press confirm switch when desired application (B) is highlighted.




**A—Up/Down Arrow Icons** **B—Application**

OUO6075,00006F8 -19-07OCT10-3/5




**A—Up/Down Arrow Icons**
**B—Plus Icon**
**C—Minus Icon**
**D—Lock/Unlock Icon**
**E—Cancel Icon**
**F—Enter/Accept Icon**

Touch or press confirm switch when up/down arrow icons (A) are highlighted to scroll through application sub-functions.

Touch or press confirm switch when plus icon (B) (expands sub-function) or minus icon (C) (collapses sub-function) is highlighted.

Touch or press confirm switch when desired sub-function is highlighted.

*NOTE: Sub-function toggles between lock/unlock icon (D).*

*Gray lock means that only some sub-functions are locked.*

- *Lock Icon - operator will not be able to make changes/adjustments. Owner is only able to make changes/adjustments.*
- *Unlock Icon - both owner and operator are able to make changes/adjustments.*

Repeat as needed for remaining applications.

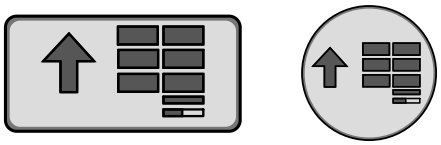
*NOTE: Touch or press confirm switch when cancel icon (E) is highlighted to cancel changes and return to previous screen.*

Touch or press confirm switch when enter/accept icon (F) is highlighted.

**Continued on next page**

OUO6075,00006F8 -19-07OCT10-4/5

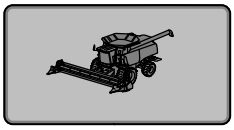
H95845 —UN—31MAR10



H95878 —UN—29MAR10

*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.

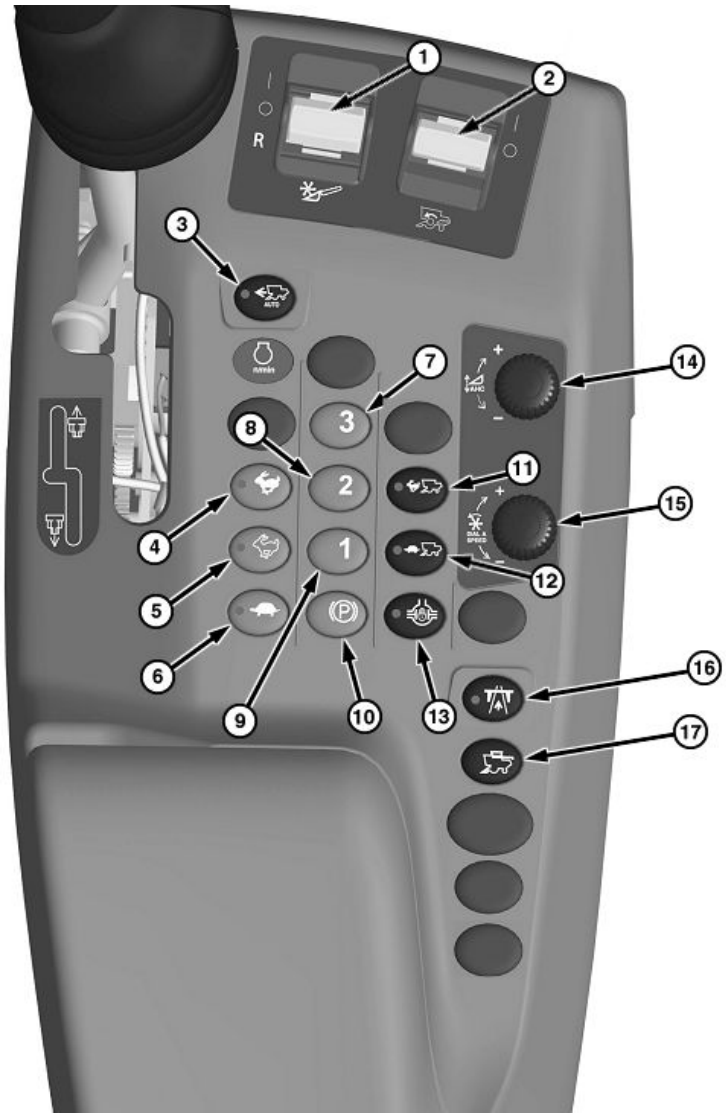


*Combine Main Page Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,00006F8 -19-07OCT10-5/5

## Armrest Console Controls




H95194 —UN—11OCT10

1— Header Engage and Feeder House Reverser Switch
2— Separator Engage Switch
3— Harvest Smart™ Feed Rate Enable Switch (If Equipped)
4— Engine Speed Switch (High Speed)
5— Engine Speed Switch (Medium Speed)
6— Engine Speed Switch (Low Speed)
7— Push Button Shift 3rd Gear Switch (If Equipped)
8— Push Button Shift 2nd Gear / ProDrive Mode 2 Switch (If Equipped)
9— Push Button Shift 1st Gear / ProDrive Mode 1 Switch (If Equipped)
10— Park Brake Switch (If Equipped)
11— Four-Wheel Drive Switch (High Speed) (If Equipped)
12— Four-Wheel Drive Switch (Slow Speed) (If Equipped)
13— Differential Lock Switch (If Equipped)
14— Header Height/HydraFlex™ Pressure Control Dial
15— Dial-A-Speed Dial
16— Road Transport Disconnect Switch
17— Folding Functions Shortcut Switch (If Equipped)

*NOTE: Not every switch is available for every machine model.*

Before operating machine, become familiar with switches and controls.

*Harvest Smart is a trademark of Deere & Company*
*HydraFlex is a trademark of Deere & Company*

OUO6075,0000A9E -19-16NOV10-1/1

## Header Engage and Feeder House Reverser Switch

Header engage switch (A) allows header drive to be turned ON or OFF. Push down and forward to lock switch in ON position or pull back on switch to turn OFF.

*NOTE: When feeder house reverser is engaged, reel moves in reverse direction (rigid and HydraFlex headers only) helping pull crop material away from feeder house.*

*If operating high engine speed and feeder house reverser switch is engaged, engine automatically derates and goes to low idle.*

Feeder house reverser switch (A) is used to hydraulically shift the feeder house gearcase into reverse mode to clear a plugged feeder house or header.

Push down and pull back on switch and hold until feeder house is clear of plug.

**System Requirements:**

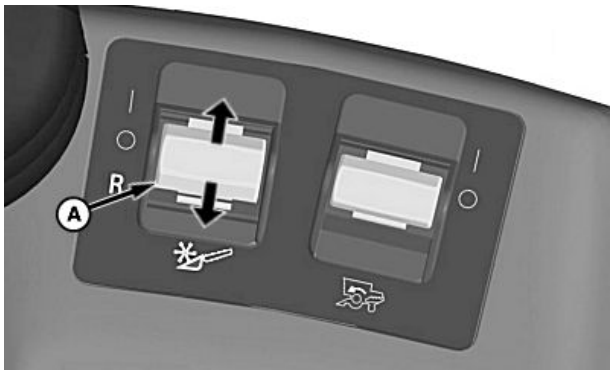
- Header engage switch and feeder house reverser switch must be OFF to start machine.
- Separator engage switch must be ON.
- Road transport disconnect switch must be in field position.
- Operator must be seated for header to operate.

Header drive can be shut OFF with quick stop switch (B) located on multi-function lever.

To engage header drive or unloading auger if quick stop switch was used, turn switch OFF and back ON.

If operator leaves seat after engagement, header continues to operate for five seconds before disengaging.

To engage, sit squarely on operator's seat and turn switch OFF and back ON.




H94644 —UN—27JAN10




H94657 —UN—01NOV10

**A—Header Engage/Feeder House Reverser Switch**

**B—Quick Stop Switch**

OUO6075,000043D -19-13DEC10-1/1

## Shifting Feeder House Reverser

*NOTE: If operating high engine speed and feeder house reverser switch is engaged, engine will automatically go to low idle.*

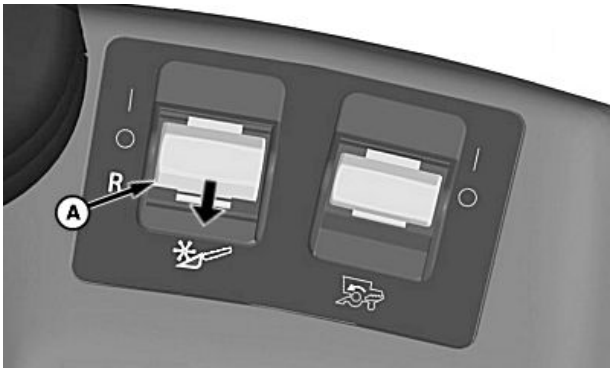
Turn header engage/feeder house reverser switch (A) OFF and throttle engine to low idle.

Push down, pull back and hold feeder house reverser switch until feeder house is clear of plug.

Release switch once feeder house is clear.

Throttle engine to high idle and resume harvesting.

**IMPORTANT: Never attempt to force "slugs" through machine by repeated cycling of reverser drive. Repeated cycling shortens life of components.**




H94655 —UN—27JAN10

**A—Header Engage/Feeder House Reverser Switch**

OUO6075,000043E -19-20NOV09-1/1

## Separator Engage Switch

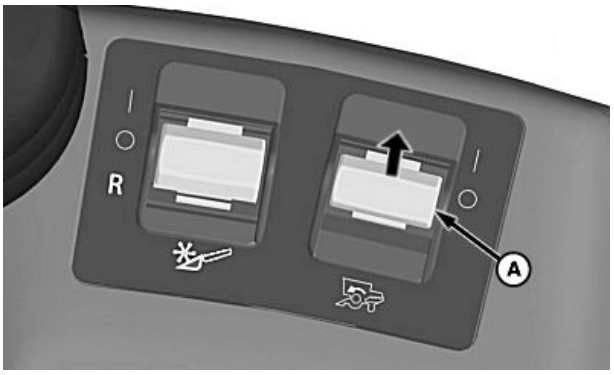
*NOTE: Engage separator prior to engaging header.*

Separator engage switch (A) allows separator to be turned ON or OFF. Push down and forward to lock switch in ON position or pull back on switch to turn OFF.

**System Requirements:**
- Engine is running at low idle.
- Separator engage switch must be OFF to start machine.
- Road transport disconnect switch must be in field position.

Separator drive speed adjust and cleaning fan speed adjust systems only work when separator is running.

*NOTE: Separator disengages when discharge beater speed drops below 300 rpm.*

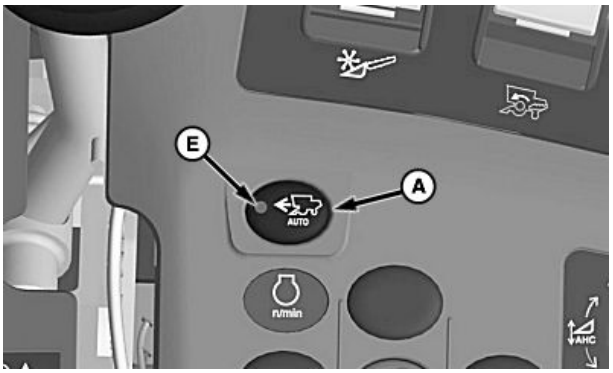


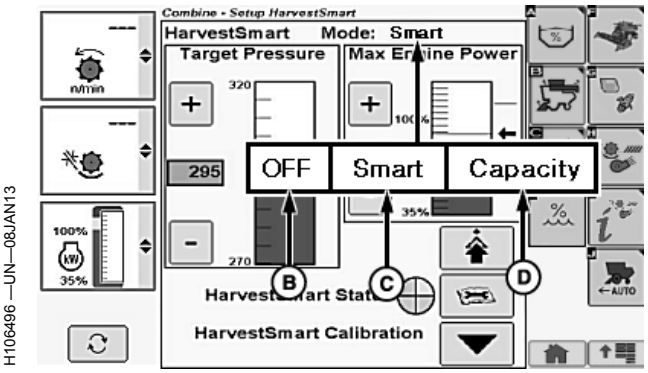

H94656 —UN—27JAN10

**A—Separator Engage Switch**

OUO6075,000043F -19-28SEP10-1/1

## Harvest Smart™ Feed Rate Enable Switch (If Equipped)




H106496 —UN—08JAN13

H106497 —UN—16JAN13

**A—Harvest Smart™ Feed Rate Enable Switch**
**B—OFF Mode**
**C—Smart Mode**
**D—Capacity Mode**
**E—Indicator Light**

Harvest Smart™ feed rate enable switch (A) allows machine to enable Harvest Smart™ system and select two operating modes.

Pressing Harvest Smart™ feed rate enable switch once causes screen to appear on display. Press switch again to toggle between the different operating modes:

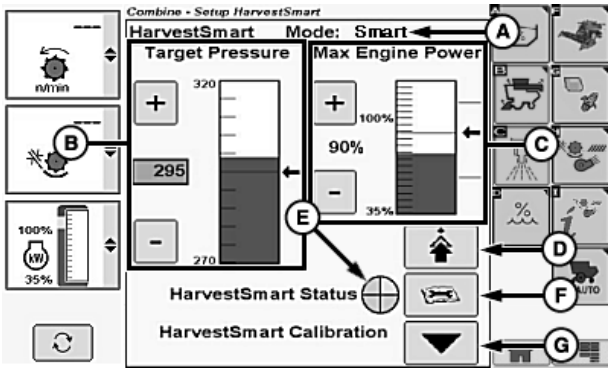
- OFF (B)
- Smart (C)
- Capacity (D)

Indicator light (E) turns ON indicating system is active.

OUO6075,000137A -19-24JAN13-1/2

Refer to Harvest Smart™ Feed Rate section for further information on operating the following:

- Operating Mode (A)
  - OFF
  - Smart
  - Capacity
- Target Pressure (B)
- Max Engine Power (C)
- Advanced Setup Icon (D)
  - Max Harvest Speed
  - Sensitivity
- Harvest Smart™ Status Indicator (E)
- Diagnostic Readings Icon (F)
- Harvest Smart™ Calibration Icon (G)




H106500 —UN—08JAN13

OUO6075,000137A -19-24JAN13-2/2

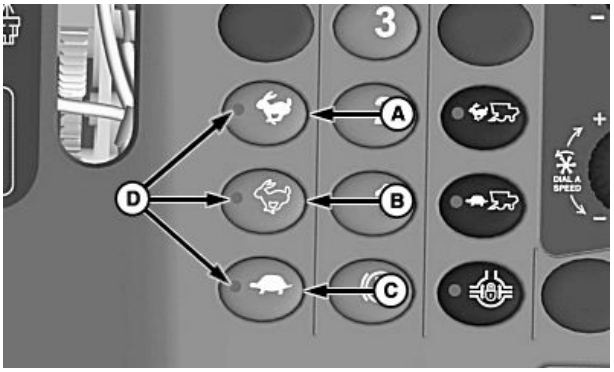
## Engine Speed Switches

Engine speed switches are used to increase or decrease engine speed.

- Switch (A) is for high speed.
- Switch (B) is for medium speed.
- Switch (C) is for low speed.

Indicator lights (D) indicate which switch is currently selected.

**A—High Engine Speed**
**B—Medium Engine Speed**
**C—Low Engine Speed**
**D—Indicator Lights**




OUO6075,0000450 -19-28SEP10-1/1

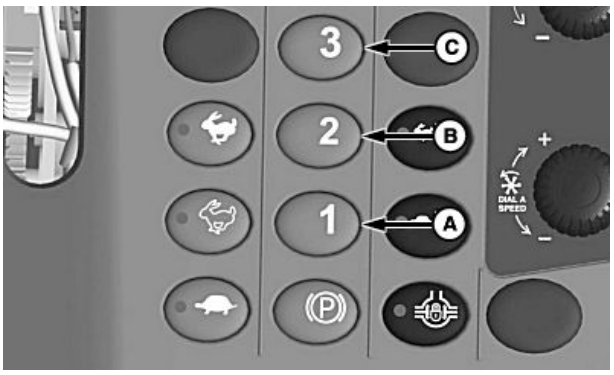
## Push Button Shift Gear Switches (If Equipped)

*NOTE: Tire sizes and country code regulations limit maximum ground speed.*

*Machine must be stopped and multi-function lever moved to neutral position before selecting desired gear.*

Push button shift gear switches (A, B, or C) are used to control transmission ground speed electronically. Press desired switch to increase or decrease machines ground speed. Display shows which switch is pressed and flashes until transmission electronically shifts.

**A—Push Button Shift 1st Gear Switch**
**B—Push Button Shift 2nd Gear Switch**
**C—Push Button Shift 3rd Gear Switch**




OUO6075,0000642 -19-13DEC10-1/1

## ProDrive Mode 1 and 2 Switches (ProDrive Machines) (If Equipped)

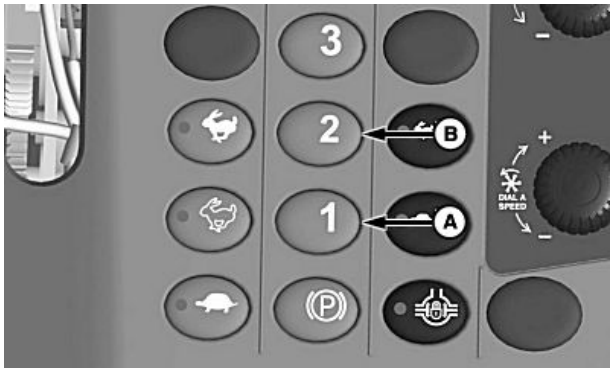
*NOTE: Tire sizes and country code regulations limit maximum ground speed. Speed can be programmed from zero to maximum allowable ground speed.*

*Maximum reverse ground speed is 10 km/h (6.2 mph) and does not change when in either mode.*

*ProDrive mode 1 or 2 switches can be selected while machine is moving.*

ProDrive mode 1 switch (A) and ProDrive mode 2 switch (B) are used to control transmission ground speed electronically. Switches are used to set a comfortable harvest or transport speed. When desired ground speed is set and multi-function lever is moved fully forward, machine operates no faster than the setpoint for the selected mode.

1. Press ProDrive mode 1 or 2 switch. Indicator lights on cornerpost display indicate which mode is currently selected.

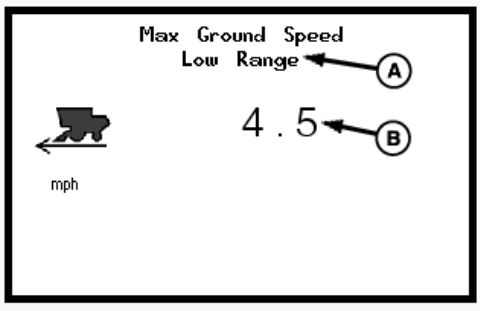



H94730 —UN—27JAN10

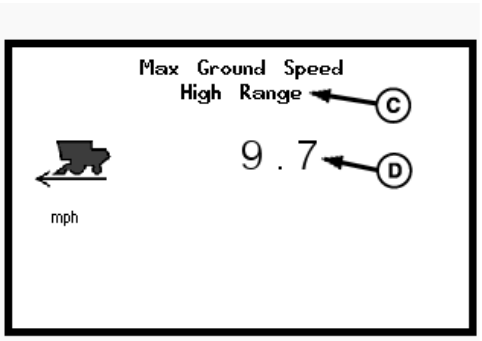
**A—ProDrive Mode 1 Switch** **B—ProDrive Mode 2 Switch**

2. Touch plus symbol (+) or minus symbol (-) or rotate selection dial until desired machine speed settings are reached.

**Continued on next page**




H101553 —UN—16MAY11




H101554 —UN—16MAY11

3. CommandCenter display shows operator adjustment settings for:

*NOTE: Mode 1 maximum speed cannot be set higher than current maximum speed set in mode 2.*

*Machine has a speed range of 0—7.2 km/h (0—4.5 mph) or 0—15.6 km/h (0—9.7 mph) as shown and will not operate faster than setpoint speed.*

*Speed change occurs between mode 1 and mode 2. (Example: Mode 1 set at 8 km/h (5 mph) with multi-function lever in mid range (4 km/h 2.5 mph). Mode 2 set at 20 km/h (12.4 mph) with multi-function lever in mid range (10 km/h; 6.2 mph). Current ground speed increases between modes).*

**Max Ground Speed Low Range (Mode 1):**

- Max Ground Speed Low Range (A) displays when ProDrive mode 1 switch is selected.
  - Display shows current setpoint speed (B).
  - When selection dial is rotated, machine slowly increases or decreases ground speed no matter where multi-function lever is positioned.

**Max Ground Speed High Range (Mode 2):**

- Max Ground Speed High Range (C) displays when ProDrive mode 2 switch is selected.
  - Display shows current setpoint speed (D).
  - When selection dial is rotated, machine slowly increases or decreases ground speed no matter where multi-function lever is positioned.

*NOTE: Greater maximum setpoints mean more aggressive machines movements. It is always best to use low range with a low maximum setpoint when doing precision movements (hooking up header).*




H101555 —UN—16MAY11

**A—Max Ground Speed Low Range**
**B—Current Setpoint Speed**
**C—Max Ground Speed High Range**
**D—Current Setpoint Speed**
**E—Higher Acceleration Range**
**F—Lower Acceleration Range**

- **Example 1:** Attaching header to machine and harvesting desired crop. Mode 1 set to 1.6 km/h (1 mph). Mode 2 set to 11.3 km/h (7 mph).
- **Example 2:** Waterway approaches and harvesting desired crop. Mode 1 set to 4.8 km/h (3 mph). Mode 2 set to 11.3 km/h (7 mph).

OUO6075,0000F82 -19-09FEB12-2/2

## Park Brake Switch (If Equipped)

*NOTE: System is in manual mode when machine is first started. Park brake indicator on cornerpost illuminates indicating park brake is engaged. Press park brake switch once to enter automatic mode.*

Park brake switch (A) manually or automatically engages/disengages park brake preventing machine movement.

**Automatic Mode:**

- Press park brake switch **once** to set park brake to automatic mode.
  - If multi-function lever is in neutral gate and speed is less than 1.5 km/h (1 mph), park brake is applied. If multi-function lever is moved out of neutral gate, park brake is released.

  *NOTE: Park brake engages each time multi-function lever is set to neutral position or if engine is shut OFF.*

**Manual Engagement (Default Mode):**

- Press park brake switch **twice** to set park brake to manual mode.




H94718 —UN—27JAN10

**A—Park Brake Switch**

  - If multi-function lever is in neutral gate and speed is less than 3.0 km/h (1.9 mph), park brake is applied. If multi-function lever is moved out of neutral gate or speed is greater than 1.5 km/h (1 mph) an alarm sounds.

OUO6075,0001411 -19-11MAR13-1/1

## Four-Wheel Drive Switches (If Equipped)

**IMPORTANT: Do not switch four-wheel drive ON or OFF while driving machine at maximum travel speed. Decrease speed or bring machine to a stop.**

**Turn four-wheel drive OFF before going down steep grades.**

**Non ProDrive Machines: In conditions that cause high pressure in hydrostatic system and machine slows or stops, move multi-function lever to neutral and shift transmission to a lower gear.**

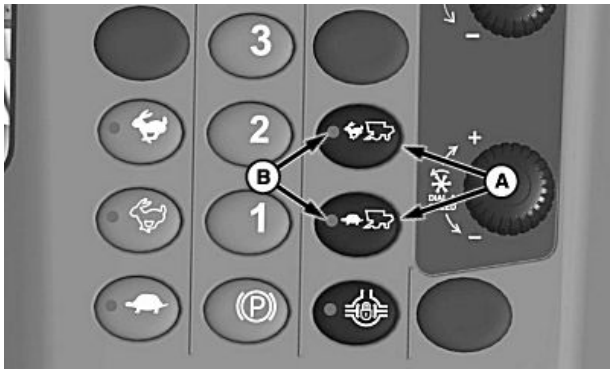
**It is OK to switch between low (turtle) and high (rabbit) settings on the "GO" while harvesting.**

Four-wheel drive switches (A) are used to control the speed of the four-wheel drive system.

Press either four-wheel drive switch once to turn ON or once to turn OFF. Indicator light (B) above either switch turns ON indicating which switch was selected.

Press bottom switch (turtle) when more traction is needed or top switch (rabbit) when higher speeds are required.

*NOTE: It is normal for front wheels to spin out (lose traction) before rear wheels in most conditions. In extremely muddy conditions, it may be necessary to apply both brakes momentarily to increase hydrostatic pressure to four-wheel drive motors.*




H94720 —UN—27JAN10

**A—Four-Wheel Drive Switches B—Indicator Lights**

*Non ProDrive Machines: If rear wheels spin excessively, shift transmission to a lower gear.*

*It is recommended that four-wheel drive be left in low (turtle) speed allowing machine to operate at maximum torque capacity. It is recommended to use high (rabbit) speed only to allow rear wheels to spin out faster than ground speed when required.*

**CAUTION: Non ProDrive Machines: Ground speed increases when turned OFF and decreases when turned ON.**

OUO6075,0000F83 -19-09FEB12-1/1

## Differential Lock Switch (If Equipped)

*NOTE: Differential lock does not engage when road transport disconnect switch is ON. Differential disengages when brake pedals are pressed.*

*Engagement is only possible if ground speed is below 10 km/h (6.2 mph) and automatically disengages when ground speed is above 12 km/h (7.5 mph).*

Differential lock switch (A) manually engages/disengages the differential lock to resolve traction problems in the field. Indicator light (B) turns ON when system is active.




H94721 —UN—27JAN10

**A—Differential Lock Switch** **B—Indicator Light**

OUO6075,0000F85 -19-09FEB12-1/1

## Header Height/HydraFlex™ Pressure Control Dial

Header height control dial (A) allows the operator to select the position of the header relative to the ground and return to that position automatically (see Header Height Resume and Header Height Sensing in CommandTouch Cab Cornerpost section).

Turn dial towards plus (+) symbol to raise header and setpoint (if equipped with HydraFlex increase pressure) or towards minus (-) symbol to lower header and setpoint (if equipped with HydraFlex decrease pressure).




H94722 —UN—27JAN10

**A—Header Height/HydraFlex Pressure Control Dial**

*HydraFlex is a trademark of Deere & Company*

OUO6075,0000445 -19-20NOV09-1/1

## Dial-A-Speed Dial

### Reel Speed/Belt Pickup Speed Automatic Adjust

Dial-A-Speed dial (A) will change speed of reel or belt pickup as determined by operator. Operating speed is a ratio of machine ground speed to reel or belt speed (see Dial-A-Speed System in CommandTouch Cab Cornerpost section).

Turn dial towards plus (+) symbol to increase reel or belt pickup speed and setpoint or towards minus (-) symbol to decrease reel and belt pickup speed and setpoint.

### Reel Speed/Belt Pickup Speed Manual Adjust

Touch or press confirm switch when Dial-A-Speed icon (B) is highlighted to disable automatic adjust system and to allow manual control.

Turn Dial-A-Speed dial to manually change speed of reel or belt pickup.

Turn dial towards plus (+) symbol to increase reel or belt pickup speed or towards minus (-) symbol to decrease reel and belt pickup speed.

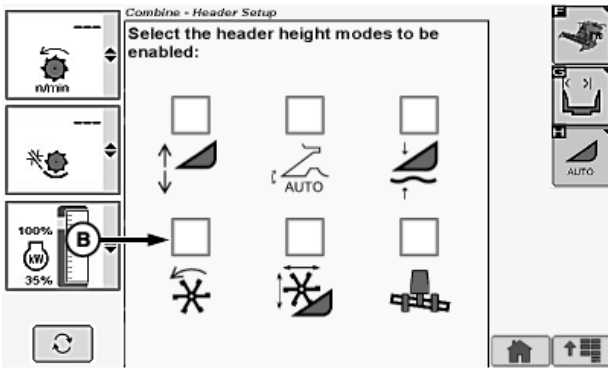
System is in manual mode when:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Header and separator are engaged.
- Dial-A-Speed is disabled or when machine speed is below 0.25 km/h (0.16 mph).

*NOTE: Corn heads with reel attached for down corn only run in manual mode.*




H94723 —UN—27JAN10




H94724 —UN—05OCT10

**A—Dial-A-Speed Dial** **B—Dial-A-Speed Icon**

*Reel must be enabled, see Change Header Settings in CommandCenter Display Screens section for further information.*

OUO6075,000044C -19-01DEC10-1/1

## Road Transport Disconnect Switch

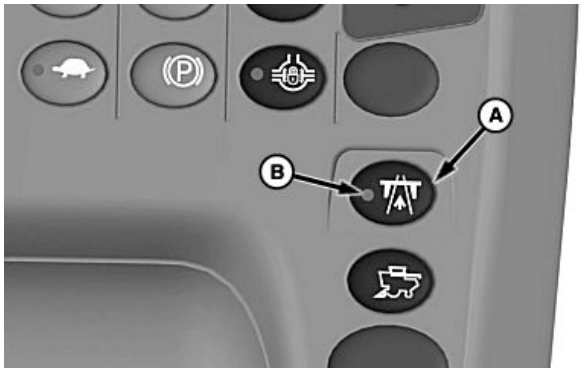
**CAUTION: ProDrive Machines: Pressing quick stop switch with separator engaged causes machine to quickly stop. It is always recommended to wear your seat belt to avoid serious injury.**

*NOTE: Machine will not enter road mode if separator is engaged. Warning alarm message appears indicating separator is engaged. Shut OFF separator to engage road transport disconnect switch.*

Road transport disconnect switch (A) must be in road position when transporting machine on roadway.

When road transport disconnect switch is pressed, indicator light (B) turns ON indicating switch is in road position. Road transport disconnect switch prevents the following functions:

- Separator Engage
- Header Engage
- Header Raise/Lower
- Header Height Resume
- Header Height Sensing
- Lateral Tilt
- Reel Raise/Lower and Reel Fore/Aft




H94726 —UN—27JAN10

**A—Road Transport Disconnect Switch B—Indicator Light**

- Unloading Auger
- Auger Swing
- Power Folding Auger (If Equipped)
- Grain Tank Covers (If Equipped)

After transporting machine on roadway and field operation is desired, press road transport disconnect switch for **two seconds** allowing indicator light to turn OFF and allowing desired switch functions to operate again.

OUO6075,000061F -19-11OCT10-1/1

## Folding Functions Shortcut Switch (If Equipped)

*NOTE: Screen shows all optional folding features. Folding feature always defaults to top portion of screen depending on options.*

Folding functions shortcut switch (A) allows direct navigation to the folding functions setup screen. See Folding Functions Setup in CommandCenter Display Screens section for further folding functions.

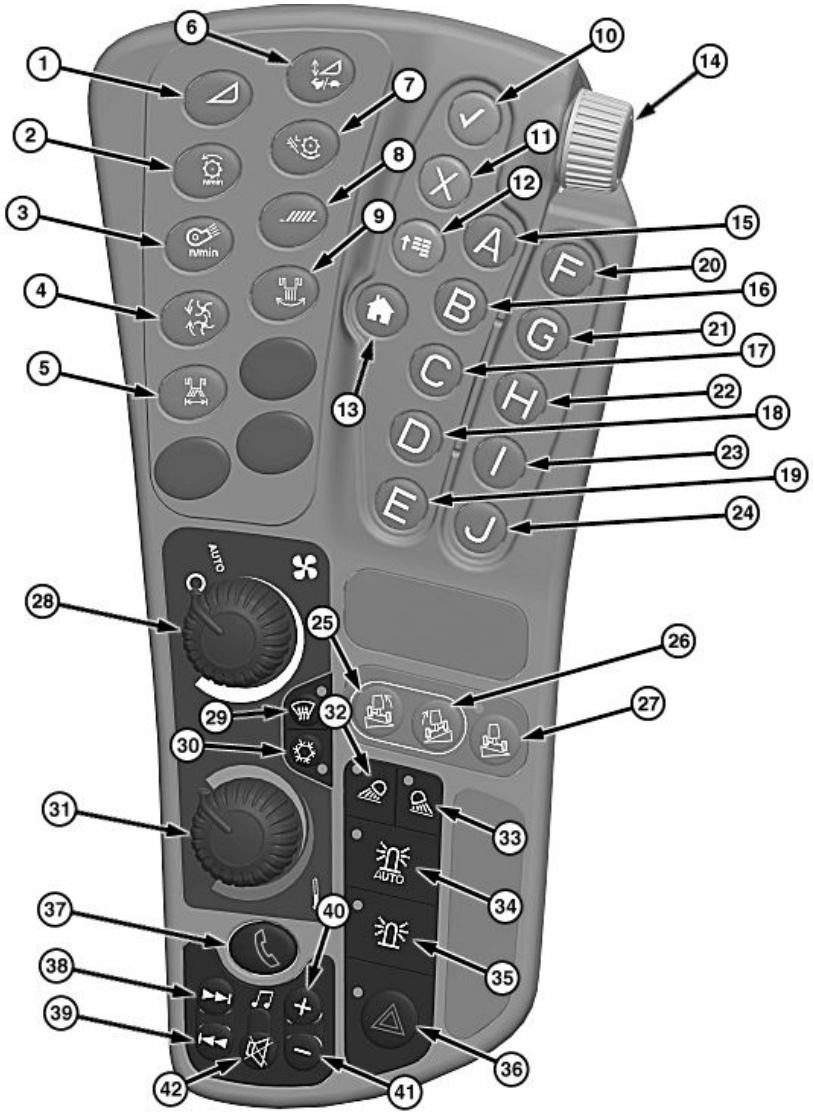
**A—Folding Functions Shortcut Switch**




H94727 —UN—27JAN10

OUO6075,0000468 -19-28SEP10-1/1

## CommandARM™ Controls




H107886 —UN—16MAY13

1— Header Adjustment Switch
2— Threshing Speed Adjust Switch
3— Cleaning Fan Speed Adjust Switch
4— Spreader Speed Adjust Switch
5— Discharge Swap Switch (If Equipped)
6— Feeder House Rate/Sensitivity Adjust Switch
7— Threshing Clearance Adjust Switch
8— Chaffer/Sieve Adjust Switch
9— Chopper Vane Angle Adjust Switch (If Equipped)
10— Confirm Switch
11— Cancel Switch
12— Main Menu Switch
13— Home Switch
14— Selection Dial
15 - 24—A—J Shortcut Switches
25— HillMaster™ Manual Tilt Left Switch (If Equipped)
26— HillMaster™ Manual Tilt Right Switch (If Equipped)
27— HillMaster™ Automatic Leveling Control Switch (If Equipped)
28— Fan Speed Control Dial
29— Defrost Switch
30— Air Conditioner Switch
31— Temperature Control Dial
32— Work Lights 1 (Front Stubble) Switch
33— Work Lights 2 (Rear Discharge) Switch
34— Auto Beacon Lights Switch
35— Beacon Lights Switch
36— Hazard Warning Lights Switch
37— Push-To-Talk Switch (If Equipped)
38— Seek Forward Switch (If Equipped)
39— Seek Reverse Switch (If Equipped)
40— Volume Increase Switch (If Equipped)
41— Volume Decrease Switch (If Equipped)
42— Mute Switch (If Equipped)

*NOTE: Not every switch is available for every machine model.*

Before operating machine, become familiar with switches and controls.

*CommandARM is a trademark of Deere & Company*

OUO6075,00014F0 -19-16MAY13-1/1

## Header Adjust Switch

Press header adjust switch (A) as needed to adjust the following.




H94660 —UN—27JAN10

**A—Header Adjust Switch**

**Cutterbar Pressure Adjust (Press Once)**

*NOTE: Only works on HydraFlex platforms.*

Cutterbar pressure adjust allows operator to increase or decrease the amount of pressure in the cutterbar.

1. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease pressure and setpoint.
2. Display shows operator adjustment settings.

**Float Position Adjust Switch (Press Once)**

*NOTE: Only works on 600D Drapers.*

> *Header Height Sensing (off the ground) must be enabled to adjust float position. This is not available with Header Height Sensing (on the ground).*
>
> *Header Height Sensing must not be enabled to adjust float pressure.*

Float position adjust allows operator to increase or decrease the amount of pressure in the gauge wheel and float frame cylinders.

1. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease gauge wheel and float frame cylinders pressure and setpoint.
   - Values are adjustable from 1 to 10 with a default of 5.
   - Level land machines should have a setting of 3 or lower.
   - Lateral tilt machines should start with a setting of 5.

*NOTE: Value should be set lower for issues where cut height is not remaining level (left to right). Steeper slopes should have a lower value.*

2. Display shows operator adjustment settings.

**Belt Speed Adjust (Press Twice)**

*NOTE: Only works on drapers and belt pickups.*

Draper belt speed adjust allows operator to increase or decrease belt speed.

1. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease belt speed.
2. Display shows operator adjustment settings.

**Draper Cutterbar Tilt Adjust (Press Three Times)**

*NOTE: Only works on 600 series drapers.*

Draper cutterbar tilt adjust allows operator to increase or decrease cutterbar angle.

1. Touch plus (+) or minus (-) symbol or rotate selection dial to adjust cutterbar anlge.
   - Increase tilts cutterbar down.
   - Decrease tilts cutterbar up.
2. Display shows operator adjustment settings.

OUO6075,00004D1 -19-28SEP10-1/1

## Threshing Speed Adjust Switch

Threshing speed adjust switch (A) increases or decreases threshing speed.

1. Engage separator.
2. Press threshing speed adjust switch.
3. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease threshing speed.
4. Display shows operator adjustment settings.

*NOTE: Threshing speed switch resets tachometer for low speed alarm. Whenever threshing speed is changed the alarm is also reset. Threshing speed may increase about 30 rpm over four hours as oil temperature increases. Adjust threshing speed as needed.*




H94669 —UN—27JAN10

**A—Threshing Speed Adjust Switch**

OUO6075,000044A -19-28SEP10-1/1

## Cleaning Fan Speed Adjust Switch

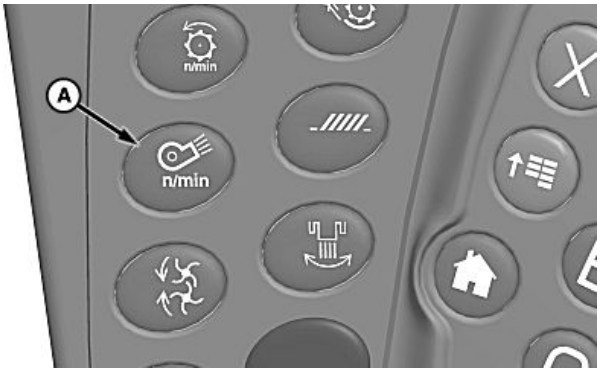
Cleaning fan speed adjust switch (A) increases or decreases cleaning fan speed.

1. Engage separator.
2. Press cleaning fan speed adjust switch.
3. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease cleaning fan speed.
4. Display shows operator adjustment settings.

Fan speed motor has a thermal (heat) shut off that stops the motor from working if any of the following happen:

- Switch is used continuously for more than two or three minutes.
- Adjustment system is against stop while motor is still trying to change speed.
- Excessive binding or dragging in linkage.

If any of the above causes are suspected, clean and adjust as necessary.




H94670 —UN—27JAN10

**A—Cleaning Fan Speed Adjust Switch**

*NOTE: Allow motor to cool 10 to 15 minutes before trying switch again.*

OUO6075,000044B -19-28SEP10-1/1

## Spreader Speed Adjust Switch

**Single Speed Spreader (If Equipped):**

*NOTE: Spreader speed can be adjusted with separator disengaged. This allows operator to adjust spreader setpoint speed. When separator is engaged, spreader operates at preset speed.*

*Spreader speed has a range of 0 rpm - 550 rpm. Increase spreader speed until desired spread width is reached.*

Spreader speed adjust switch (A) increases or decreases the speed of both spreader disks from inside cab.

1. Press spreader speed adjust switch.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease spreader speed.
3. Display shows operator adjustment settings.

*NOTE: Set spreader speed to zero when spreader is not being used.*

**Dual Speed Spreader (If Equipped):**

*NOTE: Spreader speed can be adjusted with separator disengaged. This allows operator to adjust spreader setpoint speed. When separator is engaged, spreader operates at preset speed.*

*Spreader speed has a range of 0 rpm - 550 rpm. Increase spreader speed until desired spread width is reached.*

Spreader speed adjust switch (A) increases or decreases the speed of both spreader disks together or independently from inside cab.

1. Spreader speed adjust switch:
   - Press switch **once** to adjust both spreader disk speeds.
   - Press switch **twice** to adjust left-hand spreader disk speed.
   - Press switch **three times** to adjust right-hand spreader disk speed.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease spreader speed.
3. Display shows operator adjustment settings.

*NOTE: Set spreader speed to zero when spreader is not being used.*

**PowerCast Tailboard Spreader (If Equipped):**

*NOTE: Spreader speed can be adjusted with separator disengaged. This allows operator to adjust spreader setpoint speed. When separator is engaged, spreader operates at preset speed.*




H94671 —UN—27JAN10

**A—Spreader Speed Adjust Switch**

*Spreader speed has a range of 0 rpm - 550 rpm. Increase spreader speed until desired spread width is reached.*

Spreader speed adjust switch (A) increases or decreases the speed of both spreader disks together or independently from inside cab.

1. Spreader speed adjust switch:
   - Press switch **once** to adjust both spreader disk speeds.
   - Press switch **twice** to adjust left-hand spreader disk speed.
   - Press switch **three times** to adjust right-hand spreader disk speed.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease spreader speed.
3. Display shows operator adjustment settings.

**Advanced PowerCast Tailboard Spreader (If Equipped):**

*NOTE: Spreader speed can be adjusted with separator disengaged. This allows operator to adjust spreader setpoint speed. When separator is engaged, spreader operates at preset speed.*

*Spreader speed has a range of:*

- *350 - 550 rpm (Corn) (Default 500 rpm)*
- *600 - 800 rpm (Small Grain) (Default 700 rpm)*

*Adjust values until desired spread width or offset is reached. See Residue Management Setup in CommandCenter Display Screens section for further information.*

Spreader speed adjust switch (A) increases or decreases the shroud spread width percentage or offset on both spreader disks from inside cab.

Continued on next page

Advanced PowerCast Tailboard Spreader uses independently adjustable shrouds to cover the spreader disks, which adjusts residue spread width and direction. When shrouds are adjusted to cover more of the spreader disk, the material is pushed further from the machine and in that direction.

**Width Adjustment:**

1. Press switch **once** to adjust spread width.

*NOTE: Entering a range 0 to 100% moves both shrouds and evenly increases spread width on both spreader disks.*

*Example: Machine is equipped with a 10.7 m (35 ft.) header with no wind. Default spreader width is 0%. With a 0% setting residue is spread 1 m (3 ft.) short from end of header. Press switch once and adjust spread width value. Increase spread width to 50% allowing both shrouds to move the same amount, which increases spread width on both the left and right to approximately the desired spread width.*

2. Touch or press confirm switch when desired digits are highlighted.

*NOTE: Repeat procedure until desired value is shown.*

3. Touch or press confirm switch when enter/accept icon is highlighted to save desired value.
4. Display shows operator adjustment settings.

**Offset Adjustment:**

1. Press switch **twice** to adjust spreader offset.

*NOTE: Entering a range 0 to 100% left or right (indicated by arrow on display) moves residue spread towards that direction.*

2. Touch or press confirm switch when desired digits are highlighted.

*NOTE: Repeat procedure until desired value is shown.*

3. Touch or press confirm switch when enter/accept icon is highlighted to save desired value.
4. Display shows operator adjustment settings.

OUO6075,0000453 -19-19NOV10-2/2

## Discharge Swap Switch (If Equipped)

**Chopper Vanes (If Equipped):** Discharge swap switch (A) automatically moves chopper vanes from right to left or left to right.

**Dual Speed Spreader (If Equipped):** Discharge swap switch (A) automatically adjusts spreader speed by speeding up or slowing down spreader disks.

**PowerCast Tailboard Spreader (If Equipped):** Discharge swap switch (A) automatically adjusts spreader speed by speeding up or slowing down spreader disks.

**Advanced PowerCast Tailboard Spreader (If Equipped):** Discharge swap switch (A) automatically adjusts spreader shrouds covering the spreader disks.

*NOTE: Example: If wind is blowing chaff or straw towards uncut crops or operator has reached end row and travels back the opposite direction, press switch to:*

- *Move chopper vanes automatically to opposite side.*
- *Move spreader speeds automatically to opposite side.*




H94672 —UN—27JAN10

**A—Discharge Swap Switch**

- *Move spreader shrouds automatically to opposite side.*

OUO6075,000046D -19-19NOV10-1/1

## Feeder House Rate/Sensitivity Adjust Switch

Feeder house rate/sensitivity adjust switch (A) allows operator to compensates for uneven ground and controls horizontal and vertical positions of header. System continuously compares preset positions and actual positions, thus keeping header in desired working position.

**Manual Raise/Lower Speed:**

Manual raise/lower speed controls response rate of header raise/lower functions for manual control or when in automatic height resume mode.

*NOTE: Rate setting shown on display when adjusting. Settings are adjusted between 0 to 100.*

1. Press feeder house rate/sensitivity adjust switch (A) **once** to select manual raise/lower speed.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease response speed.
3. Display shows operator adjustment settings.

**Header Height Sensitivity:**

Height Sensing and Active Header Float Pressure Sensitivity (Automatic Functions) controls speed of response for header movements when in automatic sensing and automatic float modes.

*NOTE: Sensitivity setting is shown on display when adjusting. Settings are adjusted between 0 to 100.*

1. Press feeder house rate/sensitivity adjust switch (A) **twice** to select header height sensitivity.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease sensitivity.
3. Display shows operator adjustment settings.

**Manual Tilt Speed:**

*NOTE: Manual tilt speed function only works on closed-center hydraulic machines equipped with lateral tilt.*

Manual tilt speed controls response for lateral tilt movements when in manual rate mode.

*NOTE: Rate setting is shown on display when adjusting. Settings are adjusted between 0 to 100.*




H94674 —UN—27JAN10

**A—Feeder House Rate/Sensitivity Adjust Switch**

1. Press feeder house rate/sensitivity adjust switch (A) **three times** to select manual tilt speed.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease tilt speed.
3. Display shows operator adjustment settings.

**Automatic Tilt Sensitivity:**

*NOTE: Automatic tilt sensitivity speed function only works on lateral tilt equipped machines.*

Automatic tilt sensitivity controls speed of response for lateral tilt movements when in automatic sensing and automatic float modes.

*NOTE: Sensitivity setting is shown on display when adjusting. Settings are adjusted between 0 to 100.*

*NOTE: Feeder house lateral tilt sensitivity speed function only works on lateral tilt equipped machines.*

1. Press feeder house rate/sensitivity adjust switch (A) **four times** to select automatic tilt sensitivity.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease tilt sensitivity.
3. Display shows operator adjustment settings.

OUO6075,0000447 -19-01DEC10-1/1

## Threshing Clearance Adjust Switch

Threshing clearance adjust switch (A) increases or decreases concave clearance.

1. Press threshing clearance adjust switch.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease threshing clearance.
3. Display shows operator adjustment settings.

**A—Threshing Clearance Adjust Switch**




H94675 —UN—27JAN10

OUO6075,00004D3 -19-28SEP10-1/1

## Chaffer/Sieve Adjust Switch

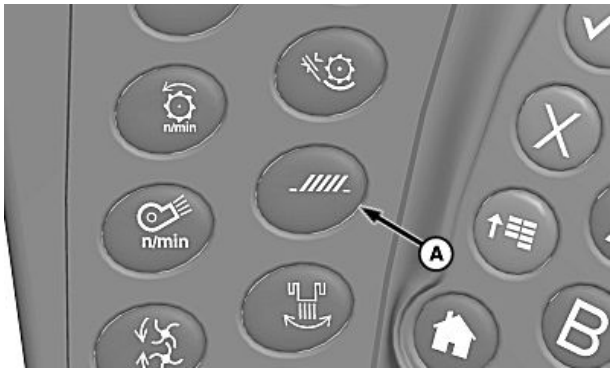
Chaffer/Sieve adjust switch increases or decreases the amount chaffer/sieve clearance.

**Chaffer Adjust**

1. Press switch **once** to adjust chaffer clearance.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease chaffer clearance.
3. Display shows operator adjustment settings.

**Sieve Adjust**

1. Press switch **twice** to adjust sieve clearance.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to increase or decrease sieve clearance.
3. Display shows operator adjustment settings.




H94676 —UN—27JAN10

**A—Chaffer/Sieve Adjust Switch**

OUO6075,00004D4 -19-07OCT10-1/1

## Chopper Vane Angle Adjust Switch (If Equipped)

Chopper vane adjust switch (A) allows operator to adjust direction of chopper vanes from inside cab.

1. Press chopper vane angle adjust switch.
2. Touch plus (+) or minus (-) symbol or rotate selection dial to adjust chopper vanes to the left or right.
3. Display shows operator adjustment settings.

**A—Chopper Vane Angle Adjust Switch**




H94677 —UN—27JAN10

OUO6075,000074F -19-28SEP10-1/1

## Operator Interface Controls

- **Selection Dial (A):** allows operator to move the ”focus” from item to item on the CommandCenter display. As item is highlighted, a ”tool tip” will appear describing what the highlighted object is. Selection dial is also used for data entry to increase/decrease numeric values.
  - Rotating selection dial forward raises input box values.
  - Rotating selection dial wheel rearward lowers input box values.
- **Confirm Switch (B):** allows operator to select desired ”focus” area on CommandCenter display or to confirm a highlighted action.
- **Cancel Switch (C):** allows operator to cancel or deselect an action on the display at anytime.
- **Main Menu Switch (D):** is used to change the active ”application” that the CommandCenter display is running. Items or applications, in the menu included:
  - Message Center
  - Display Settings
  - Layout Manager
  - Combine
  - Performance Monitor
  - GreenStar
  - Video
- **Home Switch (E):** allows operator to return to home page.
- **Shortcut Switches (F):** allows operator to select corresponding icon on secondary display unit or GreenStar display (if equipped).




H94960 —UN—27JAN10

**A—Selection Dial**
**B—Confirm Switch**
**C—Cancel Switch**
**D—Main Menu Switch**
**E—Home Switch**

OUO6075,00004D5 -19-07OCT10-1/1

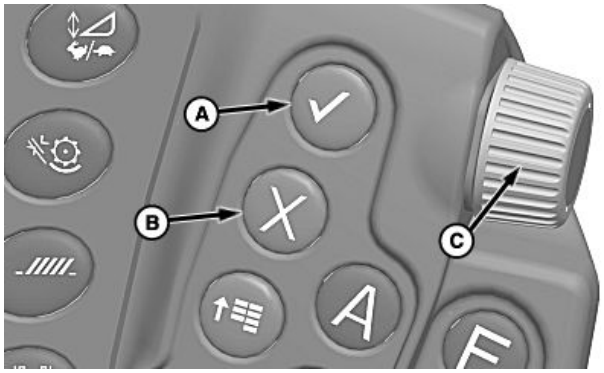
## Setpoint Modes (Manual or Automatic)

Pressing confirm switch (A) or cancel switch (B) while a setpoint screen is displayed causes setpoint screen to disappear and return to home page.

Pressing confirm switch or cancel switch has the following effects while adjusting:

- Press confirm switch while adjusting:
  - Manual mode – system deactivates.
  - Automatic mode – system continues adjusting in background.
- Press cancel switch while adjusting:
  - Manual mode – system deactivates.
  - Automatic mode – system deactivates.

Turning selection dial (C) in both modes either increases (forward) or decreases (rearward) setpoint.




H94659 —UN—27JAN10

**A—Confirm Switch**
**B—Cancel Switch**
**C—Selection Dial**

**Continued on next page**

OUO6075,0000441 -19-11OCT10-1/3

**Manual Mode**

Provides basic increase/decrease function control. Used when in Road Mode or when automatic mode requirements are not met.

With key switch ON and separator and header disengaged the following setpoints can be adjusted:

- HydraFlex Pressure
- Draper Speed
- Reel Speed
- Chaffer Opening
- Sieve Opening
- Threshing Clearance
- Cleaning Fan Speed
- Threshing Speed
- Platform Fore/Aft Tilt
- Chopper Vane Angle
- Belt Speed

*CommandARM is a trademark of Deere & Company*




H95967 —UN—07APR10

Press desired CommandARM™ switch.

Touch plus (+) or minus (-) symbol or rotate selection dial to setpoint.

OUO6075,0000441 -19-11OCT10-2/3

**Automatic Mode**

*NOTE: Black value (A) indicates current setpoint. Blue value (B) indicates setpoint value increase or decrease when plus (+) or minus (-) symbol is touched or selection dial is turned.*

Provides advanced ”dial-in” function control.

With engine at high idle and separator engaged the following setpoints can be adjusted:

- Threshing Speed
- Cleaning Fan Speed

With engine running, the following setpoints can be adjusted:

- Chaffer Opening
- Sieve Opening
- Threshing Clearance
- Chopper Vane Angle
- Spreader Speed
- Header Height Rate
- Header Height Sensitivity
- Manual Lateral Tilt Sensitivity
- Automatic Lateral Tilt Sensitivity

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H95966 —UN—07APR10

**A—Black Value** **B—Blue Value**

- ProDrive Transmission Max Speed Range 1
- ProDrive Transmission Max Speed Range 2
- Header Height Sensing Float Position

Press desired CommandARM™ switch.

Touch plus (+) or minus (-) symbol or rotate selection dial to setpoint.

OUO6075,0000441 -19-11OCT10-3/3

## HillMaster Leveling Control Switches

### Automatic Leveling

Automatic leveling control switch (A) allows machine separator to automatically level itself as machine moves over rolling ground.

**System Requirements:**
- Engine is running.
- Road transport disconnect switch in field position.

1. Press automatic leveling control switch to activate automatic leveling system.
2. Indicator light (B) will turn ON indicating setting is in automatic mode.
3. Display shows position of machine chassis body graphically.

A pendulum is used to sense the slope of the machine as it moves across the field.

*NOTE: With automatic leveling control system activated, manual tilt switches can be used to overcome automatic functions (machine may be tilted manually left or right).*

### Manual Leveling

Manual tilt switches allow the machine chassis to be tilted left or right manually as machine moves over rolling ground.

**System Requirements:**
- Engine is running.
- Road transport disconnect switch in field position.

*NOTE: Push Button Shift Transmission Machines: Push manual tilt right switch (C) or manual tilt left switch (D) to enable HillMaster mode. Push park brake switch to disengage park brake.*

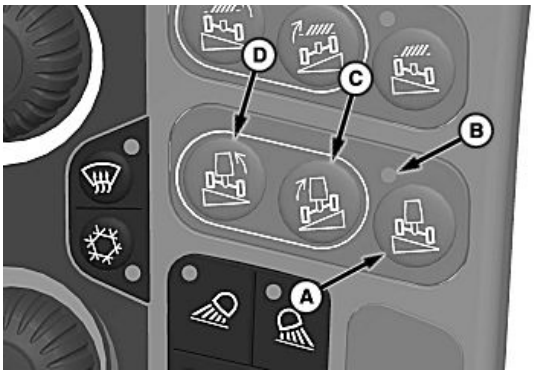
Push and hold manual tilt right switch (C) to tilt machine chassis to the right.

Push and hold manual tilt left switch (D) to tilt machine chassis to the left.

*NOTE: When manual desired tilt switch is released, automatic mode takes over and levels machine chassis automatically.*

Display shows position of machine chassis body graphically.

A pendulum is used to sense the slope of the machine as it moves across the field.




H94961 —UN—27JAN10

**A—Automatic Leveling Control Switch**
**B—Indicator Light**
**C—Manual Tilt Right Switch**
**D—Manual Tilt Left Switch**

*NOTE: With automatic leveling control system activated, manual tilt switches can be used to overcome automatic functions (machine may be tilted manually left or right).*

**Road Transport Position:**

**CAUTION: Avoid loss of control during road transport and serious injury or death. Never transport machine on roadway with HillMaster in automatic mode. Never attempt to manually tilt machine while transporting on a roadway.**

The following lockouts the HillMaster leveling system and ensures that leveling system does not shift during road transport.

**System Requirements:**
- Engine is running.
- Road transport disconnect switch in field position.

1. Move machine to level ground.
2. Press automatic leveling control switch for **five seconds** or until indicator light (B) flashes.
3. Push and hold manual tilt right switch (C) to tilt machine chassis to the right.
4. Push and hold manual tilt left switch (D) to tilt machine chassis to the left.

Machine is now in neutral position and can be driven on roadway.

OUO6075,00010C8 -19-14MAR12-1/1

## ClimaTrak™ Automatic Temperature Control

### Fan Speed

*NOTE: When operating in cold environments it is best to point air vents towards cab floor and turn fan speed to automatic position. This helps circulate air flow throughout the cab.*

**Fan Speed Control Dial (A):** adjusts fan speed and amount of air coming out of louvers.

- Off Position - all power to system is OFF.
- Automatic Position - fan speed is determined by difference between selected temperature and actual cab temperature.

  *NOTE: As temperature approaches setpoint, fan speed decreases.*

**Fan Speed Indicator (B):** indicator arrow moves in relation to desired fan speed adjusted setting.

### Defrost

**Defrost Switch (C):** manually opens defrost vents.

*NOTE: Indicator light illuminates when defrost is ON.*

*Air conditioner turns ON when defrost switch is first pressed. This allows moisture to be removed from the air and allows dry air to be blown on the windows. Press air conditioner switch to turn OFF.*

- Defrost helps remove moisture from air even in heat mode.

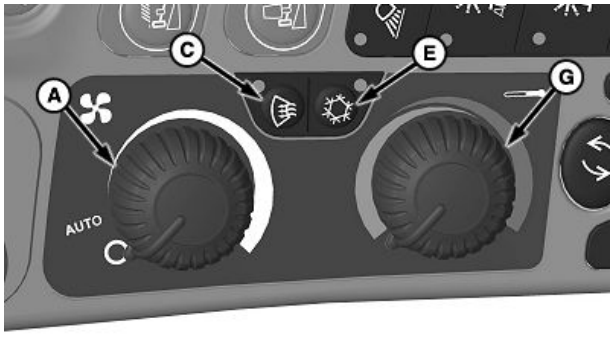
**Defrost Indicator (D):** toggles icon ON/OFF when defrost switch is pressed.

### Air Conditioner

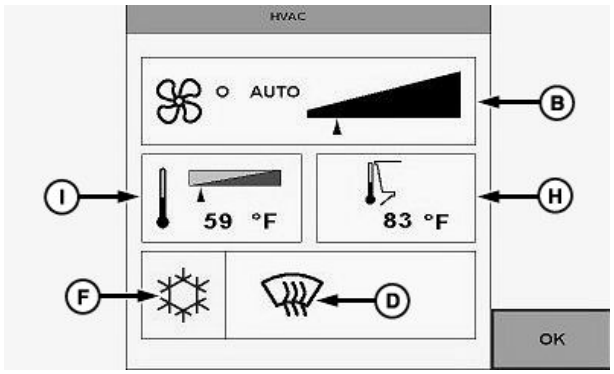
**Air Conditioner Switch (E):** activates air conditioner to cool cab.

*NOTE: Indicator light illuminates when air conditioning is ON.*

*ClimaTrak is a trademark of Deere & Company*




H96249 —UN—30APR10




H96250 —UN—30APR10

**Air Conditioner Icon (F):** toggles icon ON/OFF when air conditioner switch is pressed.

### Temperature Control

**Temperature Control Dial (G):** adjusts temperature of cab. Turn dial to red zone to increase temperature and blue zone to decrease temperature.

*NOTE: Outside ambient temperature (H) shows current air temperature.*

**Temperature Control Indicator (I):** indicator arrow moves in relation to desired temperature adjusted setting.

OUO6075,00010C3 -19-08MAR12-1/1

## Light Switches

*NOTE: For more detailed information on lighting locations on the machine, see Lights and Signals section.*

**Front Stubble Light Switch (A):**

Press switch to turn front stubble lights ON/OFF.

*NOTE: If road lights are ON, stubble lights fascia lights and rear discharge lights will not be able to be turned ON.*

- Stubble lights provide operator with area lighting behind header for night operation and low light conditions.

**Rear Discharge Light Switch (B):**

Press switch to turn rear discharge lights ON/OFF.

*NOTE: If road lights are ON, stubble lights fascia lights and rear discharge lights will not be able to be turned ON.*

- Rear discharge lights provide operator with rear area lighting for night operation and low light conditions.

**Auto Beacon Light Switch (C):**

Press switch to turn auto beacon lights ON/OFF.

- Beacon lights illuminate and provide a signal to the grain cart operator that grain tank is 3/4 full or is full and is ready to be unloaded.

**Beacon Lights Switch (D):**

Press switch to turn beacon lights ON/OFF.




H94962 —UN—27JAN10

- Beacon lights are located on both sides of the machine at the front and rear give warning to other drivers when transporting on roadways.

**Hazard Light Switch (E):**

Press switch to turn hazard warning lights ON/OFF.

- Hazard warning lights are located on both sides of the machine at the front and rear give warning to other drivers when transporting on roadways.

OUO6075,00004D7 -19-29JUN11-1/1

## Radio Function Switches (If Equipped)

**Push-To-Talk Switch (A)[1]:**

Press switch to navigate to phone call page quickly or to answer incoming phone calls or end calls already in process.

**Seek Forward Switch (B):**

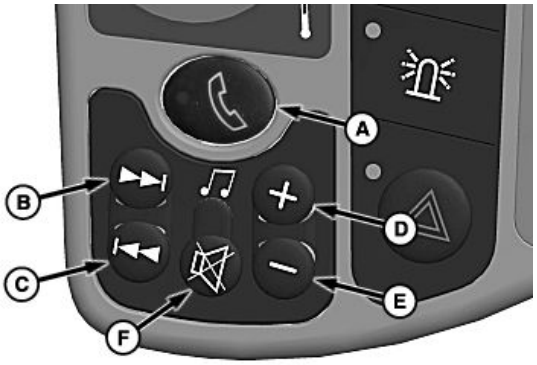
- AM/FM/WX/MW/LW: Press switch (short press) to change to next preset.
- AM/FM/WX/MW/LW: Press switch (long press) to SEEK UP.
- XM®: Press and hold switch to change to next/higher channel.
- CD/MP3: Press switch to advance to next available track.

**Seek Reverse Switch (C):**

- AM/FM/WX/MW/LW: Press switch (short press) to change to previous preset.
- AM/FM/WX/MW/LW: Press switch (long press) to SEEK DOWN.
- XM®: Press and hold switch to change to previous/lower channel.
- CD/MP3: Press switch to go to beginning of current track or to previous track.

*XM is a registered trademark of SIRIUS XM Radio Inc.*

*[1]Switch is only available for Premium radios.*




H105408 —UN—11MAY12

**Volume Increase Switch (D):**

Press switch to increase audio volume.

**Volume Decrease Switch (E):**

Press switch to decrease audio volume.

**Mute Switch (F):**

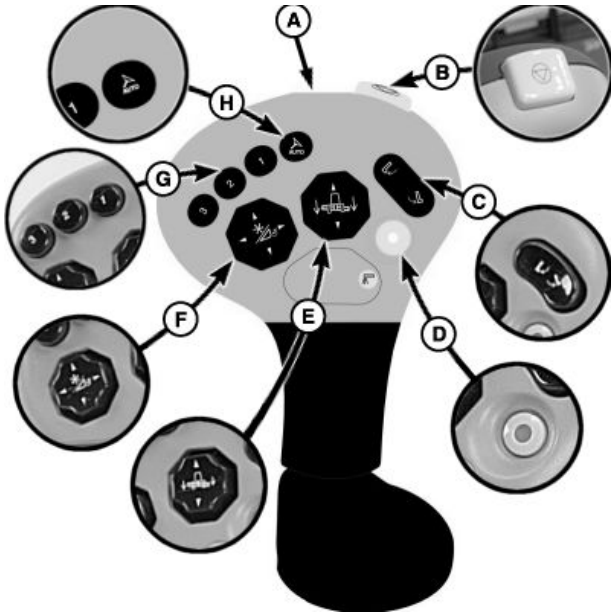
*NOTE: Press switch to mute microphone during a phone call.*

Press switch to mute audio. Press switch to resume play of audio music.

OUO6075,000151A -19-17JUN13-1/1

## Multi-Function Lever

**A—Multi-Function Lever (Forward and Reverse)**
**B—Quick Stop Switch**
**C—Unloading Auger Swing Switch**
**D—Unloading Auger Drive Engage/Disengage Switch and Indicator Light**
**E—Header Raise/Lower Switch and Lateral Tilt Switch (Optional)**
**F—Reel Raise/Lower, Reel Fore and Aft (Optional), Feeder House Backshaft Speed, Adjustable Corn Head Deck Plates (Optional)**
**G—Activation Buttons (1, 2, 3)**
**H—AutoTrac™ Resume (If Equipped)**




H94974 —UN—01NOV10

*AutoTrac is a trademark of Deere & Company*

OUO6075,0000458 -19-13DEC10-1/1

## Multi-Function Lever and Palm Adjustment

**IMPORTANT: If hydrostatic charge pressure warning comes ON in display when multi-function lever is moved, check hydraulic oil level or replace filter, see your John Deere dealer if problem is not corrected.**

Move multi-function lever forward to move machine forward or pull back slightly to the right and rearward to move machine rearward.

Palm rest (A) is adjustable to three detent positions. To raise or lower palm rest, pull lever (B) under palm rest and adjust palm rest to desired position.

**A—Palm Rest** **B—Lever**




H94975 —UN—01NOV10

OUO6075,0000459 -19-13DEC10-1/1

## Quick Stop Switch

**CAUTION: ProDrive Machines: Pressing quick stop switch with separator engaged causes machine to quickly stop. It is always recommended to wear your seat belt to avoid serious injury.**

**IMPORTANT: Header drive can be disengaged by this switch in case of malfunctions.**

Quick stop switch (A) allows operator to simultaneously shut OFF the following at the same time in case of an emergency:

- Header Engage
- Unloading Auger Drive
- Unloading Auger Swing
- Grain Tank Covers (If Equipped)
- Power Folding Auger (If Equipped)
- ProDrive (propulsion movement quickly stops) (If Equipped)

Pushing unloading auger drive switch on multi-function lever restarts the unloading auger drive. To engage header drive, turn header engage switch OFF and back ON.




H97774 —UN—01NOV10

**A—Quick Stop Switch**

OUO6075,000061E -19-13DEC10-1/1

## Unloading Auger Swing Switch

Unloading auger swing switch (A) allows operator to swing unloading auger in or out manually or automatically.

**System Requirements:**
- Road transport disconnect switch must be in field position.
- Operator must be seated.

Press top of unloading auger swing switch to swing auger out or press bottom of unloading auger swing switch to swing auger in.

**Manual Control:** Press and hold switch part way in until auger reaches desired position. Auger stops when switch is released.

**Automatic Control:** Press switch all the way in and release it. Auger will swing fully outward or inward without holding switch.

*NOTE: Automatic auger swing function will not operate when unloading auger drive is engaged. When unloading auger is not used, it is recommended to swing unloading auger back to transport position.*




H94982 —UN—01NOV10

**A—Unloading Auger Swing Switch**

OUO6075,000045B -19-13DEC10-1/1

## Unloading Auger Drive Switch

Unloading auger drive switch (A) allows operator to engage or disengage the unloading auger.

**System Requirements:**
- Road transport disconnect switch must be in field position.
- Operator must be seated.

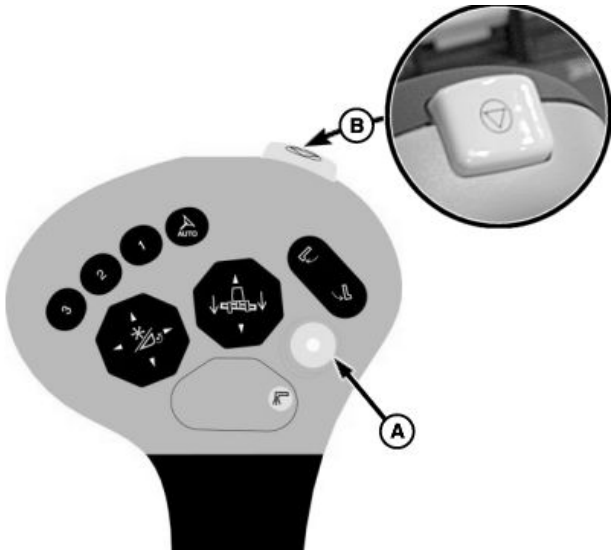
Press unloading auger drive switch once to turn ON or press unloading auger drive switch again to turn OFF. Indicator light comes ON when system is engaged.

*NOTE: Unloading auger drive can also be turned OFF with quick stop switch (B) in case of an emergency. To engage unloading auger if header and unloading auger are stopped with quick stop switch, press unloading auger switch again.*

Unloading auger drive will engage only when button is held while auger is in auto swing mode or when auger is manually swung out less than 50%.

If operator leaves seat after engagement, unloading auger drive will continue to operate for five seconds before disengaging. To engage system, sit on operator's seat and press unloading auger switch again.

*NOTE: If unloading system fails to engage or stops unexpectedly, sit squarely on seat and press unloading auger switch once.*




H94983 —UN—01NOV10

**A—Unloading Auger Drive Switch** **B—Quick Stop Switch**

OUO6075,000045C -19-13DEC10-1/1

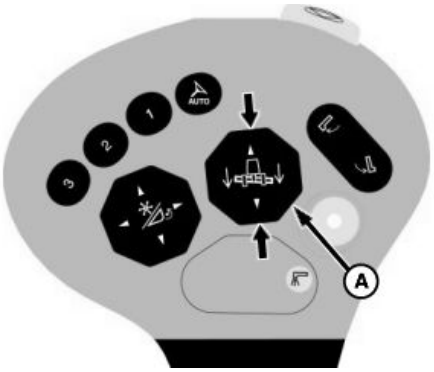
## Header Raise/Lower Switch

Header raise/lower switch (A) allows operator to raise or lower the header.

*NOTE: Header raise/lower switch has two detent positions. Pushing part way in on switch causes header to slowly raise or lower. Pushing all the way in will cause header to raise or lower at a faster rate.*

**System Requirements:**
- Road transport disconnect switch must be in field position.
- Operator must be seated.

Press and hold top of header raise/lower switch to raise header or press and hold bottom of header raise/lower switch to lower header.




H94984 —UN—01NOV10

**A—Header Raise/Lower Switch**

OUO6075,000045D -19-13DEC10-1/1

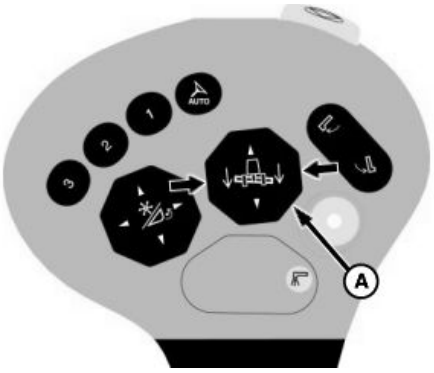
## Lateral Tilt Switch

*NOTE: On combines equipped with a level-land or lateral tilt feeder house operating in conjunction with a 600D Draper platform that is equipped with the Dual Zone Float attachment, the lateral tilt switch provides independent adjustment of the float pressure in the right and left float arm and gauge wheel (if equipped) cylinders.*

Lateral tilt switch (A) allows operator to tilt feeder house left or right.

**System Requirements:**
- Road transport disconnect switch must be in field position.

Press right side of lateral tilt switch to tilt feeder house to the right or press left side of lateral tilt switch to tilt feeder house to the left.




H94985 —UN—01NOV10

**A—Lateral Tilt Switch**

OUO6075,000045E -19-13DEC10-1/1

## Platform Reel Lift/Reel Fore and Aft Switch

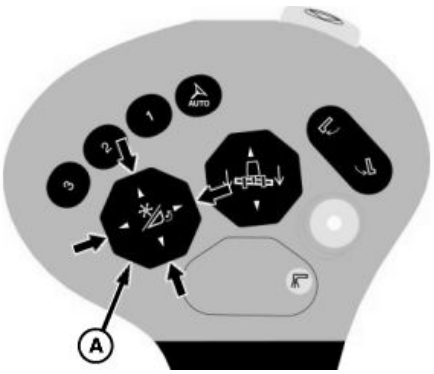
*NOTE: Switch is also used to control corn head backshaft speed and adjustable deck plate spacing (if equipped). Refer to Corn Head Backshaft Speed and Adjustable Deck Plate Spacing Switch in this section for further information.*

Reel lift/reel fore and aft switch (A) allows operator to control the position of the reel.

**System Requirements:**
- Road transport disconnect switch must be in field position.

Push and hold top of switch to raise reel or press and hold bottom of switch to lower reel.

Push and hold left side of switch to move reel forward or press and hold right side of switch to move reel rearward.




H94986 —UN—01NOV10

**A—Reel Lift/Reel Fore and Aft Switch**

OUO6075,000045F -19-13DEC10-1/1

## Corn Head Backshaft Speed/Adjustable Deck Plate Spacing Switch

*NOTE: Switch is also used to control platform reel lift/reel fore and aft. Refer to Platform Reel Lift/Reel Fore and Aft Switch in this section for further information.*

Backshaft speed and deck plate spacing switch (A) allows operator to control the backshaft speed of the corn head and adjust deck plate spacing (if equipped).

**System Requirements:**
- Road transport disconnect switch must be in field position.

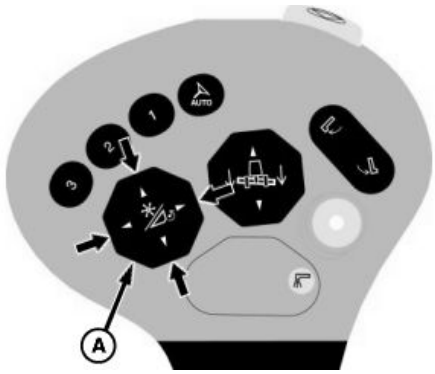
*NOTE: Multi-speed feeder house drive can be adjusted with key switch ON. When machine is started and is engaged, feeder house operates at preset speed.*

**CommandTouch Multi-Speed Feeder House Drive (optional):** When a corn head or row-crop head is attached, backshaft speed and deck plate spacing switch is used to control the backshaft speed and adjustable deck plate spacing.

Press top or bottom of switch once to activate display. Press top of switch to increase gear selection or press bottom of switch to reduce gear selection.

Current gear displays in black and desired gear flashes in blue on display until desired gear is reached.

Speeds shown are at high idle and with no load:




H94986 —UN—01NOV10

**A—Backshaft Speed and Deck Plate Spacing Switch**

- 1st Gear: 510—530 rpm
- 2nd Gear: 560—580 rpm
- 3rd Gear: 620—640 rpm
- 4th Gear: 700—720 rpm
- 5th Gear: 770—790 rpm

**Deck Plate Spacing (if equipped):** Press left or right side of switch once to activate display. Press left side of switch again to increase spacing and press right side of switch to decrease spacing.

OUO6075,0000620 -19-13DEC10-1/1

## Header Activation Buttons

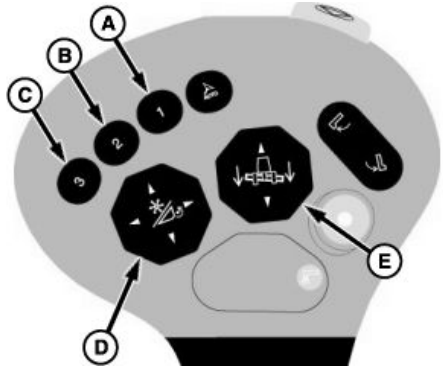
When header activation buttons (A), (B) or (C) are pressed the following functions are performed:

- Header Height Resume
- Header Height Sensing
- Lateral Tilt Control
- Reel Position Resume
- Deck Plate Position Resume
- Active Header Float

The electronic control system moves header back to preselected position chosen by operator.

*NOTE: Header positions obtained by pressing activation buttons may be overcome by pressing reel raise/lower or reel fore and aft switch (D) or header raise/lower and lateral tilt switch (E). Once activation buttons are manually overcome, press desired activation button to reactivate.*

**System Requirements:**
- Properly equipped header is connected.
- Engine is running.
- Road transport disconnect switch must be in field position.




H94987 —UN—23NOV09

**A—Activation Button 1**
**B—Activation Button 2**
**C—Activation Button 3**
**D—Reel Lift/Reel Fore and Aft Switch**
**E—Header Raise/Lower and Manual Lateral Tilt Switch**

- Header Height Resume, Header Height Sensing or Active Header Float mode are enabled.
- Header is engaged.

Pressing header activation buttons activates system. Header control system takes control and moves header to operator selected position.

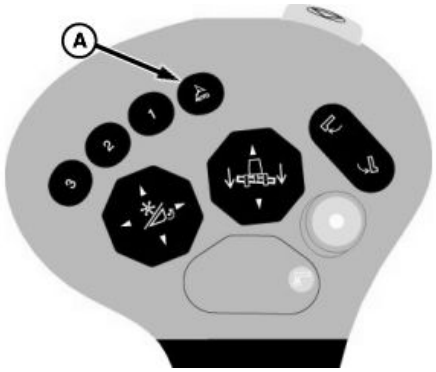
OUO6075,0000461 -19-13DEC10-1/1

## AutoTrac™ Resume Button (If Equipped)

AutoTrac™ resume button (A) activates or deactivates AutoTrac™ system.

AutoTrac™ resume button also activates or deactivates RowSense™ system. Refer to AutoTrac™ Operator's Manual for further information.

**System Requirements:**
- Properly equipped header is connected.
- Engine is running.
- Road transport disconnect switch must be in field position.
- Header is engaged.




H94988 —UN—23NOV09

**A—AutoTrac™ Resume Button**

*AutoTrac is a trademark of Deere & Company*
*RowSense is a trademark of Deere & Company*

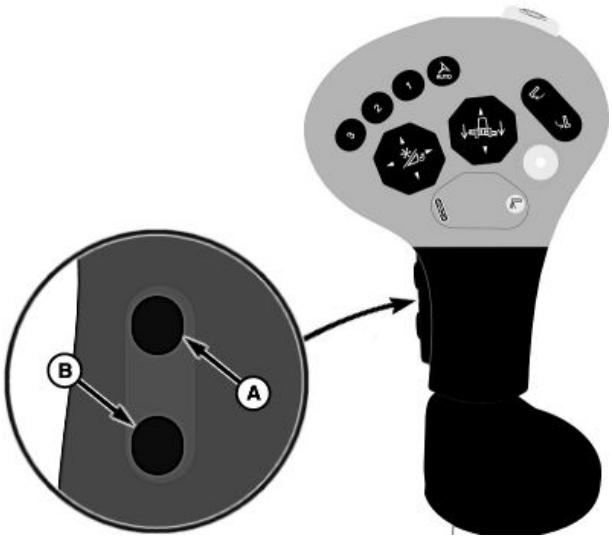
OUO6075,0001311 -19-13NOV12-1/1

## Machine Sync Buttons (If Equipped)

Machine Sync buttons allow the operator to use the nudge feature in Machine Sync without using the icons on the GreenStar™ 3 2630 display. Refer to Machine Sync Operator's Manual for further information.

Press increase button (A) to move the tractor forward or press decrease button (B) to move tractor rearward.

**System Requirements:**
- GreenStar™ 3 2630 Display is connected.
- Engine is running.
- Road transport disconnect switch must be in field position.




H106156 —UN—13NOV12

**A—Increase Button** **B—Decrease Button**

*GreenStar is a trademark of Deere & Company*

OUO6075,0001312 -19-16NOV12-1/1

## CommandTouch™ Cab Cornerpost

**(1)—Left Turn Signal Indicator:** shows operator that left turn signal is activated.

**(2)—Stop Engine Warning Indicator (Red):** illuminates and requires machine be stopped at once and problem corrected. Diagnostic trouble code is shown on armrest display until problem is resolved.

**(3)—Service Warning Indicator (Yellow):** illuminates and flashes when a problem exists with machine. Requires machine be stopped at the earliest convenience. Diagnostic trouble code is shown on armrest display.

**(4)—Information Warning Indicator (Gray):** illuminates and flashes when diagnostic trouble code is active. Alerts operator to be aware of a condition. When warning is acknowledged, screen message disappears and warning indicator turns OFF.

**(5)—Right Turn Signal Indicator:** shows operator that right turn signal is activated.

**(6)—Trailer Lights Indicator:** illuminates when trailer harness is hooked up and turn signal is applied.

**(7)—High Beam Indicator:** shows operator that high beam lights are currently selected.

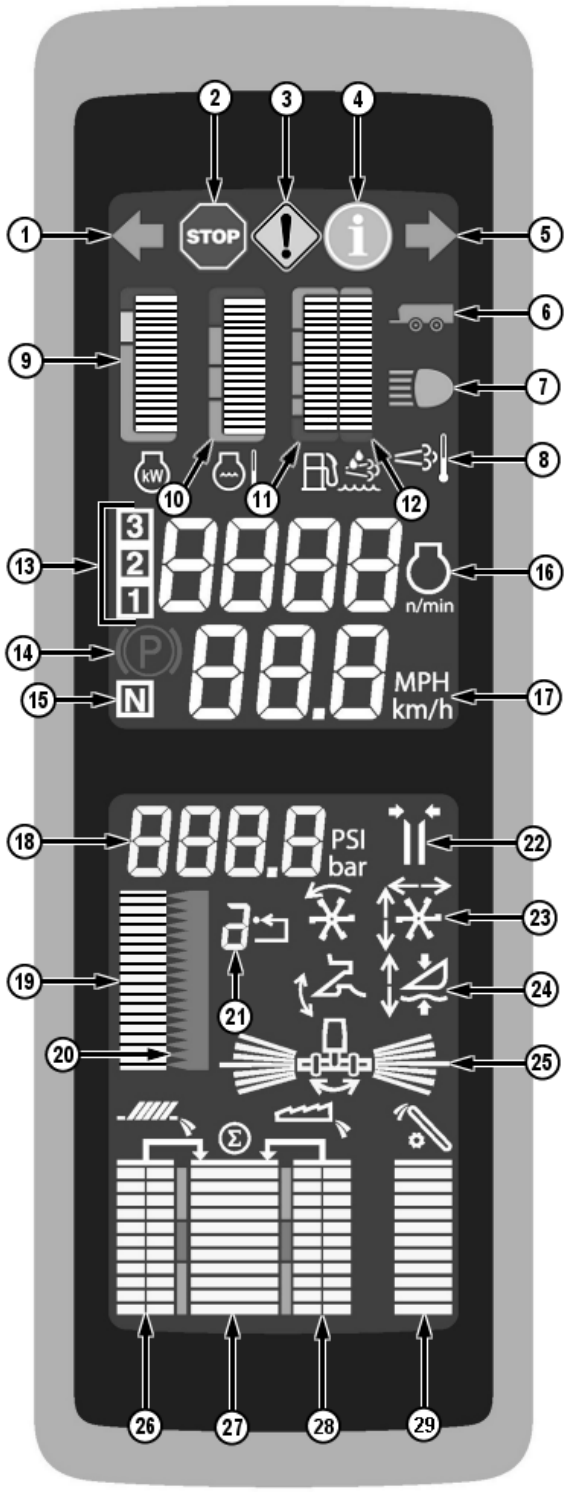
**IMPORTANT: Final Tier 4/Stage IV: Damage to exhaust cleaning components may occur if engine is turned OFF while performing exhaust filter cleaning or shortly after cleaning is complete. Alarm sounds and a warning message appears on display. Start machine and follow messages on display to allow components to cool.**

**(8)—Exhaust Filter Cleaning Indicator (Interim Tier 4/Stage III B and Final Tier 4/Stage IV):** illuminates when exhaust filter system is actively performing exhaust filter cleaning.

**(9)—Engine Power Meter Indicator:** shows operator percentage of power that engine is currently using at any given time.

**IMPORTANT: If indicator moves into red region, engine power is maximized and machine could potentially stall. Reduce load on machine until indicator moves back into green and yellow regions.**

- Green Region (35 to 100%)
- Yellow Region (101 to 107%)
- Red Region (108 to 114%)




Continued on next page

OUO6075,00015AA -19-02AUG13-1/3

**(10)—Engine Temperature Indicator:** seven to nine bars are displayed for normal operating temperature.

If alarm sounds and engine temperature message appears, stop engine and check problem immediately.

**(11)—Fuel Gauge Indicator:** shows how much fuel is left in the tank. When level reaches 10% (approximately one hour of operation) of remaining fuel, fuel indicator flashes, alarm sounds and low fuel message appears.

Indicator shows zero bars when fuel tank is empty.

**(12)—Diesel Exhaust Fluid (DEF) Level Indicator (Final Tier 4/Stage IV):** shows how much fluid is left in the tank.

- When level reaches 10%, level indicator flashes, alarm sounds and low fluid message appears.
- When level reaches 0%, level indicator illuminates and stops flashing, alarm sounds and empty fluid message and engine power limited message appears.
- When loss of prime is reached, level indicator illuminates and stops flashing, alarm sounds and empty fluid message, engine power limited message and speed limited message appears. Stop engine warning indicator (Red) illuminates, engine is derated and machine functions are restricted.

**(13)—Transmission Gear or Range Indicator:**

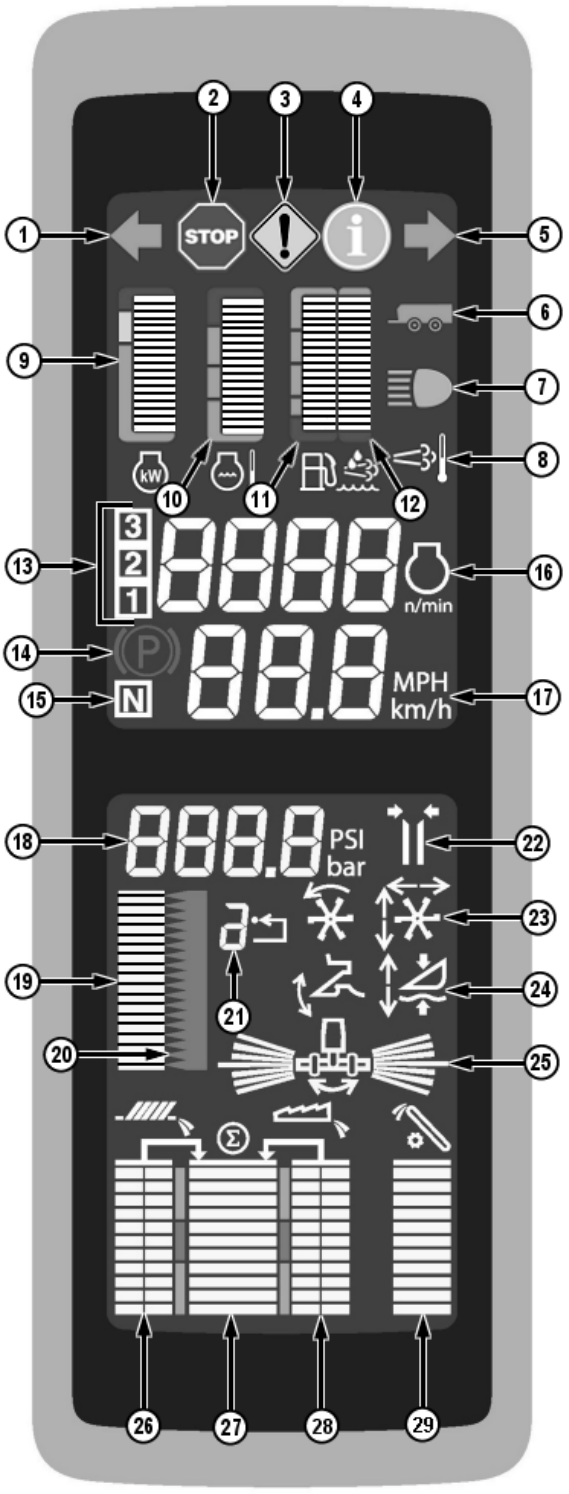
- **3-Speed Non-ProDrive™ Machines:** shows which gear is currently selected. 1, 2, 3 indicators illuminate depending on gear selection.
- **2-Speed ProDrive™ Machines:** shows which range is currently selected. 1 and 2 indicators illuminate depending on range selection.

**(14)—Park Brake Indicator:** illuminates when park brake is selected.

**(15)—Neutral Indicator:** shows that machine is currently in neutral position.

**(16)—Engine Speed Indicator:** shows engine rpm speed.

**(17)—Ground Speed Indicator:** shows machine ground speed (km/h or mph).




Continued on next page

OUO6075,00015AA -19-02AUG13-2/3

**(18)—Header Height Numeric Display:** shows current header height.

**(19)—Header Height Position Display:** shows current header height position.

**(20)—Header Height Setpoint Display:** shows operator desired setpoint.

**(21)—Header Activation Number:** shows currently selected activation button.

**(22)—Deck Plate Position Resume:** shows system is currently active.

**(23)—Dial-A-Speed/Reel Resume:**

- **Dial-A-Speed (Left Icon):** shows system is currently active.
- **Reel Resume (Right Icon):** shows system is currently active.

**(24)—Header Height Resume/Header Height Sensing/Active Header Float:**

- **Header Height Resume (Left Icon):** shows system is currently active.
- **Header Height Sensing (Right Icon):** shows system is currently active.
- **Active Header Float (Right Icon):** shows system is currently active.

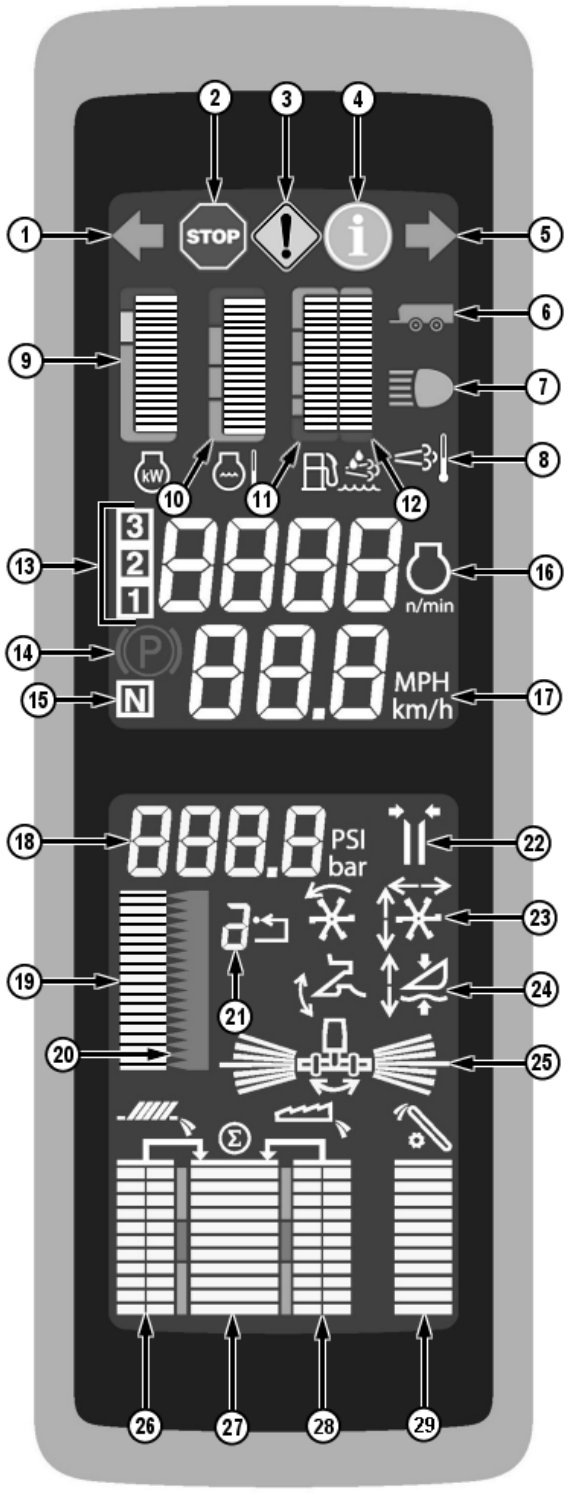
**(25)—Lateral Tilt Display:** shows position of feeder house frame.

**(26)—Shoe Loss Indicator:** shows grain loss from shoe.

**(27)—Total Loss Indicator:** shows averaged grain loss from shoe and separator area.

**(28)—Separator Loss Indicator:** shows grain loss from separator area.

**(29)—Tailings Volume Indicator:** shows volume of tailings return.




H105895 —UN—01OCT12

OUO6075,00015AA -19-02AUG13-3/3

## Active Header Control Display

**Dial-A-Speed (A):** allows operator automatic control of operating speed for reel or belt pickup headers. Operating speed is a ratio of machine ground speed to reel or belt speed.

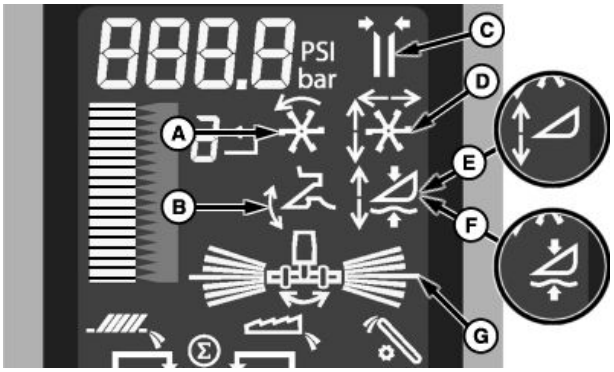
**Header Height Resume (B):** allows operator to select position of header relative to machine chassis and return to that position automatically.

**Deck Plate Position Resume (C):** allows operator to select position of deck plates (if equipped) and return to that position automatically.

**Reel Position Resume (D):** allows operator to select reel height and reel fore/aft position and return to that position automatically.

**Header Height Sensing (E):** allows operator to select position of header relative to ground and return to that position automatically.

**Header Height Sensing (HydraFlex) (E):** allows operator to adjust cutterbar ground pressure, or cutterbar weight, and return to that setting automatically. HydraFlex works in conjunction with Header Height Sensing to maintain a header position relative to the ground, follow ground contour, and return to that position automatically.




H98580 —UN—01DEC10

**Active Header Float (F):** allows a rigid header to be operated in contact with ground and maintain a set contact pressure. Operator selects how firmly header contacts ground and returns to that pressure automatically.

**Lateral Tilt (G):** allows operator to maintain header position relative to ground. Sensors at each end of header measure the distance to the ground. Header tilts to equalize distances to ground at each end of header. If equipped with left and right Header Height Sensors and Lateral Tilt is active, systems work together to maintain the closest position of the cutterbar relative to the ground.

OUO6075,00004C4 -19-01DEC10-1/1

## Description of Automatic Header Height Control System

Automatic Header Height Control system compensates for uneven ground and controls horizontal and vertical positions of header. The system continuously compares the preset position and the actual position, thus keeping the header in the desired working position.

**System Requirements:**

- Road transport disconnect switch in field position.
- Engine is running.
- Header is engaged.
- Desired header control mode activated.

**Lateral Tilt Adjustment (A)**

- Parallel adjustments of the header in relation to the ground are carried out by sensors on each end of header. This ensures that the distance between the header and the ground is equal on both the left-hand and right-hand sides.

**Platform Height Adjustment (B and C)**

- Header Height Resume — platform can be set to any position within the feeder house range.
- Header Height Sensing — height of the platform is maintained with height sensors attached to the platform.




H98581 —UN—14OCT10

**A—Lateral Tilt**
**B—Header Height Sensing/Active Header Float**
**C—Header Height Resume**

This ensures that header height is always constant over rough terrain.

- Active Header Float — machine maintains a constant header pressure with ground contact.

OUO6075,00004C5 -19-01DEC10-1/1

## Activation Button Mode Combinations

A few common modes are shown below, but many combinations exist.

| Control Modes Enabled | Activation Button 1 | Activation Button 2 | Activation Button 3 |
|---|---|---|---|
| Height Resume | Height Resume | | |
| Height Resume, Height Sensing | Height Resume | Height Sensing | |
| Height Resume, HydraFlex Height Sensing | Height Resume | HydraFlex Height Sensing | |
| Height Resume, Height Sensing, HydraFlex Height Sensing [a] | Height Resume | Height Sensing | HydraFlex Height Sensing |
| Height Resume, Height Sensing, HydraFlex Height Sensing [b] | Height Resume | Height Sensing | HydraFlex Height Sensing |
| Height Resume, Height Sensing, Active Header Float | Height Resume | Height Sensing | Active Header Float |
| Height Resume, HydraFlex Height Sensing, Active Header Float | Height Resume | HydraFlex Height Sensing | Active Header Float |
| Height Resume, Active Header Float | Height Resume | | Active Header Float |
| Height Sensing | Height Sensing | | |
| HydraFlex Height Sensing | HydraFlex Height Sensing | | |
| Height Sensing, HydraFlex Height Sensing [a] | Height Sensing | | HydraFlex Height Sensing |
| Height Sensing, HydraFlex Height Sensing [b] | Height Sensing | | HydraFlex Height Sensing |
| Height Sensing, HydraFlex Height Sensing, Active Header Float [a] | Height Sensing, HydraFlex Height Sensing | | Active Header Float |
| Height Sensing, Active Header Float | Height Sensing | | Active Header Float |
| HydraFlex Height Sensing, Active Header Float | HydraFlex Height Sensing | | Active Header Float |
| Active Header Float | Active Header Float | | |

*[a] See your John Deere dealer to enable Height Sensing and HydraFlex Height Sensing, requires 600F or 600FD with auxiliary height sensors or 600D with gauge wheels.*

*[b] Default mode with 600D platform if gauge wheels are unpinned during calibration, requires 600D with gauge wheels.*

OUO6075,0000AC3 -19-23JUN11-1/1

## Header Height Resume

*NOTE: Header setup icon changes based on type of header connected to machine.*

Allows operator to select position of feeder house relative to machine and return to that position automatically.

System must be calibrated with each header that is used (see Calibration Procedures section).

Activation buttons 1, 2 or 3 located on the multi-function lever are used to select one of the three different programmable header heights.

*NOTE: If multiple modes are enabled, refer to Activation Button Mode Combinations in this section for further information.*

**Enable/Disable System:**

Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

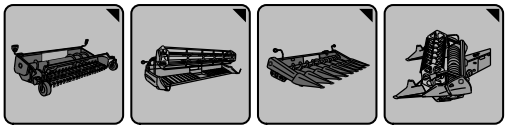
Touch or press confirm switch when Header Height Resume icon (B) is highlighted.

*NOTE: Checkmark appears indicating system is enabled or disappears indicating system is disabled.*

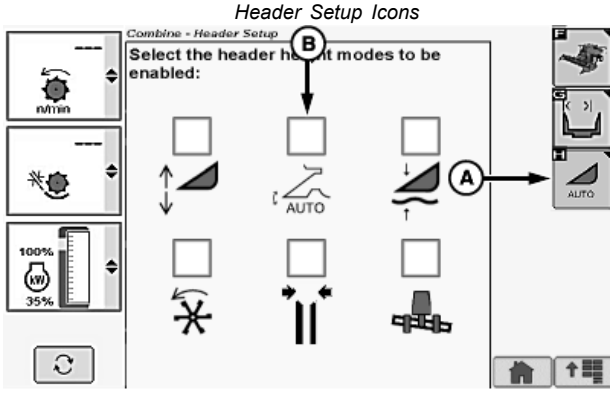
**A—Automatic Header Height Modes Icon**

**B—Header Height Resume Icon**

H96245 —UN—03MAY10

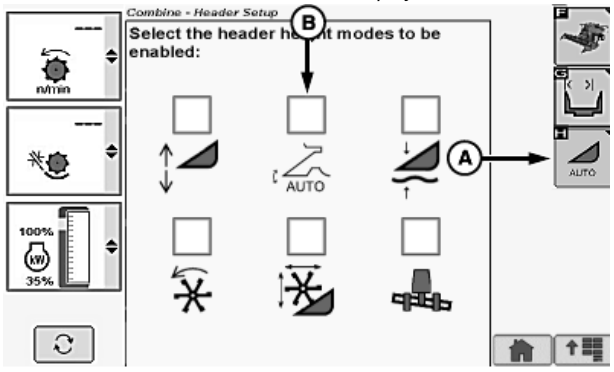


*Header Setup Icons*




H95934 —UN—05OCT10

*Corn Head Display*




H95933 —UN—05OCT10

*Draper/Platform/Belt Pickup Display*

**Continued on next page**

**Operation:**

System is active when:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Header Height Resume system enabled.
- Header is engaged.

Activate Header Height Resume by pressing activation buttons 1, 2 or 3 on multi-function lever.

Activation button number (B) on display indicates which activation button was selected.

Header Height Resume icon (A) appears on display indicating system is active.

To change height setpoint (C) of activation buttons, press desired activation button and adjust height using active header height control dial (D).

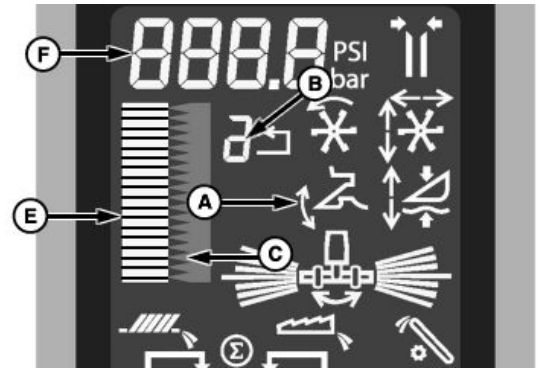
Turn active header height control dial towards plus (+) symbol to raise header and setpoint or towards minus (-) symbol to lower header and setpoint.

Bar graph (E) and numeric display (F) show the header's relative position to the ground based on the Header Height Resume sensor linked to the feeder house.

Manually adjusting header height using header raise/lower switch (G) deactivates system.

Press activation buttons 1, 2 or 3 to reactivate system. Header automatically moves to preselected height.

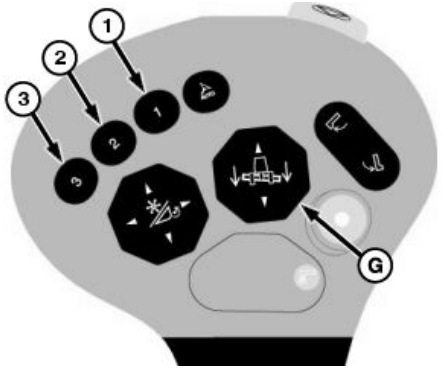
**A—Header Height Resume Icon**
**B—Activation Button Number**
**C—Height Setpoint**
**D—Header Height Control Dial**
**E—Bar Graph**
**F—Numeric Display**
**G—Header Raise/Lower Switch**




H98582 —UN—14OCT10




H95079 —UN—27JAN10




H95077 —UN—18DEC09

OUO6075,00004C6 -19-01DEC10-2/2

## Header Height Sensing

*NOTE: Header setup icon changes based on type of header connected to machine.*

Allows the operator to select the position of the header relative to the ground and return to that position automatically.

System must be calibrated with each header that is used (see Calibration Procedures section).

Activation buttons 1, 2 or 3 located on the multi-function lever are used to select one of the three different programmable header heights.

*NOTE: If multiple modes are enabled, refer to Activation Button Mode Combinations in this section for further information.*

**Enable/Disable System:**

Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

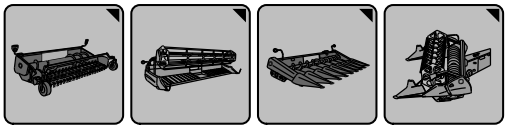
Touch or press confirm switch when Header Height Sensing icon (B) is highlighted.

*NOTE: Checkmark appears indicating system is enabled or disappears indicating system is disabled.*

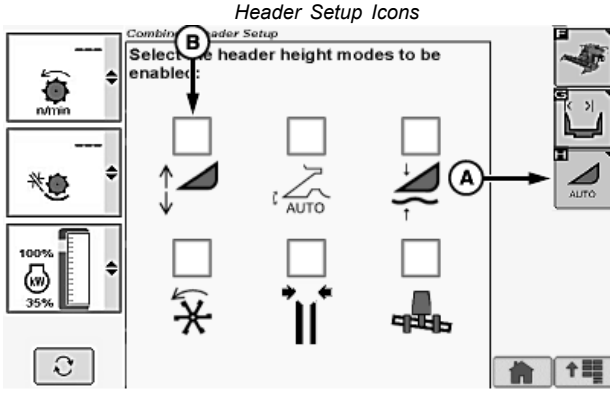
**A—Automatic Header Height Modes Icon**

**B—Header Height Sensing Icon**

H96245 —UN—03MAY10

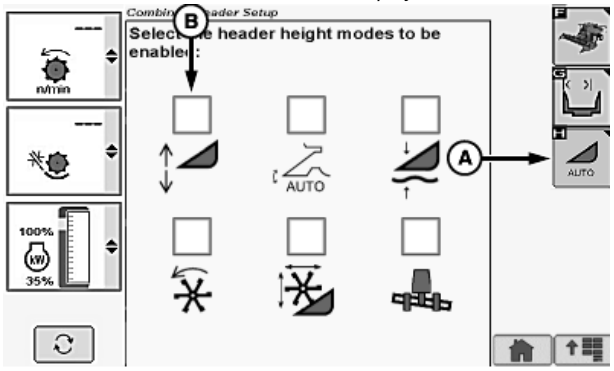


*Header Setup Icons*




H95936 —UN—05OCT10

*Corn Head Display*




H95935 —UN—05OCT10

*Draper/Platform/Belt Pickup Display*

**Continued on next page**

OUO6075,00004C7 -19-01DEC10-1/2

**Operation:**

System is active when:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Header Height Sensing system enabled.
- Header is engaged.

Activate Header Height Sensing by pressing activation buttons 1, 2 or 3 on multi-function lever.

Activation button number (B) on display indicates which activation button was selected.

Header Height Sensing icon (A) appears on display indicating system is active.

To change height setpoint (C) of activation buttons, press desired activation button and adjust height using active header height control dial (D).

Turn active header height control dial towards plus (+) symbol to raise header and setpoint or towards minus (-) symbol to lower header and setpoint.

Bar graph (E) and numeric display (F) show the header's relative position based on the Header Height sensor linked to the header.

*NOTE: Header lower switch can be set to immediately disable system until activation button is pressed, see your John Deere dealer for further information.*

Manually adjusting header height with header lower switch (G) temporarily overrides system until released. Once switch is released, system returns to automatic mode.

*NOTE: Header lower switch can be set to not reactivate system when header lower switch is pressed, see your John Deere dealer for further information.*

Using header raise switch (G) temporarily deactivates system until header lower switch is pressed. Once switch is pressed, system reactivates.

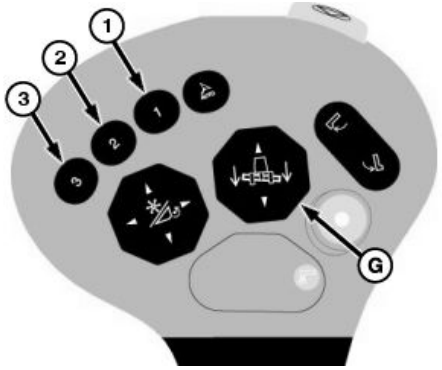
Press activation buttons 1, 2 or 3 to reactivate system. Header automatically moves to preselected height.




H99253 —UN—01DEC10




H95079 —UN—27JAN10




H95077 —UN—18DEC09

**A—Header Height Sensing Icon**
**B—Activation Button Number**
**C—Height Setpoint**
**D—Header Height Control Dial**
**E—Bar Graph**
**F—Numeric Display**
**G—Header Raise/Lower Switch**

OUO6075,00004C7 -19-01DEC10-2/2

## Header Height Sensing (HydraFlex Platforms)

*NOTE: Header setup icon changes based on type of header connected to machine.*

Allows operator to adjust cutterbar ground pressure, or cutterbar weight, and return to that setting automatically. HydraFlex works in conjunction with Header Height Sensing to maintain a header position relative to the ground, follow ground contour, and return to that position automatically. HydraFlex heads use a sensor located on the right side of the header to measure the hydraulic pressure used to support the cutterbar.

*NOTE: HydraFlex does not control cutting height relative to ground. This is automatically controlled by the height sensing system and is not adjustable through the active header control dial when HydraFlex is present.*

System must be calibrated with each header that is used (see Calibration Procedures section).

Activation buttons 1, 2 or 3 located on the multi-function lever are used to select one of the three different programmable HydraFlex pressures.

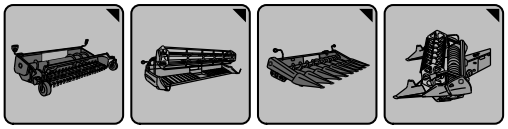
*NOTE: If multiple modes are enabled, refer to Activation Button Mode Combinations in this section for further information.*

**Enable/Disable System:**

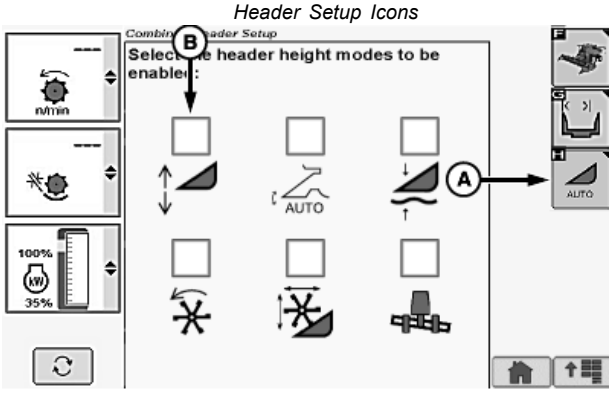
Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

H96245 —UN—03MAY10



*Header Setup Icons*




H95935 —UN—05OCT10

*Draper/Platform/Belt Pickup Display*

**A—Automatic Header Height Modes Icon**

**B—Header Height Sensing Icon**

Touch or press confirm switch when Header Height Sensing icon (B) is highlighted.

*NOTE: Checkmark appears indicating system is enabled or disappears indicating system is disabled.*

**Continued on next page**

**Operation:**

System is active when:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Header Height Sensing system enabled.
- Header is engaged.

Activate Header Height Sensing (HydraFlex) by pressing activation buttons 1, 2 or 3 on multi-function lever.

Activation button number (B) on display indicates which activation button was selected.

Header Height Sensing icon (A) appears on display indicating system is active.

To change pressure setpoint (C) of activation buttons, press desired activation button and adjust pressure using active header height control dial (D).

Bar graph (E) and numeric display (F) show the pressure setpoint based on the pressure in the cutterbar on the platform.

*NOTE: HydraFlex cannot operate independent of Header Height Sensing in an automatic mode. These systems work together to control cutterbar weight and header movement.*

Turn active header height control dial towards plus (+) symbol to increase HydraFlex pressure and setpoint or towards minus (-) symbol to lower HydraFlex pressure and setpoint.

*NOTE: Header lower switch can be set to immediately disable system until activation button is pressed, see your John Deere dealer for further information.*

Manually adjusting header height with header lower switch (G) temporarily overrides system until released. Once switch is released, system returns to automatic mode.

*NOTE: Header lower switch can be set to not reactivate system when header lower switch is pressed, see your John Deere dealer for further information.*

Using header raise switch (G) temporarily deactivates system until header lower switch is pressed. Once switch is pressed, system reactivates.

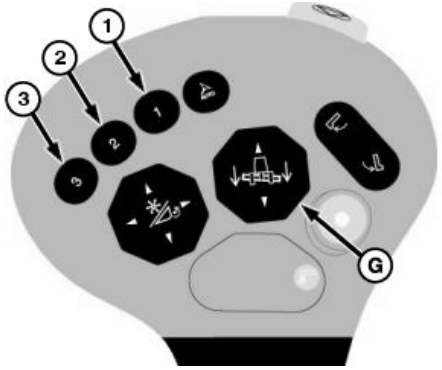
Press activation buttons 1, 2 or 3 to reactivate system or manually lowering header height with header lower switch (G) reactivates system. Header automatically moves to preselected pressure.




H99253 —UN—01DEC10




H95079 —UN—27JAN10




H95077 —UN—18DEC09

**A—Header Height Sensing Icon**
**B—Activation Button Number**
**C—Pressure Setpoint**
**D—Header Height Control Dial**
**E—Bar Graph**
**F—Numeric Display**
**G—Header Raise/Lower Switch**

OUO6075,00004C8 -19-01DEC10-2/2

## Dial-A-Speed System

*NOTE: Header setup icon changes based on type of header connected to machine.*

Allows operator automatic control of operating speed for reel or belt pickup headers. Operating speed is a ratio of machine ground speed to reel or belt speed.

System operates with any header equipped with the appropriate reel or belt pickup speed sensors.

**Enable/Disable System:**

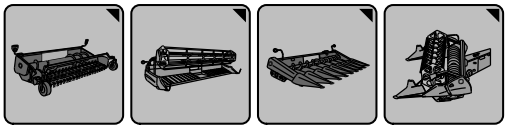
Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

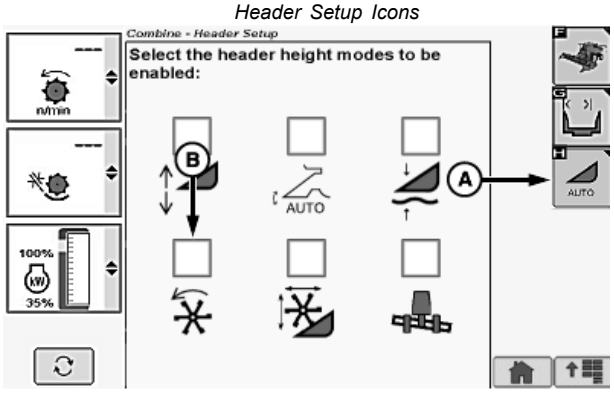
Touch or press confirm switch when Dial-A-Speed icon (B) is highlighted.

*NOTE: Checkmark appears indicating system is enabled or disappears indicating system is disabled.*

H96245 —UN—03MAY10



*Header Setup Icons*




H95938 —UN—05OCT10

*Draper/Platform/Belt Pickup Display*

**A—Automatic Header Height Modes Icon** **B—Dial-A-Speed Icon**

OUO6075,00004C9 -19-27JUN12-1/3

**Operation:**

System is active when:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Header and separator are engaged.
- Dial-A-Speed system enabled.
- Ground speed greater than 0.25 km/h (0.16 mph).

*NOTE: Dial-A-Speed system will not operate if ground speed is less than 0.25 km/h (0.16 mph).*

Dial-A-Speed icon (A) appears on display indicating system is active.

Ratio of ground speed to reel or belt pickup speed is adjusted using Dial-A-Speed dial (B). Turn dial towards plus (+) symbol to increase reel or belt pickup speed or towards minus (-) symbol to decrease reel or belt pickup speed.

Display shows current speed ratio setting. The larger the ratio number selected, the faster the reel or belt pickup operates with respect to machine ground speed.




H98584 —UN—14OCT10




H95084 —UN—27JAN10

**A—Dial-A-Speed Icon** **B—Dial-A-Speed Dial**

Continued on next page

OUO6075,00004C9 -19-27JUN12-2/3

**Change Minimum Reel or Belt Pickup Speed**

Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when header width setup icon (A) is highlighted.

Touch or press confirm switch when minimum reel speed or belt pickup speed box (B) is highlighted.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired header value is shown. Press confirm switch to save value.

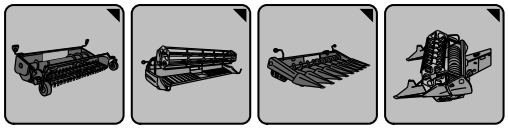
**Touchscreen Only:** Enter desired header value on numeric display. Touch enter/accept icon to save value.

*NOTE: Minimum reel or belt pickup speed has a low range of 1 rpm.*

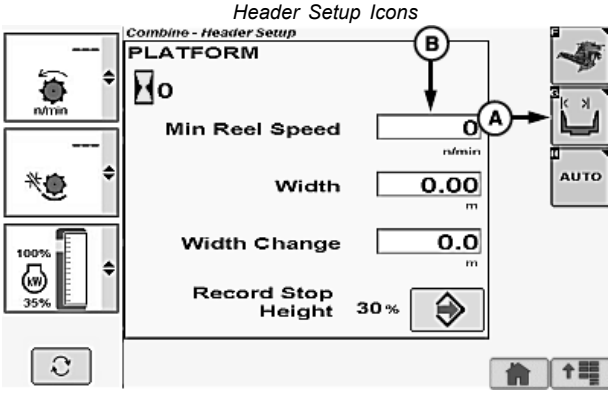
**A—Header Width Setup Icon**

**B—Minimum Reel or Belt Pickup Speed Box**

H96245 —UN—03MAY10



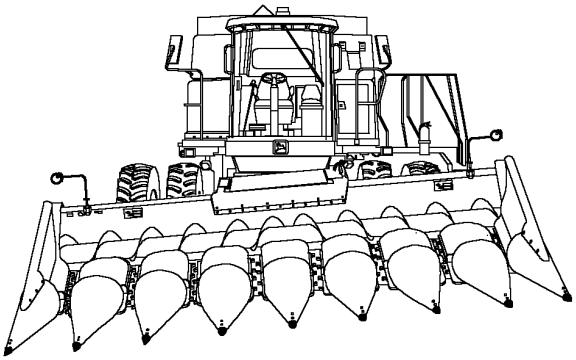
*Header Setup Icons*




H95085 —UN—05OCT10

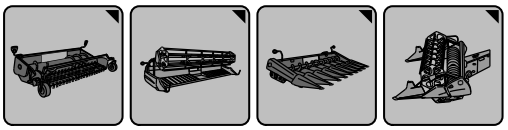
OUO6075,00004C9 -19-27JUN12-3/3

## Lateral Tilt System (Optional)



H52277 —UN—04MAR99

H96245 —UN—03MAY10



*Header Setup Icons*

*NOTE: Header setup icon changes based on type of header connected to machine.*

Allows operator to maintain header position relative to ground. Sensors are used to determine the height at each end of the header. The lateral tilt system tilts the header to equalize the distances to the ground at each end of the header. The lateral tilt system uses a special feeder house that allows the header to tilt left and right.

If equipped with left and right Header Height Sensors and Lateral Tilt is active, systems work together to maintain the closest position of the cutterbar relative to the ground.

System must be calibrated with each header that is used (see Calibration Procedures section).

Activation buttons 1, 2 or 3 located on the multi-function lever are used to activate the system.

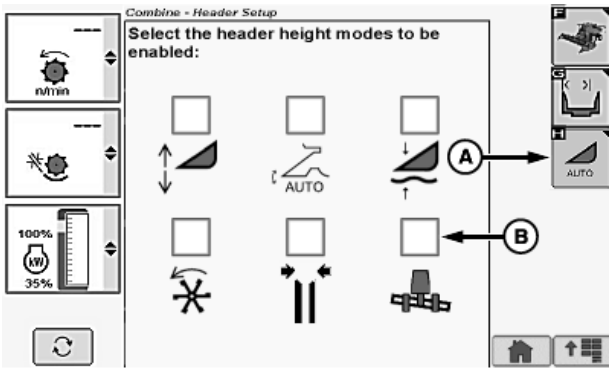
**Enable/Disable System:**

Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

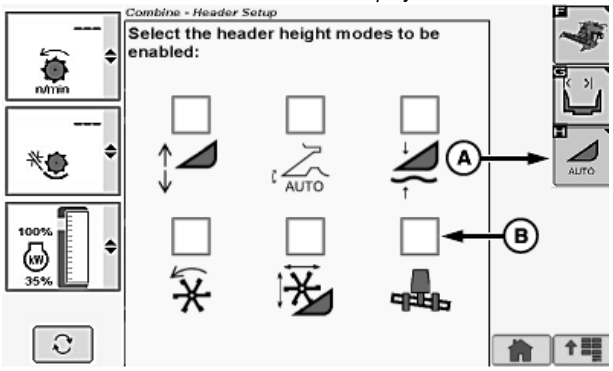
Touch or press confirm switch when lateral tilt icon (B) is highlighted.

*NOTE: Checkmark appears indicating system is enabled or disappears indicating system is disabled.*




H95939 —UN—05OCT10

*Corn Head Display*




H95940 —UN—05OCT10

*Draper/Platform/Belt Pickup Display*

**A—Automatic Header Height Modes Icon** **B—Lateral Tilt Icon**

**Continued on next page**

OUO6075,00004CA -19-01DEC10-1/2

**Operation:**

System is active when:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Header was calibrated.
- Header is engaged.
- Lateral tilt system enabled.

Activate lateral tilt by pressing activation buttons 1, 2 or 3 on multi-function lever.

Activation button number on display indicates which activation button was selected.

Lateral tilt icon (A) appears on display indicating system is active.

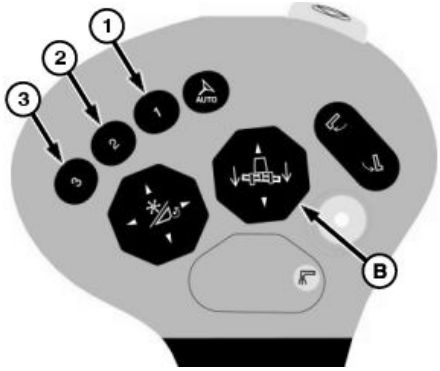
*NOTE: Pressing lateral tilt switch (B) overrides system. When switch is released within five seconds, system returns to automatic mode.*

Press right side of switch to tilt header to the right or press left side of switch to tilt the header to the left.

Press activation buttons 1, 2 or 3 to reactivate system. Header automatically returns to automatic mode.




H98585 —UN—14OCT10




H95087 —UN—01NOV10

**A—Lateral Tilt Icon** **B—Lateral Tilt Switch**

OUO6075,00004CA -19-01DEC10-2/2

## Active Header Float

*NOTE: System only works with rigid platforms, flex platforms, and draper platforms.*

*Header setup icon changes based on type of header connected to machine.*

Allows a rigid header to be operated in contact with the ground and maintain a set contact pressure. Operator selects how firmly the header contacts ground and returns to that pressure automatically. A sensor measures the oil pressure within the feeder house lift cylinders and maintains that pressure as the header moves across the ground. Accuracy is greatly affected by accumulator precharge settings.

*NOTE: While moving through the field, a sensor measures pressure in the lift cylinders. The system actuates the header raise/lower solenoid valve based on oil pressure within the lift cylinders. This maintains a constant ground contact pressure for the header as the terrain changes.*

System must be calibrated with each header that is used (see Calibration Procedures section).

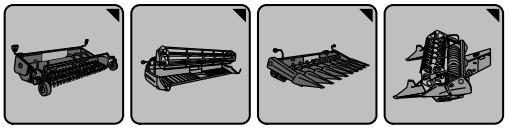
Activation buttons 1, 2 or 3 located on the multi-function lever are used to select one of the three different programmable header pressures.

**Enable/Disable System:**

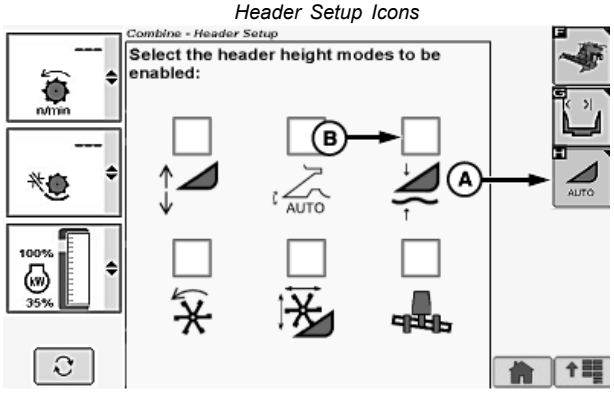
Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

H96245 —UN—03MAY10



*Header Setup Icons*




H95941 —UN—23JUN11

*Draper/Platform/Belt Pickup Display*

**A—Automatic Header Height Modes Icon**

**B—Active Header Float Icon**

Touch or press confirm switch when Active Header Float icon (B) is highlighted.

*NOTE: Checkmark appears indicating system is enabled or disappears indicating system is disabled.*

**Continued on next page**

**Operation:**

System is active when:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Active Header Float mode enabled.
- Header is engaged.

Activate Header Float by pressing activation buttons 1, 2 or 3 on multi-function lever.

Activation button number (B) on display indicates which activation button was selected.

Active Header Float icon (A) appears on display indicating system is active.

To change pressure setpoint (C) of activation buttons, press desired activation button and adjust pressure using active header height control dial (D).

Turn dial towards plus (+) symbol to increase cylinder lift pressure setpoint (raise header) or towards minus (-) symbol to decrease cylinder lift pressure setpoint (lower header).

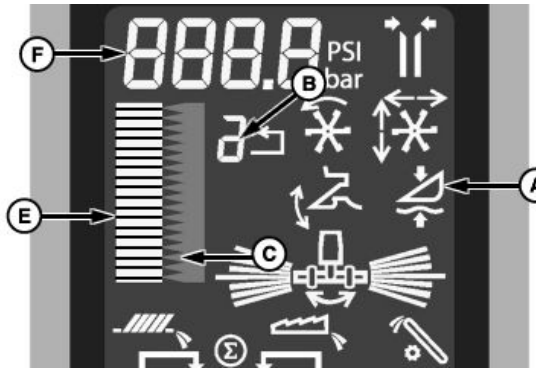
Bar graph (E) and numeric display (F) show the actual header float pressure. Units: bar for metric system and psi for English system.

Manually raising Active Header Float using header raise/lower switch (G) deactivates system.

*NOTE: Pressing header raise/lower switch disables system within five seconds.*

Press activation buttons 1, 2 or 3 to reactivate system. Header automatically moves to preselected pressure.

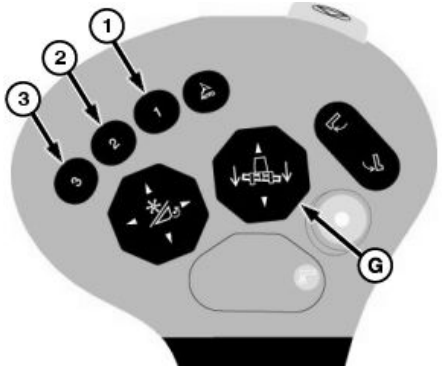
**A—Active Header Float Icon**
**B—Activation Button Number**
**C—Pressure Setpoint**
**D—Header Height Control Dial**
**E—Bar Graph**
**F—Numeric Display**
**G—Header Raise/Lower Switch**




H99254 —UN—01DEC10




H95079 —UN—27JAN10




H95077 —UN—18DEC09

OUO6075,00004CB -19-08DEC10-2/2

## Reel Position Resume

*NOTE: Header setup icon changes based on type of header connected to machine.*

Allows operator to select position of reel relative to cutterbar and return to that position automatically.

System must be calibrated with each header that is used (see Calibration Procedures section).

Activation buttons 1, 2 or 3 located on the multi-function lever are used to select one of the three different programmable reel positions/deck plate positions.

**Enable/Disable System:**

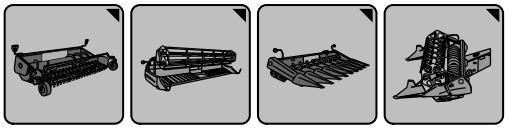
Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

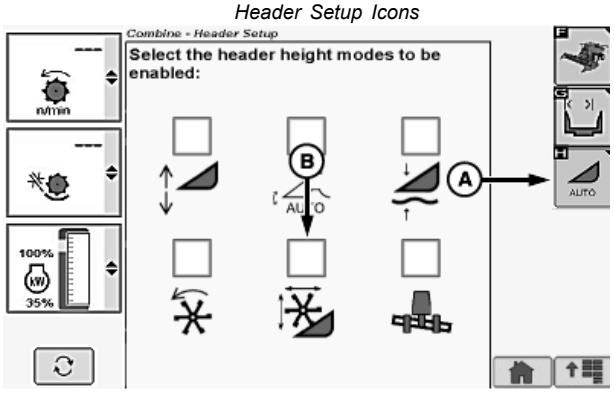
Touch or press confirm switch when Reel Position Resume icon (B) is highlighted.

*NOTE: Checkmark appears indicating system is enabled or disappears indicating system is disabled.*

H96245 —UN—03MAY10



*Header Setup Icons*




H95942 —UN—05OCT10

*Draper/Platform/Belt Pickup Display*

**A—Automatic Header Height Modes Icon**

**B—Reel Position Resume Icon**

**Continued on next page**

OUO6075,00004CC -19-01DEC10-1/2

**Operation:**

System is active when:

- Properly equipped header (with reel position sensors) is connected to machine and is calibrated.
- Engine is running.
- Road transport disconnect switch is in field position.

*NOTE: When harvesting conditions are such that more than one reel position is required (down crop position and standing crop position) the operator can store a reel position for each resume button and move from one reel position to another by selecting desired resume button.*

*Save Reel Position Resume setpoint by pressing and holding currently selected activation buttons 1, 2, or 3 on multi-function lever for two seconds. Icon (A) flashes indicating setpoint is saved.*

Activate Reel Position Resume by pressing activation buttons 1, 2 or 3 on multi-function lever.

Activation button number (C) on display indicates which activation button was selected.

Active Reel Position Resume icon (A) appears on display indicating system is active.

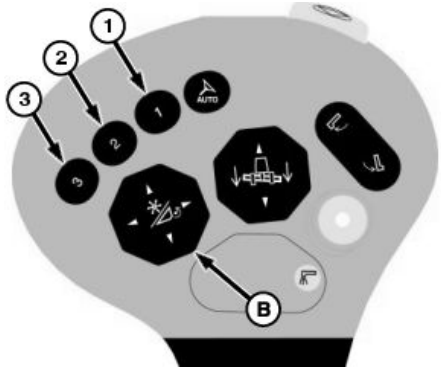
Use reel lift and reel fore/aft switch (B) to obtain desired fore-and-aft position and to obtain reel height position.

Manually moving reel lift and reel fore/aft switch (B) on multi-function lever deactivates reel position.

Press activation buttons 1, 2 or 3 to reactivate system. Reel automatically moves to preselected position.




H98586 —UN—14OCT10




H95091 —UN—01NOV10

**A—Reel Position Resume Icon**
**B—Reel Lift and Reel Fore/Aft Switch**
**C—Activation Button Number**

OUO6075,00004CC -19-01DEC10-2/2

## Deck Plate Position Resume

*NOTE: Header setup icon changes based on type of header connected to machine.*

Allows operator to select spacing of hydraulically adjustable deck plates and return to that position automatically.

System must be calibrated with each header that is used (see Calibration Procedures section).

Activation buttons 1, 2 or 3 located on the multi-function lever are used to select one of the three different programmable reel positions/deck plate positions.

**Enable/Disable System:**

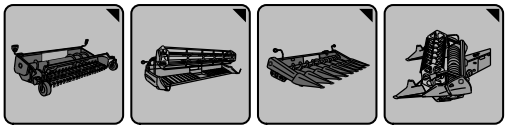
Touch or press confirm switch when header setup icon is highlighted.

Touch or press confirm switch when automatic header height modes icon (A) is highlighted.

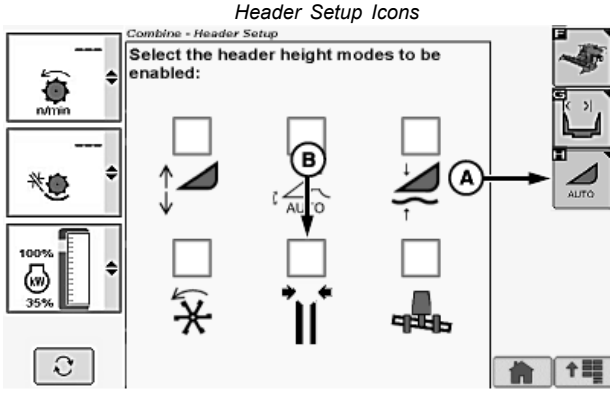
Touch or press confirm switch when Deck Plate Position Resume icon (B) is highlighted.

*NOTE: Checkmark appears indicating system is enabled or disappears indicating system is disabled.*

H96245 —UN—03MAY10



*Header Setup Icons*




H95943 —UN—05OCT10

*Corn Head Display*

**A—Automatic Header Height Modes Icon**

**B—Deck Plate Position Resume Icon**

**Continued on next page**

OUO6075,0000704 -19-01DEC10-1/2

**Operation:**

System is active when:

- Engine is running.
- Road transport disconnect switch is in field position.
- Properly equipped header (with deck plate sensors) is connected to machine and is calibrated.

*NOTE: Save Deck Plate Position Resume setpoint by pressing and holding currently selected activation buttons 1, 2, or 3 on multi-function lever for two seconds. Icon (A) flashes indicating setpoint is saved.*

Activate Deck Plate Position Resume by pressing activation buttons 1, 2 or 3 on multi-function lever.

Activation button number (C) on display indicates which activation button was selected.

Active Deck Plate Position Resume icon (A) appears on display indicating system is active.

Use reel lift and reel fore/aft switch (B) to obtain desired hydraulic deck plate spacing. Left side of switch increases spacing and right side of switch decreases spacing.

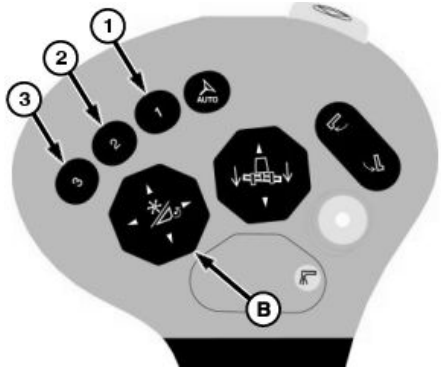
Display indicates current deck plate opening. Deck plates have a range of 0 (minimum position) to 9 (maximum position).

Manually moving reel lift and reel fore/aft switch (B) on multi-function lever deactivates deck plate spacing.

Press activation buttons 1, 2 or 3 to reactivate system. Deck plates automatically move to preselected position.




H98587 —UN—14OCT10




H95091 —UN—01NOV10

**A—Deck Plate Position Resume Icon**
**B—Reel Lift and Reel Fore/Aft Switch**
**C—Activation Button Number**

OUO6075,0000704 -19-01DEC10-2/2

## VisionTrak™ Display

**System Requirements:**

- Engine running.
- Road transport disconnect switch in field position.
- Header switch and separator switch engaged.

VisionTrak™ monitor checks grain loss by measuring a representative sample of losses over the cleaning shoe and through the separator. VisionTrak™ continuously monitors machine performance to enable operator to use maximum machine capacity. A change in loss rate is indicated by bar graphs.

Grain loss information is displayed by three vertical bar graphs.

**Shoe Loss Indicator (A):** shows grain loss from shoe.

- Averaged shoe loss is shown by two adjacent vertical bar graphs.

**Normal Range (B) (Green Range):** lines near center range indicate acceptable loss levels.

**Summation Symbol (C):** displays above bar graph.

**Total Loss Indicator (D):** shows an average of grain loss from shoe and separator area.

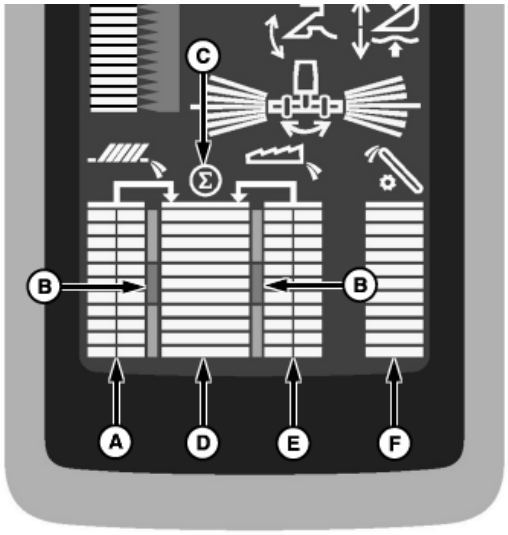
- Total loss is shown on vertical bar graph located in center of display.

**Separator Loss Indicator (E):** shows grain loss from separator area.

- Averaged separator loss is shown by two adjacent vertical bar graphs.

**Tailings Volume Indicator (F):** shows volume of tailings return.

- Tailings volume is displayed as a percentage of total full in vertical bar graph.




H106893 —UN—11FEB13

- Tailings volume is defined as total amount of material (grain and material other than grain) moving through the tailings elevator.

*NOTE: If bar graph shows full or warning alarm screen appears, stop machine and adjust chaffer and sieve.*

Bar graph is a visual guide which can be referred to periodically to see if an increase or decrease in tailings volume occurs.

If bar graph shows an increase in volume, slow ground speed and see if bar graph goes back into acceptable loss range.

If bar graph does not go back into acceptable loss range after slowing ground speed, disengage header switch. Bar graph should zero itself (nothing showing in bar graph). Engage header switch, bar graph should go back into acceptable loss range.

**Continued on next page**

If tailings sensor display consistently reads full (all bars lit) when not harvesting or empty (no bars lit) when harvesting, it may indicate that the sensor lens is coated with material or seal under lens has allowed dust to enter.

**CAUTION: Tailings sensor is a Class 1 laser product and emits laser radiation when powered. When servicing or removing tailings sensors, use caution and do not view beam directly.**

**Key switch must be turned OFF and tailings sensor must be unplugged before servicing or removing sensors.**

DO NOT operate sensor with lens removed. Accessible laser emission when lens is in place:

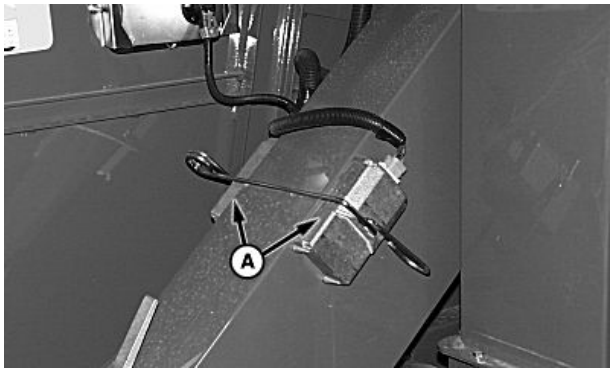
- 850 nm
- 500 nsec pulse width
- ≤ 500 Hz rep rate
- < 90 nJ per pulse
- 43 uW average power
- Class 1 levels (eye safe)

Accessible laser emission levels if sensor was operated with lens removed are:

- 850 nm
- 500 nsec pulse width
- ≤ 500 Hz rep rate
- < 380 nJ per pulse
- 188 uW average power
- Class 3R Levels (small potential for eye injury)

1. Remove tailings sensors (A) to inspect and clean lenses if needed.
2. If lenses are clean, remove and check for dust. If dust is found, completely clean area and reassemble lens onto unit making sure that gasket is sealing.
3. Verify lens is retained with all previously removed screws prior to installation.

**CAUTION: Failure to install plastic cover prior to replacement of sensors on elevator may cause malfunction, incorrect harvest readings or sensor damage, and could allow for potentially hazardous eye exposure when sensor is removed.**




H70551 —UN—02JAN02

*Tailings Sensors (S660 and S670)*




H105437 —UN—17MAY12

*Tailings Sensors (S680, S685 and S690)*

**A—Tailings Sensors**

4. Install sensor and test system.
5. If display continues to read full or empty, contact your John Deere dealer.

OUO6075,000159F -19-25JUN13-2/2

## VisionTrak™ Performance Monitor (General Information)

*NOTE: VisionTrak™ is active when header is engaged and in diagnostic mode.*

VisionTrak™ monitor checks grain loss by measuring a representative sample of losses over the cleaning shoe and through the separator. VisionTrak™ continuously monitors machine performance to enable operator to use maximum machine capacity. A change in loss rate is indicated by bar graphs.

VisionTrak™ can be set into two modes:

**Standard Mode (Factory Mode):** averages shoe sensors together. These activity indicators will change sensitivity with a change in system calibration.

Shoe activity indicators (A and B) (shoe sensors averaged) and separator activity indicator (C) show the activity of each of the three sensors. Total loss activity indicator (D) shows the total hits from the three sensors. This total can be adjusted so that normal performance is shown mid scale.

**Optional Mode:** shows activity of each individual shoe sensor (see your John Deere dealer). These activity indicators will change sensitivity with a change in system calibration.

Shoe activity indicators (A and B) (shoe sensors indicated independently) and separator activity indicator (C) show the activity of the three sensors. Total loss activity indicator (D) shows the total hits from the three sensors. All of the bars can be adjusted so that the normal performance is shown mid scale when performing a calibration.

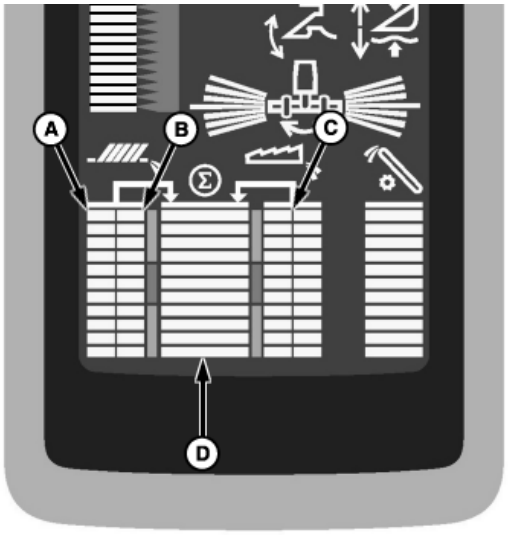
*NOTE: Refer to VisionTrak™ Performance Monitor—Operating in this section for adjusting Shoe/Separator Loss (Balance) and Shoe/Separator Loss (Sensitivity).*

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when crop setup icon (E) is highlighted.

Adjust machine and header to acceptable loss levels for particular crop and condition. While operating at desired performance, touch or press confirm switch when grain loss calibration icon (F) is highlighted. This enters current operating characteristics into memory and centers total loss activity indicator. Grain loss calibration value (G) will also be shown for future reference. VisionTrak™ is now set up to help the operator maintain the machine performance.

*NOTE: Center bar graph is now a visual guide. Operator can refer to display periodically to know when an increase or decrease in total loss amount occurs.*

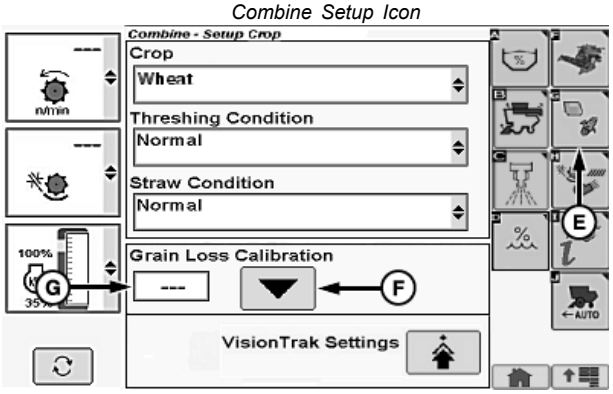



H94473 —UN—31MAR10

H94446 —UN—11NOV09



*Combine Setup Icon*




H108637 —UN—26JUL13

**A—Shoe Activity Indicator (Left Sensor)**
**B—Shoe Activity Indicator (Right Sensor)**
**C—Separator Activity Indicator**
**D—Total Loss Activity Indicator**
**E—Crop Setup Icon**
**F—Grain Loss Calibration Icon**
**G—Grain Loss Calibration Value**

*A sudden upward movement of bar graphs when field conditions are unchanged can indicate chaffer or sieve is plugged or closed. When this happens, stop machine and correct problem.*

OUO6075,00015B4 -19-26JUL13-1/1

## VisionTrak™ Performance Monitor—Operating

VisionTrak™ Performance Monitor is active when:

- Engine is running.
- Road transport disconnect switch is in field position.
- Header and separator are engaged.

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when crop setup icon (A) is highlighted.

Touch or press confirm switch when crop menu (B) is highlighted.

Crop menu displays the following:

| | | |
|---|---|---|
| Alfalfa | Lentils | Rye |
| Barley | Lupins | Safflower |
| Barley - Spring[a] | Millet | Sorghum |
| Barley - Winter[a] | Mustard | Soybeans |
| Canola | Navy Beans | Sunflower |
| Chickpeas | Oats | Triticale[a] |
| Corn | Peas | Wheat-Spring |
| Edible Beans | Popcorn | Wheat-Winter |
| Flax | Rape Seed[a] | |
| Grass Seeds | Rice | |

[a] *European crop listing only.*

Once desired crop is chosen, touch or press confirm switch.

**Grain Loss Calibration:**

Adjust machine and header to acceptable loss levels for particular crop and condition.

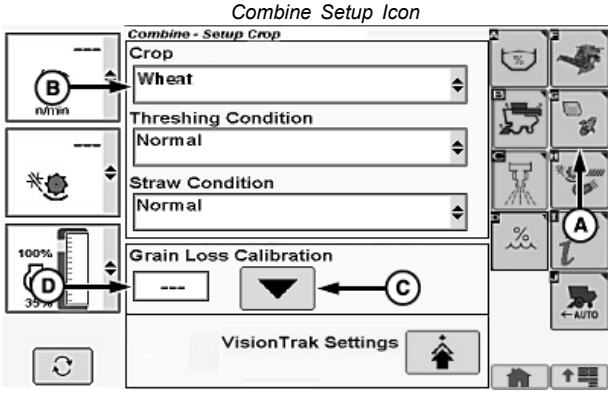
Touch or press confirm switch when calibration icon (C) is highlighted.

*NOTE: This enters current operating characteristics into memory and centers total loss activity indicator on cornerpost.*

H94473 —UN—31MAR10



*Combine Setup Icon*




H108638 —UN—26JUL13

**A—Crop Setup Icon**
**B—Crop Menu**
**C—Calibration Icon**
**D—Grain Loss Calibration Value**

**Calibration Reference Number:**

Touch or press confirm switch when grain loss calibration value (D) is highlighted.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired calibration reference value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired calibration reference value on numeric display. Touch enter/accept icon to save value.

**Continued on next page**

**Shoe/Separator Balance**

Adjusts balance of bars between shoe loss indicator and separator loss indicator located on VisionTrak™ display. Adjustment can be used to fine-tune display if losses appear to come from one area of the machine, but more losses are displayed in other area of machine due to crop conditions.

Touch or press confirm switch when VisionTrak™ settings icon (A) is highlighted.

Touch or press confirm switch when shoe/separator balance box (B) or shoe/separator balance bar graph (C) is highlighted.

**Shoe/Separator Balance Box Adjustment:**

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired shoe/separator balance value is shown. Press confirm switch to save value.

**Touchscreen Only:** Touch or press confirm switch when plus (+) icon or minus (-) icon is highlighted until desired shoe/separator balance value is shown.

**Shoe/Separator Balance Bar Graph Adjustment:**

**Non-Touchscreen or Touchscreen:** Rotate selection dial to increase or decrease shoe/separator balance bar graph to desired value. Press confirm switch to save value.

**Touchscreen Only:** Touch or press confirm switch when plus (+) icon or minus (-) icon is highlighted until desired shoe/separator balance value is shown.

Touch or press confirm switch when return/back icon (F) is highlighted to return to previous page.

**Shoe/Separator Resolution**

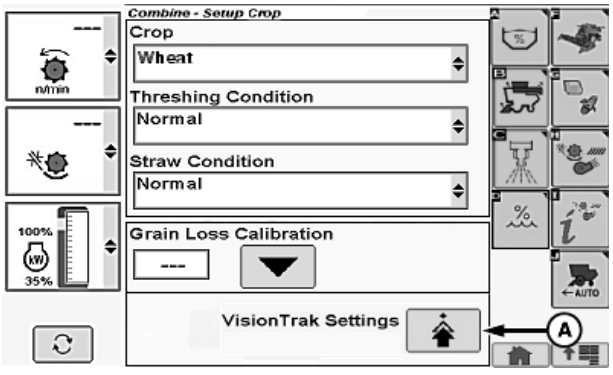
Allows operator to modify number of bars shown on VisionTrak™ display for shoe loss indicator and separator loss indicator (independent of number of center bars).

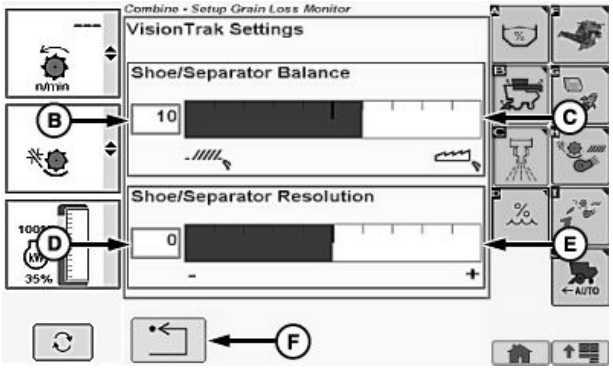
Touch or press confirm switch when VisionTrak™ settings icon (A) is highlighted.

Touch or press confirm switch when shoe/separator resolution box (D) or shoe/separator resolution bar graph (E) is highlighted.

**Shoe/Separator Resolution Box Adjustment:**

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired shoe/separator resolution value is shown. Press confirm switch to save value.




**A—VisionTrak™ Settings Icon**
**B—Shoe/Separator Balance Box**
**C—Shoe/Separator Balance Bar Graph**
**D—Shoe/Separator Resolution Box**
**E—Shoe/Separator Resolution Bar Graph**
**F—Return/Back Icon**

**Touchscreen Only:** Touch or press confirm switch when plus (+) icon or minus (-) icon is highlighted until desired shoe/separator resolution value is shown.

**Shoe/Separator Resolution Bar Graph Adjustment:**

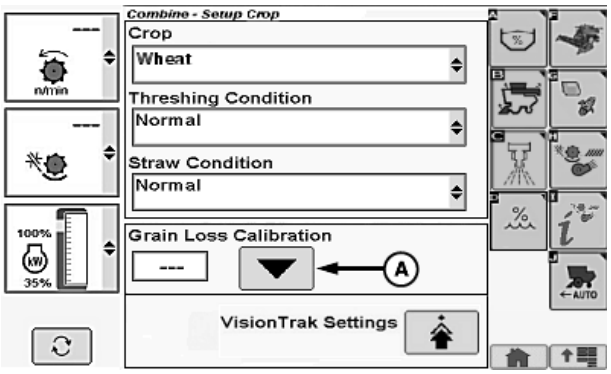
**Non-Touchscreen or Touchscreen:** Rotate selection dial to increase or decrease shoe/separator resolution bar graph to desired value. Press confirm switch to save value.

**Touchscreen Only:** Touch or press confirm switch when plus (+) icon or minus (-) icon is highlighted until desired shoe/separator resolution value is shown.

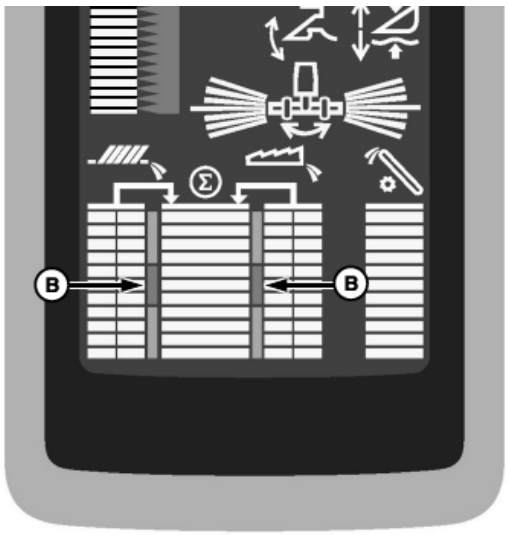
Touch or press confirm switch when return/back icon (F) is highlighted to return to previous page.

**Continued on next page**

OUO6075,00015B5 -19-31JUL13-2/4




H108639 —UN—26JUL13




H105941 —UN—08OCT12

**A—Calibration Icon** **B—Normal Range**

Set the following on display:

1. Select desired crop to be harvested from crop menu.
2. Adjust machine and header to acceptable loss levels for particular crop and condition.

*NOTE: Ignore center bar graph on cornerpost at this time.*

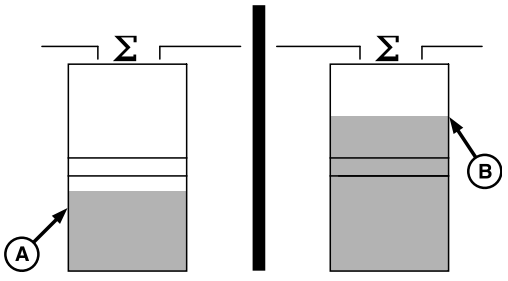
3. Operate machine at acceptable loss level.
4. Touch or press confirm switch when calibration icon (A) is highlighted to center total loss in the normal range (B). Bar graph indicates machine is operating at total loss levels acceptable by operator in step 3.

*NOTE: Bar graph is now a visual guide. Operator can refer to display periodically to know when an increase or decrease in total loss amount occurs. More detailed monitoring can be obtained by monitoring loss levels of the cleaning shoe and separator.*

OUO6075,00015B5 -19-31JUL13-3/4

5. If bar graph moves downward (A), machine is not operating at maximum productivity. Machine is either incorrectly adjusted for acceptable loss levels or moving at too slow of a ground speed. Make adjustments as needed to bring bar graph back into middle of display area.
6. If bar graph moves upward (B), machine is either incorrectly adjusted for an acceptable loss level or is moving too fast a ground speed. Make adjustments as needed to bring bar graph back into middle of display area.
7. When crop conditions change during the day (straw moisture, dew, etc.), make occasional loss checks to determine if readjustment is necessary.

*NOTE: When machine encounters a "slug", middle bar graph will fluctuate upward (15 to 20 seconds) and return to previous reading. Ignore these fluctuations when this occurs.*



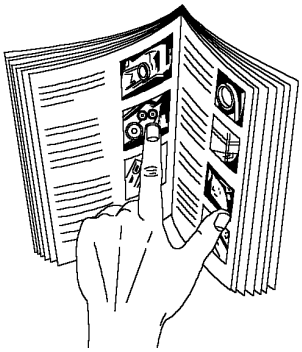

H87033 —UN—30NOV06

**A—Downward** **B—Upward**

OUO6075,00015B5 -19-31JUL13-4/4

## VisionTrak—Preliminary Adjustments on Machine

Before making adjustments to VisionTrak Performance Monitor, adjust machine so it is operating at peak efficiency. Adjustments must correspond to relevant field and crop conditions (see Crop Settings section).



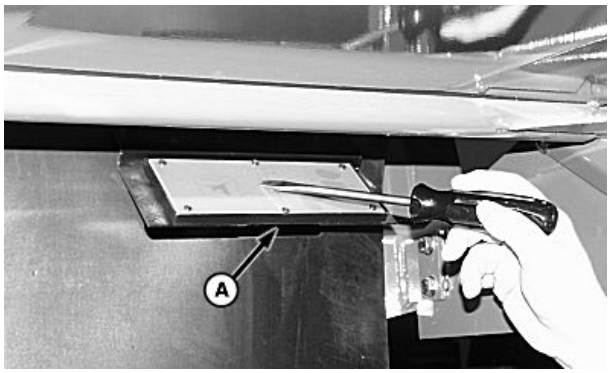
H52739 —UN—05MAR99

OUO6075,00004CE -19-19NOV09-1/1

## VisionTrak™ Operational Checks

*NOTE: Two people are required to perform this operational check. One person must remain seated in operator's seat, while another person taps on sensors.*

1. Turn key switch to RUN position, but do not start machine.
2. Engage header switch and press grain loss calibration icon.
3. Tap on right-hand shoe sensor (A) several times. Person watching VisionTrak™ display should see movement of shoe loss indicator. Repeat on left-hand shoe sensor.




H70998 —UN—25JAN02

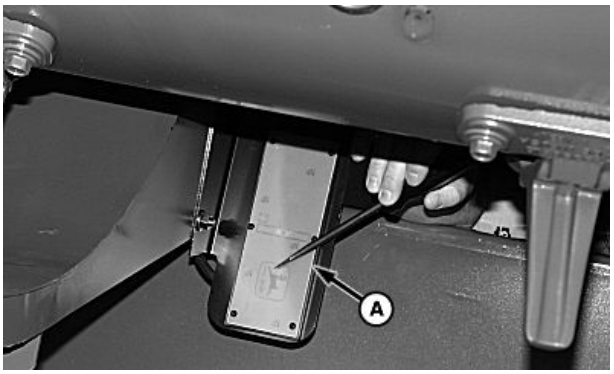
*Right-Hand Shoe Sensor*

**A—Shoe Sensor**

OUO6075,0001520 -19-18JUN13-1/2

4. Tap on separator sensor (A) several times. Person watching VisionTrak™ display should see movement of separator loss indicator.
5. Disengage header switch and turn key switch OFF.
6. If VisionTrak™ does not work after these checks, see your John Deere dealer.

**A—Separator Sensor**




H70999 —UN—25JAN02

OUO6075,0001520 -19-18JUN13-2/2

## Calibration Procedures - When to Calibrate

This list shows all possible calibrations. Depending on machine options and header types, listing shown might not match calibration menu shown on display.

*NOTE: Error codes show on display if a problem exists during a calibration procedure. Conditions causing error must be corrected before continuing calibration.*

- **Amber Flashers-** Perform calibration when control unit RC1, Amber Flasher bulbs, or associated components are replaced/adjusted.
- **Corn Head Deck Plate Spacing Calibration -** Perform calibration when control unit LC1 or deck plate position sensor or associated components are replaced/adjusted.
- **Feeder House Speed Calibration -** Perform calibration;
  - If control unit LC1 has been replaced.
  - First time each header is connected to combine.
  - If attachments of significant weight are added to or removed from header.
- **Feeder House Tilt Calibration (If Equipped) -** Perform calibration;
  - If control unit LC1 has been replaced.
  - If lateral tilt sensor or associated components are replaced/adjusted.
  - Before connecting header to combine.
- **Feeder House Tilt Speed Calibration (If Equipped) -** Perform calibration;
  - If lateral tilt sensor or associated components are replaced/adjusted.
  - Before connecting header or first time header is connected to combine.
- **Header Calibration -** Perform calibration;
  - If control unit LC1 has been replaced.
  - If a header height control sensor or associated components are replaced/adjusted.
  - First time each header is connected to combine.

  *NOTE: Mass Flow Vibration calibration must be performed when changing headers and in every crop that is harvested.*
- **Mass Flow Vibration Calibration (If Equipped) -** Perform calibration when control unit AYM or associated components are replaced/adjusted.
- **Moisture Sensor Temperature (If Equipped) -** Perform calibration when control unit AYM or associated components are replaced/adjusted.

  *NOTE: When prompted during self-leveling shoe calibration to level chaffer/sieve, use switches on side of machine to level bays.*
- **Self-Leveling Shoe Calibration (If Equipped) -** Perform calibration when control unit LC2 or chaffer/sieve actuator has been replaced/adjusted or bays are not level.
- **Chaffer Opening Calibration -** Perform calibration when control unit LC2 or chaffer actuator has been replaced/adjusted or louver openings are out of adjustment.
- **Sieve Opening Calibration -** Perform calibration when control unit LC2 or sieve actuator has been replaced/adjusted or louver openings are out of adjustment.

  **IMPORTANT: Calibration should not be completed with round bar concave covers installed. An incorrect zero position will result.**
- **Threshing Clearance Calibration -** Perform calibration when control unit LC2, threshing clearance sensor, or associated components are replace/adjusted.
- **Unloading Auger Engage Calibration -** Perform calibration when control unit RC2, unloading auger belt or associated components are replaced/adjusted.

  *NOTE: Yield calibration must be performed every year and in every crop that is harvested to achieve accurate grain weight measurements.*

  *Refer to Yield Calibration in CommandCenter Display Screens section for more information.*
- **Yield Calibration (If Equipped) -** Perform calibration when control unit AYM or associated components are replaced/adjusted.
  - Limited Accuracy - user calibration procedure has not been performed. System defaults to a fixed internal calibration value which is not adjustable.
  - Medium Accuracy - user has collected and selected one to three loads. System uses these values to adjust the internal calibration value.
  - Highest Accuracy - user has collected and selected a minimum of four calibration loads. System uses these values to adjust the internal calibration value.

  *NOTE: 13 load identification numbers can be saved before memory is full and a load identification number must be deleted.*

OUO6075,000110F -19-10APR12-1/1

## Calibration Procedures

Touch or press confirm switch when diagnostic icon is highlighted.

Touch or press confirm switch when calibration icon (A) is highlighted.

Touch or press confirm switch when calibrations menu (B) is highlighted.

Touch or press confirm switch when **desired calibration** is highlighted.

Touch or press confirm switch when enter/accept icon (C) is highlighted.

Follow instructions shown on display to calibrate.

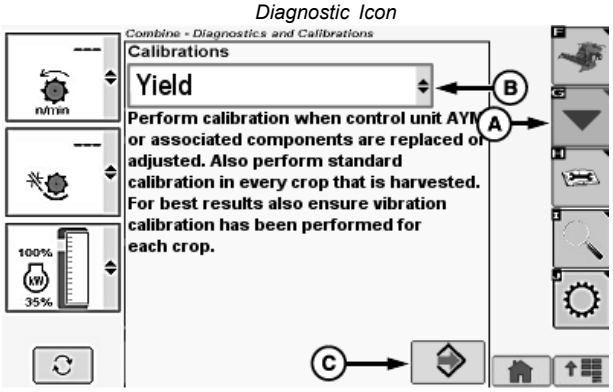
Repeat as needed for other calibrations.

**A—Calibration Icon**
**B—Calibrations Menu**
**C—Enter/Accept Icon**

H94478 —UN—31MAR10



*Diagnostic Icon*




H94928 —UN—11OCT10

OUO6075,0000623 -19-26APR10-1/1

## Calibration Error Codes

*NOTE: If error codes occur during calibration procedure, codes will show on CommandCenter display. Conditions causing error must be corrected before continuing calibration.*

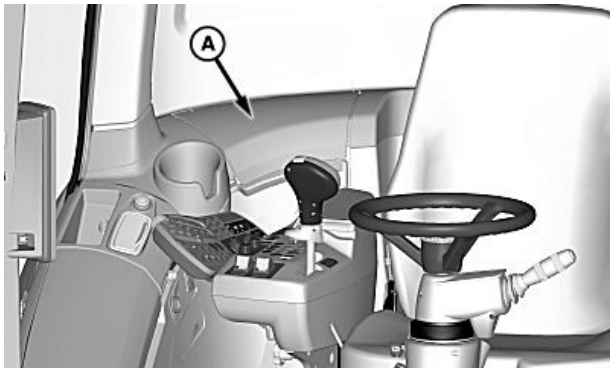
If calibration error codes appear while calibrating machine, refer to Diagnostic Trouble Codes section for further information.

OUO6075,0000624 -19-22JAN10-1/1

## Manual Storage Location

Keep machine operator's manual and settings card in compartment (A) located along rear cab wall.

**A—Compartment**



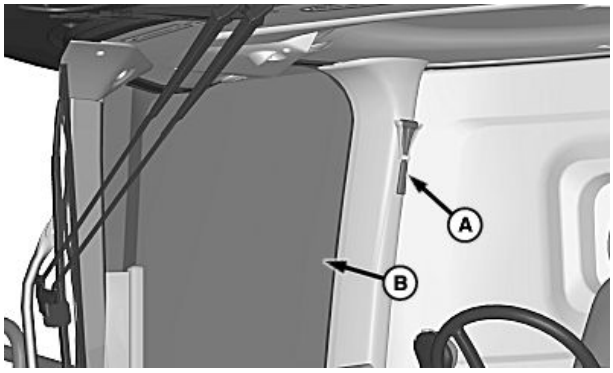

H95270 —UN—04FEB10

OUO6075,0000628 -19-04FEB10-1/1

## Emergency Exit

Remove hammer (A) and hit window (B) to break glass to exit cab. See your John Deere dealer for window replacement.

**A—Hammer** **B—Window**




H95176 —UN—22JAN10

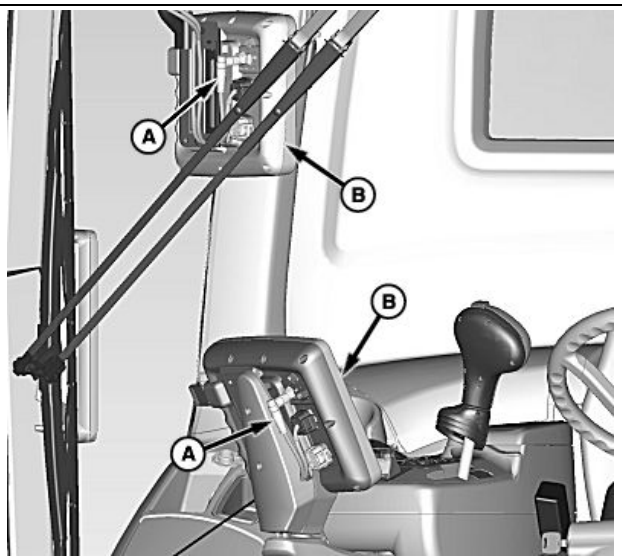
OUO6075,0000626 -19-22JAN10-1/1

## John Deere FarmSight™ Ethernet Connection (If Equipped)

*NOTE: John Deere FarmSight™ ready machines come installed with an ethernet cable which is routed to the armrest display (if equipped with GreenStar™ 3 2630 display).*

Ethernet cables (A) are used to connect the GreenStar™ 3 2630 display (B) located on the armrest or cornerpost with the John Deere FarmSight™ technology. Additional control units are located underneath the armrest on the cab floor. Refer to specific John Deere FarmSight™ Operator's Manual for further information.

**A—Ethernet Cables** **B—GreenStar™ 3 2630 Display**

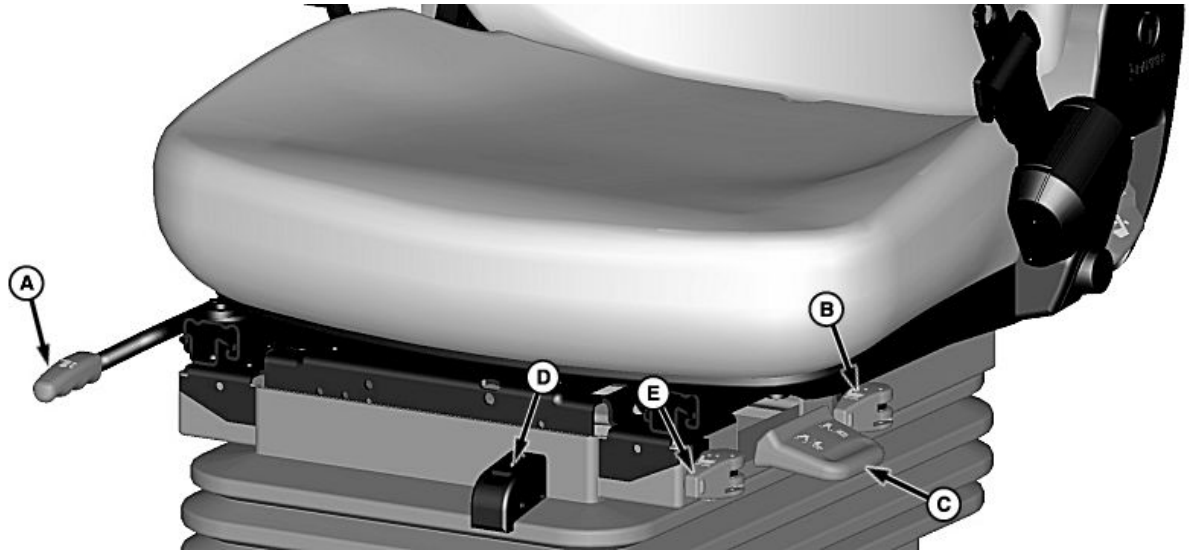



H106182 —UN—15NOV12

*FarmSight is a trademark of Deere & Company*
*GreenStar is a trademark of Deere & Company*

OUO6075,00012CD -19-16NOV12-1/1

## ComfortCommand Operator's Seat (Basic Seat)—Adjusting




H97561 —UN—02JUN11

*NOTE: Seat is equipped with an operator's presence system. If header and separator systems are engaged and the operator leaves the seat, the header drive system will disengage.*

**A— Fore/Aft Adjustment Handle** slides seat forward or rearward for the best working position.

**B— Vertical Shock Dampener Control** limits amount of "upward motion" the seat suspension provides.

*NOTE: Push control forward for soft ride or move handle back for firm ride. Between these two positions is medium firmness.*

**C— Weight/Height Adjustment Handle** raises or lowers the seat. Pull up on handle to raise seat or push down on handle to lower seat. Adjust seat until green marking is visible in weight/height indicator.

*NOTE: Suspension can be adjusted to reach limits in minimum and maximum heights, which in effect locks out the suspension system making it rigid. Suspension height control will also hit limits if adjusted too close to the extremes.*

*Do not operate compressor for more than one minute when adjusting seat.*

*If seat does not float or "pump" up, see your John Deere dealer.*

**D— Weight/Height Indicator** provides a visual indicator to operator on current weight and height. Use weight/height adjustment handle to adjust seat until green marking is visible in indicator.

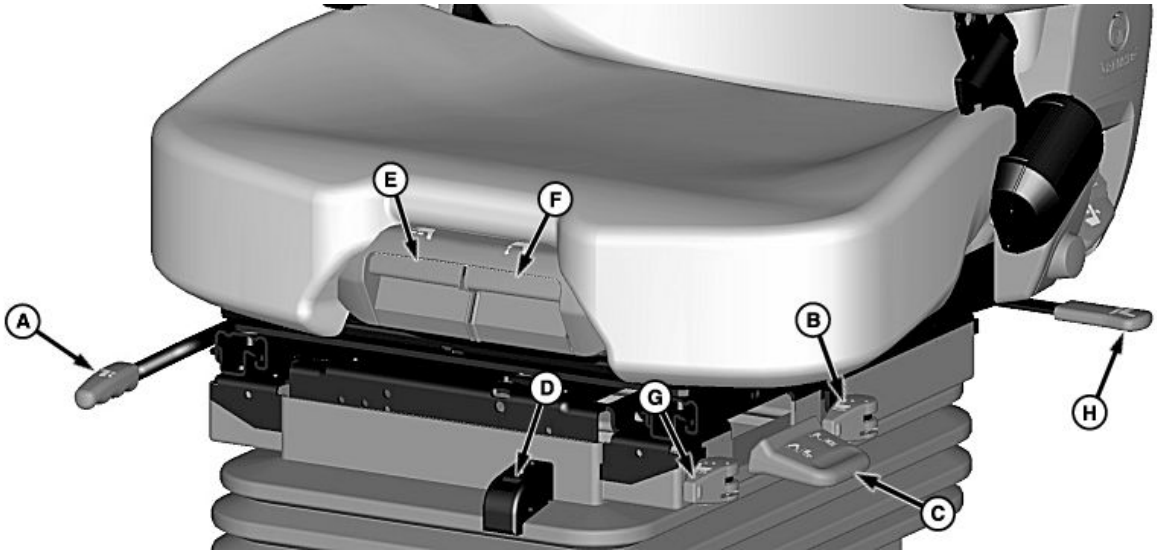
*NOTE: Adjust seat to operator weight and height. This allows the operator to get the most ride zone protection. Seat has a built-in buffer at the high and low end of vertical seat travel, resulting in a much smoother ride.*

**E— Fore/Aft Isolation Adjustment Handle** locks-out or releases forward or rearward movements. Pull up on handle to lock or push down on handle to release.

*NOTE: Fore/Aft isolator allows shock impacts to be absorbed.*

OUO6075,00007BB -19-09AUG10-1/1

## ComfortCommand™ Operator's Seat (Premium Cloth Seat)—Adjusting




H96739 —UN—02JUN11

*NOTE: Seat is equipped with an operator's presence system. If header and separator systems are engaged and the operator leaves the seat, the header drive system will disengage.*

**A— Fore/Aft Adjustment Handle** slides seat forward or rearward for the best working position.

**B—Vertical Shock Dampener Control** limits amount of "upward motion" the seat suspension provides.

*NOTE: Push control forward for soft ride or move handle back for firm ride. Between these two positions is medium firmness.*

**C— Weight/Height Adjustment Handle** raises or lowers the seat. Pull up on handle to raise seat or push down on handle to lower seat. Adjust seat until green marking is visible in weight/height indicator.

*NOTE: Suspension can be adjusted to reach limits in minimum and maximum heights, which in effect locks out the suspension system, making it rigid. Suspension height control will also hit limits if adjusted too close to the extremes.*

*Do not operate compressor for more than one minute when adjusting seat.*

*If seat does not float or "pump" up, see your John Deere dealer.*

**D— Weight/Height Indicator** provides a visual indicator to operator on current weight and height setting. Use weight/height adjustment handle to adjust seat until green marking is visible in indicator.

*NOTE: Adjust seat to operator weight and height. This allows the operator to get the most ride zone protection. Seat has a built-in buffer at the high and low end of vertical seat travel, resulting in a much smoother ride.*

**E— Seat Bottom Depth Adjustment Handle** moves seat bottom forward or rearward for the best working position.

**F— Seat Bottom Angle Adjustment Handle** raises or lowers seat cushion for the best working position.

**G— Fore/Aft Isolation Adjustment Handle** locks out or releases forward or rearward movements. Pull up on handle to lock or push down on handle to release.

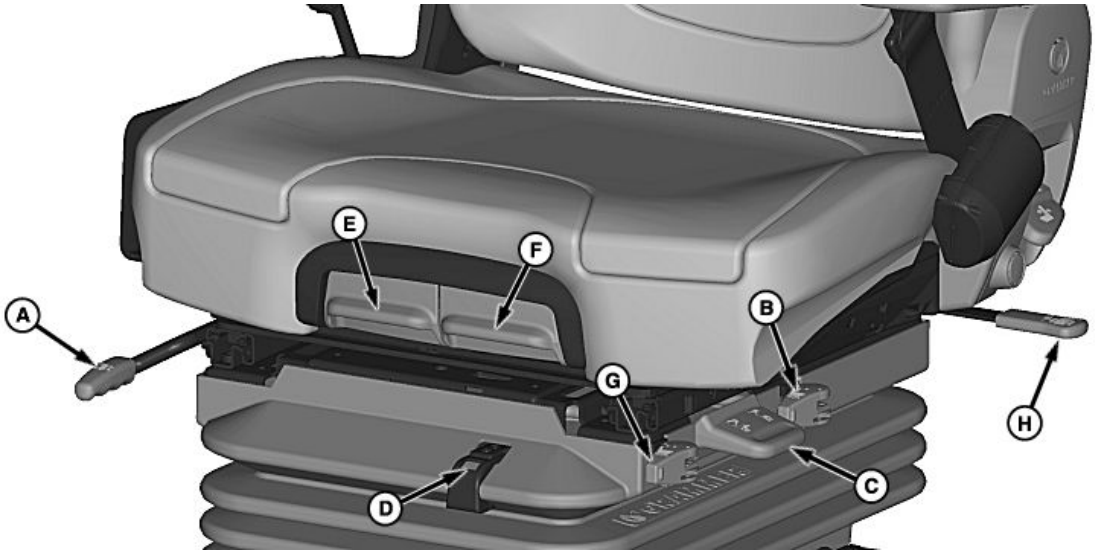
*NOTE: Fore/Aft isolator allows shock impacts to be absorbed.*

**H— Side Isolation Adjustment Handle** locks out or releases side-to-side movements. Push handle forward to release and pull handle rearward to lock.

*NOTE: Side isolation allows shock impacts to be absorbed.*

OUO6075,000127F -19-16OCT12-1/1

## ComfortCommand™ Operator's Seat (Premium Leather Seat)—Adjusting




H106058 —UN—31OCT12

*NOTE: Seat is equipped with an operator's presence system. If header and separator systems are engaged and the operator leaves the seat, the header drive system will disengage.*

**A— Fore/Aft Adjustment Handle** slides seat forward or rearward for the best working position.

**B— Vertical Shock Dampener Control** limits amount of "upward motion" the seat suspension provides.

*NOTE: Push control forward for soft ride or move handle back for firm ride. Between these two positions is medium firmness.*

**C— Weight/Height Adjustment Handle** raises or lowers the seat. Pull up on handle to raise seat or push down on handle to lower seat. Adjust seat until green marking is visible in weight/height indicator.

*NOTE: Suspension can be adjusted to reach limits in minimum and maximum heights, which in effect locks out the suspension system, making it rigid. Suspension height control will also hit limits if adjusted too close to the extremes.*

*Do not operate compressor for more than one minute when adjusting seat.*

*If seat does not float or "pump" up, see your John Deere dealer.*

**D— Weight/Height Indicator** provides a visual indicator to operator on current weight and height setting. Use weight/height adjustment handle to adjust seat until green marking is visible in indicator.

*NOTE: Adjust seat to operator weight and height. This allows the operator to get the most ride zone protection. Seat has a built-in buffer at the high and low end of vertical seat travel, resulting in a much smoother ride.*

**E— Seat Bottom Depth Adjustment Handle** moves seat bottom forward or rearward for the best working position.

**F— Seat Bottom Angle Adjustment Handle** raises or lowers seat cushion for the best working position.

**G— Fore/Aft Isolation Adjustment Handle** locks out or releases forward or rearward movements. Pull up on handle to lock or push down on handle to release.

*NOTE: Fore/Aft isolator allows shock impacts to be absorbed.*

**H— Side Isolation Adjustment Handle** locks out or releases side-to-side movements. Push handle forward to release and pull handle rearward to lock.

*NOTE: Side isolation allows shock impacts to be absorbed.*

OUO6075,0001280 -19-31OCT12-1/1

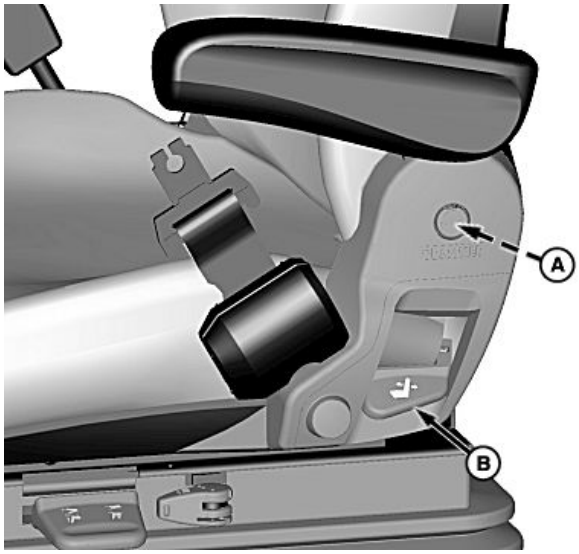
## Left-Hand Armrest and Seat Back (Basic Seat)—Adjusting

**A— Armrest Height Adjustment** remove round cap from cover and loosen 13 mm (1/2 in.) nut. Adjust armrest to desired position and tighten nut to specification and replace cap.

**Specification**

Nut—Torque.....25 N·m (221 lb.-in.)

**B— Backrest Angle Adjustment Handle** adjusts seat back angle. Pull up on handle and adjust backrest to desired position and release handle.




H97562 —UN—02JUN11

OUO6075,0000795 -19-09AUG10-1/1

## Left-Hand Armrest and Seat Back (Premium Cloth/Leather Seat)—Adjusting

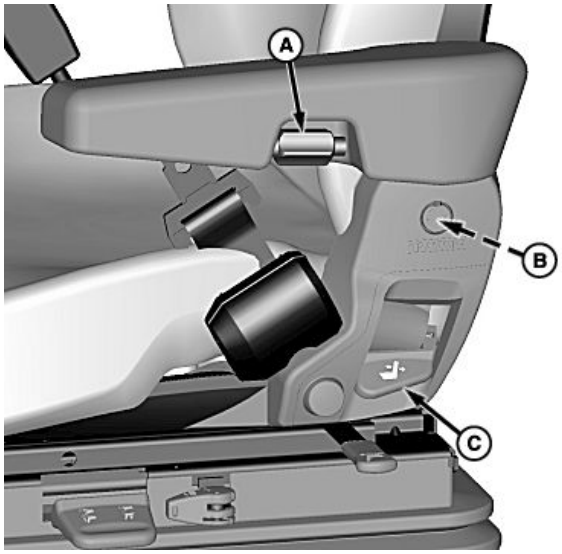
**A— Armrest Angle Adjustment Knob** adjusts armrest up or down. Rotate knob clockwise to lower and counterclockwise to raise.

**B— Armrest Height Adjustment** remove round cap from cover and loosen 13 mm (1/2 in.) nut. Adjust armrest to desired position, tighten nut to specification and reinstall cap.

**Specification**

Nut—Torque.....25 N·m (221 lb.-in.)

**C— Backrest Angle Adjustment Handle** adjusts seat back angle. Pull up on handle and adjust backrest to desired position and release handle.




H96740 —UN—02JUN11

OUO6075,0001282 -19-31OCT12-1/1

## Heated/Ventilated Seat Switch (Premium Leather Seat)

*NOTE: Key switch must be ON or machine must be running for heated/ventilated seat to operate.*

Heated/Ventilated seat provides operator with comfort during cold/hot temperatures. Heated/Ventilated seat switch (A) located on left-hand side of backrest turns seat heater or seat ventilation ON/OFF.

- Switch in top position turns seat heater ON (seat ventilation OFF).
- Switch in middle position turns seat heater and seat ventilation OFF.
- Switch in bottom position turns seat ventilation ON (seat heater OFF).

**A—Heated/Ventilated Seat Switch**




H106063 —UN—31OCT12

OUO6075,0001281 -19-31OCT12-1/1

## Lumbar Support Switch (Premium Leather Seat)

*NOTE: Key switch must be ON or machine must be running for lumbar support to operate.*

Lumbar support provides operator with added comfort to the upper and lower backrest areas. Lumbar support switches (A and B) located on left-hand side of backrest increase or decrease lumbar support curvature.

- Top Lumbar Support Switch - press switch towards plus (+) symbol to increase upper lumbar support curvature or press switch towards minus (-) symbol to decrease upper lumbar support curvature.
- Bottom Lumbar Support Switch - press switch towards plus (+) symbol to increase lower lumbar support curvature or press switch towards minus (-) symbol to decrease lower lumbar support curvature.

**A—Lumbar Support Switch** **B—Lumbar Support Switch**




H106066 —UN—31OCT12

OUO6075,00012E0 -19-31OCT12-1/1

## Instructional Seat—Adjusting

Seat back (A) and seat bottom (B) can be raised or lowered to desired operating position.

**A—Seat Back**

**B—Seat Bottom**




H96631 —UN—26MAY10

OUO6075,000078B -19-26MAY10-1/1

## Refrigerator (If Equipped)

*NOTE: Refrigerator operates only when key switch is ON and MUST remain plugged into the auxiliary outlet to keep food or beverages cold.*

Refrigerator provides a space to keep food or beverages cool throughout the day.

Raise seat bottom (A) to open refrigerator top cover (B).

Refrigerator front cover (C) can also be opened without raising seat bottom.

Turn temperature control dial (D) clockwise to decrease temperature or counterclockwise to increase temperature.

**A—Seat Bottom**
**B—Top Cover**
**C—Front Cover**
**D—Temperature Control Dial**

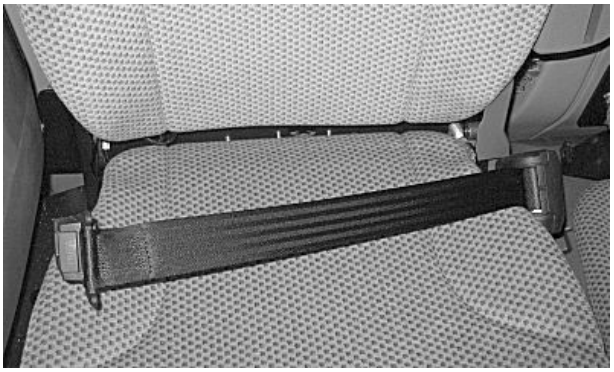



H96632 —UN—02NOV10

OUO6075,000078F -19-02NOV10-1/1

## Seat Belts

**CAUTION: Inspect seat belts and mounting hardware on your machine at least once a year. If seat belt system, including mounting hardware, buckle, belt, or retractor, shows any sign of damage such as cuts, fraying, extreme or unusual wear, discoloration or abrasion, the entire seat belt system should be replaced immediately. For your safety, replace the belt system only with replacement parts approved for your machine, see your John Deere dealer.**



H96657 —UN—01JUN10

Seat belts are standard equipment on both operator and instructional seats. Lap type seat belts have a push button quick release and automatic belt retraction to allow unrestricted exiting and entering.

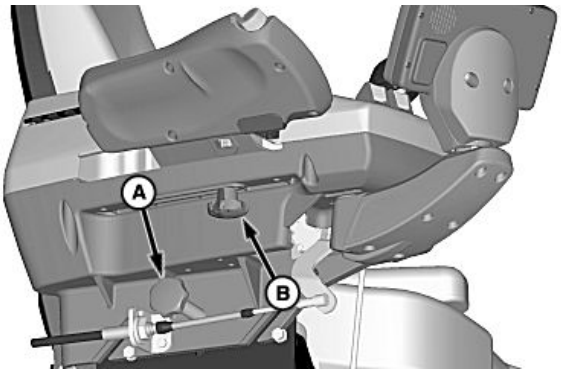
OUO6075,000062D -19-01JUN10-1/1

## Armrest Control Console—Adjusting

Loosen knob (A) and slide armrest control console up/forward or down/back in slots on outer plate. Tighten knob to lock armrest into position.

Loosen knob (B) and slide CommandARM control console forward/rearward. Tighten knob to lock control console into place.

**A—Knob** **B—Knob**




H97713 —UN—20AUG10

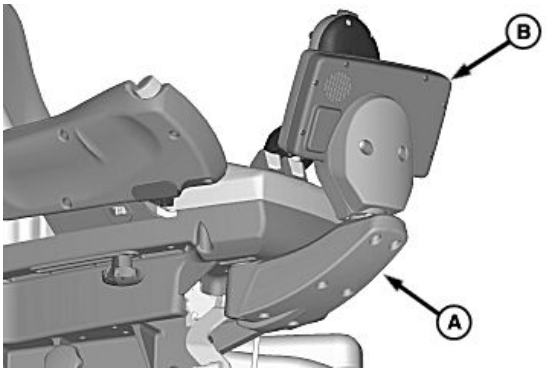
OUO6075,000078E -19-20AUG10-1/1

## Armrest Display—Adjusting

Rotate arm (A) left/right to desired operating position.

Rotate display (B) left/right or forward/rearward to desired operating position.

**A—Arm** **B—Display**




H97714 —UN—20AUG10

OUO6075,00008F8 -19-20AUG10-1/1

## Auxiliary Power Outlet Strip

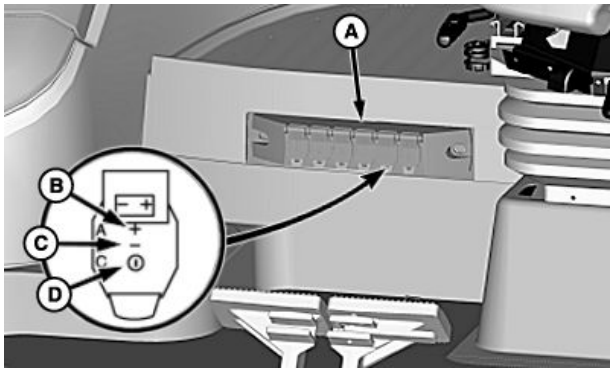
*NOTE: Maximum combined current draw for switch power is 20 amps and unswitched power is 30 amps.*

Auxiliary power outlet strip (A) is equipped with six additional electrical outlets which are located at lower rear of right-hand window. These outlets provide key-switched or unswitched power.

Spade terminal (B) is direct positive power at all times.

Spade terminal (C) is ground.

Spade terminal (D) is auxiliary power (key switch ON).




H94452 —UN—14MAY10

**A—Auxiliary Power Outlet Strip**
**B—Spade Terminal (Direct Positive Power)**
**C—Spade Terminal Ground**
**D—Spade Terminal (Positive, Key Switched ON)**

OUO6075,00010C7 -19-08MAR12-1/1

## Cab Ladder Positions (Single Tire Configuration)

**⚠ CAUTION: Do not ride or attempt to climb front or rear ladders while machine is moving.**

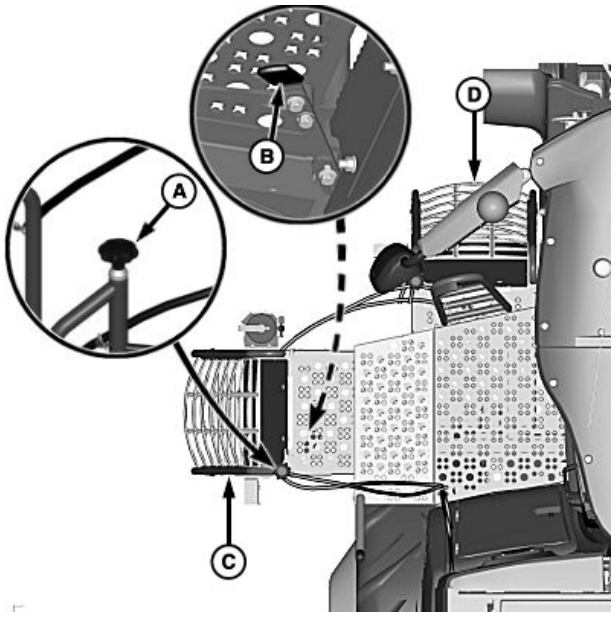
Ladder can be positioned from ground or on ladder landing with handle (A) or lever (B).

If ladder latch appears loose, clean out latch pin area. Do not use oil or grease in this area.

Swing ladder forward or rearward and lock into these different positions:

- **Position (C):** is for normal operating field conditions.
- **Position (D):** is for transporting machine on public roadways.

**⚠ CAUTION: Always swing ladder to position (D) before transporting on public roadways in order to reduce machine width and position marker/hazard light towards oncoming motorists.**




H96381 —UN—14MAY10

**A—Handle**
**B—Lever**
**C—Field Position**
**D—Roadway Driving Position**

OUO6075,000075F -19-29JUN11-1/1

## Cab Ladder Positions (Dual Tire Configuration)

**CAUTION: Do not ride or attempt to climb front or rear ladders while machine is moving.**

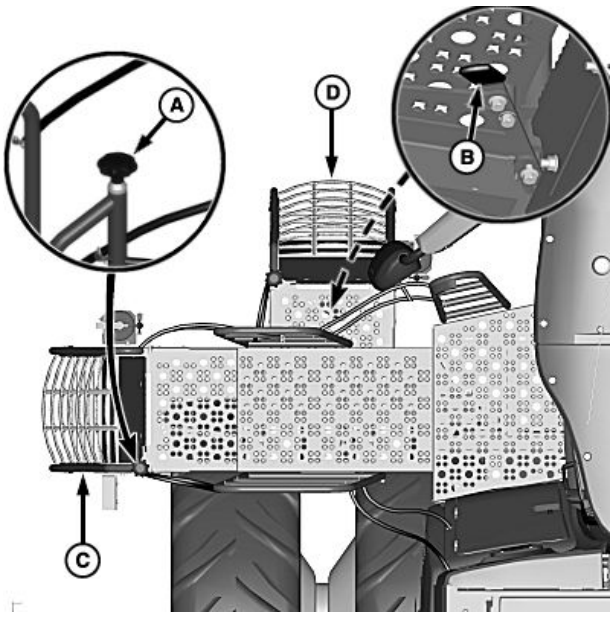
Ladder can be positioned from ground or on ladder landing with handle (A) or lever (B).

If ladder latch appears loose, clean out latch pin area. Do not use oil or grease in this area.

Swing ladder forward or rearward and lock into these different positions:

- **Position (C):** is for normal operating field conditions.
- **Position (D):** is for transporting machine on public roadways.

**CAUTION: Always swing ladder to position (D) before transporting on public roadways in order to reduce machine width and position marker/hazard light towards oncoming motorists.**




H96380 —UN—14MAY10

**A—Handle**
**B—Lever**
**C—Field Position**
**D—Roadway Driving Position**

OUO6075,0000630 -19-29JUN11-1/1

## Fire Extinguisher

A 6 kg (15 lb.) general-purpose fire extinguisher meeting national certification requirements must be installed on your machine. A fire extinguisher and bracket is located on the right side of the engine platform.

Maintain fire extinguisher to keep it in operating condition.

Keep engine deck clean and free of dust, chaff and straw to prevent the possibility of fire.




H39760 —UN—11OCT88

OUO6075,0000A9F -19-16NOV10-1/1

## Fire Extinguisher Location

A general-purpose fire extinguisher is located on the front ladder platform.



H96654 —UN—27MAY10

*Front Fire Extinguisher Location*

OUO6075,0000C9F -19-14JUN11-1/1

## Steering Column

**A— Horn** allows operator to warn bystanders to stay clear.

**B— Turn Signal Switch** allows operator to indicate left or right-hand turns.

**⚠ CAUTION: Adjust steering wheel only when machine is stopped.**

**C— Steering Column Vertical Adjustment** allows operator to adjust steering column up or down.

Loosen hub and push or pull wheel to position. Slightly tighten hub to hold steering wheel in position.

**D— Starter Switch** allows key switch to be turned to:

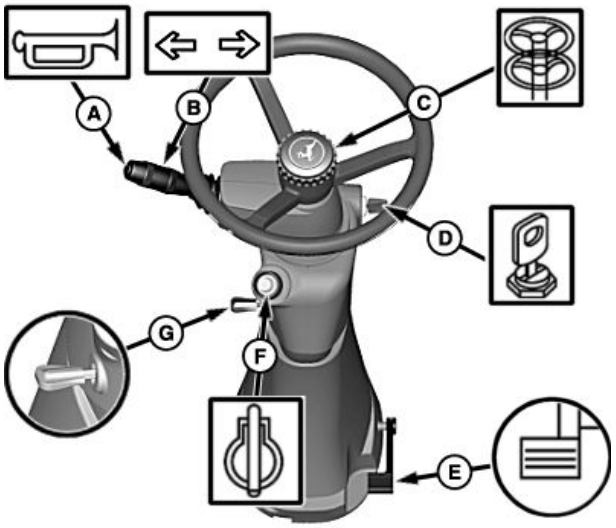
| | |
|---|---|
| First Position | Accessories |
| Second Position | OFF |
| Third Position | Run |
| Fourth Position | Start |

**⚠ CAUTION: Adjust column only when machine is stopped. Do not step on pedal without holding steering wheel.**

**E— Steering Column Horizontal Adjustment** allows operator to move steering column with pedal to desired position.

Press pedal to release lock on steering column and move column to desired position. Column locks when pedal is released.

*NOTE: Starting aid only works in "Run" or "Start" positions.*




H94521 —UN—02NOV10

**F— Starting Aid Push Button (If Equipped)** allows operator the ability to start engine in cold conditions.

**⚠ CAUTION: Adjust steering wheel only when machine is stopped.**

**G— Steering Wheel Tilt Adjustment (If Equipped)** allows operator to move steering column with handle to desired position.

Pull up on handle to release lock and move steering wheel to desired position. Release handle to lock into desired position.

OUO6075,0000634 -19-21MAR11-1/1

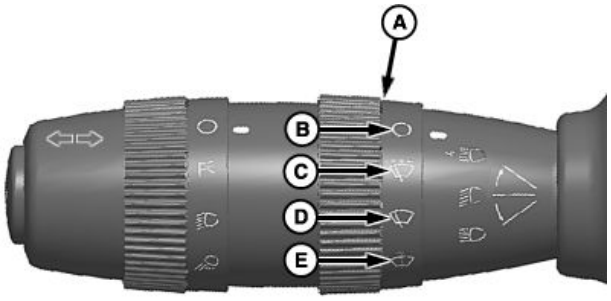
## Windshield Wiper/Windshield Washer Switch

*NOTE: Key switch must be ON or machine running for windshield wiper and windshield washer to operate.*

Windshield wiper/washer switch (A) on steering column is used to control the following:

- OFF Position (B)
- Wiper Intermittent Operation (C)
- Wiper ON Position (D)
- Windshield Washer (E)

**A—Windshield Wiper/Washer Switch**
**B—OFF Position**
**C—Wiper Intermittent Position**
**D—Wiper ON Position**
**E—Windshield Washer**




H96489 —UN—22JUN11

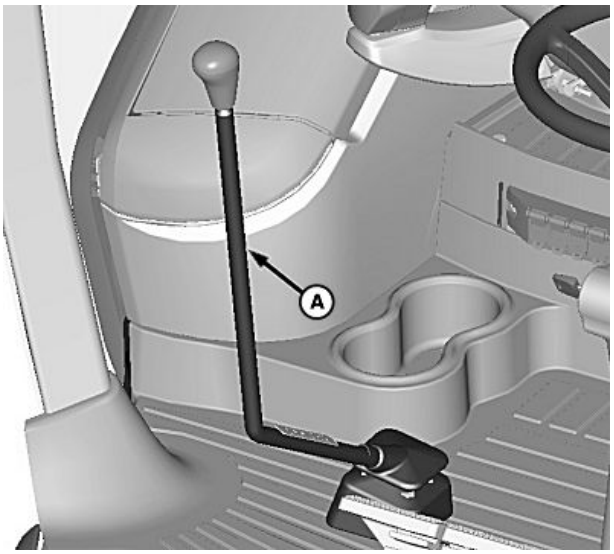
OUO6075,000076D -19-20MAY10-1/1

## Gearshift Lever (If Equipped)

**IMPORTANT: Stop machine and move multi-function lever to neutral before shifting gears.**

When shifting gearshift lever (A) the shift pattern is a straight line with detents for 1, 2 and 3. Less resistance is felt for neutral between 1st and 2nd gears.

**A—Gearshift Lever**




H102184 —UN—13JUN11

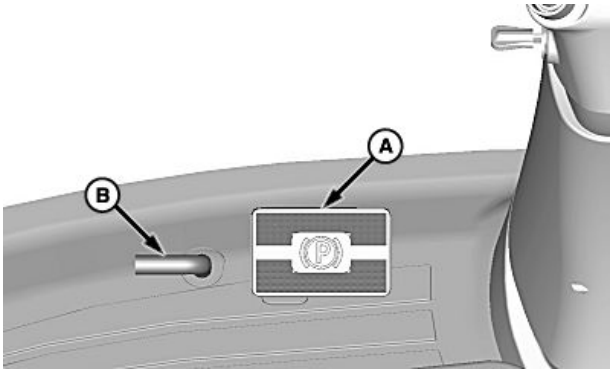
OUO6075,0000635 -19-13JUN11-1/1

## Manual Park Brake (If Equipped)

**IMPORTANT: Machine is equipped with manual engage and disengage park brake pedals. Be certain to engage park brake when engine is running and machine is parked or before leaving machine with engine turned OFF.**

Press pedal (A) to engage park brake and pedal (B) to disengage park brake.

**A—Pedal (Engage)**
**B—Pedal (Disengage)**




H102186 —UN—13JUN11

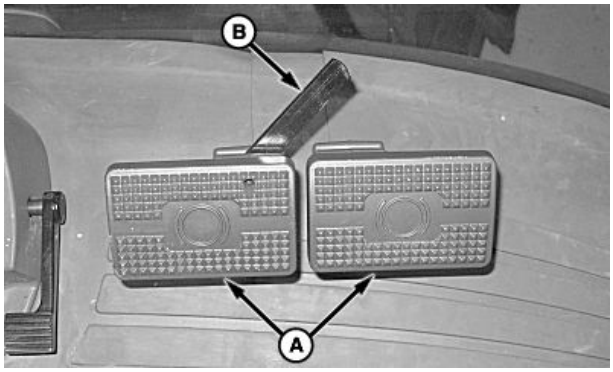
OUO6075,0000636 -19-17JUN13-1/1

## Brake Pedals

Leave brake pedals (A) unlocked for field use and lock (B) brake pedals together when transporting.

**A—Brake Pedals**

**B—Lock (Transport)**




H96681 —UN—01JUN10

OUO6075,0000637 -19-01JUN10-1/1

## Handrails and Right-Hand Landing Access

**CAUTION: Raise feeder house completely and lower safety stop on feeder house lift cylinder.**

**IMPORTANT: Close cab door before using handrail.**

**Do not manually move wiper arm, this could cause damage to wiper mechanism.**

Use ladder and landing to clean left side of cab.

Access feeder house by using step on left-hand side.

Use handrails (A) located on either side of cab and at top of cab.

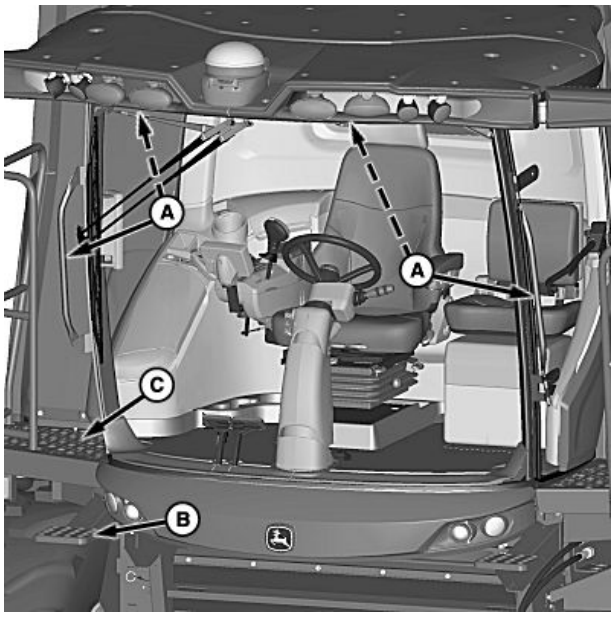
Stand on raised feeder house to clean front cab window and service headlights or wiper.

Use step (B) and landing (C) to clean right side of cab.

**A—Handrails**

**B—Step**

**C—Landing**




H94810 —UN—15JUL10

OUO6075,0000496 -19-08OCT09-1/1

## GreenStar™ Display and Harvest Monitor/Harvest Doc™ Systems

GreenStar 3 CommandCenter displays are mounted on the armrest, which contain vehicle specific information and GreenStar applications (excluding Harvest Doc).

GreenStar 3 2630 display (optional) is mounted on the armrest and contains vehicle specific information and GreenStar applications.

*GreenStar is a trademark of Deere & Company*
*Harvest Monitor/Harvest Doc are trademarks of Deere & Company*

For information on Harvest Doc system, refer to Harvest Doc manual.

OUO6075,000062E -19-03NOV10-1/1

## Light Switches

*NOTE: Exit lights remain ON for a 180 seconds after key switch is turned OFF (if road or field lights were used within the previous five minutes). Operator chooses to light left or right side of machine with turn signal lever.*

*When all lights are first turned to the ON position with key switch OFF, there will be a slight delay before lights turn ON.*

Light selection switch (A) on steering column is used to control the following:

- OFF Position (B)
- Park light switch (C) controls:
  - Marker lights
- Road light switch (D) controls:
  - Hazard (flashing) lights
  - Four headlights (Two Low Beam Lights and Two High Beam Lights)
  - Beacon lights
  - Lower driving lights (if equipped)
- Field light switch (E) controls:
  - Grain tank and all eight headlights
  - Row finder lights with turn signal lever
  - Unloading auger light when extended
  - Marker lights and hazard lights

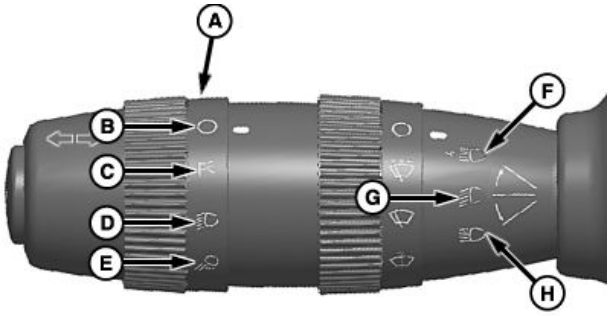
Light selection lever on steering column is used to control the High/Low beam headlights:

*NOTE: High beam indicator illuminates on cornerpost when lever is in the momentary high beam and high beam positions.*

- Momentary High Beam (F):
  - Pull lever to upper position momentarily activates high beams.
- Low Beam Position (G):
  - Pull lever to middle position to operate low beams.
- High Beam Position (H):
  - Push lever to lower position to activate high beam headlights.

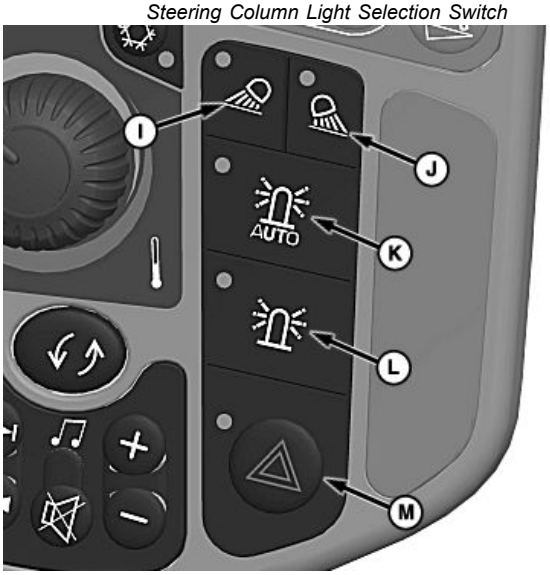
Armrest light switches are used to control the following:

- Front Stubble light switch (I) controls:
  - Stubble lights in front of machine
  - Cab fascia lights (if equipped)
- Rear Discharge light switch (J) controls:
  - Rear residue lights at rear of machine




H99531 —UN—22JUN11

*Steering Column Light Selection Switch*




H99532 —UN—03JAN11

*Armrest Light Switches*

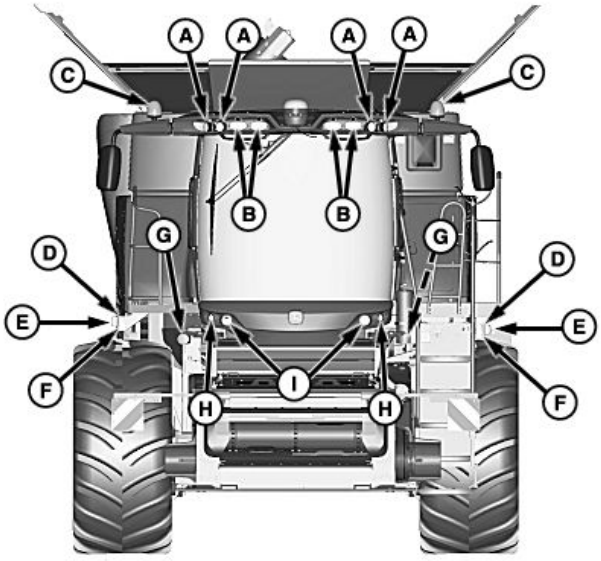
**A—Light Selection Switch**
**B—OFF Position**
**C—Park Light Switch**
**D—Road Light Switch**
**E—Field Light Switch**
**F—Momentary High Beam**
**G—Low Beam Position**
**H—High Beam Position**
**I— Front Stubble Light Switch**
**J— Rear Discharge Light Switch**
**K—Auto Beacon Light Switch**
**L— Beacon Light Switch**
**M—Hazard Light Switch**

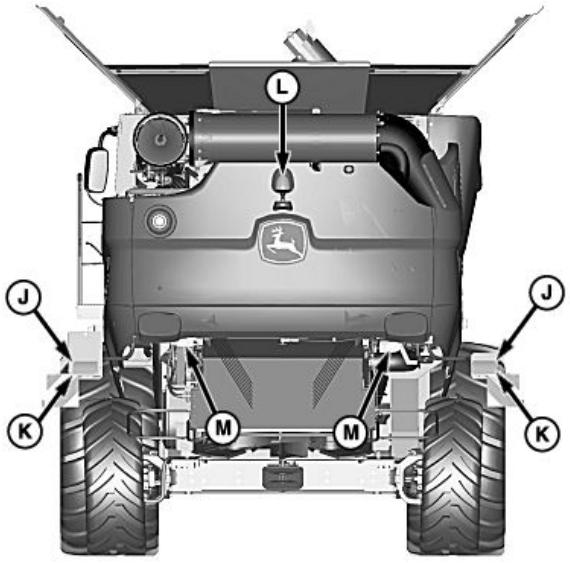
- Auto Beacon light switch (K) controls:
  - Auto beacon lights
- Beacon light switch (L) controls:
  - Beacon lights
- Hazard light switch (M) controls:
  - Hazard (flashing) lights

OUO6075,0001352 -19-30NOV12-1/1

## Lighting Locations

### Front and Rear View Lights




H107108 —UN—28FEB13

**A—Halogen Cab Headlights or High Intensity Discharge (HID) (Optional) Cab Headlights**
**B—Cab Headlights (High/Low Beam)**
**C—Beacon Lights**
**D—Hazard Lights (Amber)**
**E—Hazard Lights (Amber)**
**F—Marker Lights (White)**
**G—Stubble Lights**
**H—Fascia Lights (If Equipped)**
**I— Lower Driving Lights (If Equipped)**
**J— Marker/Brake Lights (Red)**
**K—Rear Hazard Lights (Amber)**
**L— Beacon Light**
**M—Rear Discharge Lights**

**Beacon Light Switch:**

**CAUTION: Lights must be turned ON when transporting. Swing cab ladder forward to orient marker/hazard light towards oncoming motorists.**

- Switch controls beacon lights (C, L).
- Two beacon lights are located at the front (left and right) and one at the rear of the machine. These lights give warning to other drivers when transporting on roadways.

**Hazard Light Switch:**

**CAUTION: Lights must be turned ON when transporting. Swing cab ladder forward to orient marker/hazard light towards oncoming motorists.**

- Switch controls beacon lights (C, L), hazard lights (D, E), and rear hazard lights (K).
- Hazard lights are located on both sides of machine at front and rear. These lights are used to indicate an inoperable machine.

**Road Light Switch:**

**CAUTION: Lights must be turned ON when transporting. Swing cab ladder forward to orient marker/hazard light towards oncoming motorists.**

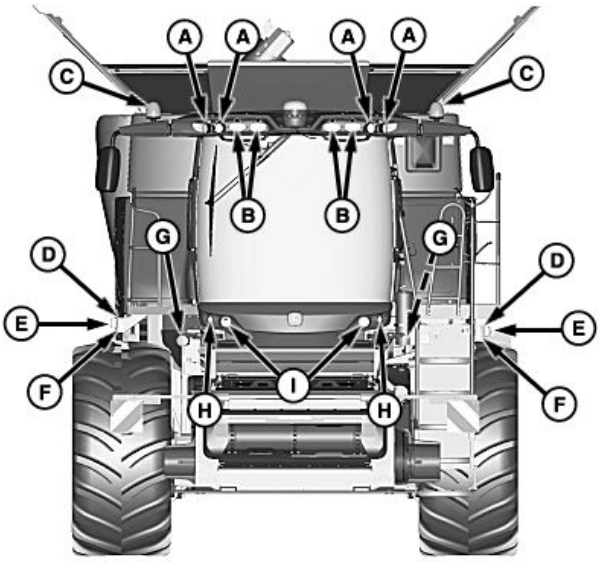
*NOTE: When road lights are ON and no header is connected, lower driving lights turn ON and cab headlights turn OFF. When a header is connected, lower driving lights turn OFF and cab headlights turn ON.*

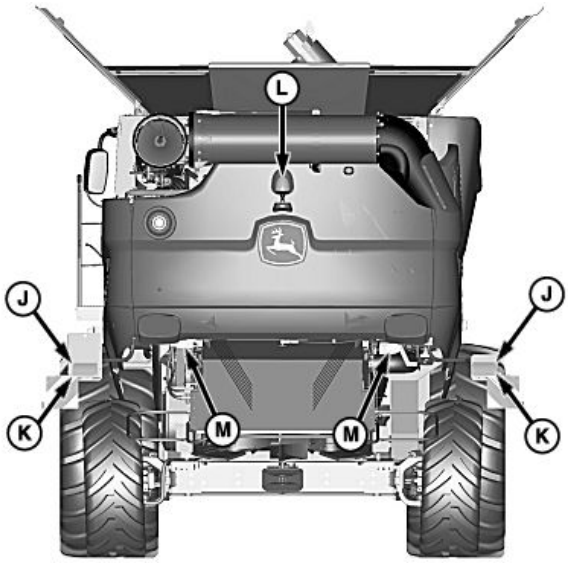
*Hazard lights turn ON if turn signals are OFF. If turn signals are ON, hazard lights function as turn signal lights.*

- Switch controls beacon lights (C, L), cab headlights (B), marker lights (F), lower driving lights (I), and marker/brake lights (J).
- Beacon lights give warning to other drivers when transporting on roadways.

**Continued on next page**

OUO6075,0001353 -19-18JUN13-1/6




H107108 —UN—28FEB13

**A—Halogen Cab Headlights or High Intensity Discharge (HID) (Optional) Cab Headlights**
**B—Cab Headlights (High/Low Beam)**
**C—Beacon Lights**
**D—Hazard Lights (Amber)**
**E—Hazard Lights (Amber)**
**F—Marker Lights (White)**
**G—Stubble Lights**
**H—Fascia Lights (If Equipped)**
**I—Lower Driving Lights (If Equipped)**
**J—Marker/Brake Lights (Red)**
**K—Rear Hazard Lights (Amber)**
**L—Beacon Light**
**M—Rear Discharge Lights**

### Auto Beacon Light Switch:

*NOTE: When auto beacon lights are activated and grain reaches the 3/4 full sensor, the beacon lights start to flash (3 seconds ON and 6 seconds OFF). When grain reaches the grain tank full sensor, the beacon lights turn ON steady and will not flash.*

- Beacon lights (C, L) illuminate when grain tank is 3/4 full. Beacons provide a signal to the grain cart operator that grain tank is full and is ready to be unloaded.

### Field Light Switch:

- Switch controls marker lights (F), marker/brake lights (J), and cab headlights (A, B).
- Field lights provide operator with area lighting for operation at night and during low light conditions.

### Front Stubble Light Switch:

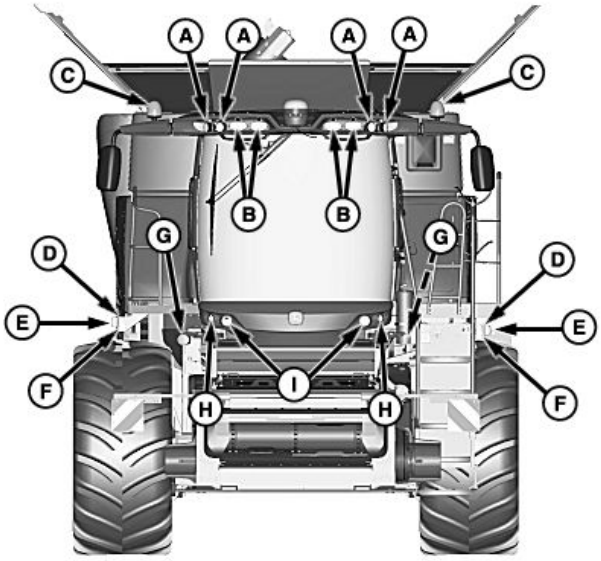
**CAUTION: To avoid motorist confusion, do not operate work lights when transporting on public roadways.**

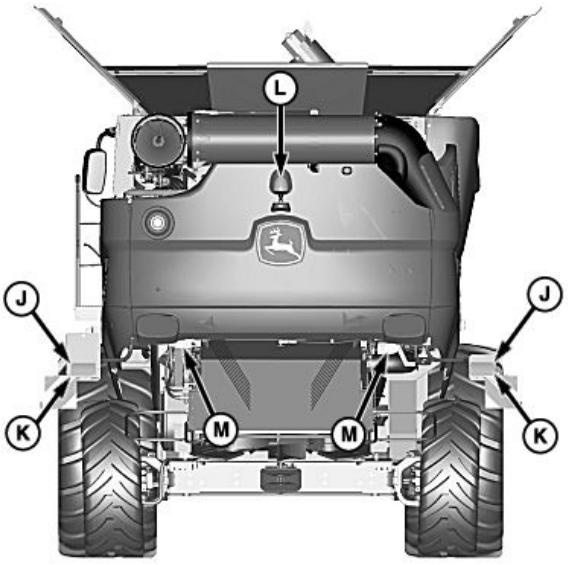
- Switch controls stubble lights (G) and fascia lights (H).
- Stubble lights provide operator with additional lighting behind header for night operation and low light conditions[1].
- Fascia lights provide operator with additional lighting at front of machine during harvest.

[1] *If road lights are ON and machine is in Road Mode, stubble lights, fascia lights and rear discharge lights will not be able to be turned ON.*

**Continued on next page**

OUO6075,0001353 -19-18JUN13-2/6




H107108 —UN—28FEB13

**A—Halogen Cab Headlights or High Intensity Discharge (HID) (Optional) Cab Headlights**
**B—Cab Headlights (High/Low Beam)**
**C—Beacon Lights**
**D—Hazard Lights (Amber)**
**E—Hazard Lights (Amber)**
**F—Marker Lights (White)**
**G—Stubble Lights**
**H—Fascia Lights (If Equipped)**
**I—Lower Driving Lights (If Equipped)**
**J—Marker/Brake Lights (Red)**
**K—Rear Hazard Lights (Amber)**
**L—Beacon Light**
**M—Rear Discharge Lights**

**Rear Discharge Light Switch:**

**CAUTION: To avoid motorist confusion, do not operate work lights when transporting on public roadways.**

- Switch controls rear discharge lights (M).
- Rear discharge lights provide operator with rear area lighting for night operation and low light conditions[1] [2].

**Marker/Brake Lights:**

- Marker/Brake lights (J) come ON when machine senses a deceleration. Lights stay on for a minimum of two seconds.[3]
- Once speed is less than 1.6 km/h (1 mph), brake lights stay on for two minutes or until forward acceleration is sensed and speed is greater than 1.6 km/h (1 mph).
- Marker lights also act as turn indicators, and illuminate when a turn is signaled. Light in direction of turn flashes.

**Exit Lighting:**

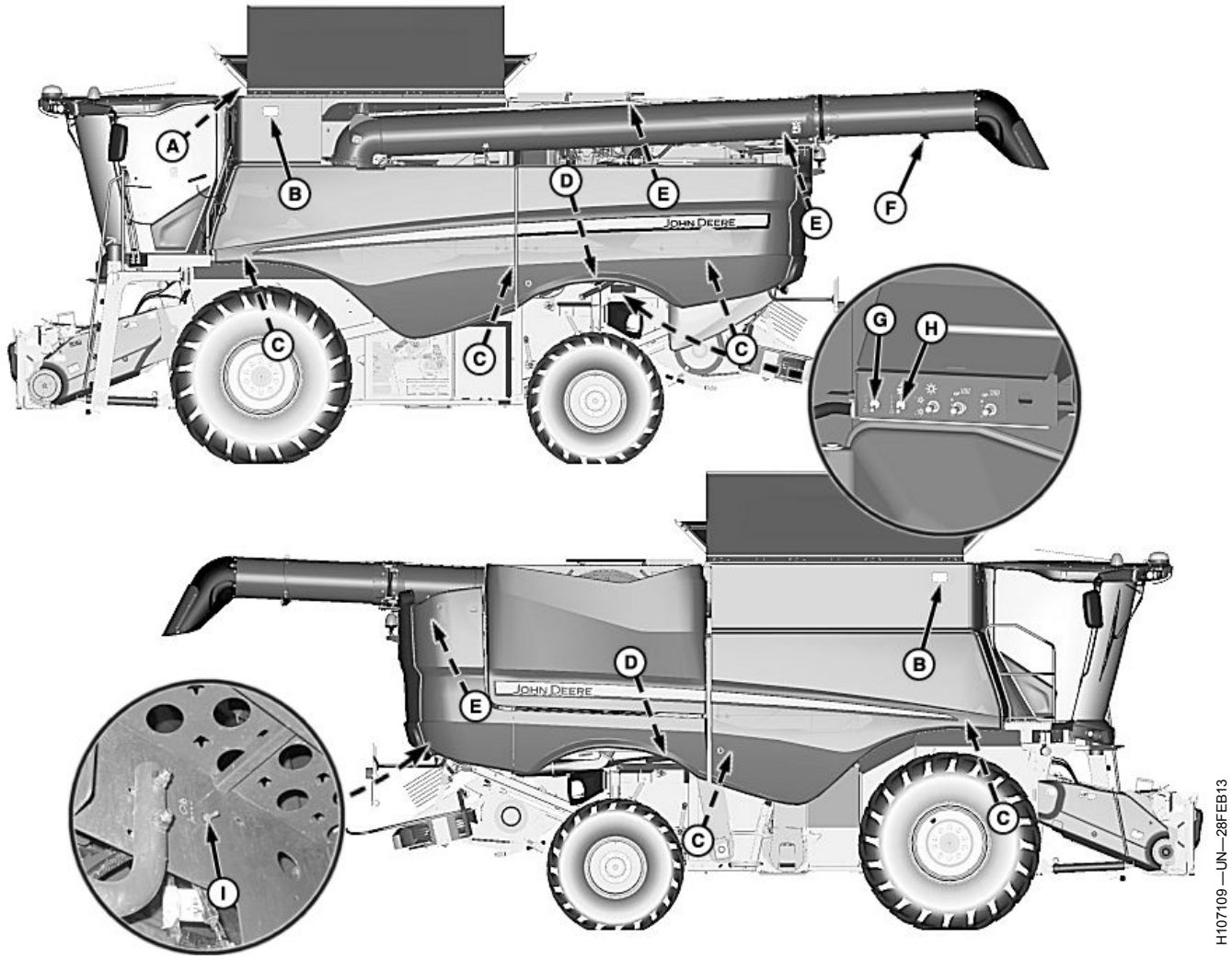
- Two outermost cab headlights (B) remain on for a maximum of 180 seconds after key switch and light switch are turned OFF (if road or field lights were in use within the previous five minutes).

*[1]If road lights are ON and machine is in Road Mode, stubble lights, fascia lights and rear discharge lights will not be able to be turned ON.*
*[2]France Only: If machine is in Road Mode, rear discharge lights will not turn ON.*
*[3]France Only: Brake lights will come ON when brake pedal is pressed.*

**Continued on next page**

OUO6075,0001353 -19-18JUN13-3/6

**Left and Right Side View Lights**




**A—Grain Tank Light**
**B—Row Finder Lights**
**C—Gull Wing Service Lights**
**D—Shoe Service Lights**
**E—Engine Compartment Service Lights**
**F—Unloading Auger Light**
**G—Shoe Service Light Switch**
**H—Gull Wing Service Lights Switch**
**I— Engine Compartment Service Lights Switch**

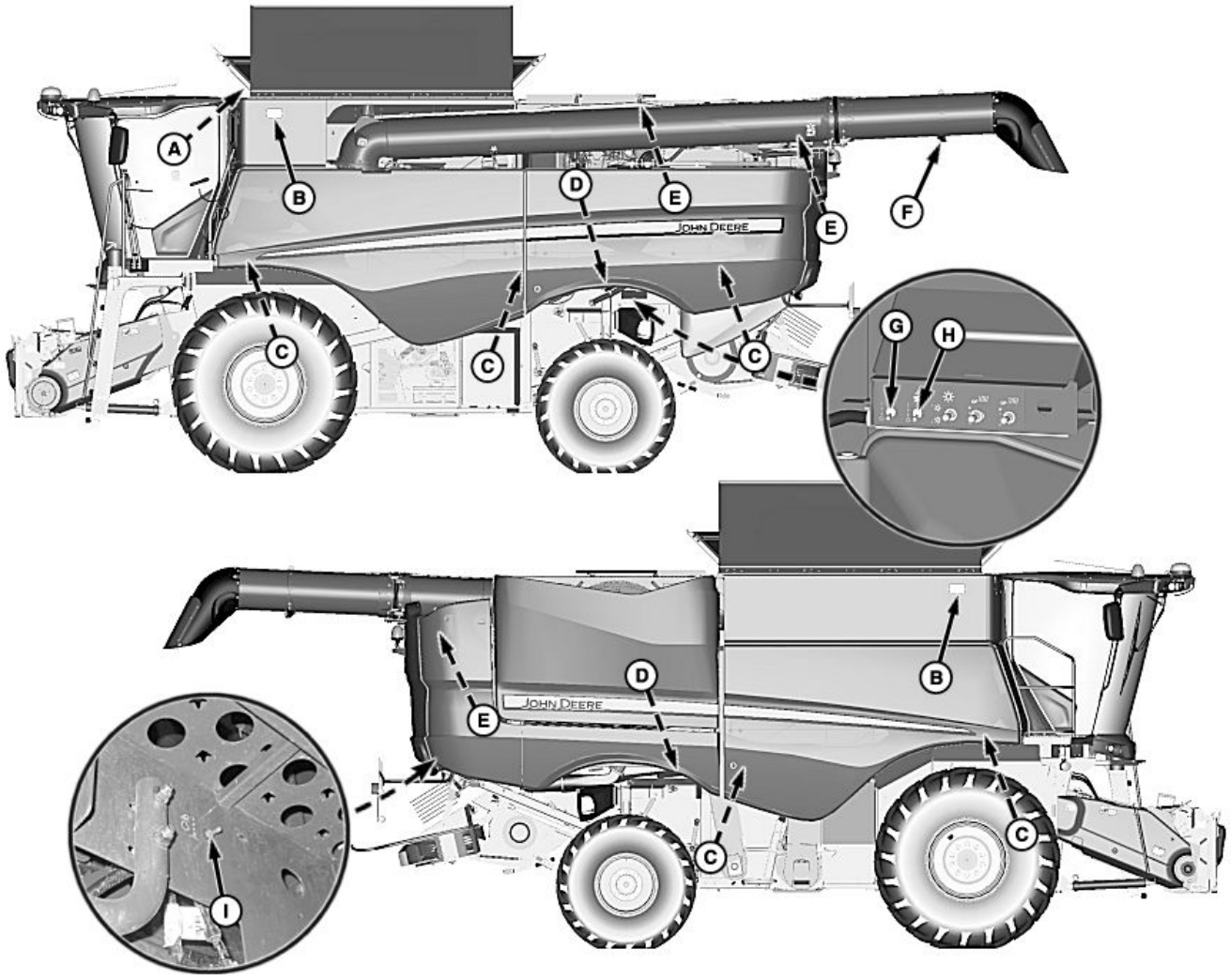
**Field Light Switch:**

- Switch controls grain tank light (A), row finder lights (B) (with turn signal lever), unloading auger light (F) and marker/hazard lights.
- Row finder lights provide operator with area lighting on each side of machine for night operation and low light conditions.

*NOTE: When Field Light switch is ON, use turn signal lever to actuate either right or left side row finder light.*

- Grain tank light provides operator with lighting in grain tank for night operation and low light conditions.
- Grain tank light turns OFF when grain reaches the 3/4 full sensor.
- Unloading auger light comes ON when auger is extended more than 50% with field light switch ON.
- Unloading auger light provides lighting for unloading grain tank at night or low light conditions.

**Continued on next page**




**A—Grain Tank Light**
**B—Row Finder Lights**
**C—Gull Wing Service Lights**
**D—Shoe Service Lights**
**E—Engine Compartment Service Lights**
**F—Unloading Auger Light**
**G—Shoe Service Light Switch**
**H—Gull Wing Service Lights Switch**
**I— Engine Compartment Service Lights Switch**

**Shoe Service Lights:**

- Shoe service lights (D) provide operator with lighting for cleaning shoe adjustment at night or low light conditions.
- Shoe service lights ON/OFF switch (G) is located above left-hand separator shield.
- Illuminates during maintenance and service operations (not during harvest).

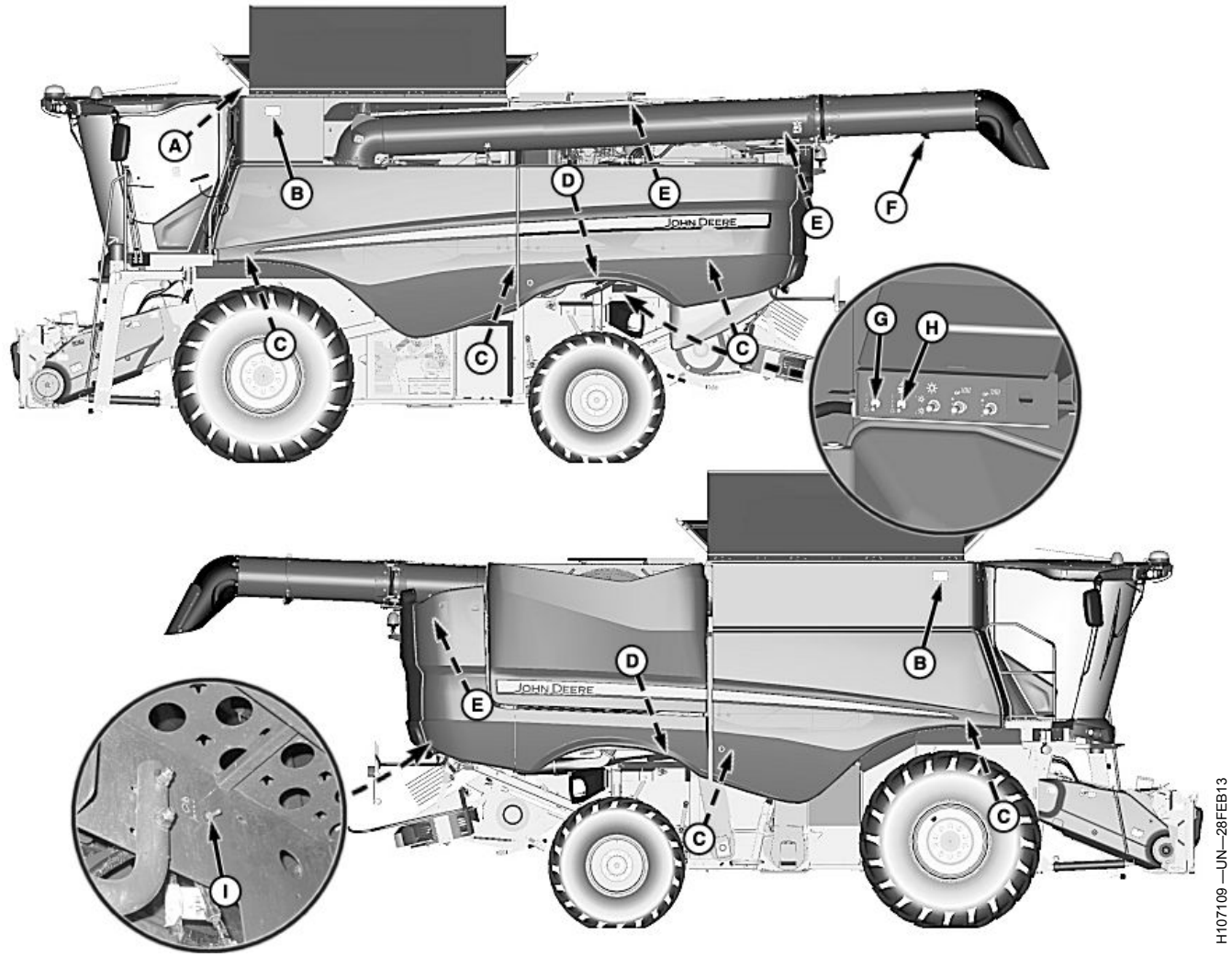
**Gull Wing Service Lights (Optional):**

**CAUTION: Avoid motorist confusion. Do not operate gull wing service lights when transporting.**

- Gull wing service lights (C) are provided on both sides of machine under gull wing doors and provide better visibility of separator area.
- Gull wing service lights ON/OFF switch (H) is located above left-hand separator shield.

**Continued on next page**

OUO6075,0001353 -19-18JUN13-5/6




**A—Grain Tank Light**
**B—Row Finder Lights**
**C—Gull Wing Service Lights**
**D—Shoe Service Lights**
**E—Engine Compartment Service Lights**
**F—Unloading Auger Light**
**G—Shoe Service Light Switch**
**H—Gull Wing Service Lights Switch**
**I— Engine Compartment Service Lights Switch**

**Engine Compartment Service Lights (Optional):**

**CAUTION: Avoid motorist confusion. Do not operate engine compartment service lights when transporting.**

- Engine compartment service lights (E) provide lighting for engine deck area at night or low light conditions.
- Engine compartment service lights ON/OFF switch (I) is located on right-hand rear side of machine.
- Switch controls engine compartment door light, rear engine deck light, and engine compartment front light.
- Illuminates during maintenance and service operations (not during harvest).

**Exit Lighting:**

- Row finder lights (B) remain on for a maximum of 180 seconds after key switch and light switch are turned OFF (if road or field lights were in use within the previous five minutes). Operator chooses to light left or right side of machine using turn signal lever.

OUO6075,0001353 -19-18JUN13-6/6

## Driving Lights (Russia Only)

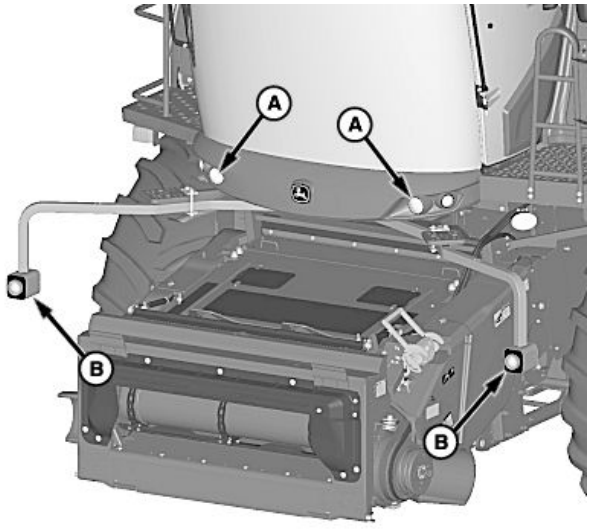
**CAUTION: Road lights must be turned ON when transporting. Swing cab ladder forward to orient marker/hazard light towards oncoming motorists.**

*NOTE: When road lights are ON and no header is connected, lower driving lights turn ON and cab headlights turn OFF. When a header is connected, lower driving lights turn OFF and cab headlights turn ON.*

*Lower driving lights (A) are only available for a max. travel speed of 20 km/h (12.4 mph).*

*Lower driving lights (A) SHOULD be covered and two optional driving lights (B) SHOULD be installed for a max. travel speed of 30 km/h (18.6 mph).*

Road light switch controls lower driving lights (A) and optional driving lights (B). Refer to Light Switches earlier in this section for further information.




H105724 —UN—16NOV12

**A—Lower Driving Lights** **B—Driving Lights (Optional)**

OUO6075,00012CF -19-26OCT12-1/1

## Lighting Delay/Timeout

When all lights are first turned to the ON position with key switch OFF, there will be a slight delay. Machine is determining whether current battery voltage exists to operate lights without machine running. This feature is built into the machine to help prevent too much voltage being drawn from the battery, which may prevent machine from starting.

*NOTE: After Cleaning Shoe Lights, Service Lights or Engine Compartment Service Lights are ON for over ten minutes lights will flash, then turn OFF momentarily, then back ON for 20 seconds. This cycle will continue for three minutes then lights will turn OFF until switch is cycled. If lights do not come back on after switch is cycled, machine has determined that battery voltage is too low to allow light operation. Lights will come on again once the engine is running and the batteries are recharging.*

OUO6075,0001354 -19-27NOV12-1/1

## Turn Signals

*NOTE: Turn signals operate anytime key switch is ON. With field light switch ON, turn signal lever actuates either right or left row finder light. Turn signals are not self-cancelling, so lever must be moved to neutral position.*

When operating machine on road or highway, use turn signal lever (A) to indicate turns.

*NOTE: Indicator lights (left or right) on cornerpost illuminate and indicate a turn.*




H95266 —UN—22JUN11

**A—Turn Signal Lever**

OUO6075,0000682 -19-29JUN11-1/1

## Cab Interior Light

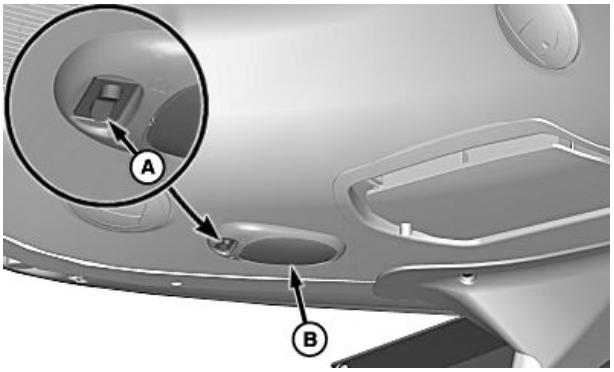
Dome light provides overhead lighting for use at night or in low light conditions.

Light switch (A) controls dome light (B).

Light switch is a three position switch:

- ON (left)
- OFF (center)
- Automatic (right) (open cab door)

**A—Light Switch** **B—Dome Light**




H94501 —UN—06AUG09

OUO6075,0000683 -19-03FEB10-1/1

## Map Light

Map light provides overhead lighting for use at night or in low light conditions.

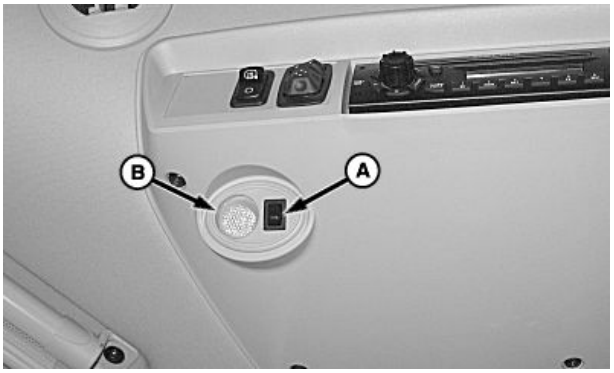
Light switch (A) controls map light (B).

*NOTE: Adjust map light as needed.*

Light switch is a two-position switch:

- ON
- OFF

**A—Light Switch** **B—Map Light**




H96823 —UN—10JUN10

OUO6075,00007D1 -19-02NOV10-1/1

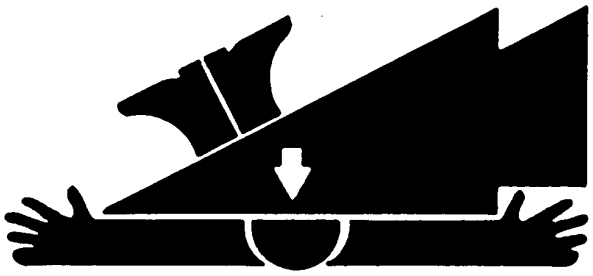
## Hydraulic Cylinder Safety Stop

**CAUTION: Shut OFF engine, set parking brake and remove key.**

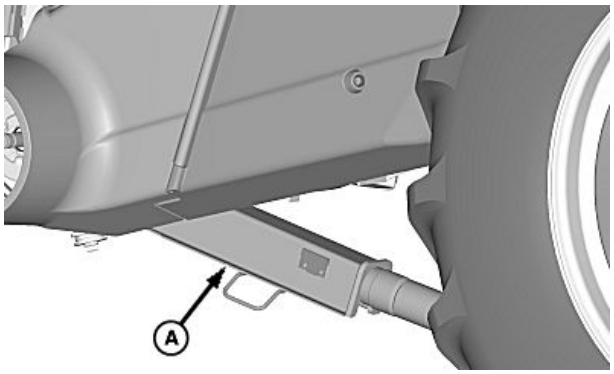
**Cracking of hydraulic line fittings to lower feeder house results in an instantaneous dropping of feeder house and header.**

Lower safety stop (A) onto hydraulic cylinder rod.

**A—Safety Stop**



TS696 —UN—21SEP89




H90891 —UN—26FEB08

OUO6075,0000657 -19-02FEB10-1/1

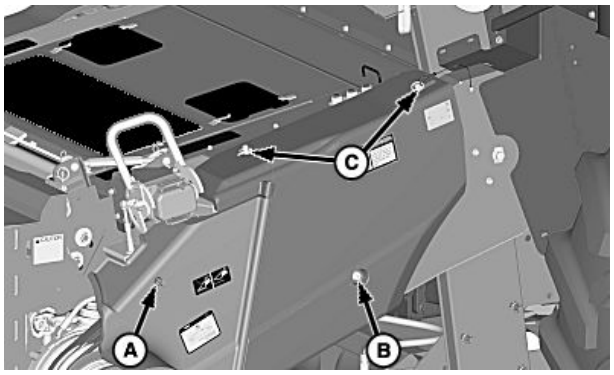
## Feeder House Side Shields

**CAUTION: Raise feeder house, lower safety stop, shut OFF engine, set parking brake and remove key.**

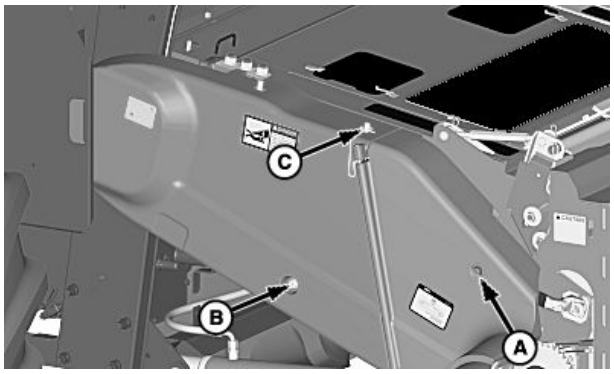
Feeder house shields have a front and rear shield. Turn latch (A) and swing front shield open for service.

Turn latch (B) and remove quick-lock pins (C) to remove rear shield.

**A—Latch**
**B—Latch**
**C—Quick-Lock Pin**




H91044 —UN—27MAR08




H91045 —UN—27MAR08

OUO6075,0000677 -19-02FEB10-1/1

## Feeder House Doors

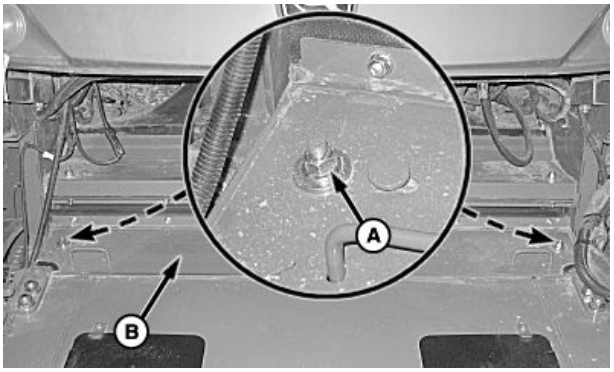
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nuts (A) on each side of the door and push nuts towards center of feeder house.

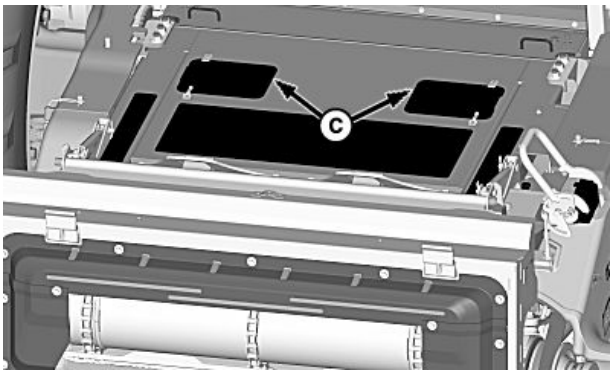
Pull door (B) forward to remove.

Lift doors (C) to access inside of feeder house.

**A—Nuts**
**B—Door**
**C—Doors**




H100486 —UN—28FEB11




H90905 —UN—27FEB08

OUO6075,0000B6F -19-21MAR11-1/1

## Feed Accelerator Top Access Door

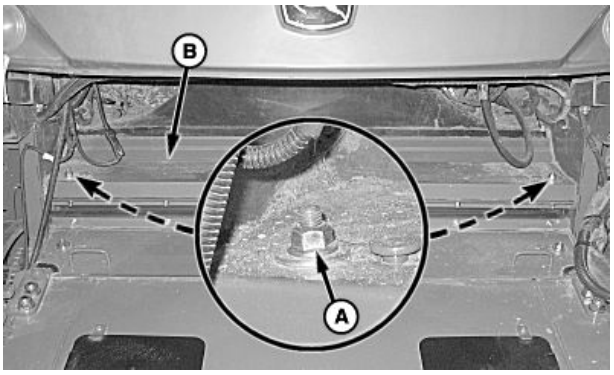
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen locking nuts (A) on each side of the door and push locking nuts towards center of machine.

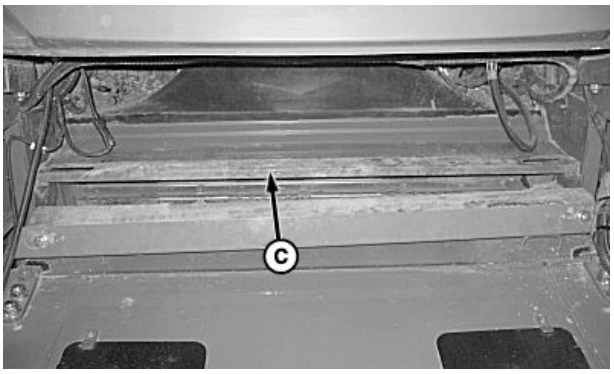
Pull door (B) forward to remove.

Slide door (C) forward to remove.

**A—Locking Nuts**
**B—Door**
**C—Door**




H100487 —UN—28FEB11




H100488 —UN—28FEB11

OUO6075,0000B70 -19-21MAR11-1/1

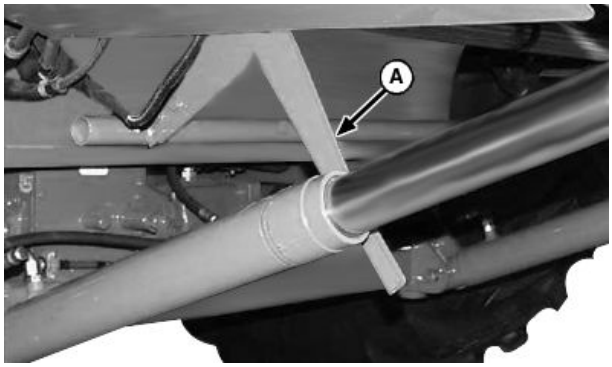
## Feeder House Bottom Door and Feedplate Seal Support

**CAUTION: Raise feeder house, lower safety stop, shut OFF engine, set parking brake and remove key.**

Remove quick-lock pin and move lever (A) down and rearward to open door.

**IMPORTANT: Lever will be bent if left down when feeder house is lowered.**

Push lever forward and up to close door. Retain with quick-lock pin.




H52761 —UN—17MAY99

**A—Lever**

OUO6075,000065B -19-02FEB10-1/2

If feeder house door does not seal (A) tight, grain leakage could occur.

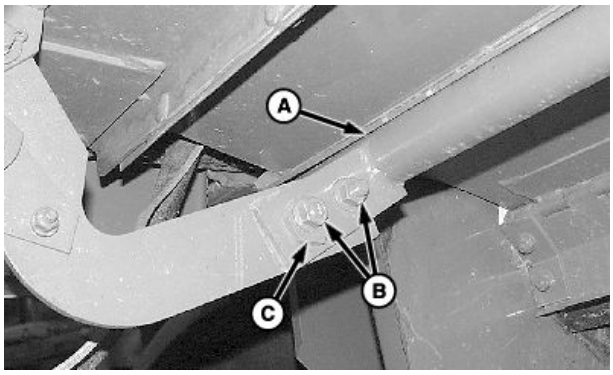
Loosen cap screws (B) on both sides.

Turn eccentric (C).

Tighten cap screw securing eccentric.

Tighten remaining cap screws.

**A—Seal**
**B—Cap Screws**
**C—Eccentric**




H74778 —UN—14JAN03

OUO6075,000065B -19-02FEB10-2/2

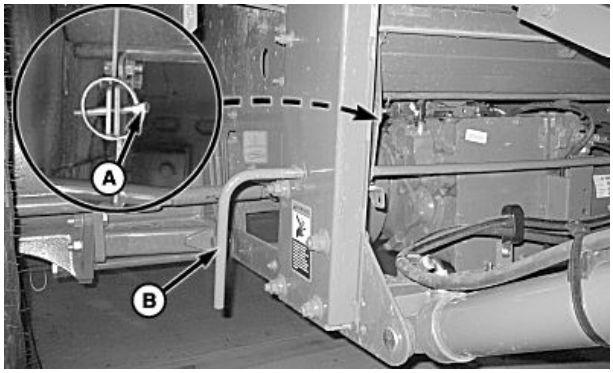
## Stone Trap

**CAUTION: Raise feeder house, lower safety stop, shut OFF engine, set parking brake and remove key.**

Stone trap protects the cylinder and concave from rock or stone damage.

Remove quick-lock pin (A) and move lever (B) up to open stone trap.

Move lever down to close stone trap. Retain with quick-lock pin.




H99239 —UN—01DEC10

**A—Quick-Lock Pin** **B—Lever**

OUO6075,000065C -19-01DEC10-1/1

## Feeder House Fore/Aft Tilt Frame—Adjusting

**CAUTION: Lower header to ground to relieve tension from fore/aft tilt frame turnbuckles. Shut OFF engine, set parking brake and remove key.**

Fore/Aft tilt frame is used to set the correct relationship between platform skid plates and the ground. It compensates for different tire sizes, rear axle settings, and other variables.

Loosen tilt frame nuts (A) and nut (B) on both sides.

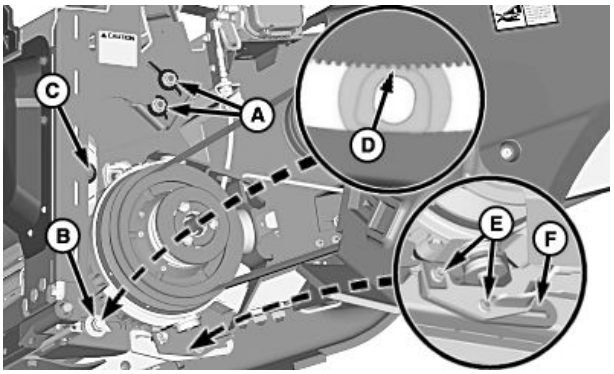
**IMPORTANT: Do not loosen cap screw (C).**

Disengage washer splines (D) from support plate on both sides.

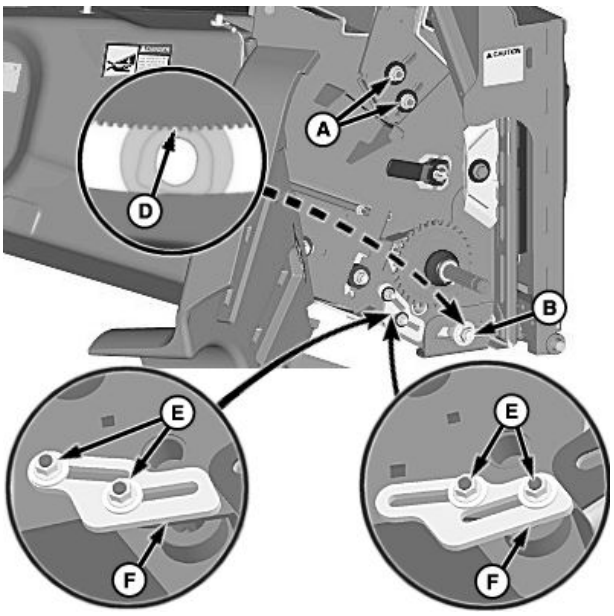
*NOTE: Move right-hand stop plate to rearward mounting holes if needed.*

Loosen nuts (E) and move stop plate (F) rearward on both sides.

**A—Tilt Frame Nuts, M16**
**B—Tilt Frame Nut, M20**
**C—Cap Screw**
**D—Washer Splines**
**E—Nuts**
**F—Stop Plate**




H95791 —UN—22MAR10




H105003 —UN—08MAR12

*Rearward Holes (Left) / Forward Holes (Right)*

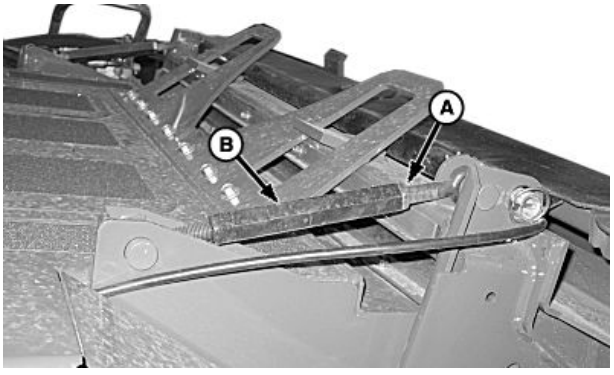
OUO6075,0001191 -19-05SEP12-1/4

**IMPORTANT: Hose clamp on multi-coupler may need to be repositioned when adjusting fore/aft tilt frame.**

Loosen nut (A) and adjust turnbuckle (B) on both sides as needed for correct header angle.

Tighten turnbuckle nut on both sides.

**A—Nut**
**B—Turnbuckle**




H105751 —UN—05SEP12

**Continued on next page**

OUO6075,0001191 -19-05SEP12-2/4

Engage washer splines (D) into support plate and tighten tilt frame nuts (A and B) on both sides to specification.

**Specification**

M16 Tilt Frame Nuts
(A)—Torque.....300 N·m (221 lb-ft)

M20 Tilt Frame Nut
(B)—Torque.....620 N·m (460 lb-ft)

**IMPORTANT: No gap should exist between stop plates and fore/aft tilt frame after tightening nuts.**

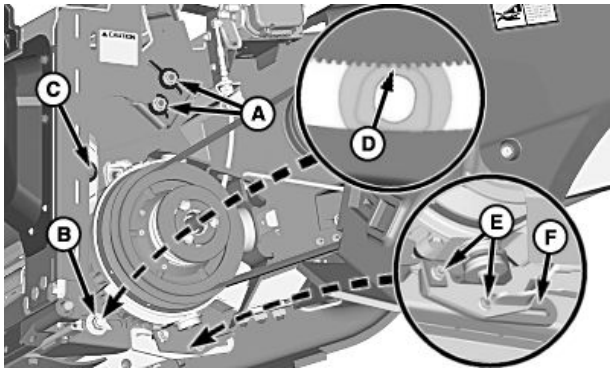
*NOTE: Attach right-hand stop plate to forward or rearward holes as needed.*

Move stop plate (F) fully forward on both sides and tighten nuts (E) to specification.

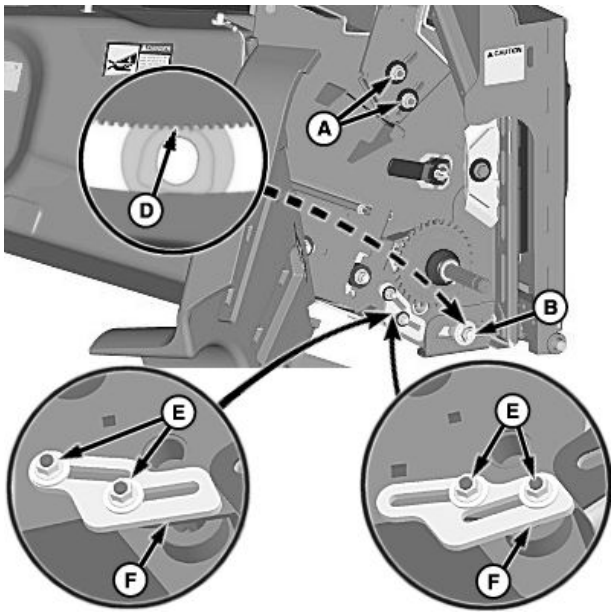
**Specification**

Stop Plate
Nuts—Torque.....130 N·m (96 lb.-ft.)

**A—Tilt Frame Nuts, M16**
**B—Tilt Frame Nut, M20**
**C—Cap Screw**
**D—Washer Splines**
**E—Nuts**
**F—Stop Plate**




H95791 —UN—22MAR10




H105003 —UN—08MAR12

*Rearward Holes (Left) / Forward Holes (Right)*

OUO6075,0001191 -19-05SEP12-3/4

Tilt adjustment is set to an approximate position at factory, but if tires or axle positions are changed, it may be necessary to readjust. An approximate setting can be obtained without a header attached by the following:

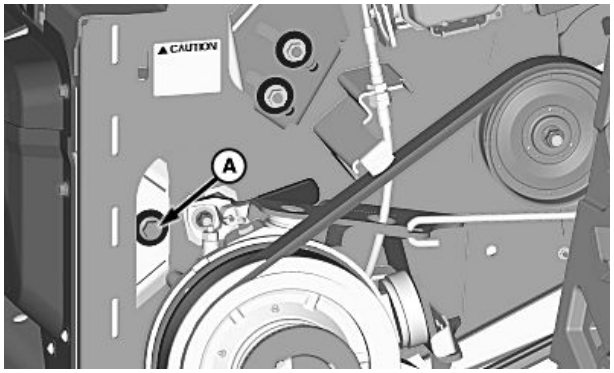
- With machine on a smooth level surface, lower or raise feeder house until pivot bolt (A) to ground distance is set to specification.

**Specification**

Pivot Bolt To
Ground—Distance..... 865 mm (34 in.)

- Using a level as a reference, adjust fore/aft tilt frame until front face is vertical.

If further adjustment is necessary, refer to header operator's manual for additional adjustments.




H94359 —UN—24JUN09

**A—Pivot Bolt**

OUO6075,0001191 -19-05SEP12-4/4

## Feeder House Conveyor Chain—Adjusting

Remove feeder house shields on both sides.

One offset link on each chain strand must be removed when washer (A) aligns with inner edge of front embossment (B) as shown.

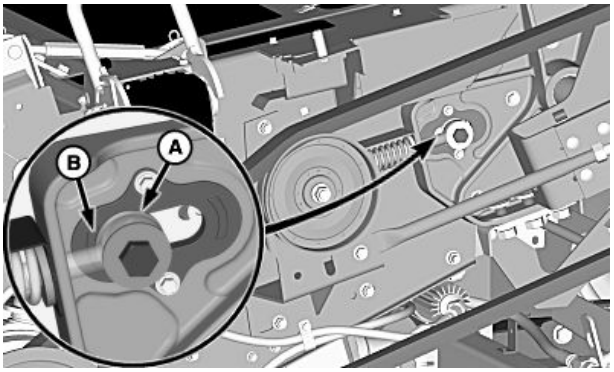
Tighten nut (C) on both sides of feeder house until washer (D) is between end of gauge (E) and bottom of step.

*NOTE: Check tension on both sides every 25 hours for the first 100 hours.*

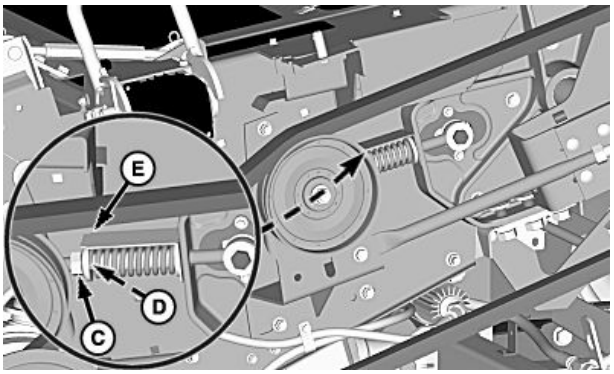
- Check tension on both sides every 100 hours. Adjust when any part of washer is beyond end of gauge.
- Out-of-round sprockets or drum and bent shafts can cause chain tension to be uneven, too tight, or too loose.
- Excessive chain tension causes shaft and bearing failures.

Install feeder house side shields.

**A—Washer**
**B—Embossment**
**C—Nut**
**D—Washer**
**E—Gauge**




H94329 —UN—19JUN09




H94336 —UN—22JUN09

OUO6075,000067C -19-22NOV10-1/1

## Feeder House Conveyor Chain Links—Removing

*NOTE: When replacing chain links always check sprockets for wear.*

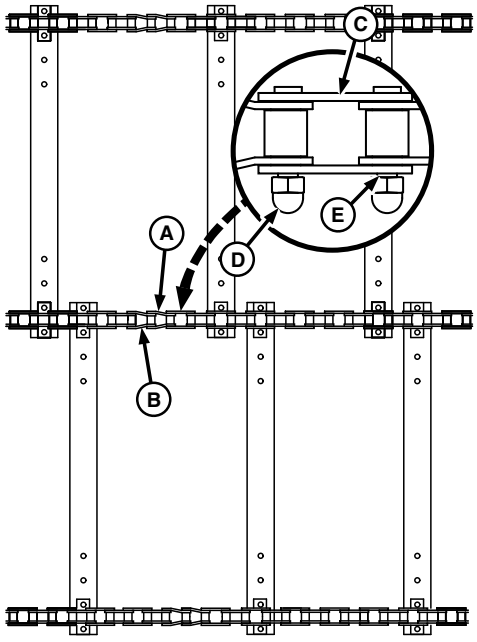
Remove offset links (A) for initial chain adjustment.

Remove offset links (B) for second adjustment. When adjustment is used up from second adjustment, chain is worn out and must be replaced.

| Specification | |
|---|---|
| "U" Slat M10 Hardware—Torque | 73 N·m (54 lb-ft) |
| Chain Link M8 Cap Nuts—Torque | 25 N·m (18 lb-ft) |

**IMPORTANT: When installing connector links, cap nuts must be oriented away from drum rings.**

**When chain link cap nuts (D) are torqued to specification, gap (E) should exist between connector link sidebar (C) and cap nut.**




H87543 —UN—17APR07

**A—Offset Link**
**B—Offset Link**
**C—Sidebar**
**D—Cap Nut**
**E—Gap, 1—2 mm (3/64 in.—5/64 in.)**

OUO6075,000067D -19-02FEB10-1/1

## Feeder House Drum—Height Adjustment

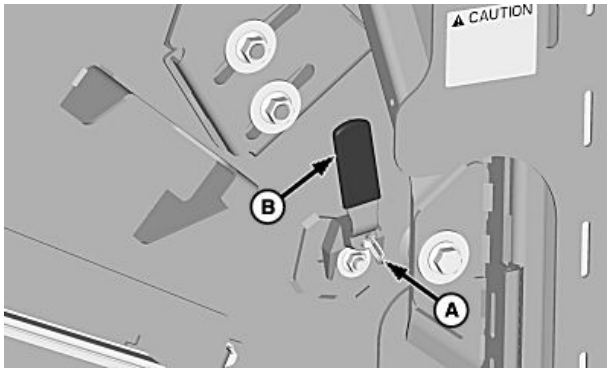
**CAUTION: Raise feeder house, lower safety stop, shut OFF engine, set parking brake and remove key.**

Open feeder house shields.

Pull and hold pin (A) while rotating handle (B) to desired crop position on both sides.

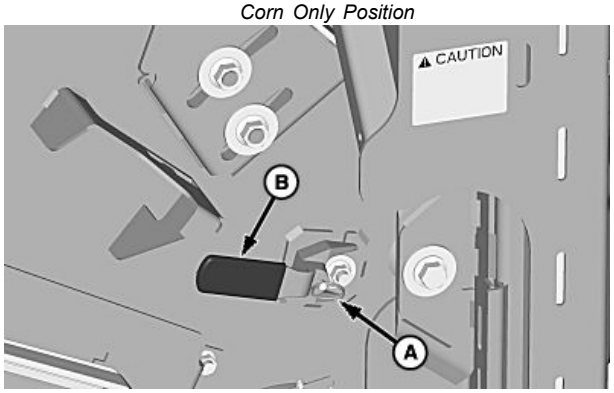
Close feeder house shields.

**A—Pin** **B—Drum Height Handle**




H90908 —UN—27FEB08

*Corn Only Position*




H90909 —UN—27FEB08

*Small Grain Position*

OUO6075,000067E -19-02FEB10-1/1

## Feeder House Conveyor Speed—Changing

**CAUTION: Raise feeder house, lower safety stop, shut OFF engine, set parking brake and remove key.**

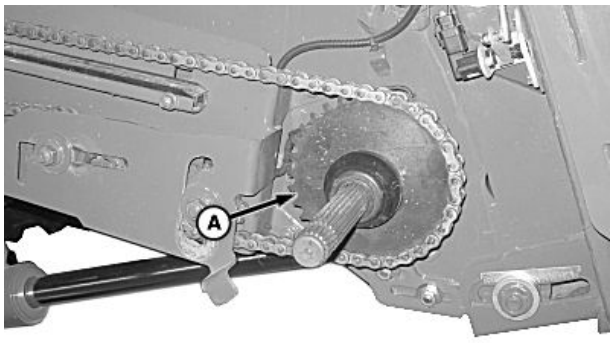
*NOTE: Refer to Crop Settings section for recommended feeder house conveyor sprocket settings.*

**Important Notes About 32-Tooth Sprocket:**
- Sprocket is not recommended for corn use.

**Recommended for conditions when feeding is poor due to following crops and conditions:**
- **Crops:** Barley, Canola, Oats, Rice, Rye, and Wheat
- **Conditions:** High Volume, Green, Wet, Windrowed, and Poor Feeding

As crop conditions change or feeding improves (dryer, more even windrows, lighter straw), it is recommended to use the 26 tooth sprocket. Chain speed slows and reduces potential for straw damage or pre-threshing and extends chain life.

Feeder conveyor chain can be set to two different speeds by selecting drive sprocket (A) on right-hand side of the lower shaft.




H102187 —UN—13JUN11

**A—Sprocket**

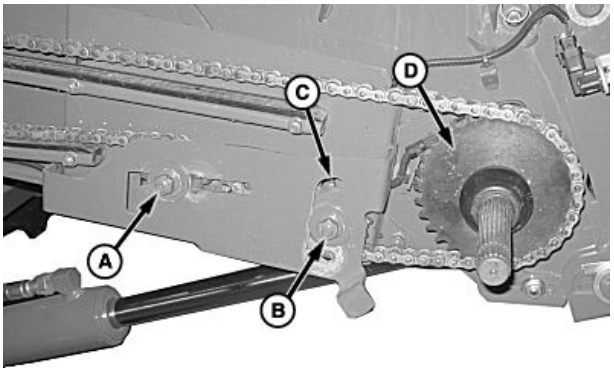
Use small sprocket for slow speed and large sprocket for high speed.

**Continued on next page**

OUO6075,0000661 -19-13JUN11-1/4

1. **To move drive chain to smaller sprocket:** Open right-hand front shield.
2. Loosen nut (A) and push sprocket rearward.
3. Loosen nut (B) and move sprocket to upper position (C).
4. Push in on coupler and move sprocket (D) outward until it engages detent.

**A—Nut**
**B—Nut**
**C—Upper Position**
**D—Sprocket**

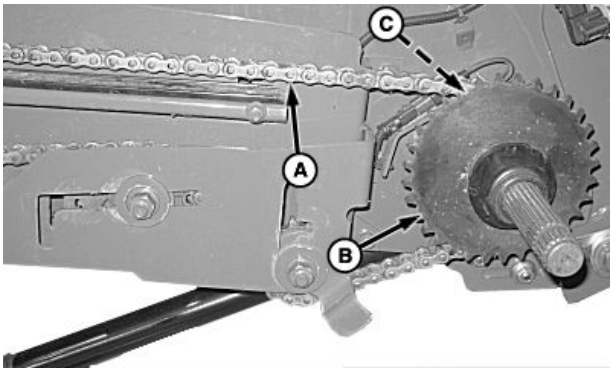



H102188 —UN—13JUN11

OUO6075,0000661 -19-13JUN11-2/4

5. Move chain (A) from large sprocket (B) to small sprocket (C).

**A—Chain**
**B—Large Sprocket**
**C—Small Sprocket**




H102189 —UN—13JUN11

**Continued on next page**

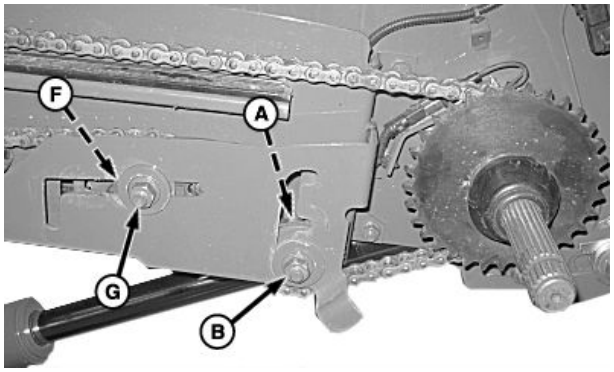
OUO6075,0000661 -19-13JUN11-3/4

6. Move sprocket (A) to lower position and tighten nut (B).
7. Loosen nuts (C) and slide chain guide (D) into desired notches (E) and tighten nuts.

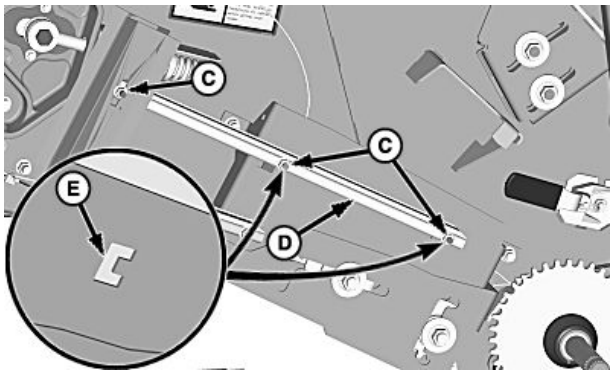
*NOTE: Do not over tighten feeder conveyor drive chain. It is acceptable for chain to ride on plastic guide.*

8. Use pry bar in holes of inside plate to move sprocket (F) forward and tighten nut (G).
9. Close right-hand front shield.

**A—Sprocket**
**B—Nut**
**C—Nuts**
**D—Chain Guide**
**E—Notches**
**F—Sprocket**
**G—Nut**




H102190 —UN—13JUN11




H91064 —UN—02APR08

OUO6075,0000661 -19-13JUN11-4/4

## Feeder House Conveyor Drive Chain—Adjusting

**⚠ CAUTION: Raise feeder house, lower safety stop, shut OFF engine, set parking brake and remove key.**

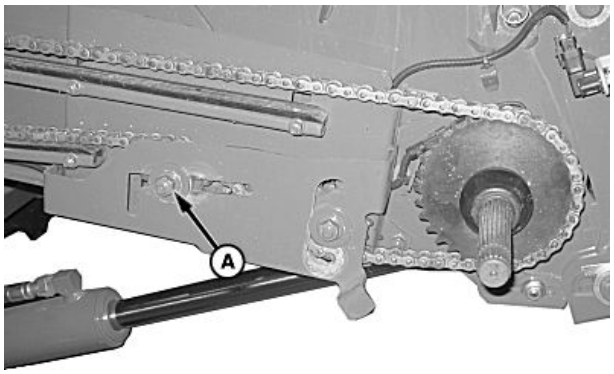
Open right-hand front shield.

Loosen nut (A) and push sprocket rearward.

*NOTE: Do not over tighten feeder conveyor drive chain. It is acceptable for chain to ride on plastic guide.*

Use pry bar in holes on inside plate to move sprocket forward and tighten nut (A).

Close right-hand front shield.




H102191 —UN—13JUN11

**A—Nut**

OUO6075,0000662 -19-13JUN11-1/1

## Feeder House Top Shaft Stripper—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

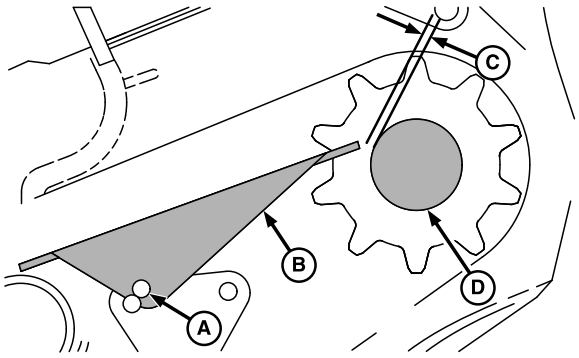
If top feeder house shaft should wrap, check to see that the strippers are adjusted as follows:

Remove top feeder house door.

Loosen bolts (A) and set stripper (B) to 3 mm (1/8 in.) (C) from top shaft (D).

| Specification | |
|---|---|
| Stripper Location—Distance | 3 mm (1/8 in.) |

Tighten bolts (A) and install top feeder house door.




H59570 —UN—18AUG99

**A—Bolts**
**B—Stripper**
**C—Dimension 3 mm (1/8 in.)**
**D—Top Shaft**

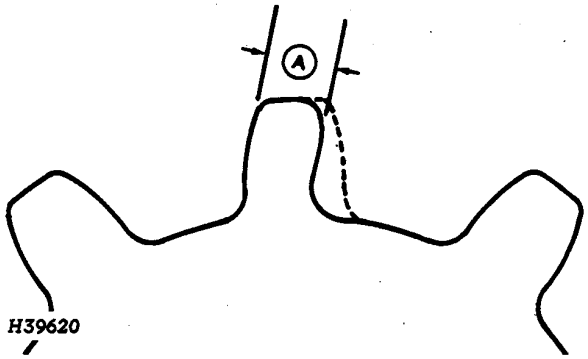
OUO6075,0000664 -19-02FEB10-1/1

## Feeder House Top Shaft Sprockets

After 1000 hours, depending on the crops being harvested, check the upper shaft sprockets for wear.

If these sprockets are worn past 12 mm (1/2 in.) (A), sprockets can be reversed for additional wear.

**A—Dimension 12 mm (1/2 in.)**




H39620 —UN—11OCT88

OUO6075,0000665 -19-02FEB10-1/1

## Feeder House Variable Speed Drive Belt—Replacing

**CAUTION: Lower variable sheave is under spring tension; if belt is removed, it will snap back to a closed position.**

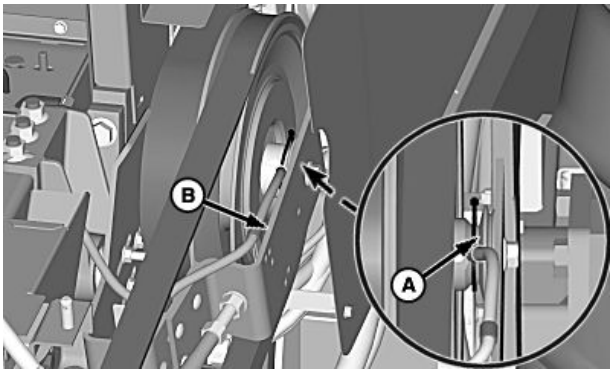
Start engine, engage separator and move engine speed switch to fast idle. **Adjust feeder house drive belt to slow front shaft speed.**

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Disengage separator, stop engine, and remove key.

Lower safety stop and remove left-hand feeder house shields.

Look under rubber boot (A) to verify if upper sheaves are fully open. At low speed position, outer sheave half bulb is against bracket (B).




H90912 —UN—28FEB08

**A—Rubber Boot**
**B—Bracket**

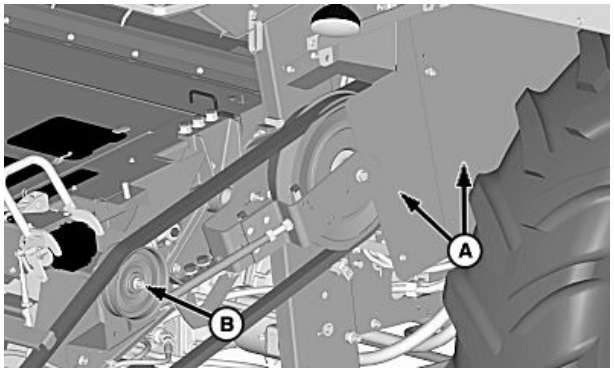
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OUO6075,0000666 -19-02FEB10-1/6

Remove shields (A).

Loosen idler nut (B) to relieve drive belt tension.

**A—Shields** **B—Nut**

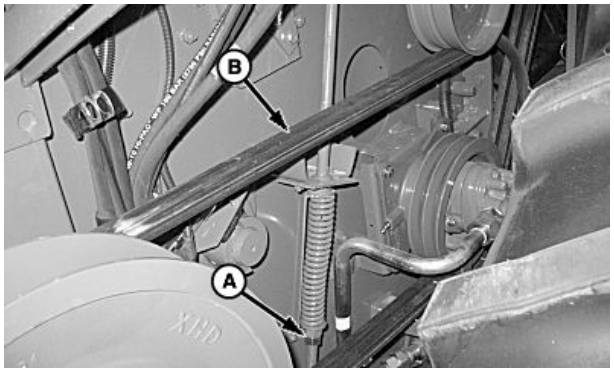



H90910 —UN—27FEB08

OUO6075,0000666 -19-02FEB10-2/6

Loosen nuts (A) to relieve tension on reel drive belt (B).

**A—Nut** **B—Drive Belt**



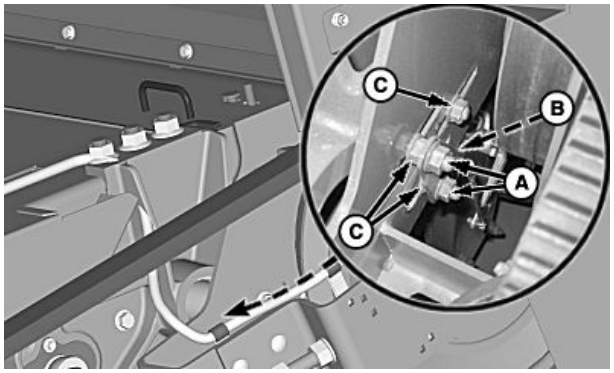

H90976 —UN—06MAR08

OUO6075,0000666 -19-02FEB10-3/6

Remove and retain nuts (A) and bracket (B).

Loosen nuts (C) to allow upper sheave assembly to move.

**A—Nuts (2 Used)**
**B—Bracket**
**C—Nuts (3 Used)**




H90967 —UN—05MAR08

**Continued on next page**

OUO6075,0000666 -19-02FEB10-4/6

*NOTE: Nut (C) must be moved and jammed against nut (A). Together these nuts can be used to turn tensioner bolt.*

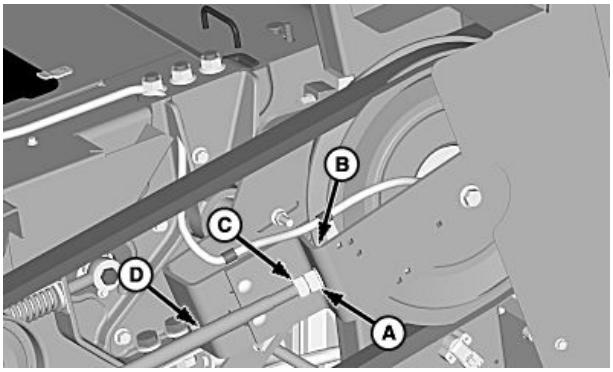
Loosen nut (A) away from bracket (B) until a 3 mm (1/8 in.) gap exists between either side of bracket.

Tighten nut (C) against nut (A).

*NOTE: Threading bolt into tensioner allows sheave to move forward to remove drive belt.*

Use nut (A) to screw threaded bolt into tensioner (D).

**A—Nut**
**B—Bracket**
**C—Nut**
**D—Tensioner**




H90913 —UN—28FEB08

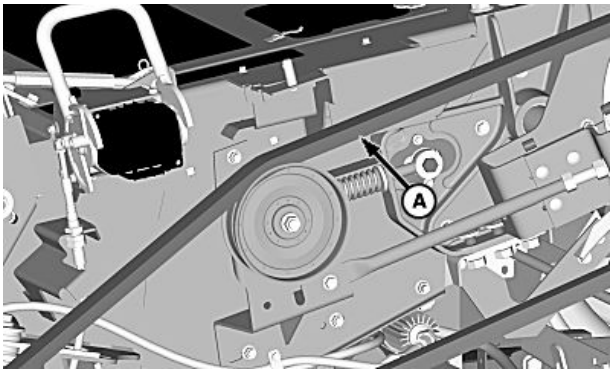
OUO6075,0000666 -19-02FEB10-5/6

Remove drive belt (A) from sheaves.

Install replacement drive belt and adjust tension. (See Feeder House Variable Speed Belt—Adjusting).

Install bracket and feeder house shields previously removed.

**A—Drive Belt**




H90911 —UN—28FEB08

OUO6075,0000666 -19-02FEB10-6/6

## Feeder House Variable Speed Drive Belt—Adjusting

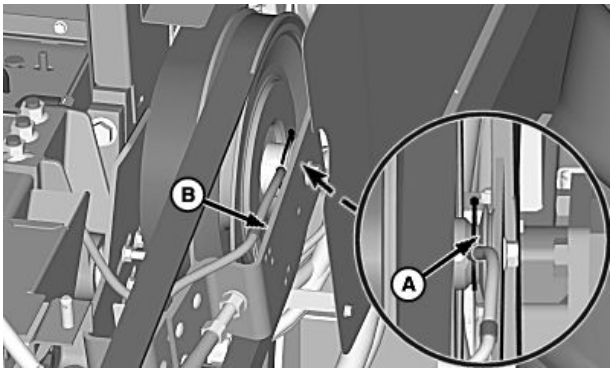
*NOTE: Minor adjustments can be made to variable speed belt by raising idler. If a 3 mm (1/8 in.) gap cannot be reached by raising idler, proceed to next step.*

Start engine, engage separator and move engine speed switch to fast idle. **Adjust feeder house drive belt to slow front shaft speed.**

Disengage separator, stop engine, and remove key.

Lower safety stop and remove left-hand feeder house shields.

Look under rubber boot (A) to verify if upper sheaves are fully open. At low speed position, outer sheave half bulb is against bracket (B).




H90912 —UN—28FEB08

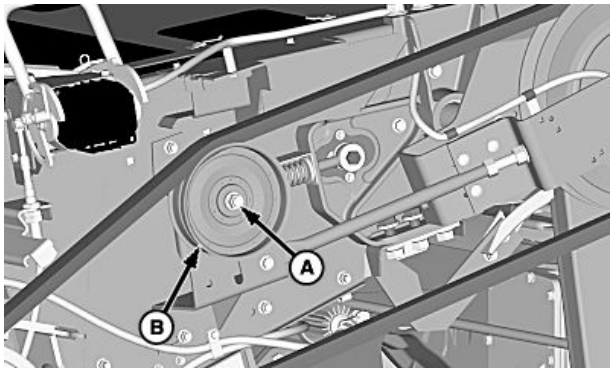
**A—Rubber Boot** **B—Bracket**

**Continued on next page**

OUO6075,0000667 -19-02FEB10-1/9

Loosen nut (A) to adjust idler (B) to lower position.

**A—Nut** **B—Idler**



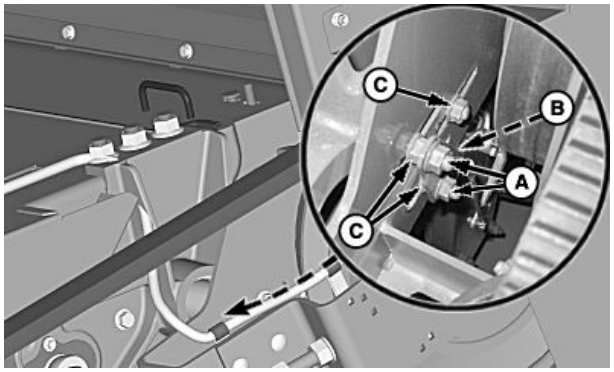

H90914 —UN—28FEB08

OUO6075,0000667 -19-02FEB10-2/9

Remove and retain nuts (A) and bracket (B).

Loosen nuts (C) to allow upper sheave assembly to move.

**A—Nuts (2 Used)** **C—Nuts (3 Used)**
**B—Bracket**




H90967 —UN—05MAR08

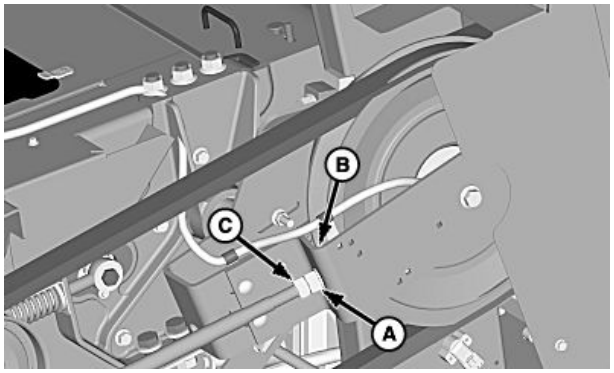
OUO6075,0000667 -19-02FEB10-3/9

*NOTE: Nut (C) must be moved and jammed against nut (A). Together these nuts can be used to turn tensioner bolt.*

Loosen nut (A) away from bracket (B) until a 3 mm (1/8 in.) gap exists between either side of bracket.

Tighten nut (C) against nut (A).

**A—Nut** **C—Nut**
**B—Bracket**




H90915 —UN—28FEB08

**Continued on next page**

OUO6075,0000667 -19-02FEB10-4/9

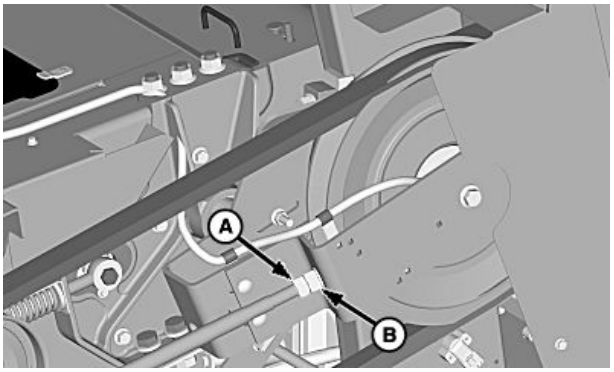
**IMPORTANT: Rotate belt while adjusting sheave gap. Failure to rotate belt while adjusting sheave gap results in belt damage.**

**A gap between sheave halves is important so sheave halves can grip belt when in slow speed position. Cutting platform drive shaft speed must be at slow speed.**

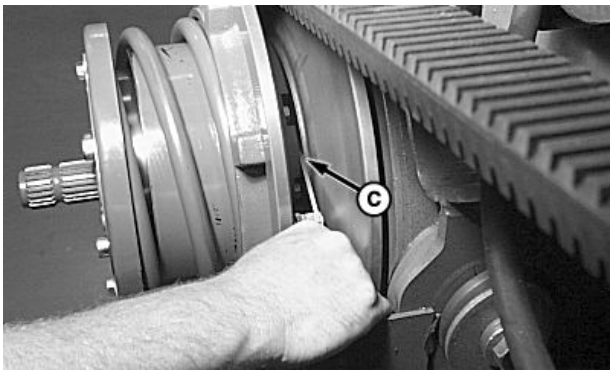
Turn nut (A) to adjust bolt (B).

Move upper variable sheaves with bolt until a 3 mm (1/8 in.) gap exists between lower sheave halves or upper sheave assembly reaches end of slots.

**A—Nut**
**B—Bolt**
**C—Gap, 3 mm (1/8 in.)**




H90916 —UN—28FEB08

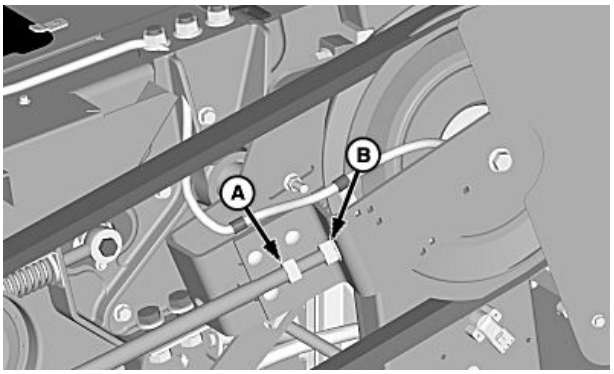



H84140 —UN—26JUL05

OUO6075,0000667 -19-02FEB10-5/9

Tighten nut (A) first and then nut (B).

**A—Nut**
**B—Nut**



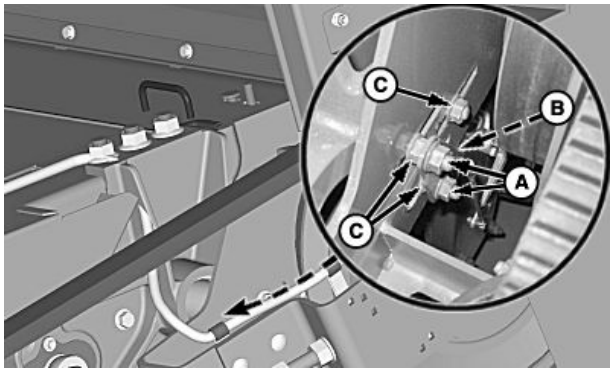

H90917 —UN—28FEB08

**Continued on next page**

OUO6075,0000667 -19-02FEB10-6/9

Tighten nuts (C) and install bracket (B) and retain with nuts (A).

**A—Nuts (2 Used)**
**B—Bracket**
**C—Nuts (3 Used)**




H90967 —UN—05MAR08

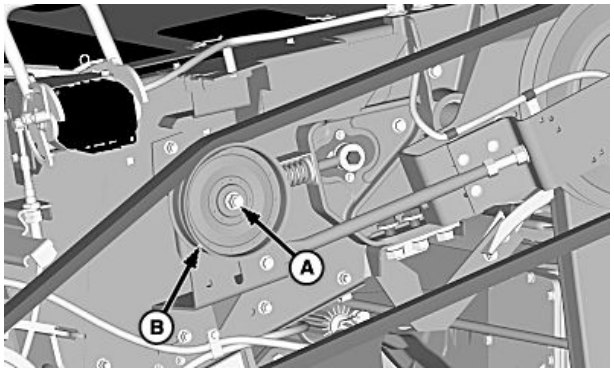
OUO6075,0000667 -19-02FEB10-7/9

**IMPORTANT: DO NOT stand on belt while pushing up on idler to set gap.**

Raise idler (A) until idler touches drive belt.

Raise sheave an additional 25 mm (1 in.) and tighten nut (B).

**A—Idler**
**B—Nut**



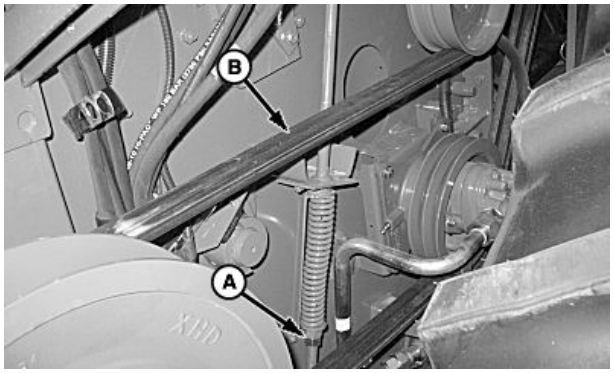

H90914 —UN—28FEB08

OUO6075,0000667 -19-02FEB10-8/9

Tighten adjusting nut (A) to position washer between end of gauge and bottom of step to adjust reel drive belt (B).

Install feeder house shields.

**A—Nut**
**B—Drive Belt**




H90976 —UN—06MAR08

OUO6075,0000667 -19-02FEB10-9/9

## Header Reel/Belt Pickup Pump Belt (Variable Speed Feeder House)—Replacing

**CAUTION: Lower variable sheave is under spring tension; if belt is removed, it will snap back to a closed position.**

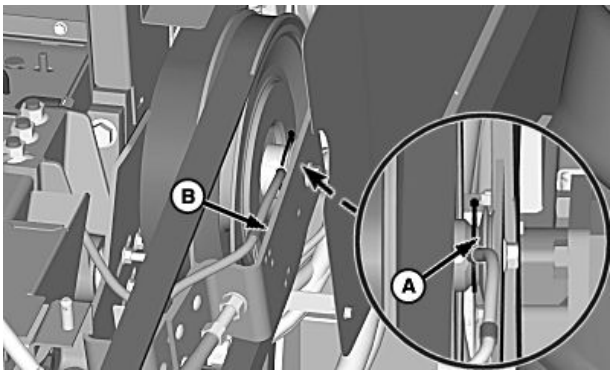
Start engine, engage separator and move switch to fast idle. **Adjust feeder house drive belt to slow front shaft speed.**

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Disengage separator, stop engine, and remove key.

Lower safety stop and remove left-hand feeder house shields.

Look under rubber boot (A) to verify if upper sheaves are fully open. At low speed position, outer sheave half bulb is against bracket (B).



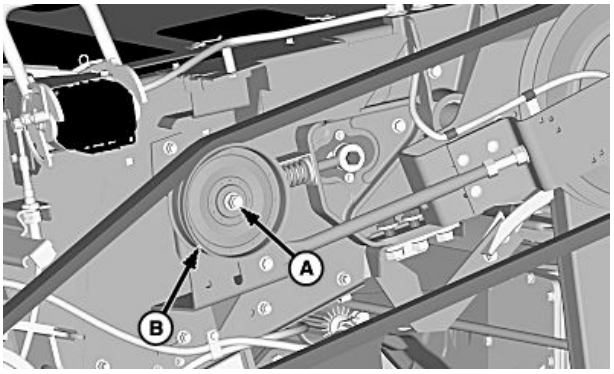

H90912 —UN—28FEB08

**A—Rubber Boot** **B—Bracket**

OUO6075,0000668 -19-03AUG10-1/13

Loosen idler nut (A) and slide sheave (B) down to release tension on drive belt.

**A—Idler Nut** **B—Sheave**



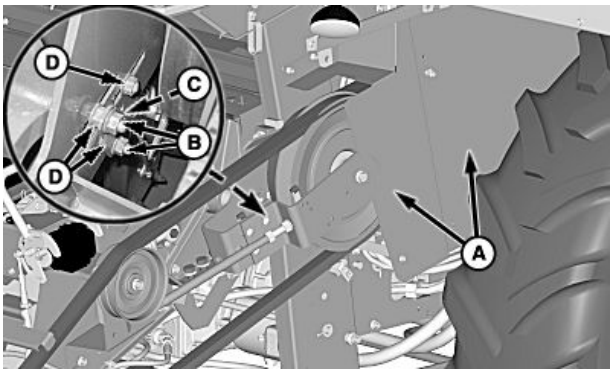

H90914 —UN—28FEB08

OUO6075,0000668 -19-03AUG10-2/13

Remove shields (A), nuts (B) and sensor bracket (C).

Loosen nuts (D) to allow upper sheave assembly to move.

**A—Shields** **C—Sensor Bracket**
**B—Nuts (2 Used)** **D—Nuts (3 Used)**




H90918 —UN—05MAR08

**Continued on next page**

OUO6075,0000668 -19-03AUG10-3/13

*NOTE: Nut (C) must be moved and jammed against nut (A). Together these nuts can be used to turn tensioner bolt.*

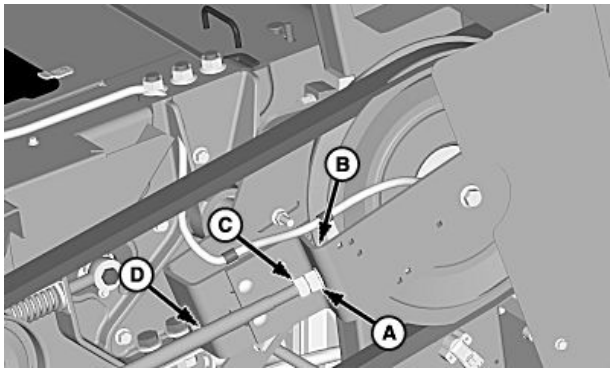
Loosen nut (A) away from bracket (B) until a 3 mm (1/8 in.) gap exists between either side of bracket.

Tighten nut (C) against nut (A).

*NOTE: Threading bolt into tensioner allows sheave to move forward to remove drive belt.*

Use nut (A) to screw threaded bolt into tensioner (D).

**A—Nut**
**B—Bracket**
**C—Nut**
**D—Tensioner**



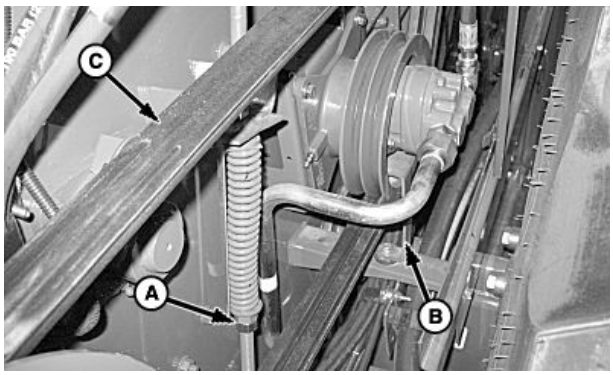

H90913 —UN—28FEB08

OUO6075,0000668 -19-03AUG10-4/13

Loosen nuts (A) to relieve tension from drive belt.

Remove cap screw and nut to move reel pump brace (B) out of way so drive belt (C) can be removed.

**A—Nuts**
**B—Brace**
**C—Drive Belt**



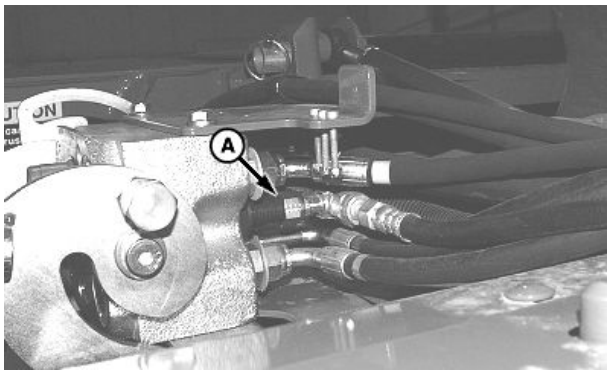

H90977 —UN—06MAR08

OUO6075,0000668 -19-03AUG10-5/13

*NOTE: Cap hydraulic hose to prevent system contamination and fluid loss.*

Disconnect hydraulic hose (A) from multi-coupler.

**A—Hydraulic Hose**




H84326 —UN—26AUG05

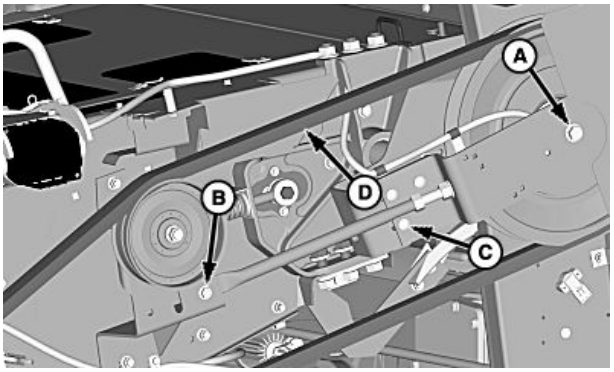
**Continued on next page**

OUO6075,0000668 -19-03AUG10-6/13

Remove cap screw (A), cap screw and nut (B) and round head bolts (C).

Remove drive belt (D) from rear sheave.

**A—Cap Screw**
**B—Cap Screw and Nut**
**C—Round Head Bolt (3 used)**
**D—Drive Belt**




H90919 —UN—28FEB08

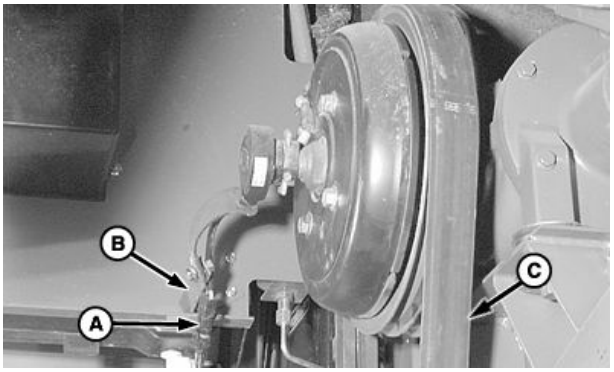
OUO6075,0000668 -19-03AUG10-7/13

Disconnect connector (A) and remove strap from bracket (B).

Remove and discard drive belt (C).

Install replacement drive belt, connect strap to bracket, and connect electrical connector.

**A—Connector**
**B—Bracket**
**C—Drive Belt**



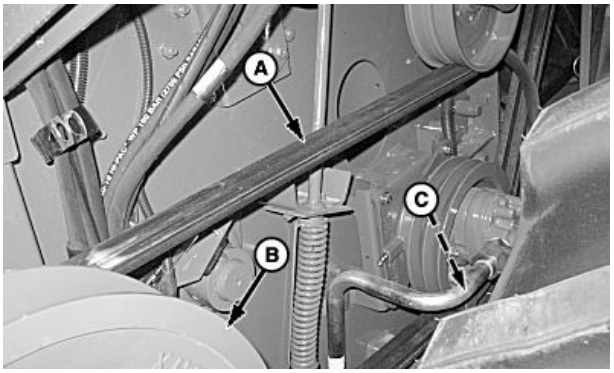

H87527 —UN—27FEB07

OUO6075,0000668 -19-03AUG10-8/13

Install drive belt (A) around reel pump and rear sheaves (B).

Install previously removed reel pump brace (C) with cap screw and nut.

**A—Drive Belt**
**B—Sheave**
**C—Brace**




H90978 —UN—06MAR08

**Continued on next page**

OUO6075,0000668 -19-03AUG10-9/13

Install drive belt (A) around rear sheave.

Install cap screw (B) and tighten to specification.

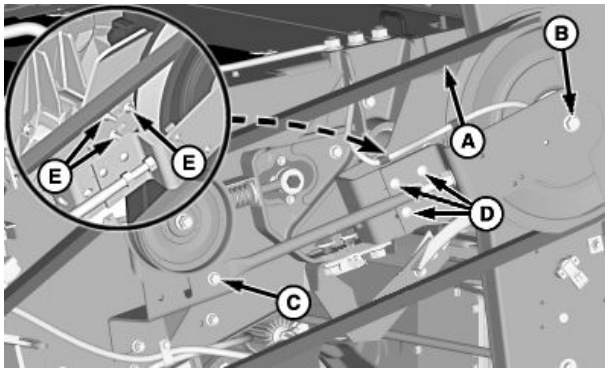
**Specification**

Cap Screw—Torque.....185 N·m (136 lb-ft)

Tighten cap screw and nut (C).

Leave round head bolts (D) loose at this time.

Tighten nuts (E) to prevent upper sheave assembly from moving.



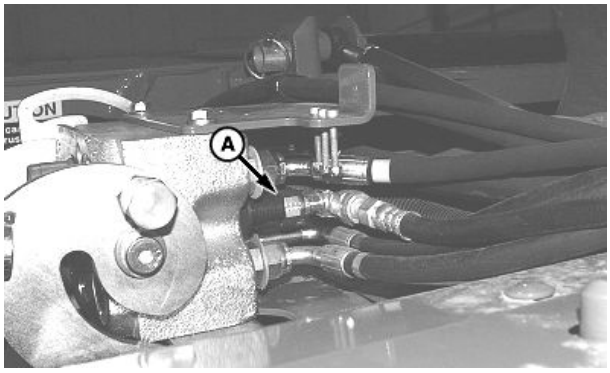

H90920 —UN—31MAR10

**A—Drive Belt**
**B—Cap Screw**
**C—Cap Screw and Nut**
**D—Round Head Bolt (3 used)**
**E—Nuts (3 Used)**

OUO6075,0000668 -19-03AUG10-10/13

Connect hydraulic hose (A) to multi-coupler.

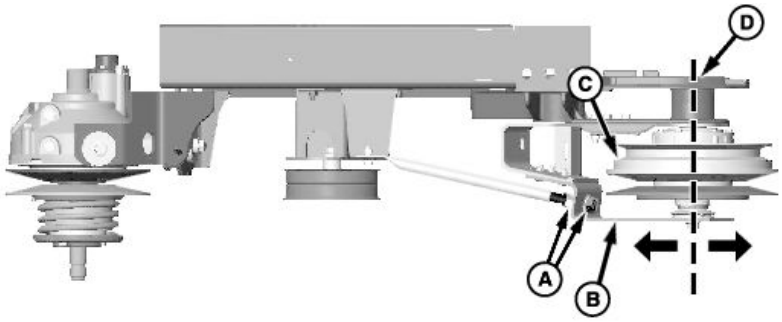
**A—Hydraulic Hose**




H84326 —UN—26AUG05

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OUO6075,0000668 -19-03AUG10-11/13




H84440 —UN—13SEP05

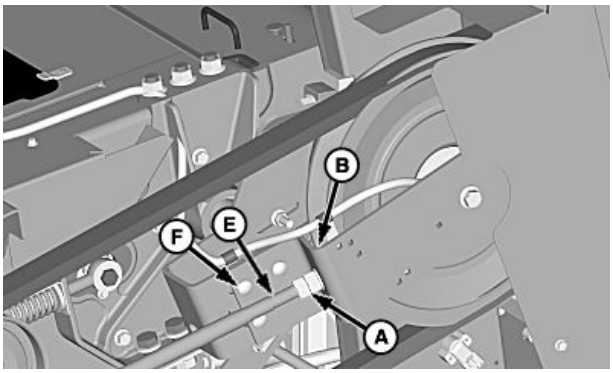
*Top View*

*NOTE: Check alignment of upper countershaft sheaves (C). Make sure that sheaves are running parallel to feeder house sidesheet. Parallel alignment of countershaft sheaves must be adjusted by loosening round head bolts (F) and using nuts (A) on bolt (E).*

Using nuts (A), turn bolt (E) to move outer strap (B) forward or rearward to align sheaves (C) parallel to feeder house sidesheet (D).

Tighten round head bolts (F) to specification.

| Specification | |
|---|---|
| Countershaft Strap Round Head Bolts—Torque | 54 N·m (40 lb-ft) |



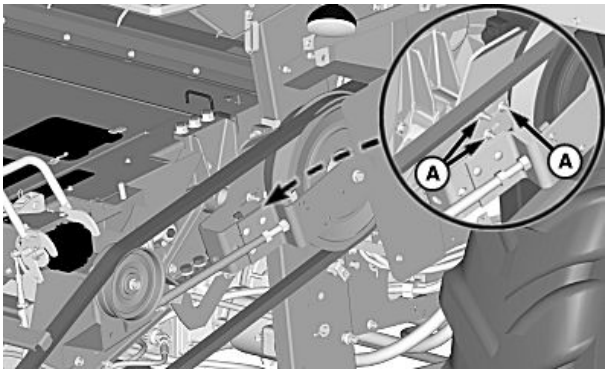

H90921 —UN—28FEB08

**A—Nuts (2 used)**
**B—Outer Strap**
**C—Sheave (2 used)**
**D—Sidesheet**
**E—Cap Screw**
**F—Round Head Bolts (3 used)**

OUO6075,0000668 -19-03AUG10-12/13

Loosen previously tightened nuts (A) and refer to Feeder House Variable Speed Belt—Adjusting to set sheave gap.

**A—Nuts (3 Used)**




H90922 —UN—28FEB08

OUO6075,0000668 -19-03AUG10-13/13

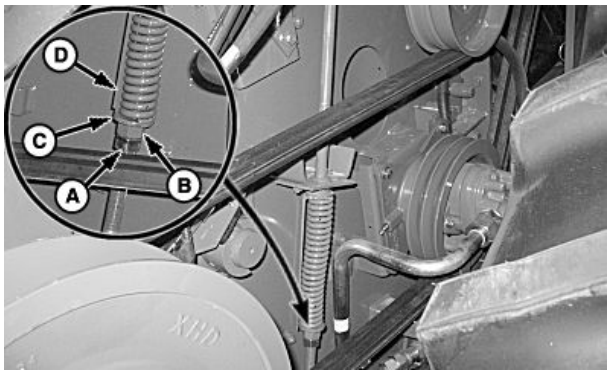
## Header Reel/Belt Pickup Pump Belt (Variable Speed Feeder House)—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen lock nut (A).

Tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Lock Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H900975 —UN—06MAR08

OUO6075,0000669 -19-02FEB10-1/1

## Feeder House Fixed Speed Drive Belt—Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Lower safety stop and remove left-hand feeder house shields.

Remove shields (A).

**A—Shields**




H90923 —UN—28FEB08

OUO6075,000066A -19-02FEB10-1/2

Loosen nuts (A) to relieve tension on drive belt (B).

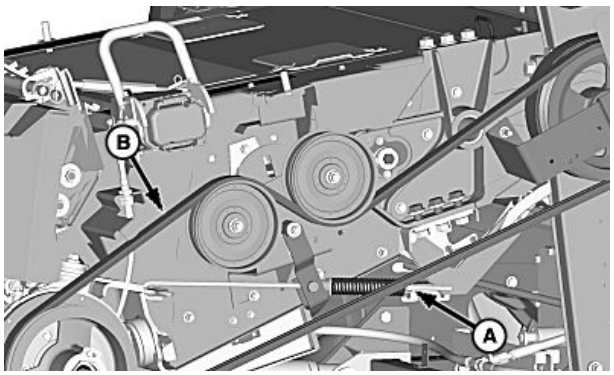
Remove drive belt from sheaves.

Install replacement drive belt and tighten nuts to position washer between end of gauge and bottom of step.

Swing bracket into position and retain with cap screw and nut.

Install feeder house shields previously removed.

**A—Nuts**
**B—Drive Belt**




H90924 —UN—28FEB08

OUO6075,000066A -19-02FEB10-2/2

## Feeder House Fixed Speed Drive Belt—Adjusting

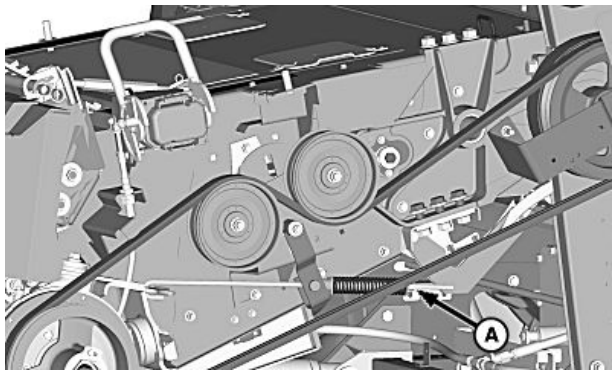
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Lower safety stop and remove left-hand feeder house shields.

Tighten nuts (A) to position washer between end of gauge and bottom of step.

Install feeder house shields previously removed.

**A—Nuts**




H90925 —UN—28FEB08

OUO6075,000066B -19-02FEB10-1/1

## Header Reel/Belt Pickup Pump Belt (Fixed Speed Feeder House)—Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Lower safety stop and remove left-hand feeder house shields.

Remove shields (A).

**A—Shields**



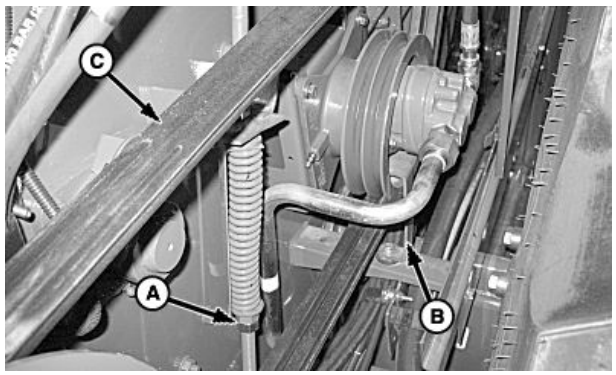

H90923 —UN—28FEB08

OUO6075,000066C -19-02FEB10-1/8

Loosen nuts (A) to relieve tension from drive belt.

Remove cap screw and nut to move reel pump brace (B) out of way so drive belt (C) can be removed.

**A—Nuts**
**B—Brace**
**C—Drive Belt**



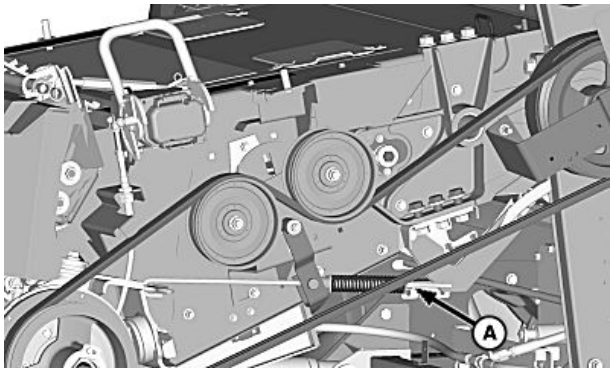

H90977 —UN—06MAR08

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OUO6075,000066C -19-02FEB10-2/8

Loosen nuts (A) to relieve tension on drive belt.

**A—Nuts**

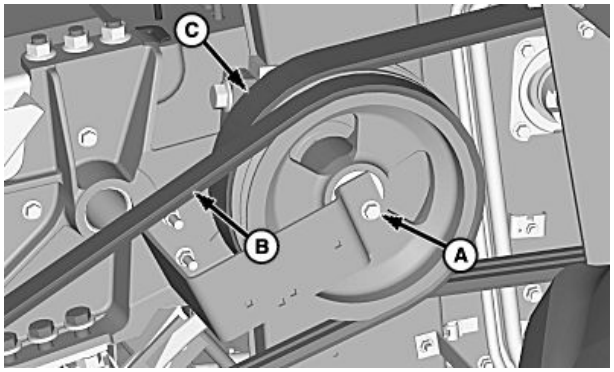



H90925 —UN—28FEB08

OUO6075,000066C -19-02FEB10-3/8

Remove cap screw (A), fixed speed drive belt (B) and header reel/belt pickup pump belt (C).

**A—Cap Screw**
**B—Fixed Speed Drive Belt**
**C—Header Reel/Belt Pickup Pump Belt**




H90926 —UN—28FEB08

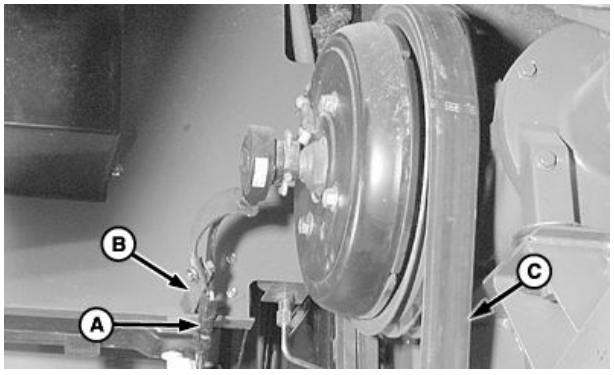
OUO6075,000066C -19-02FEB10-4/8

Disconnect connector (A) and remove strap from bracket (B).

Remove and discard header reel/belt pickup pump belt (C).

Install replacement header reel/belt pickup pump belt, connect strap to bracket, and connect electrical connector.

**A—Connector**
**B—Bracket**
**C—Header Reel/Belt Pickup Pump Belt**




H87527 —UN—27FEB07

**Continued on next page**

OUO6075,000066C -19-02FEB10-5/8

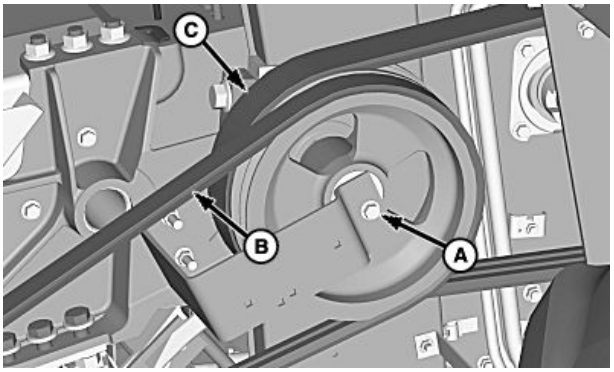
Install replacement header reel/belt pickup pump belt (C) and fixed speed drive belt (B).

Install and tighten cap screw (A) to specification.

**Specification**

Cap Screw—Torque.....185 N·m (136 lb-ft)

**A—Cap Screw**
**B—Fixed Speed Drive Belt**
**C—Header Reel/Belt Pickup Pump Belt**




H90926 —UN—28FEB08

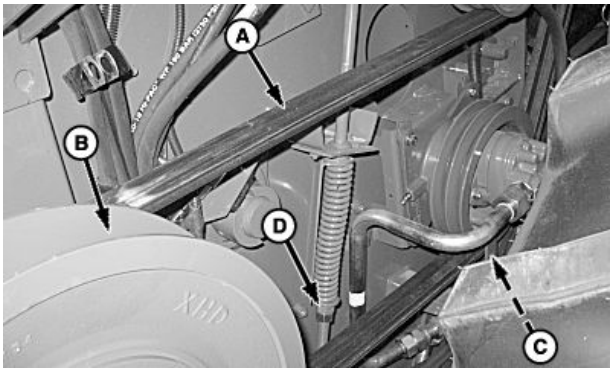
OUO6075,000066C -19-02FEB10-6/8

Install drive belt (A) around reel pump and rear sheaves (B).

Install previously removed reel pump brace (C) with cap screw and nut.

Tighten nuts (D) to position washer between end of gauge and bottom of step to adjust drive belt.

**A—Drive Belt**
**B—Sheave**
**C—Brace**
**D—Nuts (2 Used)**



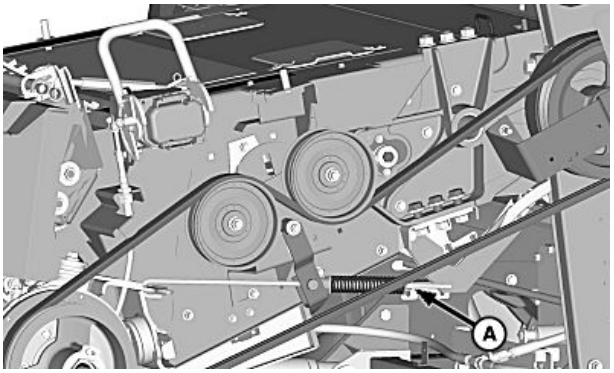

H90979 —UN—06MAR08

OUO6075,000066C -19-02FEB10-7/8

Tighten nuts (A) to position washer between end of gauge and bottom of step to properly tension drive belt.

Install left-hand feeder house shields.

**A—Nuts**




H90925 —UN—28FEB08

OUO6075,000066C -19-02FEB10-8/8

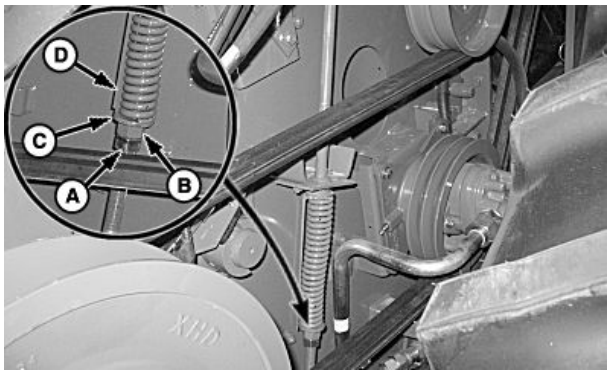
## Header Reel/Belt Pickup Pump Belt (Fixed Speed Feeder House)—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen lock nut (A).

Tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Lock Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H900975 —UN—06MAR08

OUO6075,000066D -19-02FEB10-1/1

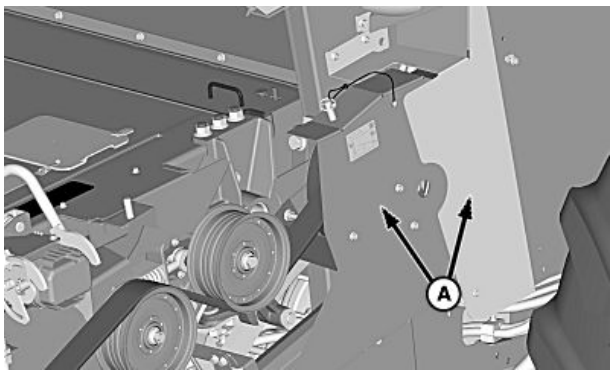
## CommandTouch Multi-Speed Feeder House Drive Belt—Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Lower safety stop and remove left-hand feeder house shields.

Remove shields (A).

**A—Shields**




H900968 —UN—05MAR08

OUO6075,0000653 -19-02FEB10-1/2

Loosen nuts (A) to relieve tension on drive belt and loosen idler nut (B).

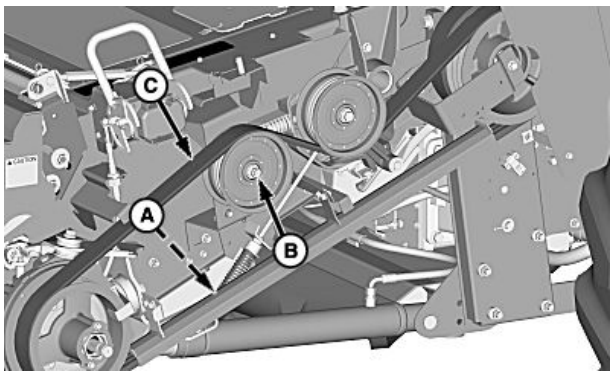
Remove drive belt (C) from sheaves.

Install replacement drive belt and move idler to 3/4 of way up slot and tighten idler nut.

Tighten nuts to position washer between end of gauge and bottom of step.

Install feeder house shields previously removed.

**A—Nuts**
**B—Idler Nut**
**C—Drive Belt**




H900969 —UN—05MAR08

OUO6075,0000653 -19-02FEB10-2/2

## CommandTouch Multi-Speed Feeder House Drive Belt—Adjusting

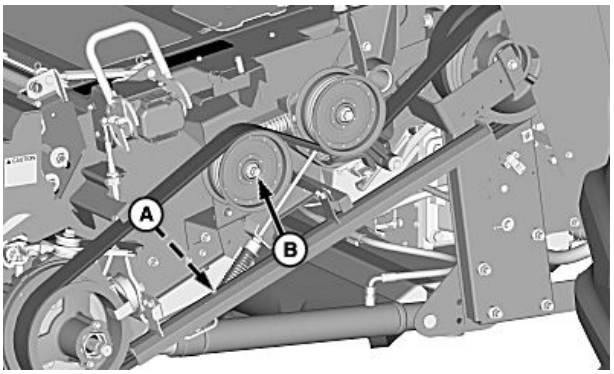
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Lower safety stop and remove left-hand feeder house shields.

Tighten nuts (A) to position washer between end of gauge and bottom of step.

*NOTE: If gauge reaches end of tensioning, loosen idler nut (B) and move idler higher in slot. Tighten nuts to position washer between end of gauge and bottom of step.*

Install feeder house shields previously removed.




H90970 —UN—05MAR08

**A—Nuts** **B—Idler Nut**

OUO6075,0000654 -19-02FEB10-1/1

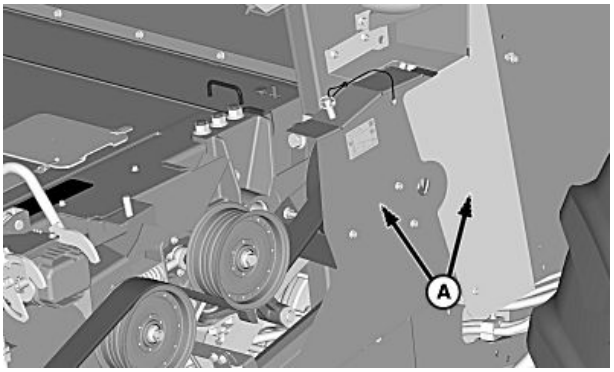
## Header Reel/Belt Pickup Pump Belt (CommandTouch Multi-Speed Feeder House)—Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Lower safety stop and remove left-hand feeder house shields.

Remove shields (A).

**A—Shields**



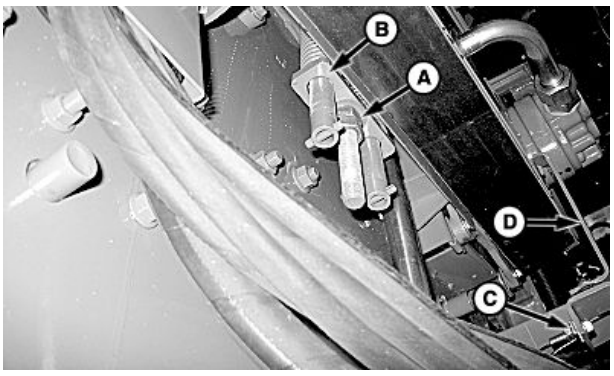

H90968 —UN—05MAR08

OUO6075,0000655 -19-02FEB10-1/6

Loosen nuts (A) on spring tensioner (B) to relieve tension on drive belt.

Remove cap screw and nut (C) to move reel pump brace (D) out of way.

**A—Nuts**
**B—Spring Tensioner**
**C—Cap Screw and Nut**
**D—Brace**



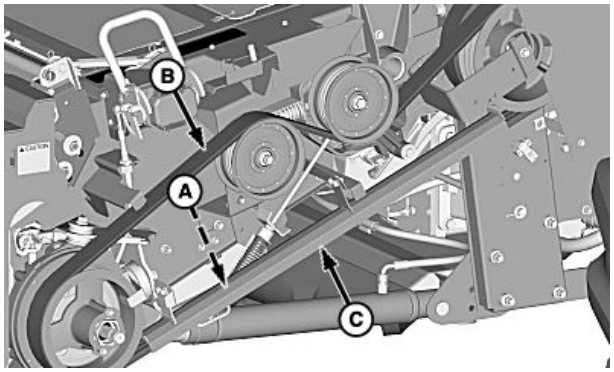

H87350 —UN—05FEB07

**Continued on next page**

OUO6075,0000655 -19-02FEB10-2/6

Loosen nuts (A) to relieve tension on drive belt (B) and remove shield (C).

**A—Nuts**
**B—Drive Belt**
**C—Shield**




H90971 —UN—05MAR08

OUO6075,0000655 -19-02FEB10-3/6

Remove sensor bracket (A) and cap screw (B).

Remove feeder house drive belt (C) from sheaves and header reel/belt pickup pump belt (D).

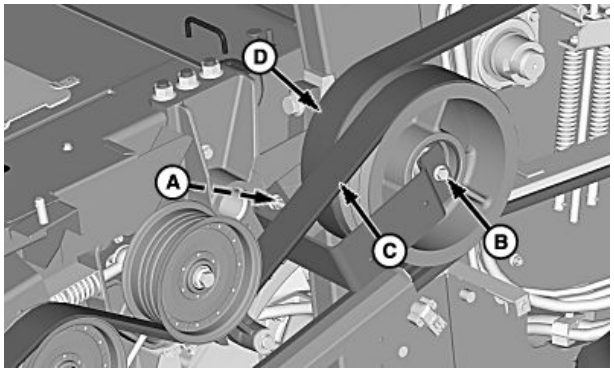
Install replacement header reel/belt pickup pump belt and feeder house drive belt.

Install sensor bracket and tighten cap screw to specification.

**Specification**

Cap Screw—Torque..... 185 N•m (136 lb-ft)

**A—Sensor Bracket**
**B—Cap Screw**
**C—Feeder House Drive Belt**
**D—Header Reel/Belt Pickup Pump Belt**



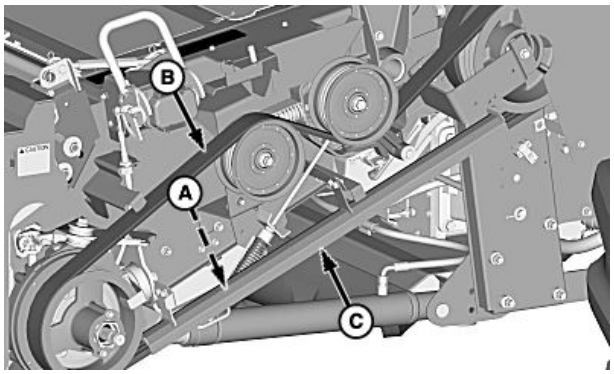

H90972 —UN—05MAR08

OUO6075,0000655 -19-02FEB10-4/6

*NOTE: An equal gap is required on each side of drive belt and belt shield to prevent belt rubbing.*

Install previously removed shield (C) and tighten nuts (A) to position washer between end of gauge and bottom of step to properly tension drive belt (B).

**A—Nuts**
**B—Drive Belt**
**C—Shield**




H90971 —UN—05MAR08

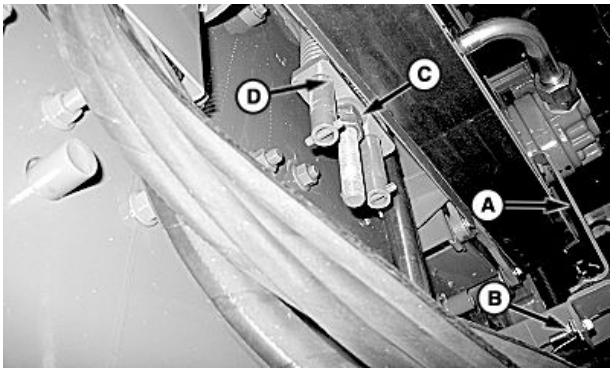
**Continued on next page**

OUO6075,0000655 -19-02FEB10-5/6

Install previously removed reel pump brace (A) and retain with cap screw and nut (B).

Tighten nuts (C) until holes (D) appear through gauge.

**A—Brace**
**B—Cap Screw and Nut**
**C—Nuts**
**D—Holes**




H87517 —UN—27FEB07

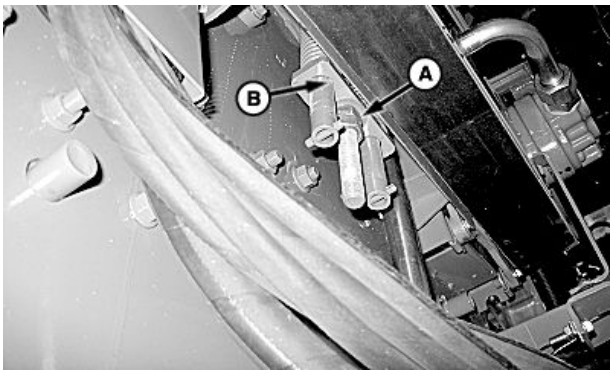
OUO6075,0000655 -19-02FEB10-6/6

## Header Reel/Belt Pickup Pump Belt (CommandTouch Multi-Speed Feeder House)—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Tighten nuts (A) until holes (B) appear through gauge.

**A—Nuts**
**B—Holes**




H87518 —UN—27FEB07

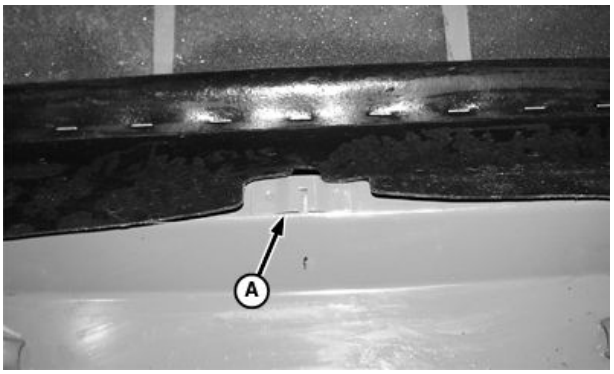
OUO6075,0000656 -19-02FEB10-1/1

## Manual Tilt Indicator (Lateral Tilt System)

For a quick visual indication of whether header is level with machine chassis, the lateral tilt system is equipped with a manual tilt indicator.

When notch (A) is in center of rubber seal, the header is approximately level with the machine body. Indicator may also be useful as a reference during operation.

**A—Notch**




H62284A —UN—24JAN00

OUO6075,000066E -19-02FEB10-1/1

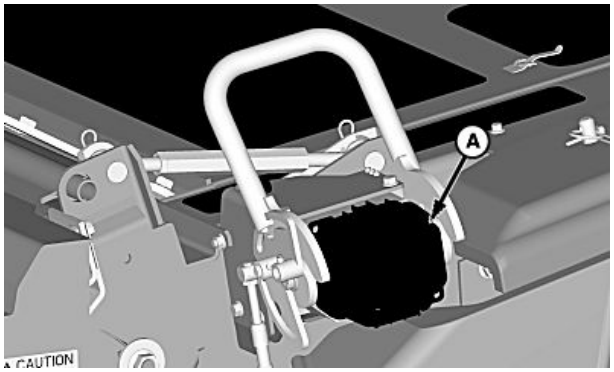
## Attach Multi-Coupler and Single Point Latching

**IMPORTANT: Do not actuate latch pins with header on ground. If multi-coupler must be actuated with header on ground, unhook cable from handle.**

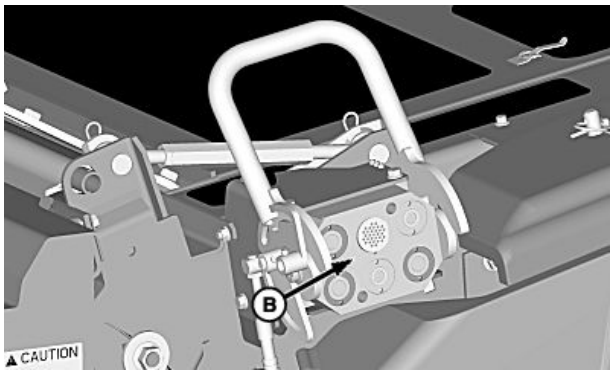
Remove cover (A) and clean multi-coupler face (B).

**A—Cover**

**B—Multi-Coupler Face**




H90927 —UN—31MAR10

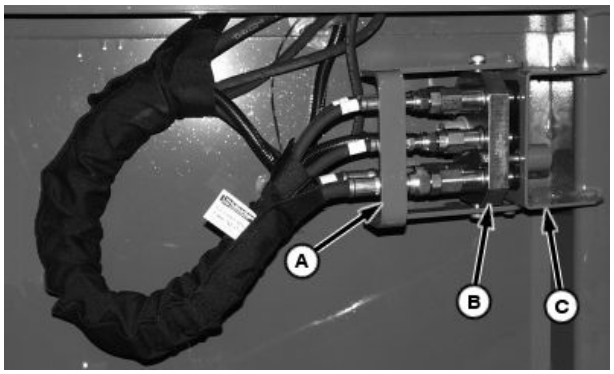



H90928 —UN—28FEB08

OUO6075,000066F -19-02FEB10-1/6

Open handle (A) and remove multi-coupler (B) from storage bracket (C).

**A—Handle**
**B—Multi-Coupler**
**C—Storage Bracket**




H770035 —UN—19SEP01

**Continued on next page**

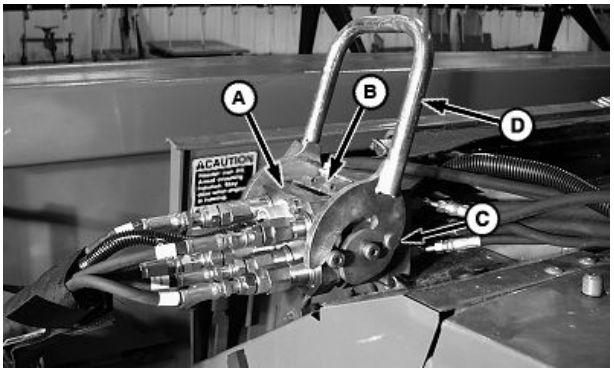
OUO6075,000066F -19-02FEB10-2/6

*NOTE: To prevent damage to latching cable, a shear screw is attached to the handle. Attempts to actuate latching pins with header on ground results in screw shearing. (See Extra Shear Screw Location later in this section.)*

Install multi-coupler (A) onto receptacle (B).

Pull and hold button lock (C) to close handle (D).

**A—Multi-Coupler**
**B—Receptacle**
**C—Button Lock**
**D—Handle**



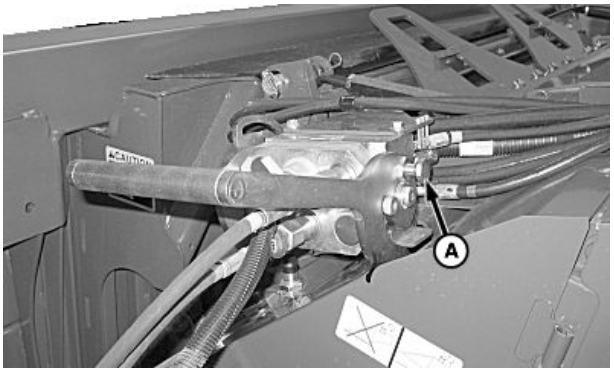

H82378 —UN—07FEB05

OUO6075,000066F -19-02FEB10-3/6

**IMPORTANT: Failure to close multi-coupler fully so button lock can engage could result in header falling off while harvesting or transporting.**

When multi-coupler handle is fully closed, button lock (A) automatically locks couplers together.

**A—Button Lock**




H87894 —UN—19APR07

**Continued on next page**

OUO6075,000066F -19-02FEB10-4/6

*NOTE: With header attached, latch pins must move freely through latch plate holes. If latch pins do not extend through latch plates, make sure that latching plates on header are properly adjusted.*

Latch pins (A) must move freely through latch plate holes in header when multi-coupler is latched. Latch plate (B) must make contact with bracket (C). Less clearance (D) must be maintained between bottom of plate and pin rather than top of plate (E) and pin. This may require latch plate to be flipped.

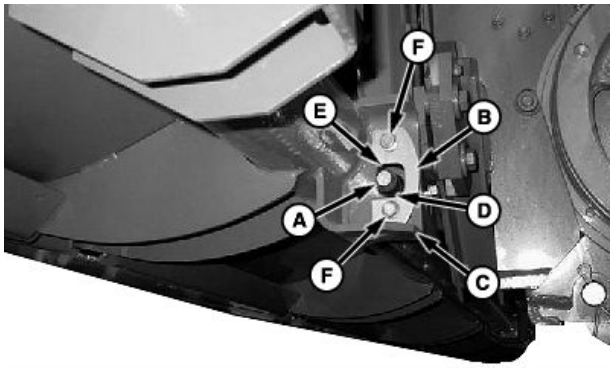
**If adjustment is needed:** Remove cap screws (F), flip plate end for end and reinstall.

Tighten cap screws to M10 or M12 specification.

| Specification | |
|---|---|
| Inside Latch Plate (M10 Cap Screws)—Torque | 80 N·m (60 lb-ft) |

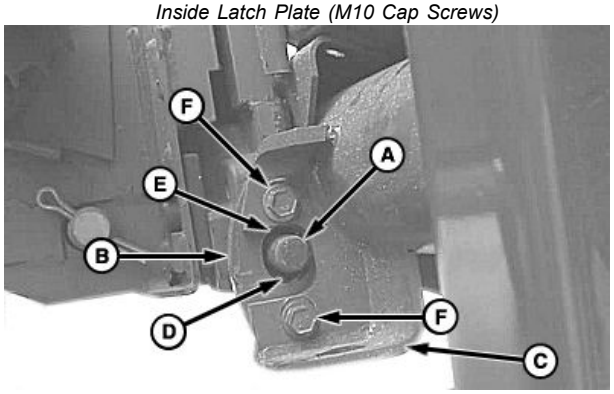
| Specification | |
|---|---|
| Outside Latch Plate (M12 Cap Screws)—Torque | 130 N·m (96 lb-ft) |

**A—Latch Pin**
**B—Latching Plate**
**C—Bottom Bracket**
**D—Gap**
**E—Top Of Plate**
**F—Cap Screws**




H81307 —UN—28JUN04

*Inside Latch Plate (M10 Cap Screws)*




H81308 —UN—28JUN04

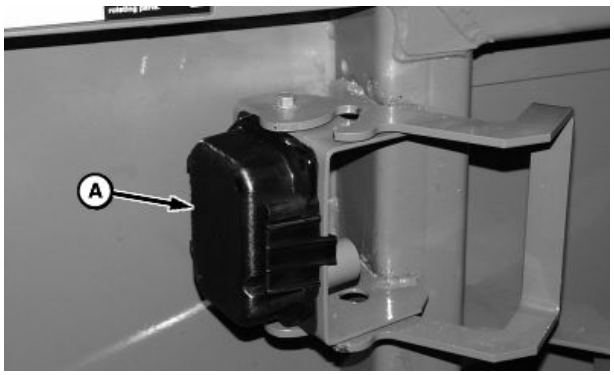
*Outside Latch Plate (M12 Cap Screws)*

OUO6075,000066F -19-02FEB10-5/6

Install multi-coupler cover (A) on platform storage position.

Remove telescopic shaft from storage position and install onto feeder house backshaft, making sure quick attach collar locks fully.

**A—Cover**




H74305 —UN—18NOV02

OUO6075,000066F -19-02FEB10-6/6

## Attaching and Detaching Header from Feeder House

**CAUTION: Do not leave drive shafts on machine. Personal injury or machine damage may occur if feeder house is accidentally engaged.**

**IMPORTANT: Drive shafts with U-joints are used on left-hand and right-hand sides of all approved headers.**

*NOTE: For complete attaching and detaching procedures refer to header Operator's Manual.*

Disconnect telescoping drive shaft from feeder house at quick disconnect coupler (A) on left and right sides.

Place telescoping drive shaft in storage position (B).

**IMPORTANT: Latch pins are not to be actuated with header on ground. If multi-coupler must be actuated with header on ground, unhook cable from handle.**

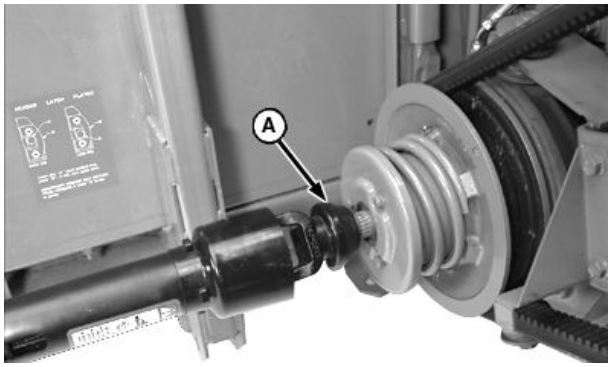
*NOTE: Latch pins should be fully retracted when handle is up all the way against the stop. Adjust cable mounting if latch pins are not fully retracted (see Single Point Latching—Adjusting).*

Pull and hold button lock (C) to release lock while raising handle to disconnect multi-coupler.

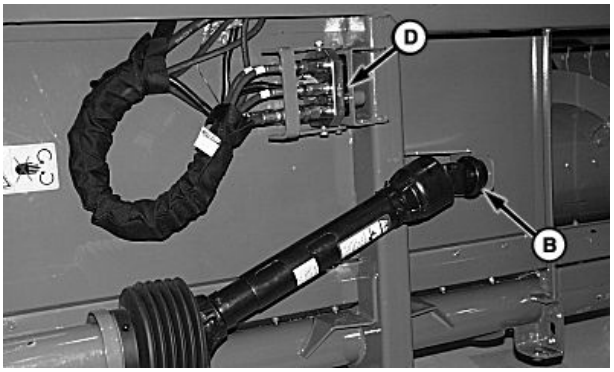
Remove multi-coupler cover from storage position on header and place cover on machine multi-coupler.

Place and lock multi-coupler in storage position (D).

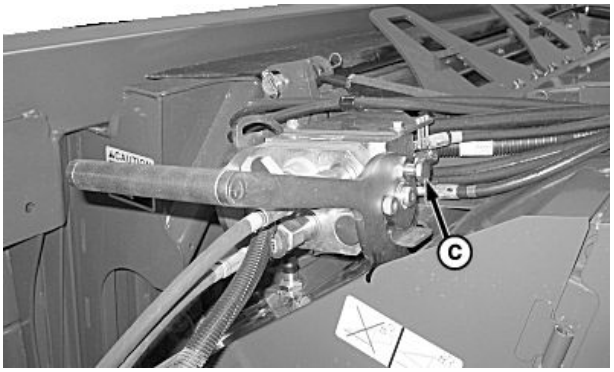
**A—Quick Disconnect Coupler**
**B—Storage Position**
**C—Button Lock**
**D—Multi-Coupler Storage Position**




H52778 —UN—23MAR99




H82374 —UN—07FEB05




H87895 —UN—19APR07

OUO6075,0000670 -19-02FEB10-1/1

## Single Point Latching—Adjusting

*NOTE: Lateral Tilt Feeder House: Adjustments must only be made to cable at multi-coupler handle.*

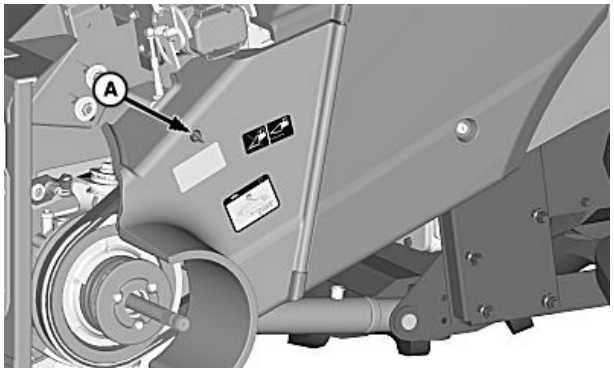
Open left-hand feeder house shield (A).

Loosen cable lock nuts (B).

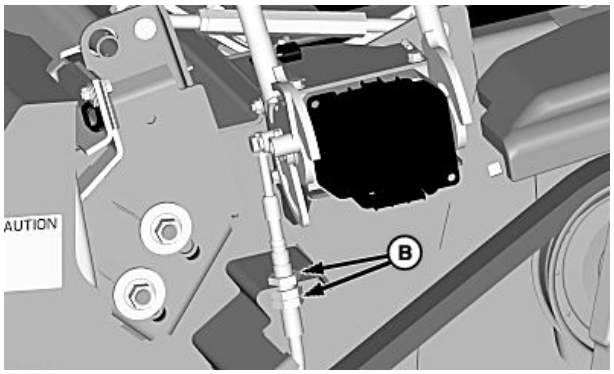
**IMPORTANT: Verify that handle is against stop on multi-coupler. Failure to verify that handle is against stop results in inaccurate pin dimensions and could result in header falling off while harvesting or transporting.**

Rest multi-coupler handle against stop.

**A—Shield** **B—Lock Nuts**




H90929 —UN—28FEB08




H90930 —UN—28FEB08

OUO6075,0000671 -19-02FEB10-1/4

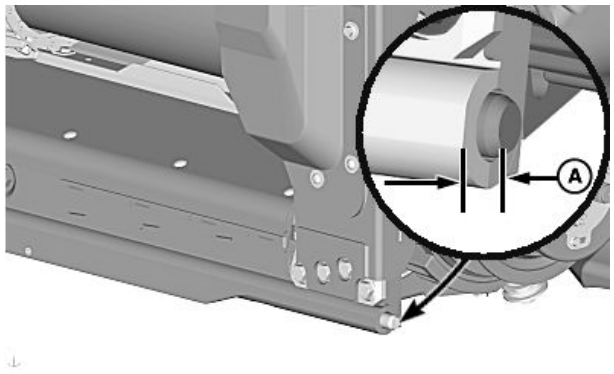
*NOTE: Moving cable "up" in bracket pulls pin farther in.*

*Moving cable "down" in bracket pushes pin farther out.*

Adjust cable in bracket as needed for proper pin adjustment:

- Left-hand latching pin must be flush to +/- 2 mm (0.08 in.) (A).

**A—Dimension**




H90931 —UN—05MAR08

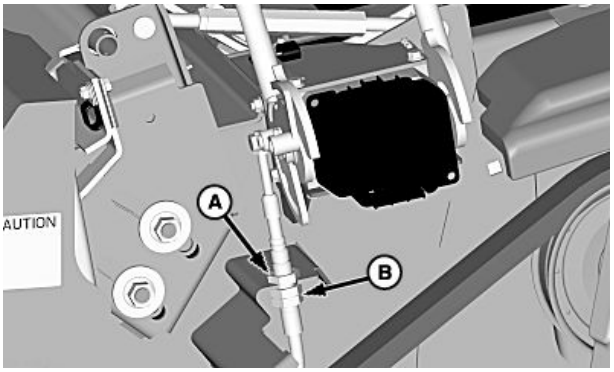
*Left-Hand Latching Pin*

**Continued on next page**

OUO6075,0000671 -19-02FEB10-2/4

Hold bottom lock nut (B) and tighten top lock nut (A).

**A—Top Lock Nut** **B—Bottom Lock Nut**




H90932 —UN—28FEB08

OUO6075,0000671 -19-02FEB10-3/4

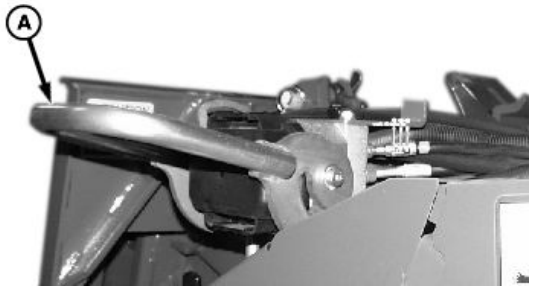
**IMPORTANT: Failure to verify that pins are set to specified dimensions could result in header falling off while harvesting or transporting.**

Fully lower multi-coupler handle (A) and verify pins (B) (both sides) are set to specification. Readjust if not set to specification.

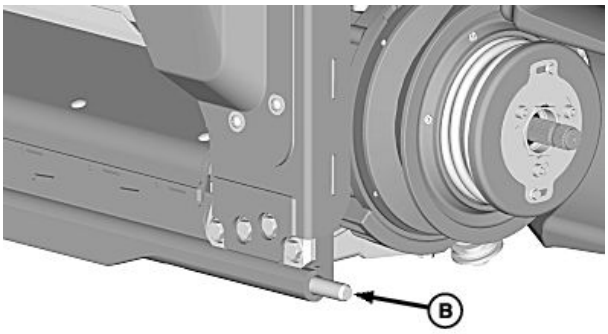
**Specification**

Feeder House
Pins—Distance.....45—52 mm
(1-3/4 in. — 2 in.)

**A—Multi-Coupler Handle** **B—Pins**




H81287 —UN—23JUN04




H90933 —UN—28FEB08

OUO6075,0000671 -19-02FEB10-4/4

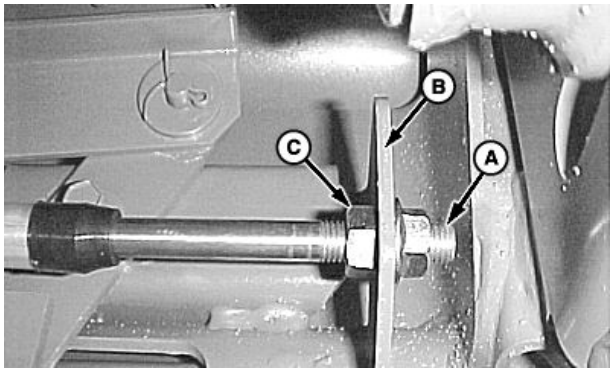
## Level Land Feeder House Lower Cable End—Adjusting

Adjustments should be made to lower end of latching cable if threads (A) are not centered in bracket (B).

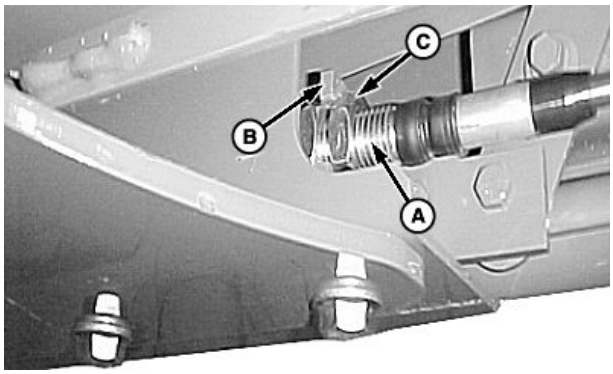
Loosen lock nuts (C) and adjust cable so that threads are centered in bracket.

Tighten lock nuts.

**A—Threads**
**B—Bracket**
**C—Lock Nuts**




H79380 —UN—10DEC03




H79389 —UN—10DEC03

OUO6075,0000672 -19-02FEB10-1/1

## Level Land Feeder House—Shim Adjusting

*NOTE: Tires must be inflated to equal air pressure for accurate leveling adjustment.*

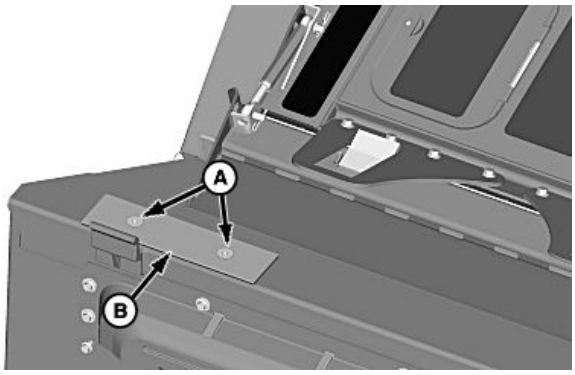
Header must be level when attached to feeder house.

Raise header to medium height.

Take a position approximately 5 m (15 ft.) in front of header.

Compare bottom of header with machine front axle.

If header is not level, remove screws (A) and move shims (B) from side to side on top beam of feeder house to level header.




H85585 —UN—22MAR06

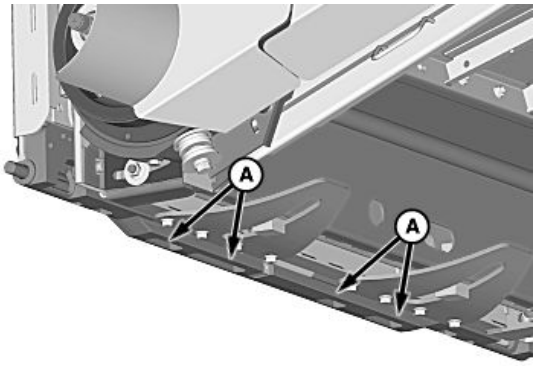
**A—Screws**
**B—Shim**

OUO6075,0000673 -19-02FEB10-1/1

## Feeder House Latching Pins (Cleanout)

If latch pins move hard on lateral tilt feeder houses, clean crop debris from locations (A).

**A—Clean Out Locations**



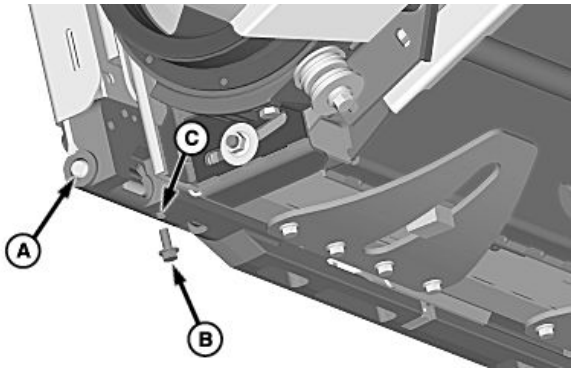

H84880 —UN—04NOV05

OUO6075,0000674 -19-02FEB10-1/1

## Feeder House Manual Unlatching

To remove header if shear screw should fail, push latching pins (A) through latch plates and install M12 cap screw (B) in hole (C). Repeat on opposite side.

**A—Latching Pins**
**B—Cap Screw**
**C—Hole**



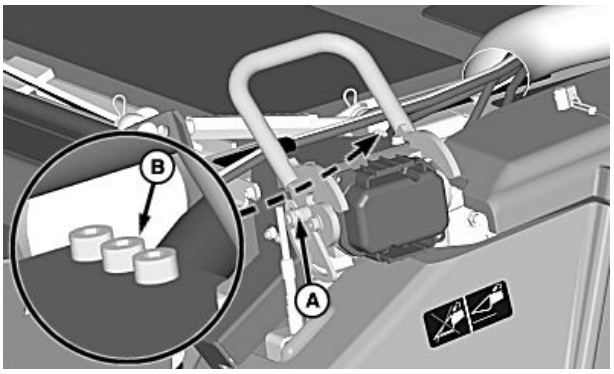

H84881 —UN—04NOV05

OUO6075,0000675 -19-02FEB10-1/1

## Shear Screw Location

If shear screw (A) breaks, remove and replace with extra shear screw (B). Extra shear screws are provided.

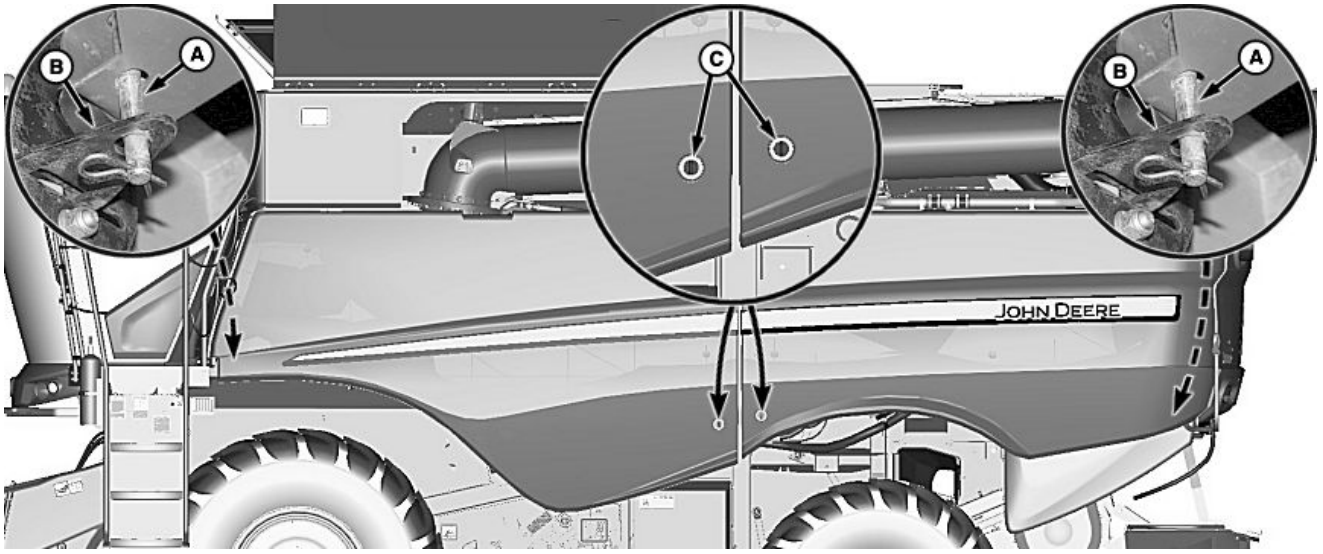
**A—Shear Screw**
**B—Extra Shear Screws**



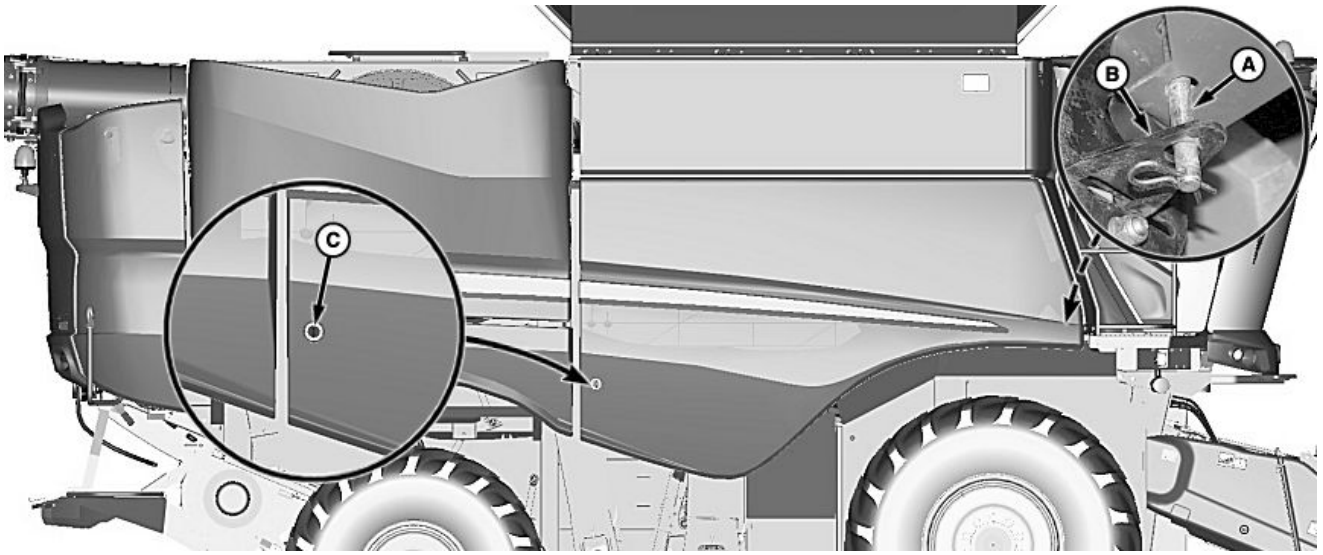

H98963 —UN—02NOV10

OUO6075,0000676 -19-02NOV10-1/1

## Gull Wing Doors




H106221 —UN—19FEB13




H106222 —UN—19FEB13

**A—Pin**
**B—Locking Plates**
**C—Latch**

**⚠ CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Pinning and latch lever operation is the same on both sides of machine.*

1. Remove spring clip, and pin (A) from locking plate (B). Reinstall spring clip onto pin.
2. Turn latch (C) and pull out on gull wing doors to raise.

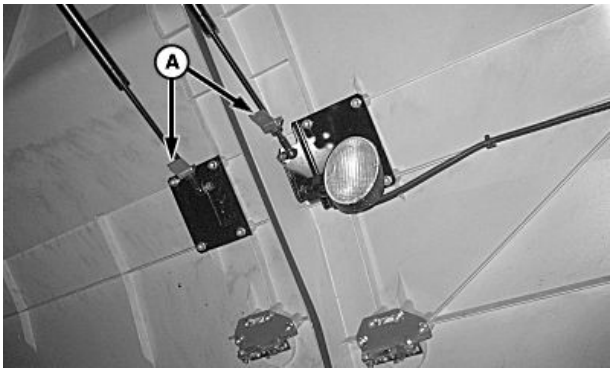
**Continued on next page**

OUO6075,0001329 -19-16NOV12-1/2

**IMPORTANT: Do not use cylinders (A) as hand holds or hang anything on these cylinders. This could cause the cylinder rod to bend or break.**

In cold weather or in high winds, these gull wing doors may ”creep” down. Position stop on rod to hold gull wing doors in place.

**A—Cylinders**




H96801 —UN—09JUN10

*Left-hand Cylinder Stops*

OUO6075,0001329 -19-16NOV12-2/2

## Left-Hand Side Shields

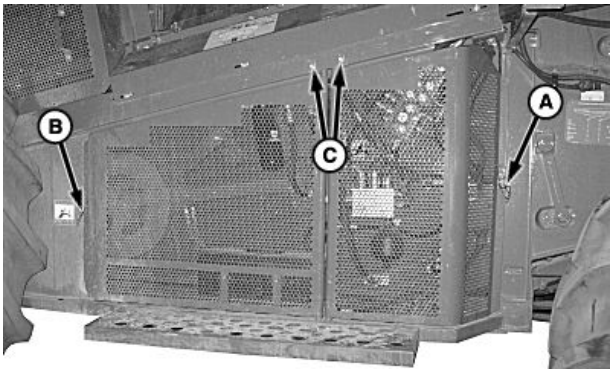
**S660 and S670**

**CAUTION: Shut OFF engine, set park brake and remove key.**

**Side Shields—** Remove quick-lock pin (A and B) to open shields.

Remove cap screws (C) and lift shields to remove.

**A—Quick-Lock Pin**
**B—Quick-Lock Pin**
**C—Cap Screws**




H105327 —UN—01MAY12

OUO6075,00015A0 -19-25JUN13-1/5

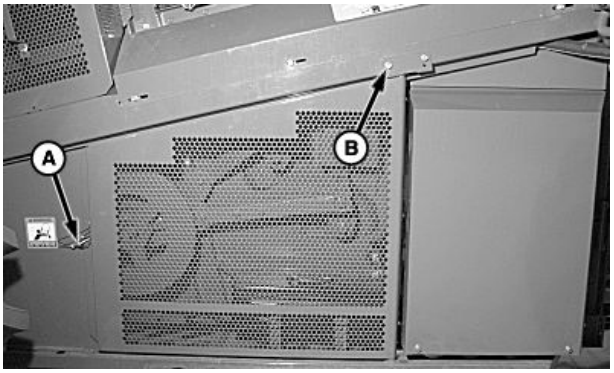
**S680, S685 and S690**

**CAUTION: Shut OFF engine, set park brake and remove key.**

**Side Shields—** Remove quick-lock pin (A) to open shield.

Remove cap screws (B) and lift shield to remove.

**A—Quick-Lock Pin**
**B—Cap Screws**



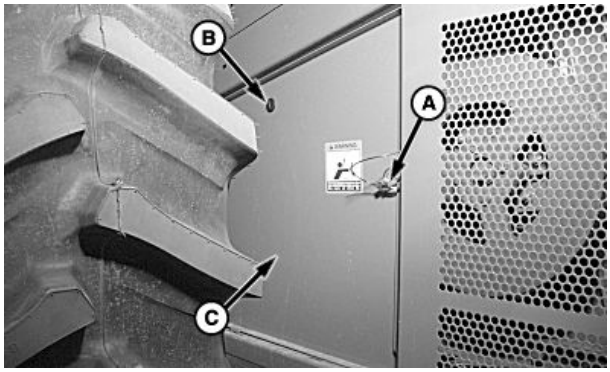

H96802 —UN—09JUN10

**Continued on next page**

OUO6075,00015A0 -19-25JUN13-2/5

**Fan Shield—** Remove quick-lock pin (A) and turn latch (B) to remove shield (C).

**A—Quick-Lock Pin**
**B—Latch**
**C—Shield**

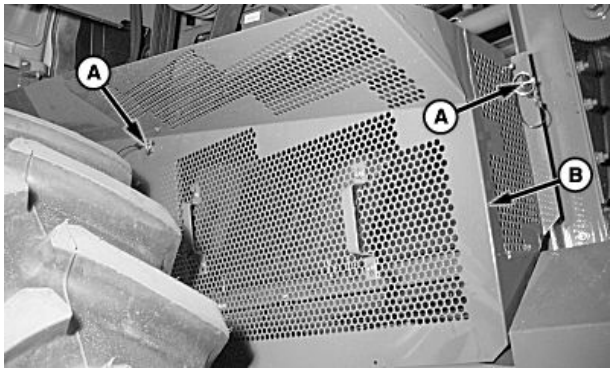



H96803 —UN—09JUN10

OUO6075,00015A0 -19-25JUN13-3/5

**Upper Separator Shield—** Remove quick-lock pins (A) and remove shield (B).

**A—Quick-Lock Pins**
**B—Shield**




H96804 —UN—09JUN10

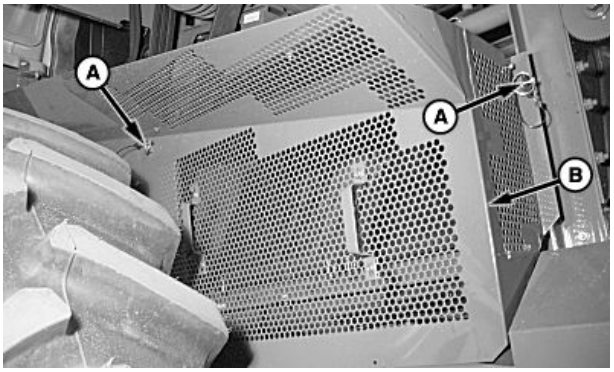
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OUO6075,00015A0 -19-25JUN13-4/5

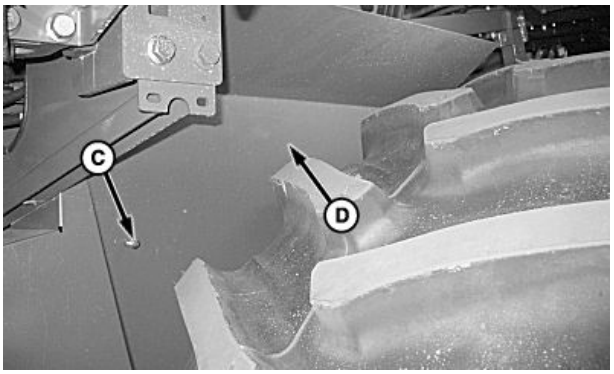
**Front Separator Shield—** Remove quick-lock pins (A) and remove shield (B).

Remove cap screw (C) and push front separator shield (D) rearward to remove.

**A—Quick-Lock Pins**
**B—Shield**
**C—Cap Screw**
**D—Shield**




H96804 —UN—09JUN10




H96805 —UN—09JUN10

OUO6075,00015A0 -19-25JUN13-5/5

## Right-Hand Side Shields

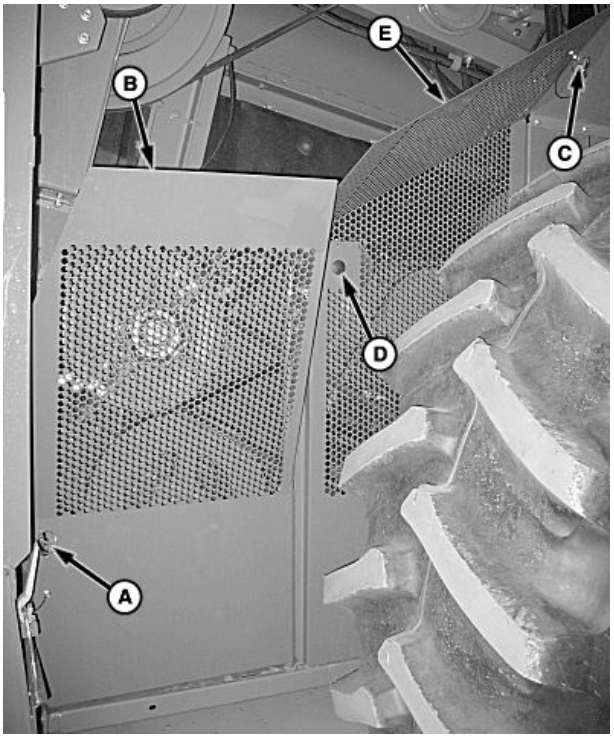
**⚠ CAUTION: Shut OFF engine, set parking brake and remove key.**

**Rear Shield and Middle Fan Shield—** Remove quick-lock pin (A) and open shield (B) to service belts.

Remove quick-lock pin (C) and turn latch (D) to unlock.

Lift and remove rear shield (B) and middle fan shield (E).

**A—Quick-Lock Pin**
**B—Shield**
**C—Quick-Lock Pin**
**D—Latch**
**E—Shield**




H96806 —UN—09JUN10

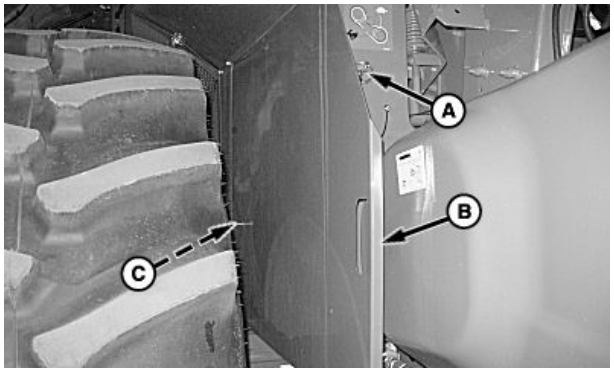
**Continued on next page**

OUO6075,00007C7 -19-28SEP10-1/2

**Front Separator Shield—** Remove quick-lock pin (A) and pull shield (B) forward.

Remove cap screw (C) and remove shield.

**A—Quick-Lock Pin**
**B—Shield**
**C—Cap Screw**




H96807 —UN—09JUN10

OUO6075,00007C7 -19-28SEP10-2/2

## Separator Covers

**CAUTION: Shut OFF engine, set parking brake and remove key.**

**IMPORTANT: To prevent grain loss, verify that separator covers are flush against separator and underneath edge of separator. Covers are installed starting from left-hand side, as facing the machine and working to the right.**

**Do not lay covers in hot sun or they will become distorted.**

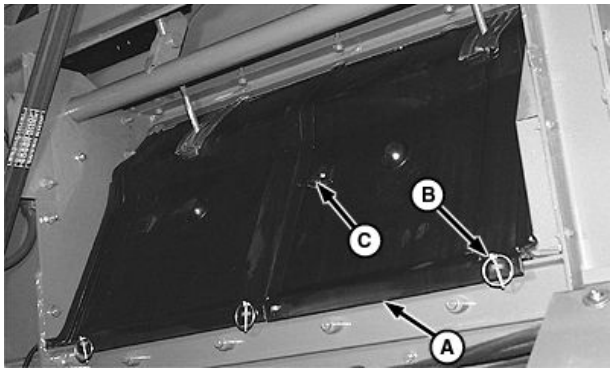
Two covers (A) are used on each side of the machine to seal the threshing section.

Three covers (A) on each side seal the separating section.

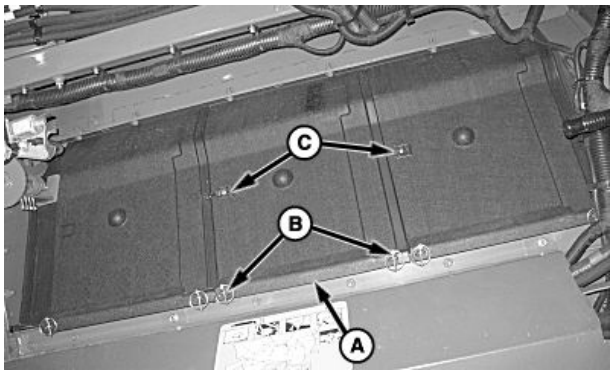
Quick-lock pins (B) and spring straps (C) are used to retain covers.

Remove quick-lock pins and raise spring straps to remove covers.

**A—Covers**
**B—Quick-Lock Pins**
**C—Spring Straps**




H62100 —UN—20JAN00




H96808 —UN—09JUN10

OUO6075,00007C8 -19-09JUN10-1/1

## Standard Feed Accelerator—Wing Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

*NOTE: Wings can be reversed for additional wear.*

Feed accelerator wings and wear strips can be replaced without removing the feed accelerator. Replace feed accelerator wings in sets of two and opposite of each other to maintain proper balance.

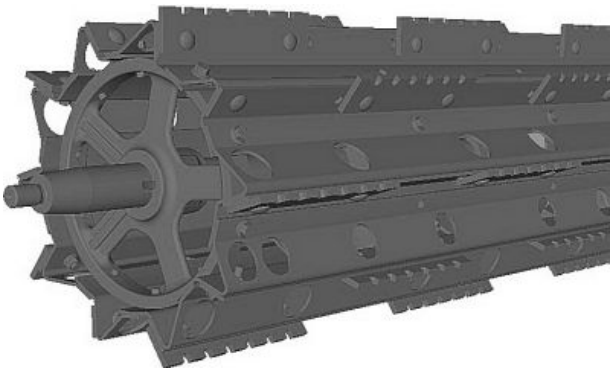
*NOTE: If accelerator is removed from machine, or has been serviced, tighten clamp bolts before securing wings. Tighten cap screws to specification.*

Remove round head bolts (A) and replace feed accelerator wear strips (B) as required. Tighten round head bolts to specification.

| Specification | |
|---|---|
| Feed Accelerator Wear Strip Round Head Bolts—Torque | 70 N·m (52 lb-ft) |

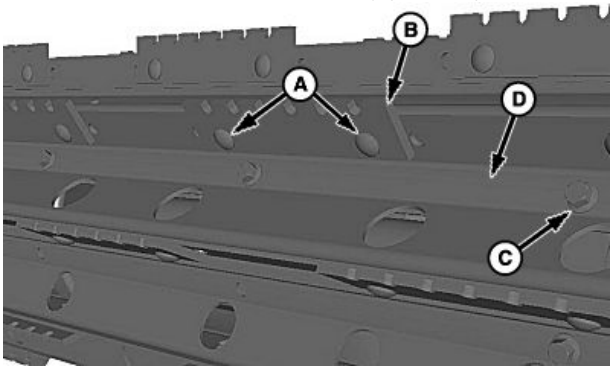
Remove cap screws (C) and replace feed accelerator wings (D) as required. Tighten cap screws to specification.

| Specification | |
|---|---|
| Feed Accelerator Wing Cap Screws—Torque | 70 N·m (52 lb-ft) |



H85626 —UN—27MAR06

*Feed Accelerator Wing (Standard)*




H85627 —UN—27MAR06

*Feed Accelerator Wing (Standard)*

**A—Round Head Bolt(s)**
**B—Feed Accelerator Wear Strip**
**C—Cap Screws**
**D—Feed Accelerator Wings**

OUO6075,0000AB0 -19-16JUL07-1/1

## Tough Crop Feed Accelerator—Wing Replacing

**CAUTION: Shut OFF engine, set park brake and remove key.**

Feed accelerator wings and wear strips can be replaced without removing the feed accelerator. Replace feed accelerator wings in sets of two and opposite of each other to maintain proper balance.

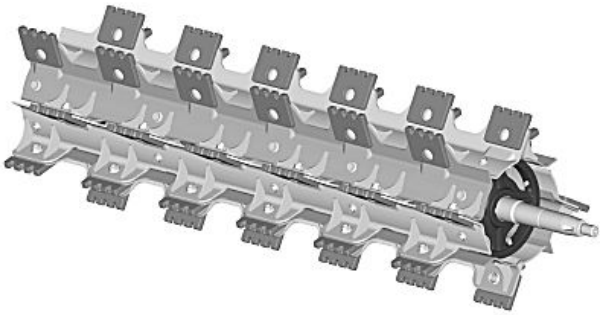
*NOTE: If accelerator is removed from machine, or has been serviced, tighten clamp bolts before securing wings. Tighten cap screws to specification.*

Remove round head bolts (A) and replace feed accelerator wear strips (B) as required. Tighten round head bolts to specification.

| Specification | |
|---|---|
| Feed Accelerator Wear Strip Round Head Bolts—Torque | 104 N·m (77 lb.-ft.) |

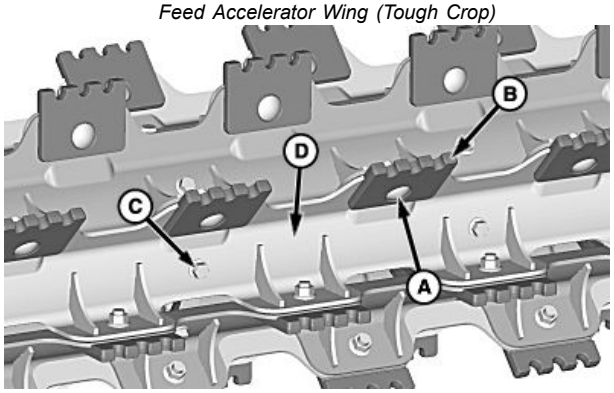
Remove cap screws (C) and replace feed accelerator wings (D) as required. Tighten cap screws to specification.

| Specification | |
|---|---|
| Feed Accelerator Wing Cap Screws—Torque | 70 N·m (52 lb.-ft.) |



H107173 —UN—06MAR13

*Feed Accelerator Wing (Tough Crop)*




H107174 —UN—06MAR13

*Feed Accelerator Wing (Tough Crop)*

**A—Round Head Bolts**
**B—Feed Accelerator Wear Strip**
**C—Cap Screws**
**D—Feed Accelerator Wings**

OUO6075,000140D -19-08MAR13-1/1

## Tine Feed Accelerator—Wing Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Feed accelerator wings and wear strips can be replaced without removing the feed accelerator.

Remove round head bolts (A) and replace feed accelerator wear strips (B) as required. Tighten round head bolts to specification.

| Specification | |
|---|---|
| Feed Accelerator Wear Strip Round Head Bolts—Torque | 73 N·m (54 lb.-ft.) |

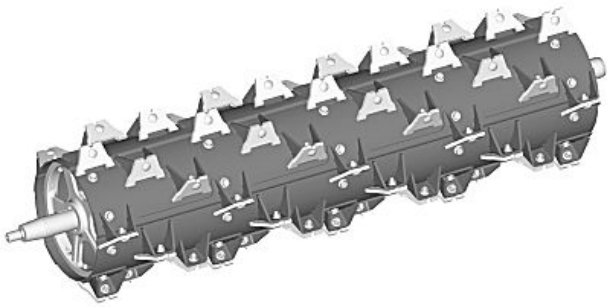
Remove cap screws (C) and replace wing assembly (D) as required.

**IMPORTANT: Feed accelerator must be statically balanced. Add washers as needed until feed accelerator is balanced.**

Install wing assembly so it overlaps at location (E) as shown. Tighten cap screws to specification.

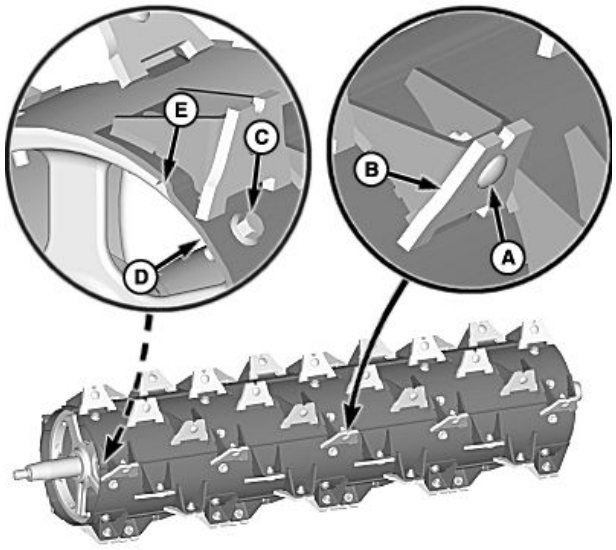
| Specification | |
|---|---|
| Feed Accelerator Wing Assembly Cap Screws—Torque | 73 N·m (54 lb.-ft.) |

**A—Round Head Bolt(s)**
**B—Feed Accelerator Wear Strip**
**C—Cap Screws**
**D—Wing Assembly**
**E—Overlap Location**



H102209 —UN—15JUN11

*Feed Accelerator Wing*

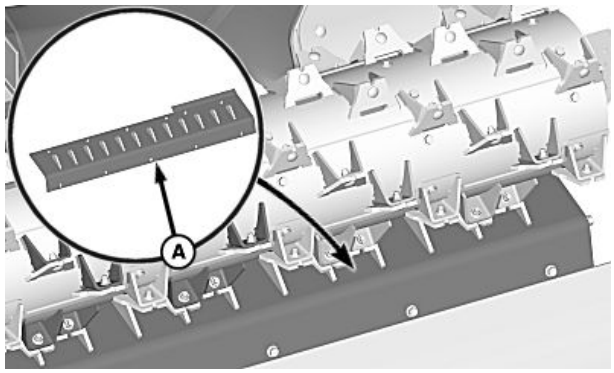



H102210 —UN—15JUN11

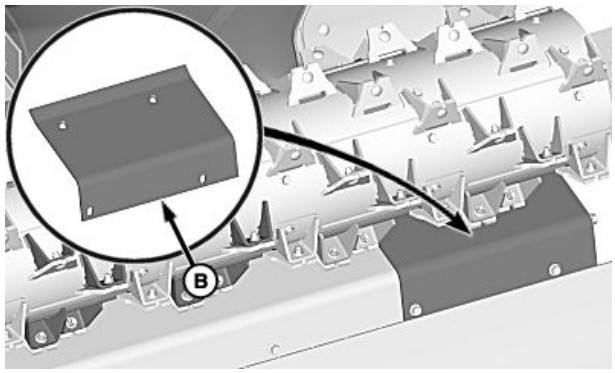
*Feed Accelerator Wing*

OUO6075,0000CA3 -19-15JUN11-1/1

## Tine Feed Accelerator Comb Floor (Rice Machines)




H105544 —UN—20JUN12




H105543 —UN—20JUN12

**A—Comb Floor** **B—Smooth Liner Plate**

*NOTE: Machine is shipped from factory with the comb floor installed. Comb floor can only be run with tine feed accelerator.*

When comb floor (A) is removed for harvest the smooth liner plate (B) which was shipped with the machine must be installed (left side of machine).

**Non Rice Harvest Information:**

- Corn - Remove comb floor and install smooth liner plate.
- Soybeans - If splits become a concern, remove comb floor and install smooth liner plate.
- Small Grains - Remove comb floor and install smooth liner plate.

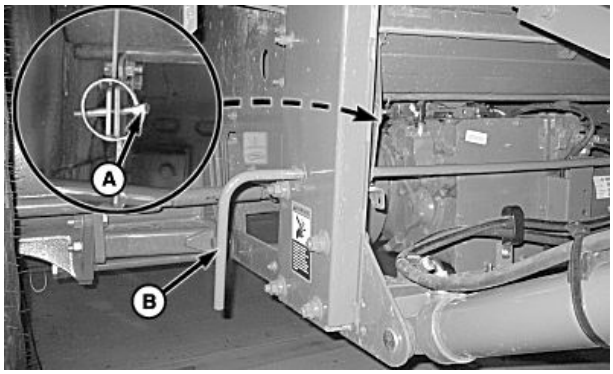
OUO6075,0001166 -19-22JUN12-1/8

**Removing Comb Floor:**

**CAUTION: Raise feeder house, lower safety stop, shut OFF engine, set parking brake and remove key.**

Remove quick-lock pin (A) and move lever (B) up to open stone trap.

**A—Quick-Lock Pin** **B—Lever**




H99239 —UN—01DEC10

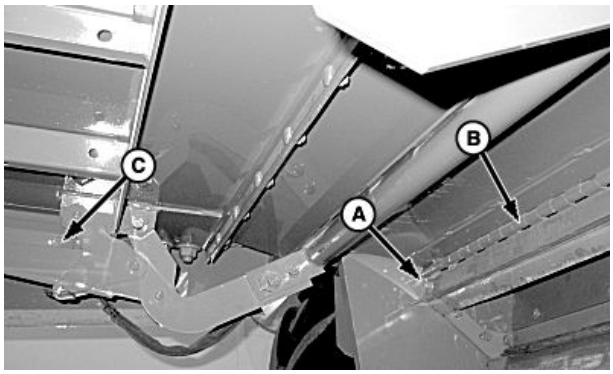
OUO6075,0001166 -19-22JUN12-2/8

Remove and retain cap screws and nuts (A) on both sides of machine.

Remove quick-lock pin and lower lever (C) while removing feedplate assembly (B) at same time.

Raise feedplate lever (C).

**A—Cap Screws and Nuts** **C—Lever**
**B—Feedplate Assembly**




H86271 —UN—10JUL06

**Continued on next page**

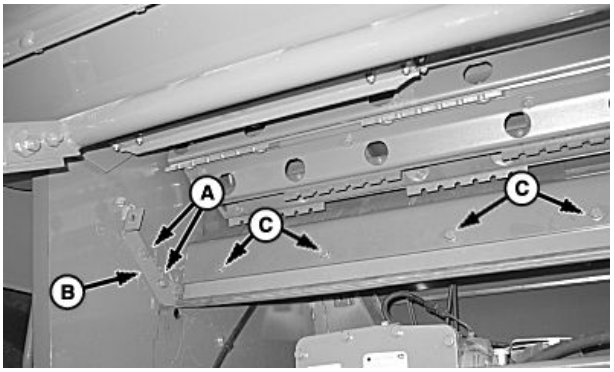
OUO6075,0001166 -19-22JUN12-3/8

Remove and retain hardware (A) and bracket (B) from both sides of machine.

Remove and retain cap screws and nuts (C).

Remove and retain plow bolts and remove comb floor.

**A—Hardware (4 Used)**
**B—Brackets (2 Used)**
**C—Cap Screws and Nuts (6 Used)**




H92220 —UN—16JUN08

OUO6075,0001166 -19-22JUN12-4/8

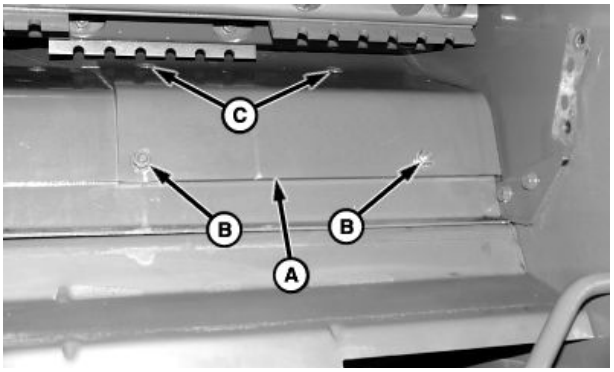
Install smooth liner plate (A) shipped with machine on left-hand side.

Install previously removed cap screws and nuts (B).

*NOTE: Plow bolt must be installed in holes that previously held comb floor to prevent grain loss.*

Install previously removed plow bolts (C).

**A—Smooth Liner Plate**
**B—Cap Screws and Nuts (2 Used)**
**C—Plow Bolts (6 Used)**



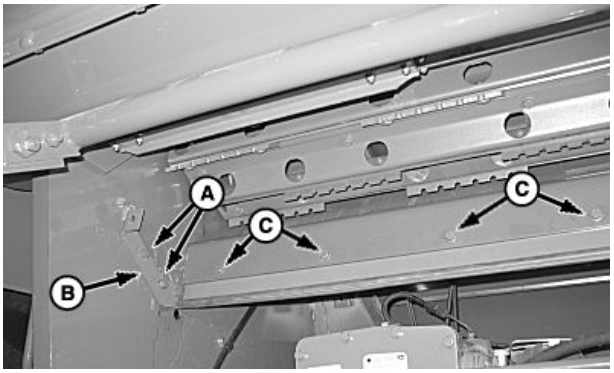

H105545 —UN—21JUN12

OUO6075,0001166 -19-22JUN12-5/8

Install previously removed cap screws and nuts (C).

Install previously removed bracket (B) on both sides of machine and retain with previously removed hardware (A).

**A—Hardware (4 Used)**
**B—Brackets (2 Used)**
**C—Cap Screws and Nuts (4 Used)**




H92220 —UN—16JUN08

**Continued on next page**

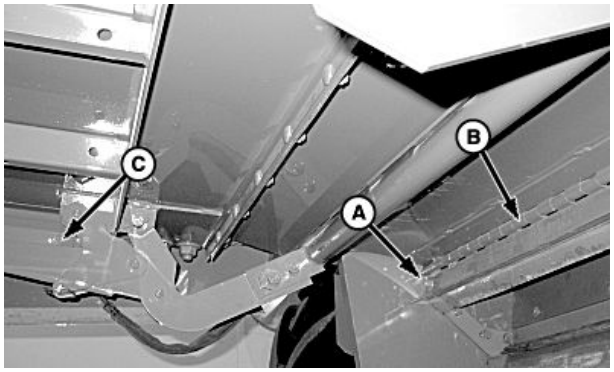
OUO6075,0001166 -19-22JUN12-6/8

Lower feed plate lever (C) and install previously removed feedplate assembly (B).

Install previously removed cap screws and nuts (A) on both sides of machine.

Push lever forward and up to close feedplate door and retain with quick-lock pin.

**A—Cap Screws and Nuts**
**B—Feedplate Assembly**
**C—Lever**

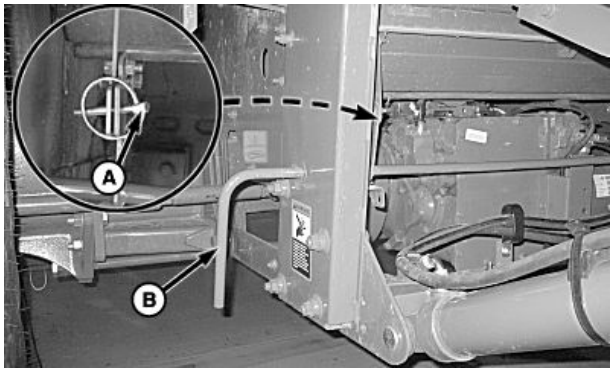



H86271 —UN—10JUL06

OUO6075,0001166 -19-22JUN12-7/8

Move lever (B) down to close stone trap and retain with quick-lock pin (A).

**A—Quick-Lock Pin**
**B—Lever**




H99239 —UN—01DEC10

OUO6075,0001166 -19-22JUN12-8/8

## Feed Accelerator Belt—Replacing

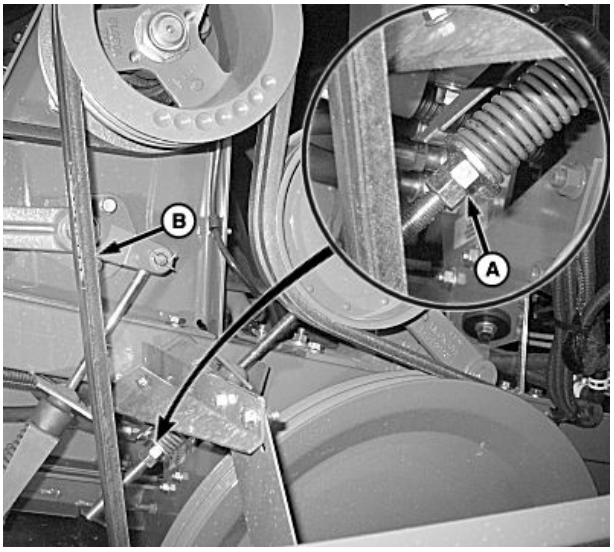
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nuts (A) to remove tension from front jackshaft belt (B).

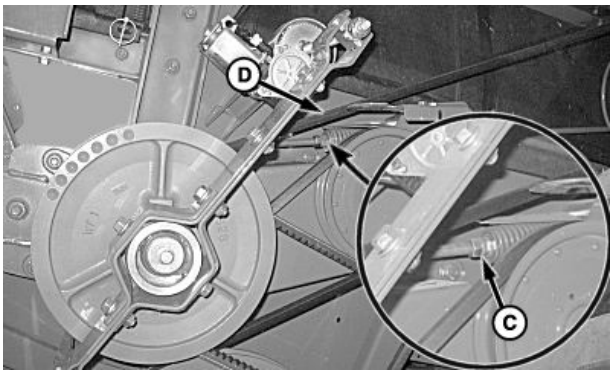
Loosen nuts (C) to remove tension on shoe, fan, and conveyor auger belt (D).

Remove both belts from countershaft sheaves to allow removal of feed accelerator belt.

**A—Nuts**
**B—Front Jackshaft Belt**
**C—Nuts**
**D—Belt**




H96924 —UN—16JUN10

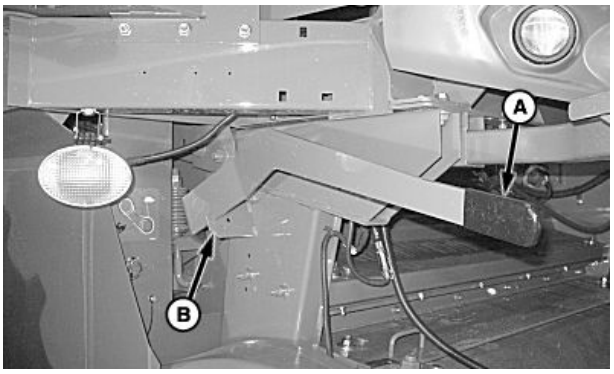



H96925 —UN—16JUN10

OUO6075,00007F1 -19-14JUN11-1/4

Push lever (A) up and out of notch in bracket (B) to relieve belt tension from accelerator belt.

**A—Lever**
**B—Bracket**




H96926 —UN—16JUN10

**Continued on next page**

OUO6075,00007F1 -19-14JUN11-2/4

**Standard Speed High Capacity Feed Accelerator Belt**

Remove cap screws (A) and sheave (B).

Remove feed accelerator belt (C) and install replacement belt.

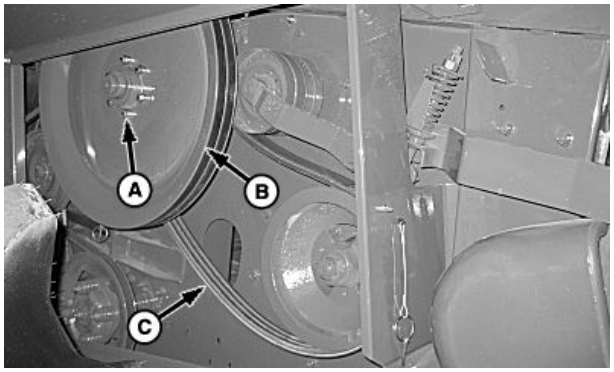
Install sheave and retain with cap screws.

Push lever up and into notch in bracket.

Adjust feed accelerator belt tension so washer is positioned between end of gauge and bottom of step.

Install shoe, fan, and conveyor auger belt and front jackshaft belt.

Adjust tension for belts so washer is positioned between end of gauge and bottom of step.




H86422 —UN—28JUL06

**A—Cap Screws (6 Used)**
**B—Sheave**
**C—Feed Accelerator Belt**

OUO6075,00007F1 -19-14JUN11-3/4

**High Speed High Capacity Feed Accelerator Belt**

Remove cap screws (A) and sheave (B).

Remove feed accelerator belt (C) and install replacement belt.

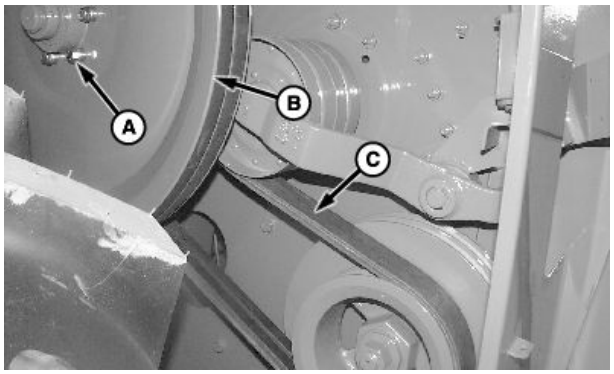
Install sheave and retain with cap screws.

Push lever up and into notch in bracket.

Adjust feed accelerator belt tension so washer is positioned between end of gauge and bottom of step.

Install shoe, fan, and conveyor auger belt and front jackshaft belt.

Adjust tension for belts so washer is positioned between end of gauge and bottom of step.




H75090 —UN—06FEB03

**A—Cap Screws (6 Used)**
**B—Sheave**
**C—Feed Accelerator Belt**

OUO6075,00007F1 -19-14JUN11-4/4

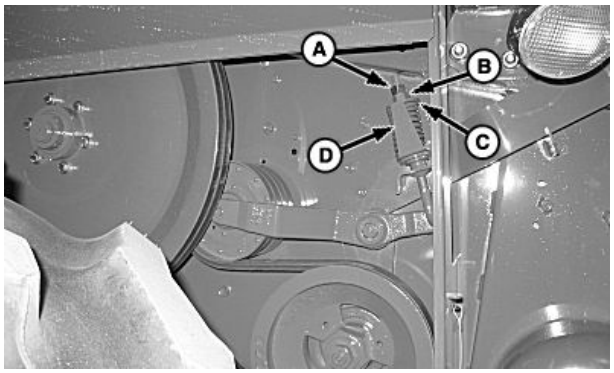
## Feed Accelerator Belt—Adjusting

**⚠ CAUTION: Shut OFF engine, set parking brake and remove key.**

Feed accelerator belt idler is located on right-hand side of machine behind feeder house pivot.

Loosen lock nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Lock Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H85678 —UN—06APR06

OUO6075,0000743 -19-19MAR07-1/1

## Standard Speed High Capacity Feed Accelerator—Changing Speed

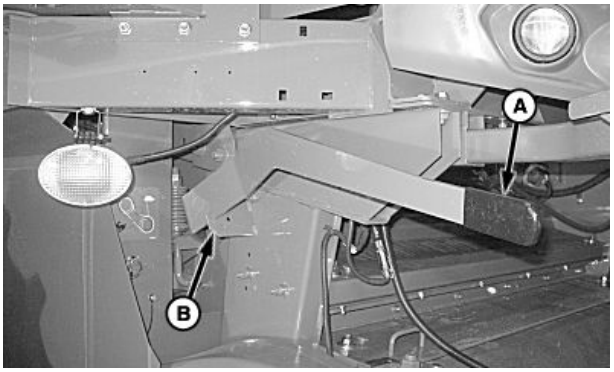
*NOTE: Refer to Crop Settings section for recommended feed accelerator speed settings.*

*When changing separator speeds make sure to cycle power ON and OFF to recognize new speed range.*

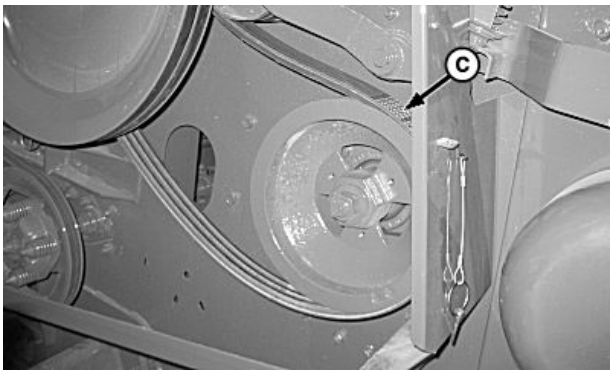
To change feed accelerator speed to high speed position:

- Push lever (A) up and out of notch in bracket (B) to relieve belt tension.
- Move belt (C) to inside sheave grooves on both sheaves for high speed.
- Push lever up and into notch in bracket to reset belt tension.

**A—Lever**
**B—Bracket**
**C—Belt**




H96926 —UN—16JUN10




H86423 —UN—28JUL06

OUO6075,00007F2 -19-27OCT10-1/1

## High Speed High Capacity Feed Accelerator—Changing To Slow Speed

*NOTE: Refer to Crop Settings section for recommended feed accelerator speed settings.*

*When changing separator speeds make sure to cycle power ON and OFF to recognize new speed range.*

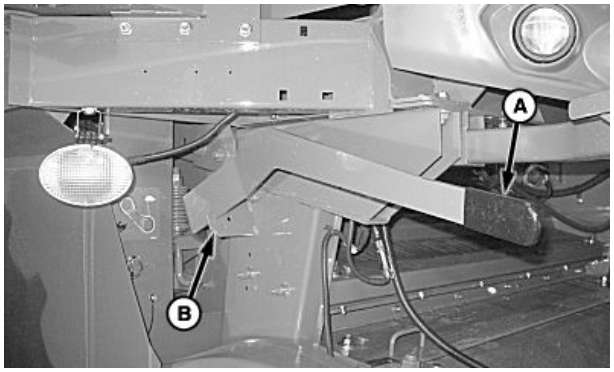
To change feed accelerator speed to low speed position:

- Push lever (A) up and out of notch in bracket (B) to relieve belt tension.
- Remove belt (C) from lower sheave and let belt hang freely from upper sheave.

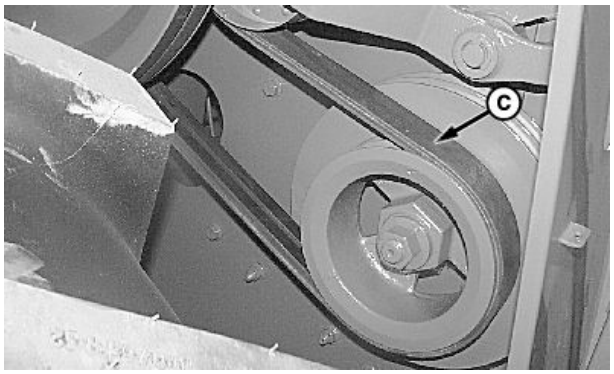
*NOTE: Belt must be twisted to fit between upper sheave and sidesheet.*

- Remove belt (D) from upper sheave (E) and move to inside sheave for low speed.
- Install belt (C) on inner sheave groove on lower sheave.
- Push lever up and into notch in bracket to reset belt tension.

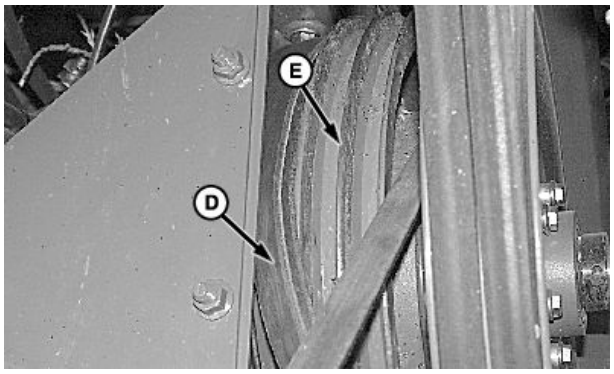
**A—Lever**
**B—Bracket**
**C—Belt**
**D—Belt**
**E—Upper Sheave**




H96926 —UN—16JUN10



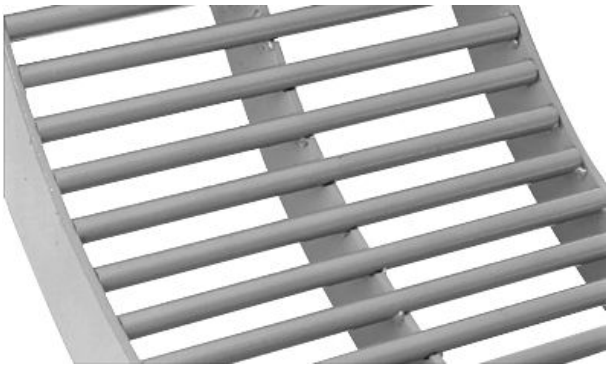

H750088 —UN—07FEB03




H75076 —UN—06FEB03

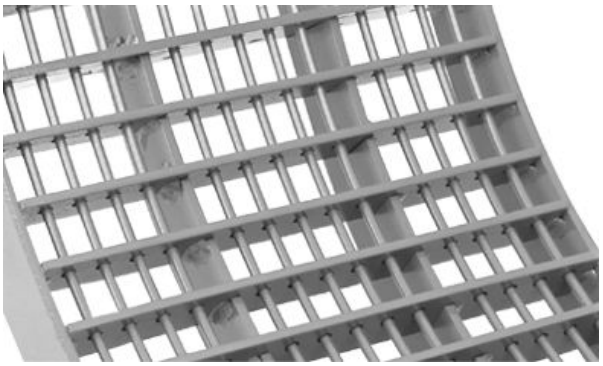
OUO6075,00007F3 -19-14JUN11-1/1

## Concave Types



H54506 —UN—23MAR99

*Round Bar Multi Crop Concave*

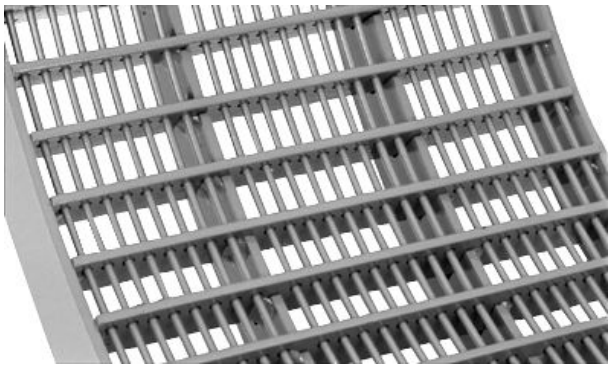


H54507 —UN—25JUN99

*Large Wire Concave*

Three different concaves are available for different crop and crop conditions.

- Round bar multi crop concave is used for corn and soybeans.
- Large wire concave is used for rice, soybeans, and grain sorghum.
- Small wire concave is used for small grains.



H54508 —UN—22JUN99

*Small Wire Concave*

OUO6075,00007A8 -19-02JUN10-1/1

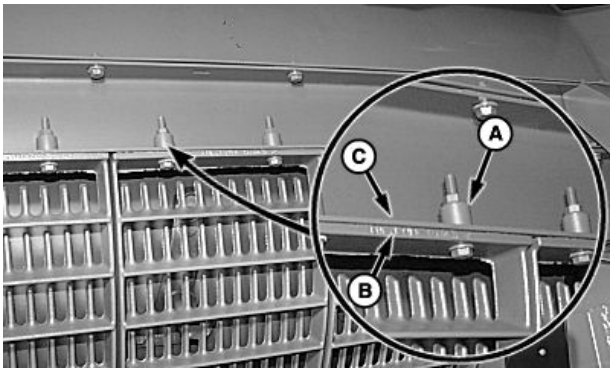
## Separator Grate Spacers

Spacers are installed in storage position (as shown) from factory.

Spacers can be used in corn to reduce bits of cob in the grain tank sample.

**IMPORTANT: Spacers should be used in corn and soybeans only. Remove spacers for all other crops (place spacers in storage position as shown).**

Remove all separator grate spacers (A) from storage position (as shown) and install between separator grates (B) and separator channel (C).

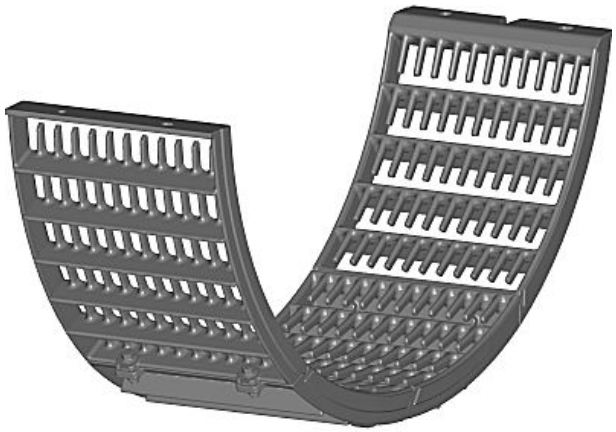



H86634 —UN—20SEP06

**A—Spacers**
**B—Separator Grates**
**C—Separator Channel**

OUO6075,0000B06 -19-03JAN11-1/1

## Separator Grate Types



H107177 —UN—06MAR13

*Standard Cast Separator Grate*



H107178 —UN—06MAR13

*Heavy-Duty Separator Grate*

Two different separator grates options are available for the machine.

- Standard Cast Separator Grates - come standard on all machines, except for rice machines.
- Heavy-Duty Separator Grates - are used in tough crop situations. These grates are optional on all Variable Stream Rotor machines, but standard on rice machines.

OUO6075,000140F -19-08MAR13-1/1

## Separator Grate Covers (If Equipped)

Recommended for very dry small grain. Covers (A) are installed on separator grates to help balance chaff load to cleaning shoe.

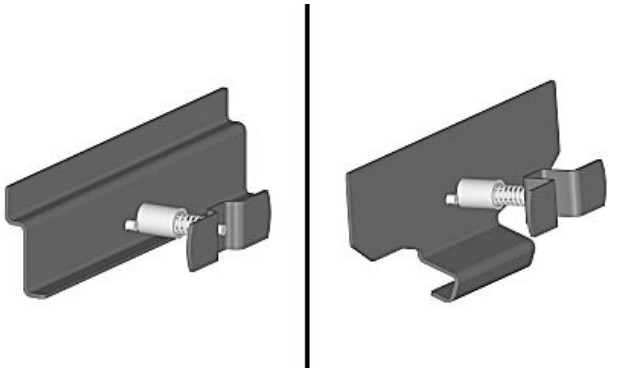
**Standard Cast Grate Covers**

- Install two rows (eight covers) on right-hand side and three rows (twelve covers) on left-hand side. Make adjustments as necessary depending on conditions.

**Heavy-Duty Grate Covers**

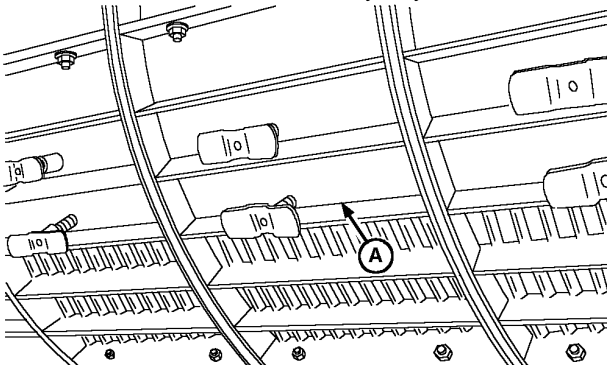
- Install one row (four covers) on right-hand side and two rows (eight covers) on left-hand side. Make adjustments as necessary depending on conditions.

**A—Separator Grate Covers**



H107180 —UN—07MAR13

*Standard Cast Grate Covers/Heavy-Duty Grate Covers*




H54512 —UN—01APR99

OUO6075,0001410 -19-08MAR13-1/1

## Concave Sector Gear Shear Bolts

**CAUTION: Shut OFF engine, set parking brake and remove key.**

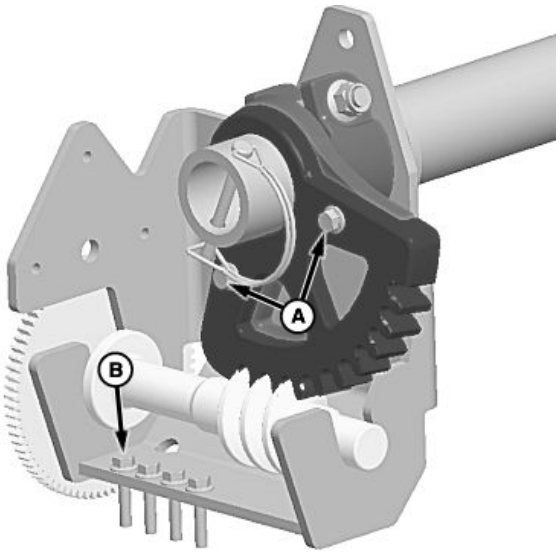
Use only John Deere supplied shear bolts (A), see your John Deere dealer for replacement shear bolts.

If shear bolts should break, replace with extra shear bolts (B), which are provided on sector gear bracket.

Tighten shear bolts to specification.

| Specification | |
|---|---|
| Shear Bolts—Torque | 15 N·m (133 lb-in.) |

**A—Shear Bolts** **B—Extra Shear Bolts (4 Used)**




H88917 —UN—14JUN07

OUO6075,0000BEC -19-14JUN07-1/1

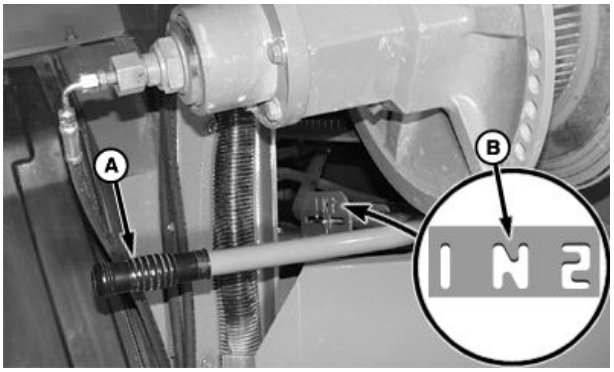
## Concave Sections—Remove and Install

**CAUTION: Concave sections are heavy and awkward to handle. Another person may be needed to remove and install concave sections.**

*NOTE: For ease of removal, close concave completely.*

1. Move handle (A) to shift rotor gearcase in neutral position (B).

**A—Handle** **B—Neutral Position**

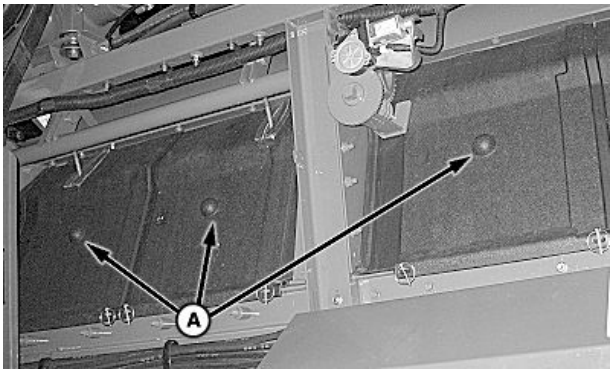



H96927 —UN—17JUN10

OUO6075,00007F5 -19-12OCT10-1/17

2. Remove shielding as needed to access separator inspection covers.
3. Remove separator inspection covers (A).
4. Inspect wear on concave sections using AH204933 Clearance Gauge.

**A—Separator Covers**




H96446 —UN—20MAY10

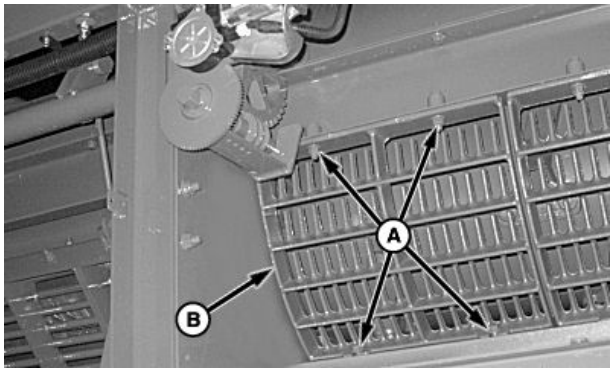
**Continued on next page**

OUO6075,00007F5 -19-12OCT10-2/17

*NOTE: Removing separator grate provides access for rotating rotor for maximum concave to threshing element clearance.*

5. Remove cap screws (A) and separator grate (B).

**A—Cap Screws** **B—Separator Grate**

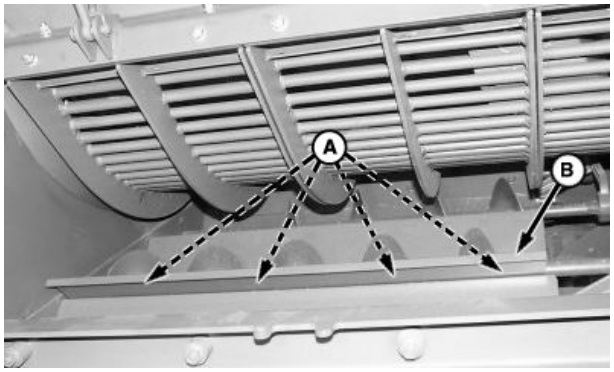



H96447 —UN—20MAY10

OUO6075,00007F5 -19-12OCT10-3/17

6. Loosen cap screws (A) and remove left-hand sheet metal diverter (B).

**A—Cap Screws** **B—Diverter**

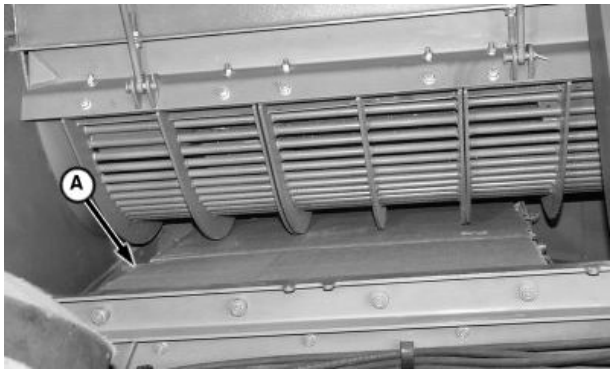



H63543 —UN—12APR00

OUO6075,00007F5 -19-12OCT10-4/17

7. Place a piece of cardboard (A) or poly over conveyor augers. This provides protection for the augers and allows a smooth surface to remove the concaves.

**A—Cardboard**



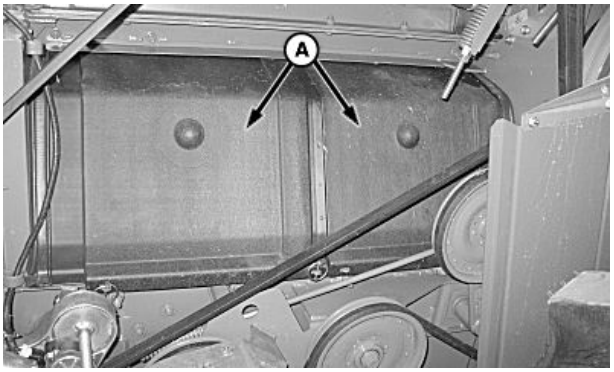

H63541 —UN—12APR00

**Continued on next page**

OUO6075,00007F5 -19-12OCT10-5/17

8. Remove shielding as needed to access separator inspection covers.
9. Remove quick-lock pins and front two separator covers (A) on right-hand side of machine.

**A—Separator Cover**

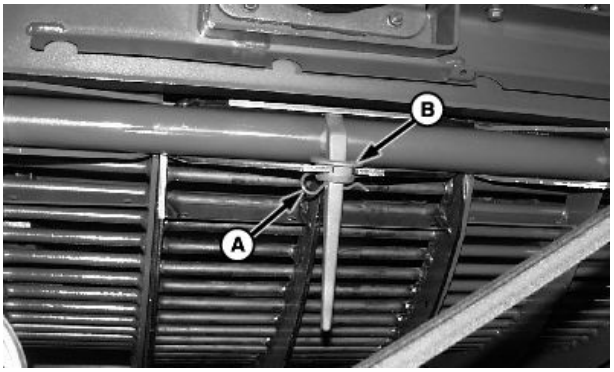



H96929 —UN—17JUN10

OUO6075,00007F5 -19-12OCT10-6/17

10. Remove spring lock pin (A) from concave retainer (B).
11. Lift concave retainer and remove handle from each concave section.

**A—Spring Pin** **B—Concave Retainer**



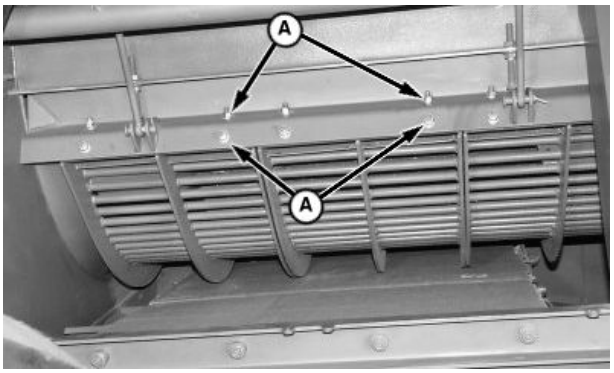

H75040 —UN—04FEB03

*Concave Retainer*

OUO6075,00007F5 -19-12OCT10-7/17

12. Loosen cap screws (A).
13. Fully open concave. This allows weight of concaves to rest on conveyor auger bed.

**A—Cap Screws (12 Used)**



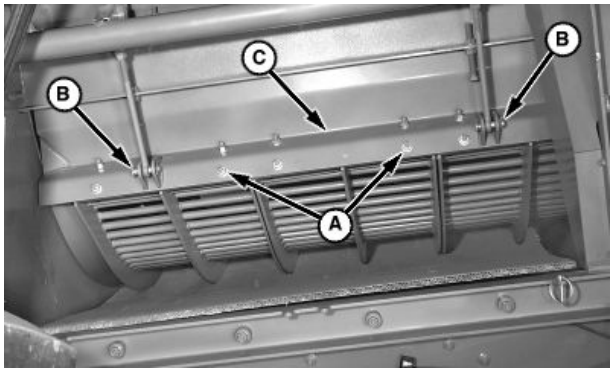

H63582 —UN—14APR00

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OUO6075,00007F5 -19-12OCT10-8/17

14. Remove cap screws (A).
15. Remove cotter pins, pins (B) and ”Z” bar (C).
16. Rotate rotor such that a gap in the threshing element pattern occurs at mid concave.
17. Remove center concave section.
18. Slide rear concave to the center position and remove.
19. Slide front concave to the center position and remove.
20. Install concaves in reverse order.

**A—Cap Screws (12 Used)**
**B—Pins**
**C—”Z” Bar**

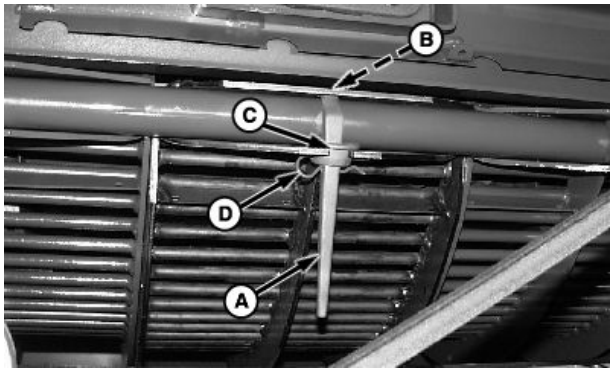



H63583 —UN—14APR00

OUO6075,00007F5 -19-12OCT10-9/17

21. Install concave handle (A) into groove (B) on concave sections.
22. Install concave retainer (C) and retain with spring pin (D).

**A—Handle**
**B—Groove**
**C—Concave Retainer**
**D—Spring Pin**

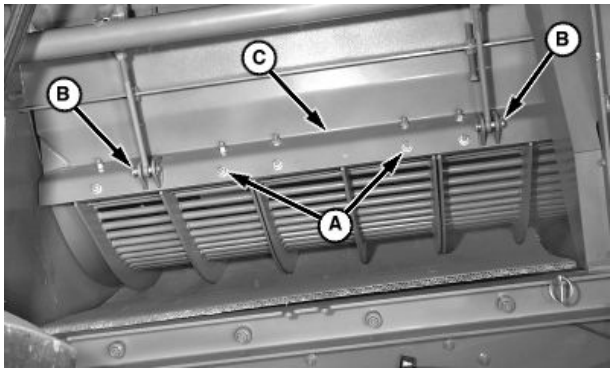



H750411 —UN—04FEB03

OUO6075,00007F5 -19-12OCT10-10/17

23. Position ”Z” bar (C) over end of concaves and install cap screws, but do not tighten.
24. Install pins (B).
25. Fully close concave.

**A—Cap Screws (12 Used)**
**B—Pins**
**C—”Z” Bar**



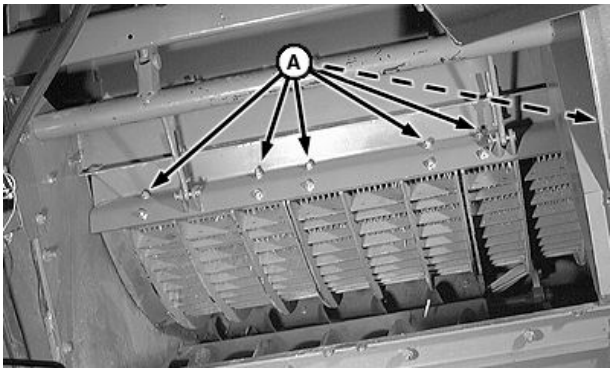

H63583 —UN—14APR00

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OUO6075,00007F5 -19-12OCT10-11/17

26. Be sure the ends of concaves fit snug into ”Z” bar; then tighten top row of cap screws (A) first.
27. Tighten bottom row of cap screws last.
28. Adjust concave level. (See Concave Leveling later in this section.)

**A—Cap Screws**



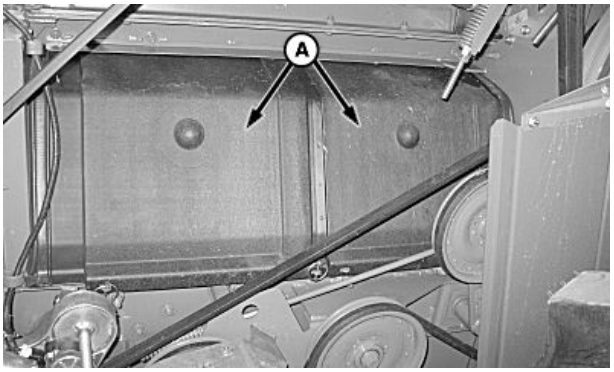

H51980 —UN—16FEB99

OUO6075,00007F5 -19-12OCT10-12/17

*NOTE: Verify that top edge of separator cover is under clips.*

29. Install separator covers (A).
30. Install shielding previously removed to access separator inspection covers.

**A—Separator Covers**

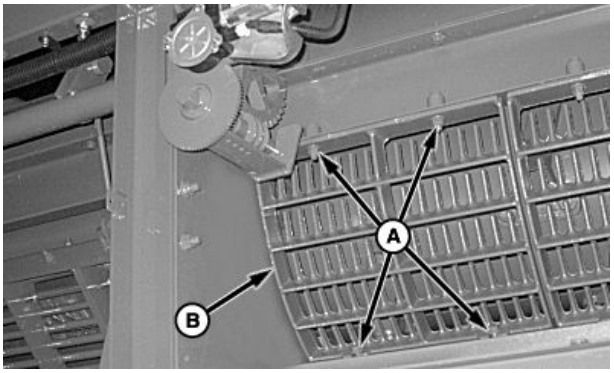



H96929 —UN—17JUN10

OUO6075,00007F5 -19-12OCT10-13/17

31. Install separator grate (B) and retain with cap screws (A).

**A—Cap Screws** **B—Separator Grate**



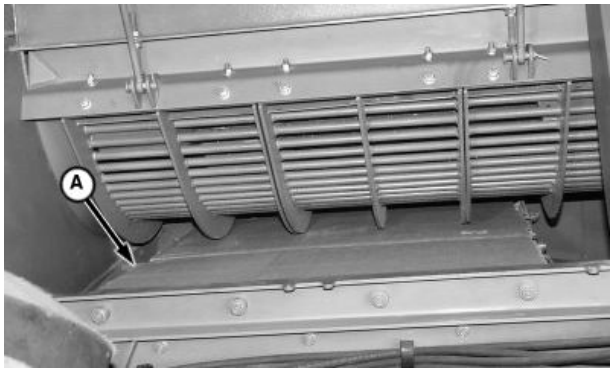

H96447 —UN—20MAY10

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OUO6075,00007F5 -19-12OCT10-14/17

32. Remove cardboard (A) or poly from conveyor augers.

**A—Cardboard**

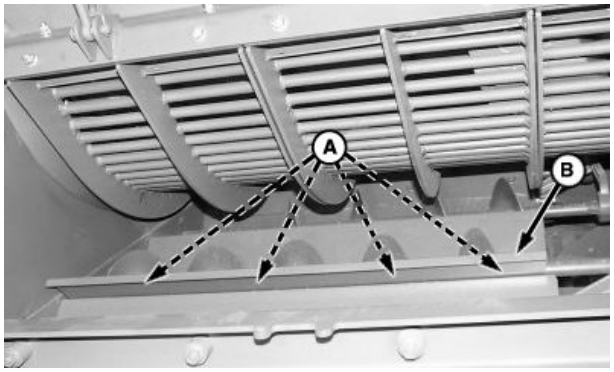



H63541 —UN—12APR00

OUO6075,00007F5 -19-12OCT10-15/17

33. Install diverter (B) to original position and tighten cap screws (A).

**A—Cap Screws** **B—Diverter**

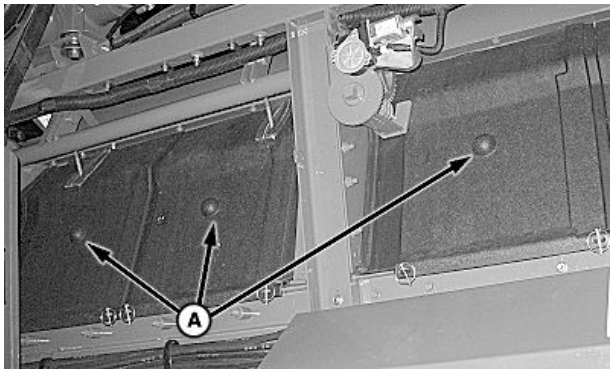



H63543 —UN—12APR00

OUO6075,00007F5 -19-12OCT10-16/17

34. Install separator inspection covers (A).
35. Install shielding previously removed to access separator inspection covers.
36. Shift rotor drive gearcase to previous position.

**A—Separator Cover**




H96446 —UN—20MAY10

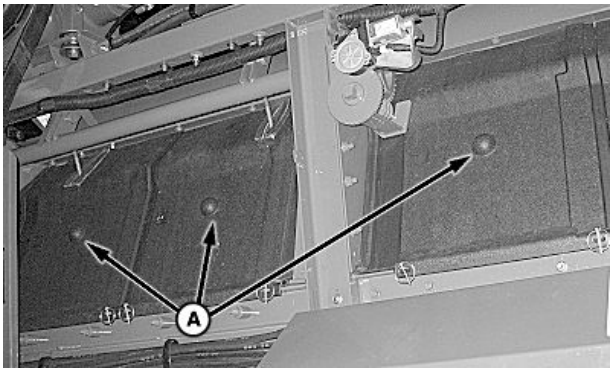
OUO6075,00007F5 -19-12OCT10-17/17

## Concave Leveling

*NOTE: Round bar concave covers (if installed) should be removed prior to beginning concave leveling.*

1. Remove shielding as needed to access separator inspection covers.
2. Remove separator inspection covers (A).

**A—Separator Cover**



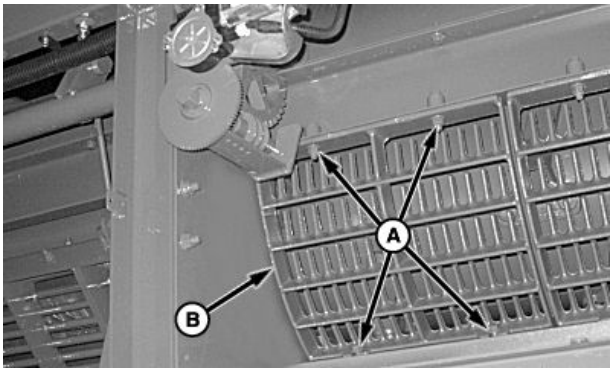

H96446 —UN—20MAY10

OUO6075,00007F6 -19-12OCT10-1/9

*NOTE: Removing separator grate provides access for rotating rotor.*

3. Remove cap screws (A) and separator grate (B).

**A—Cap Screw (4 used)** **B—Separator Grate**



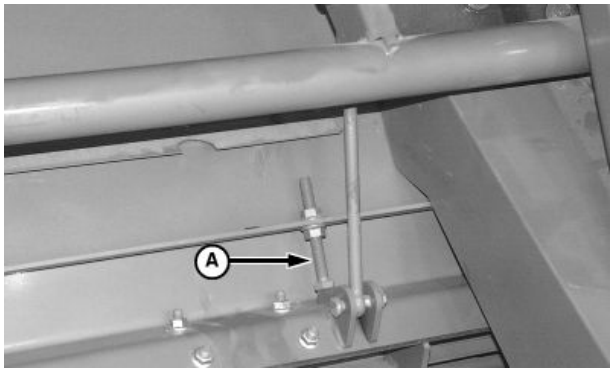

H96447 —UN—20MAY10

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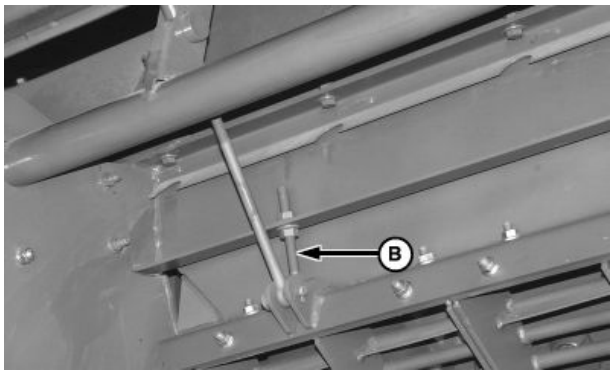
OUO6075,00007F6 -19-12OCT10-2/9

4. Back off stop bolts (A and B).

**A—Stop Bolt** **B—Stop Bolt**




H63912 —UN—15MAY00

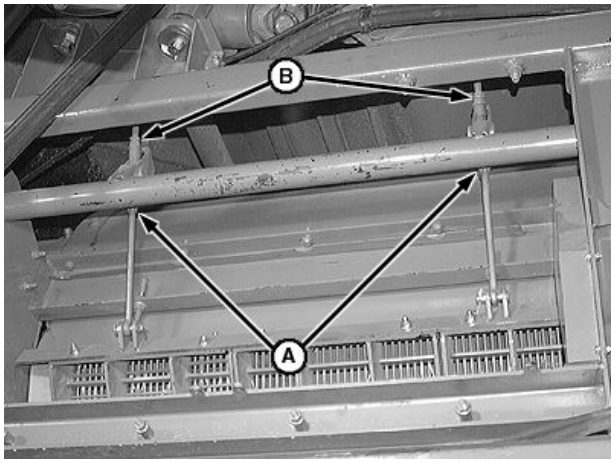



H63911 —UN—15MAY00

OUO6075,00007F6 -19-12OCT10-3/9

5. Loosen lock nuts (A) and back off nuts (B) five turns each.

**A—Bottom Nut (2 used)** **B—Top Nut (2 used)**



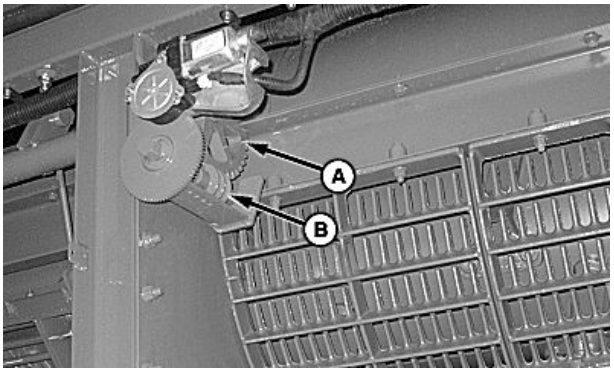

H51982 —UN—16FEB99

**Continued on next page**

OUO6075,00007F6 -19-12OCT10-4/9

6. Use concave adjust switch to adjust concave up until worm gear (B) and sector gear (A) are bottomed out in the up position.

**A—Sector Gear** **B—Worm Gear**

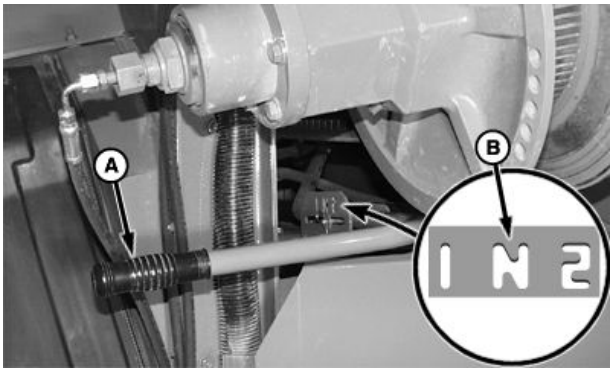



H96450 —UN—20MAY10

OUO6075,00007F6 -19-12OCT10-5/9

7. Move handle (A) to shift rotor gearcase in neutral position (B).

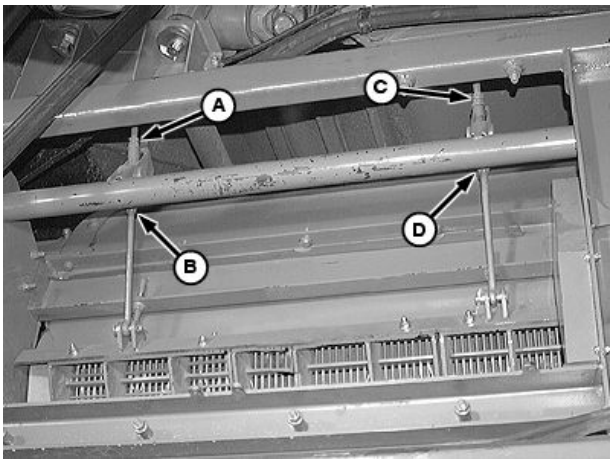
**A—Handle** **B—Neutral Position**




H96927 —UN—17JUN10

OUO6075,00007F6 -19-12OCT10-6/9

8. Adjust front eyebolt top nut (A) slowly until elements ”tick” concave while rotor is rotating. Back off three complete turns.
9. Adjust rear eyebolt top nut (C) slowly, until elements ”tick” concave while rotor is rotating. Back off three complete turns.
10. Adjust front eyebolt top nut (A) down slowly until elements ”tick” concave. Back off slowly until ”tick” stops. As soon as ”tick” has stopped back off one complete turn and tighten top lock nut.
11. Adjust rear eyebolt top nut (C) down slowly, until elements ”tick” concave. Back off slowly until ”tick” stops. As soon as ”tick” has stopped back off one complete turn and tighten top lock nut.
12. Tighten bottom front concave adjustment nut. Hold front eyebolt top nut (A) with open end wrench and tighten front eyebolt bottom lock nut (B).
13. Tighten bottom rear concave adjustment nut. Hold rear eyebolt top nut (C) with open end wrench and tighten rear eyebolt bottom lock nut (D).




H65419 —UN—22NOV00

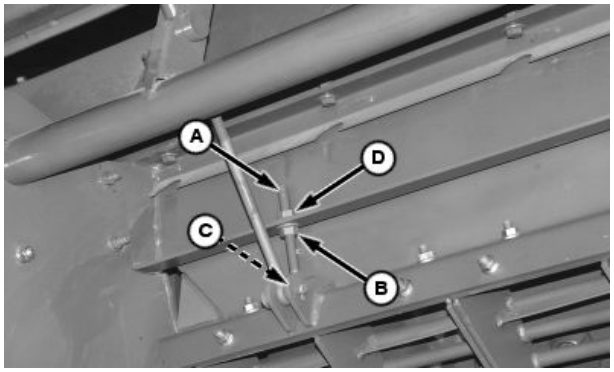
**A—Front Eyebolt Top Nut** **C—Rear Eyebolt Top Nut**
**B—Front Eyebolt Bottom Lock Nut** **D—Rear Eyebolt Bottom Lock Nut**

**Continued on next page**

OUO6075,00007F6 -19-12OCT10-7/9

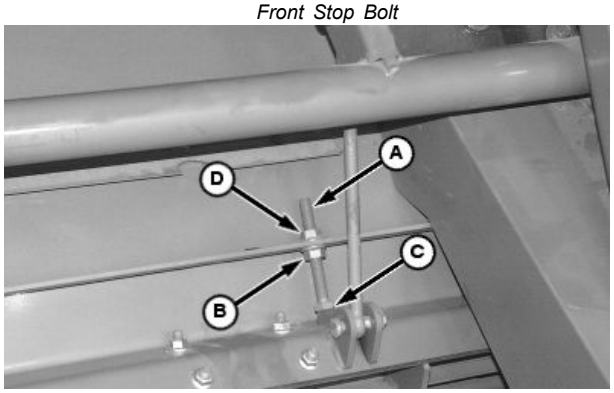
14. Adjust front and rear concave stop bolt (A) by tightening bottom nut (B) until head of bolt (C) is snug against concave. Tighten top nut (D) while holding bottom nut (B) with open end wrench.

**A—Stop Bolt (2 used)**
**B—Lock Nut**
**C—Head of Bolt**
**D—Lock Nut**




H65421 —UN—22NOV00

*Front Stop Bolt*



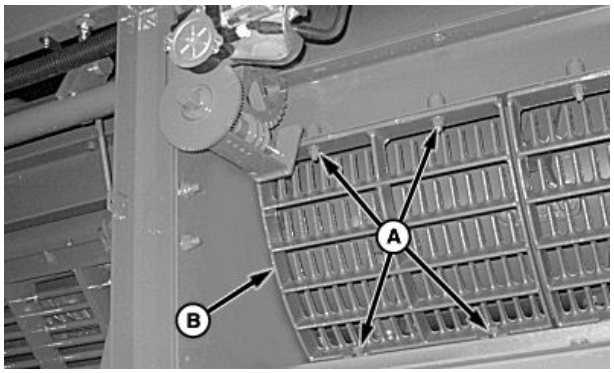

H65420 —UN—22NOV00

*Rear Stop Bolt*

OUO6075,00007F6 -19-12OCT10-8/9

15. Install separator grate (B) and retain with cap screws (A).
16. Shift rotor drive gearcase to previous position.
17. Install previously removed separator inspection covers and shields.
18. Calibrate concave position from inside cab. (See Calibration Procedures section for further information.)

**A—Cap Screw (4 used)**
**B—Separator Grate**




H96447 —UN—20MAY10

OUO6075,00007F6 -19-12OCT10-9/9

## Separator Top Cover Vanes (If Equipped)

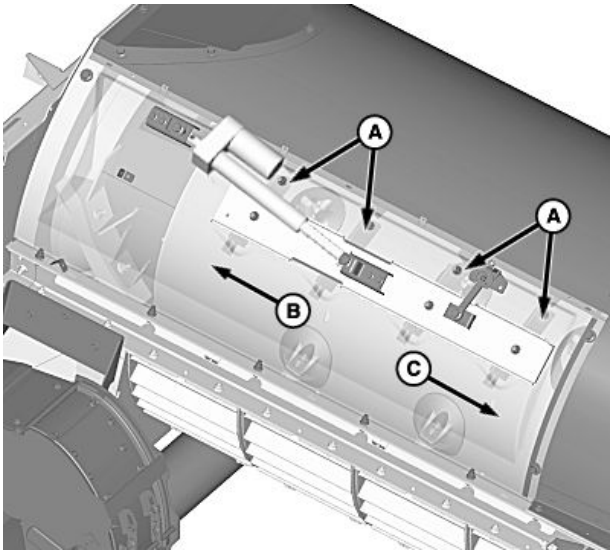
Separator top cover vanes (A) are located on right-hand side of machine behind the clean grain loading auger.

Separator top cover vanes are able to be adjusted to two different positions through software.

*NOTE: Running separator vanes in advanced position may increase grain losses in certain crop and conditions. Crop dwell time in separator is reduced to improve straw quality.*

- (B)—Advanced Position
- (C)—Standard Position

See Residue Management Setup in CommandCenter Display Screens section for further information on how to change positions through the software.




H97060 —UN—22JUN10

**A—Separator Top Cover Vanes C—Standard Position**
**B—Advanced Position**

OUO6075,0000811 -19-12OCT10-1/1

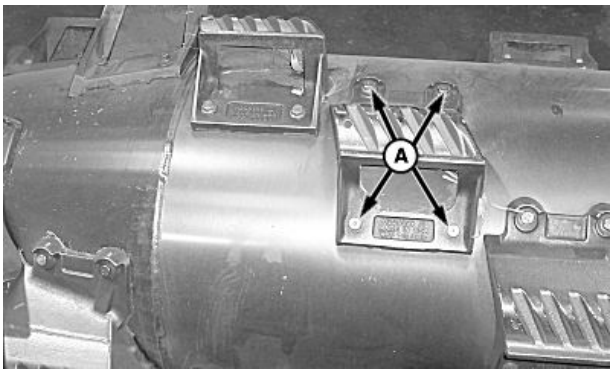
## Threshing Elements and Tines (TriStream Rotor)—Remove and Install

**IMPORTANT: Rotor is a balanced assembly. Elements and tines must be replaced in sets of three to maintain balance. Replacement kits are available through service parts and include new cap screws with pre-applied Threadlock and Sealer. Tines or elements that become loose may result in machine damage.**

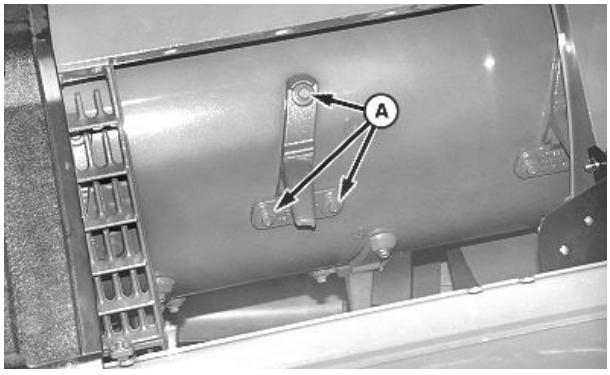
**If tines or elements need to be removed for other than replacement, mark location on tine(s)/element(s) and rotor, prior to removal. Install in same location as removed to maintain balance. Always use new cap screws.**

**Make sure to clean out tailings and front cross auger if tine replacement is due to broken or damaged tines. Failure to do so before initial start-up may allow broken tines to recirculate and cause tine damage to reoccur.**

1. Remove separator grates or concave sections as needed to access rotor. (See Concave Sections—Remove and Install in this section.)
2. Inspect wear on threshing elements and separator tines using KXE10110 Clearance Gauge.
3. Remove cap screws (A) and threshing element or tine.




H82539 —UN—07MAR05




H73898 —UN—30OCT02

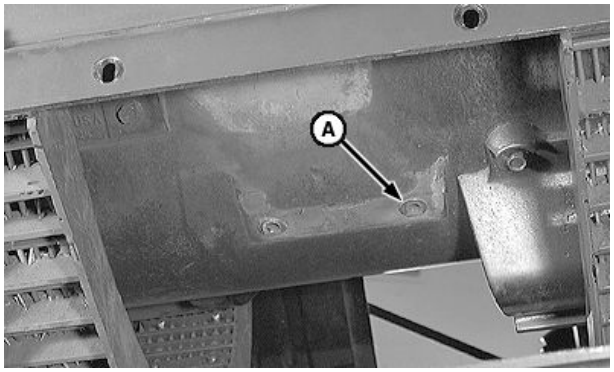
**A—Cap Screw**

**Continued on next page**

OUO6075,0000B7F -19-14JUN11-1/2

4. Inspect RIVNUT® threaded inserts (A). Replace if damaged.
5. If one element or tine needs replaced, replace all in the group. Example: If element 2 needs to be replaced, replace elements 1 and 3 also.
6. Use Threshing Elements and Separator Tine Location diagram for identifying elements and tines.
7. Tighten cap screws to specification.

| Specification | |
|---|---|
| Threshing Element and Separator Tine Cap Screws—Torque | 90 N·m (66 lb.-ft.) |



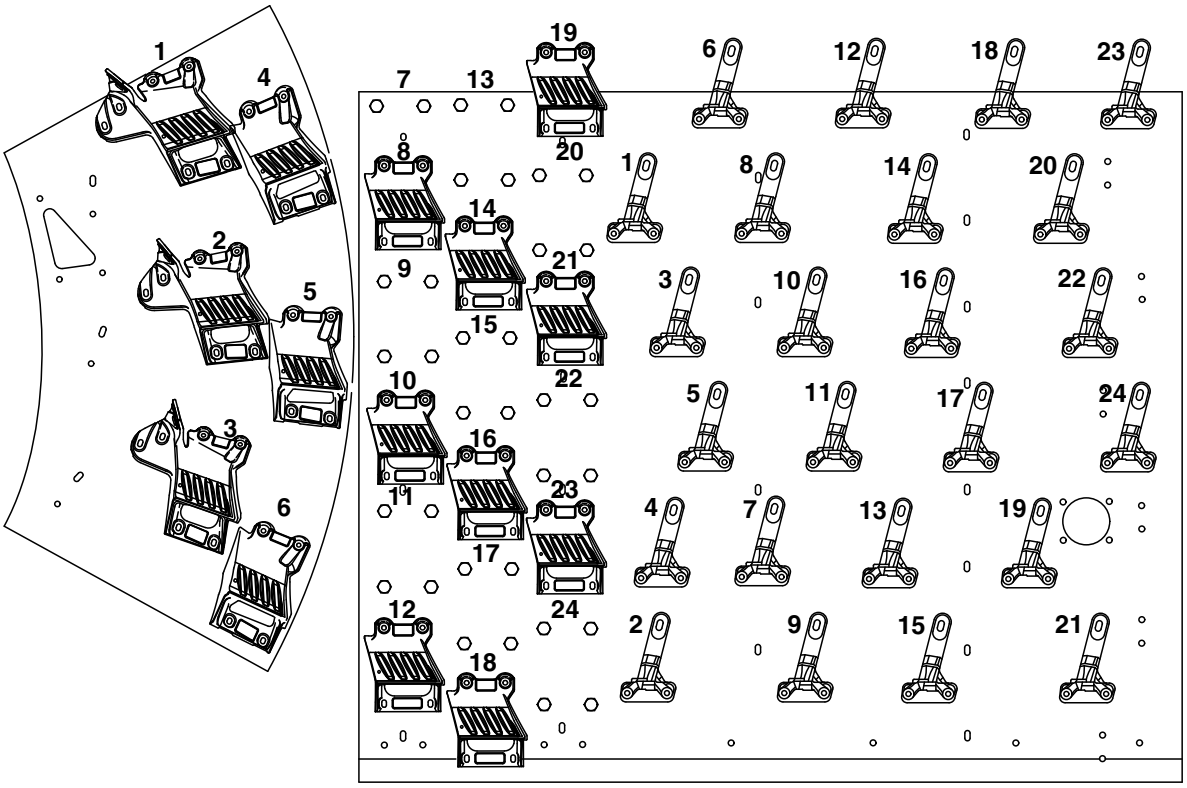

H54006 —UN—18FEB99

**A—Threaded Insert**

*RIVNUT is a trademark of RIVNUT Engineered Products Inc.*

OUO6075,0000B7F -19-14JUN11-2/2

## Threshing Element and Separator Tine Location (TriStream Rotor Tough Grain Configuration)



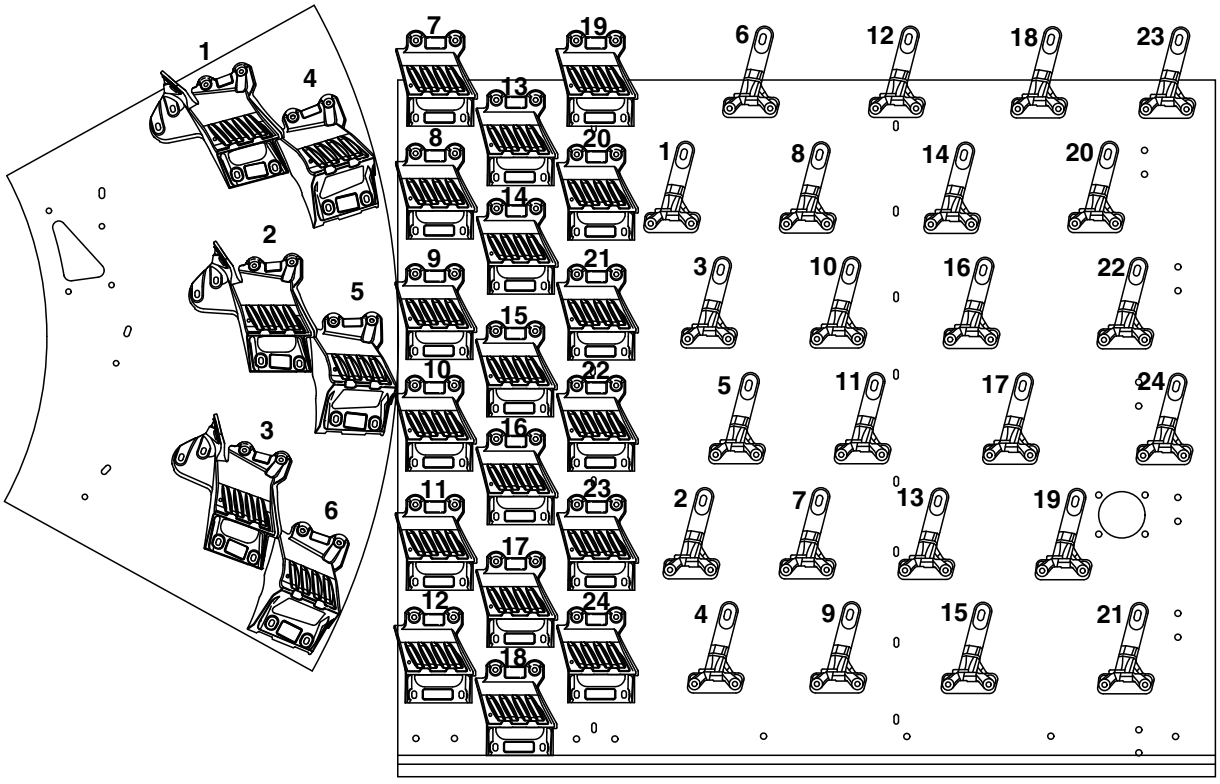

H82830 —UN—23MAR05

*NOTE: Additional elements can be added to the tough grain configuration in locations with an "O" stamped into the rotor if the dense pack configuration is desired.*

| Threshing Element Groups (Tough Grain Rotor Configuration) | Separator Tine Groups (Tough Grain Rotor Configuration) |
|---|---|
| **Group 1 Elements =** 1, 2, 3 | **Group 1 Tines =** 1, 4, 5 |
| **Group 2 Elements =** 4, 5, 6 | **Group 2 Tines =** 2, 3, 6 |
| **Group 3 Elements =** 8, 10, 12 | **Group 3 Tines =** 8, 9, 11 |
| **Group 4 Elements =** 14, 16, 18 | **Group 4 Tines =** 7, 10, 12 |
| **Group 5 Elements =** 19, 21, 23 | **Group 5 Tines =** 13, 16, 18 |
| | **Group 6 Tines =** 14, 15, 17 |
| | **Group 7 Tines =** 19, 22, 23 |
| | **Group 8 Tines =** 20, 21, 24 |

OUO6075,0000B81 -19-22MAR11-1/1

## Threshing Element and Separator Tine Location (TriStream Rotor Dense Pack Configuration)




*NOTE: Dense pack configuration is field conversion only.*

| Threshing Element Groups (Dense Pack Rotor Configuration) | Separator Tine Groups (Dense Pack Rotor Configuration) |
|---|---|
| **Group 1 Elements =** 1, 2, 3 | **Group 1 Tines =** 1, 4, 5 |
| **Group 2 Elements =** 4, 5, 6 | **Group 2 Tines =** 2, 3, 6 |
| **Group 3 Elements =** 7, 9, 11 | **Group 3 Tines =** 8, 9, 11 |
| **Group 4 Elements =** 8, 10, 12 | **Group 4 Tines =** 7, 10, 12 |
| **Group 5 Elements =** 13, 15, 17 | **Group 5 Tines =** 13, 16, 18 |
| **Group 6 Elements =** 14, 16, 18 | **Group 6 Tines =** 14, 15, 17 |
| **Group 7 Elements =** 19, 21, 23 | **Group 7 Tines =** 19, 22, 23 |
| **Group 8 Elements =** 20, 22, 24 | **Group 8 Tines =** 20, 21, 24 |

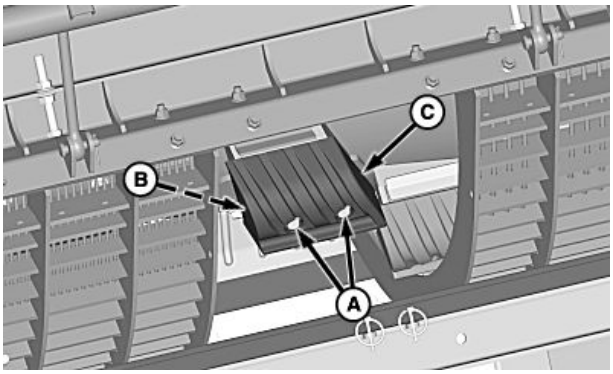
OUO6075,0000B80 -19-22MAR11-1/1

## Threshing Elements and Tines (Variable Stream Rotor)—Remove and Install

**Threshing Elements**

**IMPORTANT: Rotor is a balanced assembly. Elements must be replaced in groups of three to maintain balance. When installing more than one kit, do not mix and match elements. Replacement kits are available through service parts and include cap screws with pre-applied Thread Lock and Sealer. Always use supplied cap screws. Elements that become loose may result in machine damage.**

1. Remove concave sections as needed to access threshing elements. (See Concave Sections—Remove and Install in this section.)
2. Inspect wear on threshing elements using KXE10110 Clearance Gauge.
3. Remove and discard cap screws (A) and retain threaded strap (B) from threshing element (C) as needed.




H94732 —UN—22SEP09

**A—Cap Screws**
**B—Threaded Strap**
**C—Threshing Element**

**Continued on next page**

OUO6075,0000B82 -19-14JUN11-1/4

4. Install replacement threshing element (A) onto rotor base. (Use Threshing Element location diagram to identify threshing elements).

| Threshing Element Groups |
|---|
| **Group 1 Elements =** 1, 2, 3 |
| **Group 2 Elements =** 4, 5, 6 |
| **Group 3 Elements =** 7, 8, 9 |
| **Group 4 Elements =** 10, 11, 12 |
| **Group 5 Elements =** 13, 14, 15 |

5. Verify element boss (B) is fully seated through rotor base holes (C).
6. Install previously removed threaded strap (D) and supplied cap screws (E).
7. Tighten cap screws to specification.

**Specification**

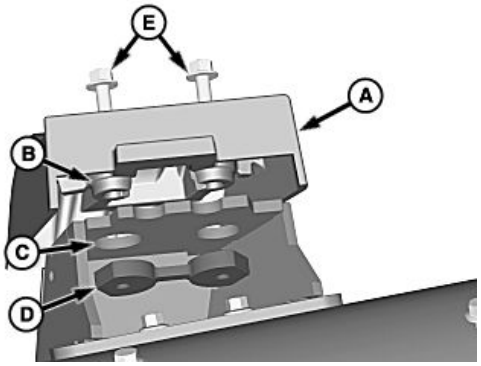
Threshing Elements Cap Screws—Torque.....87 ± 9 N·m (64 ± 7 lb.-ft.)

**IMPORTANT: Verify that elements are seated properly after tightening.**

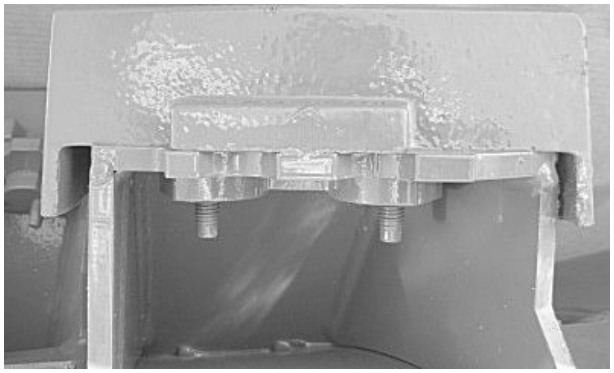
**Rice threshing elements are taller than corn/grain threshing elements. Concave level must be adjusted.**

8. Adjust concave levelness. (See Concave Leveling in this section).

**A—Threshing Element**
**B—Element Boss**
**C—Rotor Base Hole**
**D—Threaded Strap**
**E—Cap Screws**

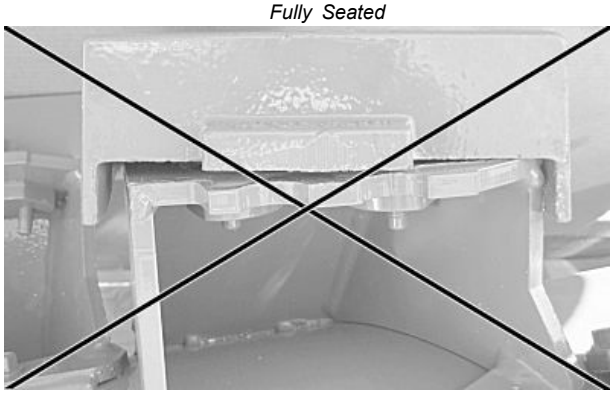



H94747 —UN—24SEP09



H97768 —UN—25AUG10

*Fully Seated*



H97769 —UN—26AUG10

*Not Fully Seated*

**Continued on next page**

OUO6075,0000B82 -19-14JUN11-2/4

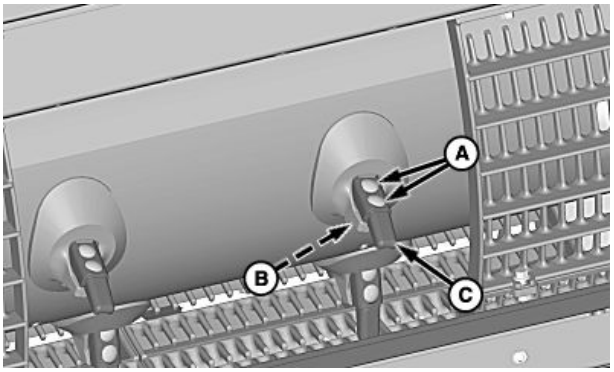
**Separator Tines**

**IMPORTANT: Rotor is a balanced assembly. Tines must be replaced in pairs to maintain balance. When installing more than one kit, do not mix and match tines. Always use supplied cap screws. Tines that become loose may result in machine damage.**

1. Remove separator grates as needed to access separator tines. (See Concave Sections—Remove and Install in this section.)
2. Inspect wear on separator tines using KXE10110 Clearance Gauge.

*NOTE: For ease of removal, shift rotor gear case to neutral position.*

3. Remove and discard round head cap screws (A), nuts (B) and separator tines (C) as needed.




H94733 —UN—22SEP09

**A—Round Head Cap Screws**
**B—Lock Nuts (2 used)**
**C—Separator Tines**

OUO6075,0000B82 -19-14JUN11-3/4

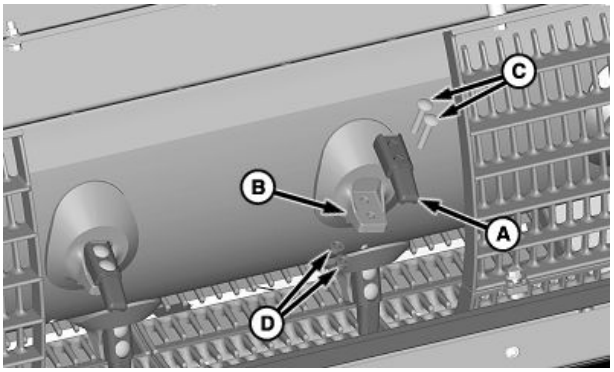
**IMPORTANT: Separator tines MUST be replaced in pairs to maintain proper balance.**

| Separator Tine Pairs | |
|---|---|
| 1-2 | 11-12 |
| 3-4 | 13-14 |
| 5-6 | 15-16 |
| 7-8 | 17-18 |
| 9-10 | 19-20 |

4. Install supplied separator tine (A) onto rotor base (B). (Use Separator Tine location diagram to identify separator tines).
5. Install supplied round head cap screws (C) and retain with nuts (D).
6. Tighten nuts to specification.

**Specification**

Tine Cap Screws—Torque ..... 75 ± 11 N·m (55 ± 8 lb.-ft.)

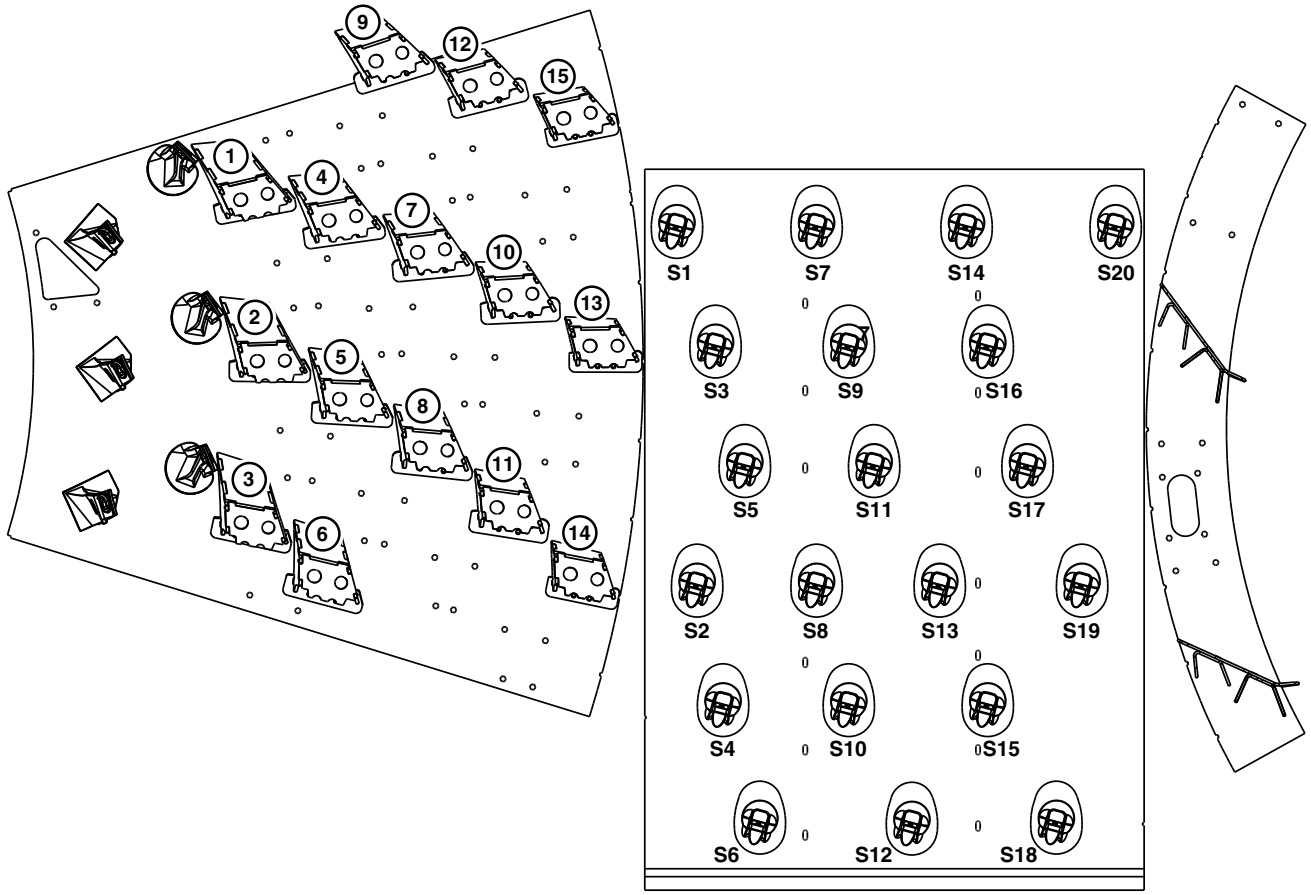



H94751 —UN—25SEP09

**A—Separator Tine**
**B—Rotor Base**
**C—Round Head Cap Screws**
**D—Nuts**

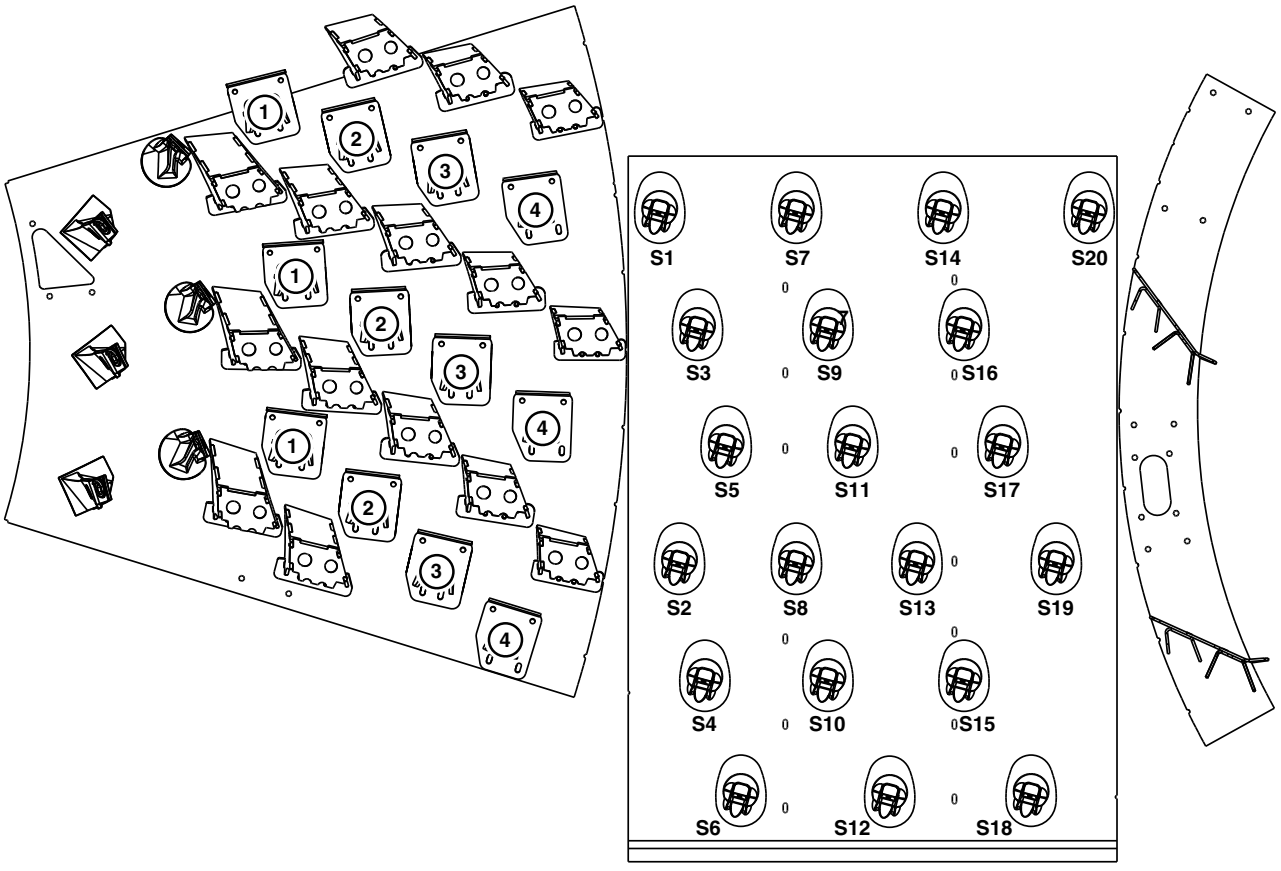
OUO6075,0000B82 -19-14JUN11-4/4

## Threshing Element and Separator Tine Location (Variable Stream Rotor Standard Configuration)




OUO6075,0000B83 -19-07APR11-1/1

## Threshing Element and Separator Tine Location (Variable Stream Rotor Dense Pack Configuration)




OUO6075,0000B84 -19-07APR11-1/1

## Posi-Torq™ Separator—Dual-Range

**⚠ CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Use slowest possible speed with large seed crops to prevent damage.*

To shift from low to high speed or high to low speed, move handle (A) to detented neutral position.

For low speed position (B), push handle towards separator sidesheet.

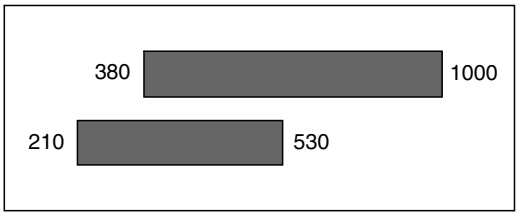
For high speed position (C), pull handle away from separator sidesheet.

To fully engage drive, it may be necessary to rotate variable sheaves a small amount while moving shift handle.

*NOTE: Verify gears are fully engaged.*

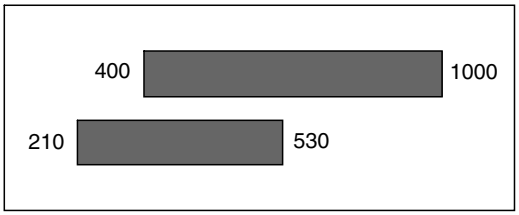
*When changing separator speeds make sure to cycle power ON and OFF to recognize new speed range.*

*Shift to low speed if operating below 530 rpm for extended periods.*



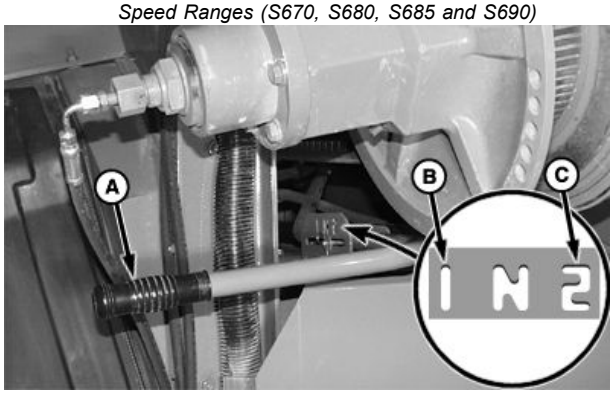

H96714 —UN—02JUN10

*Speed Ranges (S660)*




H96715 —UN—02JUN10

*Speed Ranges (S670, S680, S685 and S690)*




H96936 —UN—17JUN10

**A—Handle**
**B—Low Speed Position (1)**
**C—High Speed Position (2)**

*Posi-Torq is a trademark of Deere & Company*

OUO6075,0001527 -19-18JUN13-1/1

## Separator Drive Sheave Gap—Adjusting

**IMPORTANT: If gap is more than 10 mm (3/8 in.), it limits sheave travel. Any of these failures can occur when drive is operated at high end of variable drive range:**

- **Belt stretch or failure**
- **Bearing or shaft failure**

**If gap is less than 6 mm (1/4 in.), it limits torque sensing. Any of these failures can occur when drive is operated at low end of variable range:**

- **Belt failure**
- **Belt slippage**

If unable to obtain high speed while operating at high end of variable drive range or belt slippage occurs while operating at low end of variable drive, check for incorrect gap. For best performance, set gap to specification.

| Specification | |
|---|---|
| Sheaves—Gap | 8 mm ± 2 mm (5/16 in. ± 1/16 in.) |

With separator engaged, set separator drive to slowest speed allowing driven sheaves to close.

**CAUTION: Shut OFF engine, set parking brake and remove key.**

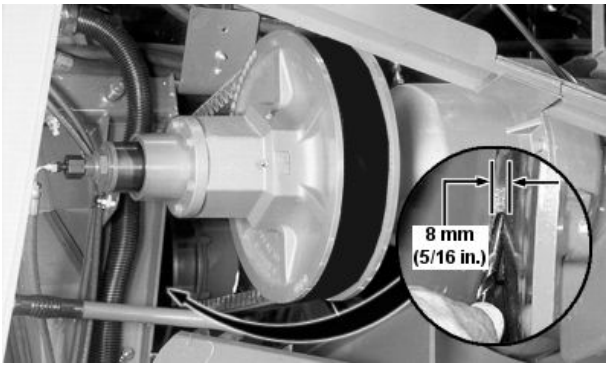
Loosen cap screws (A) around gearcase.

*NOTE: Shift gearcase to neutral to properly seat belt between sheaves. Manually rotate sheaves, while adjusting turnbuckle.*

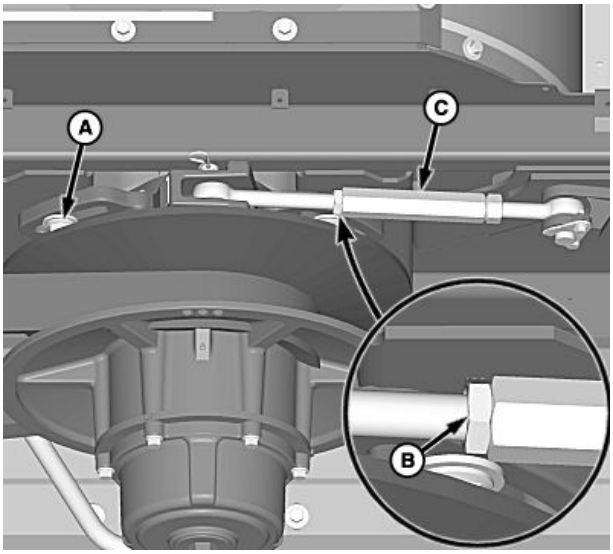
Loosen nut (B) and adjust turnbuckle (C) to obtain specified gap between driven sheaves.

| Specification | |
|---|---|
| Sheaves—Gap | 8 mm (5/16 in.) |

Tighten nut (B) and cap screws (A).




H75081 —UN—07FEB03




H101227 —UN—26APR11

**A—Cap Screws (4 Used)**
**B—Nut**
**C—Turnbuckle**

Shift gearcase to desired speed range.

OUO6075,0000BE3 -19-27APR11-1/1

## Separator Variable Drive Belt—Replacing

With separator engaged, set separator drive to slowest speed allowing driven sheaves to close.

**⚠ CAUTION: Shut OFF engine, set parking brake and remove key.**

Shift gearcase to neutral position.

Disconnect hose (A) at rotary hydraulic coupling using two wrenches.

Clean and remove plug (B) to relieve vacuum in grease cavity.

Pry driver sheaves completely open.

*NOTE: Remove shielding as needed to gain access to separator variable drive belt.*

Loosen cap screws (C) around gearcase.

Loosen nut (D) and adjust turnbuckle (E) to move gearcase and sheave assembly to the left.

Remove and replace belt. Rotate pulleys by hand to seat belt.

Rotate pulleys and adjust turnbuckle to obtain specified gap between driven sheaves.

| Specification | |
|---|---|
| Sheaves—Gap | 8 mm (5/16 in.) |

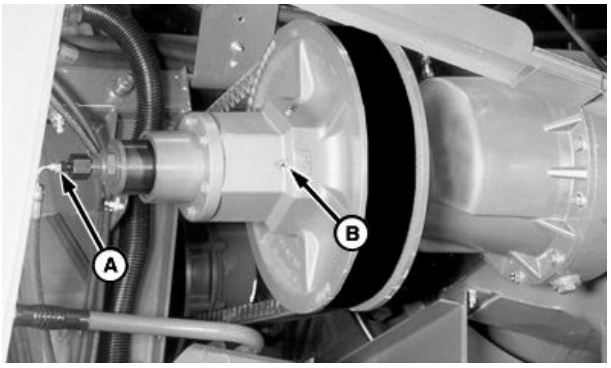
Tighten nut (D) and cap screws (C).

*NOTE: Install shielding previously removed to gain access to separator variable drive belt.*

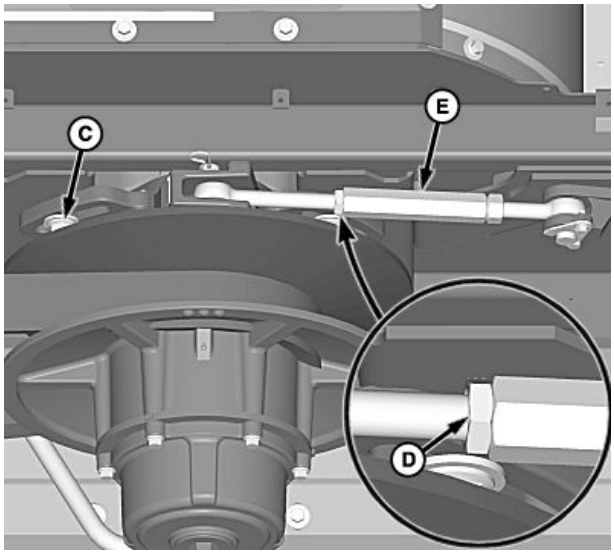
Install plug (B) and hydraulic hose (A) on driver sheave.

Shift gearcase to desired speed range.

Start engine and engage separator. Cycle variable drive through speed range several times. Disengage separator drive.




H101228 —UN—26APR11




H101229 —UN—26APR11

**A—Hose**
**B—Plug**
**C—Cap Screws (4 Used)**
**D—Nut**
**E—Turnbuckle**

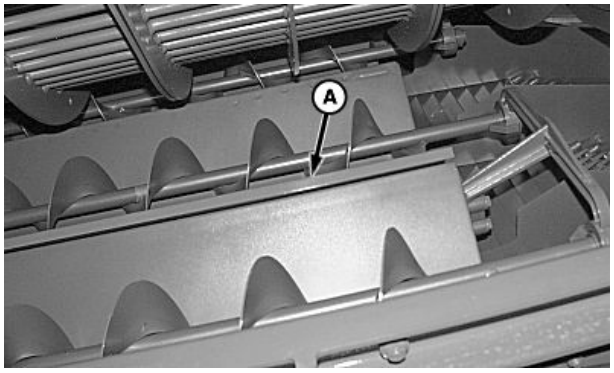
*NOTE: Check sheave gap again after several hours and adjust as required.*

OUO6075,0000BE4 -19-27APR11-1/1

## Auger Bed Dividers

To prevent high seed losses or to prevent material building up on one side while harvesting on hillsides, move auger bed dividers (A) in an upwards direction.

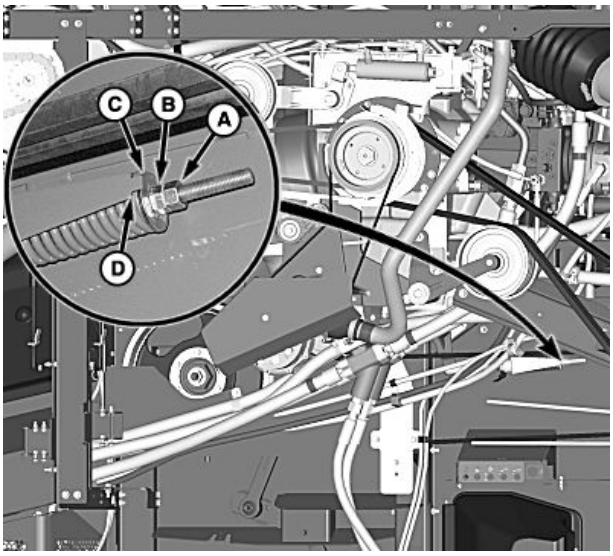
**A—Auger Bed Dividers**




H83545 —UN—20MAY05

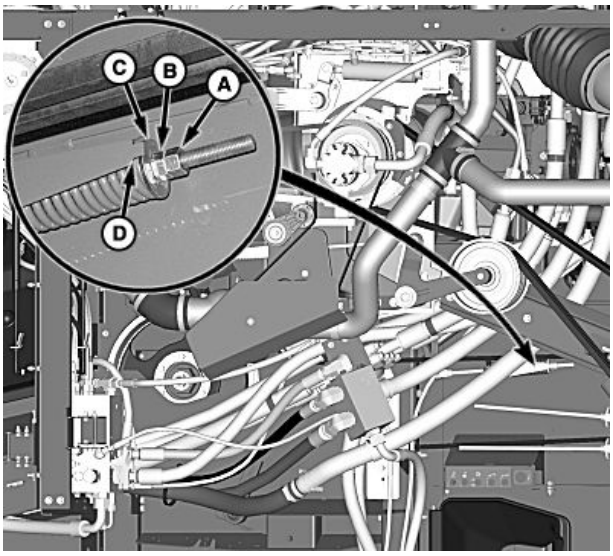
OUO6075,0000755 -19-20MAR07-1/1

## Discharge Beater Belt—Adjusting




H108263 —UN—18JUN13

S660 and S670




H108264 —UN—18JUN13

S680, S685 and S690

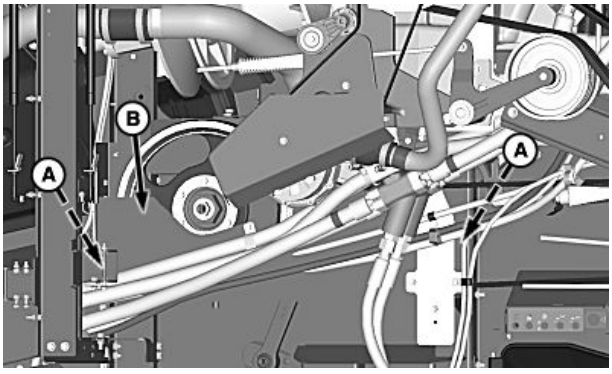
**A—Nut**
**B—Nut**
**C—Washer**
**D—Gauge**

**CAUTION: Shut OFF engine, set park brake and remove key.**

Loosen nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

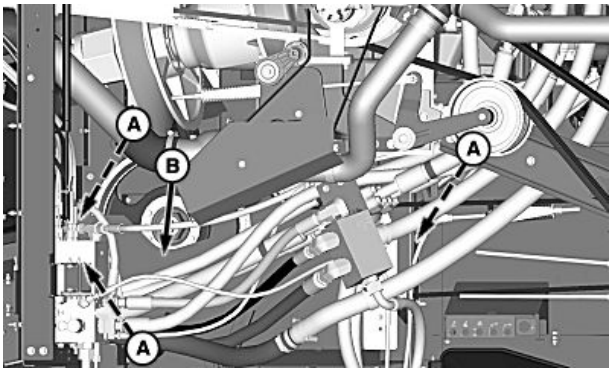
OUO6075,0001528 -19-18JUN13-1/1

## Discharge Beater Belt—Replacing




H108265 —UN—18JUN13

S660 and S670




H108266 —UN—18JUN13

S680, S685 and S690

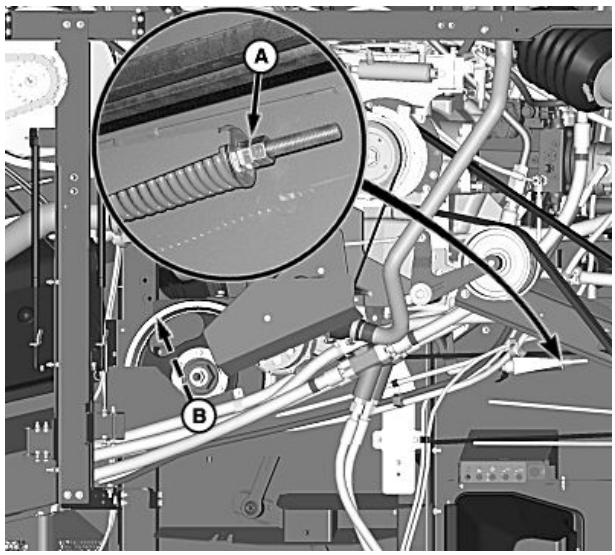
**A—Cap Screws**
**B—Shield**

**CAUTION: Shut OFF engine, set park brake and remove key.**

Remove cap screws (A) and shield (B) from left-hand rear of machine.

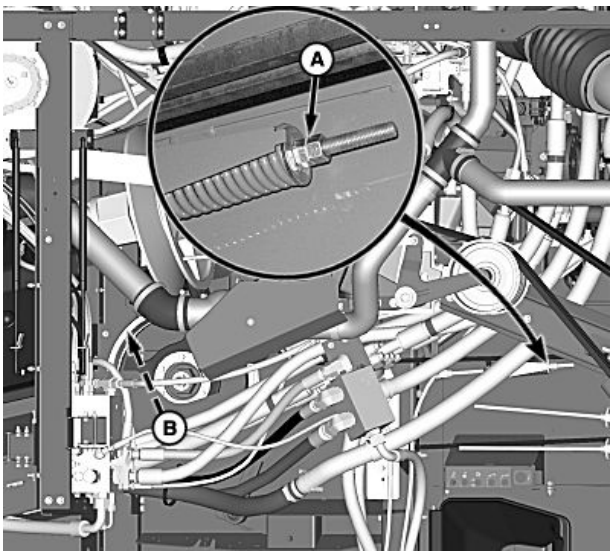
**Continued on next page**

OUO6075,0001529 -19-18JUN13-1/8




H108267 —UN—18JUN13

*S660 and S670*




H108268 —UN—18JUN13

*S680, S685 and S690*

**A—Nuts** **B—Discharge Beater Belt**

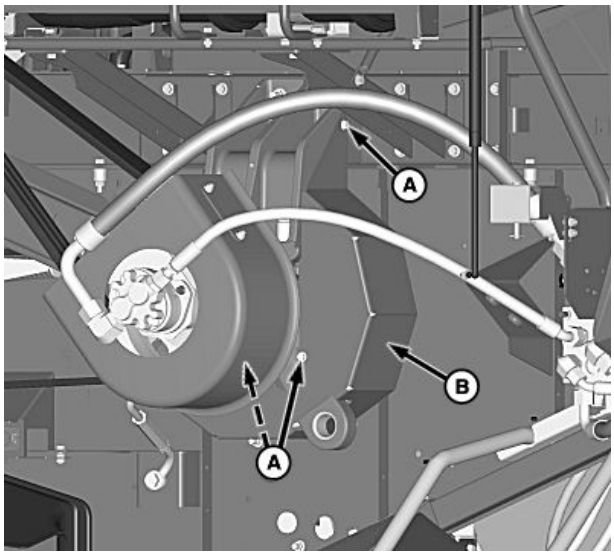
Loosen nuts (A) and remove belt (B) from sheave.

OUO6075,0001529 -19-18JUN13-2/8

**Spreader Equipped Machines**

Remove cap screws (A) and shield (B).

**A—Cap Screws** **B—Shield**




H99547 —UN—05JAN11

**Continued on next page**

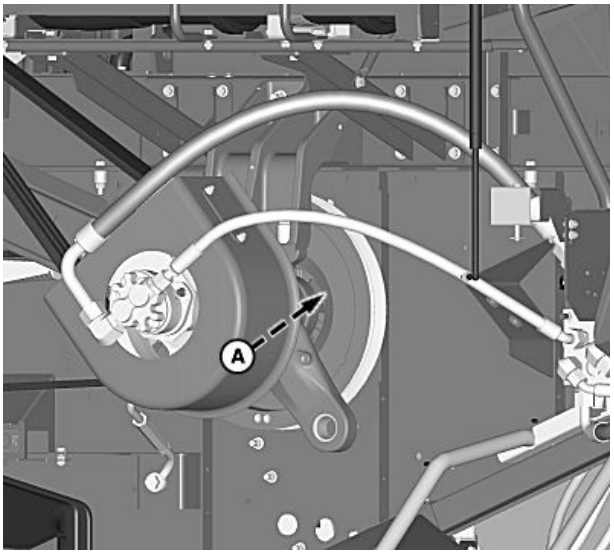
OUO6075,0001529 -19-18JUN13-3/8

Remove and discard belt (A) from jackshaft.

Install replacement discharge beater belt onto jackshaft.

Install previously removed shield and cap screws.

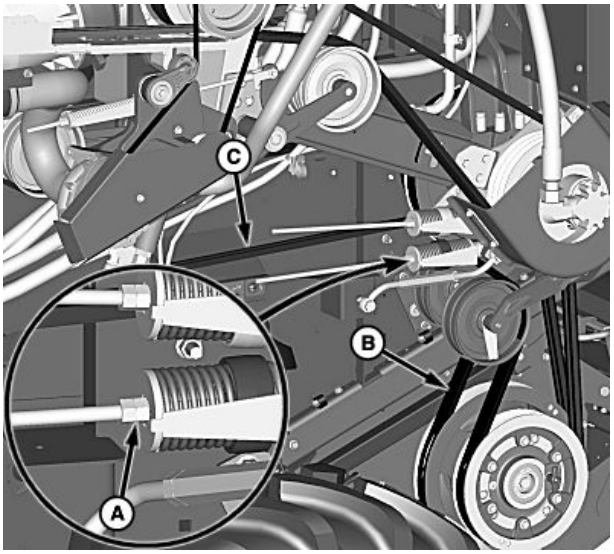
**A—Discharge Beater Belt**




H100562 —UN—03MAR11

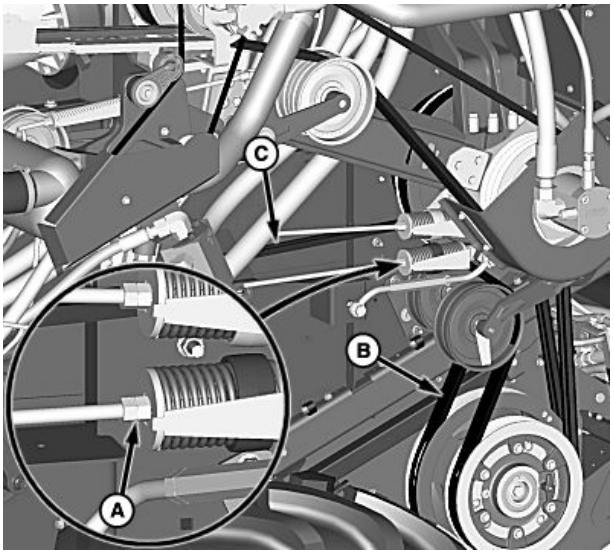
OUO6075,0001529 -19-18JUN13-4/8

**Chopper Equipped Machines**




H108269 —UN—18JUN13

*S660 and S670*




H108270 —UN—18JUN13

*S680, S685 and S690*

**A—Nuts**
**B—Inner Chopper Drive Belt**
**C—Discharge Beater Belt**

Raise chopper assembly fully with switch on left-hand sidesheet and remove chopper shields.

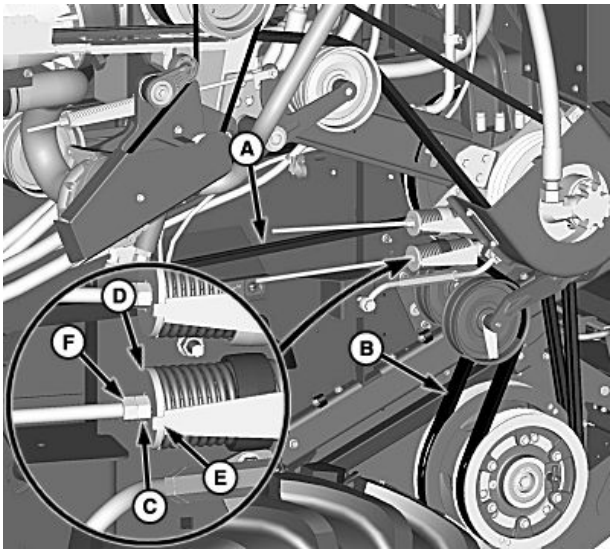
*NOTE: Mark location of tensioner nuts before loosening to aid in reassembly.*

Loosen nuts (A) and remove inner belt (B) from sheave.

Remove and discard belt (C) from chopper jackshaft.

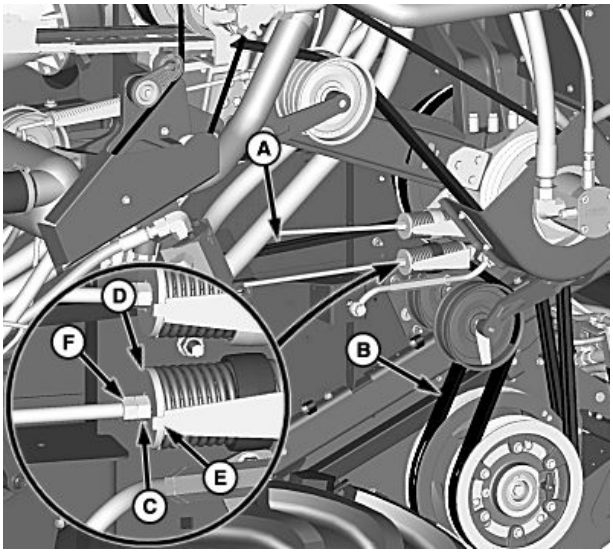
**Continued on next page**

OUO6075,0001529 -19-18JUN13-5/8




H108271 —UN—18JUN13

*S660 and S670*




H108272 —UN—18JUN13

*S680, S685 and S690*

**A—Discharge Beater Belt**
**B—Inner Chopper Drive Belt**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**

Install replacement discharge beater belt (A) onto chopper jackshaft.

Install inner belt (B) and verify that belt aligns with sheaves.

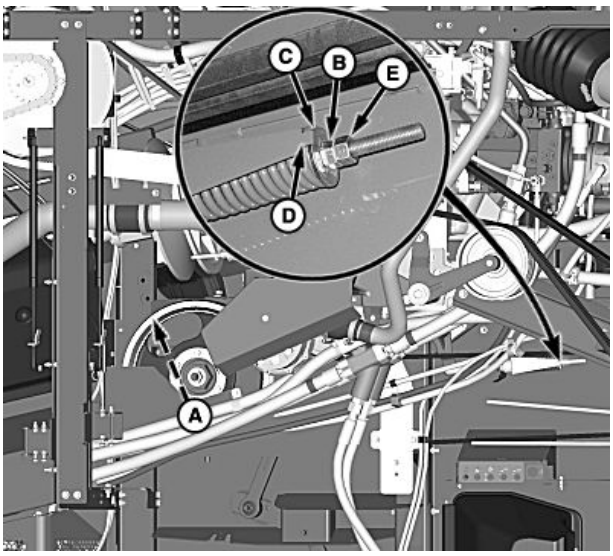
Lower chopper assembly fully with switch on left-hand sidesheet.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Install previously removed chopper shields.

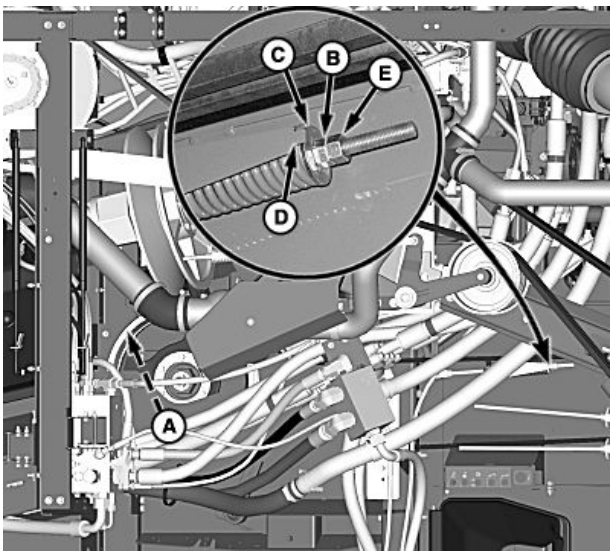
**Continued on next page**

OUO6075,0001529 -19-18JUN13-6/8




H108273 —UN—18JUN13

*S660 and S670*




H108274 —UN—18JUN13

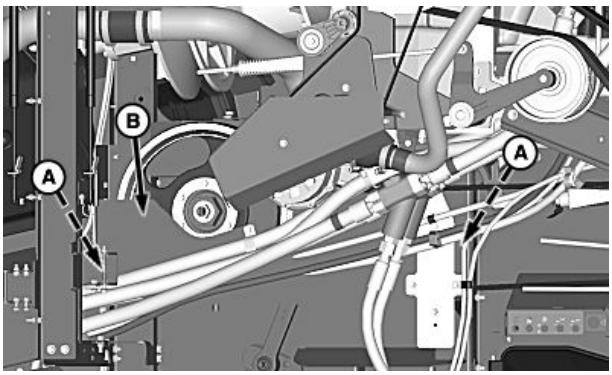
*S680, S685 and S690*

**A—Discharge Beater Belt** **B—Nut** **C—Washer** **D—Gauge** **E—Lock Nut**

Install discharge beater belt (A) onto sheave.

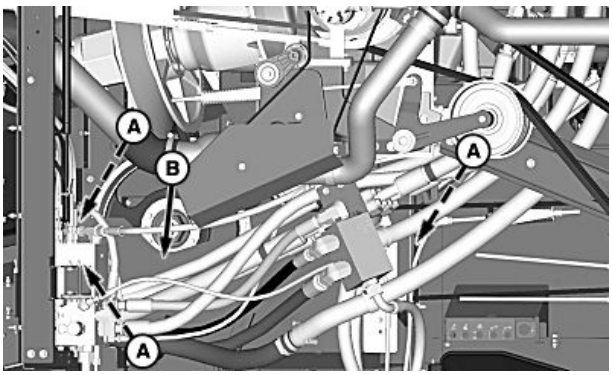
Tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut (E).

OUO6075,0001529 -19-18JUN13-7/8




H108265 —UN—18JUN13

*S660 and S670*




H108266 —UN—18JUN13

*S680, S685 and S690*

**A—Cap Screws** **B—Shield**

Install shield (B) and retain with cap screws (A).

OUO6075,0001529 -19-18JUN13-8/8

## Discharge Beater—Wing Replacing (S660 and S670)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

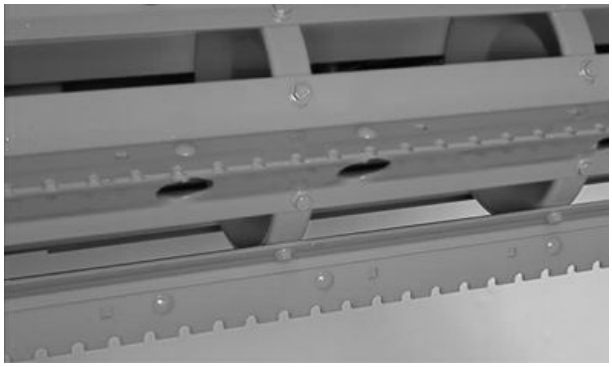
*NOTE: Beater wings can be reversed for additional wear.*

Beater wings can be replaced without removing beater.

Remove cap screws from wing and remove wing. Three wings are attached with cap screws and three wings are attached with cap screws, nuts and washers.

Replace wing and tighten nuts or cap screws to specification.

Remove and replace wear strips as required. Tighten cap screws to specification.



H54675 —UN—13MAY99

**Specification**

Cap Screws—Torque.....70 N·m (52 lb-ft)

OUO6075,0000E99 -19-07FEB12-1/1

## Standard Discharge Beater—Wing Replacing (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

*NOTE: Wings can be reversed for additional wear.*

Discharge beater wings and wear strips can be replaced without removing the discharge beater. Replace discharge beater wings in sets of two and opposite of each other to maintain proper balance.

*NOTE: If discharge beater is removed from machine, or has been serviced, tighten clamp bolts before securing wings. Tighten cap screws to specification.*

Remove round head bolts (A) and replace discharge beater wear strips (B) as required. Tighten round head bolts to specification.

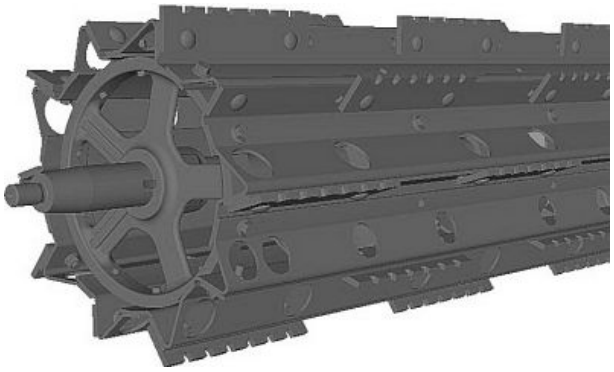
**Specification**

Discharge Beater Wear Strip Round Head Bolts—Torque.....70 N·m (52 lb.-ft.)

Remove cap screws (C) and replace discharge beater wings (D) as required. Tighten cap screws to specification.

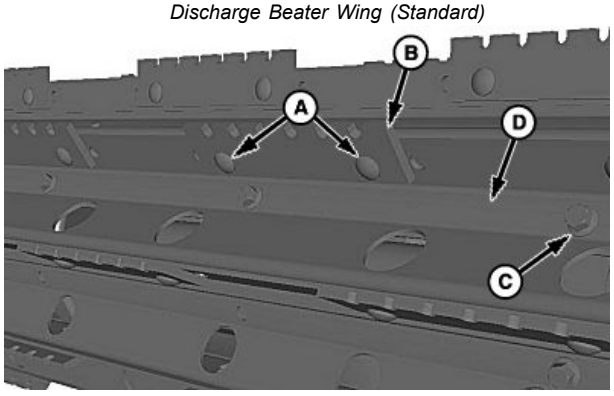
**Specification**

Discharge Beater Wing Cap Screws—Torque.....70 N·m (52 lb.-ft.)



H85626 —UN—27MAR06

*Discharge Beater Wing (Standard)*




H85627 —UN—27MAR06

*Discharge Beater Wing (Standard)*

**A—Round Head Bolt(s)**
**B—Discharge Beater Wear Strip**
**C—Cap Screws**
**D—Discharge Beater Wings**

OUO6075,0001224 -19-09OCT12-1/1

## Tough Crop (Rice) Discharge Beater—Wing Replacing

**CAUTION: Shut OFF engine, set park brake and remove key.**

Discharge beater wings and wear strips can be replaced without removing the discharge beater. Replace discharge beater wings in sets of two and opposite of each other to maintain proper balance.

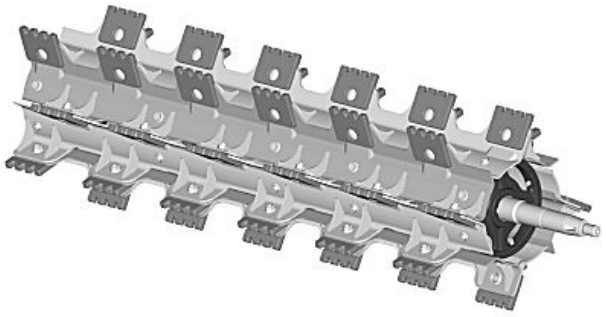
*NOTE: If discharge beater is removed from machine, or has been serviced, tighten clamp bolts before securing wings. Tighten cap screws to specification.*

Remove round head bolts (A) and replace discharge beater wear strips (B) as required. Tighten round head bolts to specification.

| Specification | |
|---|---|
| Discharge Beater Wear Strip Round Head Bolts—Torque | 104 N·m (77 lb.-ft.) |

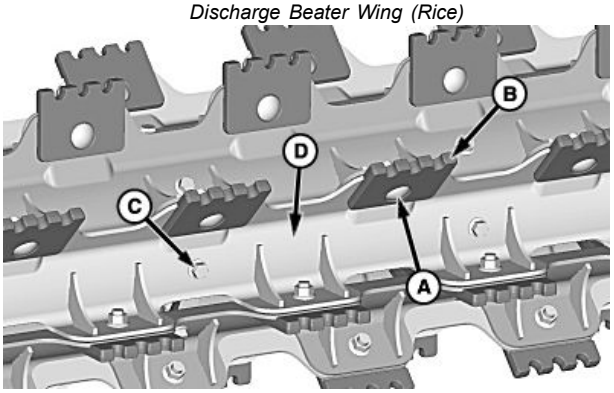
Remove cap screws (C) and replace discharge beater wings (D) as required. Tighten cap screws to specification.

| Specification | |
|---|---|
| Discharge Beater Wing Cap Screws—Torque | 70 N·m (52 lb.-ft.) |



H107173 —UN—06MAR13

*Discharge Beater Wing (Rice)*




H107174 —UN—06MAR13

*Discharge Beater Wing (Rice)*

**A—Round Head Bolts**
**B—Discharge Beater Wear Strip**
**C—Cap Screws**
**D—Discharge Beater Wings**

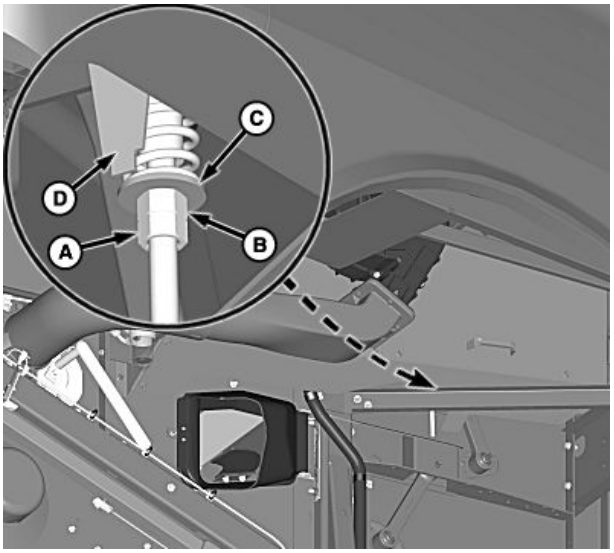
OUO6075,000140E -19-08MAR13-1/1

## Overshot Beater Belt (If Equipped)—Adjusting (S670, S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H98549 —UN—12OCT10

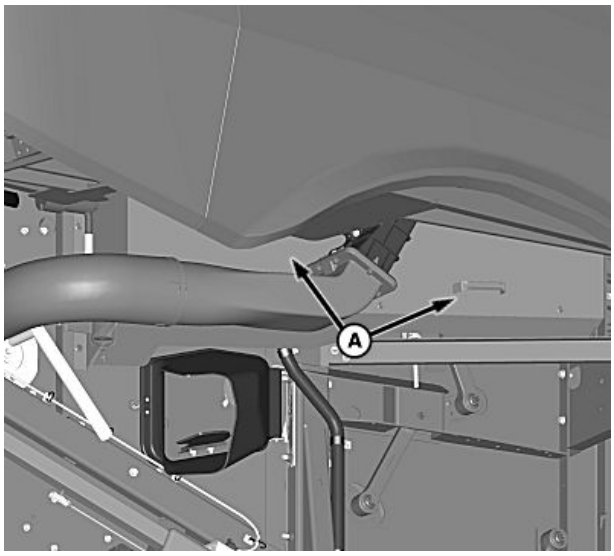
OUO6075,0001225 -19-09OCT12-1/1

## Overshot Beater Belt (If Equipped)—Replacing (S670, S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Remove cap screws and shields (A) from right-hand rear of machine.

**A—Shields**




H98550 —UN—12OCT10

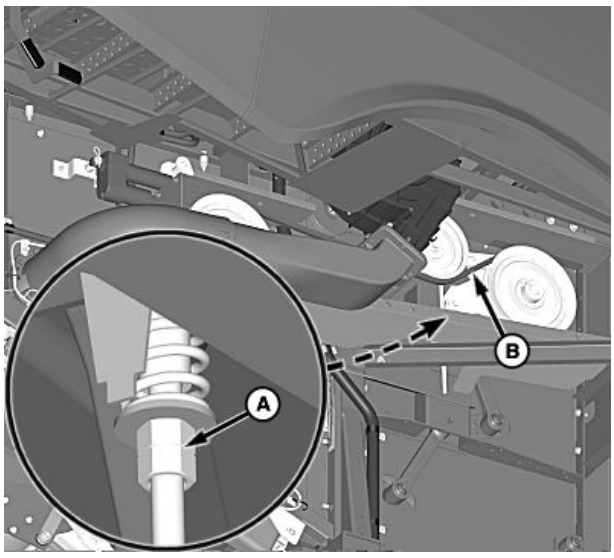
OUO6075,0001226 -19-09OCT12-1/2

Loosen nuts (A) and remove belt (B) from sheave.

Install replacement belt and adjust tensioner until washer is positioned between end of gauge and bottom of step. Tighten lock nut.

Install shields and retain with cap screws.

**A—Nuts** **B—Overshot Beater Belt**




H98551 —UN—12OCT10

OUO6075,0001226 -19-09OCT12-2/2

## Overshot Beater (If Equipped)—Wing Replacing (S670, S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

*NOTE: Wings can be reversed for additional wear.*

Overshot beater wings and wear strips can be replaced without removing the overshot beater. Replace overshot beater wings in sets of two and opposite of each other to maintain proper balance.

*NOTE: If overshot beater is removed from machine, or has been serviced, tighten clamp bolts before securing wings. Tighten cap screws to specification.*

Remove round head bolts (A) and replace overshot beater wear strips (B) as required.

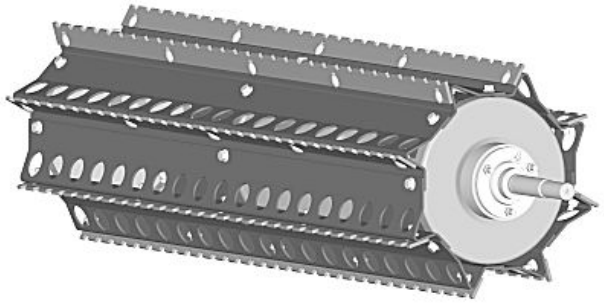
Adjust overshot beater wear strips outward until at end of notch (C) as shown.

Tighten round head bolts to specification.

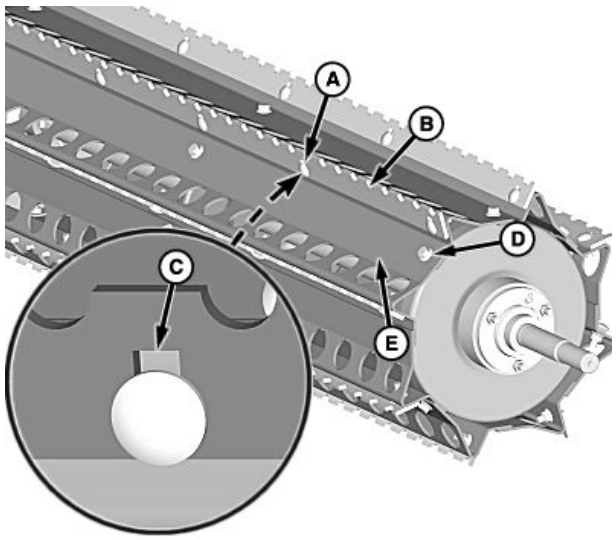
| Specification | |
|---|---|
| Overshot Beater Wear Strip Round Head Bolts—Torque | 79 N·m (58 lb.-ft.) |

Remove cap screws (D) and replace overshot beater wings (E) as required. Tighten cap screws to specification.

| Specification | |
|---|---|
| Overshot Beater Wing Cap Screws—Torque | 79 N·m (58 lb.-ft.) |



H98552 —UN—12OCT10




H98553 —UN—14OCT10

**A—Round Head Bolt(s)**
**B—Overshot Beater Wear Strip**
**C—Notch**
**D—Cap Screws**
**E—Overshot Beater Wings**

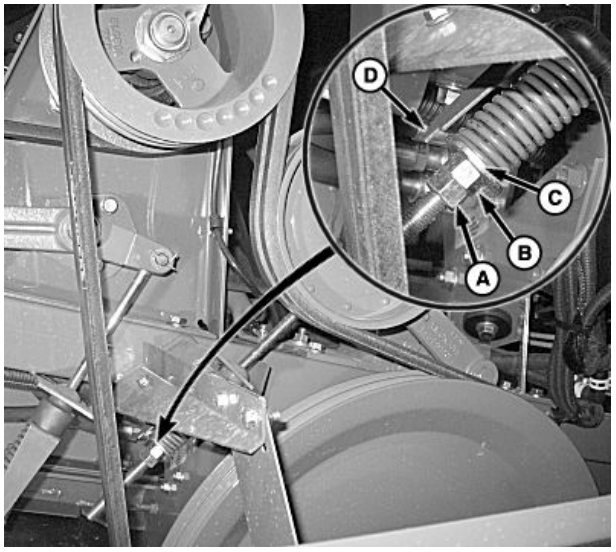
OUO6075,0001227 -19-09OCT12-1/1

## Countershaft Right-Hand Front Belt—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H96938 —UN—17JUN10

OUO6075,00007F8 -19-17JUN10-1/1

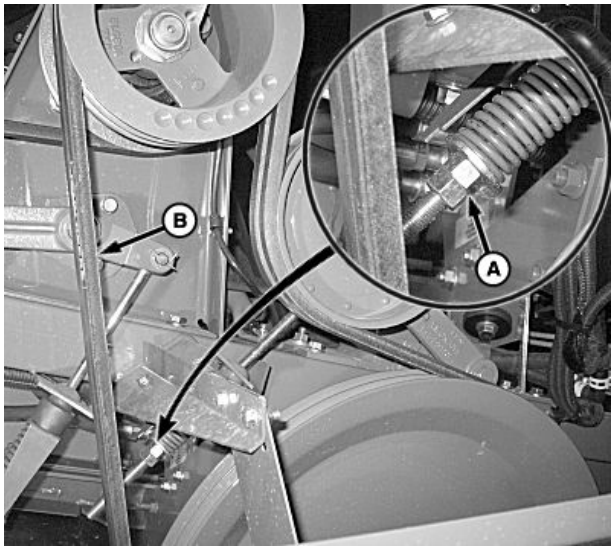
## Countershaft Right-Hand Front Belt—Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nuts (A) and remove belt (B).

Install replacement belt and adjust tensioner until washer is positioned between end of gauge and bottom of step. Tighten lock nut.

**A—Nuts**
**B—Right-Hand Front Belt**




H96924 —UN—16JUN10

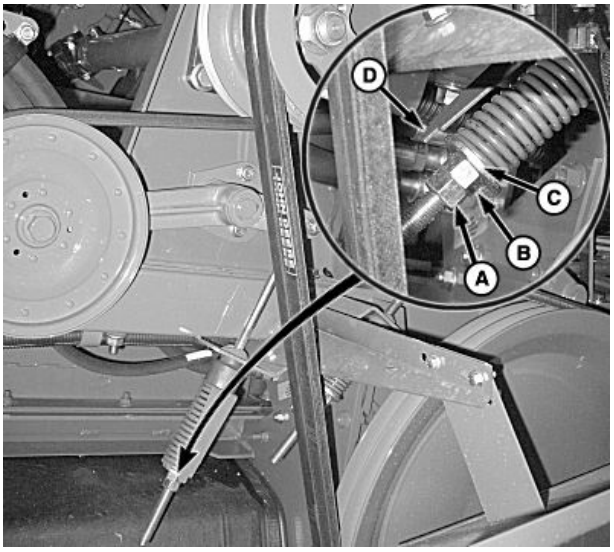
OUO6075,00007F9 -19-17JUN10-1/1

## Countershaft Right-Hand Rear Belt—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H96939 —UN—17JUN10

OUO6075,00007FA -19-17JUN10-1/1

## Countershaft Right-Hand Rear Belt—Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

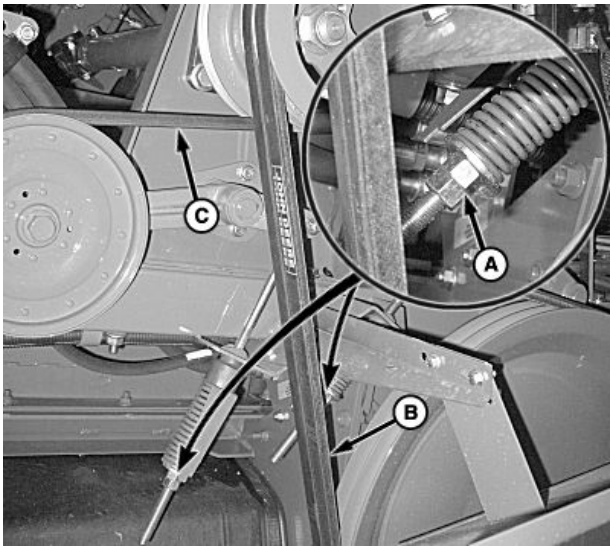
Loosen nuts (A) and remove right-hand front countershaft belt (B).

Loosen nuts (A) and remove rear countershaft belt (C).

Install replacement belt and adjust tensioner until washer is positioned between end of gauge and bottom of step.

Install front countershaft belt and adjust tensioner until washer is positioned between end of gauge and bottom of step.

**A—Nuts**
**B—Front Countershaft Belt**
**C—Rear Countershaft Belt**



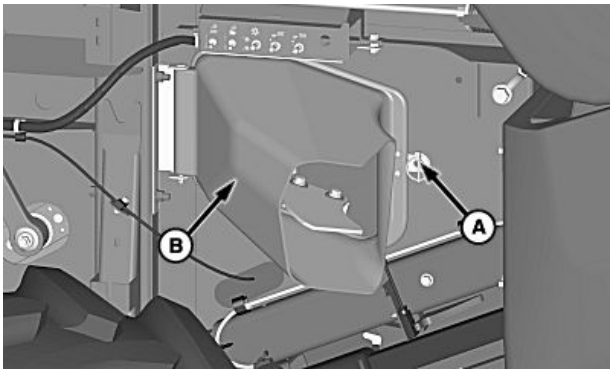

H96940 —UN—17JUN10

OUO6075,00007FB -19-22JUN10-1/1

## Cleaning Shoe Air Chutes

Remove quick-lock pin (A) to open air chute (B). Opening air chutes allows operator to look at cleaning shoe area when adjusting chaffer or sieve or when inspecting cleaning shoe area.

**A—Quick-Lock Pin**
**B—Air Chute**



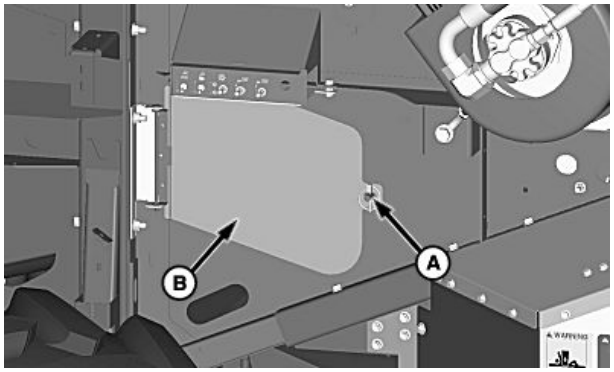

H96942 —UN—14SEP10

OUO6075,00007FC -19-14SEP10-1/1

## Cleaning Shoe Access Door (Spreader Machines)

Remove quick-lock pin (A) to open access door (B). Opening access door allows operator to look at cleaning shoe area when adjusting chaffer or sieve or when inspecting cleaning shoe area.

**A—Quick-Lock Pin**
**B—Access Door**




H102245 —UN—15JUN11

OUO6075,0000CA7 -19-16JUN11-1/1

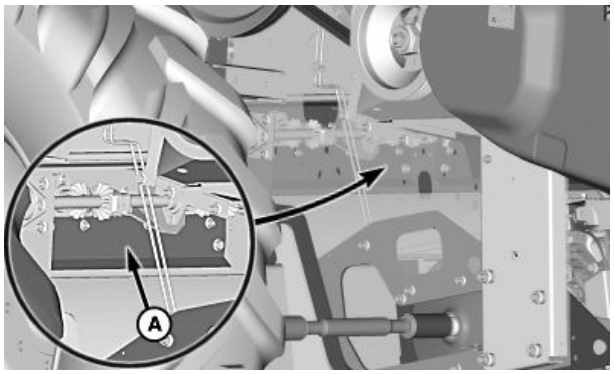
## Cleaning Shoe Auger Gears—Manual Cleanout Door (If Equipped)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Allows operator to clean and inspect the cleaning shoe augers gear area.

Remove cap screws from cleanout door (A) to clean area.

**A—Cleanout Door**




H102538 —UN—29JUN11

OUO6075,0000CBD -19-29JUN11-1/1

## Cleaning Shoe Auger Gears—Cleanout Door (If Equipped)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

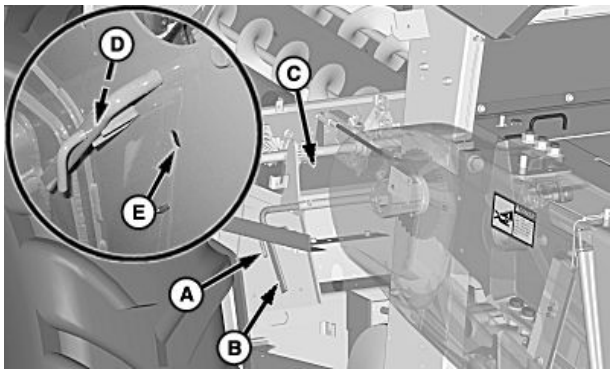
Allows operator to clean and inspect the cleaning shoe augers gear area.

Pull lock-out pin (A) and move handle (B) to open or close cleanout door (C).

Move handle to desired position:

- Closed Position (D)
- Open Position (E)

**A—Lock-Out Pin**
**B—Handle**
**C—Cleanout Door**
**D—Closed Position**
**E—Open Position**




H95822 —UN—24MAR10

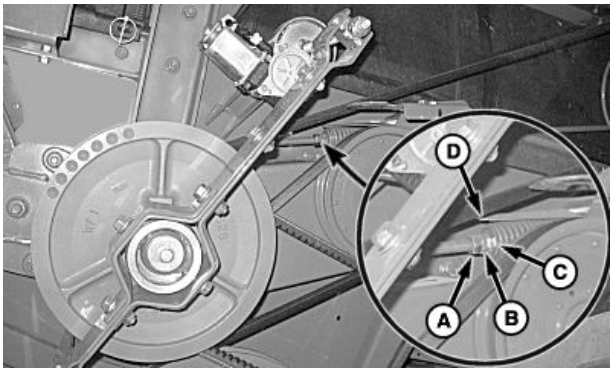
OUO6075,0000F8B -19-09FEB12-1/1

## Shoe, Fan and Conveyor Auger Belt—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H96944 —UN—17JUN10

*Shield Removed for Clarity*

OUO6075,00007FD -19-17JUN10-1/1

## Shoe, Fan and Conveyor Auger Belt—Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

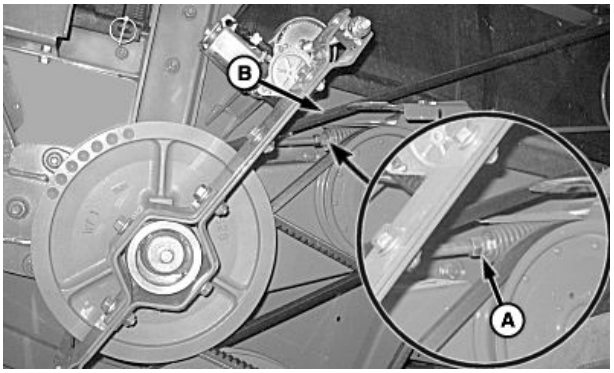
Remove right-hand front countershaft belt and cleaning fan variable drive belts.

Loosen nuts (A) and remove shoe, fan and conveyor auger drive belt (B).

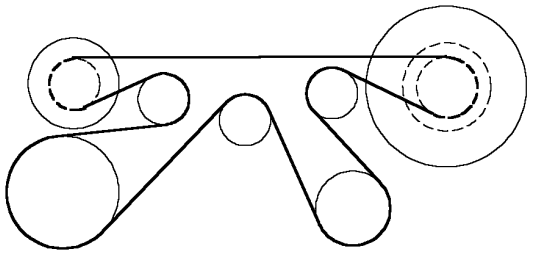
Install replacement belt and adjust tensioner until washer is positioned between end of gauge and bottom of step.

Install front countershaft belt, cleaning fan variable drive belt and adjust tensioners until washer is positioned between end of gauge and bottom of step.

**A—Nuts**
**B—Belt**




H96943 —UN—17JUN10



H54683 —UN—17MAY99

*Belt Routing*

OUO6075,00007FE -19-17JUN10-1/1

## Cleaning Fan Belt—Replacing

Start machine, engage separator and operate fan at maximum speed.

Disengage separator, shut OFF engine and remove key.

**CAUTION: Shut OFF engine, set parking brake and remove key.**

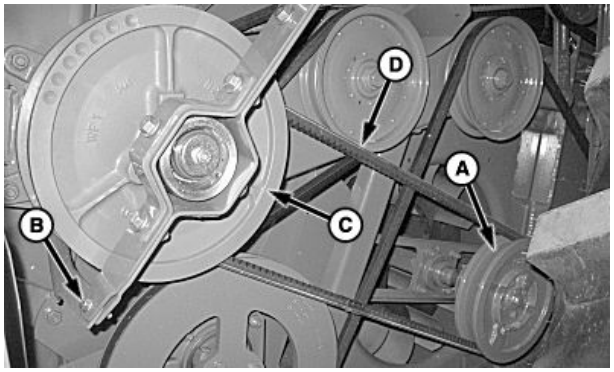
Wedge bottom sheave (A) to full open position.

Disconnect support arms (B) and swing arms away.

Remove upper sheave (C) and pull belt (D) over lower sheave.

Install replacement belt, remove wedge, and connect support arms.

Check adjustment of cleaning fan speed.




H96945 —UN—17JUN10

**A—Bottom Sheave**
**B—Support Arms**
**C—Upper Sheave**
**D—Belt**

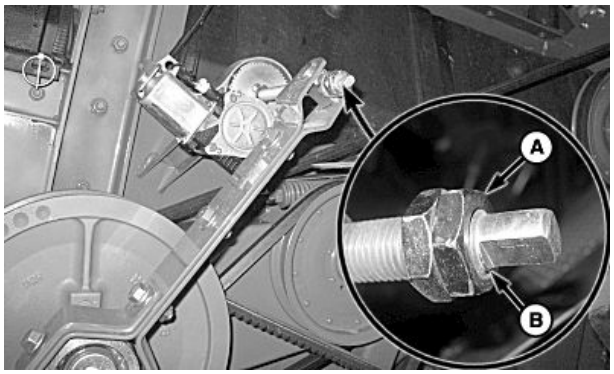
OUO6075,00007FF -19-17JUN10-1/1

## Cleaning Fan Actuator—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

*NOTE: Cleaning fan minimum/maximum speed is controlled electronically; stop nuts ensure drive protection in the event of improper electronic speed setting and must be installed as shown.*

Verify nuts (A) are jammed together at end of threads (B) as shown.




H96946 —UN—17JUN10

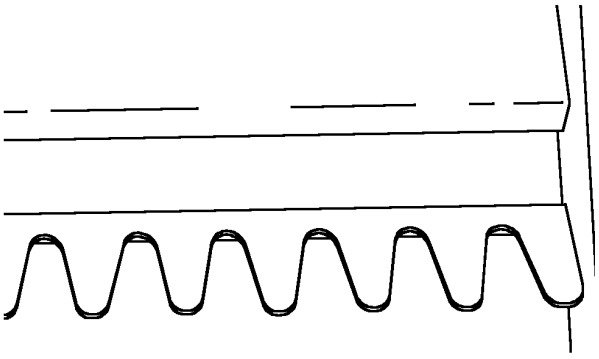
**A—Nuts**
**B—End of Threads**

OUO6075,0000800 -19-17JUN10-1/1

## Deep-Tooth Front Chaffer

Deep-tooth front chaffer is fixed and is set at 24 mm (15/16 in.).

Crop material that passes through the front chaffer is delivered to the chaffer for further cleaning.



H54528 —UN—01APR99

OUO6075,0000766 -19-22APR08-1/1

## Chaffer and Sieve—Measuring

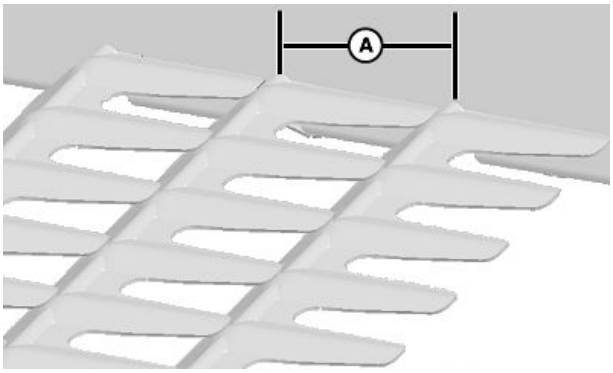
### Louver Length

Machines can be equipped with two different types of chaffer and sieves.

- **Deep-tooth** chaffer and sieve.
- **General Purpose** chaffer and sieve.

Proper way to measure chaffer and sieve louver length is from wire-to-wire (A) as shown. This can be used to determine if a deep-tooth or general purpose chaffer or sieve is installed.

**A—Wire-To-Wire**




H89699 —UN—21AUG07

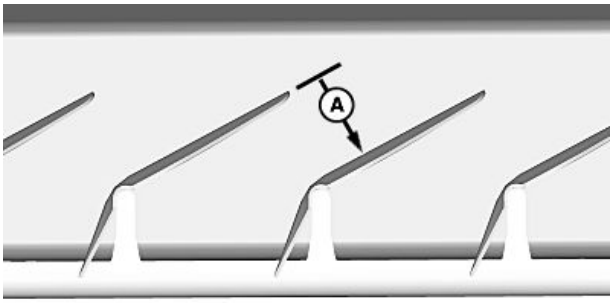
OUO6075,0001367 -19-18DEC12-1/2

### Louver Clearance

*NOTE: Always close chaffer/sieve louvers past desired set point and then open louvers to desired set point to remove play.*

Proper way to measure chaffer and sieve clearance is from louver-to-louver (A) as shown. This can be used to determine if clearance on chaffer and sieve matches with setting shown on armrest display.

**A—Louver-To-Louver**

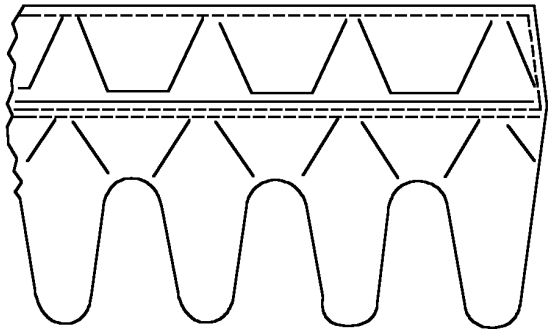



H92974 —UN—03OCT08

OUO6075,0001367 -19-18DEC12-2/2

## General Purpose Chaffer 29 mm (1-1/8 in.)

General purpose chaffer is suitable for corn, soybeans, sorghum, small grains, oil seed crops, grass seed and many specialty crops. It is recommended for dry conditions and is resistant to “stabbing” of corn tassels and soybean, sunflower and sorghum stems.



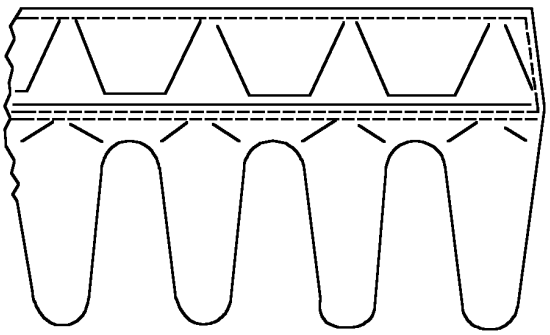
H54526 —UN—01APR99

OUO6075,0000767 -19-22AUG07-1/1

## Deep-Tooth Chaffer 41 mm (1-5/8 in.)

*NOTE: Not recommended for use in small grains, food corn or popcorn*

Deep-tooth chaffer and deep-tooth sieve provide additional grain separation capacity in high moisture and high yield corn and high-capacity and clean grain sample in corn and soybeans.

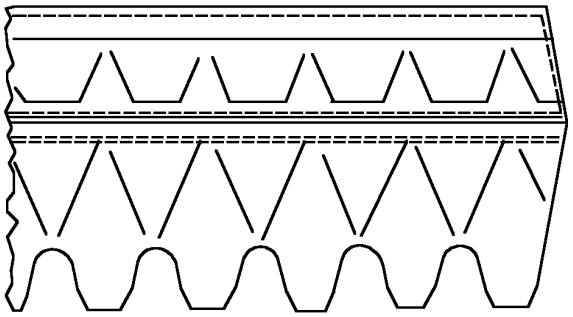


H58751 —UN—13JUL99

OUO6075,0000A1E -19-13OCT10-1/1

## General Purpose Sieve 29 mm (1-1/8 in.)

This sieve is suitable for all major crops and many specialty crops.



H54527 —UN—01APR99

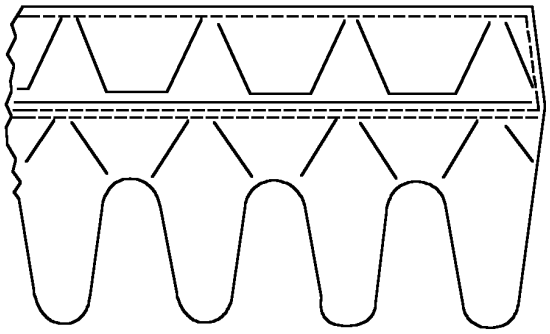
OUO6075,0000C9E -19-14JUN11-1/1

## Deep-Tooth Sieve 29 mm (1-1/8 in.)

*NOTE: Not recommended for use in small grains, food corn or popcorn*

Deep-tooth sieve provides additional grain separation in high-moisture and high-yield corn.

This sieve together with the deep-tooth chaffer provides high-capacity and clean grain samples in corn and soybeans.



H54526 —UN—01APR99

OUO6075,0000A20 -19-13OCT10-1/1

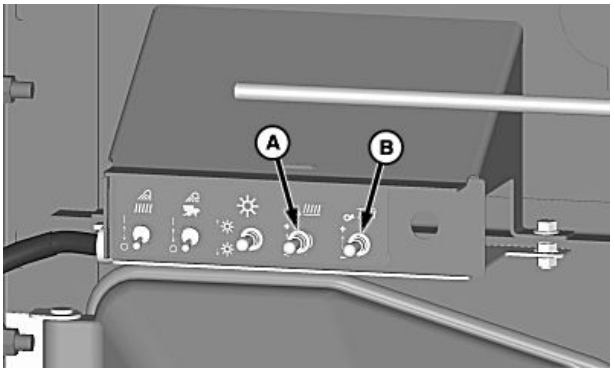
## Chaffer/Sieve Adjusting Switch

**IMPORTANT: Close chaffer/sieve louvers completely to prevent louver damage while removing chaffer/sieve.**

Chaffer adjust switch (A) and sieve adjust switch (B) are located on left-hand side of machine.

Chaffer adjust switch and sieve adjust switch allows operator to open or close chaffer and sieve to various positions.

**A—Chaffer Adjust Switch** **B—Sieve Adjust Switch**




H97564 —UN—14SEP10

OUO6075,00007DC -19-21MAR11-1/1

## Dual Zone Adjust Rear Chaffer—Adjusting

**CAUTION: Shut OFF engine, set park brake and remove key to help prevent accidental starting and personal injury.**

Raise chopper/spreader assembly.

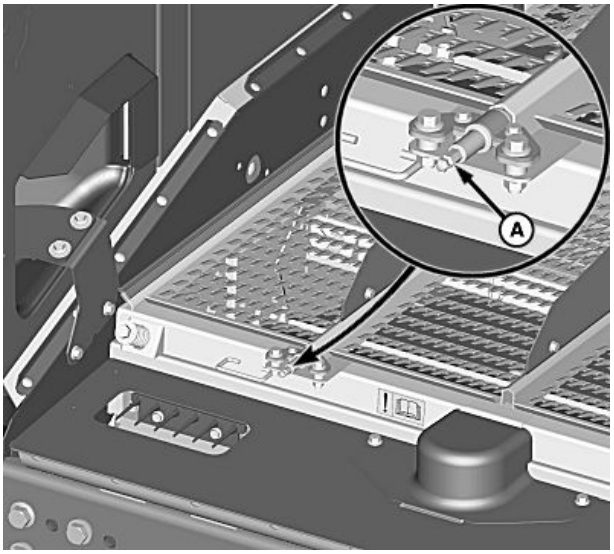
Turn adjustment linkage (A) clockwise to close chaffer and counterclockwise to open chaffer.

Close chaffer louvers past desired set point and then open louvers to desired set point to remove play.

*NOTE: Refer to Crop Settings section for recommended Dual Zone Adjust Rear Chaffer settings.*

Measure distance between louvers and verify setting.

**A—Adjustment Linkage**




H106353 —UN—17DEC12

OUO6075,0001368 -19-25JAN13-1/1

## Chaffer/Sieve Elements—Remove and Install

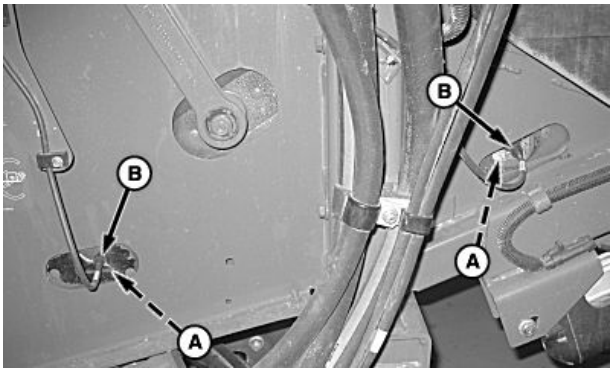
**CAUTION: Shut OFF engine, set parking brake and remove key to help prevent accidental starting and personal injury.**

**IMPORTANT: Avoid damage to chaffer/sieve elements. Completely close chaffer/sieve louvers before removing elements from machine.**

*NOTE: It is not necessary to remove chopper or spreader (if equipped) to remove chaffer/sieve elements. Chopper or spreader must be fully raised.*

*Sieve removal is similar to chaffer removal.*

1. Remove grommets (A) before disconnecting electrical harness (B).




H100410 —UN—13JUN11

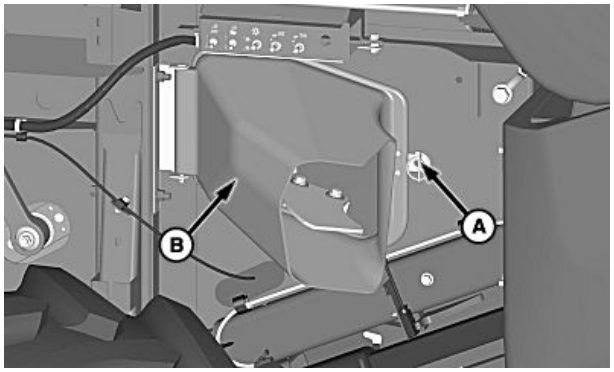
**A—Grommet** **B—Chaffer/Sieve Harness**

**Continued on next page**

OUO6075,0000B59 -19-13JUN11-1/6

2. Remove quick-lock pin (A) to open air chute (B) on both sides of machine.

**A—Quick-Lock Pin** **B—Air Chute**

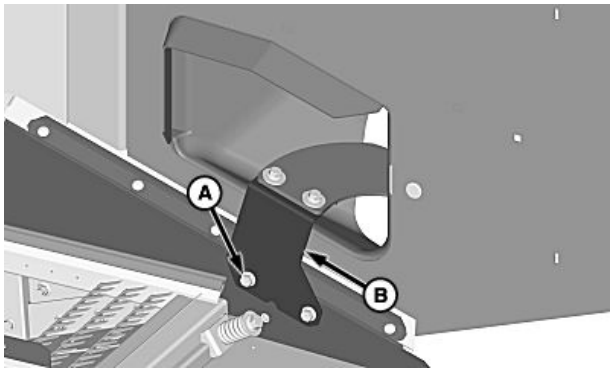



H96942 —UN—14SEP10

OUO6075,0000B59 -19-13JUN11-2/6

3. Remove cap screws (A) and agitator bracket (B) on both sides of machine.

**A—Cap Screws (2 Used)** **B—Agitator Bracket**



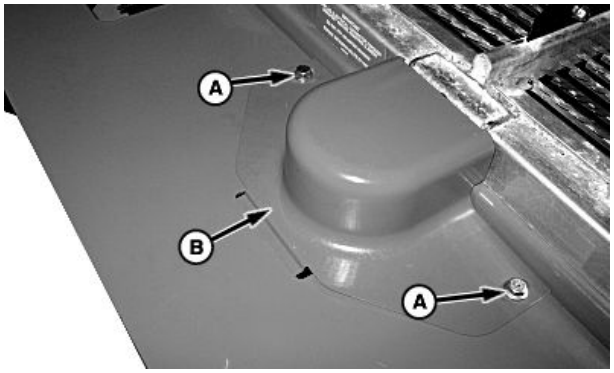

H100411 —UN—13JUN11

OUO6075,0000B59 -19-13JUN11-3/6

*NOTE: Chaffer motor does not have to be removed.*

4. Remove cap screws (A) and motor cover (B).

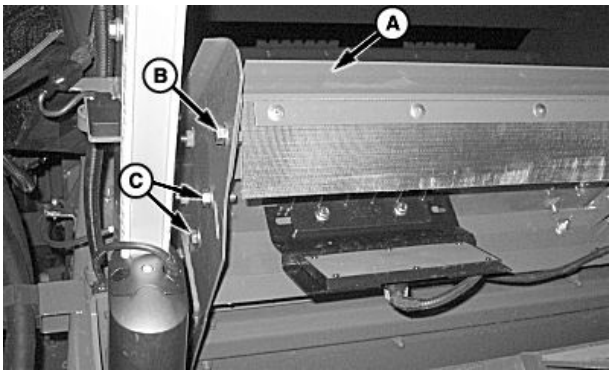
**A—Cap Screws** **B—Motor Cover**



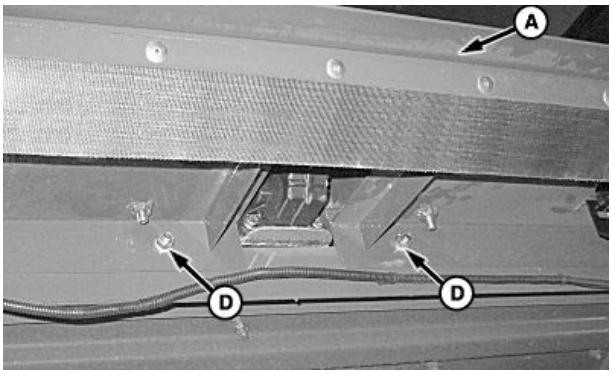

H96965 —UN—21JUN10

**Continued on next page**

OUO6075,0000B59 -19-13JUN11-4/6




H96969 —UN—21JUN10




H96971 —UN—21JUN10

**A—Tailboard**
**B—Cap Screw and Nut**
**C—Cap Screws**
**D—Cap Screws and Nuts**

*NOTE: Tailboard does not need to be removed.*

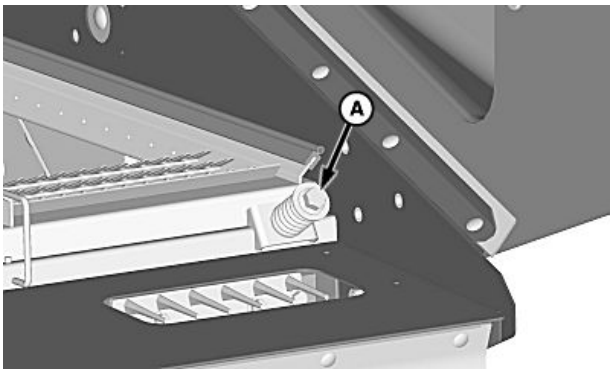
5. **Lower Tailboard (A):**
   a. Remove cap screw and nut (B) from both sides of machine.
   b. Loosen cap screws (C) from both sides of machine.
   c. Remove cap screws and nuts (D) from underneath center of tailboard.
   d. Pull tailboard rearward and lower.

OUO6075,0000B59 -19-13JUN11-5/6

6. Remove chaffer/sieve retaining bolts (A) and springs from both sides of machine.
7. Slide chaffer/sieve element through rear of machine.
8. Inspect grain seals on chaffer/sieve element and repair or replace as needed.
9. Install chaffer/sieve element through rear of machine and tighten retaining bolts to specification.

| Specification | |
|---|---|
| Chaffer/Sieve Retaining Bolts—Torque | 100 N·m (74 lb.-ft.) |

10. Raise tailboard and install previously removed and loosened hardware.
11. Install previously removed motor cover and retain with cap screws.
12. Install agitator bracket on both side of machine with cap screws.
13. Close air chutes on both sides of machine and retain with quick-lock pins.




H102179 —UN—13JUN11

**A—Retaining Bolts**

14. Install previously removed grommet and connect previously removed electrical harness.
15. Calibrate chaffer/sieve, see Calibration Procedures section for further information.

OUO6075,0000B59 -19-13JUN11-6/6

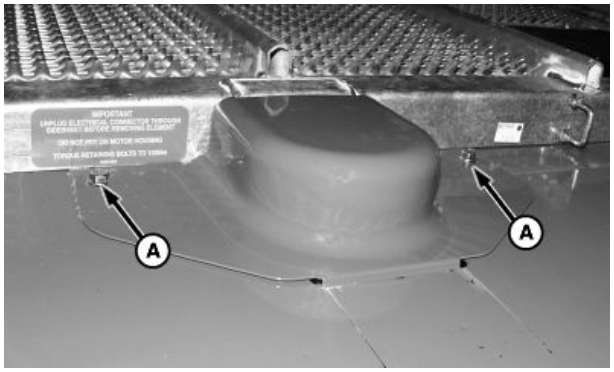
## Chaffer/Sieve Motor—Manual Adjust

**CAUTION: Shut OFF engine, set parking brake and remove key to help prevent accidental starting and personal injury.**

*NOTE: Same manual adjust procedure can be used on the chaffer/sieve motor.*

1. Remove cap screws (A) to access motor.

**A—Cap Screws**




H75897 —UN—09APR03

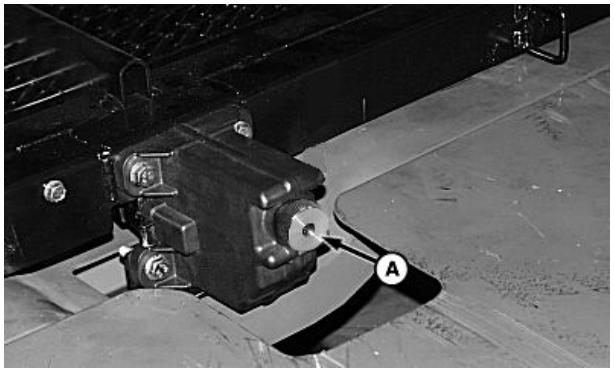
OUO6075,00009B4 -19-06DEC10-1/2

**IMPORTANT: To prevent adjusting motor damage, do not use wrench on knob.**

*NOTE: Once chaffer/sieve adjusting motor is repaired or replaced, adjusting motor will have to be recalibrated. (See Calibration Procedures section).*

2. Use knob (A) to adjust motor. Turn knob clockwise to close and counterclockwise to open chaffer/sieve.

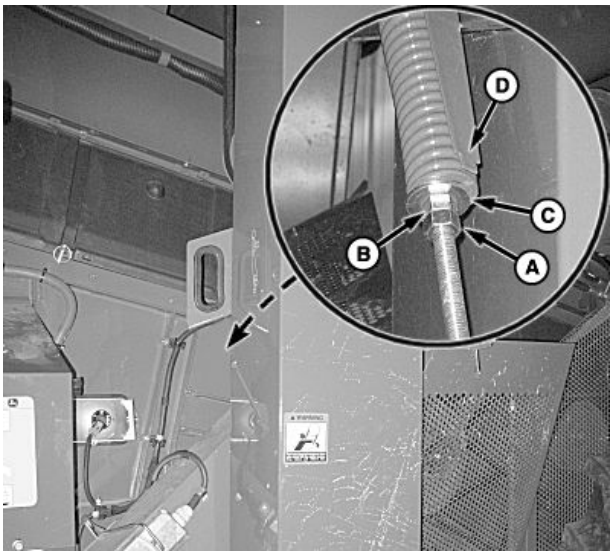
**A—Knob**




H74041 —UN—05NOV02

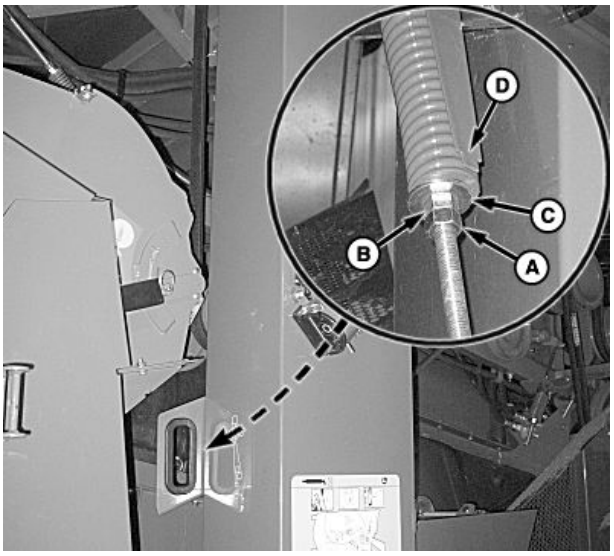
OUO6075,00009B4 -19-06DEC10-2/2

## Clean Grain Elevator Belt—Adjusting




H97127 —UN—27OCT10

*S660 and S670*




H97030 —UN—22JUN10

*S680, S685 and S690*

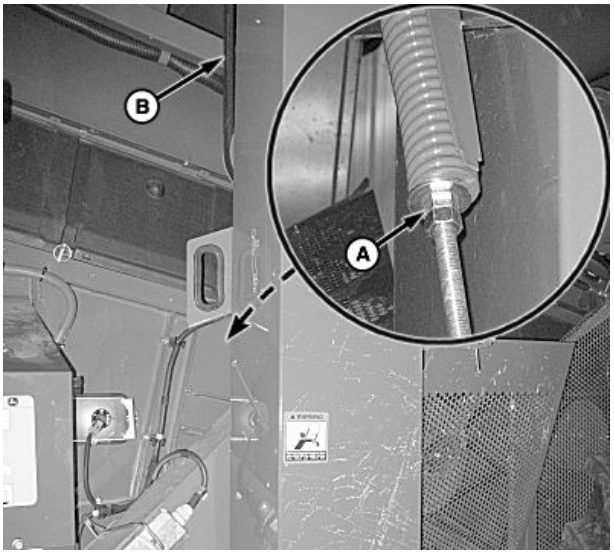
**A—Nut**
**B—Nut**
**C—Washer**
**D—Gauge**

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

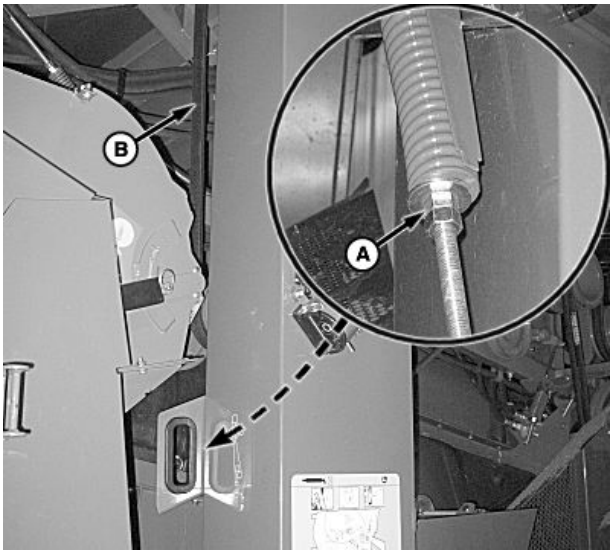
OUO6075,0001228 -19-09OCT12-1/1

## Clean Grain Elevator Belt—Replacing




H97128 —UN—27OCT10

*S660 and S670*




H97033 —UN—22JUN10

*S680, S685 and S690*

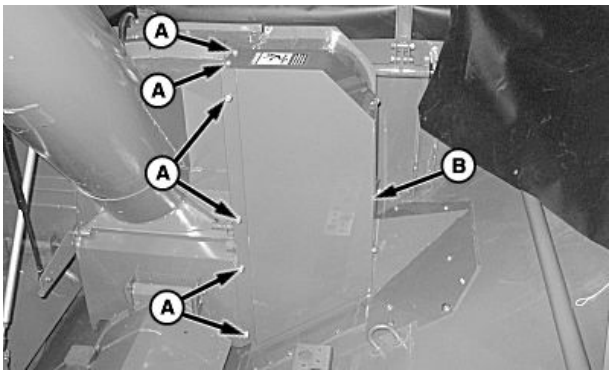
**A—Nuts**
**B—Clean Grain Elevator Belt**

**CAUTION: Shut OFF engine, set parking brake and remove key.**

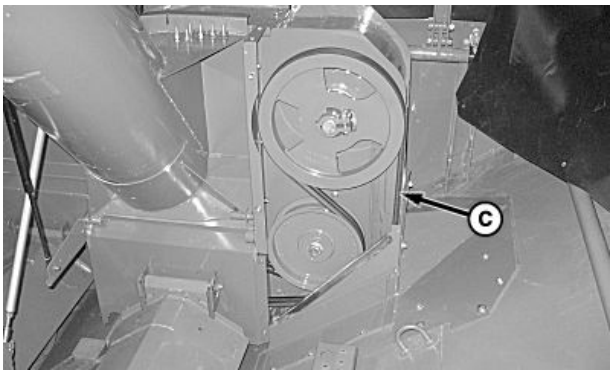
Loosen nuts (A) to relieve tension on clean grain elevator belt (B).

**Continued on next page**

OUO6075,0001229 -19-09OCT12-1/2




H97032 —UN—22JUN10




H97034 —UN—22JUN10

**A—Cap Screws** **B—Cover**
**C—Clean Grain Elevator Belt**

Remove cap screws (A) and cover (B).

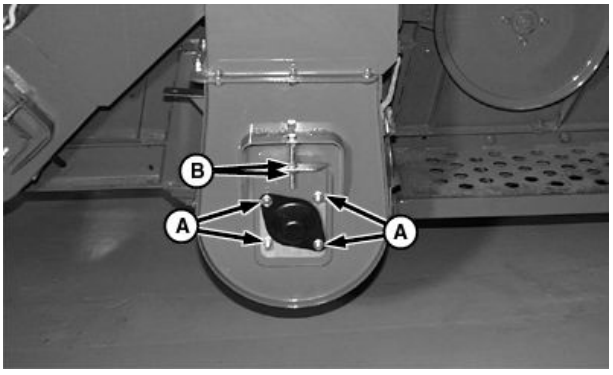
Remove clean grain elevator belt (C) from pulleys.

Install replacement belt and adjust tensioner until washer is positioned between end of gauge and bottom of step. Tighten lock nut.

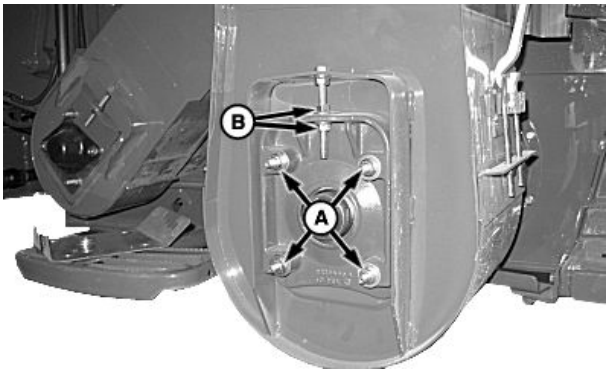
Install previously removed cover and retain with cap screws.

OUO6075,0001229 -19-09OCT12-2/2

## Clean Grain Elevator Conveyor Chain—Adjusting




H62184 —UN—13JAN00




H87582 —UN—07MAR07

**A—Nuts (4 Used)** **B—Nuts**

Release latch and open lower door.

Remove nuts from bearing cover (if equipped).

Loosen nuts (A) and use nuts (B) to adjust chain. Move bearing carrier downward to tighten chain.

Elevator chain is adjusted properly when lower end of chain can be slid side-to-side on sprocket but cannot be pulled away from sprocket. When chain loosens up to 6 mm (1/4 in.) from sprocket, readjust chain. After a period of use, it may be necessary to remove a half link to adjust chain correctly.

OUO6075,0001048 -19-27FEB12-1/1

## Tailings System Elevator Sensors

**CAUTION: Tailings sensor is a Class 1 laser product and emits laser radiation when powered. When servicing or removing tailings sensors, use caution and do not view beam directly.**

**Key switch must be turned OFF and tailings sensor must be unplugged before servicing or removing sensors.**

DO NOT operate sensor with lens removed. Accessible laser emission when lens is in place:

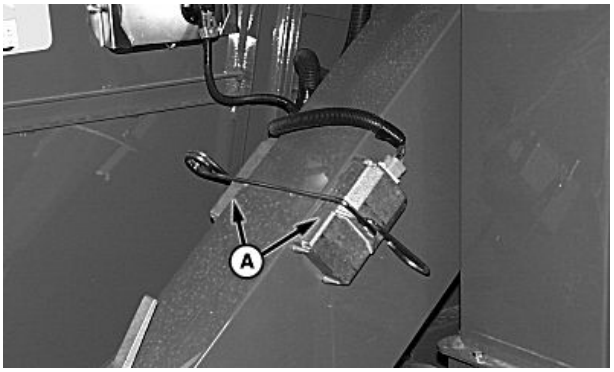
- 850 nm
- 500 nsec pulse width
- ≤ 500 Hz rep rate
- < 90 nJ per pulse
- 43 uW average power
- Class 1 levels (Eye Safe)

Accessible laser emission levels if sensor was operated with lens removed are:

- 850 nm
- 500 nsec pulse width
- ≤ 500 Hz rep rate
- < 380 nJ per pulse
- 188 uW average power
- Class 3R Levels (small potential for eye injury)

1. Remove tailings sensors (A) to inspect and clean lenses if needed.
2. If lenses are clean, remove and check for dust. If dust is found, completely clean area and reassemble lens onto unit making sure that gasket is sealing.
3. Verify lens is retained with all previously removed screws prior to installation.

**CAUTION: Failure to install plastic cover prior to replacement of sensors on elevator may cause malfunction, incorrect harvest readings or sensor damage, and could allow for potentially hazardous eye exposure when sensor is removed.**




H70551 —UN—02JAN02

*S660 and S670*




H105437 —UN—17MAY12

*S680, S685 and S690*

**A—Tailings Sensors**

4. Install sensor and test system.
5. If display continues to read full or empty, contact your John Deere dealer.

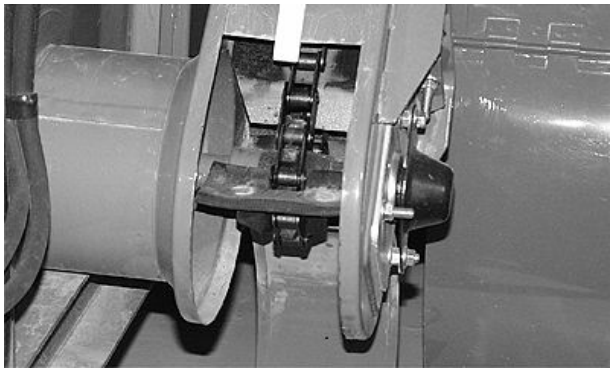
OUO6075,000122A -19-09OCT12-1/1

## Tailings System Elevator Paddles

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Check elevator chain occasionally for worn or missing paddles.

In muddy conditions, one steel paddle may be installed in the elevator chain to act as a wiper.



H62187 —UN—13JAN00

*S660 and S670*



H97055 —UN—22JUN10

*S680, S685 and S690*

OUO6075,000122B -19-09OCT12-1/1

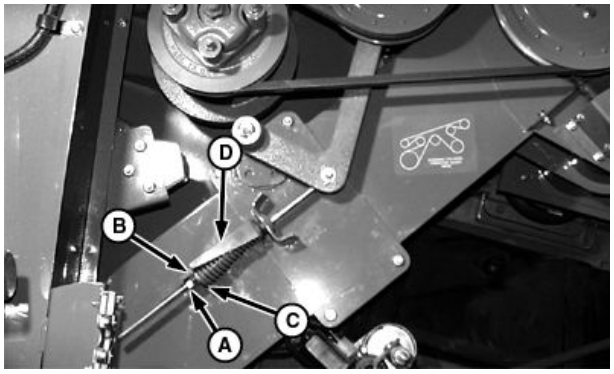
## Tailings Elevator Drive Belt—Adjusting (S660 and S670)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen lock nut (A).

Tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Lock Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H62186 —UN—13JAN00

OUO6075,0000F98 -19-09FEB12-1/1

## Tailings System Elevator Paddle Chain—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

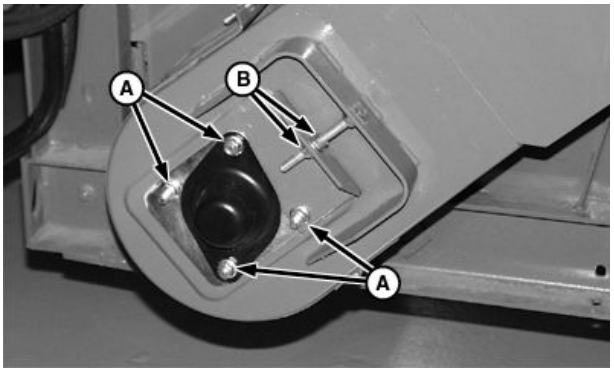
Release latch and open lower door.

Remove nuts from bearing cover.

Loosen nuts (A) and use nuts (B) to adjust chain. Move bearing carrier downward to tighten chain.

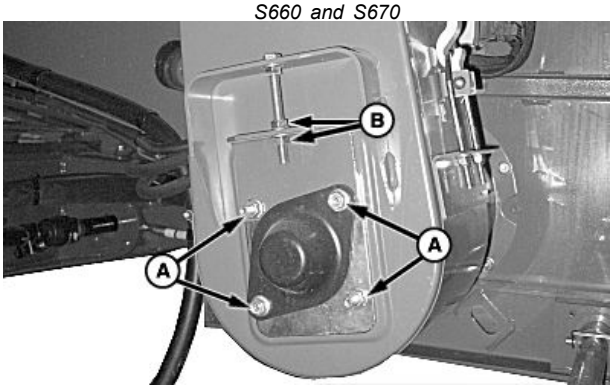
Elevator chain is adjusted properly when lower end of chain can be slid side-to-side on sprocket but cannot be pulled away from sprocket. When chain loosens up to 6 mm (1/4 in.) from sprocket, readjust chain. After a period of use, it may be necessary to remove a half link to adjust tailings elevator chain correctly.

**A—Nuts (4 Used)** **B—Nuts**




H62185 —UN—13JAN00

*S660 and S670*




H97059 —UN—22JUN10

*S680, S685 and S690*

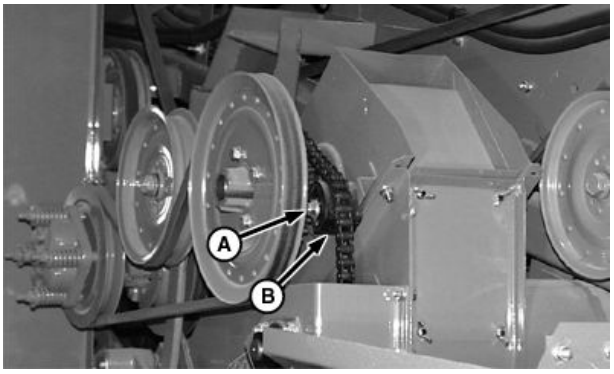
OUO6075,000122C -19-09OCT12-1/1

## Upper Tailings Auger Drive Chain—Adjusting (S660 and S670)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen cap screw (A) and adjust block (B) to tighten chain. Tighten cap screw when chain is tight.

**A—Cap Screw** **B—Block**




H62189 —UN—13JAN00

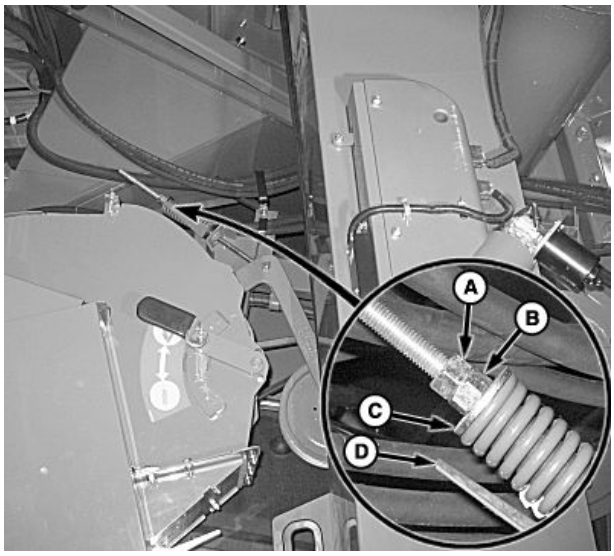
OUO6075,0000F99 -19-09FEB12-1/1

## Tailings System Drive Belt—Adjusting (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H97014 —UN—13SEP10

OUO6075,000122D -19-09OCT12-1/1

## Tailings System Drive Belt—Replacing (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

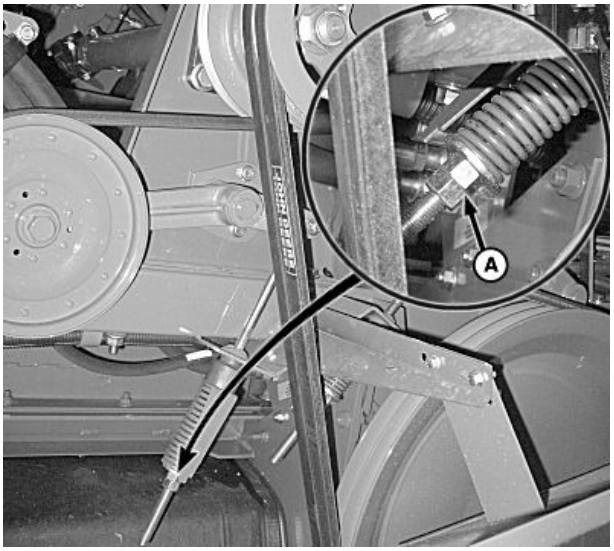
Loosen nuts (A) and remove rear countershaft belt (B) from pulley.

Loosen nuts (C) and remove tailings system drive belt (D).

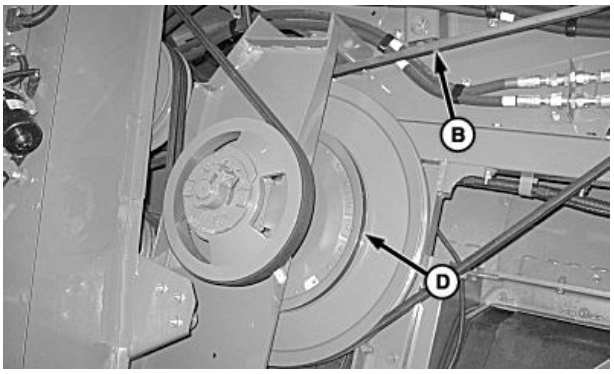
Install replacement belt and adjust tensioner until washer is positioned between end of gauge and bottom of step.

Install rear countershaft belt onto pulley and adjust tensioner until washer is positioned between end of gauge and bottom of step.

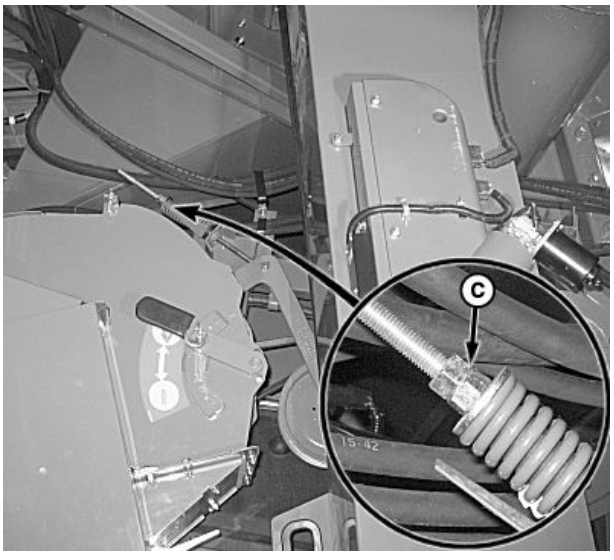
**A—Nuts**
**B—Rear Countershaft Belt**
**C—Nuts**
**D—Tailings System Drive Belt**




H97015 —UN—22JUN10




H97016 —UN—22JUN10




H97017 —UN—13SEP10

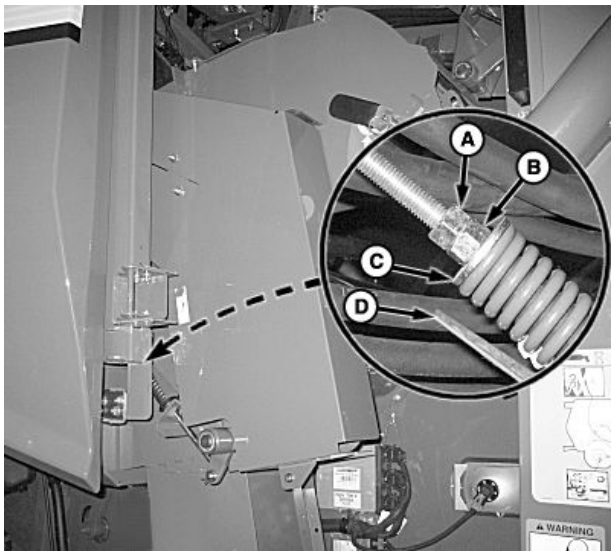
OUO6075,000122E -19-09OCT12-1/1

## Tailings System Drive Chain—Adjusting (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

**A—Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H105438 —UN—17MAY12

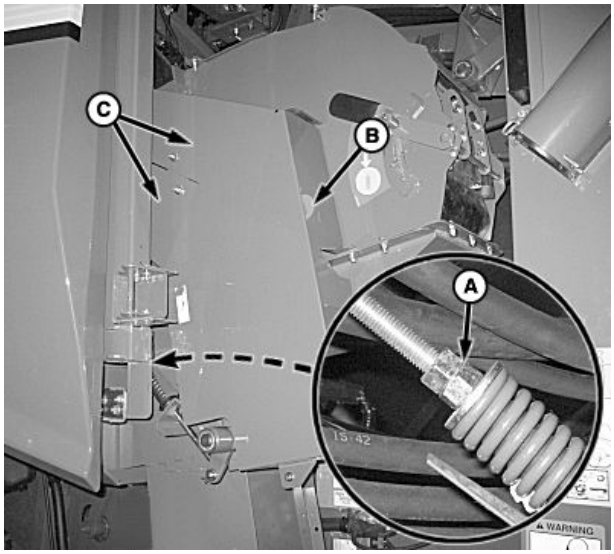
OUO6075,000122F -19-09OCT12-1/1

## Tailings System Drive Chain—Replacing (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nuts (A) and remove shields (B and C).

**A—Nuts**
**B—Shield**
**C—Shields**




H105439 —UN—17MAY12

**Continued on next page**

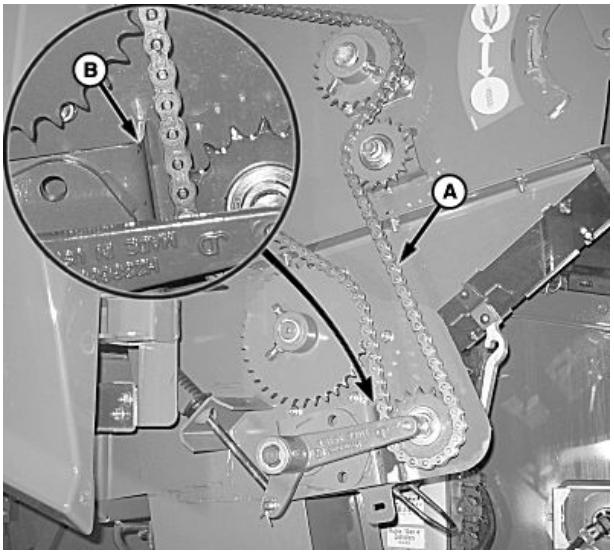
OUO6075,0001230 -19-09OCT12-1/2

Replace if fully tensioned chain (A) contacts or is less than 3 mm (1/8 in.) away from bracket (B).

Install replacement chain and adjust tensioner until washer is positioned between end of gauge and bottom of step.

Install previously removed shields.

**A—Chain** **B—Bracket**




H97963 —UN—30JUN11

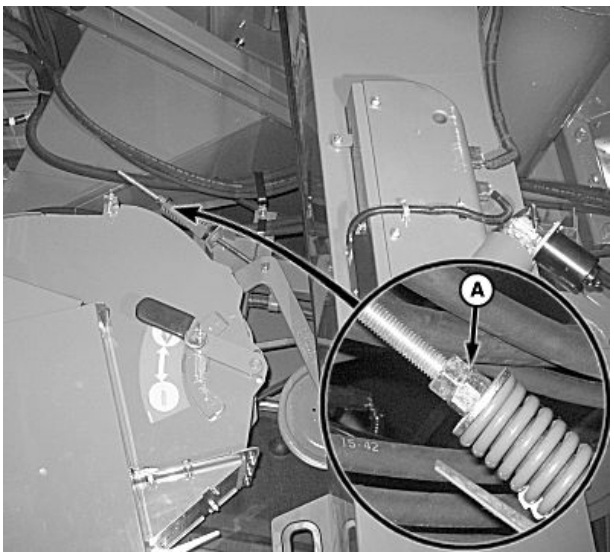
OUO6075,0001230 -19-09OCT12-2/2

## Tailings System Wear Strips and Rasp Bars—Remove and Install (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nuts (A) to relieve belt tension from tailings system drive belt.

**A—Nuts**




H97073 —UN—13SEP10

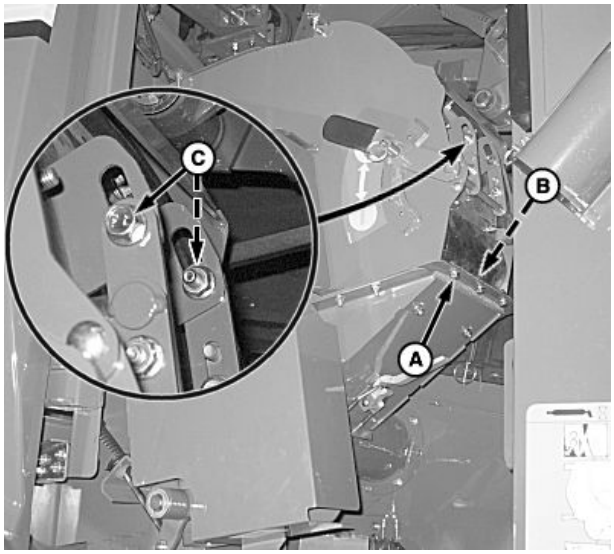
**Continued on next page**

OUO6075,0001231 -19-09OCT12-1/4

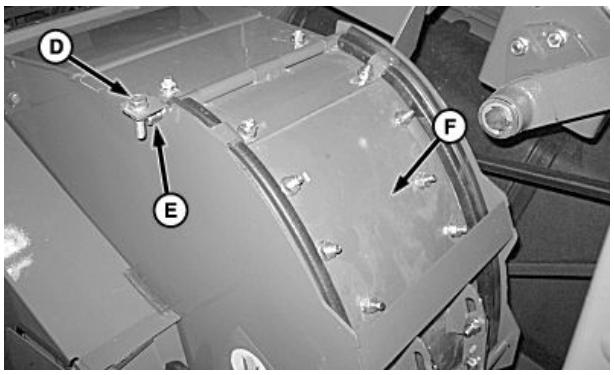
Remove cap screws (A) and strap (B).

Remove shoulder bolts (C), cap screw (D) and rod (E) from access cover (F).

**A—Cap Screws (3 Used)**
**B—Strap**
**C—Shoulder Bolts (2 Used)**
**D—Cap Screw**
**E—Rod**
**F—Access Cover**




H97069 —UN—13SEP10




H97070 —UN—13SEP10

OUO6075,0001231 -19-09OCT12-2/4

Remove cap screws and nuts (A) from wear strips.

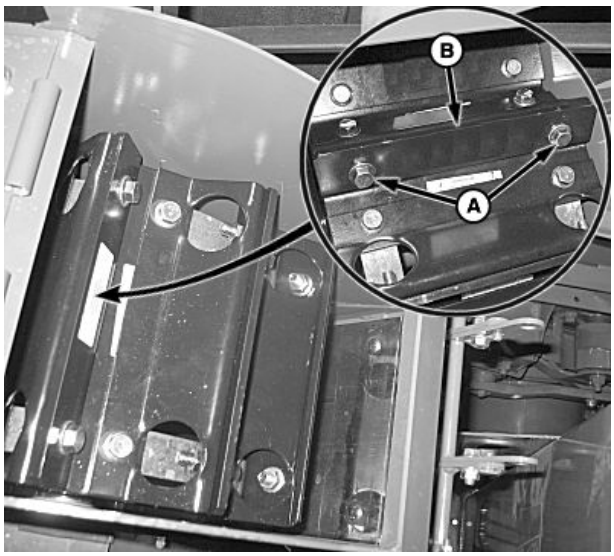
Remove and replace wear strips as needed.

Tighten wear strip cap screws to specification.

**Specification**

Wear Strip Cap Screws—Torque.....70 N·m (52 lb.-ft.)

**A—Cap Screws and Nuts**
**B—Wear Strips**




H97072 —UN—13SEP10

**Continued on next page**

OUO6075,0001231 -19-09OCT12-3/4

Remove cap screws and nuts (A) from rasp bar (B).

Remove and replace rasp bars as needed.

Tighten rasp bar cap screws to specification.

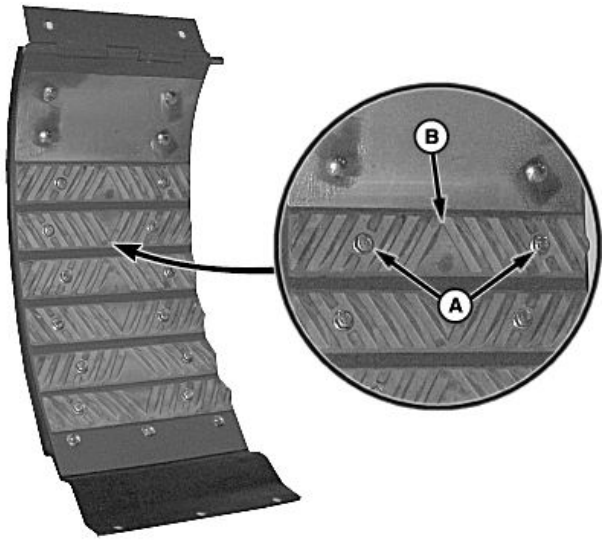
| Specification | |
|---|---|
| Rasp Bar Cap Screws—Torque | 37 N·m ± 7 N·m (27 lb.-ft. ± 5 lb.-ft) |

*NOTE: Verify seals on access cover remain in place when installing onto tailings system.*

Install access cover and retain with rod and cap screw.

Install shoulder bolts and align rubber piece with holes and install strap and cap screws.

Adjust tailings system drive belt tensioner until washer is positioned between end of gauge and bottom of step.




H97084 —UN—23JUN10

**A—Cap Screws and Nuts** **B—Rasp Bar**

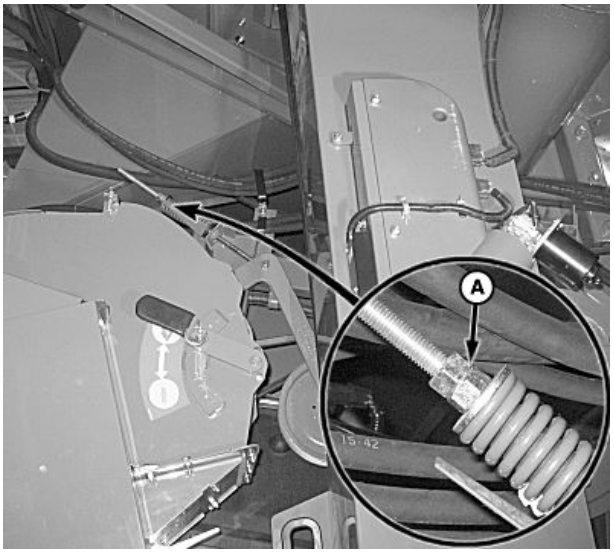
OUO6075,0001231 -19-09OCT12-4/4

## Tailings System Wear Strips and Rasp Bars—Adjusting (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen nuts (A) to relieve belt tension from tailings system drive belt.

**A—Nuts**




H97073 —UN—13SEP10

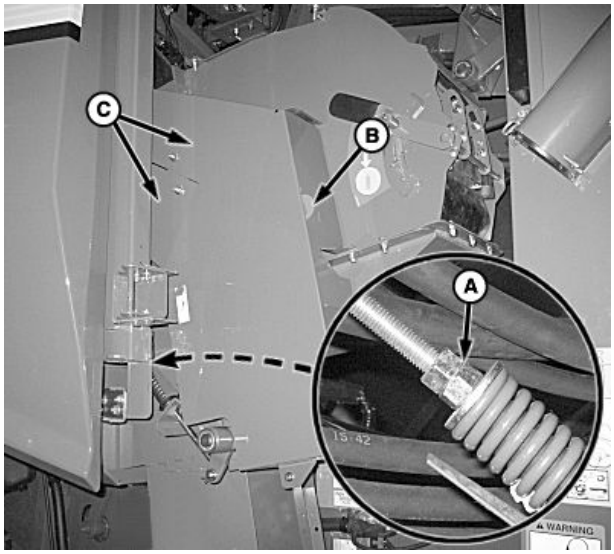
**Continued on next page**

OUO6075,0001232 -19-09OCT12-1/3

Loosen nuts (A) and remove shields (B and C).

Remove drive chain to allow tailings system to turn freely.

**A—Nuts**
**B—Shield**
**C—Shields**




H105439 —UN—17MAY12

OUO6075,0001232 -19-09OCT12-2/3

*NOTE: Moving adjustment handle downward zeros the position between wear strips and rasp bars.*

Move adjustment handle (A) downward as shown and install cap screws (B) in existing holes.

Loosen cap screws and nuts (C).

Slowly adjust access door while rotating beater until ”ticking” is heard.

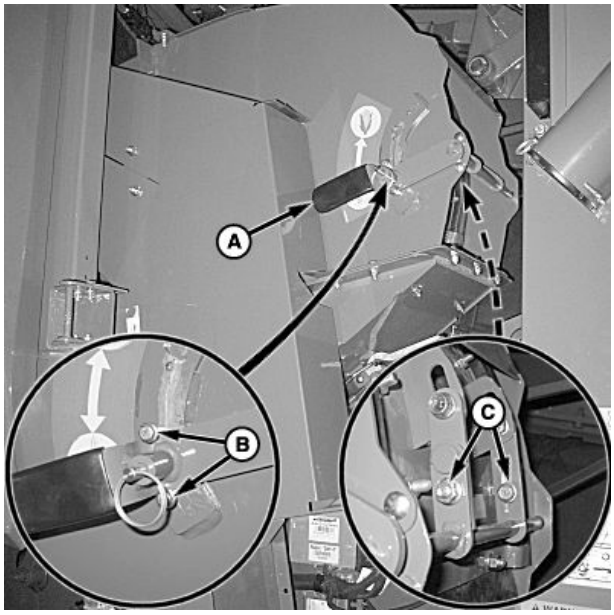
Slowly back off until ”ticking” stops and tighten cap screws and nuts.

Adjust tailings system drive belt tensioner until washer is positioned between end of gauge and bottom of step.

Install chain and adjust tensioner until washer is positioned between end of gauge and bottom of step.

Install previously removed shields.

**A—Adjustment Handle**
**B—Cap Screws, M6**
**C—Cap Screws and Nuts**




H97094 —UN—13SEP10

OUO6075,0001232 -19-09OCT12-3/3

## Tailings System Return Concave—Adjusting (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

**IMPORTANT: To prevent personal injury or machine damage do not move crop selection handle when machine is running.**

*NOTE: Refer to Crop Settings section for recommended tailings system concave position settings.*

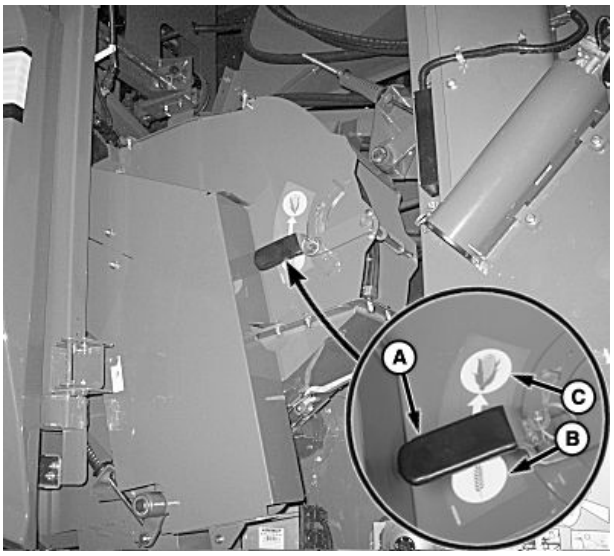
**Small Grain Position (B):**

Crop selection handle (A) should be in ”LOWER” position, when harvesting small grain crops.

**Large Grain Position (C):**

Crop selection handle (A) should be in ”UPPER” position, when harvesting large crops or damage sensitive crops.

**A—Crop Selection Handle**
**B—Small Grain Position**
**C—Large Grain Position**




H97103 —UN—13SEP10

OUO6075,0001233 -19-09OCT12-1/1

## Tailings System Auger Cleanout Door (S680, S685 and S690)

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Use handle (A) to open tailings system auger cleanout door to remove material as needed.

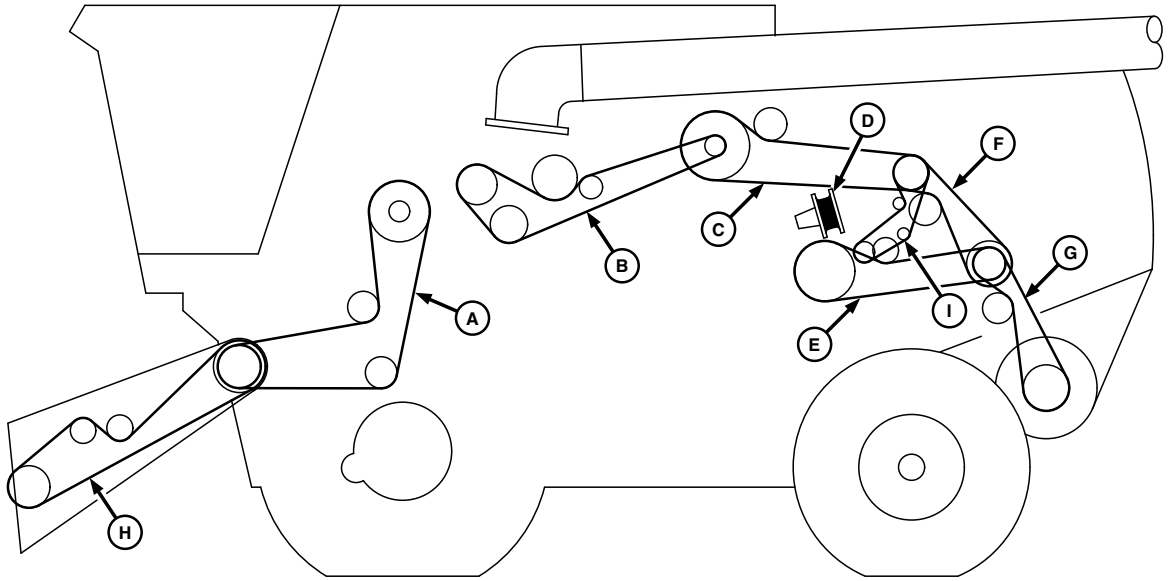
**A—Handle**




H97095 —UN—13SEP10

OUO6075,0001234 -19-09OCT12-1/1

## Drive Belts—Left-Hand

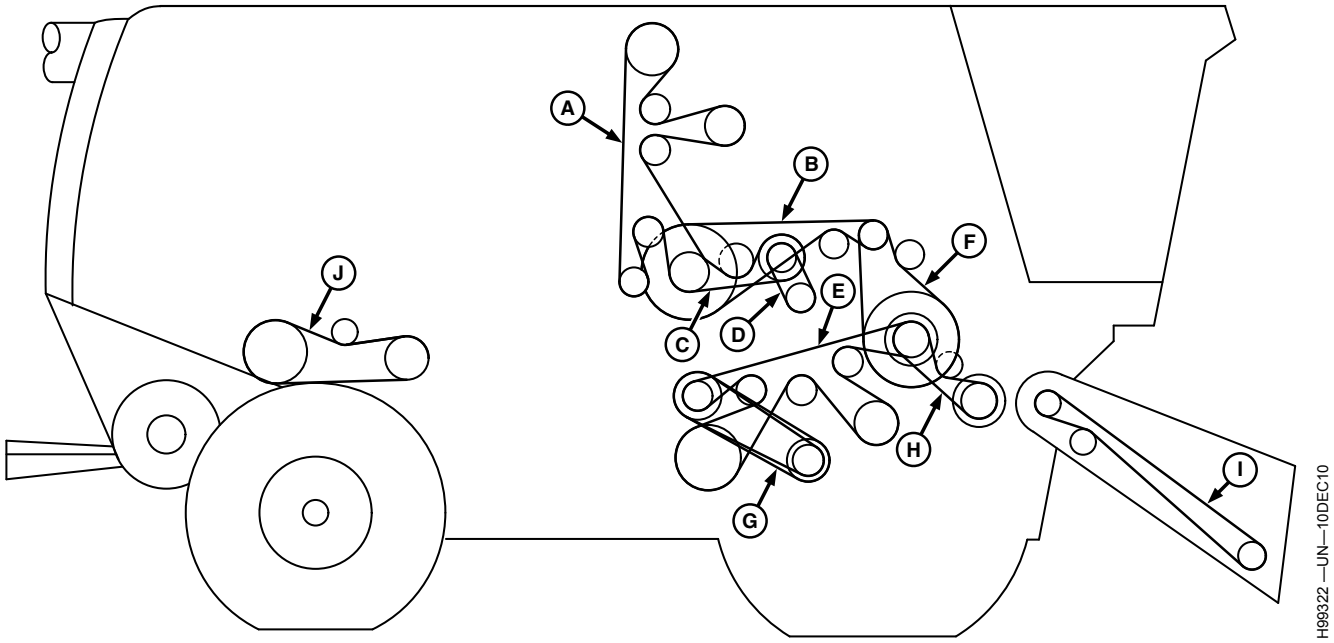



H107018 —UN—25FEB13

| | | | |
|---|---|---|---|
| **S660 Machines** | | | |
| A | Header and Reel Pump Standard/High Capacity Belt | F | Countershaft, Discharge Beater and Chopper Belt |
| B | Unloading Auger System, #60 Roller Chain | G | Straw Chopper Belts |
| C | Unloading Auger System Belt | H | Fixed Speed Feeder House Drive Belt<br>Feeder House Variable Drive Standard/High Capacity Belt |
| D | Separator Variable Drive Belt | I | Engine Debris Management Belt (Interim Tier 4/Stage III B) |
| E | Discharge Beater Belt (Non-Rice Machine)<br>Discharge Beater Belts (Rice Machine) | | |
| **S670 Machines** | | | |
| A | Header and Reel Pump Standard/High Capacity Belt or CommandTouch™ Multi-Speed Feeder House Drive Belt (Option) | | |
| B | Unloading Auger System, #60 Roller Chain (10,572 L (300 bu.) Grain Tank) | | |
| C | Unloading Auger System Belt | | |
| D | Separator Variable Drive Belt | | |
| E | Discharge Beater Belts | | |
| F | Countershaft, Discharge Beater and Chopper Belt | | |
| G | Straw Chopper Belts | | |
| H | Fixed Speed Feeder House Drive Belt<br>Feeder House Variable Drive Standard/High Capacity Belt or CommandTouch™ Multi-Speed Feeder House Drive Belt (Option) | | |
| I | Engine Debris Management Belt (Interim Tier 4/Stage III B) | | |
| **S680, S685 and S690 Machines** | | | |
| A | Header and Reel Pump Standard/High Capacity Belt or CommandTouch™ Multi-Speed Feeder House Drive Belt (Option) | | |
| B | Unloading Auger System, #80 Roller Chain (14,096 L (400 bu.) Grain Tank) | | |
| C | Unloading Auger System Belt | | |
| D | Separator Variable Drive Belt | | |
| E | Discharge Beater Belts | | |
| F | Countershaft, Discharge Beater and Chopper Belt | | |
| G | Straw Chopper Belts | | |
| H | Fixed Speed Feeder House Drive Belt<br>Feeder House Variable Drive Standard/High Capacity Belt or CommandTouch™ Multi-Speed Feeder House Drive Belt (Option) | | |
| I | Engine Debris Management Belt (Interim Tier 4/Stage III B) | | |

ZX08994,00008E3 -19-07MAR13-1/1

## Drive Belts—Right-Hand (S660 and S670)

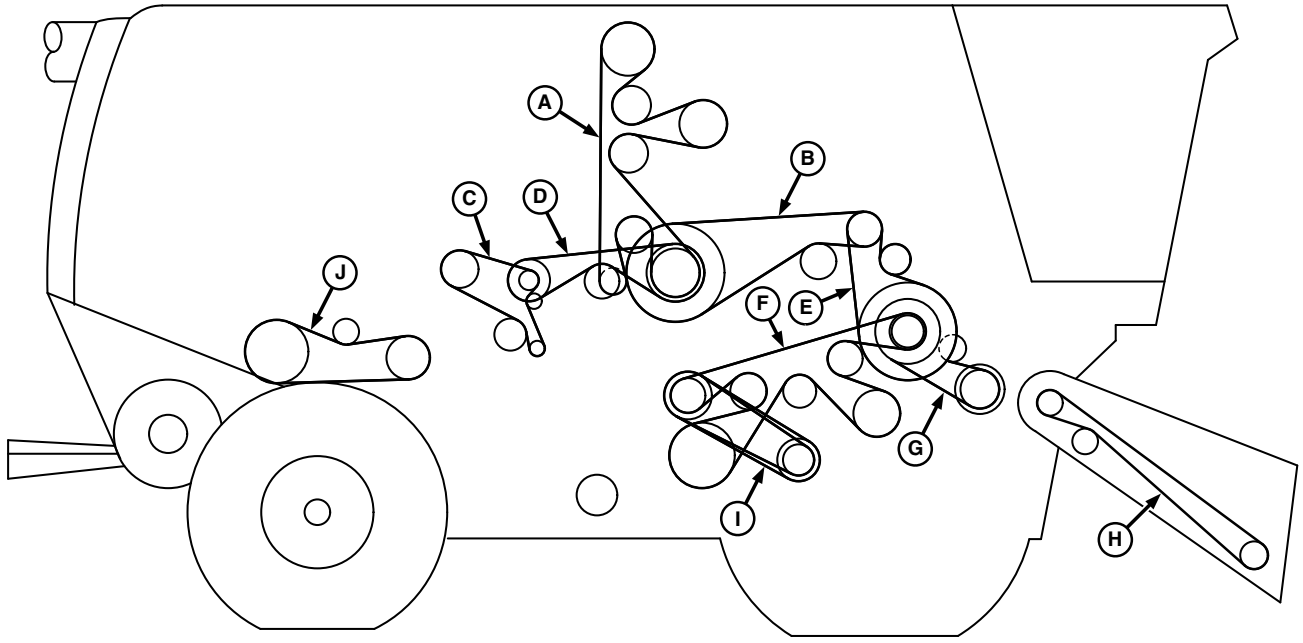



**A—Clean Grain Elevator Belt**
**B—Rear Right-Hand Jackshaft Belt**
**C—Tailings Auger and Elevator Belt**
**D—Tailings Return Auger, #50 Chain**
**E—Shoe Fan and Conveyor Augers Belt**
**F—Front Right-Hand Jackshaft Belt**
**G—Cleaning Fan Variable Belt**
**H—Feed Accelerator Belt**
**I— Feeder Conveyor (Chain), #60 Chain**
**J— Overshot Beater Drive Belt (Optional) [1]**

*[1]Only available on S670 machines.*

OUO6075,0001049 -19-27FEB12-1/1

## Drive Belts—Right-Hand (S680, S685 and S690)




**A—Clean Grain Elevator Belt**
**B—Rear Right-Hand Jackshaft Belt**
**C—Tailings Elevator/Upper Auger #60 Roller Chain**
**D—Tailings System Drive Belt**
**E—Front Right-Hand Jackshaft Belt**
**F—Shoe Fan and Conveyor Augers Belt**
**G—Feed Accelerator Belt**
**H—Feeder Conveyor (Chain), #60 Chain**
**I— Cleaning Fan Variable Belt**
**J— Overshot Beater Drive Belt (Optional)**

OUO6075,0001235 -19-09OCT12-1/1

## Feed Accelerator—Unplugging

1. Disengage separator.
2. Shut OFF engine, set parking brake and remove key.
3. Shift separator drive gearcase to low speed.
4. Remove belt tension from feed accelerator drive by pushing lever up and out from notch in bracket.
5. Open stone trap door and clean. Leave stone trap door open.
6. Sound horn, start engine and set engine speed at mid idle.
7. Engage separator to clean out material, discharge beater and chopper.
8. Disengage separator.
9. Shut OFF engine, set parking brake and remove key.
10. Remove feed accelerator access covers and remove crop material from accelerator area. After clearing plug, rotate accelerator one revolution to be sure it is free.
11. Engage feed accelerator drive by pushing lever up and into notch in bracket.
12. Sound horn, start engine and set engine speed at mid idle.
13. Engage separator. If plug does not clear, disengage separator and repeat steps 9 — 13.
14. Shut OFF engine, set parking brake and remove key.
15. Close stone trap door and set concave spacing back to original setting. Replace feed accelerator access covers.
16. If initially operating in high speed, shift separator drive gearcase and adjust separator speed back to initial setting and resume operation.

OUO6075,0000785 -19-09AUG07-1/1

## Separator—Unplugging

Disengage separator.

*NOTE: Note concave setting and adjust concave to wide open position.*

Shut OFF engine, set park brake and remove key.

Shift separator drive gearcase to neutral position.

Remove belt tension from feed accelerator drive by pushing lever up and out from notch in bracket.

Open stone trap door and clean. Leave stone trap door open.

Sound horn, start engine and set engine speed at mid idle.

Engage separator to clean out material from the discharge beater.

Adjust separator variable belt to mid range.

Disengage separator.

Shut OFF engine, set park brake and remove key.

Shift separator drive gearcase to low speed.

Sound horn, start engine and set engine speed at mid idle.

**IMPORTANT: To prevent damage to main engine gearcase and wet clutch, do not engage separator clutch with a plugged separator more than three times in a period of three minutes.**

**Wait for one minute between plugged separator engagements while idling machine.**

Engage separator to clear separator. If plug does not clear, disengage separator.

If separator cannot be power unplugged, it will be necessary to remove concaves and grates and remove some straw by hand. After clearing plug, replace concaves and grates.

After separator is unplugged, close stone trap door and set concave spacing back to original setting.

Engage feed accelerator drive by pushing lever up and into notch in bracket.

If originally operating in high speed, shift separator gearcase to high speed position. Adjust separator speed back to original setting and resume operation.

OUO6075,00010C6 -19-23MAY13-1/1

## Discharge Beater—Unplugging

Disengage header and separator.

*NOTE: Note concave setting and adjust concave to wide open position.*

Shut OFF engine, set parking brake and remove key.

Raise straw chopper.

Remove covers to access discharge beater area and remove crop material from beater area.

Remove shields over discharge beater drive pulley, so pulley can be rotated by hand.

After clearing plug, rotate beater one revolution to be sure it is free.

Shift separator drive gearcase to neutral position.

Remove belt tension from feed accelerator drive by pushing lever up and out from notch in bracket.

Sound horn, start engine and set engine speed at mid idle.

Engage separator to clean out material from discharge beater and chopper.

Disengage separator.

Shut OFF engine, set parking brake and remove key.

Shift separator drive gearcase to original speed.

Engage feed accelerator drive by pushing lever up and into notch in bracket.

Install all shields previously removed.

Lower straw chopper to operating position.

Sound horn, start engine and set engine speed at mid idle.

Engage separator.

Set concave spacing back to initial setting and resume operation.

OUO6075,0000787 -19-09AUG07-1/1

# Chopper and Spreader (Deluxe Residue)

## Chopper (General Information)

**CAUTION: Do not let anyone stand behind chopper while it is running. Shut OFF engine, set parking brake and remove key before adjusting chopper.**

**Normal use wears the bottom of chopper fins to a sharp edge.**

For Chopper High Speed:

- Grain

For Chopper Low Speed:

- Corn

To change chopper to high speed or low speed, see Chopper Drive Speeds—Changing later in this section.

Start with knifebank in fully disengaged position. If better cut quality is desired, adjust knifebank to fully engaged position, see Chopper Stationary Knifebank—Adjusting later in this section.

*NOTE: For in cab chopper adjustment switches, see CommandTouch Armrest Console section for further information.*

OUO6075,0000B74 -19-21MAR11-1/1

## Windrowing (General Information)

- Raise chopper fully. See Chopper Adjusting switch later in this section.
- Shift chopper drive into neutral position. See Chopper Drive Speeds—Changing later in this section.
- If harvesting low straw volume crops, lower cob deflector into corn position. See Crop Diverter later in this section.
- If equipped with a PowerCast tailboard, set disk speed to zero. See Spreader Speed Adjust switch in CommandTouch Armrest Console section for further information.

OUO6075,0000CB9 -19-28JUN11-1/1

## Chopper Tailboard—Adjusting

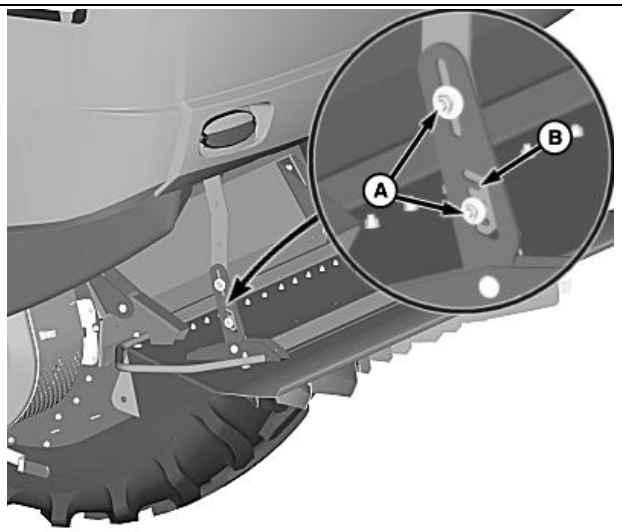
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen cap screws (A) on both sides of chopper.

Adjust chopper tailboard up or down in notches (B) to control straw spread width.

Tighten cap screws on both sides of chopper to lock into position.

**A—Cap Screws (4 Used)** **B—Notches**




H98131 —UN—20SEP10

OUO6075,00009CA -19-21SEP10-1/1

## Chopper Vanes (Manual Adjust)—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

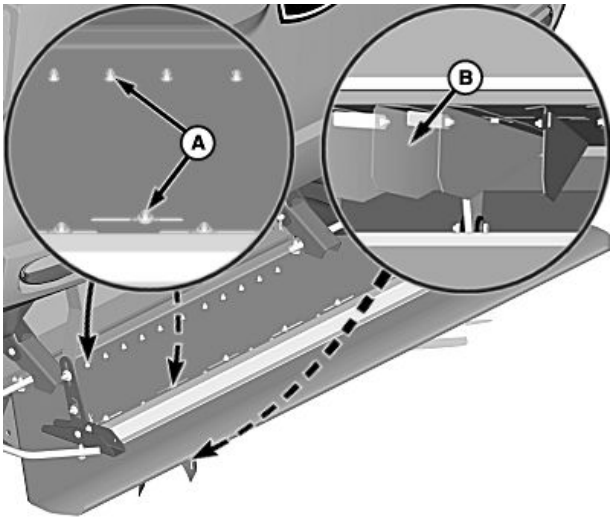
*NOTE: Adjustments can be made to chopper vanes if factory settings do not produce adequate spread width or even distribution.*

*Chopper vanes are factory set for 9.1 m (30 ft.) platforms.*

Loosen nuts (A) and adjust chopper vane (B) as needed to control distribution of straw spread width. See Chopper Vanes (Manual Adjust)—Factory Settings later in this section.

Tighten nuts and repeat as needed on remaining chopper vanes.

**A—Nuts**
**B—Chopper Vane**




H98133 —UN—20SEP10

OUO6075,00009B8 -19-20SEP10-1/1

## Chopper Vanes (Electric Motor)—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

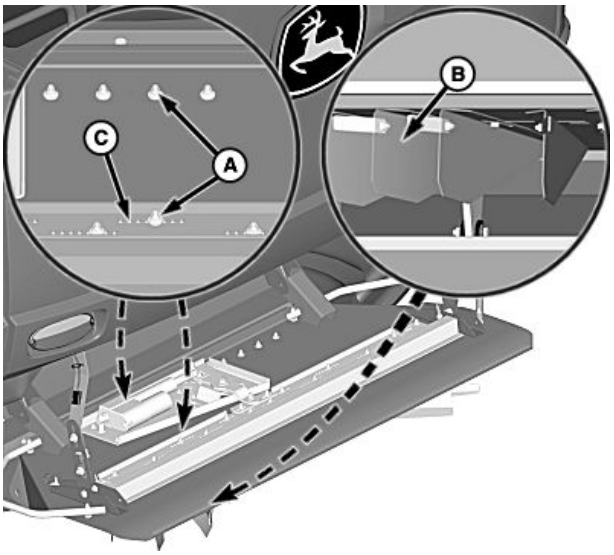
*NOTE: Adjustments can be made to chopper vanes if factory settings do not produce adequate spread width or even distribution.*

*Chopper vanes are factory set for 9.1 m (30 ft.) platforms.*

Loosen nuts (A) and adjust chopper vane (B) to different holes (C) if needed to control distribution of straw spread width. See Chopper Vanes (Electrical Adjust)—Factory Settings later in this section.

Tighten nuts and repeat as needed on remaining chopper vanes.

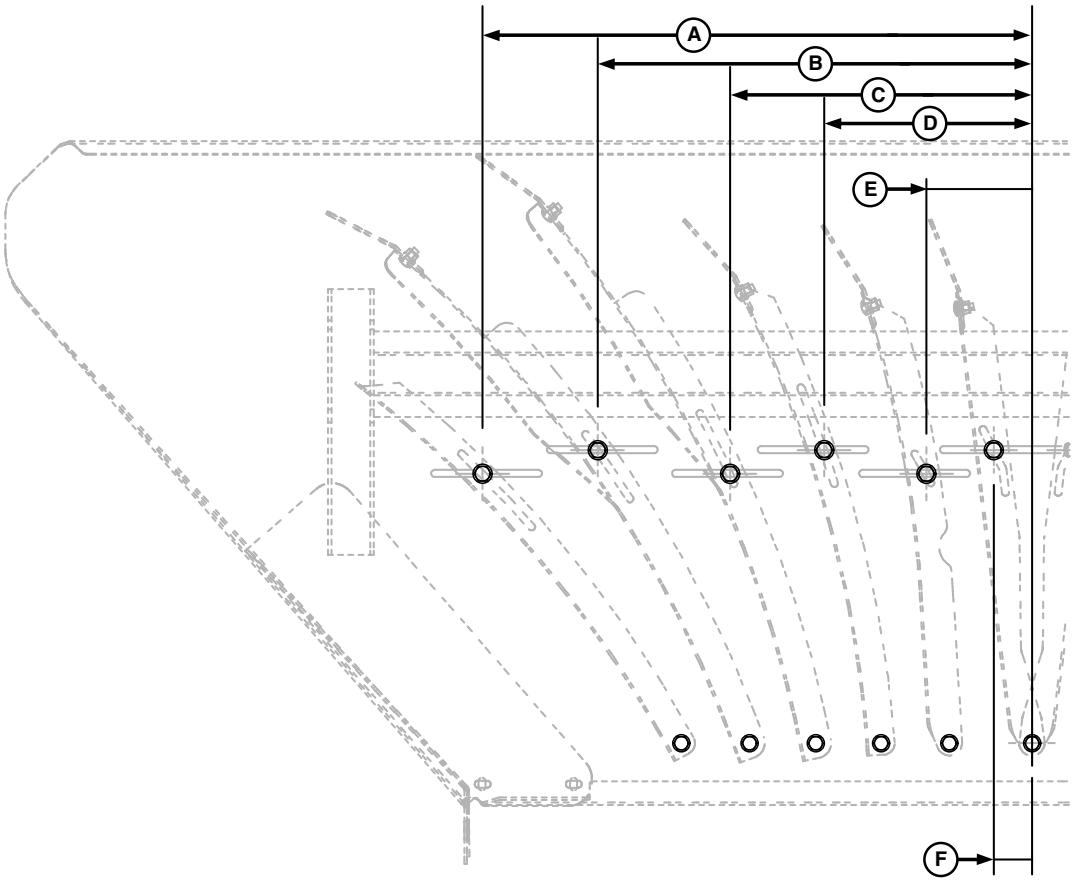
**A—Nuts**
**B—Chopper Vane**
**C—Holes**




H98134 —UN—21SEP10

OUO6075,00009B9 -19-22SEP10-1/1

## Chopper Vanes (Manual Adjust)—Factory Settings

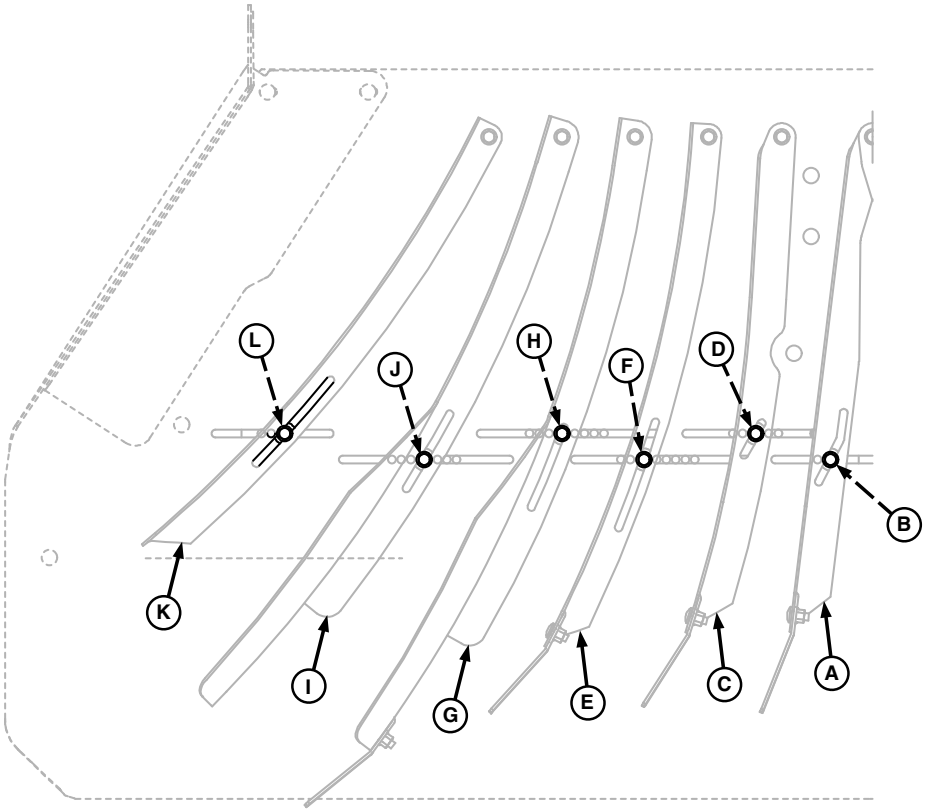



*Chopper Settings For 9.1 m (30 ft.) Platforms (View From Above Chopper)*

**A—693 mm (27.3 in.)**
**B—548 mm (21.6 in.)**
**C—382 mm (15 in.)**
**D—262 mm (10.3 in.)**
**E—133 mm (5.2 in.)**
**F—48 mm (1.9 in.)**

OUO6075,0000B78 -19-21MAR11-1/1

## Chopper Vanes (Electrical Adjust)—Factory Settings




H100408 —UN—23FEB11

*Chopper Settings For 9.1 m (30 ft.) Platforms (View From Below Chopper)*

**A—Vane 1**
**B—Second Hole**
**C—Vane 2**
**D—Third Hole**
**E—Vane 3**
**F—Sixth Hole**
**G—Vane 4**
**H—Fifth Hole**
**I— Vane 5**
**J—Fourth Hole**
**K—Vane 6**
**L—First Hole**

*NOTE: Hole locations are from center of chopper outward when adjusting chopper vanes.*

*If 7.6 m (25 ft.) spread width pattern is desired, see your John Deere dealer for further information on an optional kit.*

OUO6075,0000B79 -19-21MAR11-1/1

## PowerCast Tailboard—Adjusting (Optional)

**CAUTION: Do not let anyone stand behind spreading tailboard while it is running. Shut OFF engine, set parking brake and remove key before adjusting.**

For best performance, powered tailboard should always run level or parallel to ground. Depending on tire combinations, it may be necessary to raise or lower tailboard.

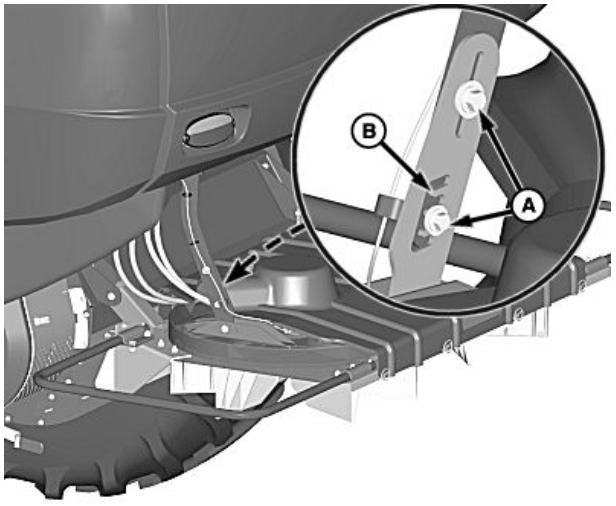
Park machine on level ground.

Loosen cap screws (A) on both sides of chopper.

Adjust powered tailboard up or down in notches (B) to level tailboard.

Tighten cap screws on both sides of chopper to lock into position.

**A—Cap Screws (4 Used)**
**B—Notches**




H98132 —UN—20SEP10

OUO6075,00009CC -19-14OCT10-1/1

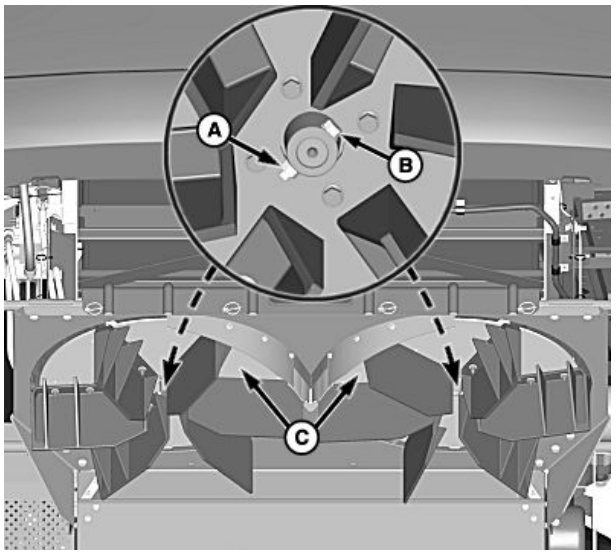
## PowerCast Tailboard Blade—Replacing (Optional)

**CAUTION: Disk assemblies weigh approximately 13 kg (29 lb.).**

**IMPORTANT: Disk assemblies are left-handed and right-handed. Mark disk assembly locations before removing.**

Remove lock nut (A) and cap screw (B) from spreader disk assemblies (C).

**A—Lock Nut**
**B—Cap Screw**
**C—Spreader Disk Assemblies**




H98170 —UN—22SEP10

**Continued on next page**

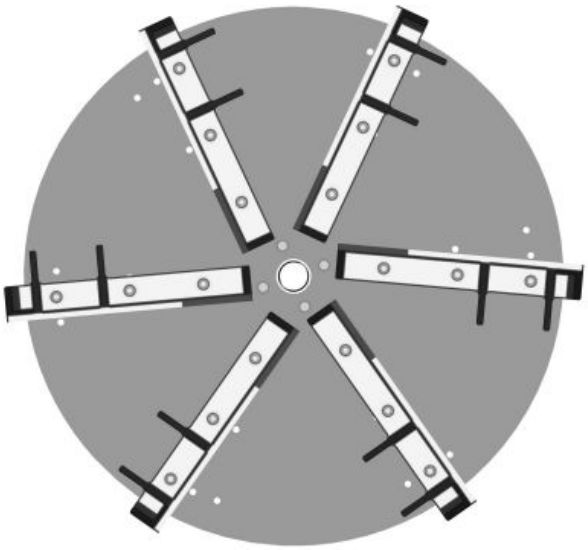
OUO6075,00009CE -19-22SEP10-1/2

**IMPORTANT: When replacing worn or damaged blades, make sure to replace blades on opposite sides of disk at the same time to maintain disk rotational balance.**

Blades are oriented in alternating hole patterns to obtain an optimum material spread. Ensure that replacement blades are put back in the same holes as previously removed.

Install replacement blades as needed and tighten hardware to specification.

| Specification | |
|---|---|
| Blade Hardware—Torque | 22 N·m (16 lb.-ft.) |



H98171 —UN—22SEP10

OUO6075,00009CE -19-22SEP10-2/2

## PowerCast Tailboard (Optional) Rear Shrouds

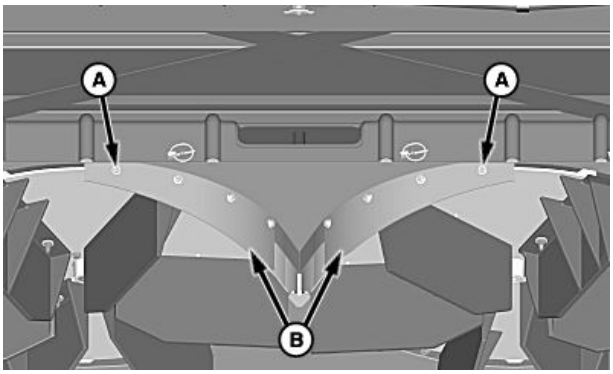
*NOTE: Shrouds can be removed to spread more material towards center of machine when harvesting in tough or heavy straw conditions.*

*Front and rear shrouds should always be installed to provide optimal material distribution when harvesting corn.*

**Field Position:**

Shrouds are used to manage residue spread with distribution for wider platforms.

Install rear shrouds (B) behind welded strap as shown and retain with hardware (A).




H98180 —UN—22SEP10

**A—Hardware (8 Used)** **B—Rear Shrouds**

**Continued on next page**

OUO6075,00009CF -19-30SEP10-1/2

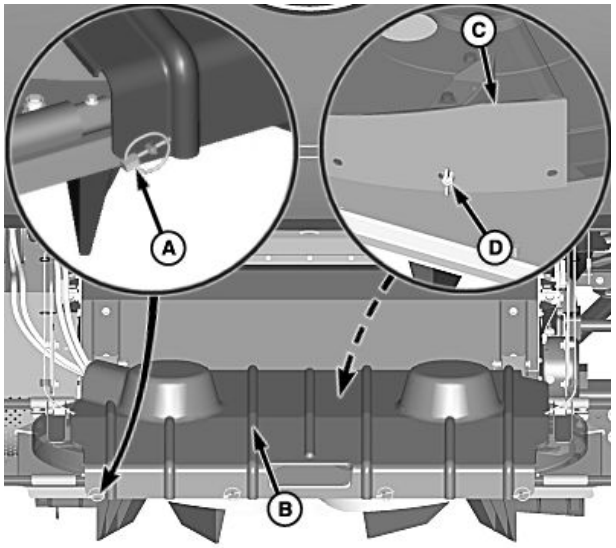
**Storage Position:**

Remove and retain quick-lock pins (A) and shield (B).

Install rear shrouds (C) to weld stud as shown and retain with wing nut (D).

Install previously removed shield and quick-lock pins.

**A—Quick-Lock Pins**
**B—Shield**
**C—Rear Shrouds**
**D—Wing Nut**




H98181 —UN—22SEP10

OUO6075,00009CF -19-30SEP10-2/2

## Crop Diverter Vanes—Adjusting

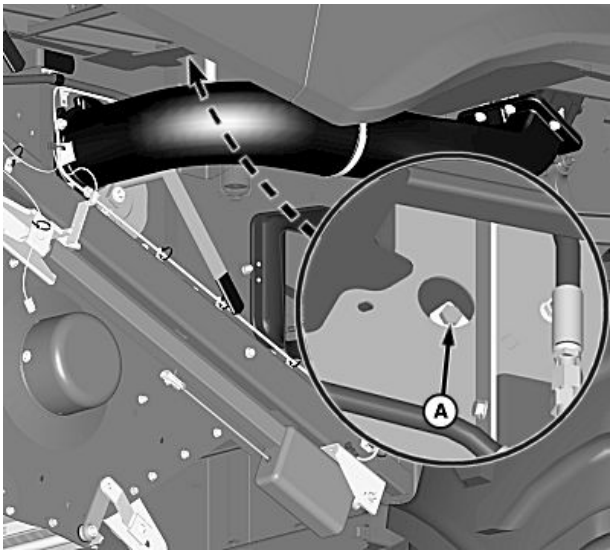
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Turning cap screw (A) adjusts indicator (B) and moves crop diverter vanes.

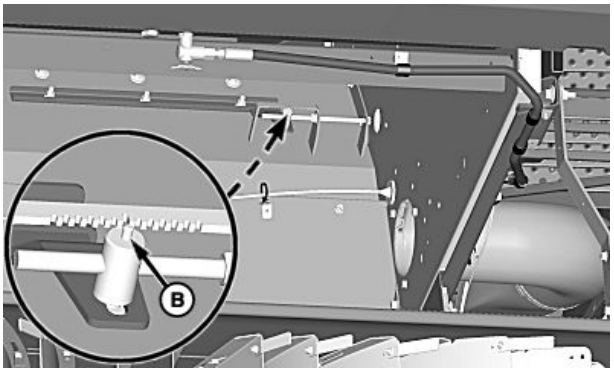
- Counterclockwise (C) - moves vanes towards left-hand side of machine.
- Clockwise (D) - moves vanes towards right-hand side of machine.

*NOTE: Adjust vanes until crop material distribution is even across body width.*

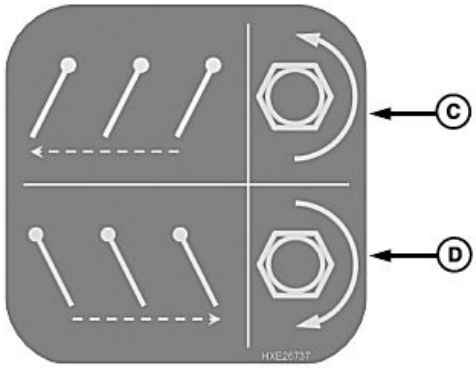
**A—Cap Screw**
**B—Indicator**
**C—Counterclockwise**
**D—Clockwise**




H98165 —UN—21SEP10




H98166 —UN—21SEP10




H98708 —UN—19OCT10

OUO6075,00009CD -19-17NOV10-1/1

## Crop Diverter

**IMPORTANT: To prevent personal injury or machine damage do not move crop diverter handle when machine is running.**

**Small Grain Position (C):**

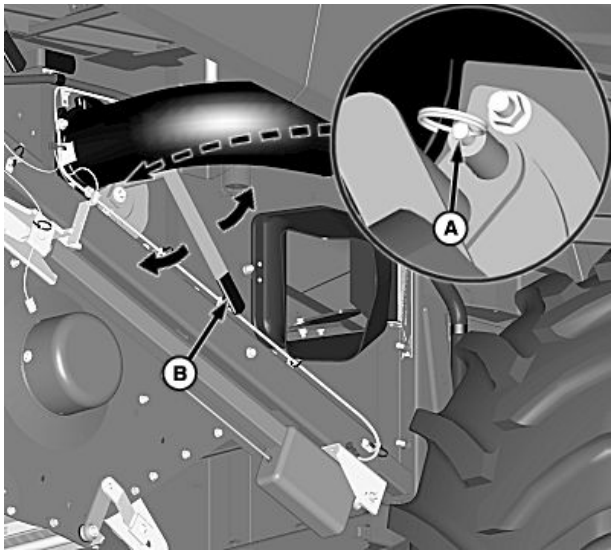
Pull lockout pin (A) and move crop diverter handle (B) to "UPPER" position. Crop diverter handle should be placed in "UPPER" position when servicing cleaning shoe.

**Large Grain Position (D):**

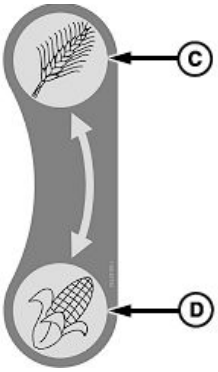
*NOTE: When harvesting corn or sunflowers, crop diverter handle should be in "LOWER" position.*

Pull lockout pin (A) and move crop diverter handle (B) to "LOWER" position. Crop diverter protects cleaning shoe from damage by preventing material from being thrown forward.

**A—Lock-Out Pin**
**B—Crop Diverter Handle**
**C—Small Grain Position**
**D—Large Grain Position**




H98135 —UN—20SEP10




H99171 —UN—23NOV10

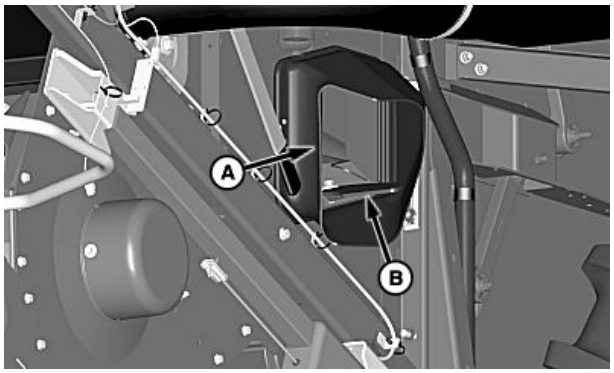
OUO6075,00009BC -19-23NOV10-1/1

## Air Chutes

Air chute (A) located on both sides of chopper allows cleaning shoe to breathe more freely especially when running on low speed. Depending on harvesting conditions, grain tank quality may be enhanced and feeder house dust reduced.

Air chute agitator (B) prevents crop material from building up and plugging air chutes.

**A—Air Chute**
**B—Air Chute Agitator**




H98136 —UN—20SEP10

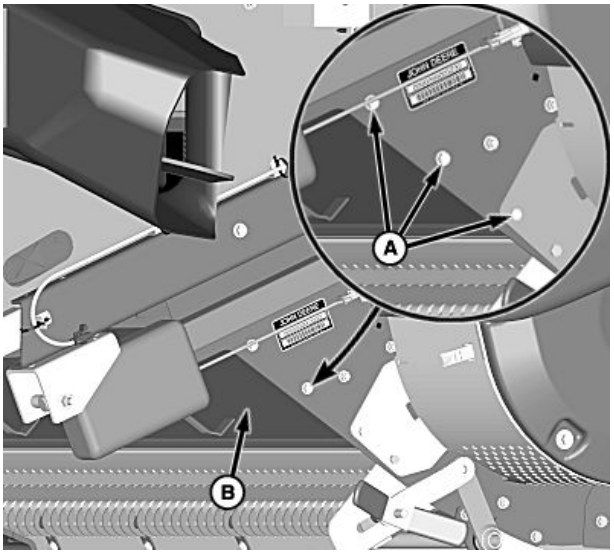
OUO6075,00009BD -19-28SEP10-1/1

## Chopper Access Door

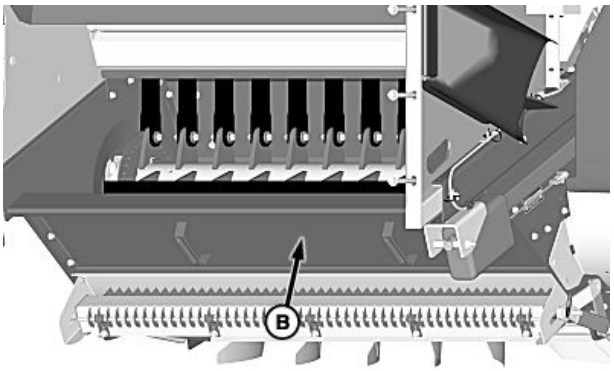
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Remove cap screws (A) from both sides of chopper to remove access door (B).

**A—Cap Screws** **B—Access Door**




H98689 —UN—19OCT10




H98690 —UN—19OCT10

OUO6075,0000A30 -19-20OCT10-1/1

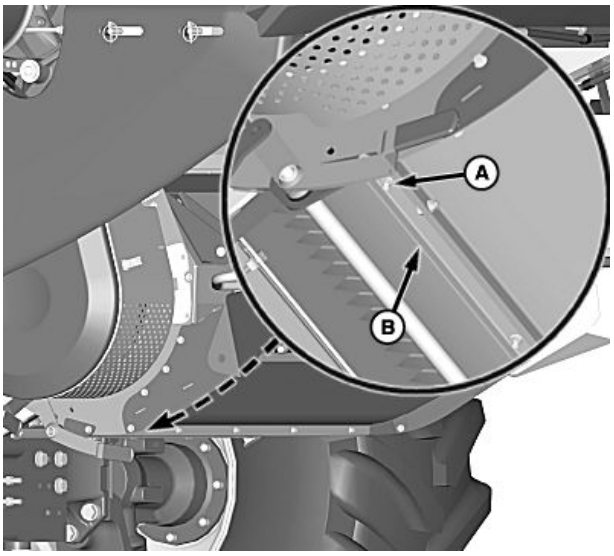
## Chopper Controller Bar (Optional)

**IMPORTANT: Controller bar must be removed and placed in storage position when harvesting corn. Failure to remove controller bar can result in chaffer element damage.**

Controller bar improves cut quality, distribution, and spread width in tough straw conditions. See your John Deere dealer for further information.

Remove hardware (A) and controller bar (B) from bottom side of chopper.

**A—Hardware** **B—Controller Bar**



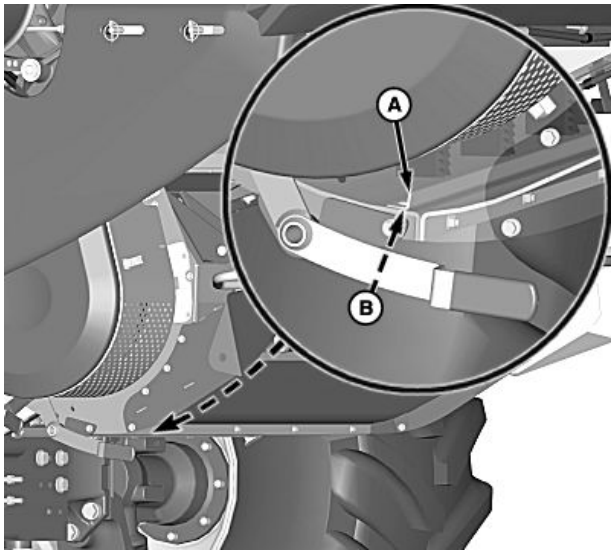

H98138 —UN—21SEP10

**Continued on next page**

OUO6075,00009BF -19-21SEP10-1/2

Raise chopper fully to install controller bar (A) on inside of chopper as shown and retain with hardware (B).

**A—Controller Bar** **B—Hardware**




H98139 —UN—21SEP10

OUO6075,00009BF -19-21SEP10-2/2

## Chopper Stationary Knifebank—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

**IMPORTANT: Knifebank must be fully disengaged for corn.**

*NOTE: Chopper can be run with knives disengaged, however cut quality decreases.*

*Use position in between to optimize power consumption and achieve satisfactory cut length.*

Knives can be adjusted to any position. Position of knives determines cut length of material.

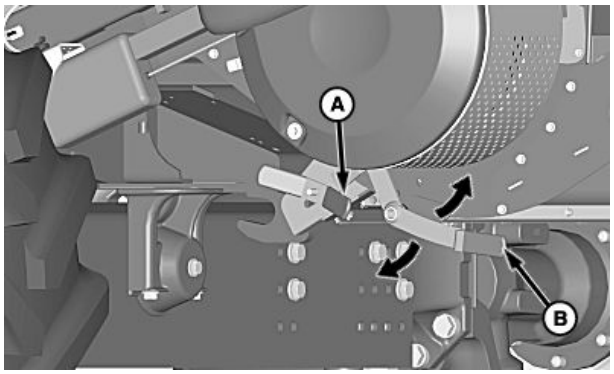
**Knifebank Engaged Position:**

Loosen wing nut (A) on chopper.

Move adjustment handle (B) downward until knifebank is at top of adjustment slot.

Tighten wing nut to lock knifebank into position.

**Knifebank Disengaged Position:**




H98137 —UN—20SEP10

*Knifebank Engaged Position*

**A—Wing Nut** **B—Handle**

Loosen wing nut (A) on chopper.

Move adjustment handle (B) upward until knifebank is at bottom of adjustment slot.

Tighten wing nut to lock knifebank into position.

OUO6075,00009C1 -19-21SEP10-1/1

## Chopper Stationary Knife Blades—Replacing

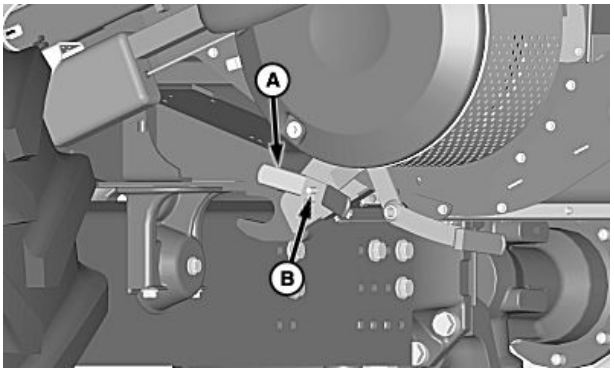
**CAUTION: Shut OFF engine, set parking brake and remove key. Knife blades are sharp.**

Loosen wing nut (A) on chopper.

Move adjustment handle upward until knifebank is at bottom of adjustment slot.

*NOTE: Retain bushing at outer ends of knifebank for later assembly.*

Support knifebank and remove tension rod (B) by pushing out right side of machine.




H98140 —UN—21SEP10

**A—Wing Nut** **B—Tension Rod**

OUO6075,00009C0 -19-21SEP10-1/2

Remove pin (A) from retaining rod (B).

Loosen lock nuts (C) on clips holding retaining rod.

Slide retaining rod until it clears knives that need to be replaced.

Reverse knives for additional usage or replace knives if worn on both sides.

Align retaining rod with knives.

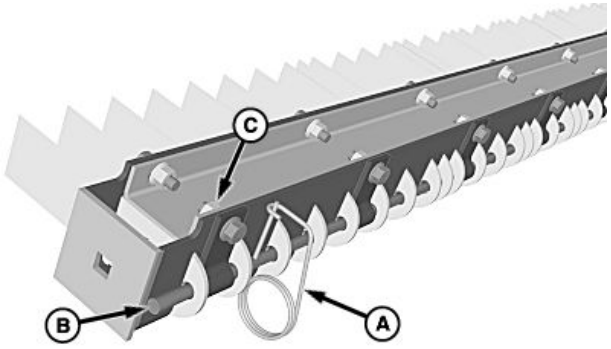
Tighten lock nuts on clips and install pin.

*NOTE: Reposition bushing at outer ends of knifebank.*

Install knifebank assembly and slide tension rod from right side of machine.

Install wing nut and adjust knifebank to desired position.

**IMPORTANT: Knifebank must be fully disengaged for corn.**




H82430 —UN—14FEB05

**A—Pin** **C—Lock Nuts**
**B—Retaining Rod**

Tighten wing nut to lock knifebank into position.

OUO6075,00009C0 -19-21SEP10-2/2

## Fine Cut Chopper Blades—Replacing and Configuration

**CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Rotor shown illustrates blade replacement examples for both scoop and paddle blades. Always maintain original factory provided blade pattern.*

**Outer Blades:**

*NOTE: If removing blades or bushings for inspection purposes, be certain to reinstall blades on SAME support from which they were removed. This must be done to maintain balance. It is a good practice to mark each blade before removal.*

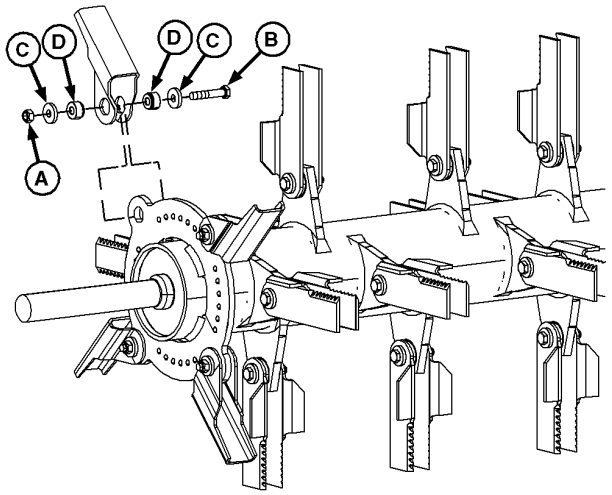
*Install new hardware in the same direction as it was removed when installing or replacing blades.*

Remove lock nut (A), cap screw (B), washers (C), and bushings (D).

*NOTE: Inspect and replace bushings, lock nuts and cap screws if worn.*

Replace blades and bushings. Install cap screw, washers and lock nut. Tighten nut to specification.

| | Specification |
|---|---|
| Chopper Blade Lock Nut—Torque | 60 N·m (44 lb.-ft.) |




H87281 —UN—01AUG07

**A—Lock Nut**
**B—Cap Screw**
**C—Washers**
**D—Bushings**

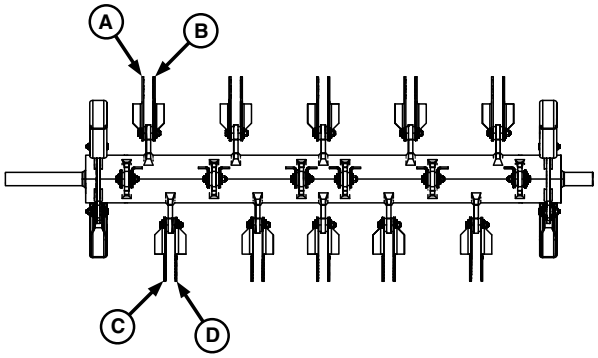
OUO6075,0001451 -19-27MAR13-1/3

**Blade Configuration:**

**IMPORTANT: Chopper balance MUST be maintained. Replace BOTH blades on single support and BOTH blades on opposite support (180 degrees). Four blades MUST be installed to replace one broken blade, or all blades can be replaced at one time. This MUST be done to maintain balance.**

If blade (A) is broken, replace blades (A—D).

**A—D— Paddle Blades**




H107307 —UN—22MAR13

**Continued on next page**

OUO6075,0001451 -19-27MAR13-2/3

**Inner Blades:**

*NOTE: If removing blades or bushings for inspection purposes, be certain to reinstall blades on SAME support from which they were removed. This must be done to maintain balance. It is a good practice to mark each blade before removal.*

*Install new hardware in the same direction as it was removed when installing or replacing blades.*

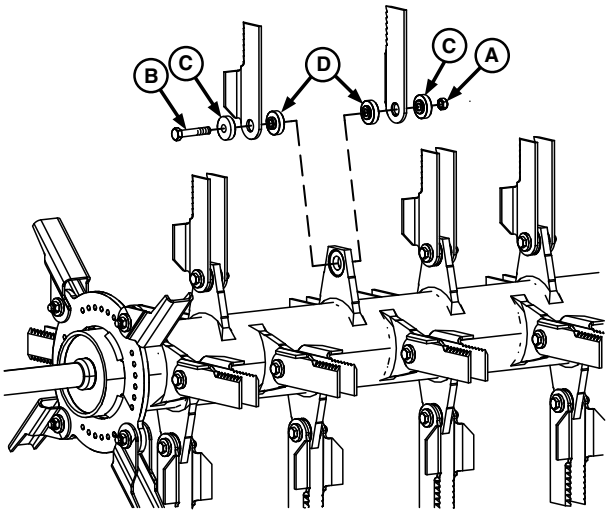
Remove lock nut (A) and cap screw (B).

Remove and inspect bushings (C and D).

*NOTE: Inspect and replace bushings, lock nuts and cap screws if worn.*

Replace blades and bushings. Install cap screw and lock nut. Tighten nut to specification.

| Specification | |
|---|---|
| Chopper Blade Lock Nut—Torque | 60 N·m (44 lb.-ft.) |




H98142 —UN—21SEP10

**A—Lock Nut**
**B—Cap Screw**
**C—Bushings**
**D—Bushings**

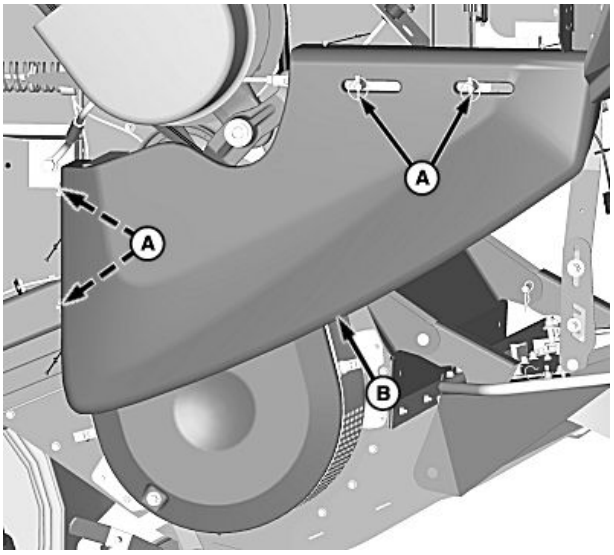
OUO6075,0001451 -19-27MAR13-3/3

## Chopper Blades—Centering

**⚠ CAUTION: Shut OFF engine, set parking brake and remove key.**

Raise chopper fully and remove quick-lock pins (A) and shield (B).

**A—Quick-Lock Pins** **B—Shield**




H98146 —UN—21SEP10

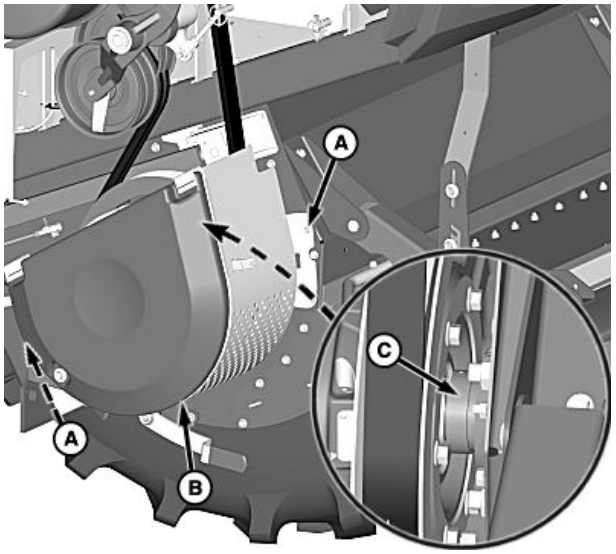
**Continued on next page**

OUO6075,00009C4 -19-21SEP10-1/4

Remove cap screws (A) and shield (B).

Loosen set screw and locking collar (C) on left-hand side.

**A—Cap Screws (4 Used)**
**B—Shield**
**C—Locking Collar**



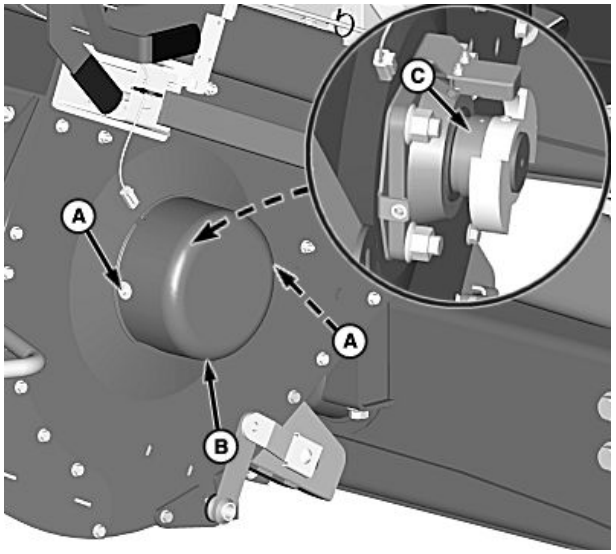

H98147 —UN—21SEP10

OUO6075,00009C4 -19-21SEP10-2/4

Remove cap screws (A) and bearing cover (B).

Loosen set screw and locking collar (C) on right-hand side.

**A—Cap Screws (2 Used)**
**B—Bearing Cover**
**C—Locking Collar**




H98148 —UN—21SEP10

**Continued on next page**

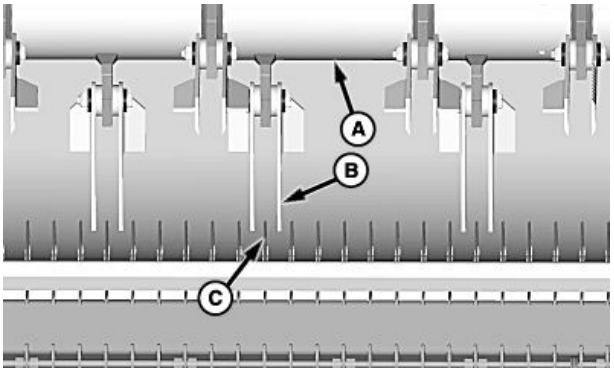
OUO6075,00009C4 -19-21SEP10-3/4

Position chopper rotor (A) right or left to ensure all rotor blades (B) clear stationary knives (C).

Tighten locking collars on both sides in direction of rotation and retain with set screws.

Install bearing cover on right-hand side and chopper shields on left-hand side.

**A—Chopper Rotor**
**B—Rotor Blades**
**C—Stationary Knives**




H87317 —UN—30JAN07

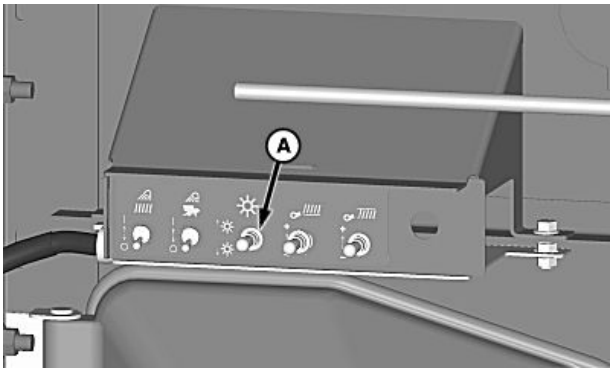
OUO6075,00009C4 -19-21SEP10-4/4

## Chopper Adjusting Switch

Chopper adjust switch (A) is located on left-hand side of machine.

Chopper adjust switch allows operator to raise or lower chopper to various positions.

**A—Chopper Switch**




H97565 —UN—14SEP10

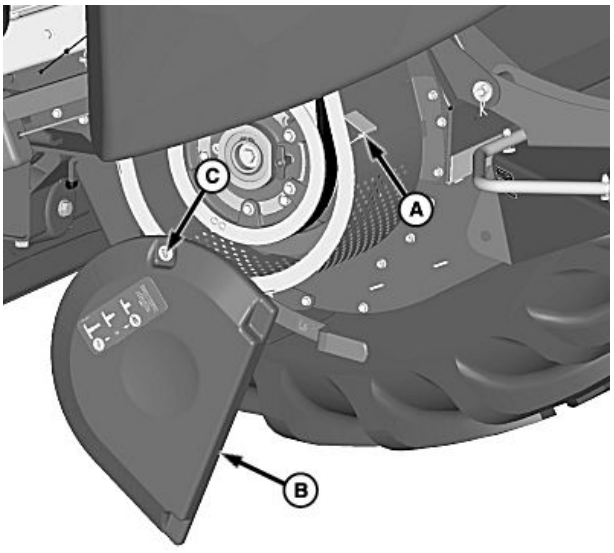
OUO6075,00009C6 -19-21SEP10-1/1

## Chopper Drive Speeds—Changing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Release latch (A) and rotate shield (B) on pivot (C).

**A—Latch**
**B—Shield**
**C—Pivot**




H105440 —UN—18MAY12

**Continued on next page**

OUO6075,000113F -19-18MAY12-1/2

**Slow Speed Position:**

*NOTE: It may be necessary to rotate sheave a small amount while moving shifter handle.*

Move shifter handle (A) to position (B).

- Corn

**Neutral Position:**

*NOTE: It may be necessary to rotate sheave a small amount while moving shifter handle.*

Move shifter handle (A) to position (C).

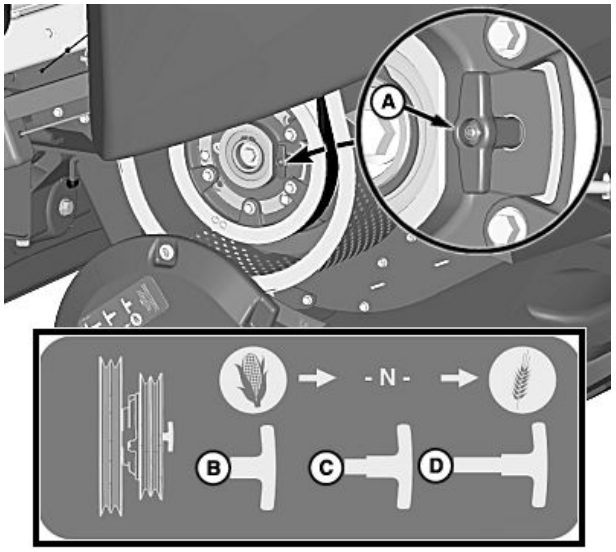
**High Speed Position:**

*NOTE: It may be necessary to rotate sheave a small amount while moving shifter handle.*

Move shifter handle (A) to position (D).

- Grain

Close shield and retain with latch.




H105441 —UN—18MAY12

**A—Shifter Handle**
**B—Slow Speed Position**
**C—Neutral Position**
**D—High Speed Position**

OUO6075,000113F -19-18MAY12-2/2

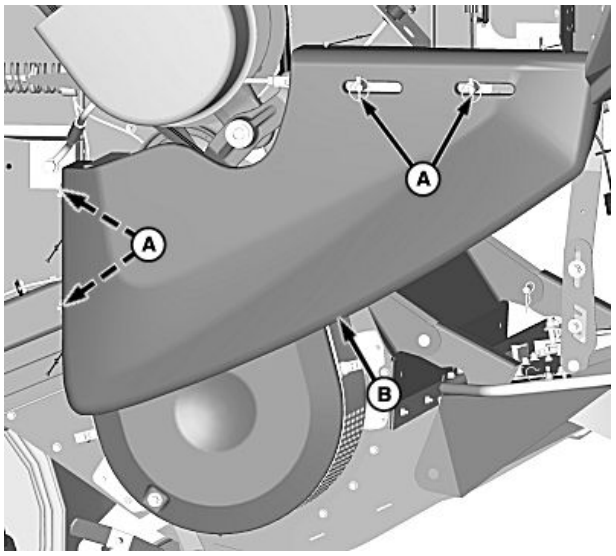
## Chopper Drive Belt Tension—Adjusting

**CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Lower chopper fully to properly tension belts.*

Remove quick-lock pins (A) and shield (B).

**A—Quick-Lock Pins**
**B—Shield**




H98146 —UN—21SEP10

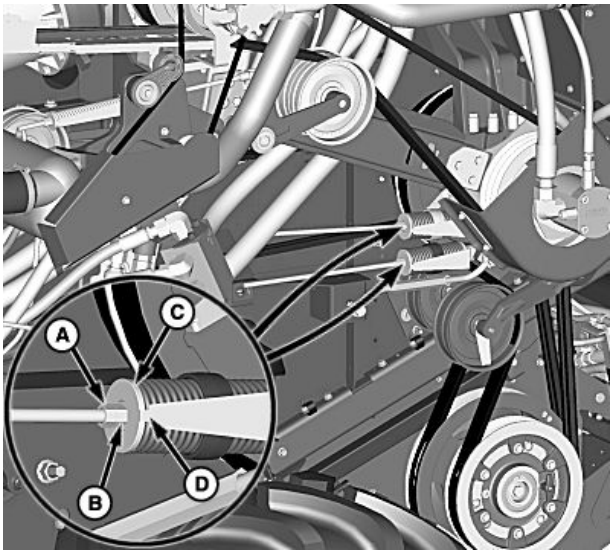
**Continued on next page**

OUO6075,00013DF -19-18JUN13-1/2

Loosen lock nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

Install shield and retain with quick-lock pins.

**A—Lock Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H108275 —UN—18JUN13

OUO6075,00013DF -19-18JUN13-2/2

## Chopper Belt—Replacing

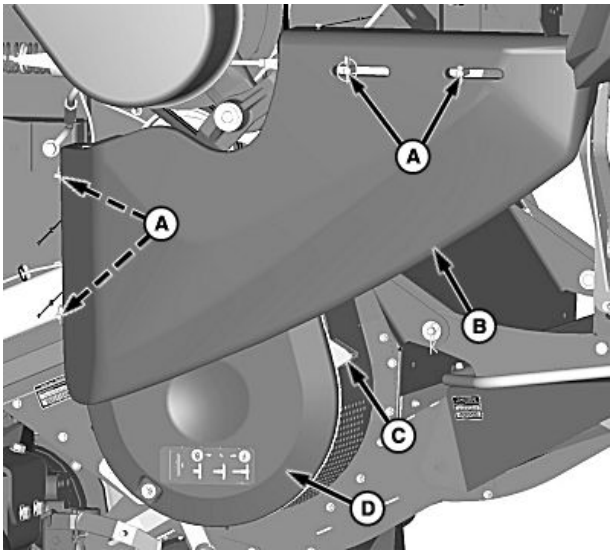
**CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Chopper should be moved to middle position for easier belt installation.*

Remove quick-lock pins (A) and shield (B).

Release latch (C) and rotate shield (D) to open.

**A—Quick-Lock Pins**
**B—Shield**
**C—Latch**
**D—Shield**




H105442 —UN—18MAY12

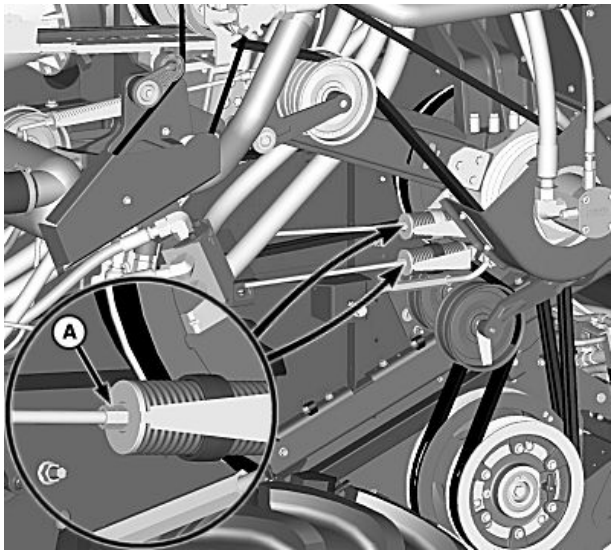
**Continued on next page**

OUO6075,00013E0 -19-18JUN13-1/10

*NOTE: Mark location of tensioner nuts before loosening to aid in reassembly.*

Loosen nuts (A) to relieve belt tension.

**A—Nuts**

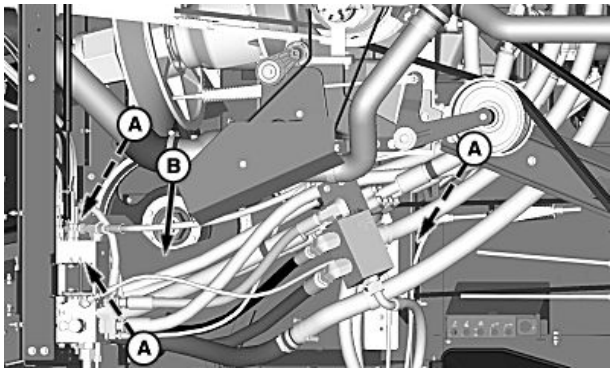



H108276 —UN—18JUN13

OUO6075,00013E0 -19-18JUN13-2/10

Remove cap screws (A) and shield (B).

**A—Cap Screws** **B—Shield**



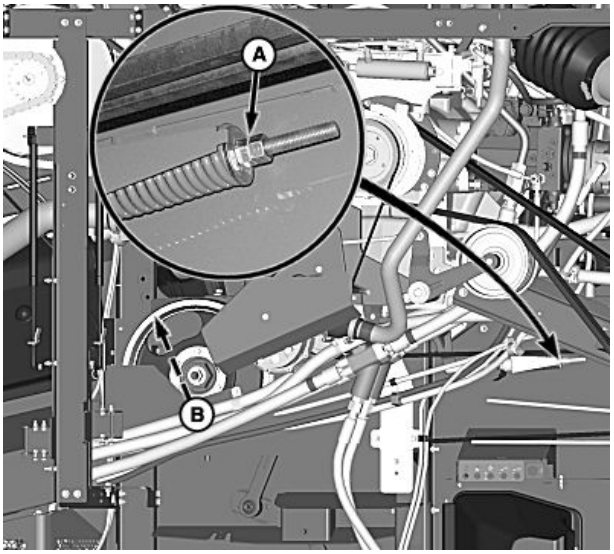

H108266 —UN—18JUN13

**Continued on next page**

OUO6075,00013E0 -19-18JUN13-3/10

Loosen nuts (A) to relieve belt tension from discharge beater belt (B).

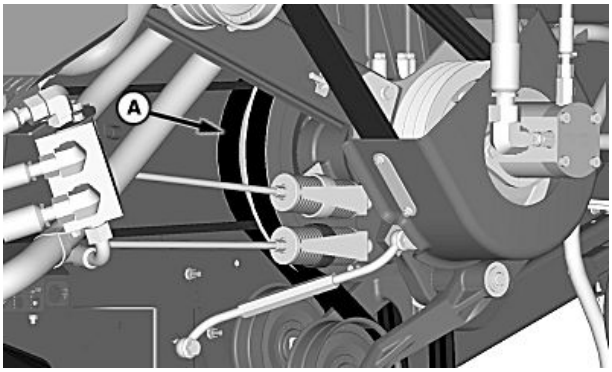
**A—Nuts** **B—Discharge Beater Belt**



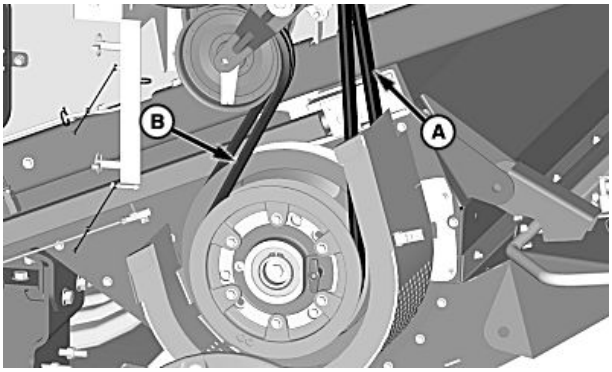

H108267 —UN—18JUN13

OUO6075,00013E0 -19-18JUN13-4/10

**Inner Chopper Belt:**




H107035 —UN—26FEB13




H98161 —UN—21SEP10

**A—Inner Chopper Drive Belt** **B—Outer Chopper Drive Belt**

*NOTE: Turn belt so it fits between sheave and sidesheet.*

Remove inner chopper drive belt (A) from upper sheaves.

Remove outer chopper drive belt (B) from lower sheaves.

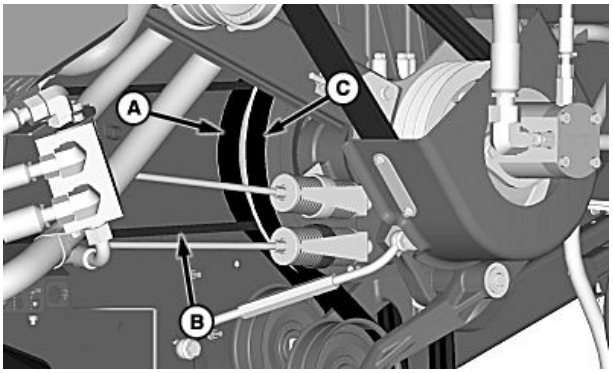
Remove inner chopper drive belt from lower sheaves.

Install replacement belt in reverse order.

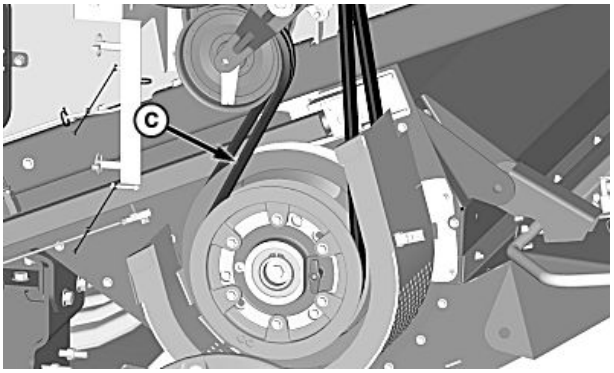
**Continued on next page**

OUO6075,00013E0 -19-18JUN13-5/10

**Outer Chopper Belt:**




H107027 —UN—26FEB13




H107028 —UN—26FEB13

**A—Inner Chopper Drive Belt** **B—Discharge Beater Belt** **C—Outer Chopper Drive Belt**

*NOTE: Turn belts so they fit between sheave and sidesheet.*

Remove inner chopper drive belt (A) and discharge beater belt (B) from upper sheaves.

Remove outer chopper drive belt (C) from upper and lower sheaves.

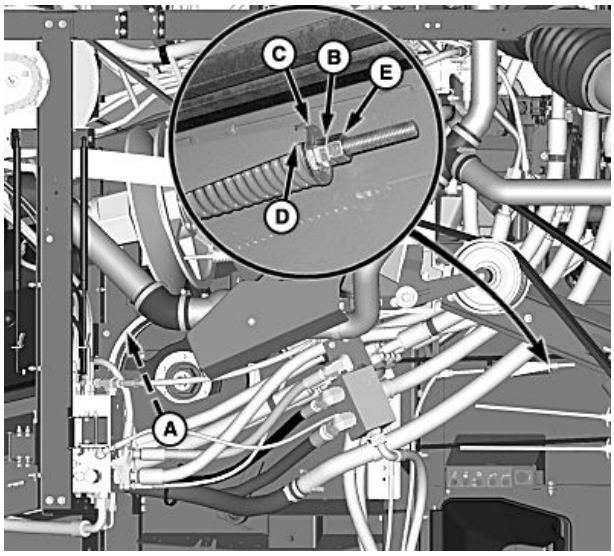
Install replacement belt in reverse order.

OUO6075,00013E0 -19-18JUN13-6/10

Install discharge beater belt (A) onto sheave.

Tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut (E).

**A—Discharge Beater Belt**
**B—Nut**
**C—Washer**
**D—Gauge**
**E—Lock Nut**



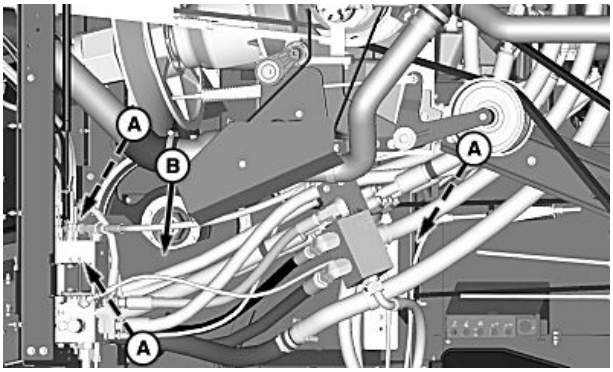

H108277 —UN—18JUN13

**Continued on next page**

OUO6075,00013E0 -19-18JUN13-7/10

Install shield (B) and retain with cap screws (A).

**A—Cap Screws** **B—Shield**



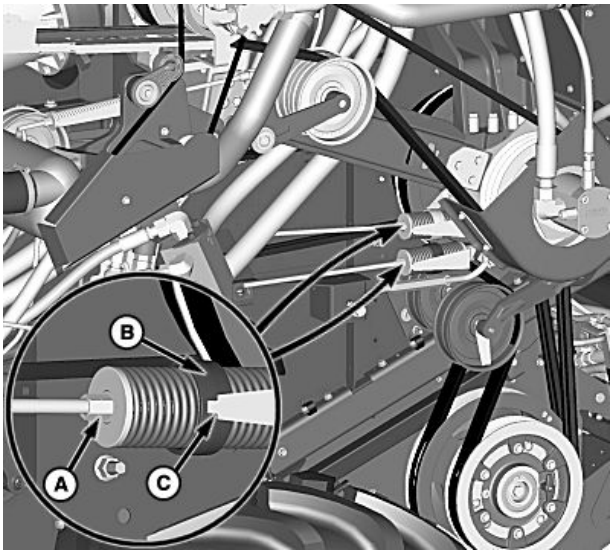

H108266 —UN—18JUN13

OUO6075,00013E0 -19-18JUN13-8/10

Lower chopper to middle position.

Tighten nuts (A) until spring guide (B) is at end of gauge (C) as shown.

**A—Nuts** **C—Gauge**
**B—Spring Guide**




H108278 —UN—18JUN13

**Continued on next page**

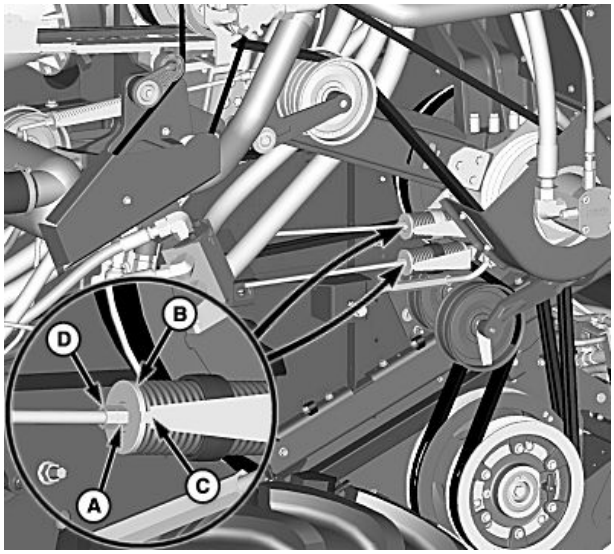
OUO6075,00013E0 -19-18JUN13-9/10

Lower chopper completely to properly tension belt.

Tighten nut (A) until washer (B) is positioned between end of gauge (C) and bottom of step. Tighten lock nut (D).

Install shield and retain with quick-lock pins.

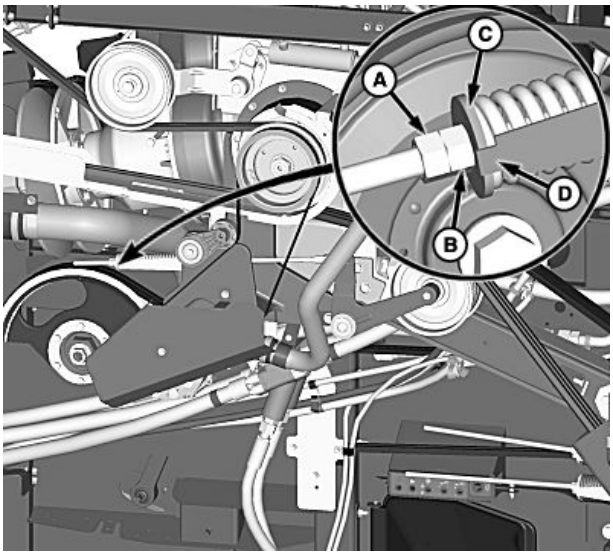
**A—Nut**
**B—Washer**
**C—Gauge**
**D—Lock Nut**




H108279 —UN—18JUN13

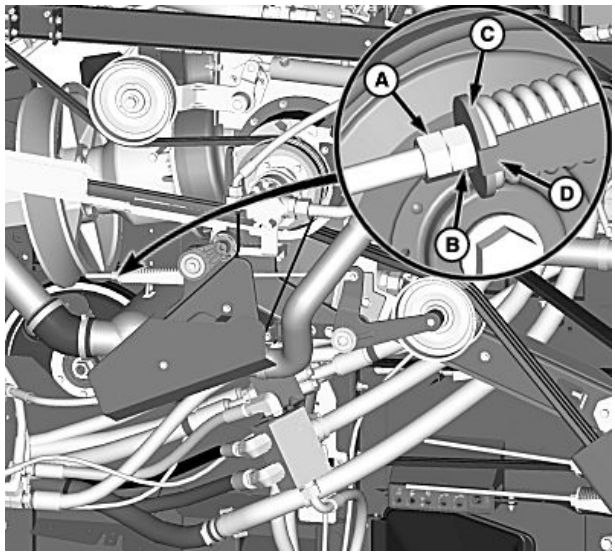
OUO6075,00013E0 -19-18JUN13-10/10

## Chopper Jackshaft Belt—Adjusting




H108280 —UN—18JUN13

*S660 and S670*




H108281 —UN—18JUN13

*S680, S685 and S690*

**A—Lock Nut**
**B—Nut**
**C—Washer**
**D—Gauge**

**⚠ CAUTION: Shut OFF engine, set park brake and remove key.**

Chopper jackshaft belt is located on left-hand side above chopper.

Loosen lock nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

OUO6075,0001539 -19-19JUN13-1/1

## Chopper Jackshaft Belt—Replacing (S660 and S670)

**CAUTION: Shut OFF engine, set park brake and remove key.**

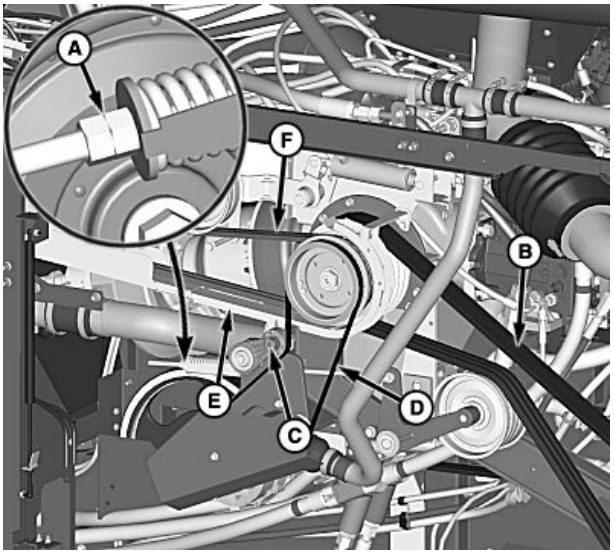
Loosen nuts (A) to relieve belt tension from chopper jackshaft belt (B).

Use breaker bar to relieve tension from tensioner arm (C) to remove engine debris management belt (D).

Remove cap screws from belt trap (E).

Remove and retain unloading auger drive belts (F).

**A—Nuts**
**B—Chopper Jackshaft Belt**
**C—Tensioner Arm**
**D—Engine Debris Management Belt (If Equipped)**
**E—Belt Trap**
**F—Unloading Auger Drive Belts**




H108282 —UN—18JUN13

OUO6075,000153A -19-19JUN13-1/5

**With Hydraulic Pump:**

Remove hardware (A) and strap (B) on both sides of shield.

Remove nut (C) from pump assembly bracket.

*NOTE: Verify that washers and isolator remain in place when removing. Install previously removed nut to retain washers and isolators in place when assembly is removed.*

Remove cap screws (D) from pump assembly.

Remove shield (E) and pump assembly bracket.

Support shield and pump assembly bracket out of the way.

Remove jackshaft belt (F) from upper and lower sheaves.

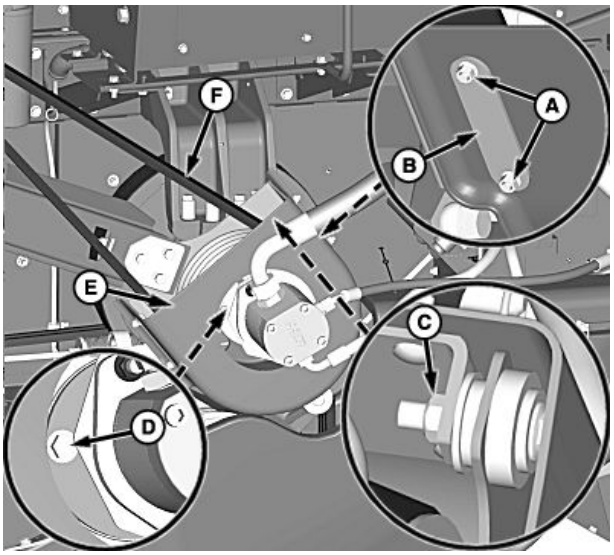
Install replacement belt in reverse order.

Align pump assembly with sheave and tighten cap screws to specification.

| Specification | |
|---|---|
| Cap Screws—Torque | 80 N·m (59 lb.-ft.) |

*NOTE: Align shaft key on pump assembly with keyway in sheave. Verify that washers and isolators remain in place on pump assembly bracket.*

Install shield and pump assembly bracket and retain with nut.




H98502 —UN—20OCT10

**A—Hardware**
**B—Strap**
**C—Nut**
**D—Cap Screw (2 Used)**
**E—Shield**
**F—Chopper Jackshaft Belt**

Install strap on both sides of shield and retain with hardware.

**Continued on next page**

OUO6075,000153A -19-19JUN13-2/5

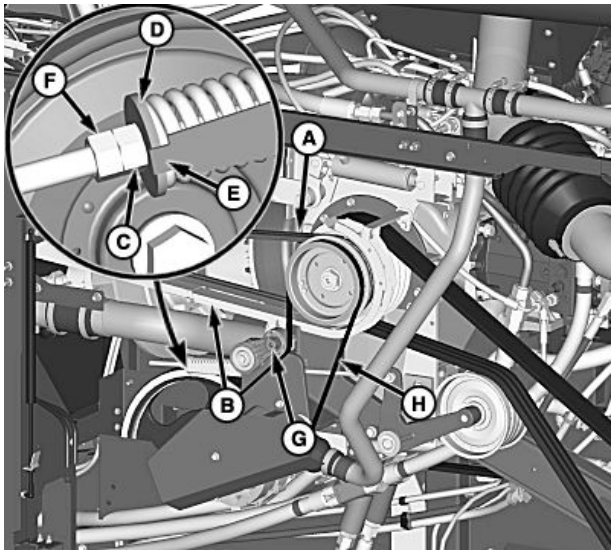
Install unloading auger drive belts (A).

Install belt trap (B) and retain with cap screws.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Use breaker bar to relieve tension from tensioner arm (G) to install engine debris management belt (H).

**A—Unloading Auger Drive Belts**
**B—Belt Trap**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**
**G—Tensioner Arm**
**H—Engine Debris Management Belt (If Equipped)**




H108284 —UN—18JUN13

OUO6075,000153A -19-19JUN13-3/5

**Without Hydraulic Pump:**

Remove hardware (A) and strap (B) on both sides of shield (C).

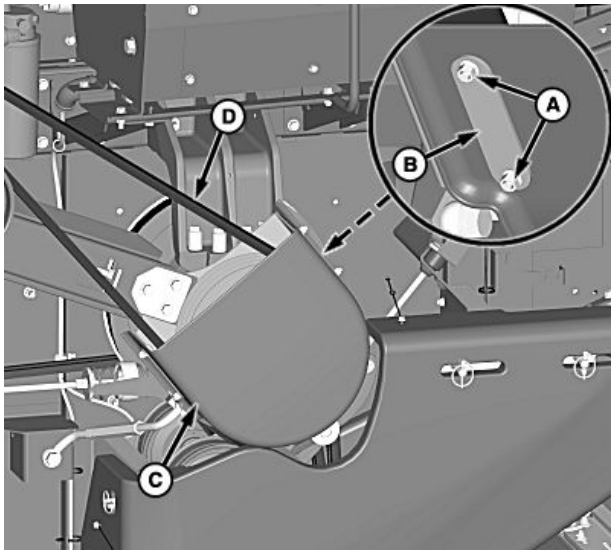
Remove jackshaft belt (D) from upper and lower sheaves.

Install replacement belt in reverse order.

Align shield with bracket holes.

Install strap on both sides of shield and retain with hardware.

**A—Hardware**
**B—Strap**
**C—Shield**
**D—Chopper Jackshaft Belt**




H98500 —UN—08OCT10

**Continued on next page**

OUO6075,000153A -19-19JUN13-4/5

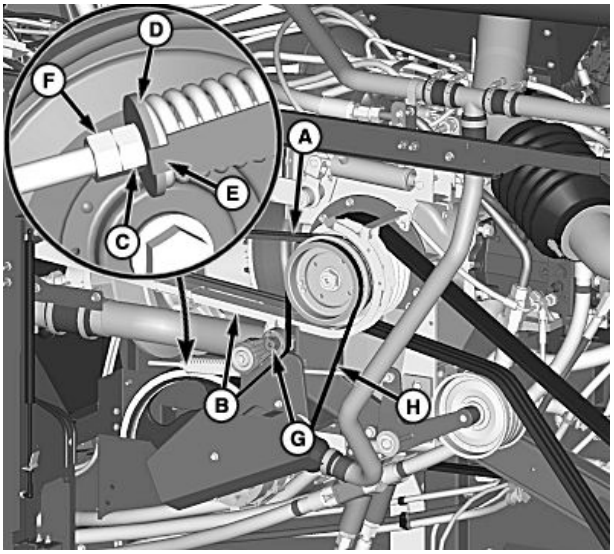
Install unloading auger drive belts (A).

Install belt trap (B) and retain with cap screws.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Use breaker bar to relieve tension from tensioner arm (G) to install engine debris management belt (H).

**A—Unloading Auger Drive Belts**
**B—Belt Trap**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**
**G—Tensioner Arm**
**H—Engine Debris Management Belt (If Equipped)**




H108285 —UN—18JUN13

OUO6075,000153A -19-19JUN13-5/5

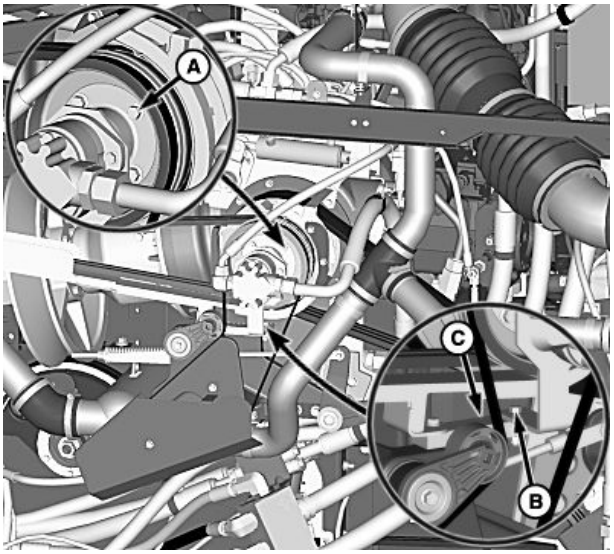
## Chopper Jackshaft Belt—Replacing (S680, S685 and S690)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Remove cap screws (A) and hardware (B) from isolator strap (C).

Remove pump assembly and support out of the way.

**A—Cap Screws (4 Used)**
**B—Hardware**
**C—Isolator Strap**




H108283 —UN—18JUN13

**Continued on next page**

OUO6075,000153B -19-19JUN13-1/8

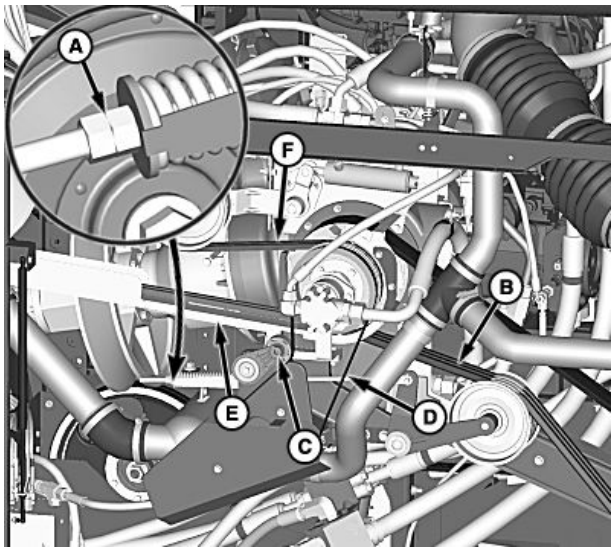
Loosen nuts (A) to relieve belt tension from chopper jackshaft belt (B).

Use breaker bar to relieve tension from tensioner arm (C) to remove engine debris management belt (D).

Remove cap screws from belt trap (E).

Remove and retain unloading auger drive belts (F).

**A—Nuts**
**B—Chopper Jackshaft Belt**
**C—Tensioner Arm**
**D—Engine Debris Management Belt (If Equipped)**
**E—Belt Trap**
**F—Unloading Auger Drive Belts**




H108286 —UN—18JUN13

OUO6075,000153B -19-19JUN13-2/8

**With Hydraulic Pump:**

Remove hardware (A) and strap (B) on both sides of shield.

Remove nut (C) from pump assembly bracket.

*NOTE: Verify that washers and isolator remain in place when removing. Install previously removed nut to retain washers and isolators in place when assembly is removed.*

Remove cap screws (D) from pump assembly.

Remove shield (E) and pump assembly bracket.

Support shield and pump assembly bracket out of the way.

Remove jackshaft belt (F) from upper and lower sheaves.

Install replacement belt in reverse order.

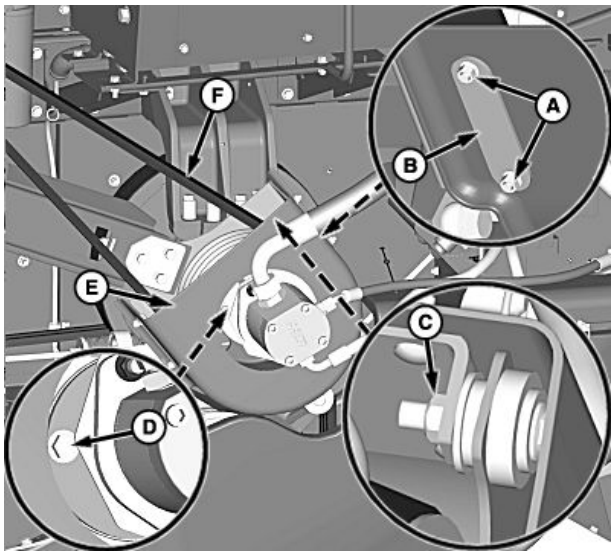
Align pump assembly with sheave and tighten cap screws to specification.

**Specification**

Cap Screws—Torque.....80 N·m (59 lb.-ft.)

*NOTE: Align shaft key on pump assembly with keyway in sheave. Verify that washers and isolators remain in place on pump assembly bracket.*

Install shield and pump assembly bracket and retain with nut.




H98502 —UN—20OCT10

**A—Hardware**
**B—Strap**
**C—Nut**
**D—Cap Screw (2 Used)**
**E—Shield**
**F—Chopper Jackshaft Belt**

Install strap on both sides of shield and retain with hardware.

**Continued on next page**

OUO6075,000153B -19-19JUN13-3/8

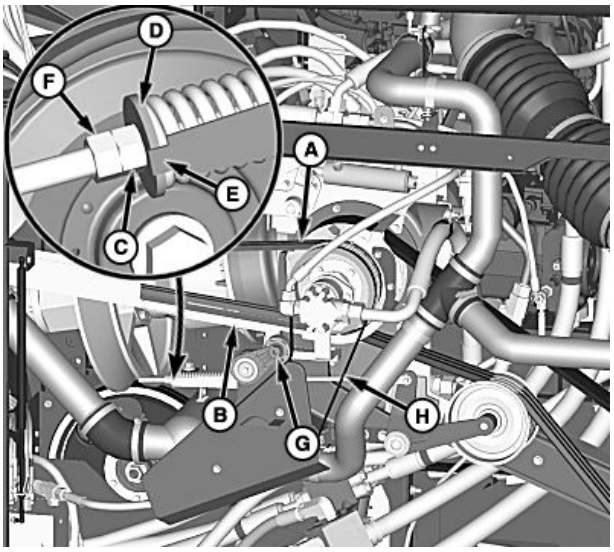
Install unloading auger drive belts (A).

Install belt trap (B) and retain with cap screws.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Use breaker bar to relieve tension from tensioner arm (G) to install engine debris management belt (H).

**A—Unloading Auger Drive Belts**
**B—Belt Trap**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**
**G—Tensioner Arm**
**H—Engine Debris Management Belt (If Equipped)**




H108287 —UN—18JUN13

OUO6075,000153B -19-19JUN13-4/8

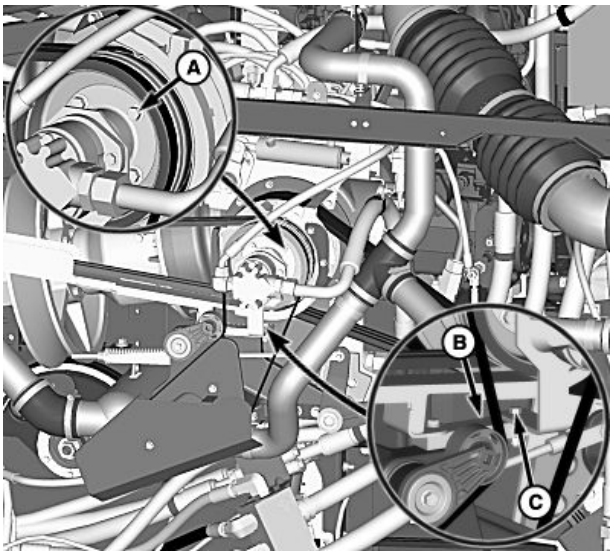
Align pump assembly with sheave and tighten cap screws (A) to specification.

**Specification**

Cap Screws—Torque.....80 N·m (59 lb.-ft.)

Install isolator strap (B) and retain with hardware (C).

**A—Cap Screws (4 Used)**
**B—Isolator Strap**
**C—Hardware**




H108288 —UN—18JUN13

**Continued on next page**

OUO6075,000153B -19-19JUN13-5/8

**Without Hydraulic Pump:**

Remove hardware (A) and strap (B) on both sides of shield (C).

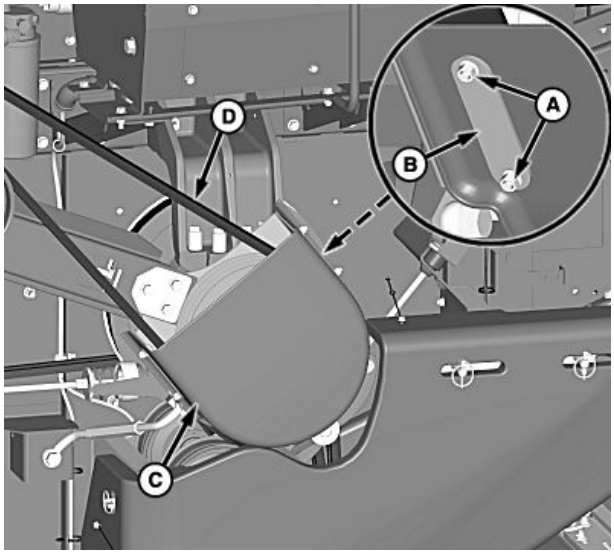
Remove jackshaft belt (D) from upper and lower sheaves.

Install replacement belt in reverse order.

Align shield with bracket holes.

Install strap on both sides of shield and retain with hardware.

**A—Hardware**
**B—Strap**
**C—Shield**
**D—Chopper Jackshaft Belt**




H98500 —UN—08OCT10

OUO6075,000153B -19-19JUN13-6/8

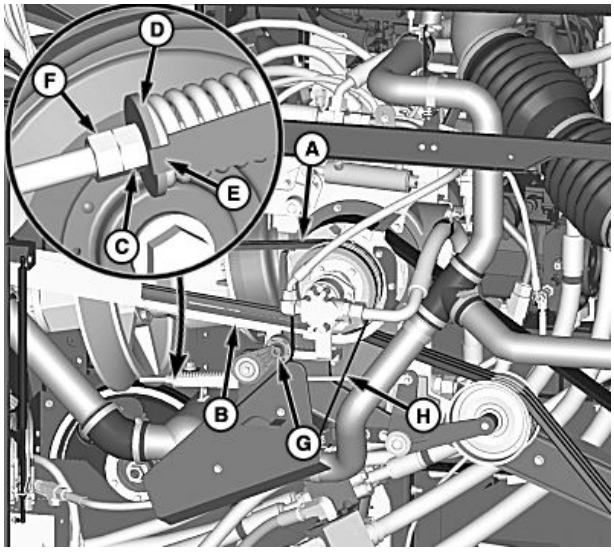
Install unloading auger drive belts (A).

Install belt trap (B) and retain with cap screws.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Use breaker bar to relieve tension from tensioner arm (G) to install engine debris management belt (H).

**A—Unloading Auger Drive Belts**
**B—Belt Trap**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**
**G—Tensioner Arm**
**H—Engine Debris Management Belt (If Equipped)**




H108287 —UN—18JUN13

**Continued on next page**

OUO6075,000153B -19-19JUN13-7/8

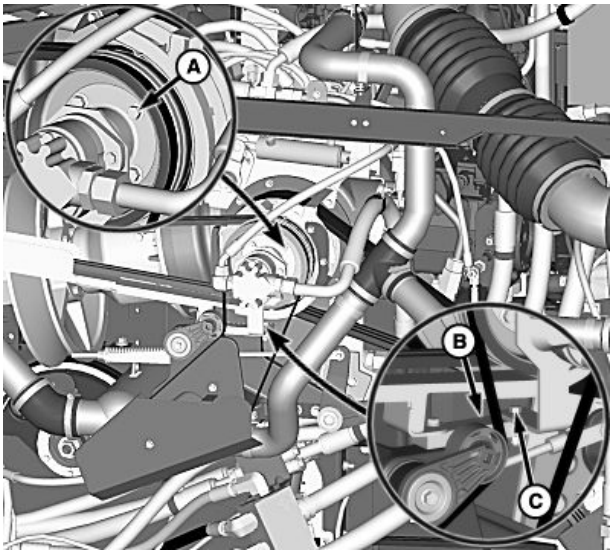
Align pump assembly with sheave and tighten cap screws (A) to specification.

**Specification**

Cap Screws—Torque.....80 N·m (59 lb.-ft.)

Install isolator strap (B) and retain with hardware (C).

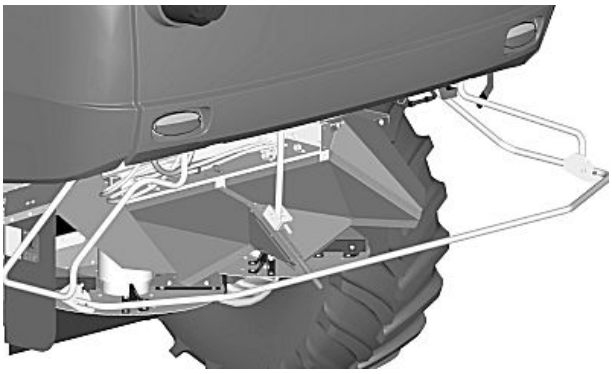
**A—Cap Screws (4 Used)**
**B—Isolator Strap**
**C—Hardware**




H108288 —UN—18JUN13

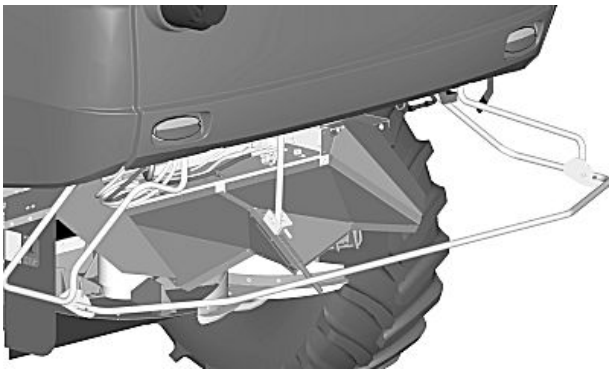
OUO6075,000153B -19-19JUN13-8/8

## Spreader (General Information)



H98186 —UN—23SEP10

*Single Speed Spreader*



H98187 —UN—23SEP10

*Dual Speed Spreader*

**CAUTION: Do not let anyone stand behind spreader while it is running. Shut OFF engine, set parking brake and remove key before adjusting spreader.**

**Before performing service or maintenance on raised spreader, fully insert lock-out pin into place.**

*NOTE: For in cab spreader adjustment switches, see CommandTouch Armrest Console section for further information.*

OUO6075,0000B75 -19-21MAR11-1/1

## Spreader—Windrow Position

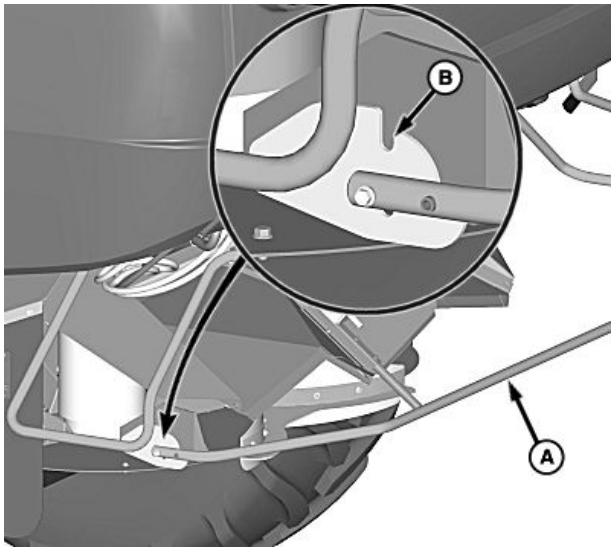
**CAUTION: Shut OFF engine, set parking brake and remove key. Before performing service or maintenance on raised spreader, fully insert lock-out pin into place.**

**IMPORTANT: Spreader hoop MUST always be in the "down" position as shown when operating.**

*NOTE: Spreader can be rotated upward to allow material to discharge into a windrow pattern.*

Raise spreader hoop (A) until it aligns with notch (B) when accessing or raising spreader to windrow position.

**A—Spreader Hoop**
**B—Notch**



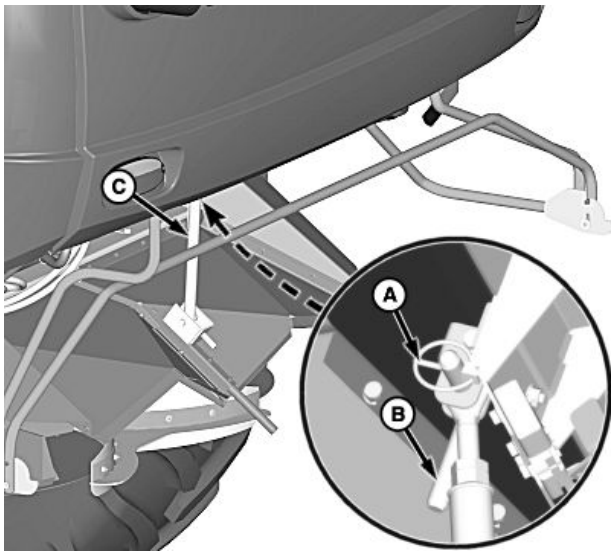

H98188 —UN—23SEP10

OUO6075,00009D3 -19-23SEP10-1/3

Remove quick-lock pin (A) from pin (B) and lower support tube (C).

*NOTE: Place pin back into storage position and retain with quick-lock pin.*

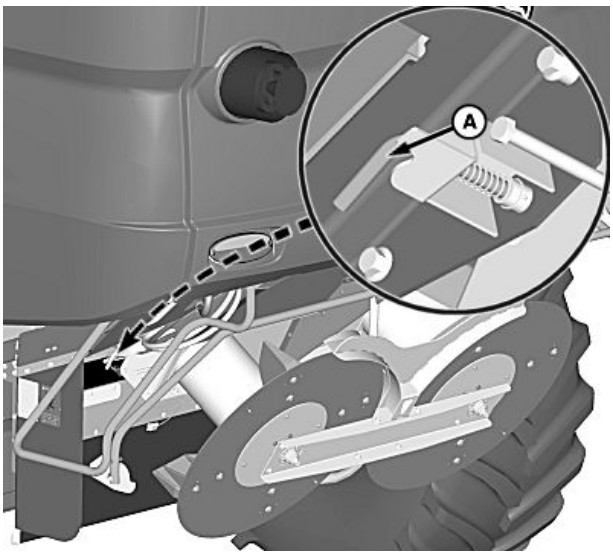
**A—Quick-Lock Pin**
**B—Pin**
**C—Support Tube**



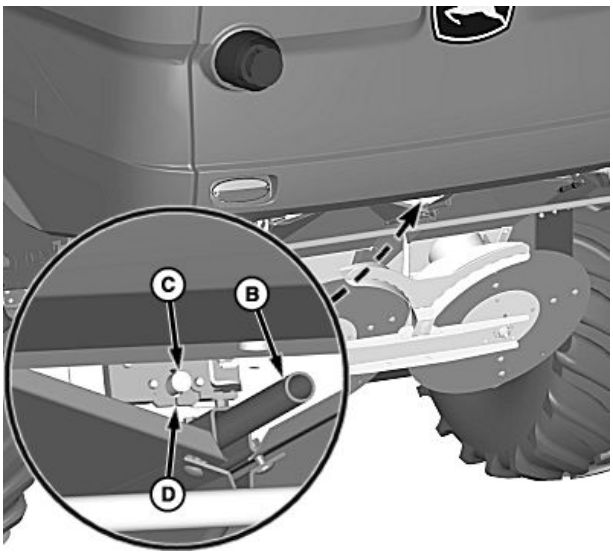

H98189 —UN—23SEP10

**Continued on next page**

OUO6075,00009D3 -19-23SEP10-2/3




H98190 —UN—23SEP10




H98191 —UN—23SEP10

**A—Pin**
**B—Handle**
**C—Pin**
**D—Latch Assembly**

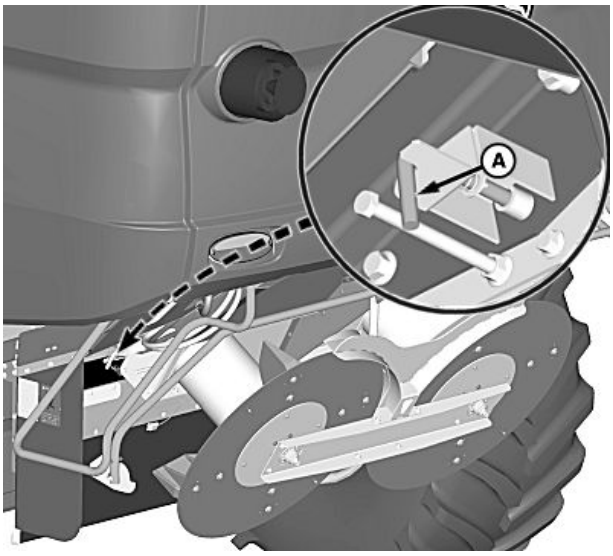
Pull pin (A) to fully raise spreader.

Raise spreader with handle (B) until pin (C) fully engages with latch assembly (D).

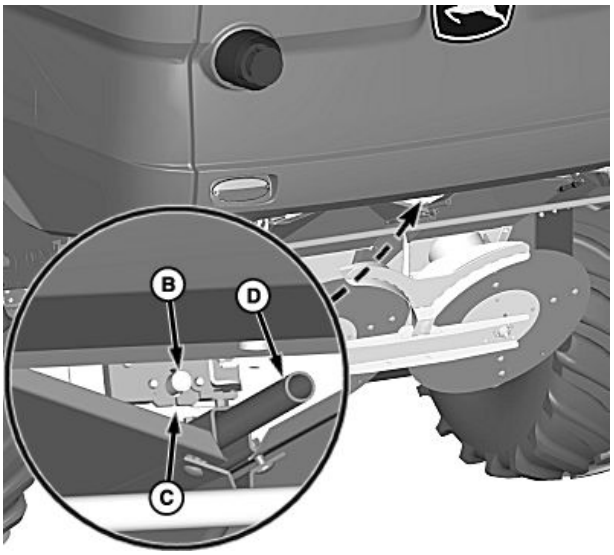
*NOTE: Set spreader speed to zero, refer to Spreader Speed Adjust Switch in CommandTouch Armrest Console section for further information.*

OUO6075,00009D3 -19-23SEP10-3/3

## Spreader—Lowering




H98192 —UN—23SEP10




H98193 —UN—23SEP10

**A—Pin**
**B—Pin**
**C—Latch Assembly**
**D—Handle**

**⚠ CAUTION: Shut OFF engine, set parking brake and remove key.**

Rotate and place pin (A) onto bracket to unlock spreader.

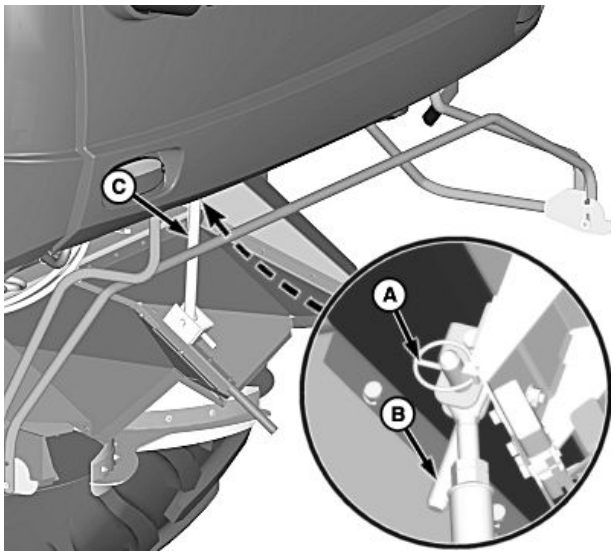
Release pin (B) from latch assembly (C) and lower spreader with handle (D).

OUO6075,00009D4 -19-08OCT10-1/2

Raise support tube (C) until it aligns with hole and retain with pin (B) and quick-lock pin (A).

*NOTE: Increase spreader speed until desired spread width is reached, refer to Spreader Speed Adjust Switch in CommandTouch Armrest Console section for further information.*

**A—Quick-Lock Pin**
**B—Pin**
**C—Support Tube**




H98189 —UN—23SEP10

OUO6075,00009D4 -19-08OCT10-2/2

## Spreader Disks (Single Speed)—Replacing

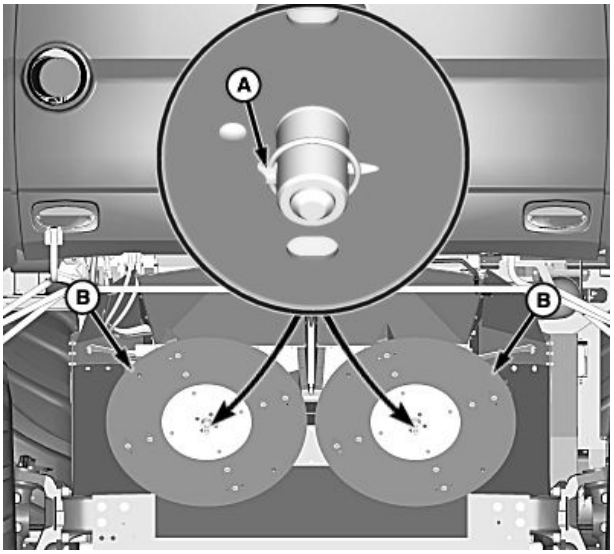
**CAUTION: Disk assemblies weigh approximately 25 kg (55 lb).**

**IMPORTANT: Disk assemblies are left-handed and right-handed. Mark disk assembly locations before removing.**

*NOTE: Disk assemblies can be removed for service or to provide additional clearance under spreader.*

Remove quick-lock pins (A) and disk assemblies (B).

**A—Quick-Lock Pin** **B—Disk Assemblies**




H98194 —UN—23SEP10

OUO6075,00009D5 -19-23SEP10-1/2

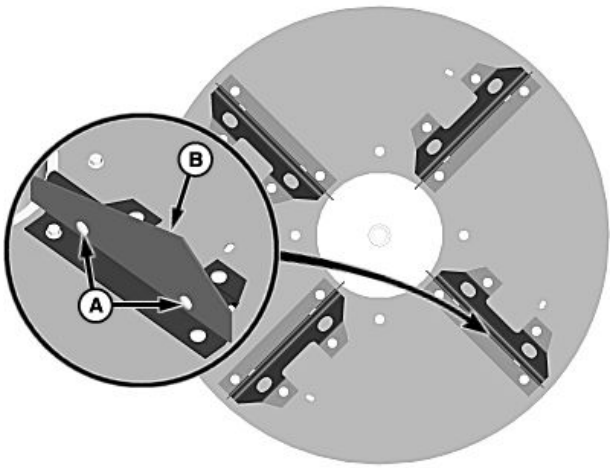
**IMPORTANT: When replacing worn or damaged blades, make sure to replace blades on opposite sides of disk at the same time to maintain disk rotational balance.**

Blades are oriented in alternating hole patterns to obtain an optimum material spread. Ensure that replacement blades are put back in the same holes as previously removed.

Remove hardware (A) and blade (B).

Install replacement blades as needed and tighten hardware.

**A—Hardware** **B—Blade**




H98197 —UN—23SEP10

OUO6075,00009D5 -19-23SEP10-2/2

## Spreader Disks (Dual Speed)—Replacing

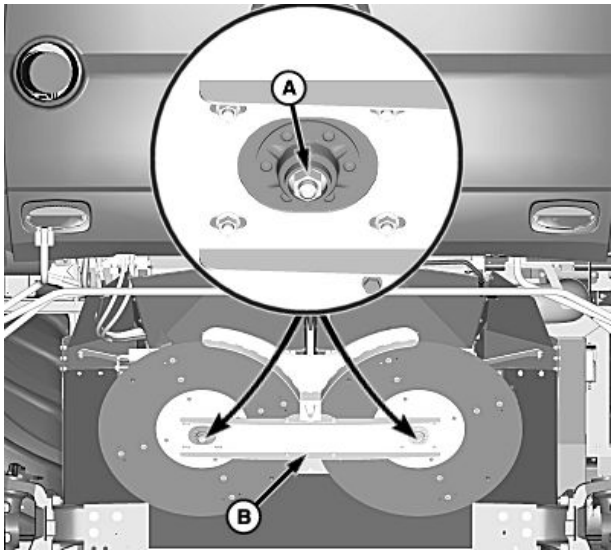
**CAUTION: Disk assemblies weigh approximately 25 kg (55 lb).**

**IMPORTANT: Disk assemblies are left-handed and right-handed. Mark disk assembly locations before removing.**

*NOTE: Disk assemblies can be removed for service or to provide additional clearance under spreader.*

Remove nuts (A) and support shroud (B).

**A—Nut**
**B—Support Shroud**

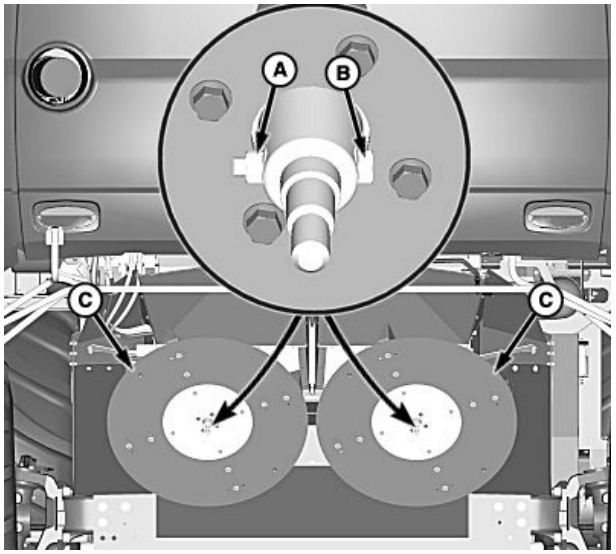



H98195 —UN—08OCT10

OUO6075,00009D6 -19-23SEP10-1/3

Remove nuts (A) and cap screws (B) from disk assemblies (C).

**A—Nut**
**B—Cap Screw**
**C—Disk Assemblies**




H98196 —UN—23SEP10

**Continued on next page**

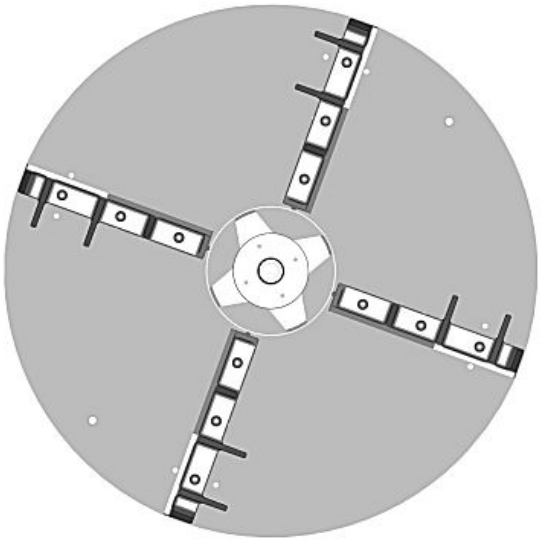
OUO6075,00009D6 -19-23SEP10-2/3

**IMPORTANT: When replacing worn or damaged blades, make sure to replace blades on opposite sides of disk at the same time to maintain disk rotational balance.**

Blades are oriented in alternating hole patterns to obtain an optimum material spread. Ensure that replacement blades are put back in the same holes as previously removed.

Install replacement blades as needed and tighten hardware to specification.

| Specification | |
|---|---|
| Blade Hardware—Torque | 22 N·m (16 lb.-ft.) |



H98198 —UN—23SEP10

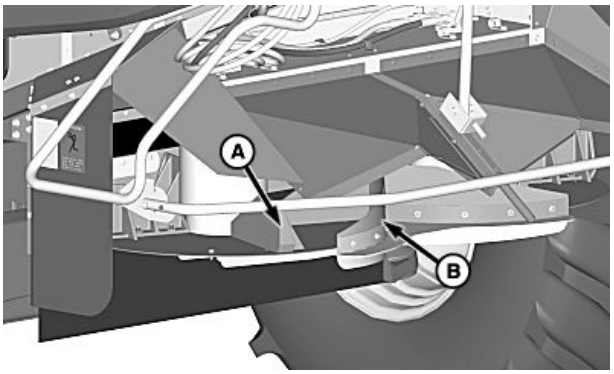
OUO6075,00009D6 -19-23SEP10-3/3

## Wide Spread Straw Spreader (Optional)

**CAUTION: Do not let anyone stand behind spreader while it is running. Shut OFF engine, set parking brake and remove key before adjusting spreader.**

*NOTE: Shrouds should be removed when harvesting with headers smaller than 9.1 m (30 ft.) or corn heads smaller than 12 rows to provide optimal material distribution.*

When straw spreader blades (A) and shrouds (B) are installed, it increases spread width and provides better material distribution for larger headers. See your John Deere dealer for further information.




H98199 —UN—23SEP10

**A—Blades** **B—Shrouds**

OUO6075,00009D9 -19-28MAR11-1/1

# Chopper and Spreader (Premium Model)

## Chopper (General Information)

**CAUTION: Do not let anyone stand behind chopper while it is running. Shut OFF engine, set parking brake and remove key before adjusting chopper.**

**Normal use wears the bottom of chopper fins to a sharp edge.**

The extra fine cut chopper cuts the straw discharged from the separator when the chop to drop door is closed. See Residue Management Setup in CommandCenter Display Screens section for changing chop to drop door position.

The chop to drop door can also be set to drop the straw discharged from the separator into a windrow behind the machine, when the door is opened.

Advanced PowerCast or Premium Vane Tailboard is used to distribute the chaff material from the cleaning shoe to the width of the header when the chop to drop door is opened.

For Chopper High Speed:

- Grain

For Chopper Low Speed:

- Corn

To change chopper to high speed or low speed, see Chopper Drive Speeds—Changing later in this section.

Start with knifebank in fully disengaged position. If better cut quality is desired, adjust knifebank to fully engaged position, see Chopper Stationary Knifebank—Adjusting later in this section.

*NOTE: For in cab chopper adjustment switches, see CommandTouch Armrest Console section for further information.*

*For in cab spreader adjustment switches, see CommandTouch Armrest Console section for further information.*

OUO6075,0000CA5 -19-15JUN11-1/1

## Windrowing (General Information)

- To windrow straw and spread chaff, open chop to drop door. See Residue Management Setup in CommandCenter Display Screens section for further information.
- To windrow straw and chaff, see Windrow (General Information) in Deluxe Residue section.
- Raise chopper fully. See Chopper Adjusting switch later in this section.
- Shift chopper drive into neutral position. See Chopper Drive Speeds—Changing later in this section.
- If harvesting low straw volume crops, lower cob deflector into corn position. See Crop Diverter later in this section.
- If equipped with a Advanced PowerCast Tailboard, set disk speed to zero. See Spreader Speed Adjust switch in CommandTouch Armrest Console section for further information.

OUO6075,0000CBA -19-28JUN11-1/1

## Chopper Vanes—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

*NOTE: Adjustments can be made to chopper vanes if factory settings do not produce adequate spread width or even distribution.*

*Chopper vanes are factory set for 9.1 m (30 ft.) platforms.*

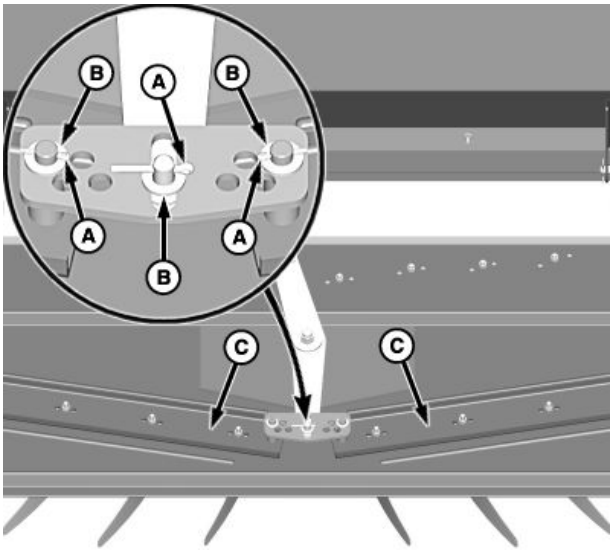
Remove and retain cotter pins (A) and washers (B).

Adjust slide guides (C) to desired holes in adjustment plate.

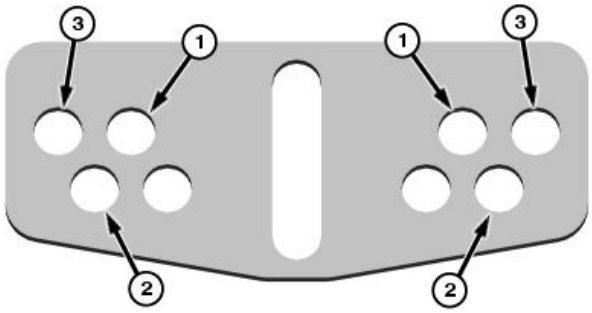
- Hole 1: 6.7 m (22 ft.) Header Position
- Hole 2: 7.6 m (25 ft.) Header Position
- Hole 3: 9.1 m (30 ft.) Header Position

Install previously removed washers and cotter pins.

**A—Cotter Pins**
**B—Washers**
**C—Slide Guides**




H98656 —UN—19OCT10




H98657 —UN—19OCT10

OUO6075,0000A28 -19-19OCT10-1/1

## Chopper Vanes (Electric Motor)—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

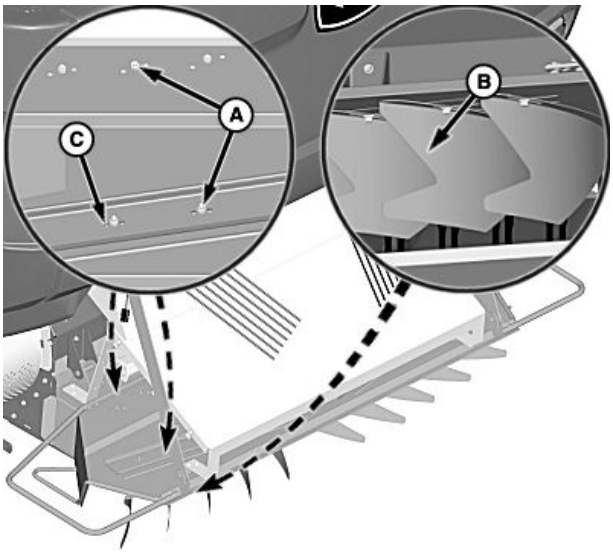
*NOTE: Adjustments can be made to chopper vanes if factory settings do not produce adequate spread width or even distribution.*

*Chopper vanes are factory set for 9.1 m (30 ft.) platforms.*

Loosen nuts (A) and adjust chopper vane (B) to different holes (C) if needed to control distribution of straw spread width. See Chopper Vanes (Electrical Adjust)—Factory Settings later in this section.

Tighten nuts and repeat as needed on remaining chopper vanes.

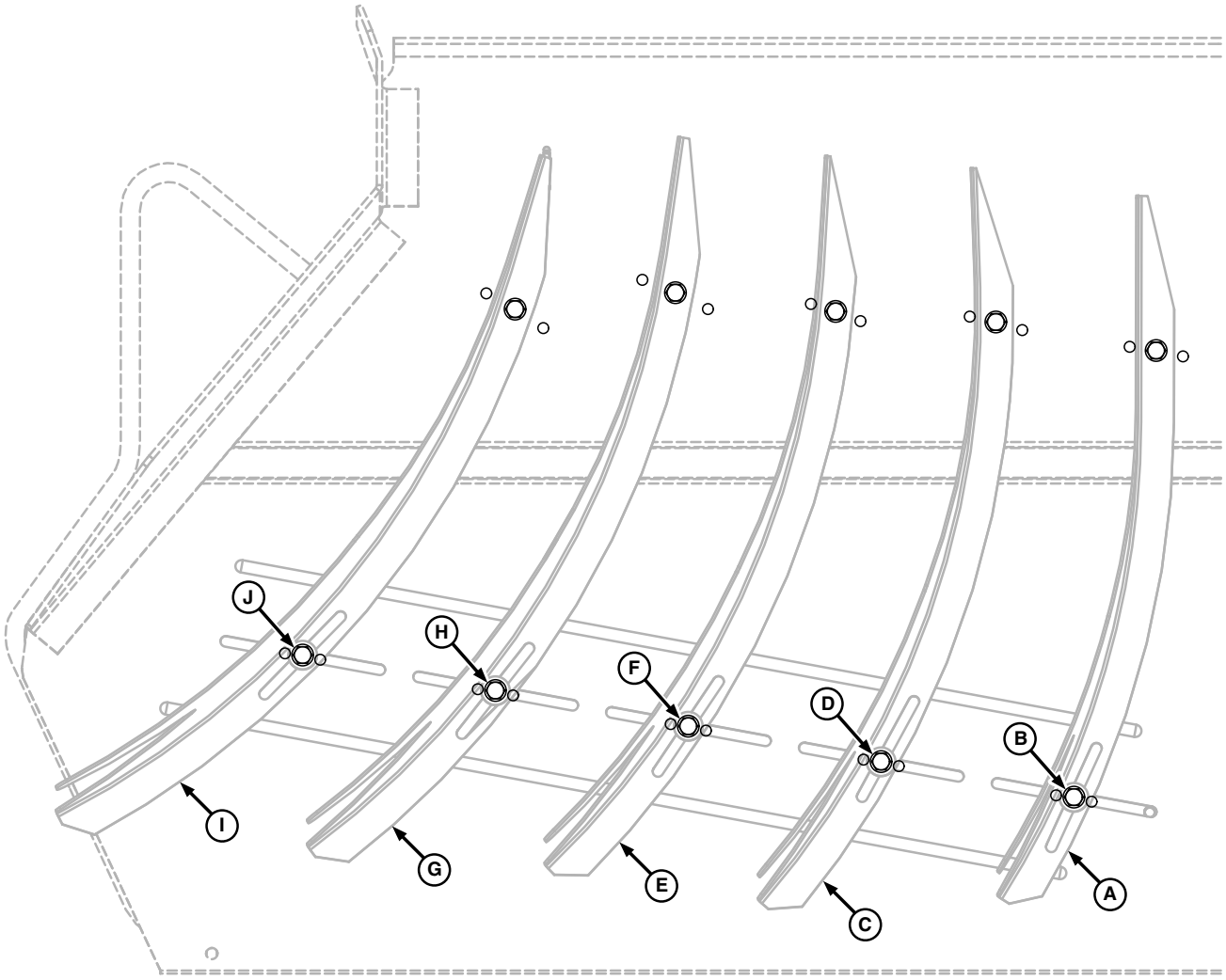
**A—Nuts**
**B—Chopper Vane**
**C—Holes**




H98365 —UN—30SEP10

OUO6075,00009EA -19-30SEP10-1/1

## Chopper Vanes (Electrical Adjust)—Factory Settings




*Chopper Settings For 9.1 m (30 ft.) Platforms (View From Below Chopper)*

**A—Vane 1**
**B—Middle Hole**
**C—Vane 2**
**D—Middle Hole**
**E—Vane 3**
**F—Middle Hole**
**G—Vane 4**
**H—Middle Hole**
**I— Vane 5**
**J— Middle Hole**

*NOTE: Hole locations are from center of chopper outward when adjusting chopper vanes.*

*If 7.6 m (25 ft.) spread width pattern is desired, see your John Deere dealer for further information on an optional kit.*

OUO6075,00009EB -19-30SEP10-1/1

## Crop Diverter Vanes—Adjusting

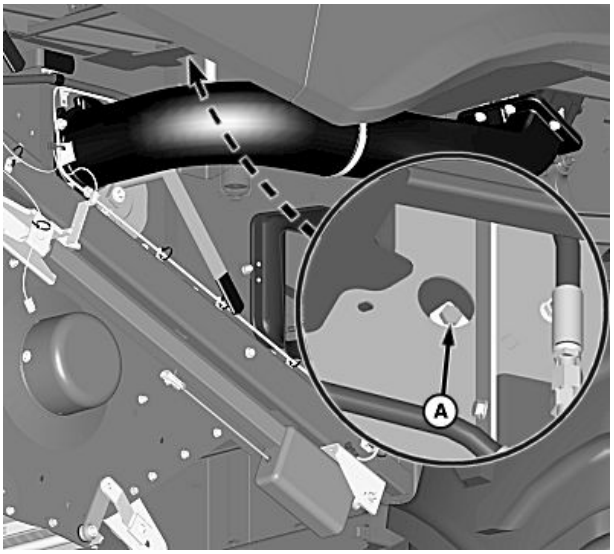
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Turning cap screw (A) adjusts indicator (B) and moves crop diverter vanes.

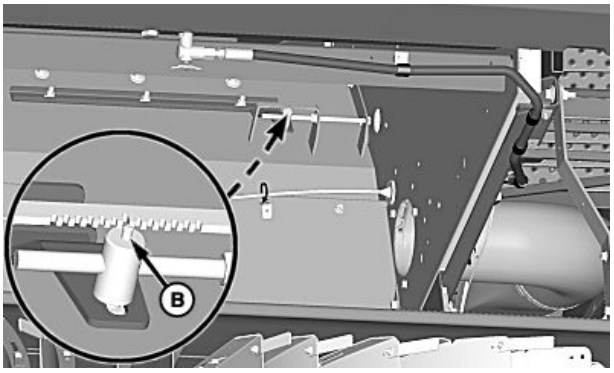
- Counterclockwise (C) - moves vanes towards left-hand side of machine.
- Clockwise (D) - moves vanes towards right-hand side of machine.

*NOTE: Adjust vanes until crop material distribution is even across body width.*

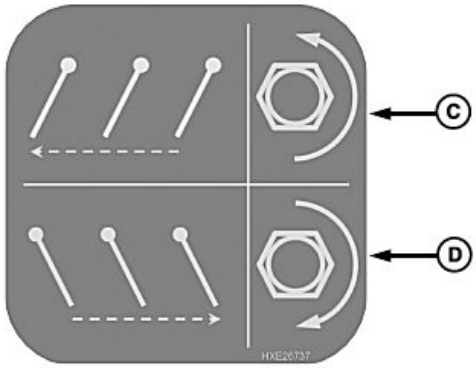
**A—Cap Screw**
**B—Indicator**
**C—Counterclockwise**
**D—Clockwise**




H98165 —UN—21SEP10




H98166 —UN—21SEP10




H98708 —UN—19OCT10

OUO6075,00009CD -19-17NOV10-1/1

## Crop Diverter

**IMPORTANT: To prevent personal injury or machine damage do not move crop diverter handle when machine is running.**

**Small Grain Position (C):**

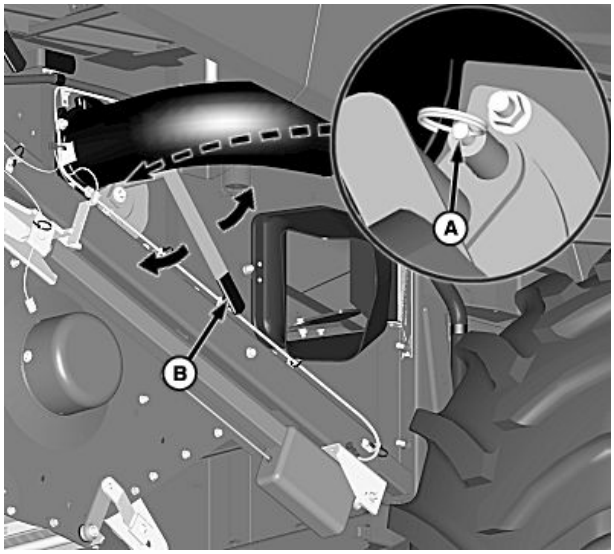
Pull lockout pin (A) and move crop diverter handle (B) to "UPPER" position. Crop diverter handle should be placed in "UPPER" position when servicing cleaning shoe.

**Large Grain Position (D):**

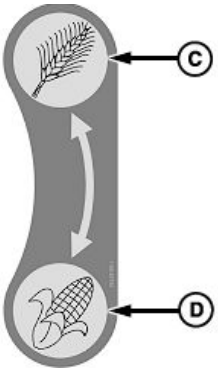
*NOTE: When harvesting corn or sunflowers, crop diverter handle should be in "LOWER" position.*

Pull lockout pin (A) and move crop diverter handle (B) to "LOWER" position. Crop diverter protects cleaning shoe from damage by preventing material from being thrown forward.

**A—Lock-Out Pin**
**B—Crop Diverter Handle**
**C—Small Grain Position**
**D—Large Grain Position**




H98135 —UN—20SEP10




H99171 —UN—23NOV10

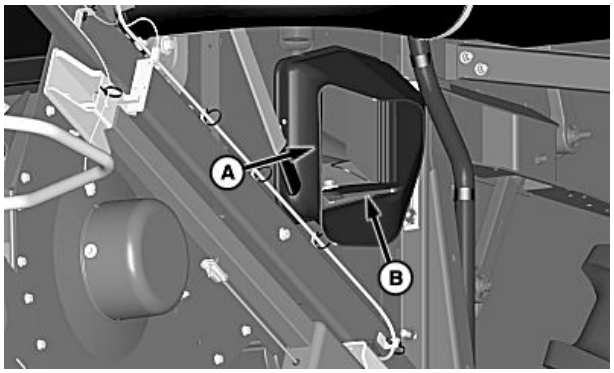
OUO6075,00009BC -19-23NOV10-1/1

## Air Chutes

Air chute (A) located on both sides of chopper allows cleaning shoe to breathe more freely especially when running on low speed. Depending on harvesting conditions, grain tank quality may be enhanced and feeder house dust reduced.

Air chute agitator (B) prevents crop material from building up and plugging air chutes.

**A—Air Chute**
**B—Air Chute Agitator**




H98136 —UN—20SEP10

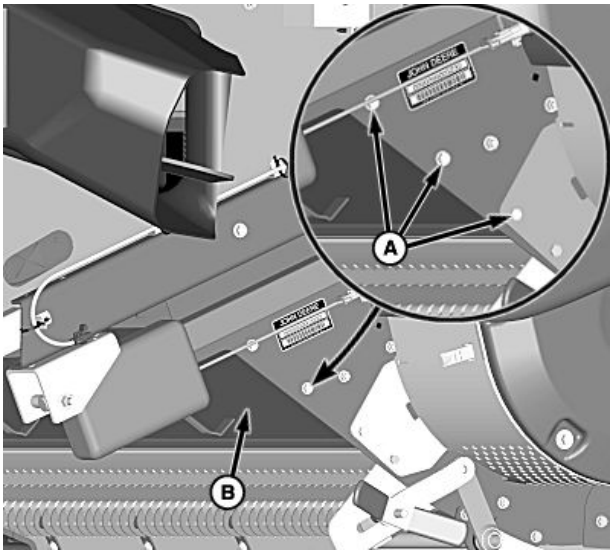
OUO6075,00009BD -19-28SEP10-1/1

## Chopper Access Door

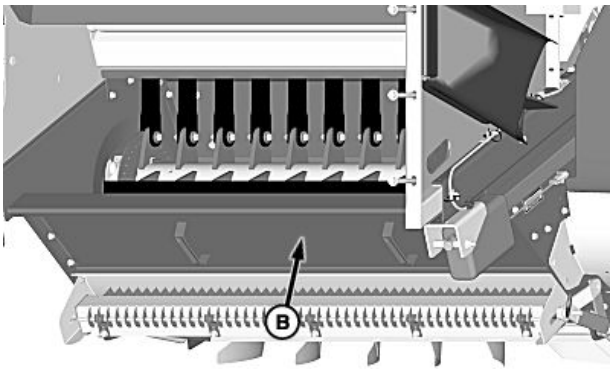
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Remove cap screws (A) from both sides of chopper to remove access door (B).

**A—Cap Screws** **B—Access Door**




H98689 —UN—19OCT10




H98690 —UN—19OCT10

OUO6075,0000A30 -19-20OCT10-1/1

## Overshot Beater Floor (If Equipped)—Removing

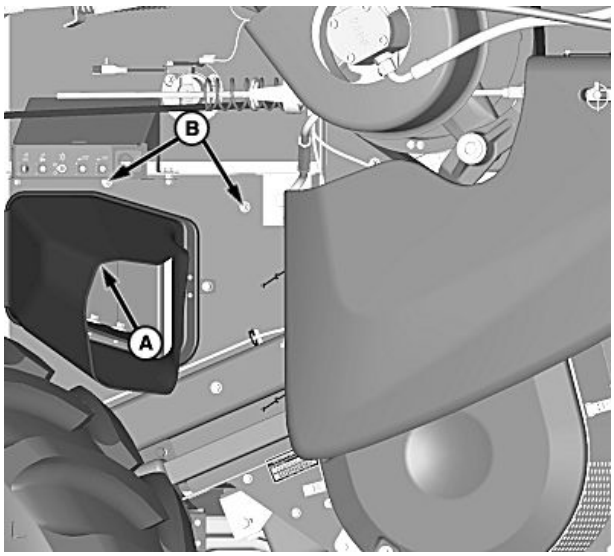
**CAUTION: Shut OFF engine, set parking brake and remove key.**

*NOTE: Overshot beater floor should be installed for corn/large grain and removed for small grain.*

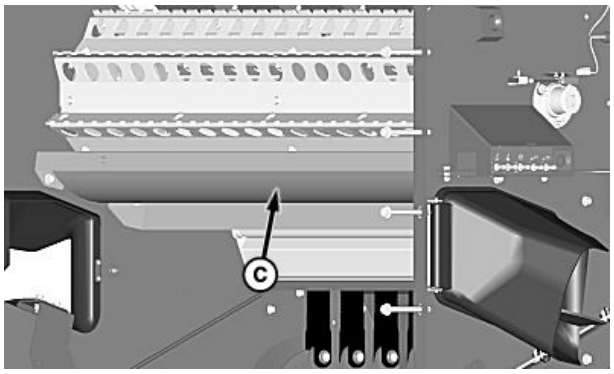
Open air chute (A) located on both sides of chopper.

Remove cap screws (B) located above air chutes on both sides of chopper and remove overshot beater floor (C).

**A—Air Chutes**
**B—Cap Screws (2 Used)**
**C—Overshot Beater Floor**




H98720 —UN—20OCT10




H98721 —UN—20OCT10

OUO6075,0000A34 -19-18NOV10-1/1

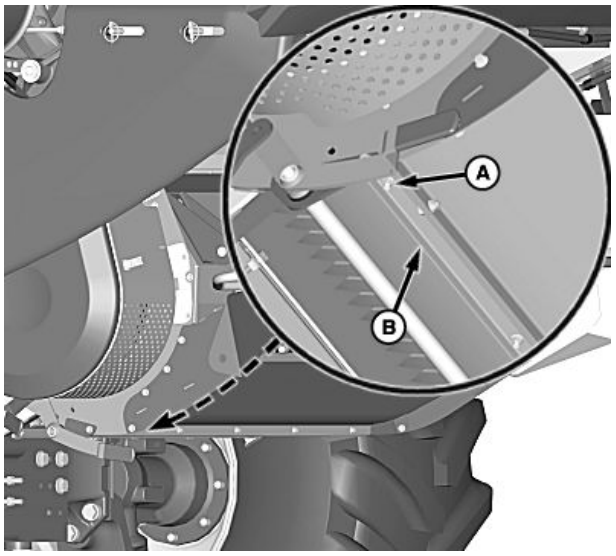
## Chopper Controller Bar (Optional)

**IMPORTANT: Controller bar must be removed and placed in storage position when harvesting corn. Failure to remove controller bar can result in chaffer element damage.**

Controller bar improves cut quality, distribution, and spread width in tough straw conditions. See your John Deere dealer for further information.

Remove hardware (A) and controller bar (B) from bottom side of chopper.

**A—Hardware**
**B—Controller Bar**



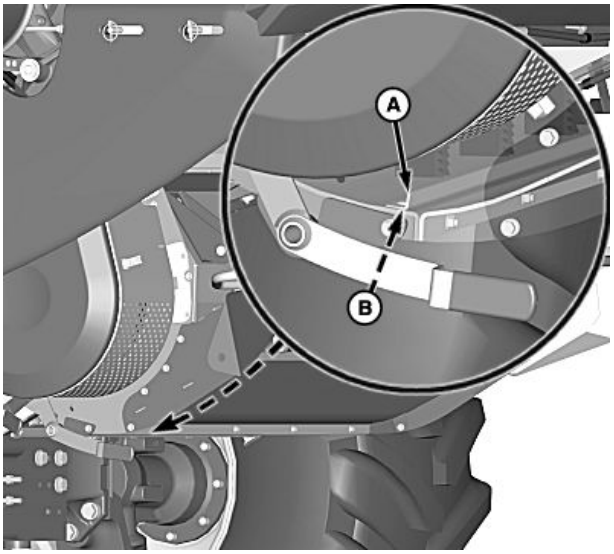

H98138 —UN—21SEP10

**Continued on next page**

OUO6075,00009BF -19-21SEP10-1/2

Raise chopper fully to install controller bar (A) on inside of chopper as shown and retain with hardware (B).

**A—Controller Bar** **B—Hardware**




H98139 —UN—21SEP10

OUO6075,00009BF -19-21SEP10-2/2

## Chopper Stationary Knifebank—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

**IMPORTANT: Knifebank must be fully disengaged for corn.**

*NOTE: Chopper can be run with knives disengaged, however cut quality decreases.*

*Use position in between to optimize power consumption and achieve satisfactory cut length.*

Knives can be adjusted to any position. Position of knives determines cut length of material.

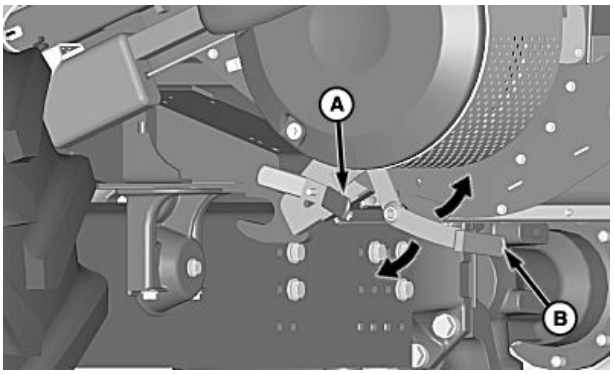
**Knifebank Engaged Position:**

Loosen wing nut (A) on chopper.

Move adjustment handle (B) downward until knifebank is at top of adjustment slot.

Tighten wing nut to lock knifebank into position.

**Knifebank Disengaged Position:**




H98137 —UN—20SEP10

*Knifebank Engaged Position*

**A—Wing Nut** **B—Handle**

Loosen wing nut (A) on chopper.

Move adjustment handle (B) upward until knifebank is at bottom of adjustment slot.

Tighten wing nut to lock knifebank into position.

OUO6075,00009C1 -19-21SEP10-1/1

## Chopper Stationary Knife Blades—Replacing

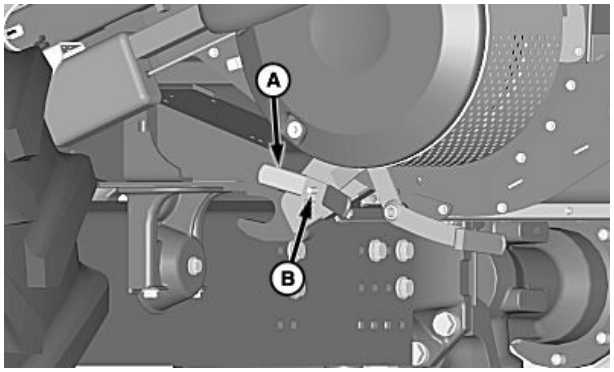
**CAUTION: Shut OFF engine, set parking brake and remove key. Knife blades are sharp.**

Loosen wing nut (A) on chopper.

Move adjustment handle upward until knifebank is at bottom of adjustment slot.

*NOTE: Retain bushing at outer ends of knifebank for later assembly.*

Support knifebank and remove tension rod (B) by pushing out right side of machine.




H98140 —UN—21SEP10

**A—Wing Nut** **B—Tension Rod**

OUO6075,00009C0 -19-21SEP10-1/2

Remove pin (A) from retaining rod (B).

Loosen lock nuts (C) on clips holding retaining rod.

Slide retaining rod until it clears knives that need to be replaced.

Reverse knives for additional usage or replace knives if worn on both sides.

Align retaining rod with knives.

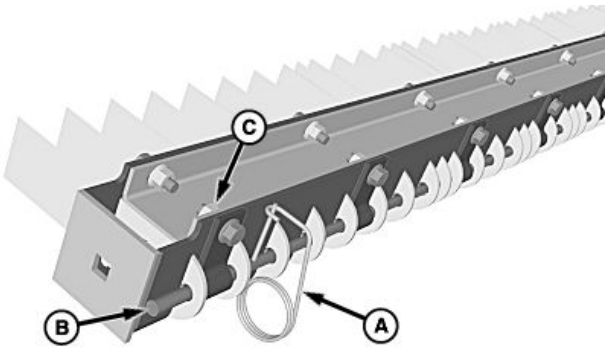
Tighten lock nuts on clips and install pin.

*NOTE: Reposition bushing at outer ends of knifebank.*

Install knifebank assembly and slide tension rod from right side of machine.

Install wing nut and adjust knifebank to desired position.

**IMPORTANT: Knifebank must be fully disengaged for corn.**




H82430 —UN—14FEB05

**A—Pin** **C—Lock Nuts**
**B—Retaining Rod**

Tighten wing nut to lock knifebank into position.

OUO6075,00009C0 -19-21SEP10-2/2

## Middle Splitter Knife—Replacing

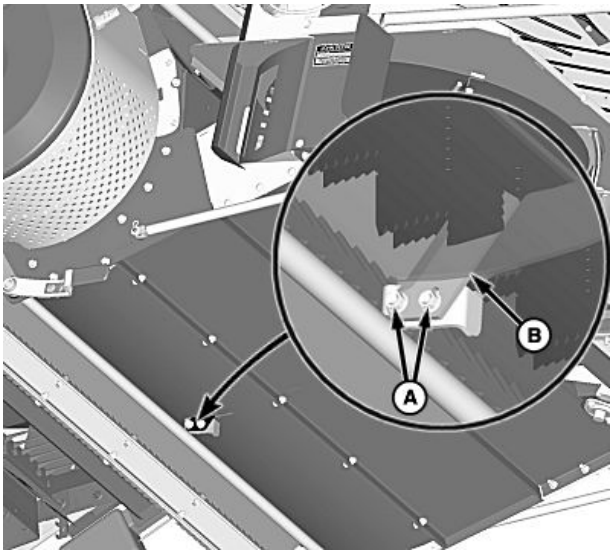
**CAUTION: Shut OFF engine, set parking brake and remove key. Knife blade is sharp.**

Remove hardware (A) and discard middle splitter knife (B).

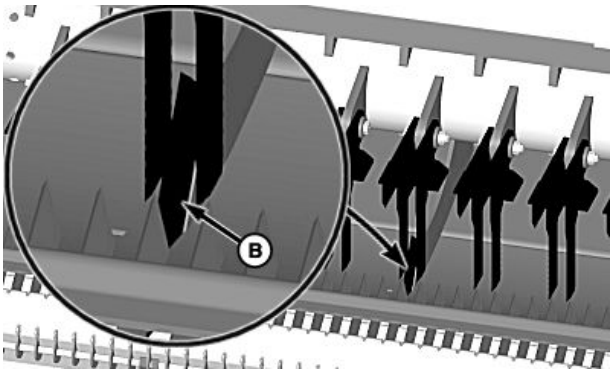
*NOTE: Knife must be seated against middle splitter so no gap exists.*

Replace middle splitter knife and install previously removed hardware.

**A—Hardware** **B—Middle Splitter Knife**




H98691 —UN—19OCT10




H98692 —UN—19OCT10

OUO6075,0000A31 -19-20OCT10-1/1

## Extra Fine Cut Chopper Blades—Replacing and Configuration

**CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Rotor shown illustrates blade replacement examples for both paddle and straight blades. Always maintain original factory provided blade pattern.*

**Outer Blades:**

*NOTE: If removing blades or bushings for inspection purposes, be certain to reinstall blades on SAME support from which they were removed. This must be done to maintain balance. It is a good practice to mark each blade before removal.*

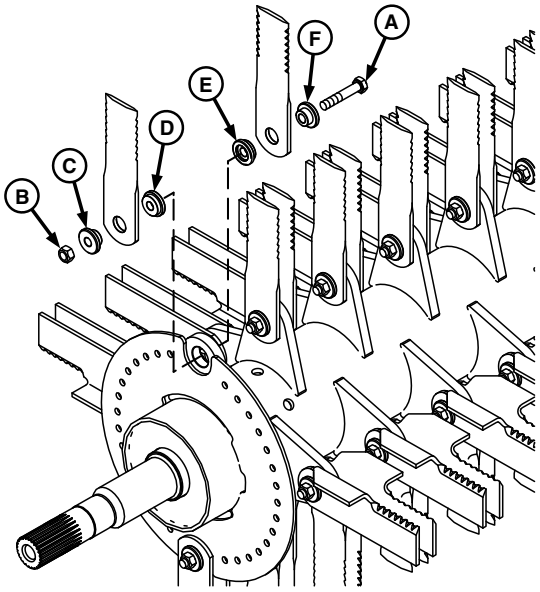
*Install new hardware in the same direction as it was removed when installing or replacing blades.*

Remove lock nut (A), cap screw (B), and bushings (C, D, E, F).

*NOTE: Inspect and replace bushings, lock nuts and cap screws if worn.*

Replace blades and bushings. Install cap screw, washer, bushings, and lock nut. Tighten nut to specification.

| | Specification |
|---|---|
| Chopper Blade Lock Nut—Torque | 60 N·m (44 lb.-ft.) |




H99000 —UN—12NOV10

**A—Lock Nut**
**B—Cap Screw**
**C—Bushing**
**D—Bushing**
**E—Bushing**
**F—Bushing**

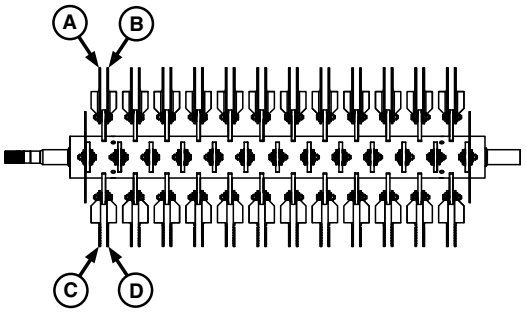
OUO6075,000153C -19-19JUN13-1/3

**Blade Configuration:**

**IMPORTANT: Chopper balance MUST be maintained. Replace BOTH blades on single support and BOTH blades on opposite support (180 degrees). Four blades MUST be installed to replace one broken blade, or all blades can be replaced at one time. This MUST be done to maintain balance.**

If blade (A) is broken, replace blades (A—D).

**IMPORTANT: Verify clearance between rotor blades and stationary knives, by rotating rotor by hand, before running chopper.**




H107308 —UN—22MAR13

**A—D— Paddle Blades**

**Continued on next page**

OUO6075,000153C -19-19JUN13-2/3

**Inner Blades:**

*NOTE: If removing blades or bushings for inspection purposes, be certain to reinstall blades on SAME support from which they were removed. This must be done to maintain balance. It is a good practice to mark each blade before removal.*

*Install new hardware in the same direction as it was removed when installing or replacing blades.*

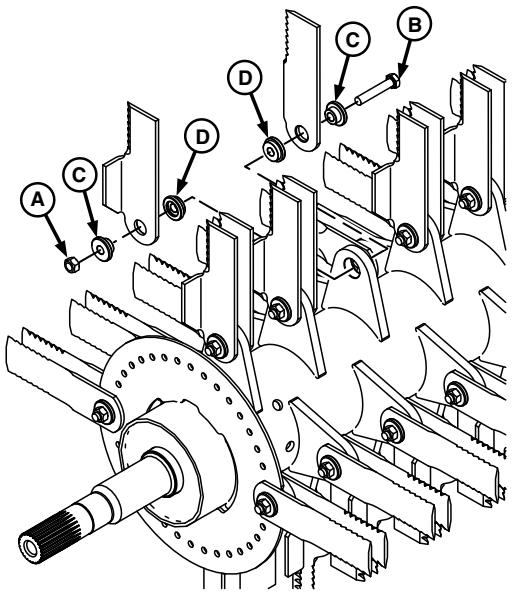
Remove lock nut (A) and cap screw (B).

Remove and inspect bushings (C and D).

*NOTE: Inspect and replace bushings, lock nuts and cap screws if worn.*

Replace blades and bushings. Install cap screw and lock nut. Tighten nut to specification.

| Specification | |
|---|---|
| Chopper Blade Lock Nut—Torque | 60 N·m (44 lb.-ft.) |




H99002 —UN—12NOV10

**A—Lock Nut**
**B—Cap Screw**
**C—Bushings**
**D—Bushings**

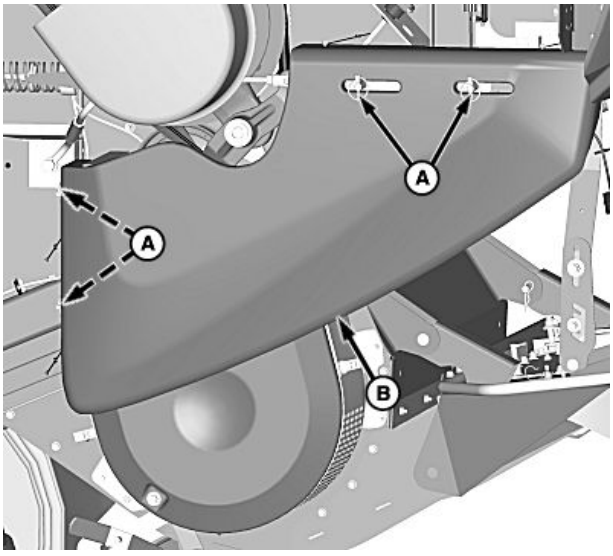
OUO6075,000153C -19-19JUN13-3/3

## Chopper Blades—Centering

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Raise chopper fully and remove quick-lock pins (A) and shield (B).

**A—Quick-Lock Pins**
**B—Shield**




H98146 —UN—21SEP10

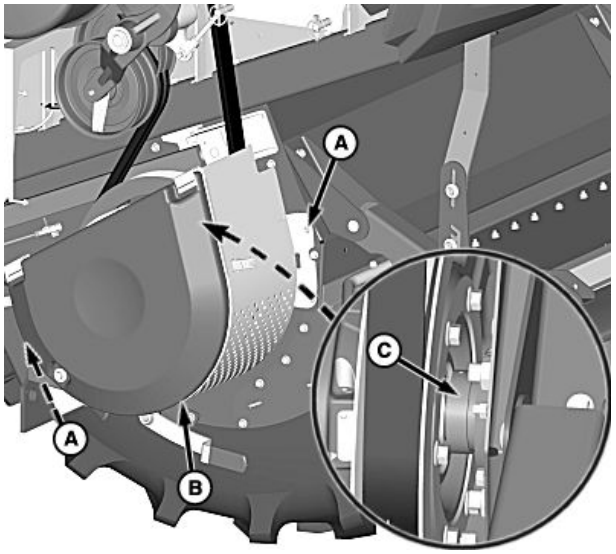
**Continued on next page**

OUO6075,00009C4 -19-21SEP10-1/4

Remove cap screws (A) and shield (B).

Loosen set screw and locking collar (C) on left-hand side.

**A—Cap Screws (4 Used)**
**B—Shield**
**C—Locking Collar**



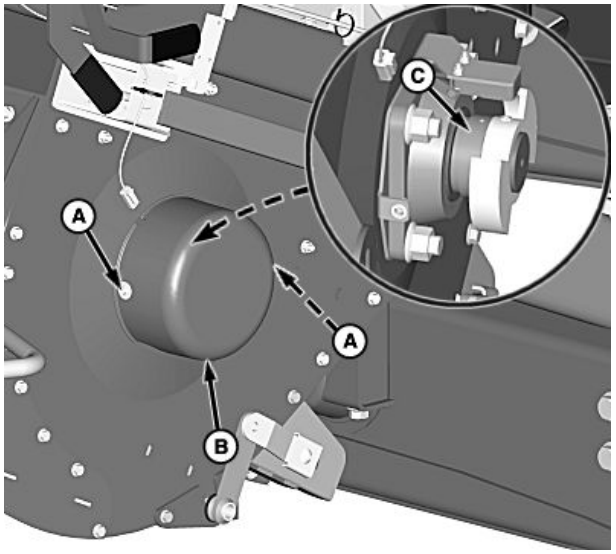

H98147 —UN—21SEP10

OUO6075,00009C4 -19-21SEP10-2/4

Remove cap screws (A) and bearing cover (B).

Loosen set screw and locking collar (C) on right-hand side.

**A—Cap Screws (2 Used)**
**B—Bearing Cover**
**C—Locking Collar**




H98148 —UN—21SEP10

**Continued on next page**

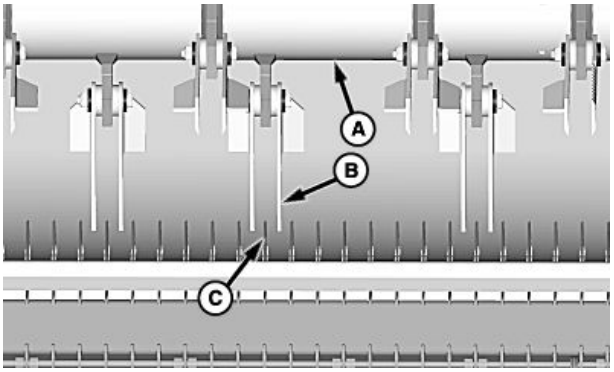
OUO6075,00009C4 -19-21SEP10-3/4

Position chopper rotor (A) right or left to ensure all rotor blades (B) clear stationary knives (C).

Tighten locking collars on both sides in direction of rotation and retain with set screws.

Install bearing cover on right-hand side and chopper shields on left-hand side.

**A—Chopper Rotor**
**B—Rotor Blades**
**C—Stationary Knives**




H87317 —UN—30JAN07

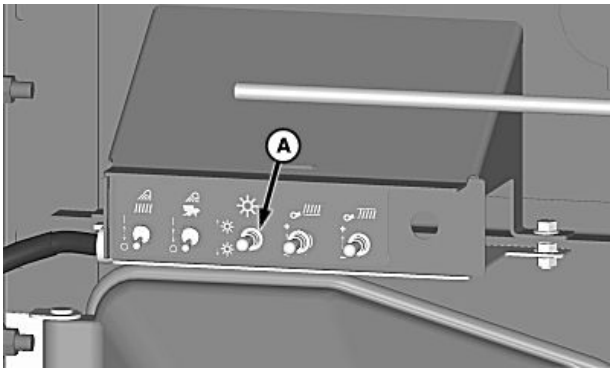
OUO6075,00009C4 -19-21SEP10-4/4

## Chopper Adjusting Switch

Chopper adjust switch (A) is located on left-hand side of machine.

Chopper adjust switch allows operator to raise or lower chopper to various positions.

**A—Chopper Switch**




H97565 —UN—14SEP10

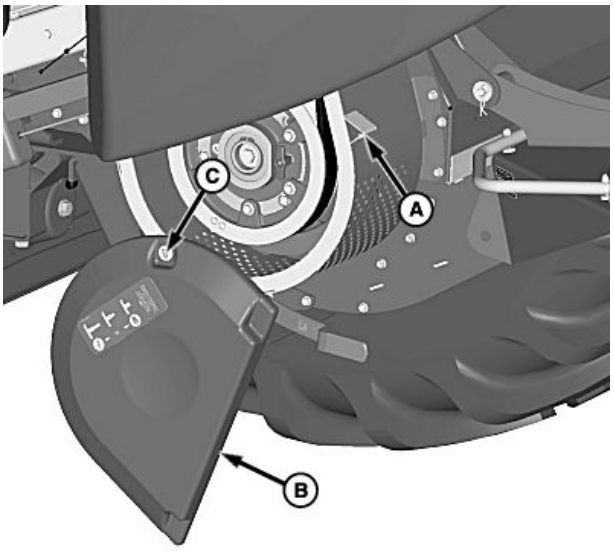
OUO6075,00009C6 -19-21SEP10-1/1

## Chopper Drive Speeds—Changing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Release latch (A) and rotate shield (B) on pivot (C).

**A—Latch**
**B—Shield**
**C—Pivot**




H105440 —UN—18MAY12

**Continued on next page**

OUO6075,000113F -19-18MAY12-1/2

**Slow Speed Position:**

*NOTE: It may be necessary to rotate sheave a small amount while moving shifter handle.*

Move shifter handle (A) to position (B).

- Corn

**Neutral Position:**

*NOTE: It may be necessary to rotate sheave a small amount while moving shifter handle.*

Move shifter handle (A) to position (C).

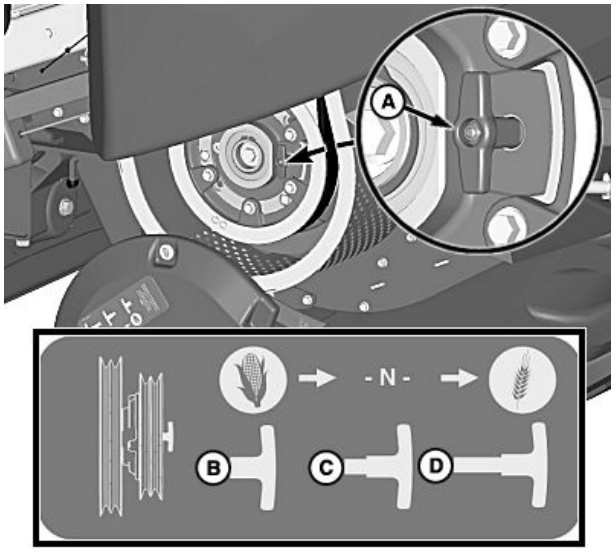
**High Speed Position:**

*NOTE: It may be necessary to rotate sheave a small amount while moving shifter handle.*

Move shifter handle (A) to position (D).

- Grain

Close shield and retain with latch.




H105441 —UN—18MAY12

**A—Shifter Handle**
**B—Slow Speed Position**
**C—Neutral Position**
**D—High Speed Position**

OUO6075,000113F -19-18MAY12-2/2

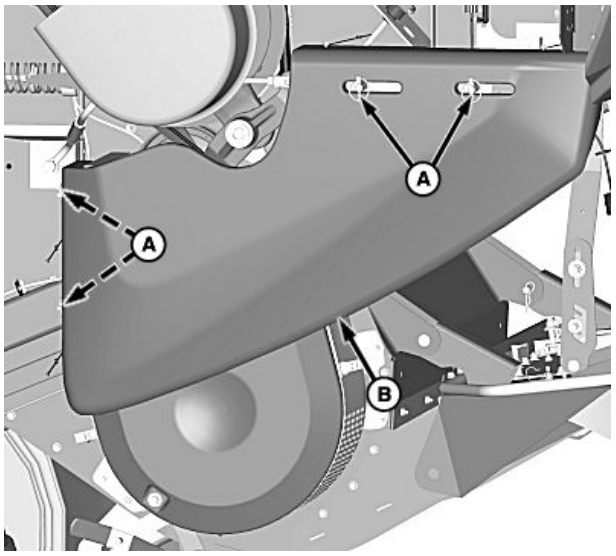
## Chopper Drive Belt Tension—Adjusting

**CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Lower chopper fully to properly tension belts.*

Remove quick-lock pins (A) and shield (B).

**A—Quick-Lock Pins**
**B—Shield**




H98146 —UN—21SEP10

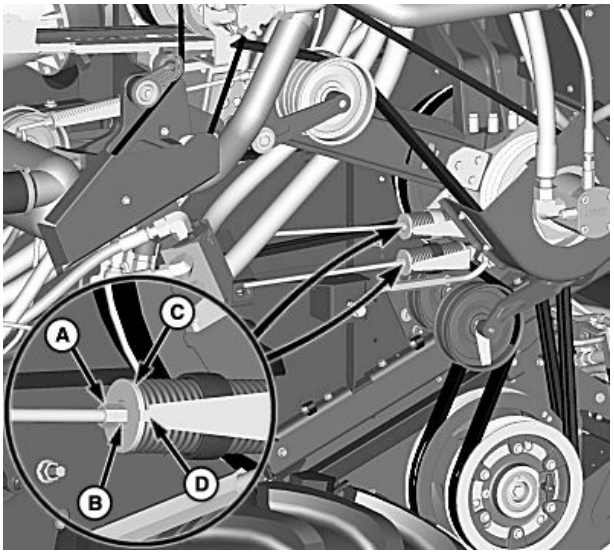
**Continued on next page**

OUO6075,00013DF -19-18JUN13-1/2

Loosen lock nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

Install shield and retain with quick-lock pins.

**A—Lock Nut**
**B—Nut**
**C—Washer**
**D—Gauge**




H108275 —UN—18JUN13

OUO6075,00013DF -19-18JUN13-2/2

## Chopper Belt—Replacing

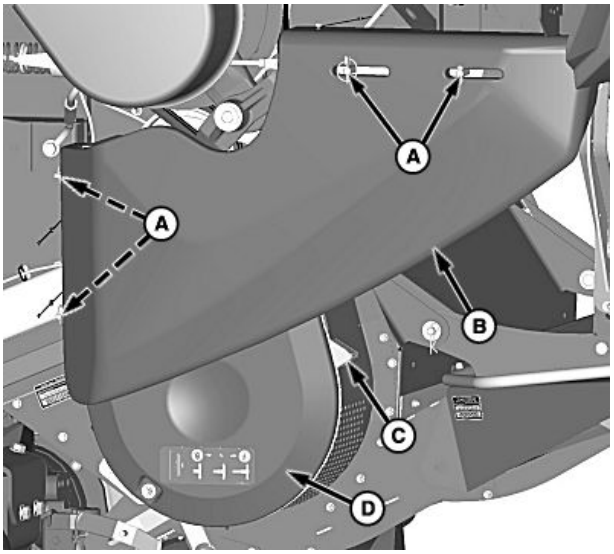
**⚠ CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Chopper should be moved to middle position for easier belt installation.*

Remove quick-lock pins (A) and shield (B).

Release latch (C) and rotate shield (D) to open.

**A—Quick-Lock Pins**
**B—Shield**
**C—Latch**
**D—Shield**




H105442 —UN—18MAY12

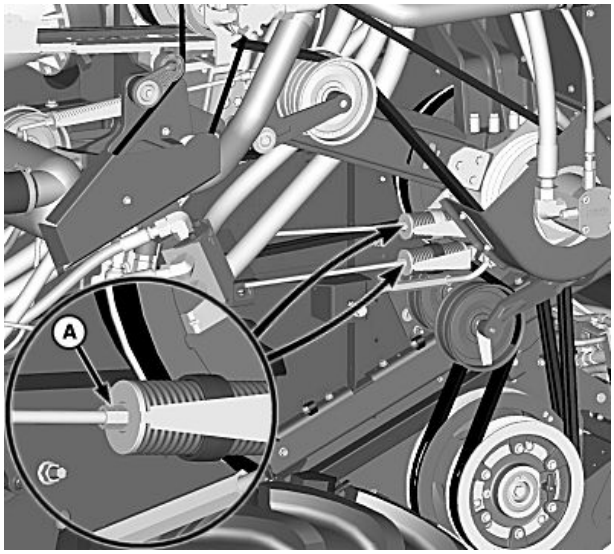
**Continued on next page**

OUO6075,00013E0 -19-18JUN13-1/10

*NOTE: Mark location of tensioner nuts before loosening to aid in reassembly.*

Loosen nuts (A) to relieve belt tension.

**A—Nuts**

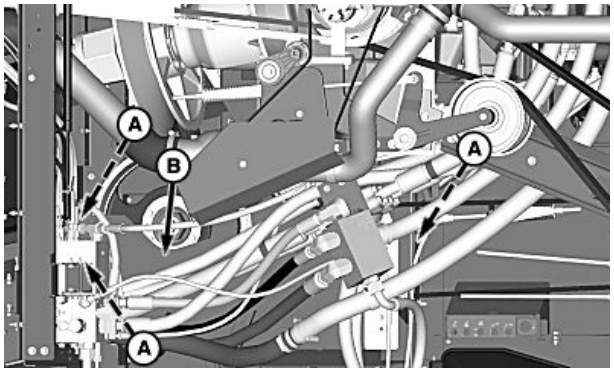



H108276 —UN—18JUN13

OUO6075,00013E0 -19-18JUN13-2/10

Remove cap screws (A) and shield (B).

**A—Cap Screws** **B—Shield**



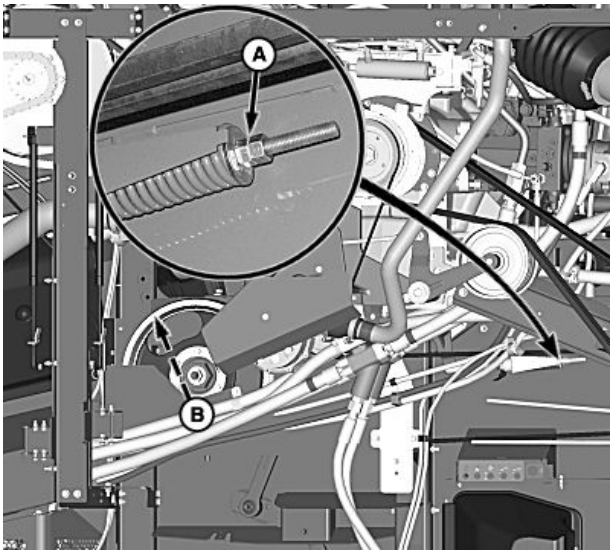

H108266 —UN—18JUN13

**Continued on next page**

OUO6075,00013E0 -19-18JUN13-3/10

Loosen nuts (A) to relieve belt tension from discharge beater belt (B).

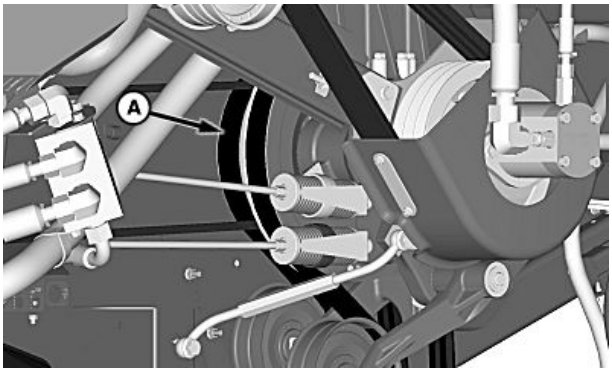
**A—Nuts** **B—Discharge Beater Belt**



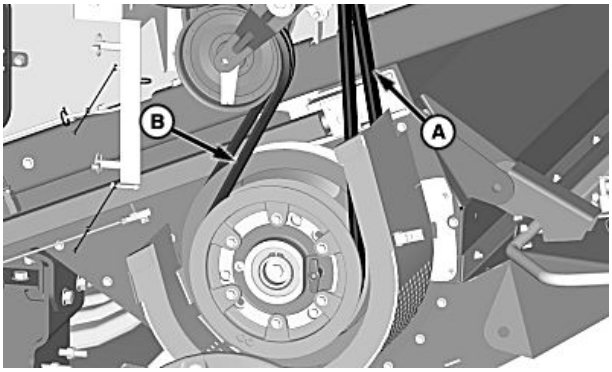

H108267 —UN—18JUN13

OUO6075,00013E0 -19-18JUN13-4/10

**Inner Chopper Belt:**




H107035 —UN—26FEB13




H98161 —UN—21SEP10

**A—Inner Chopper Drive Belt** **B—Outer Chopper Drive Belt**

*NOTE: Turn belt so it fits between sheave and sidesheet.*

Remove inner chopper drive belt (A) from upper sheaves.

Remove outer chopper drive belt (B) from lower sheaves.

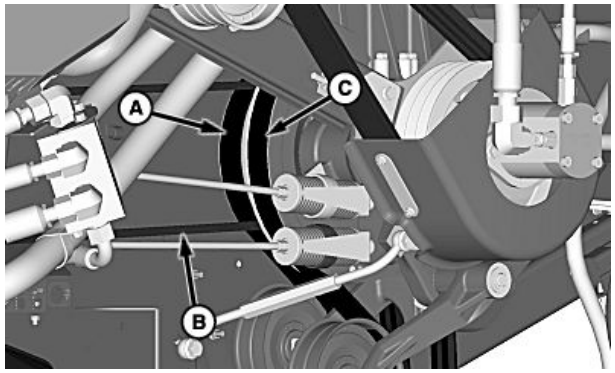
Remove inner chopper drive belt from lower sheaves.

Install replacement belt in reverse order.

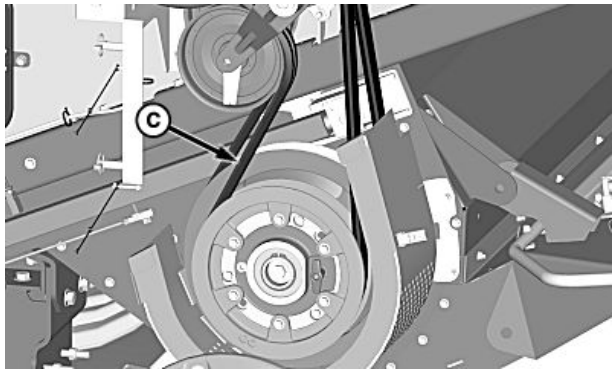
**Continued on next page**

OUO6075,00013E0 -19-18JUN13-5/10

**Outer Chopper Belt:**




H107027 —UN—26FEB13




H107028 —UN—26FEB13

**A—Inner Chopper Drive Belt** **B—Discharge Beater Belt** **C—Outer Chopper Drive Belt**

*NOTE: Turn belts so they fit between sheave and sidesheet.*

Remove inner chopper drive belt (A) and discharge beater belt (B) from upper sheaves.

Remove outer chopper drive belt (C) from upper and lower sheaves.

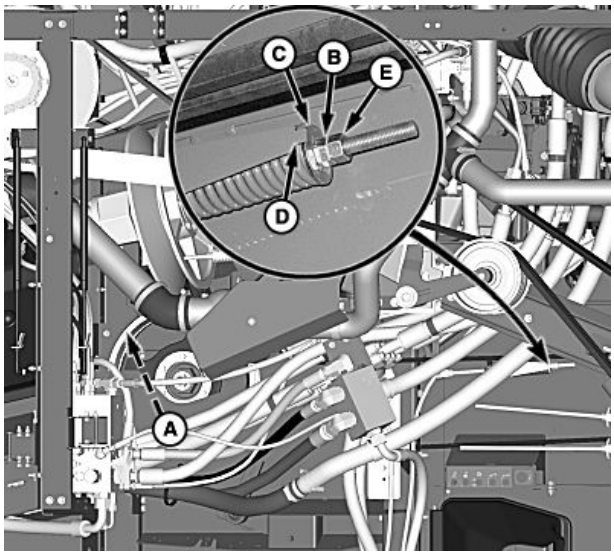
Install replacement belt in reverse order.

OUO6075,00013E0 -19-18JUN13-6/10

Install discharge beater belt (A) onto sheave.

Tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut (E).

**A—Discharge Beater Belt**
**B—Nut**
**C—Washer**
**D—Gauge**
**E—Lock Nut**



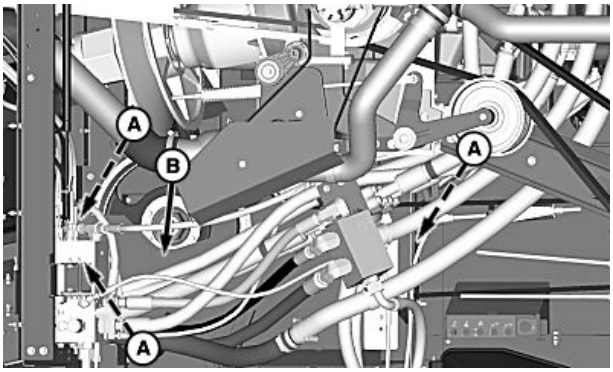

H108277 —UN—18JUN13

**Continued on next page**

OUO6075,00013E0 -19-18JUN13-7/10

Install shield (B) and retain with cap screws (A).

**A—Cap Screws** **B—Shield**



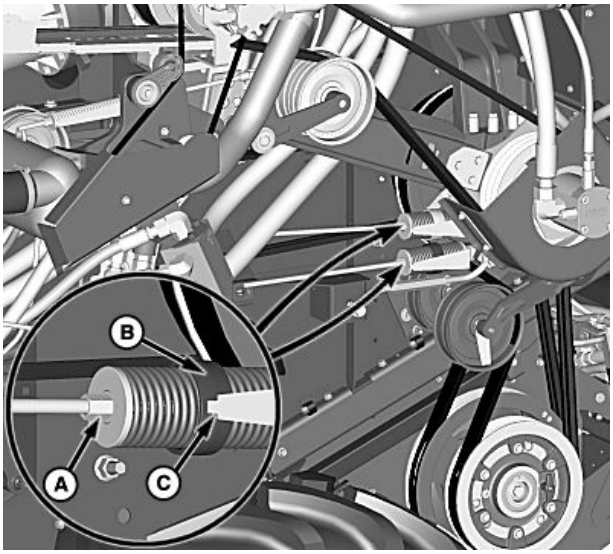

H108266 —UN—18JUN13

OUO6075,00013E0 -19-18JUN13-8/10

Lower chopper to middle position.

Tighten nuts (A) until spring guide (B) is at end of gauge (C) as shown.

**A—Nuts** **C—Gauge**
**B—Spring Guide**




H108278 —UN—18JUN13

**Continued on next page**

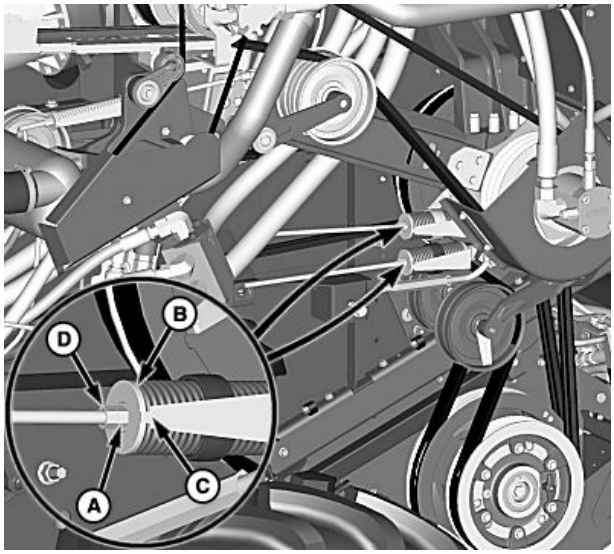
OUO6075,00013E0 -19-18JUN13-9/10

Lower chopper completely to properly tension belt.

Tighten nut (A) until washer (B) is positioned between end of gauge (C) and bottom of step. Tighten lock nut (D).

Install shield and retain with quick-lock pins.

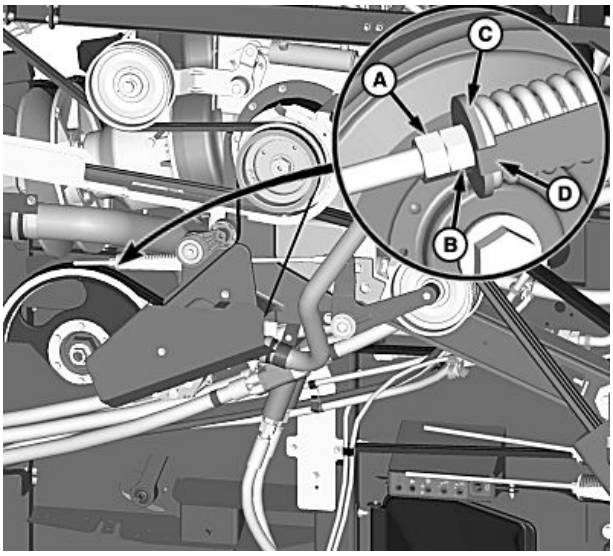
**A—Nut**
**B—Washer**
**C—Gauge**
**D—Lock Nut**




H108279 —UN—18JUN13

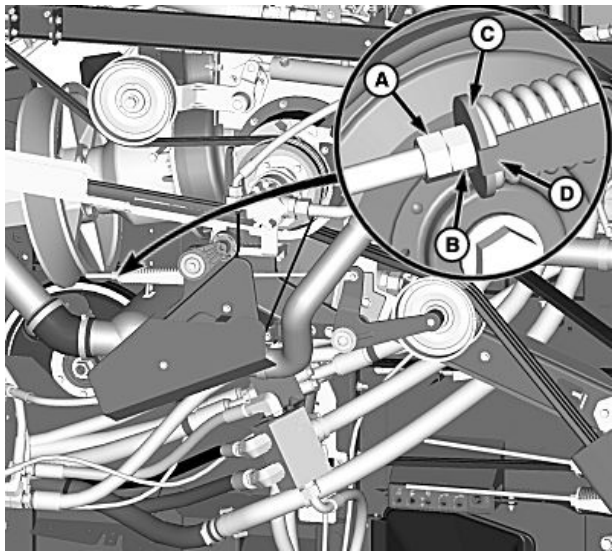
OUO6075,00013E0 -19-18JUN13-10/10

## Chopper Jackshaft Belt—Adjusting




H108280 —UN—18JUN13

*S670*




H108281 —UN—18JUN13

*S680, S685 and S690*

**A—Lock Nut**
**B—Nut**
**C—Washer**
**D—Gauge**

**⚠ CAUTION: Shut OFF engine, set park brake and remove key.**

Chopper jackshaft belt is located on left-hand side above chopper.

Loosen lock nut (A) and tighten nut (B) until washer (C) is positioned between end of gauge (D) and bottom of step. Tighten lock nut.

OUO6075,000153D -19-19JUN13-1/1

## Chopper Jackshaft Belt—Replacing (S670)

**CAUTION: Shut OFF engine, set park brake and remove key.**

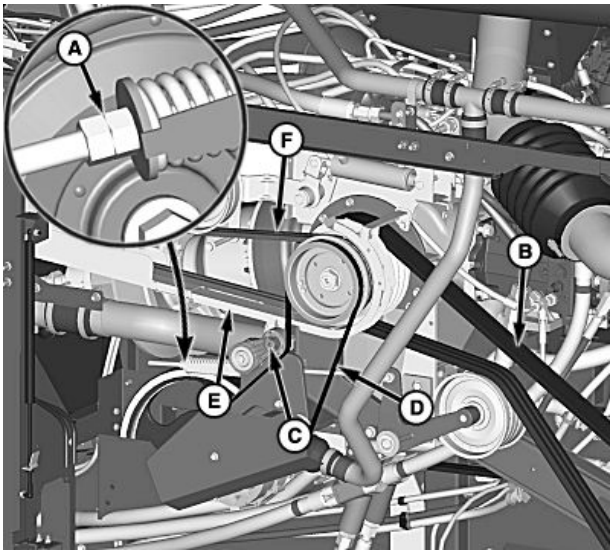
Loosen nuts (A) to relieve belt tension from chopper jackshaft belt (B).

Use breaker bar to relieve tension from tensioner arm (C) to remove engine debris management belt (D).

Remove cap screws from belt trap (E).

Remove and retain unloading auger drive belts (F).

**A—Nuts**
**B—Chopper Jackshaft Belt**
**C—Tensioner Arm**
**D—Engine Debris Management Belt (If Equipped)**
**E—Belt Trap**
**F—Unloading Auger Drive Belts**




H108282 —UN—18JUN13

OUO6075,00013E4 -19-18JUN13-1/5

**With Hydraulic Pump:**

Remove hardware (A) and strap (B) on both sides of shield.

Remove nut (C) from pump assembly bracket.

*NOTE: Verify that washers and isolator remain in place when removing. Install previously removed nut to retain washers and isolators in place when assembly is removed.*

Remove cap screws (D) from pump assembly.

Remove shield (E) and pump assembly bracket.

Support shield and pump assembly bracket out of the way.

Remove jackshaft belt (F) from upper and lower sheaves.

Install replacement belt in reverse order.

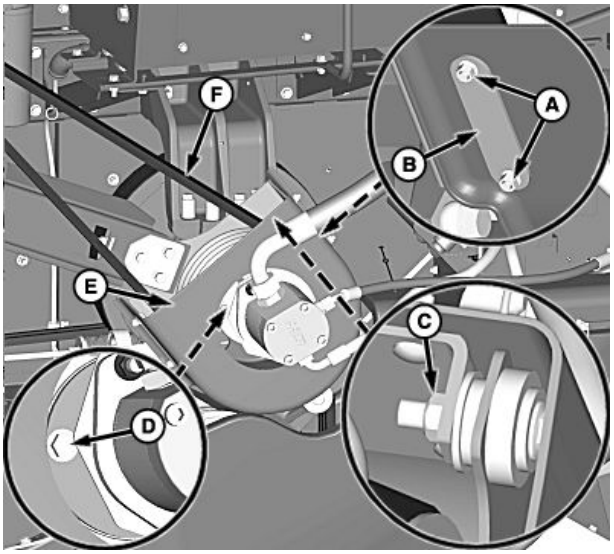
Align pump assembly with sheave and tighten cap screws to specification.

**Specification**

Cap Screws—Torque.....80 N·m (59 lb.-ft.)

*NOTE: Align shaft key on pump assembly with keyway in sheave. Verify that washers and isolators remain in place on pump assembly bracket.*

Install shield and pump assembly bracket and retain with nut.




H98502 —UN—20OCT10

**A—Hardware**
**B—Strap**
**C—Nut**
**D—Cap Screw (2 Used)**
**E—Shield**
**F—Chopper Jackshaft Belt**

Install strap on both sides of shield and retain with hardware.

**Continued on next page**

OUO6075,00013E4 -19-18JUN13-2/5

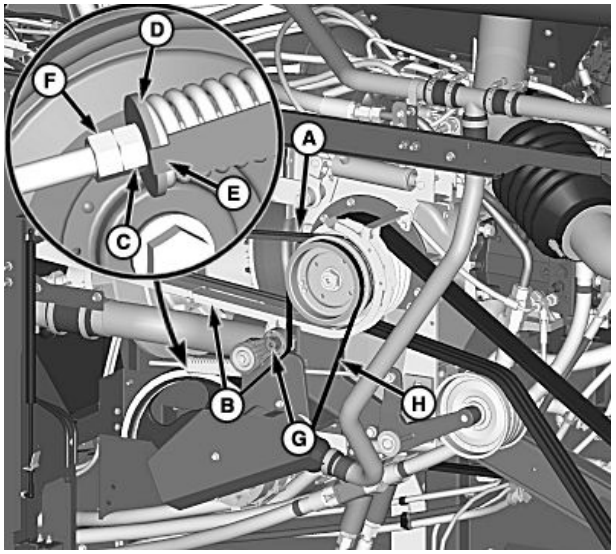
Install unloading auger drive belts (A).

Install belt trap (B) and retain with cap screws.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Use breaker bar to relieve tension from tensioner arm (G) to install engine debris management belt (H).

**A—Unloading Auger Drive Belts**
**B—Belt Trap**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**
**G—Tensioner Arm**
**H—Engine Debris Management Belt (If Equipped)**




H108284 —UN—18JUN13

OUO6075,00013E4 -19-18JUN13-3/5

**Without Hydraulic Pump:**

Remove hardware (A) and strap (B) on both sides of shield (C).

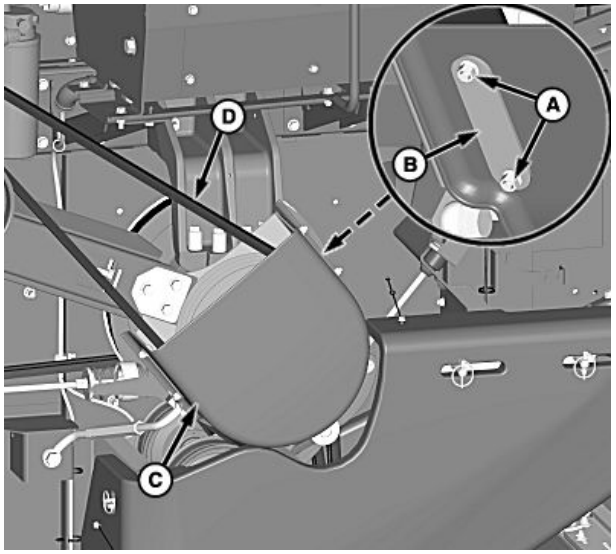
Remove jackshaft belt (D) from upper and lower sheaves.

Install replacement belt in reverse order.

Align shield with bracket holes.

Install strap on both sides of shield and retain with hardware.

**A—Hardware**
**B—Strap**
**C—Shield**
**D—Chopper Jackshaft Belt**




H98500 —UN—08OCT10

**Continued on next page**

OUO6075,00013E4 -19-18JUN13-4/5

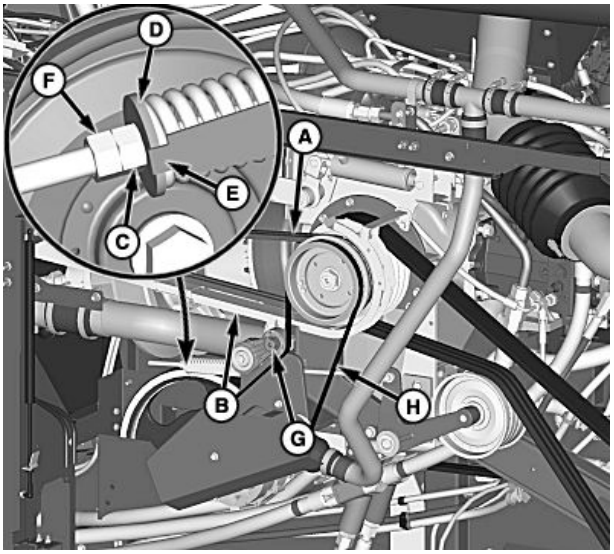
Install unloading auger drive belts (A).

Install belt trap (B) and retain with cap screws.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Use breaker bar to relieve tension from tensioner arm (G) to install engine debris management belt (H).

**A—Unloading Auger Drive Belts**
**B—Belt Trap**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**
**G—Tensioner Arm**
**H—Engine Debris Management Belt (If Equipped)**




H108285 —UN—18JUN13

OUO6075,00013E4 -19-18JUN13-5/5

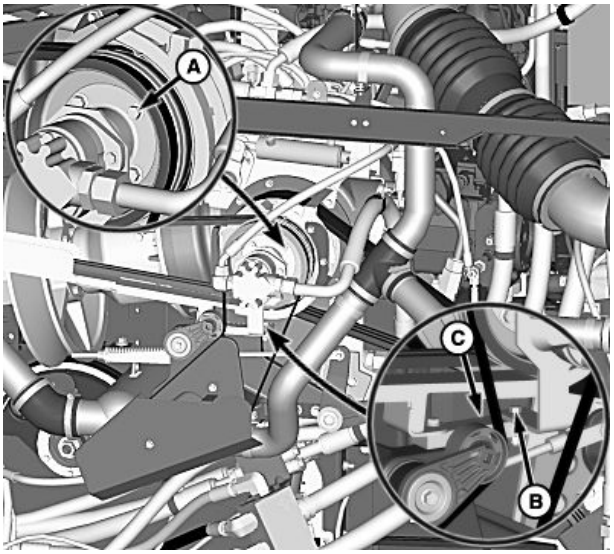
## Chopper Jackshaft Belt—Replacing (S680, S685 and S690)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Remove cap screws (A) and hardware (B) from isolator strap (C).

Remove pump assembly and support out of the way.

**A—Cap Screws (4 Used)**
**B—Hardware**
**C—Isolator Strap**




H108283 —UN—18JUN13

**Continued on next page**

OUO6075,000153E -19-19JUN13-1/8

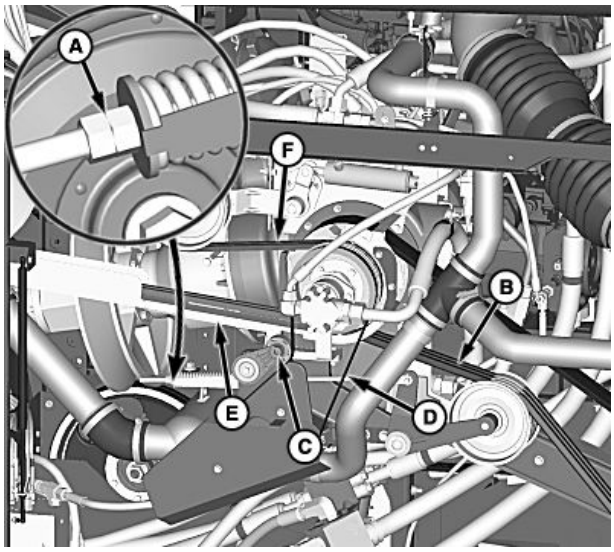
Loosen nuts (A) to relieve belt tension from chopper jackshaft belt (B).

Use breaker bar to relieve tension from tensioner arm (C) to remove engine debris management belt (D).

Remove cap screws from belt trap (E).

Remove and retain unloading auger drive belts (F).

**A—Nuts**
**B—Chopper Jackshaft Belt**
**C—Tensioner Arm**
**D—Engine Debris Management Belt (If Equipped)**
**E—Belt Trap**
**F—Unloading Auger Drive Belts**




H108286 —UN—18JUN13

OUO6075,000153E -19-19JUN13-2/8

**With Hydraulic Pump:**

Remove hardware (A) and strap (B) on both sides of shield.

Remove nut (C) from pump assembly bracket.

*NOTE: Verify that washers and isolator remain in place when removing. Install previously removed nut to retain washers and isolators in place when assembly is removed.*

Remove cap screws (D) from pump assembly.

Remove shield (E) and pump assembly bracket.

Support shield and pump assembly bracket out of the way.

Remove jackshaft belt (F) from upper and lower sheaves.

Install replacement belt in reverse order.

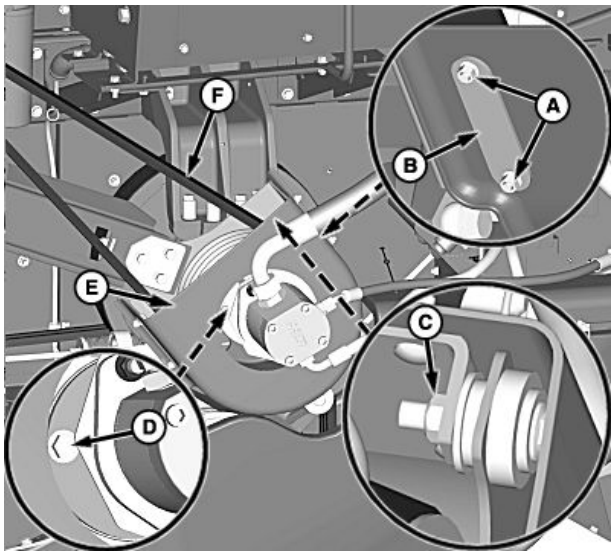
Align pump assembly with sheave and tighten cap screws to specification.

**Specification**

Cap Screws—Torque.....80 N·m (59 lb.-ft.)

*NOTE: Align shaft key on pump assembly with keyway in sheave. Verify that washers and isolators remain in place on pump assembly bracket.*

Install shield and pump assembly bracket and retain with nut.




H98502 —UN—20OCT10

**A—Hardware**
**B—Strap**
**C—Nut**
**D—Cap Screw (2 Used)**
**E—Shield**
**F—Chopper Jackshaft Belt**

Install strap on both sides of shield and retain with hardware.

**Continued on next page**

OUO6075,000153E -19-19JUN13-3/8

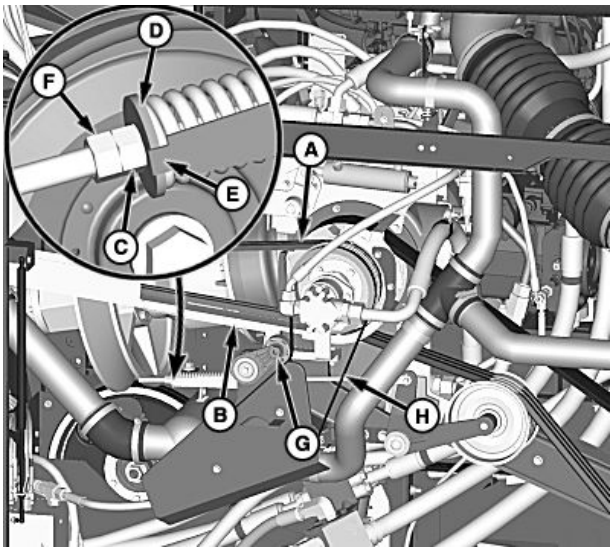
Install unloading auger drive belts (A).

Install belt trap (B) and retain with cap screws.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Use breaker bar to relieve tension from tensioner arm (G) to install engine debris management belt (H).

**A—Unloading Auger Drive Belts**
**B—Belt Trap**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**
**G—Tensioner Arm**
**H—Engine Debris Management Belt (If Equipped)**




H108287 —UN—18JUN13

OUO6075,000153E -19-19JUN13-4/8

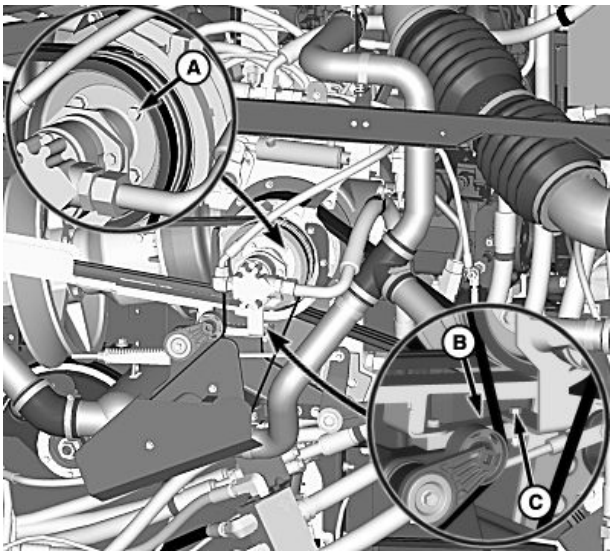
Align pump assembly with sheave and tighten cap screws (A) to specification.

**Specification**

Cap Screws—Torque.....80 N·m (59 lb.-ft.)

Install isolator strap (B) and retain with hardware (C).

**A—Cap Screws (4 Used)**
**B—Isolator Strap**
**C—Hardware**




H108288 —UN—18JUN13

**Continued on next page**

OUO6075,000153E -19-19JUN13-5/8

**Without Hydraulic Pump:**

Remove hardware (A) and strap (B) on both sides of shield (C).

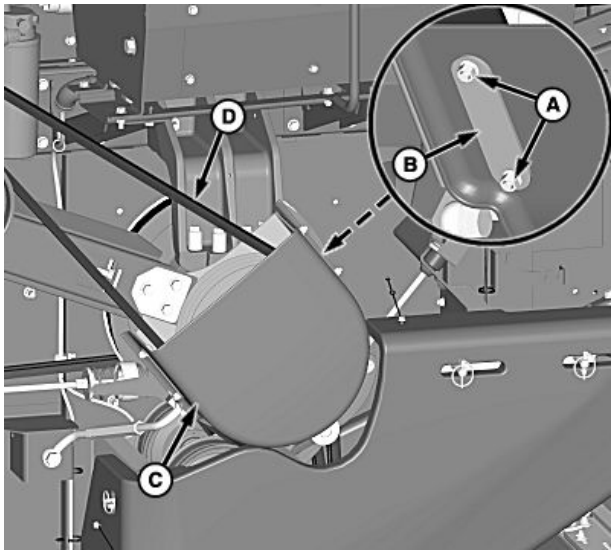
Remove jackshaft belt (D) from upper and lower sheaves.

Install replacement belt in reverse order.

Align shield with bracket holes.

Install strap on both sides of shield and retain with hardware.

**A—Hardware**
**B—Strap**
**C—Shield**
**D—Chopper Jackshaft Belt**




H98500 —UN—08OCT10

OUO6075,000153E -19-19JUN13-6/8

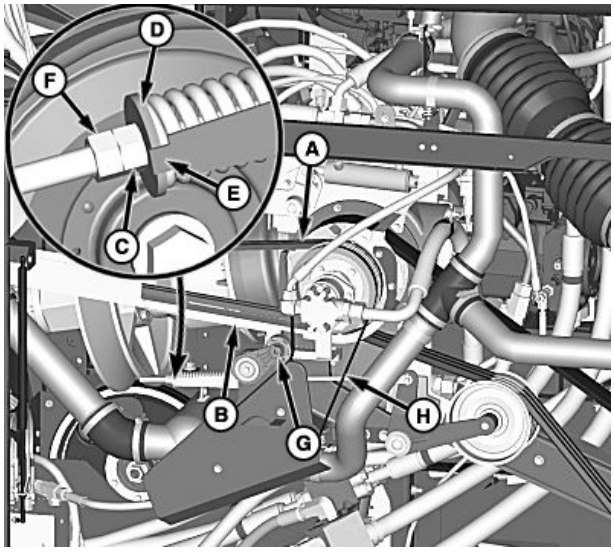
Install unloading auger drive belts (A).

Install belt trap (B) and retain with cap screws.

Tighten nut (C) until washer (D) is positioned between end of gauge (E) and bottom of step. Tighten lock nut (F).

Use breaker bar to relieve tension from tensioner arm (G) to install engine debris management belt (H).

**A—Unloading Auger Drive Belts**
**B—Belt Trap**
**C—Nut**
**D—Washer**
**E—Gauge**
**F—Lock Nut**
**G—Tensioner Arm**
**H—Engine Debris Management Belt (If Equipped)**




H108287 —UN—18JUN13

**Continued on next page**

OUO6075,000153E -19-19JUN13-7/8

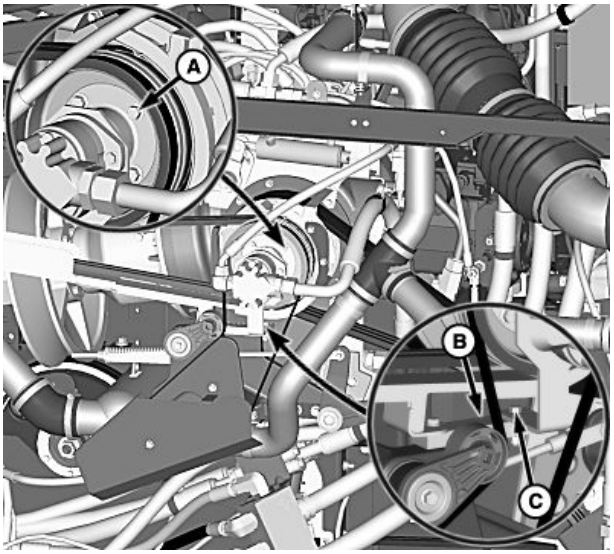
Align pump assembly with sheave and tighten cap screws (A) to specification.

**Specification**

Cap Screws—Torque.....80 N·m (59 lb.-ft.)

Install isolator strap (B) and retain with hardware (C).

**A—Cap Screws (4 Used)**
**B—Isolator Strap**
**C—Hardware**




H108288 —UN—18JUN13

OUO6075,000153E -19-19JUN13-8/8

## Advanced PowerCast Spreader Disks—Replacing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Remove hardware (A) and bracket (B).

Inspect and replace rubber support (C) and fingers (D) as needed. See your John Deere dealer for replacement parts.

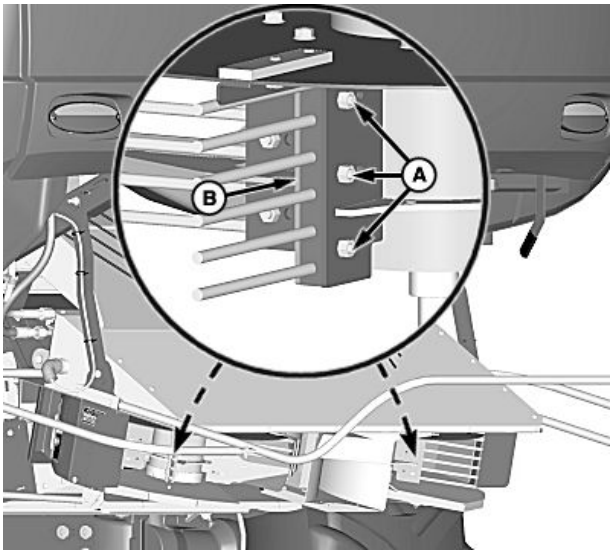
**IMPORTANT: Replace all rubber supports to maintain disk rotational balance.**

Install replacement rubber support and fingers as needed.

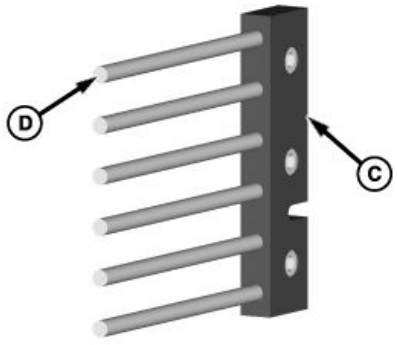
Ensure that rubber support and bracket are put back in the same holes as previously removed.

Tighten hardware and repeat as needed on remaining disk blades.

**A—Hardware**
**B—Bracket**
**C—Rubber Support**
**D—Fingers**




H98693 —UN—19OCT10




H98694 —UN—19OCT10

Continued on next page

OUO6075,0000A32 -19-15JUN11-1/2

Remove cap screws (A) from plate (B).

Inspect and replace paddle bracket (C) as needed. See your John Deere dealer for replacement parts.

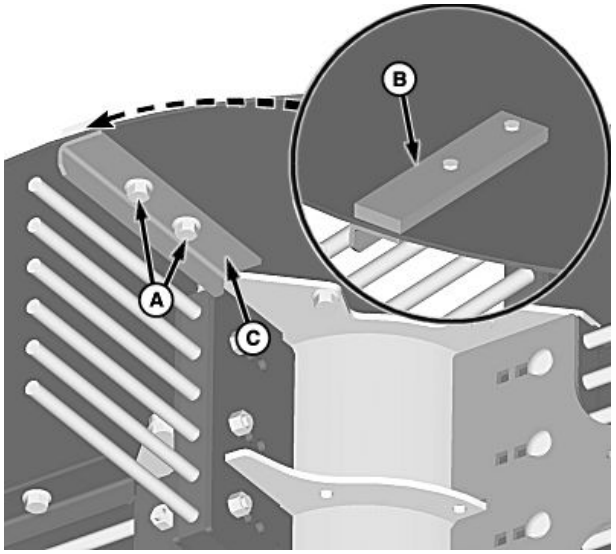
**IMPORTANT: Replace all paddle brackets to maintain disk rotational balance.**

Install replacement paddle bracket as needed.

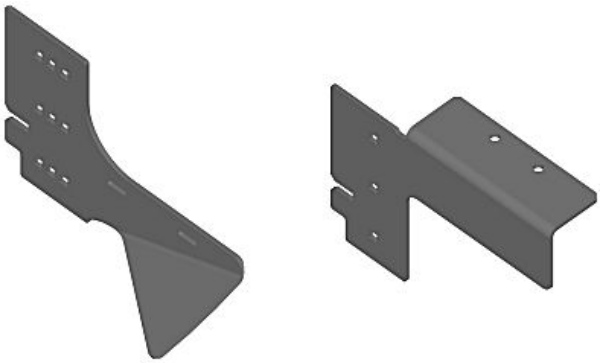
Tighten hardware and repeat as needed on remaining disk blades.

*NOTE: Remove small grain paddles and install corn paddles as needed for crop being harvested.*

**A—Cap Screws**
**B—Plate**
**C—Paddle Brackets**




H98695 —UN—19OCT10



H1102241 —UN—23JUN11

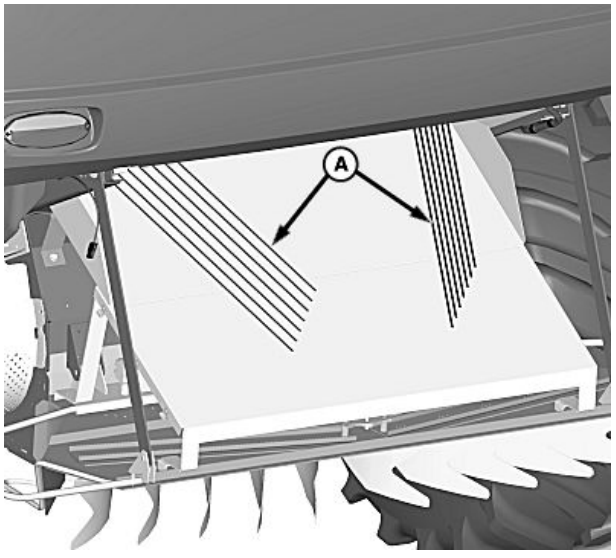
*Small Grain Paddle / Corn Paddle*

OUO6075,0000A32 -19-15JUN11-2/2

## Windrow Convergence Rakes

Convergence rakes (A) are used to divert cut straw material into a narrower windrow.

**A—Convergence Rakes**




H98368 —UN—30SEP10

OUO6075,0000A03 -19-23NOV10-1/1

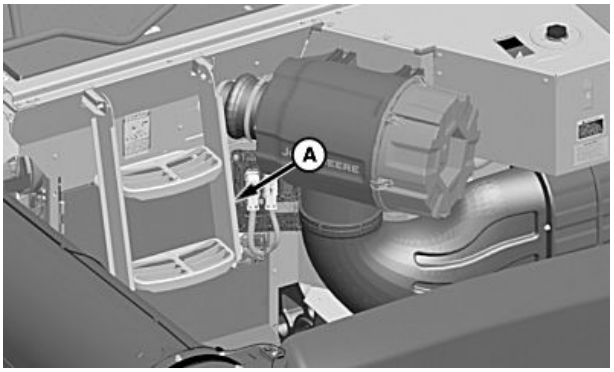
## Grain Tank/Engine Ladder

**CAUTION: Shut OFF engine, set parking brake and remove key.**

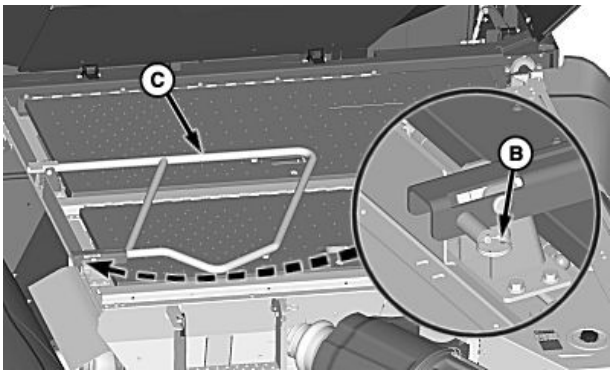
Use ladder (A) to access grain tank.

Pull lock-out pin (B) and rotate handrail (C) up until handrail locks into place.

**A—Ladder**
**B—Lock-Out Pin**
**C—Handrail**




H96783 —UN—09JUN10




H102411 —UN—23JUN11

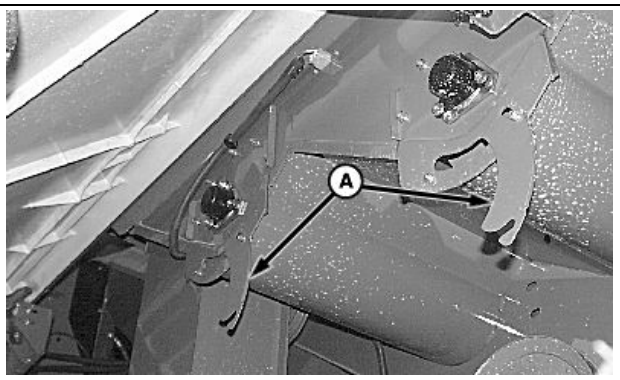
OUO6075,00007CA -19-23JUN11-1/1

## Grain Tank Drain Holes

Grain tank drain hole doors (A) are located on right-hand end of both cross augers and must be opened during storage or for cleaning grain tank.

Loosen cap screws and slide doors away from drain holes.

**A—Drain Hole Doors**




H80946 —UN—27MAY04

OUO6075,0000A44 -19-21OCT10-1/1

## Grain Tank Sample Trough

Grain tank sample trough (A) allows operator to take a sample of the harvested crop from the loading auger without entering the grain tank.

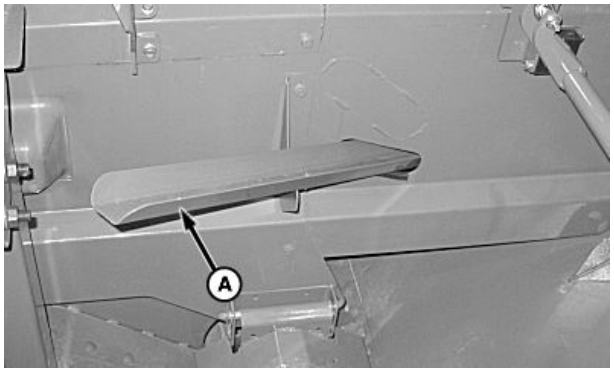
With machine full of harvested crop, move multi-function lever to neutral position and apply the parking brake.

Disengage header, but leave separator engaged.

**CAUTION: Do not have a second person check for a grain tank sample.**

Open door (B). Lower end of grain tank trough spills off sample of harvested crop.

**A—Sample Trough** **B—Door**




H96883 —UN—14JUN10




H96884 —UN—14JUN10

OUO6075,0000A45 -19-13DEC10-1/1

## Grain Tank Fill Sensors—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

*NOTE: Header drive must be engaged for buzzer to sound.*

**Grain Tank 3/4 Full Sensor:**

3/4 full sensor (A) is located on the front side of the clean grain loading auger or on the right-hand grain tank cover. If operating in low flow crop conditions, grain tank sensor (C) can be moved to bottom hole on right-hand grain tank cover.

Adjust sensor by moving it higher or lower in slot (B) or holes (E) to adjust switch "trip" point. The higher the sensor is positioned, the fuller the grain tank is when the buzzer sounds.

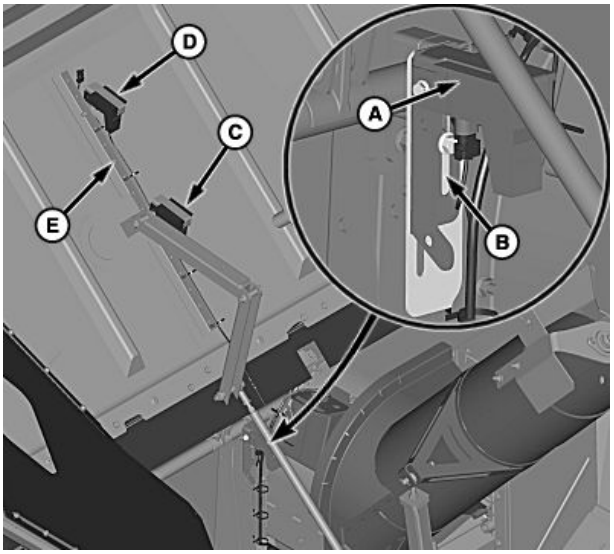
Grain tank 3/4 full icon appears on display when grain reaches the sensor.

When grain tank is 3/4 full, beacon lights illuminate to provide a signal to the grain cart operator that grain tank is nearly full.

**Grain Tank 4/4 Full Sensor:**

Grain tank 4/4 full sensor (D) is located on the right-hand grain tank extension or grain tank cover.

Grain tank 4/4 full icon appears on display when grain reaches the sensor.




H96916 —UN—16JUN10

**A—3/4 Full Sensor**
**B—Slot**
**C—3/4 Full Sensor (Optional Location)**
**D—4/4 Full Sensor**
**E—Holes**

Adjust sensor by moving it higher or lower in holes (E) to adjust switch "trip" point. The higher the sensor is positioned, the fuller the grain tank is when the buzzer sounds.

OUO6075,000104A -19-27FEB12-1/1

## Grain Tank Covers (If Equipped)—Operating

**CAUTION: Grain tank covers must be closed and antenna retained with hook on cab roof before transporting machine on roadway. Avoid contact with low hanging power lines and tree limbs.**

*NOTE: Separator does not engage until grain tank covers are fully open.*

*Clean grain loading auger rises when grain tank covers are opened. Auger swings down when covers are closed.*

Press folding functions shortcut switch (A) on armrest. See Folding Functions Setup in CommandCenter Display Screens section for further information on raising or lowering grain tank covers.

**A—Folding Functions Shortcut Switch**



H96897 —UN—15JUN10




H94727 —UN—27JAN10

OUO6075,00007EF -19-15JUN10-1/1

## Grain Tank Covers (If Equipped)—Adjusting

*NOTE: Only adjust turnbuckles on left-hand side of machine. Turnbuckles on right-hand side of machine are not adjustable.*

Raise grain tank covers fully.

Loosen nut (A) and adjust bolt (B) until a nominal distance (C) is achieved between turnbuckle ends as shown.

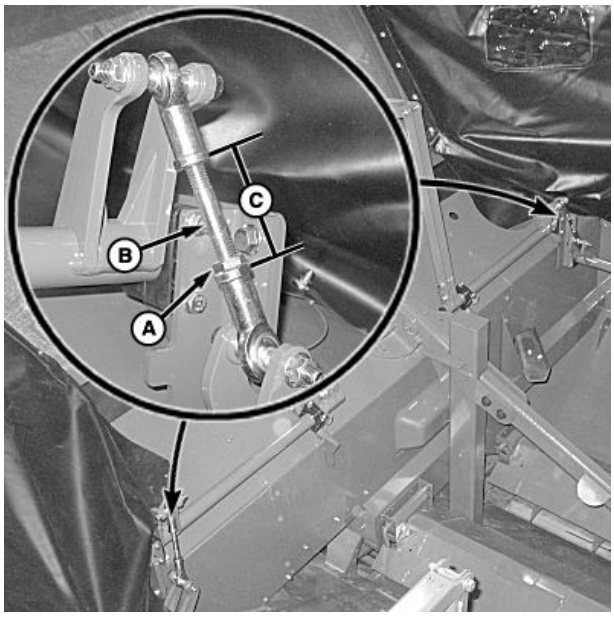
*NOTE: Increasing turnbuckle distance increases clearance between left cover and front/rear covers.*

*Decreasing turnbuckle distance decreases clearance between left cover and front/rear covers.*

Tighten nut when distance is achieved.

Repeat as needed on remaining turnbuckle.

**A—Nut**
**B—Bolt**
**C—Nominal Distance, 64 mm (2-1/2 in.)**




H96901 —UN—15JUN10

OUO6075,00007F0 -19-21OCT10-1/1

## Grain Tank Cross Auger Covers

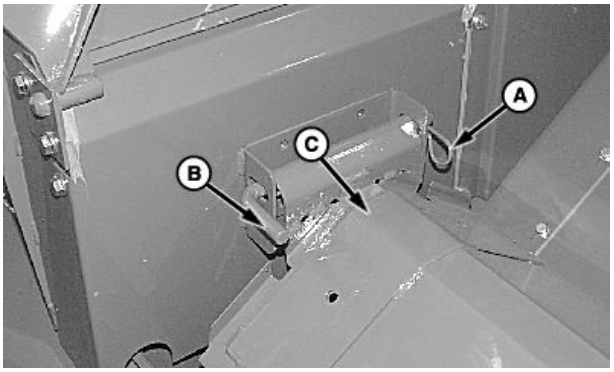
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Remove locking pins (A) and pins (B) holding ends of auger cover (C) to grain tank. Hold cover in desired position and install previously removed pins and locking pins.

Covers should be level and mounted so each cover is the same distance from auger over entire length.

*NOTE: Set auger covers to top position for all crops.*

**A—Locking Pins**
**B—Pins**
**C—Auger Covers**




H80947 —UN—27MAY04

OUO6075,0000A46 -19-27OCT10-1/1

## Unloading Auger Drive Shear Bolt

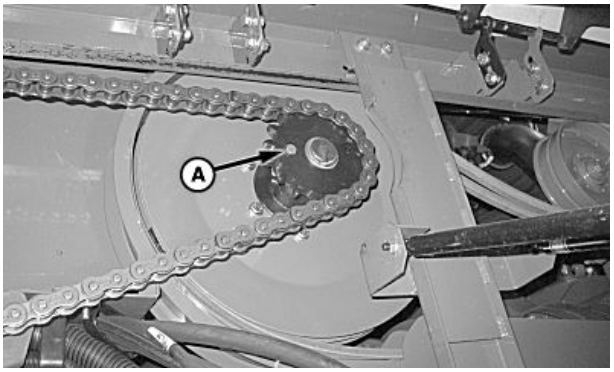
**CAUTION: Shut OFF engine, set parking brake and remove key.**

Use only John Deere supplied shear bolt (A) (cap screw through hub), see your John Deere dealer for replacement shear bolts.

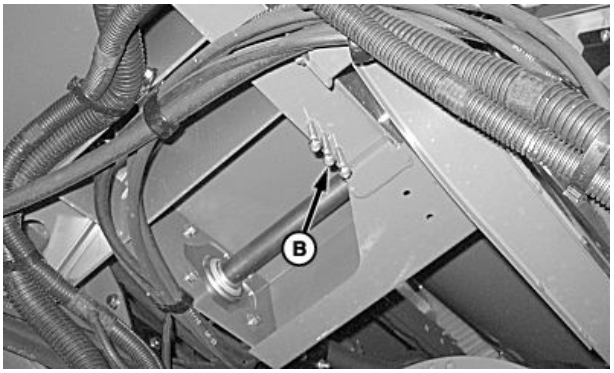
Extra shear bolts (B) are provided to the right of the drive below the countershaft.

**IMPORTANT: Do not install a tire inner tube or a sack to end of unloading auger. Any restriction at end of auger can cause damage to unloading auger system and could cause shear bolt failure.**

**A—Shear Bolt**
**B—Shear Bolts (3 Used)**




H96888 —UN—14JUN10




H96889 —UN—14JUN10

OUO6075,00007E6 -19-14JUN10-1/1

## Grain Tank Loading Auger Deflector

**CAUTION: Shut OFF engine, set parking brake and remove key.**

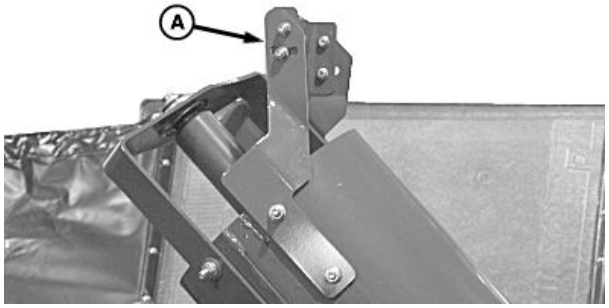
Position deflector (A) as needed.

Counterclockwise rotation:

- Windy conditions when harvesting crops like grass seed or rape.
- Corn—Grain tank will fill to the left and to the rear.

Clockwise rotation:

- Grain—Grain tank will fill to the right and to the front.




H96890 —UN—14JUN10

**A—Deflector**

OUO6075,0000A47 -19-21OCT10-1/1

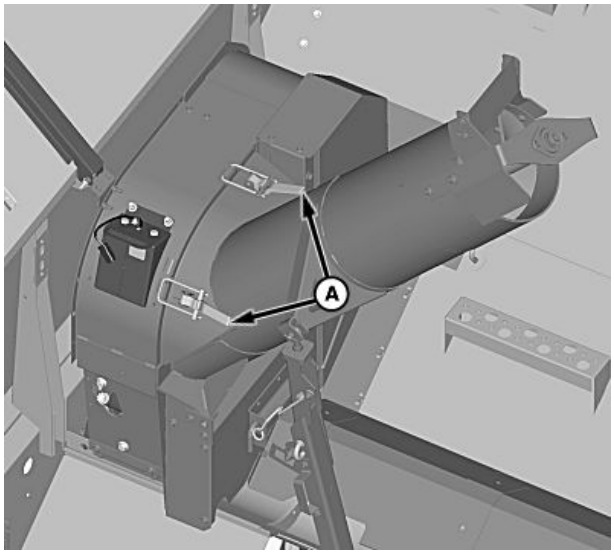
## Grain Tank Loading Auger (Grain Tank Extensions)—Folding

**CAUTION: Grain tank loading auger is heavy. Use extra care when raising or lowering auger.**

Allows operator to reduce height of machine by 0.5 m (1-1/2 ft.) when grain tank extensions are also lowered.

Hold top of auger and release clamps (A). Lower auger onto cross auger cover.

**A—Clamps**




H102235 —UN—15JUN11

OUO6075,0000CA6 -19-15JUN11-1/1

## Grain Tank Loading Auger (Grain Tank Covers)—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

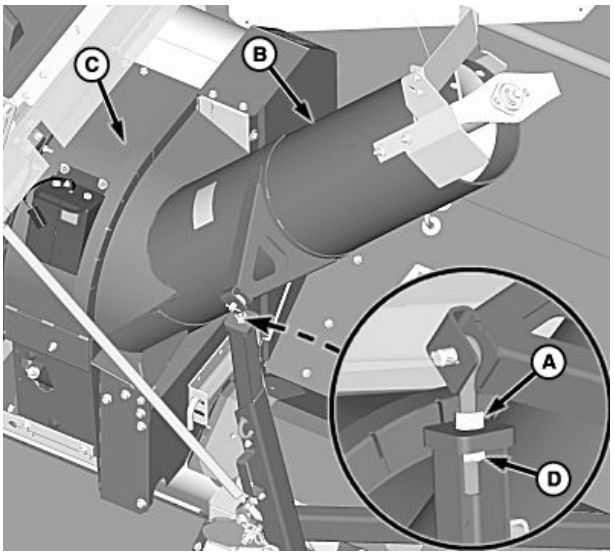
*NOTE: Verify that grain tank covers are fully raised.*

Adjust nut (A) until grain tank loading auger (B) contacts transition housing (C).

Adjust nut (A) an additional 1/2 turn and tighten nut (D) to lock eyebolt in place.

*NOTE: This keeps the loading auger housing tight against the transition housing making sure the loading auger is fully engaged to the driver on the gearbox.*

**A—Nut**
**B—Grain Tank Loading Auger**
**C—Transition Housing**
**D—Nut**




H98919 —UN—28OCT10

OUO6075,0001149 -19-24MAY12-1/2

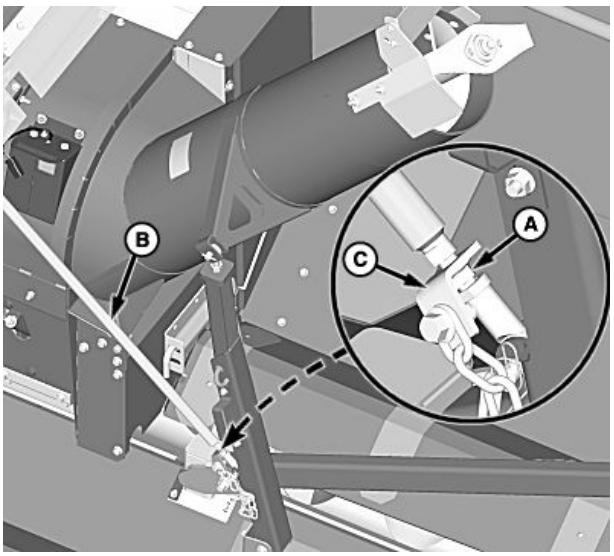
Loosen nut (A) and adjust turnbuckle (B) by hand until a slight amount of resistance is felt on turnbuckle.

*NOTE: Lengthen or shorten turnbuckle to increase or decrease gap between loading auger housing and transition housing.*

*Pin at end of turnbuckle should rotate freely when properly adjusted.*

Verify bracket (C) faces towards front of machine and tighten nut (A) to lock turnbuckle (B) in place.

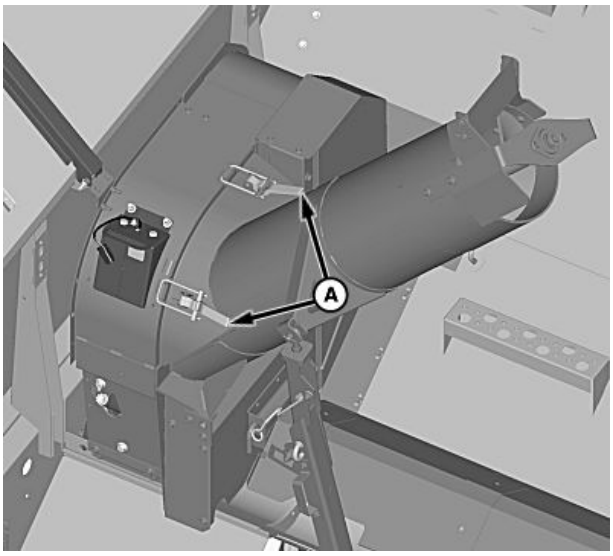
**A—Nut**
**B—Turnbuckle**
**C—Bracket**



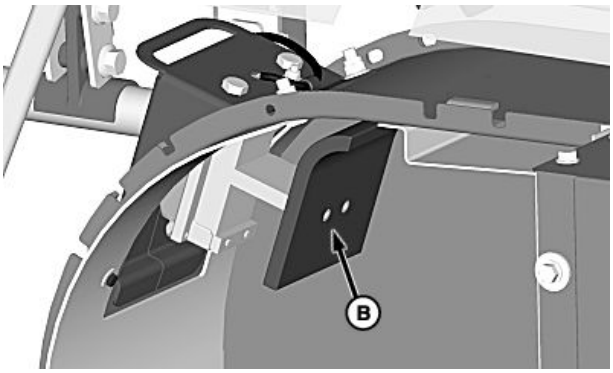

H98920 —UN—28OCT10

OUO6075,0001149 -19-24MAY12-2/2

## Mass Flow Sensor Plate (Grain Tank Extensions)—Cleaning




H102235 —UN—15JUN11




H98923 —UN—28OCT10

**A—Clamps** **B—Mass Flow Sensor**

**CAUTION: Shut OFF engine, set parking brake and remove key.**

**Grain tank loading auger is heavy. Use extra care when raising or lowering auger.**

Hold top of grain tank loading auger and release clamps (A).

Lower grain tank loading auger to access mass flow sensor plate (B).

Raise grain tank loading auger fully against transition housing and retain with clamps.

OUO6075,00010A5 -19-05MAR12-1/1

## Mass Flow Sensor Plate (Grain Tank Covers)—Cleaning

**CAUTION: Shut OFF engine, set parking brake and remove key.**

**DO NOT pull or remove pin (A) to lower grain tank loading auger. Removing pin could result in personal injury or machine damage.**

**Grain tank loading auger is heavy. Use extra care when raising or lowering auger.**

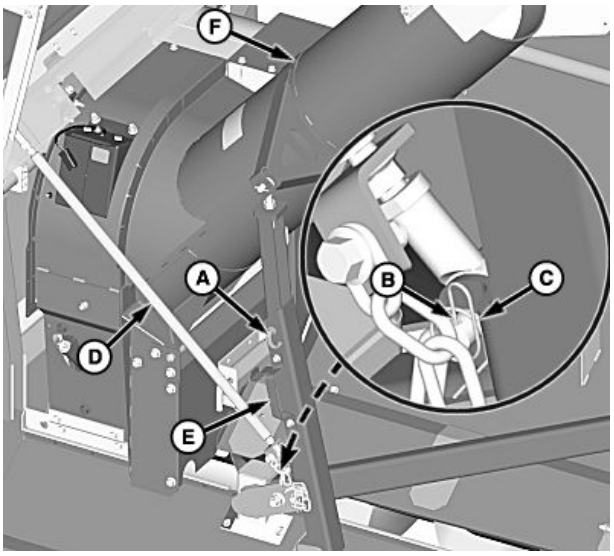
Remove quick-lock pin (B) and pin (C) from turnbuckle (D).

Use handle (E) to assist in lowering grain tank loading auger (F) to access mass flow sensor plate (G).

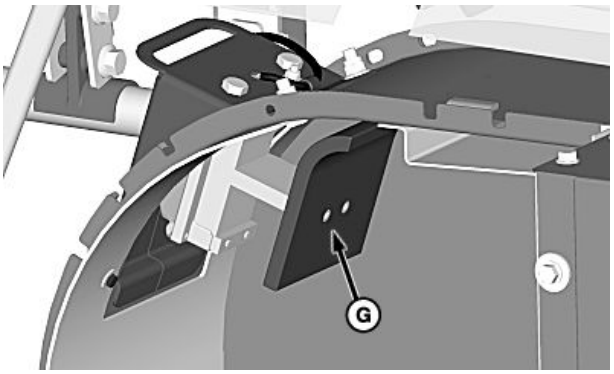
Raise grain tank loading auger fully against transition housing.

Align turnbuckle with hole and retain with pin and quick-lock pin.

**A—Pin**
**B—Quick-Lock Pin**
**C—Pin**
**D—Turnbuckle**
**E—Handle**
**F—Grain Tank Loading Auger**
**G—Mass Flow Sensor**




H102236 —UN—15JUN11




H102237 —UN—15JUN11

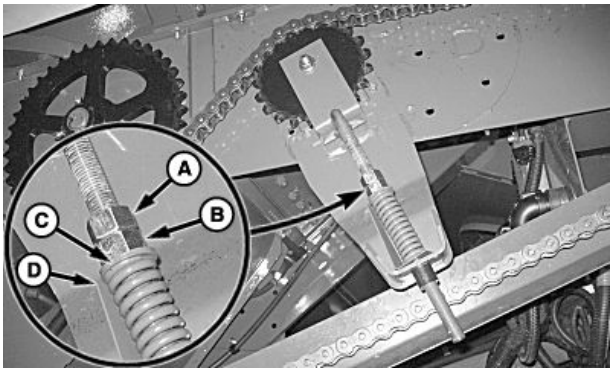
OUO6075,0000A67 -19-15JUN11-1/1

## Unloading Auger Drive Chain—Adjusting

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Loosen lock nut (A). Tighten nut (B) until washer (C) aligns with end of gauge (D). Tighten locking nut.

**A—Nut**
**B—Nut**
**C—Washer**
**D—End of Gauge**




H96891 —UN—14JUN10

OUO6075,000113B -19-10MAY12-1/1

## Unloading Auger Cradle Support—Adjusting

**CAUTION: Shut OFF engine, set park brake and remove key.**

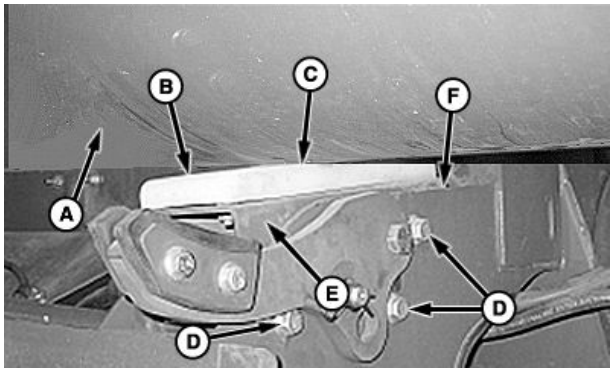
1. Swing unloading auger to storage or transport position.

*NOTE: No gap should exist between unloading auger (A) and wear plate (B) at location (C) when adjusted properly.*

2. If gap exists between unloading auger and wear plate, loosen cap screws (D) and adjust cradle support (E) vertically until wear plate contacts lower surface of unloading auger.

*NOTE: Top surface of cradle support (E) MUST be parallel with top of grain tank plate (F).*

3. Tighten cap screws when cradle is adjusted.

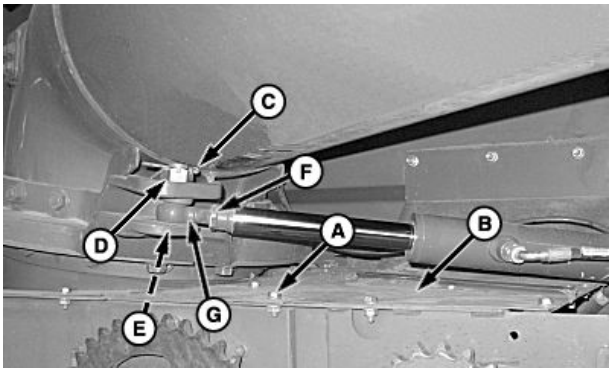



H106291 —UN—19DEC12

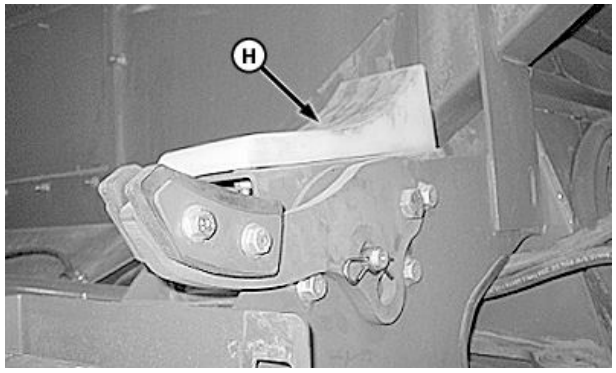
**A—Unloading Auger**
**B—Wear Plate**
**C—Location**
**D—Cap Screws**
**E—Cradle Support**
**F—Grain Tank Plate**

OUO6041,0000825 -19-29JAN13-1/1

## Unloading Auger Position—Adjusting




H106293 —UN—07DEC12




H106322 —UN—11DEC12

**A—Cap Screws (8 Used)**
**B—Cover**
**C—Cotter Pin**
**D—Nut and Washer**
**E—Pin**
**F—Nut**
**G—Eyebolt**
**H—Wear Plate**

**CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Unloading auger MUST contact wear plate when adjusted properly.*

1. Remove cotter pin (C), nut and washer (D) and pin (E).
2. Loosen nut (F) and adjust eyebolt (G) until unloading auger lightly contacts wear plate surface (H).
3. Install previously removed hardware and cover after unloading auger is adjusted.

OUO6041,0000826 -19-29JAN13-1/1

## Unloading Auger Lock Arm Positions

**CAUTION: Shut OFF engine, set park brake and remove key.**

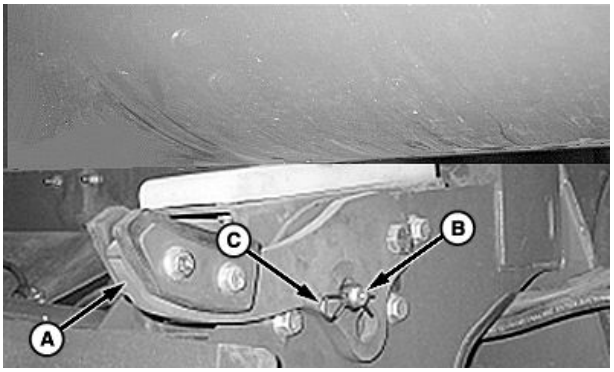
**Field Position:**

Lower lock arm (A) as shown and install pin (B) and retain with spring pin (C).

**Storage/Transport Position:**

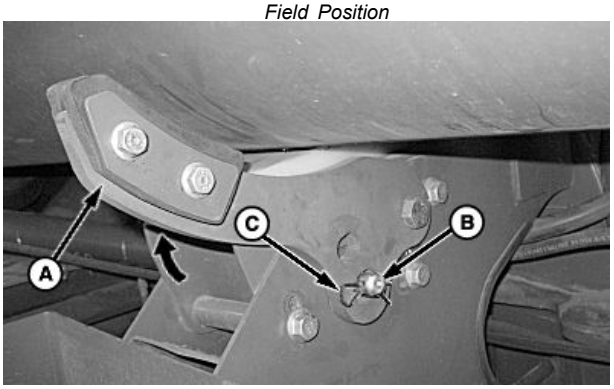
Raise lock arm (A) as shown and install pin (B) and retain with spring pin (C).

**A—Lock Arm**
**B—Pin**
**C—Spring Pin**




H106300 —UN—10DEC12

*Field Position*




H106292 —UN—10DEC12

*Storage Position/Transport Position*

OUO6041,0000827 -19-29JAN13-1/1

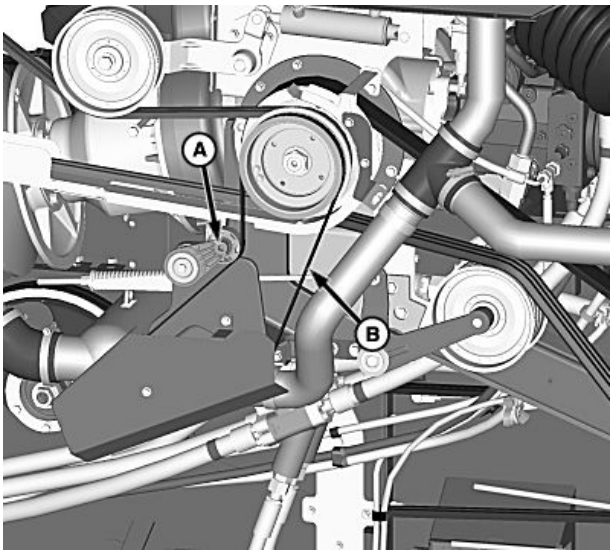
## Unloading Auger Drive Belt—Replacing (S660 and S670)

**CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Verify that unloading auger hydraulic cylinder is disengaged and retracted.*

Use breaker bar to relieve tension from tensioner arm (A) to remove engine debris management belt (B).

**A—Tensioner Arm**
**B—Engine Debris Management Belt (If Equipped)**



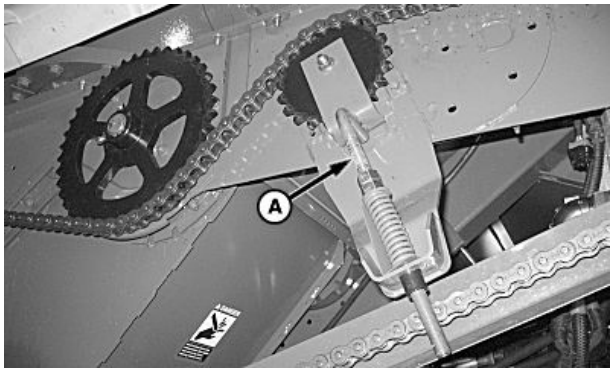

H108390 —UN—25JUN13

**Continued on next page**

OUO6075,000153F -19-25JUN13-1/3

Loosen tensioner (A) on unloading auger drive chain.

**A—Tensioner**




H105391 —UN—09MAY12

OUO6075,000153F -19-25JUN13-2/3

Remove chain from sprocket (A).

Remove cap screws from belt trap (B).

Remove belt trap and belts (C).

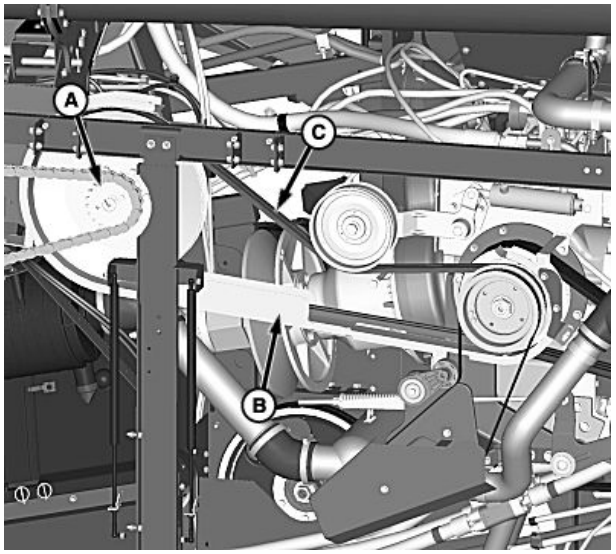
Install replacement belts and previously removed belt trap.

Use breaker bar to relieve tension from tensioner arm to install engine debris management belt.

Install shield and retain with cap screws.

Install drive chain and adjust tensioner until washer aligns with end of gauge.

**A—Sprocket**
**B—Belt Trap**
**C—Belts**




H108394 —UN—25JUN13

OUO6075,000153F -19-25JUN13-3/3

## Unloading Auger Drive Belt—Replacing (S680, S685 and S690)

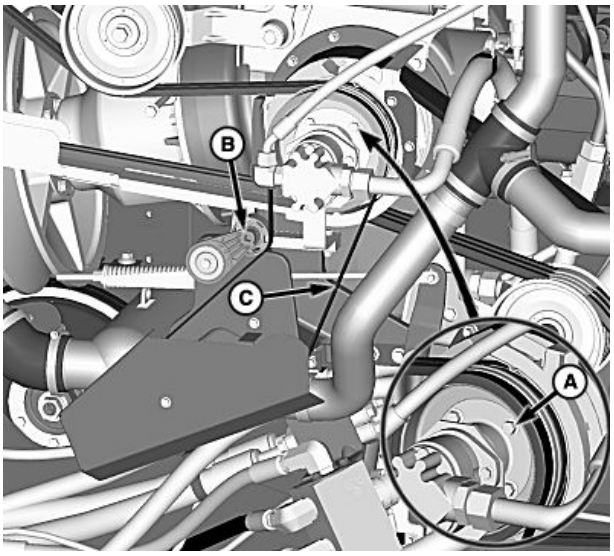
**CAUTION: Shut OFF engine, set park brake and remove key.**

*NOTE: Verify that unloading auger hydraulic cylinder is disengaged and retracted.*

Remove cap screws (A) and support pump assembly out of the way.

Use breaker bar to relieve tension from tensioner arm (B) to remove engine debris management belt (C).

**A—Cap Screws**
**B—Tensioner Arm**
**C—Engine Debris Management Belt (If Equipped)**

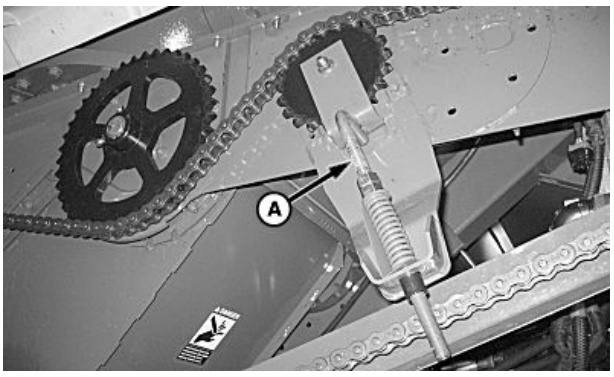



H108393 —UN—25JUN13

OUO6075,0001540 -19-25JUN13-1/3

Loosen tensioner (A) on unloading auger drive chain.

**A—Tensioner**




H105391 —UN—09MAY12

**Continued on next page**

OUO6075,0001540 -19-25JUN13-2/3

Remove chain from sprocket (A).

Remove cap screws from belt trap (B).

Remove belt trap and belts (C).

Install replacement belts and previously removed belt trap.

Install pump assembly and tighten cap screws to specification.

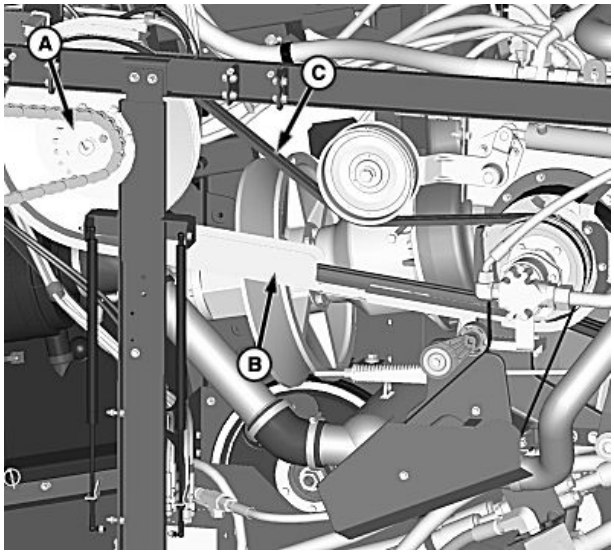
**Specification**

Cap Screws—Torque.....80 N·m (59 lb.-ft.)

Use breaker bar to relieve tension from tensioner arm to install engine debris management belt.

Install shield and retain with cap screws.

Install drive chain and adjust tensioner until washer aligns with end of gauge.




H108395 —UN—25JUN13

**A—Sprocket**
**B—Belt Trap**
**C—Belts**

OUO6075,0001540 -19-25JUN13-3/3

## Welding Near Electronic Control Units

**IMPORTANT: Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.**

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Short the positive and negative vehicle battery cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.
6. After the repair area is complete and all components are back in their proper locations, connect positive (+) battery cable(s) first, then connect negative (-) battery cable(s).



TS953 —UN—15MAY90

OUO6075,00003DD -19-01JUL09-1/1

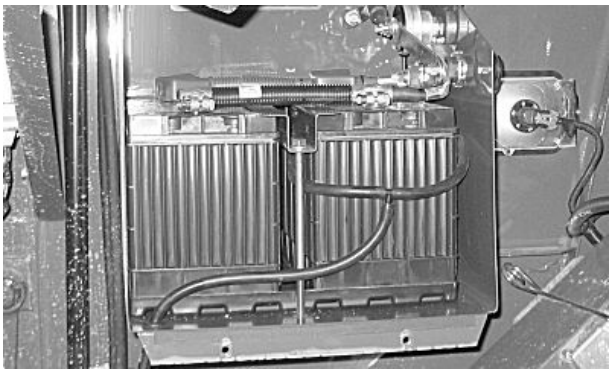
## Keep Electronic Control Unit Connectors Clean

**IMPORTANT: Do not open control unit and do not clean with a high-pressure spray. Moisture, dirt, and other contaminants may cause permanent damage.**

1. Keep terminals clean and free of foreign debris. Moisture, dirt, and other contaminants may cause the terminals to erode over time and not make a good electrical connection.
2. If a connector is not in use, put on the proper dust cap or an appropriate seal to protect it from foreign debris and moisture.
3. Control units are not repairable.
4. Since control units are the components LEAST likely to fail, isolate failure before replacing by completing a diagnostic procedure. (See your John Deere dealer.)
5. The wiring harness terminals and connectors for electronic control units are repairable.

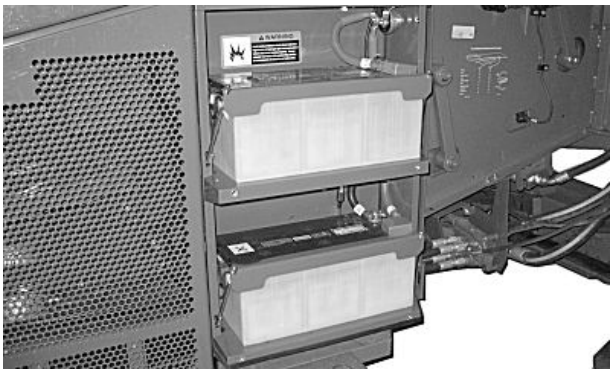
DX,WW,ECU04 -19-11JUN09-1/1

## Observe Electrical Precautions



H85704 —UN—17APR06

*S660 and S670*



H96581 —UN—30JUN10

*S680, S685 and S690*

**CAUTION: Machine must be on a flat surface to accurately check fluid levels. Battery fluid level should be visible at the top of each fill port covering the plates in each cell.**

**Keep all sparks and flames away from batteries as gas given off by electrolyte is explosive.**

**To avoid sparks, connect ground cable last and disconnect it first. To avoid shocks and burns, turn battery disconnect switch OFF before servicing any part of the electrical system or when removing batteries.**

OUO6075,00015A4 -19-25JUN13-1/1

## Basic Electrical Component Handling / Precautions for Vehicles Equipped with Computer Controlled Systems

- Never disconnect the batteries while the key switch is on and the engine is running.
  Why: This can cause electrical voltage spikes that can damage electronic components.
- Do not connect jumper cables while the key switch is on.
  Why: This can cause electrical voltage spikes that can damage electronic components.
- Disconnect batteries prior to recharging (if possible)
  Why: Electrical loads in the machine can slow the recharging process. Battery chargers can cause electrical voltage spikes that can damage electronic components.
- Never jump start the machine with a voltage higher than the machine is designed to operate on
  Why: This can damage electronic components
- Do not connect or disconnect electrical connectors while the key switch is on or the machine is running.
  Why: This can cause computer system errors from interrupting a computer program while it is running and electrical voltage spikes that are produced can damage electronic components.
- Do not apply power or ground to any component as a test unless specifically instructed to do so.
  Why: Connecting the wrong voltage to the wrong point of an electronic system can cause electronic component failures.
- When welding on the machine, make sure to connect ground lead to the parts being welded. For maximum protection disconnect all electronic controllers before welding.
  Why: The high currents associated with welding can damage wiring harnesses that are involved in the ground path. Welding can also cause electrical voltage spikes that can damage electronic components.

KC01776,00003CF -19-19MAR01-1/1

## Handling Batteries Safely

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

**Avoid hazards by:**

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

**If acid is spilled on skin or in eyes:**

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

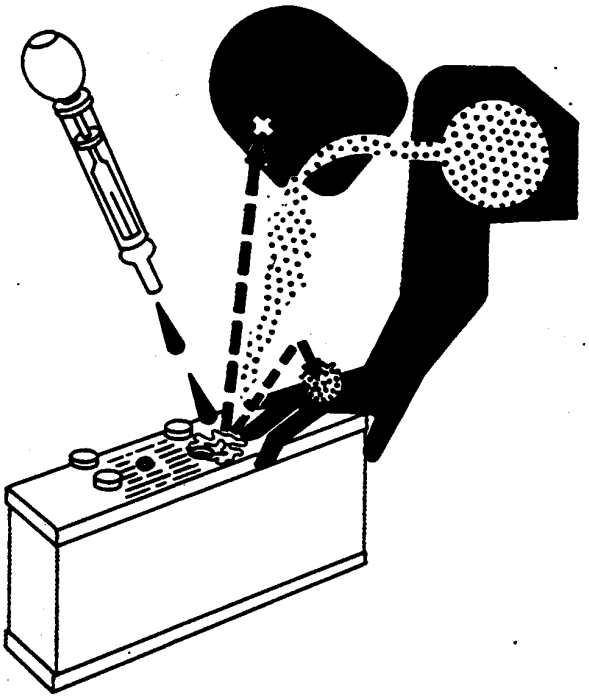
**If acid is swallowed:**

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).
3. Get medical attention immediately.

**WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**



TS204 —UN—15APR13



TS203 —UN—23AUG88

DX,WW,BATTERIES -19-02DEC10-1/1

## Batteries—Safe Installation

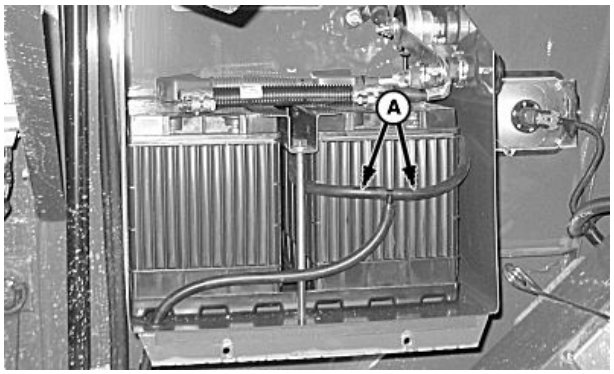
**CAUTION: Machine must be on a flat surface to accurately check fluid levels. Battery fluid level should be visible at the top of each fill port covering the plates in each cell.**

**Avoid serious injury or death from explosions. High levels of hydrogen gas can accumulate if the battery box is not vented properly. Always reinstall the vent tubes (A) after performing service or maintenance on the batteries or the battery box. Verify that the ventilation hoses are not bent or kinked.**

**Replacement batteries must have a ventilation fitting suited for ventilation hose attachment. See your John Deere dealer for replacement batteries equipped with ventilation fittings.**

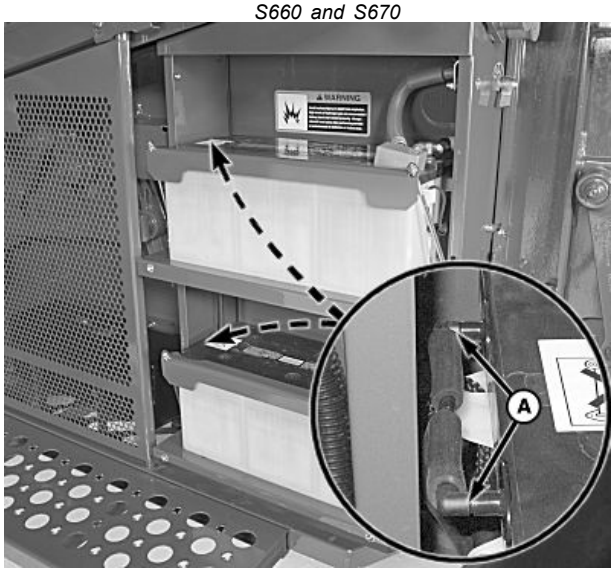
**If ventilation tubes are not attached to the battery then the battery lid must remain off whenever the machine engine is running or whenever the batteries are being charged with an external charger.**

**A—Vent Tubes**




H85705 —UN—17APR06

*S660 and S670*




H96586 —UN—30JUN10

*S680, S685 and S690*

OUO6075,0001541 -19-01JUL13-1/1

## Battery Cables—Connecting

**CAUTION: BATTERIES ARE NEGATIVE GROUNDED ONLY. Always connect battery ground strap to negative (-) posts of battery. Connect starter cable to positive (+) post of battery. Reversed polarity in battery or alternator connections results in permanent damage to electrical system. Connect ground strap to negative (-) terminal last.**

**IMPORTANT: Batteries must have same terminal locations.**

When connecting batteries:

Turn off all switches and accessories. Clean battery posts and terminals.

QUICKLY TAP ground strap to negative post. Arcing must not occur. If arcing occurs, DO NOT MAKE CONNECTION. Check to see if battery position is reversed.

If arcing still occurs, check again that all switches and accessories are off. Then check for shorts, broken wires and loose or corroded connections.

Connect negative (-) battery ground straps.

OUO6075,00007D7 -19-19MAR07-1/1

## Batteries—Charging

Keep battery fully charged, especially during cold weather. Failure to keep battery fully charged, above 12.50 volts, may result in reduced battery life.

**CAUTION: Never charge a frozen battery. Thaw at room temperature before connecting to battery charger. Only charge batteries in a well ventilated area. Disconnect both cables from battery terminals when charging batteries in combine.**

**IMPORTANT: If batteries are not fully charged electrolyte may freeze.**

Determine which battery needs to be charged.

Disconnect both battery cables and connect charger positive cable to "+" terminal and charger negative cable to "-" terminal.

Follow instructions provided with charger. Always charge batteries with a 12-volt charger.

OUO6075,00007D8 -19-19MAR07-1/1

## Batteries—Checking Specific Gravity

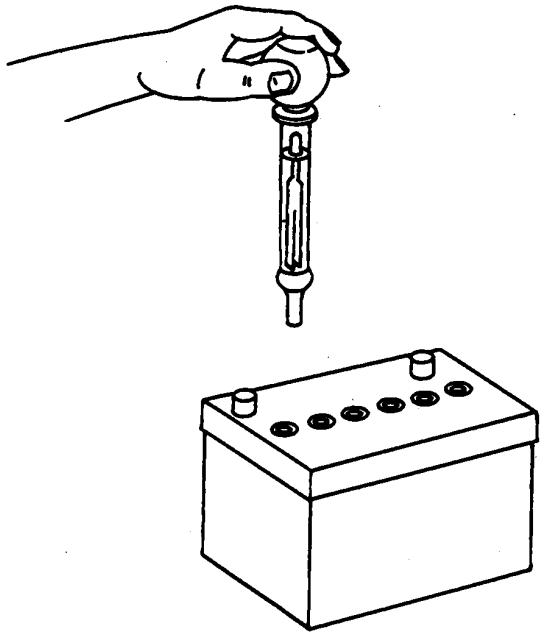
**CAUTION: Batteries must be on a flat surface to accurately check fluid levels. Battery fluid level should be visible at the top of each fill port covering the plates in each cell.**

**Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.**

**Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.**

Check specific gravity of electrolyte in each cell with a battery hydrometer to determine battery condition. Charge battery if reading is below 1.225. Replace battery if difference between cells is more than 0.050.

Always correct specific gravity reading for electrolyte temperature variation. Add 0.004 for every 10°F above 80°F. (Add 0.007 for every 10°C above 27°C.) Subtract at same rate if electrolyte temperature is below 80°F (27°C). Corrected specific gravity of a fully charged battery is 1.265 — 1.280.



TS182 —UN—23AUG88

OUO6075,00007D9 -19-19MAR07-1/1

## Batteries—Connecting Booster

Cold weather starting can be easier by connecting an additional 12-volt battery in parallel.

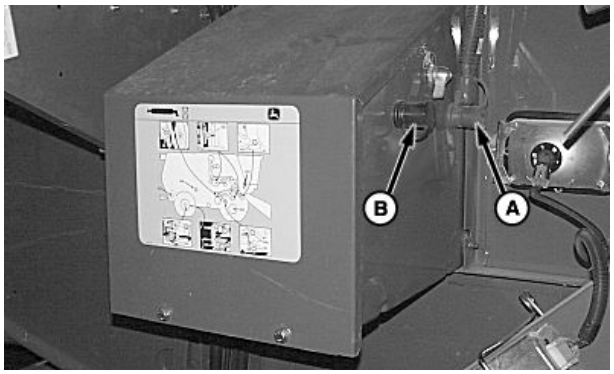
**⚠ CAUTION: Gas given off by batteries is explosive. Avoid sparks near batteries.**

**IMPORTANT: Never connect jumper cables with key switch ON. Never jump-start with more than 12 volts.**

Remove protective caps from posts.

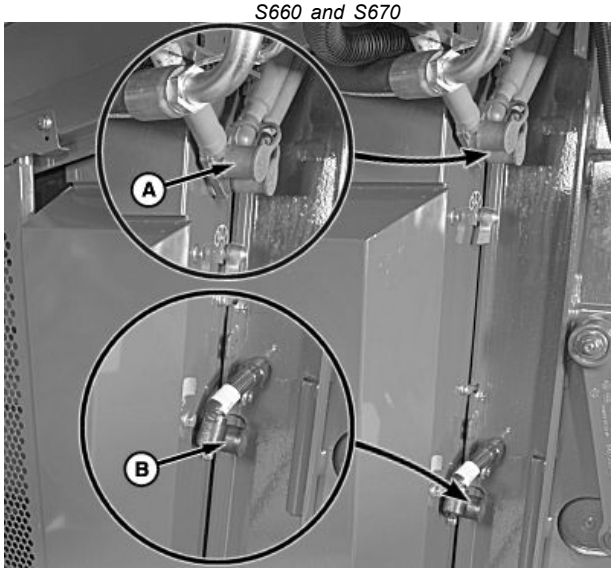
First jumper cable must first be connected to positive (+) post of booster battery. Connect other end to positive (+) post (A) of machine battery. Second jumper cable must first be connected to negative (-) post of booster battery. Connect other end to negative (-) post (B) of machine battery.

**A—Positive (+) Post** **B—Negative (-) Post**




H1104930 —UN—27FEB12

*S660 and S670*




H96584 —UN—24MAY10

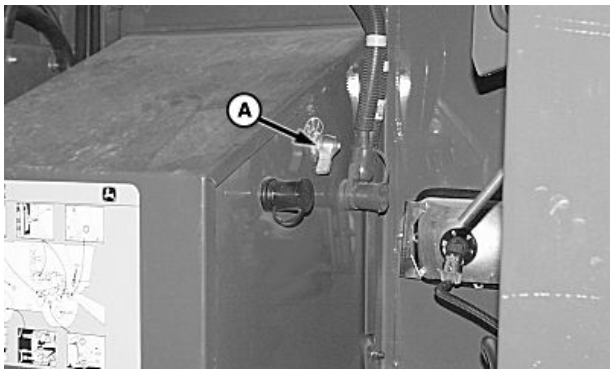
*S680, S685 and S690*

OUO6075,0001542 -19-19JUN13-1/1

## Batteries—Removing and Installing (S660 and S670)

1. Turn battery disconnect switch (A) counterclockwise to OFF position.

**A—Battery Disconnect Switch**



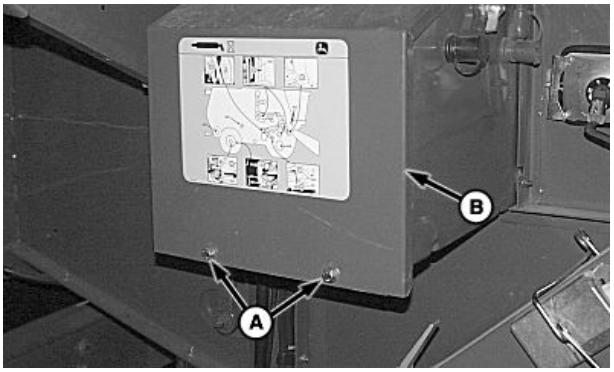

H83428 —UN—01JUN05

**Continued on next page**

OUO6075,0000FBD -19-10MAY12-1/4

2. Remove cap screws (A) and cover (B) to access batteries.

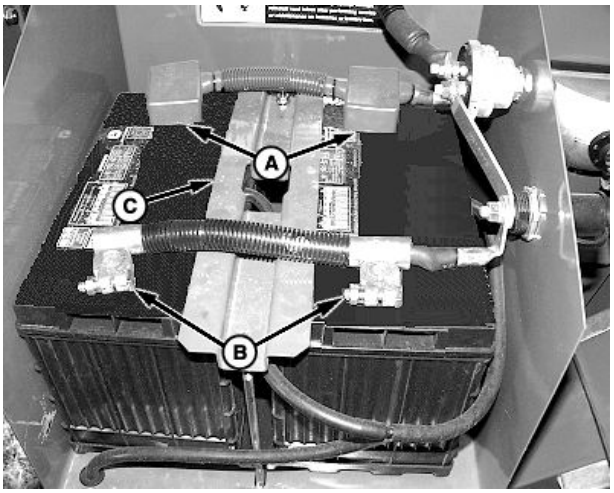
**A—Cap Screws** **B—Cover**




H83464 —UN—01JUN05

OUO6075,0000FBD -19-10MAY12-2/4

3. Disconnect negative (-) cable (B) from batteries and negative jump start post.
4. Disconnect positive (+) cable (A) and positive jump start post.
5. Remove clamp (C) and battery vent tubes.
6. Clean batteries and battery mounting area.
7. Install batteries in battery box and on plastic tray.
8. Clean battery cables and posts and reconnect battery vent tubes.
9. Loosely install clamp (C).
10. Attach positive (+) cable (A) and positive jump start post.
11. Attach negative (-) cable (B) and negative jump start post.
12. Tighten battery clamp.



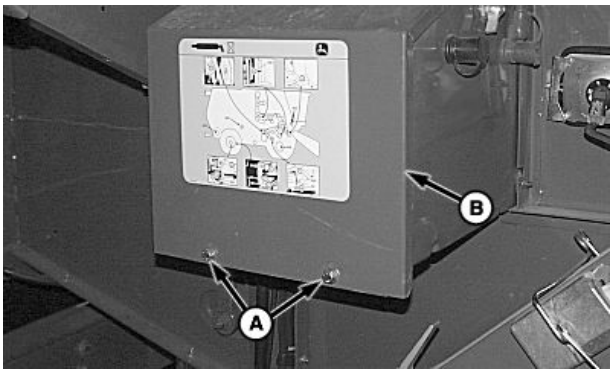

H83385 —UN—11JUL05

**A—Positive Cable** **C—Clamp**
**B—Negative Cable**

OUO6075,0000FBD -19-10MAY12-3/4

13. Install cover (B) and retain with previously removed cap screws (A).
14. Turn battery disconnect switch clockwise to ON position.

**A—Cap Screws** **B—Cover**



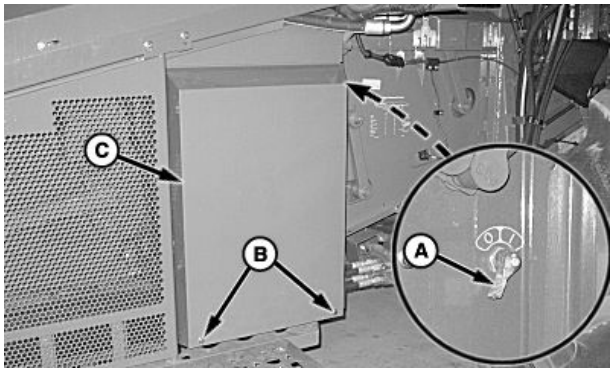

H83464 —UN—01JUN05

OUO6075,0000FBD -19-10MAY12-4/4

## Batteries—Removing and Installing (S680, S685 and S690)

1. Turn battery disconnect switch (A) counterclockwise to OFF position.
2. Remove cap screws (B) and cover (C) to access batteries.

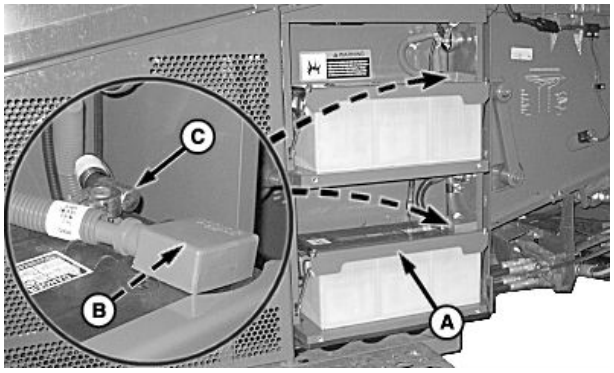
**A—Battery Disconnect Switch**
**B—Cap Screws (9 Used)**
**C—Cover**




H96582 —UN—30JUN10

OUO6075,000123E -19-09OCT12-1/2

3. Remove clamp (A) and battery vent tubes.
4. Disconnect positive (+) cable (B) and negative (-) cable (C).
5. Clean batteries and battery mounting area.
6. Install batteries in battery box.
7. Clean battery cables, posts and reconnect battery vent tubes.
8. Attach positive (+) cable and negative (-) cable.
9. Install and tighten battery clamp.
10. Install cover and retain with previously removed cap screws.
11. Turn battery disconnect switch clockwise to ON position.

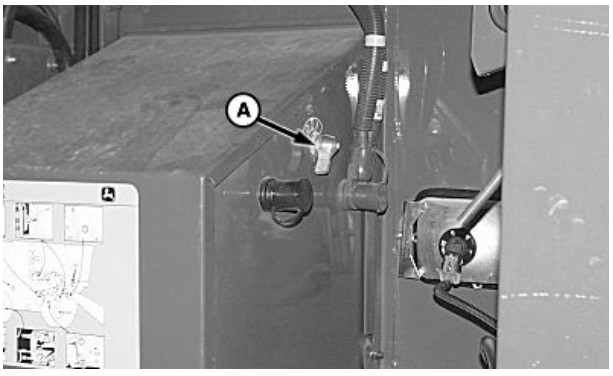



H96583 —UN—30JUN10

**A—Clamp**
**B—Positive Cable**
**C—Negative Cable**

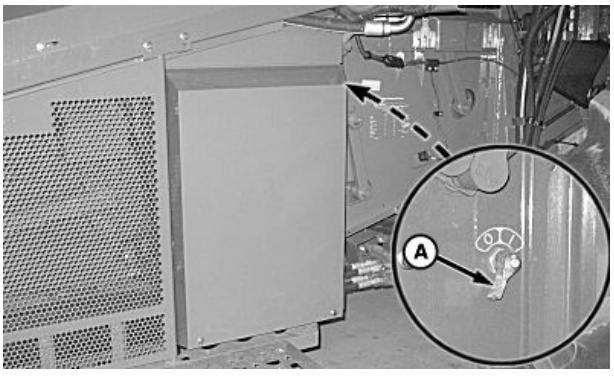
OUO6075,000123E -19-09OCT12-2/2

## Battery Disconnect Switch




H83428 —UN—01JUN05

*S660 and S670*




H96585 —UN—30JUN10

*S680, S685 and S690*

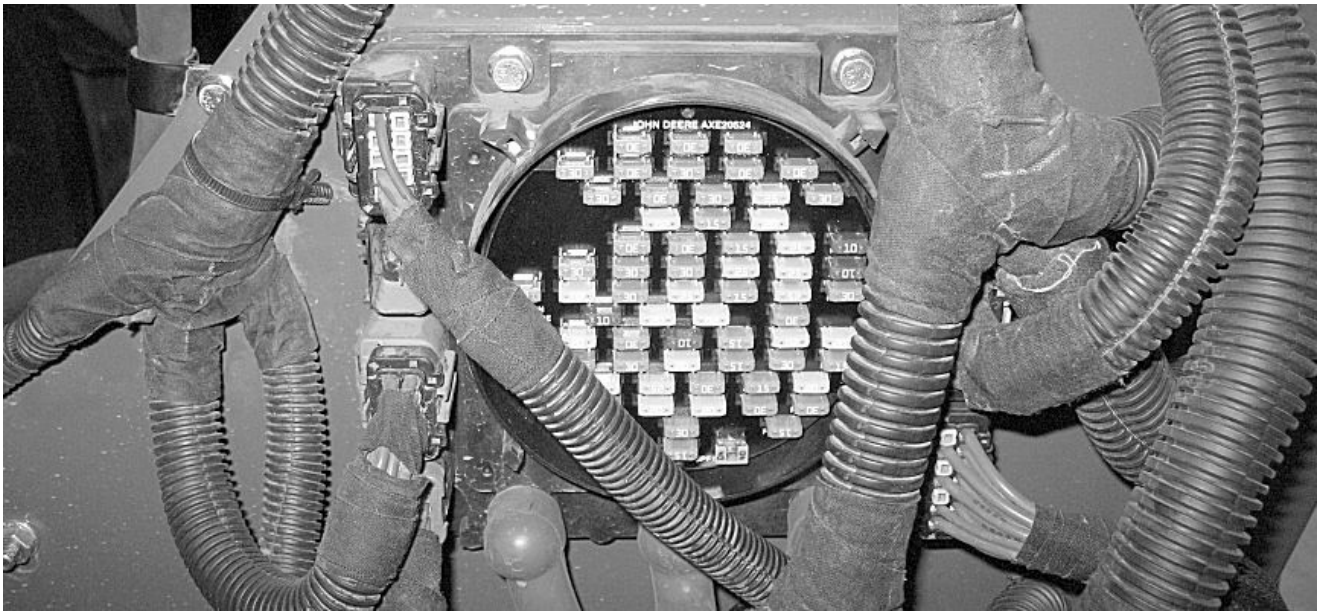
**A—Battery Disconnect Switch**

*NOTE: Turn battery disconnect switch OFF if machine is stored longer than 25 days. If storage period is longer than 90 days, remove negative lead to batteries to minimize load to batteries.*

Turn battery disconnect switch (A) clockwise to turn ON machine electrical system or turn switch counterclockwise to turn OFF machine electrical system.

OUO6075,0001544 -19-19JUN13-1/1

## Fuse Center




H105754 —UN—05SEP12

*NOTE: Fuse center is located on right-hand side for S660 and S670 machines and on left-hand side for S680, S685 and S690 machines.*

- F1 — F2 Not Used
- F3 (cc# 0642) Right Control Unit 2 (RC2) Power 1
- F6 (cc# 0652) Right Control Unit 2 (RC2) Power 2
- F7 (cc# 0342) Right Control Unit 1 (RC1) Power 1
- F8 (cc# 0842) Left Power Module 1B (LPM1B) Power 2
- F9 (cc# 0362) Right Power Module 1 (RPM1) Power 5
- F10 (cc# 8232) Cab Control Unit (CAB) Power 2
- F11 (cc# 0332) Right Power Module 1 (RPM1) Power 3
- F12 (cc# 0322) Right Power Module 1 (RPM1) Power 2
- F13 — Not Used
- F14 (cc# 8022) Cab Power Module A (CPMA) Power 1
- F15 (cc# 0352) Right Power Module 1 (RPM1) Power 4
- F16 — Not Used
- F17 (cc# 0912) Moisture Sensor Power
- F18 (cc# 0372) Right Control Unit 1 (RC1) Power 2
- F19 (cc# 8042) Cab Power Module A (CPMA) Power 3
- F20 (cc# 8162) Dome Light and Power Mirrors
- F21 (cc# 8132) Cab Power Module B (CPMB) Power 4
- F22 (cc# 8002) Cab Control Unit (CAB) Power 1
- F23 (cc# 8122) Cab Power Module B (CPMB) Power 3
- F24 (cc# 8142) Cab Power Module B (CPMB) Power 5
- F25 — Not Used
- F26 (cc# 8992) Miscellaneous Cab Power 3
- F27 (cc# 0152) Left Control Unit 1 (LC1) Power 2
- F28 (cc# 8182) Recirculation Fan Power 2
- F29 (cc# 8082) Recirculation Fan Power 1
- F30 (cc# 8242) Auxiliary Outlet Unswitched Power
- F31 (cc# 0012) Unswitched Battery Power
- F32 (cc# 0142) Left Power Module 1A (LPM1A) Power 4
- F33 (cc# 8092) Accessory Power
- F34 (cc# 0112) Left Power Module 1A (LPM1A) Power 1
- F35 — Not Used
- F36 (cc# 0312) Right Power Module 1 (RPM1) Power 1
- F37 (cc# 8172) Seat Compressor
- F38 (cc# 8072) Miscellaneous Cab Power 1
- F39 (cc# 4972) AutoTrac™ (SSU/XSC) Unswitched Power
- F40 (cc# 8052) Cab Power Module A (CPMA) Power 4
- F41 (cc# 8032) Cab Power Module A (CPMA) Power 2
- F42 (cc# 8152) Miscellaneous Cab Power 2
- F43 (cc# 5222) Engine Control Unit (ECU) Power 3
- F44 (cc# 0712) Left Power Module 2B (LPM2B) Power 1
- F45 (cc# 0122) Left Power Module 1A (LPM1A) Power 2
- F46 (cc# 0132) Left Power Module 1A (LPM1A) Power 3
- F47 (cc# 8192) Automatic Temperature Control (ATC) Power
- F48 (cc# 5012) Engine Control Unit (ECU) Power 1
- F49 (cc# 8062) Cab Power Module A (CPMA) Power 5
- F50 — Not Used
- F51 (cc# 0162) Left Control Unit 1 (LC1) Power 1
- F52 — Not Used
- F54 (cc# 0422) ProDrive™ Transmission Control Unit (PTP) Power (If Equipped)
- F55 (cc# 5022) Engine Control Unit (ECU) Power 2
- F56 (cc# 5042) Fuel Transfer Pump
- F57 (cc# 0222) Left Power Module 2B (LPM2B) Power 2
- F58 — Not Used
- F62 — Not Used
- F63 (cc# 5062) Dosing Pump Power
- F64 (cc# 0212) Left Power Module 2A (LPM2A) Power 1
- F67 — Not Used
- F68 (cc# 0172) Left Power Module 1A (LPM1A) Power 5
- F69 (cc# 0972) Flex Residue Chopper Power 2 (If Equipped)
- F70 — Not Used
- F71 — Not Used
- F73 (cc# 0252) Left Control Unit 2 (LC2) Power 1
- F74 (cc# 0972) Flex Residue Chopper Power 1 (If Equipped)
- F75 — F77 Not Used
- F78 (cc# 0242) Left Control Unit 2 (LC2) Power 1
- F79 — Not Used

Continued on next page

OUO6075,000159C -19-25JUN13-1/2

- F80 (cc# 0722) Left Power Module 2B (LPM2B) Power 2

OUO6075,000159C -19-25JUN13-2/2

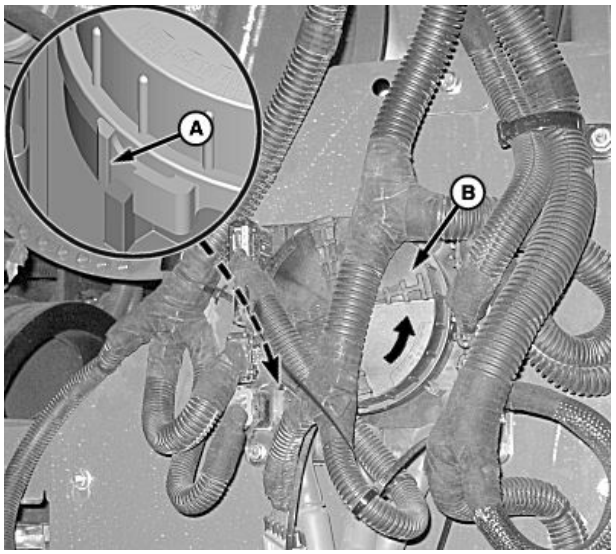
## Fuse Center Cover

*NOTE: Fuse center is located on right-hand side for S660 and S670 machines and on left-hand side for S680, S685 and S690 machines.*

*Spare fuses and fuse puller are located underneath cover.*

Press lock tab (A) and turn cover (B) counterclockwise to open fuse center.

**A—Lock Tab** **B—Cover**




H105753 —UN—04OCT12

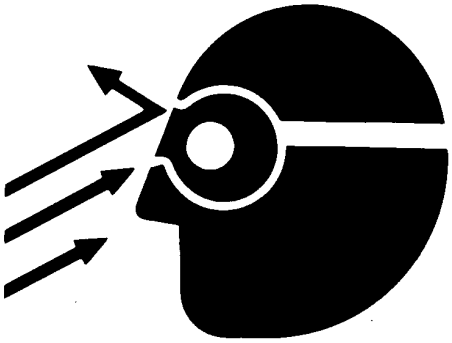
OUO6075,0001545 -19-19JUN13-1/1

## Safety Rules When Replacing Halogen Bulbs

**CAUTION: Halogen bulbs (A) contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:**

- **Turn light switch OFF and allow bulb to cool before changing bulbs. Leave switch OFF until bulb change is complete.**
- **Wear eye protection when changing bulb.**
- **Handle bulb by its base. Wear protective gloves or avoid touching light bulb surface.**
- **Use a clean cloth and alcohol to remove any fingerprints from glass bulb before installing. Skin oil deposited on bulb will cause overheating and premature failure.**
- **Do not drop or scratch bulb.**
- **Keep moisture away from bulb.**
- **Do not operate bulb outside of its enclosure. Bulb has a high internal pressure and if cracked or broken it could explode and cause injury.**
- **Place used bulb in new bulb carton and dispose of properly. Keep out of reach of children.**

**A—Halogen Bulb**



TS266 —UN—23AUG88




H59774 —UN—30AUG99

OUO6075,0001356 -19-12DEC12-1/1

## Cab Headlight Bulb—Replacing

**CAUTION: Raise feeder house and lower safety stop before replacing or adjusting headlights.**

Disconnect wiring harness connector (A) from headlight assembly (B).

Rotate light housing toward outside of cab.

Turn bulb assembly (C) counterclockwise and remove.

*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

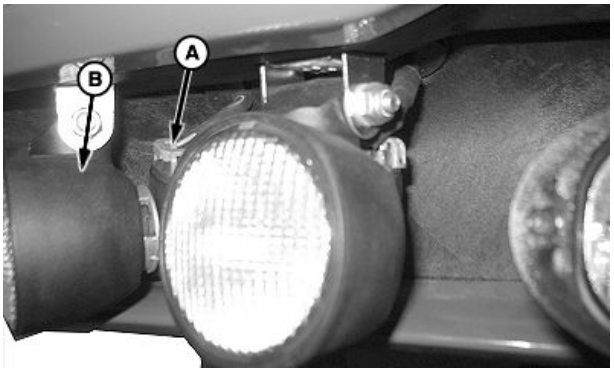
Replace bulb.

Push in bulb assembly and turn clockwise to install into housing.

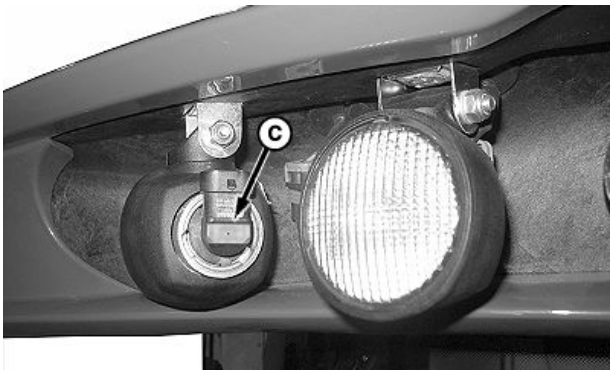
Rotate light housing to previous operating position and connect wiring harness.

Repeat on remaining lights as needed.

**A—Connector**
**B—Headlight Assembly**
**C—Bulb Assembly**




H96621 —UN—25MAY10




H96622 —UN—25MAY10

OUO6075,0000784 -19-04NOV10-1/1

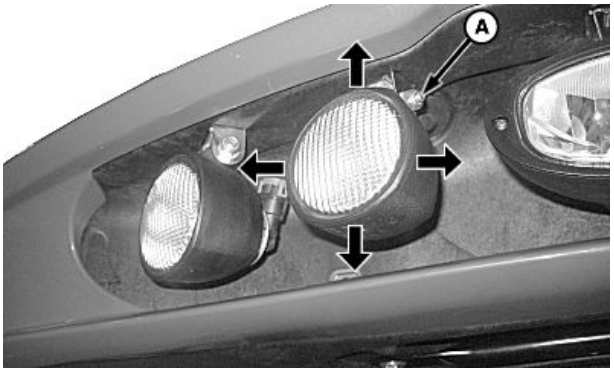
## Cab Headlights—Adjusting

**CAUTION: Raise feeder house and lower safety stop before replacing or adjusting headlights.**

*NOTE: Light assemblies can be adjusted as needed to achieve correct lighting angles.*

**Vertical Adjustment:** Loosen cap screw (A). Rotate light assembly up or down to desired position and tighten cap screw. Repeat on remaining lights as needed.

**Horizontal Adjustment:** Rotate light assembly left or right to desired position. Repeat on remaining lights as needed.




H96624 —UN—25MAY10

**A—Cap Screw**

OUO6075,0001052 -19-27FEB12-1/1

## Cab Halogen Light Bulb—Replacing

**CAUTION: Raise feeder house and lower safety stop before replacing or adjusting headlights.**

Remove screws (A) and face plate lens (B) from housing.

Squeeze clips (C) to remove bulb assembly (D).

*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

Remove and replace bulb.

Attach bulb assembly using clips on light bulb base.

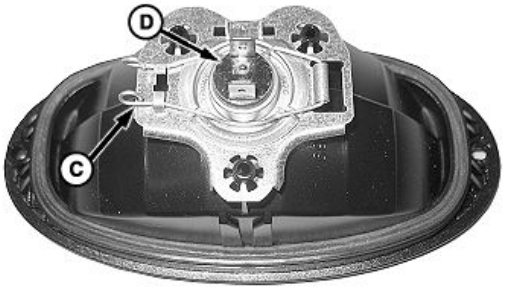
Align face plate lens with connector inside housing and retain with screws.

Repeat on remaining lights as needed.

**A—Screws**
**B—Face Plate Lens**
**C—Clip**
**D—Bulb Assembly**




H96625 —UN—25MAY10




H96626 —UN—25MAY10

OUO6075,0000787 -19-04NOV10-1/1

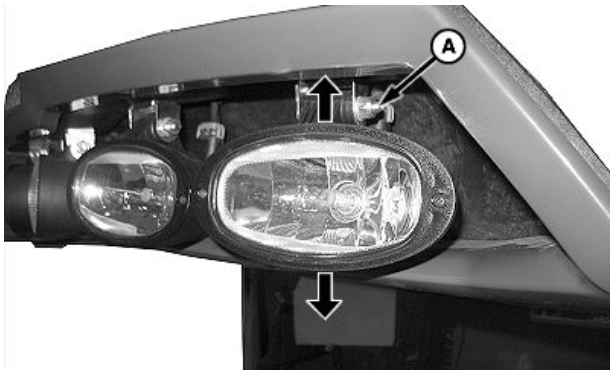
## Cab Halogen Lights—Adjusting

**CAUTION: Raise feeder house and lower safety stop before replacing or adjusting headlights.**

*NOTE: Light assemblies can be adjusted as needed to achieve correct lighting angles.*

Loosen cap screw (A). Rotate light assembly up or down to desired position and tighten cap screw. Repeat on remaining lights as needed.

**A—Cap Screw**




H96628 —UN—25MAY10

OUO6075,0001053 -19-27FEB12-1/1

## Fascia Light Bulb (If Equipped)—Replacing

**CAUTION: Lower feeder house fully before replacing or adjusting headlights.**

Disconnect wiring harness connector (A) from bulb assembly (B).

Turn bulb assembly counterclockwise and remove.

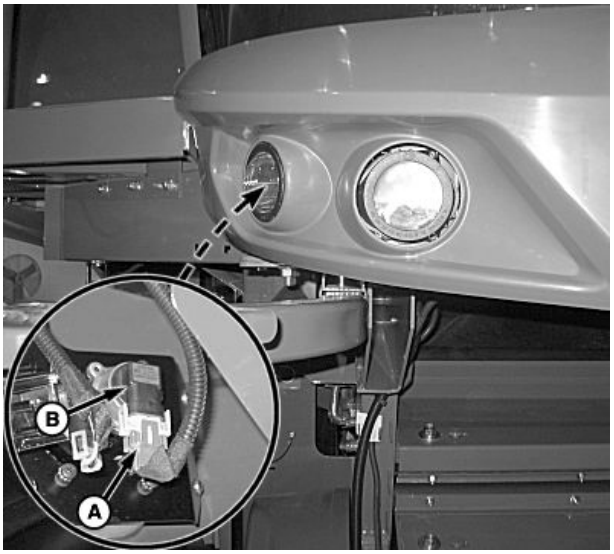
*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

Remove and replace bulb.

Push in bulb assembly and turn clockwise to install into housing and connect wiring harness.

Repeat on remaining lights as needed.

**A—Connector** **B—Bulb Assembly**




H98976 —UN—02NOV10

OUO6075,0000A6F -19-04NOV10-1/1

## Lower Driving Light Bulb (If Equipped)—Replacing

**CAUTION: Lower feeder house fully before replacing or adjusting headlights.**

Disconnect wiring harness connector (A) from bulb assembly (B).

Turn bulb assembly counterclockwise and remove.

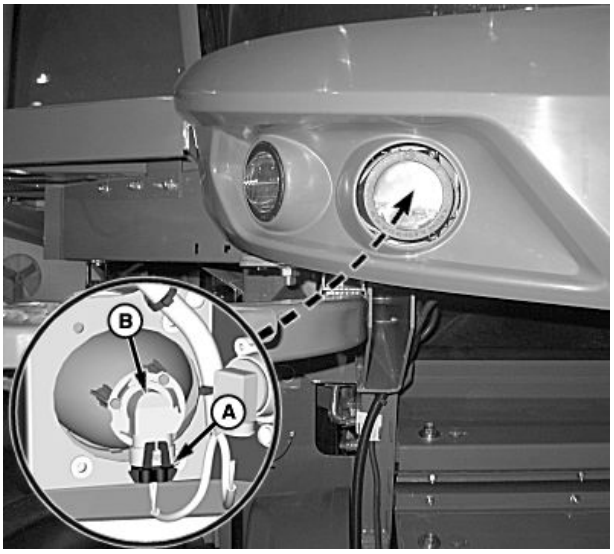
*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

Remove and replace bulb.

Push in bulb assembly and turn clockwise to install into housing and connect wiring harness.

Repeat on remaining lights as needed.

**A—Connector** **B—Bulb Assembly**




H99629 —UN—02NOV10

OUO6075,0000A70 -19-04NOV10-1/1

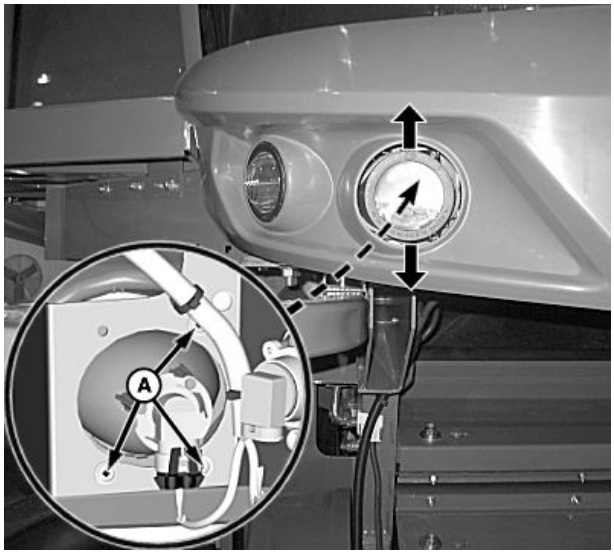
## Lower Driving Light Bulb (If Equipped)—Adjusting

**CAUTION: Lower feeder house fully before replacing or adjusting headlights.**

*NOTE: Light assemblies can be adjusted as needed to achieve correct lighting angles.*

Adjust screws (A) to rotate light assembly up or down to desired position and tighten screws. Repeat on remaining lights as needed.

**A—Screws**



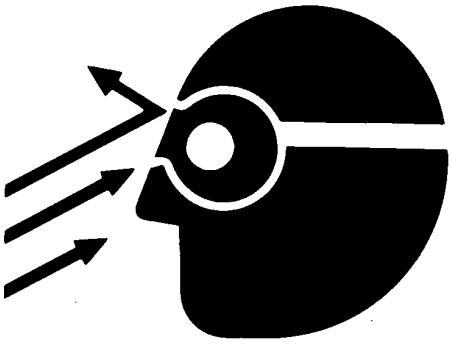

H98977 —UN—02NOV10

OUO6075,0001054 -19-27FEB12-1/1

## Safety Rules When Replacing High Intensity Discharge (HID) Xenon Lights

**CAUTION: Handling bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:**

- **Turn light switch OFF and allow bulb to cool before changing bulbs. Leave switch OFF until bulb change is complete.**
- **High voltage is conducted by electrical connection between lights and ballast unit; this connection must never be disconnected without first disconnecting vehicle wiring harness to ballast.**
- **Wear eye protection when changing bulb.**
- **Handle bulb by its base. Wear protective gloves or avoid touching light bulb surface.**
- **Use a clean cloth and alcohol to remove any fingerprints from glass bulb before installing. Skin oil deposited on bulb will cause overheating and premature failure.**
- **Do not drop or scratch bulb.**
- **Keep moisture away from bulb.**



TS266 —UN—23AUG88

- **Do not operate bulb outside of its enclosure. Bulb has a high internal pressure and if cracked or broken it could explode and cause injury.**
- **Place used bulb in new bulb carton and dispose of properly. Keep out of reach of children.**

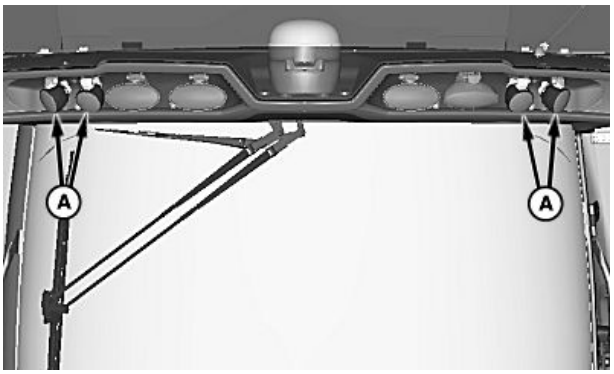
OUO6075,0001357 -19-12DEC12-1/1

## High Intensity Discharge (Xenon) Light Bulb (Optional)—Replacing

**CAUTION: Avoid serious injury or death from electrical shock or lamp explosion. Lamps are powered by 25,000 volts. Before working on HID-Xenon lights or ballast, ensure that lights are turned OFF, engine is shut OFF, parking brake is set, key is removed, and appropriate eye protection is worn.**

**If lights were previously operated, wait a minimum of five minutes before servicing bulb.**

**Raise feeder house and lower safety stop before replacing or adjusting headlights.**

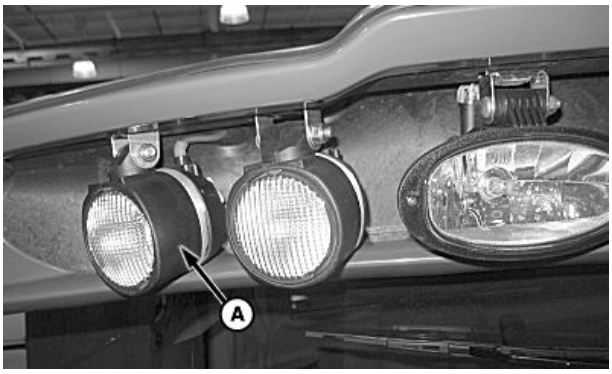



H966644 —UN—27MAY10

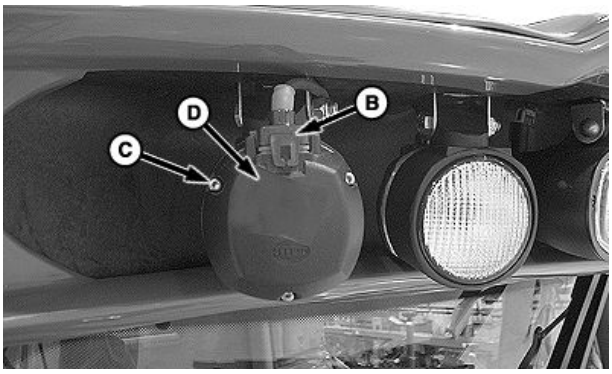
High intensity discharge (HID) Xenon lights (A) are located on both sides of cab as shown.

**A—HID-Xenon Lights**

OUO6075,0000790 -19-04NOV10-1/2




H966646 —UN—27MAY10




H966634 —UN—26MAY10

Rotate light housing (A) toward outside of cab.

Disconnect wiring harness connector (B) from light assembly.

Remove socket head cap screws (C) and remove rear housing (D).

Pry locking tab (E) and remove HID-Xenon bulb (F).

**IMPORTANT: Handle bulb by the base and avoid touching glass.**

Remove and replace bulb.

Install rear housing to light housing and retain with socket head cap screws.

Connect wiring harness and rotate light housing to previous operating position.

Repeat on remaining lights as needed.




H966635 —UN—26OCT10

**A—Light Housing**
**B—Connector**
**C—Socket Head Cap Screws (3 Used)**
**D—Rear Housing**
**E—Locking Tab**
**F—HID-Xenon Bulb**

OUO6075,0000790 -19-04NOV10-2/2

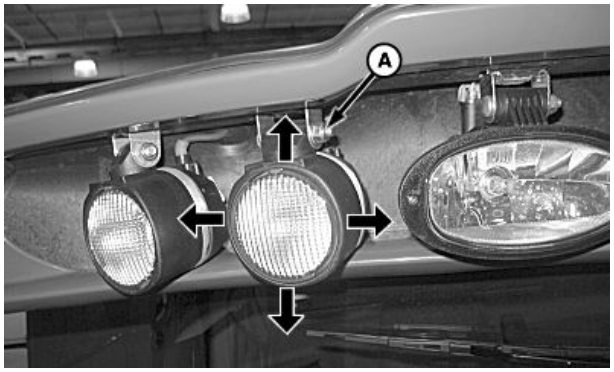
## High Intensity Discharge (Xenon) Lights (Optional)—Adjusting

**CAUTION: Raise feeder house and lower safety stop before replacing or adjusting headlights.**

*NOTE: Light assemblies can be adjusted as needed to achieve correct lighting angles.*

**Vertical Adjustment:** Loosen cap screw (A). Rotate light assembly up or down to desired position and tighten cap screw. Repeat on remaining lights as needed.

**Horizontal Adjustment:** Rotate light assembly left or right to desired position. Repeat on remaining lights as needed.

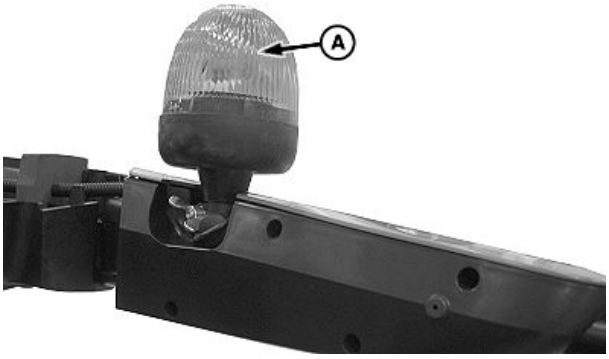



H96647 —UN—27MAY10

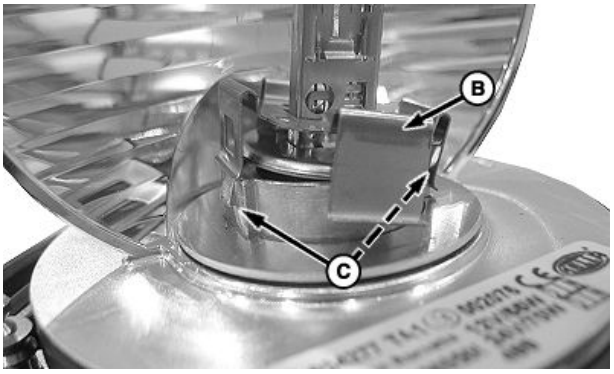
**A—Cap Screw**

OUO6075,0001055 -19-27FEB12-1/1

## Beacon Light Bulb—Replacing




H96613 —UN—25MAY10




H96614 —UN—25MAY10

**CAUTION: Raise feeder house and lower safety stop before replacing beacon lights.**

Push down on lens (A) and turn counterclockwise to remove.

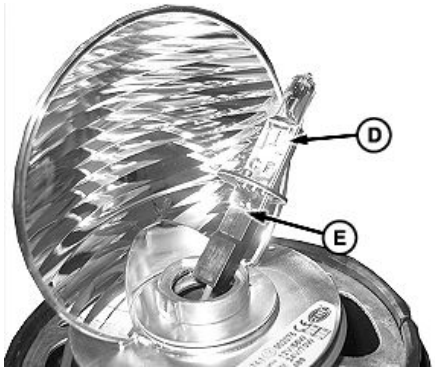
Pry clip (B) from locking tab (C).

Remove bulb assembly (D) from connector (E).

*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

Replace bulb and install in reverse order.

Repeat on remaining lights as needed.




H96615 —UN—25MAY10

**A—Lens**
**B—Clip**
**C—Locking Tab**
**D—Bulb Assembly**
**E—Connector**

OUO6075,000078A -19-04NOV10-1/1

## Discharge Lights, Auxiliary Field Lights, Access Door Work Lights, Stubble Lights, Grain Tank and Unloading Auger Light—Replacing

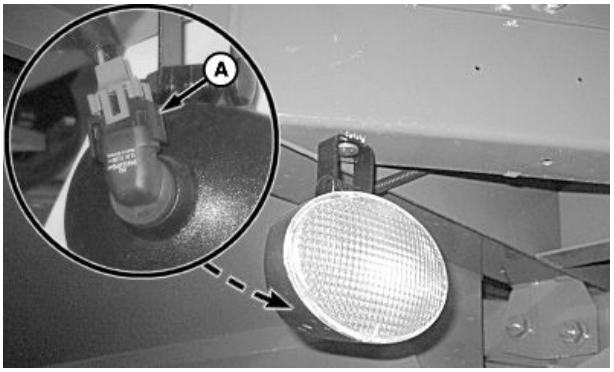
Disconnect wiring harness connector (A) from bulb assembly.

Turn bulb assembly counterclockwise and remove.

Remove and replace bulb.

*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

Push in bulb assembly and turn clockwise to install into housing and connect wiring harness.




H96617 —UN—25MAY10

*Right-Hand Stubble Light*

**A—Connector**

OUO6075,0000781 -19-04NOV10-1/1

## Side Finder Lights and Cleaning Shoe Lights—Replacing

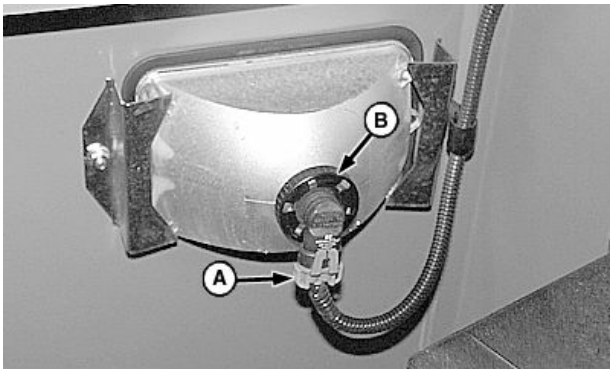
Disconnect wiring harness connector (A) from bulb assembly.

Push in and twist retainer ring (B) counterclockwise and remove.

Remove and replace bulb.

*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

Install bulb assembly in reverse order and connect wiring harness.




H57680 —UN—28MAY99

**A—Connector** **B—Retainer Ring**

OUO6075,0000782 -19-04NOV10-1/1

## Hazard/Marker Lights, Marker/Brake Lights and Rear Hazard Lights—Replacing

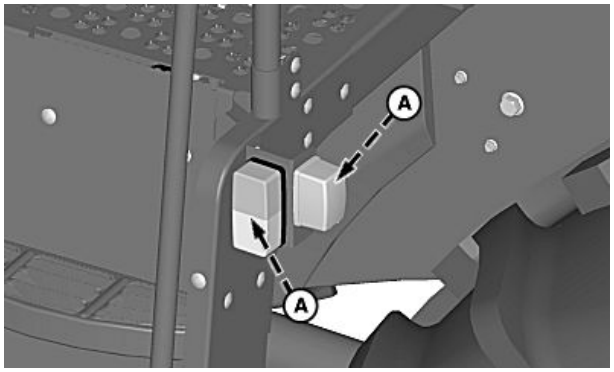
Remove screws (A) from lens covers.

Remove light bulb by pushing in and turning counterclockwise.

*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

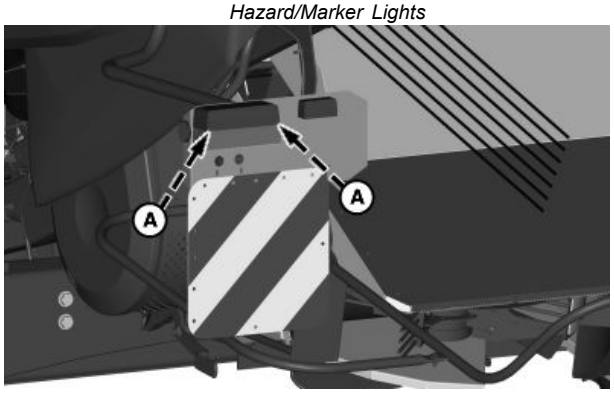
Install bulb and lens cover in reverse order.

**A—Screws**




H100490 —UN—28FEB11

*Hazard/Marker Lights*




H100491 —UN—28FEB11

*Marker/Brake Lights and Rear Hazard Lights*

OUO6075,0001361 -19-11DEC12-1/1

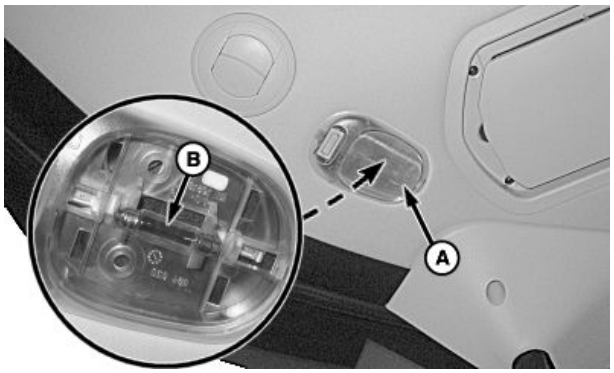
## Cab Interior Light—Replacing

Remove lens cover (A) and replace bulb (B).

*NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.*

Install bulb and lens cover in reverse order.

**A—Lens Cover** **B—Bulb**




H96618 —UN—02JUN10

OUO6075,0000783 -19-04NOV10-1/1

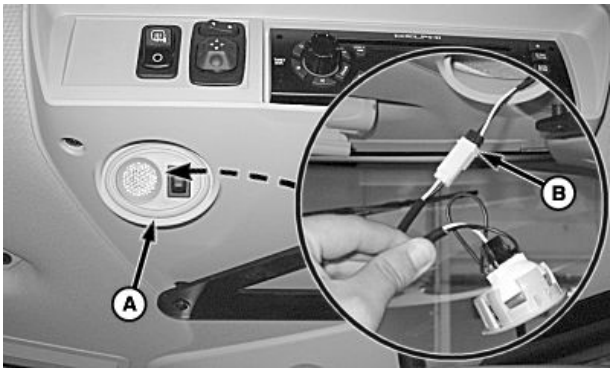
## Map Light—Replacing

Remove map light assembly (A) and disconnect wiring harness connector (B).

Remove and replace map light assembly.

Install and orient map light assembly in reverse order as shown.

**A—Map Light Assembly** **B—Connector**

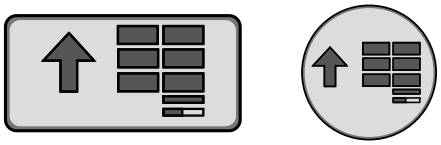



H97965 —UN—13SEP10

OUO6075,00009AF -19-13SEP10-1/1

## Accessing Diagnostic Trouble Code Menu

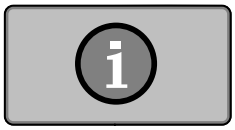
H95846 —UN—31MAR10



*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95878 —UN—29MAR10



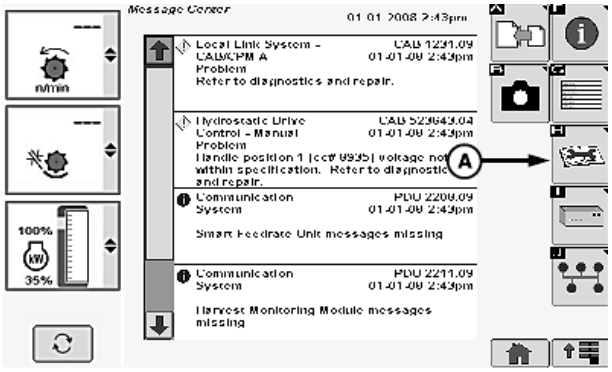
*Message Center Application Icon*

Touch or press confirm switch when message center icon is highlighted.

OUO6075,00006C8 -19-01APR10-1/5

Touch or press confirm switch when trouble codes icon (A) is highlighted.

**A—Trouble Codes Icon**




H95508 —UN—05OCT10

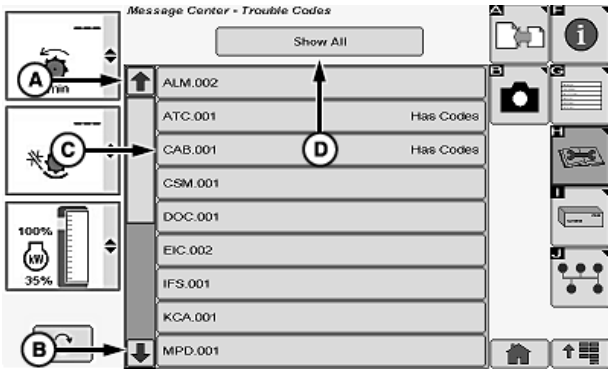
OUO6075,00006C8 -19-01APR10-2/5

*NOTE: Another way to display diagnostic trouble codes is with show all menu (D). Touch or press confirm switch when show all menu is highlighted. This displays all trouble codes for all control units.*

Touch or press confirm switch when up arrow (A) or down arrow (B) is highlighted to scroll through control unit list.

Touch or press confirm switch when desired control unit (C) is highlighted.

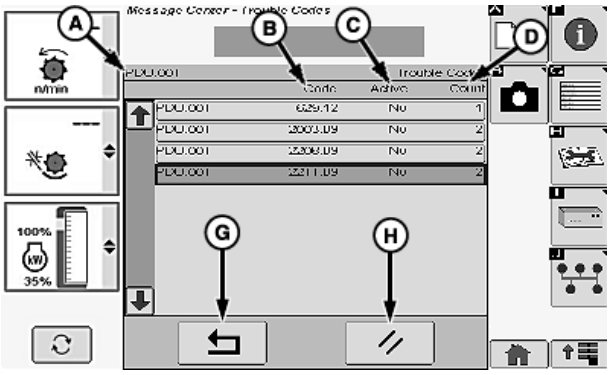
**A—Up Arrow**
**B—Down Arrow**
**C—Control Unit**
**D—Show All Menu**




H95509 —UN—05OCT10

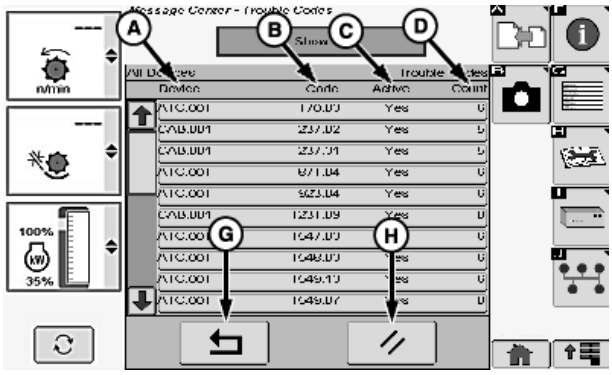
**Continued on next page**

OUO6075,00006C8 -19-01APR10-3/5




H95511 —UN—05OCT10

*Individual Control Unit Trouble Codes*




H95512 —UN—05OCT10

*All Control Unit Trouble Codes*

*NOTE: Touch or press confirm switch when up arrow or down arrow is highlighted to scroll through trouble codes if multiple codes are displayed.*

Screen displays the following:

- Control Unit (A)
- Trouble Code (B)
- Active (Yes/No) (C)
- Count (D)

Touch or press confirm switch when desired code is highlighted.

Code description (E) appears and gives more detail of trouble code.

Touch or press confirm switch when enter/accept icon (F) is highlighted to return to previous screen.

Touch or press confirm switch when return/back icon (G) is highlighted to return to previous screen or until clear icon (H) is highlighted.

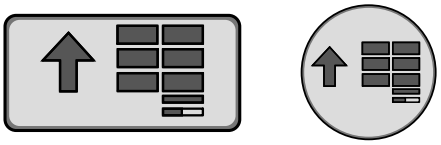



H95533 —UN—05OCT10

*Detailed Code Description*

**A—Control Unit/Device**
**B—Trouble Code**
**C—Active (Yes/No)**
**D—Count**
**E—Code Description**
**F—Enter/Accept Icon**
**G—Return/Back Arrow Icon**
**H—Clear Icon**

OUO6075,00006C8 -19-01APR10-4/5

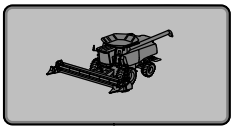


H95878 —UN—29MAR10

*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95845 —UN—31MAR10



*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,00006C8 -19-01APR10-5/5

## Diagnostic Trouble Code Priorities

Each diagnostic trouble code (DTC) has a priority. The priority of the DTC is indicated in the way the DTC is displayed to the operator:

- **Stop Engine Warning Indicator (Red):** illuminates and requires machine be stopped at once and problem corrected. Diagnostic trouble code is shown on armrest display until problem is resolved.
- **Service Warning Indicator (Yellow):** illuminates and flashes when a problem exists with machine. Requires machine be stopped at the earliest convenience. Diagnostic trouble code is shown on armrest display.
- **Information Warning Indicator (Gray):** illuminates and flashes when diagnostic trouble code is active. Alerts operator to be aware of a condition. When warning is acknowledged, screen message disappears and indicator warning light turns OFF.

OUO6075,00006CA -19-24AUG10-1/1

## Service Tires Safely

**CAUTION: Explosive separation of a tire and rim parts can cause serious injury or death.**

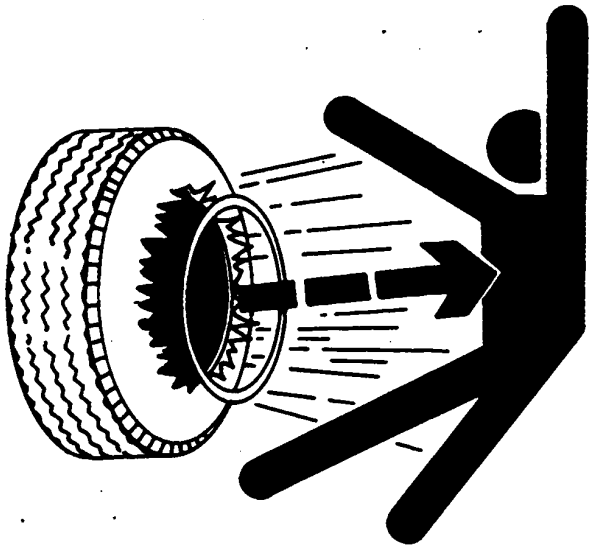
**Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.**

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure.

Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.



TS211 —UN—15APR13

DX,RIM1 -19-27OCT08-1/1

## Roadway Transport with Header Attached

Observe national and local laws regarding operation of the combine on public roadways.

This combine has been approved for roadway transport in Germany with a Geringhoff 8 row folding header and a Kemper 8 row folding header. Roadway transport in Germany with other heads must be approved by your local TUEV to achieve a road permission.

OUO6075,0000A06 -19-15MAR07-1/1

## Tire Loading Decal

Decal (A) (located on cab ladder) contains important information concerning tire loading.

**A—Decal**




H96785 —UN—09JUN10

OUO6075,00007CB -19-09JUN10-1/1

## Care and Service of Tires

Check tires daily for damage or noticeably low pressure.

At least every 50 hours of operation, check tire pressure. If tires contain liquid ballast, use a special air-water gauge and measure with valve stem at bottom.

A small puncture in a tubeless tire can be temporarily repaired without dismounting the tire, thus avoiding down time during a busy season.

Protect tires from exposure to sunlight, petroleum products, and chemicals.

Drive carefully. Try to avoid rocks and sharp objects.

**IMPORTANT: A permanent repair should be made as soon as possible to prevent further tire damage.**

*NOTE: Tire pressures listed below may differ from the tire pressures shown on the side of the tires.*

*Not every tire listed below is available for every region or machine model.*

| Tire Inflation Pressure | | | | | | | |
|---|---|---|---|---|---|---|---|
| Front Tire Sizes | Load Index | Air Pressure | | Rear Tire Sizes | Load Index | Air Pressure | |
| | | kPa | psi | | | kPa | psi |
| 680/85R32 AC70G TL | 178A8 | 414 | 60 | 500/85R24 IMP SVT | 177A8 | 359 | 52 |
| IF680/85R32 CFO TL CEREXBIB | 179A8 | 241 | 35 | 500/80R28 IMP SFT | 176A8 | 317 | 46 |
| 800/65R32 TL AC 70N | 178A8 | 317 | 46 | VF520/80R26 TL CEREXBIB | 165A8 | 241 | 35 |
| IF800/65R32 CFO TL CEREXBIB | 178A8 | 248 | 36 | 620/75R26 TL MEGAXBIB | 166A8 | 317 | 46 |
| 800/70R32 CHO SVT | 175A8 | 207 | 30 | VF620/70R26 TL CEREXBIB | 170A8 | 241 | 35 |
| IF800/70R32 CFO TL CEREXBIB | 182A8 | 241 | 35 | 750/65R26 TL MEGAXBIB | 166A8 | 290 | 42 |
| 800/70R38 TL SFT | 181A8 | 317 | 46 | | | | |
| IF800/70R38 CFO TL CEREXBIB | 184A8 | 241 | 35 | | | | |
| 900/60R32 TL SVT | 176A8 | 276 | 40 | | | | |
| 900/60R38 TL SVT | 181A8 | 276 | 40 | | | | |
| IF900/60R38 CFO TL CEREXBIB | 184A8 | 207 | 30 | | | | |

OUO6075,0001546 -19-07AUG13-1/1

## Front and Rear Tire Information

It will be necessary to recalibrate system if tires or final drives are changed from what was originally shipped from the factory. Verify that correct tire code is entered into memory.

**IMPORTANT: When changing drive wheels, tire radius may also change. CAB control unit MUST be set to new tire radius. See your John Deere dealer for further information.**

**Failure to calibrate system will result in inaccurate Harvest Monitor Yields.**

For additional information shown below on front and rear tires, see your John Deere dealer for further information.

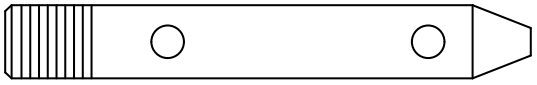
**Front Tires:**
- Tire Sizes
- Header Compatibility
- Row Spacings
- Wheel Spacers
- Axle Spacers
- Wheel Offsets

**Rear Tires:**
- Tire Sizes
- Axle Types
- Spindle Types
- Axle Positions
- Front to Rear Height Differences

OUO6075,0001113 -19-11APR12-1/1

## Drive Wheel Starter Stud

If a wheel is removed, thread wheel starter stud (HXE16110) into axle, then install wheel. This stud can also be used for duals.



H97547 —UN—06AUG10

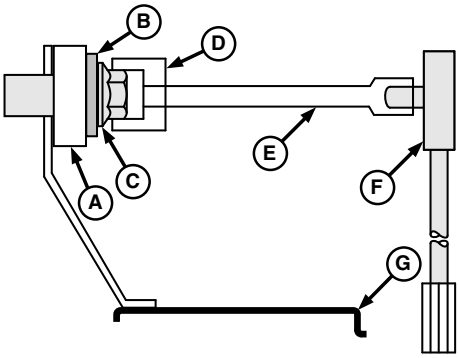
OUO6075,00007CC -19-06AUG10-1/1

## Drive Wheel Bolt Torque (Single Wheel Configuration)

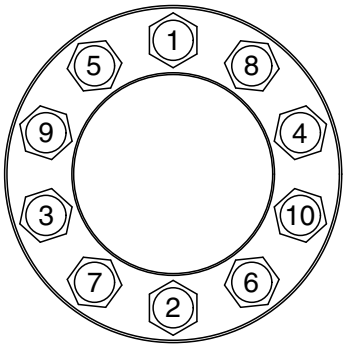
Each time drive wheels are repositioned or replaced, torque wheel bolts to specification and in a criss/cross pattern. After one hour of operation, torque wheel bolts again to specification and every 100 hours thereafter.

| Specification | |
|---|---|
| Wheel Bolts—Torque (Lubricated) | 710 N·m (524 lb.-ft.) |

**A—Spacer**
**B—Washer**
**C—Wheel Bolt**
**D—32 mm Socket**
**E—Extension**
**F—Torque Wrench**
**G—Wheel**




H96868 —UN—11JUN10




H96863 —UN—10JUN10

*Torque Sequence*

OUO6075,0001081 -19-28FEB12-1/1

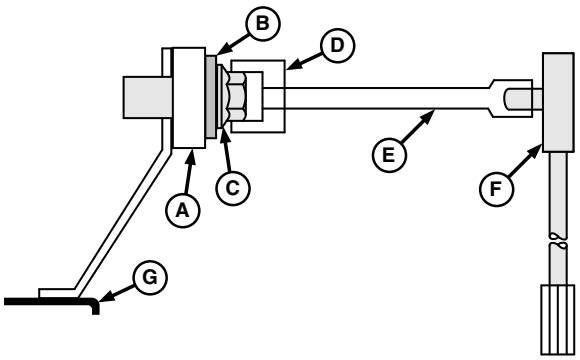
## Drive Wheel Bolt Torque (Dual Wheel Configuration)

Each time inner or outer dual wheels are repositioned or replaced, torque wheel bolts to specification and in a criss/cross pattern. After one hour of operation, torque wheel bolts again to specification and every 100 hours thereafter.

**Specification**

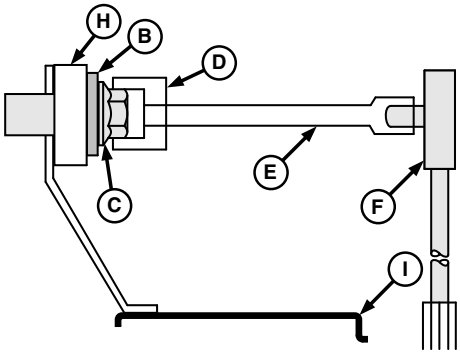
Wheel Bolts—Torque
(Lubricated).....710 N·m
(524 lb.-ft.)

**A—Dual Wheel Spacer**
**B—Washer**
**C—Wheel Bolt**
**D—32 mm Socket**
**E—Extension**
**F—Torque Wrench**
**G—Inner Dual Wheel**
**H—Spacer**
**I— Outer Dual Wheel**



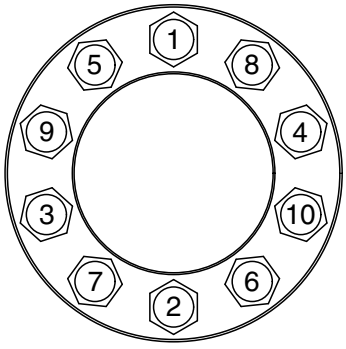

H96841 —UN—11JUN10

*Inner Dual Wheel*




H96842 —UN—11JUN10

*Outer Dual Wheel*




H96863 —UN—10JUN10

*Torque Sequence*

OUO6075,0001082 -19-28FEB12-1/1

## Front Drive Wheel Offset

**CAUTION: Avoid serious injury or death resulting from final drive failure and loss of drive wheel during transport or field operation. Do not exceed maximum wheel offset.**

**IMPORTANT: Use only John Deere supplied wheels, tires and spacers. Use of non-John Deere components not meeting specification will void the warranty.**

**Do not use clamp-on style duals. They do not meet John Deere specification.**

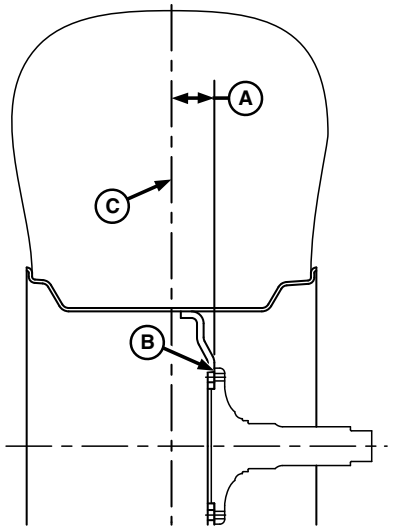
**Do not operate with rear wheels offset outward.**

Wheel offset distance severely affects life of final drive parts. When installing drive wheels, ensure that offset dimension (A) measured from spindle surface (B) to centerline (C or D) is within specification.

**Maximum Wheel Offset—Specification**

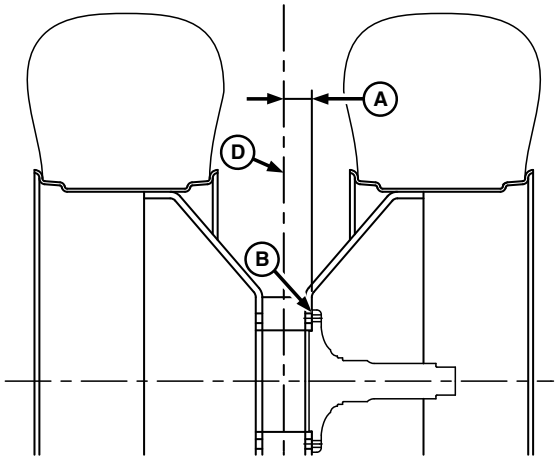
| | |
|---|---|
| Single Wheel—Distance | 114.3 mm (4-1/2 in.) |
| Dual Wheels—Distance | 50.8 mm (2 in.) |

**A—Dimension**
**B—Spindle Surface**
**C—Tire Centerline**
**D—Centerline of Duals**




H65047 —UN—30OCT00

*Single Wheel*




H65048 —UN—30OCT00

*Dual Wheels*

OUO6075,000130E -19-09NOV12-1/1

## Preparing Dual Wheels for Transport or Service

**CAUTION: Do not attempt to operate machine in the field with outer dual wheels removed. Machine damage can occur.**

**Only move machine short distances with outer duals removed. Before moving machine reduce machine weight by removing header and emptying grain tank.**

When preparing dual wheels for transport, outer wheels can be removed to reduce transport width.

Refer to the following directions whenever front wheels (outer and inner) need to be removed and installed on a dual wheel machine. Inner wheel cannot be removed without first removing outer wheel.

Pay close attention to ”CAUTION” statements as they address your safety, the safety of others and safe operations of the machine.

OUO6075,000082A -19-15MAR07-1/1

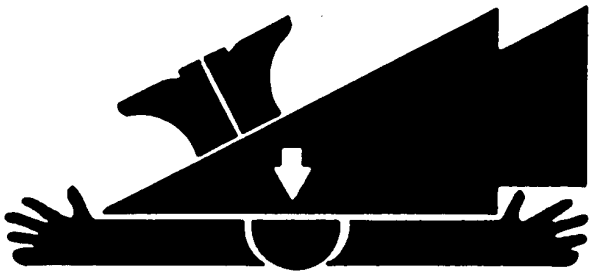
## Remove Front Wheels—Dual Wheels

**CAUTION: To avoid injury or death, raise feeder house and lower safety stop. Some assembly requires you to work underneath feeder house.**

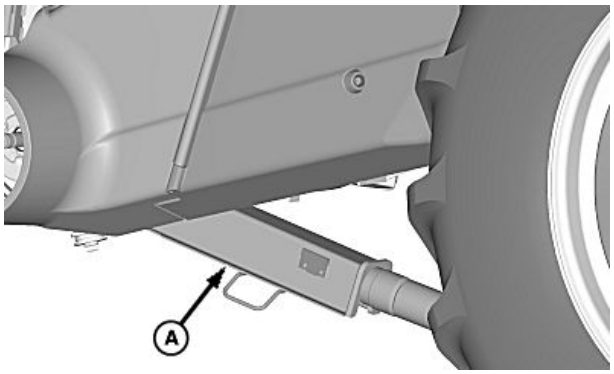
**Without safety stop engaged, feeder house can suddenly lower, causing serious crushing injury or death.**

1. Raise feeder house and lower safety stop (A).
2. Inner and Outer Wheels: With front tires on ground, loosen wheel bolts one full turn, but do not remove at this time.

**A—Safety Stop**



TS696 —UN—21SEP89




H90891 —UN—26FEB08

**Continued on next page**

OUO6075,0001115 -19-13APR12-1/2

**CAUTION: Jack MUST have a minimum lifting capacity of 5443 kg (6 ton). Grain tank MUST be empty and header attachment removed.**

**Block both sides of tires to prevent machine movement.**

3. Raise front end of machine with jack (A).

**CAUTION: To help prevent personal injury caused by unexpected movement of machine, verify that machine is stable after blocking. Do not support machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work on a machine that is supported solely by a jack.**

**Verify that front axle rests on blocking before attempting to remove wheels.**

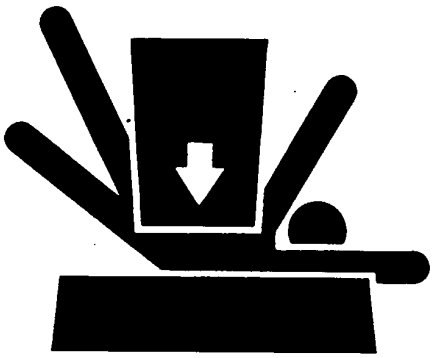
4. Position solid blocking under front axle (B). Lower machine onto blocking, making sure that no load shift is seen or felt.

**CAUTION: Wheel assemblies are heavy, awkward to handle, and difficult to control due to extreme offset of tire and rim. Two people are required for wheel removal.**

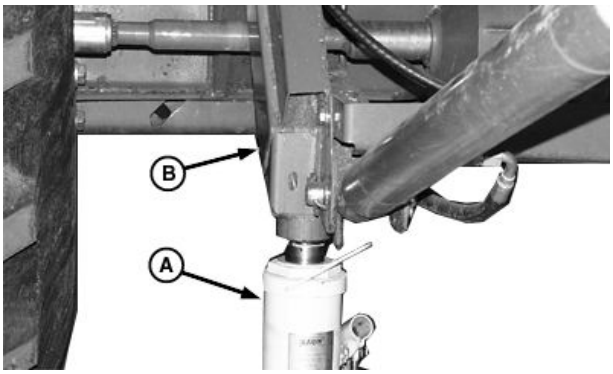
5. While supporting outer wheel assembly, remove wheel bolts, washers, spacers, and front wheels. Move wheel assemblies away from machine.

*NOTE: Machine can be transported with inner wheels left in-place. Likewise, outer wheels can be serviced off machine while leaving inner wheels undisturbed.*

Follow same steps to remove inner wheels.



TS2229 —UN—23AUG88




H63871 —UN—09MAY00

**A—Jack** **B—Front Axle**

- Loosen wheel bolts one full turn.
- Support wheel assembly.
- Remove wheel bolts, washers, spacer ring, and inner wheel.

OUO6075,0001115 -19-13APR12-2/2

## Install Front Wheels—Dual Wheels

**CAUTION: Dual wheels are heavy (approximately 550 kg (1213 lb.) without liquid ballast) and difficult to handle due to extreme offset of tire and rim. When handling wheels, off centered weight can suddenly shift making wheel handling awkward and the wheel difficult to control. To avoid personal injury, two people are needed to control wheel handling.**

*NOTE: If installing dual wheels, both inner and outer wheels are positioned, so bottom end of tire cleats are facing towards front and down. Tire MUST be installed as directed or machine will not be drivable.*

*Pilot stud HXE16110 is recommended to help guide wheels into position.*

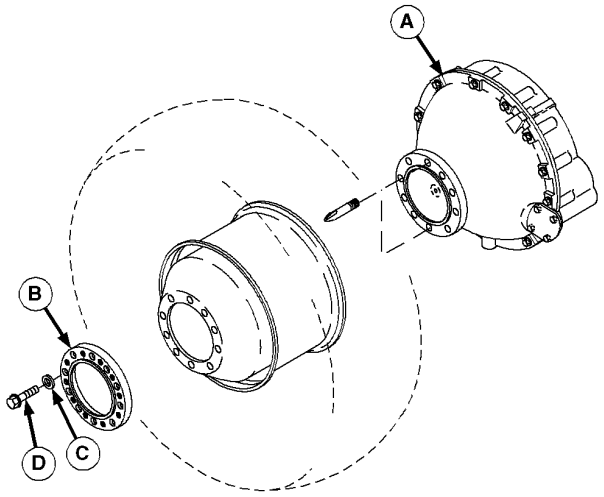
1. Install pilot studs in top and bottom holes of drive hub (A). Stud threads must bottom out in hole so inner end is flush with inside of hub.

**IMPORTANT: Due to countersunk design of spacer ring, inner wheel bolts can be checked and torqued when outer wheel is removed.**

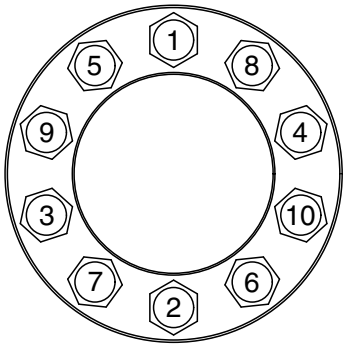
**Inner wheel is installed over drive hub (rim dished in) positioning tire close to machine.**

2. Position inner wheel on studs with bottom end of tire cleats to front and down.
3. Install wheel with spacer ring (B) and retain with washers (C) and wheel bolts (D). Wheel bolt heads fit inside larger unthreaded holes.
4. Remove pilot studs and replace with washers and wheel bolts.
5. Torque wheel bolts to specification using criss/cross pattern to evenly pull wheel tight against hub.

| Specification | |
|---|---|
| Wheel Bolts—Torque (Lubricated) | 710 N·m (524 lb.-ft.) |




H96886 —UN—14JUN10




H96863 —UN—10JUN10

*Torque Sequence*

**A—Drive Hub**
**B—Spacer Ring**
**C—Washers (10 Used)**
**D—Wheel Bolts (10 Used)**

6. Repeat steps on opposite of machine.

**Continued on next page**

OUO6075,00015D2 -19-07AUG13-1/2

**IMPORTANT: Due to countersunk design of spacer ring, inner wheel bolts can be checked and torqued when outer wheel is removed.**

*NOTE: Outer wheels have a chain slot (E) in rims.*

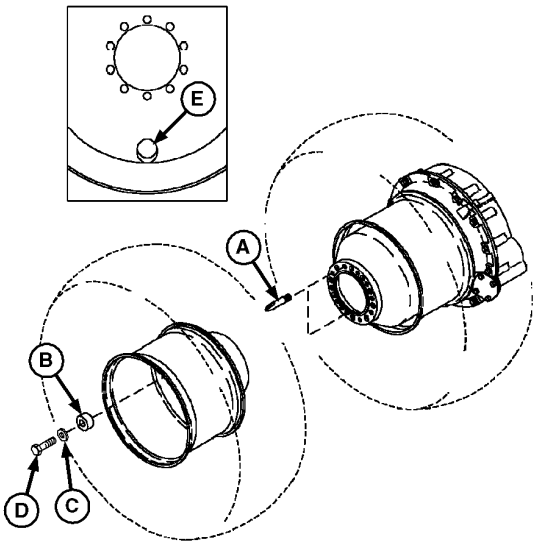
7. Outer Wheel Installation: Install pilot studs (A) in top and bottom tapped holes of spacer ring. Stud threads must bottom out in hole.
8. Position outer wheel on studs with bottom end of tire cleats to front and down.
9. Install wheel with spacers (B) and retain with washers (C) and wheel bolts (D).
10. Remove pilot studs and replace with spacers, washers, and wheel bolts.
11. Torque wheel bolts to specification using criss/cross pattern to evenly pull wheel tight against hub.

**Specification**

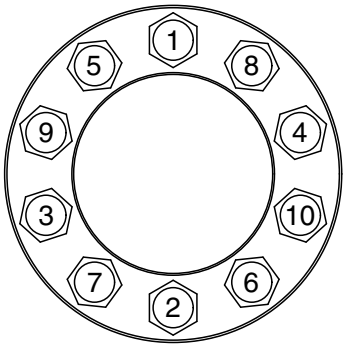
Wheel Bolts—Torque
(Lubricated).....710 N·m
(524 lb.-ft.)

12. Repeat steps on opposite side of machine and lower to ground.
13. Check tire pressure and inflate as needed. See Care and Service of Tires in this section for tire inflation pressure.

**A—Pilot Studs**
**B—Spacers**
**C—Washers (10 Used)**
**D—Wheel Bolts (10 Used)**
**E—Chain Slot**




H96887 —UN—17JUN10




H96863 —UN—10JUN10

*Torque Sequence*

OUO6075,00015D2 -19-07AUG13-2/2

## Single Attach Wide Spaced Dual Wheels (Optional)

Center attaching ring (A), allows each wheel to be individually attached to machine.

Attaching ring lets you install or remove your outer wheels without removing the inner drive wheels. This makes it easier to prepare machine for loading or unloading from a trailer, or when a narrow transport width is needed.

**A—Attaching Ring**




H48058 —UN—19AUG96

OUO6075,000082D -19-15MAR07-1/1

## Rear Wheel Bolt Torque

Each time a rear wheel is removed, torque wheel bolts to specification. After one hour of operation, torque wheel bolts again to specification and every 100 hours thereafter.

| Specification | |
|---|---|
| M16 Wheel Bolts (Regular Duty Two-Wheel Drive)—Torque (Dry) | 315 N·m (230 lb.-ft.) |
| M22 Wheel Bolts (Extra Heavy Duty Two-Wheel Drive)—Torque (Lubricated) | 710 N·m (524 lb.-ft.) |
| M22 Wheel Bolts (Four-Wheel Drive)—Torque (Lubricated) | 710 N·m (524 lb.-ft.) |

*NOTE: Mount rear tires with the offset "in" and valve stems to the outside.*




H96809 —UN—09JUN10

*Refer to decal on tire for proper torque sequence.*

OUO6075,0001084 -19-28FEB12-1/1

## Using Liquid Weight

**CAUTION: Installing liquid weight (ballast) requires special equipment and training.**

**IMPORTANT: Cover rim completely with solution to avoid corrosion, but NEVER fill any tire more than 90 percent full. More solution would leave too little air space to absorb shocks. Damage to tire could occur.**

A solution of water and calcium chloride provides a safe and economical ballast. Used properly, it will not damage tires, tubes or rims.

Use calcium chloride to prevent water from freezing. A mixture of 1.6 kg (3-1/2 lb) of calcium chloride per 3.8 L (1 gal) will not freeze solid above -45°C (-50°F).

*NOTE: Use of alcohol as liquid ballast is not recommended. Calcium chloride solution is heavier and more economical.*




H96809 —UN—09JUN10

Fill tubeless tires at least to valve level (minimum 75 percent full). Less solution would expose part of rim, possibly causing corrosion. Tube-type tires may be filled to any level below 90 percent.

OUO6075,00007D0 -19-10JUN10-1/1

## Ballast Requirements (S660)

*NOTE: Tires requiring fluid must be filled to 75%.*

| | Normal (Slopes of 15% or less) | | | | Extremely Hilly (Slopes greater than 15%) | | | |
|---|---|---|---|---|---|---|---|---|
| | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | |
| | Fluid Required | | Fluid Required | | Fluid Required | | Fluid Required | |
| Header | No | Yes | No | Yes | No | Yes | No | Yes |
| 606C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 606C-SM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C-SM | 0 | 0 | 0 | 0 | NR | 1, 2, 3, 4, 5, 6 | 5, 6 | 1, 2, 3, 4 |
| 612C | 0 | 0 | 0 | 0 | NR | 4, 5, 6 | NR | 4, 5, 6 |
| 615 BPU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 618R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 620R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 622R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 625R & F | 0 | 0 | 0 | 0 | 5, 6 | 1, 2, 3, 4 | 4, 5, 6 | 1, 2, 3 |
| 630R & F | 0 | 0 | 0 | 0 | NR | 1, 2, 3, 4, 5, 6 | NR | 1, 2, 3, 4, 5, 6 |
| 635F | 0 | 0 | 0 | 0 | NR | 4, 5, 6 | NR | 4, 5, 6 |
| 625D | 0 | 0 | 0 | 0 | NR | 4, 5, 6 | NR | 4, 5, 6 |
| 630D | 0 | 0 | 0 | 0 | NR | 6 | NR | 6 |
| 635D | 5, 6 | 1, 2, 3, 4 | 2, 4, 5, 6 | 1, 3 | NR | NR | NR | NR |
| 640D | NR | 1, 2, 3, 4, 5, 6 | NR | 1, 2, 3, 4, 5, 6 | NR | NR | NR | NR |
| 630FD | 0 | 0 | 0 | 0 | NR | 6 | NR | 6 |
| 635FD | 2, 4, 5, 6 | 1, 3 | 0 | 0 | NR | NR | NR | NR |
| 640FD | NR | 1, 2, 3, 4, 5, 6 | NR | 1, 2, 3, 4, 5, 6 | NR | NR | NR | NR |

BPU = Belt Pickup Platform
R = Rigid Platform
F = Flex Platform
D = Draper Platform
FD = Flex Draper Platform
C = Corn Head
C-SM = Corn Head w/ StalkMaster™

0 = No ballast required for any rear tire option.
1 = 500/85R24 IMP 177A8 SVT rear tires.
2 = 500/80R28 IMP 176A8 SFT rear tires.
3 = VF520/80R26 165A8 TL CEREXBIB rear tires.
4 = 620/75R26 166A8 TL MEGAXBIB rear tires.
5 = VF620/70R26 170A8 TL CEREXBIB rear tires.
6 = 750/65R26 166A8 TL MEGAXBIB rear tires.
NR = Not recommended since machine with header cannot be properly ballasted.

*StalkMaster is a trademark of Deere & Company*

OUO6075,0001547 -19-29JUL13-1/1

## Ballast Requirements (S670)

*NOTE: Tires requiring fluid must be filled to 75%.*

| | Normal (Slopes of 15% or less) | | | | Extremely Hilly (Slopes greater than 15%) | | | |
|---|---|---|---|---|---|---|---|---|
| | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | |
| | Fluid Required | | Fluid Required | | Fluid Required | | Fluid Required | |
| **Header** | **No** | **Yes** | **No** | **Yes** | **No** | **Yes** | **No** | **Yes** |
| 606C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 606C-SM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C-SM | 0 | 0 | 0 | 0 | 4, 5, 6 | 1, 2, 3 | 2, 4, 5, 6 | 1, 3 |
| 612C | 0 | 0 | 0 | 0 | NR | 4, 5, 6 | NR | 4, 5, 6 |
| 612C-SM | 0 | 0 | 0 | 0 | NR | 6 | NR | 4, 5, 6 |
| 615 BPU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 618R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 620R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 622R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 625R & F | 0 | 0 | 0 | 0 | 4, 5, 6 | 1, 2, 3 | 0 | 0 |
| 630R & F | 0 | 0 | 0 | 0 | NR | 1, 2, 3, 4, 5, 6 | NR | 1, 2, 3, 4, 5, 6 |
| 635F | 0 | 0 | 0 | 0 | NR | 4, 5, 6 | NR | 4, 5, 6 |
| 625D | 0 | 0 | 0 | 0 | NR | 4, 5, 6 | NR | 2, 3, 4, 5, 6 |
| 630D | 0 | 0 | 0 | 0 | NR | 6 | NR | 6 |
| 635D | 2, 4, 5, 6 | 1, 3 | 0 | 0 | NR | NR | NR | NR |
| 640D | NR | 1, 2, 3, 4, 5, 6 | 4, 5, 6 | 1, 2, 3 | NR | NR | NR | NR |
| 630FD | 0 | 0 | 0 | 0 | NR | 5, 6 | NR | 4, 5, 6 |
| 635FD | 0 | 0 | 0 | 0 | NR | NR | NR | NR |
| 640FD | 5, 6 | 1, 2, 3, 4 | 4, 5, 6 | 1, 2, 3 | NR | NR | NR | NR |

BPU = Belt Pickup Platform
R = Rigid Platform
F = Flex Platform
D = Draper Platform
FD = Flex Draper Platform
C = Corn Head
C-SM = Corn Head w/ StalkMaster™

0 = No ballast required for any rear tire option.
1 = 500/85R24 IMP 177A8 SVT rear tires.
2 = 500/80R28 IMP 176A8 SFT rear tires.
3 = VF520/80R26 165A8 TL CEREXBIB rear tires.
4 = 620/75R26 166A8 TL MEGAXBIB rear tires.
5 = VF620/70R26 170A8 TL CEREXBIB rear tires.
6 = 750/65R26 166A8 TL MEGAXBIB rear tires.
NR = Not recommended since machine with header cannot be properly ballasted.

*StalkMaster is a trademark of Deere & Company*

OUO6075,0001548 -19-29JUL13-1/1

## Ballast Requirements (S670 HillMaster™)

*NOTE: Tires requiring fluid must be filled to 75%.*

| | Normal (Slopes of 15% or less) | | | | Extremely Hilly (Slopes greater than 15%) | | | |
|---|---|---|---|---|---|---|---|---|
| | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | |
| | Fluid Required | | Fluid Required | | Fluid Required | | Fluid Required | |
| **Header** | **No** | **Yes** | **No** | **Yes** | **No** | **Yes** | **No** | **Yes** |
| 606C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 606C-SM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C | 0 | 0 | 0 | 0 | NR | 1, 2 | 0 | 0 |
| 608C-SM | 0 | 0 | 0 | 0 | NR | 1, 2 | NR | 1, 2 |
| 615 BPU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 618R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 620R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 622R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 625R & F | 0 | 0 | 0 | 0 | NR | 1, 2 | NR | 1, 2 |
| 630R & F | 0 | 0 | 0 | 0 | NR | 2 | NR | 1, 2 |
| 625D | 0 | 0 | 0 | 0 | NR | NR | NR | NR |
| 630D | 0 | 1, 2 | 0 | 0 | NR | NR | NR | NR |
| 630FD | 0 | 0 | 0 | 0 | NR | NR | NR | NR |

BPU = Belt Pickup Platform
R = Rigid Platform
F = Flex Platform
D = Draper Platform
FD = Flex Draper Platform
C = Corn Head
C-SM = Corn Head w/ StalkMaster™

0 = No ballast required for any rear tire option.
1 = 500/85R24 IMP 177A8 SVT rear tires.
2 = VF520/80R26 165A8 TL CEREXBIB rear tires.
NR = Not recommended since machine with header cannot be properly ballasted.

*StalkMaster is a trademark of Deere & Company*

OUO6075,0001549 -19-29JUL13-1/1

## Ballast Requirements (S680, S685 and S690)

*NOTE: Tires requiring fluid must be filled to 75%.*

| | Normal (Slopes of 15% or less) | | | | Extremely Hilly (Slopes greater than 15%) | | | |
|---|---|---|---|---|---|---|---|---|
| | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | |
| | Fluid Required | | Fluid Required | | Fluid Required | | Fluid Required | |
| **Header** | **No** | **Yes** | **No** | **Yes** | **No** | **Yes** | **No** | **Yes** |
| 606C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 606C-SM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C-SM | 0 | 0 | 0 | 0 | 3, 4 | 1, 2 | 0 | 0 |
| 612C | 0 | 0 | 0 | 0 | NR | 3, 4 | NR | 3, 4 |
| 612C-SM | 0 | 0 | 0 | 0 | NR | 4 | NR | 4 |
| 615 BPU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 618R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 620R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 622R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 625R & F | 0 | 0 | 0 | 0 | 3, 4 | 1, 2 | 0 | 0 |
| 630R & F | 0 | 0 | 0 | 0 | NR | 1, 2, 3, 4 | NR | 1, 2, 3, 4 |
| 635F | 0 | 0 | 0 | 0 | NR | 3, 4 | NR | 3, 4 |
| 625D | 0 | 0 | 0 | 0 | NR | 3, 4 | NR | 3, 4 |
| 630D | 0 | 0 | 0 | 0 | NR | 4 | NR | 4 |
| 635D | 0 | 0 | 0 | 0 | NR | NR | NR | NR |
| 640D | 0 | 0 | 0 | 0 | NR | NR | NR | NR |
| 630FD | 0 | 0 | 0 | 0 | NR | 4 | NR | 3, 4 |
| 635FD | 0 | 0 | 0 | 0 | NR | NR | NR | 4 |
| 640FD | 0 | 0 | 0 | 0 | NR | NR | NR | NR |

| | |
|---|---|
| BPU = Belt Pickup Platform<br>R = Rigid Platform<br>F = Flex Platform<br>D = Draper Platform<br>FD = Flex Draper Platform<br>C = Corn Head<br>C-SM = Corn Head w/ StalkMaster™ | 0 = No ballast required for any rear tire option.<br>1 = 500/85R24 IMP 177A8 SVT rear tires.<br>2 = 500/80R28 IMP 176A8 SFT rear tires.<br>3 = VF620/70R26 170A8 TL CEREXBIB rear tires.<br>4 = 750/65R26 166A8 TL MEGAXBIB rear tires.<br>NR = Not recommended since machine with header cannot be properly ballasted. |

*StalkMaster is a trademark of Deere & Company*

OUO6075,000154A -19-29JUL13-1/1

## Ballast Requirements (S680 HillMaster™, S685 HillMaster™ and S690 HillMaster™)

*NOTE: Tires requiring fluid must be filled to 75%.*

| | Normal (Slopes of 15% or less) | | | | Extremely Hilly (Slopes greater than 15%) | | | |
|---|---|---|---|---|---|---|---|---|
| | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | | Four-Wheel Drive: No | | Four-Wheel Drive: Yes | |
| | Fluid Required | | Fluid Required | | Fluid Required | | Fluid Required | |
| **Header** | **No** | **Yes** | **No** | **Yes** | **No** | **Yes** | **No** | **Yes** |
| 606C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 606C-SM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 608C-SM | 0 | 0 | 0 | 0 | NR | 1 | 0 | 0 |
| 615 BPU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 618R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 620R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 622R & F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 625R & F | 0 | 0 | 0 | 0 | NR | 1 | 0 | 0 |
| 630R & F | 0 | 0 | 0 | 0 | NR | 1 | NR | 1 |
| 625D | 0 | 0 | 0 | 0 | NR | NR | NR | 1 |
| 630D | 0 | 0 | 0 | 0 | NR | NR | NR | NR |
| 630FD | 0 | 0 | 0 | 0 | NR | NR | NR | NR |

BPU = Belt Pickup Platform
R = Rigid Platform
F = Flex Platform
D = Draper Platform
FD = Flex Draper Platform
C = Corn Head
C-SM = Corn Head w/ StalkMaster™

0 = No ballast required for any rear tire option.
1 = 500/85R24 IMP 177A8 SVT rear tires.
NR = Not recommended since machine with header cannot be properly ballasted.

*StalkMaster is a trademark of Deere & Company*

OUO6075,000154B -19-29JUL13-1/1

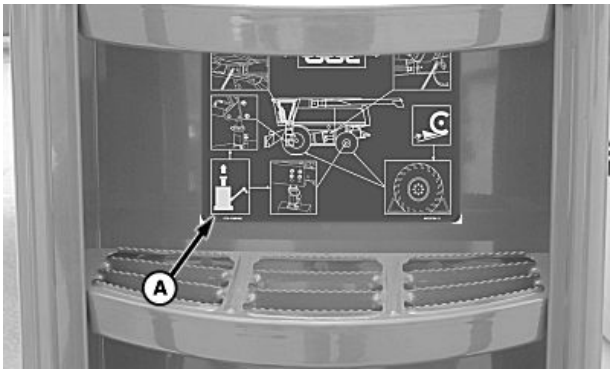
## Jack Pocket Locations Decal

**CAUTION: Always empty grain tank before raising machine.**

**Block both sides of tires to prevent machine movement.**

Jack pocket locations decal (A) is located on cab ladder. Decal shows correct locations for raising machine using proper jacks.

**A—Jack Pocket Locations Decal**




H106687 —UN—24JAN13

OUO6075,0001392 -19-24JAN13-1/1

## Breaking-In Engine

**S660, S670, S680 and S690 (Tier 2/Stage II)**

Engine is factory filled with John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In Plus™ Engine Oil as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

If John Deere Break-In™ Engine Oil is used during the initial operation of a new or rebuilt engine, change the oil and filter at a maximum of 100 hours.

If John Deere Break-In Plus™ Engine Oil is used, change oil and filter at a minimum of 100 hours and a maximum equal to interval specified for John Deere Plus-50™ II or Plus-50™ oil (see Diesel Engine Oil in the Fuels and Lubricants section for further information).

**IMPORTANT: DO NOT add makeup oil until the oil level is BELOW the "ADD" mark on dipstick. John Deere Break-In Plus™ Oil should be used to make up any oil consumed during this period.**

**DO NOT use Plus-50™ or Plus-50™ II Engine Oil during break-in period of a new engine or engine that has had a major overhaul. These oils will not allow a new or overhauled engine to properly wear during this break-in period.**

Check engine oil level frequently during break-in period. If oil must be added during this period, John Deere Break-In Plus™ Oil is preferred.

**IMPORTANT: DO NOT fill above the FULL mark. Oil level anywhere within the cross-hatch marks are considered in the acceptable operating range.**

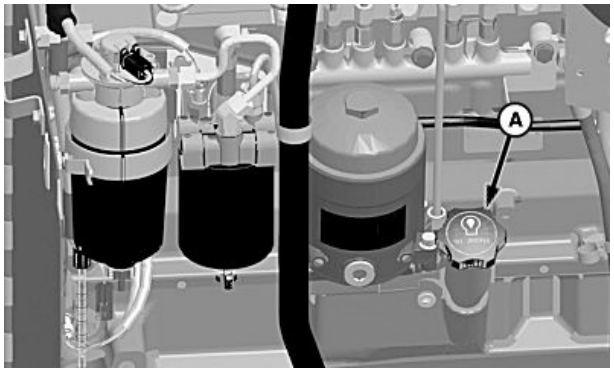
*NOTE: Some increase in oil consumption may be expected when low viscosity oils are used. Check oil levels more frequently.*

Avoid prolonged periods of engine idling or sustained maximum load operation. If engine idles longer than 5 minutes, stop engine.

After break-in period, change engine oil and replace engine oil filter. Fill crankcase with John Deere Plus-50™ II, John Deere Plus-50™ or seasonal viscosity grade oil (see Diesel Engine Oil in Fuels and Lubricants section for oil recommendations).

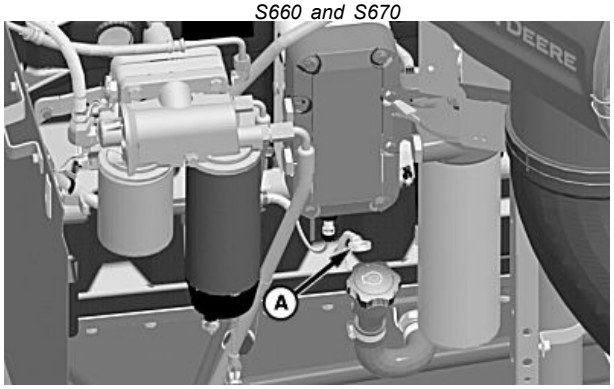
*NOTE: Verify that dipstick is screwed or pushed completely into housing before removing to check oil level.*

*Break-In Plus is a trademark of Deere & Company*
*Break-In is a trademark of Deere & Company*
*Plus-50 is a trademark of Deere & Company*



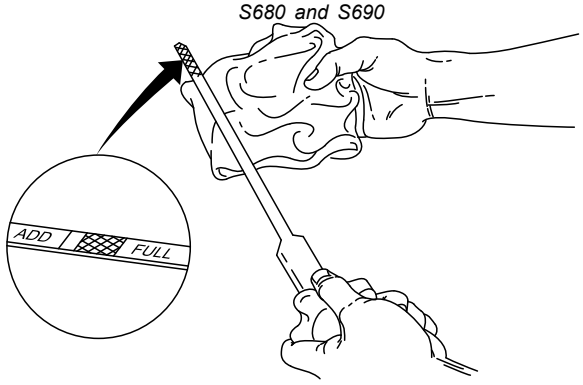

H95375 —UN—16FEB10

*S660 and S670*




H95419 —UN—19FEB10

*S680 and S690*




H86717 —UN—19OCT06

**A—Dipstick**

Remove dipstick (A) and check oil level daily. Oil level should be between "ADD" and top of cross-hatch area on dipstick. If oil level is below "ADD" mark, add oil as needed (see Fuel and Lubricants section for oil recommendations).

Watch for leaks. Do not operate engine when oil level is below "ADD" mark on dipstick.

**Continued on next page**

OUO6075,0001553 -19-09JUL13-1/4

**S660, S670, S680, S685 and S690 (Interim Tier 4/Stage III B)**

Engine is factory filled with John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In Plus™ Engine Oil as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

During the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and a maximum equal to the interval specified for John Deere Plus-50™ II oil (see Diesel Engine Oil in the Fuels and Lubricants section for further information).

If one of these oils is used during the initial operation of a new or rebuilt engine, change oil and filter between a minimum of 100 hours and a maximum of 400 hours.

**IMPORTANT: DO NOT add makeup oil until the oil level is BELOW the "ADD" mark on dipstick. John Deere Break-In Plus™ Oil should be used to make up any oil consumed during this period.**

**DO NOT use Plus-50™ or Plus-50™ II Engine Oil during break-in period of a new engine or engine that has had a major overhaul. These oils will not allow a new or overhauled engine to properly wear during this break-in period.**

Check engine oil level frequently during break-in period. If oil must be added during this period, John Deere Break-In Plus™ Oil is preferred.

**IMPORTANT: DO NOT fill above the FULL mark. Oil level anywhere within the cross-hatch marks are considered in the acceptable operating range.**

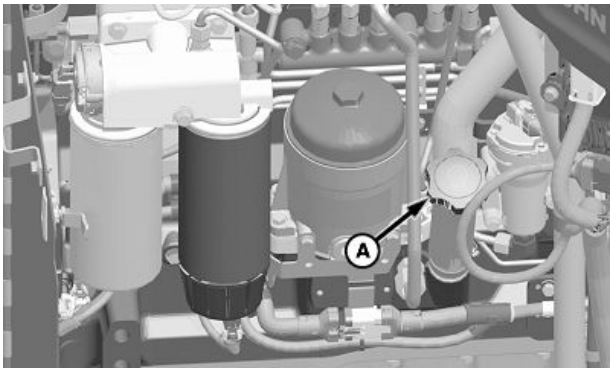
*NOTE: Some increase in oil consumption may be expected when low viscosity oils are used. Check oil levels more frequently.*

Avoid prolonged periods of engine idling or sustained maximum load operation. If engine idles longer than 5 minutes, stop engine.

After break-in period, change engine oil and replace engine oil filter. Fill crankcase with John Deere Plus-50™ II or other diesel engine oil (see Diesel Engine Oil in Fuels and Lubricants section for oil recommendations).

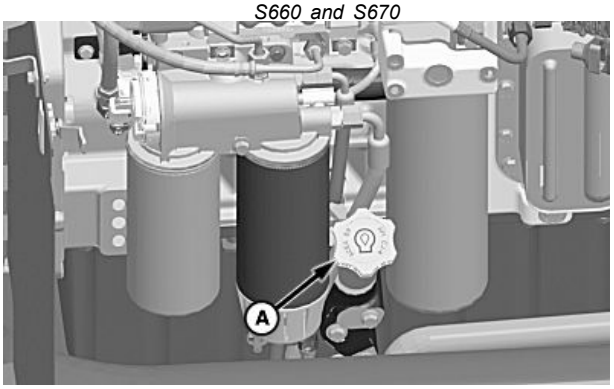
*NOTE: Verify that dipstick is screwed completely into housing before removing to check oil level.*

*Break-In Plus is a trademark of Deere & Company*
*Plus-50 is a trademark of Deere & Company*



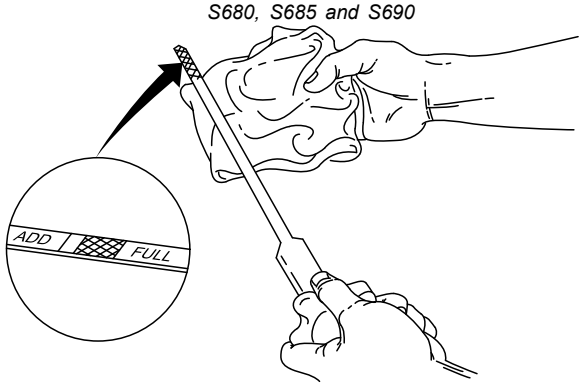

H95306 —UN—11FEB10

*S660 and S670*




H95396 —UN—17FEB10

*S680, S685 and S690*




H86717 —UN—19OCT06

**A—Dipstick**

Remove dipstick (A) and check oil level daily. Oil level should be between "ADD" and top of cross-hatch area on dipstick. If oil level is below "ADD" mark, add oil as needed (see Fuel and Lubricants section for oil recommendations).

Watch for leaks. Do not operate engine when oil level is below "ADD" mark on dipstick.

**Continued on next page**

**All Machines**

If air temperature is below -10 °C (14 °F) use an engine block heater.

Temperature indicator should read in green zone (A) during normal operation.

**IMPORTANT: Prevent possible engine damage. Do not shut OFF engine if temperature warning light comes ON or bars enter red zone. Shutting OFF engine causes coolant temperature to rise even higher, resulting in machine damage. Reduce load and run engine at a slower speed to lower coolant temperature. Unless temperature drops quickly, stop engine and determine cause before resuming operation.**

Watch temperature gauge closely. If gauge moves into red zone, reduce load on engine and determine cause before resuming operation.




H105918 —UN—05OCT12

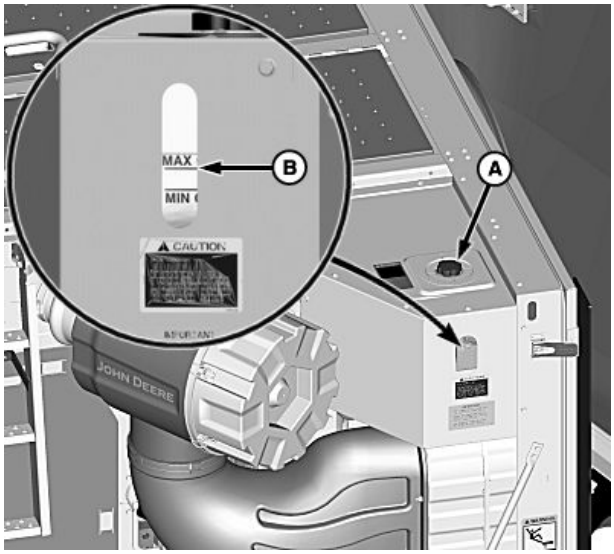
**A—Green Zone (Normal Operation)**

OUO6075,0001553 -19-09JUL13-3/4

Check coolant level periodically and watch for signs of leaks. Remove surge tank cap (A) and pour coolant into surge tank and fill to "Max Cold" line (B).

*NOTE: Coolant level must be between "Max Cold" and "Min Cold" lines. Add coolant as needed if coolant is below "Min Cold" line.*

**A—Surge Tank Cap** **B—Max Cold Line**




H105922 —UN—05OCT12

OUO6075,0001553 -19-09JUL13-4/4

## Belt Drives Adjustment - First 50 Hours

**CAUTION: Never check or adjust belt drives with engine running. Shut OFF engine, set parking brake and remove key.**

Check all spring loaded belt idler adjustments after first 50 hours of operation. Most belt stretch occurs during the first hours of service.

After initial adjustments, check belt adjustment as required. Washer on spring tensioner should be positioned between end of gauge and bottom of step.

OUO6075,000056C -19-14JAN10-1/1

## Break-In Check First 100 Hours

Perform daily or 10 hour service, (see Lubrication and Maintenance section).

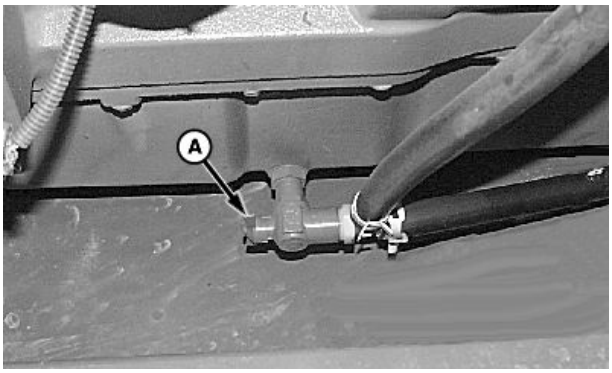
Watch CommandCenter display for engine temperature and engine oil pressure diagnostic trouble codes. If codes appear, refer to Diagnostic Trouble Codes section for further information.

Check engine oil level (if needed, add John Deere Break-In Oil) and coolant level frequently and watch for signs of leaks.

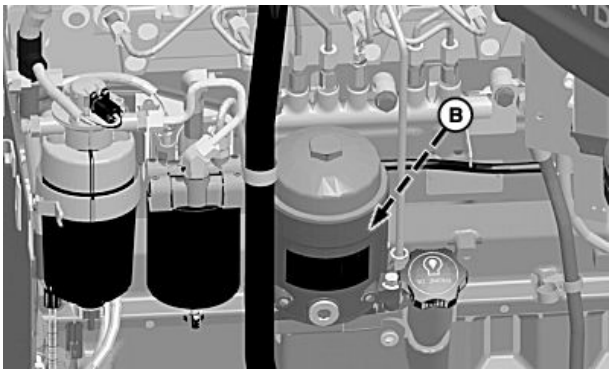
Check engine air intake system hoses and clamps for tightness.

OUO6075,000056D -19-14JAN10-1/1

## Break-In Service After 100 Hours (Tier 2/Stage II)




H81205 —UN—15JUN04




H95377 —UN—16FEB10

*S660 and S670*

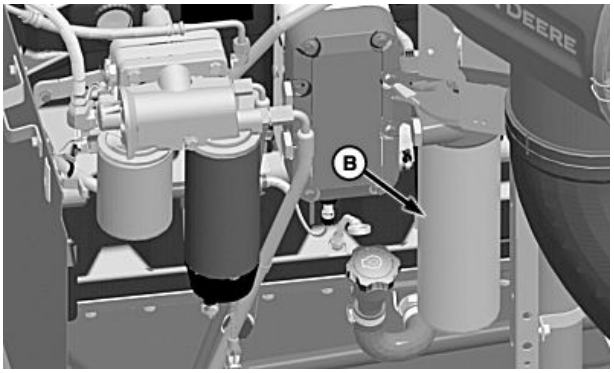
Drain crankcase oil by opening drain (A) and close drain once oil is drained.

Remove and retain cap and dispose of oil filter (B) properly.

Install oil filter and retain with cap.

Fill crankcase with proper amount of engine oil (see Diesel Engine Oil in Fuel And Lubricants section for oil specification).

**A—Drain** **B—Oil Filter**

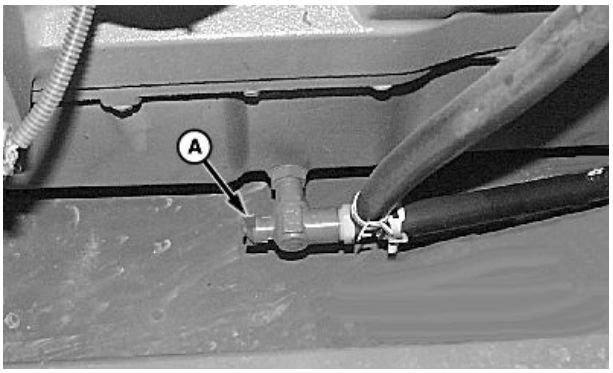



H95420 —UN—09MAR10

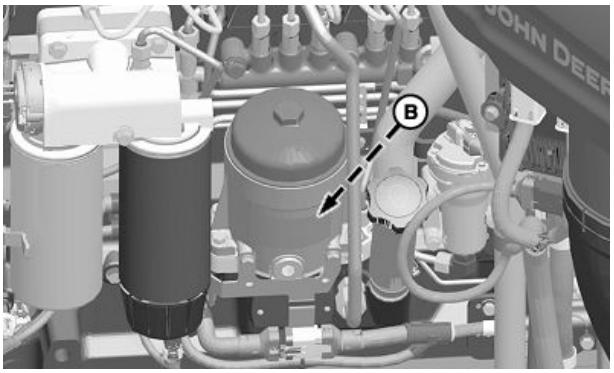
*S680 and S690*

OUO6075,0001554 -19-09JUL13-1/1

## Break-In Service After 400 Hours (Final Tier 4/Stage IV)




H81205 —UN—15JUN04




H95310 —UN—11FEB10

*S660 and S670*

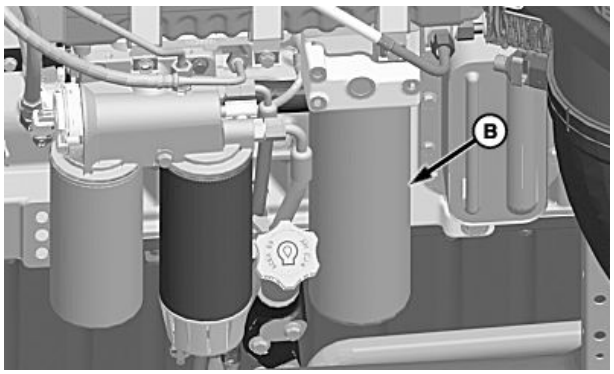
Drain crankcase oil by opening drain (A) and close drain once oil is drained.

Remove and retain cap and dispose of oil filter (B) properly.

Install oil filter and retain with cap.

Fill crankcase with proper amount of engine oil (see Diesel Engine Oil in Fuel And Lubricants section for oil specification).

**A—Drain** **B—Oil Filter**

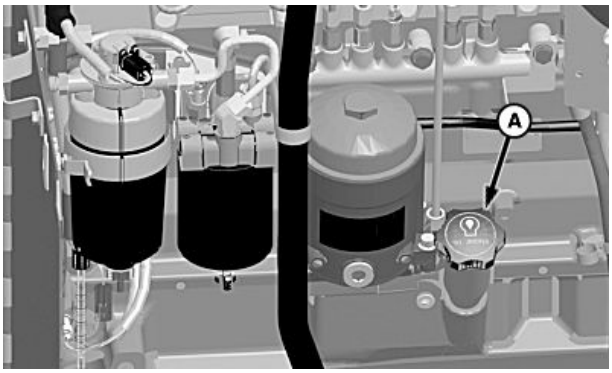



H95397 —UN—17FEB10

*S680, S685 and S690*

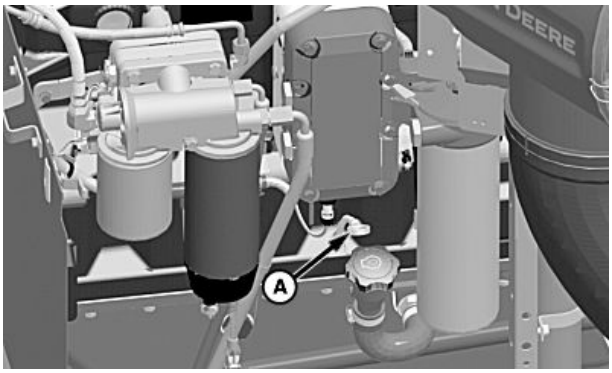
OUO6075,0001555 -19-19JUN13-1/1

## Engine Oil Level



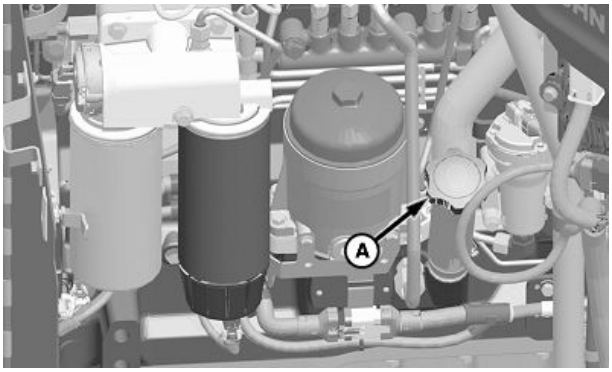

H95375 —UN—16FEB10

*S660 and S670 (Tier 2/Stage II)*



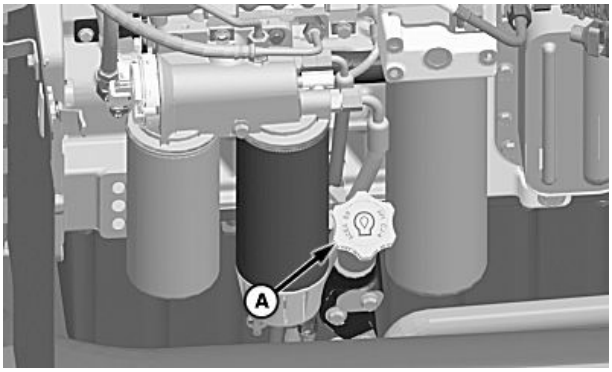

H95419 —UN—19FEB10

*S680 and S690 (Tier 2/Stage II)*




H95306 —UN—11FEB10

*S660 and S670 (Interim Tier 4/Stage III B)*




H95396 —UN—17FEB10

*S680, S685 and S690 (Interim Tier 4/Stage III B)*

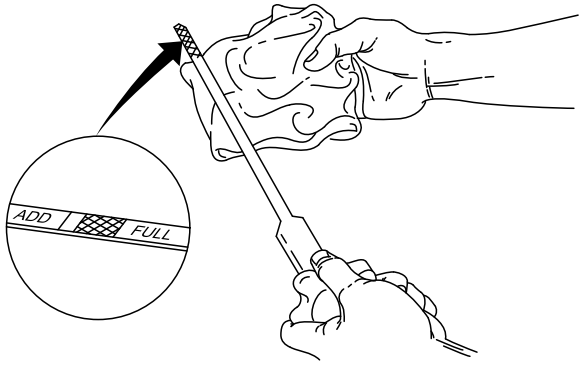
**IMPORTANT: It is vital to maintain engine oil at correct levels to ensure a long service life. Check oil level with machine parked on level ground.**

*NOTE: Verify that dipstick is screwed or pushed completely into housing before removing to check oil level.*

Check engine oil level with dipstick (A) daily. Do not operate engine when oil level is below ”ADD” mark on dipstick.

Remove dipstick and check oil level. Oil level should be between ”ADD” and top of cross-hatch area on dipstick. If oil level is below ”ADD” mark, add oil as needed (see Fuel And Lubricants for oil recommendations).

Watch for leaks. Do not operate engine with oil level below ”ADD” mark.

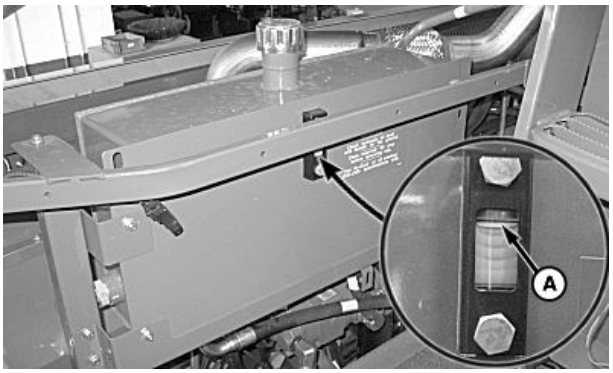



H86717 —UN—19OCT06

**A—Dipstick**

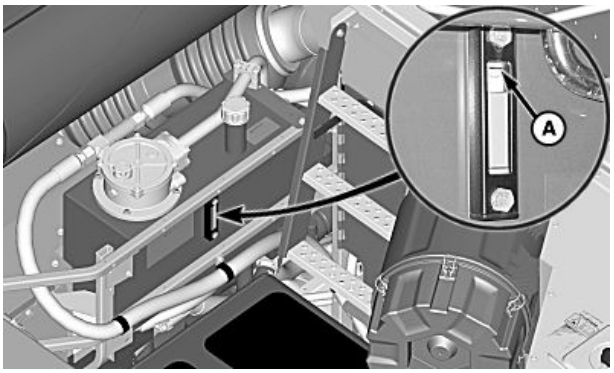
OUO6075,0001556 -19-09JUL13-1/1

## Hydrostatic/Hydraulic Oil Level




H97523 —UN—04AUG10

*S660 and S670*



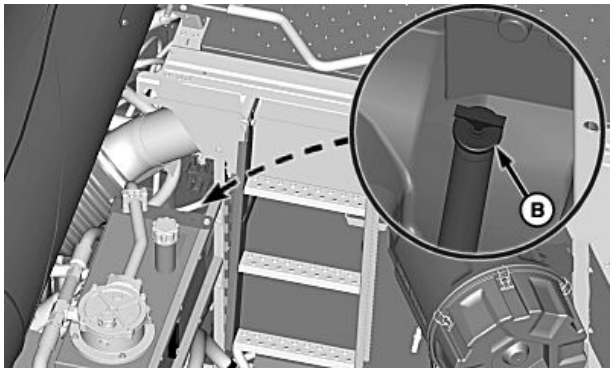

H106938 —UN—14FEB13

*S680, S685 and S690*

Check hydrostatic/hydraulic oil level with header on ground and all cylinders retracted. Oil level must be at top of sight glass (A) with feeder house fully lowered. Add oil as needed, but do not overfill.

Shut OFF engine, set park brake and remove key before checking hydraulic oil at engine gearcase. Oil must not be below ”ADD” mark on dipstick (B).

**A—Sight Glass** **B—Dipstick**




H106937 —UN—14FEB13

*Hydraulic Oil Level (Engine Gearcase)*

OUO6075,0001557 -19-19JUN13-1/1

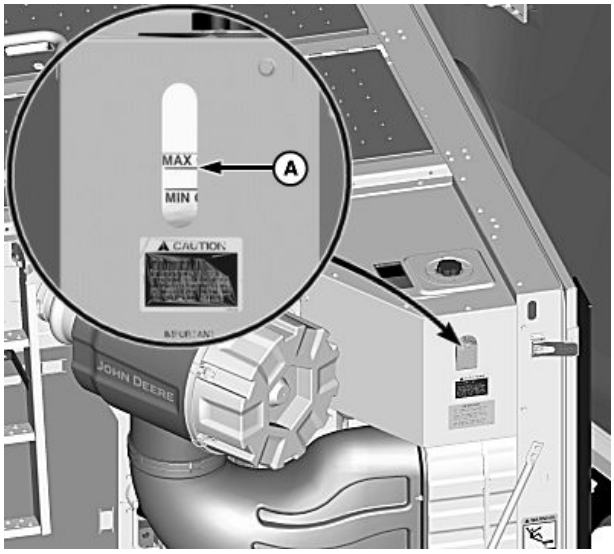
## Coolant Level

**IMPORTANT: A special cap is used on the surge tank. If cap is damaged or missing, it must be replaced by an equivalent cap.**

Allow engine to cool. Coolant level in surge tank should be at ”Max Cold” line (A).

*NOTE: Coolant level must be between ”Max Cold” and ”Min Cold” lines. Add coolant as needed if coolant is below ”Min Cold” line.*

**A—Max Cold Line**




H105923 —UN—05OCT12

OUO6075,000128C -19-17OCT12-1/1

## Fuel System

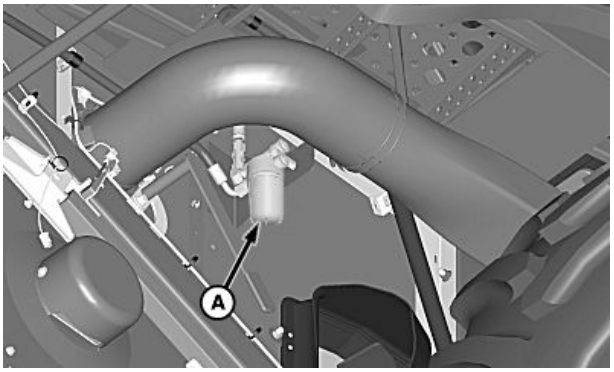
**CAUTION: Shut OFF engine, set park brake and remove key before performing maintenance work on fuel filters.**

*NOTE: Make sure that precleaner bowl is fully seated to prevent air from entering the fuel system.*

Close fuel shut off valve on fuel tank.

Remove precleaner bowl (A) and clean screen if dirty fuel was used.

**A—Precleaner Bowl**




H98377 —UN—30SEP10

*Fuel Precleaner Bowl (All Machines)*

OUO6075,0001558 -19-09JUL13-1/4

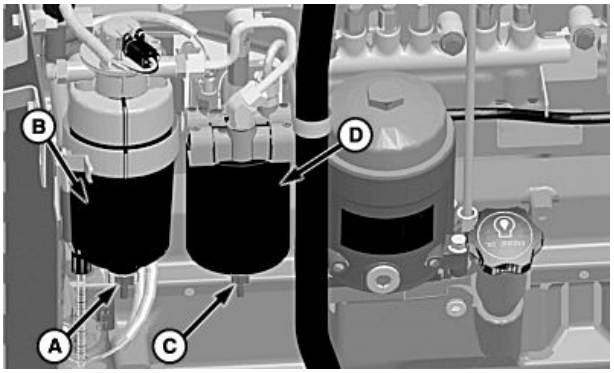
### S660 and S670 (Tier 2/Stage II)

Open drain (A) to inspect fuel system for water in primary filter (B) (see Service Engine section).

Open drain (C) to inspect fuel system for water in secondary filter (D) (see Service Engine section).

If problem persists, change fuel filters (see Service Engine section).

**A—Drain**
**B—Primary Fuel Filter**
**C—Drain**
**D—Secondary Fuel Filter**




H1104937 —UN—28FEB12

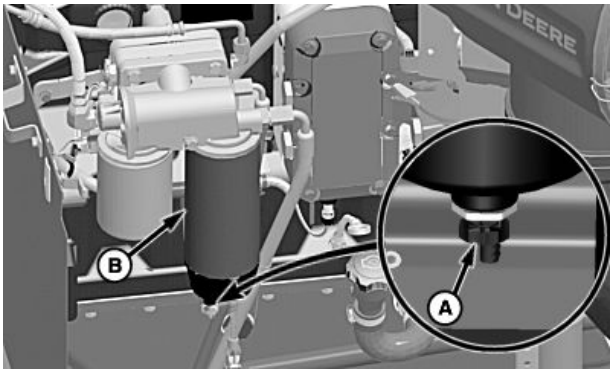
OUO6075,0001558 -19-09JUL13-2/4

### S680 and S690 (Tier 2/Stage II)

Open drain (A) to inspect fuel system for water in primary filter (B) (see Service Engine section).

If problem persists change fuel filters (see Service Engine section).

**A—Drain**
**B—Primary Fuel Filter**




H104938 —UN—28FEB12

**Continued on next page**

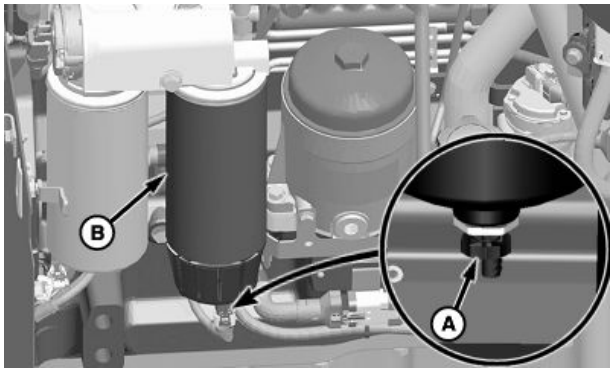
OUO6075,0001558 -19-09JUL13-3/4

**S660, S670, S680, S685 and S690 (Interim Tier 4/Stage III B)**

Open drain (A) to inspect fuel system for water in primary filter (B) (see Service Engine section).

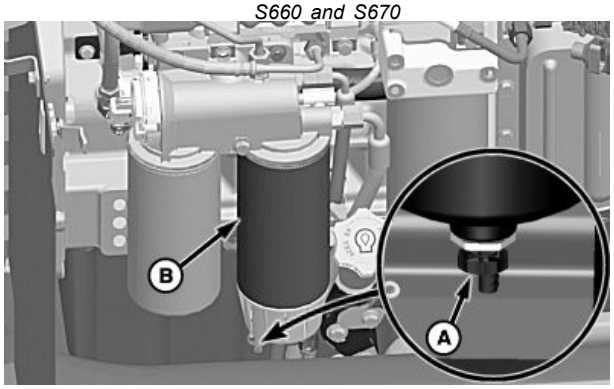
If dirty fuel was used, replace filter (see Service Engine section).

**A—Drain** **B—Primary Fuel Filter**




H104939 —UN—28FEB12

*S660 and S670*




H104940 —UN—28FEB12

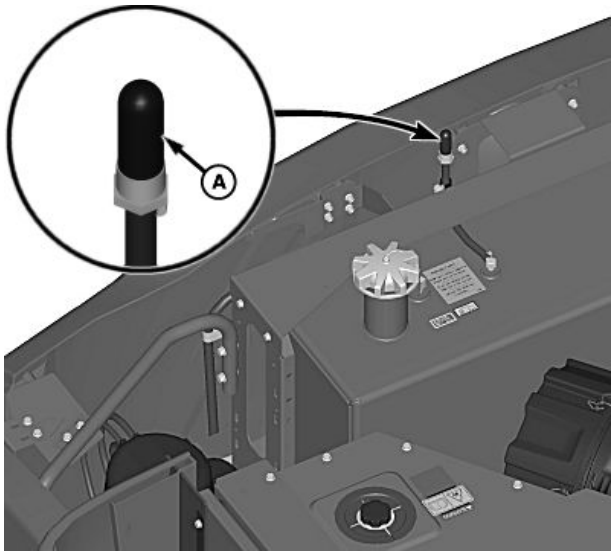
*S680, S685 and S690*

OUO6075,0001558 -19-09JUL13-4/4

## Fuel Tank Breather

Visually inspect fuel tank breather (A) weekly. Do not allow excessive amounts of chaff or debris to collect on breather. If breather is covered with debris, it does not allow fuel tank to breathe. Remove fuel tank breather from hose and clean.

**A—Fuel Tank Breather**




H106003 —UN—23OCT12

OUO6075,00012CA -19-27JUN13-1/1

## Engine Air Scoop Positions

*NOTE: Engine air scoop is shipped from factory in transport position. Before field operations, engine air scoop must be moved to selected field position.*

Pull lock-out pin (A) and rotate engine air scoop to desired position.

**Transport Position:**

**IMPORTANT: Engine air scoop must be placed into transport position when local roadway restrictions apply. Follow your local country regulations.**

Verify that engine air scoop is moved to transport position (1) when machine must be transported.

Refer to Position Engine Air Scoop (Transport Position) in this section for further information.

**Standard Field Position:**

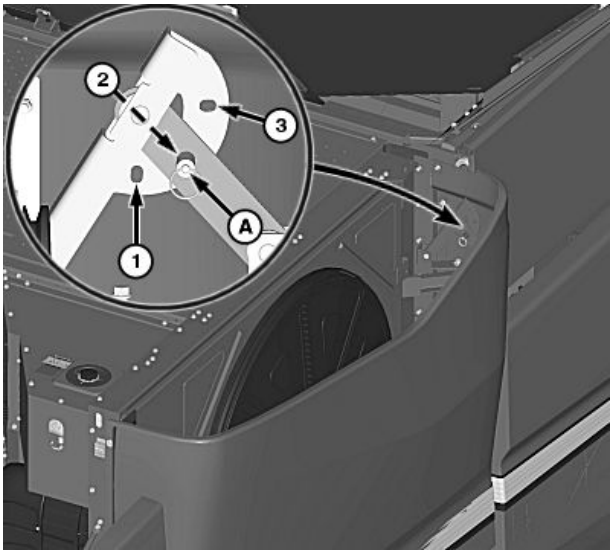
**IMPORTANT: Engine air scoop must be placed into standard field position when harvesting to prevent overheating of engine.**

Verify that engine air scoop is in standard field position (2) when operating in normal field conditions.

Refer to Position Engine Air Scoop (Standard Field Position) in this section for further information.

**Extended Field Position:**

**IMPORTANT: Engine air scoop must be placed into extended field position when harvesting in high ambient temperature conditions and/or high altitude areas to prevent overheating of engine.**




H106789 —UN—05FEB13

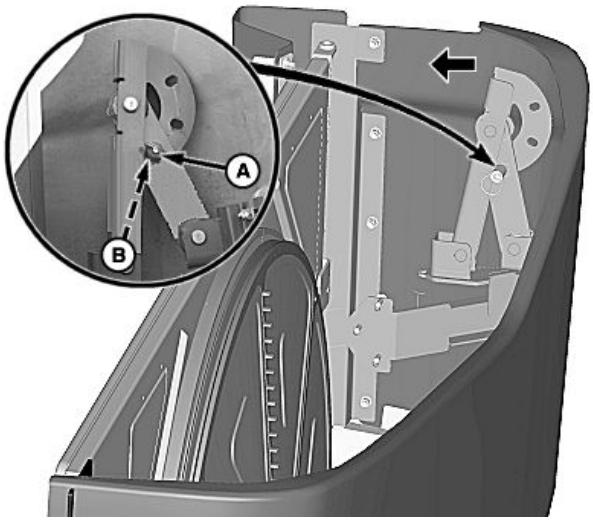
**A—Lock-Out Pin**
**1— Transport Position**
**2— Standard Field Position**
**3— Extended Field Position**

Verify that engine air scoop is in extended field position (3) for increased cooling capacity when harvesting in high ambient temperature conditions and/or high altitude areas.

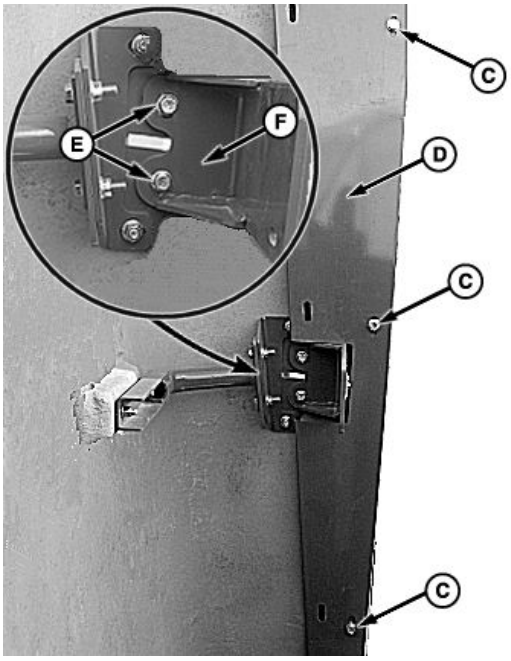
Refer to Position Engine Air Scoop (Extended Field Position) in this section for further information.

OUO6075,00013BB -19-05FEB13-1/1

## Position Engine Air Scoop (Transport Position)




H106623 —UN—28JAN13




H106729 —UN—29JAN13

*Standard Field Position*

**A—Lock-Out Pin**
**B—Hole**
**C—Cap Screws and Lock Nuts**
**D—Panel**
**E—Cap Screws and Lock Nuts**
**F—Bracket**

**IMPORTANT: Engine air scoop must be placed into transport position when local roadway restrictions apply. Follow your local country regulations.**

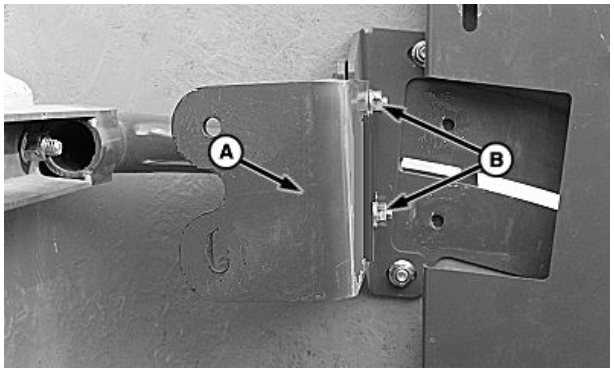
*NOTE: Engine air scoop is shipped from factory in transport position. Before field operations, engine air scoop must be moved to selected field position.*

1. Pull lock-out pin (A) and move air scoop inward until pin aligns with hole (B).
2. Remove and retain cap screws and lock nuts (C) and panel (D) from air scoop.
3. Remove and retain cap screws and lock nuts (E) and bracket (F).

OUO6075,00013B8 -19-11FEB13-1/3

4. Install previously removed bracket (A) and retain using previously removed nuts (B) as shown.

**A—Bracket**
**B—Nuts**




H106692 —UN—30JAN13

*Transport Position*

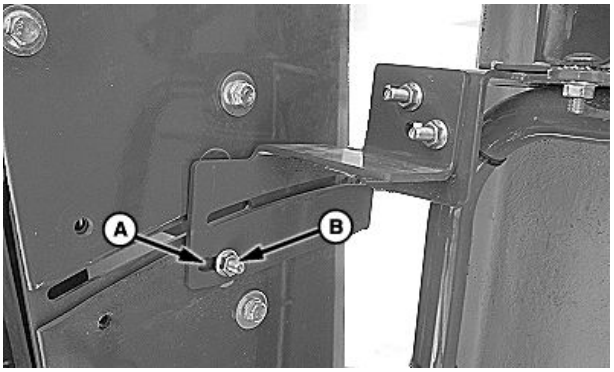
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OUO6075,00013B8 -19-11FEB13-2/3

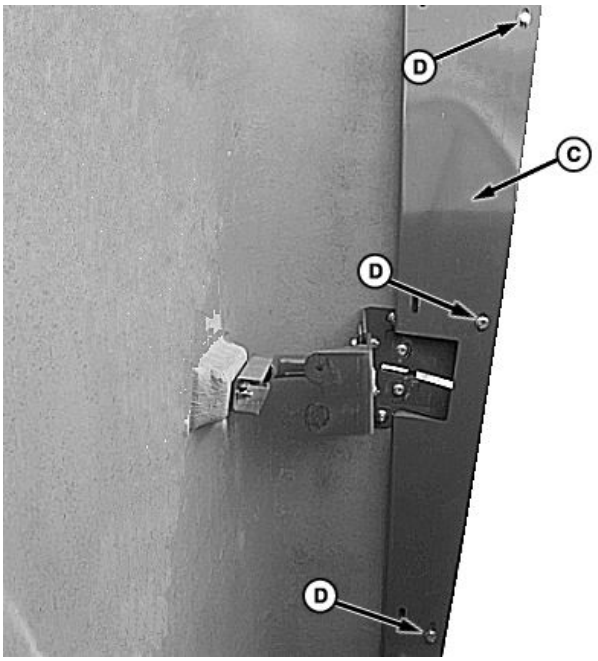
*NOTE: Only one cap screw and nut are required for this installation. Retain remaining cap screw and nut for later use.*

5. Move air scoop inward and install cap screw through bracket hole (A) and retain using previously removed lock nut (B).
6. Install previously removed panel (C) and retain using previously removed cap screws and lock nuts (D).

**A—Bracket Hole**
**B—Lock Nut**
**C—Panel**
**D—Cap Screws and Lock Nuts**



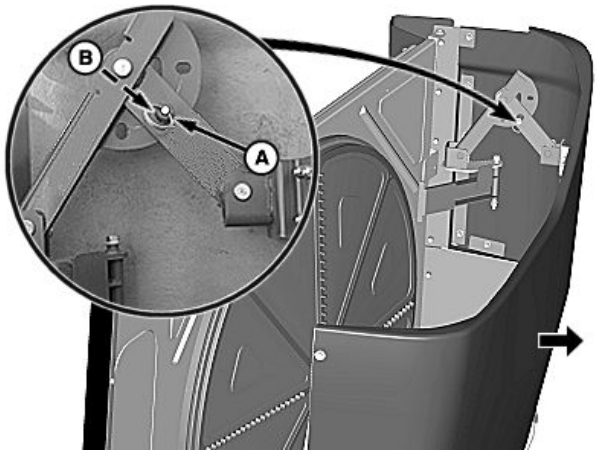

H106693 —UN—30JAN13



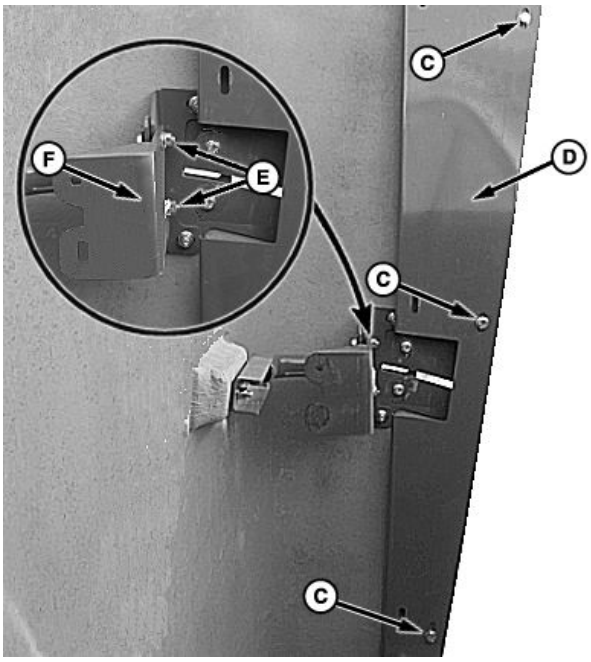

H106696 —UN—30JAN13

OUO6075,00013B8 -19-11FEB13-3/3

## Position Engine Air Scoop (Standard Field Position)




H106614 —UN—23JAN13




H106615 —UN—30JAN13

*Transport Position*

**A—Lock-Out Pin**
**B—Hole**
**C—Cap Screws and Lock Nuts**
**D—Panel**
**E—Lock Nuts**
**F—Bracket**

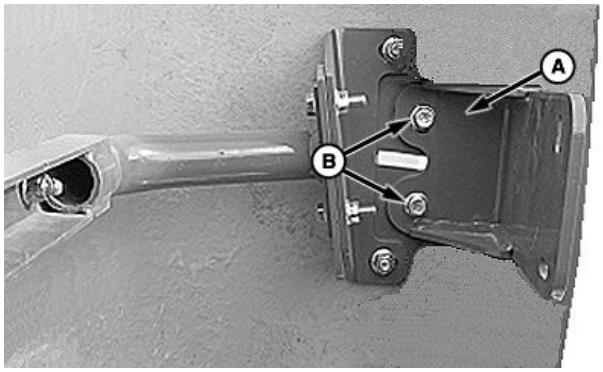
**IMPORTANT: Engine air scoop must be placed into standard field position when harvesting to prevent overheating of engine.**

1. Pull lock-out pin (A) and move air scoop outward until pin aligns with hole (B).
2. Remove and retain cap screws and lock nuts (C) and panel (D) from air scoop.
3. Remove lock nuts (E) and bracket (F).
4. Install previously removed nuts back on cap screws.

OUO6075,00013B9 -19-11FEB13-1/3

5. Install bracket (A) and cap screws (B) through holes as shown.

**A—Bracket**
**B—Cap Screws**

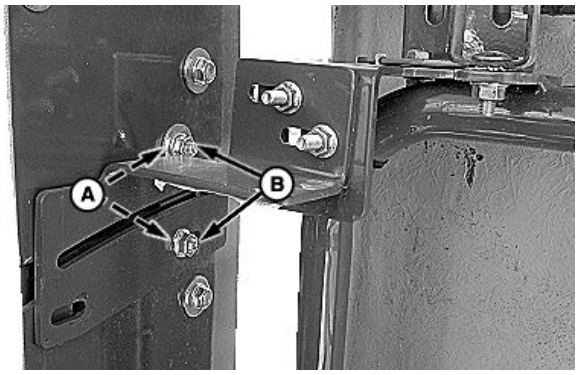



H106616 —UN—29JAN13

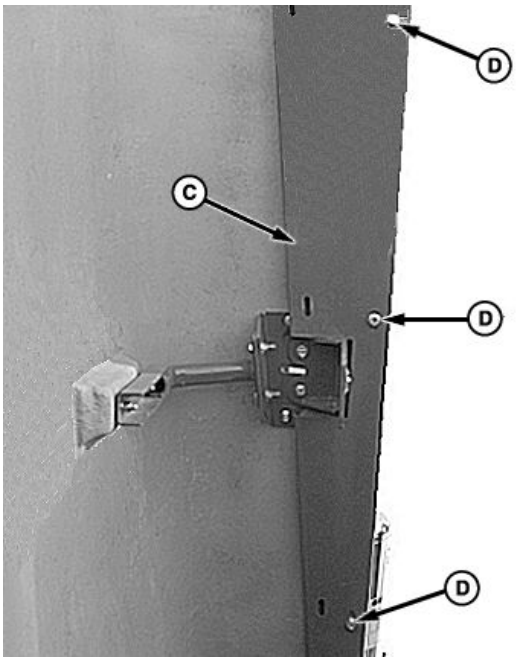
*Standard Field Position*

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OUO6075,00013B9 -19-11FEB13-2/3




H106617 —UN—29JAN13



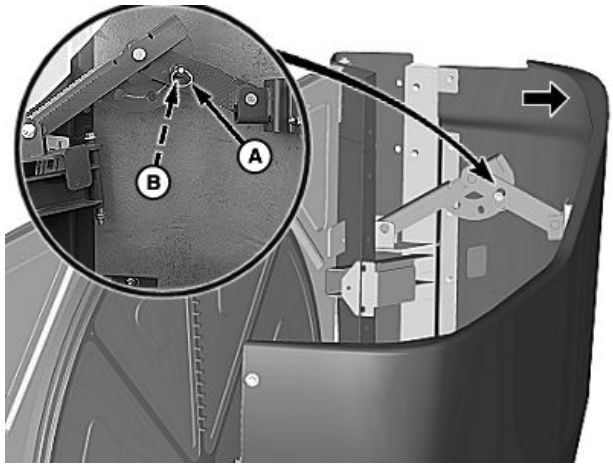

H106618 —UN—29JAN13

**A—Bracket Holes** **B—Lock Nuts** **C—Panel** **D—Hardware**

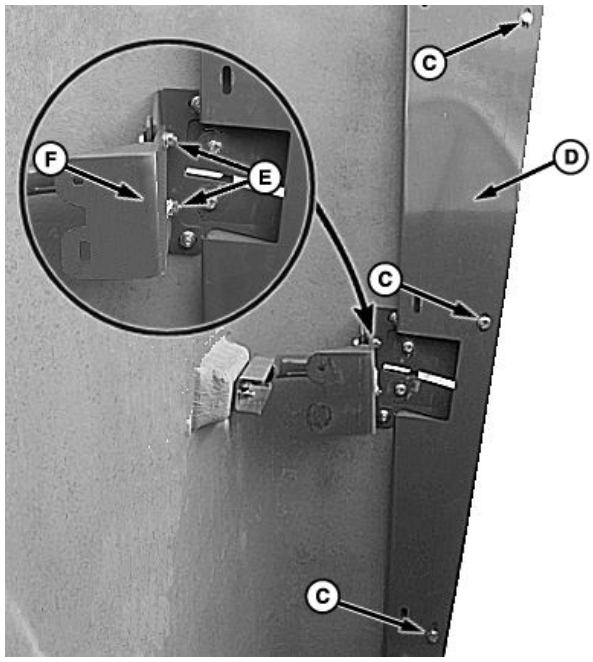
6. Move air scoop outward and install cap screws through bracket holes (A) and retain using previously removed lock nuts (B).
7. Install previously removed panel (C) using previously removed cap screws and nuts (D).

OUO6075,00013B9 -19-11FEB13-3/3

## Position Engine Air Scoop (Extended Field Position)




H106619 —UN—28JAN13




H106615 —UN—30JAN13

*Transport Position*

**A—Lock-Out Pin**
**B—Hole**
**C—Cap Screws and Lock Nuts**
**D—Panel**
**E—Cap Screws and Nuts**
**F—Bracket**

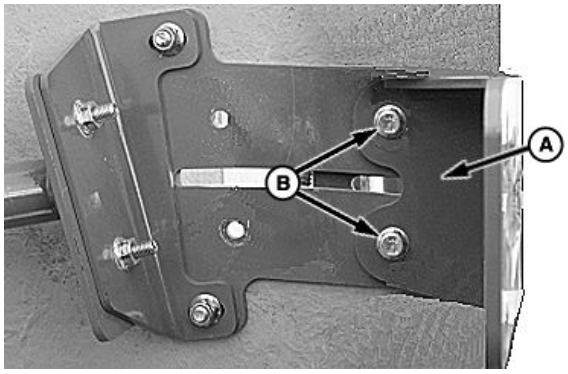
**IMPORTANT: Engine air scoop must be placed into extended field position when harvesting in high ambient temperature conditions and/or high altitude areas to prevent overheating of engine.**

1. Pull lock-out pin (A) and move air scoop outward until pin aligns with hole (B).
2. Remove and retain cap screws and lock nuts (C) and panel (D) from air scoop.
3. Remove nuts (E) and bracket (F).

OUO6075,00013BA -19-11FEB13-1/3

4. Install previously removed bracket (A) and cap screws (B) through holes as shown.

**A—Bracket**
**B—Cap Screws**




H106620 —UN—30JAN13

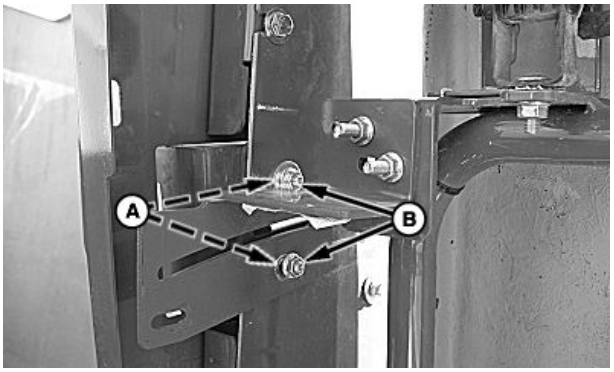
*Extended Field Position*

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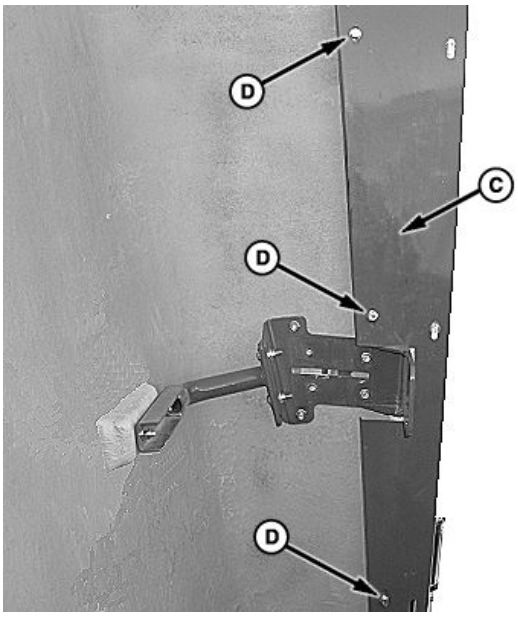
OUO6075,00013BA -19-11FEB13-2/3

5. Move air scoop outward and install cap screws through bracket holes (A) and retain using previously removed lock nuts (B).
6. Install previously removed panel (C) using previously removed cap screws and lock nuts (D).

**A—Bracket Holes**
**B—Lock Nut**
**C—Panel**
**D—Cap Screws and Lock Nuts**




H106621 —UN—29JAN13

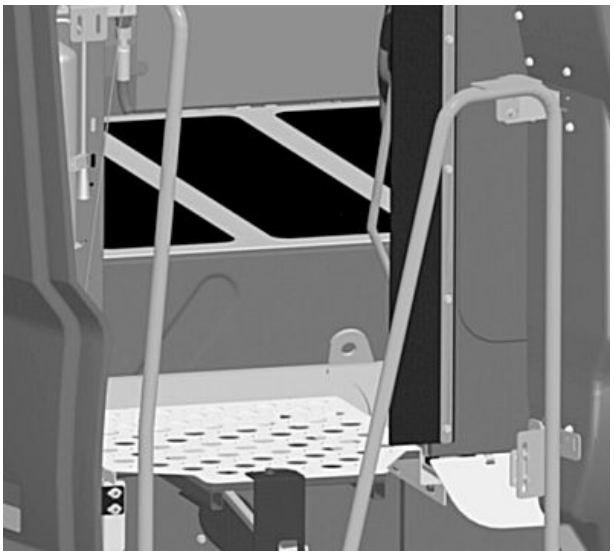



H106622 —UN—29JAN13

OUO6075,00013BA -19-11FEB13-3/3

## Cleaning Engine Compartment

**CAUTION: Do not clean engine or engine compartment with engine running. Dirt, oil, chaff, and crop debris in engine compartment and on engine is a fire hazard. Direction of wind, type of crop and its moisture content can all have an effect on where and how much chaff and debris accumulate. Check and clean this area frequently.**



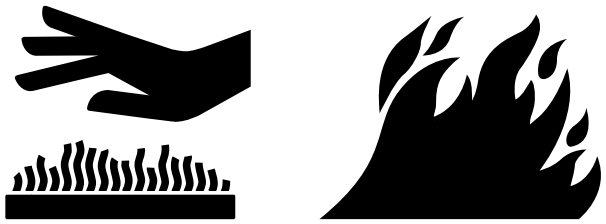
H95319 —UN—11FEB10

OUO6075,0000575 -19-17MAR10-1/1

## Exhaust Filter Cleaning

Servicing machine or attachments during exhaust filter cleaning can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.

During auto or manual/stationary exhaust filter cleaning operations, the engine will run at elevated idle and hot temperatures for an extended period of time. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite, or melt common materials.



RG17488 —UN—21AUG09

DX,FILTER -19-20JAN10-1/1

## Exhaust Filter System Overview (Interim Tier 4/Stage III B)

Your machine is equipped with an emission compliant engine which cleans and filters the exhaust. Under normal machine operation and with system in AUTO mode, the system requires minimal operator interaction.

To avoid unnecessary buildup of diesel particulates or soot in the exhaust filter system;

- Utilize AUTO Exhaust Filter Cleaning mode
- Avoid unnecessary idling
- Use proper engine oil. See Fuels and Lubricants section for recommendations.
- Use only ultra low sulfur fuel. See Fuels and Lubricants section for recommendations.

Touch or press confirm switch when Engine Information Icon is highlighted.

There are two exhaust filter system modes:

- Auto (A)
- Disable (B)

**IMPORTANT: Disable mode should ONLY be used when temporarily connected to an indoor exhaust system for diagnostic and repair activities.**

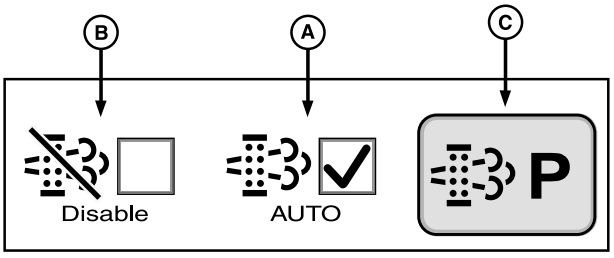
*NOTE: Parked exhaust filter cleaning icon (C) may be active or inactive (grayed out) depending on exhaust filter restriction level. See Parked Exhaust Filter Cleaning in this section.*

*System defaults to AUTO mode when parked exhaust filter cleaning is complete or key switch is cycled. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See When to Disable Exhaust Cleaning System in this section.*

H94480 —UN—31MAR10



*Engine Information Icon*




H95633 —UN—09MAR10

**A—AUTO Exhaust Filter Cleaning Mode**
**B—Disable Exhaust Filter Cleaning Mode**
**C—Parked Exhaust Filter Cleaning Icon**

OUO6075,00010E4 -19-21MAR12-1/1

## When to Disable Exhaust Cleaning System

**IMPORTANT: Disable the automatic exhaust filter cleaning system only when necessary.**

**CAUTION: When AUTO or PARKED cleaning is enabled, the exhaust temperature may be high under no load or light load conditions at certain times during the exhaust filter cleaning cycle.**

Disable exhaust filter cleaning system in conditions where it may be unsafe for elevated exhaust temperatures.

Such as:

- Indoors or under a roof unless a high temperature externally vented exhaust system is connected.
- When there is not enough time available for the machine to complete a cleaning cycle before it is shut down.
- High crop dust or chaff conditions.
- Next to a fueling area.

OUO6075,000071B -19-28JUN11-1/1

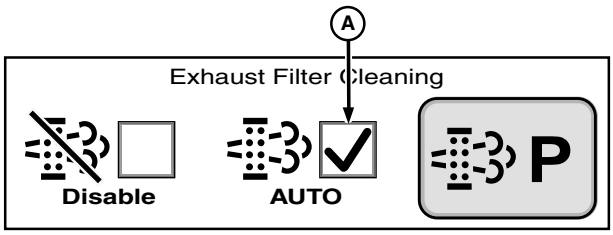
## Exhaust Filter AUTO Mode (Interim Tier 4/Stage III B)

*NOTE: System defaults to AUTO mode when parked exhaust filter cleaning is complete or key switch is cycled. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See When to Disable Exhaust Cleaning System in this section.*

**AUTO Mode** (A) allows the Exhaust Filter System to intelligently perform exhaust filter cleaning as required. Cornerpost display indicator and armrest display provide operator information related to exhaust filter system activity.

Exhaust Filter Cleaning Indicator (B) illuminates when exhaust filter system is actively performing exhaust filter cleaning.

**Exhaust Filter Restricted—** depending on operating conditions, the Exhaust Filter System may request a change in operation. Armrest display will recommend operational changes.




H96154 —UN—21APR10




H105919 —UN—05OCT12

**A—AUTO Exhaust Filter Cleaning Mode**

**B—Exhaust Filter Cleaning Indicator**

OUO6075,00012DB -19-26OCT12-1/1

## Parked Exhaust Filter Cleaning (Interim Tier 4/Stage III B)

**Parked Exhaust Filter Cleaning** is an automated process which allows the system to clean the exhaust filter when required. During the process the engine speed will be controlled by the system and the machine must remain parked to complete the procedure. Time required for the Parked Exhaust Filter Cleaning process is dependent upon the level of exhaust filter restriction, ambient temperatures and current exhaust gas temperature. Display will provide estimated time to completion.

Follow instructions shown on display to complete the Parked Exhaust Filter Cleaning process.

*NOTE: Parked Exhaust Filter Cleaning may exceed 40 minutes.*

Prior to initiating the Parked Exhaust Filter Cleaning process:

- Position machine outdoors
- Engage park brake
- Turn OFF header and separator switches
- Set engine speed to low idle
- Object detection sensor on rear composite panel MUST be clear and far enough away from objects

Touch or press confirm switch when Engine Information Icon is highlighted.

Touch or press confirm switch when Parked Exhaust Filter Cleaning icon (A) is highlighted.

Touch or press confirm switch when desired icon is highlighted:

- Cancel Icon (B) - allows operator to cancel procedure.
- Next Page Icon (C) - allows operator to start procedure.

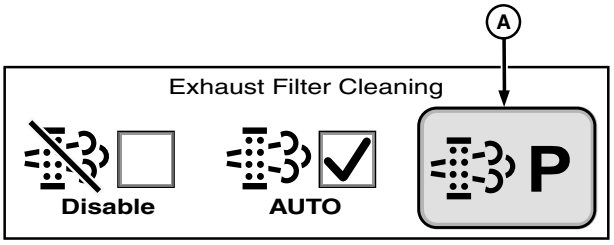
Follow instructions shown on remaining screens.

**IMPORTANT: Engine speed will be controlled by the machine during filter cleaning.**

H94480 —UN—31MAR10



*Engine Information Icon*




H94792 —UN—20OCT09




H106517 —UN—11JAN13

**A—Parked Exhaust Filter Cleaning Icon**
**B—Cancel Icon**
**C—Next Page Icon**

**Continued on next page**

Once process is started a status screen appears.

There are two steps in the Parked Filter Cleaning process (Figure A), preparation and cleaning. During the preparation step, the Exhaust Filter System will control engine speed to increase exhaust temperature. During the cleaning step, diesel particulates or soot is cleaned from the Exhaust Filter System.

System informs (Figure B) operator when Parked Filter Cleaning is complete. If you are not returning the machine to service immediately after procedure, allow engine time to return to normal operating temperature before stopping engine.

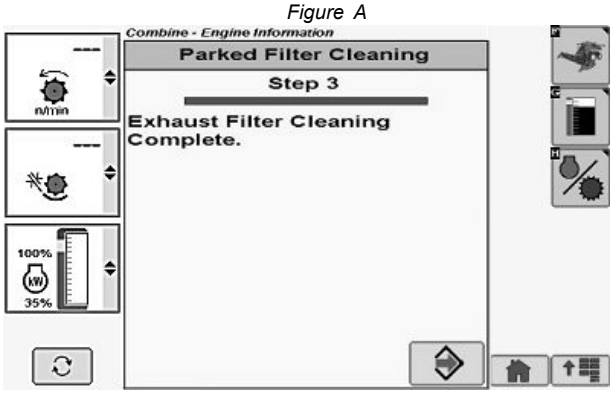
*NOTE: At any time during the parked procedure, the process can be canceled by advancing the throttle, engaging transmission, or stopping engine.*

System defaults to AUTO mode when parked exhaust filter cleaning is complete. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See When to Disable Exhaust Cleaning System in this section.




H106518 —UN—11JAN13

*Figure A*




H106519 —UN—11JAN13

*Figure B*

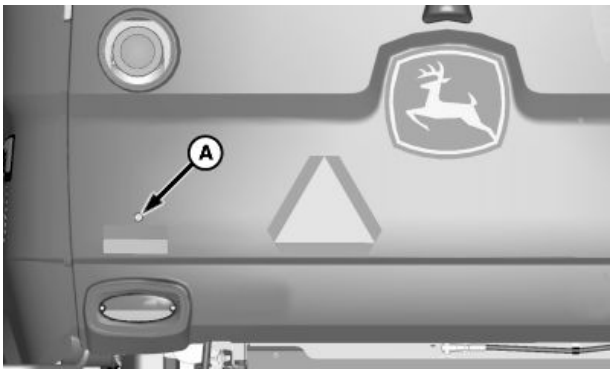
OUO6075,0001388 -19-15JAN13-2/2

## Object Detection Sensor (Interim Tier 4/Stage III B)

*NOTE: Verify that sensor is not obstructed and is not covered with mud or crop debris.*

Sensor (A) located on rear composite panel verifies that objects are more than 2 m (6.5 ft.) away from exhaust plume (elevated exhaust gas temperatures) during the exhaust filter cleaning process. If sensor detects that objects are closer than 2 m (6.5 ft.), system will stop the exhaust filter cleaning process.

**A—Sensor**




H106571 —UN—16JAN13

OUO6075,0001391 -19-17JAN13-1/1

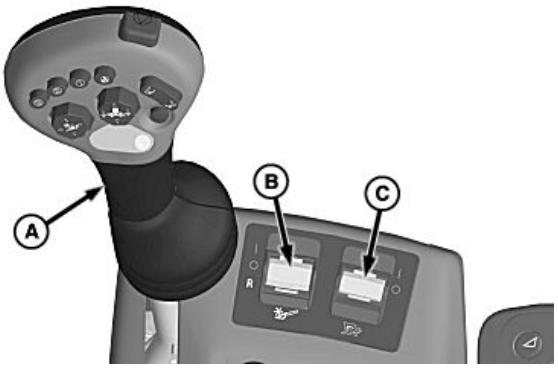
## Starting the Engine

**CAUTION: Before starting engine, make sure that everyone is clear of machine. Sound horn to warn others.**

**Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove exhaust fumes from area with an exhaust pipe extension.**

**If you do not have an exhaust pipe extension, open doors and get outside air into area.**

1. Move multi-function lever (A) to neutral position.
2. Verify that header engage switch (B) and separator engage switch (C) are OFF.




H95320 —UN—11FEB10

**A—Multi-Function Lever**
**B—Header Engage Switch**
**C—Separator Engage Switch**

OUO6075,0000581 -19-13DEC10-1/2

**CAUTION: Sound horn before starting engine to warn others to stay clear from machine.**

**To avoid the possibility of personal injury or death, start engine ONLY from operator seat. Do not start engine by shorting across starter terminals. Machine will start in gear if bypassed.**

**IMPORTANT: To prevent starter damage, do not operate starter for more than 30 seconds at a time. If engine does not start, wait at least two minutes before trying again.**

*NOTE: If temperature is below -5 °C (23 °F) it may be necessary to use cold weather starting aid, (see Cold Weather Starting Aid in Operating the Engine section).*

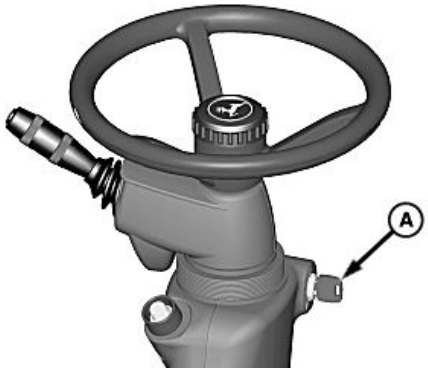
*When key switch is turned to START, a delay of a couple of seconds will occur. This allows control units to power up, relays to close, and starter solenoid to energize.*

*Decal under storage box lid on the armrest shows engine starting information.*

3. Sound horn and turn key switch (A) located on steering column to START position.

   Key positions are:

| | |
|---|---|
| First Position | Accessories |
| Second Position | OFF |
| Third Position | Run |
| Fourth Position | Start |




H95321 —UN—02NOV10

**A—Key Switch**

*NOTE: Diagnostic Trouble Codes (DTC) will display if Stop Engine Code appears on display. Display stops normal functions, indicating a problem that requires the machine be stopped and the problem corrected immediately. Codes are displayed until the problem is resolved. If problem cannot be resolved, see your John Deere dealer.*

4. Release key after engine starts and let engine run at low idle for five minutes to warm oil.

OUO6075,0000581 -19-13DEC10-2/2

## Stopping the Engine

1. Lower header or reel completely to ground.
2. Move multi-function lever (A) to neutral position (B) and press low engine speed switch (C).
3. Shut OFF header engage switch (D) and separator engage switch (E).

**IMPORTANT: Cooling of turbocharger and some engine parts is provided by engine oil. Stopping a hot engine might cause damage to these parts.**

4. Before stopping an engine that was operating at working load, idle engine two—three minutes to allow turbocharger to cool.

**CAUTION: Set parking brake and remove key before leaving machine.**

5. Turn key switch OFF.




H95322 —UN—11FEB10

**A—Multi-Function Lever**
**B—Neutral Position**
**C—Low Engine Speed Switch**
**D—Header Engage Switch**
**E—Separator Engage Switch**

OUO6075,0000582 -19-13DEC10-1/1

## Handle Starting Fluid Safely

**CAUTION: Starting fluid is highly flammable. DO NOT use near fire, sparks, or flames. Read CAUTION information on container. Protect container against damage. DO NOT carry extra or empty cans inside cab.**

If starting fluid is not used for several days, remove can. Check fluid and valve operation by reinstalling and depressing spray nozzle. If no fluid is emitted, use a new can.

To prevent accidental discharge when storing the pressurized can, keep cap on container. Store in a cool, protected location.



TS1356 —UN—18MAR92

Do not incinerate or puncture a starting fluid container.

OUO6075,0000585 -19-17MAY10-1/1

## Cold Weather Starting Aid (If Equipped)

**CAUTION: Avoid personal injury and damage to engine. Inject fluid only while engine is turning.**

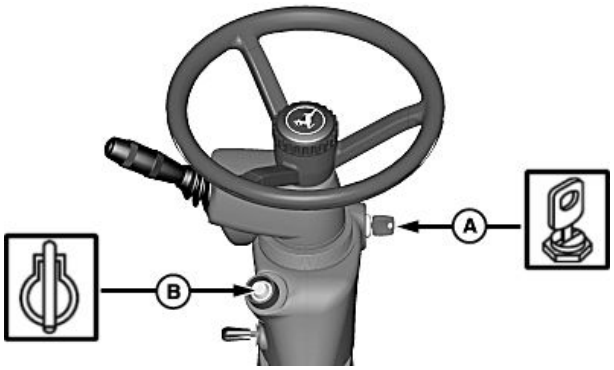
Starting aid only works in ”Run” or ”Start” positions.

Turn key switch (A) to start engine. As soon as engine starts to turn over, press starting aid button (B).

As soon as engine starts, release key, and starting aid button.

If temperature is below -5 °C (23 °F), hold starting aid button down for two—three seconds after engine starts. Repeat procedure until engine runs without faltering.

**IMPORTANT: To assure proper lubrication, operate engine at low speed, with no load for one—two minutes. Extend this period to two—four minutes when operating at temperatures below freezing.**

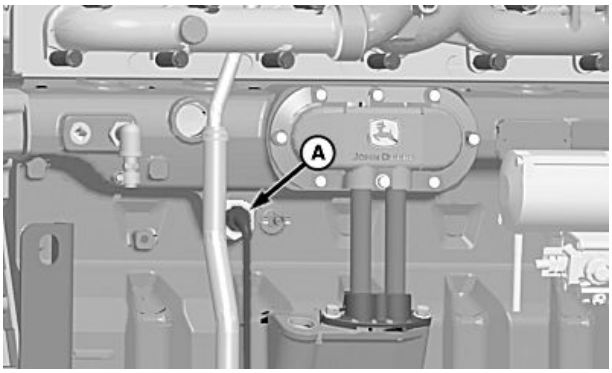



H96387 —UN—02NOV10

**A—Key Switch** **B—Starting Aid Button**

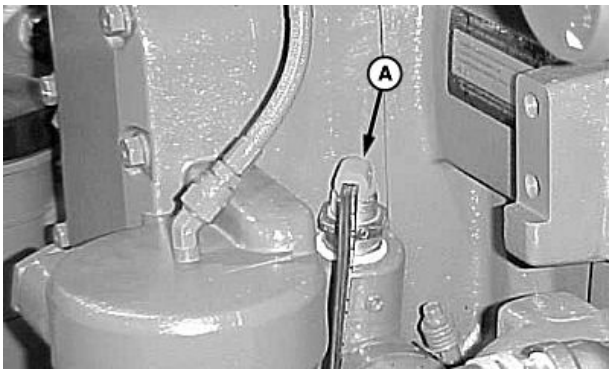
OUO6075,0000586 -19-21MAR11-1/1

## Coolant Heater



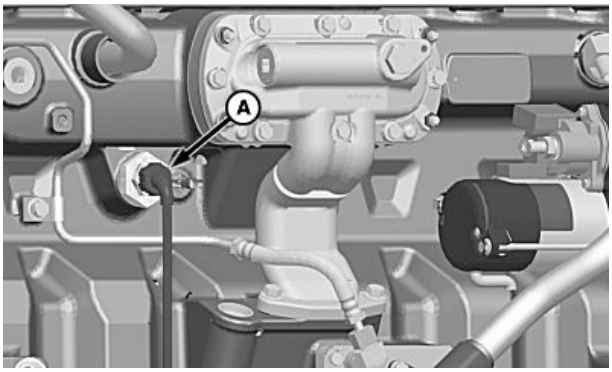

H95379 —UN—16FEB10

*S660 and S670 (Tier 2/Stage II) (Front Side)*



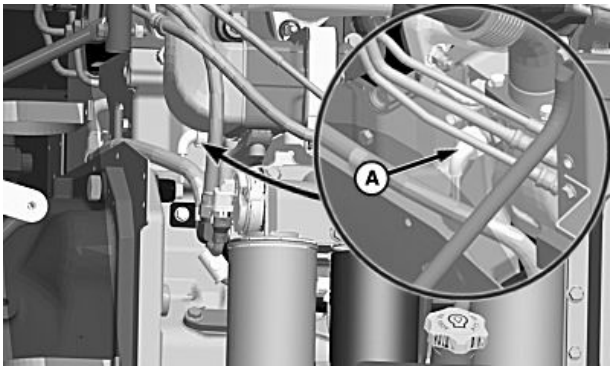

H71689 —UN—18APR02

*S680 and S690 (Tier 2/Stage II) (Rear Side)*




H95324 —UN—11FEB10

*S660 and S670 (Interim Tier 4/Stage III B) (Front Side)*




H95424 —UN—19FEB10

*S680, S685 and S690 (Interim Tier 4/Stage III B) (Rear Side)*

**CAUTION: To avoid shock or hazardous operation, always use a three wire heavy duty electrical cord (minimum gauge 10 AWG and no longer than 7.6 m (25 ft.)) equipped with three connectors. If a two to three contact adapter is used at wall receptacle, always connect green wire to a good ground.**

**Before connecting heater to power source, be sure that element is immersed in coolant. NEVER energize heater in air. Doing so can cause element sheath to burst causing personal injury.**

Coolant heater (A) mounts in freeze plug opening (front side or rear side of engine). By warming engine coolant, the heater reduces oil drag, eases starting, and shortens warm up time.

Coolant Heater Types

- 1000 W (110 V)
- 1000 W (220 V) (Export Machines)



TS210 —UN—23AUG88

**A—Coolant Heater**

OUO6075,0001559 -19-09JUL13-1/1

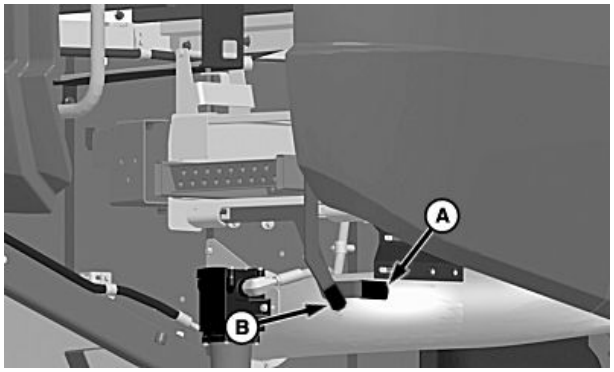
## Rear Ladder and Landing

**CAUTION: Shut OFF engine, set parking brake and remove key.**

Push up on handle (A) and swing ladder out until door latches.

Use handle (B) to pull ladder rearward.

**A—Handle** **B—Handle**




H95325 —UN—11FEB10

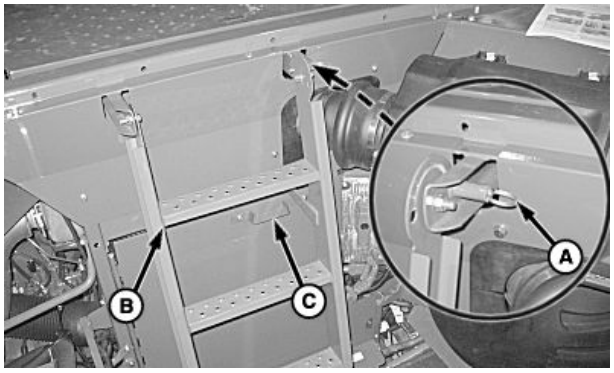
OUO6075,0000588 -19-16FEB10-1/1

## Engine Filter Access Cover

Pull lock-out pin (A) and rotate ladder (B) up until ladder locks into place.

Pull filter access cover (C) open to release from magnet.

**A—Lock-Out Pin** **C—Cover**
**B—Ladder**




H95353 —UN—25AUG10

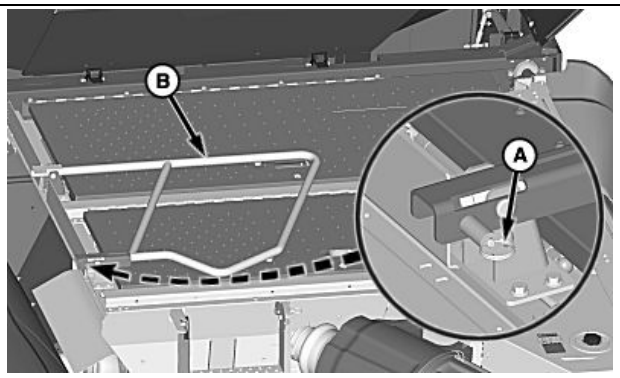
OUO6075,000069B -19-25AUG10-1/1

## Engine Access Covers

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place.

Open engine access covers.

**A—Lock-Out Pin** **B—Handrail**




H102372 —UN—22JUN11

OUO6075,0000589 -19-21JUN11-1/1

## Changing Starting Fluid Can

**CAUTION: Starting fluid is highly flammable and can cause injury or death to you or others if accidentally ignited. DO NOT use near fire, sparks, or flames. Read the cautionary information on the container and protect the container against damage.**

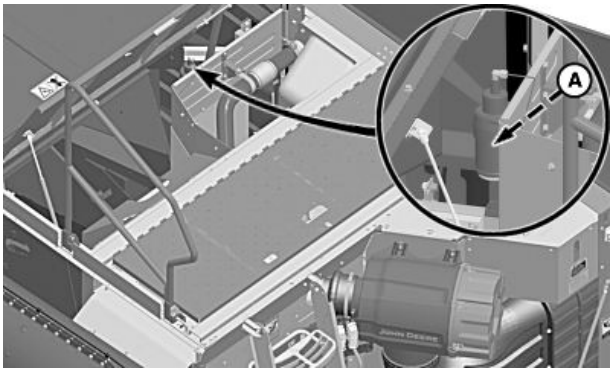
Open engine access cover. Remove safety cap and spray button from starting fluid can (A). Loosen thumb wheel enough to change cans and then tighten.

**IMPORTANT: To avoid drawing dust into engine, always keep can in position.**

Protect starting fluid can from extreme heat or damage.

Check for fluid and valve operation by installing and pressing spray nozzle. If no fluid sprays out, replace can.

**CAUTION: To prevent possible injury from exploding container, do not carry extra or empty cans inside cab.**




H95327 —UN—11FEB10

**A—Starting Fluid Can**

OUO6075,000058B -19-17MAY10-1/1

## Do Not Modify Engine Power or Fuel/Air System

**IMPORTANT: Increasing horsepower, or altering any aspect of fuel and air delivery on emissions certified engines beyond factory settings, will cause emission levels beyond what is allowed by engine emission regulations. Unauthorized adjustments are in violation of the emission regulations applicable to this engine and may result in substantial fines and penalties. Machine warranty will be voided if power level is changed from factory specifications.**

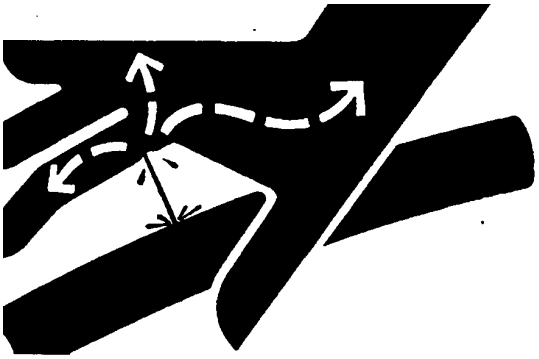
**Do not attempt to service injection pump or fuel injectors. Special training and special tools are required. See your John Deere dealer.**

OUO6075,000058D -19-11FEB10-1/1

## Fuel System

**CAUTION: Escaping diesel fuel under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pin holes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.**

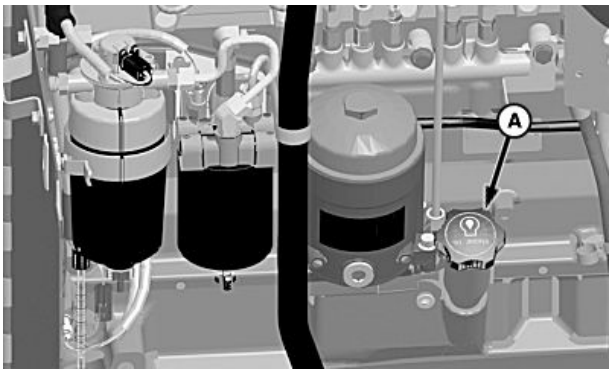
**If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.**



X9811 —UN—23AUG88

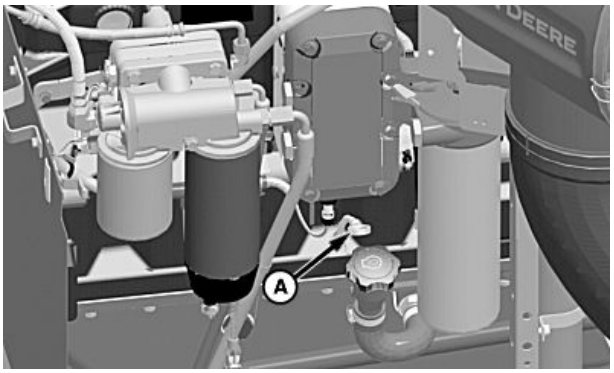
OUO6075,000058E -19-11FEB10-1/1

## Engine Oil Level



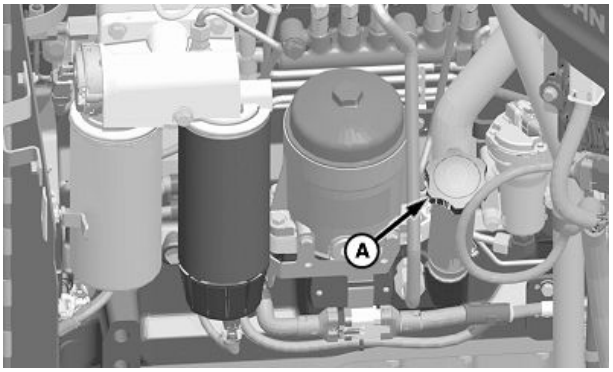

H95375 —UN—16FEB10

*S660 and S670 (Tier 2/Stage II)*



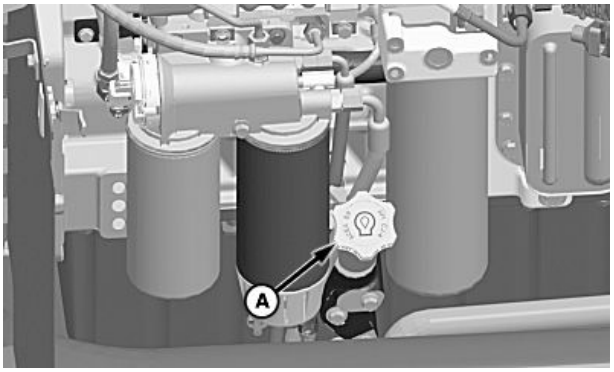

H95419 —UN—19FEB10

*S680 and S690 (Tier 2/Stage II)*




H95306 —UN—11FEB10

*S660 and S670 (Interim Tier 4/Stage III B)*




H95396 —UN—17FEB10

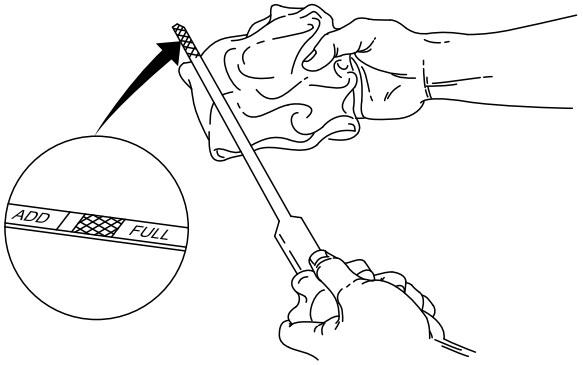
*S680, S685 and S690 (Interim Tier 4/Stage III B)*

**IMPORTANT: It is vital to maintain engine oil at correct levels to ensure a long service life. Check oil level with machine parked on level ground.**

*NOTE: Verify that dipstick is screwed or pushed completely into housing before removing to check oil level.*

Check engine oil level with dipstick (A) daily. Do not operate engine when oil level is below "ADD" mark on dipstick.

Remove dipstick and check oil level. Oil level should be between "ADD" and top of cross-hatch area on dipstick. If oil level is below "ADD" mark, add oil as needed (see Fuel And Lubricants for oil recommendations).




H86717 —UN—19OCT06

**A—Dipstick**

OUO6075,000155A -19-09JUL13-1/1

## Fuel Tank—Filling

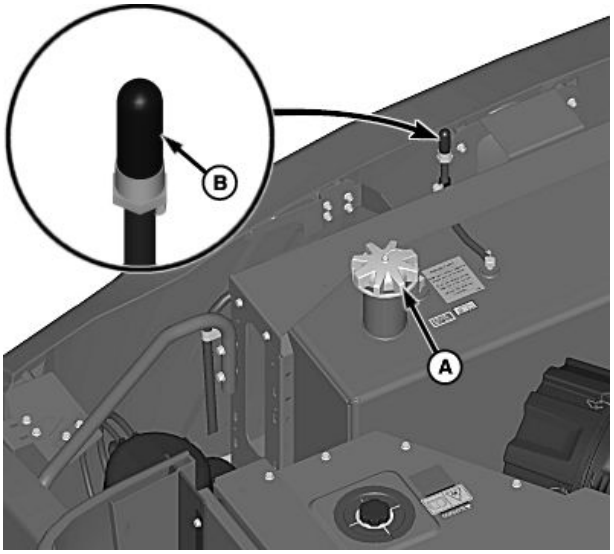
**CAUTION: Handle fuel carefully. Do not refuel machine while smoking. Shut OFF engine, set park brake and remove key before filling tank.**

**Do not overfill fuel tank. Bodily injury can result from fuel splash back. Leakage can result from expansion of fuel. If tank is too full, then left in direct sunlight or if temperature gets too hot, tank will overflow.**

Fuel tank cap (A) is not vented. Excess air is vented through fuel tank breather (B).

Visually inspect fuel tank breather. Do not allow excessive amounts of chaff or debris to collect on breather. If breather is covered with debris, it does not allow fuel tank to breathe. Remove fuel tank breather from hose and clean.

**A—Fuel Tank Cap** **B—Fuel Tank Breather**




H106022 —UN—26OCT12

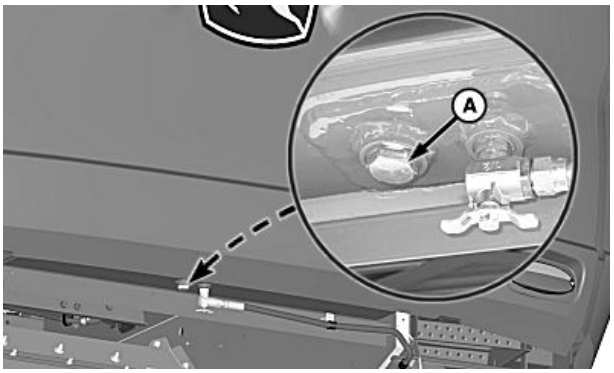
OUO6075,00012DC -19-01JUL13-1/1

## Fuel Tank—Draining

**CAUTION: Shut OFF engine, set parking brake and remove key before performing maintenance work.**

Remove plug (A) at bottom of fuel tank to drain fuel.

**A—Plug**




H95330 —UN—21JUN11

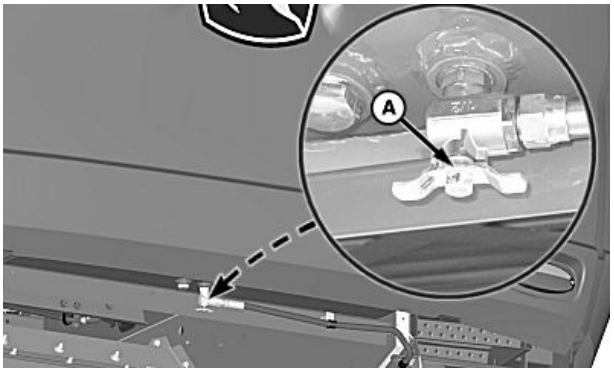
OUO6075,0000591 -19-16FEB10-1/1

## Fuel Tank—Shut-Off Valve

**CAUTION: Shut OFF engine, set parking brake and remove key before performing maintenance work.**

Close valve (A) at bottom of fuel tank when servicing fuel filters.

**A—Valve**

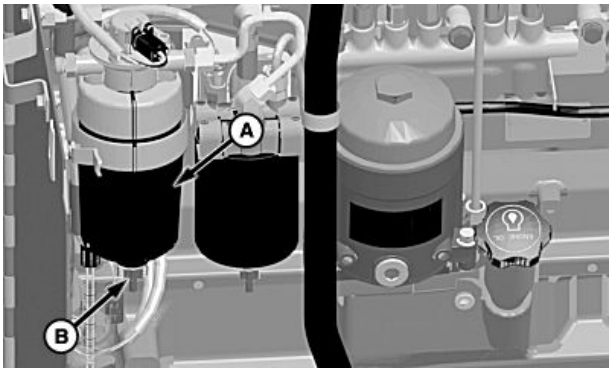



H95332 —UN—30SEP10

OUO6075,0000913 -19-30AUG10-1/1

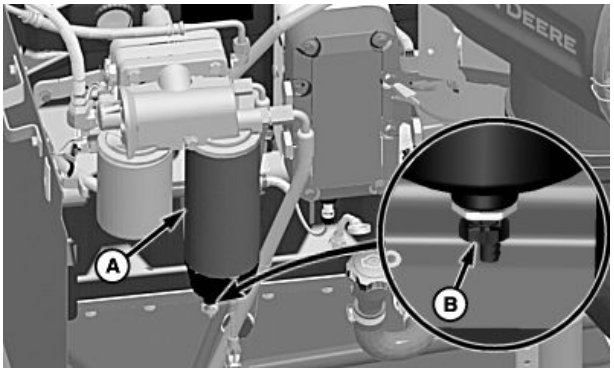
## Water Separator Primary Fuel Filter—Draining

**S660, S670, S680 and S690 (Tier 2/Stage II)**




H95380 —UN—16FEB10

*S660 and S670*




H95425 —UN—19FEB10

*S680 and S690*

**A—Primary Fuel Filter** **B—Drain**

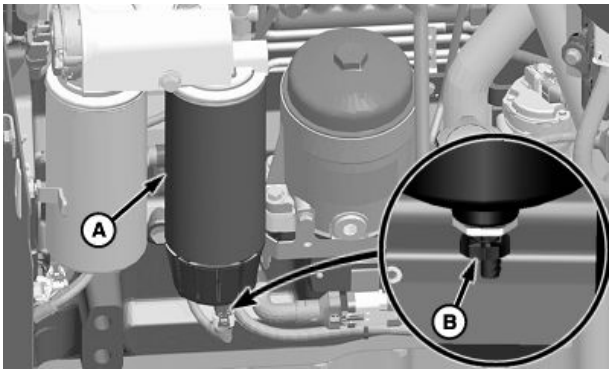
**⚠ CAUTION: Shut OFF engine, set park brake and remove key before performing maintenance work.**

When primary fuel filter (A) senses water in fuel system a diagnostic trouble code is generated.

If a diagnostic trouble code appears, drain primary filter using drain (B) and reset code.

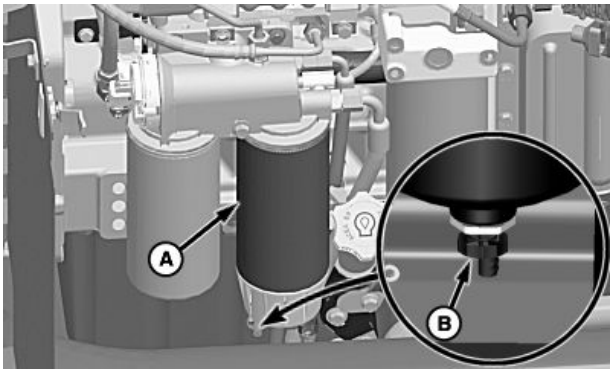
OUO6075,000155B -19-09JUL13-1/2

**S660, S670, S680, S685 and S690 (Interim Tier 4/Stage III B)**




H95331 —UN—11FEB10

*S660 and S670*




H95400 —UN—17FEB10

*S680, S685 and S690*

**A—Primary Fuel Filter** **B—Drain**

**⚠ CAUTION: Shut OFF engine, set park brake and remove key before performing maintenance work.**

When primary fuel filter (A) senses water in fuel system a diagnostic trouble code is generated.

If a diagnostic trouble code appears, drain primary filter using drain (B) and reset code.

OUO6075,000155B -19-09JUL13-2/2

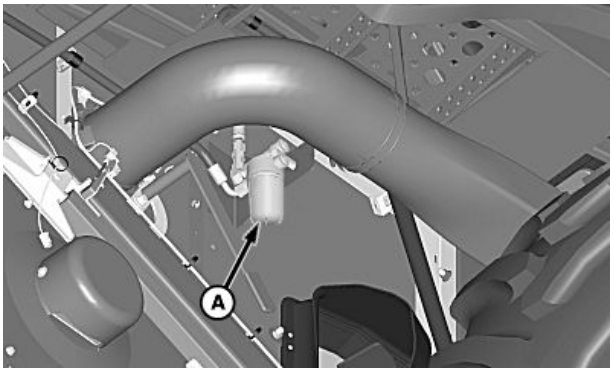
## Fuel Precleaner Filter—Cleaning

*NOTE: Do not clean fuel precleaner and change primary and secondary fuel filters at the same time. Doing so makes it difficult to restart machine. Perform this procedure, then run engine before changing primary and secondary fuel filters.*

*Clean fuel precleaner filter if buildup is visible on filter screen or if a diagnostic trouble code appears. Reset code after cleaning filter.*

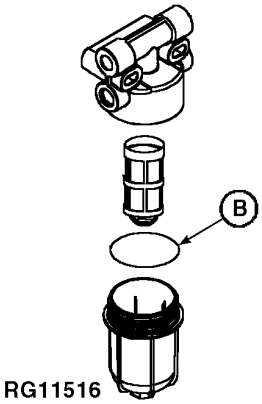
1. Start engine and run three—five minutes at low idle if machine had not been previously running.
2. Shut OFF engine and close valve at bottom of fuel tank to prevent drain back within supply line.
3. Thoroughly clean fuel precleaner assembly and surrounding area.
4. Remove precleaner bowl (A).
5. Clean filter screen and precleaner bowl. Inspect O-ring (B).
6. Install screen and tighten precleaner bowl.
7. Open valve at bottom of fuel tank to fill precleaner.
8. Start engine and run three—five minutes at low idle.

**A—Precleaner Bowl** **B—O-ring**




H98377 —UN—30SEP10

*Fuel Precleaner Filter*




RG11516 —UN—10NOV00

*Fuel Precleaner Parts*

OUO6075,0000593 -19-27OCT10-1/1

## Heavy Duty Fuel Precleaner Filter (Optional)—Flushing

*NOTE: Do not clean fuel precleaner and change primary and secondary fuel filters at the same time. Doing so makes it difficult to restart machine. Perform this procedure, then run engine before changing primary and secondary fuel filters.*

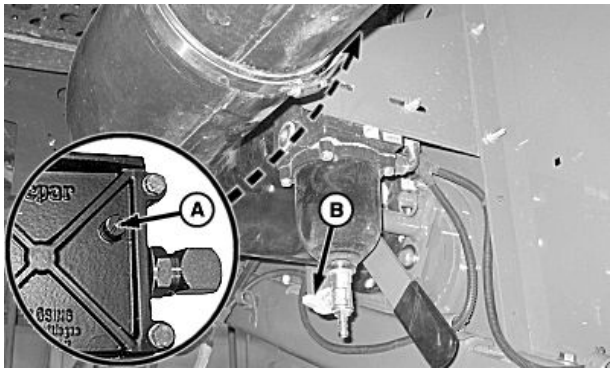
*Heavy duty fuel precleaner should be back flushed whenever bowl is half full of water or when diagnostic code appears. Reset code after cleaning. If code still displays, see Heavy Duty Fuel Precleaner Filter (Optional)—Cleaning.*

*Filter element can be back flushed up to five times before being replaced.*

1. Shut OFF engine and close valve at bottom of fuel tank.
2. Open bleed screw (A) on top of water separator. Allow water and dirt to be released from filter element and settle in bottom of bowl.
3. Push in on drain valve (B) and turn counterclockwise to drain water and dirt from bowl.

*NOTE: As fuel, water, and dirt is drained from bowl, more water and dirt will be flushed from filter element and collect in bottom of bowl.*

4. Close drain valve and allow water and dirt to settle again.




H100500 —UN—29JUN11

**A—Bleed Screw** **B—Drain Valve**

5. Repeat steps 3 and 4 until all dirt and water is removed.
6. Close bleed screw and open valve at bottom of fuel tank.
7. Turn key switch ON for 60 seconds to allow fuel pump to prime fuel system and check for leaks.
8. Start engine and run three—five minutes at low idle. If engine does not start or dies, see Primary and Secondary Fuel Filter Element—Replacing.

OUO6075,0000594 -19-21MAR11-1/1

## Heavy Duty Fuel Precleaner Filter (Optional)

### Replacing Filter

*NOTE: After filter element has been back flushed five times, clean filter. Replace filter when light is no longer visible while holding filter up to light.*

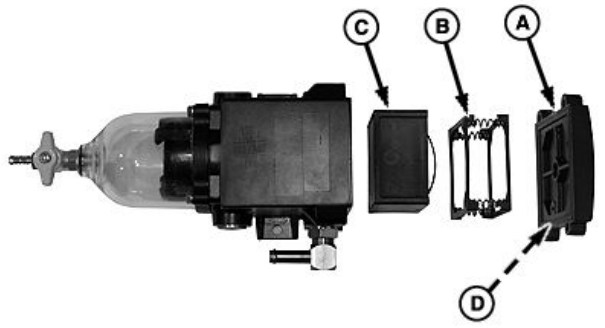
1. Shut OFF engine and close valve at bottom of fuel tank.
2. Loosen lid screws evenly in sequence shown.

*NOTE: Lid and spring cassette is used again, but a replacement filter element must be installed.*

3. Remove lid (A), spring cassette (B), and filter element (C).
4. Install replacement filter element and previously removed spring cassette (B).
5. Inspect lid gasket (D) and replace if necessary.
6. Install lid and tighten in sequence shown.
7. Open valve at bottom of fuel tank.
8. Turn key switch ON for 60 seconds to allow fuel pump to prime fuel system and check for leaks.
9. Start engine and run three—five minutes at low idle. If engine does not start or dies, see Primary and Secondary Fuel Filter Element—Replacing.




RXA0084320 —UN—26SEP05




H91103 —UN—09APR08

**A—Lid**
**B—Spring Cassette**
**C—Filter Element**
**D—Gasket**

### Cleaning Filter

1. Shut OFF engine and close valve at bottom of fuel tank.

*NOTE: Use a catch pan when draining fuel.*

2. Open drain valve and drain fuel from bowl.
3. Loosen lid screws evenly in sequence shown.
4. Remove lid (A) and spring cassette (B).
5. Lift out filter element (C) by handle.

*NOTE: Inspect filter for damage. If damaged, install replacement filter.*

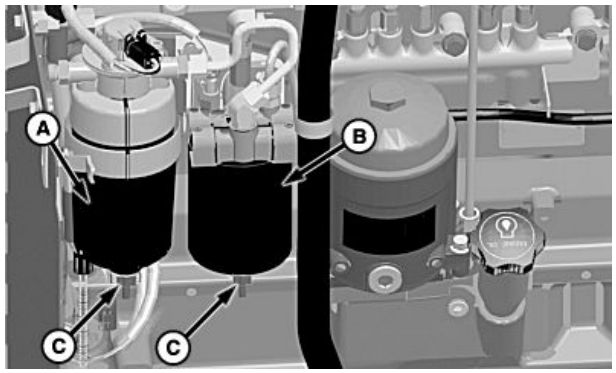
6. Wash filter in clean diesel fuel or mineral spirits.
7. Install filter element and spring cassette.
8. Inspect lid gasket (D) and replace if necessary.
9. Install lid and cap screws and leave cap screws finger tight.
10. Tighten cap screws in sequence as shown.
11. Open valve at bottom of fuel tank.
12. Turn key switch ON for 60 seconds to allow fuel pump to prime fuel system and check for leaks.
13. Start engine and run three—five minutes at low idle.

OUO6075,0000914 -19-30AUG10-1/1

## Primary and Secondary Fuel Filter Element—Replacing (Tier 2/Stage II) (S660 and S670)



TS1343 —UN—18MAR92




H95381 —UN—16FEB10

**A—Primary Fuel Filter** **B—Secondary Fuel Filter** **C—Drain Valves**

**CAUTION: High-pressure fluid remaining in fuel lines can cause serious injury. Only technicians familiar with this type of system should perform repairs. Before disconnecting fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system, wait a minimum of 15 minutes after engine is stopped.**

*NOTE: Do not clean fuel precleaner and change primary and secondary fuel filter at the same time. Doing so makes it difficult to restart machine. Perform fuel precleaner cleaning procedure then run engine before changing primary and secondary fuel filter.*

*Change primary and secondary fuel filters if performance decline is noticed or a diagnostic trouble code appears. Reset code after replacing filters.*

1. Start engine and run three—five minutes at low idle if machine had not been previously operating.
2. Shut OFF engine and close valve at bottom of fuel tank.
3. Thoroughly clean exterior of filter elements and filter mounting areas.

**CAUTION: Fuel in filters may be under pressure. Do not remove filters without completing the following step.**

*NOTE: Use a catch pan when draining fuel and when removing fuel filters.*

4. Drain fuel contaminates and relieve pressure from primary fuel filter (A) and secondary fuel filter (B) by opening drain valves (C).
5. Close drain valves and remove fuel filters.

*NOTE: Additional fuel will drain from filter housings.*

6. Remove primary fuel filter and secondary fuel filter.

**IMPORTANT: Do NOT prefill either fuel filter with fuel.**

*NOTE: Lube filter seals with diesel fuel before installing.*

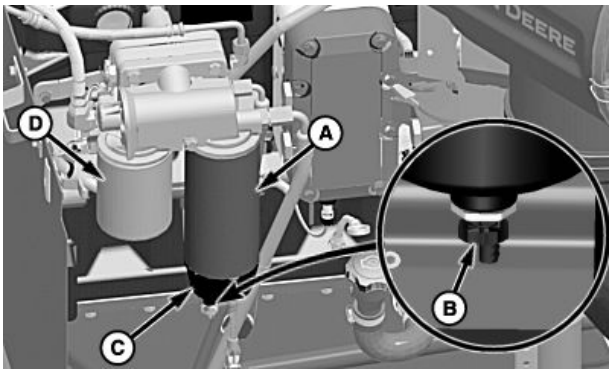
7. Install primary fuel filter (A) assembly on engine. Tighten filter assembly 3/4 of a turn after seal contacts filter housing.
8. Install replacement secondary fuel filter (B). Tighten filter 3/4 of a turn after seal contacts filter housing.
9. Verify that drain valves (C) are closed.
10. Open valve at bottom of fuel tank.
11. Turn key switch ON for 60 seconds to allow fuel pump to prime fuel system.
12. Start engine and run three—five minutes at low idle.

OUO6075,00014FA -19-28MAY13-1/1

## Primary and Secondary Fuel Filter Element—Replacing (Tier 2/Stage II) (S680 and S690)



TS1343 —UN—18MAR92




H95426 —UN—19FEB10

**A—Primary Fuel Filter**
**B—Drain Valve**
**C—Separator Bowl**
**D—Secondary Fuel Filter**

**CAUTION: High-pressure fluid remaining in fuel lines can cause serious injury. Only technicians familiar with this type of system should perform repairs. Before disconnecting fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system, wait a minimum of 15 minutes after engine is stopped.**

*NOTE: Do not clean fuel precleaner and change primary and secondary fuel filter at the same time. Doing so makes it difficult to restart machine. Perform fuel precleaner cleaning procedure then run engine before changing primary and secondary fuel filter.*

*Change primary and secondary fuel filters if performance decline is noticed or a diagnostic trouble code appears. Reset code after replacing filters.*

1. Start engine and run three—five minutes at low idle if machine had not been previously operating.
2. Shut OFF engine and close valve at bottom of fuel tank.
3. Thoroughly clean exterior of filter elements and filter mounting areas.

**CAUTION: Fuel in filters may be under pressure. Do not remove filters without completing the following step.**

*NOTE: Use a catch pan when draining fuel and when removing fuel filters.*

4. Drain fuel contaminates and relieve pressure from primary fuel filter (A) by opening drain valve (B).
5. Close drain valve and remove and retain separator bowl (C).

*NOTE: Additional fuel will drain from filter housings.*

6. Remove primary fuel filter and secondary fuel filter (D).

**IMPORTANT: Do NOT prefill either fuel filter with fuel.**

*NOTE: Lube filter seals with diesel fuel before installing.*

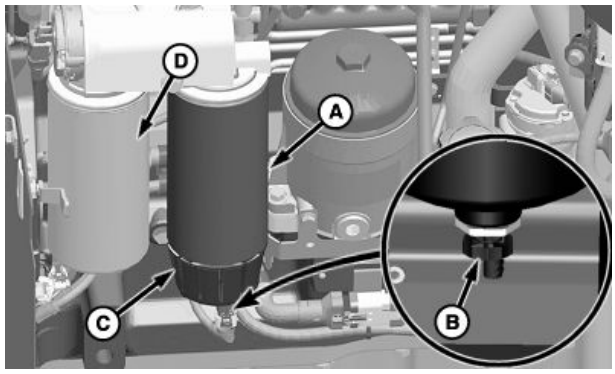
7. Install previously removed separator bowl (C) on replacement primary fuel filter (A).
8. Install primary fuel filter assembly on engine. Tighten filter assembly 3/4 of a turn after seal contacts filter housing.
9. Install replacement secondary fuel filter (D). Tighten filter 3/4 of a turn after seal contacts filter housing.
10. Verify that drain valve (B) is closed.
11. Open valve at bottom of fuel tank.
12. Turn key switch ON for 60 seconds to allow fuel pump to prime fuel system.
13. Start engine and run three—five minutes at low idle.

OUO6075,000155D -19-09JUL13-1/1

## Primary and Secondary Fuel Filter Element—Replacing (Interim Tier 4/Stage III B)

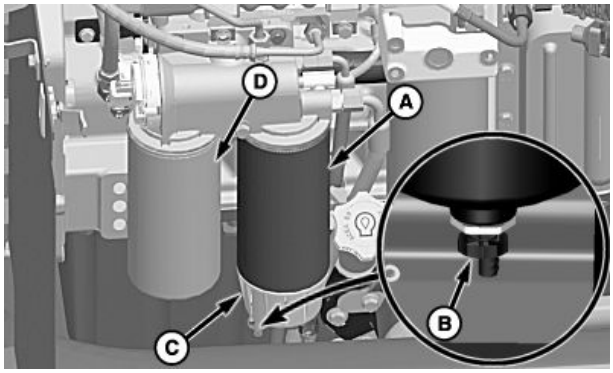


TS1343 —UN—18MAR92




H95335 —UN—12FEB10

*S660 and S670*




H95401 —UN—17FEB10

*S680, S685 and S690*

**A—Primary Fuel Filter**
**B—Drain Valve**
**C—Separator Bowl**
**D—Secondary Fuel Filter**

**⚠ CAUTION: High-pressure fluid remaining in fuel lines can cause serious injury. Only technicians familiar with this type of system should perform repairs. Before disconnecting fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system, wait a minimum of 15 minutes after engine is stopped.**

*NOTE: Do not clean fuel precleaner and change primary and secondary fuel filter at the same time. Doing so makes it difficult to restart machine. Perform fuel precleaner cleaning procedure then run engine before changing primary and secondary fuel filter.*

*Change primary and secondary fuel filters if performance decline is noticed or a diagnostic trouble code appears. Reset code after replacing filters.*

1. Start engine and run three—five minutes at low idle if machine had not been previously operating.
2. Shut OFF engine and close valve at bottom of fuel tank.
3. Thoroughly clean exterior of filter elements and filter mounting areas.

**⚠ CAUTION: Fuel in filters may be under pressure. Do not remove filters without completing the following step.**

*NOTE: Use a catch pan when draining fuel and when removing fuel filters.*

4. Drain fuel contaminates and relieve pressure from primary fuel filter (A) by opening drain valve (B).
5. Close drain valve and remove and retain separator bowl (C).

*NOTE: Additional fuel will drain from filter housings.*

6. Remove primary fuel filter and secondary fuel filter (D).

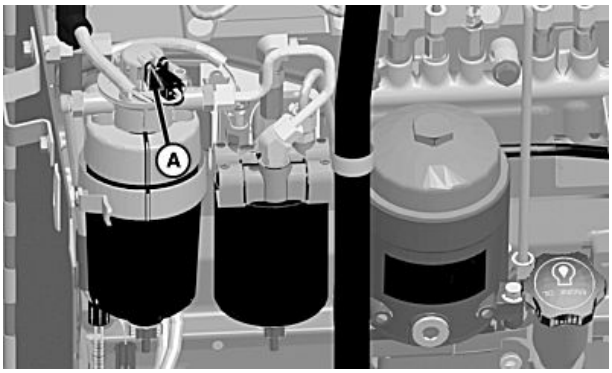
**IMPORTANT: Do NOT prefill either fuel filter with fuel.**

*NOTE: Lube filter seals with diesel fuel before installing.*

7. Install previously removed separator bowl (C) on replacement primary fuel filter (A).
8. Install primary fuel filter assembly on engine. Tighten filter assembly 3/4 of a turn after seal contacts filter housing.
9. Install replacement secondary fuel filter (D). Tighten filter 3/4 of a turn after seal contacts filter housing.
10. Verify that drain valve (B) is closed.
11. Open valve at bottom of fuel tank.
12. Turn key switch ON for 60 seconds to allow fuel pump to prime fuel system.
13. Start engine and run three—five minutes at low idle.

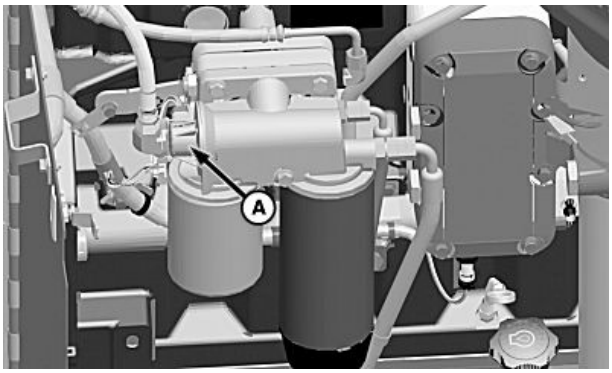
OUO6075,000155E -19-20JUN13-1/1

## Fuel System—Bleeding



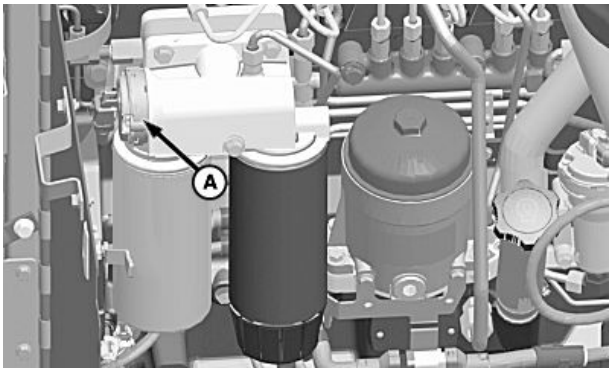

H95383 —UN—16FEB10

*S660 and S670 (Tier 2/Stage II)*



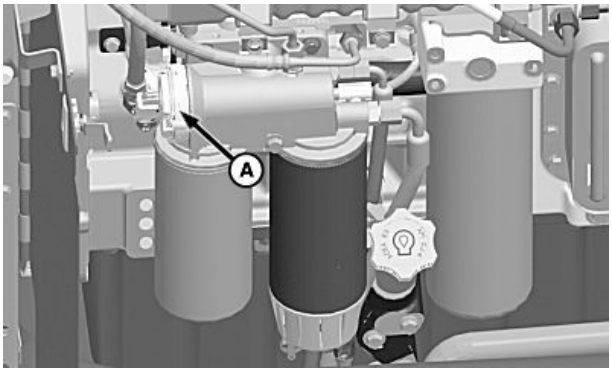

H95428 —UN—19FEB10

*S680 and S690 (Tier 2/Stage II)*




H95337 —UN—12FEB10

*S660 and S670 (Interim Tier 4/Stage III B)*




H95403 —UN—17FEB10

*S680, S685 and S690 (Interim Tier 4/Stage III B)*

**A—Fuel Pump**

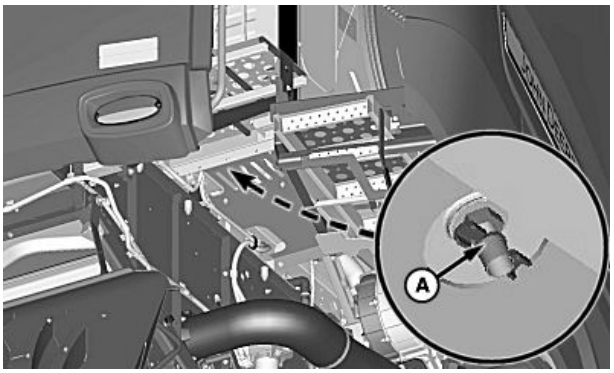
**CAUTION: Shut OFF engine, set park brake and remove key before performing maintenance work.**

Air can enter fuel system when changing fuel filters or when machine has run out of fuel. Air in fuel system could prevent engine from starting. If engine does not start, turn key switch ON for 60 seconds to allow fuel pump (A) to prime fuel system.

OUO6075,000155F -19-09JUL13-1/1

## Cooling System—Draining






TS281 —UN—15APR13

H106843 —UN—08FEB13

*S660 and S670 (Tier 2/Stage II)*

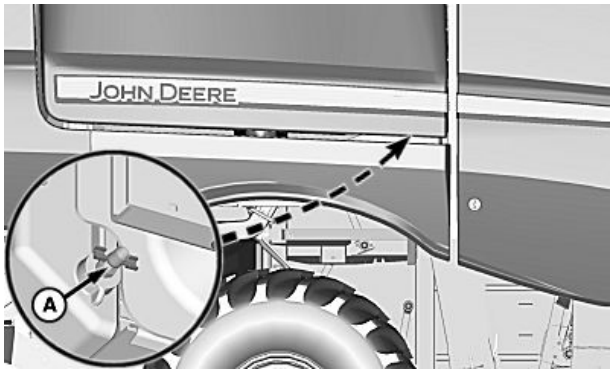
**CAUTION: Avoid being scalded when opening surge tank cap. Open cap 1.5 turns to relieve pressure. Never open cap when engine is hot. Allow system to cool before draining.**

*NOTE: Radiator drain is located on front side of radiator.*

Coolant must be drained and replaced every six years or 2000 hours.

Open drain valve (A) located on radiator.

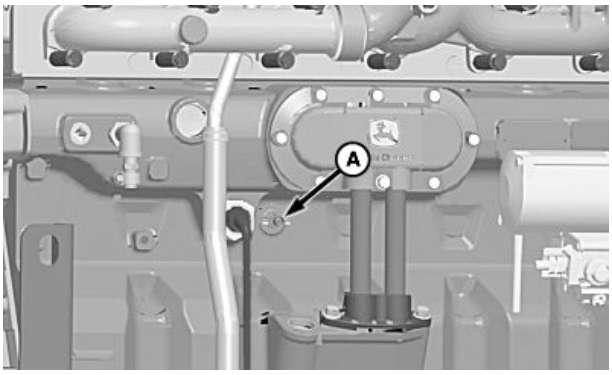
**A—Drain Valve**




H106844 —UN—08FEB13

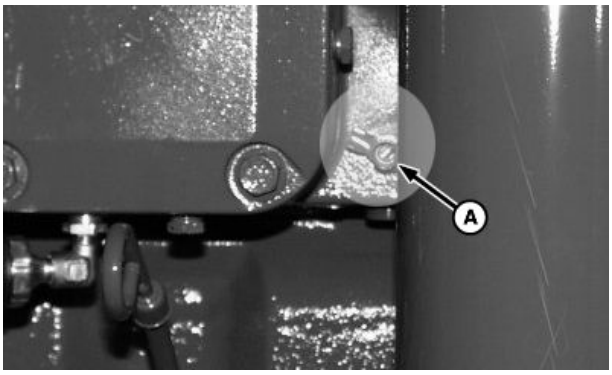
*S680 and S690 (Tier 2/Stage II)*
*S660, S670, S680, S685 and S690 (Interim Tier 4/Stage III B)*

**Continued on next page**



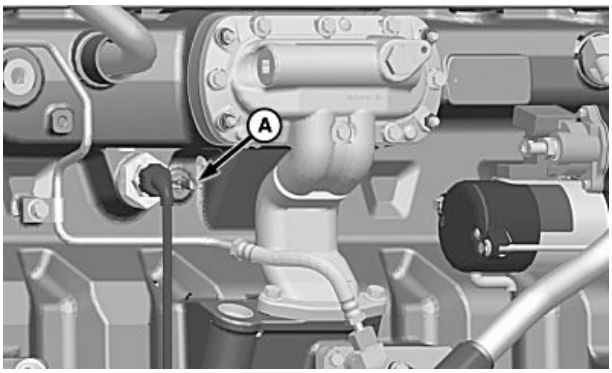

H104941 —UN—28FEB12

*Front Side of Engine (S660 and S670 Tier 2/Stage II)*



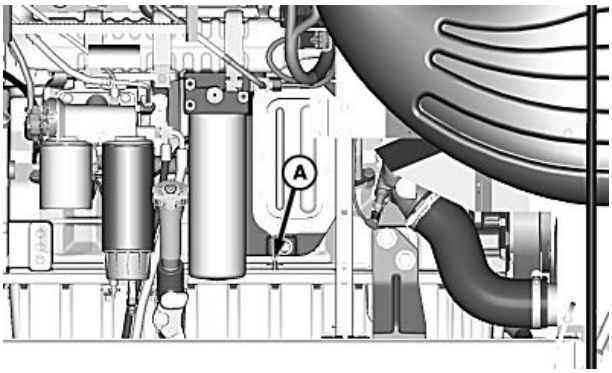

H104942 —UN—28FEB12

*Above Crankshaft (S680 and S690 Tier 2/Stage II)*




H104943 —UN—28FEB12

*Front Side of Engine (S660 and S670 Interim Tier 4/Stage III B)*




H104944 —UN—28FEB12

*Rear Side of Engine (S680, S685 and S690 Interim Tier 4/Stage III B)*

**A—Drain Valve**

Open drain valve (A) located on engine block.

OUO6075,0001560 -19-09JUL13-2/3

Open surge tank cap (A) to allow coolant to drain faster.

Close radiator drains and fill system with clean water.

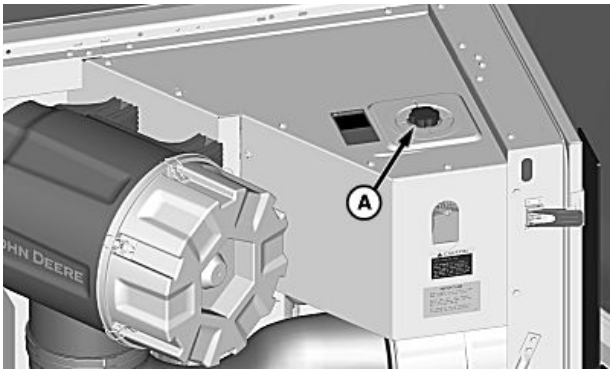
Install surge tank cap and run engine until it reaches operating temperature with heater ON.

Shut OFF engine, carefully remove surge tank cap and drain water out before rust or sediment settles.

Close radiator drains and refill system with a solution of clean water and John Deere Cooling System Cleaner PT500 or equivalent. Follow instructions with cleaner.

After using cleaner, flush system with clean water and drain.

Close radiator drains and fill system (refer to Cooling System—Filling in this section for filling procedure and Fuels and Lubricants section for coolant specifications).




H105924 —UN—05OCT12

**A—Surge Tank Cap**

OUO6075,0001560 -19-09JUL13-3/3

## Cooling System—Filling

**CAUTION: Avoid being scalded when opening surge tank cap. Open cap 1.5 turns to relieve pressure. Never open cap when engine is hot and never fill cooling system when engine is overheated unless engine is idling slowly. Pour coolant in slowly. Check coolant level when engine is cold.**

**IMPORTANT: A special cap is used on the surge tank and radiator. If cap is damaged or missing, it must be replaced by an equivalent cap.**

**Never pour cold water into a hot engine as it might crack cylinder block or head. Do not operate engine without coolant.**

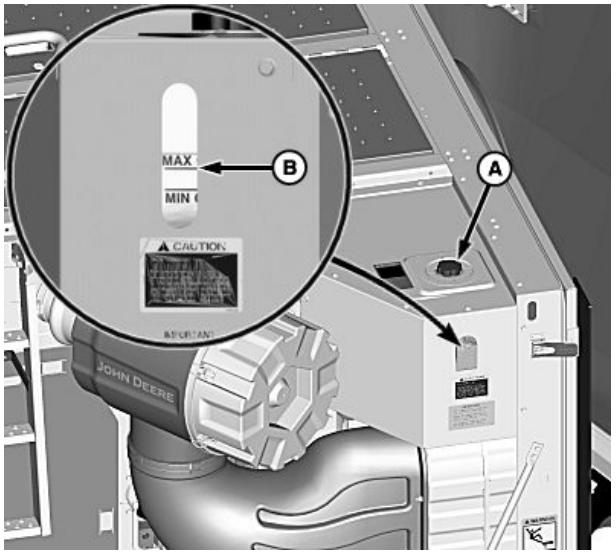
Remove surge tank cap (A) and fill until fluid is at "Max Cold" line (B).

Install cap on surge tank, turn ON heater, and run engine until it reaches operating temperature.

Carefully remove cap from surge tank and refill as necessary. Install cap on surge tank.

When engine is cool, coolant level should be at "Max Cold" line.

*NOTE: Coolant level must be between "Max Cold" and "Min Cold" lines. Add coolant as needed if coolant is below "Min Cold" line.*




H105922 —UN—05OCT12

**A—Surge Tank Cap** **B—Max Cold Line**

OUO6075,0001294 -19-17OCT12-1/1

## Cooling System—Winterize

**IMPORTANT: Do not drain cooling system to protect against freezing. Heater does not drain completely, so damage would result.**

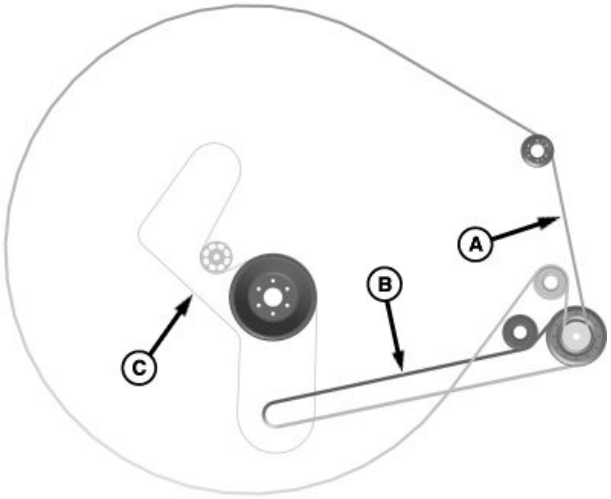
Before cold weather, be sure cooling system has enough antifreeze. Use a reliable brand of permanent-type ethylene glycol antifreeze which contains a rust inhibitor and water pump lubricant, but does not contain a leak-stopping additive, (see Fuels and Lubricants in this manual for correct recommendations).

After adding antifreeze, turn heater ON and run engine until it reaches operating temperature. This mixes the solution and circulates it through the system.

OUO6075,000059B -19-14JAN10-1/1

## Engine Belt—Routing (Tier 2/Stage II) (S660 and S670)

**A—Rotary Screen Drive Belt, Screen Side**
**B—Rotary Screen Drive Belt, Engine Side**
**C—Cooling Fan, Air Conditioner, Compressor Belt**

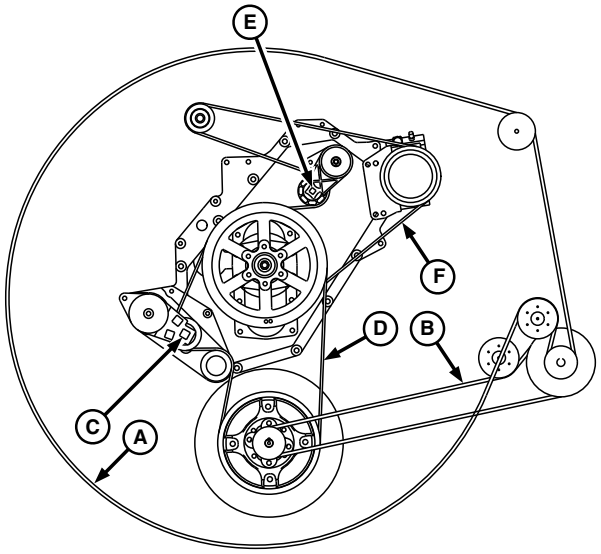



H95385 —UN—16FEB10

OUO6075,0000FED -19-13FEB12-1/1

## Engine Belt—Routing (Tier 2/Stage II) (S680 and S690)

**A—Belt, Rotary Screen (Driven)**
**B—Belt, Rotary Screen (Drive)**
**C—Tensioner, Fan**
**D—Belt, Fan**
**E—Tensioner, Accessory**
**F—Belt, Accessory**




H82474 —UN—17FEB05

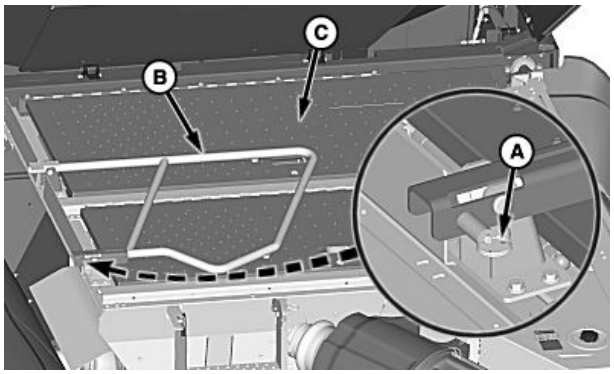
OUO6075,0001562 -19-09JUL13-1/1

## Engine Accessory/Fan Drive Belt—Replacing (Tier 2/Stage II) (S660 and S670)

**⚠ CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin**
**B—Handrail**
**C—Separator Access Cover**

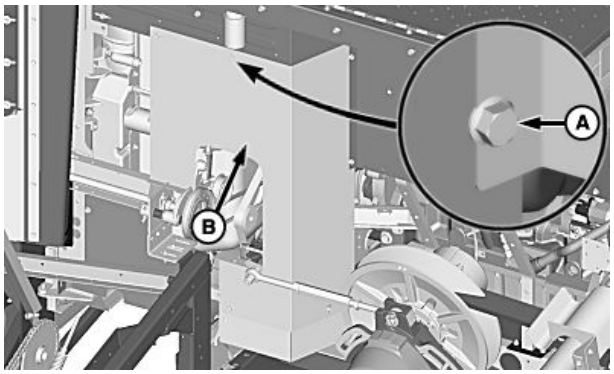



H102385 —UN—22JUN11

OUO6075,00013BF -19-28MAY13-1/8

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)**
**B—Shield**



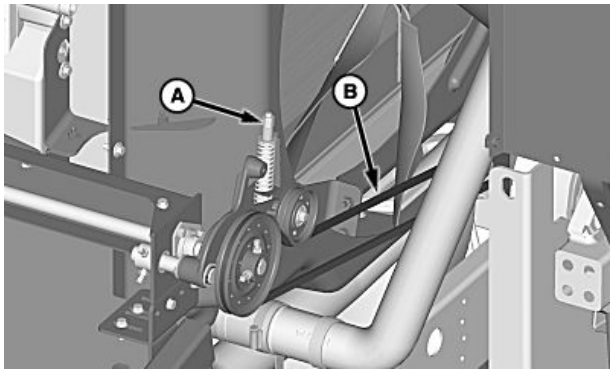

*Front Side Of Engine*

H106845 —UN—08FEB13

OUO6075,00013BF -19-28MAY13-2/8

Loosen nuts (A) and remove rotary screen drive belt (B).

**A—Nuts**
**B—Rotary Screen Drive Belt**




H95701 —UN—15MAR10

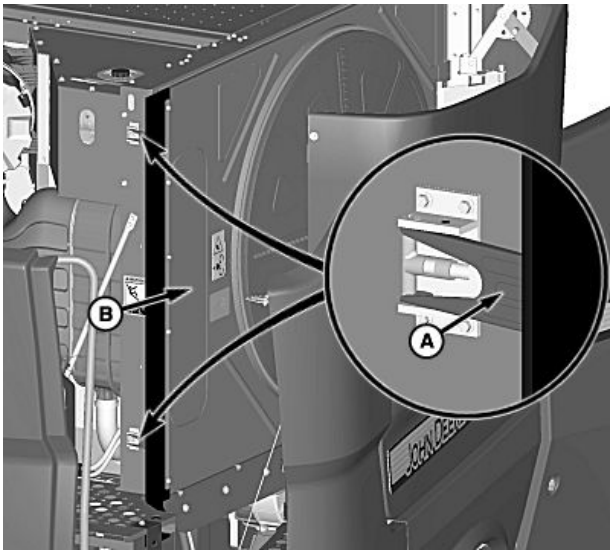
**Continued on next page**

OUO6075,00013BF -19-28MAY13-3/8

Pull latches (A) and open rotary screen door (B).

**A—Latches**

**B—Rotary Screen Door**




H106847 —UN—08FEB13

OUO6075,00013BF -19-28MAY13-4/8

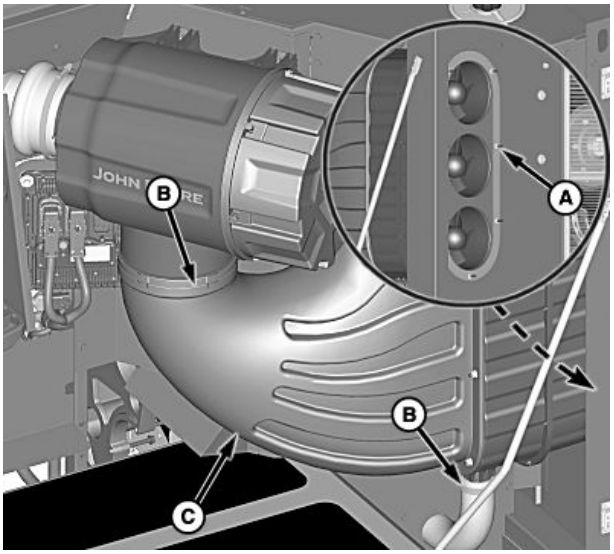
Remove nuts (A) and loosen hose clamps (B).

Lay air duct (C) out of the way.

**A—Nuts (7 Used)**

**B—Clamps**

**C—Air Duct**



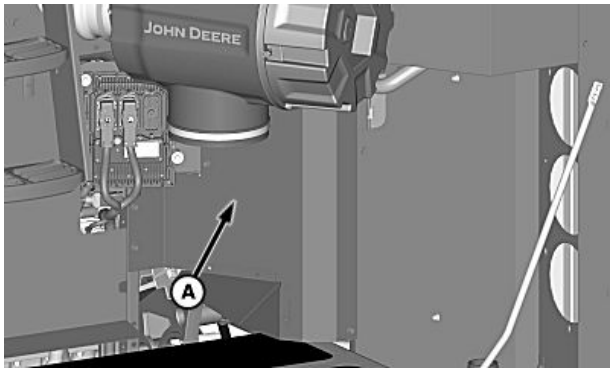

H95647 —UN—10MAR10

**Continued on next page**

OUO6075,00013BF -19-28MAY13-5/8

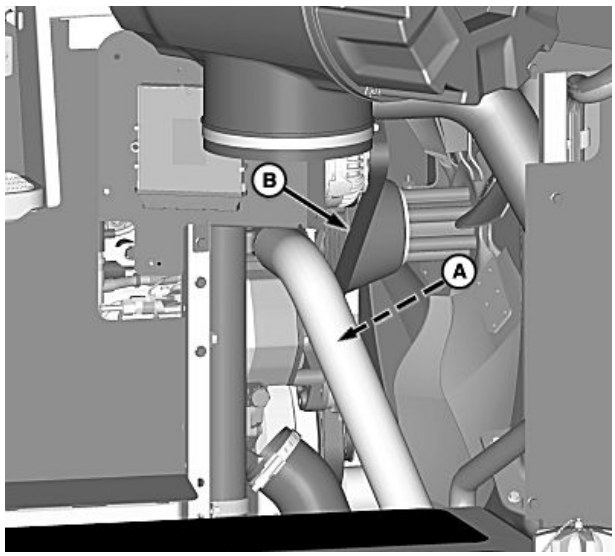
Remove shield (A).

**A—Shield**

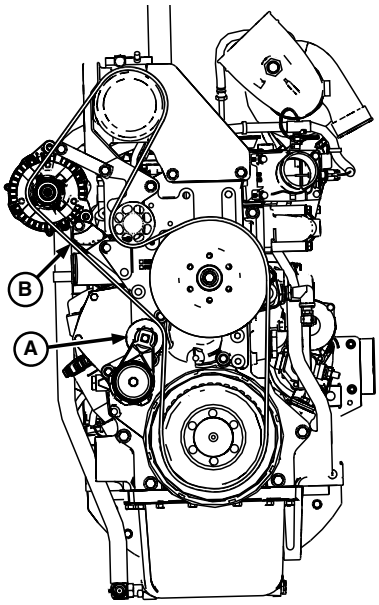



H95648 —UN—10MAR10

OUO6075,00013BF -19-28MAY13-6/8




H95699 —UN—15MAR10




H95702 —UN—15MAR10

*Engine Accessory/Fan Drive Belt*

**A—Tensioner Arm**

**B—Engine Accessory/Fan Drive Belt**

Use breaker bar to relieve belt tension from tensioner arm (A).

Remove belt (B) and work belt over fan blades to remove.

Install replacement belt over fan blades.

Use breaker bar to relieve tension from tensioner arm to install replacement belt.

**Continued on next page**

OUO6075,00013BF -19-28MAY13-7/8

Install rotary screen drive belt (B).

Tighten nuts (A) until washer is positioned between end of gauge and bottom of step.

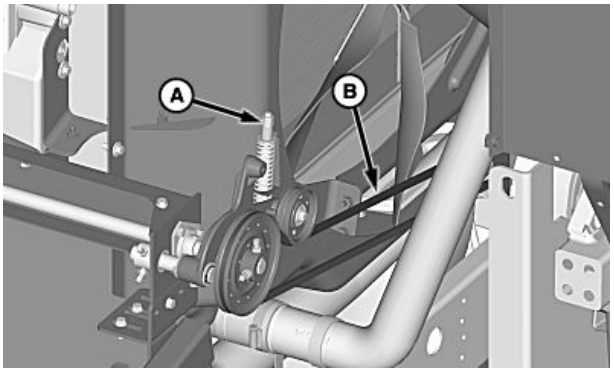
Install previously removed shield (front side).

Close separator access cover and lower handrail.

Install previously removed shield (rear side) and air duct.

Close and latch rotary screen door.

**A—Nuts** **B—Rotary Screen Drive Belt**




H95701 —UN—15MAR10

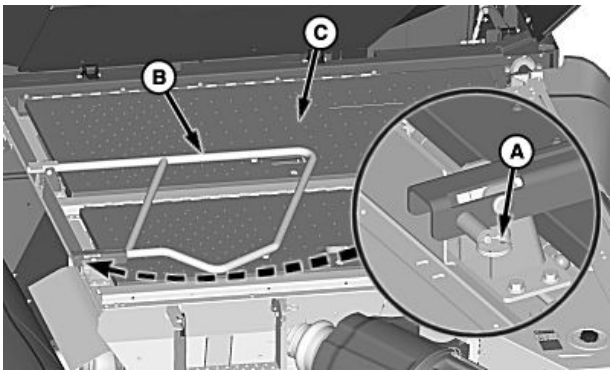
OUO6075,00013BF -19-28MAY13-8/8

## Engine Accessory Belt—Replacing (Tier 2/Stage II) (S680 and S690)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin** **C—Separator Access Cover**
**B—Handrail**

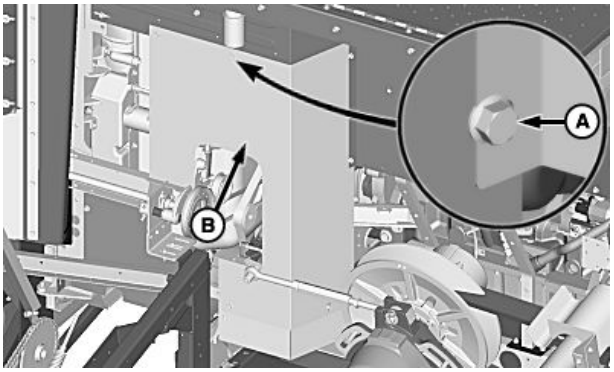



H1102385 —UN—22JUN11

OUO6075,0001563 -19-09JUL13-1/10

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)** **B—Shield**




H1106845 —UN—08FEB13

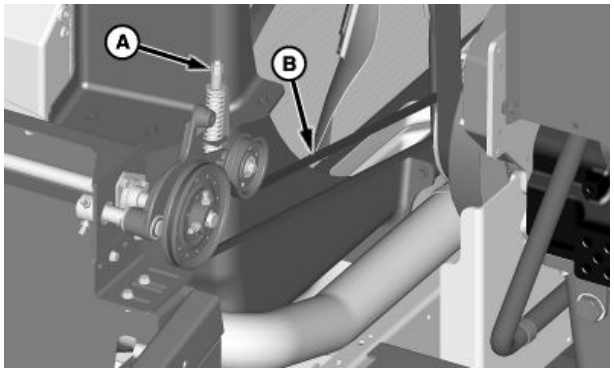
*Front Side Of Engine*

**Continued on next page**

OUO6075,0001563 -19-09JUL13-2/10

Loosen nuts (A) and remove rotary screen drive belt (B).

**A—Nuts** **B—Rotary Screen Drive Belt**

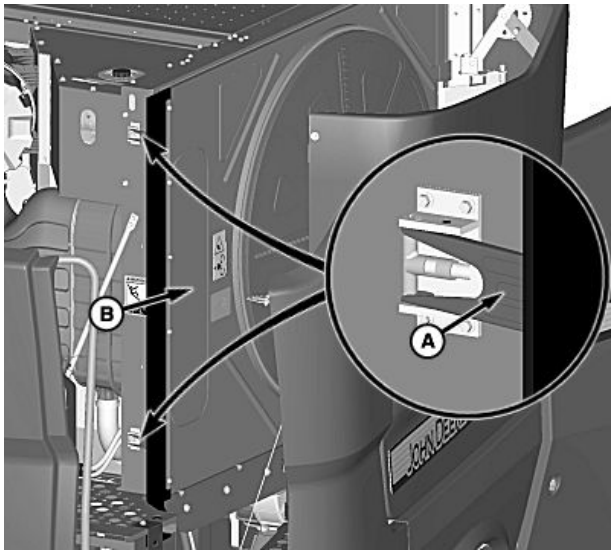



H95693 —UN—15MAR10

OUO6075,0001563 -19-09JUL13-3/10

Pull latches (A) and open rotary screen door (B).

**A—Latches** **B—Rotary Screen Door**




H106847 —UN—08FEB13

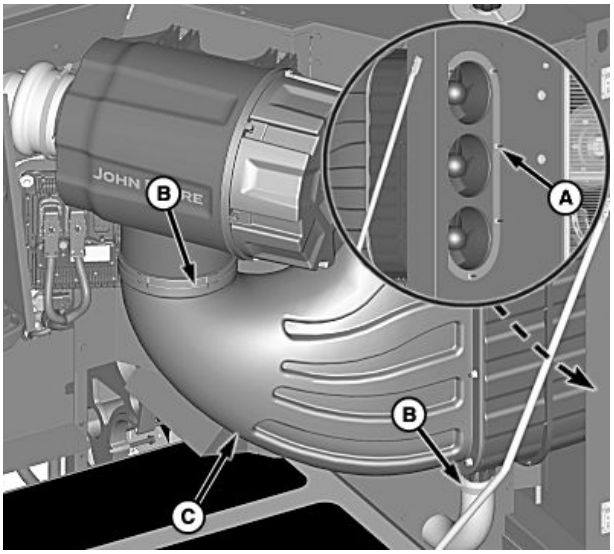
**Continued on next page**

OUO6075,0001563 -19-09JUL13-4/10

Remove nuts (A) and loosen hose clamps (B).

Lay air duct (C) out of the way.

**A—Nuts (7 Used)**
**B—Clamps**
**C—Air Duct**

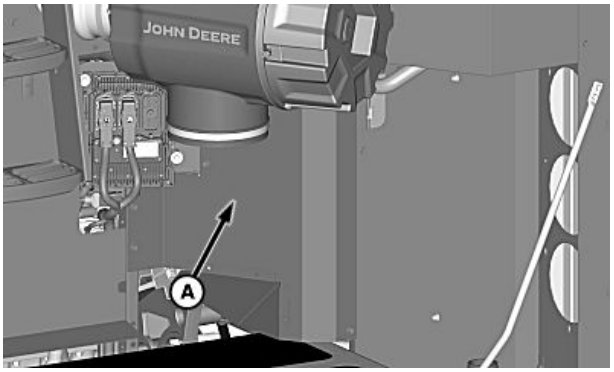



H95647 —UN—10MAR10

OUO6075,0001563 -19-09JUL13-5/10

Remove shield (A).

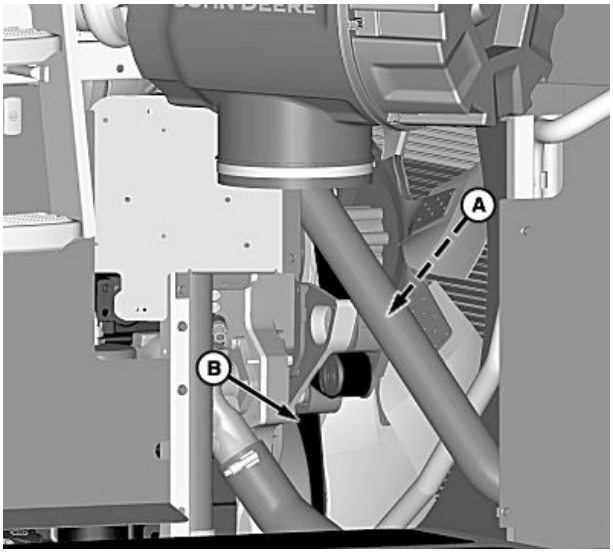
**A—Shield**



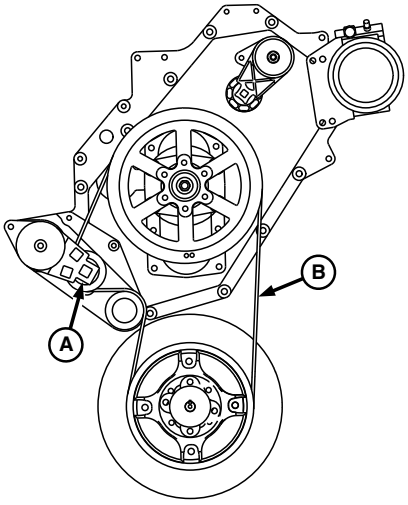

H95648 —UN—10MAR10

**Continued on next page**

OUO6075,0001563 -19-09JUL13-6/10




H95694 —UN—15MAR10




H71844 —UN—25APR02

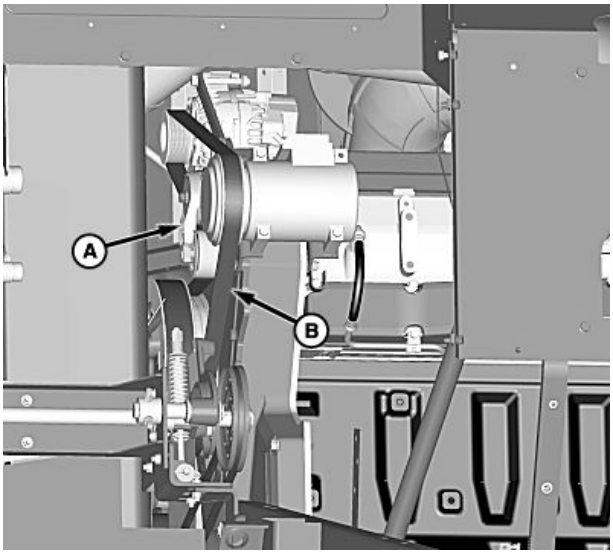
*Fan Belt Routing*

**A—Tensioner Arm** **B—Fan Belt**

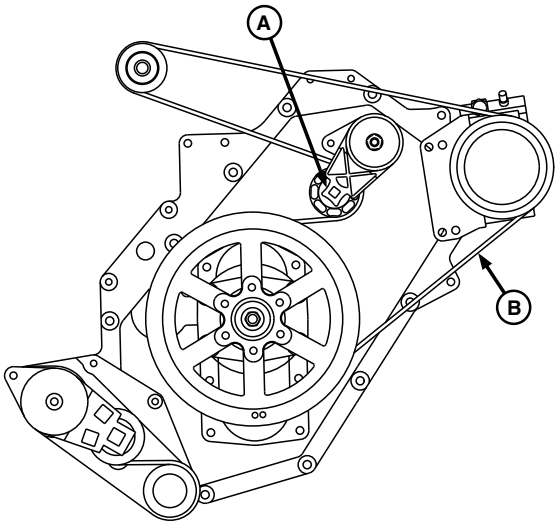
Use breaker bar to relieve belt tension from tensioner arm (A).

Remove belt (B) and work belt over fan blades to remove.

OUO6075,0001563 -19-09JUL13-7/10




H95695 —UN—15MAR10




H82475 —UN—17FEB05

*Accessory Belt Routing*

**A—Tensioner Arm** **B—Accessory Belt**

Use breaker bar to relieve belt tension from tensioner arm (A).

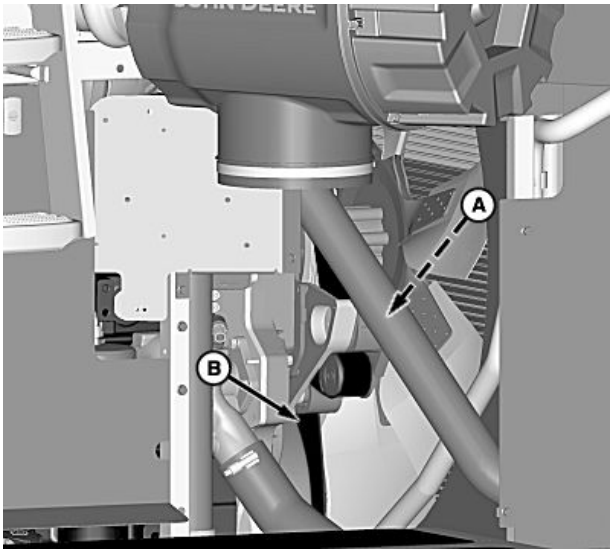
Remove belt (B) and work belt over fan blades to remove.

Install replacement belt over fan blades.

Use breaker bar to relieve tension from tensioner arm to install replacement belt.

**Continued on next page**

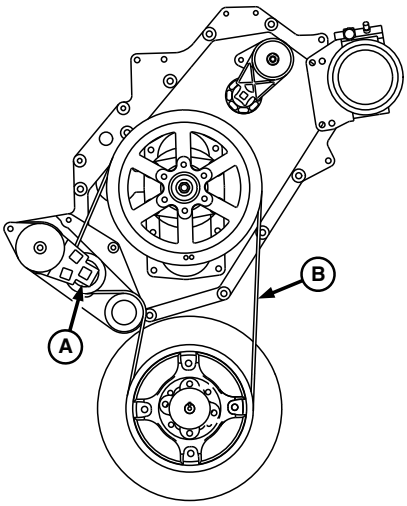
OUO6075,0001563 -19-09JUL13-8/10




H95694 —UN—15MAR10

**A—Tensioner Arm** **B—Fan Belt**

Use breaker bar to relieve belt tension from tensioner arm (A).




*Fan Belt Routing*

H71844 —UN—25APR02

Install previously removed belt (B) and work belt over fan.

OUO6075,0001563 -19-09JUL13-9/10

Install rotary screen drive belt (B).

Tighten nuts (A) until washer is positioned between end of gauge and bottom of step.

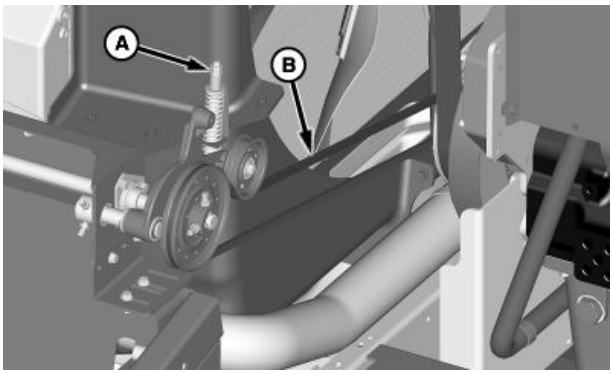
Install previously removed shield (front side).

Close separator access cover and lower handrail.

Install previously removed shield (rear side) and air duct.

Close and latch rotary screen door.

**A—Nuts** **B—Rotary Screen Drive Belt**




H95693 —UN—15MAR10

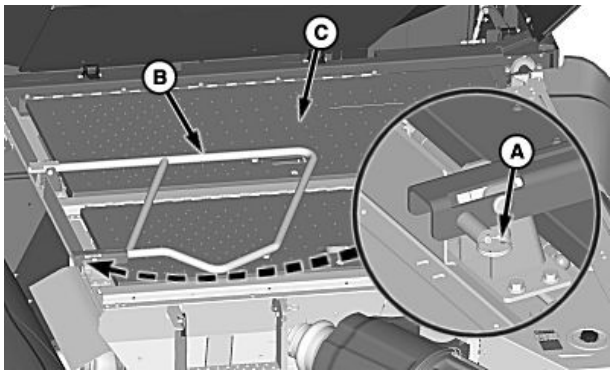
OUO6075,0001563 -19-09JUL13-10/10

## Fan Drive Belt—Replacing (Tier 2/Stage II) (S680 and S690)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin**
**B—Handrail**
**C—Separator Access Cover**

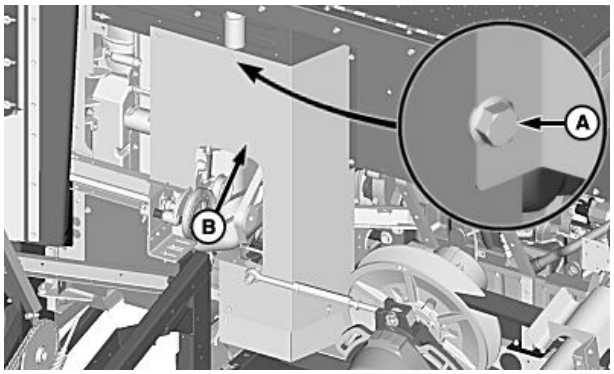



H102385 —UN—22JUN11

OUO6075,0001564 -19-09JUL13-1/8

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)**
**B—Shield**



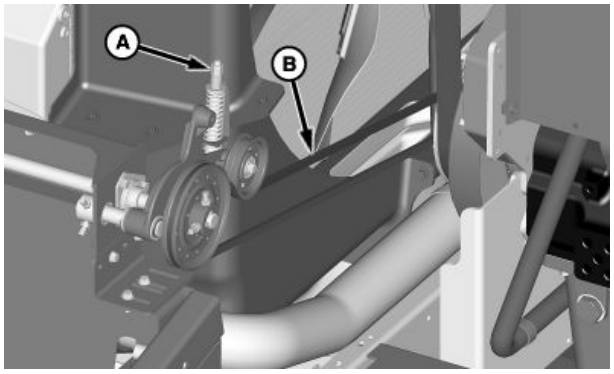

H1106845 —UN—08FEB13

*Front Side Of Engine*

OUO6075,0001564 -19-09JUL13-2/8

Loosen nuts (A) and remove rotary screen drive belt (B).

**A—Nuts**
**B—Rotary Screen Drive Belt**




H95693 —UN—15MAR10

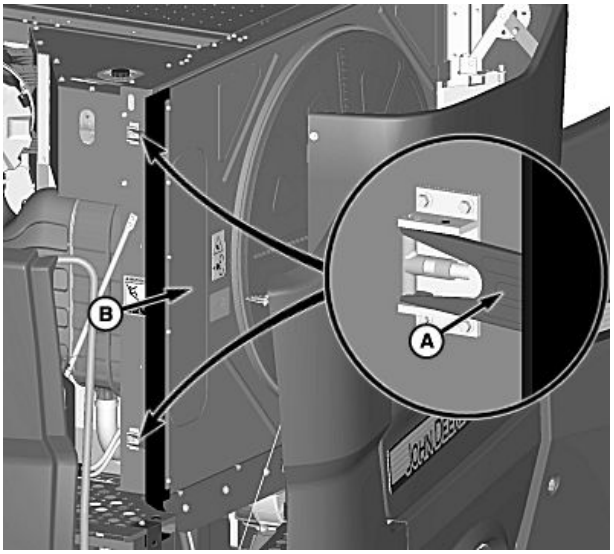
**Continued on next page**

OUO6075,0001564 -19-09JUL13-3/8

Pull latches (A) and open rotary screen door (B).

**A—Latches**

**B—Rotary Screen Door**




H106847 —UN—08FEB13

OUO6075,0001564 -19-09JUL13-4/8

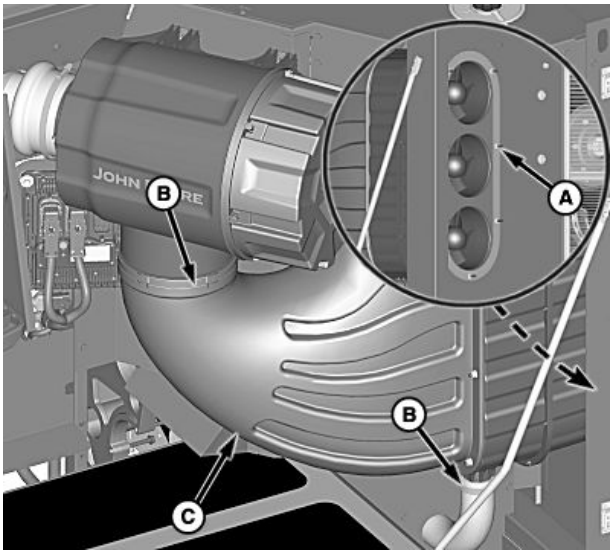
Remove nuts (A) and loosen hose clamps (B).

Lay air duct (C) out of the way.

**A—Nuts (7 Used)**

**B—Clamps**

**C—Air Duct**



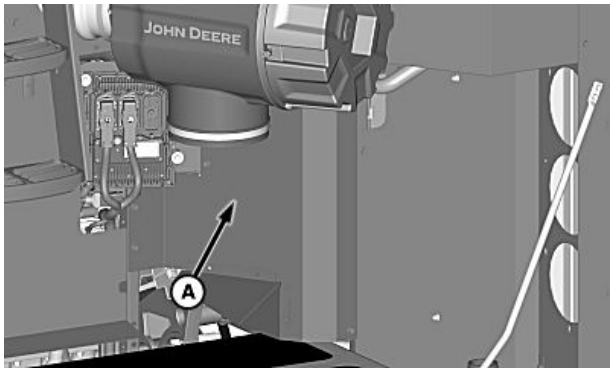

H95647 —UN—10MAR10

**Continued on next page**

OUO6075,0001564 -19-09JUL13-5/8

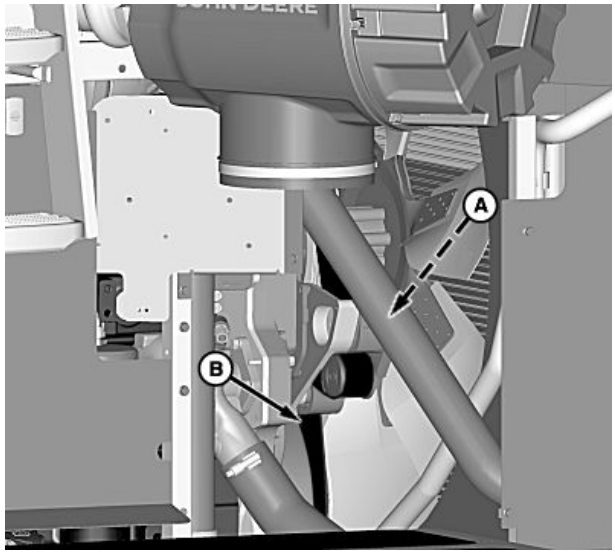
Remove shield (A).

**A—Shield**

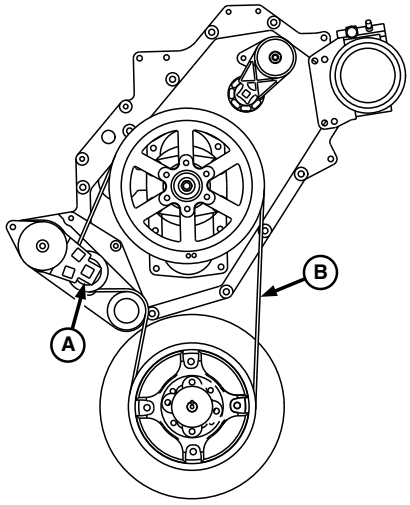



H95648 —UN—10MAR10

OUO6075,0001564 -19-09JUL13-6/8




H95694 —UN—15MAR10




*Fan Belt Routing*

H71844 —UN—25APR02

**A—Tensioner Arm** **B—Fan Belt**

Use breaker bar to relieve belt tension from tensioner arm (A).

Remove belt (B) and work belt over fan blades to remove.

Install replacement belt over fan blades.

Use breaker bar to relieve tension from tensioner arm to install replacement belt.

**Continued on next page**

OUO6075,0001564 -19-09JUL13-7/8

Install rotary screen drive belt (B).

Tighten nuts (A) until washer is positioned between end of gauge and bottom of step.

Install previously removed shield (front side).

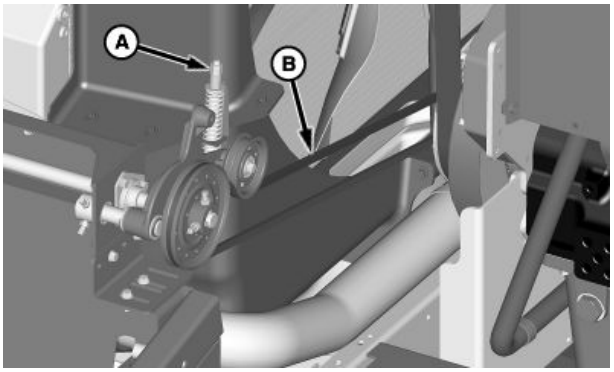
Close separator access cover and lower handrail.

Install previously removed shield (rear side) and air duct.

Close and latch rotary screen door.

**A—Nuts**

**B—Rotary Screen Drive Belt**

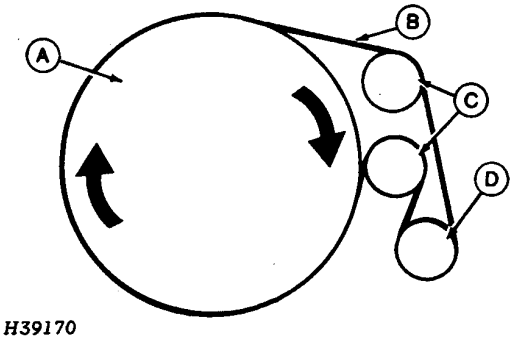



H95693 —UN—15MAR10

OUO6075,0001564 -19-09JUL13-8/8

## Rotary Screen Belt—Routing

**A—Rotary Screen**
**B—Belt**
**C—Idlers**
**D—Drive Sheave**




H39170 —UN—11OCT88

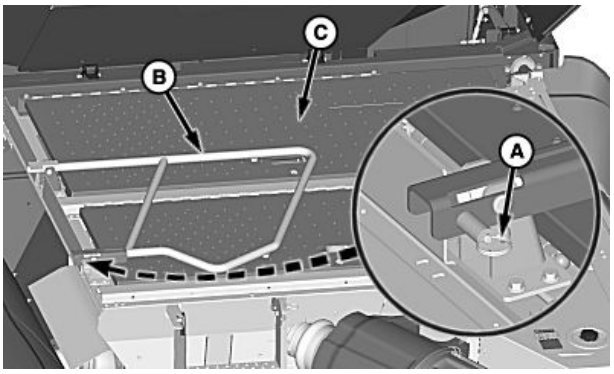
OUO6075,00006CE -19-05MAR10-1/1

## Rotary Screen Drive Belt—Replacing (Tier 2/Stage II) (S660 and S670)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin**
**B—Handrail**
**C—Separator Access Cover**



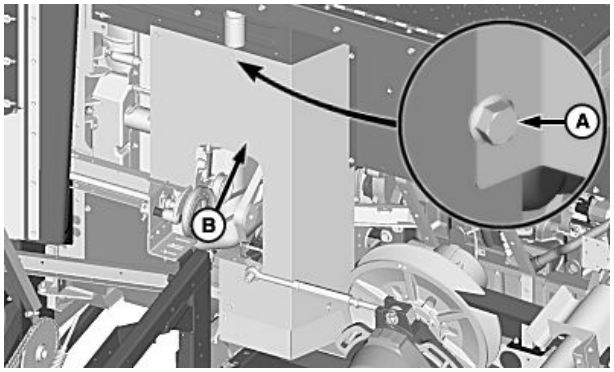

H102385 —UN—22JUN11

**Continued on next page**

OUO6075,00013C2 -19-08FEB13-1/3

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)** **B—Shield**




H106845 —UN—08FEB13

*Front Side Of Engine*

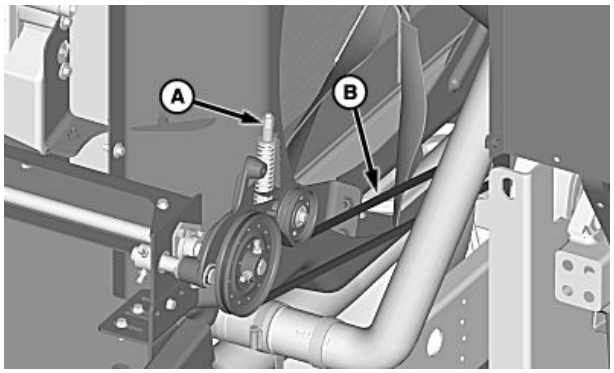
OUO6075,00013C2 -19-08FEB13-2/3

Loosen nuts (A) and remove rotary screen drive belt (B).

Install replacement belt and tighten nuts until washer is positioned between end of gauge and bottom of step.

Install previously removed shield, close separator access cover and lower handrail.

**A—Nuts** **B—Rotary Screen Drive Belt**




H95701 —UN—15MAR10

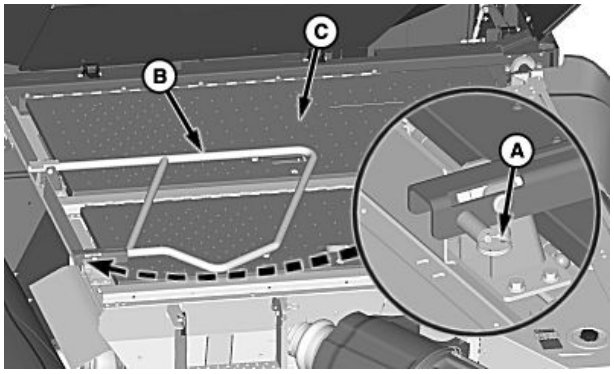
OUO6075,00013C2 -19-08FEB13-3/3

## Rotary Screen Drive Belt—Replacing (Tier 2/Stage II) (S680 and S690)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin** **C—Separator Access Cover**
**B—Handrail**



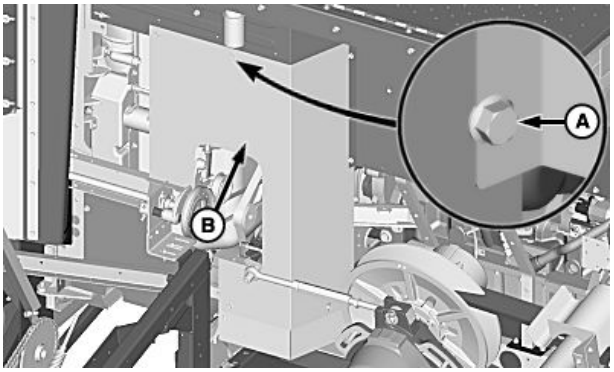

H102385 —UN—22JUN11

**Continued on next page**

OUO6075,0001565 -19-09JUL13-1/3

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)** **B—Shield**




H106845 —UN—08FEB13

*Front Side Of Engine*

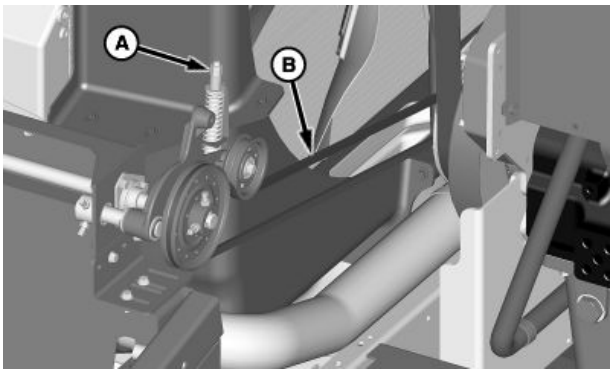
OUO6075,0001565 -19-09JUL13-2/3

Loosen nuts (A) and remove rotary screen drive belt (B).

Install replacement belt and tighten nuts until washer is positioned between end of gauge and bottom of step.

Install previously removed shield, close separator access cover and lower handrail.

**A—Nuts** **B—Rotary Screen Drive Belt**

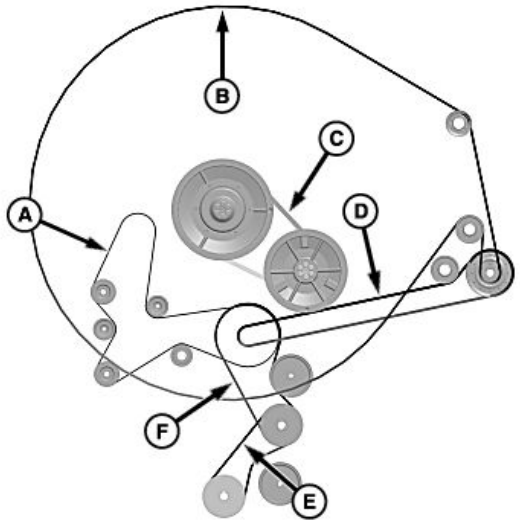



H95693 —UN—15MAR10

OUO6075,0001565 -19-09JUL13-3/3

## Engine Belt—Routing (Interim Tier 4/Stage III B) (S660 and S670)

**A—Air Conditioner Compressor, Alternator Belt**
**B—Rotary Screen Drive Belt, Screen Side**
**C—Variable Speed Fan Belt**
**D—Rotary Screen Drive Belt, Engine Side**
**E—Vacuum Fan Driven Belt, Fan Side**
**F—Vacuum Fan Drive Belt, Engine Side**

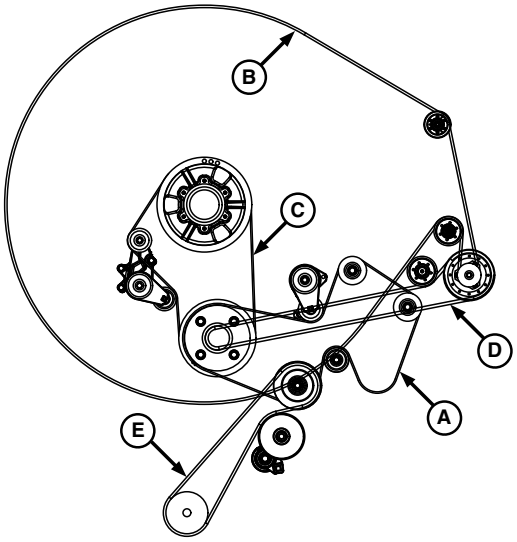



H95341 —UN—12FEB10

OUO6075,0000FF4 -19-13FEB12-1/1

## Engine Belt—Routing (Interim Tier 4/Stage III B) (S680, S685 and S690)

A—Air Conditioner Compressor, Alternator Belt
B—Rotary Screen Drive Belt, Screen Side
C—Fan Drive Belt
D—Rotary Screen Drive Belt, Engine Side
E—Vacuum Fan Drive Belt




H99552 —UN—06JAN11

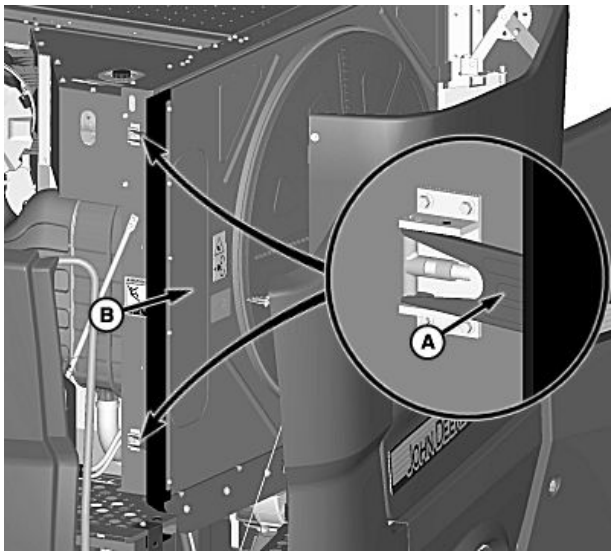
OUO6075,0001566 -19-20JUN13-1/1

## Air Conditioner Compressor/Alternator Belt—Replacing (Interim Tier 4/Stage III B) (S660 and S670)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull latches (A) and open rotary screen door (B).

A—Latches
B—Rotary Screen Door




H106847 —UN—08FEB13

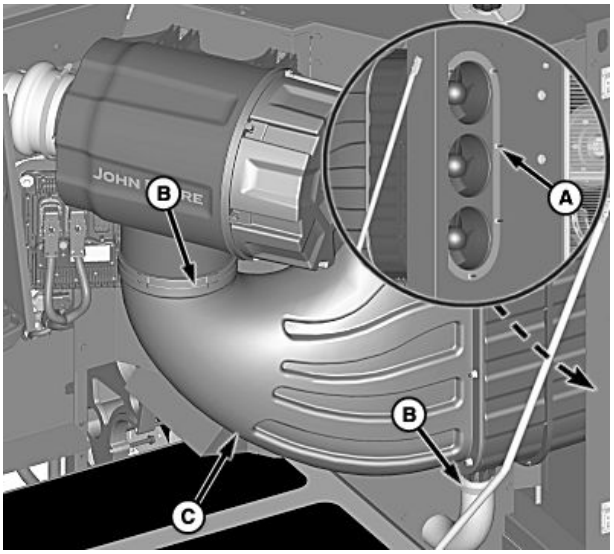
Continued on next page

OUO6075,0001568 -19-20JUN13-1/8

Remove nuts (A) and loosen hose clamps (B).

Lay air duct (C) out of the way.

**A—Nuts (7 Used)**
**B—Clamps**
**C—Air Duct**

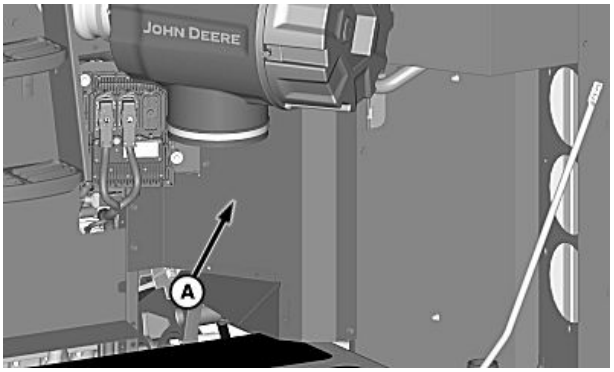



H95647 —UN—10MAR10

OUO6075,0001568 -19-20JUN13-2/8

Remove shield (A).

**A—Shield**

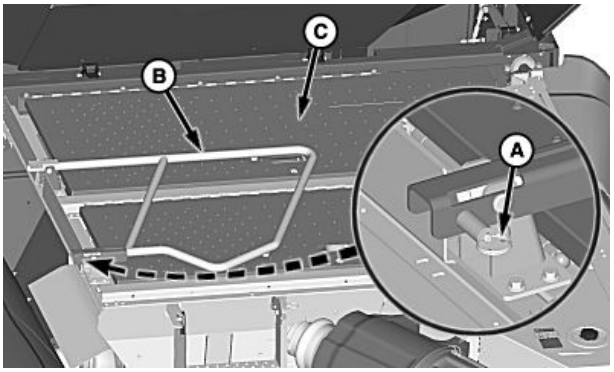



H95648 —UN—10MAR10

OUO6075,0001568 -19-20JUN13-3/8

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin**
**B—Handrail**
**C—Separator Access Cover**



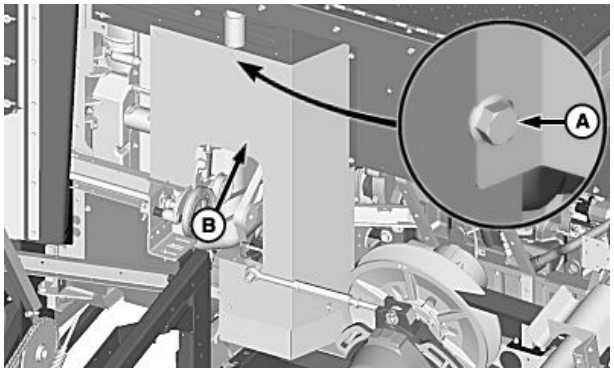

H102385 —UN—22JUN11

**Continued on next page**

OUO6075,0001568 -19-20JUN13-4/8

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)** **B—Shield**




H106845 —UN—08FEB13

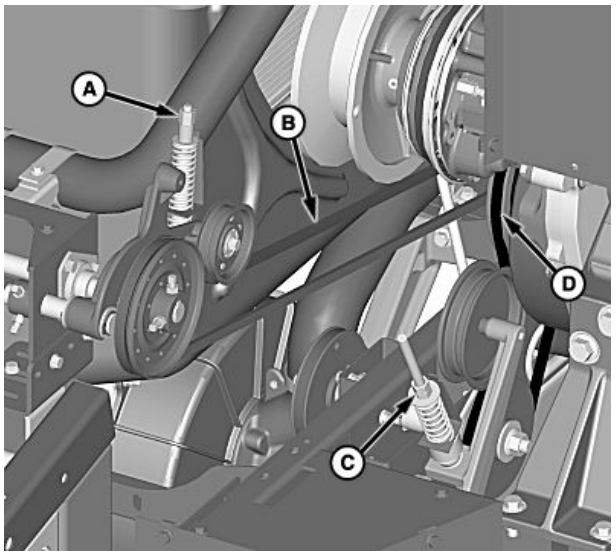
*Front Side Of Engine*

OUO6075,0001568 -19-20JUN13-5/8

Loosen nuts (A) and remove rotary screen drive belt (B).

Loosen nuts (C) and remove vacuum fan drive belt (D).

**A—Nuts** **C—Nuts**
**B—Rotary Screen Drive Belt** **D—Vacuum Fan Drive Belt**




H95655 —UN—10MAR10

**Continued on next page**

OUO6075,0001568 -19-20JUN13-6/8

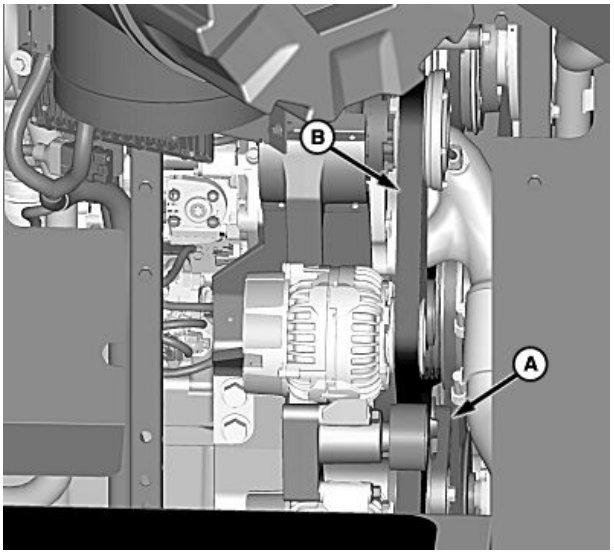
Use breaker bar to relieve belt tension from tensioner arm (A).

Remove belt (B) and work belt over fan blades to remove.

Install replacement belt over fan blades.

Use breaker bar to relieve tension from tensioner arm to install replacement belt.

**A—Tensioner Arm** **B—Belt**




H95656 —UN—10MAR10

OUO6075,0001568 -19-20JUN13-7/8

Install vacuum fan drive belt (D).

Tighten nuts (C) until washer is positioned between end of gauge and bottom of step.

Install rotary screen drive belt (B).

Tighten nuts (A) until washer is positioned between end of gauge and bottom of step.

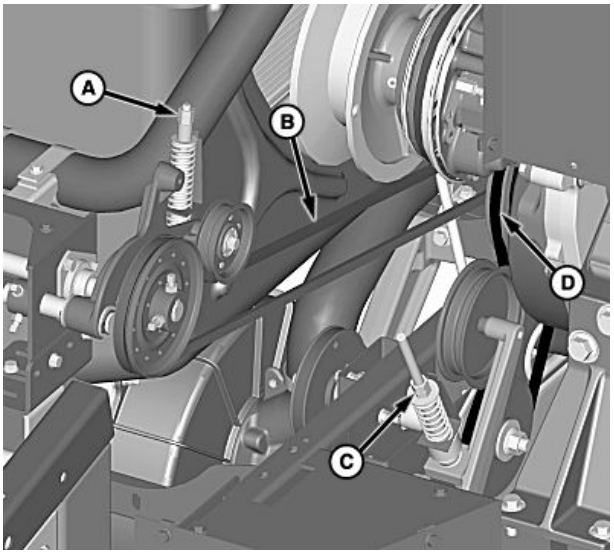
Install previously removed shield (front side).

Close separator access cover and lower handrail.

Install previously removed shield (rear side) and air duct.

Close and latch rotary screen door.

**A—Nuts** **C—Nuts**
**B—Rotary Screen Drive Belt** **D—Vacuum Fan Drive Belt**




H95655 —UN—10MAR10

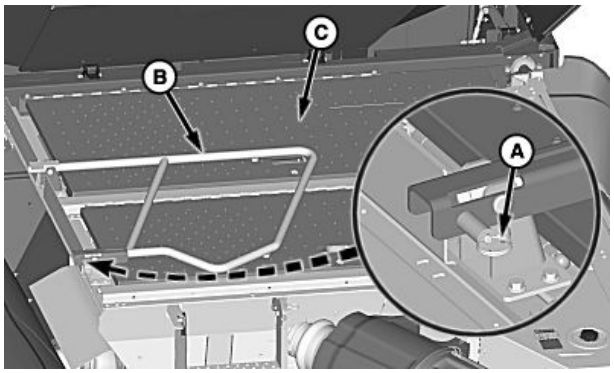
OUO6075,0001568 -19-20JUN13-8/8

## Air Conditioner Compressor/Alternator Belt—Replacing (Interim Tier 4/Stage III B) (S680, S685 and S690)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin**
**B—Handrail**
**C—Separator Access Cover**

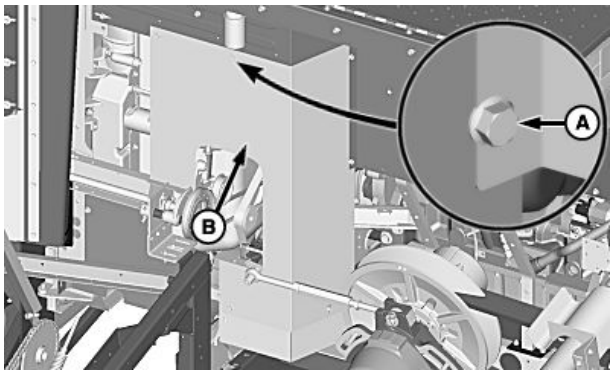



H102385 —UN—22JUN11

OUO6075,0001569 -19-20JUN13-1/12

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)**
**B—Shield**



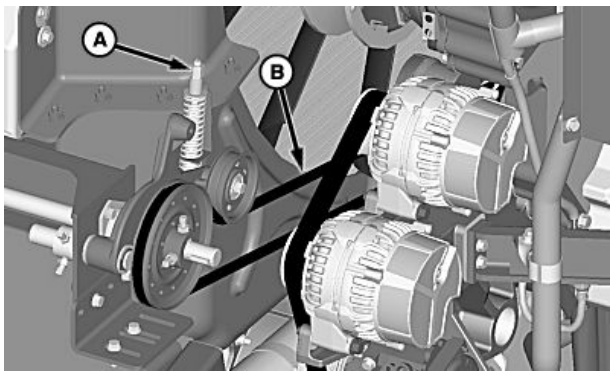

H106845 —UN—08FEB13

*Front Side Of Engine*

OUO6075,0001569 -19-20JUN13-2/12

Loosen nuts (A) and remove rotary screen drive belt (B).

**A—Nuts**
**B—Rotary Screen Drive Belt**




H95665 —UN—11MAR10

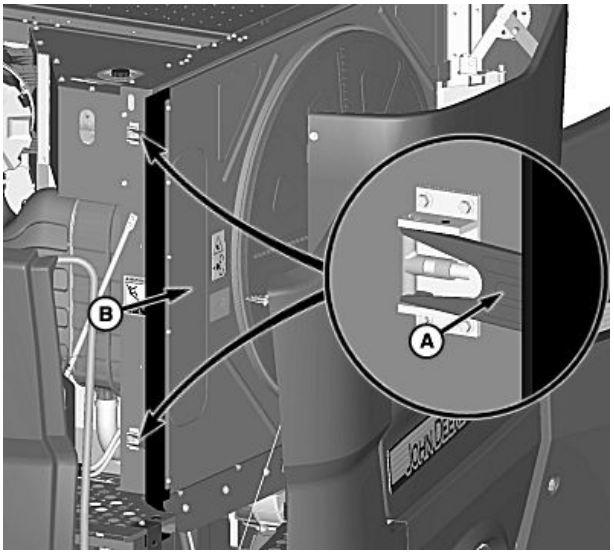
**Continued on next page**

OUO6075,0001569 -19-20JUN13-3/12

Pull latches (A) and open rotary screen door (B).

**A—Latches**

**B—Rotary Screen Door**




H106847 —UN—08FEB13

OUO6075,0001569 -19-20JUN13-4/12

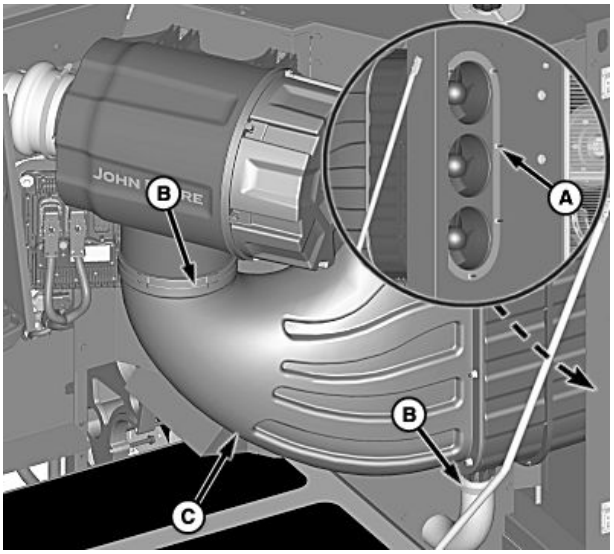
Remove nuts (A) and loosen hose clamps (B).

Lay air duct (C) out of the way.

**A—Nuts (7 Used)**

**B—Clamps**

**C—Air Duct**



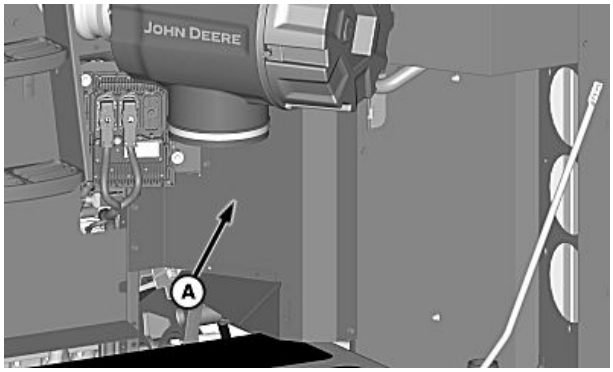

H95647 —UN—10MAR10

**Continued on next page**

OUO6075,0001569 -19-20JUN13-5/12

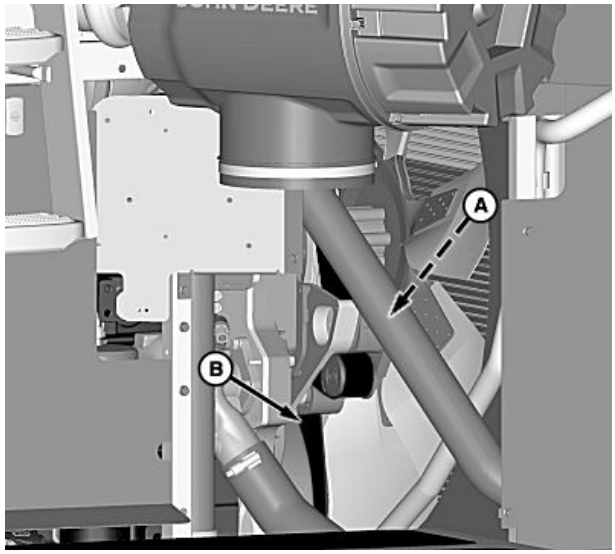
Remove shield (A).

**A—Shield**

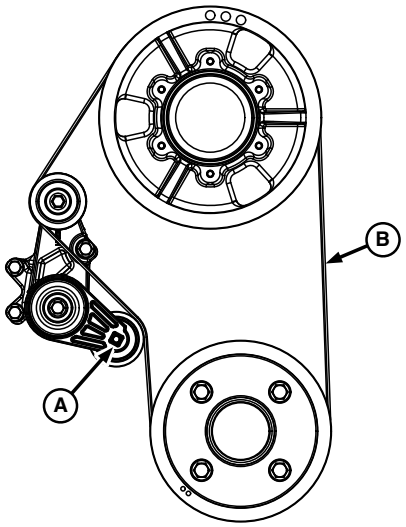



H95648 —UN—10MAR10

OUO6075,0001569 -19-20JUN13-6/12




H95694 —UN—15MAR10




H99551 —UN—06JAN11

*Fan Belt Routing*

**A—Tensioner Arm** **B—Fan Belt**

Use breaker bar to relieve belt tension from tensioner arm (A).

Remove belt (B) and work belt over fan blades to remove.

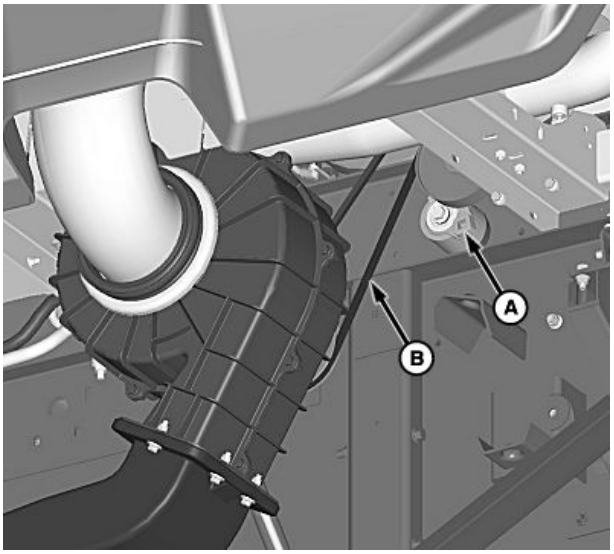
**Continued on next page**

OUO6075,0001569 -19-20JUN13-7/12

Use breaker bar to relieve belt tension from tensioner arm (A).

Remove vacuum fan drive belt (B) located below radiator.

**A—Tensioner Arm** **B—Vacuum Fan Drive Belt**




H99550 —UN—06JAN11

OUO6075,0001569 -19-20JUN13-8/12

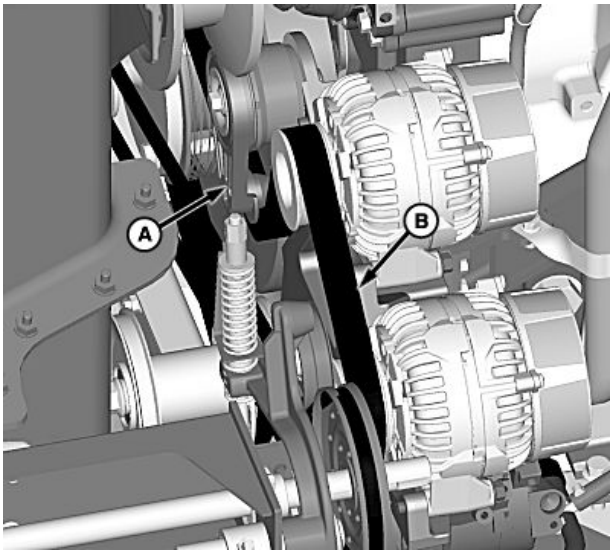
Use breaker bar to relieve belt tension from tensioner arm (A).

Remove belt (B) and work belt over fan blades to remove.

Install replacement belt over fan blades.

Use breaker bar to relieve tension from tensioner arm to install replacement belt.

**A—Tensioner Arm** **B—Belt**




H95661 —UN—11MAR10

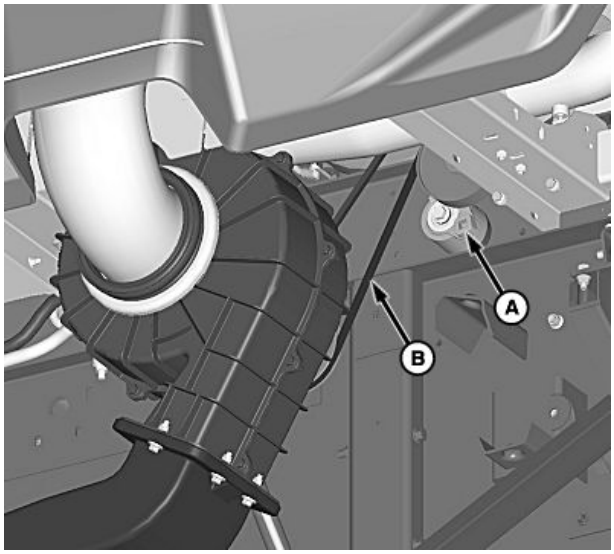
**Continued on next page**

OUO6075,0001569 -19-20JUN13-9/12

Install vacuum fan drive belt (B).

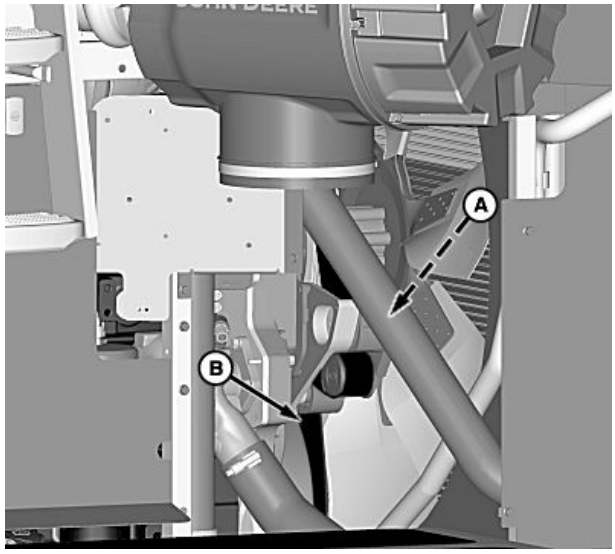
Use breaker bar to relieve tension from tensioner arm (A) to install belt.

**A—Tensioner Arm** **B—Vacuum Fan Drive Belt**

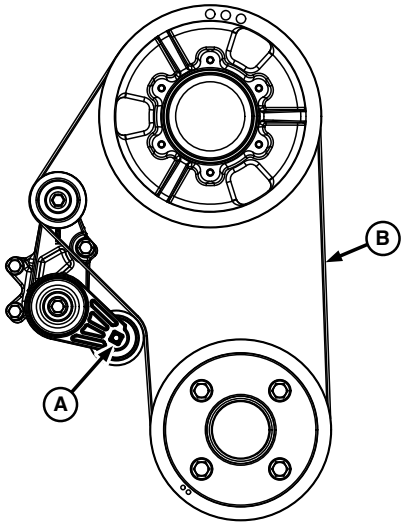



H99550 —UN—06JAN11

OUO6075,0001569 -19-20JUN13-10/12




H95694 —UN—15MAR10




H99551 —UN—06JAN11

*Fan Belt Routing*

**A—Tensioner Arm** **B—Fan Belt**

Install belt (B) and work belt over fan blades.

Use breaker bar to relieve tension from tensioner arm (A) to install belt.

**Continued on next page**

OUO6075,0001569 -19-20JUN13-11/12

Install rotary screen drive belt (B).

Tighten nuts (A) until washer is positioned between end of gauge and bottom of step.

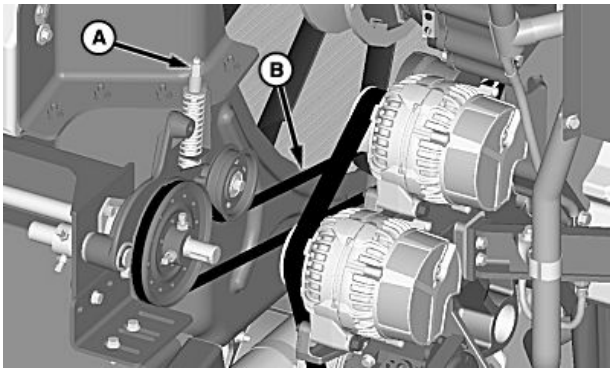
Install previously removed shield (front side).

Close separator access cover and lower handrail.

Install previously removed shield (rear side) and air duct.

Close and latch rotary screen door.

**A—Nuts** **B—Rotary Screen Drive Belt**




H95665 —UN—11MAR10

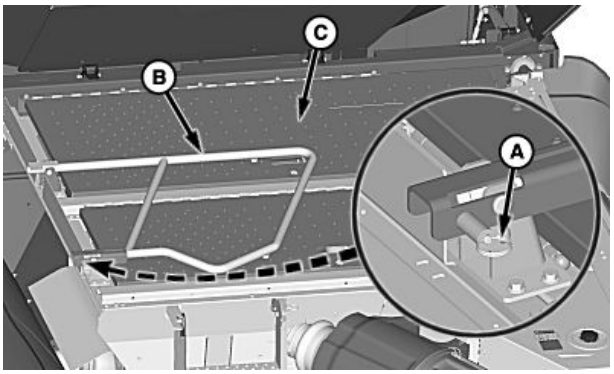
OUO6075,0001569 -19-20JUN13-12/12

## Rotary Screen Drive Belt—Replacing (Interim Tier 4/Stage III B) (S660 and S670)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin** **C—Separator Access Cover**
**B—Handrail**

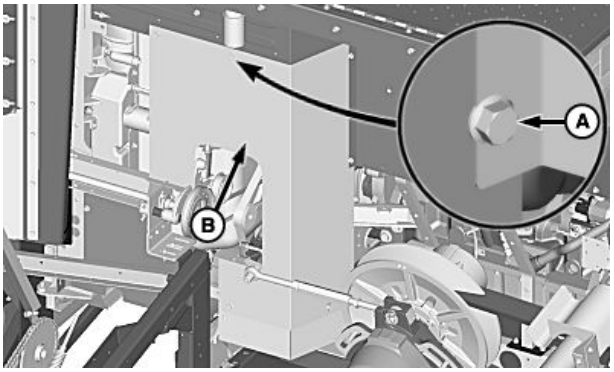



H1102385 —UN—22JUN11

OUO6075,000156A -19-20JUN13-1/3

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)** **B—Shield**




H1106845 —UN—08FEB13

*Front Side Of Engine*

**Continued on next page**

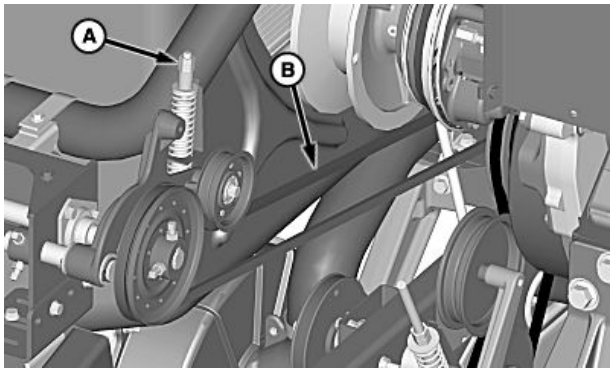
OUO6075,000156A -19-20JUN13-2/3

Loosen nuts (A) and remove rotary screen drive belt (B).

Install replacement belt and tighten nuts until washer is positioned between end of gauge and bottom of step.

Install previously removed shield, close separator access cover and lower handrail.

**A—Nuts** **B—Rotary Screen Drive Belt**




H95657 —UN—10MAR10

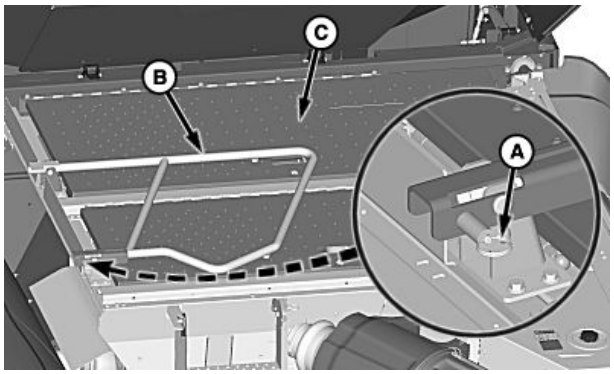
OUO6075,000156A -19-20JUN13-3/3

## Rotary Screen Drive Belt—Replacing (Interim Tier 4/Stage III B) (S680, S685 and S690)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin** **C—Separator Access Cover**
**B—Handrail**

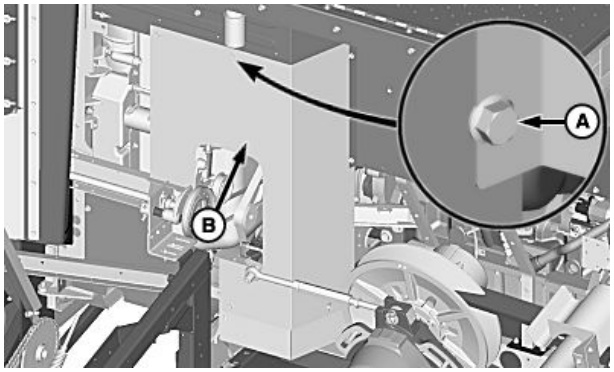



H102385 —UN—22JUN11

OUO6075,000156B -19-20JUN13-1/3

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)** **B—Shield**




H106845 —UN—08FEB13

*Front Side Of Engine*

**Continued on next page**

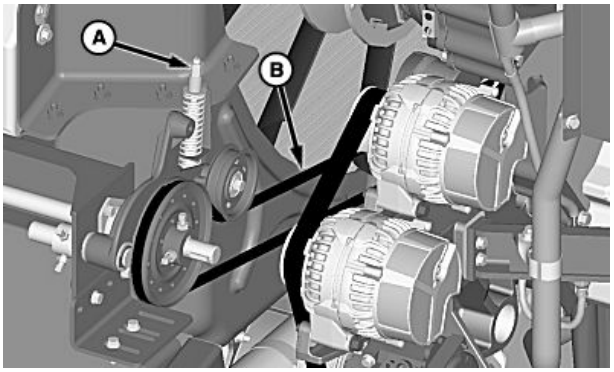
OUO6075,000156B -19-20JUN13-2/3

Loosen nuts (A) and remove rotary screen drive belt (B).

Install replacement belt and tighten nuts until washer is positioned between end of gauge and bottom of step.

Install previously removed shield, close separator access cover and lower handrail.

**A—Nuts** **B—Rotary Screen Drive Belt**




H95665 —UN—11MAR10

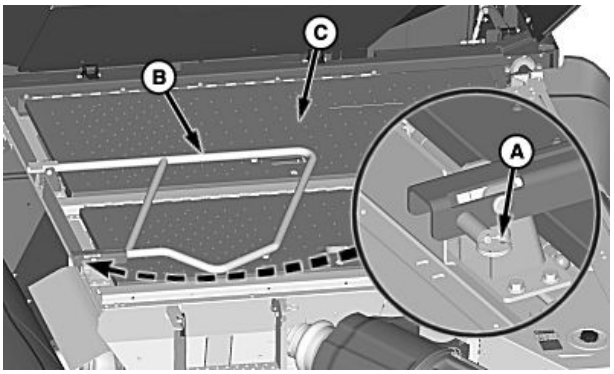
OUO6075,000156B -19-20JUN13-3/3

## Vacuum Fan Drive Belt—Replacing (Interim Tier 4/Stage III B) (S660 and S670)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin** **C—Separator Access Cover**
**B—Handrail**

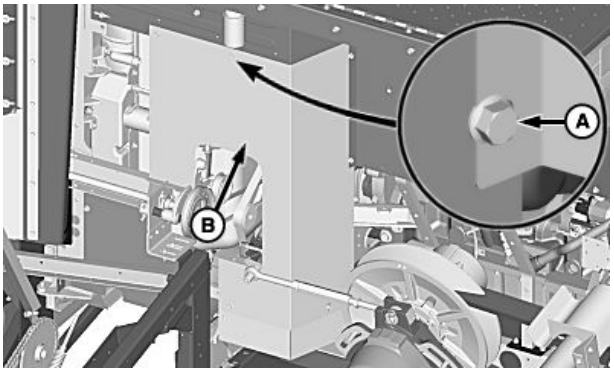



H1102385 —UN—22JUN11

OUO6075,000156C -19-20JUN13-1/3

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)** **B—Shield**




*Front Side Of Engine*

H1106845 —UN—08FEB13

**Continued on next page**

OUO6075,000156C -19-20JUN13-2/3

Loosen nuts (A) and remove rotary screen drive belt (B).

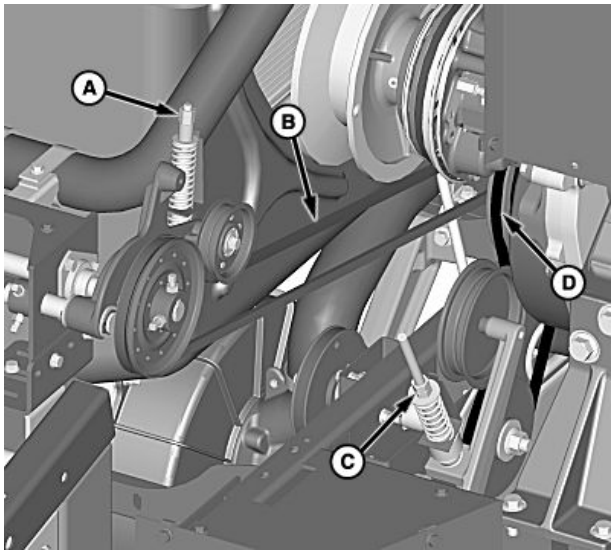
Loosen nuts (C) and remove vacuum fan drive belt (D).

Install replacement vacuum fan drive belt and tighten nut until washer is positioned between end of gauge and bottom of step.

Install rotary screen drive belt and tighten nut until washer is positioned between end of gauge and bottom of step.

Install previously removed shield, close separator access cover and lower handrail.

**A—Nuts**
**B—Rotary Screen Drive Belt**
**C—Nuts**
**D—Vacuum Fan Drive Belt**




H95655 —UN—10MAR10

OUO6075,000156C -19-20JUN13-3/3

## Vacuum Fan Drive Belt—Replacing (Interim Tier 4/Stage III B) (S680, S685 and S690)

**CAUTION: Shut OFF engine, set park brake and remove key.**

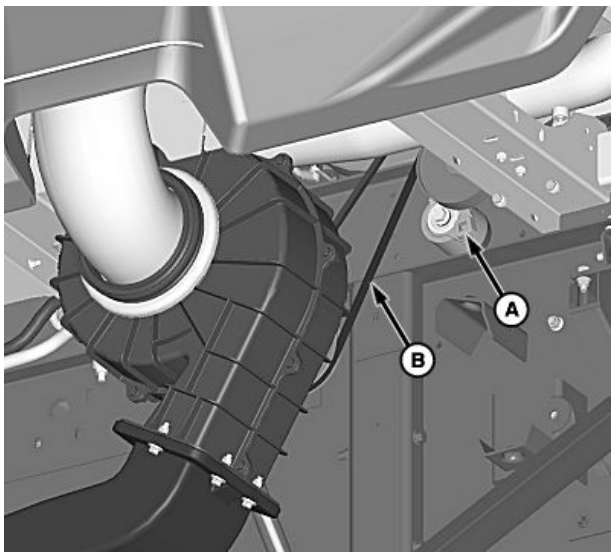
Use breaker bar to relieve belt tension from tensioner arm (A).

Remove vacuum fan drive belt (B) located below radiator.

Install replacement vacuum fan drive belt.

Use breaker bar to relieve tension from tensioner arm to install belt.

**A—Tensioner Arm**
**B—Vacuum Fan Drive Belt**




H99550 —UN—06JAN11

OUO6075,000156D -19-20JUN13-1/1

## Vacuum Fan Driven Belt—Replacing (Interim Tier 4/Stage III B) (S660 and S670)

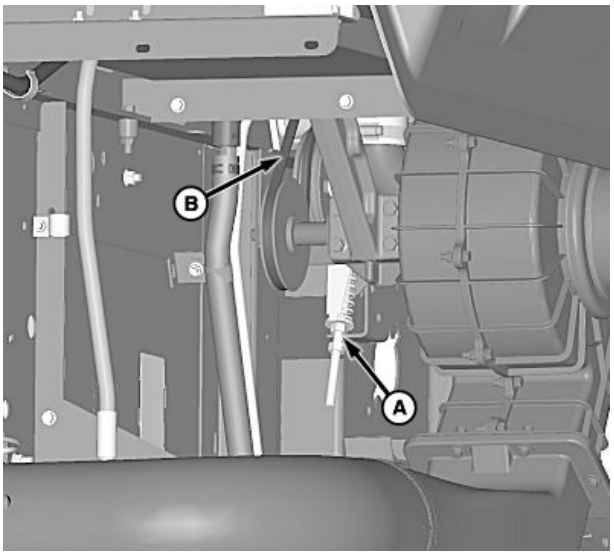
**CAUTION: Shut OFF engine, set park brake and remove key.**

Loosen nuts (A) and remove vacuum fan driven belt (B) located below radiator.

Install replacement vacuum fan driven belt.

Tighten nuts until washer is positioned between end of gauge and bottom of step.

**A—Nuts** **B—Vacuum Fan Driven Belt**




H95667 —UN—11MAR10

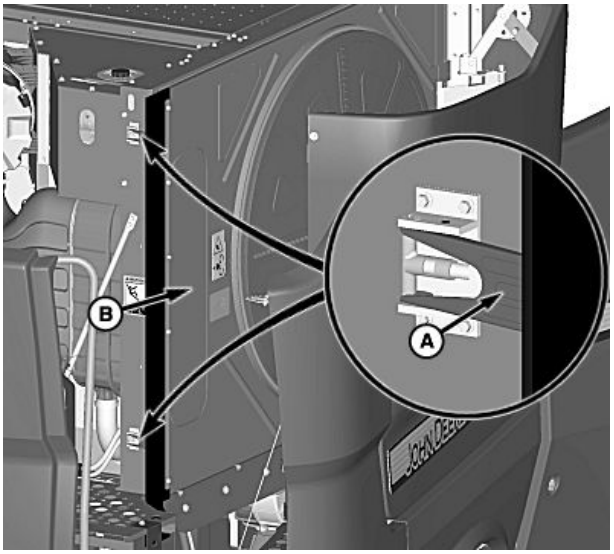
OUO6075,000156E -19-20JUN13-1/1

## Variable Speed Fan Drive Belt—Replacing (Interim Tier 4/Stage III B) (S660 and S670)

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull latches (A) and open rotary screen door (B).

**A—Latches** **B—Rotary Screen Door**




H106847 —UN—08FEB13

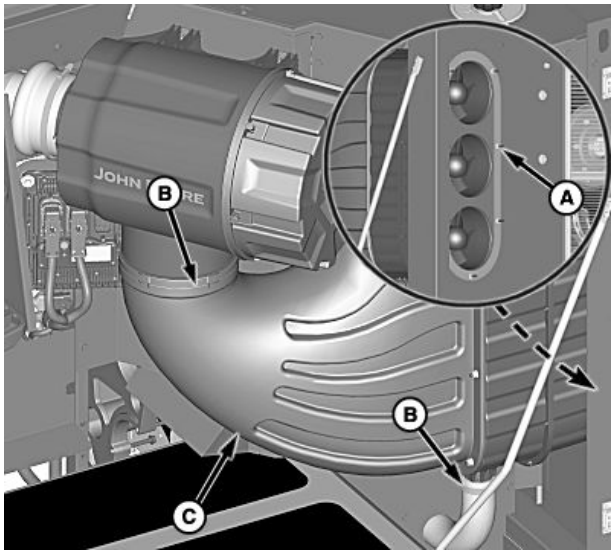
**Continued on next page**

OUO6075,00013C9 -19-11FEB13-1/12

Remove nuts (A) and loosen hose clamps (B).

Lay air duct (C) out of the way.

**A—Nuts (7 Used)**
**B—Clamps**
**C—Air Duct**

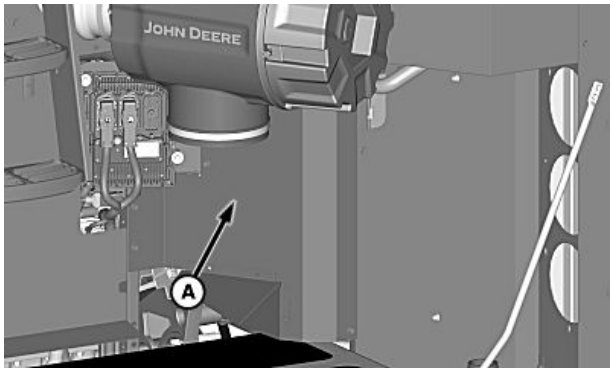



H95647 —UN—10MAR10

OUO6075,00013C9 -19-11FEB13-2/12

Remove shield (A).

**A—Shield**




H95648 —UN—10MAR10

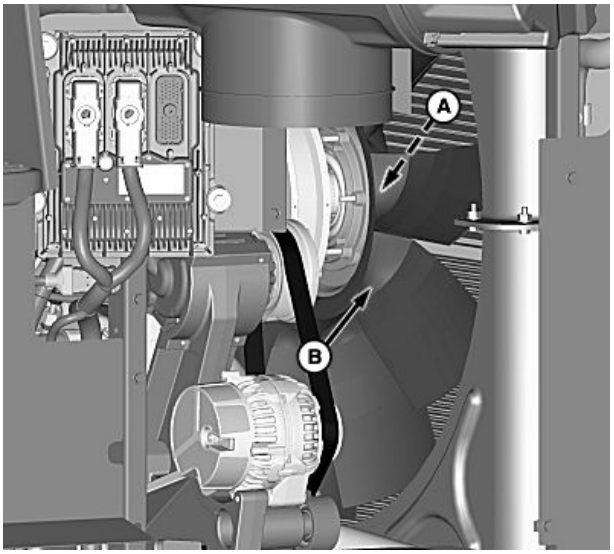
**Continued on next page**

OUO6075,00013C9 -19-11FEB13-3/12

Remove cap screws (A) from fan assembly (B).

Lay fan assembly out of the way.

**A—Cap Screws (6 Used)** **B—Fan Assembly**



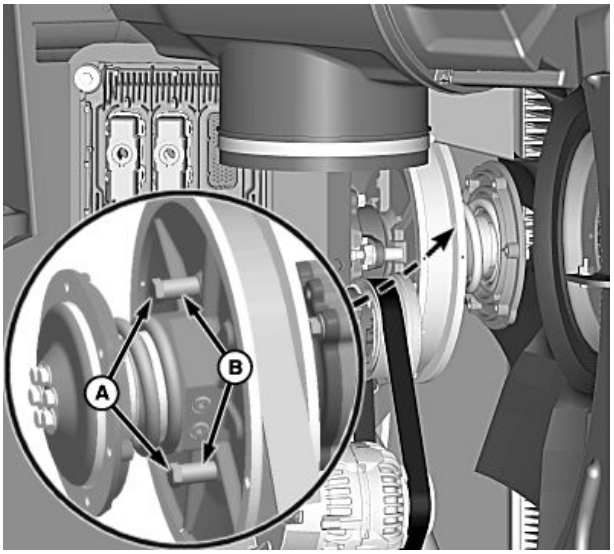

H95649 —UN—10MAR10

OUO6075,00013C9 -19-11FEB13-4/12

Remove cap screws (A) and spacers (B).

Install previously removed cap screws until spring is compressed completely.

**A—Cap Screws** **B—Spacers**



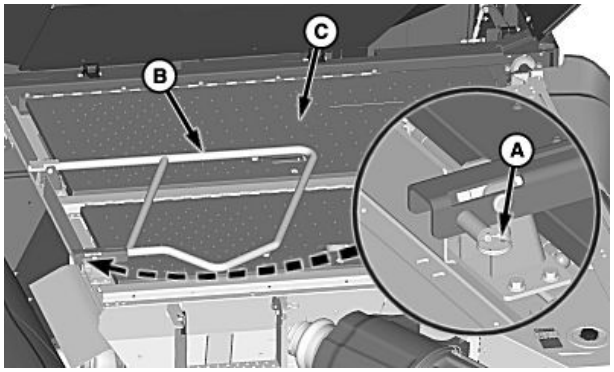

H95650 —UN—10MAR10

**Continued on next page**

OUO6075,00013C9 -19-11FEB13-5/12

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin**
**B—Handrail**
**C—Separator Access Cover**

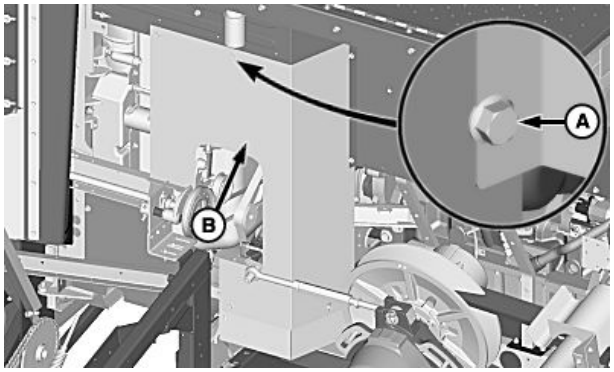



H102385 —UN—22JUN11

OUO6075,00013C9 -19-11FEB13-6/12

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)**
**B—Shield**



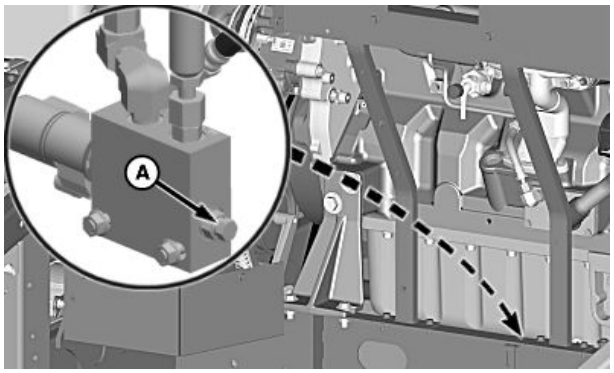

H106845 —UN—08FEB13

*Front Side Of Engine*

OUO6075,00013C9 -19-11FEB13-7/12

Locate valve on front side of support rail and loosen bleed screw (A) to relieve pressure from sheaves.

**A—Bleed Screw**




H95652 —UN—10MAR10

**Continued on next page**

OUO6075,00013C9 -19-11FEB13-8/12

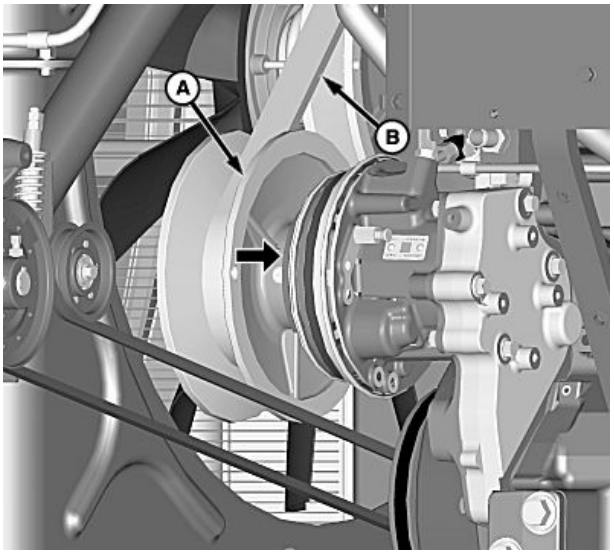
With bleed screw loose, pull sheave (A) towards engine until completely open.

Remove variable speed belt (B).

*NOTE: Belt MUST be installed over driver sheave first and then over driven sheave.*

Install replacement variable speed belt.

**A—Sheave** **B—Variable Speed Belt**



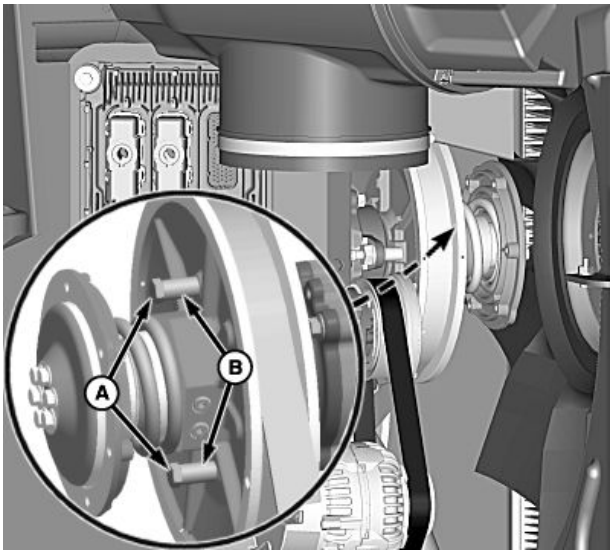

H95653 —UN—31MAR10

OUO6075,00013C9 -19-11FEB13-9/12

**IMPORTANT: Spring MUST be un-compressed to allow variable speed fan to adjust speed.**

With variable speed belt installed, remove cap screws (A) to un-compress spring and install previously removed spacers (B) as shown.

**A—Cap Screws** **B—Spacers**




H95650 —UN—10MAR10

**Continued on next page**

OUO6075,00013C9 -19-11FEB13-10/12

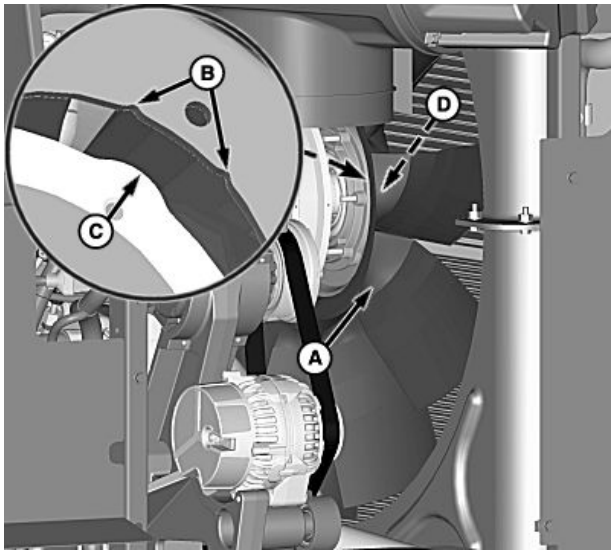
Install fan assembly (A) so index marks (B) are positioned on either side of boss (C).

Install previously removed cap screws (D). Tighten cap screws to specification.

**Specification**

Cap Screws—Torque.....40 N·m (30 lb.-ft.)

**A—Fan Assembly**
**B—Index Marks**
**C—Boss**
**D—Cap Screws (6 Used)**




H95654 —UN—10MAR10

OUO6075,00013C9 -19-11FEB13-11/12

Locate valve on front side of support rail and tighten bleed screw and nut (A) to specification.

**Specification**

Bleed Screw and Nut—Torque.....23 N·m (17 lb.-ft.)

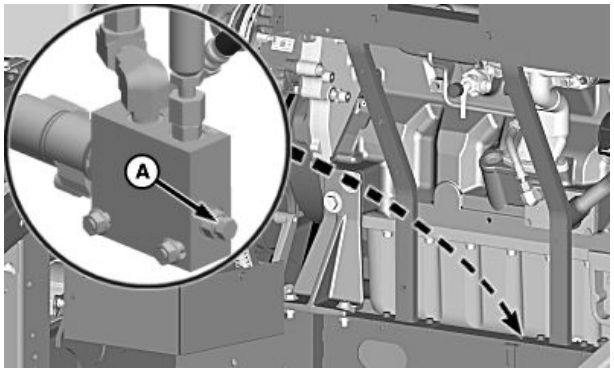
Install previously removed shield (front side).

Close separator access cover and lower handrail.

Install previously removed shield (rear side) and air duct.

Close and latch rotary screen door.

**A—Bleed Screw and Nut**




H95652 —UN—10MAR10

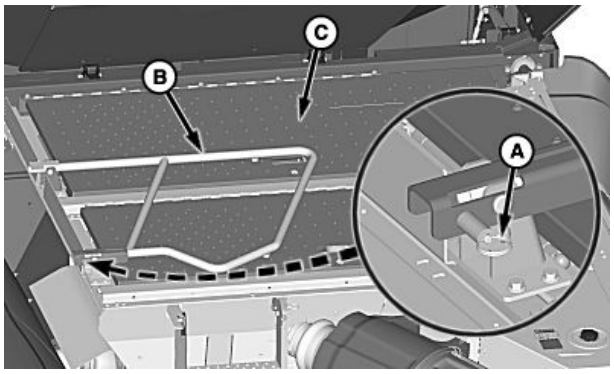
OUO6075,00013C9 -19-11FEB13-12/12

## Fan Drive Belt—Replacing (Interim Tier 4/Stage III B) (S680, S685 and S690)

**⚠ CAUTION: Shut OFF engine, set park brake and remove key.**

Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place to open separator access cover (C).

**A—Lock-Out Pin**
**B—Handrail**
**C—Separator Access Cover**



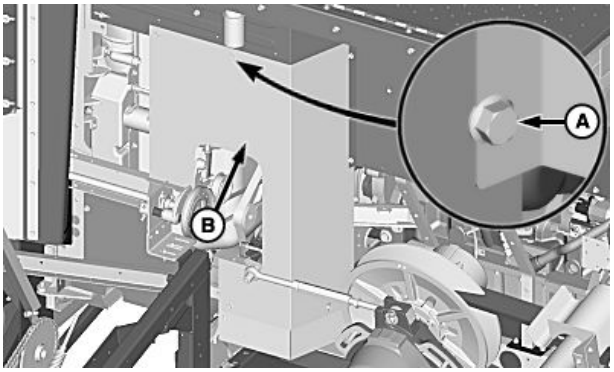

H102385 —UN—22JUN11

**Continued on next page**

OUO6075,000156F -19-20JUN13-1/8

Remove cap screws (A) and shield (B).

**A—Cap Screws (7 Used)** **B—Shield**



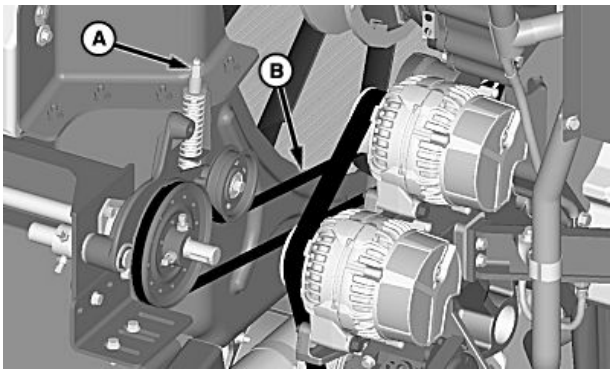

H106845 —UN—08FEB13

*Front Side Of Engine*

OUO6075,000156F -19-20JUN13-2/8

Loosen nuts (A) and remove rotary screen drive belt (B).

**A—Nuts** **B—Rotary Screen Drive Belt**

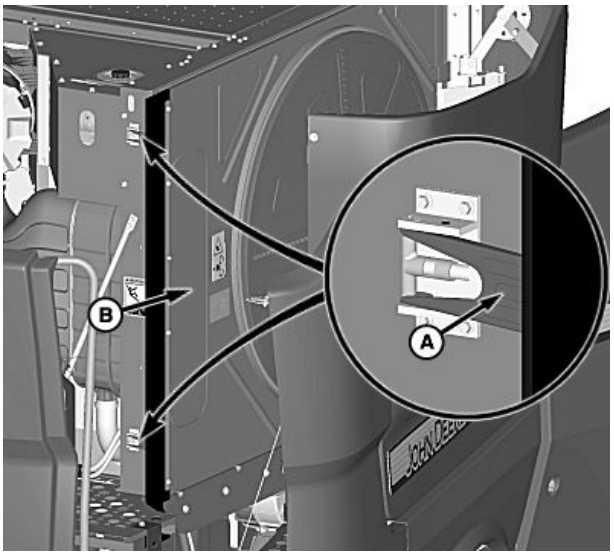



H95665 —UN—11MAR10

OUO6075,000156F -19-20JUN13-3/8

Pull latches (A) and open rotary screen door (B).

**A—Latches** **B—Rotary Screen Door**




H106847 —UN—08FEB13

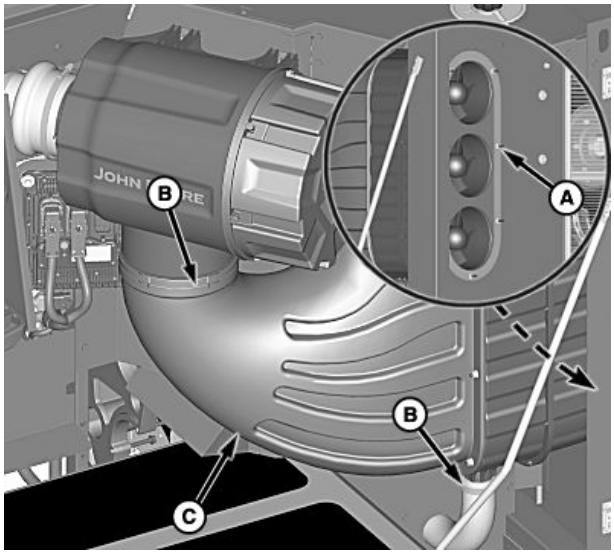
**Continued on next page**

OUO6075,000156F -19-20JUN13-4/8

Remove nuts (A) and loosen hose clamps (B).

Lay air duct (C) out of the way.

**A—Nuts (7 Used)**
**B—Clamps**
**C—Air Duct**

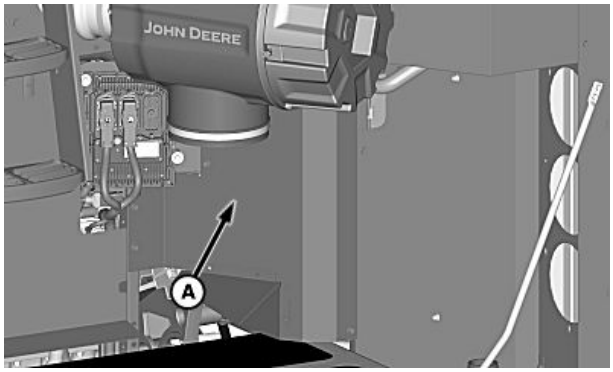



H95647 —UN—10MAR10

OUO6075,000156F -19-20JUN13-5/8

Remove shield (A).

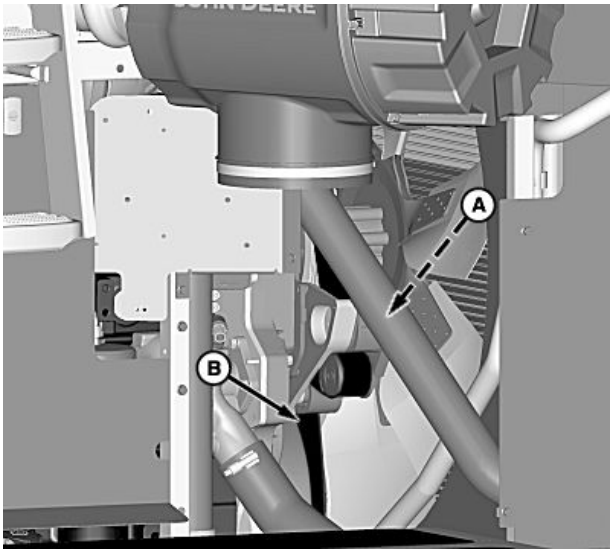
**A—Shield**



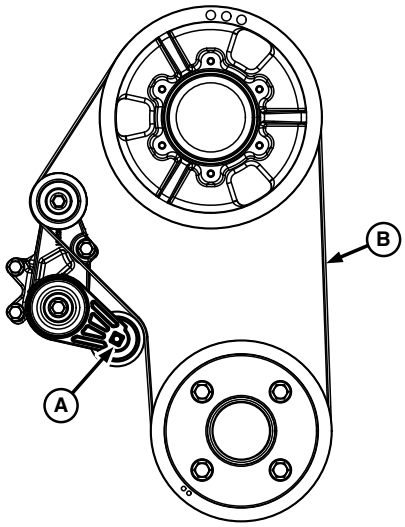

H95648 —UN—10MAR10

**Continued on next page**

OUO6075,000156F -19-20JUN13-6/8




H95694 —UN—15MAR10




H99551 —UN—06JAN11

*Fan Belt Routing*

**A—Tensioner Arm** **B—Fan Belt**

Use breaker bar to relieve belt tension from tensioner arm (A).

Remove belt (B) and work belt over fan blades to remove.

Install replacement belt over fan blades.

Use breaker bar to relieve tension from tensioner arm to install replacement belt.

OUO6075,000156F -19-20JUN13-7/8

Install rotary screen drive belt (B).

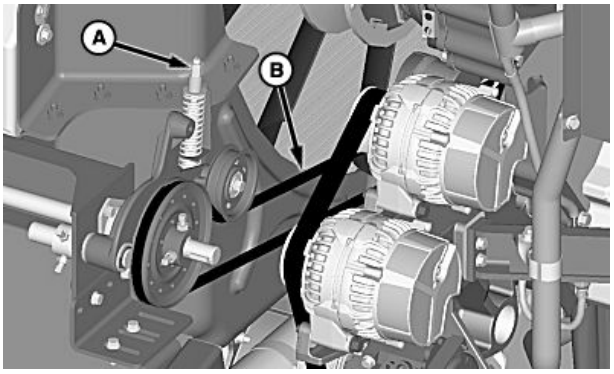
Tighten nuts (A) until washer is positioned between end of gauge and bottom of step.

Install previously removed shield (front side).

Close separator access cover and lower handrail.

Install previously removed shield (rear side) and air duct.

Close and latch rotary screen door.




H95665 —UN—11MAR10

**A—Nuts** **B—Rotary Screen Drive Belt**

OUO6075,000156F -19-20JUN13-8/8

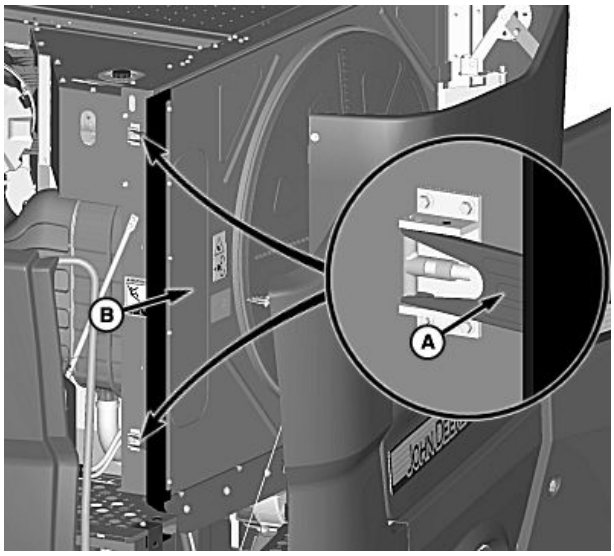
## Rotary Screen, Oil Cooler, Condenser, Radiator and Charge Air Cooler—Cleaning

**CAUTION: Shut OFF engine, set park brake and remove key.**

Pull latches (A) and open rotary screen door (B).

**A—Latches**

**B—Rotary Screen Door**




H106847 —UN—08FEB13

OUO6075,0001570 -19-20JUN13-1/3

**Tier 2/Stage II (S660 and S670):**

*NOTE: Clean areas out with compressed air, blowing from inside out.*

Check rotary screen daily to be certain it turns freely.

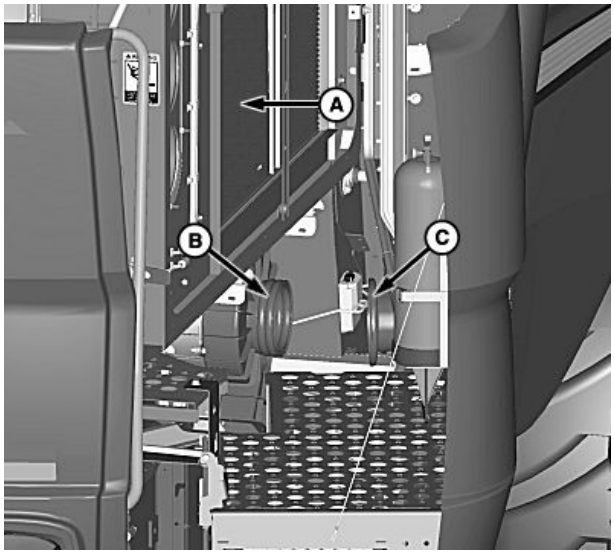
Clean rotary screen with a brush and compressed air when dirt and chaff builds up on or behind screen.

Clean condenser (A), oil cooler, charge air cooler, and radiator.

Clean out dirt from lower vacuum duct (B) and transfer duct (C).

**IMPORTANT: When using high-pressure air or water, be careful of fin damage to coolers. Use a fin comb to straighten bent fins. Bent fins decrease cooler performance.**

Close and latch rotary screen door.




H106852 —UN—08FEB13

**A—Condenser**

**B—Vacuum Duct**

**C—Transfer Duct**

**Continued on next page**

OUO6075,0001570 -19-20JUN13-2/3

**Interim Tier 4/Stage III B (S660, S670, S680, S685 and S690)**

*NOTE: Clean areas out with compressed air, blowing from inside out.*

Check rotary screen daily to be certain it turns freely.

Clean rotary screen with a brush and compressed air when dirt and chaff builds up on or behind screen.

Pull lock-out pin (A) and rotate fuel cooler (B) to clean.

Clean radiator (C), oil cooler and charge air cooler.

Clean out dirt from lower vacuum duct (D).

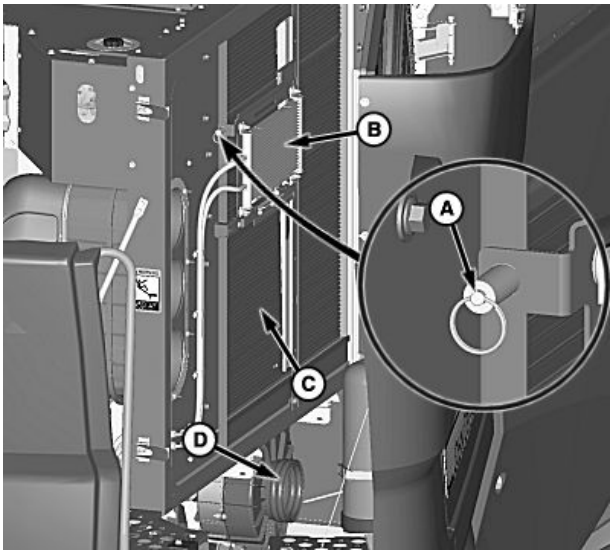
Clean condensers (E) located on rotary screen door (F).

Clean out dirt from transfer duct (G).

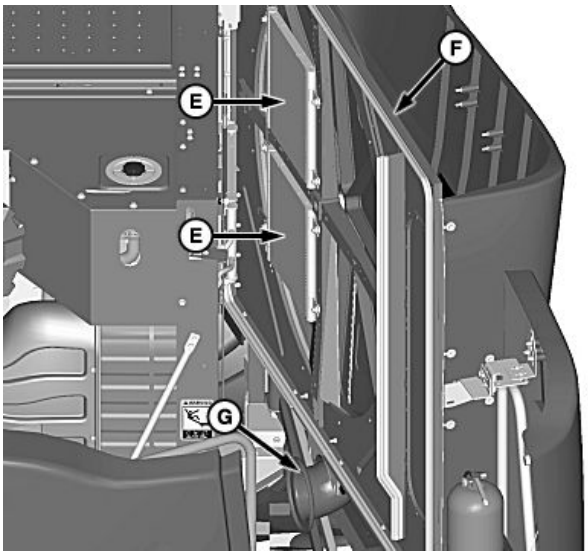
**IMPORTANT: When using high-pressure air or water, be careful of fin damage to coolers. Use a fin comb to straighten bent fins. Bent fins decrease cooler performance.**

Close and latch rotary screen door.

**A—Lock-Out Pin**
**B—Fuel Cooler**
**C—Radiator**
**D—Vacuum Duct**
**E—Condensers**
**F—Rotary Screen Door**
**G—Transfer Duct**




H106853 —UN—08FEB13



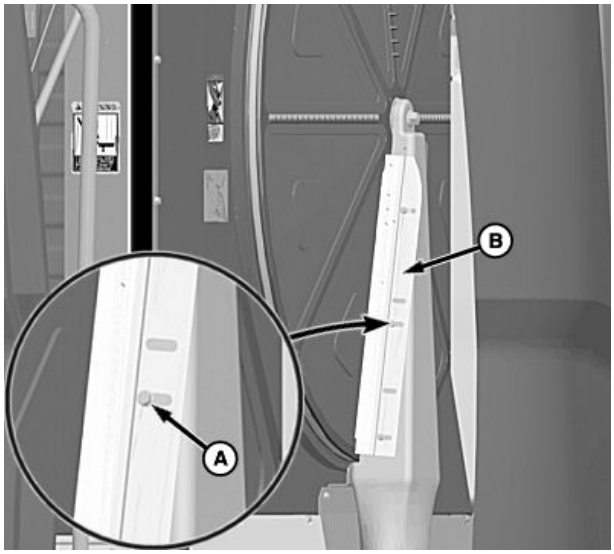

H106854 —UN—08FEB13

OUO6075,0001570 -19-20JUN13-3/3

## Rotary Screen Brush—Adjustment

Loosen cap screws (A) and adjust brush (B) as needed to remove crop debris.

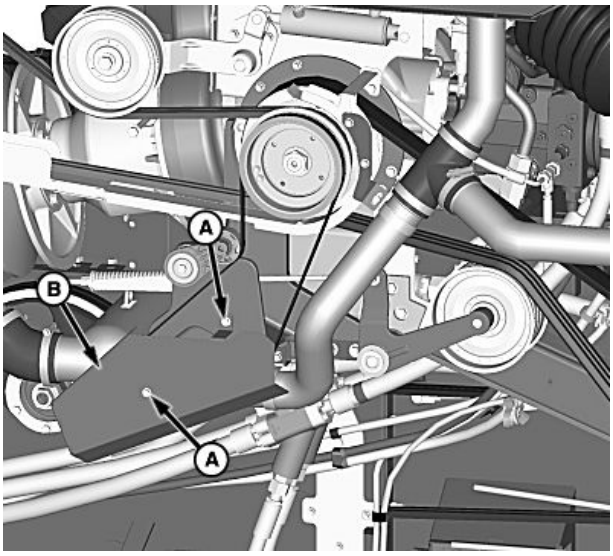
**A—Cap Screws** **B—Brush**




H95350 —UN—15FEB10

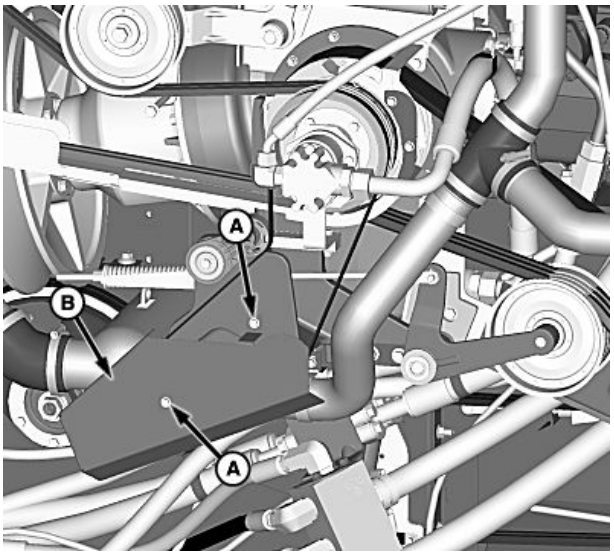
OUO6075,00005A0 -19-16FEB10-1/1

## Engine Debris Management Belt—Replacing (Interim Tier 4/Stage III B)




H108289 —UN—18JUN13

*S660 and S670*




H108292 —UN—18JUN13

*S680, S685 and S690*

**A—Cap Screws** **B—Shield**

**⚠ CAUTION: Shut OFF engine, set park brake and remove key.**

Remove cap screws (A) and shield (B).

**Continued on next page**

OUO6075,0001571 -19-20JUN13-1/3

**S660 and S670**

Use breaker bar to relieve tension from tensioner arm (A) to remove engine debris management belt (B).

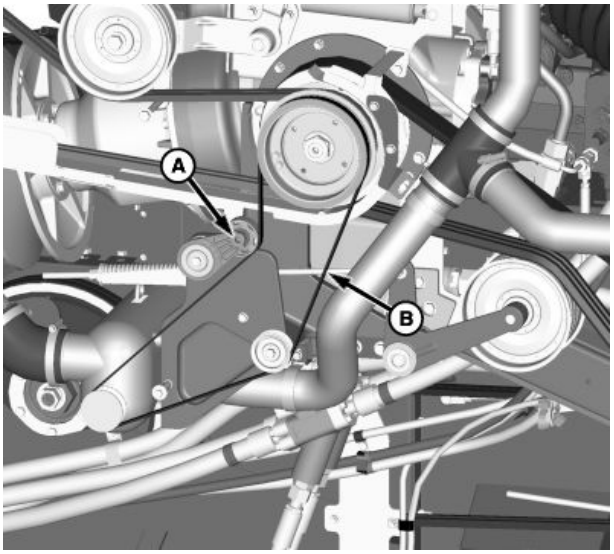
Remove belt and install replacement belt in reverse order.

Use breaker bar to relieve tension from tensioner arm to install belt.

Install shield and retain with cap screws.

**A—Tensioner Arm**

**B—Engine Debris Management Belt**




H108290 —UN—18JUN13

OUO6075,0001571 -19-20JUN13-2/3

**S680, S685 and S690**

Remove cap screws (A) and support pump assembly out of the way.

Remove belt and install replacement belt in reverse order.

Align pump assembly with sheave and tighten cap screws to specification.

| Specification | |
|---|---|
| Cap Screws—Torque | 80 N·m (59 lb.-ft.) |

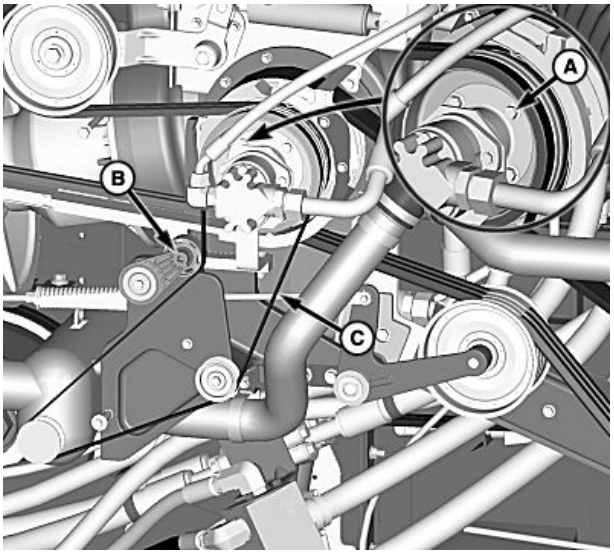
Use breaker bar to relieve tension from tensioner arm (B) to install engine debris management belt (C).

Install shield and retain with cap screws.

**A—Cap Screws**

**B—Tensioner Arm**

**C—Engine Debris Management Belt**




H108293 —UN—18JUN13

OUO6075,0001571 -19-20JUN13-3/3

## Engine Debris Management Air Filter—Removing (Interim Tier 4/Stage III B)

**IMPORTANT: When servicing filters, shut OFF engine, set park brake and remove key so dirt cannot be pulled into engine.**

Service filter only when engine debris management air filter icon is displayed on armrest display.

Disengage latches (A) and remove dust cover (B).

Remove primary air filter (C).

Remove safety filter (D) in a counterclockwise direction. Safety filter stops dirt that would pass through a damaged primary filter.

**IMPORTANT: Never wash, brush, or knock elements. If blowing out the primary element, use dry compressed air (500 kPa; 72.5 psi). Clean the element from the inside out making sure that the tip of the air gun does not come in contact with the filter paper.**

**Never clean the safety element. Replace if dirty.**

**Never run engine without both filters in place.**

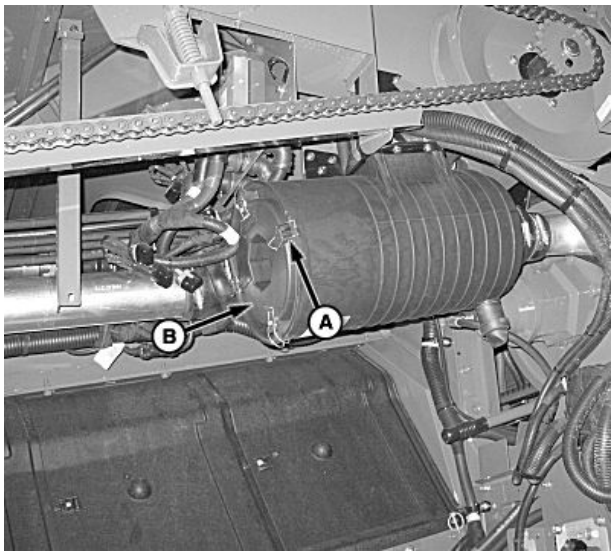
Service filters as needed.

Install safety filter and turn in a clockwise direction until hand tight.

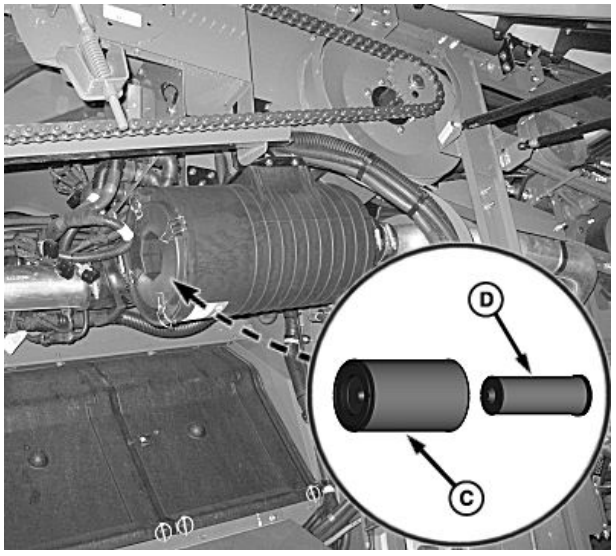
Install primary air filter.

Install cover and engage latches.

**A—Latches**
**B—Dust Cover**
**C—Primary Air Filter**
**D—Safety Filter**




H108121 —UN—06JUN13




H1108122 —UN—06JUN13

OUO6075,0001572 -19-20JUN13-1/1

## Air Cleaner Filters—Removing

**IMPORTANT: When servicing filters, shut OFF engine, set parking brake and remove key so dirt cannot be pulled into engine.**

Service filters only when engine air filter icon is displayed on armrest display.

Unsnap dust cover (A) and remove primary air filter (B).

Unscrew safety filter (C) in a counterclockwise direction to remove. Safety filter stops dirt that would pass through a damaged primary filter.

**IMPORTANT: Never wash, brush, or knock elements. If blowing out the primary element, use dry compressed air (500 kPa; 72.5 psi). Clean the element from the inside out making sure that the tip of the air gun does not come in contact with the filter paper.**

**Never clean the safety element. Replace if dirty.**

**Never run engine without both filters in place.**

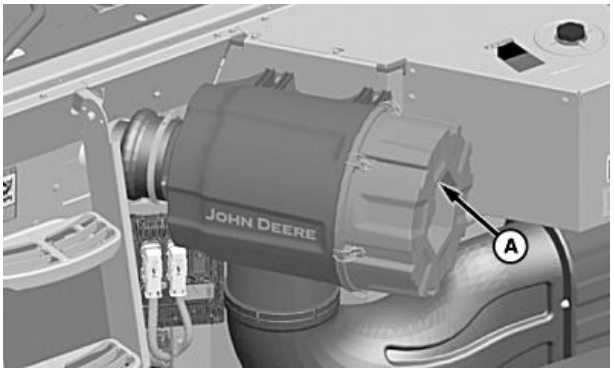
Service filters as needed.

Install safety filter and turn in a clockwise direction until hand tight.

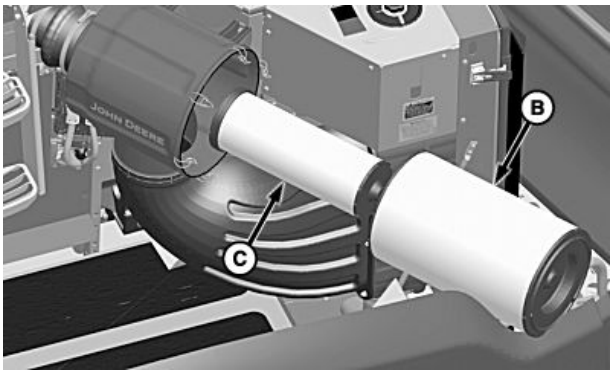
Install primary air filter and dust cover.

Check all connections in the air intake system. Be certain they are tight.

**IMPORTANT: Do not use any exhaust flow cleaning unit to blow chaff off combine. Using such a unit can cause air filter failure, followed by engine failure.**




H95351 —UN—15FEB10




H1000563 —UN—03MAR11

**A—Dust Cover**
**B—Primary Air Filter**
**C—Safety Filter**

OUO6075,00005A1 -19-29MAR11-1/1

## Diesel Particulate Filter Maintenance and Service (Interim Tier 4/Stage III B)

The Exhaust Filter includes the Diesel Oxidation Catalyst and Diesel Particulate Filter (DPF). The DPF is designed to retain residual ash, which is a noncombustible result of additives used in crankcase lubrication oils and the fuel. The DPF provides many hours of maintenance free operation. At some point the DPF will require professional service to remove the accumulated ash. The exact number of hours of operation before service is required will vary depending upon the engine's power category, duty cycle and operating conditions, engine oil ash content, and fuel quality. Adhering to John Deere's recommended oil and fuel specifications will maximize the hours of operation before professional DPF service is required.

As the engine owner, you are responsible for performing the required maintenance described in your Operator's Manual. During normal equipment operation the DPF maintenance requirements will depend on the rate at which ash accumulates in it. Generally, DPFs on engines above 175 hp / 130 kW will require servicing at about 4,500 hours. As ash levels rise in the DPF the capacity for soot storage is reduced and the back pressure of the exhaust system will rise more frequently. A diagnostic trouble code will appear indicating when the DPF needs servicing.

The removal of DPF ash must be done by removing the DPF from the machine and placing it into specialized equipment. Do not remove ash by using water or other chemicals. Removing ash by these methods may damage the material securing the DPF in its canister, resulting in the loosening of the DPF element in the canister and subjecting it to damage from vibration.



H99803 —UN—14JAN11

Failure to follow the approved ash removal methods may violate U.S. federal, state and local hazardous waste laws, along with damage to the DPF resulting in potential denial of the Diesel Exhaust Filter emissions warranty. It is strongly recommended you take the DPF to an authorized John Deere service location or other qualified service provider for servicing.

When AUTO or PARKED cleaning is enabled, the exhaust temperature may be high under no load or light load conditions at certain times during the exhaust filter cleaning cycle.

Disable exhaust filter cleaning system in conditions where it may be unsafe for elevated exhaust temperatures.

Disable the automatic exhaust filter cleaning system only when necessary.

OUO6075,0001573 -19-20JUN13-1/1

## Exhaust Filter / Diesel Particulate Filter Ash Handling and Disposal (Interim Tier 4/Stage III B)

**CAUTION: Under federal, state, and/or local laws or regulations, Diesel Particulate Filter ash may be classified as a hazardous waste. Hazardous wastes must be disposed of in accordance with all applicable federal, state and local laws or regulations governing hazardous waste disposal.**

**Only a qualified service provider should remove ash from the DPF. Personal protective equipment and clothing, maintained in a sanitary and reliable condition, should be used when handling and cleaning a DPF. See your John Deere dealer or qualified service provider for assistance.**

OUO6075,0000B0F -19-14JAN11-1/1

## Exhaust Filter Disposal (Interim Tier 4/Stage III B)

**CAUTION: Proper management of an Exhaust Filter that has reached the end of its useful life is required, since the ash or catalyst material in the device may be classified as hazardous waste under federal, state, and/or local laws or regulations. Used Exhaust Filters, which include the Diesel Particulate Filter, may be exchanged at any John Deere dealer or qualified service provider.**

OUO6075,0000B10 -19-14JAN11-1/1

## Roadway Transport with Header Attached

Observe national and local laws regarding operation of the combine on public roadways.

This combine has been approved for roadway transport in Germany with a Geringhoff 8 row folding header and a Kemper 8 row folding header. Roadway transport in Germany with other heads must be approved by your local TUEV to achieve a road permission.

OUO6075,0000A06 -19-15MAR07-1/1

## Driving Machine on Roads

1. Press folding functions shortcut switch (A) for direct navigation to the folding functions screen.

**IMPORTANT: Verify that grain tank is unloaded before transporting machine on road.**

2. Touch or press and hold confirm switch when folding unloading auger icon (B) is highlighted.

*NOTE: Folding unloading auger is an automatic feature when icon is selected. Unloading auger begins to fold automatically when icon is selected.*

**CAUTION: Avoid power line entanglement. Grain tank covers must be closed before transporting machine.**

3. **Grain Tank Covers (If Equipped):**

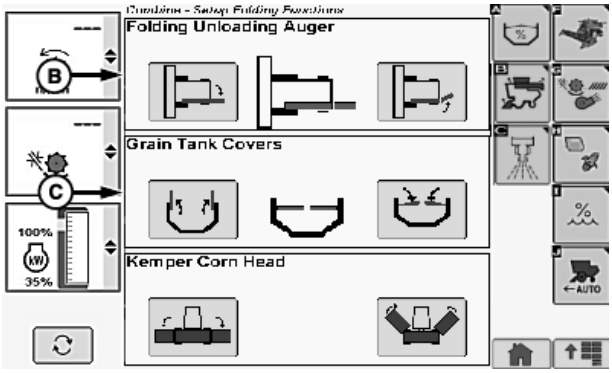
   Touch or press and hold confirm switch when folding grain tank covers icon (C) is highlighted.

*NOTE: Covers automatically fold when desired icon is touched or confirm switch is pressed.*

**A—Folding Functions Shortcut Switch**
**B—Folding Unloading Auger**
**C—Folding Grain Tank Covers**




H94727 —UN—27JAN10



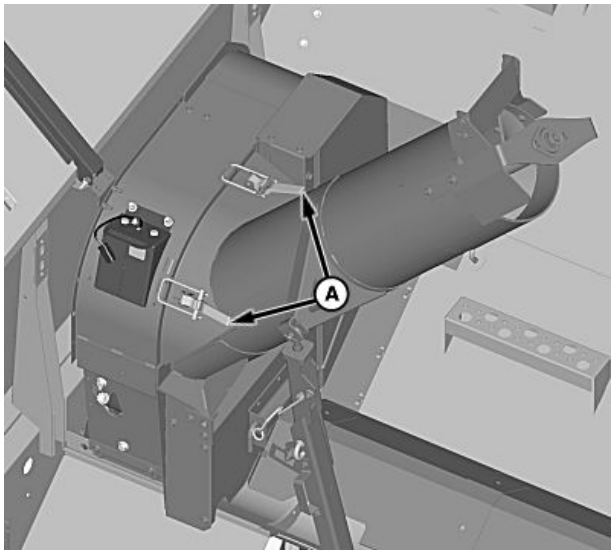

H96010 —UN—05OCT10

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OUO6075,00010A9 -19-13APR12-1/12

4. **Manual Fold Clean Grain Auger (If Equipped):** Release clamps (A) and lower auger.

**A—Clamps**




H102235 —UN—15JUN11

OUO6075,00010A9 -19-13APR12-2/12

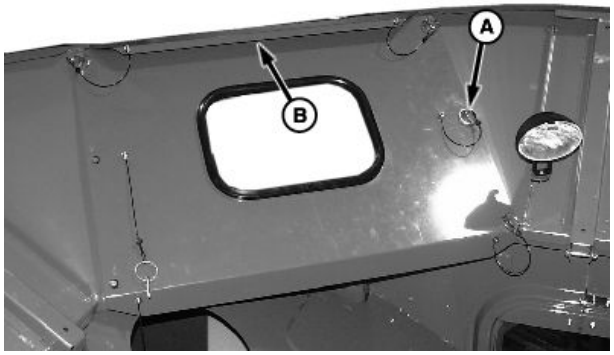
5. **116 L/sec. (3.3 bu./sec.) Unload Rate Grain Tank Extensions (If Equipped):** Remove quick-lock pins (A) from grain tank corner extensions (B). Fold grain tank extensions in the following order:

   a. Fold front grain tank extension and rear grain tank extension.

   b. Fold left-hand grain tank extension and right-hand grain tank extension.

**A—Quick-Lock Pins**

**B—Grain Tank Corner Extensions**




H75331 —UN—26FEB03

*Front Grain Tank Extension Shown*

OUO6075,00010A9 -19-13APR12-3/12

6. **134 L/sec. (3.8 bu./sec.) Unload Rate Grain Tank Extensions (If Equipped):** Remove quick-lock pins from grain tank corner extensions (A). Fold grain tank extensions in the following order:

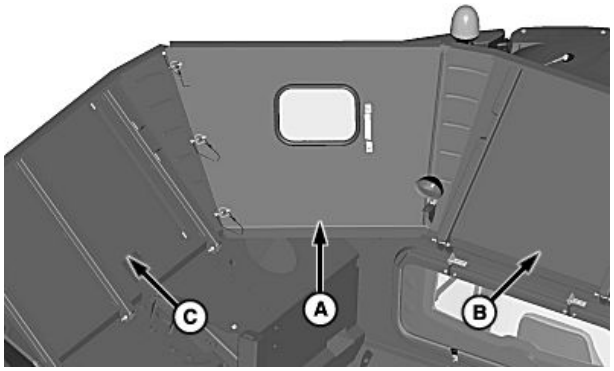
   a. Fold front grain tank extension (B) and rear grain tank extension.

   b. Fold left-hand grain tank extension (C) and right-hand grain tank extension.

**A—Grain Tank Corner Extensions**

**B—Front Grain Tank Extension**

**C—Left-Hand Grain Tank Extension**




H100448 —UN—25FEB11

*Front Grain Tank Extension*

**Continued on next page**

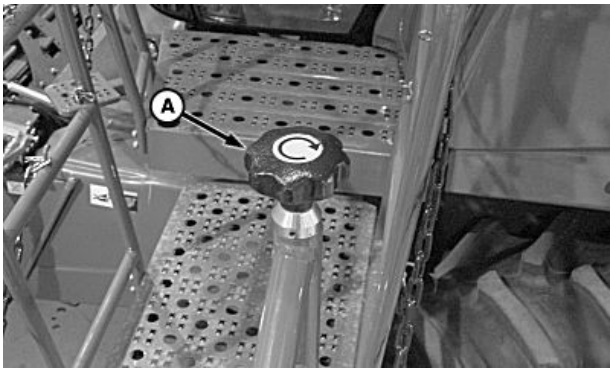
OUO6075,00010A9 -19-13APR12-4/12

**CAUTION: Swing ladder to the full forward position to reduce machine width and to orient marker/hazard light toward oncoming motorists.**

**IMPORTANT: Travel at a reasonable speed for road or field conditions. Never transport on the road with grain in the tank.**

**Follow local regulations for equipment size, lighting, and marking before driving on public roadways.**

7. Use handle (A) to unlock ladder and swing fully forward.
8. Fold radio antenna down and retain with hook (if equipped). If hook is not available, retain antenna to cab roof with tape.




H96869 —UN—11JUN10

**A—Handle**

OUO6075,00010A9 -19-13APR12-5/12

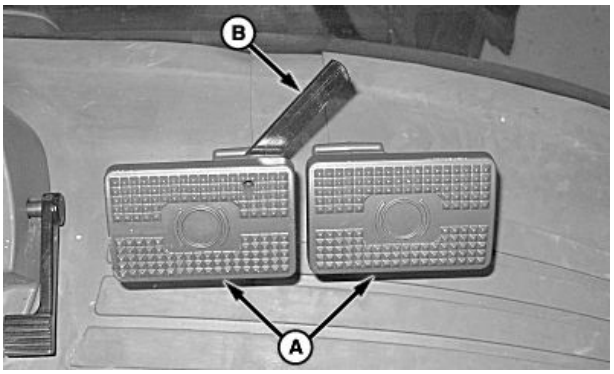
9. Lock brake pedals together with lock (B) when driving on roads. Leave pedals (A) unlocked for field operation.

**CAUTION: Use seat belt whenever operating machine or riding as an observer.**

10. Fasten seat belt.

**CAUTION: Sound horn before starting engine to clear people away from machine.**

11. Sound horn and start engine. Use cold weather starting aid if needed.




H96681 —UN—01JUN10

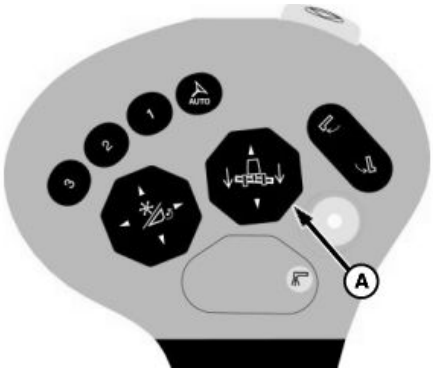
**A—Pedals** **B—Lock**

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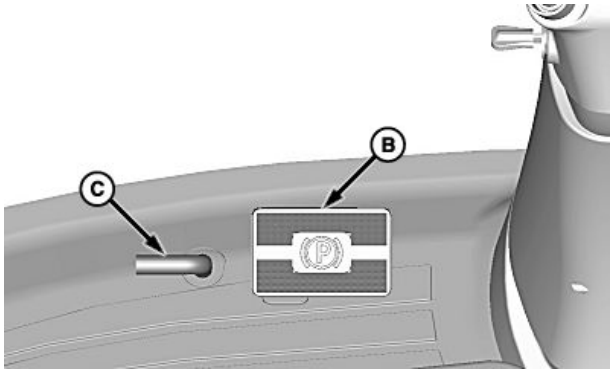
OUO6075,00010A9 -19-13APR12-6/12

12. Raise header with header switch (A).
13. Non ProDrive Machines: Disengage parking brake (B) with pedal (C).

**A—Header Raise/Lower Switch**
**B—Parking Brake**
**C—Pedal**




H96011 —UN—01NOV10




H105174 —UN—13APR12

OUO6075,00010A9 -19-13APR12-7/12

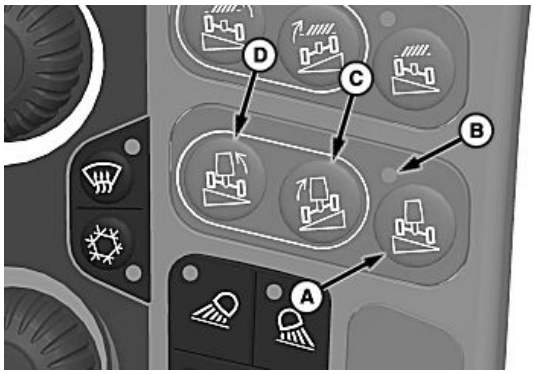
14. **HillMaster Machines:**

**CAUTION: Avoid loss of control during road transport and serious injury or death. Never transport machine on a roadway with HillMaster leveling system in automatic mode. Never attempt to manually tilt machine while transporting on a roadway.**

a. Move machine to level ground.

*NOTE: Road transport disconnect switch in field position.*

b. Press automatic leveling control switch (A) for **five seconds** or until indicator light (B) flashes.
c. Push and hold manual tilt right switch (C) to tilt machine chassis to the right.
d. Push and hold manual tilt left switch (D) to tilt machine chassis to the left.




H94961 —UN—27JAN10

**A—Automatic Leveling Control Switch**
**B—Indicator Light**
**C—Manual Tilt Right Switch**
**D—Manual Tilt Left Switch**

**Continued on next page**

OUO6075,00010A9 -19-13APR12-8/12

*NOTE: After transporting machine, press road transport disconnect switch for two seconds allowing indicator light to turn OFF and allowing desired switch functions to operate.*

15. Engage road transport disconnect switch (A).

**A—Road Transport Disconnect Switch**




H96012 —UN—13APR10

OUO6075,00010A9 -19-13APR12-9/12

**CAUTION: When transporting on a road or highway, marker/hazard lights and taillights on both sides provide a warning to operators of vehicles approaching from the front and rear. These lights must be turned ON when driving machine on public roadways. Swing cab ladder fully forward to orient marker/hazard lights towards oncoming motorists. Do not operate marker/hazard lights if prohibited by law.**

16. Turn beacon/hazard light switch (A) ON for both daytime and nighttime road travel. Warning lights automatically operate when hazard lights are ON.

**A—Beacon/Hazard Light Switch**




H96013 —UN—13APR10

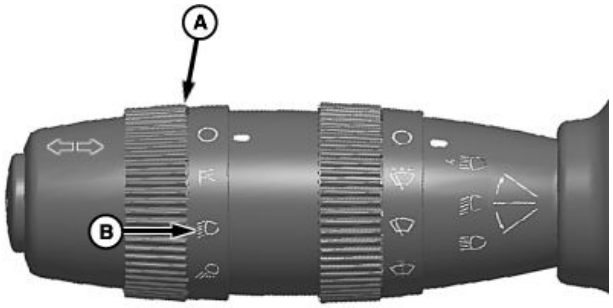
OUO6075,00010A9 -19-13APR12-10/12

17. Use selection switch (A) to turn ON road lights (B) for nighttime travel.

*NOTE: Turn signal indicators on cornerpost display illuminate to indicate a turn.*

18. Use turn signals as needed. They are not self canceling.

**A—Selection Switch** **B—Road Lights Switch**




H96014 —UN—22JUN11

**Continued on next page**

OUO6075,00010A9 -19-13APR12-11/12

19. Press engine speed switch (A) for maximum engine speed.

*NOTE: For field operation, select a gear according to working conditions.*

20. Non ProDrive Machines: Engage 3rd gear for road travel.

**CAUTION: If transporting machine with header attached, travel at a reasonable speed to ensure adequate braking performance and control of machine.**

21. Slowly move multi-function lever forward or rearward. When coming to the top of a hill, pull back on multi-function lever before starting down the other side.




H96015 —UN—13APR10

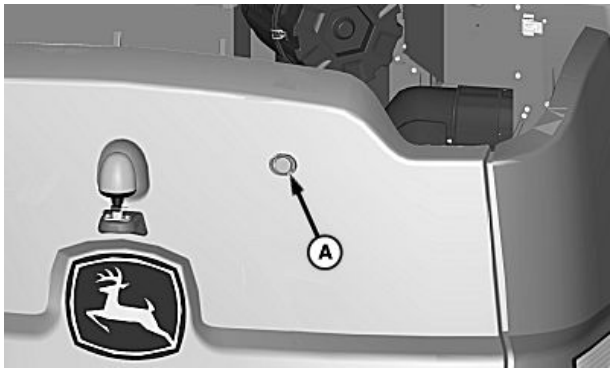
**A—Engine Speed Switch**

OUO6075,00010A9 -19-13APR12-12/12

## Back-Up Alarm

**IMPORTANT: During cold weather start-up (below 0°C (32°F) back-up alarm may not activate on reverse travel until hydraulic oil is sufficiently warmed. After start-up allow engine to run at low idle for five minutes in order to warm oil.**

If multi-function lever is moved rearward while engine is running, back-up alarm (A) sends an acoustical signal to warn others around the machine that the operator is backing up.




H97997 —UN—15SEP10

**A—Back-Up Alarm**

OUO6075,000082F -19-13DEC10-1/1

## Transporting Machine on a Trailer

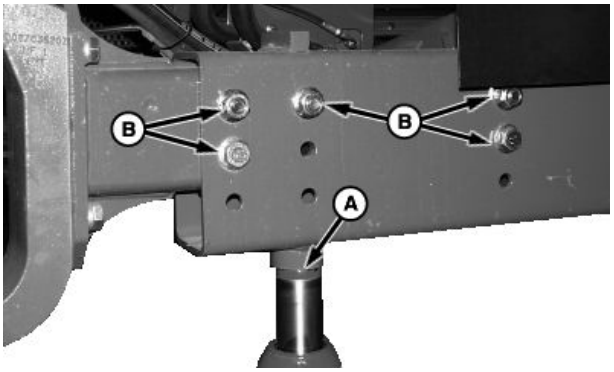
1. Refer to Driving Machine on Roads earlier in this section for additional information that MUST be done before transporting machine on a trailer.
2. Remove header and outside dual wheels (if equipped).

*NOTE: After transporting machine, adjust rear axle spacing to previous width.*

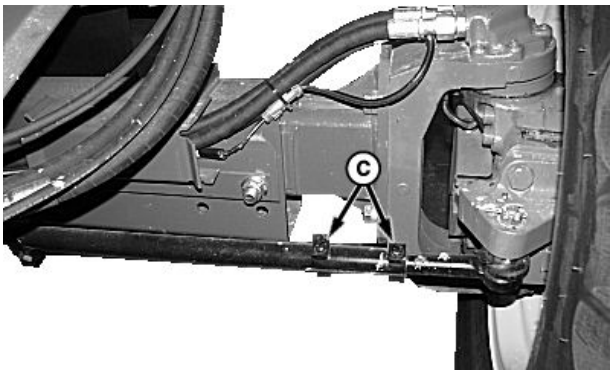
3. Locate jack pocket (A) on rear axle and raise machine.
4. Remove cap screws (B) from rear axle.
5. Remove cap screws (C) from tie rod.
6. Adjust rear axle to narrowest position. Repeat steps as needed on opposite side.
7. Install previously removed hardware and tighten to specification.

**Specification**

| | |
|---|---|
| Axle Cap Screws—Torque | 620 N·m (460 lb.-ft.) |
| Tie Rod Cap Screws—Torque | 130 N·m (95 lb.-ft.) |




H70555 —UN—02JAN02




H70554 —UN—02JAN02

**A—Jack Pocket**
**B—Cap Screws (5 used)**
**C—Cap Screws**

OUO6075,0001387 -19-20JUN13-1/15

8. **HillMaster™ Machines:**

**⚠ CAUTION: Never drive machine on a trailer with HillMaster™ leveling system in automatic mode. Never attempt to manually tilt machine while on trailer.**

a. Move machine to level ground.

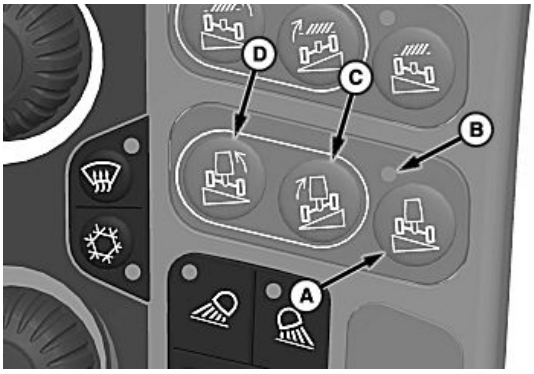
*NOTE: Road transport disconnect switch in field position.*

b. Press automatic leveling control switch (A) for **five seconds** or until indicator light (B) flashes.

c. Push and hold manual tilt right switch (C) to tilt machine chassis to the right.

d. Push and hold manual tilt left switch (D) to tilt machine chassis to the left.

9. Drive machine on trailer and move multi-function lever to neutral position.
10. **Dual Ladder Landing Configuration:** Lower feeder house onto trailer to allow ladder landing to be swung to transport position.




H94961 —UN—27JAN10

**A—Automatic Leveling Control Switch**
**B—Indicator Light**
**C—Manual Tilt Right Switch**
**D—Manual Tilt Left Switch**

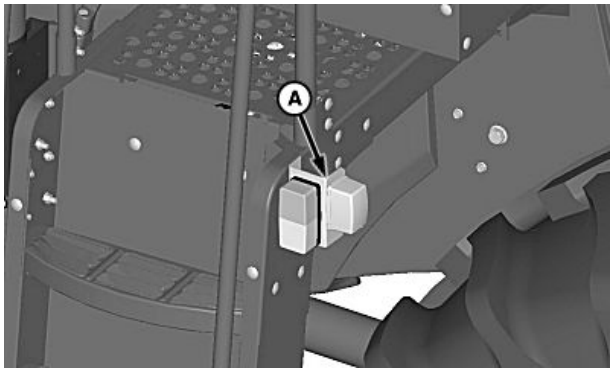
11. Shut OFF engine, set park brake and remove key.
12. Fold radio antenna down and retain with hook (if equipped). If hook is not available, retain antenna to cab roof with tape.

**Continued on next page**

OUO6075,0001387 -19-20JUN13-2/15

13. **Single Tire Configuration:** Disconnect wiring harness and remove light bracket (A).

**A—Light Bracket**




H102529 —UN—28JUN11

OUO6075,0001387 -19-20JUN13-3/15

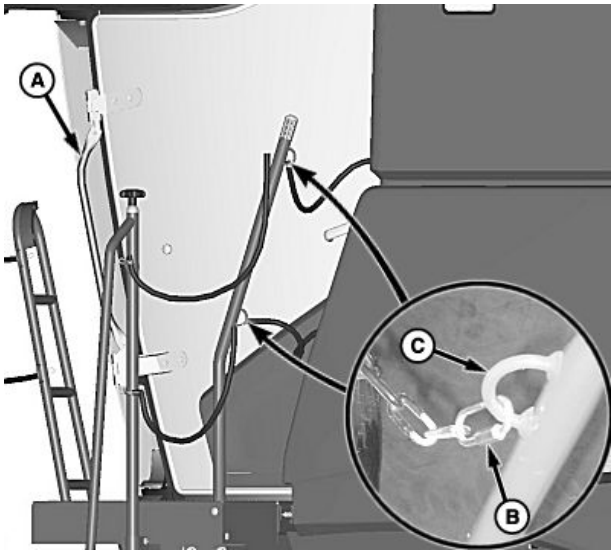
14. **Single Tire Configuration:** Remove and retain cab handrail (A).

**IMPORTANT: Possible injury to you or others can occur from falling. Be careful when disconnecting safety chains and dismounting ladder landing.**

*NOTE: Assemble chain back onto existing loops on ladder handrail and loops on grain tank. This shortens the chain and prevents it from damaging the composite panels.*

15. **Single Tire Configuration:** Disconnect and retain closure chain link (B) from handrail loops (C).

**A—Handrail**
**B—Chain Link**
**C—Handrail Loops**



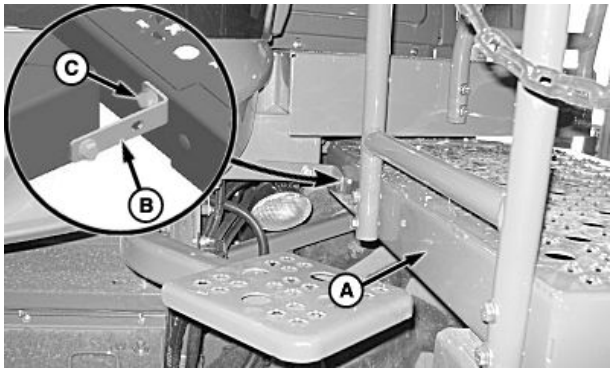

H102527 —UN—28JUN11

OUO6075,0001387 -19-20JUN13-4/15

*NOTE: Cab ladder must be swung past inner most detent position to allow ladder landing to contact shipping bracket.*

16. **Single Tire Configuration:** Swing ladder landing (A) to transport position until it contacts shipping bracket (B) and install cap screw (C).

**A—Ladder Landing**
**B—Shipping Bracket**
**C—Cap Screw**



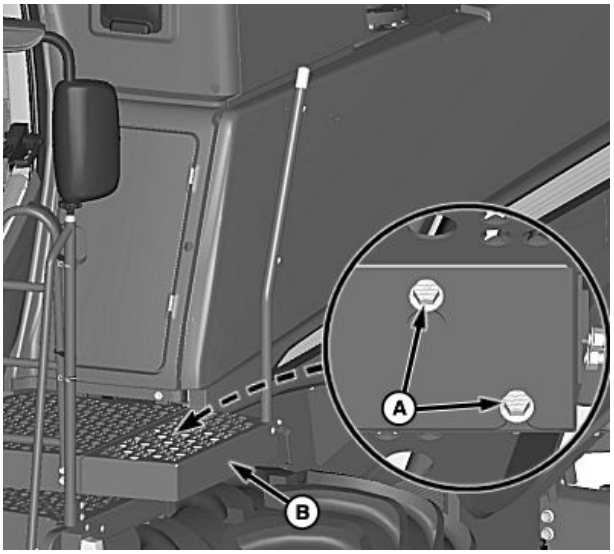

H102532 —UN—28JUN11

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OUO6075,0001387 -19-20JUN13-5/15

17. **Single Tire Configuration:** Loosen cap screws (A) and remove ladder landing (B).

**A—Cap Screws (5 Used)** **B—Ladder Landing**




H102531 —UN—28JUN11

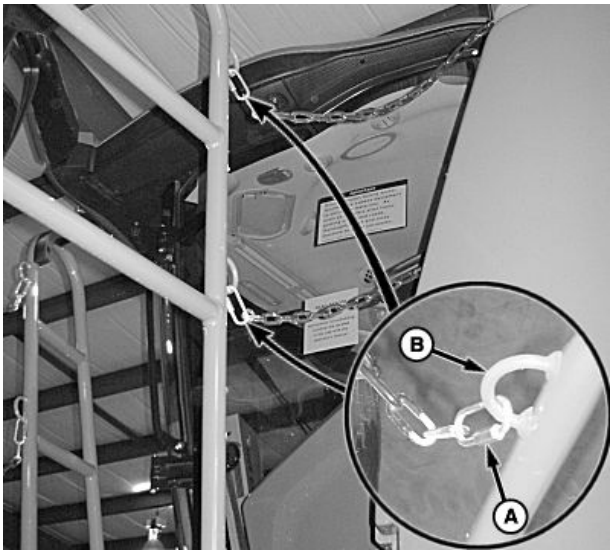
OUO6075,0001387 -19-20JUN13-6/15

**IMPORTANT: Possible injury to you or others can occur from falling. Be careful when disconnecting safety chains and dismounting ladder landing.**

*NOTE: Assemble chain back onto existing loops on grain tank. This shortens the chain and prevents it from damaging the composite panels.*

18. **Dual Tire Configuration:** Disconnect and retain closure chain link (A) from handrail loop (B) on both sides of handrail.

**A—Chain Link** **B—Handrail Loop**



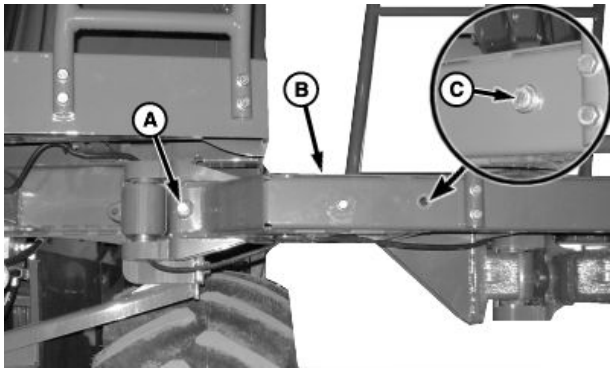

H102501 —UN—27JUN11

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OUO6075,0001387 -19-20JUN13-7/15

19. **Dual Tire Configuration:** Remove cap screw (A) and swing ladder landing (B) to transport position.
20. **Dual Tire Configuration:** Install previously removed cap screw (C) in storage position as shown.

**A—Cap Screw**
**B—Ladder Landing**
**C—Cap Screw**




H102502 —UN—27JUN11

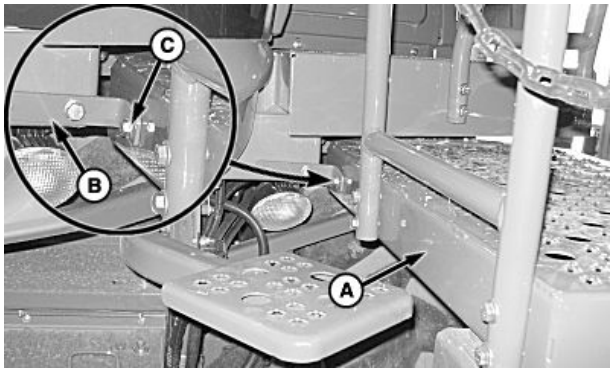
OUO6075,0001387 -19-20JUN13-8/15

**IMPORTANT: Feeder house MUST be lowered onto trailer to avoid contact between ladder landing and feeder house drive shaft when ladder is swung forward.**

*NOTE: Cab ladder must be swung past inner most detent position to allow ladder landing to contact shipping bracket.*

21. **Dual Tire Configuration:** Swing ladder landing (A) to transport position until it contacts shipping bracket (B) and install cap screw (C).

**A—Ladder Landing**
**B—Shipping Bracket**
**C—Cap Screw**

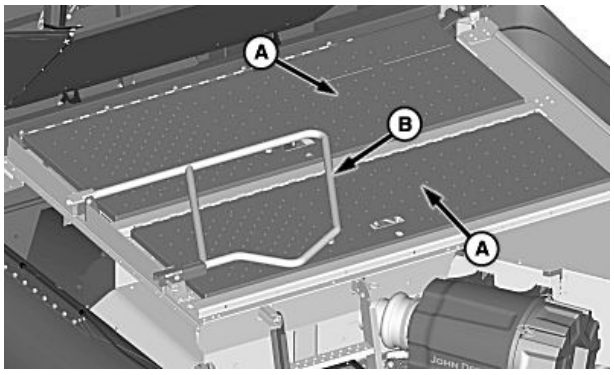



H102503 —UN—28JUN11

OUO6075,0001387 -19-20JUN13-9/15

22. Lower engine access covers (A) and handrail (B) to lock covers into place.
23. **Tier 2/Stage II Engines:** Tape muffler cap closed to prevent damage to turbocharger.

**A—Engine Access Covers**
**B—Handrail**

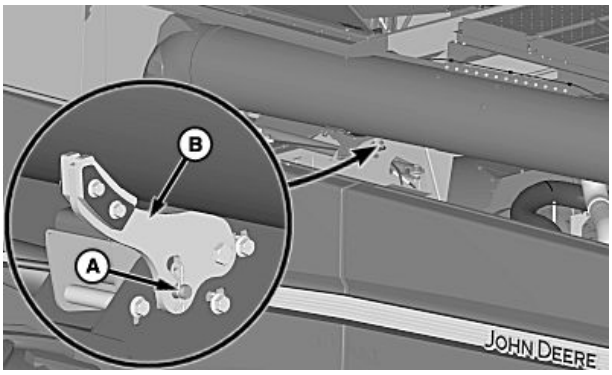



H102388 —UN—22JUN11

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OUO6075,0001387 -19-20JUN13-10/15






TS249 —UN—23AUG88

H106366 —UN—28JAN13

**A—Spring Pin and Pin** **B—Unloading Auger Lock Arm**

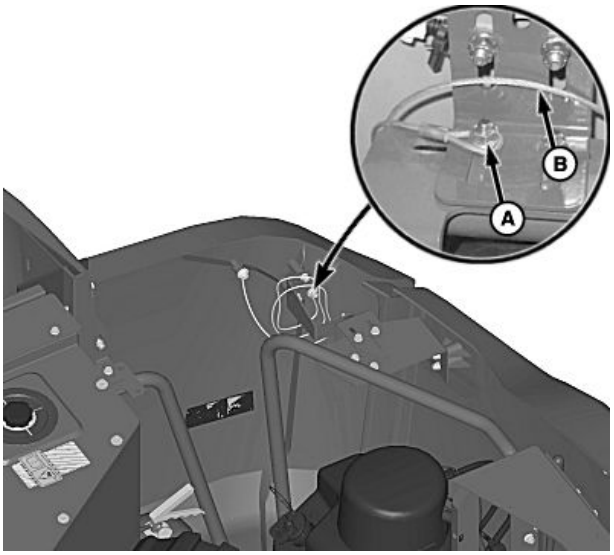
**⚠ CAUTION: Possible injury or death to you or others can occur from falling. Use a ladder or equivalent with an appropriate load rating to access location when installing unloading auger retaining hardware. Do not attempt to access location from engine platform.**

24. **Unloading Auger Lock Arm:**
    a. Remove and retain spring pin and pin (A).
    b. Raise unloading auger lock arm (B) until holes align.
    c. Install previously removed pin and spring pin.

OUO6075,0001387 -19-20JUN13-11/15

25. Loosen hardware (A) and remove cable (B) from storage position.

**A—Hardware** **B—Cable**




H107241 —UN—18MAR13

**Continued on next page**

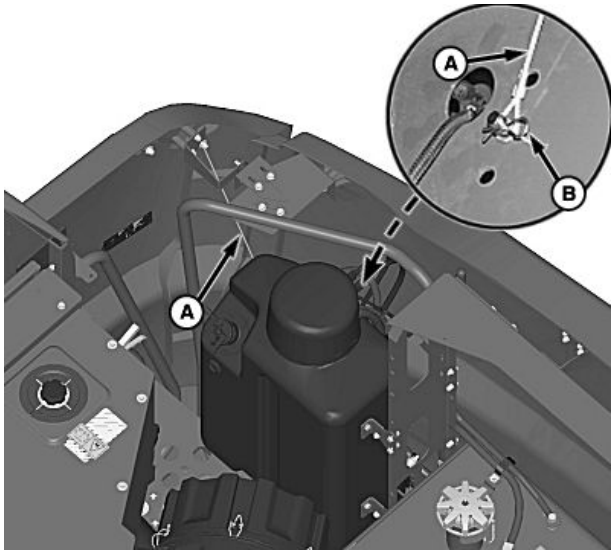
OUO6075,0001387 -19-20JUN13-12/15

*NOTE: Verify that cable is installed on inside portion of handrail.*

*Adjust pin to different positions if cable does not reach.*

26. Install cable (A) over pin and retain with spring pin (B).

**A—Cable** **B—Spring Pin**

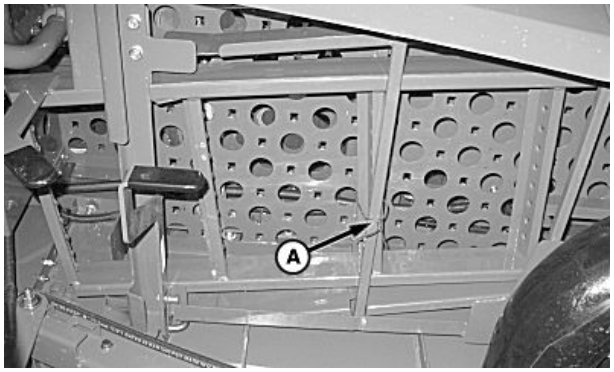



H107242 —UN—18MAR13

OUO6075,0001387 -19-20JUN13-13/15

27. Wire down ladder extension and platform (A).

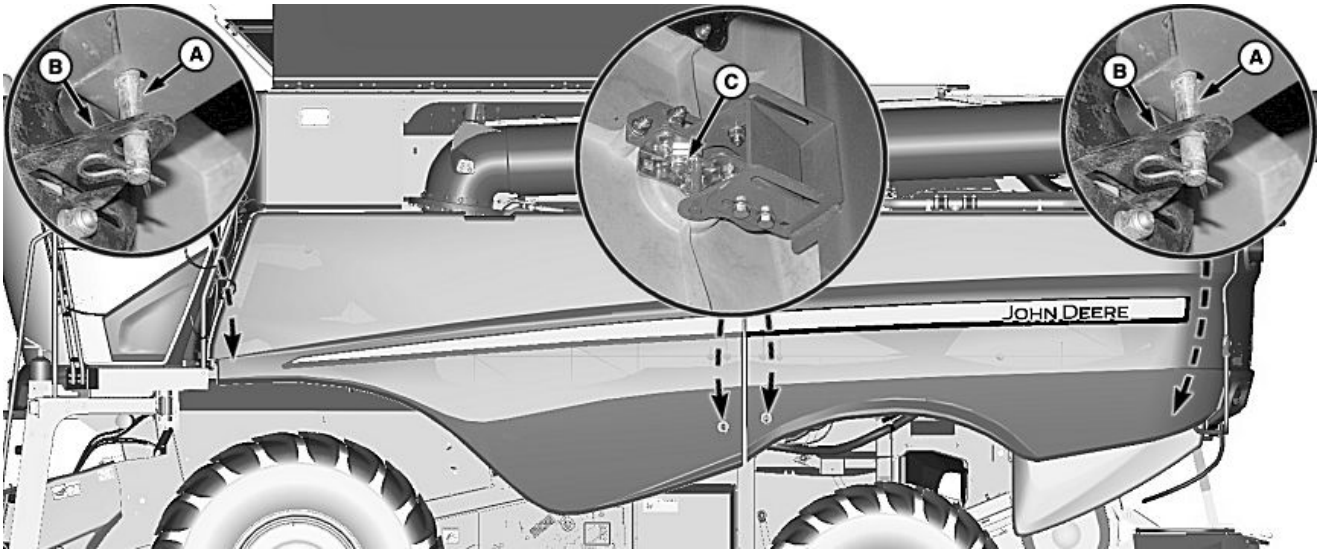
**A—Ladder Extension and Platform**




H97171 —UN—29JUN10

**Continued on next page**

OUO6075,0001387 -19-20JUN13-14/15




H106223 —UN—19FEB13

**A—Pins**
**B—Locking Plates**
**C—Latches**

28. Install pins (A) through locking plates (B) and retain with spring pins at front and rear corners of left-hand gull wing doors.
29. Wire down gull wing doors at latches (C). Repeat on opposite side of machine.

**IMPORTANT: Fasten machine to trailer with chains.**

30. Fasten machine to trailer with chains (see Machine Tie Down Location Decal located on cab ladder for tie down information).

OUO6075,0001387 -19-20JUN13-15/15

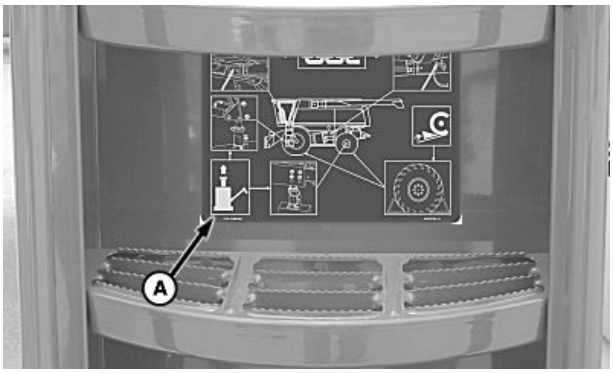
## Machine Tie Down Locations Decal

**CAUTION: Always empty grain tank before raising machine.**

*NOTE: Machine tie down locations are on both sides of machine at front and rear.*

Machine tie down locations decal (A) is located on cab ladder. Decal shows correct locations for fastening machine with chains.

**A—Machine Tie Down Locations Decal**




H106687 —UN—24JAN13

OUO6075,0001393 -19-24JAN13-1/1

## Transport Information

**CAUTION: Avoid electrical line entanglement. Grain tank cover must be closed and radio antenna turned to horizontal position before transporting machine.**

**Check local governmental regulations regarding driving or towing equipment on public roads. Use auxiliary lights and devices available from your John Deere dealer to warn other road users.**

Machine can be transported on a flat bed truck or by towing.

When towing, refer to Towing Machine in this section.

OUO6075,00000D6 -19-28APR08-1/1

## Towing Machine (Mechanical Shift Transmission Machines)

**CAUTION: Do not tow machine with wire rope. If rope breaks, the whipping action could cause bodily injury.**

**Avoid electrical line entanglement. Grain extensions must be lowered and radio antenna lowered before transporting.**

**Check local governmental regulations regarding driving or towing equipment on public roads. Use auxiliary lights and devices available from your John Deere dealer to warn other roadway users.**

Do not tow machine except in an emergency for a short distance at 8 km/h (5 mph). To tow machine, proceed as follows:

- Empty grain tank and remove header.
- Swing unloading auger back. Fold grain tank extensions.
- Swing ladder forward and fold down radio antenna.
- Disengage parking brake.

**CAUTION: Do not remove couplers. When couplers are removed, brakes are disabled.**

- Place gearshift lever and multi-function lever in neutral position.
- Tow machine in a forward direction by attaching a chain around main axle. Be certain chain does not damage any hydraulic lines. Have driver in operator's seat to steer and brake the machine.
- Turn warning lights ON, unless prohibited by law.
- Travel at a safe and reasonable speed, not to exceed 8 km/h (5 mph).

**CAUTION: Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use hand signals or turn signal lights.**

**Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible and in good working order. Replace or repair lighting and marking that are damaged or lost.**

OUO6075,00008DB -19-13DEC10-1/1

## Towing Machine (Push Button Shift and ProDrive Transmission Machines)

**CAUTION: Do not tow machine with wire rope. If rope breaks, the whipping action could cause bodily injury.**

**Do not remove couplers. When couplers are removed, brakes are disabled.**

**Avoid electrical line entanglement. Grain extensions or grain tank covers must be lowered and radio antenna lowered before transporting.**

**Check local governmental regulations regarding driving or towing equipment on public roads. Use auxiliary lights and devices available from your John Deere dealer to warn other roadway users.**

**Avoid crushing injuries from runaway machine. If machine is on a slope, do not disengage parking brake until wheels are blocked.**

**Releasing parking brake lock must be carried out ONLY for towing purposes. NEVER operate machine with parking brake mechanically released. ALWAYS set parking brake lock back to its initial status when towing is no longer required.**

**Machine can be towed for emergency situations up to 10 minutes at maximum speed of 10 km/h (6.2 mph).**

*NOTE: Engine must be running to tow machine. If engine is inoperable, see your John Deere dealer for further information.*

To tow machine, proceed as follows:

- Start engine.
- Empty grain tank and remove header.
- Swing unloading auger back.
- Fold grain tank extensions or grain tank covers.
- Swing ladder forward and fold down radio antenna.
- Tow machine in a forward direction by attaching a chain around main axle. Be certain chain does not damage any hydraulic lines. Have driver in operator's seat to steer machine.
- Turn warning lights ON, unless prohibited by law.

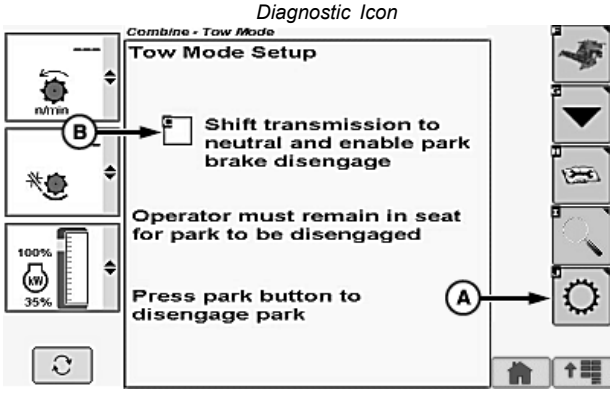
**CAUTION: Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use hand signals or turn signal lights.**

**Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible and in good working order. Replace or repair lighting and marking that are damaged or lost.**

H94478 —UN—31MAR10



*Diagnostic Icon*




H94941 —UN—05OCT10

Touch or press confirm switch when diagnostic icon is highlighted.

Touch or press confirm switch when tow mode setup icon (A) is highlighted.

Touch or press confirm switch when box is highlighted.

- Shift transmission to neutral and enable park brake disengaged Box (B) - shifts machine to neutral position and enables park brake disengage.

*NOTE: Operator must remain in seat for park to be disengaged.*

Press park brake switch on armrest to release brakes before towing machine.

OUO6075,00008DA -19-29MAR11-1/1

## Semi-Automatic Trailer Hitch— Attaching (Standard)

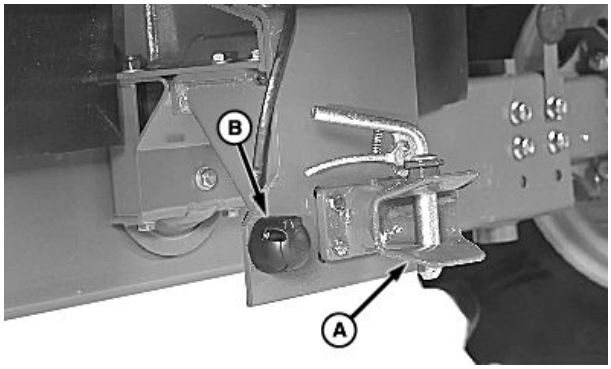
**CAUTION: Shut OFF engine, set parking brake and remove key before hooking up trailer.**

Fully raise chopper.

Attach trailer to hitch (A) and secure with trailer hitch pin.

Connect trailer electrical harness to electrical connector (B).

**A—Hitch** **B—Electrical Connector**




H78504 —UN—11SEP03

OUO6075,0000AA3 -19-17NOV10-1/1

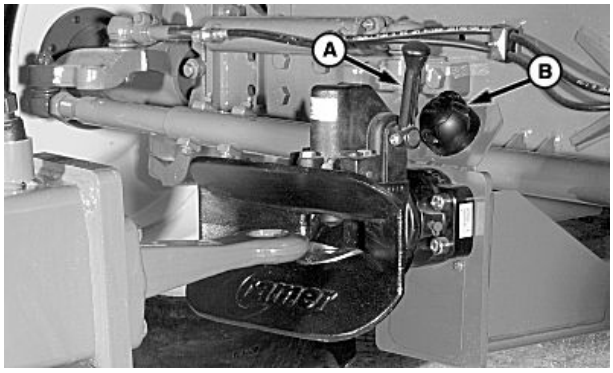
## Automatic Rear Trailer Hitch—Attaching (Optional)

**CAUTION: Shut OFF engine, set parking brake and remove key before hooking up trailer.**

Fully raise chopper.

Raise handle (A) to open lock pin and attach trailer to machine. When trailer hitch aligns with lock pin, handle will lower and automatically lock trailer hitch in place.

Connect trailer electrical harness to electrical connector (B).

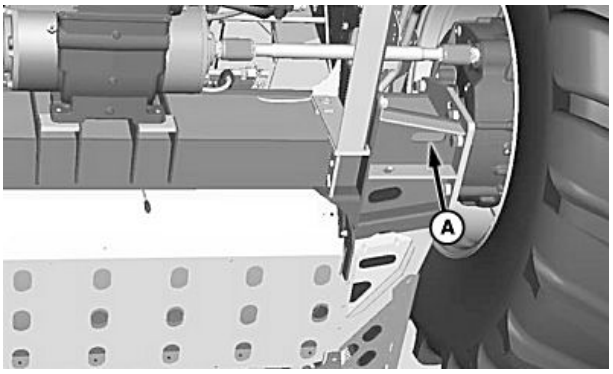



H81658 —UN—13SEP04

**A—Handle** **B—Electrical Connector**

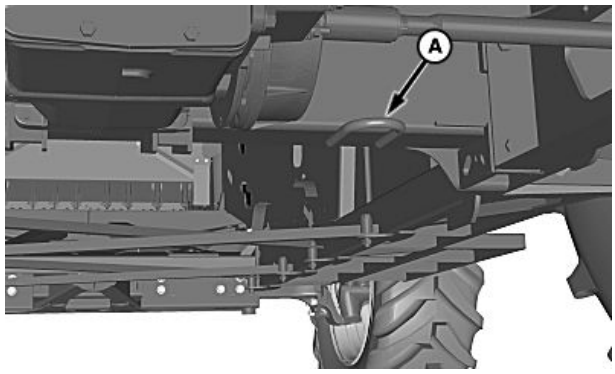
OUO6075,0000AA4 -19-17NOV10-1/1

## Front Tow Hook




H102206 —UN—14JUN11

*Front Tow Hook (Level Land Machine)*




H84249 —UN—17AUG05

*Front Tow Hook (HillMaster Machine)*

**A—Hook**

Tow or pull machine out of mud in a forward direction if necessary by attaching a chain to hook (A) on the front axle. Be certain chain will not damage any hydraulic lines.

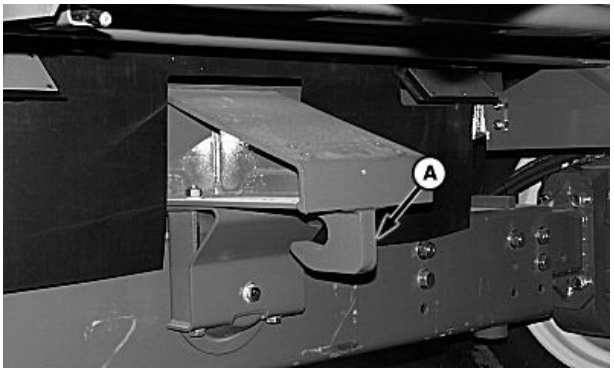
OUO6075,0000CA1 -19-20JUN11-1/1

## Rear Tow Hook

**CAUTION: Always use a suitable chain. Do not exceed the breaking strength. Do not mix chain with tow straps or ropes. Energy stored in the towing device could cause serious bodily injury if it should break.**

Secure chain to hook (A) to pull out machine. Do not use this hook for pulling a trailer.

**A—Hook**




H70303 —UN—09NOV01

OUO6075,0001064 -19-27FEB12-1/1

# Harvesting Hints

## Harvesting Tips

Adjust machine to crop being harvested and to field conditions.

Select a ground speed that does not overload machine. Engine must be at full rpm to keep separator at full speed. Select a ground speed for slower travel, but do not slow engine speed.

If concave is set too close for harvested crop, straw will be excessively ground up requiring more horsepower to thresh the crop.

If concave is set too wide for harvested crop, it will not be completely threshed.

After concave is adjusted properly, adjust separator speed to achieve maximum threshing with the least amount of crop damage. If crop damage does occur, do not widen concave clearance. Instead reduce feed accelerator speed. Concave spacing in these crops has very little effect on seed damage.

Crops such as edible beans and peas are easily cracked and can require the use of a slower feed accelerator drive. When harvesting edible beans and peas keep machine full to provide enough material to cushion the crop against cracking.

For potential improvements in straw quality consider that the following can help improve straw quality depending on conditions:

- Slowing feeder house chain speed
- Slowing feed accelerator speed
- Slowing rotor speed
- Opening concave
- Reducing threshing elements
- Installing round bar concaves

For improved performance in sidehill conditions consider, raising auger bed dividers, installing tall chaffer dividers available from your John Deere dealer, removing or clipping the removable plastic fingers located in rear corners of chaffer element, and/or improve chaff and grain distribution by installing separator grate covers (if equipped). Each of these can improve chaff and grain distribution to the cleaning shoe that will help improve the machines performance in sidehill conditions.

When using a cutting platform, cut crop as high as possible without loss of low heads. Adjust reel position and speed for even feeding. Keep cutterbar in register and guards in alignment for clean cutting.

When harvesting corn, keep corn head only as low as necessary for ears. Keep it centered in the rows to prevent ear loss.

When using a belt pickup, keep windrow centered so material is fed evenly into feeder house. Grain heads must be lying in one direction. Operate machine so heads are picked up first.

When harvesting soybeans with a row-crop head, keep header as low as possible. When harvesting crops such as milo or sunflowers, operate header just low enough to cut the heads from the stalks.

Adjust chaffer openings to pass grain or seed to the lower sieve in the first two-thirds of the chaffer without admitting too much coarse material.

Use as much air as possible without blowing over clean grain and seed. Heavy crops require more air than light seed crops.

OUO6075,00000F4 -19-29APR08-1/1

## Alfalfa / Barley / Canola / Chickpeas

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

**** Refer to Footnotes Description Page later in this section for more detailed information.***

| | Alfalfa | Barley |
|---|---|---|
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | High | High |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 600 - 800 | 700 - 950 |
| Threshing Clearance | 0 - 5 | 5 - 22 |
| Concave Type (North America) ***(F)**** | Small Wire | Small Wire |
| Concave Type (Europe) ***(F)**** | Small/Small/Large | Small/Small/Large |
| Separator Grate Covers ***(D)**** | Use As Required | Use As Required |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 550 - 700 | 850 - 1100 |
| Chaffer Clearance (mm) | 10 - 20 | 13 - 18 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 1 - 4 | 6 - 9 |
| Tailings System Concave Position (If Equipped) | Grain | Grain |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |
| | **Canola** | **Chickpeas** |
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | High | Low |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 350 - 550 ***(L)**** | 400 - 600 |
| Threshing Clearance | 15 - 40 | 18 - 24 |
| Concave Type (North America) ***(F)**** | Small Wire | Round Bar/Large Wire |
| Concave Type (Europe) ***(F)**** | Small/Small/Large | Round Bar/Large Wire |
| Separator Grate Covers ***(D)**** | Use As Required | Use As Required |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 600 - 900 | 800 - 1100 |
| Chaffer Clearance (mm) | 10 - 14 | 15 - 20 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 2 - 5 | 6 - 10 |
| Tailings System Concave Position (If Equipped) | Grain | Corn |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |

OUO6075,00011AC -19-18JAN13-1/1

## Corn (Dry) / Corn (Wet) / Corn Cob Mix / Edible Beans

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

**** Refer to Footnotes Description Page later in this section for more detailed information.***

| | Corn Dry | Corn Wet |
|---|---|---|
| Feeder House Drum Position | Up | Up |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | Low ***(C)**** | Low |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 250 - 450 | 350 - 500 |
| Threshing Clearance | 20 - 35 | 20 - 35 |
| Concave Type (North America) ***(F)**** | Round Bar | Round Bar |
| Concave Type (Europe) ***(F)**** | Round Bar | Round Bar |
| Separator Grate Covers ***(D)**** | None | None |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 900 - 1300 | 1000 - 1300 |
| Chaffer Clearance (mm) | 15 - 20 (Deep Tooth)<br>17 - 22 (General Purpose) | 16 - 21 (Deep Tooth)<br>18 - 22 (General Purpose) |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 10 - 14 (Deep Tooth)<br>11 - 15 (General Purpose) | 10 - 14 (Deep Tooth)<br>11 - 15 (General Purpose) |
| Tailings System Concave Position (If Equipped) | Corn | Corn |
| Crop Diverter | Corn | Corn |
| Knife Bank Engagement | Disengaged Only | Disengaged Only |
| Chopper Speed | Low | Low |
| | **Corn Cob Mix *(H)* (M)**** | **Edible Beans** |
| Feeder House Drum Position | Up | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 22 Tooth ***(P)**** |
| Feed Accelerator Speed ***(B)* (J)**** | Low | Low ***(C)**** |
| Feed Accelerator Wear Strips (North America) | Serrated | Backswept Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Backswept Serrated |
| Threshing Speed (rpm) ***(B)* (E)**** | 450 - 650 | 300 - 500 ***(L)**** |
| Threshing Clearance | 15 - 30 | 15 - 30 |
| Concave Type (North America) ***(F)**** | Large Wire ***(K)**** | Round Bar/Large Wire |
| Concave Type (Europe) ***(F)**** | Large Wire ***(K)**** | Round Bar/Large Wire |
| Separator Grate Covers ***(D)**** | None | None |
| Separator Grate Spacers | Either | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Advanced |
| Fan Speed (rpm) | 1000 - 1300 | 800 - 1100 |
| Chaffer Clearance (mm) | 22 | 14 - 18 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | Removed | 6 - 10 |
| Tailings System Concave Position (If Equipped) | Corn | Corn |
| Crop Diverter | Corn | Grain |
| Knife Bank Engagement | Disengaged Only | Allowed |
| Chopper Speed | Low | High |

OUO6075,00011AD -19-18JAN13-1/1

## Flax / Grass Seed / Guar (Cluster Beans) / Lentils

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

**** Refer to Footnotes Description Page later in this section for more detailed information.***

| | Flax | Grass Seed |
|---|---|---|
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 32 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | High | High |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 800 - 1000 | 500 - 850 ***(N)**** |
| Threshing Clearance | 0 - 10 | 12 - 25 |
| Concave Type (North America) ***(F)**** | Small Wire | Small Wire |
| Concave Type (Europe) ***(F)**** | Small Wire | Small/Small/Large |
| Separator Grate Covers ***(D)**** | Use As Required | Use As Required |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 700 - 1050 | 350 - 600 ***(I)**** |
| Chaffer Clearance (mm) | 8 - 15 | 12 - 18 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 5 - 10 | 5 - 12 |
| Tailings System Concave Position (If Equipped) | Grain | Grain |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |
| | **Guar (Cluster Beans)** | **Lentils** |
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | Low | Low |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 500 - 700 | 350 - 500 |
| Threshing Clearance | 10 - 15 | 7 - 12 |
| Concave Type (North America) ***(F)**** | Round Bar | Round Bar/Large Wire |
| Concave Type (Europe) ***(F)**** | Round Bar | Small/Small/Large |
| Separator Grate Covers ***(D)**** | None | Use As Required |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 650 - 750 | 800 - 1000 |
| Chaffer Clearance (mm) | 10 - 15 | 12 - 18 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 6 - 10 | 3 - 10 |
| Tailings System Concave Position (If Equipped) | Corn | Corn |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |

OUO6075,00011AE -19-18JAN13-1/1

## Lupins / Millet / Mustard / Navy Beans

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

**** Refer to Footnotes Description Page later in this section for more detailed information.***

| | Lupins | Millet |
|---|---|---|
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | Low | High |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 400 - 600 | 400 - 500 |
| Threshing Clearance | 12 - 18 | 10 - 15 |
| Concave Type (North America) ***(F)**** | Round Bar/Large Wire | Small Wire |
| Concave Type (Europe) ***(F)**** | Round Bar/Large Wire | Small/Small/Large |
| Separator Grate Covers ***(D)**** | Use As Required | None |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 900 - 1100 | 600 - 750 |
| Chaffer Clearance (mm) | 15 - 20 | 10 - 12 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 4 - 8 | 4 - 6 |
| Tailings System Concave Position (If Equipped) | Corn | Grain |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |
| | **Mustard** | **Navy Beans** |
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 22 Tooth ***(P)**** |
| Feed Accelerator Speed ***(B)* (J)**** | High | Low ***(C)**** |
| Feed Accelerator Wear Strips (North America) | Serrated | Backswept Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Backswept Serrated |
| Threshing Speed (rpm) ***(B)* (E)**** | 600 - 900 | 300 - 350 ***(L)**** |
| Threshing Clearance | 10 - 20 | 15 - 30 |
| Concave Type (North America) ***(F)**** | Small Wire | Round Bar |
| Concave Type (Europe) ***(F)**** | Small/Small/Large | Round Bar |
| Separator Grate Covers ***(D)**** | Use As Required | None |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Advanced |
| Fan Speed (rpm) | 500 - 800 | 800 - 1100 |
| Chaffer Clearance (mm) | 10 - 14 | 14 - 18 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 2 - 5 | 6 - 10 |
| Tailings System Concave Position (If Equipped) | Grain | Corn |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |

OUO6075,00011AF -19-18JAN13-1/1

## Oats / Peas / Popcorn / Rape Seed (Dry)

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

**** Refer to Footnotes Description Page later in this section for more detailed information.***

| | Oats | Peas |
|---|---|---|
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | High | Low |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 600 - 900 | 300 - 400 |
| Threshing Clearance | 15 - 25 | 15 - 30 |
| Concave Type (North America) ***(F)**** | Small Wire | Round Bar/Large Wire |
| Concave Type (Europe) ***(F)**** | Small/Small/Large | Round Bar/Large Wire |
| Separator Grate Covers ***(D)**** | Use As Required | None |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Advanced |
| Fan Speed (rpm) | 750 - 900 | 850 - 1050 |
| Chaffer Clearance (mm) | 18 - 22 | 16 - 20 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 6 - 10 | 6 - 11 |
| Tailings System Concave Position (If Equipped) | Grain | Corn |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |
| | **Popcorn** | **Rape Seed (Dry)** |
| Feeder House Drum Position | Up | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | Low | Low |
| Feed Accelerator Wear Strips (North America) | Smooth | Serrated Tough Crop |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Smooth | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 210 - 310 | 400 - 700 ***(L)**** |
| Threshing Clearance | 15 - 25 | 20 - 40 |
| Concave Type (North America) ***(F)**** | Round Bar | Small Wire |
| Concave Type (Europe) ***(F)**** | Round Bar | Small/Small/Large |
| Separator Grate Covers ***(D)**** | None | Use As Required |
| Separator Grate Spacers | Installed | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 900 - 1100 | 620 - 800 |
| Chaffer Clearance (mm) | 14 - 18 | 11 - 14 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 6 - 8 | 3 - 6 |
| Tailings System Concave Position (If Equipped) | Corn | Corn |
| Crop Diverter | Corn | Grain |
| Knife Bank Engagement | Disengaged Only | Allowed |
| Chopper Speed | Low | High |

OUO6075,00011B0 -19-18JAN13-1/1

## Rape Seed (Green) / Rice / Rye / Safflower

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

**** Refer to Footnotes Description Page later in this section for more detailed information.***

| | Rape Seed (Green) | Rice |
|---|---|---|
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 32 Tooth | 32 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | Low | High |
| Feed Accelerator Wear Strips (North America) | Serrated Tough Crop | Tine |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Tine |
| Threshing Speed (rpm) ***(B)* (E)**** | 500 - 800 ***(L)**** | 700 - 1000 ***(N)**** |
| Threshing Clearance | 20 - 40 | 15 - 25 |
| Concave Type (North America) ***(F)**** | Small Wire | Large Wire |
| Concave Type (Europe) ***(F)**** | Small/Small/Large | Large Wire |
| Separator Grate Covers ***(D)**** | Use As Required | None |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 700 - 850 | 750 - 850 |
| Chaffer Clearance (mm) | 11 - 14 | 16 - 20 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 4 - 8 | 5 - 10 |
| Tailings System Concave Position (If Equipped) | Corn | Corn |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |
| | **Rye** | **Safflower** |
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | High | Low |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 700 - 900 | 300 - 400 |
| Threshing Clearance | 13 - 26 | 15 - 25 |
| Concave Type (North America) ***(F)**** | Small Wire | Small Wire |
| Concave Type (Europe) ***(F)**** | Small/Small/Large | Small/Small/Large |
| Separator Grate Covers ***(D)**** | Use As Required | Use As Required |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 750 - 950 | 550 - 750 |
| Chaffer Clearance (mm) | 16 - 18 | 14 - 16 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 6 - 10 | 4 - 7 |
| Tailings System Concave Position (If Equipped) | Grain | Corn |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |

OUO6075,00011B1 -19-18JAN13-1/1

## Sorghum / Soybeans / Sunflower / Triticale

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

**** Refer to Footnotes Description Page later in this section for more detailed information.***

| | Sorghum | Soybeans |
|---|---|---|
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | Low | Low |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 550 - 700 | 450 - 650 |
| Threshing Clearance | 10 - 25 | 15 - 30 |
| Concave Type (North America) ***(F)**** | Round Bar/Large Wire | Round Bar/Large Wire |
| Concave Type (Europe) ***(F)**** | Round Bar/Large Wire | Round Bar/Large Wire |
| Separator Grate Covers ***(D)**** | Use As Required | None |
| Separator Grate Spacers | In Storage Position | Either |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 900 - 1100 | 800 - 1050 |
| Chaffer Clearance (mm) | 14 - 17 | 14 - 18 (General Purpose)<br>13 - 17 (Deep Tooth) |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 5 - 8 | 6 - 10 (General Purpose)<br>5 - 9 (Deep Tooth) |
| Tailings System Concave Position (If Equipped) | Corn | Corn |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |
| | **Sunflower** | **Triticale** |
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | Low | High |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 200 - 400 | 850 - 1000 |
| Threshing Clearance | 25 - 40 | 18 - 24 |
| Concave Type (North America) ***(F)**** | Round Bar/Large Wire | Small Wire |
| Concave Type (Europe) ***(F)**** | Round Bar/Large Wire | Small/Small/Large |
| Separator Grate Covers ***(D)**** | Use As Required | Use As Required |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Advanced | Standard |
| Fan Speed (rpm) | 650 - 850 | 750 - 1000 |
| Chaffer Clearance (mm) | 10 - 15 | 16 - 18 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 3 - 10 | 6 - 10 |
| Tailings System Concave Position (If Equipped) | Corn | Grain |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |

OUO6075,00011B2 -19-18JAN13-1/1

## Wheat Difficult / Wheat Normal

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

**** Refer to Footnotes Description Page later in this section for more detailed information.***

| | Wheat Difficult | Wheat Normal |
|---|---|---|
| Feeder House Drum Position | Down | Down |
| Feeder House Conveyor Chain ***(A)* (B)**** | 26 Tooth | 26 Tooth |
| Feed Accelerator Speed ***(B)* (J)**** | High | High |
| Feed Accelerator Wear Strips (North America) | Serrated | Serrated |
| Feed Accelerator Wear Strips (Europe) ***(G)**** | Serrated Tough Crop | Serrated Tough Crop |
| Threshing Speed (rpm) ***(B)* (E)**** | 800 - 1000 | 750 - 950 |
| Threshing Clearance | 3 - 15 | 8 - 16 |
| Concave Type (North America) ***(F)**** | Small Wire | Small Wire |
| Concave Type (Europe) ***(F)**** | Small/Small/Large | Small/Small/Large |
| Separator Grate Covers ***(D)**** | Use As Required | Use As Required |
| Separator Grate Spacers | In Storage Position | In Storage Position |
| Top Cover Transport Vanes ***(O)**** (If Equipped) | Standard | Standard |
| Fan Speed (rpm) | 900 - 1250 | 900 - 1250 |
| Chaffer Clearance (mm) | 13 - 18 | 13 - 18 |
| Dual Zone Adjust Rear Chaffer Clearance (mm) | 5 Level<br>10 Sidehill | 5 Level<br>10 Sidehill |
| Sieve Clearance (mm) | 3 - 8 | 3 - 8 |
| Tailings System Concave Position (If Equipped) | Grain | Grain |
| Crop Diverter | Grain | Grain |
| Knife Bank Engagement | Allowed | Allowed |
| Chopper Speed | High | High |

OUO6075,00011B3 -19-18JAN13-1/1

## Footnotes Description Page

***(A)**** *For poor feeding straw crops due to high volume, green, or windrowed conditions, the 32-tooth drive sprocket is recommended.*

***(B)**** *For improved straw quality in dry crops and grain quality, use lower speed. For dry, brittle sunflowers a 15-tooth drive sprocket can be used.*

***(C)**** *For improved grain quality, use slow down kit to 320 rpm.*

***(D)**** *In shoe overloading conditions in dry crops, with small wire concaves, initially install two rows on right side and three rows on left side of the separator grates. With large wire concaves, initially install three rows on right side and two rows on left side of separator grates. Adjust number and pattern as required by condition.*

***(E)**** *15 elements is the standard configuration. In most conditions 15 elements will require less power leading to higher capacity, less shoe load, and less straw damage. An additional 9 element locations (Dense Pack) are available on tough crop rotors which can be used in tough material handling conditions.*

***(F)**** *For improvement in threshing, grain tank sample, and chaff load distribution in small grain, first install concave covers in front concave. Additional covers can be added to other concaves as needed.*

***(G)**** *Recommendations other than Serrated Tough Crop will require conversion of Feed Beater.*

***(H)**** *Tailings sump cover recommended.*

***(I)**** *Cleaning fan slow down kit may be required.*

***(J)**** *For increased material handling use High speed.*

***(K)**** *Wires may be removed for increased cob capture.*

***(L)**** *Discharge paddles can be installed for improved material handling in rotor if using TriStream™ Rotor.*

***(M)**** *Utilize Corn Cob Mix separator grates.*

***(N)**** *In extremely tough material handling conditions, threshing tines may be installed in place of threshing elements (threshing performance may be reduced).*

***(O)**** *Advanced setting may be used for improved straw quality and/or material handling. Note: Separator loss may increase when advanced.*

***(P)**** *Available through service parts.*

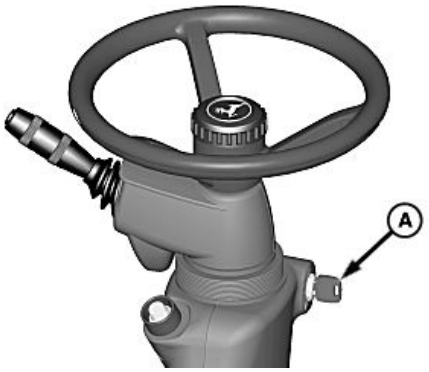
OUO6075,0001365 -19-13DEC12-1/1

## Power Shutdown Procedure

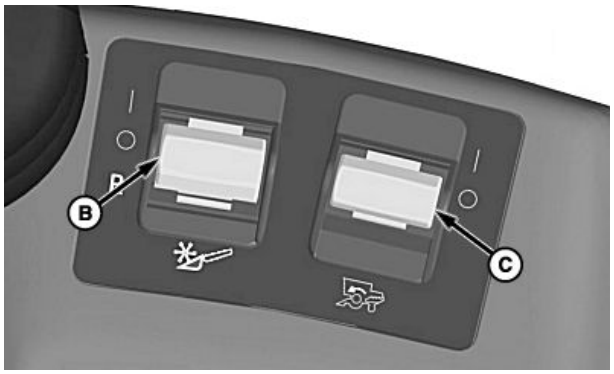
*NOTE: A power shutdown is used to determine the machines performance in the threshing and separating areas by taking a "snap-shot" of the material in the separator. This is valuable in determining where the losses behind the machine are generated and what adjustments can be made to correct the condition.*

*Verify that crop condition and material intake is similar for each shutdown.*

1. Locate engine speed indicator on cornerpost display and threshing speed readout on armrest display.
2. Lock brake pedals together.
3. Operate machine at optimized throughput levels in desired crop.
4. Move steering wheel forward for free motion (both hands needed).
5. Press low idle engine speed switch on armrest.
6. Depress brake pedals.
   a. **Non-ProDrive™ machines:** Fully depress brake pedals (quickly pulls engine speed down by loading propulsion system).
   b. **ProDrive™ machines:** Lightly depress brake pedals (ProDrive™ attempts to repower and will downshift changing machine dynamics if brakes are fully depressed).
7. As engine speed drops to near low idle speed (1200 rpm), **quickly disengage header (B) and separator engage (C) switches on armrest.**
8. Quickly move multi-function lever to neutral position.
9. Allow engine to cool for a minute.
10. Turn key switch (A) to shut OFF engine, set park brake and remove key.
11. Inspect for excessive grain damage, kernels left on the cobs, and free grain loss before making any adjustments.




H95321 —UN—02NOV10




H96263 —UN—04MAY10

**A—Key Switch**
**B—Header Engage Switch**
**C—Separator Engage Switch**

12. Decide what adjustments are needed. Open threshing clearance and engage separator (avoids undue stress to cylinder drive area during cleanout).
13. Adjust machine to desired settings and continue harvesting.
14. Repeat this procedure and verify grain quality and losses behind machine.
15. Once acceptable loss levels are attained, calibrate VisionTrak™ Monitor and continue to harvest.

OUO6075,00014AB -19-18APR13-1/1

# Harvest Smart™ Feed Rate (Optional)

## Harvest Smart Feed Rate—Operating Safely (If Equipped)

**IMPORTANT: Harvest Smart Feed Rate is intended to aid the operator for more efficient machine operation. Operator is still responsible for machine and must continue to pay attention to surrounding environment during operation.**

Read and understand this manual before operating Harvest Smart. Do not let others operate system without instruction. If you do not understand any part of this manual and need assistance, see your John Deere dealer.

When system is activated, remain alert and pay attention to surrounding environment. Be prepared to take control of ground speed when deactivating system at end rows.

OUO6075,0000705 -19-06APR10-1/1

## Harvest Smart Feed Rate—Description

Harvest Smart Feed Rate varies ground speed to maintain a constant flow of material through machine, maximizing productivity and reducing operator stress. As crop material gets lighter, machine ground speed will increase and as crop material gets heavier machine ground speed will decrease. **Operator limits maximum ground speed at all times by pulling back on multi-function lever.** System begins to slow machine ground speed when engine power level goes above operator desired maximum engine power setting. This helps prevent engine from pulling down and from stalling.

System may not perform optimally if used in the following conditions:

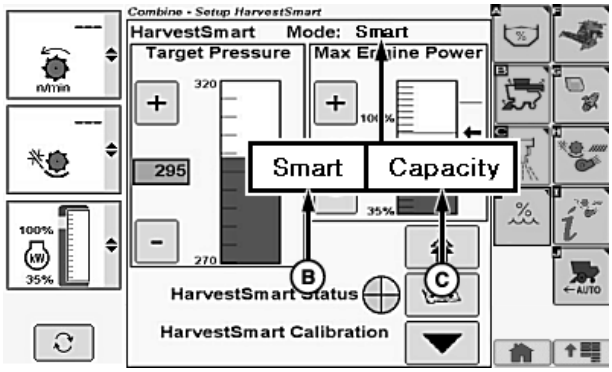
- Extreme Hilly Conditions
- Tangled or Lodged Crop Conditions
- Extremely Muddy Conditions

OUO6075,0000706 -19-13DEC10-1/1

## Harvest Smart™ Feed Rate—Smart or Capacity Modes




H95948 —UN—06APR10




H106490 —UN—16JAN13

**A—Harvest Smart™ Feed Rate Enable Switch**
**B—Smart Mode**
**C—Capacity Mode**

Press Harvest Smart™ feed rate enable switch (A) until Smart mode (B) or Capacity mode (C) is shown on display.

**Smart Mode (B):**

*NOTE: Smart mode is the preferred operating method for controlling the machine.*

Monitors loss levels with VisionTrak™ to ensure that system is at operator designated level (loss monitor calibrated). System is set when grain loss calibration icon is selected. When loss monitor levels are consistently above or below operator desired levels, system increases or decreases material flow levels, bringing loss levels back into desired range.

**Capacity Mode (C):**

Maintains a constant material flow allowing machine to increase ground speed when crop materials are lighter and decrease ground speed when crop materials are heavier. Capacity mode does not adjust VisionTrak™ monitor settings, since mode is only maintaining a constant material flow.

OUO6075,0001370 -19-17JUN13-1/1

## Harvest Smart™ Feed Rate—Target Pressure

*NOTE: Target pressure cannot be adjusted through the Harvest Smart™ setup screen in Smart mode.*

Target pressure allows operator to adjust target volume without changing VisionTrak™ loss monitor settings. Target volume measures amount of material entering separator by monitoring rotor pressure.

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when Harvest Smart™ Feed Rate setup icon (A) is highlighted.

Touch or press confirm switch when plus (+) icon (B) or minus (-) icon (C) is highlighted or when target pressure box (D) is highlighted to adjust target pressure.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired target pressure value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired target pressure value on numeric display. Touch enter/accept icon to save value.

*NOTE: Bar graph indicates current target pressure level. Arrow indicator and line display operator setpoint value.*

Arrow indicator (E) adjusts to operator setpoint value.

**System Adjustments**

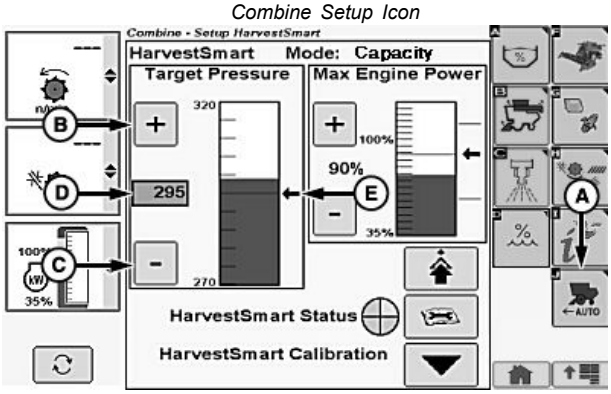
*NOTE: Target pressure cannot be adjusted through Harvest Smart™ setup screen while in Smart Mode.*

- Target Pressure (30—420) – use this to set target volume or throughput independently of VisionTrak™ loss monitor.
  - Parameter can be used when operator likes to adjust target volume (based on rotor load) without changing VisionTrak™ loss monitor calibration.

H94473 —UN—31MAR10



*Combine Setup Icon*




H1106440 —UN—03JAN13

**A—Harvest Smart™ Feed Rate Setup Icon**
**B—Plus Icon**
**C—Minus Icon**
**D—Target Pressure Box**
**E—Arrow Indicator**

- Recommended way of adjusting target pressure is in Smart Mode using up/down arrow buttons on VisionTrak™. Performing settings through VisionTrak™ keeps target volume/loss relationship intact (example: if VisionTrak™ calibration factor is acceptable, but machine maintains a slow ground speed, increase target volume parameter by 20. If ground speed is high, decrease target volume parameter by 20).

OUO6075,0001372 -19-09JAN13-1/1

## Harvest Smart™ Feed Rate—Max Engine Power

Max engine power sets maximum allowable engine load at which Harvest Smart™ is allowed to operate.

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when Harvest Smart™ Feed Rate setup icon (A) is highlighted.

Touch or press confirm switch when plus (+) icon (B) or minus (-) icon (C) is highlighted to adjust max engine power.

*NOTE: Bar graph indicates current engine power level. Arrow indicator and line display operator setpoint value.*

Arrow indicator (D) adjusts to operator setpoint value and displays max engine power percentage (E).

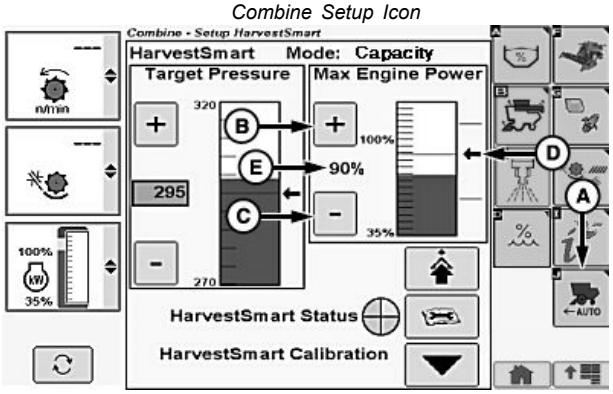
### System Adjustments

- Max Engine Power Icon – use this to set maximum allowable engine load Harvest Smart™ will allow.
  - If slug feeding is a concern, decrease setting to allow for more cushion on engine load.
  - Using engine load to control ground speed can be accomplished by setting value close to operating maximum engine power level. This can be done in crops where there are large header loads relative to threshing loads (example corn).

H94473 —UN—31MAR10



*Combine Setup Icon*




H106441 —UN—03JAN13

**A—Harvest Smart™ Feed Rate Setup Icon**
**B—Plus Icon**
**C—Minus Icon**
**D—Arrow Indicator**
**E—Max Engine Power Percentage**

OUO6075,0001371 -19-24JAN13-1/1

## Harvest Smart™ Feed Rate—Max Harvest Speed

Max harvest speed sets maximum allowable ground speed for Harvest Smart™ to operate. System will not exceed setting, regardless of crop volume.

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when Harvest Smart™ Feed Rate setup icon (A) is highlighted.

Touch or press confirm switch when advanced setup icon (B) is highlighted.

Touch or press confirm switch when max harvest speed box (C) is highlighted.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired max harvest speed value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired max harvest speed value on numeric display. Touch enter/accept icon to save value.

Touch or press confirm switch when return/back icon (D) is highlighted to return to previous page.

### System Adjustments

- Max Harvest Speed (2.0 - 14.0 km/h) (1.2 - 8.6 mph) – use parameter to set maximum ground speed when Harvest Smart™ is active.

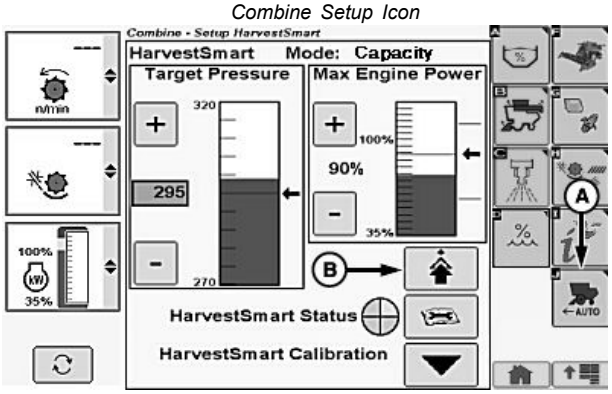
  *NOTE: Parameters can be modified to increase functionality and optimize performance.*

  - Sets a comfortable maximum ground speed without having to move multi-function lever back. Otherwise, when crop conditions change from normal yields to light yields, system increases ground speed until target pressure or multi-function lever position speed is reached.
  - One option is to set maximum ground speed 0.8—1.6 km/h (0.5—1 mph) higher in lightest crop conditions. By limiting maximum ground speed to just above normal operating speed, system is more efficient (not a large speed range to adapt to and learn parameters).

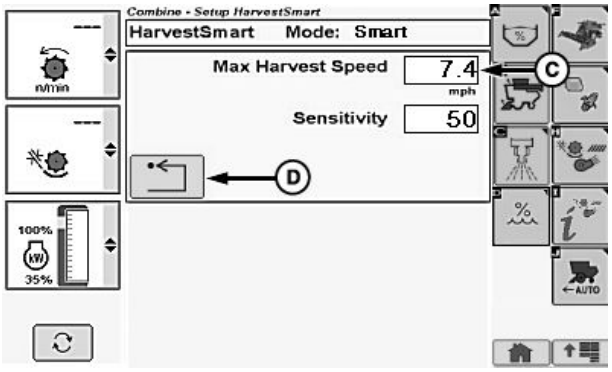
H94473 —UN—31MAR10



*Combine Setup Icon*




H106442 —UN—03JAN13




H106492 —UN—08JAN13

**A—Harvest Smart™ Feed Rate Setup Icon**
**B—Advanced Setup Icon**
**C—Max Harvest Speed Box**
**D—Return/Back Icon**

*NOTE: Multi-function lever position set by operator always limits maximum ground speed.*

OUO6075,0001376 -19-08JAN13-1/1

## Harvest Smart™ Feed Rate—Sensitivity

Sensitivity sets aggressiveness of Harvest Smart™ response to crop density changes. High response settings cause machine to make abrupt changes to ground speed maintaining crop volume. Low response settings cause machine to make less aggressive changes.

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when Harvest Smart™ Feed Rate setup icon (A) is highlighted.

Touch or press confirm switch when advanced setup icon (B) is highlighted.

Touch or press confirm switch when sensitivity box (C) is highlighted.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired sensitivity value is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired sensitivity value on numeric display. Touch enter/accept icon to save value.

Touch or press confirm switch when return/back icon (D) is highlighted to return to previous page.

**System Adjustments**

- Sensitivity (0—100) – use this to adjust how aggressively Harvest Smart™ makes ground speed changes.

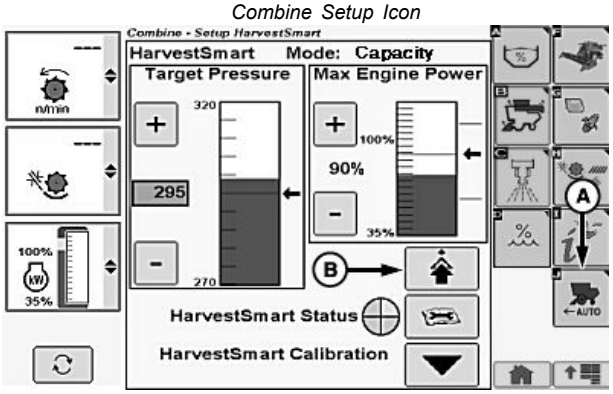
  *NOTE: Parameters can be modified to increase functionality and optimize performance.*

  - It is best to start low and make large (10-20) increases until ground speed changes feel too aggressive. Back down numbers from there.
  - Rates vary with header because of difference in feeding function (example: corn head might perform best at high rates, whereas a draper needs low rates).
  - Rates need to be adjusted based on ground speed. At slow speeds a higher rate might perform better than at high speeds. In highly variable conditions (large density changes in short distances) it is recommended to keep response rate in mid range setting (40—60).

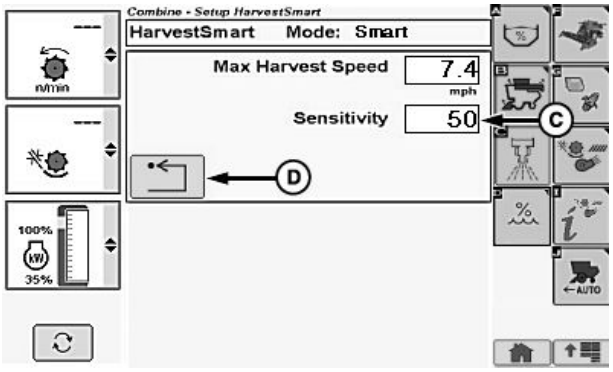
H94473 —UN—31MAR10



*Combine Setup Icon*




H106442 —UN—03JAN13




H106493 —UN—08JAN13

**A—Harvest Smart™ Feed Rate Setup Icon**
**B—Advanced Setup Icon**
**C—Sensitivity Box**
**D—Return/Back Icon**

OUO6075,0001377 -19-08JAN13-1/1

## Harvest Smart™ Feed Rate—Status Identifications

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when Harvest Smart™ Feed Rate setup icon (A) is highlighted.

*NOTE: Harvest Smart™ status indicator (B) shows which state that machine is currently operating in.*

Touch or press confirm switch when diagnostic readings icon (C) is highlighted.

Screen displays the following machine state, condition and status information:

- Harvest Smart™ Installed
- Manual Mode Deactivated
- Separator Engaged
- Header Engaged
- Engine at High Idle
- Road Mode Inactive
- Activation Button 2 or 3 Pressed
- Multi-Function Lever Limited
- Multi-Function Lever Position
- Harvest Smart™ Commanded Position

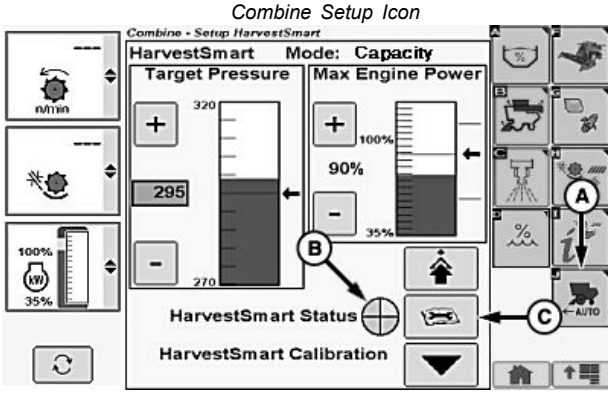
Touch or press confirm switch when return/back icon (D) is highlighted to return to previous page.

**A—Harvest Smart™ Feed Rate Setup Icon**
**B—Harvest Smart™ Status Indicator**
**C—Diagnostic Readings Icon**
**D—Return/Back Icon**

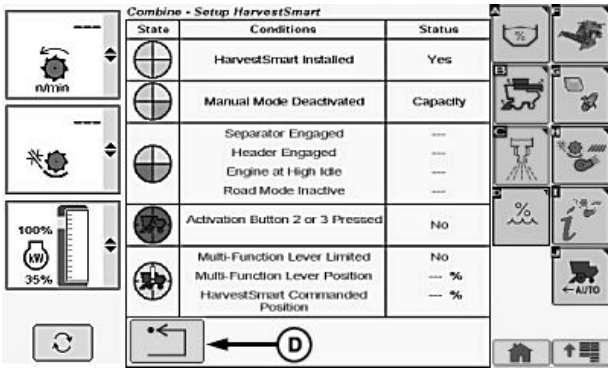
H94473 —UN—31MAR10



*Combine Setup Icon*



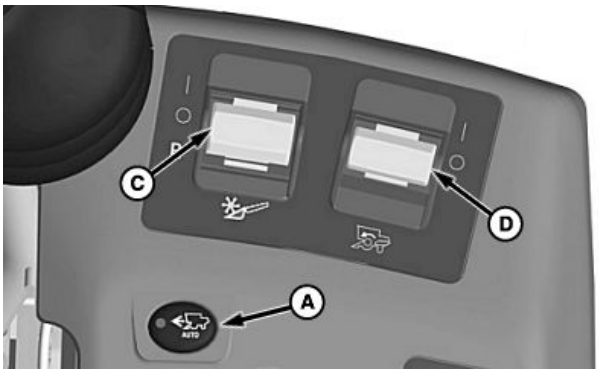

H106444 —UN—04JAN13



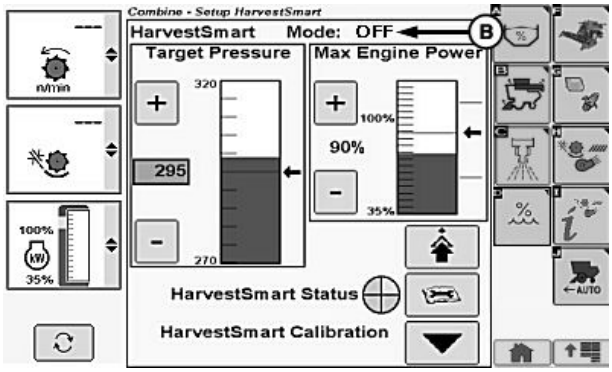

H106446 —UN—04JAN13

OUO6075,0001374 -19-04JAN13-1/1

## Harvest Smart™ Feed Rate—Initial Calibration




H106448 —UN—04JAN13




H106449 —UN—04JAN13

**A—Harvest Smart™ Feed Rate Enable Switch**
**B—OFF**
**C—Header Engage Switch**
**D—Separator Engage Switch**

*NOTE: Calibration MUST be done when harvesting crops for the first time, changing crops, or when field conditions change.*

Press Harvest Smart™ feed rate enable switch (A) until OFF (B) is shown on display.

Turn header engage switch (C) and separator engage switch (D) ON and lower header.

OUO6075,0001284 -19-08JAN13-1/2

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when Harvest Smart™ Feed Rate setup icon (A) is highlighted.

Operate machine in consistent crop at desired loss levels, maintaining that level for 10 – 15 seconds to allow machine to stabilize.

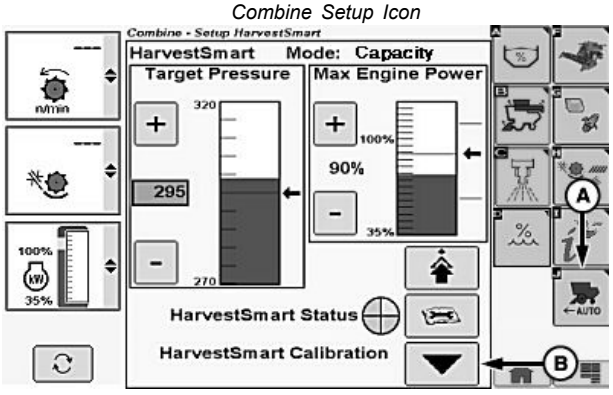
Touch or press confirm switch when Harvest Smart™ calibration icon (B) is highlighted. This sets material flow and loss targets for Harvest Smart™.

**A—Harvest Smart™ Feed Rate Setup Icon**
**B—Harvest Smart™ Calibration Icon**

H94473 —UN—31MAR10



*Combine Setup Icon*

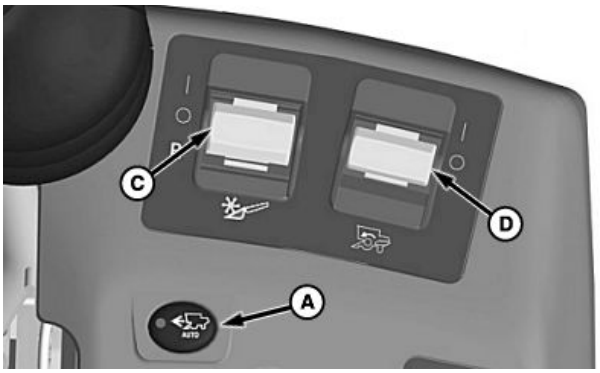


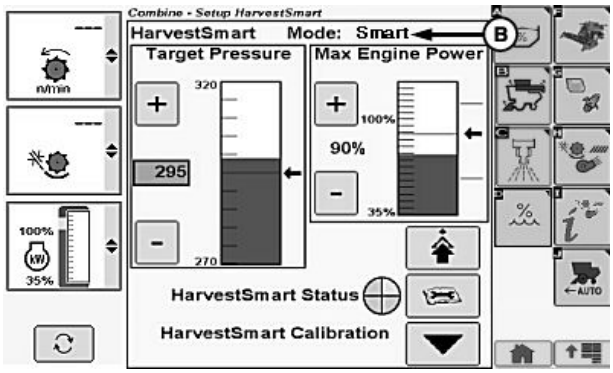

H1106450 —UN—04JAN13

*Capacity Mode Shown*

OUO6075,0001284 -19-08JAN13-2/2

## Harvest Smart™ Feed Rate—Operation




**A—Harvest Smart™ Feed Rate Enable Switch**
**B—Smart**
**C—Header Engage Switch**
**D—Separator Engage Switch**

*NOTE: If operator leaves seat while Harvest Smart™ is activated, system will continue to operate for three seconds before system disengages and machine slows to a stop. To activate system, place multi-function lever in neutral position and press activation button 2 or 3 on multi-function lever.*

Press Harvest Smart™ feed rate enable switch (A) until Smart (B) is shown on display.

Turn header engage switch (C) and separator engage switch (D) ON and lower header.

OUO6075,0001375 -19-24JAN13-1/2

Press activation button 2 or 3 on multi-function lever to activate system and move multi-function lever fully forward.

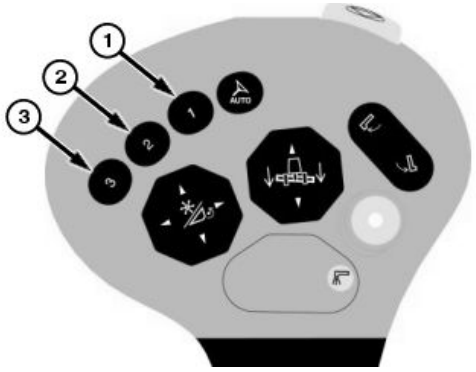
*NOTE: Multi-function lever limits maximum ground speed. Move multi-function lever rearward to slow or stop machine. Move multi-function lever forward to slowly allow machine to go to operator preset ground speed.*

Maximum allowable ground speed is shown on CommandCenter™ display.

**⚠ CAUTION: Once activation button 1 is pressed machine will accelerate to multi-function lever position, returning full control of multi-function lever to operator.**

When coming to end of field, press activation button 1 on multi-function lever. This temporarily deactivates the system, allowing machine to accelerate to multi-function lever position. When system is temporarily deactivated, operator has full control of machine. Pull multi-function lever rearward to slow machine.

*NOTE: It can take up to five minutes for Harvest Smart™ to determine an average harvest speed after a new calibration is entered. This speed is then used to resume machine ground speed when entering crop and Harvest Smart™ is active.*



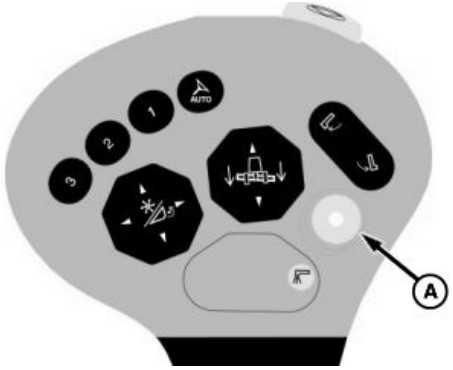

When entering crops, press activation button 2 or 3 on multi-function lever to reactivate system and move multi-function lever fully forward.

OUO6075,0001375 -19-24JAN13-2/2

## Harvest Smart™ Feed Rate—Additional Information (Unloading Auger ON and Field Conditions)

*NOTE: Harvest Smart™ maintains ground speed of machine when unloading auger button is pressed (if multi-function lever is not moved rearward). When unloading system is engaged, system remains in control; however, response is limited to prevent sudden changes that would overrun grain cart.*

- When unloading auger drive switch (A) is pressed, Harvest Smart™ will still be active. If operator wants manual control while unloading, pull multi-function lever rearward until machine slows slightly to temporarily deactivate system. Operator now has full control of ground speed. When unloading auger button is shut OFF, system automatically reactivates and controls ground speed.
- When crop conditions are highly variable, operator should move multi-function lever rearward to slow and limit entry speed into heavier crop conditions. After 5 seconds move multi-function lever fully forward.




H95955 —UN—01NOV10

**A—Unloading Auger Drive Switch**

OUO6075,00015BF -19-31JUL13-1/2

- If system consistently makes machine drive faster than normal, increase grain loss calibration value by 2 or 3. If system consistently makes machine drive slower than normal, decrease grain loss calibration value by 2 or 3.
  a. Touch or press confirm switch when combine setup icon is highlighted.
  b. Touch or press confirm switch when crop setup icon (A) is highlighted.
  c. Touch or press confirm switch when grain loss calibration value (B) is highlighted.
  d. Select desired grain loss calibration value:
  **Non-Touchscreen or Touchscreen:** Rotate selection dial until desired grain loss calibration value is shown. Press confirm switch to save value.
  **Touchscreen Only:** Enter desired grain loss calibration value on numeric display. Touch enter/accept icon to save value.

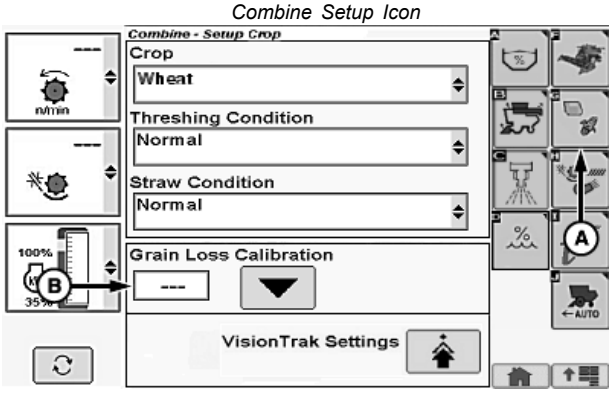
**A—Crop Setup Icon**

**B—Grain Loss Calibration Value**

H94473 —UN—31MAR10



*Combine Setup Icon*




H108684 —UN—31JUL13

OUO6075,00015BF -19-31JUL13-2/2

## Harvest Smart™ Feed Rate—Best Practices

**Calibrate System:**

Touch or press confirm switch when combine setup icon is highlighted.

Touch or press confirm switch when Harvest Smart™ Feed Rate setup icon (A) is highlighted.

Operate machine in desired crop at acceptable throughput and loss level for 15-20 seconds ensuring steady operation (allows rotor pressure and loss levels to steady).

Touch or press confirm switch when grain loss calibration icon (B) is highlighted. Calibrating sets the following parameters:

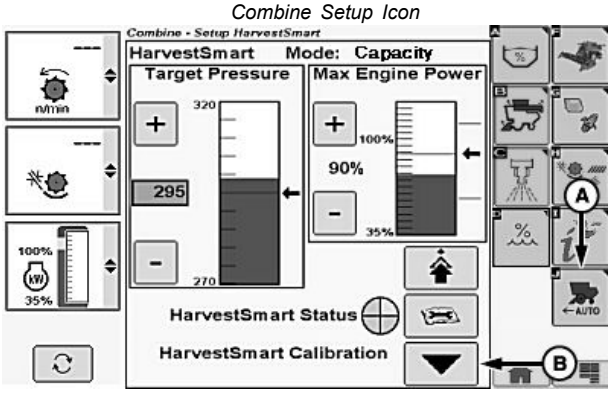
- Target Volume (Throughput)
- Target Loss
- VisionTrak™ Loss Calibration Factor

**A—Harvest Smart™ Feed Rate Setup Icon** **B—Grain Loss Calibration Icon**

H94473 —UN—31MAR10



*Combine Setup Icon*




*Capacity Screen Shown*

H106450 —UN—04JAN13

OUO6075,0001286 -19-04JAN13-1/2

**Activate System:**

Press Harvest Smart™ feed rate enable switch (A) until Smart or Capacity mode is shown on display:

- Smart mode - is the recommended method.
- Capacity mode - if losses are not a concern or VisionTrak™ is not reliable due to conditions.

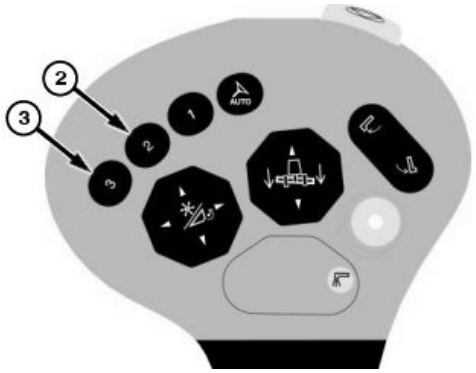
Press activation button 2 or 3 on multi-function lever to activate system and move multi-function lever forward allowing system to increase speed accordingly to crop density.

*NOTE: System will not command a speed greater than multi-function lever position.*

**A—Harvest Smart™ Feed Rate Enable Switch**




H95948 —UN—06APR10




H95956 —UN—01NOV10

OUO6075,0001286 -19-04JAN13-2/2

## Harvest Smart™ Feed Rate Control—System and Field Symptoms

**Machine is accelerating too slow:**

- Increase sensitivity rate, see Harvest Smart™ Feed Rate—Sensitivity in this section.
  - At higher sensitivity rates, machine responds faster to changes.

*NOTE: Increasing sensitivity rate by increments of one is hardly noticeable. Increasing sensitivity rate by increments of 20 is more noticeable. After getting in an acceptable performance range, settings can be refined more closely.*

*Increasing sensitivity rate has no effect on maximum deceleration.*

**Machine stops or overspeeds dramatically:**

- If machine is at low end of threshing speed range and feed rate overspeeds, increase rotor speed by 20 - 30 rpm. Ground speed is held for ten seconds after rotor speed is increased or decreased. After ten seconds a five second average of rotor pressure is taken and a new value is set for target pressure.

*NOTE: Harvest Smart™ has limits detecting rotor load at the low and high end of threshing speed. If after fifteen seconds, averaged system seems unstable, calibrate Target Value again.*

**Ground speed oscillating:**

*NOTE: When harvesting new crops, it is normal for machine to oscillate for a short period of time.*

- Decrease sensitivity rate.
- Machine is operating near maximum power (under rated speed of engine) and is causing machine to oscillate (speed up/slow down ground speed), see Harvest Smart™ Feed Rate—Sensitivity in this section.
  - Decrease sensitivity rate to stop oscillation and adjust target engine speed to control ground speed.

**Ground speed oscillating in hilly conditions:**

- As machine moves uphill, it keeps a constant ground speed. If machine is moving up a steep hill, machine slows slightly due to high hydrostatic forces, see Harvest Smart™ Feed Rate—Max Harvest Speed in this section.
- As machine moves downhill, it increases in speed, see Harvest Smart™ Feed Rate—Max Harvest Speed in this section.
  - Operator should set a maximum harvest ground speed that is comfortable. This allows machine to not exceed maximum speed when going down a hill.

*NOTE: When harvesting in areas where crop conditions are tougher or along waterways and washouts, it is recommended that operator pull back on multi-function lever. This gains control of machine and slows ground speed if operator feels machine is moving too fast.*

**Target or ground speed increases with no losses:**

- When operating in Smart Mode, VisionTrak™ sensors are not working (matted over, disconnected, or are damaged), which causes machine to increase speed resulting in high losses, see Harvest Smart™ Feed Rate— Smart or Capacity Modes in this section.
  - Change from operating in Smart Mode to Capacity Mode. This allows constant material flow, allowing machine to increase speed when crop materials are lighter and decrease speed when crop materials are heavier.

**System loses target values:**

- When operating in Smart Mode, system continuously recalculates target pressure values to adjust ground speed.
- Harvest Smart™ must be recalibrated each time key switch is cycled. System does not retain entry speed through key cycles.

**Machine reacts too slow for crop changes:**

- Machine sensitivity rate adjust is too slow, see Harvest Smart™ Feed Rate— Sensitivity in this section.

*NOTE: Increasing sensitivity rate by increments of one is hardly noticeable. Increasing sensitivity rate by increments of 20 is more noticeable.*

  - Continue to increase sensitivity rate until oscillating occurs and lower sensitivity rate from that point.
  - High sensitivity rate settings cause machine to make abrupt ground speed changes to maintain crop volume.
  - Low sensitivity rate settings allow for less aggressive changes.

**Machine reacts aggressively to crop losses:**

- Capacity Mode allows constant material flow, allowing machine to increase speed when crop materials are lighter and decrease speed when crop materials are heavier.
  - Recalibrate VisionTrak™, see Harvest Smart™ Feed Rate—Initial Calibration in this section.
  - If recalibrating VisionTrak™ has no effect, switch to Capacity Mode, see Harvest Smart™ Feed Rate—Smart or Capacity Modes in this section.
  - In some conditions, Capacity Mode is a better mode for operation.

OUO6075,0001378 -19-30JAN13-1/1

## Harvest Smart™ Feed Rate Troubleshooting

### Harvest Smart™ Feed Rate Control

| Symptom | Problem | Solution |
|---|---|---|
| **Machine slows way down or stops when Harvest Smart™ Feed Rate Control is activated.** | *NOTE: It can take up to five minutes for Harvest Smart™ to determine an average harvest speed after a new calibration is entered.* | Recalibrate system. |
| | Machine has a bad calibration value. | |
| | Harvest Smart™ must be recalibrated each time key switch is cycled. System does not retain entry speed through key cycles. | Recalibrate system. |
| **After calibrating system machine drives too slow.** | Target rotor torque is too low. | Increase grain loss calibration value by 2 or 3. |
| | Machine has a bad calibration value. | Recalibrate system. |
| **After calibrating system machine drives faster than desired.** | Target rotor torque is too high. | Decrease grain loss calibration value by 2 or 3. |
| | Machine has a bad calibration value. | Recalibrate system. |
| **With Harvest Smart™ Feed Rate Control active machine is oscillating speed too much.** | Gain/Aggressiveness is set too high. | Decrease sensitivity setting. |
| | Loss monitor too sensitive. | Try running Harvest Smart™ Feed Rate Control System on Capacity Mode. |
| **With Harvest Smart™ Feed Rate Control active system seems sluggish to respond to changes.** | Gain/Aggressiveness is set too low. | Increase sensitivity setting. |
| **Harvest Smart™ Feed Rate Control is operating erratically.** | Machine has a bad calibration value. | Recalibrate system. |
| | Loss monitor not working properly. | Try running Harvest Smart™ Feed Rate Control System on Capacity Mode. |

### Harvest Smart™ Feed Rate Control Drive By Wire

| Symptom | Problem | Solution |
|---|---|---|
| **Machine stops unexpectedly and will not move.** | System has a component out of tolerance. | Return multi-function lever to neutral and clear all diagnostic trouble codes. After codes are cleared try to drive machine. |
| | Swashplate position sensor detects a stuck valve or has malfunctioned and is showing multiple diagnostic trouble codes. | (Non ProDrive™ Machines) Refer to Harvest Smart™ Feed Rate Limp and Emergency Modes later in this section for further information or see your John Deere dealer. |

Continued on next page

OUO6075,0001379 -19-30JAN13-1/2

| Symptom | Problem | Solution |
|---|---|---|
| | | (ProDrive™ Machines) Refer to Harvest Smart™ Feed Rate Limp Mode later in this section for further information or see your John Deere dealer. |
| | System has lost one or more of the redundancy channels or channels are in discrepancies and is showing multiple diagnostic trouble codes. | (Non ProDrive™ Machines) Refer to Harvest Smart™ Feed Rate Limp and Emergency Modes later in this section for further information or see your John Deere dealer. |
| | | (ProDrive™ Machines) Refer to Harvest Smart™ Feed Rate Limp Mode later in this section for further information or see your John Deere dealer. |
| **Machine will stop after driver is out of seat for three seconds.** | Operator out of seat. | Operator must return to seat and return multi-function lever to neutral before operation can resume. |

OUO6075,0001379 -19-30JAN13-2/2

## Harvest Smart Feed Rate Limp Mode and Emergency Modes

**Limp Mode**

*NOTE: ALLOWS MACHINE TO OPERATE UP TO FOUR HOURS. NOT TO BE USED FOR NORMAL OPERATION. Call your John Deere dealer to have machine inspected immediately.*

Use **LIMP** mode to allow machine to move temporarily.

Press main menu icon or switch.

Touch or press confirm switch when message center icon is highlighted.

Touch or press confirm switch when diagnostic address icon is highlighted.

*NOTE: Touch or press confirm switch when down arrow is highlighted to scroll through listing.*

Touch or press confirm switch when device drop down menu is highlighted.

Touch or press confirm switch when **VCM** controller is highlighted in menu listing.

Touch or press confirm switch when down arrow is highlighted.

Touch or press confirm switch when address **103** is highlighted in menu listing.

Touch or press confirm switch when enter/accept icon is highlighted.

*NOTE: Change 0 to 1 to enable limp mode.*

Touch or press confirm switch when digit one is highlighted.

- 0= Disabled
- 1= Enabled

Touch or press confirm switch when enter/accept icon is highlighted.

Touch or press confirm switch when enter/accept icon is highlighted to save address value.

Press main menu icon or switch.

Touch or press confirm switch when combine main page icon is highlighted.

**Emergency Mode**

*NOTE: MOVES MACHINE FOR 30 SECONDS. NOT TO BE USED FOR NORMAL OPERATION. Call your John Deere dealer to have machine inspected immediately.*

Use **EMERGENCY** mode to move machine out of the way.

Press main menu icon or switch.

Touch or press confirm switch when message center icon is highlighted.

Touch or press confirm switch when diagnostic address icon is highlighted.

*NOTE: Touch or press confirm switch when down arrow is highlighted to scroll through listing.*

Touch or press confirm switch when device drop down menu is highlighted.

**Non ProDrive Machines:** Touch or press confirm switch when **VCM** controller is highlighted in menu listing.

**ProDrive Machines:** Touch or press confirm switch when **PTP** controller is highlighted in menu listing.

Touch or press confirm switch when down arrow is highlighted.

**Non ProDrive Machines:** Touch or press confirm switch when address **102** is highlighted in menu listing.

**ProDrive Machines:** Touch or press confirm switch when address **119** is highlighted in menu listing.

Touch or press confirm switch when enter/accept icon is highlighted.

*NOTE: Change 0 to 1 to enable emergency mode.*

Touch or press confirm switch when digit one is highlighted.

- 0= Disabled
- 1= Enabled

Touch or press confirm switch when enter/accept icon is highlighted.

Touch or press confirm switch when enter/accept icon is highlighted to save address value.

Press main menu icon or switch.

Touch or press confirm switch when combine main page icon is highlighted.

OUO6075,0001118 -19-13APR12-1/1

# HillMaster™ Leveling System (If Equipped)

## HillMaster System (General Information)

**CAUTION: HillMaster must only be used in field. Before driving on public roads, machine must be lowered to transport position, so maximum height is less than 4.0 m.**

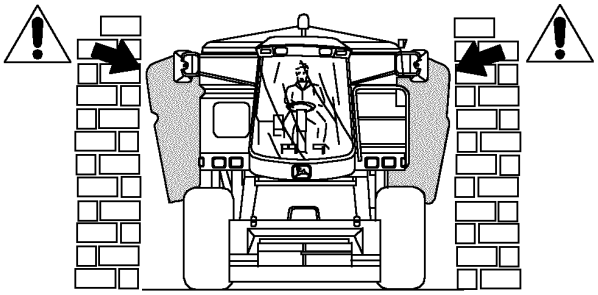
**Care must be taken when turning machine on slopes. Follow these precautions when turning machine on slopes in order to avoid loss of stability and potential rollover of machine:**

- **Never turn machine faster than leveling system can keep machine level.**
- **Always turn uphill and never downhill.**
- **Do not move onto steeper grades once maximum tilt limit indicator appears on display.**

**Avoid crushing injuries. Always lower leveling system before getting underneath machine for service or adjustments. Shut OFF engine, set parking brake and remove key.**

**IMPORTANT: Before actuating manual leveling control switch, verify that parking brake is released.**

**Do not park machine too close to other machines or building walls. This is important as machine may tilt due to internal loss of oil pressure when parked for long periods of time. This may cause damage to machine and adjacent machines or walls.**



ZX 002438

ZX002438 —UN—16JUN95

Standard final drives are mounted to pivoting carrier plates on the front axle. Hydraulic cylinders are used to pivot the carrier plates up and down to tilt the machine. Separator remains level as machine moves over uneven ground.

System is operated manually using HillMaster tilt left and right buttons or in automatic mode.

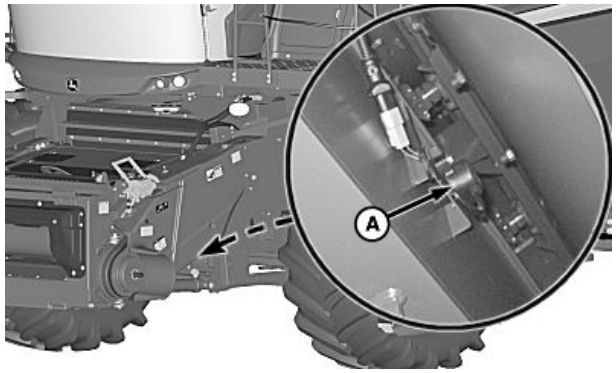
OUO6075,0000A04 -19-02NOV10-1/5

In automatic mode, tilt sensor (A) levels the body of the machine and remains level as the machine moves across the field.

As field slope changes, a pendulum in the tilt sensor measures the angle of tilt and provides a signal to the control unit. At the appropriate time and angle of tilt, the control circuit sends an electronic signal to the right or left tilt solenoid on the tilt leveling control valve.

*NOTE: Sensor keeps separator level within one degree during field operation. When operating on rough or irregular ground, separator level position may exceed this one degree for a short time.*

Tilt system keeps separator level on slopes up to 15%. If operated on slopes greater than 15%, maximum tilt limit indicator appears on display.




*Tilt Sensor Located on Front Axle*

H98380 —UN—01OCT10

**A—Tilt Sensor**

**Continued on next page**

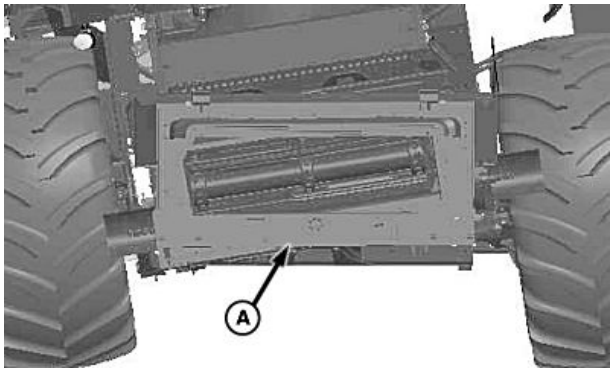
OUO6075,0000A04 -19-02NOV10-2/5

**HeaderTrak Tilt Operation**

HeaderTrak tilt assists in keeping the header parallel with the ground as the machine separator tilts to stay level. The system uses a specially equipped feeder house (A) that enables the header to tilt left and right.

HillMaster along with HeaderTrak tilt function allows header to tilt left and right ± 9 degrees. Both systems allow header to cut properly on slopes up to 15%.

HeaderTrak tilt system uses a double-acting primary/secondary cylinder arrangement to tilt header with respect to chassis.




H84660 —UN—07OCT05

**A—Feeder House**

OUO6075,0000A04 -19-02NOV10-3/5

Header tilt primary cylinder (A) is connected between the front axle and the left final drive carrier plate. Header tilt secondary cylinder (B) is located on top of feeder house and connects the tilt frame to the feeder house. During normal operation, the header automatically stays parallel to ground as separator tilts left or right staying level.

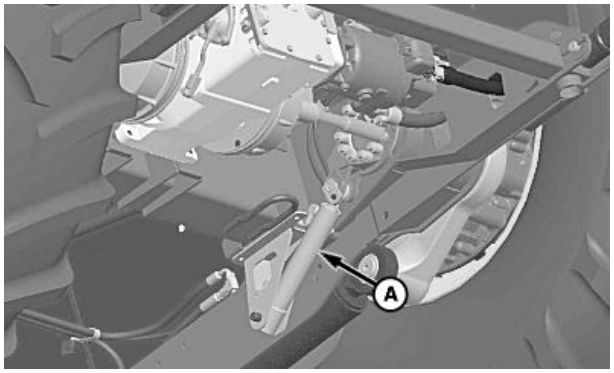
*NOTE: Areas around feeder house tilt frame need to be cleaned regularly to prevent buildup of material, which could limit full tilt travel.*

Operator can override automatic header leveling feature by using HeaderTrak tilt switches located on multi-function lever. When HeaderTrak tilt switches are pressed, oil from main hydraulic valve block is added or removed from header tilt circuit, allowing it to move independently of feeder house and chassis.

For automatic operation, header must be equipped with HeaderTrak sensors and calibrated prior to first use.

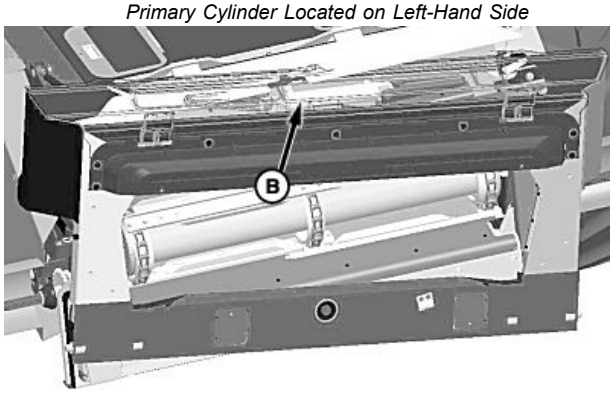
Automatic operation is enabled by pressing HeaderTrak enable button on display. System is activated by pressing activation buttons 1, 2 or 3 on the multi-function lever.

Headers equipped for HeaderTrak tilt have a sensor at both left and right ends. Signals from these sensors are processed and the appropriate hydraulic control valve is energized to level header with respect to ground.




H84613 —UN—04OCT05

*Primary Cylinder Located on Left-Hand Side*




H84661 —UN—07OCT05

*Header Tilt Secondary Cylinder*

**A—Header Tilt Primary Cylinder**

**B—Header Tilt Secondary Cylinder**

**Continued on next page**

OUO6075,0000A04 -19-02NOV10-4/5

### Header Tilt Cylinders

Angle of header is determined by a primary/secondary cylinder arrangement. Primary cylinder (A) is connected between chassis and left final drive carrier plate. Secondary cylinder (B) is connected between feeder house and tilt frame.

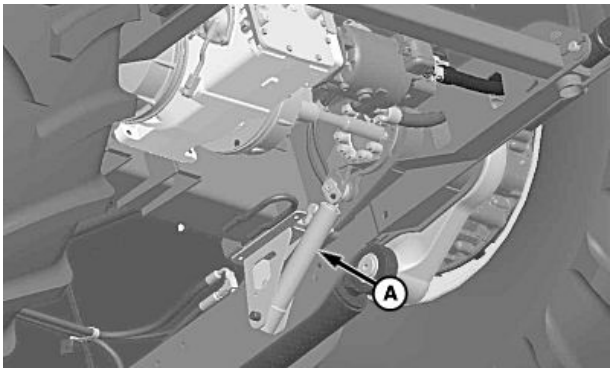
Rod ends of primary and secondary cylinders are connected to each other and piston ends of primary and secondary cylinders are connected to each other. As left leveling cylinder extends and retracts, the left final drive carrier plate pivots up and down and extends or retracts the header tilt primary cylinder. Movement of primary cylinder extends and retracts secondary cylinder.

As primary cylinder extends through movement of final drive carrier plate, oil flows from rod end of primary cylinder to rod end of secondary cylinder. This causes the secondary cylinder to retract. Oil from base end of secondary cylinder flows to base end of primary cylinder to fill additional volume created as primary cylinder is extended.

When primary cylinder is retracted by movement of final drive carrier plate, the opposite occurs.

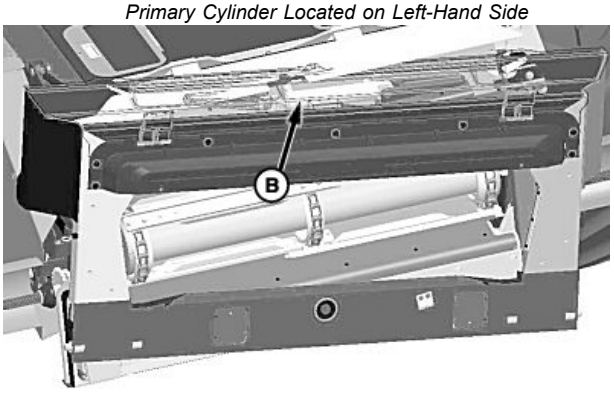
**A—Header Tilt Primary Cylinder**

**B—Header Tilt Secondary Cylinder**




H84613 —UN—04OCT05

*Primary Cylinder Located on Left-Hand Side*




H84661 —UN—07OCT05

*Header Tilt Secondary Cylinder*

OUO6075,0000A04 -19-02NOV10-5/5

## HillMaster Daily Operation Preparations

**⚠ CAUTION: Do not attempt to operate HillMaster machine unless all of the following operational checks are completed successfully. If one or more of the following checks fail (separator does not tilt or time to reach full tilt is excessive), contact your John Deere dealer for assistance.**

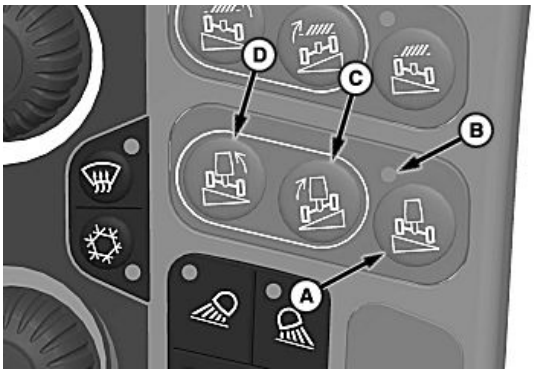
Before operating HillMaster machine the following three operational checks must be performed (daily).

**System Requirements:**

- Engine is running.
- Road transport disconnect switch in field position.
- Press automatic leveling control switch (A) to activate automatic leveling system.
- Indicator light (B) turns ON indicating setting is in automatic mode.

**Check One:** Push and hold manual tilt right switch (C) for approximately 20 seconds to tilt machine chassis to the right.

**Check Two:** Push and hold manual tilt left switch (D) for approximately 20 seconds to tilt machine chassis to the left.




H94961 —UN—27JAN10

**A—Automatic Leveling Control Switch**
**B—Indicator Light**
**C—Manual Tilt Right Switch**
**D—Manual Tilt Left Switch**

*NOTE: Time required to bring machine from maximum left tilt position to maximum right tilt position is approximately 5—7 seconds.*

**Check Three:** Press and hold manual tilt left switch until machine is tilted fully to the left. Push and hold manual tilt right switch until machine chassis is tilted fully to the right.

OUO6075,0000A05 -19-01NOV10-1/1

## HillMaster Leveling Control Switches

### Automatic Leveling

Automatic leveling control switch (A) allows machine separator to automatically level itself as machine moves over rolling ground.

**System Requirements:**
- Engine is running.
- Road transport disconnect switch in field position.

1. Press automatic leveling control switch to activate automatic leveling system.
2. Indicator light (B) will turn ON indicating setting is in automatic mode.
3. Display shows position of machine chassis body graphically.

A pendulum is used to sense the slope of the machine as it moves across the field.

*NOTE: With automatic leveling control system activated, manual tilt switches can be used to overcome automatic functions (machine may be tilted manually left or right).*

### Manual Leveling

Manual tilt switches allow the machine chassis to be tilted left or right manually as machine moves over rolling ground.

**System Requirements:**
- Engine is running.
- Road transport disconnect switch in field position.

*NOTE: Push Button Shift Transmission Machines: Push manual tilt right switch (C) or manual tilt left switch (D) to enable HillMaster mode. Push park brake switch to disengage park brake.*

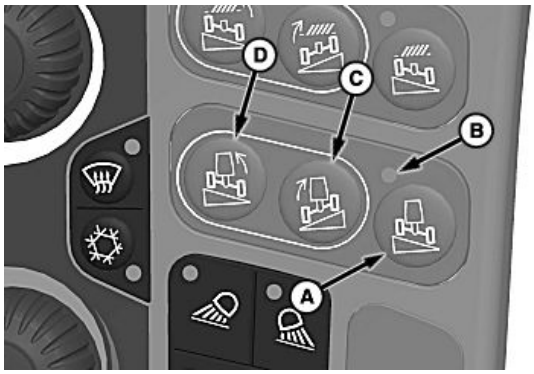
Push and hold manual tilt right switch (C) to tilt machine chassis to the right.

Push and hold manual tilt left switch (D) to tilt machine chassis to the left.

*NOTE: When manual desired tilt switch is released, automatic mode takes over and levels machine chassis automatically.*

Display shows position of machine chassis body graphically.

A pendulum is used to sense the slope of the machine as it moves across the field.




H94961 —UN—27JAN10

**A—Automatic Leveling Control Switch**
**B—Indicator Light**
**C—Manual Tilt Right Switch**
**D—Manual Tilt Left Switch**

*NOTE: With automatic leveling control system activated, manual tilt switches can be used to overcome automatic functions (machine may be tilted manually left or right).*

**Road Transport Position:**

**CAUTION: Avoid loss of control during road transport and serious injury or death. Never transport machine on roadway with HillMaster in automatic mode. Never attempt to manually tilt machine while transporting on a roadway.**

The following lockouts the HillMaster leveling system and ensures that leveling system does not shift during road transport.

**System Requirements:**
- Engine is running.
- Road transport disconnect switch in field position.

1. Move machine to level ground.
2. Press automatic leveling control switch for **five seconds** or until indicator light (B) flashes.
3. Push and hold manual tilt right switch (C) to tilt machine chassis to the right.
4. Push and hold manual tilt left switch (D) to tilt machine chassis to the left.

Machine is now in neutral position and can be driven on roadway.

OUO6075,00010C9 -19-14MAR12-1/1

# Fire Prevention

## Recommended Fire Preventions

The machine must be inspected periodically throughout the harvest day. Buildup of crop material and other debris must be removed to ensure proper machine function and to reduce the risk of fire.

Regular and thorough cleaning of machine combined with other routine maintenance procedures listed in the Operator's Manual greatly reduces the risk of fire, chance of costly downtime, and improve machine performance.

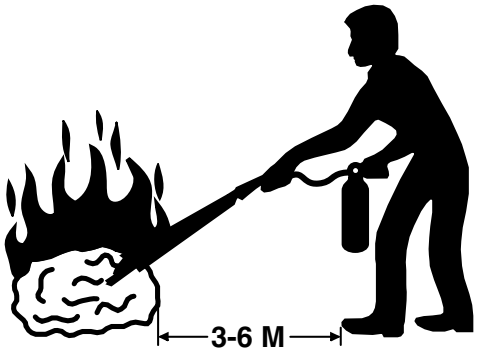
Always follow all safety procedures posted on the machine and in the Operator's Manual. Before carrying out any inspection or cleaning, always shut OFF engine, set parking brake, and remove key.

Your machine is equipped with general-purpose fire extinguisher and a pressurized water fire extinguisher. Extinguishers must be checked daily when entering or exiting the cab and when working around machine to ensure that they are in working condition. Fire extinguishers must be replaced or professionally serviced after any usage.

For further information, refer to Machine Cleanout section.

OUO6075,00001E2 -19-29MAR11-1/1

## Fire Extinguisher Operation




H90363 —UN—05DEC07

Your machine is equipped with general-purpose fire extinguisher and a pressurized water fire extinguisher. Extinguishers must be checked daily when entering or exiting the cab and when working around machine to ensure that they are in working condition. Fire extinguishers must be replaced or professionally serviced after any usage.

**Fire Extinguisher Recommendations:**

General-Purpose Fire Extinguisher:
- Use extinguisher for grease, oil, electrical, and chemical fires.

Pressurized Water Fire Extinguisher:
- Use extinguisher on crop material buildup or crop debris fires.

**Use of a Fire Extinguisher:**

The diagram shows the recommended method to extinguish a fire. Always aim towards base of fire.

The following are basic steps for the use of a fire extinguisher:

1. Remove fire extinguisher from bracket and carry to area of fire.
2. Approach area of fire with wind to your back.
3. Pull safety pin from top of extinguisher.
4. Hold extinguisher upright by handles and aim hose at **base** of flames.
5. Squeeze handles to discharge fire extinguisher.
6. Move nozzle back and forth, covering flames with a cloud of powder.

**Inspection Checklist:**

At least once per month, inspect fire extinguishers and ensure the following:

1. Are fire extinguishers positioned in designated location on cab ladder landing and at rear of machine?
2. Are there any obstructions to proper access or visibility?
3. Are operating instructions on nameplate legible and facing outward?
4. Are safety seals broken or missing?
5. Is extinguisher full? (Determines by weighing or "hefting")
6. Is there any physical damage, corrosion, leakage, or a clogged nozzle?

When inspection of fire extinguisher reveals a deficiency, extinguisher must be serviced or replaced.

OUO6075,00001E1 -19-29MAR11-1/1

## Handle Fuel Safely—Avoid Fires

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.



TS202 —UN—23AUG88

Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.

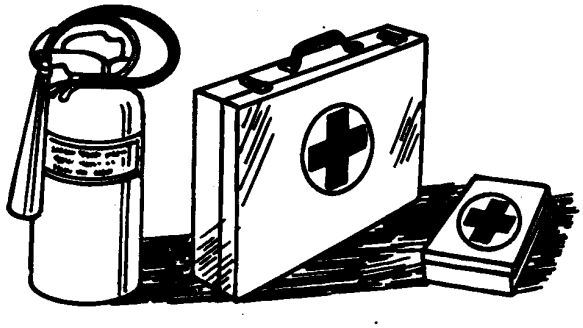
DX,FIRE1 -19-12OCT11-1/1

## Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



TS291 —UN—15APR13

DX,FIRE2 -19-03MAR93-1/1

## Handle Starting Fluid Safely

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. Keep starting fluid away from batteries and cables.

To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.



TS1356 —UN—18MAR92

DX,FIRE3 -19-16APR92-1/1

## Remove Accumulated Crop Debris

The build up of chaff and crop debris in the engine compartment, on the engine, and near moving parts is a fire hazard. Check and clean these areas frequently. Before performing any inspection or service, shut off the engine, set the parking brake and remove the key.



TS227 —UN—15APR13

HX,9010SA,B -19-23AUG97-1/1

## Fire Extinguisher

A 6 kg (15 lb.) general-purpose fire extinguisher meeting national certification requirements must be installed on your machine. A fire extinguisher and bracket is located on the right side of the engine platform.

Maintain fire extinguisher to keep it in operating condition.

Keep engine deck clean and free of dust, chaff and straw to prevent the possibility of fire.




H39760 —UN—11OCT88

OUO6075,0000A9F -19-16NOV10-1/1

## Fire Extinguisher Location

A general-purpose fire extinguisher is located on the front ladder platform.



*Front Fire Extinguisher Location*

H96654 —UN—27MAY10

OUO6075,0000C9F -19-14JUN11-1/1

## In Case of Fire

Stop harvesting immediately at first sign of fire. This may be the smell of smoke or the sight of smoke or flames.

Do not risk personal injury. If a fire is too far advanced, do not try to extinguish it.

If fire can be safely extinguished, proceed carefully and follow these guidelines:

1. Remove fire extinguisher from bracket and carry to area of fire.
2. Approach area of fire with wind to your back.
3. Pull safety pin from top of extinguisher.
4. Hold extinguisher upright by handles and aim hose at base of flames.
5. Squeeze handles to discharge fire extinguisher.
6. Move nozzle back and forth, covering flames with a cloud of powder or water.

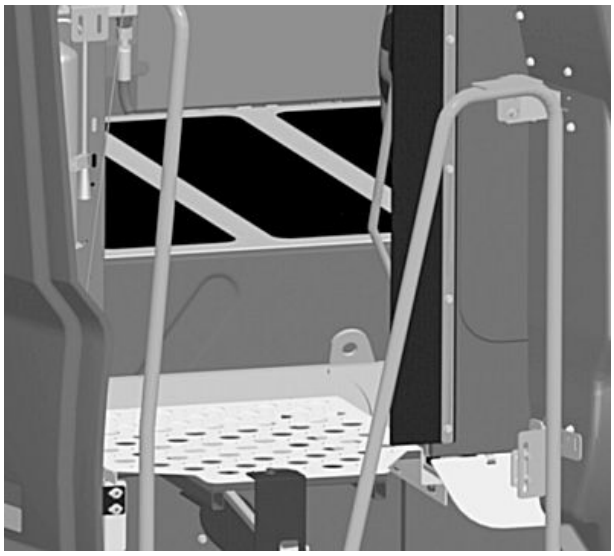


TS227 —UN—15APR13

OUO6075,00001DE -19-18SEP08-1/1

## Cleaning Engine Compartment

**CAUTION: Do not clean engine or engine compartment with engine running. Dirt, oil, chaff, and crop debris in engine compartment and on engine is a fire hazard. Direction of wind, type of crop and its moisture content can all have an effect on where and how much chaff and debris accumulate. Check and clean this area frequently.**



H95319 —UN—11FEB10

OUO6075,0000575 -19-17MAR10-1/1

# Machine Cleanout

## General Cleaning Guidelines

Machine must be inspected periodically throughout the harvest day. Buildup of crop material and other debris must be removed to ensure proper machine function and to reduce the risk of fire. Frequency of inspections and cleanings will vary depending on a number of factors, including operating conditions, machine settings, crop conditions, operating speeds, and weather conditions. Inspections and cleanings may be required multiple times throughout the harvest day, particularly in dry, hot, and windy conditions.

**IMPORTANT: Regular and thorough cleaning of machine combined with other routine maintenance procedures listed in the Operator's Manual greatly reduce the risk of fire, chance of costly downtime, and improve machine performance.**

**Crop material and other debris can accumulate in various areas. Direction of wind, type of crop, and crop moisture content can all impact where and how much crop material and debris can accumulate. Be aware of harvest conditions and adjust your cleaning schedule to ensure proper machine function and to reduce the risk of fire. Inspect and clean these areas as needed throughout the harvest day.**

Harvesting certain crops can cause special issues. Some crops are very "sticky" and it is often more difficult to clean the machine when harvesting these crops. Examples of these crops include sunflower, canola, and safflower. Take special care in cleaning the machine when harvesting these crops.

Always follow all safety procedures posted on the machine and in the Operator's Manual. Before carrying out any inspection or cleaning, always shut OFF engine, set parking brake and remove key.

OUO6075,0001167 -19-21JUN12-1/1

## Cleaning Out Machine (Periodic)

The photographs in this section show areas of the machine that require regular inspection and cleaning. While there are other areas that require regular cleaning, frequent attention to these areas provides the greatest impact on fire prevention.

Some of these photographs show accumulations of crop material and other debris prior to cleaning. This type of accumulation is not normal; it was allowed for illustrative purposes only.

**IMPORTANT: These areas may require more frequent cleaning, even multiple times per day, depending on harvest conditions. Be aware of harvest conditions and adjust your cleaning schedule to ensure proper machine function and to reduce the risk of fire.**

**Other areas not covered in this section may also collect crop debris and MUST be cleaned periodically for machine function and appearance. Thoroughly inspect the entire machine on a regular basis throughout the harvest season.**

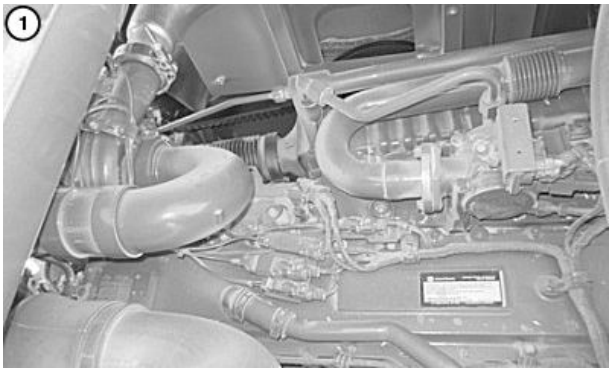
Always follow all safety procedures posted on the machine and in the Operator's Manual. Before carrying out any inspection or cleaning, always shut OFF engine, set parking brake and remove key.

Thoroughly clean machine from top to bottom with compressed air. First clean all areas accessible from engine deck. Start with engine compartment and work outwards and counterclockwise to other areas around engine compartment, floor underneath engine, top rear of rotor and rear deck, including top of diesel particulate filter (if equipped). Once top areas of machine are clean, proceed to cleaning areas accessible from ground level.

From ground level, clean rear underside of fuel tank area and top of the rear tailboard of the residue disposal system. Diesel particulate filter area (if equipped) will also need to be cleaned from ground level. Once the cleaning from ground level is finished, recheck engine compartment for any crop debris that could have blown in from ground level cleaning.

*NOTE: (A) photos are for S550 machines only.*

**Engine Compartment (Top Areas)**




H105220 —UN—18APR12

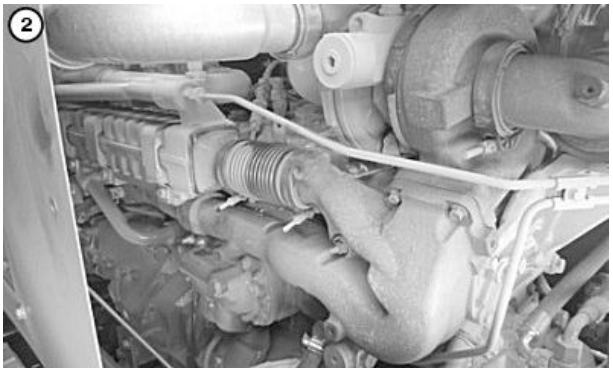



H105236 —UN—02MAY12

(1 and 1A) — Turbocharger(s)

OUO6075,0001120 -19-27JUN12-1/18

**Engine Compartment (Top Areas)**




H105221 —UN—18APR12



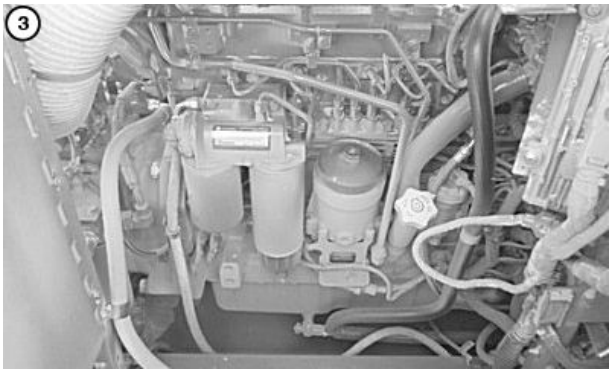

H105237 —UN—02MAY12

(2 and 2A) — Exhaust Manifold and Manifold Shield

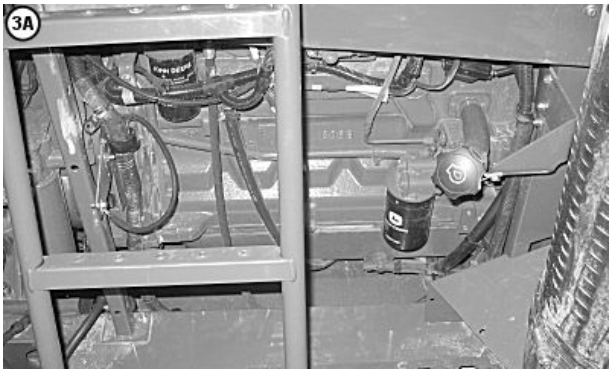
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OUO6075,0001120 -19-27JUN12-2/18

**Engine Compartment (Top Areas)**




H105226 —UN—02MAY12

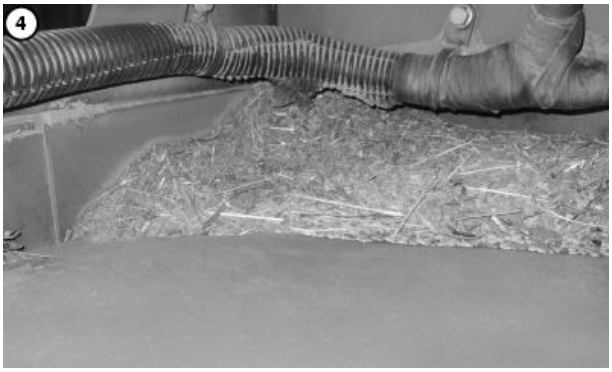



H105238 —UN—02MAY12

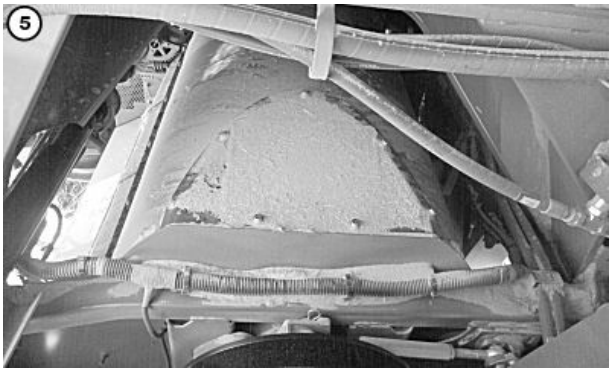
(3 and 3A) — Around Engine

OUO6075,0001120 -19-27JUN12-3/18

**Engine Compartment (Top Areas)**




H105546 —UN—21JUN12



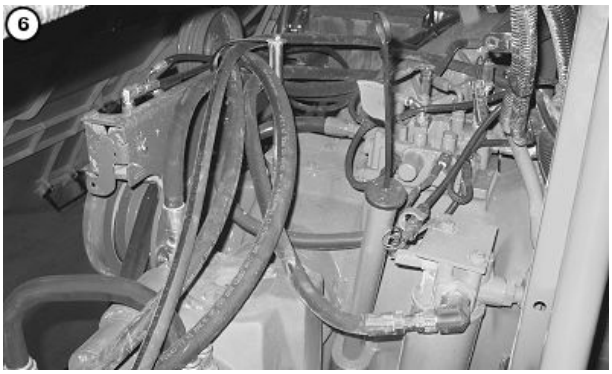

H105547 —UN—21JUN12

(4) — Underneath Engine

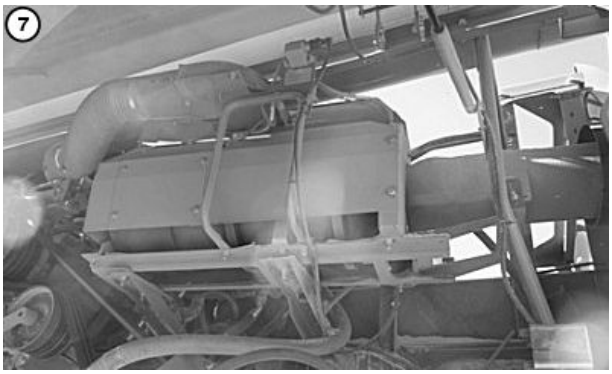
(5) — Top Rear of Rotor

OUO6075,0001120 -19-27JUN12-4/18

**Engine Compartment (Top Areas)**




H105548 —UN—21JUN12




H105549 —UN—21JUN12

(6) — Main Engine Gearcase

(7) — Areas around and under Diesel Particulate Filter (If Equipped)

**Continued on next page**

OUO6075,0001120 -19-27JUN12-5/18

**Engine Compartment (Top Areas)**




H105550 —UN—21JUN12




H105551 —UN—21JUN12

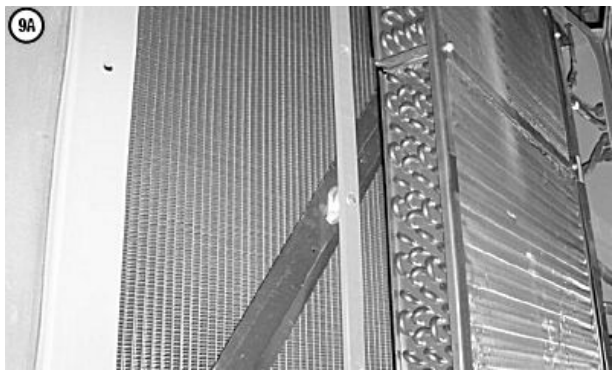
(8 and 8A) — On Top of Fuel Tank

OUO6075,0001120 -19-27JUN12-6/18

**Engine Compartment (Top Areas)**




H105552 —UN—21JUN12




H105553 —UN—21JUN12

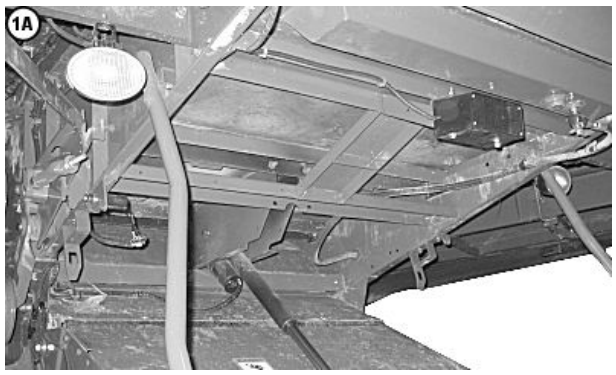
(9 and 9A) — Engine Cooling Package

OUO6075,0001120 -19-27JUN12-7/18

**Ground Accessible (Bottom Areas)**




H100574 —UN—20JUN11



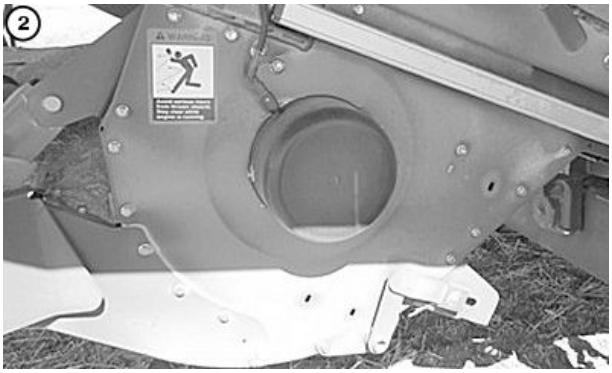

H105346 —UN—02MAY12

(1 and 1A) — Underneath Fuel Tank

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OUO6075,0001120 -19-27JUN12-8/18

**Ground Accessible (Bottom Areas)**




H105229 —UN—19APR12




H105335 —UN—02MAY12

*Fuse Center (S550, S660 and S670 Machines)*

**IMPORTANT: Lubrication decals show the different locations of grease points around the machine. Follow lubrication times provided on decals and refer to hour intervals listed in Lubrication and Maintenance section for further information.**

**Bearing failures or overheating can result in a fire. To reduce bearing failures or overheating, always refer to lubrication decals on machine.**

(2) — Areas Around Bearings and Bearing Guards (Various locations)

(3) — Fuse Center and Battery Box Areas

OUO6075,0001120 -19-27JUN12-9/18

**Ground Accessible (Bottom Areas)**

(4) — Clean Grain Elevator Drives




H105230 —UN—02MAY12

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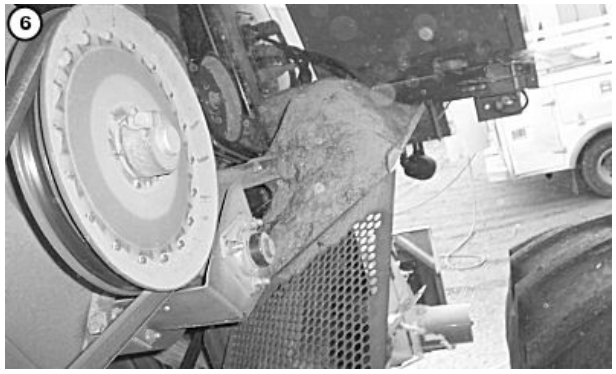
OUO6075,0001120 -19-27JUN12-10/18

**Ground Accessible (Bottom Areas)**




H105336 —UN—02MAY12

(5) — Right Side Walk Area




H105231 —UN—02MAY12

(6) — Right Side Mud Shields

OUO6075,0001120 -19-27JUN12-11/18

**Ground Accessible (Bottom Areas)**




H105337 —UN—02MAY12

(7) — Right Side Feeder House Shields




H105338 —UN—02MAY12

(8) — Left Side Feeder House Shields

OUO6075,0001120 -19-27JUN12-12/18

**Ground Accessible (Bottom Areas)**




H105232 —UN—02MAY12

(9) — Transmission



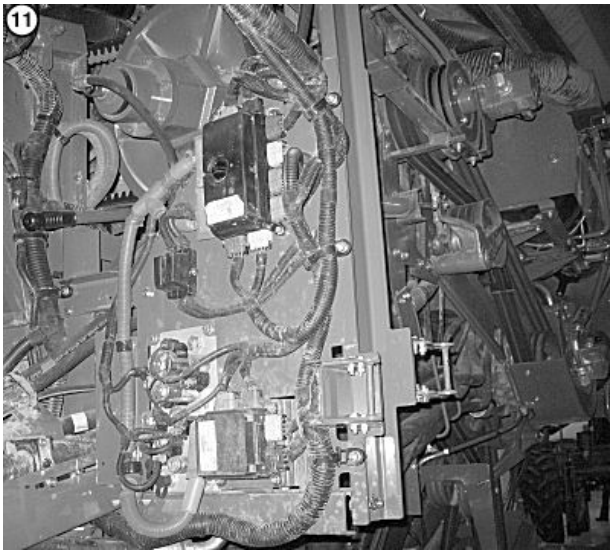

H105339 —UN—02MAY12

(10) — Left Side Walk Area

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OUO6075,0001120 -19-27JUN12-13/18

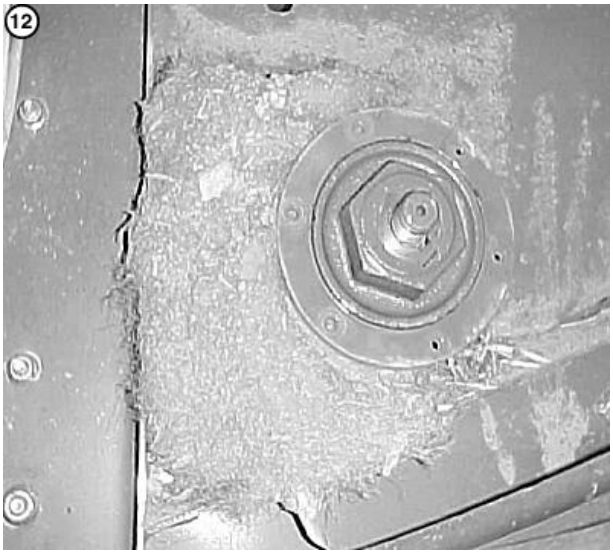
**Ground Accessible (Bottom Areas)**




H105340 —UN—02MAY12

*Fuse Center (S680 and S690 Machines)*

(11) — Fuse Center and Battery Box Areas




H105341 —UN—02MAY12

(12) — Discharge Beater Drives

OUO6075,0001120 -19-27JUN12-14/18

**Ground Accessible (Bottom Areas)**

(13) — Left Side Rotor Area

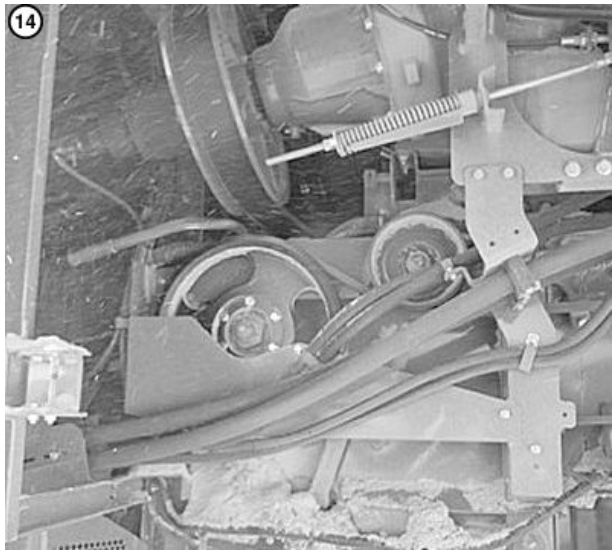



H105233 —UN—02MAY12

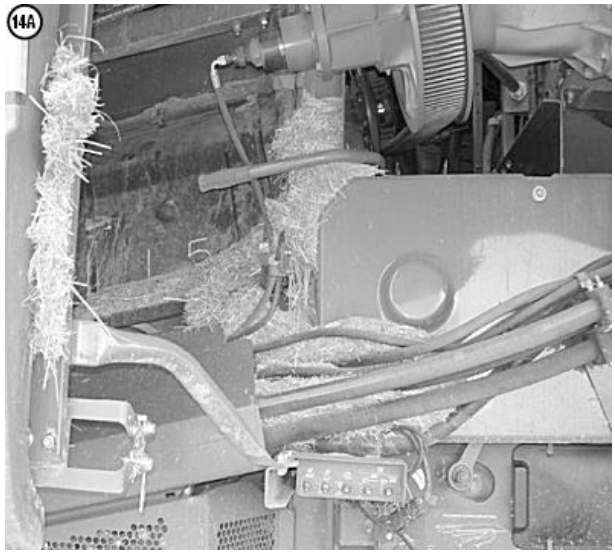
**Continued on next page**

OUO6075,0001120 -19-27JUN12-15/18

**Ground Accessible (Bottom Areas)**




H105234 —UN—02MAY12




H105242 —UN—02MAY12

(14 and 14A) — Rotor Drives

OUO6075,0001120 -19-27JUN12-16/18

**Ground Accessible (Bottom Areas)**




H105235 —UN—02MAY12




H105243 —UN—02MAY12

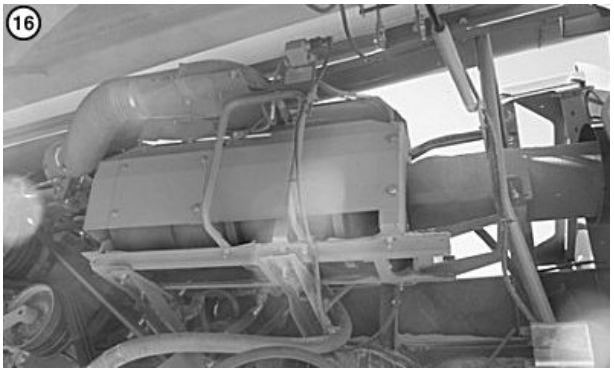
(15 and 15A) — Residue Disposal Drives

**Continued on next page**

OUO6075,0001120 -19-27JUN12-17/18

**Ground Accessible (Bottom Areas)**

(16) — Areas around and under Diesel Particulate Filter (If Equipped)




H105343 —UN—02MAY12

OUO6075,0001120 -19-27JUN12-18/18

## Cleaning Out Machine (Annual Cleanout and Specialty Crops)

**CAUTION: To prevent injury, never clean machine with engine running and separator engaged. Shut OFF engine, set park brake and remove key.**

The following instructions are recommended when cleaning out machine for certified seed crops or when transporting machine inter-state.

**CAUTION: Block header safely so it does not move. Lower reel safety stops.**

Remove header from machine.

Drive machine over end rows or bumps to jar and shake dirt loose. Shut OFF engine, set park brake and remove key.

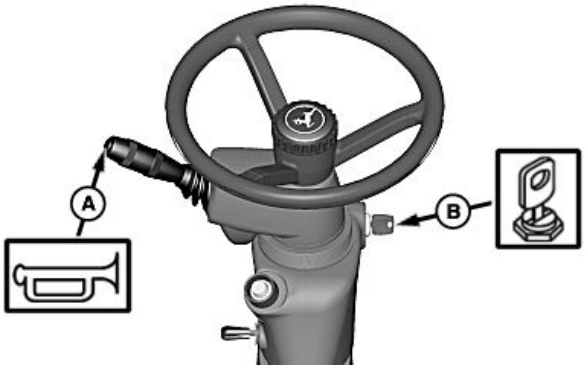
Open or remove all doors and drain holes.

**CAUTION: Sound horn (A) to clear everyone from area. Stay clear of machine when discharging chaff.**

Turn key switch (B) to start engine.

Engage separator until chaff stops coming out rear of machine.

Lower engine rpm to low idle and engage separator several times. Running the separator at low idle removes dirt from inside the rotor.




H97186 —UN—02NOV10

**A—Horn** **B—Key Switch**

Move throttle to high rpm and run for a few minutes. Repeat cycle until chaff no longer comes out of the rear of machine.

**CAUTION: Keep bystanders clear of machine when discharging chaff.**

Drive machine onto blocking so right-hand side is about 150 mm (6 in.) higher, or park on incline so dirt can run out.

**Continued on next page**

OUO6075,0001574 -19-27JUN13-1/30

**CAUTION: Shut OFF engine, set park brake, remove key, block wheels and lower feeder house safety stop.**

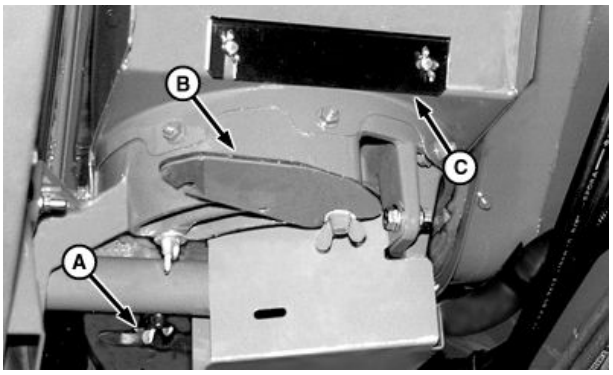
**When working with compressed air in dusty conditions, you must wear goggles and dust mask for personal protection. Air hose must have a 2 m (6 ft.) wand (end).**

Start at top of machine and work down.



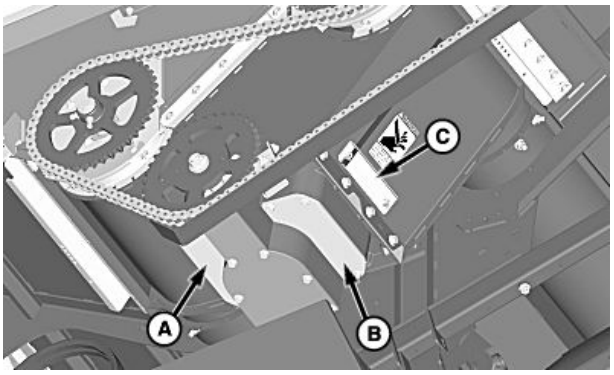

H39607 —UN—11OCT88

OUO6075,0001574 -19-27JUN13-2/30




H62230 —UN—19JAN00

*S660 and S670*




H98866 —UN—27OCT10

*S680, S685 and S690*

**A—Cleanout Door** **B—Cleanout Door** **C—Cleanout Door**

Open cleanout doors (A), (B) and (C).

Clean grain from under grain tank cross augers over to the sump.

Clean grain from edges of unloading auger sump to the bottom. Grain must be cleaned out from doors standing on ground.

**Continued on next page**

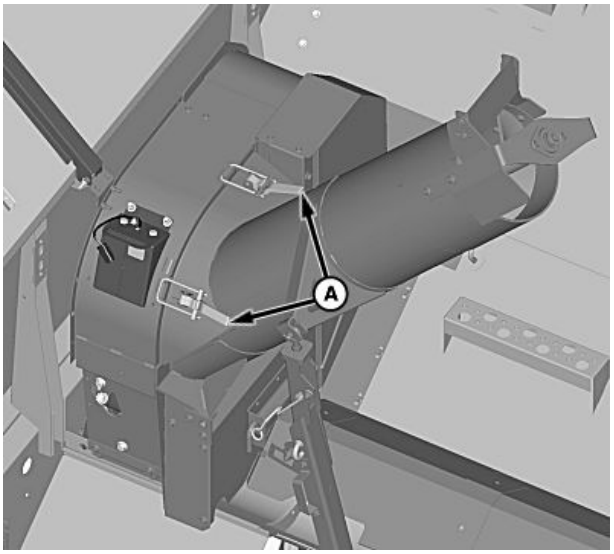
OUO6075,0001574 -19-27JUN13-3/30

**Grain Tank Loading Auger (Grain Tank Extensions):**

Release clamps (A) and lower auger.

Clean top area and down into clean grain elevator to clean elevator chain. Clean all sides.

**A—Clamps**




H102235 —UN—15JUN11

OUO6075,0001574 -19-27JUN13-4/30

**Grain Tank Loading Auger (Grain Tank Covers):**

**CAUTION: DO NOT pull or remove pin (A) to lower grain tank loading auger. Removing pin could result in personal injury or machine damage.**

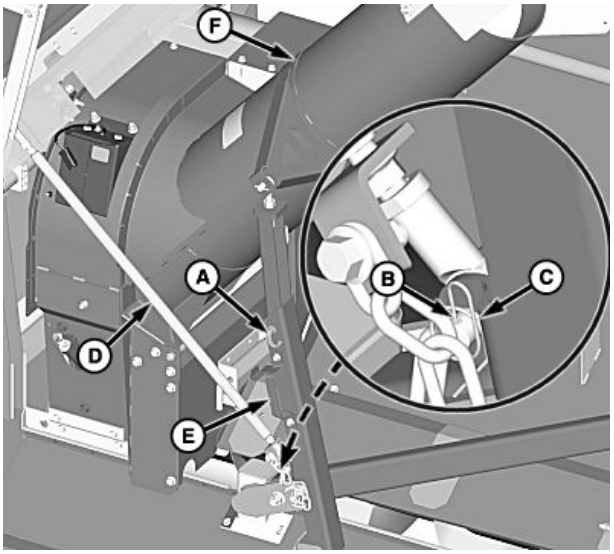
**Grain tank loading auger is heavy. Use extra care when raising or lowering auger.**

Remove quick-lock pin (B) and pin (C) from turnbuckle (D).

Use handle (E) to assist in lowering grain tank loading auger (F).

Clean top area and down into clean grain elevator to clean elevator chain. Clean all sides.

**A—Pin**
**B—Quick-Lock Pin**
**C—Pin**
**D—Turnbuckle**
**E—Handle**
**F—Auger**



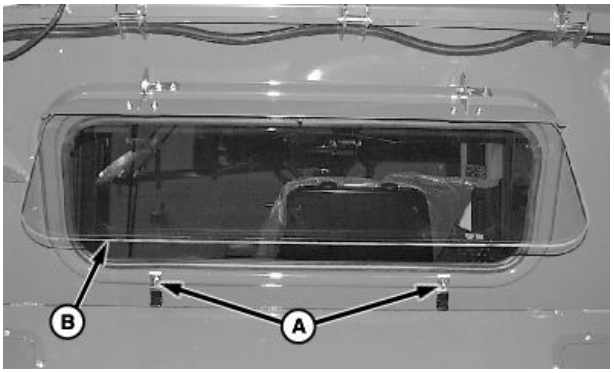

H102236 —UN—15JUN11

OUO6075,0001574 -19-27JUN13-5/30

Loosen clamps (A) and swing grain tank window (B) up.

Clean out area behind cab, around primary countershaft and over separator.

**A—Clamps**
**B—Grain Tank Window**




H76204 —UN—28APR03

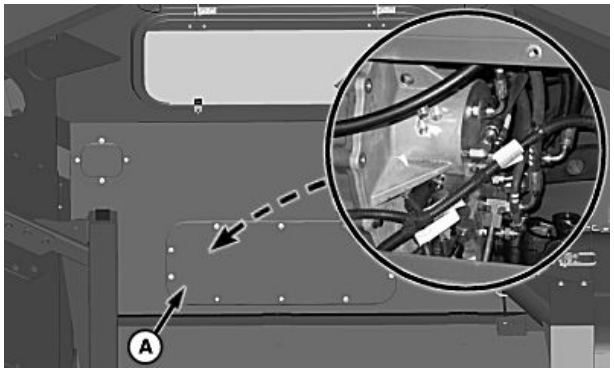
**Continued on next page**

OUO6075,0001574 -19-27JUN13-6/30

Remove access door (A) (if equipped) on front side of grain tank.

Clean out material around multi-speed feeder house drive gearcase.

**A—Access Door**




H87627 —UN—13MAR07

OUO6075,0001574 -19-27JUN13-7/30

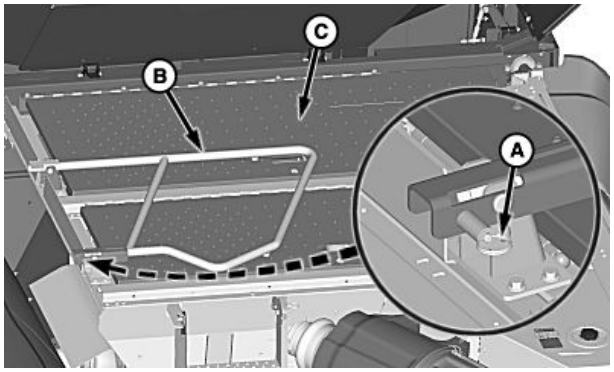
Pull lock-out pin (A) and rotate handrail (B) up until handrail locks into place.

Open engine access covers (C) and clean top side of engine compartment area and around separator on front side of engine.

Clean entire engine compartment area, especially under engine.

Wipe up any oil or grease found on engine area.

**A—Lock-Out Pin**
**B—Handrail**
**C—Engine Access Covers**




H102385 —UN—22JUN11

OUO6075,0001574 -19-27JUN13-8/30

Pull lock-out pin (A) and rotate ladder (B) up until ladder locks into place.

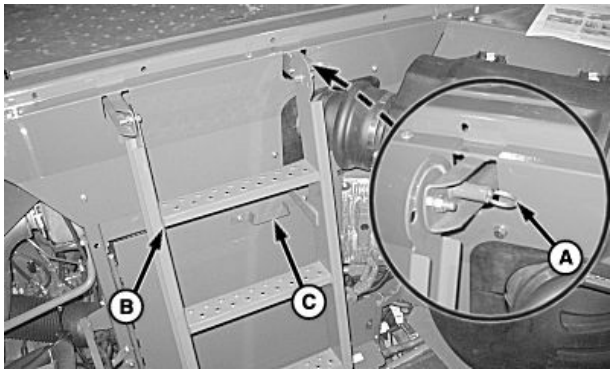
Pull filter access cover (C) open to release from magnet.

Clean rear side of engine compartment area.

Clean entire engine compartment area, especially under engine.

Wipe up any oil or grease found on engine area.

**A—Lock-Out Pin**
**B—Ladder**
**C—Cover**




H95353 —UN—25AUG10

**Continued on next page**

OUO6075,0001574 -19-27JUN13-9/30

**Tier 2/Stage II (S660 and S670):**

*NOTE: Clean areas out with compressed air, blowing from inside out.*

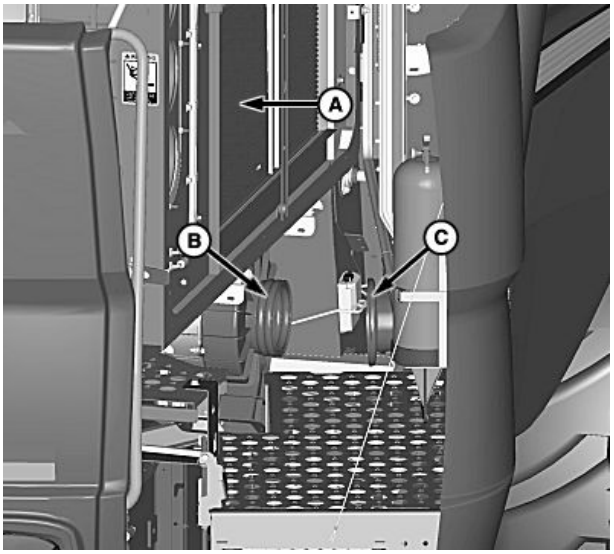
Open rotary screen door.

Clean the following areas from inside out:

- Radiator (A)
- Condenser
- Oil Cooler
- Charge Air Cooler

Clean out dirt from lower vacuum duct (B) and transfer duct (C).

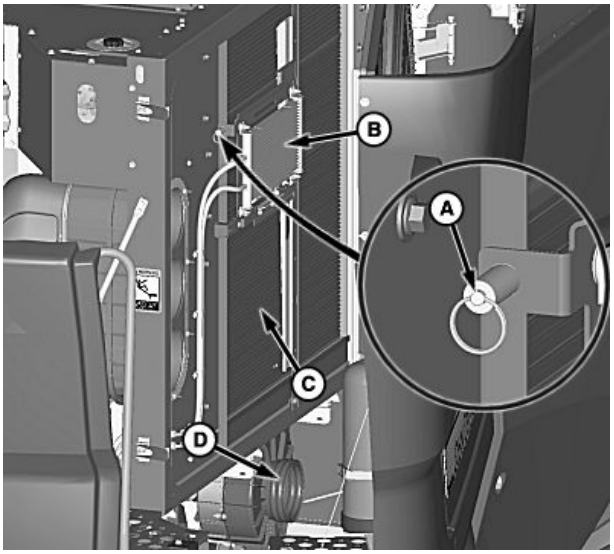
**A—Radiator**
**B—Vacuum Duct**
**C—Transfer Duct**



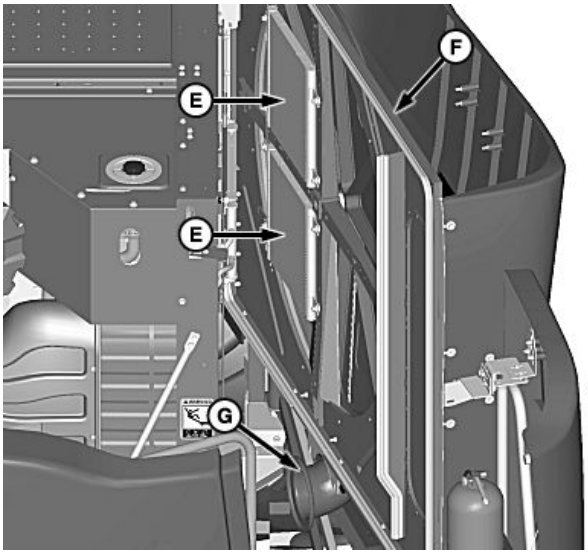

H106852 —UN—08FEB13

OUO6075,0001574 -19-27JUN13-10/30

**Interim Tier 4/Stage III B (S660, S670, S680, S685 and S690):**




H106853 —UN—08FEB13




H106854 —UN—08FEB13

**A—Lock-Out Pin**
**B—Fuel Cooler**
**C—Radiator**
**D—Vacuum Duct**
**E—Condensers**
**F—Rotary Screen Door**
**G—Transfer Duct**

*NOTE: Clean areas out with compressed air, blowing from inside out.*

Open rotary screen door.

Pull lock-out pin (A) and rotate fuel cooler (B) to clean.

Clean the following areas from inside out:

- Radiator (C)
- Oil Cooler
- Charge Air Cooler

Clean out dirt from lower vacuum duct (D).

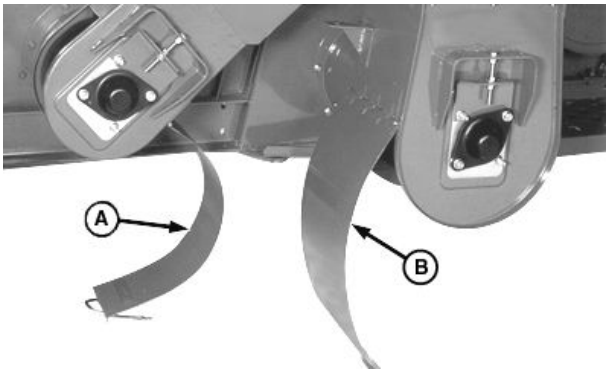
Clean condensers (E) located on rotary screen door (F).

Clean out dirt from transfer duct (G).

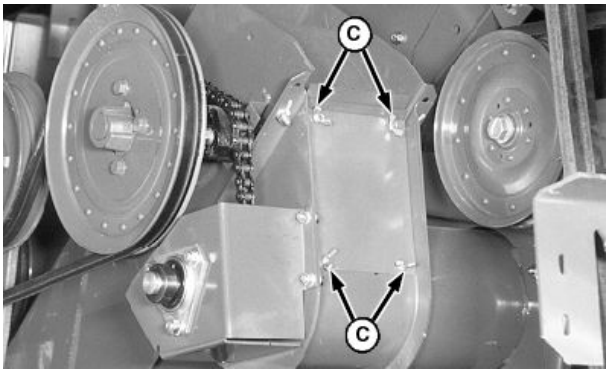
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OUO6075,0001574 -19-27JUN13-11/30

**S660 and S670:**




H62232 —UN—19JAN00




H62233 —UN—19JAN00

**A—Tailings Elevator Door** **B—Clean Grain Elevator Door** **C—Wing Nuts**

Open lower tailings elevator door (A) and clean grain elevator door (B).

Remove wing nuts (C) and remove door at upper end of tailings elevator.

Remove material as needed and clean sides of elevator.

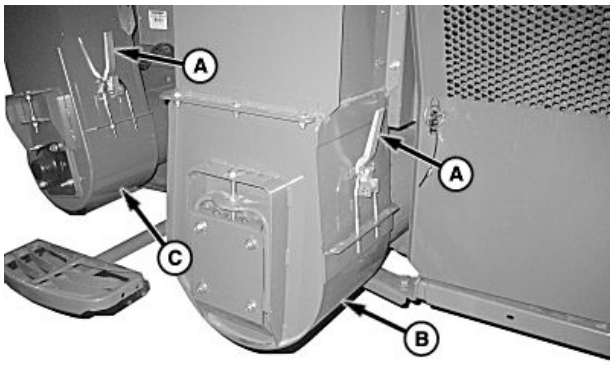
OUO6075,0001574 -19-27JUN13-12/30

**S680, S685 and S690:**

Use handle (A) to open clean grain elevator door (B) and tailings system elevator door (C).

Remove material as needed and clean sides of elevator.

**A—Handle**
**B—Clean Grain Elevator Door**
**C—Tailings System Elevator Door**




H97193 —UN—30JUN10

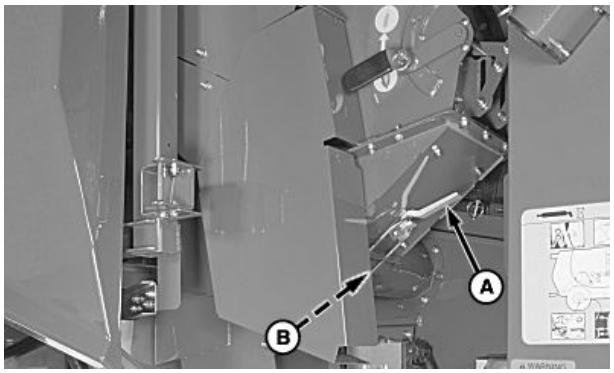
OUO6075,0001574 -19-27JUN13-13/30

**S680, S685 and S690:**

Use handle (A) to open tailings system auger door (B).

Remove material as needed and clean sides of elevator.

**A—Handle** **B—Tailings System Auger Door**

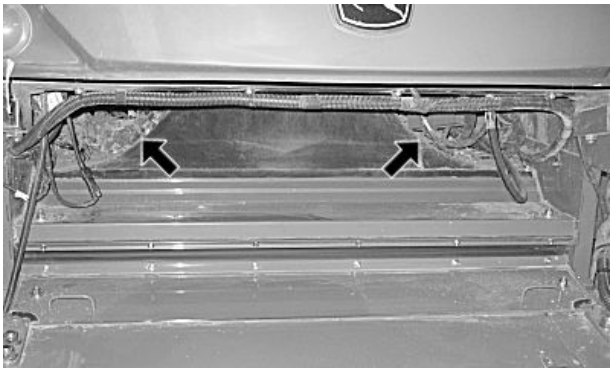



H97194 —UN—30JUN10

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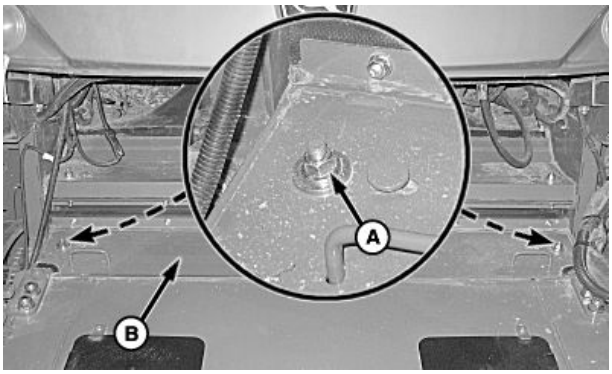
OUO6075,0001574 -19-27JUN13-14/30

Clean out chaff between separator and sides of machine.

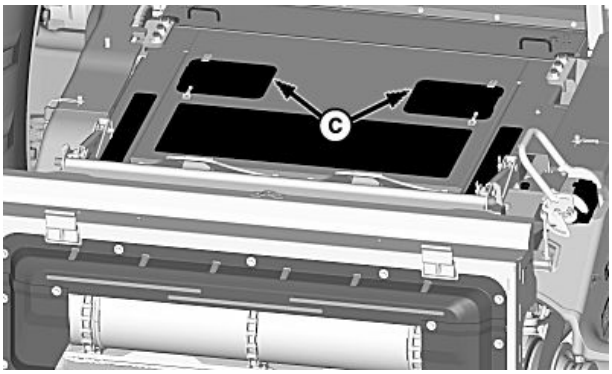


H100541 —UN—02MAR11

OUO6075,0001574 -19-27JUN13-15/30




H100486 —UN—28FEB11




H90905 —UN—27FEB08

**A—Nuts**
**B—Feeder House Door**
**C—Feeder House Door**

Loosen nuts (A) on each side of feeder house door and push nuts towards center of feeder house.

Pull door forward to remove.

Clean feeder house through top doors (B) and (C).

Lift conveyor chain and let chain snap back several times while cleaning.

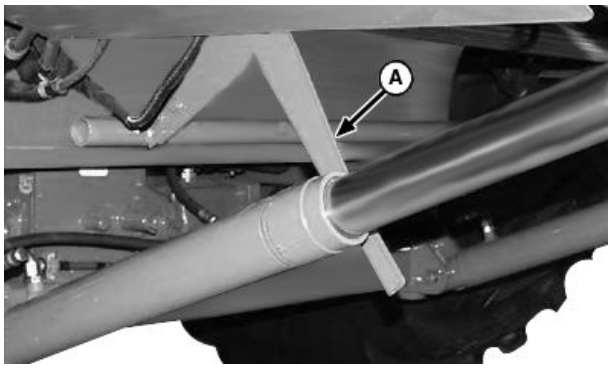
OUO6075,0001574 -19-27JUN13-16/30

Remove quick-lock pin and move lever (A) down and rearward to open feed plate.

Clean out feed plate area.

Push lever forward and up to close feed plate. Retain with quick-lock pin.

**A—Lever**




H52761 —UN—17MAY99

**Continued on next page**

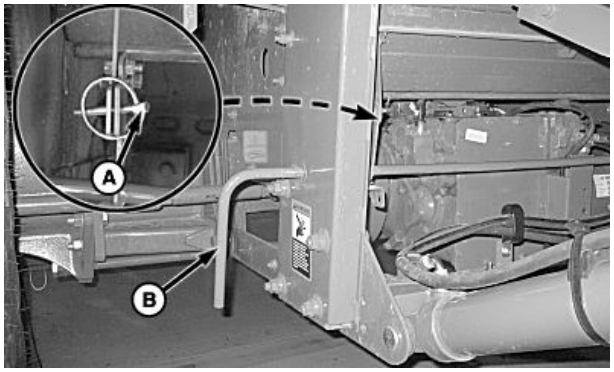
OUO6075,0001574 -19-27JUN13-17/30

Remove quick-lock pin (A) and move lever (B) up to open stone trap.

Clean out stone trap area.

Move lever down to close stone trap. Retain with quick-lock pin.

**A—Quick-Lock Pin** **B—Lever**



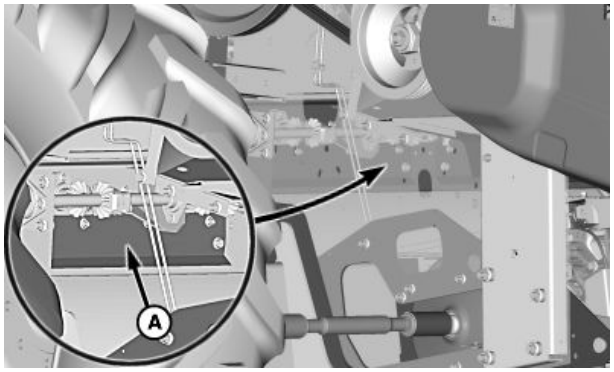

H99239 —UN—01DEC10

OUO6075,0001574 -19-27JUN13-18/30

If Equipped: Remove cap screws from cleanout doors (A) to clean area.

Install cleanout doors and cap screws when cleaning is complete.

**A—Cleanout Doors**

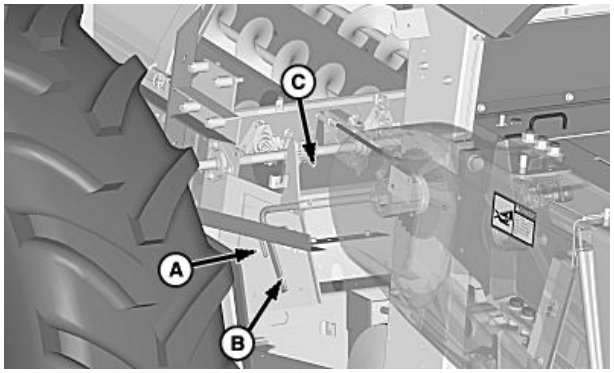



H102538 —UN—29JUN11

OUO6075,0001574 -19-27JUN13-19/30

If Equipped: Pull lock-out pin (A) and move handle (B) up to dump cleanout door (C) and move handle down to close and lock cleanout door.

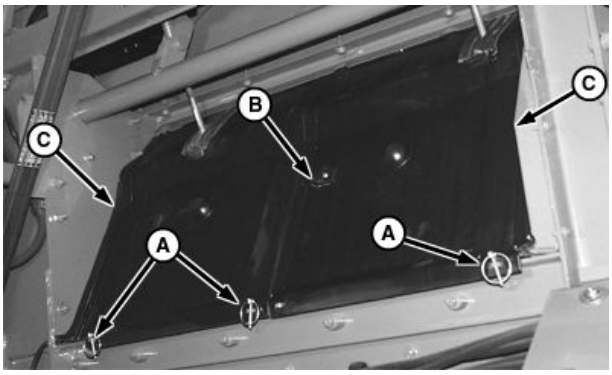
**A—Lock-Out Pin** **C—Cleanout Door**
**B—Handle**




H91139 —UN—15APR08

**Continued on next page**

OUO6075,0001574 -19-27JUN13-20/30




H62265 —UN—19JAN00



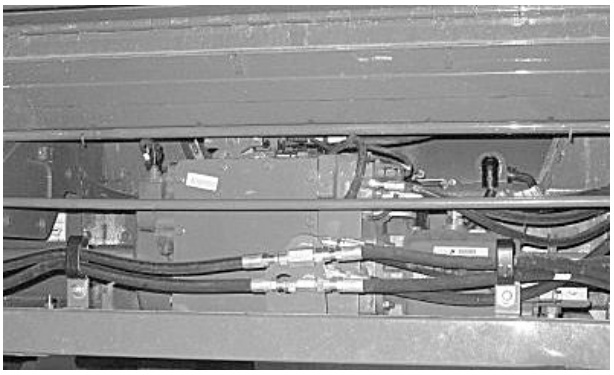
H52708 —UN—23MAR99

**A—Quick-Lock Pins** **B—Spring Latch** **C—Separator Covers**

Remove quick-lock pins (A), spring latch (B) and separator covers (C). Use scraper to loosen material, and clean out through sides of machine.

OUO6075,0001574 -19-27JUN13-21/30

Clean off top of axle and transmission.



H99165 —UN—22NOV10

*Push Button Shift Machine Shown*

OUO6075,0001574 -19-27JUN13-22/30

Open sieve and chaffer as far as possible and clean.

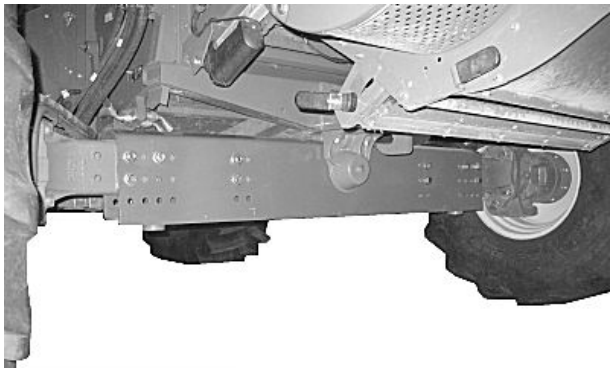


H52710 —UN—23MAR99

**Continued on next page**

OUO6075,0001574 -19-27JUN13-23/30

Clean rear axle area.



H100556 —UN—02MAR11

OUO6075,0001574 -19-27JUN13-24/30

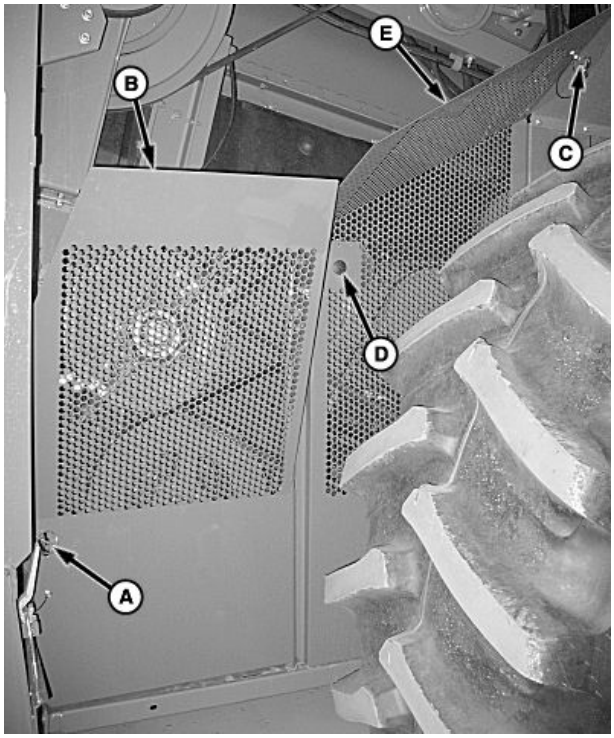
Remove quick-lock pin (A) and open shield (B).

Remove quick-lock pin (C) and turn latch (D) to unlock.

Lift and remove rear shield (B) and middle fan shield (E).

Clean out fan area.

**A—Quick-Lock Pin**
**B—Shield**
**C—Quick-Lock Pin**
**D—Latch**
**E—Shield**




H96806 —UN—09JUN10

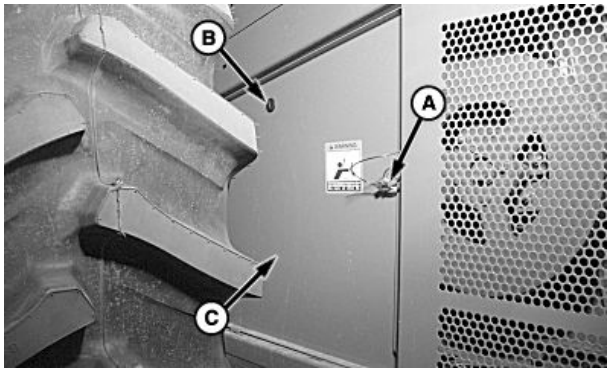
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OUO6075,0001574 -19-27JUN13-25/30

Remove quick-lock pin (A) and turn latch (B) to remove shield (C).

Clean out area.

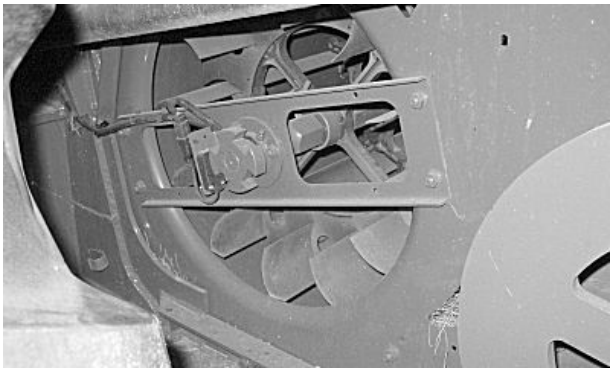
**A—Quick-Lock Pin**
**B—Latch**
**C—Shield**




H96803 —UN—09JUN10

OUO6075,0001574 -19-27JUN13-26/30

Clean area around fan.

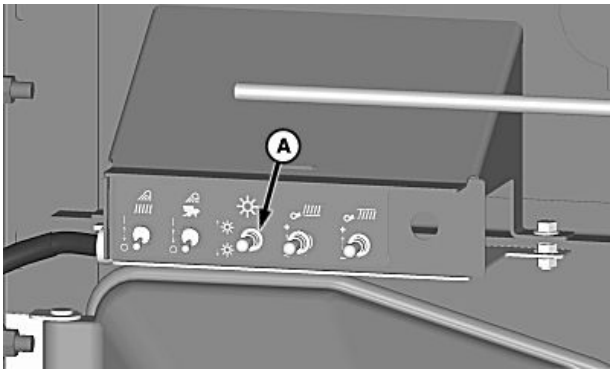


H100557 —UN—02MAR11

OUO6075,0001574 -19-27JUN13-27/30

Raise chopper (if equipped) with switch (A).

**A—Switch**



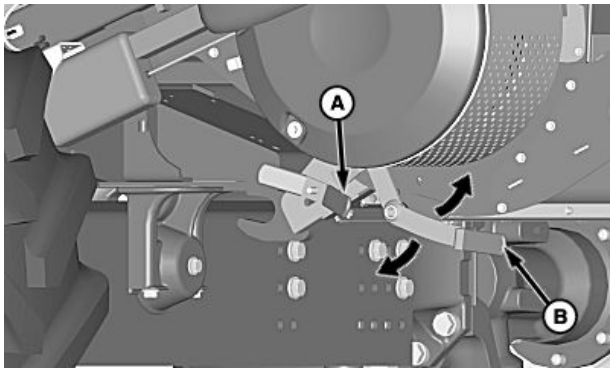

H97565 —UN—14SEP10

**Continued on next page**

OUO6075,0001574 -19-27JUN13-28/30

Loosen wing nut (A) and use handle (B) to disengage knifebank and clean chopper.

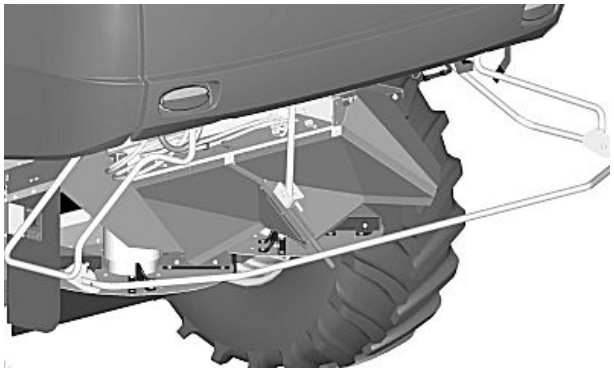
**A—Wing Nut** **B—Handle**




H98137 —UN—20SEP10

OUO6075,0001574 -19-27JUN13-29/30

Clean chaff from spreader (if equipped) drive area and spreader hood.



H98906 —UN—27OCT10

OUO6075,0001574 -19-27JUN13-30/30

## Handle Fuel Safely—Avoid Fires

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.



TS202 —UN—23AUG88

Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.

DX,FIRE1 -19-12OCT11-1/1

## Avoid Static Electricity Risk When Refueling

The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

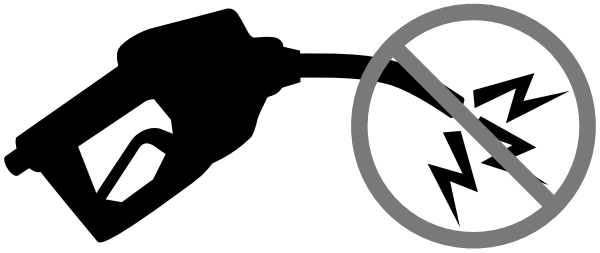
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure the delivery system is in compliance with fueling standards for proper grounding and bonding practices.



RG22142 —UN—21AUG13



RG21992 —UN—21AUG13

OUO6075,000159E -19-25JUN13-1/1

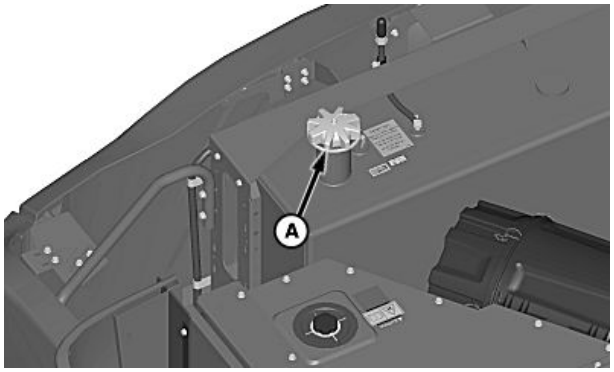
## Fuel Tank—Filling

**CAUTION: Handle fuel carefully. Do not refuel machine while smoking. Shut OFF engine, set park brake and remove key before filling tank.**

**Do not overfill fuel tank. Bodily injury can result from fuel splash back. Leakage can result from expansion of fuel. If tank is filled too full, then left in direct sunlight or if temperature gets too hot, tank will overflow.**

**IMPORTANT: Interim Tier 4/Stage III B Engines: Use ONLY ultra low sulfur diesel fuel. See Diesel Fuel and Biodiesel Fuel in this section for further information.**

Fill fuel tank (A) at end of each day. This prevents condensation in tank as moist air cools.




H106862 —UN—11FEB13

**A—Fuel Tank**

OUO6075,00013CD -19-11FEB13-1/1

## Handling and Storing Diesel Fuel

**CAUTION: Handle fuel carefully. Do not fill the fuel tank when engine is running.**

**DO NOT smoke while you fill the fuel tank or service the fuel system.**

Fill the fuel tank at the end of each day's operation to prevent water condensation and freezing during cold weather.

Keep all storage tanks as full as practicable to minimize condensation.

Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering.

Monitor water content of the fuel regularly.

When using bio-diesel fuel, the fuel filter may require more frequent replacement due to premature plugging.

Check engine oil level daily prior to starting engine. A rising oil level may indicate fuel dilution of the engine oil.

When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel and prevent water condensation. Contact your fuel supplier for recommendations.

OUO6075,0000ADD -19-09DEC10-1/1

## Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590 or ASTM D975 is acceptable for use at all percentage mixture levels.

**Required Fuel Properties**

In all cases, the fuel shall meet the following properties:

**Cetane number of 43 minimum.** Cetane number greater than 47 is preferred, especially for temperatures below –20°C (–4°F) or elevations above 1500 m (5000 ft.).

**Cold Filter Plugging Point** (CFPP) should be at least 5°C (9°F) below the expected lowest temperature or **Cloud Point** below the expected lowest ambient temperature.

**Fuel lubricity** should pass a maximum scar diameter of 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

**Diesel fuel quality and sulfur content** must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

**Sulfur content for Interim Tier 4 and Stage III B engines**

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

**Sulfur Content for Tier 3 and Stage III A Engines**

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED
- Use of diesel fuel with sulfur content 1000–5000 mg/kg (1000–5000 ppm) REDUCES oil and filter change intervals.
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer

**Sulfur Content for Tier 2 and Stage II Engines**

- Use of diesel fuel with sulfur content less than 500 mg/kg (500 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 500–5000 mg/kg (500–5000 ppm) REDUCES the oil and filter change interval
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer

**Sulfur Content for Other Engines**

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is recommended.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change intervals.

**IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.**

**IMPORTANT: Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.**

DX,FUEL1 -19-11APR11-1/1

## Biodiesel Fuel

Biodiesel fuel is comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats. Biodiesel blends are biodiesel mixed with petroleum diesel fuel on a volume basis.

Before using fuel containing biodiesel, review the Biodiesel Use Requirements and Recommendations in this Operator's Manual.

Environmental laws and regulations can encourage or prohibit the use of biofuels. Operators should consult with appropriate governmental authorities prior to using biofuels.

**All John Deere Engines with Exhaust Filter (Released 2011 and After)**

While 5% blends (B5) are preferred, biodiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used. Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

Biodiesel concentrations above B20 can harm the engine's emission control systems and should not be used. Risks include, but are not limited to, more frequent stationary regeneration, soot accumulation, and increased intervals for ash removal.

John Deere approved fuel conditioners, which contain detergent and dispersant additives, are required when using B20, and are recommended when using lower biodiesel blends.

**All John Deere Engines Excluding Exhaust Filter (Primarily Released Prior to 2012)**

While 5% blends (B5) are preferred, biodiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used. Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

These John Deere engines can operate on biodiesel blends above B20 (up to 100% biodiesel). Operate at levels above B20 ONLY if the biodiesel is permitted by law and meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 might not fully comply with or be permitted by all applicable emissions regulations. Expect up to a 12% reduction in power and an 18% reduction in fuel economy when using 100% biodiesel.

John Deere approved fuel conditioners, which contain detergent and dispersant additives, are required when using B20, and are recommended when using lower biodiesel blends.

**Biodiesel Use Requirements and Recommendations**

The petroleum diesel portion of all biodiesel blends must meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standards.

Biodiesel users in the U.S. are strongly encouraged to purchase biodiesel blends from a BQ-9000 Certified Marketer and sourced from a BQ-9000 Accredited Producer (as certified by the National Biodiesel Board). Certified Marketers and Accredited Producers can be found at the following website: http://www.bq9000.org.

Biodiesel contains residual ash. Ash levels exceeding the maximums allowed in either ASTM D6751 or EN14214 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present).

The fuel filter can require more frequent replacement, when using biodiesel fuel, particularly if switching from diesel. Check engine oil level daily prior to starting engine. A rising oil level can indicate fuel dilution of the engine oil. Biodiesel blends up to B20 must be used within 90 days of the date of biodiesel manufacture. If used, biodiesel blends above B20 must be used within 45 days from the date of biodiesel manufacture.

When using biodiesel blends up to B20, the following must be considered:

- Cold weather flow degradation
- Stability and storage issues (moisture absorption, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to biodiesel on used engines.)
- Possible fuel leakage through seals and hoses (primarily an issue with older engines)
- Possible reduction of service life of engine components

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the specifications provided in this Operator's Manual.

Consult your John Deere dealer for approved fuel conditioners to improve storage and performance with biodiesel fuels.

The following must also be considered if using biodiesel blends above B20:

- Possible coking or blocked injector nozzles, resulting in power loss and engine misfire if John Deere approved fuel conditioners are not used
- Possible crankcase oil dilution (requiring more frequent oil changes)
- Possible lacquering or seizure of internal components
- Possible formation of sludge and sediments
- Possible thermal oxidation of fuel at elevated temperatures
- Possible compatibility issues with other materials (including copper, lead, zinc, tin, brass, and bronze) used in fuel handling equipment
- Possible reduction in water separator efficiency
- Possible damage to paint if exposed to biodiesel

Continued on next page

DX,FUEL7 -19-29AUG12-1/2

- Possible corrosion of fuel injection equipment
- Possible elastomeric seal and gasket material degradation (primarily an issue with older engines)
- Possible high acid levels within fuel system
- Because biodiesel blends above B20 contain more ash, using blends above B20 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present)

**IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines. Their use could cause engine failure.**

DX,FUEL7 -19-29AUG12-2/2

## Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

**IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.**

Fuel lubricity should pass a maximum scar diameter of 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

If fuel of low or unknown lubricity is used, add John Deere Fuel-Protect Diesel Fuel Conditioner (or equivalent) at the specified concentration.

**Lubricity of Biodiesel Fuel**

Fuel lubricity can improve significantly with biodiesel blends up to B20 (20% biodiesel). Further increase in lubricity is limited for biodiesel blends greater than B20.

DX,FUEL5 -19-14APR11-1/1

## Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold weather operation, a little extra care is necessary. The information below outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold weather aids.

**Use Winter Grade Fuel**

When temperatures fall below 0°C (32°F), winter grade fuel (No. 1-D in North America) is best suited for cold weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

**Cloud point** is the temperature at which wax will begin to form in the fuel and this wax causes fuel filters to plug. **Pour point** is the lowest temperature at which movement of the fuel is observed.

*NOTE: On average, winter grade diesel fuel has a lower Btu (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low power complaints in cold weather operation.*

**Air Intake Heater**

An air intake heater is an available option for some engines to aid cold weather starting.

**Ether**

An ether port on the intake is available to aid cold weather starting.

**CAUTION: Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.**

**Coolant Heater**

An engine block heater (coolant heater) is an available option to aid cold weather starting.

**Seasonal Viscosity Oil and Proper Coolant Concentration**

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

**Diesel Fuel Flow Additive**

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold weather season. This generally extends operability to about 10°C (18°F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

**IMPORTANT: Treat fuel when outside temperature drops below 0°C (32°F). For best results, use with untreated fuel. Follow all recommended instructions on label.**

**BioDiesel**

When operating with biodiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) at 5°C (41°F) to treat biodiesel fuels during the cold weather season. Use B5 or lower blends at temperatures below 0°C (32°F). Use only winter grade petroleum diesel fuel at temperatures below -10°C (14°F).

**Winterfronts**

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

**Radiator Shutters**

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93°C (200°F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

DX,FUEL10 -19-20APR11-1/1

## Heavy Duty Diesel Engine Coolant

The engine cooling system is filled to provide year-round protection against corrosion and cylinder liner pitting, and winter freeze protection to -37°C (-34°F). If protection at lower temperatures is required, consult your John Deere dealer for recommendations.

**The following engine coolants are preferred:**

- John Deere COOL-GARD™ II Premix
- John Deere COOL-GARD II PG Premix

Use John Deere COOL-GARD II PG Premix when a non-toxic coolant formulation is required.

**Additional Recommended Coolants**

The following engine coolant is also recommended:

- John Deere COOL-GARD II Concentrate in a 40–60% mixture of concentrate with quality water.

John Deere COOL-GARD II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate coolants do not require use of supplemental coolant additives.

**Other Coolants**

John Deere COOL-GARD II and COOL-GARD II PG coolants might not be available in the geographical area where service is performed.

If these coolants are unavailable, use a coolant concentrate or prediluted coolant intended for use with heavy duty diesel engines and with a minimum of the following chemical and physical properties:

- Is formulated with a quality nitrite-free additive package.
- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

The additive package must be part of one of the following coolant mixtures:

- ethylene glycol or propylene glycol base prediluted (40—60%) heavy duty coolant
- ethylene glycol or propylene glycol base heavy duty coolant concentrate in a 40—60% mixture of concentrate with quality water

**Water Quality**

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

**IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.**

**Do not mix ethylene glycol and propylene glycol base coolants.**

**Do not use coolants that contain nitrites.**

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DX,COOL3 -19-14APR11-1/1

## Drain Intervals for Diesel Engine Coolant

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix and COOL-GARD II Concentrate are maintenance free coolants for up to six years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix or COOL-GARD II PG Premix.

Test the coolant condition annually with Coolant Test Strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II Coolant Extender as directed.

If John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, or COOL-GARD II Concentrate is used, but the coolant is not tested OR additives are not replenished by adding John Deere COOL-GARD II Coolant Extender, the drain interval is four years or 4000 hours of operation. This drain interval only applies to COOL-GARD II coolants that have been maintained within a 40—60% mixture of concentrate with quality water.

If a coolant other than COOL-GARD II, or COOL-GARD II PG is used, reduce the drain interval to two years or 2000 hours of operation.

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DX,COOL11 -19-14APR11-1/1

## John Deere COOL-GARD™ II Coolant Extender

Some coolant additives will gradually deplete during engine operation. For John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate, replenish coolant additives between drain intervals by adding John Deere COOL-GARD II Coolant Extender.

John Deere COOL-GARD II Coolant Extender should not be added unless indicated by coolant testing.

John Deere COOL-GARD II Coolant Extender is a chemically matched additive system for use with all John Deere COOL-GARD II coolants. John Deere COOL-GARD II Coolant Extender is not intended for use with nitrite-containing coolants.

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**IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:**

- **John Deere COOL-GARD II**
- **John Deere COOL-GARD II PG**

The use of non-recommended supplemental coolant additives may result in additive drop-out, gelation of the coolant, or corrosion of cooling system components.

Add the recommended concentration of John Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

DX,COOL16 -19-20APR11-1/1

## Supplemental Coolant Additives

Some coolant additives will gradually deplete during engine operation. For nitrite-containing coolants, replenish coolant additives between drain intervals by adding a supplemental coolant additive as determined necessary by coolant testing.

John Deere Liquid Coolant Conditioner is recommended as a supplemental coolant additive for nitrite-containing coolants.

John Deere Liquid Coolant Conditioner is not designed for use with John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, or COOL-GARD II Concentrate.

**IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:**

- **John Deere COOL-GARD II**
- **John Deere COOL-GARD II PG**

If other coolants are used, consult the coolant supplier and follow the manufacturer's recommendation for use of supplemental coolant additives.

The use of non-recommended supplemental coolant additives may result in additive drop-out and gelation of the coolant.

Add the manufacturer's recommended concentration of supplemental coolant additive. DO NOT add more than the recommended amount.

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DX,COOL4 -19-14APR11-1/1

## Operating in Warm Temperature Climates

John Deere engines are designed to operate using glycol base engine coolants.

Always use a recommended glycol base engine coolant, even when operating in geographical areas where freeze protection is not required.

John Deere COOL-GARD™ II Premix is available in a concentration of 50% ethylene glycol. However, there are situations in warm temperature climates where a coolant with lower glycol concentration (approximately 20% ethylene glycol) has been approved. In these cases, the low glycol formulation has been modified to provide the same level of corrosion inhibitor as John Deere COOL-GARD II Premix (50/50).

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**IMPORTANT: Water may be used as coolant *in emergency situations only.***

**Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation will occur when water is used as the coolant, even when coolant conditioners are added.**

**Drain cooling system and refill with recommended glycol base engine coolant as soon as possible.**

DX,COOL6 -19-03NOV08-1/1

## Additional Information About Diesel Engine Coolants and John Deere COOL-GARD™ II Coolant Extender

Engine coolants are a combination of three chemical components: ethylene glycol (EG) or propylene glycol (PG) antifreeze, inhibiting coolant additives, and quality water.

### Coolant Specifications

John Deere COOL-GARD™ II Premix either EG or PG, are fully formulated coolants that contain all three components in their correct concentrations. DO NOT add an initial charge of John Deere COOL-GARD II Coolant Extender to COOL-GARD II Premix. DO NOT add any other supplemental coolant additive or water to COOL-GARD II Premix.

John Deere COOL-GARD II Concentrate contains both ethylene glycol and inhibiting coolant additives. Mix this product with quality water, but DO NOT add an initial charge of John Deere COOL-GARD II Coolant Extender or any other supplemental coolant additive.

### Replenish Coolant Additives

Some coolant additives will gradually deplete during engine operation. Periodic replenishment of inhibitors is required, even when John Deere COOL-GARD II Premix or COOL-GARD II Concentrate is used. Follow the recommendations in this manual for the use of John Deere COOL-GARD II Coolant Extender.

### Why use John Deere COOL-GARD II Coolant Extender?

Operating without proper coolant additives will result in increased corrosion, cylinder liner erosion and pitting, and other damage to the engine and cooling system. A simple mixture of ethylene glycol or propylene glycol and water will not give adequate protection.

John Deere COOL-GARD II Coolant Extender is a chemically matched additive system designed to fortify the proprietary additives used in John Deere COOL-GARD II Premix and COOL-GARD II Concentrate and to provide optimum protection for up to six years or 6000 hours of operation.

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### Avoid Automotive-type Coolants

Never use automotive-type coolants (such as those meeting ASTM D3306). These coolants do not contain the correct additives to protect heavy-duty diesel engines. Do not treat an automotive engine coolant with supplemental coolant additives because the high concentration of additives can result in additive fallout.

### Water Quality

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.All water used in the cooling system should meet the following minimum specifications for quality:

| | |
|---|---|
| Chlorides | <40 mg/L |
| Sulfates | <100 mg/L |
| Total dissolved solids | <340 mg/L |
| Total hardness | <170 mg/L |
| pH | 5.5 to 9.0 |

### Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

| Ethylene Glycol | Freeze Protection Limit |
|---|---|
| 40% | -24°C (-12°F) |
| 50% | -37°C (-34°F) |
| 60% | -52°C (-62°F) |
| **Propylene Glycol** | **Freeze Protection Limit** |
| 40% | -21°C (-6°F) |
| 50% | -33°C (-27°F) |
| 60% | -49°C (-56°F) |

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

DX,COOL17 -19-20APR11-1/1

## Testing Diesel Engine Coolant

Maintaining adequate concentrations of glycol and inhibiting additives in the coolant is critical to protect the engine and cooling system against freezing, corrosion, and cylinder liner erosion and pitting.

Test the coolant solution at intervals of 12 months or less and whenever excessive coolant is lost through leaks or overheating.

**Coolant Test Strips**

Coolant test strips are available from your John Deere dealer. These test strips provide a simple, effective method to check the freeze point and additive levels of your engine coolant.

**When Using John Deere COOL-GARD II**

John Deere COOL-GARD II Premix™ , COOL-GARD II PG Premix and COOL-GARD II Concentrate are maintenance free coolants for up to six years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix or COOL-GARD II PG premix. Test the coolant condition annually with coolant test strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II Coolant Extender as directed.

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Add only the recommended concentration of John Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

**When Using Nitrite-Containing Coolants**

Compare the test strip results to the supplemental coolant additive (SCA) chart to determine the amount of inhibiting additives in your coolant and whether more John Deere Liquid Coolant Conditioner should be added.

Add only the recommended concentration of John Deere Liquid Coolant Conditioner. DO NOT add more than the recommended amount.

**Coolant Analysis**

For a more thorough evaluation of your coolant, perform a coolant analysis. The coolant analysis can provide critical data such as freezing point, antifreeze level, pH, alkalinity, nitrite content (cavitation control additive), molybdate content (rust inhibitor additive), silicate content, corrosion metals, and visual assessment.

Contact your John Deere dealer for more information on coolant analysis.

DX,COOL9 -19-11APR11-1/1

## Diesel Engine Break-In Oil (Tier 2/Stage II)

New engines are filled at the factory with either John Deere Break-In™ or Break-In™ Plus Engine Oil. During the break-in period, add John Deere Break-In™ or Break-In™ Plus Engine Oil, respectively, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

Change the oil and filter at 100 hours maximum for Break-In™ Oil or 375 hours maximum for Break-In™ Plus Oil during the initial operation of a new or rebuilt engine.

After engine overhaul, fill the engine with either John Deere Break-In™ or Break-In™ Plus Engine Oil.

If John Deere Break-In™ or Break-In™ Plus Engine Oil is not available, use a 10W-30 diesel engine oil meeting one of the following during the first 100 hours of operation:

- API Service Classification CE
- API Service Classification CD
- API Service Classification CC
- ACEA Oil Sequence E2
- ACEA Oil Sequence E1

*Break-In is a trademark of Deere & Company.*
*Plus-50 is a trademark of Deere & Company.*

**IMPORTANT: Do not use Plus-50™ II, Plus-50 or engine oils meeting any of the following for the initial break-in of a new or rebuilt engine:**

| | |
|---|---|
| **API CJ-4** | **ACEA E9** |
| **API CI-4 PLUS** | **ACEA E7** |
| **API CI-4** | **ACEA E6** |
| **API CH-4** | **ACEA E5** |
| **API CG-4** | **ACEA E4** |
| **API CF-4** | **ACEA E3** |
| **API CF-2** | |
| **API CF** | |

**These oils will not allow the engine to break in properly.**

John Deere Break-In™ Plus Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50™ II, John Deere Plus-50, or other diesel engine oil as recommended in this manual.

OUO6075,0000ADE -19-22JUN11-1/1

## John Deere Break-In™ Plus Engine Oil (Interim Tier 4/Stage III B)

New engines are filled at the factory with John Deere Break-In™ Plus Engine Oil. During the break-in period, add John Deere Break-In™ Plus Engine Oil, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

Change the oil and filter between a minimum of 100 hours and a maximum of 375 hours during the initial operation of a new or rebuilt engine.

After engine overhaul, fill the engine with John Deere Break-In™ Plus Engine Oil.

If John Deere Break-In™ Plus Engine Oil is not available, use a 10W-30 diesel engine oil meeting one of the following during the initial 250 hours of operation:

*Break-In is a trademark of Deere & Company.*
*Plus-50 is a trademark of Deere & Company.*

- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

**IMPORTANT: Do not use any other engine oils during the initial break-in of a new or rebuilt engine.**

John Deere Break-In™ Plus Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50™ II or other diesel engine oil as recommended in this manual.

OUO6075,0000ADF -19-22JUN11-1/1

## Diesel Engine Oil (Tier 2/Stage II)

Use oil viscosity based on the expected air temperature range during the period between oil changes.

**John Deere Plus-50™ II oil is preferred.**

John Deere Plus-50™ is also recommended.

Other oils may be used if they meet one or more of the following:

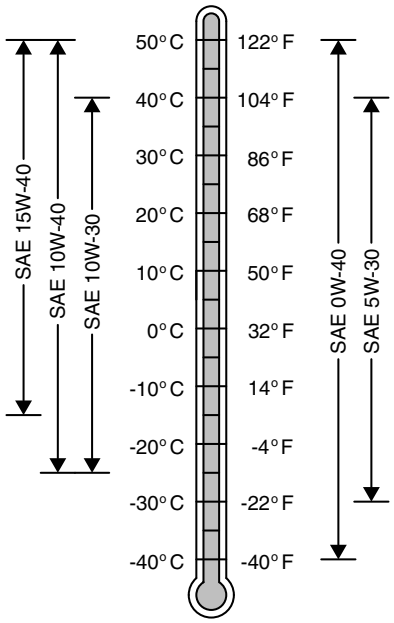
- John Deere Torq-Gard Supreme™
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- API Service Category CH-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5
- ACEA Oil Sequence E4
- ACEA Oil Sequence E3

**Multi-viscosity diesel engine oils are preferred.**

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

DO NOT use diesel fuel with sulfur content greater than 1.0% (10 000 mg/kg).

*Plus-50 is a trademark of Deere & Company*
*Torq-Gard Supreme is a trademark of Deere & Company*




*Oil Viscosities for Air Temperature Ranges*

OUO6075,0000AE0 -19-09DEC10-1/1

## Diesel Engine Oil (Interim Tier 4/Stage III B)

Use oil viscosity based on the expected air temperature range during the period between oil changes.

**John Deere Plus-50™ II is the recommended engine oil.**

Extended service intervals may apply when John Deere Plus-50™ II engine oil is used. Refer to the engine oil drain interval table and consult your John Deere dealer for more information.

If John Deere Plus-50™ II engine oil is not available, engine oil meeting one or more of the following may be used:

- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

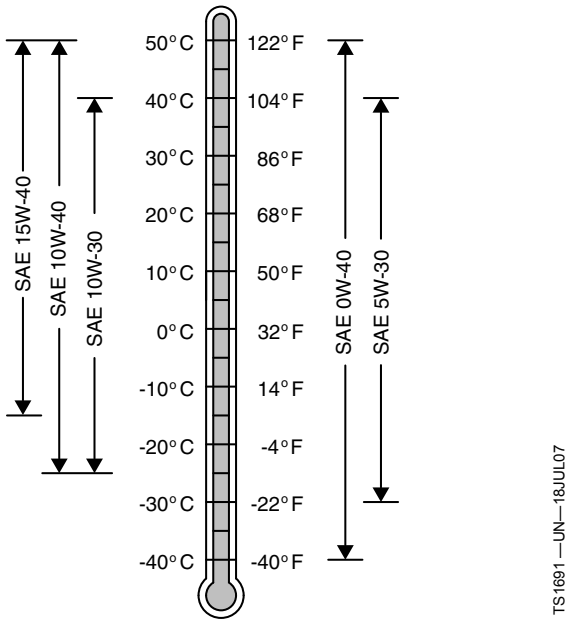
DO NOT use engine oil containing more than 1.0% sulfated ash, 0.12% phosphorus, or 0.4% sulfur.

**Multi-viscosity diesel engine oils are preferred.**

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

**IMPORTANT: Use only ultra low sulfur diesel (ULSD) fuel with a maximum sulfur content of 0.0015% (15 mg/kg).**

*Plus-50 is a trademark of Deere & Company*




*Oil Viscosities for Air Temperature Ranges*

OUO6075,0000AE1 -19-09DEC10-1/1

## Engine Oil and Filter Service Intervals (Tier 2/Stage II)

Recommended oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of the diesel fuel. Actual service intervals also depend on operation and maintenance practices.

Use oil analysis to evaluate the condition of the oil and to aid in selection of the proper oil and filter service interval. Contact your John Deere dealer for more information on engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

**Diesel fuel sulfur content** affects engine oil and filter service intervals.

- Use of diesel fuel with sulfur content less than 500 mg/kg (500 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 500—5000 mg/kg (500—5000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

**IMPORTANT: To avoid engine damage:**

- **Reduce oil and filter service intervals by 50% when using biodiesel blends greater than B20. Oil analysis may allow longer service intervals.**
- **Use only approved oil types.**

**Approved Oil Types:**

- ”Plus-50 Oils” include John Deere Plus-50™ II and John Deere Plus-50.
- ”Other Oils” include John Deere Torq-Gard™, API CJ-4, API CI-4 PLUS, API CI-4, API CH-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, ACEA E4, and ACEA E3.

| Engine Oil and Filter Service Intervals | |
|---|---|
| **Fuel Sulfur** | Less than 500 mg/kg (500 ppm) |
| Plus-50 Oils | 375 hours |
| Other Oils | 250 hours |
| **Fuel Sulfur** | 500—5000 mg/kg (500—5000 ppm) |
| Plus-50 Oils | 275 hours |
| Other Oils | 150 hours |
| **Fuel Sulfur** | 5000—10 000 mg/kg (5000—10 000 ppm) |
| Plus-50 Oils | 187 hours |
| Other Oils | 125 hours |
| Oil analysis may extend the service interval of ”Other Oils”, to a maximum not to exceed the interval for Plus-50 Oils. | |

*Plus-50 is a trademark of Deere & Company*
*Torq-Gard is a trademark of Deere & Company*

OUO6075,0000AE2 -19-09DEC10-1/1

## Engine Oil and Filter Service Intervals (Interim Tier 4/Stage III B)

Recommended oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of the diesel fuel. Actual service intervals also depend on operation and maintenance practices.

Use oil analysis to evaluate the condition of the oil and to aid in selection of the proper oil and filter service interval. Contact your John Deere dealer for more information on engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

**Diesel fuel sulfur content** affects engine oil and filter service intervals. Higher fuel sulfur levels reduce oil and filter service intervals.

Use of diesel fuel with sulfur content less than 15 mg/kg (15 ppm) is REQUIRED.

*Plus-50 is a trademark of Deere & Company*

**IMPORTANT: To avoid engine damage:**

- **Reduce oil and filter service intervals by 50% when using biodiesel blends greater than B20. Oil analysis may allow longer service intervals.**
- **Use only approved oil types.**

**Approved Oil Types:**

- **John Deere Plus-50™ II.**
- **”Other Oils” include API CJ-4, ACEA E9, and ACEA E6.**

| Engine Oil and Filter Service Intervals | |
|---|---|
| John Deere Plus-50™ II | 400 hours |
| Other Oils | 250 hours |

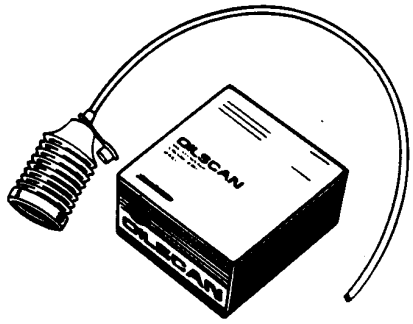
OUO6075,000115B -19-05JUN12-1/1

## Oilscan™ and CoolScan™

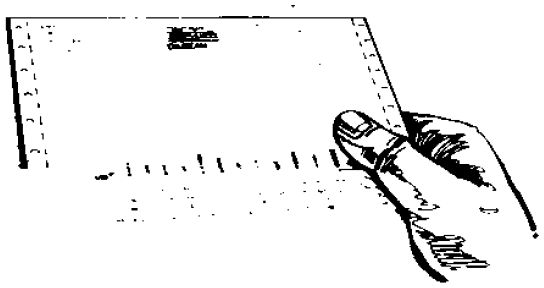
Oilscan™ and CoolScan™ are John Deere sampling programs to help you monitor machine performance and identify potential problems before they cause serious damage.

Oil and coolant samples should be taken from each system before its recommended change interval.

Check with your John Deere dealer for the availability of Oilscan™ and CoolScan™ kits.




T6828AB —UN—15JUN89



T6829AB —UN—26AUG11

*Oilscan is a trademark of Deere & Company*
*CoolScan is a trademark of Deere & Company*

DX,OILSCAN -19-13SEP11-1/1

## ProDrive™Transmission, CommandTouch™ Multi-Speed Feeder House Drive, Hydrostatic Drive System, Main Hydraulic System and Main Engine Gearcase Oils

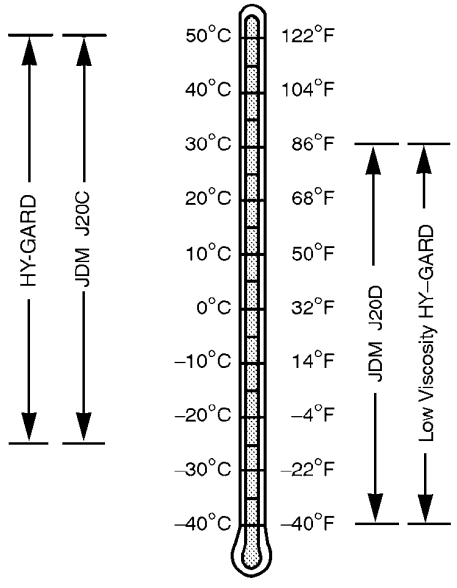
*NOTE: Machines come factory filled with John Deere Hy-Gard™.*

Only the following oils are approved:

- John Deere Hy-Gard™
- Oils meeting John Deere Standard JDM J20C

*NOTE: For usage in extremely low temperatures only the following may be substituted:*

- *Low Viscosity Hy-Gard™*
- *Oils meeting John Deere Standard JDM J20D*




ZX1030848 —UN—15SEP02

*Hy-Gard is a trademark of Deere & Company*

OUO6075,00013F2 -19-28FEB13-1/1

## Transmission (Mechanical Shift and Push Button Shift), Final Drives, Loading Auger, Primary Countershaft and Two-Speed Separator Drive Gearcases

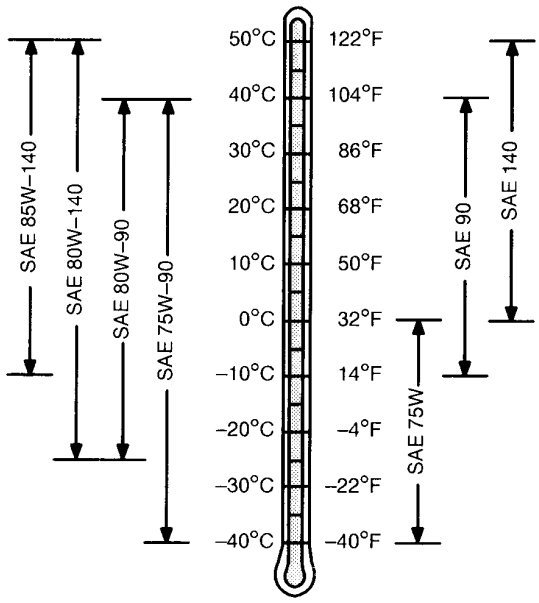
Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere GL-5 GEAR LUBRICANT
- John Deere EXTREME-GARD™

Other oils may be used if they meet API Service Classification GL-5.

| Product Number | Description | Size |
|---|---|---|
| TY6252 | 80W/90 GL5 Gear Lube | 16 kg pail (35 lb. pail) |
| TY6296 | 80W/90 GL5 Gear Lube | 0.9 L can (1 qt. can) |
| TY6256 | 85W/140 GL5 Gear Lube | 16 kg pail (35 lb. pail) |
| TY6345 | 85W/140 GL5 Gear Lube | 0.9 L can (1 qt. can) |




TS1653 —UN—14MAR96

*EXTREME-GARD is a trademark of Deere & Company.*

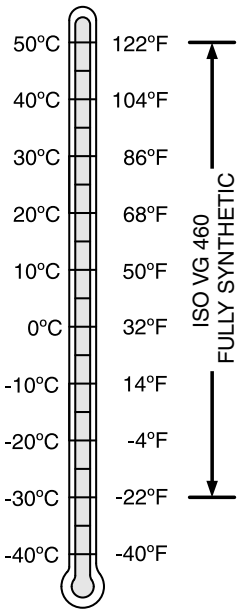
OUO6075,00010AC -19-05MAR12-1/1

## Feeder House Reverser Gearcase

Only the following oil is approved:

- ISO VG 460 Fully Synthetic

| Product Number | Description | Size |
|---|---|---|
| TY26408 | ISO VG 460 Fully Synthetic | 0.95 L (1 qt) |




OUO6075,0000B2A -19-09AUG07-1/1

## Grease

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

The following grease is recommended:

- John Deere SD POLYUREA GREASE (TY6341)

Other greases may be used if they meet the following:

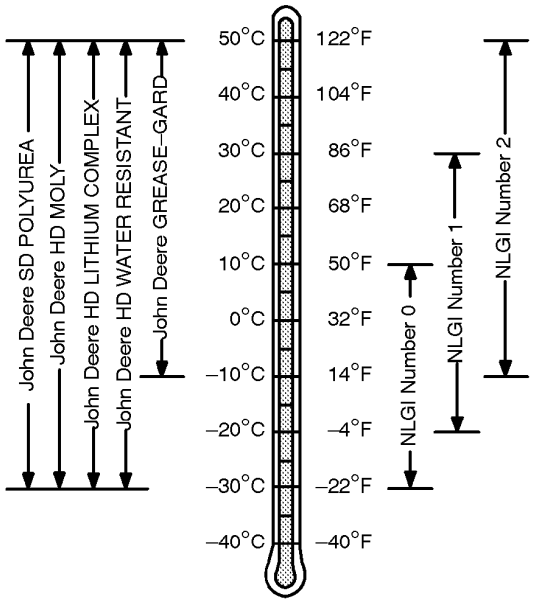
- NLGI Performance Classification GC-LB

**IMPORTANT: John Deere SD POLYUREA GREASE (TY6341) is the required grease for the feeder house torque sensing cams.**

**Some types of grease thicken and are not compatible with others.**

**If grease fitting is missing, replace immediately. Clean fittings thoroughly before using grease gun.**

| Product Number | Description |
|---|---|
| TY6341 | Multi-Purpose, High-Temperature Extreme Pressure Grease, especially effective in rolling contact applications. |




HX,AG,SF7350 -19-26OCT99-1/1

## Brake Fluid (If Equipped)

**IMPORTANT: When removing reservoir cap, keep contaminants from entering the reservoir.**

Fluid should be 6 mm (1/4 in.) from top.

Fill reservoir with SAE J1703d, DOT-3 or DOT-4 hydraulic brake fluid.

OUO6075,0000AE9 -19-10DEC10-1/1

## Oil Filters

Filtration of oils is critically important for proper operation and lubrication. John Deere brand oil filters have been designed and produced specifically for John Deere applications.

John Deere filters adhere to engineering specifications for quality of the filter media, filter efficiency rating, strength of the bond between the filter media and the element end cap, fatigue life of the canister (if applicable), and pressure capability of the filter seal. Non-John Deere branded oil filters might not meet these key John Deere specifications.

Always change oil filters regularly as specified in this manual.

OUO6075,0000AE4 -19-09DEC10-1/1

## Fuel Filters

The importance of fuel filtration cannot be overemphasized with modern fuel systems. The combination of increasingly restrictive emission regulations and more efficient engines requires fuel system to operate at much higher pressures. Higher pressures can only be achieved using fuel injection components with very close tolerances. These close manufacturing tolerances have significantly reduced capacities for debris and water.

John Deere brand fuel filters have been designed and produced specifically for John Deere engines.

To protect the engine from debris and water, always change engine fuel filters as specified in this manual.

OUO6075,0000AE5 -19-09DEC10-1/1

## Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to both conventional and synthetic lubricants.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER -19-11APR11-1/1

## Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST -19-11APR11-1/1

## Mixing of Lubricants

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

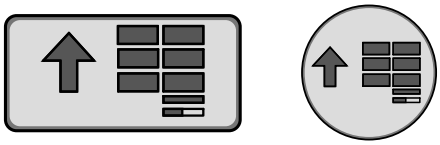
Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

Consult your John Deere dealer to obtain specific information and recommendations.

DX,LUBMIX -19-18MAR96-1/1

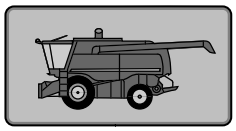
## Service Intervals—Clearing or Delaying

H95847 —UN—12OCT10



*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

H95878 —UN—29MAR10



*Performance Monitor Application Icon*

**⚠ CAUTION: To prevent injury, never lubricate or service machine, header, or engine while it is running. Shut OFF engine, set parking brake and remove key.**

**IMPORTANT: Service times are for average conditions. Service more often if machine is used in extreme conditions.**

*NOTE: See Break-In Service section for information on Service Intervals for First 100 Hours of Machine Operation.*

Press main menu icon or switch.

Touch or press confirm switch when performance monitor icon is highlighted.

OUO6075,00005F1 -19-27JUN12-1/3

Touch or press confirm switch when advanced settings icon (A) is highlighted.

Touch or press confirm switch when service alarm interval (B) is highlighted.

**Non-Touchscreen or Touchscreen:** Rotate selection dial until desired service interval is shown. Press confirm switch to save value.

**Touchscreen Only:** Enter desired service interval on numeric display. Touch enter/accept icon to save value.

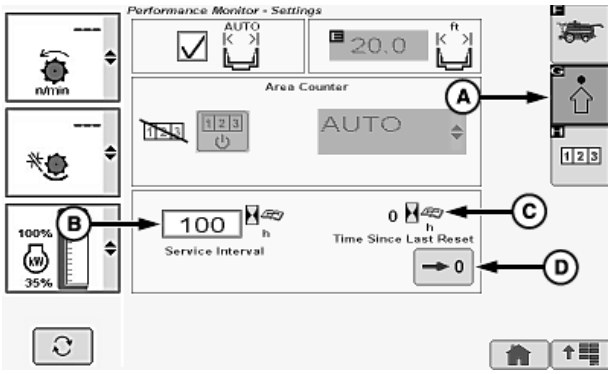
*NOTE: Use service screen as a guide to when the machine needs to be serviced.*

*Service screen appears every 50 hours of engine operation, indicating machine needs to be serviced.*

When service screen appears, two choices can be selected:

- Operator can choose to ignore servicing machine at this time.
- Operator can choose to service machine at this time.

*NOTE: If operator selects return/back icon ignoring service at this time the screen disappears. The next time the key switch is turned to the "RUN" position the screen will appear.*




H95957 —UN—05OCT10

**A—Advanced Settings Icon**
**B—Service Alarm Interval**
**C—Time Since Last Reset**
**D—Reset Icon**

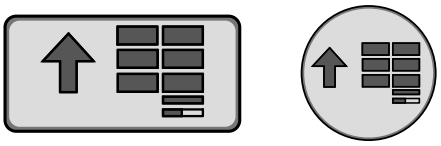
*Time since last reset (C) appears and alerts operator the amount of hours that has passed since being serviced.*

After service is performed, touch or press confirm switch when reset icon (D) is highlighted to reset to zero.

**Continued on next page**

OUO6075,00005F1 -19-27JUN12-2/3

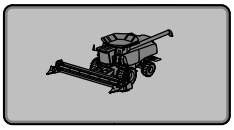
H95845 —UN—31MAR10



*Main Menu Icon (Display) / Main Menu Switch (Armrest)*

Press main menu icon or switch.

H95878 —UN—29MAR10

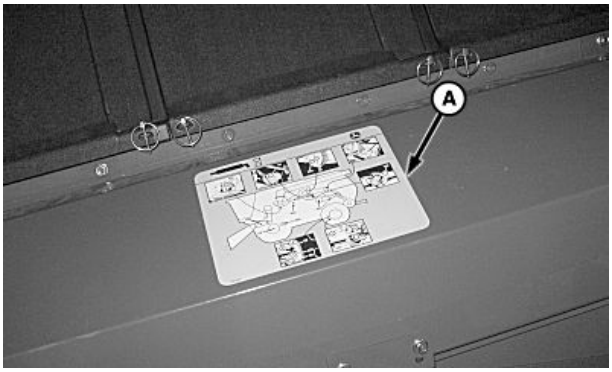


*Combine Main Application Icon*

Touch or press confirm switch when combine main page icon is highlighted.

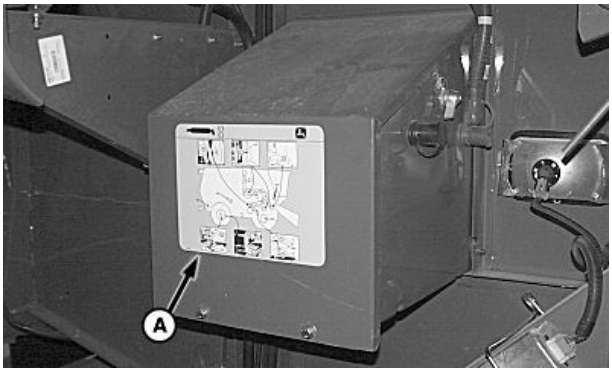
OUO6075,00005F1 -19-27JUN12-3/3

## Lubrication Decal Locations




H97176 —UN—30JUN10

*Left-Hand Lubrication Decal*




H83439 —UN—01JUN05

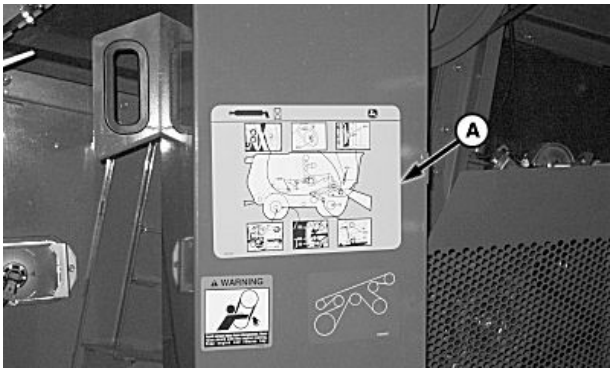
*Right-Hand Lubrication Decal (S660 and S670)*

**IMPORTANT: HillMaster Machines: Avoid crushing injuries. Always completely lower machine leveling system before getting underneath for service, adjustments or repairs. Shut OFF engine, set parking brake and remove key.**

Lubrication decals (A) show the different locations of grease points around the machine. Follow lubrication times provided on decals and refer to hour intervals listed in this section for further information.

Bearing failures or overheating can result in a fire. To reduce bearing failures or overheating, follow hour intervals listed in this section for further information.

Crop material and other debris may accumulate around bearings and bearing covers. Inspect and clean these areas periodically throughout the harvest day.




H97177 —UN—30JUN10

*Right-Hand Lubrication Decal (S680, S685 and S690)*

**A—Lubrication Decals**

OUO6075,0001258 -19-09OCT12-1/1

## Hydraulic Hose Replacement

Hydraulic hoses should be inspected frequently for leakage, kinking, cuts, cracks, abrasion, corrosion, exposed wire braid, or any other signs of wear or damage. Worn or damaged hose assemblies can fail during use and should be replaced immediately. See your John Deere dealer for replacement hoses.

**CAUTION: If incorrectly rated hose is used, machine damage, injury or death could occur.**

If hoses are to be fabricated, ensure that hoses are the same rating as one being replaced. See your John Deere dealer for correct hose rating replacements.

Incorrect hose length or routing can increase chance of hose wear or damage. Use old hose as guide for length and hose routing.

Incorrect fittings can damage mating parts or cause leaks. Make sure to use steel fittings approved for use with hose manufacture. Use correct size and thread type as replaced hose.

OUO6075,00000B9 -19-04JUN08-1/1

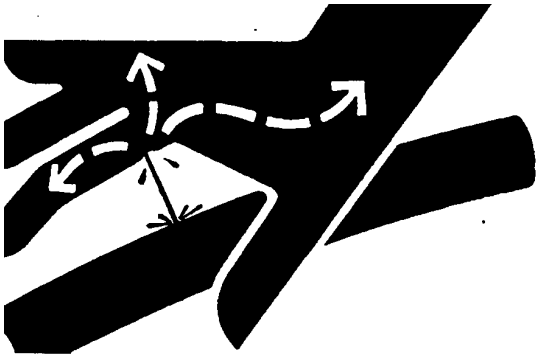
## Hydraulic System Cleanliness

**CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.**

**If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury may call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.**

**Cleanliness**

If hydraulic system should be disconnected for service, protect ends of hoses, tubing and ports of components from contamination with clean, lint-free towels or clean plastic bags.



X9811 —UN—23AUG88

Before installing any replacement hose, flush the inside with unused diesel fuel or unused commercial petroleum cleaning solvent for ten seconds minimum. Do not use water, water soluble cleaners or compressed air.

Remove cover from multi-coupler and attach to docking station on header. When coupling to header clean multi-coupler surfaces to remove dirt and debris.

OUO6075,0000A7B -19-04NOV10-1/1

## Lubrication Symbols

**CAUTION: Never lubricate or service corn head while machine engine is running.**

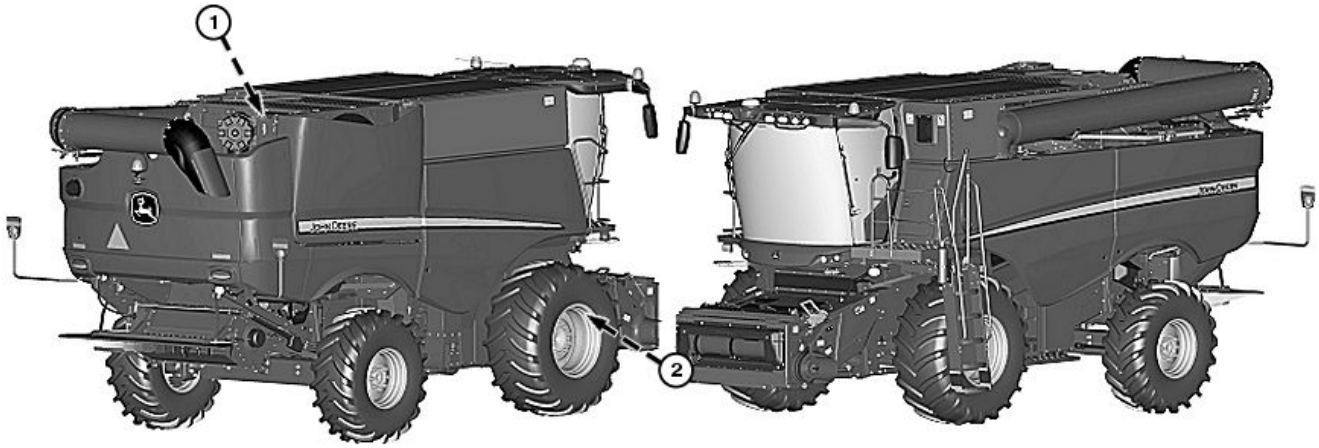
**Lubricate with John Deere Multipurpose SD Polyurea Grease High Temperature/Extreme Pressure lubricant or an equal SAE Multipurpose High Temperature Grease with Extreme Pressure (EP) performance at hours shown on the symbol.**

**Lubricate with John Deere SAE 30 oil or heavier oil at hourly intervals indicated on the symbols.**

**IMPORTANT: Recommended service intervals are for average conditions. Service MORE OFTEN if machine is operated under adverse conditions.**

OUO6075,0000852 -19-14MAR07-1/1

## Every 10 Hours



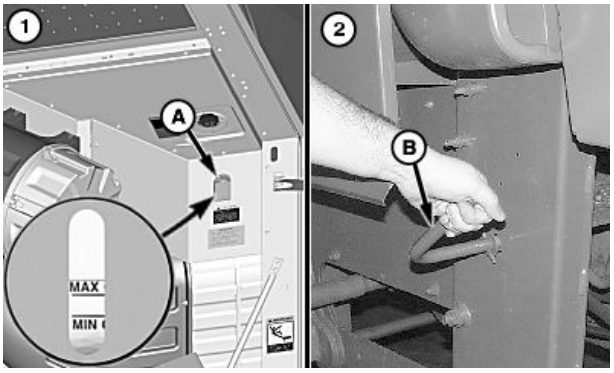

H106183 —UN—20FEB13

**IMPORTANT: Service times are for average conditions. Service more often if machine is used in extreme conditions.**

1. Surge Tank - Check engine coolant level in surge tank (A) with engine cold. Level must be up to ”Max Cold” line.

*NOTE: Coolant level must be between ”Max Cold” and ”Min Cold” lines. Add coolant as needed if coolant is below ”Min Cold” line.*

2. Stone trap - Remove quick-lock pin and dump stone trap with lever (B). Close stone trap and retain with quick-lock pin.

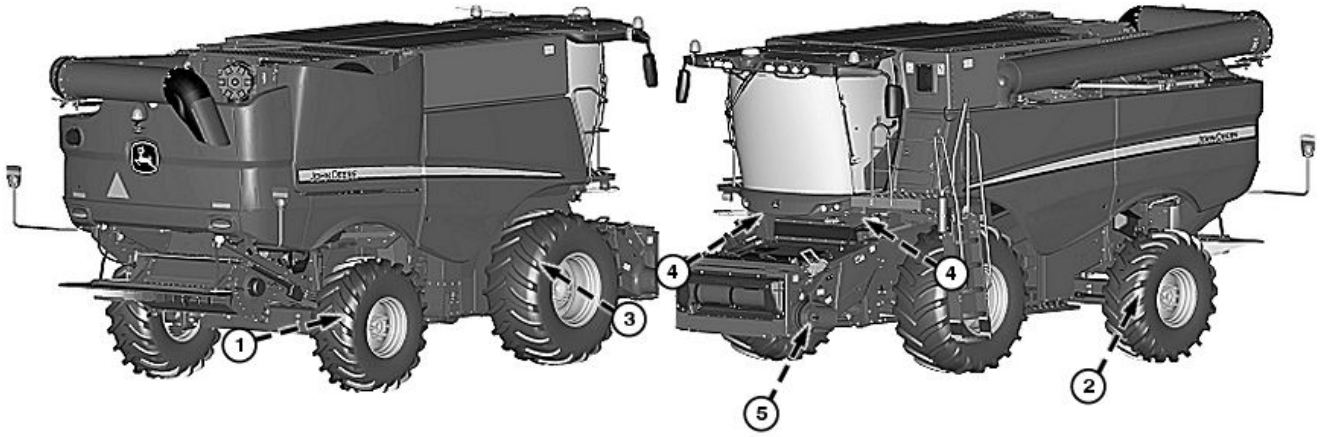



H107146 —UN—05MAR13

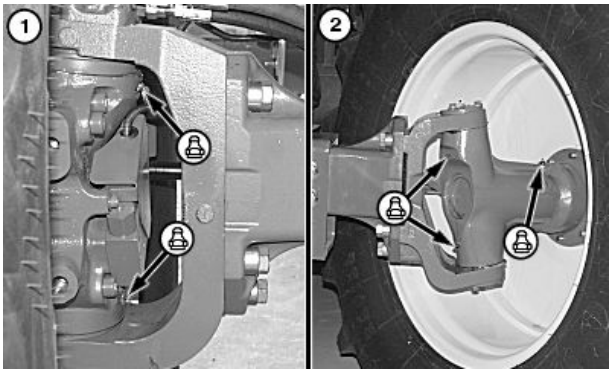
**A—Surge Tank** **B—Lever**

OUO6075,000132D -19-07MAR13-1/1

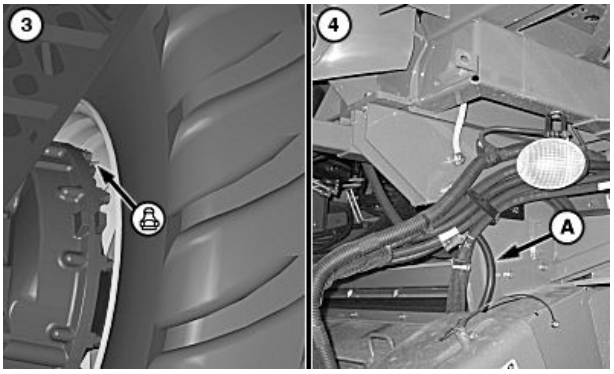
## Every 10 Hours




H106184 —UN—20FEB13




H106509 —UN—09JAN13




H106510 —UN—09JAN13

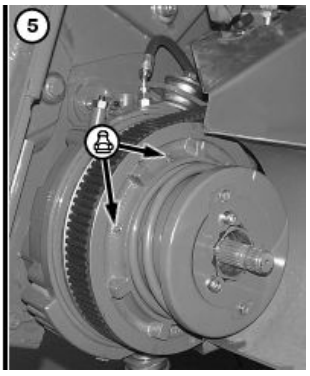
*Four-Wheel Drive/Two-Wheel Drive*

**A—Drain Hose**

*NOTE: When operating in mud and water, grease rear axle spindle bearings and motor pivots every 10 hours. Normal conditions grease every 50 hours.*

1. Two Speed Four-Wheel Drive Motor Pivots - Grease two fittings (both sides).
2. Two-Wheel Drive Heavy Duty and Extra Heavy Duty Axle Spindle Bearings/Pivot Pins - When operating in mud and water, grease fittings (both sides) every 10 hours. Normal conditions grease fitting (both sides) every 50 hours.
3. Final Drive Outer Bearings - When operating in mud and water, grease fitting (both sides) every 10 hours. Normal conditions grease fitting (both sides) every 50 hours.
4. Air Conditioning Drain Hose - Clean air conditioning drain hose (A) on both sides of cab.

*NOTE: Use John Deere TY6341 Multi-Purpose SD Polyurea Grease or John Deere TY25744*




H86831 —UN—07NOV06

*Synthetic Grease when greasing feeder house reverser drive gearcase.*

5. **S660 and S670 Machines:** Feeder House Reverser Drive Gearcase (Variable Speed Feeder House) - Turn sheave so fittings are in the 12 and 2 o'clock positions.

**Continued on next page**

OUO6075,00013F6 -19-01MAR13-1/2

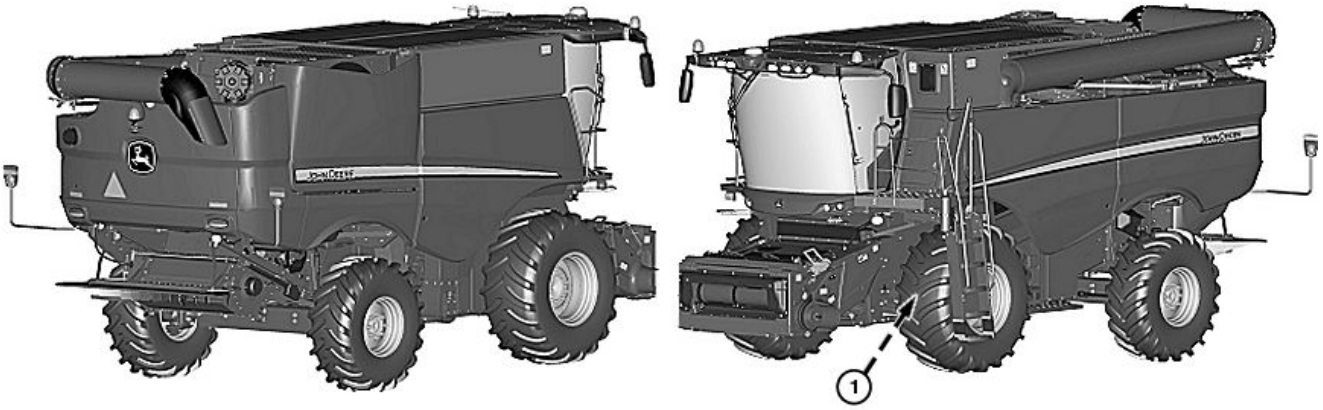
When operating in severe conditions or high yielding corn, grease fitting at 12 o'clock position, 5 - 8 pumps every 10 hours. Excess grease will purge from under spring.

Grease fitting at 2 o'clock position, 2 - 3 pumps every 10 hours. Over greasing this fitting can allow grease to purge on belt and cause belt failure.

When operating in normal conditions, grease 12 o'clock fitting (10 - 15 times) and 2 o'clock fitting (5 - 8 times) every 50 hours. After greasing, cycle variable sheaves through speed range a couple of times to ensure grease spreads evenly over cam surfaces.

OUO6075,00013F6 -19-01MAR13-2/2

## Every 10 Hours (HillMaster™ Machines)




H107116 —UN—01MAR13

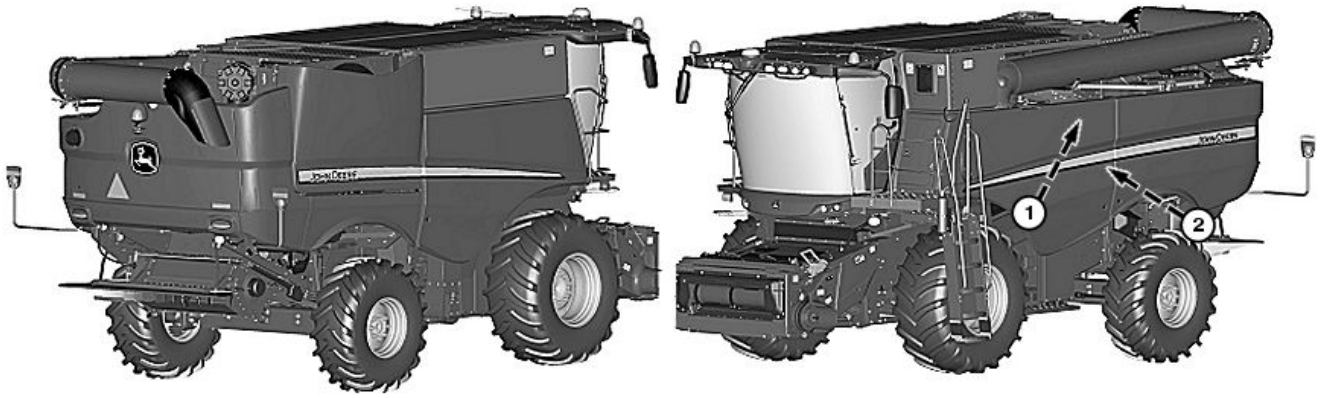
1. Final Drive Pivot - Grease fitting (both sides) until grease purges.



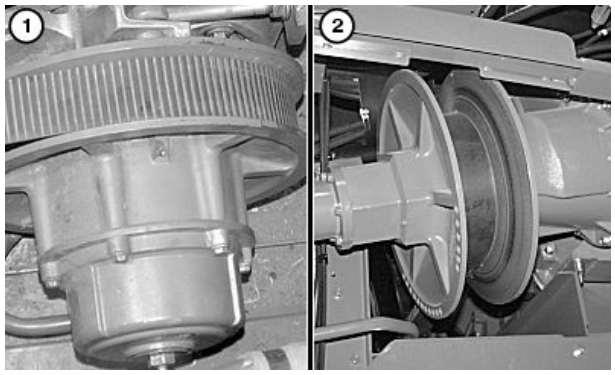

H98384 —UN—01OCT10

OUO6075,00013F7 -19-01MAR13-1/1

## Every 50 Hours

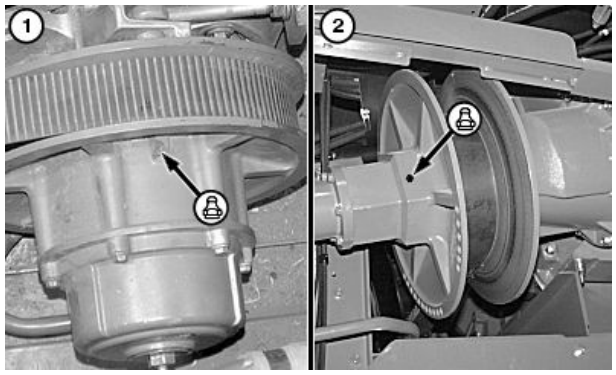



H106185 —UN—20FEB13




H87397 —UN—13FEB07

*S660*




H93580 —UN—05MAR09

*S670, S680, S685 and S690*

**S660 Machines:**

*NOTE: Start machine and cycle separator through full speed range a couple of times to distribute grease evenly.*

1. Separator Variable Speed Driven Sheaves - Cycle sheaves through speed range if operated at high speed all the time. Cycling sheaves helps replenish bushings with grease already inside sheave cavity.
2. Separator Variable Speed Driver Sheaves - Cycle sheaves through speed range if operated at high speed all the time. Cycling sheaves helps replenish bushings with grease already inside sheave cavity.

**S670, S680, S685 and S690 Machines:**

**IMPORTANT: Separator Variable Speed Driven and Driver Sheaves: Pump 20—25 shots of grease into fitting. DO NOT OVER GREASE.**

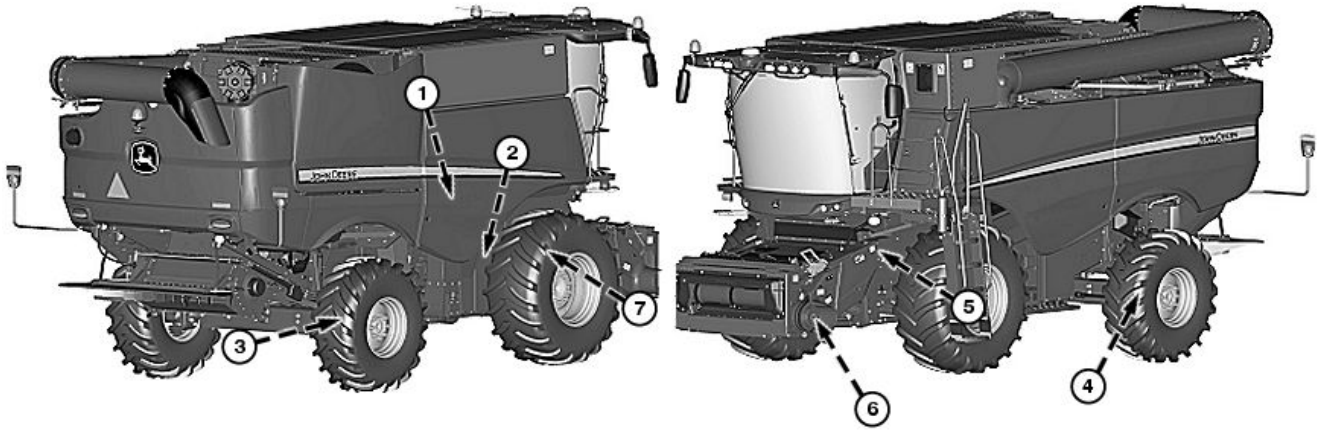
1. Separator Variable Speed Driven Sheaves - Rotate sheaves to access fitting.

*NOTE: Start machine and cycle separator through full speed range a couple of times to distribute grease evenly.*

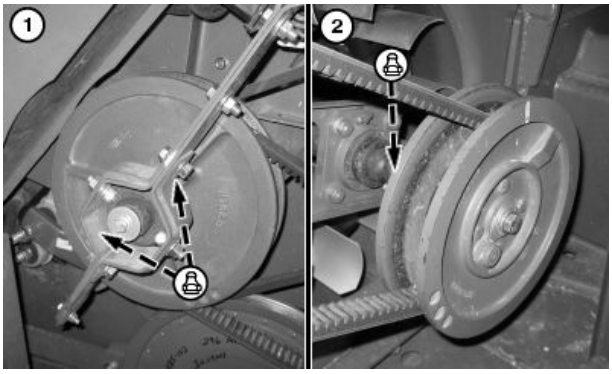
2. Separator Variable Speed Driver Sheaves - Close sheaves (high speed) before greasing fitting on outer sheave hub. Rotate sheave to access fitting. Cycle cylinder speed to distribute grease if operated at high speed all the time.

OUO6075,0001575 -19-20JUN13-1/1

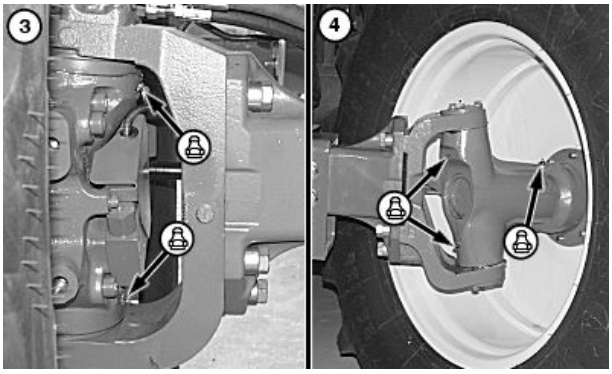
## Every 50 Hours




H106186 —UN—20FEB13

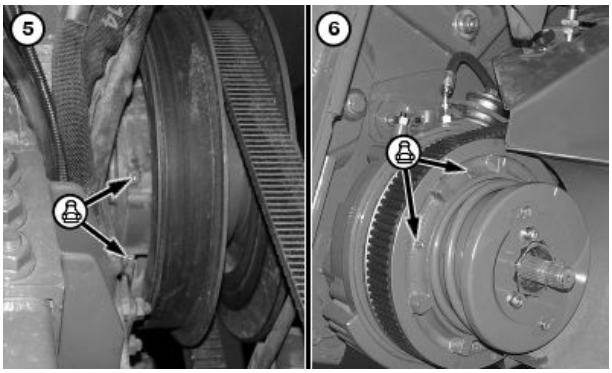



H91006 —UN—17MAR08




H86775 —UN—02NOV06

*Four-Wheel Drive/Two-Wheel Drive*




H87803 —UN—04APR07




H86897 —UN—08NOV06

1. Cleaning Fan Variable Upper Sheaves - Grease both fittings on hub of outer sheave. Rotate sheaves for fitting access.
2. Cleaning Fan Variable Lower Sheaves - Grease fitting on hub located on inner sheave. Rotate sheaves for fitting access.

*NOTE: When operating in mud and water grease rear axle spindle bearings and motor pivots every 10 hours. Normal conditions grease every 50 hours.*

3. Two Speed Four-Wheel Drive Motor Pivots - Grease two fittings (both sides).

**Continued on next page**

OUO6075,00013F9 -19-01MAR13-1/2

4. Two-Wheel Drive Heavy Duty and Extra Heavy Duty Axle Spindle Bearings/Pivot Pins - When operating in mud and water, grease fittings (both sides) every 10 hours. Normal conditions grease fittings (both sides) every 50 hours.

*NOTE: It may be necessary to rotate sheave for access to fittings.*

5. **S660 and S670 Machines:** Feeder House Upper Sheaves (Variable Speed Feeder House) - Raise feeder house, lower safety stop and lube fittings from underside of feeder house.

*NOTE: Use John Deere TY6341 Multi-Purpose SD Polyurea Grease or John Deere TY25744 Synthetic Grease when greasing feeder house reverser drive gearcase.*

6. **S660 and S670 Machines:** Feeder House Reverser Drive Gearcase (Variable Speed Feeder House) - Turn sheave so fittings are in the 12 and 2 o'clock positions.

   When operating in severe conditions or high yielding corn, grease fitting at 12 o'clock position, 5 - 8 pumps every 10 hours. Excess grease will purge from under spring.

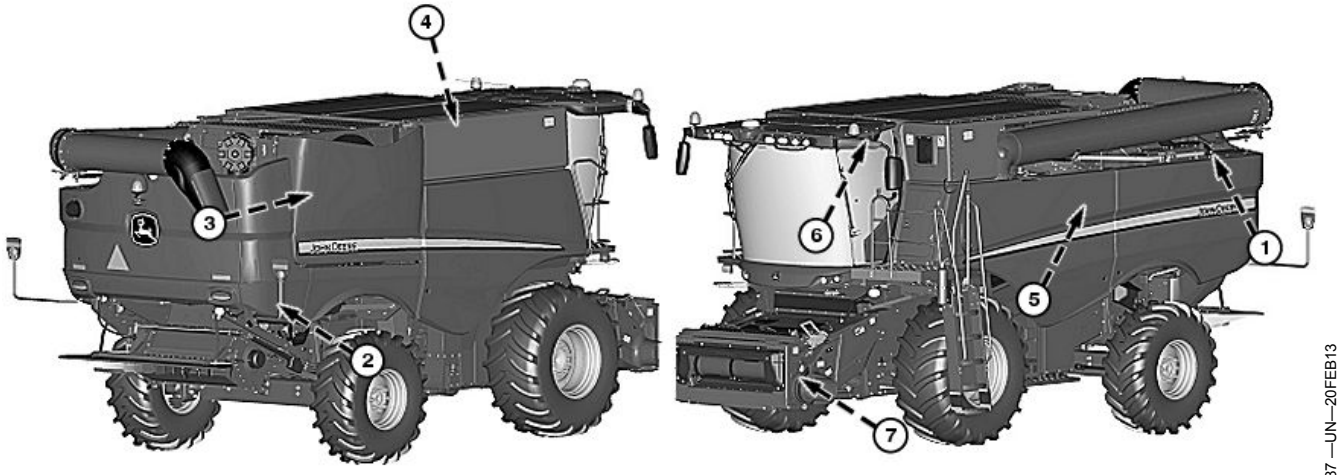
   Grease fitting at 2 o'clock position, 2 - 3 pumps every 10 hours. Over greasing this fitting can allow grease to purge on belt and cause belt failure.

   When operating in normal conditions, grease 12 o'clock fitting (10 - 15 times) and 2 o'clock fitting (5 - 8 times) every 50 hours. After greasing, cycle variable sheaves through speed range a couple of times to ensure grease spreads evenly over cam surfaces.

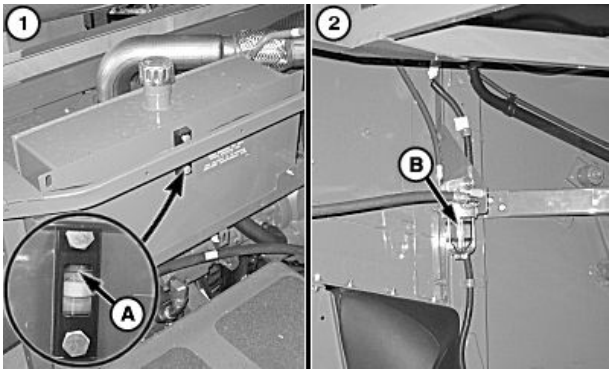
7. Final Drive Outer Bearings - When operating in mud and water, grease fitting (both sides) every 10 hours. Normal conditions grease fitting (both sides) every 50 hours.

OUO6075,00013F9 -19-01MAR13-2/2

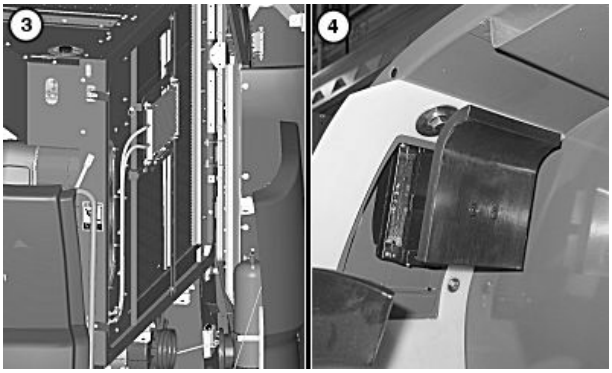
## Every 50 Hours



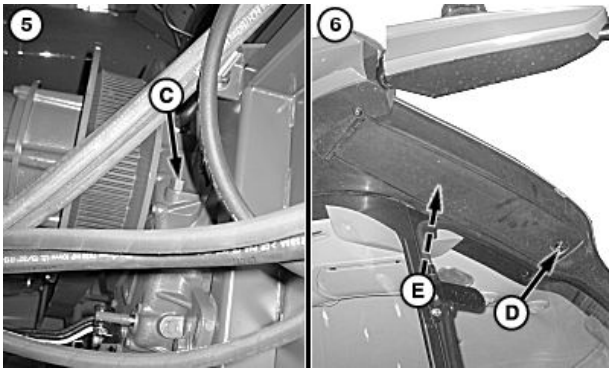

H106187 —UN—20FEB13



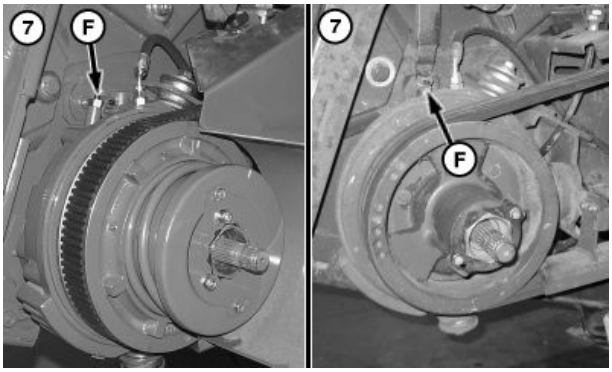

H97528 —UN—04AUG10




H107147 —UN—05MAR13




H97452 —UN—30JUL10




H91012 —UN—20MAR08

*Variable Speed/Multi-Speed Reverser Gearcase*

**A—Sight Glass**
**B—Fuel Precleaner Filter**
**C—Dipstick**
**D—Knob**
**E—Fresh Air Filter**
**F—Dipstick**

1. Hydrostatic/Hydraulic Oil - Check with header on ground. Oil level must be at top of sight glass (A) with feeder house fully lowered. Add oil as needed.
2. Fuel Precleaner Filter - Visually check fuel precleaner filter (B) and clean if buildup is visible on screen. Close fuel tank shut off valve. Remove filter and clean screen. Install screen and filter and open fuel tank shut off valve to fill (see Fuel Precleaner Filter Cleaning in Service Engine section.)

**Continued on next page**

OUO6075,0001331 -19-07MAR13-1/2

3. Radiator, Charge Air Cooler, Oil Cooler and Condenser - Clean radiator by blowing compressed air from inside out. Check areas for chaff buildup and clean if necessary.

*NOTE: On machines equipped with grain tank covers, it is necessary to remove bottom support rod hardware to lower auger.*

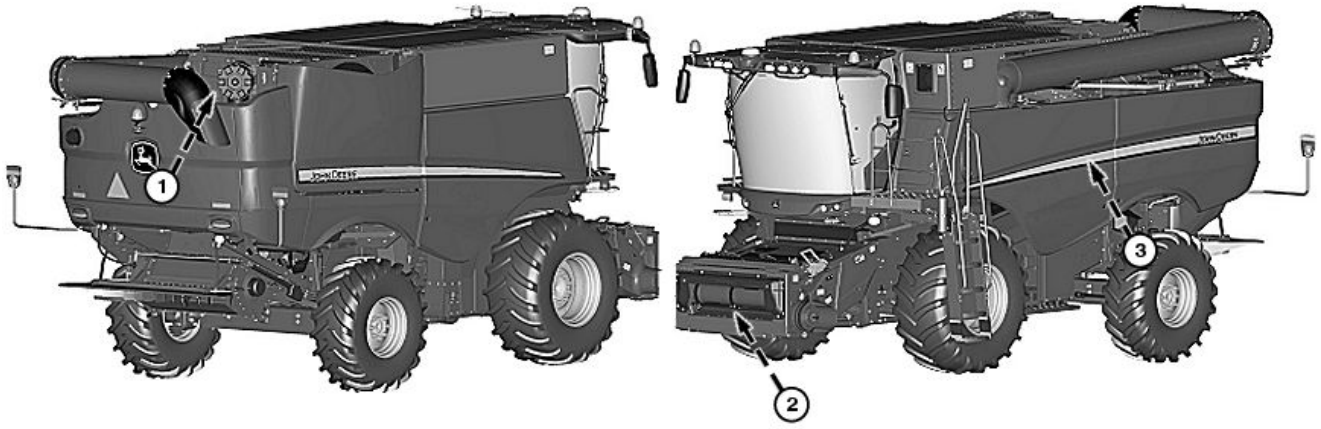
4. Mass Flow Sensor - Lower auger and clean mass flow sensor plate.
5. Two-Speed Separator Drive - Remove dipstick (C) and check oil level. Add oil as needed to correct level on dipstick.

*NOTE: Cab fresh air filter may require cleaning sooner in very dusty conditions.*

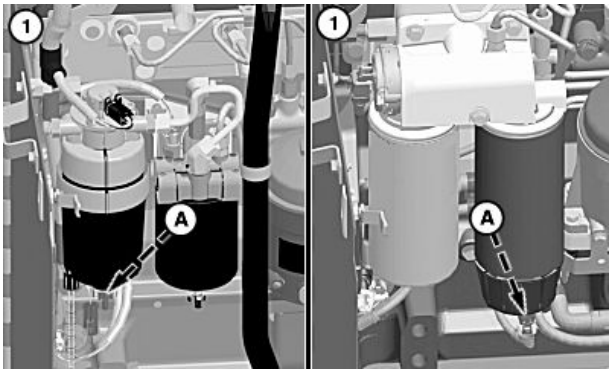
6. Cab Fresh Air Filter - Turn knob (D) and lower access cover. Remove fresh air filter (E) to clean or replace.
7. Feeder House Reverser Gearcase - Raise feeder house and lower safety stop. Gearcases with an oil cooler will require gearcase be run for several minutes. This ensures that the cooler is filled with oil. Oil level must show on knurled part of dipstick (F).

OUO6075,0001331 -19-07MAR13-2/2

## Every 50 Hours

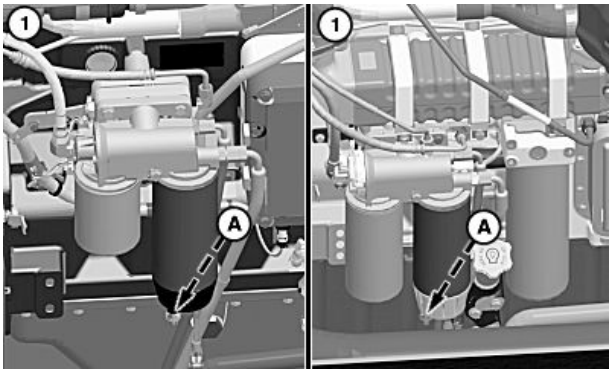



H108222 —UN—10JUN13




H97797 —UN—27AUG10

*S660 and S670 (Tier 2/Stage II) / (Interim Tier 4/Stage III B)*

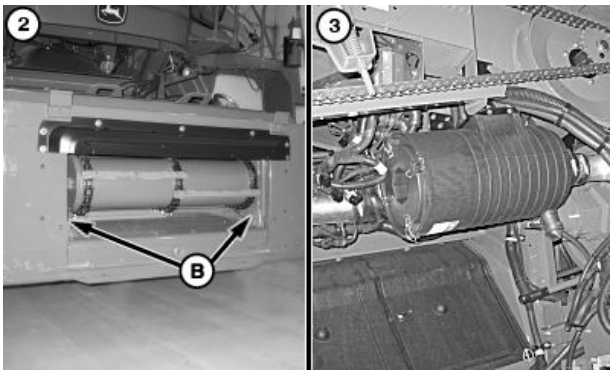



H97800 —UN—27AUG10

*S680 and S690 (Tier 2/Stage II) / (Interim Tier 4/Stage III B)*

**A—Drain** **B—Cleanout Areas**

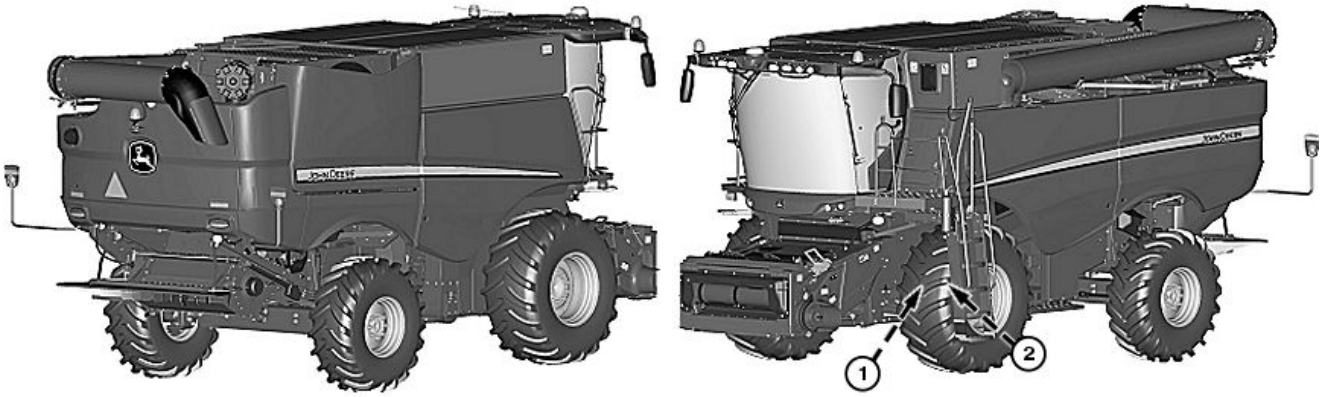
1. Water Separator Primary Fuel Filter - Check separator bowl for water. Open drain (A) and drain water out separator bowl.
2. Lateral Tilt Feeder House - Check cleanout areas (B) for packed material which could prevent header from tilting. Clean out if required.
3. Engine Debris Management Air Filter (Interim Tier 4/Stage III B Engines) - When air filter restricted indicator is shown on display, service primary filter. Check safety filter for plugging. Replace elements if plugged.




H108223 —UN—10JUN13

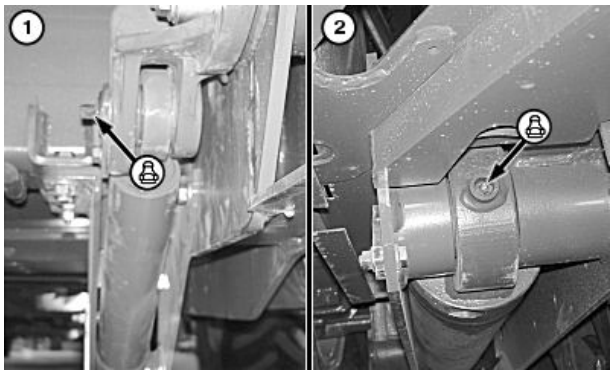
OUO6075,0001576 -19-09JUL13-1/1

## Every 50 Hours (Hillmaster™ Machines)




H107117 —UN—01MAR13

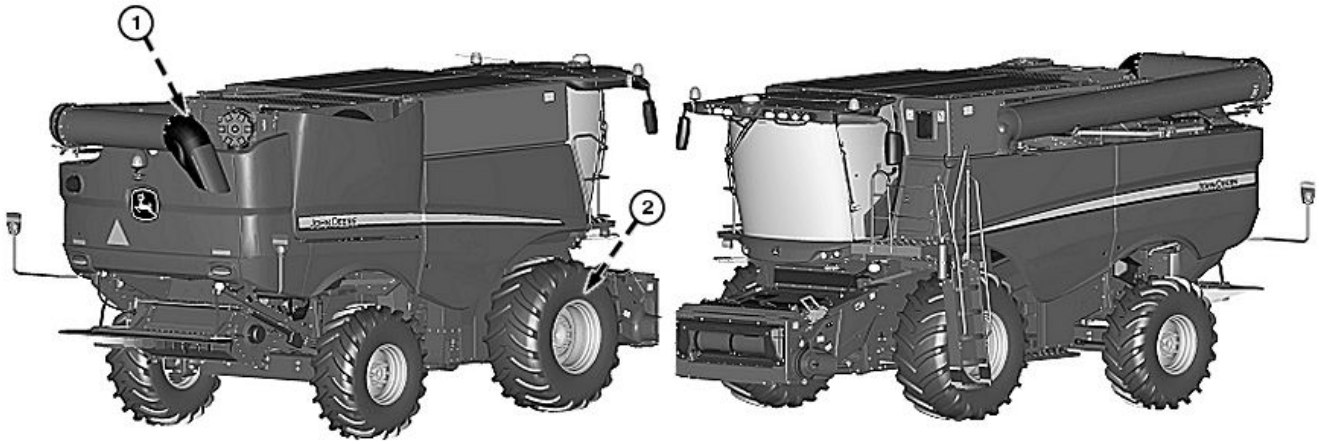
1. Master Cylinder Piston Pin - Grease fitting (both sides) until grease purges.
2. Leveling Cylinder Barrel - Grease fitting (both sides) until grease purges.




H98386 —UN—01OCT10

OUO6075,00013FB -19-01MAR13-1/1

## First 100 Hours (S670, S680, S685 and S690 ProDrive™ Machines)

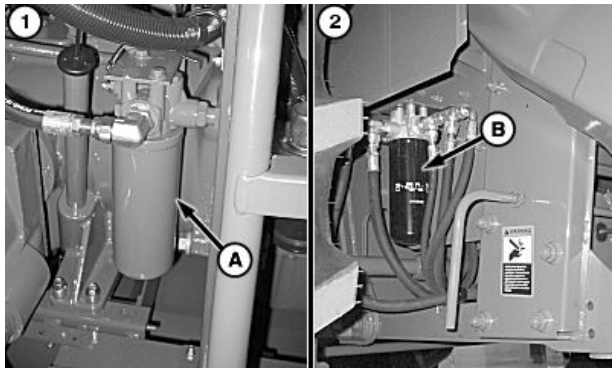



H106189 —UN—20FEB13

*NOTE: It is not necessary to drain system when replacing filter.*

1. **S670 ProDrive™ Machines:** Main Engine Gearcase Filter - Remove and replace filter (A). Coat seal on filter with oil. Hand tighten, then tighten 1/2 turn more.
2. **ProDrive™ Machines:** ProDrive™/Main Engine Gearcase Lube Filter - Remove and replace filter (B). Coat seal on filter with oil. Hand tighten, then tighten 1/2 turn more.

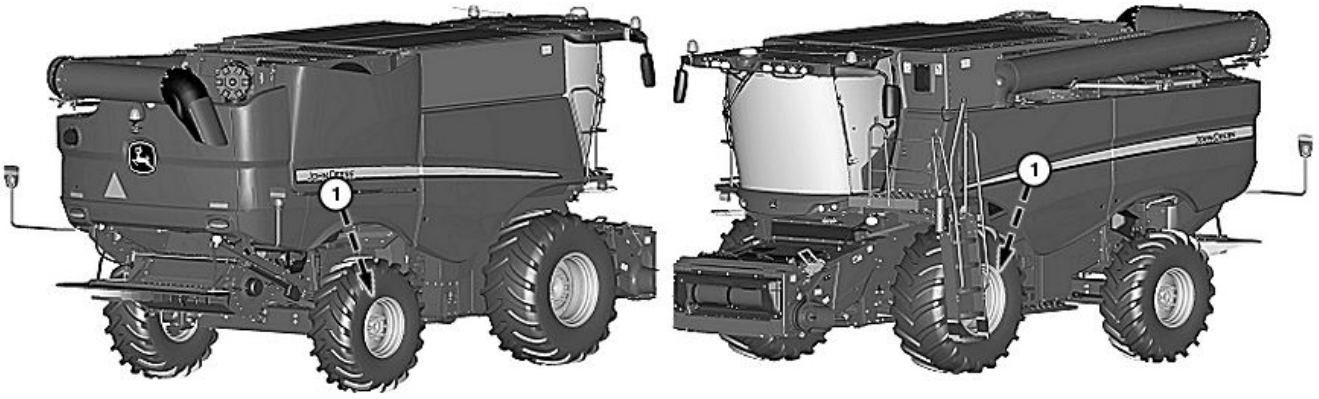
**A—Filter** **B—Filter**




H99378 —UN—08DEC10

OUO6075,0001577 -19-20JUN13-1/1

## Every 100 Hours




H108217 —UN—10JUN13

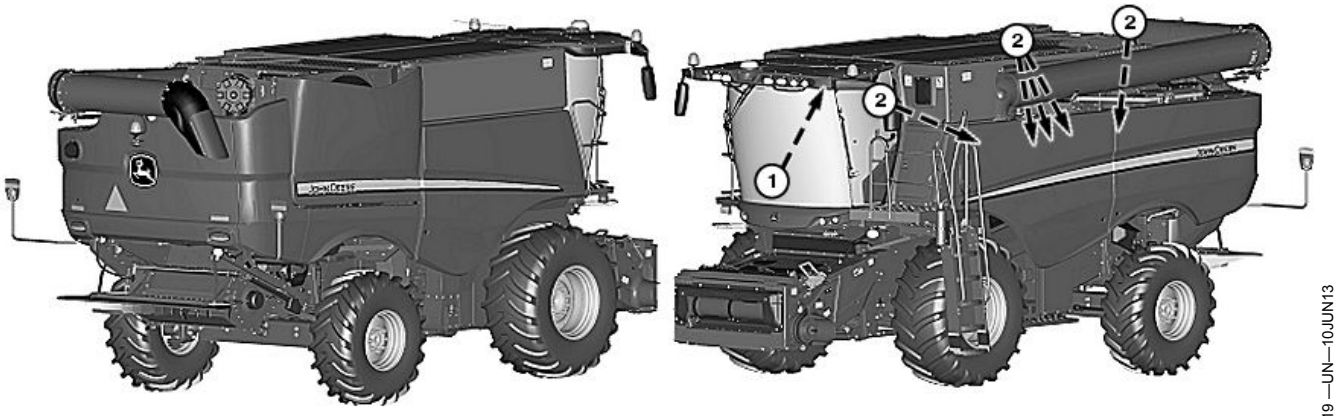



H108218 —UN—10JUN13

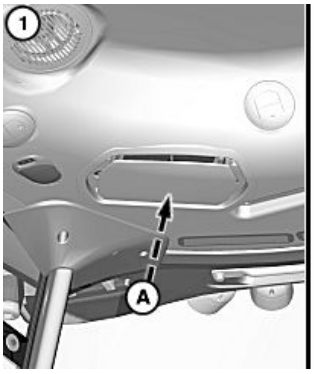
1. Tire pressure and Bolt Torque - Check front and rear tire pressure and wheel bolt torque (see Ground Drive and Rear Axle section).

OUO6075,000150D -19-10JUN13-1/1

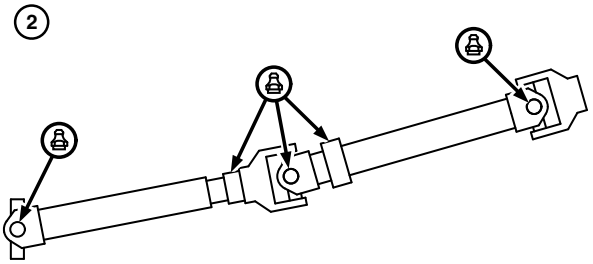
## Every 200 Hours




H108219 —UN—10JUN13




H108220 —UN—10JUN13




H108221 —UN—10JUN13

**A—Recirculating Filter**

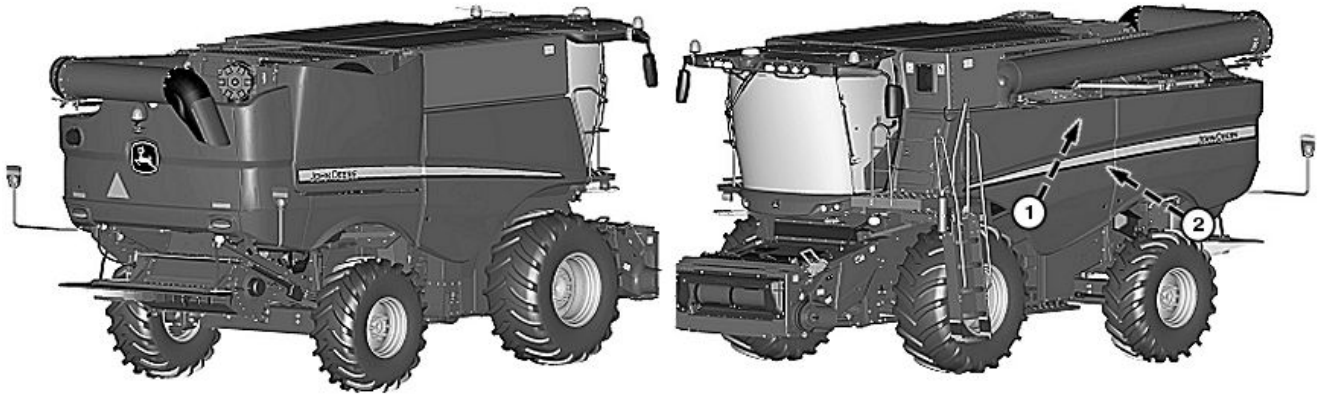
1. Recirculating Filter - Remove cover to clean or replace recirculating filter (A).

*NOTE: Machines not equipped with multi-speed feeder house drive have one grease fitting.*

2. **S670, S680, S685 and S690 Machines:** Primary Countershaft (Multi-Speed Feeder House) - Rotate to access five fittings and grease.

OUO6075,0001578 -19-20JUN13-1/1

## Every 200 Hours (S660)



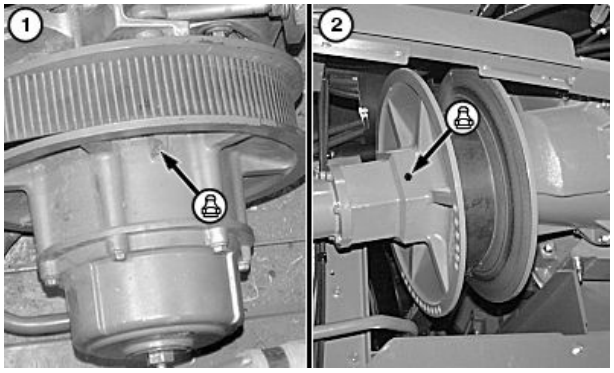

H106185 —UN—20FEB13

**IMPORTANT: Separator Variable Speed Driven and Driver Sheaves: Pump 20 to 25 shots of grease into fitting. DO NOT OVER GREASE.**

1. Separator Variable Speed Driven Sheaves - Rotate sheaves to access fitting.

*NOTE: Start machine and cycle separator through full speed range a couple of times to distribute grease evenly.*

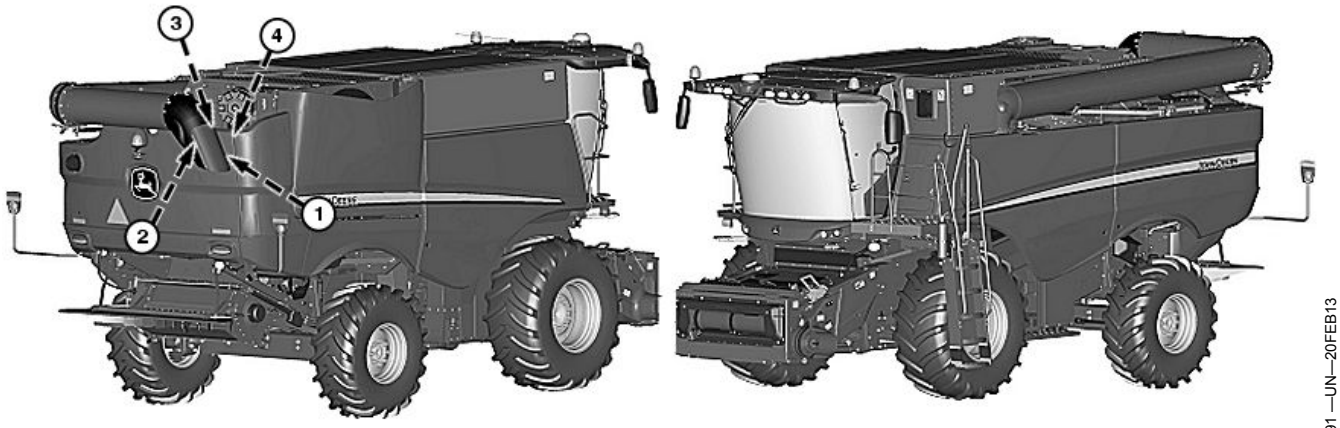
2. Separator Variable Speed Driver Sheave - Close sheaves (high speed) before greasing fitting on outer sheave hub. Rotate sheave to access fitting. Cycle cylinder speed to distribute grease if operated at high speed all the time.



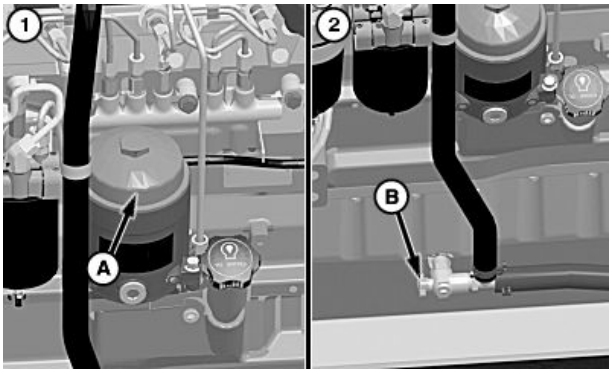

H93580 —UN—05MAR09

OUO6075,00013FC -19-01MAR13-1/1

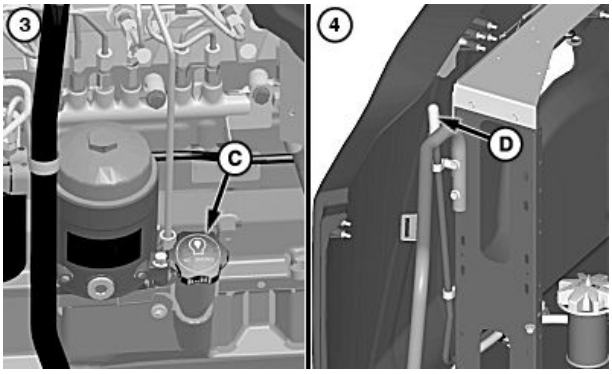
## Every 250 Hours (Tier 2/Stage II) (S660 and S670)




H106191 —UN—20FEB13




H97455 —UN—30JUL10




H107149 —UN—06MAR13

**A—Cap**
**B—Drain**
**C—Dipstick**
**D—Fuel Tank Breather**

**IMPORTANT: Change oil every 100 hours if fuel with a high sulfur content is used. Refer to Fuels and Lubricants section for further information on sulfur content.**

**Fill crankcase with seasonal viscosity grade oil or Torq-Gard™ (250 hours service interval). If using John Deere Plus-50™ or Plus-50™ II engine oil and a John Deere filter, service interval can be extended by 50 percent. Example: 250 Hours extends to 375 Hours.**

1. Engine Crankcase Top Load Oil Filter - Remove cap (A) and remove filter. Replace filter and install cap. Tighten cap to specifications.

**Specification**

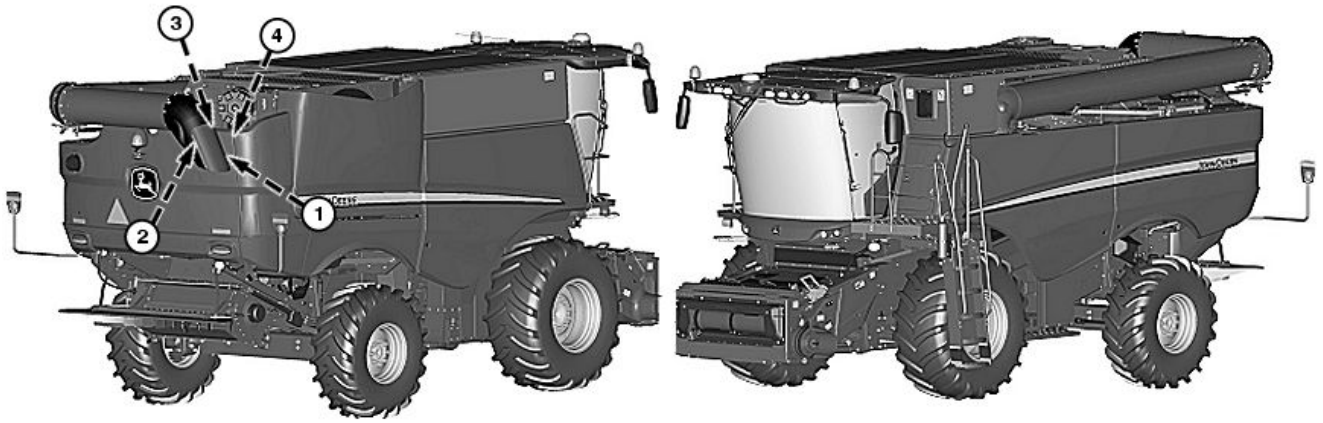
| | |
|---|---|
| Oil Filter Cap—Torque | 40 N·m (30 lb.-ft.) |

2. Engine Crankcase Top Load Oil - Open drain (B) to remove oil.
3. Engine Crankcase Top Load Oil - Remove dipstick (C) to fill and check oil level after filling.
4. Fuel Tank Breather - Visually inspect fuel tank breather (D). Do not allow debris to collect on breather. Remove fuel tank breather from hose and clean.

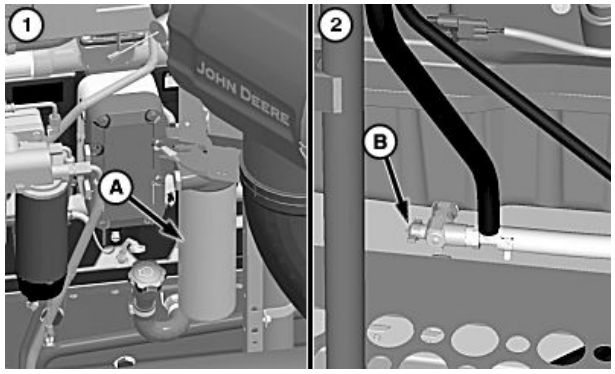
*Torq-Gard is a trademark of Deere & Company*
*Plus-50 is a trademark of Deere & Company*

OUO6075,0001336 -19-07MAR13-1/1

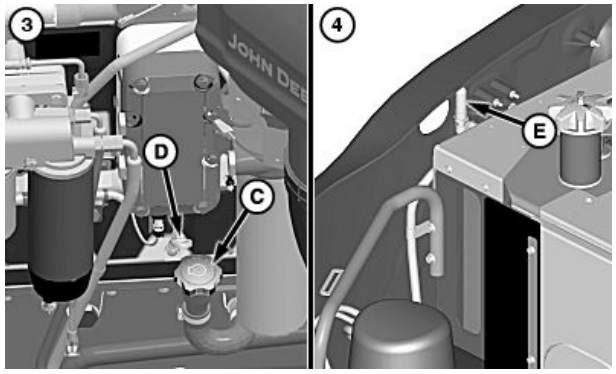
## Every 250 Hours (Tier 2/Stage II) (S680 and S690)




H106191 —UN—20FEB13




H97489 —UN—02AUG10




H107150 —UN—08MAR13

**A—Oil Filter**
**B—Drain**
**C—Cap**
**D—Dipstick**
**E—Fuel Tank Breather**

**IMPORTANT: Change oil every 100 hours if fuel with a high sulfur content is used. Refer to Fuels and Lubricants section for further information on sulfur content.**

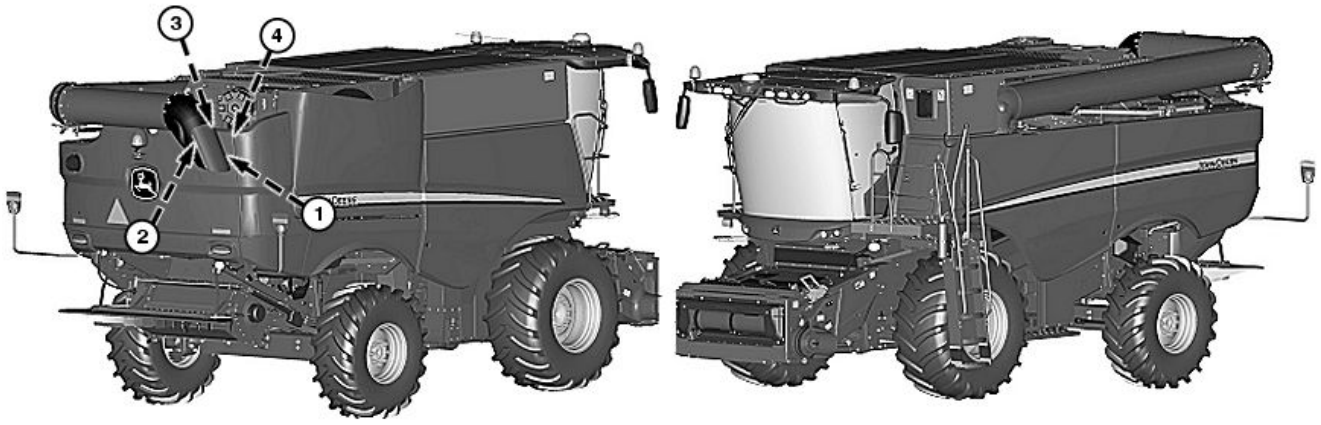
**Fill crankcase with seasonal viscosity grade oil or Torq-Gard™ (250 hours service interval). If using John Deere Plus-50™ or Plus-50™ II engine oil and a John Deere filter, service interval can be extended by 50 percent. Example: 250 Hours extends to 375 Hours.**

1. Engine Crankcase Oil Filter - Remove and replace oil filter (A).
2. Engine Crankcase Oil - Open drain (B) to remove oil.
3. Engine Crankcase Oil - Remove cap (C) to fill and check oil level with dipstick (D) after filling.
4. Fuel Tank Breather - Visually inspect fuel tank breather (E). Do not allow debris to collect on breather. Remove fuel tank breather from hose and clean.

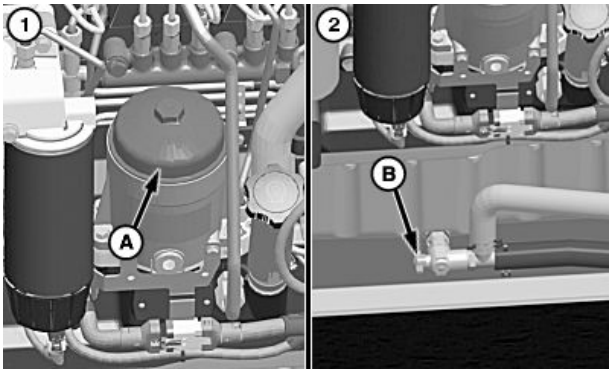
*Torq-Gard is a trademark of Deere & Company*
*Plus-50 is a trademark of Deere & Company*

OUO6075,0001579 -19-09JUL13-1/1

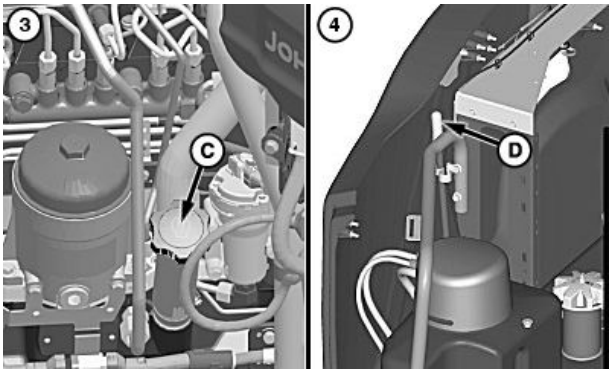
## Every 250 Hours (Interim Tier 4/Stage III B) (S660 and S670)




H106191 —UN—20FEB13




H97453 —UN—30JUL10




H107151 —UN—08MAR13

**A—Cap**
**B—Drain**
**C—Dipstick**
**D—Fuel Tank Breather**

**IMPORTANT: Change oil every 250 hours when using other engine oils as specified in Fuels and Lubricants section.**

**Change oil every 400 hours when using John Deere Plus-50™ II engine oil and a John Deere filter. Refer to Fuels and Lubricants section for further information.**

**Interim Tier 4/Stage III B engines require Plus-50™ II engine oil or a API CJ-4, ACEA E9, ACEA E6 certified oils.**

**Only Ultra Low Sulfur Diesel (ULSD) fuel with less than 0.0015% (or 15 ppm) sulfur content can be used in Interim Tier 4/Stage III B engines.**

*Plus-50 is a trademark of Deere & Company*

1. Engine Crankcase Top Load Oil Filter - Remove cap (A) and remove filter. Replace filter and install cap. Tighten cap to specification.

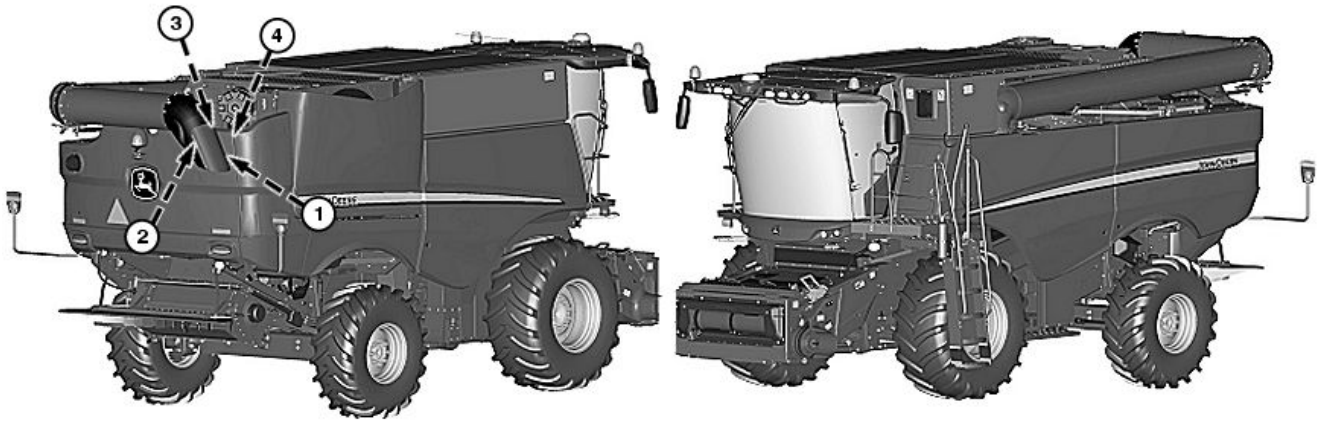
**Specification**

Oil Filter Cap—Torque.....40 N·m (30 lb.-ft.)

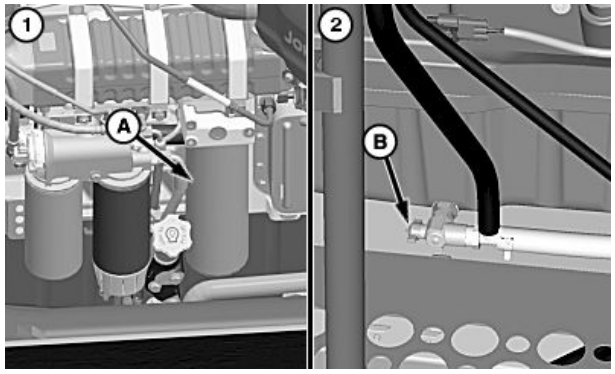
2. Engine Crankcase Top Load Oil - Open drain (B) to remove oil.
3. Engine Crankcase Top Load Oil - Remove dipstick (C) to fill and check oil level after filling.
4. Fuel Tank Breather - Visually inspect fuel tank breather (D). Do not allow debris to collect on breather. Remove fuel tank breather from hose and clean.

OUO6075,00013FD -19-20JUN13-1/1

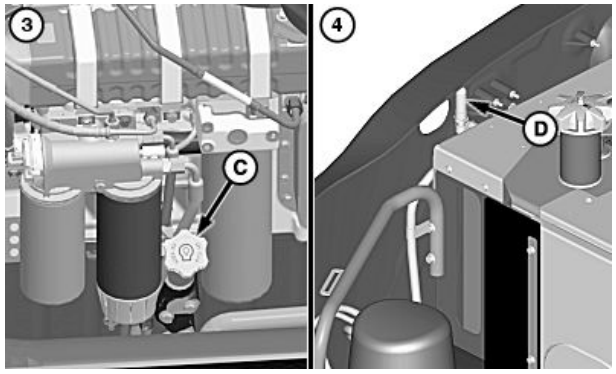
## Every 250 Hours (Interim Tier 4/Stage III B) (S680, S685 and S690)




H106191 —UN—20FEB13




H97490 —UN—02AUG10




H107152 —UN—08MAR13

**A—Oil Filter**
**B—Drain**
**C—Dipstick**
**D—Fuel Tank Breather**

**IMPORTANT: Change oil every 250 hours when using other engine oils as specified in Fuels and Lubricants section.**

**Change oil every 400 hours when using John Deere Plus-50™ II engine oil and a John Deere filter. Refer to Fuels and Lubricants section for further information.**

**Interim Tier 4/Stage III B engines require Plus-50™ II engine oil or a API CJ-4, ACEA E9, ACEA E6 certified oils.**

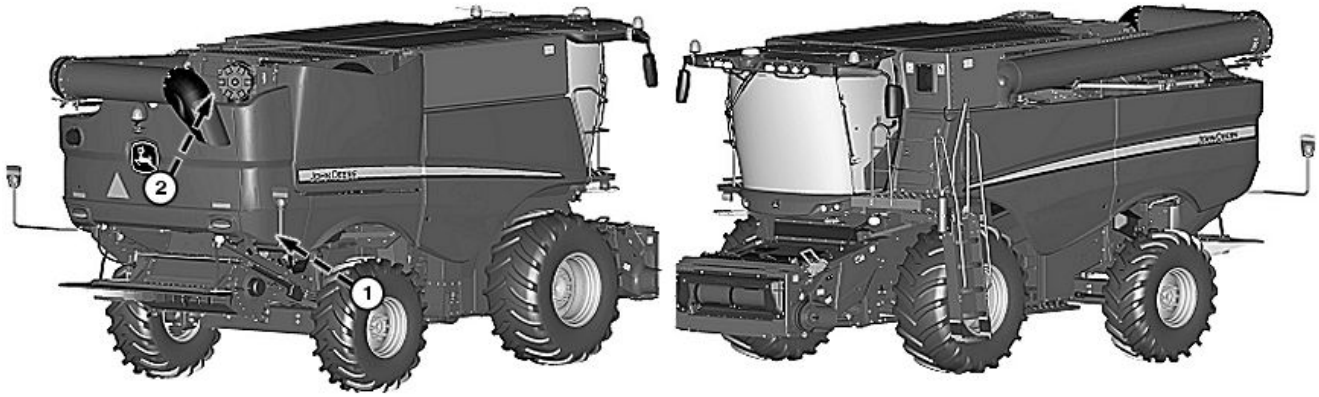
**Only Ultra Low Sulfur Diesel (ULSD) fuel with less than 0.0015% (or 15 ppm) sulfur content can be used in Interim Tier 4/Stage III B engines.**

*Plus-50 is a trademark of Deere & Company*

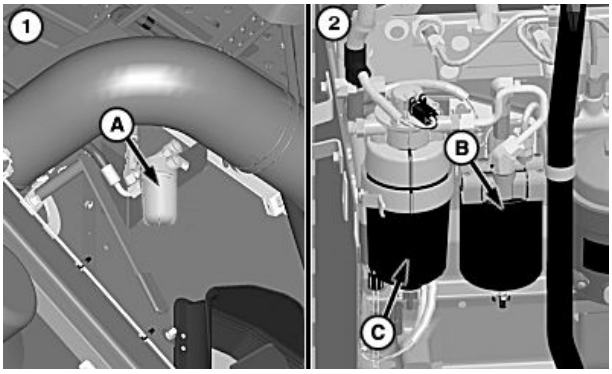
1. Engine Crankcase Oil Filter - Remove and replace oil filter (A).
2. Engine Crankcase Oil - Open drain (B) to remove oil.
3. Engine Crankcase Oil - Remove dipstick (C) to fill and check oil level after filling.
4. Fuel Tank Breather - Visually inspect fuel tank breather (D). Do not allow debris to collect on breather. Remove fuel tank breather from hose and clean.

OUO6075,000157A -19-20JUN13-1/1

## Every 400 Hours (S660 and S670)

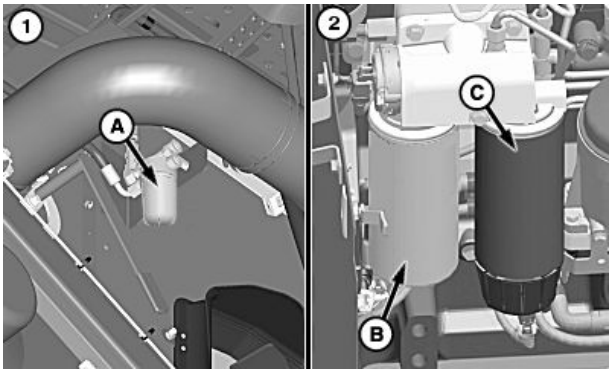



H106192 —UN—20FEB13




H97460 —UN—09NOV10

*Fuel Filters (Tier 2/Stage II)*




H97461 —UN—09NOV10

*Fuel Filters (Interim Tier 4/Stage III B)*

**A—Fuel Precleaner Filter** **B—Secondary Fuel Filter** **C—Primary Fuel Filter**

**CAUTION: High-pressure fluid remaining in fuel lines can cause serious injury. Before disconnecting fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system, wait a minimum of 15 minutes after engine is stopped.**

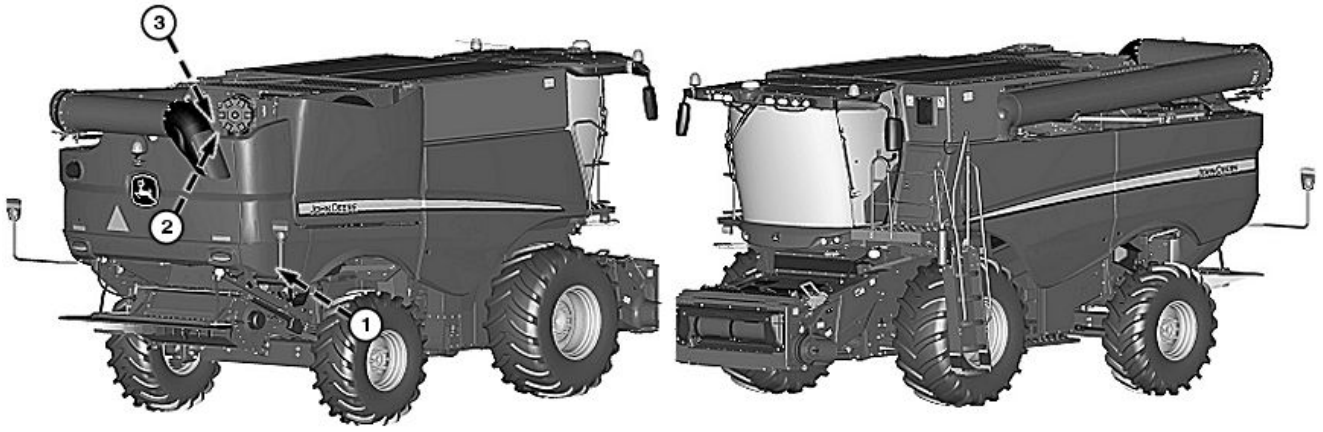
**Shut OFF engine, set park brake and remove key before performing maintenance work on fuel filter.**

1. Fuel Precleaner Filter - Close fuel tank shut-off valve. Remove fuel precleaner filter (A) and clean screen. Install fuel precleaner filter and open fuel tank shut-off valve and allow bowl to fill (see Fuel Precleaner Filter—Cleaning in Service Engine section).
2. Secondary Fuel Filter - Close fuel tank shut-off valve. Remove and replace secondary fuel filter (B) when performance decline is noticed or diagnostic trouble code is generated. Remove fuel from filter and discard. Install replacement secondary fuel filter and open fuel tank shut-off valve (see Primary and Secondary Fuel Filter—Replacing in Service Engine section).

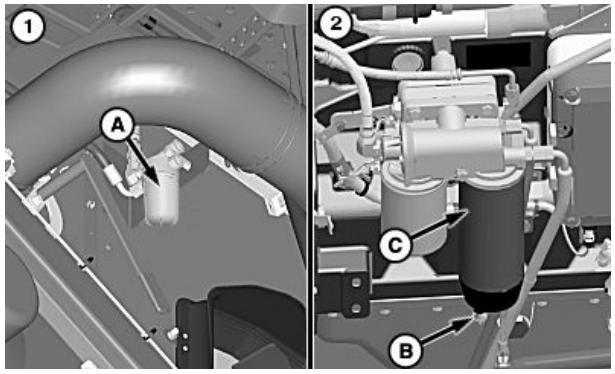
Primary Fuel Filter - Close fuel tank shut-off valve. Remove and replace primary fuel filter (C) when performance decline is noticed or diagnostic trouble code is generated. Disconnect water sensor from primary fuel filter. Remove fuel from filter and discard. Install replacement primary fuel filter, open fuel tank shut-off valve, and turn key switch ON to prime fuel system (see Primary and Secondary Fuel Filter—Replacing in Service Engine section).

OUO6075,00013FF -19-01MAR13-1/1

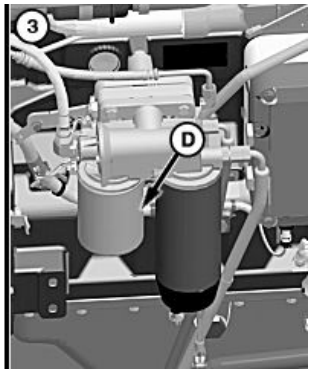
## Every 400 Hours (Tier 2/Stage II) (S680 and S690)




H106193 —UN—20FEB13




H97495 —UN—09NOV10




H97497 —UN—02AUG10

**A—Fuel Precleaner Filter**

**B—Water Separator**
**C—Primary Fuel Filter**

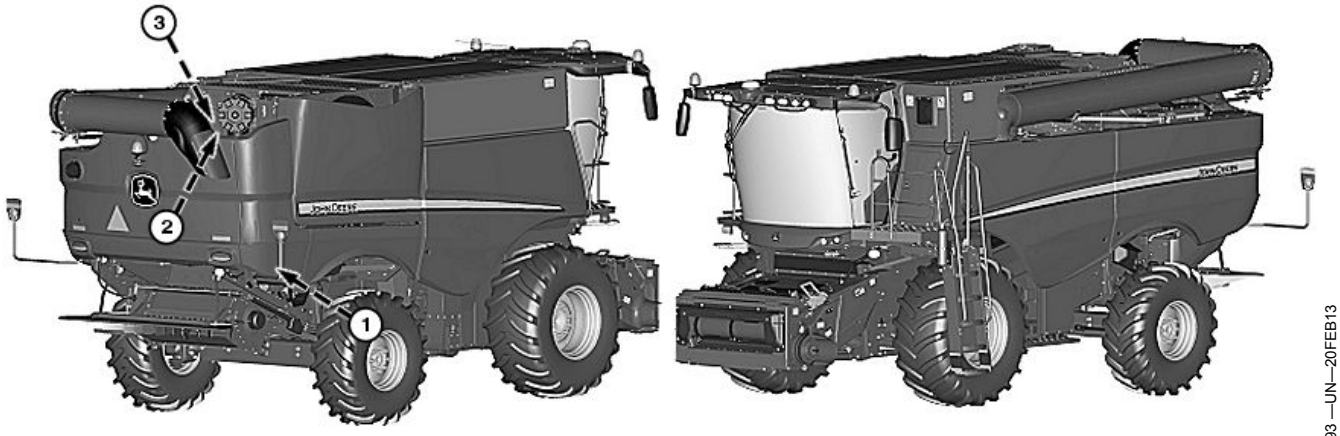
**D—Secondary Fuel Filter**

1. Fuel Precleaner Filter - Close fuel tank shut-off valve. Remove fuel precleaner filter (A) and clean screen. Install fuel precleaner filter and open fuel tank shut-off valve and allow bowl to fill (see Fuel Precleaner Filter—Cleaning in Service Engine section).
2. Water Separator - Check water separator (B) for water or when diagnostic trouble code is generated. Open drain to remove water from water separator (see Water Separator Primary Fuel Filter—Draining in Service Engine section). Remove and retain water separator.

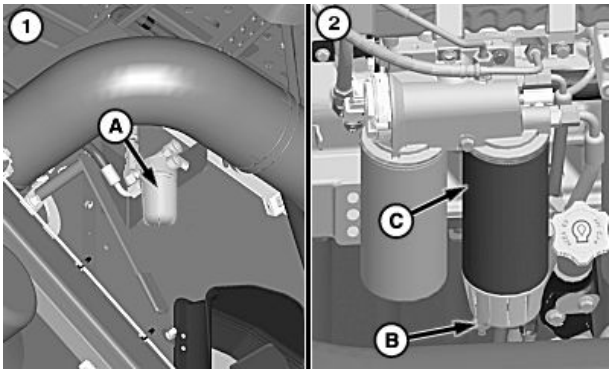
   Primary Fuel Filter - Close fuel tank shut-off valve. Remove and replace primary fuel filter (C) when performance decline is noticed or diagnostic trouble code is generated. Install replacement primary fuel filter and previously removed water separator (see Primary and Secondary Fuel Filter—Replacing in Service Engine section).
3. Secondary Fuel Filter - Close fuel tank shut-off valve. Remove and replace secondary fuel filter (D) when performance decline is noticed or diagnostic trouble code is generated. Remove fuel from filter and discard. Install replacement secondary fuel filter, open fuel tank shut-off valve, and turn key switch ON to prime fuel system (see Primary and Secondary Fuel Filter—Replacing in Service Engine section).

OUO6075,000157B -19-09JUL13-1/1

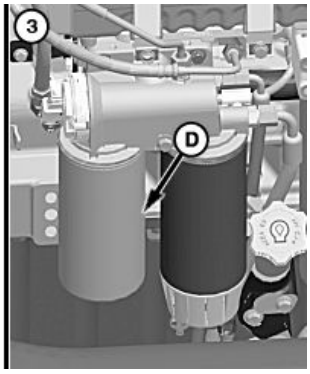
## Every 400 Hours (Interim Tier 4/Stage III B) (S680, S685 and S690)




H106193 —UN—20FEB13




H97496 —UN—09NOV10




H97498 —UN—02AUG10

**A—Fuel Precleaner Filter**

**B—Water Separator**
**C—Primary Fuel Filter**

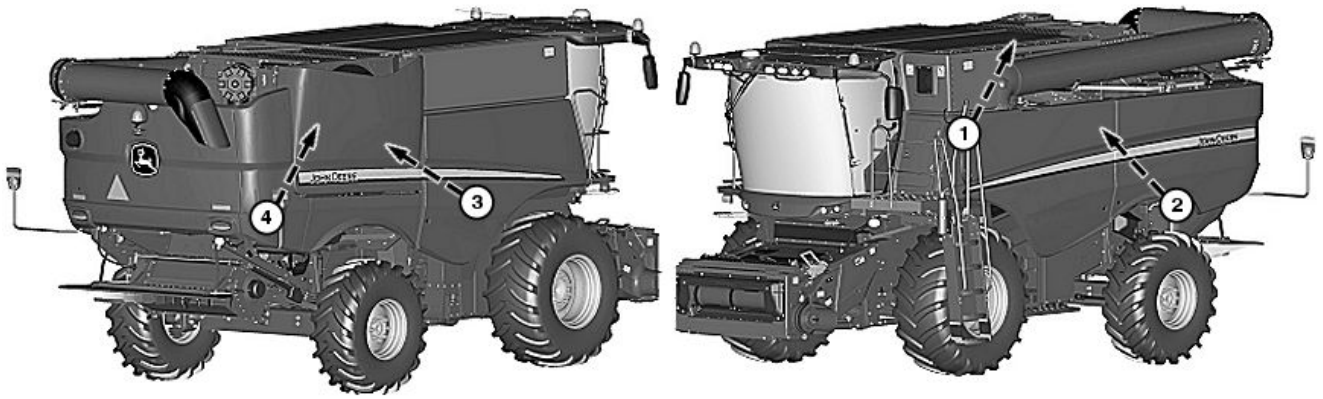
**D—Secondary Fuel Filter**

1. Fuel Precleaner Filter - Close fuel tank shut-off valve. Remove fuel precleaner filter (A) and clean screen. Install fuel precleaner filter and open fuel tank shut-off valve and allow bowl to fill (see Fuel Precleaner Filter—Cleaning in Service Engine section).
2. Water Separator - Check water separator (B) for water or when diagnostic trouble code is generated. Open drain to remove water from water separator (see Water Separator Primary Fuel Filter—Draining in Service Engine section). Remove and retain water separator.

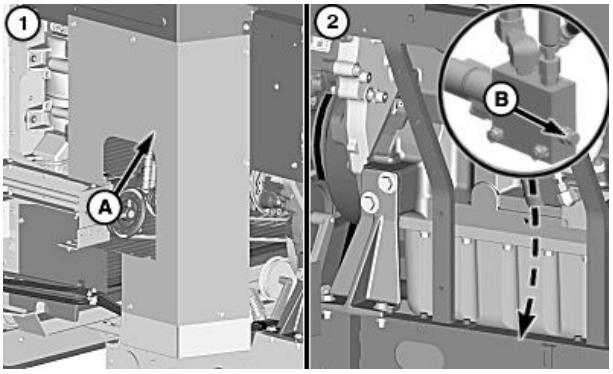
   Primary Fuel Filter - Close fuel tank shut-off valve. Remove and replace primary fuel filter (C) when performance decline is noticed or diagnostic trouble code is generated. Install replacement primary fuel filter and previously removed water separator (see Primary and Secondary Fuel Filter—Replacing in Service Engine section).
3. Secondary Fuel Filter - Close fuel tank shut-off valve. Remove and replace secondary fuel filter (D) when performance decline is noticed or diagnostic trouble code is generated. Remove fuel from filter and discard. Install replacement secondary fuel filter, open fuel tank shut-off valve, and turn key switch ON to prime fuel system (see Primary and Secondary Fuel Filter—Replacing in Service Engine section).

OUO6075,000157C -19-20JUN13-1/1

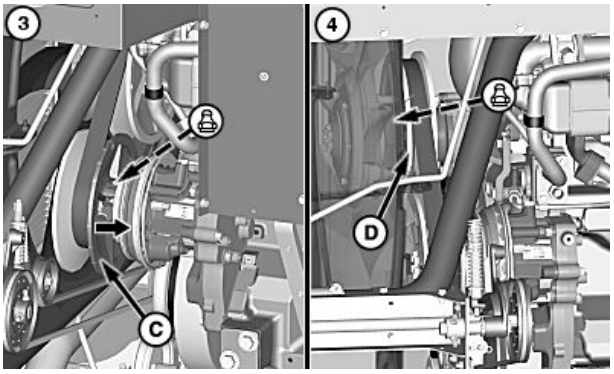
## Every 400 Hours (Interim Tier 4/Stage III B) (S660 and S670)




H106194 —UN—20FEB13




H100290 —UN—17FEB11




H100281 —UN—17FEB11

**A—Shield**
**B—Bleed Screw**
**C—Driver Sheave**
**D—Driven Sheave**

1. Engine Shielding - Remove and retain shield (A).
2. Variable Speed Drive Bleed Valve - Loosen bleed screw (B) to relieve pressure from sheaves.

**IMPORTANT: Inner driver sheave must be fully retracted to obtain proper amount of lubrication.**

**Sheave movement range can be impaired if sheaves are not fully separated.**

3. Variable Speed Driver Sheave - Locate grease fitting on driver sheave (C). Pull driver sheave towards engine until completely open. Grease fitting 10—12 pumps. Excess grease will purge from front side of driver sheave.

**IMPORTANT: Driven sheaves must be fully closed to obtain proper amount of lubrication.**

**Sheave movement range can be impaired if sheaves are not fully closed.**

4. Variable Speed Driven Sheave - Locate grease fitting on driven sheave (D). Push driven sheaves together until they are completely closed. Grease fitting 10—12 pumps. Excess grease will purge from front side of driven sheave.

   Tighten bleed screw and nut on valve to specification.

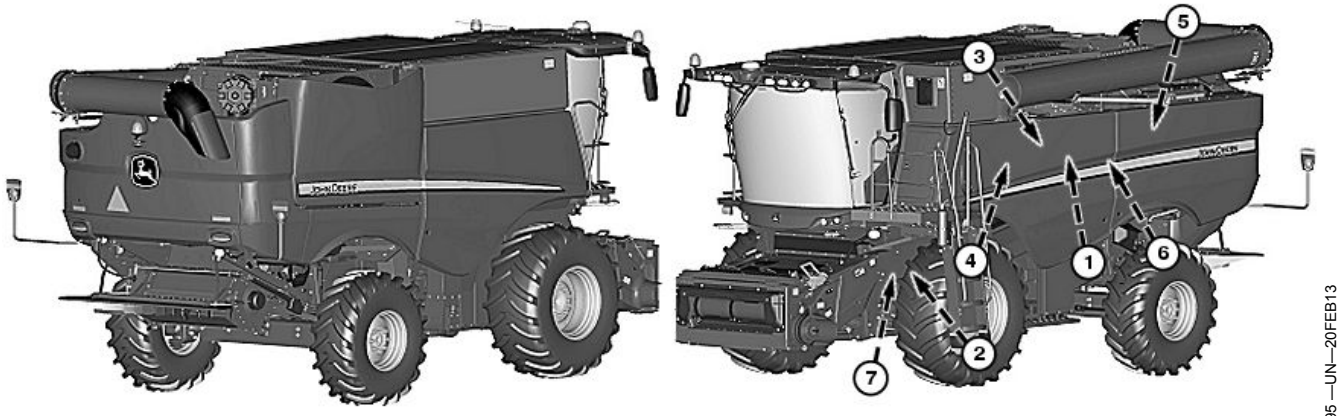
**Specification**

| | |
|---|---|
| Bleed Screw and Nut—Torque | 23 N·m (17 lb.-ft.) |

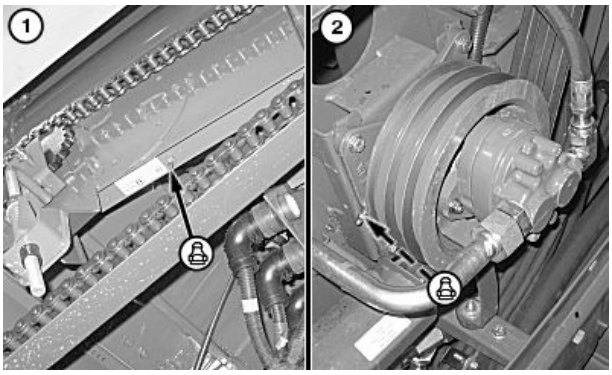
Instal previously removed shield.

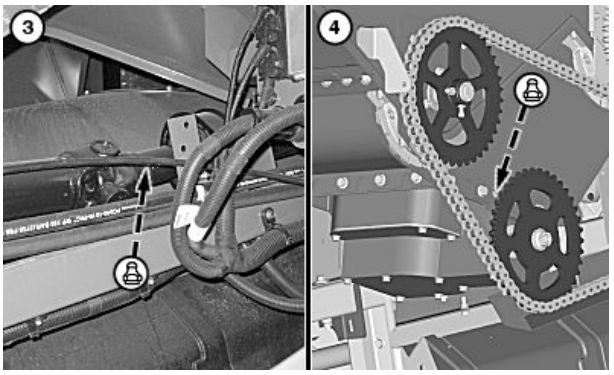
OUO6075,0001401 -19-01MAR13-1/1

## Every 400 Hours



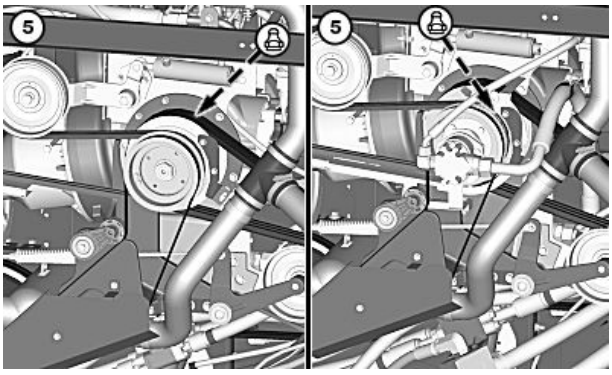

H106195 —UN—20FEB13

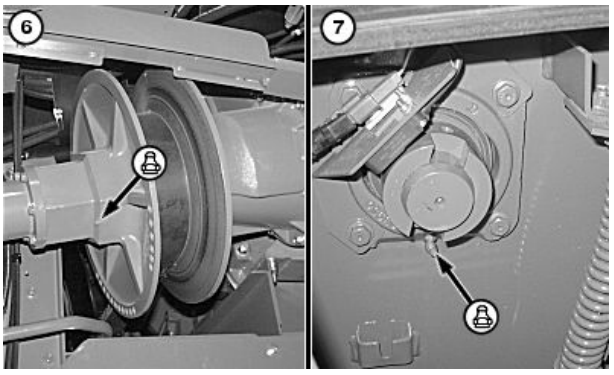



H97612 —UN—25AUG10

H104960 —UN—29FEB12




H108326 —UN—18JUN13

H104962 —UN—29FEB12

*S660 and S670 / S680, S685 and S690*

1. Unloading Auger Upper Gearcase - Grease fitting.
2. Header/Reel Drive Pump Sheave Bearing - Grease fitting.

*NOTE: Machines equipped with multi-speed feeder house drive have five grease fittings.*

3. Primary Countershaft Universal Joint Spline (Non Multi-Speed Feeder House) - Rotate to access fitting and grease.

**IMPORTANT: Pump 10 shots of grease into fitting.**

4. **S680, S685 and S690 Machines:** Vertical Unloading Auger Upper Gearcase - Grease fitting.

**Continued on next page**

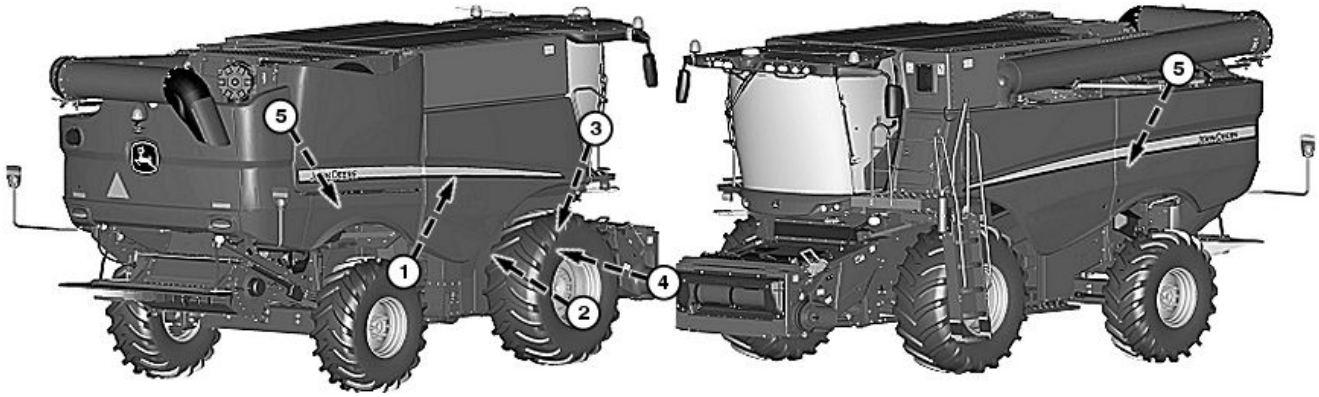
5. Chopper/Unloading Driveshaft Bearing - Rotate sheave to access fitting on bottom of sheave groove and grease fitting.

**IMPORTANT: Remove pipe plug and install grease fitting. Pump 40—45 shots of grease into fitting. DO NOT OVER GREASE. Remove grease fitting and reinstall pipe plug.**

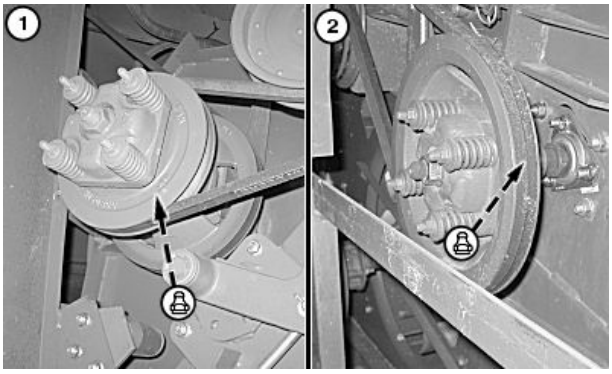
6. Variable Speed Driver Sheave - Close sheaves (high speed) before greasing at pipe plug in outer sheave hub. Rotate sheave for pipe plug access. Cycle cylinder speed to distribute grease if operated at high speed all the time.
7. Feed Accelerator Bearing (Left Side) - Grease fitting.

OUO6075,000157D -19-20JUN13-2/2

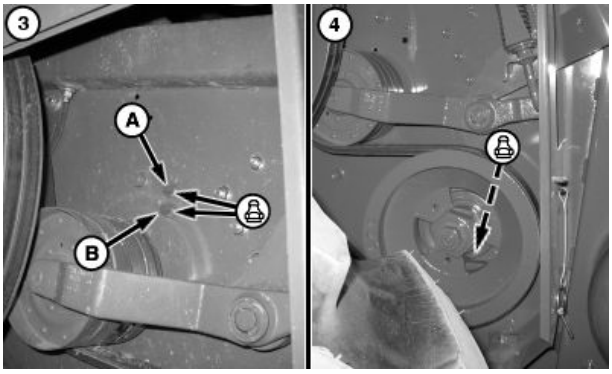
## Every 400 Hours




H106196 —UN—20FEB13




H86797 —UN—06NOV06




H86798 —UN—06NOV06

**A—Primary Countershaft Bearing B—Separator Bearing**

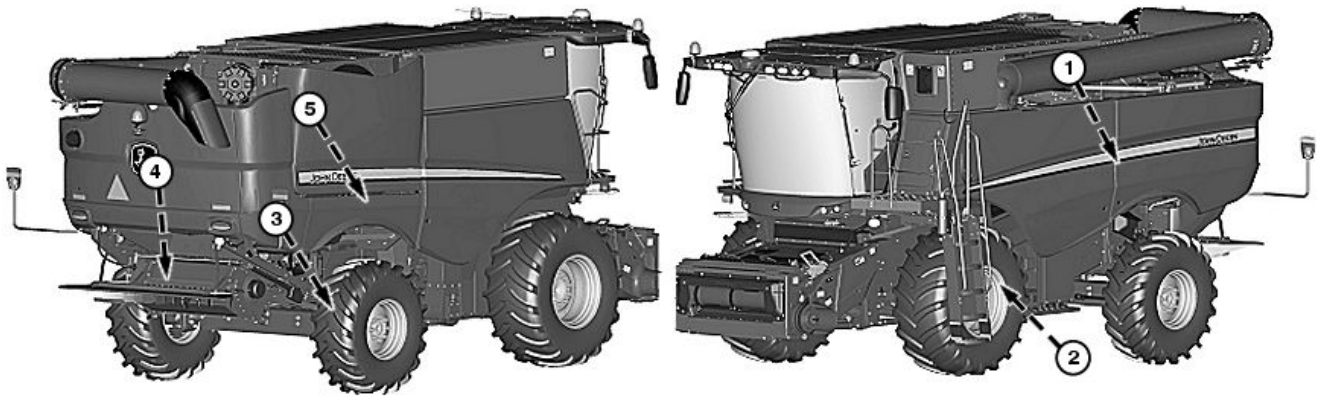
1. **S660 and S670 Machines:** Tailings Auger Drive Slip Clutch - Rotate sheave assembly to access fitting. Do not over grease.
2. Conveyor Auger Drive Slip Clutch - Rotate sheave assembly to access fitting. Do not over grease.
3. Right-Hand Side Lube Bank - Grease fittings to lubricate primary countershaft bearing (A) and separator bearing (B).
4. Feed Accelerator Bearing (Right Side) - Rotate sheaves to access fitting.
5. **S670, S680, S685 and S690 Machines:** Overshot Beater Bearings (Optional) - Grease fitting (both sides).



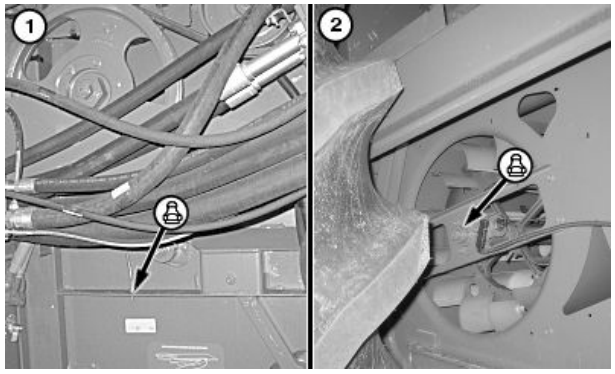

H101059 —UN—15APR11

OUO6075,000157E -19-20JUN13-1/1

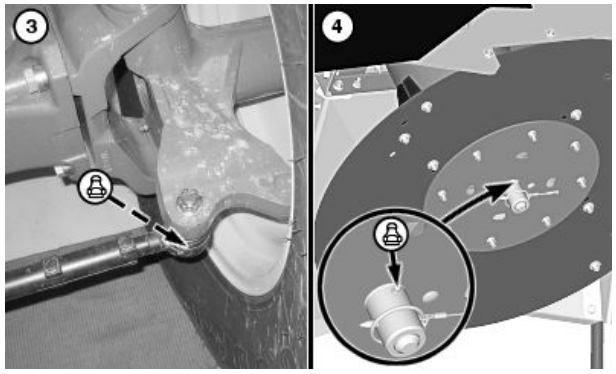
## Every 400 Hours




H106197 —UN—20FEB13



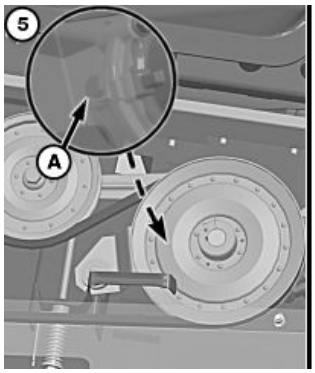

H97684 —UN—25AUG10




H97661 —UN—18AUG10

**A—Plug**

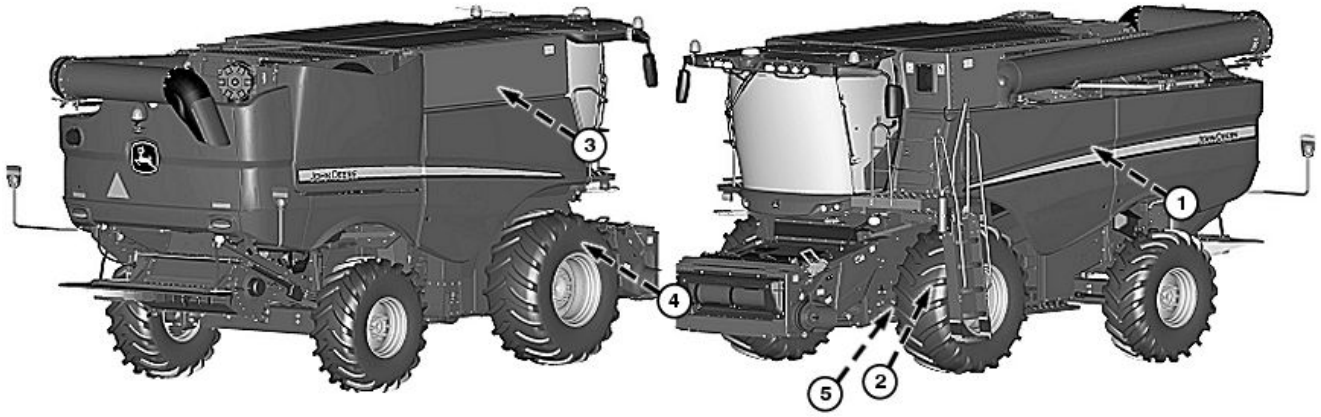
1. Discharge Beater Bearing - Grease fitting (both sides).
2. Cleaning Fan Shaft Bearings - Grease fitting (both sides).
3. Rear Axle Tie Rod - Grease fitting (both sides) on power steering rod end ball joint.
4. Spreader Disk (If Equipped) - Grease fitting (both sides) to prevent hubs from corroding to shafts.
5. **S670, S680, S685 and S690 Machines:** Overshot Beater Gearcase Oil (Optional) - Remove plug (A) and check oil level. Add oil as needed.



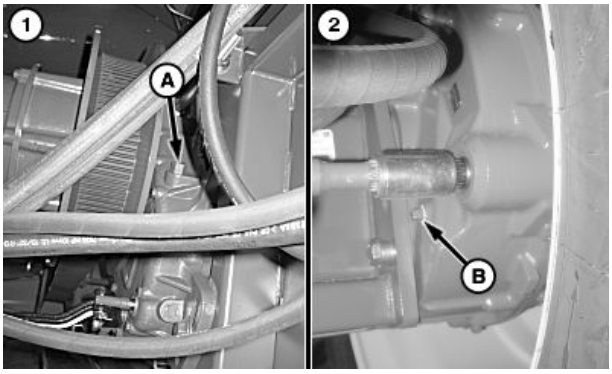

H97663 —UN—18AUG10

OUO6075,000157F -19-20JUN13-1/1

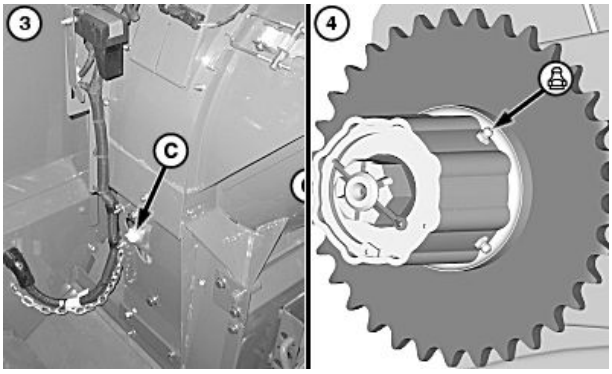
## Every 400 Hours




H106198 —UN—20FEB13




H86807 —UN—19APR07




H97471 —UN—30JUL10

**A—Dipstick**
**B—Plug**
**C—Dipstick**
**D—Driveshaft Coupler**

1. Separator Drive - Remove dipstick (A) and check oil level. Oil level should be between grooves on dipstick. Add oil as needed.

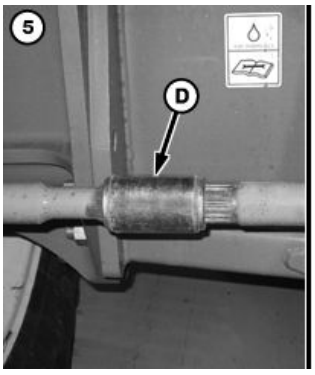
**IMPORTANT: HillMaster™ Machines: When checking final drive oil level, warn bystanders to stay clear of machine while leveling.**

*NOTE: HillMaster™ Machines: For oil level accuracy, final drives must be positioned so that final drive input shaft is on the same level as the axle drive shaft.*

2. Final Drive Oil - Remove plug (B) and check oil level (both sides). Oil should be within 12 mm (1/2 in.) of bottom of hole. Add oil as needed.

*NOTE: Loading auger gearcase does not need to be drained.*

3. Loading Auger Gearcase - Check oil level with dipstick (C) and add oil as needed.




H99263 —UN—02DEC10

4. Feeder House Slip Clutch - Grease fitting on upper feeder house slip clutch, until grease is forced out past seal.

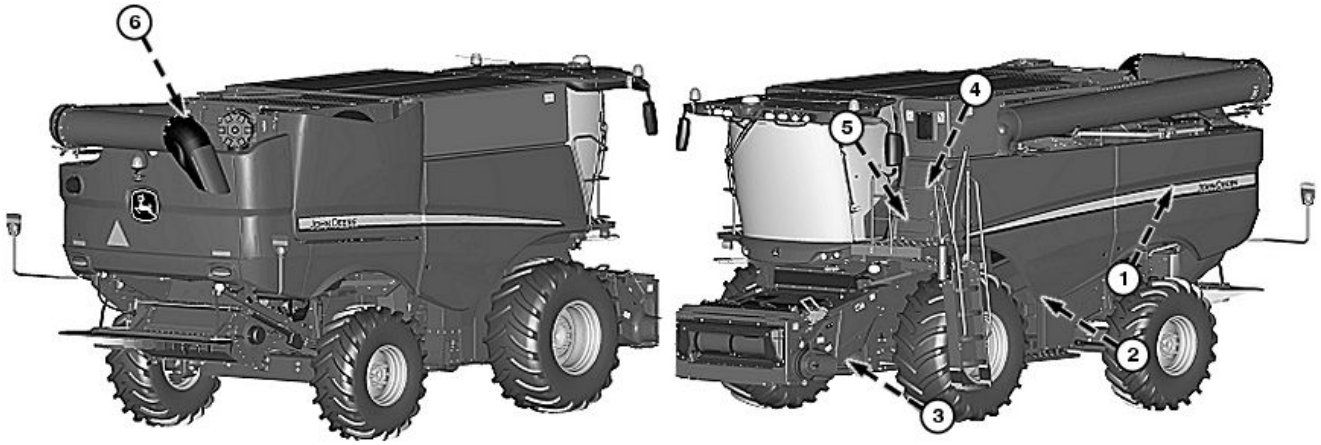
**Continued on next page**

OUO6075,0001404 -19-01MAR13-1/2

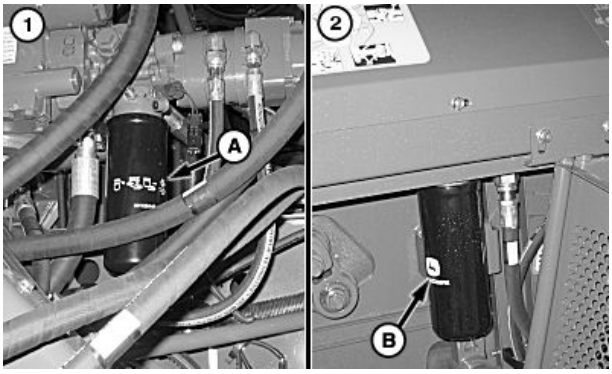
5. Final Drive Couplers - Remove driveshaft coupler (D) and driveshaft (both sides). Clean spline areas and apply anti-seize compound to both splined ends of driveshaft.

OUO6075,0001404 -19-01MAR13-2/2

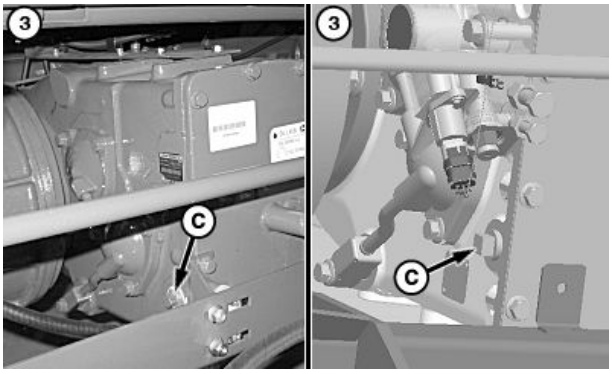
## Every 400 Hours (S660 and S670 Non ProDrive™ Machines)




H106199 —UN—20FEB13

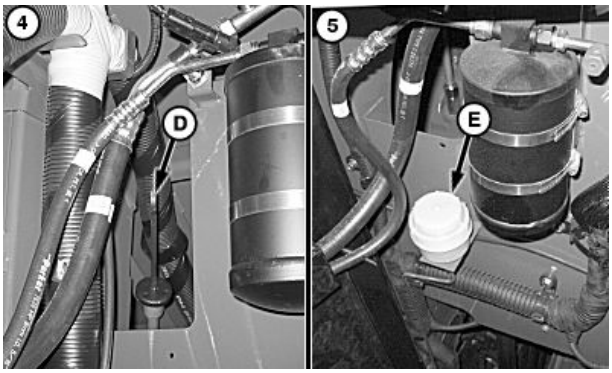



H97639 —UN—16AUG10

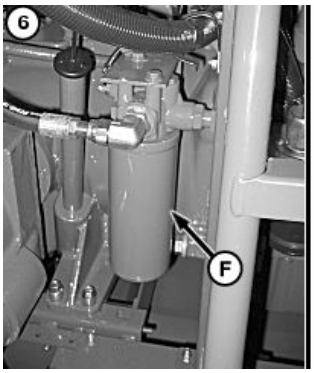



H97640 —UN—18AUG10

*Mechanical Shift / Push Button Shift*




H91518 —UN—30APR08




H97641 —UN—16AUG10

**A—Filter**
**B—Filter**
**C—Plug**
**D—Dipstick**
**E—Reservoir Cap**
**F—Filter**

*NOTE: It is not necessary to drain system when replacing filters.*

1. Hydrostatic Charge Filter - Remove and replace filter (A). Coat seal on filter with oil. Hand tighten, then tighten 1/2 turn more.
2. Hydraulic/Hydrostatic Filter - Remove and replace filter (B). Coat seal on filter with oil. Hand tighten, then tighten 1/2 turn more.
3. Transmission Oil - Remove plug (C) and check oil level. Add oil as needed to within 12 mm (1/2 in.) of bottom of hole.

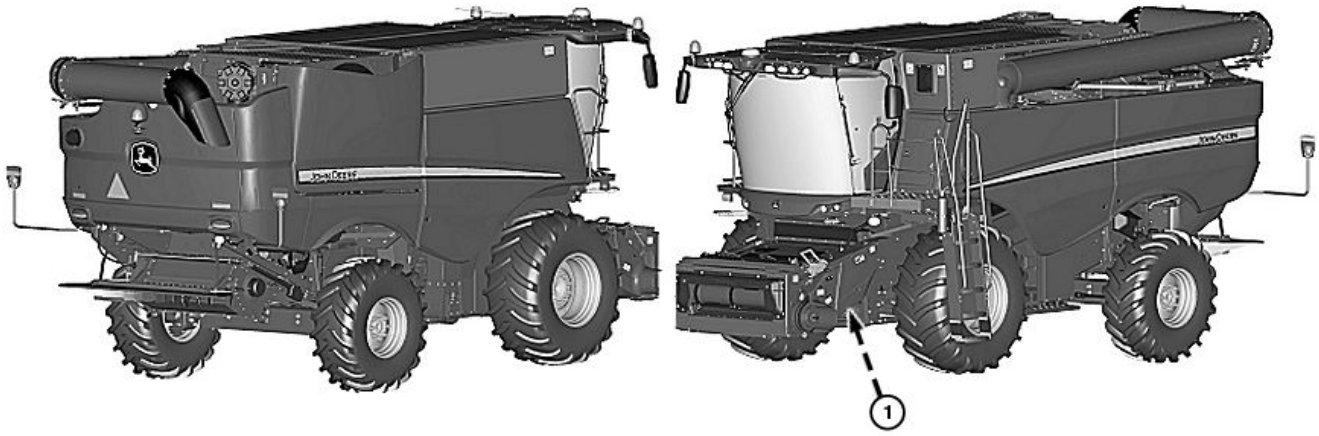
**Continued on next page**

OUO6075,0001405 -19-20JUN13-1/2

4. Primary Countershaft Gearcase Oil (Fixed and Variable Speed Feeder House) - Check primary countershaft gearcase oil level with dipstick (D). Add oil as needed.
5. Brake Fluid - Check brake fluid level. Look through reservoir cap (E). Add brake fluid to 6 mm (1/4 in.) from top. Do not let dirt get into brake fluid.
6. Main Engine Gearcase Filter - Remove and replace filter (F). Coat seal on filter with oil. Hand tighten, then tighten 1/2 turn more.

OUO6075,0001405 -19-20JUN13-2/2

## Every 400 Hours (S660 and S670 Push Button Shift Transmission Machines)



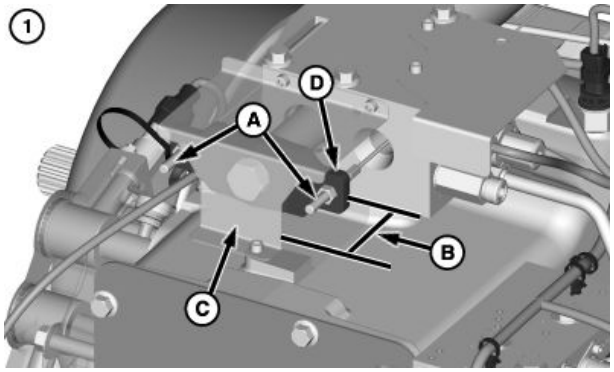

H106200 —UN—20FEB13

*NOTE: Engage park brake (piston extended – spring applied).*

1. Park Brake Cylinder Cables (A) - Measure and verify that distance (B) from shield (C) to balancer (D) is approximately 33.5—36.5 mm (1-5/16—1-7/16 in.) on both sides.

**CAUTION: Park brake cylinder cables are under extreme pressure. Cables MUST be adjusted by your John Deere dealer.**

If cables need to be adjusted, see your John Deere dealer.

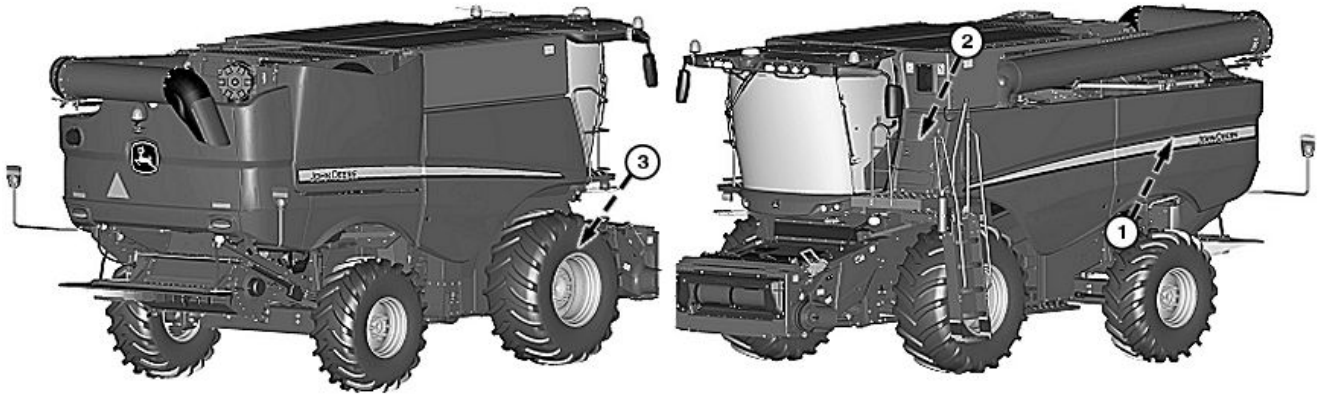



H105060 —UN—12SEP13

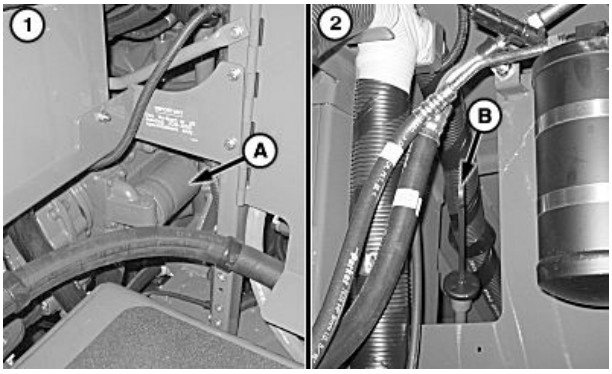
**A—Park Brake Cables**
**B—Distance**
**C—Shield**
**D—Balancer**

OUO6075,0001406 -19-01MAR13-1/1

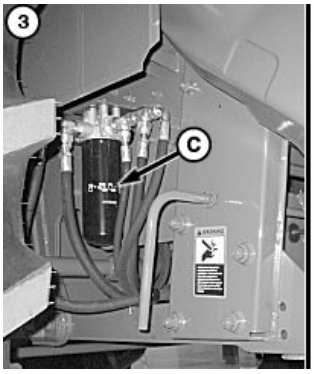
## Every 400 Hours (S670, S680, S685 and S690 ProDrive™ Machines)




H106201 —UN—20FEB13




H97704 —UN—25AUG10




H97705 —UN—25AUG10

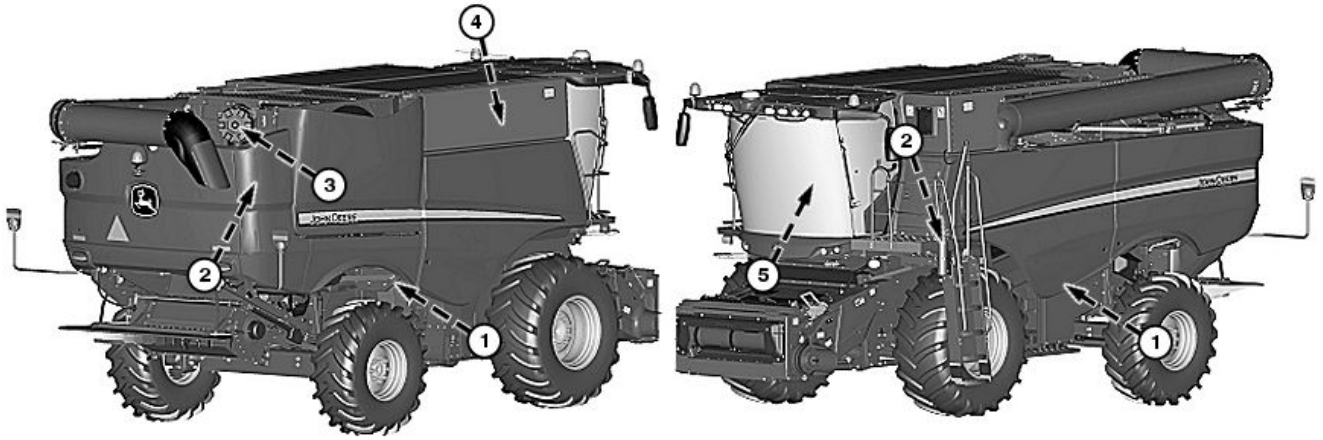
**A—Filter** **B—Dipstick** **C—Filter**

*NOTE: It is not necessary to drain system when replacing filters.*

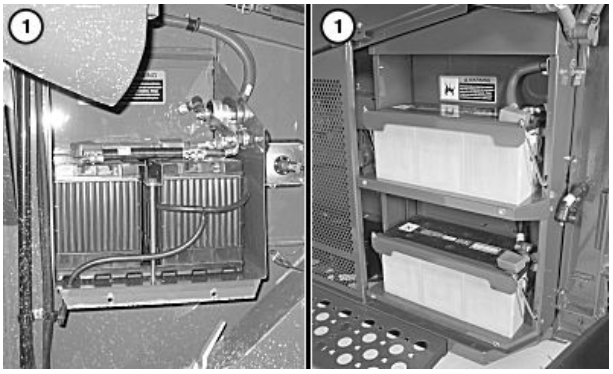
1. Hydrostatic Charge Filter - Remove and replace filter (A). Coat seal on new filter with oil. Hand tighten, then tighten 1/2 turn more.
2. Primary Countershaft Gearcase Oil (Fixed Speed Feeder House) - Check primary countershaft gearcase oil level with dipstick (B). Add oil as needed.
3. ProDrive™/Main Engine Gearcase Lube Filter - Remove and replace filter (C). Coat seal on filter with oil. Hand tighten, then tighten 1/2 turn more.

OUO6075,0001580 -19-20JUN13-1/1

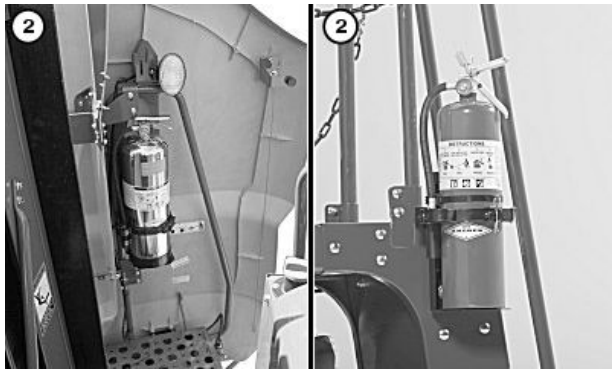
## Every 400 Hours




H106202 —UN—20FEB13

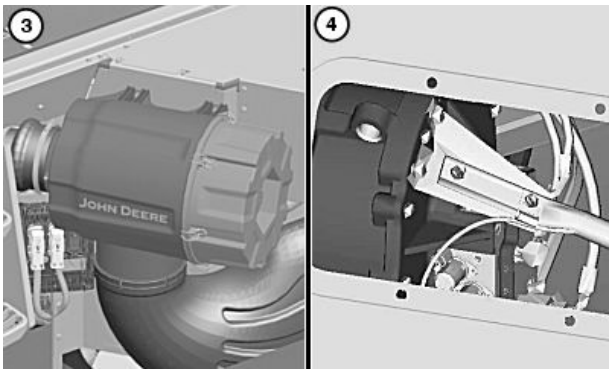



H104985 —UN—06MAR12

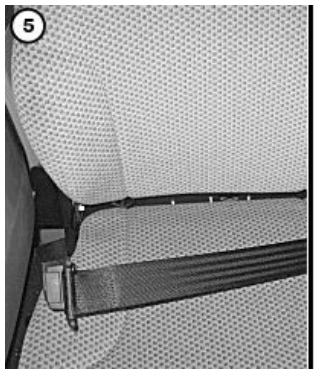



H107154 —UN—06MAR13

*S660 and S670 / S680, S685 and S690*




H104987 —UN—06MAR12




H104988 —UN—06MAR12

*NOTE: Batteries are located on right side of machine for S660 and S670 machines and on left side of machine for S680, S685 and S690 machines.*

1. Batteries - Clean top of batteries and check level in each cell. Fill to bottom of filler neck with distilled water if needed. Clean battery posts, cables, and tighten connections as needed.
2. Fire Extinguishers - Inspect fire extinguishers (front and rear) by following maintenance instructions on fire extinguisher label. Recharge or replace as necessary.
3. Air Filter Elements - When engine air filter restricted indicator is shown on display, service primary air filter. Check safety filter for plugging. Check for leaks and for collapse of aspirator tube. Replace elements if plugged.

**Continued on next page**

OUO6075,0001581 -19-20JUN13-1/2

**CAUTION: Dirt, oil, chaff, and crop debris in this area is a fire hazard. Direction of wind, type of crop and its moisture content can all have an effect on where and how much chaff and debris accumulate. Do not clean area with engine running.**

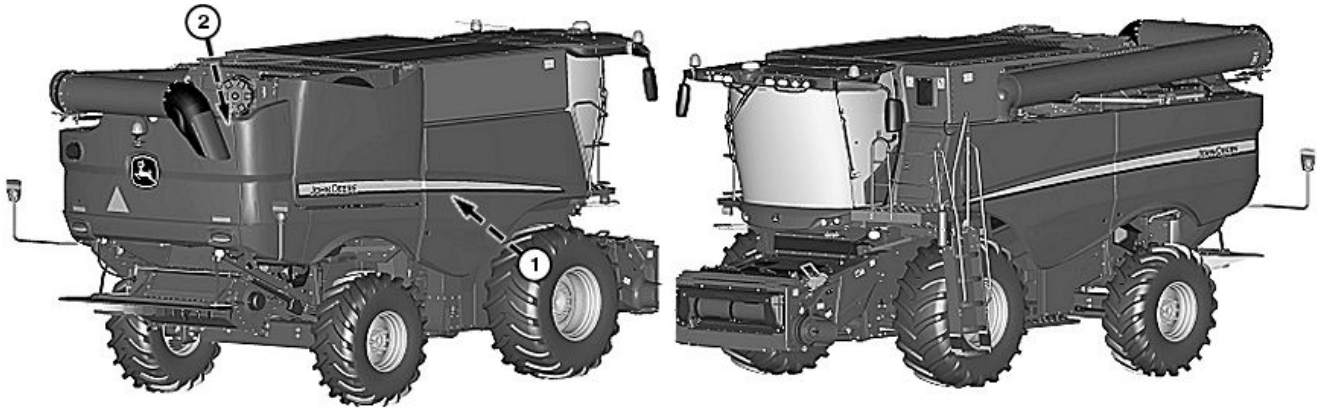
4. **S670, S680, S685 and S690 Machines:** Multi-Speed Feeder House Drive (Optional) - Remove access door on front side of grain tank and clean material around gearcase.

**IMPORTANT: Inspect seat belt and mounting hardware at least once a year. If seat belt system, including mounting hardware, buckle, belt, or retractor, shows any sign of damage or unusual wear, discoloration, or abrasion the entire seat belt should be replaced immediately. For your safety, replace seat belt system with replacement parts approved for your machine. See your John Deere dealer.**

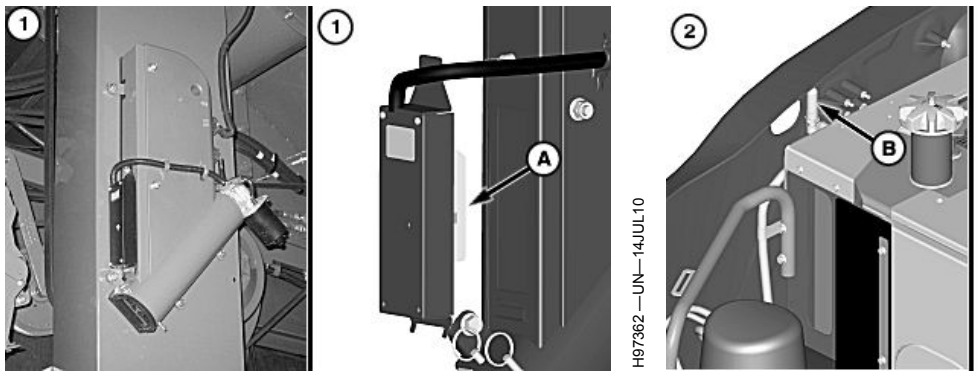
5. Seat Belt - Inspect seat belt for damage.

OUO6075,0001581 -19-20JUN13-2/2

## Every 400 Hours




H1106203 —UN—20FEB13




H97362 —UN—14JUL10

H1107155 —UN—08MAR13

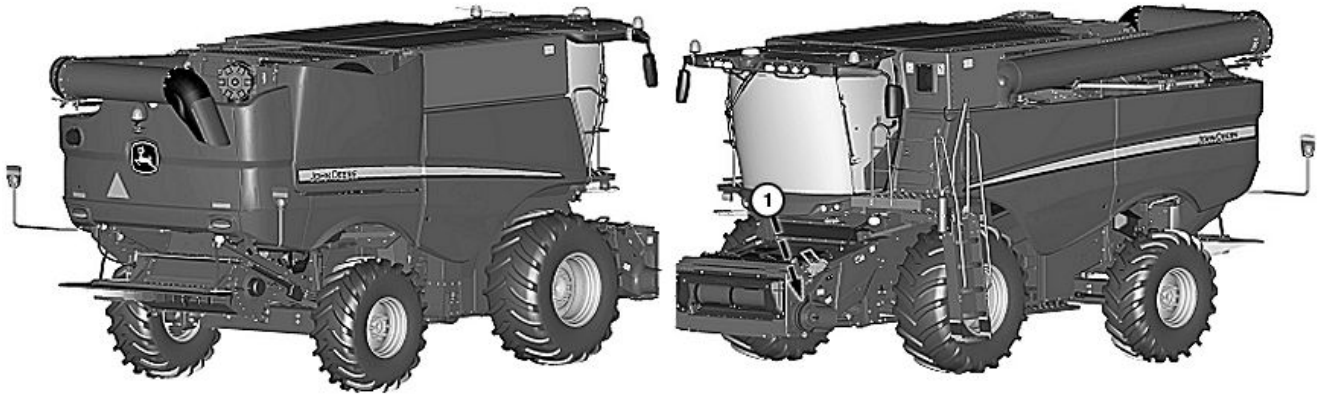
**A—Moisture Sensor Module** **B—Fuel Tank Breather**

**IMPORTANT: Static electricity can damage the moisture sensor module when touching the sensing plate. To avoid damage, ensure that you always touch a metal surface on the machine with at least one hand or arm before working on or cleaning the moisture sensor module.**

1. Moisture Sensor – Remove and clean moisture sensor module (A) when operating in weeds, green crops, or very small grains (canola).
2. Fuel Tank Breather - Remove and replace fuel tank breather (B).

OUO6075,0001346 -19-07MAR13-1/1

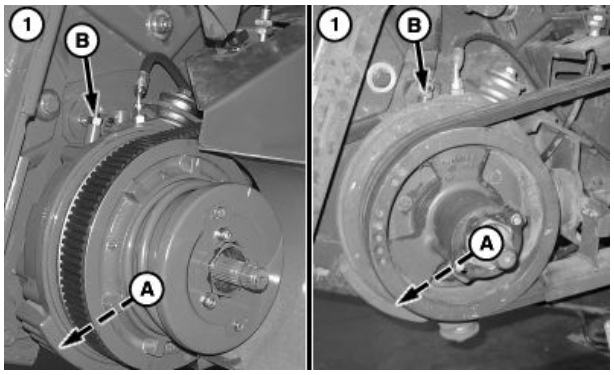
## Every 800 Hours




H106204 —UN—20FEB13

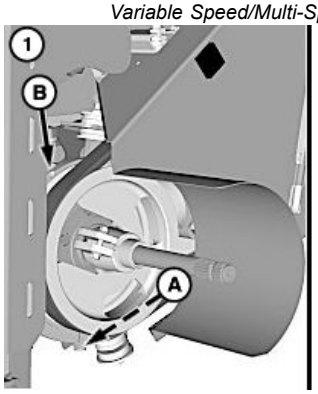
1. Feeder House Reverser Gearcase - Raise feeder house and lower safety stop. Drain oil at plug (A), wipe plug clean and refill at dipstick opening (B). Check oil level with feeder house raised up. Gearcases with an oil cooler require gearcase be run for several minutes. This ensures that the cooler is filled with oil. Oil level must show on knurled part of dipstick. Refer to Fuels and Lubricants section for proper oil type.

**A—Plug** **B—Dipstick**




H91014 —UN—20MAR08

*Variable Speed/Multi-Speed Reverser Gearcase*

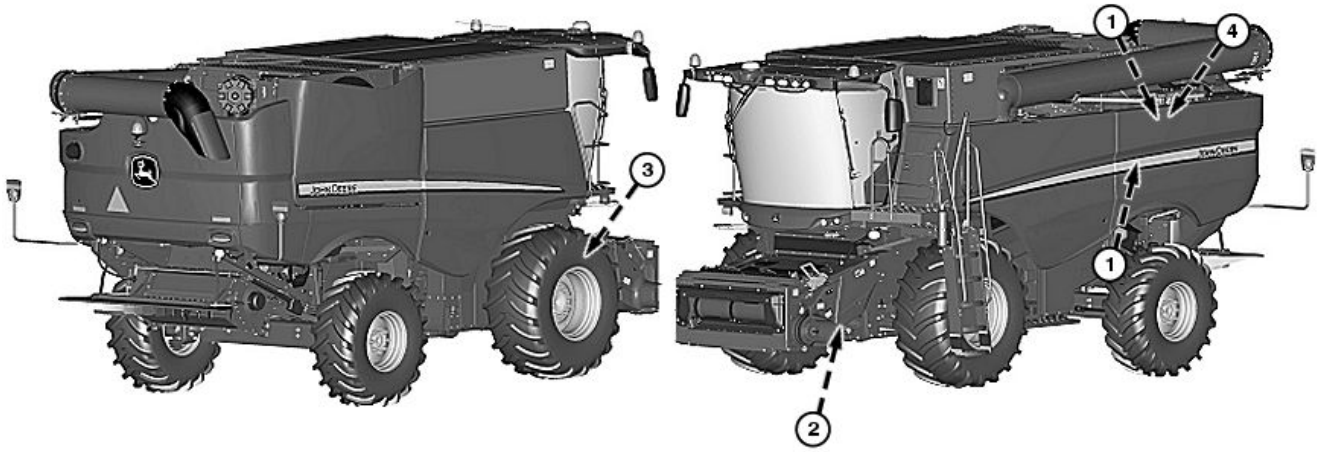



H104990 —UN—07MAR12

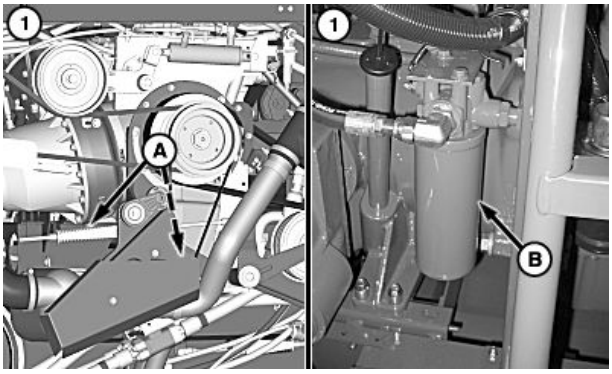
*Fixed Speed*

OUO6075,0001347 -19-27NOV12-1/1

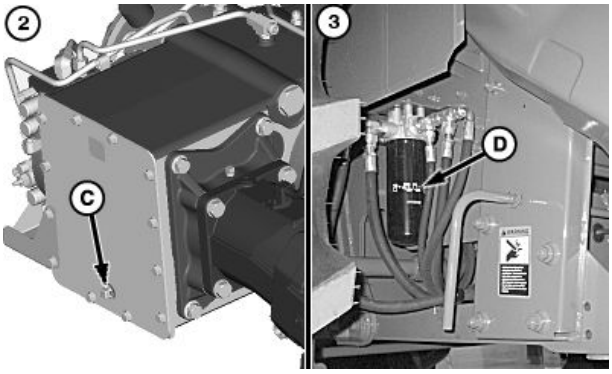
## Every 1000 Hours (S670 ProDrive™ Machines)




H106205 —UN—20FEB13




H108327 —UN—18JUN13



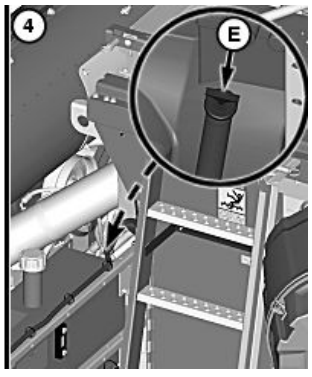

H99381 —UN—08DEC10

**A—Plugs**
**B—Filter**
**C—Plug**
**D—Filter**
**E—Dipstick**

1. Main Engine Gearcase Oil and Filter - Drain oil at plugs (A). Remove and replace filter (B). Coat seal on new filter with oil. Hand tighten, then tighten 1/2 turn more.
2. Transmission Oil - Drain oil at plug (C).
3. ProDrive™/Main Engine Gearcase Lube Filter - Remove and replace filter (D). Coat seal on filter with oil. Hand tighten, then tighten 1/2 turn more.

*NOTE: Overfilling main engine gearcase may cause oil to force dipstick tube out when machine is running.*

4. **Fill Main Engine Gearcase**
   1. Fill until oil is at bottom line on dipstick (E).
   2. Install dipstick and run engine for one minute minimum.
   3. Shut OFF engine and let machine sit for five minutes allowing air to settle from oil.

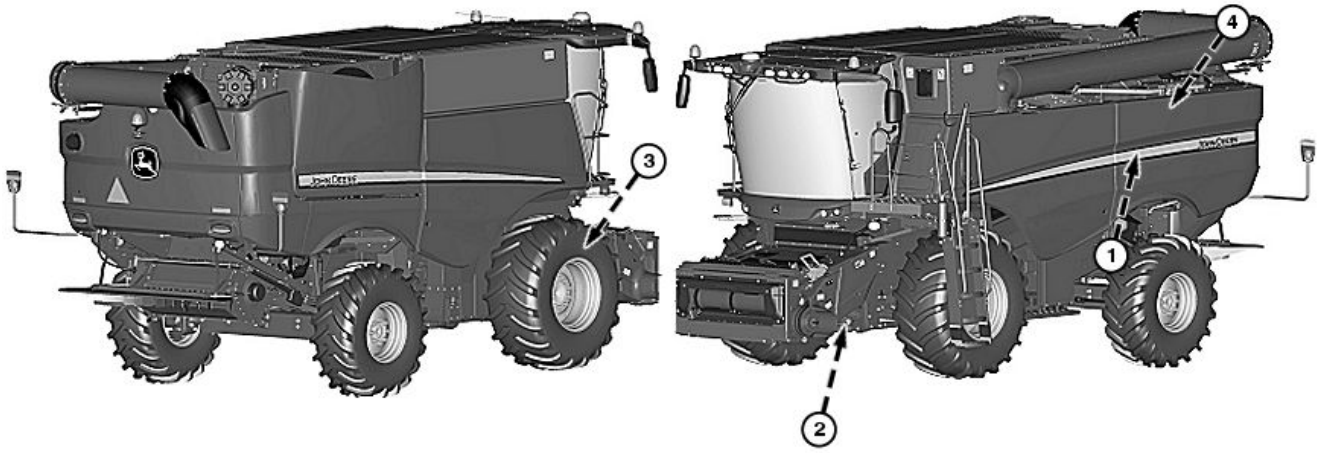



H107156 —UN—08MAR13

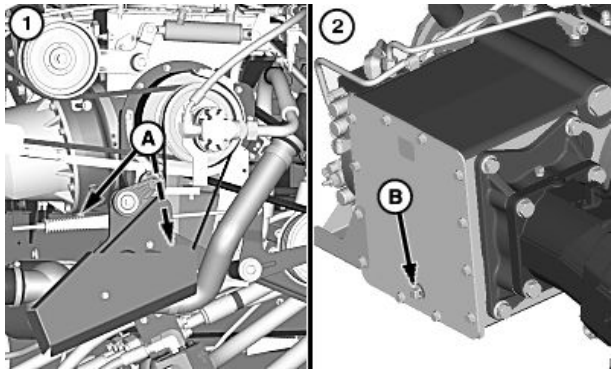
   4. Remove dipstick and check oil level. Add oil until oil level is at top line on dipstick.
   5. Repeat procedures until oil level remains at top line on dipstick.

OUO6075,00014FC -19-20JUN13-1/1

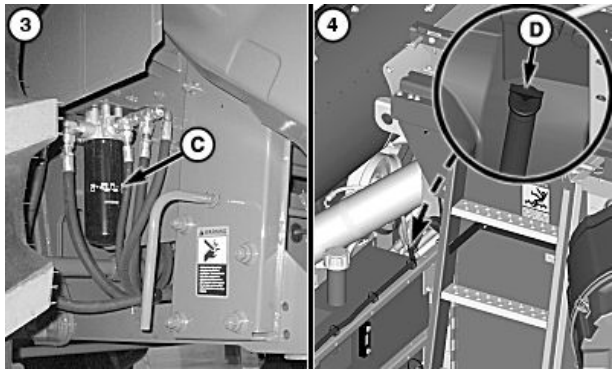
## Every 1000 Hours (S680, S685 and S690)




H106206 —UN—20FEB13




H108328 —UN—18JUN13




H107157 —UN—08MAR13

**A—Plugs**
**B—Plug**
**C—Filter**
**D—Dipstick**

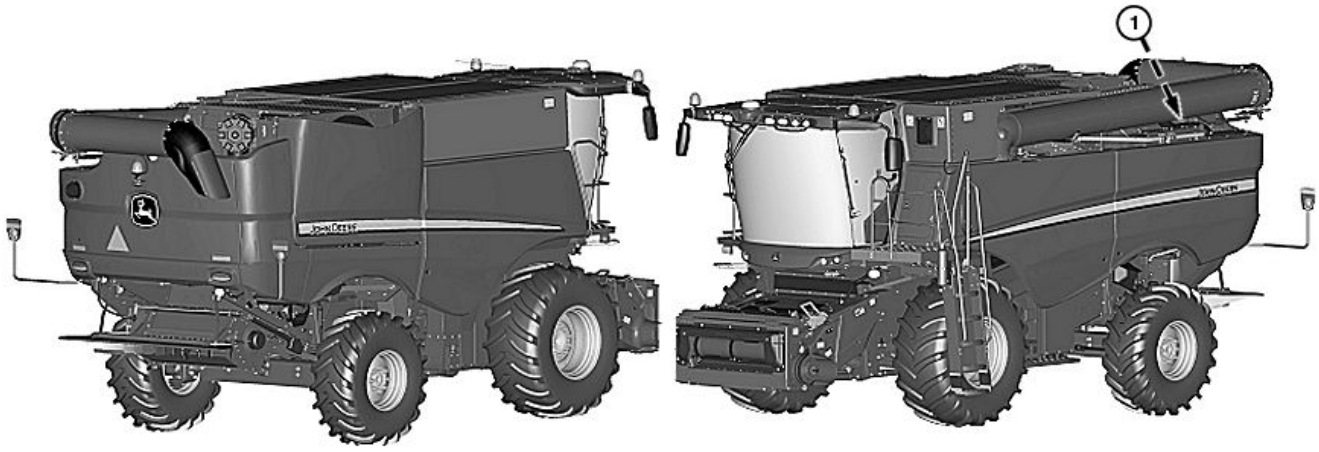
1. Main Engine Gearcase - Drain oil at plugs (A).
2. Transmission Oil - Drain oil at plug (B).
3. ProDrive™/Main Engine Gearcase Lube Filter - Remove and replace filter (C). Coat seal on filter with oil. Hand tighten, then tighten 1/2 turn more.

*NOTE: Overfilling main engine gearcase may cause oil to force dipstick tube out when machine is running.*

4. **Fill Main Engine Gearcase**
   1. Fill until oil is at bottom line on dipstick (D).
   2. Install dipstick and run engine for one minute minimum.
   3. Shut OFF engine and let machine sit for five minutes allowing air to settle from oil.
   4. Remove dipstick and check oil level. Add oil until oil level is at top line on dipstick.
   5. Repeat procedures until oil level remains at top line on dipstick.

OUO6075,0001582 -19-20JUN13-1/1

## Every 1000 Hours (S680, S685 and S690)




H106207 —UN—20FEB13

*NOTE: Clean area around filter cap before removing to prevent system contamination. It is not necessary to drain system when replacing filter.*

1. Hydraulic Reservoir Filter - Remove and replace filter when performance decline is noticed or diagnostic trouble code is generated.

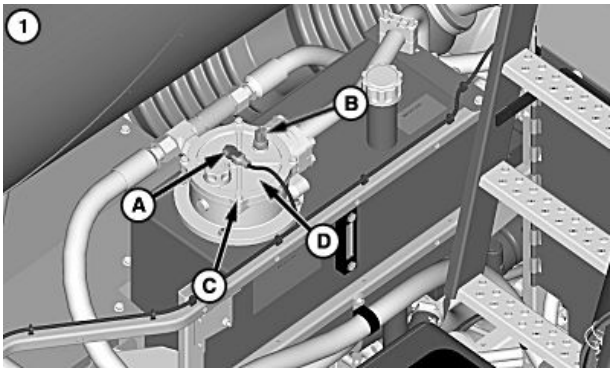
1. Disconnect wiring harness connector (A) from sensor (B).

**⚠ CAUTION: Remove cap screws equally to relieve spring pressure from filter cap.**

*NOTE: Inspect and replace O-ring underneath filter cap as needed.*

2. Remove and retain cap screws (C) and filter cap (D).
3. Remove and retain spring on top of filter.
4. Remove and discard filter.
5. Install replacement filter as shown with previously removed spring.
6. Install previously removed filter cap.
7. Use filter cap to compress spring and install previously removed cap screws.

**IMPORTANT: Verify that O-ring remains in place when installing filter cap.**




H107158 —UN—07MAR13

**A—Wiring Harness Connector**
**B—Sensor**
**C—Cap Screws**
**D—Filter Cap**

8. Tighten cap screws to specification.

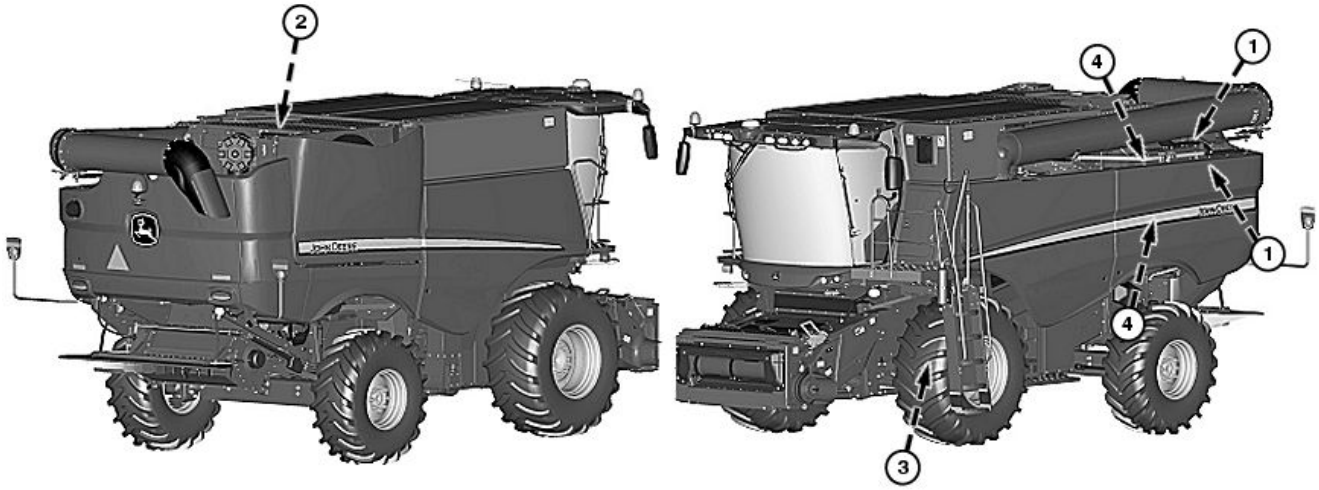
**Specification**

Cap Screws—Torque.....7 N·m (62 lb.-in.)

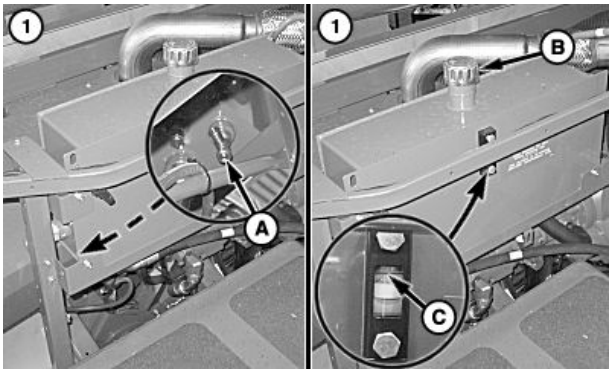
9. Connect wiring harness to sensor.

OUO6075,0001583 -19-20JUN13-1/1

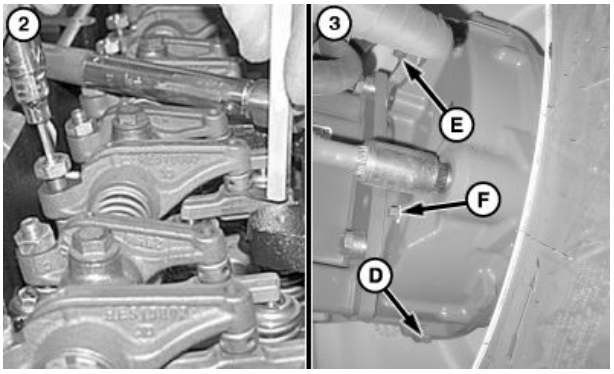
## Every 2000 Hours (S660 and S670)




H106208 —UN—20FEB13




H97536 —UN—05AUG10

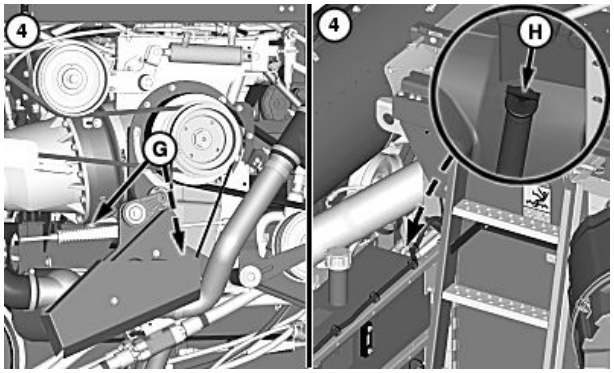



H86820 —UN—19APR07

**A—Drain Valve**
**B—Cap**
**C—Sight Glass**
**D—Drain Plug**
**E—Fill Plug**
**F—Check Hole**
**G—Drain Plugs**
**H—Dipstick**

*NOTE: Clean hydraulic reservoir area to prevent system contamination and refer to Specifications section for oil capacity before draining.*

1. Hydraulic/Hydrostatic Reservoir Oil - Open drain valve (A) to drain oil. Close valve once oil is drained. Remove cap (B) and fill hydraulic reservoir until oil level is at top of sight glass (C) with feeder house fully lowered.
2. Engine Valve Backlash - Have engine valve backlash checked and adjusted if necessary, by your John Deere dealer.
3. Final Drives Oil (both sides) - Remove drain plug (D) to drain. Remove fill plug (E) to refill until oil level is within 12 mm (1/2 in.) of bottom check hole (F).

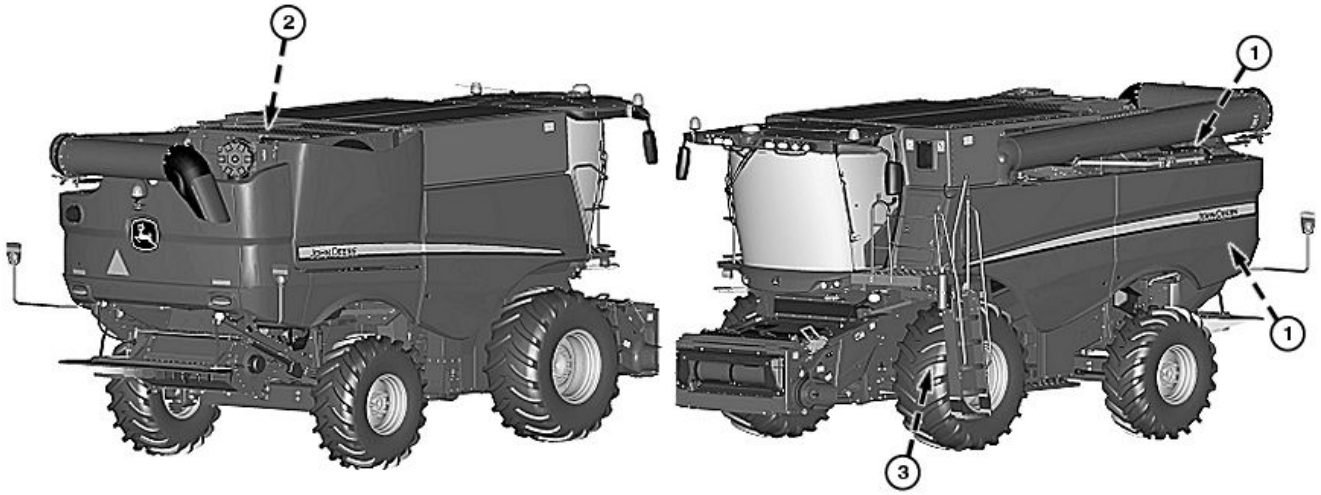



H108330 —UN—18JUN13

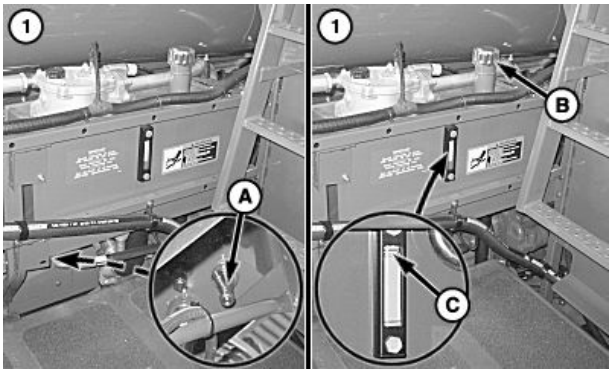
4. Main Engine Gearcase Oil (Non ProDrive™ Machines)- Drain at plugs (G). Refill and check oil level at dipstick (H).

OUO6075,0001584 -19-20JUN13-1/1

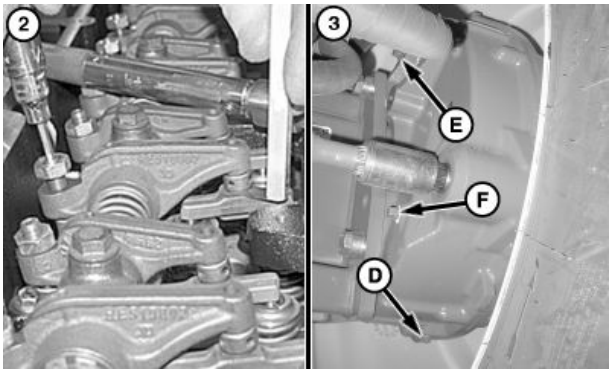
## Every 2000 Hours (S680, S685 and S690)




H106209 —UN—20FEB13




H108225 —UN—10JUN13




H86820 —UN—19APR07

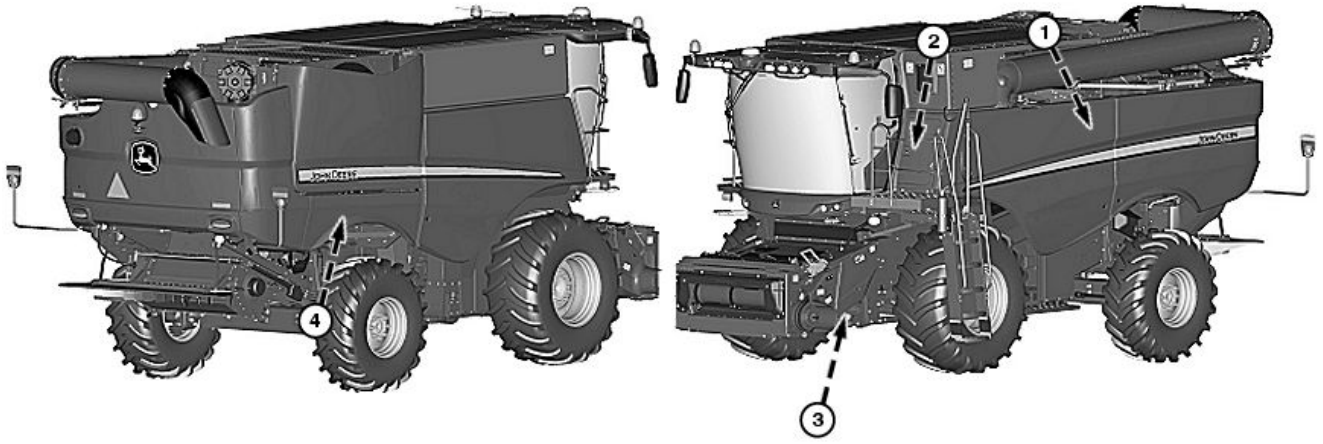
**A—Drain Valve**
**B—Cap**
**C—Sight Glass**
**D—Drain Plug**
**E—Fill Plug**
**F—Check Hole**

*NOTE: Clean hydraulic reservoir area to prevent system contamination and refer to Specifications section for oil capacity before draining.*

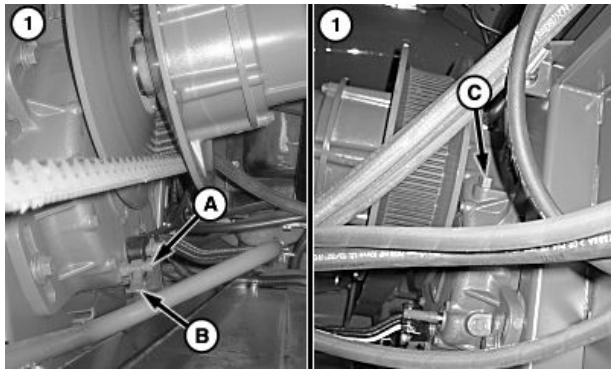
1. Hydraulic/Hydrostatic Reservoir Oil - Open drain valve (A) to drain oil. Close valve once oil is drained. Remove cap (B) and fill hydraulic reservoir until oil level is at top of sight glass (C) with feeder house fully lowered.
2. Engine Valve Backlash - Have engine valve backlash checked and adjusted if necessary, by your John Deere dealer.
3. Final Drives Oil (both sides) - Remove drain plug (D) to drain. Remove fill plug (E) to refill until oil level is within 12 mm (1/2 in.) of bottom check hole (F).

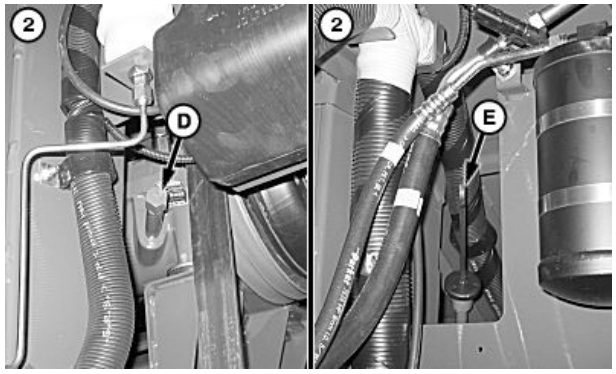
OUO6075,0001585 -19-20JUN13-1/1

## Every 2000 Hours



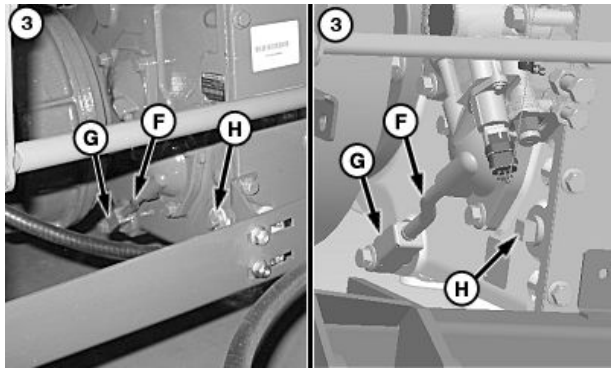

H106210 —UN—20FEB13

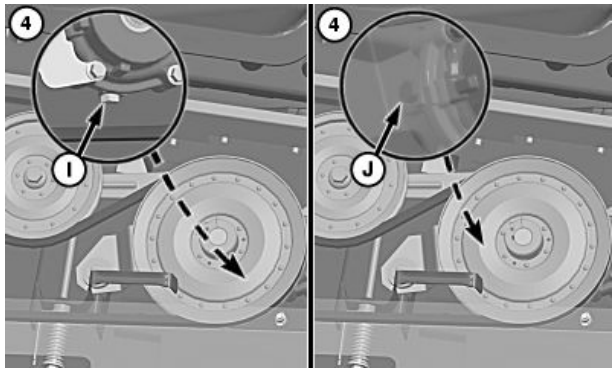



H97678 —UN—18AUG10

H97679 —UN—18AUG10




H97680 —UN—18AUG10

H97681 —UN—18AUG10

*Mechanical Shift/Push Button Shift*

**A—Cap**
**B—Drain Valve**
**C—Dipstick**
**D—Cap**
**E—Dipstick**
**F—Tube**
**G—Block**
**H—Check Plug**
**I— Plug**
**J— Plug**

1. Separator Drive Oil - Remove cap (A) and attach hose to drain valve (B). Open valve to drain. Refill at dipstick (C) as needed.
2. Primary Countershaft Gearcase Oil (Fixed and Variable Speed Feeder House) - Drain at cap (D) and refill at dipstick (E). Oil level must show on knurled part of dipstick.
3. Transmission Oil - Slide tube (F) out of block (G). Remove block to drain. Remove check plug (H) and refill to within 12 mm (1/2 in.) of hole.

**Continued on next page**

OUO6075,0001586 -19-20JUN13-1/2

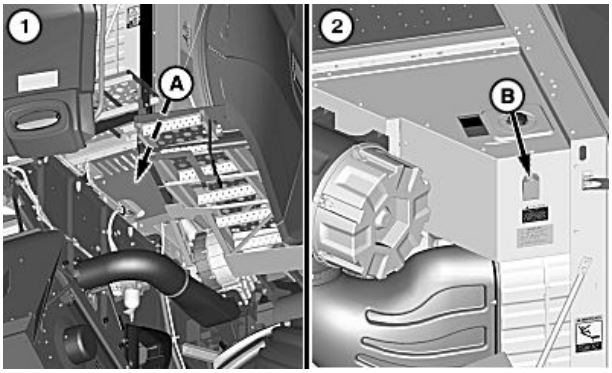
4. **S670, S680, S685 and S690 Machines:** Overshot Beater Gearcase Oil (Optional) - Drain at plug (I) and refill at plug (J). Oil level must be level with plug hole on side of gearcase.

OUO6075,0001586 -19-20JUN13-2/2

## Every 2000 Hours or Six Years

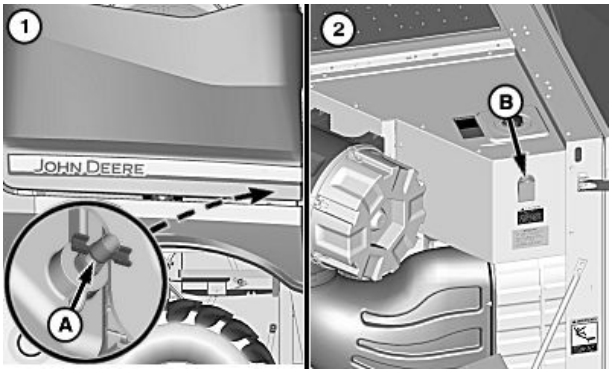



H106211 —UN—20FEB13




H107162 —UN—06MAR13

*S660 and S670 Radiator Drain (Tier 2/Stage II)*




H107163 —UN—08MAR13

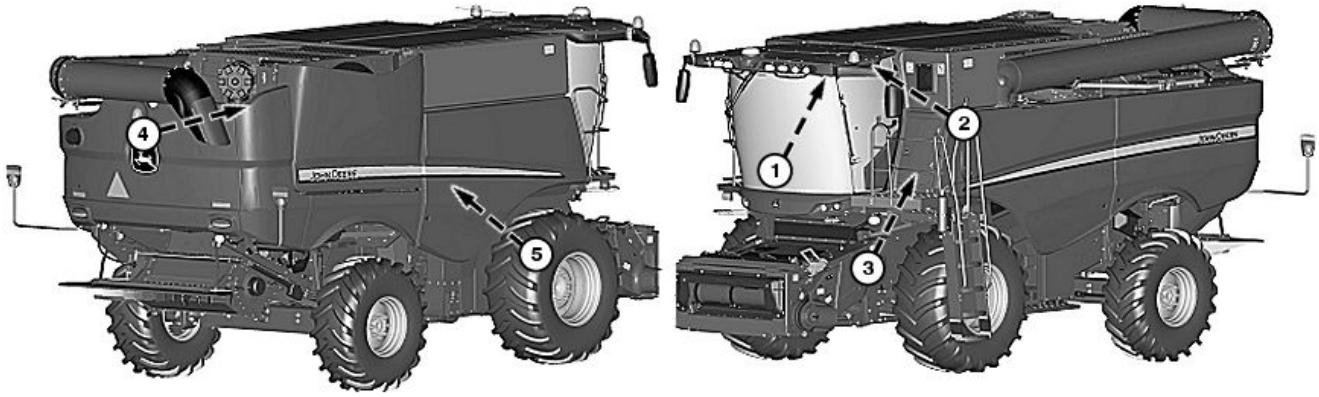
*S680 and S690 Radiator Drain (Tier 2/Stage II)*
*S660, S670, S680, S685 and S690 Radiator Drain (Interim Tier 4/Stage III B)*

**A—Drain** **B—Surge Tank**

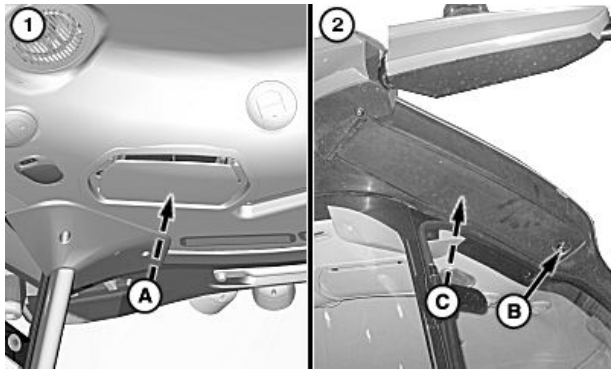
1. Radiator - Open drain (A) to remove coolant from radiator.
2. Surge Tank - Flush and refill with correct coolant and conditioner (see Cooling System—Draining in Service Engine section and Engine Coolant recommendations given in Fuels and Lubricants section). Check engine coolant level in surge tank (B) with engine cold. Level must be up to "Max Cold" line.

OUO6075,0001587 -19-09JUL13-1/1

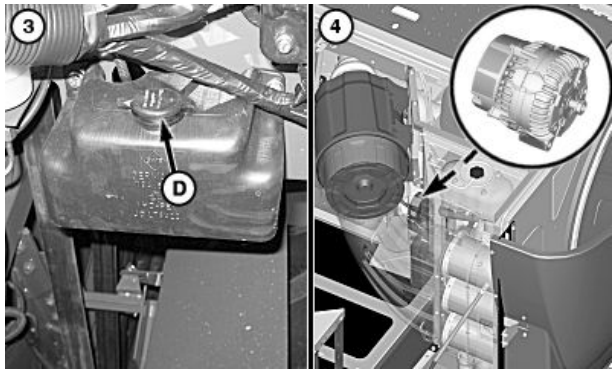
## As Required




H106212 —UN—20FEB13




H97476 —UN—30JUL10

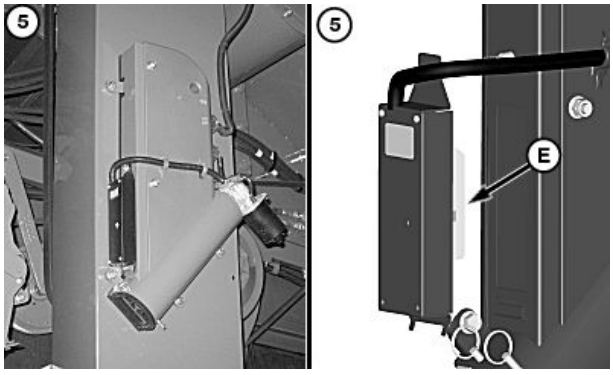



H97477 —UN—02AUG10

**A—Recirculating Filter**
**B—Knob**
**C—Fresh Air Filter**
**D—Reservoir Cap**
**E—Moisture Sensor Module**

1. Recirculating Filter - Remove cover to clean or replace recirculating filter (A).
2. Cab Fresh Air Filter - Turn knob (B) and lower access cover. Remove fresh air filter (C) to clean or replace as needed.
3. Windshield Washer Reservoir - Open cap (D) and fill windshield washer reservoir as needed.
4. Alternator(s) Screen - Clean screen when 50% covered with debris.

**IMPORTANT: Static electricity can damage the moisture sensor module when touching the sensing plate. To avoid damage, ensure that you always touch a metal surface on the machine with at least one hand or arm before working on or cleaning the moisture sensor module.**




H97364 —UN—02AUG10

5. Moisture Sensor – Remove and clean moisture sensor module (E) when operating in weeds, green crops, or very small grains (canola).

OUO6075,000134F -19-27NOV12-1/1

## 4500 Hours or Five Years

**IMPORTANT: Vibration damper assembly is not repairable and should be replaced every five years or 4500 hours, whichever occurs first.**

Have your John Deere dealer replace the front engine crankshaft damper.

OUO6075,0000609 -19-19JAN10-1/1

## Feeder House

| Symptom | Problem | Solution |
|---|---|---|
| **Uneven or bunched feeding of crop to rotor.** | Header auger too high. | Adjust auger down and back. See header operator's manual. |
| | Buildup of grain on cutterbar. | Lower reel and set fore-and aft position as close as possible to cutterbar and auger. See platform operator's manual. |
| | Drum arms bind up to sidesheet on one side. | Loosen and tension chain again. Straighten or replace bent parts. |
| | Feeder conveyor chain too tight and holds drum up. | Adjust conveyor chain to correct tension. |
| | Header drive belt slipping. | Spring-loaded idler must be free and tight against belt. |
| | Auger too far ahead of stripper. | Adjust auger back to stripper. See header operator's manual. |
| | Feeder conveyor drive chain not on correct sprocket. | Place chain on correct sprocket. |
| | Feeder conveyor slats bowed up. | Straighten or replace bent slats. |
| | Dirt and sap buildup on feeder house bottom. | Clean bottom. |
| | Too great a distance between platform auger and feeder house front drum. | Add links to feeder house chain. |
| **Header or Reel Will Not Lift Correctly** | Air in hydraulic system. | Tighten clamps on leaking lines or hoses. Bleed reel lift system. See Platform operator's manual. |

OUO6075,0000B5B -19-02MAR11-1/1

## Separator

| Symptom | Problem | Solution |
|---|---|---|
| **Slugging or Overloading of Separator.** | Single tine separator variable drive belt is slipping at slow speed. | Adjust sheave gap. |
| | Separator speed too slow for crop. | Increase separator speed. |
| **Backfeeding of Feed Accelerator.** | Separator speed too slow for crop. | Increase separator speed. |
| | Accelerator speed in slow speed position. | Change accelerator speed to high speed position. |
| **Grain Not Threshed.** | Separator speed too slow for crop. | Increase separator speed in increments of 50-100 rpm. After separator speed adjustment check grain quality. |
| | Concave clearance too wide. | Tighten threshing clearance in increments of 5-10 mm. After threshing clearance adjustment check grain quality. |
| | Concave clearance not even from front to rear. | Adjust to specifications. See Concave Leveling in Separator section. for further information. |
| | Not enough material entering combine for proper threshing. | Increase ground speed. |
| **Too Much Cracked Grain in Tank.** | Separator speed too fast for crop. | Decrease separator speed in increments of 10 rpm. |
| | Concave clearance too tight. | Open threshing clearance in 2 mm increments. |
| | Feed beater speed too fast for crop. | Decrease feed accelerator speed by switching to low speed. |
| | Excessive grain in tailings. | Open sieve in increments of 2 mm to reduce tailings. |
| | Not enough material entering machine. | Increase ground speed. |
| | Active tailings system (if equipped) concave position incorrectly set. | Set active tailings system concave position. See Crop Settings section for further information. |
| **Separator Grain Loss** | Separator overloaded due to incomplete threshing or late threshing at concave. | Reduce separator to concave spacing and/or increase separator speed to increase threshing action. |
| | Separator covers installed. | See Crop Settings section for further information. |
| | | Remove covers to increase open area while maintaining even shoe loading. |

Continued on next page

| Symptom | Problem | Solution |
|---|---|---|
| | Separator top cover vanes (if equipped) are in the advanced position. | Move vanes to standard position. See CommandCenter Display Screen section for further information. |
| **Dirty Grain Tank (Unthreshed Heads).** | Separator not threshing enough. | Increase separator speed in increments of 50-100 rpm. |
| | | Decrease threshing clearance in increments of 2 mm. |
| | | Check concave level. See Concave Leveling in Separator section for further information. |
| | | Active tailings system machines: install concave covers in first concave. |
| | | Non active tailings system machines: install concave covers in second concave. |
| | | Add concave interrupters to first concave. |
| | Active tailings system (if equipped) concave position incorrectly set. | Verify that active tailings system concave position is correct for crop harvested. |
| | | Check active tailings system concave position for correct zero position. See Tailings System Wear Strips and Rasp Bars—Adjusting in Separator section for further information. |
| **Dirty Grain Tank (Mostly Chaff).** | Fan speed too slow. | Increase fan speed. |
| | Residue system crop diverter door in incorrect position. | Verify that door position matches harvested crop. |
| **Dirty Grain Tank (Small Pieces of Cob).** | Broken cob pieces in grain tank. | *NOTE: Spacers should be used in corn and soybeans only. Remove spacers for all other crops.* |
| | | Install separator grate spacers. |
| | Check threshing clearance. If clearance is less than bare cob diameter rotor may break up cob. | *NOTE: For active tailings system machine spacers should not be installed in fourth grate.* |
| | | Install separator grate spacers. |
| **Damaged chaffer/sieve elements.** | Crop diverter door in incorrect position. | Verify that door position matches harvested crop. |

Continued on next page

| Symptom | Problem | Solution |
|---|---|---|
| **Loss of Grain Over Cleaning Shoe.** | Incorrect chaffer/sieve clearance. | Check and calibrate chaffer/sieve clearance. |
| | Incorrect distribution of chaff/grain on cleaning shoe. | Adjust separator grate blanks and auger bed dividers as required. See Power Shutdown Procedure in Crop Settings section for more information. |
| **VisionTrak Performance Monitor not reading.** | Cleaning shoe loss increases at low feedrate. | Reduce fan speed. |
| | Cleaning shoe loss increases at high feedrate. | Open chaffer. |
| | | Increase fan speed. |
| | Sensor not reading. | Check crop sensitivity settings. |
| | | Check that sensors are connected. |
| | | Check that sensors are not block by material. |
| **Undesirable Straw Quality.** | Excessive material handling. | Decrease rotor speed and increase threshing clearance to increase straw quality and balance threshing performance. |
| | | Decrease material handling speed (feeder house and feed accelerator) to balance straw quality and material handling performance. |
| | | Advance separator top cover vanes (if equipped). See CommandCenter Display Screen section for further information. |

OUO6075,0000B6A -19-07APR11-3/3

## Hydrostatic Ground Drive

| Symptom | Problem | Solution |
|---|---|---|
| **Speed Range Selector Will Not Go in Reverse (Non ProDrive™ Machines).** | Bent or broken parts in control linkage. | Repair or replace as required. |
| **Linkages Binding (Non ProDrive™ Machines).** | Frozen or worn ball joints on control cable. | Lubricate or replace. |
| | Bell crank or pivots binding. | Lubricate or replace. |
| | Control cable kinked or frozen. | Replace if needed. |
| **System Overheats.** | Oil cooler or radiator plugged. | Blow air through core and clean. |
| | Lack of charge oil flow. | See your John Deere dealer. |
| | Engine fan belt slipping or broken. | Check for worn or broken belt. |
| | Plugged oil filter. | Change filter. |
| | Exceeding relief valve pressure. | Shift to lower gear. |
| | Relief valve stuck closed. | See your John Deere dealer. |
| | By-pass valve fails to close. | See your John Deere dealer. |
| **High Oil Loss.** | Loose connections or leaking hydraulic lines, hoses, or O-rings. | Tighten connections or replace damaged lines, hoses, or O-rings. |
| | Oil leaking into main engine gearcase (Non ProDrive™ Machines). | Replace hydrostatic pump shaft seal. |
| | Oil leaking into main engine gearcase (ProDrive™ Machines). | Replace hydrostatic motor shaft seal or park brake seals in transmission, see your John Deere dealer. |
| | Worn or damaged triple pump seals (Non ProDrive™ Machines). | Check triple pump cavities between valve stack pump and steering pump. Both pump cavities should contain no oil. If oil is found between pump cavities sections, replace pump shaft seals on valve stack pump and steering pump before replacing both pumps. |
| | Worn or damaged quadruple pump seals (ProDrive™ Machines). | Check quadruple pump cavities between valve stack pump and ProDrive™ lube supply pump. Both pump cavities should contain no oil. If oil is found between pump cavities sections, replace pump shaft seals on valve stack pump and ProDrive™ lube pump before replacing both pumps. |
| **Machine Will Not Move Forward or Reverse.** | Transmission out of gear (Non ProDrive™ Machines). | Shift transmission. |

**Continued on next page**

| Symptom | Problem | Solution |
|---|---|---|
| | System detects ground drive faults (ProDrive™ Machines). | See your John Deere dealer. |
| | Low on oil. | Check for leaks and correct. Fill reservoir. |
| | Air leak in system. | Tighten connections. |
| | Control linkages broken or loose (Non ProDrive™ Machines). | Tighten loose linkages or replace as needed. |
| | Lack of charge flow or charge pressure. | See your John Deere dealer. |
| | Plugged filter. | Change filter. |
| | Exceeding maximum operating pressure setting (Non ProDrive™ Machines). | Shift to lower gear. |
| | Exceeding maximum operating pressure setting (ProDrive™ Machines). | See your John Deere dealer. |
| | Drive system unable to build up pressure. | See your John Deere dealer. |
| | Relief valve open. | See your John Deere dealer. |
| **Ground Travel Speed Erratic.** | Low oil. | Check for leaks and correct. Fill reservoir. |
| | Plugged filter. | Change hydrostatic charge filter. |
| | Exceeding maximum operating pressure setting (Non ProDrive™ Machines). | Shift to lower gear or engage four-wheel drive. |
| | Exceeding maximum operating pressure setting (ProDrive™ Machines). | See your John Deere dealer. |
| | Multi-function lever creeps toward neutral. | See your John Deere dealer. |
| | System unable to keep charge pressure. | See your John Deere dealer. |
| **Machine Will Not Stop When Speed Range Selector is in Neutral Position (Non ProDrive™ Machines).** | Control cable out of adjustment. | Adjust cable for neutral position. |
| **Lack of Power or Lost Power. Machine Not Responding to Speed Range Selector.** | Low on oil. | Check for leaks and correct. Fill reservoir. |
| | Plugged filter. | Change hydrostatic charge filter. |
| | Lack of charge flow or charge pressure. | See your John Deere dealer. |
| | Dirty fuel filter. | Replace fuel filter. |

Continued on next page

| Symptom | Problem | Solution |
|---|---|---|
| | Water in separator bowl. | Drain water from separator bowl. |
| | Drive system unable to keep or build up pressure. | See your John Deere dealer. |
| | System detects ground drive faults. | See your John Deere dealer. |

OUO6075,0001006 -19-23MAY13-3/3

## Four-Wheel Drive (Optional)

| Symptom | Problem | Solution |
|---|---|---|
| **Machine Will Not Move When Four-Wheel Drive Is Engaged.** | One or both rear wheels in spin-out condition. | Increase hydrostatic pump flow by moving multi-function lever forward. |
| | Bad electrical control switch on console. | See your John Deere dealer |
| | Bad solenoid valve on control valve. | See your John Deere dealer. |
| | Spool will not move in control valve. | See your John Deere dealer. |
| **Machine Will Not Move When Four-Wheel Drive Is Disengaged.** | Faulty line or connection between main system and rear wheel drive control valve. | Repair or replace parts as needed. |
| **Four-Wheel Drive Will Not Disengage.** | Bad electrical control switch on console. | See your John Deere dealer |
| | Bad solenoid valve on control valve. | See your John Deere dealer. |
| | Spool will not work in control valve. | See your John Deere dealer. |
| **Rear Wheels Wander During Transport Speeds.** | Toe-in out of adjustment. | Adjust toe-in. |

OUO6075,0000AEF -19-14APR11-1/1

## Steering

| Symptom | Problem | Solution |
|---|---|---|
| **Rear Wheels Wander During Transport Speeds.** | Toe-in out of adjustment. | Adjust toe-in. |
| **Steering Arms Do Not Contact Stops at Full Turns.** | Steering cylinder out of adjustment. | Adjust cylinder. |
| **Hard Steering.** | Low oil level in engine gearcase reservoir. | Add oil. |

OUO6075,0000B30 -19-09AUG07-1/1

## Brakes

| Symptom | Problem | Solution |
|---|---|---|
| **Spongy Brake Pedal Pressure.** | Low brake fluid level (Non ProDrive Machines). | Add brake fluid. |
| | Brake pedal push rods out of adjustment (ProDrive Machines). | Adjust jam nut on brake pedal push rods. |
| | Air in system. | See your John Deere dealer. |
| **Loss of Braking Power.** | Glazed linings (Non ProDrive Machines). | See your John Deere dealer. |
| | Inadequate pressure (ProDrive Machines). | See your John Deere dealer. |
| | Worn linings. | See your John Deere dealer. |
| **Parking Brake Not Holding.** | Park brake not adjusted properly (Non ProDrive Machines). | Adjust park brake. |
| | Lack of spring force (ProDrive Machines). | See your John Deere dealer. |
| | Glazed linings (Non ProDrive Machines). | See your John Deere dealer. |
| | Worn brake linings (ProDrive Machines). | See your John Deere dealer. |
| | Machine was manual overridden to move machine (ProDrive Machines). | Remove cap screws from transmission. |

OUO6075,00000F7 -19-29APR08-1/1

## Engine

| Symptom | Problem | Solution |
|---|---|---|
| **Engine Will Not Crank** | Weak battery | Charge or replace battery. |
| | Corroded or loose battery connections | Clean battery terminals and connections. |
| | Defective main switch or start safety switch | Repair switch as required. |
| | Starter solenoid defective | Replace solenoid. |
| | Starter defective | Replace starter. |
| **Engine Hard to Start or Will Not Start** | Starting system problem | Starting system not strong enough to start engine |
| | | Perform steps found in Engine Will Not Crank. |
| | Poor fuel quality | Drain fuel and replace with quality fuel of the proper grade. |
| | Slow cranking speed | Check for problem in the charging/starting system. |
| | Too high viscosity crankcase oil | Drain crankcase oil and replace with correct viscosity oil. |
| | Electronic control system problem or basic engine problem | See your John Deere dealer. |
| **Engine Misfiring or Runs Irregularly** | Poor fuel quality | Drain fuel and replace with quality fuel of the proper grade. |
| | Electronic control system problem or basic engine problem | See your John Deere dealer. |
| **Lack of Engine Power** | Poor fuel quality | Drain fuel and replace with quality fuel of the proper grade. |
| | Plugged fuel filter | Replace fuel filters. |
| | Engine overloaded | Reduce engine load. |
| | Improper crankcase oil | Drain crankcase oil and replace with correct viscosity oil. |
| | Electronic control system problem or basic engine problem | See your John Deere dealer. |
| | Engine is in derate because of an active diagnostic trouble code | See your John Deere dealer. |
| | Engine is in derate because exhaust filter cleaning is required. | Engage exhaust filter auto cleaning mode and request a manual exhaust filter cleaning. |

Continued on next page

| Symptom | Problem | Solution |
|---|---|---|
| **Engine Emits Black or Gray Smoke** | Engine overloaded | Reduce engine load. |
| | Improper type of fuel. | Use proper fuel. |
| | Air cleaner restricted or dirty | Replace air cleaner element as required. |
| | Defective muffler/exhaust piping (causing backpressure) | Replace muffler or defective piping. |
| | Electronic control system problem or basic engine problem | See your John Deere dealer. |
| | Fuel injectors dirty. | See your John Deere dealer. |
| | High-pressure fuel pump out of time. | See your John Deere dealer. |
| | Turbocharger not functioning. | See your John Deere dealer. |
| | Exhaust filter is cracked or damaged. | See your John Deere dealer. |
| **Engine Emits White Smoke** | Engine compression too low | Determine cause of low compression and repair as required. See your John Deere dealer. |
| | Improper type of fuel. | Use proper fuel. |
| | Low engine temperature. | Warm up engine to normal operating temperature. |
| | Defective thermostat(s) | Test thermostats; replace thermostats as required. |
| | Coolant entering combustion chamber (failed cylinder head gasket or cracked cylinder head) | Repair or replace as required. See your John Deere dealer. |
| | Electronic control system problem or basic engine problem | See your John Deere dealer. |
| | Defective fuel injectors. | See your John Deere dealer. |
| | High-pressure fuel pump out of time. | See your John Deere dealer. |
| **Engine Idles Poorly** | Poor fuel quality | Drain fuel and replace with quality fuel of the proper grade. |
| | Air leak on suction side of air intake system. | Check hose and pipe connections for tightness; repair as required. |
| | Electronic control system problem or basic engine problem | See your John Deere dealer. |
| **Excessive Fuel Consumption** | Poor fuel quality | Drain fuel and replace with quality fuel of the proper grade. |
| | Engine overloaded | Reduce engine load. |

**Continued on next page**

OUO6075,0000C98 -19-20JUN11-2/8

| Symptom | Problem | Solution |
|---|---|---|
| | Air cleaner restricted or dirty | Replace air cleaner element as required. |
| | Compression too low | Determine cause of low compression and repair as required. |
| | Leaks in fuel supply system | Locate source of leak and repair as required. |
| | Improper type of fuel. | Use proper type of fuel. |
| | Poor fuel quality | Drain fuel and replace with quality fuel of the proper grade. |
| | Improper valve clearance. | See your John Deere dealer. |
| | Fuel injectors defective. | See your John Deere dealer. |
| | High-pressure fuel pump out of time. | See your John Deere dealer. |
| | Improper turbocharger operation. | Inspect turbocharger. See your John Deere dealer. |
| | Low engine temperature. | Check thermostats. |
| **Fuel in Oil** | Cracked cylinder head | Locate crack, repair/replace components as required. See your John Deere dealer. |
| | Cracked or worn electronic unit injector O-ring | Remove suspected electronic unit injector and replace O-ring as required. See your John Deere dealer. |
| **Low Fuel Pressure** | Plugged fuel filter | Replace fuel filter. |
| | Restricted fuel line | Locate restriction, repair as required. |
| | Faulty fuel transfer pump | Remove fuel transfer pump; repair/replace pump as required. See your John Deere dealer. |
| **Fuel Aeration** | Electronic unit injector hold-down clamp loose | Tighten hold-down clamp cap screw to proper torque. See your John Deere dealer. |
| | Cracked or worn electronic unit injector O-ring | Remove suspected electronic unit injector and replace O-ring as required. See your John Deere dealer. |
| **Low Oil Pressure** | Low crankcase oil level | Fill crankcase to proper oil level. |
| | Crankcase oil level too high | Fill crankcase to proper oil level. |

**Continued on next page**

OUO6075,0000C98 -19-20JUN11-3/8

| Symptom | Problem | Solution |
|---|---|---|
| | Faulty pressure sensor | Replace sensor. See your John Deere dealer. |
| | Clogged oil cooler or filter | Remove and inspect oil cooler. See your John Deere dealer. |
| | Excessive oil temperature | Remove and inspect oil cooler. See your John Deere dealer. |
| | Defective oil pump | Remove and inspect oil pump. See your John Deere dealer. |
| | Incorrect oil | Drain crankcase and refill with correct oil. |
| | Oil pressure regulating valve failure | Remove and inspect oil pressure regulating valve. See your John Deere dealer. |
| | Broken piston spray nozzle | Replace piston spray nozzle. See your John Deere dealer. |
| | Clogged oil pump screen or cracked pick-up tube | Remove oil pan and clean screen/replace pick-up tube. |
| | Excessive main or connecting rod bearing clearance | Determine bearing clearance. See your John Deere dealer. |
| **High Oil Pressure** | Improper oil classification | Drain crankcase and refill with correct oil. |
| | Faulty pressure sensor | Replace sensor. See your John Deere dealer. |
| | Oil pressure regulating valve bushing loose (wanders) | Remove and inspect oil pressure regulating valve. See your John Deere dealer. |
| | Improperly operating regulating valve | Remove and inspect oil pressure regulating valve. See your John Deere dealer. |
| | Plugged piston spray nozzle | Replace piston spray nozzle. See your John Deere dealer. |
| | Stuck or damaged filter bypass valve | Remove and inspect filter bypass valve. See your John Deere dealer. |
| | Stuck or damaged oil cooler bypass valve | Remove and inspect oil cooler bypass valve. See your John Deere dealer. |
| **Excessive Oil Consumption** | Too low viscosity crankcase oil | Drain crankcase and refill with correct viscosity oil. |

**Continued on next page**

| Symptom | Problem | Solution |
|---|---|---|
| | Crankcase oil level too high | Drain oil until oil level is correct. |
| | External oil leak(s) | Determine source of oil leak(s) and repair as required. |
| | Oil control rings not seated | See your John Deere dealer. |
| | Oil control rings worn or broken | Replace piston rings. See your John Deere dealer. |
| | Scored cylinder liners or pistons | Remove and inspect cylinders and liners; replace as required. See your John Deere dealer. |
| | Worn valve guides or stems | Inspect and measure valve stems and valve guides; repair as required. See your John Deere dealer. |
| | Excessive oil pressure | See High Oil Pressure earlier in this section. |
| | Piston ring grooves excessively worn | Remove and inspect pistons. See your John Deere dealer. |
| | Piston rings sticking in ring grooves | Remove and inspect pistons. See your John Deere dealer. |
| | Insufficient piston ring tension | Remove and inspect pistons. See your John Deere dealer. |
| | Piston ring gaps not staggered | Remove and inspect pistons. See your John Deere dealer. |
| | Front and/or rear crankshaft oil seal faulty | Replace oil seals. See your John Deere dealer. |
| **Abnormal Engine Noise** [1] | Worn main or connecting rod bearings | Determine bearing clearance. See your John Deere dealer. |
| | Excessive crankshaft end play | Check crankshaft end play. See your John Deere dealer. |
| | Loose main bearing caps | Check bearing clearance; replace bearings and bearing cap screws as required. See your John Deere dealer. |
| | Worn connecting rod bushings and piston pins | Inspect piston pins and bushings. See your John Deere dealer. |
| | Scored pistons | Inspect pistons. See your John Deere dealer. |

Continued on next page

| Symptom | Problem | Solution |
|---|---|---|
| | Worn timing gears or excess backlash | Check timing gear backlash. See your John Deere dealer. |
| | Excessive valve clearance | Check and adjust valve clearance. See your John Deere dealer. |
| | Worn camshaft lobes | Replace camshaft. See your John Deere dealer. |
| | Worn rocker arm shaft(s) | Replace rocker arm shafts. See your John Deere dealer. |
| | Insufficient engine lubrication | See Lubrication System Troubleshooting, later in this section. |
| | Turbocharger noise | See Air Intake System Troubleshooting, later in this section. |
| **Turbocharger "Whistles"** | Air leak in intake manifold. | Check intake manifold gasket and manifold; repair as required. See your John Deere dealer. |
| **Turbocharger Noise or Vibration** [1] | Bearings not lubricated (insufficient oil pressure) | Determine cause of lack of lubrication; repair as required. See your John Deere dealer. |
| | Air leak in engine intake or exhaust manifold | Check intake and exhaust manifold gaskets and manifolds; repair as required. See your John Deere dealer. |
| | Improper clearance between turbine wheel and turbine housing | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| | Broken blades (or other wheel failures) | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| **Oil on Turbocharger Compressor Wheel or in Compressor Housing (Oil Being Pushed or Pulled through Center Housing)** | Excessive crankcase pressure. | Determine cause of excessive crankcase pressure; repair as required. See your John Deere dealer. |
| | Air intake restriction | Determine cause of intake restriction; repair as required. See your John Deere dealer. |
| | Drain tube restriction | Determine cause of drain tube restriction; repair as required. See your John Deere dealer. |
| **Oil in Intake Manifold or Dripping from Turbocharger Housing** | Excessive crankcase pressure | Determine cause of excessive crankcase pressure; repair as required. See your John Deere dealer. |

Continued on next page

| Symptom | Problem | Solution |
|---|---|---|
| | Air intake restriction | Determine cause of intake restriction; repair as required. See your John Deere dealer. |
| | Drain tube restriction | Determine cause of drain tube restriction; repair as required. See your John Deere dealer. |
| | Damaged or worn housing bearings | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| | Unbalance of rotating assembly | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| | Damage to turbine or compressor wheel or blade | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| | Dirt or carbon build-up on wheel or blade | Check for air intake leaks (post air filter). Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| | Bearing wear | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| | Oil starvation or insufficient lubrication | Determine cause of lack of lubrication; repair as required. See your John Deere dealer. |
| | Shaft seals worn | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| **Turbocharger Turbine Wheel Drag** | Carbon build-up behind turbine wheel caused by coked oil or combustion deposits | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| | Dirt build-up behind compressor wheel caused by air intake leaks | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| | Bearing seizure or dirty, worn bearings | Inspect turbocharger; repair/replace as required. See your John Deere dealer. |
| **Engine Overheats** | Engine overloaded. | Reduce engine load. |
| | Low coolant level. | Fill cooling system to proper level, check radiator, and hoses for loose connections or leaks. |

**Continued on next page**

| Symptom | Problem | Solution |
|---|---|---|
| | Defective surge tank cap | Replace surge tank cap as required. |
| | Loose or defective fan belt | Replace fan belt as required. Check belt tensioner. |
| | Low engine oil level. | Check oil level. Add oil as required. |
| | Cooling system needs flushing. | Flush cooling system. |
| | Defective thermostat(s) | Remove and check thermostats as required. |
| | Defective temperature gauge or sender. | Check coolant temperature with thermometer and replace, if necessary. |
| | Incorrect grade of fuel. | Use correct grade of fuel. |
| | Radiator core dirty | Clean radiator as required. |
| | Too low crankcase oil level | Fill crankcase to proper oil level. |
| | Damaged cylinder head gasket | Replace cylinder head gasket. See your John Deere dealer. |
| | Defective coolant pump | Replace coolant pump. See your John Deere dealer. |
| **Coolant in Crankcase** | Cylinder head gasket defective | Replace cylinder head gasket. See your John Deere dealer. |
| | Cylinder head or block cracked | Locate crack, repair/replace components as required. |
| | Cylinder liner seals leaking | Remove and inspect cylinder liners. See your John Deere dealer. |
| | Leaking oil cooler | Pressure test oil cooler; repair/replace as required. See your John Deere dealer. |
| | Defective oil cooler O-rings | Remove and inspect oil cooler O-rings; replace as required. See your John Deere dealer. |
| | Faulty coolant pump seal; weep hole plugged; coolant leaking through bearing | Replace coolant pump seals. See your John Deere dealer. |
| **Coolant Temperature Below Normal** | Defective thermostat(s) | Test thermostats; replace thermostats as required. |

*[1]NOTE: Variable geometry turbocharger recycles after starting engine, causing a momentary revving sound in engine. This is normal. Do not confuse whine heard during run down with noise which indicates a bearing failure.*

OUO6075,0000C98 -19-20JUN11-8/8

## Electrical

| Symptom | Problem | Solution |
|---|---|---|
| **Undercharged system** | Excessive electrical load from added accessories. | Remove accessories or install higher output alternator. |
| | Excessive engine idling. | Increase engine rpm when heavy electrical load is used. |
| | Poor electrical connections on battery, ground strap, starter, or alternator. | Inspect and clean as necessary. |
| | Defective battery. | Test batteries. |
| | Defective alternator. | Test charging system. |
| **Battery used too much water** | Cracked battery case. | Check for moisture and replace as necessary. |
| | Battery charging rate too high. | Test charging system. |
| **Batteries will not charge** | Loose or corroded connections. | Clean and tighten connections. |
| | Sulfated or worn-out batteries. | See your John Deere dealer. |
| | Stretched belt or defective belt tensioner. | Adjust belt tension or replace belts. |
| **Starter will not crank** | Engine drivelines engaged. | Disengage engine drivelines. |
| | Loose or corroded connections. | Clean and tighten loose connections. |
| | Low battery output voltage or discharged battery. | Charge or replace batteries. |
| | Faulty start circuit relay. | See your John Deere dealer. |
| | Blown fuse. | Replace fuse. |
| | | Clean battery terminals and connections. |
| | Defective main switch or start safety switch | Repair switch as required. |
| | Starter solenoid defective | Replace solenoid. |
| | Starter defective | Replace starter. |
| **Starter cranks slowly** | Low battery output. | Charge batteries. |
| | Crankcase oil too heavy. | Use proper viscosity oil. |
| | Loose or corroded connections. | Clean and tighten loose connections. |
| **Entire electrical system does not function** | Faulty battery connection. | Clean and tighten connections. |

Continued on next page

| Symptom | Problem | Solution |
|---|---|---|
| | Sulfated or worn-out batteries. | Replace batteries. |
| | Blown fuse. | Replace fuse. |

OUO6075,0000C99 -19-20JUN11-2/2

## Heater

| Symptom | Problem | Solution |
|---|---|---|
| **Heater Not Blowing Warm Air.** | Dirty recirculating filter. | Clean filter. |
| | No thermostat in water outlet manifold. | See your John Deere dealer. |
| | Defective thermostat in water outlet manifold. | See your John Deere dealer. |
| | Heater temperature control defective. | Replace control. |
| | Kinked heater hose. Defective heater valve. | Straighten or replace. Replace valve. |

OUO6075,0000B24 -19-14MAR07-1/1

## Air Conditioner

| Symptom | Problem | Solution |
|---|---|---|
| **Lack Of Or Insufficient Cooling** | Temperature control in OFF position. | Select Air Conditioning position. |
| | Compressor belt off or broken. | Replace belt. |
| | Compressor not functioning (if both the large and small hoses in the left-hand access panel are at the same temperature). | See your John Deere dealer. |
| | Temperature control is not responding (temperature door broken resulting in warm air). | See your John Deere dealer. |
| | Low pressure warning (system lost refrigerant). | See your John Deere dealer. |
| | High pressure warning (system is overcharged). | See your John Deere dealer. |
| **Compressor clutch cycles excessively or compressor stays OFF up to 15 minutes.** | Evaporator icing. | Adjust controls correctly. See CommandTouch Armrest Console section. Open louvers. Clean filters. Move control to a warmer setting. |
| **Bad smell (foul odor) in cab.** | Plugged drain tube. Dirty filters. Dirty cab. | Blow out condensate tube and clean pan under evaporator. Clean filters. Vacuum out cab. |
| | | Be certain weep valve in condensate drain tube is installed. |

OUO6075,0000A6E -19-02NOV10-1/1

## Moisture Sensor (If Equipped)

| Symptom | Problem | Solution |
|---|---|---|
| **Moisture is too high.** | Green plant sap or weed seed buildup on moisture sensor plate. | Clean moisture sensor plate. |
| **Moisture is consistently high or low.** | Moisture correction needs adjustment. | Change moisture correction. |
| **Moisture does not change or is constantly low.** | Obstructed sensor. | Inspect elevator mount unit and clean as needed. |
| **Moisture reading is inaccurate.** | Incorrect crop selected. | Select correct crop. |
| | Moisture sensor out of adjustment. | Change moisture correction. |
| **Moisture always zero.** | Recording problems. | Check if recording status comes ON when harvesting. |

OUO6075,0000A75 -19-03NOV10-1/1

## Mass Flow Sensor (If Equipped)

| Symptom | Problem | Solution |
|---|---|---|
| **Yield is constantly too high or low.** | System is out of calibration. | Change yield calibration. |
| | Incorrect header width. | Change header width. |
| | Incorrect crop selection. | Select correct crop. |
| | Dirt, mud, or debris on impact plate. | Clean impact plate. |
| **Yield is zero.** | No ground speed. | See your John Deere dealer. |
| | Clean grain elevator speed is too low. | See your John Deere dealer. |
| | Recording problems. | Check if recording status comes ON when harvesting. |

OUO6075,0000A76 -19-03NOV10-1/1

# Storage

## Preparing Machine for Storage

Swing out condenser and oil cooler and clean radiator with air, water, or a vacuum cleaner.

Clean condenser and oil cooler after cleaning radiator. Clean charge air cooler.

Every 60 to 90 days start engine and turn air conditioning ON. Run engine at low idle for several minutes for compressor seal lubrication. Outside temperature should be above 5 °C (40 °F) for proper air conditioning operation.

Clean outside of engine with a safe solvent.

**CAUTION: Do not use gasoline.**

Clean inside of air cleaner and install new elements.

With engine warm, drain crankcase. Replace filter and fill with correct oil. Add 0.66 L (22 oz.) of corrosion inhibitor to crankcase. Run engine to circulate.

Drain, flush, and refill cooling system with 50/50 mixture of antifreeze and water.

*NOTE: Turn battery disconnect switch OFF if machine is stored longer than 25 days. If storage period is longer than 90 days, remove negative lead to batteries to minimize load to batteries.*

Charge batteries completely. Specific gravity will equal 1.260 volts. Remove negative lead to batteries to minimize load to the batteries.

Drain water separator.

Clean machine inside and out. Leave elevator doors and drain covers open.

Cycle concave up and down several times to prevent material buildup in the concave area.

**IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.**

Repaint areas where needed.

*NOTE: It is not necessary to wax machine. However, if desired, use a good clear wax that contains no abrasives. These type of waxes usually do not contain cleaners.*

Lubricate machine and grease adjusting bolt threads.

Perform all 400 hour (yearly) service.

Fill fuel tank to prevent condensation.

**IMPORTANT: When fuel is stored in the machines fuel tank or farms storage tank for extended periods, or if there is a slow turn over of fuel, add a fuel conditioner to stabilize the fuel and prevent water condensation. Contact your John Deere dealer for recommendations.**

**For prolonged machine storage the best practice is to drain bio-diesel and fill machine with regular petroleum diesel fuel. Otherwise use bio-diesel stabilizer (anti-oxidant) additives or fully formulated bio-diesel conditioners. Contact your John Deere dealer for recommendations.**

If machine is to be stored for a long period of time remove and clean batteries. Store them in a cool dry place and keep them charged.

OUO6075,000111B -19-13APR12-1/1

## Removing Machine From Storage

Reconnect and/or charge batteries.

Charge batteries completely. Specific gravity will equal 1.260. Remove negative lead to batteries to minimize load to the batteries.

Check oil and coolant levels. Inspect for leaks and add oil and coolant if needed.

Close elevator doors and drain hole.

Check drive belt tensions. Adjust spring loaded idlers until washer is positioned between end of gauge and bottom of step.

Check tire inflation and review machine operator's manual.

Inspect fire extinguishers (front and rear) by following maintenance instructions on fire extinguisher label. Recharge or replace as necessary.

OUO6075,00001E5 -19-18SEP08-1/1

## Operating Speeds (S660 and S670)

Speeds shown are average and can vary from machine to machine.

*NOTE: Operating speed specifications and design subject to change without notice.*

| Engine Speeds | (9.0 L Tier 2/Stage II) Engine | (9.0 L Interim Tier 4/Stage III B) Engine |
|---|---|---|
| Slow Idle (Separator Off) | 1200 rpm | 1200 rpm |
| Mid Speed (Separator Off) | 1690 rpm | 1690 rpm |
| Fast Idle (Separator Off) | 2340 rpm | 2340 rpm |
| Full Load Rated Speed | 2200 rpm | 2200 rpm |

| Separator Drive Shaft Speed | 1453 rpm |
|---|---|

| Main Countershaft Speed | 1453 rpm |
|---|---|

| Separator Speeds | S660 | S670 |
|---|---|---|
| High Range | 380 - 1000 rpm | 400 - 1000 rpm |
| Low Range | 210 - 530 rpm | 210 - 530 rpm |

| Feeder House Lower Shaft Speeds | |
|---|---|
| Fixed Speed (If Equipped) | 490 rpm |
| Heavy Duty Variable Speed (If Equipped) | 490 - 750 rpm |
| High Torque Variable Speed (If Equipped) | 490 - 750 rpm |
| Multi-Speed (If Equipped) | 1st Gear: 490 rpm, 2nd Gear: 550 rpm, 3rd Gear: 600 rpm, 4th Gear: 670 rpm, 5th Gear: 750 rpm |

| Feed Accelerator Speeds | |
|---|---|
| Feed Accelerator (Standard Speed) | 430/780 rpm |
| Feed Accelerator (Optional Slow Speed) | 310/770 rpm |
| Feed Accelerator (High Speed High Capacity) | 520/970 rpm |

| Discharge Beater Speed | S660 | S670 |
|---|---|---|
| | 998 rpm | 995 rpm |

| Jackshaft Speeds | |
|---|---|
| Front Right-Hand Jackshaft | 518 rpm |
| Rear Right-Hand Jackshaft | 518 rpm |

| Cleaning Fan Speeds | |
|---|---|
| Standard Speed | 620 - 1350 rpm |
| Special Slow Speed | 250 - 500 rpm |

| Elevator Speeds | S660 | S670 |
|---|---|---|
| Clean Grain Elevator | 417 rpm | 415 rpm |
| Clean Grain Loading Auger | 448 rpm | 445 rpm |
| Tailings Elevator, Lower Auger | 395 rpm | 395 rpm |
| Tailings Elevator, Upper Auger | 625 rpm | 625 rpm |
| Shoe Drive | 298 rpm | 298 rpm |
| Conveyor Augers | 420 rpm | 420 rpm |

| Unloading System Speeds (Separator Engaged) | |
|---|---|
| Unloading System Countershaft | 1000 rpm |
| Unloading Auger Gearbox, Input Shaft | 460 rpm 116 L/sec. (3.3 bu./sec.) Unload Rate |
| Unloading Vertical Auger | 460 rpm 116 L/sec. (3.3 bu./sec.) Unload Rate |
| Unloading Outer Auger | 460 rpm 116 L/sec. (3.3 bu./sec.) Unload Rate |
| Grain Tank Horizontal Augers (Front and Rear) | 330 rpm 116 L/sec. (3.3 bu./sec.) Unload Rate |

**Continued on next page**

| **Chopper Speeds (Deluxe Residue)** | |
|---|---|
| Chopper/Discharge Beater Jackshaft | 1880 rpm |
| Chopper (Two Speed) | 1505/2350 rpm |

| **Chopper Speeds (Premium Residue)** | |
|---|---|
| Chopper/Discharge Beater Jackshaft | 2045 rpm |
| Chopper (Two Speed) | 1400/2995 rpm |
| Overshot Beater | 995 rpm |

OUO6075,000158C -19-20JUN13-2/2

## Operating Speeds (S680, S685 and S690)

Speeds shown are average and can vary from machine to machine.

*NOTE: Operating speed specifications and design subject to change without notice.*

| Engine Speeds | (13.5 L Tier 2/Stage II) Engine | (13.5 L Interim Tier 4/Stage III B) Engine |
|---|---|---|
| Slow Idle (Separator Off) | 1200 rpm | 1200 rpm |
| Mid Speed (Separator Off) | 1690 rpm | 1690 rpm |
| Fast Idle (Separator Off) | 2240 rpm | 2240 rpm |
| Full Load Rated Speed | 2100 rpm | 2100 rpm |

| Separator Drive Shaft Speed | 1466 rpm |
|---|---|

| Main Countershaft Speed | 1466 rpm |
|---|---|

| Separator Speeds | |
|---|---|
| High Range | 400 - 1000 rpm |
| Low Range | 210 - 530 rpm |

| Tailings System Speed | 880 rpm |
|---|---|

| Feeder House Lower Shaft Speeds | |
|---|---|
| Fixed Speed | 490 rpm |
| Multi-Speed | 1st Gear: 490 rpm, 2nd Gear: 550 rpm, 3rd Gear: 600 rpm, 4th Gear: 670 rpm, 5th Gear: 750 rpm |

| Feed Accelerator Speeds | |
|---|---|
| Feed Accelerator (Standard Speed) | 430/780 rpm |
| Feed Accelerator (Optional Slow Speed) | 310/770 rpm |
| Feed Accelerator (High Speed High Capacity) | 520/970 rpm |

| Discharge Beater Speed | 995 rpm |
|---|---|

| Jackshaft Speeds | |
|---|---|
| Front Right Jackshaft | 520 rpm |
| Rear Right Jackshaft | 520 rpm |

| Cleaning Fan Speeds | |
|---|---|
| Standard Speed | 620 - 1350 rpm |
| Special Slow Speed | 250 - 500 rpm |

| Elevator Speeds | S680 and S685 | S690 |
|---|---|---|
| Clean Grain Elevator | 415 rpm | 460 rpm<br>415 rpm (HillMaster™) |
| Clean Grain Loading Auger | 450 rpm | 500 rpm<br>450 rpm (HillMaster™) |
| Tailings Elevator, Lower Auger | 490 rpm | |
| Tailings Elevator, Upper Auger | 580 rpm | |
| Shoe Drive | 300 rpm | |
| Conveyor Augers | 425 rpm | |

| Unloading System Speeds (Separator Engaged) | |
|---|---|
| Unloading System Countershaft | 1005 rpm |
| Unloading Auger Gearbox, Input Shaft | 460 rpm<br>465 rpm (HillMaster™) |
| Unloading Vertical Auger | 460 rpm<br>465 rpm (HillMaster™) |

**Continued on next page**

| **Unloading System Speeds (Separator Engaged)** | |
|---|---|
| Unloading Outer Auger | 460 rpm<br>465 rpm (HillMaster™) |
| Grain Tank Horizontal Augers (Front and Rear) | 450 rpm<br>335 rpm (HillMaster™) |

| **Chopper Speeds (Deluxe Residue)** | |
|---|---|
| Chopper/Discharge Beater Jackshaft | 1880 rpm |
| Chopper (Two Speed) | 1500/2350 rpm |

| **Chopper Speeds (Premium Residue)** | |
|---|---|
| Chopper/Discharge Beater Jackshaft | 2045 rpm |
| Chopper (Two Speed) | 1400/2995 rpm |
| Overshot Beater | 995 rpm |

OUO6075,000158D -19-25JUN13-2/2

## Specifications (S660 and S670)

*NOTE: Specifications and design subject to change without notice.*

| **Engine** | | |
|---|---|---|
| Make | John Deere | |
| Model | 6090HH006 (9.0 L Tier 2/Stage II)<br>6090HH015 (9.0 L Interim Tier 4/Stage III B) | |
| Type | six-cylinder, in line, valve-in-head (four valve), air-to-air aftercooled diesel turbocharged | |
| | **S660** | **S670** |
| Rated Power | 239 kW (320 hp.) | 278 kW (373 hp.) |
| Rated Speed | 2200 rpm | 2200 rpm |
| Power Boost at Rated Speed | 25 kW (34 hp.) | 25 kW (34 hp.) |
| Peak Power | 272 kW (365 hp.) | 317 kW (425 hp.) |
| Peak Power Speed (Rated Speed -200 rpm) | 2000 rpm | 2000 rpm |
| Displacement | 9.0 L (549 cu. in.) | 9.0 L (549 cu. in.) |
| Firing Order | 1-5-3-6-2-4 | 1-5-3-6-2-4 |
| Air Cleaner | Dry-type with safety element | Dry-type with safety element |

| **Electrical System** | |
|---|---|
| Battery Voltage | 12 Volts |
| Battery Terminal Grounded | Negative |
| Alternator (9.0 L Tier 2/Stage II)<br>Alternators (9.0 L Interim Tier 4/Stage III B) | 200 amp |

| **Transmission** | |
|---|---|
| Speeds (Mechanical Shift Machines) | Three Speeds |
| Speeds (Push Button Shift Machines) | Three Speeds |
| Speeds (ProDrive™ Machines) | Two Speed Auto Shift |

| **Brakes** | |
|---|---|
| Type (Mechanical Shift Machines) | Hydraulic Shoe |
| Type (Push Button Shift Machines) | Hydraulic Shoe |
| Type (ProDrive™ Machines) | Multiple Wet Discs |

| **Feed Accelerator** | |
|---|---|
| Number of Wings | 10 |

| **Separator Elements** | |
|---|---|
| Threshing Elements (TriStream™ Rotor) | Corn/Small Grain: 15 |
| Threshing Elements (Variable Stream Rotor) | Corn/Small Grain: 15<br>Rice Option: 15 elements and 12 threshing tines in dense pack locations |
| Tines (TriStream™ Rotor) | 24 |
| Tines (Variable Stream Rotor) | 20 |

| **Concave** | |
|---|---|
| Number of Concaves | 3 |
| Number of Bars Per Concave | Grain—Front 25, Mid/rear 25; Corn 31 |

| **Separator** | |
|---|---|
| Number of Grates | 4 |

| **Discharge Grate** | |
|---|---|
| Number of Grates | 3 |

| **Discharge Beater** | |
|---|---|
| Number of Wings | 5 |

**Continued on next page**

| Grain Tank | |
|---|---|
| Capacity | 10,572 L (300 bu.) Extensions<br>10,572 L (300 bu.) Covers |
| Average Unloading Rate, 116 L/sec. (3.3 bu./sec.) Unload Rate | 6977 L/min. (198 bu/min) |
| Maximum Unloading Rate, 116 L/sec. (3.3 bu./sec.) Unload Rate | 7612 L/min. (216 bu/min) |

| Weight | S660 | S670 | S670 HillMaster™ |
|---|---|---|---|
| Machine Weight [a] | 17,920 kg (39,507 lb.) | 18,450 kg (40,675 lb.) | 18,765 kg (41,370 lb.) |

*[a] Weight is based on grain machine configuration with 950 L (250 gal.) of diesel fuel in the fuel tank, empty grain tank, and no header attached.*

| Turning Radius | |
|---|---|
| Rear Wheel Tread Width | 3.35 m (10 ft. 10 in.) |
| Turning Radius (Non-Powered Axles) | 8.02 m (26 ft. 3 in.) |
| Turning Radius (Powered Axles) | 7.73 m (25 ft. 4 in.) |

| Capacities | S660 | S670 |
|---|---|---|
| Fuel Tank | 950 L (250 gal.) | 950 L (250 gal.) |
| Cooling System w/ heater (9.0 L Tier 2/Stage II) | 53 L (56 qt.) | 53 L (56 qt.) |
| Cooling System w/ heater (9.0 L Interim Tier 4/Stage III B) | 53 L (56 qt.) | 53 L (56 qt.) |
| Engine Crankcase w/ filter (9.0 L Tier 2/Stage II) | 27.5 L (29 qt.) [a] | 27.5 L (29 qt.) [a] |
| Engine Crankcase w/ filter (9.0 L Interim Tier 4/Stage III B) | 27.5 L (29 qt.) [a] | 27.5 L (29 qt.) [a] |
| Transmission (Mechanical Shift and Push Button Shift Machines) | 9.6 L (10 qt.) | 9.6 L (10 qt.) |
| Final Drives | 8 L (8.5 qt.) | 8 L (8.5 qt.)<br>7 L (7.4 qt.) HillMaster™ |
| Heavy-Duty Feeder House Reverser Gearcase w/o cooler | 2.3 L (4.75 pt.) | 2.3 L (4.75 pt.) |
| Heavy-Duty Feeder House Reverser Gearcase w/ cooler | 3.5 L (7.4 pt.) | NA |
| Extra Heavy-Duty Feeder House Reverser Gearcase w/ cooler | 4.9 L (10.4 pt.) | 4.9 L (10.4 pt.) |
| Multi-Speed Feeder House Reverser Gearcase w/ cooler | NA | 5.2 L (11 pt.) |
| Premium Overshot Beater Gearcase (If Equipped) | NA | 0.2 L (0.21 qt.) |
| Countershaft Drive Gearcase | 1.9 L (2.04 qt.) | 1.9 L (2.04 qt.) |
| Loading Auger Gearcase | 3.8 L (4 qt.) | 3.8 L (4 qt.) |
| Two-Speed Separator Drive Gearcase | 4.7 L (5 qt.) | 4.7 L (5 qt.) |
| Engine Gearcase w/ transfer (Mechanical Shift and Push Button Shift Machines) | 21.3 L (22.5 qt.) | 21.3 L (22.5 qt.) |
| Engine Gearcase w/ transfer (ProDrive™ Machines) | NA | 51 L (54 qt.) |
| Hydraulic/Hydrostatic Reservoir | 31 L (33 qt.) | 31 L (33 qt.) |

*[a] It is vital to maintain engine oil at correct levels. Always verify that oil level is at correct location on dipstick when servicing.*

OUO6075,000158E -19-29JUL13-2/2

## Specifications (S680, S685 and S690)

*NOTE: Specifications and design subject to change without notice.*

| **Engine** | | |
|---|---|---|
| Make | John Deere | |
| Model | 6135HH004 (13.5 L Tier 2/Stage II)<br>6135HH003 (13.5 L Interim Tier 4/Stage III B) | |
| Type | six-cylinder, in line, valve-in-head, air-to-air aftercooled diesel turbocharged | |
| | **S680** | **S685** |
| Rated Power | 353 kW (473 hp.) | 373 kW (500 hp.) |
| Rated Speed | 2100 rpm | 2100 rpm |
| Power Boost at Rated Speed | 37 kW (50 hp.) | 37 kW (50 hp.) |
| Peak Power | 402 kW (540 hp.) | 425 kW (570 hp.) |
| Peak Power Speed (Rated Speed -200 rpm) | 1900 rpm | 1900 rpm |
| Displacement | 13.5 L (824 cu. in.) | 13.5 L (824 cu. in.) |
| Firing Order | 1-5-3-6-2-4 | 1-5-3-6-2-4 |
| Air Cleaner | Dry-type with safety element | Dry-type with safety element |
| | **S690** | |
| Rated Power | 405 kW (543 hp.) | |
| Rated Speed | 2100 rpm | |
| Power Boost at Rated Speed (Tier 2/Stage II) | 23 kW (31 hp.) | |
| Power Boost at Rated Speed (Interim Tier 4/Stage III B) | 37 kW (50 hp.) | |
| Peak Power (Tier 2/Stage II) | 458 kW (614 hp.) | |
| Peak Power (Interim Tier 4/Stage III B) | 460 kW (617 hp.) | |
| Peak Power Speed (Rated Speed -200 rpm) | 1900 rpm | |
| Displacement | 13.5 L (824 cu. in.) | |
| Firing Order | 1-5-3-6-2-4 | |
| Air Cleaner | Dry-type with safety element | |

| **Electrical System** | |
|---|---|
| Battery Voltage | 12 Volts |
| Battery Terminal Grounded | Negative |
| Alternator (13.5 L Tier 2/Stage II)<br>Alternators (13.5 L Interim Tier 4/Stage III B) | 200 amp |

| **Transmission** | |
|---|---|
| Speeds | Two Speed Auto Shift |

| **Brakes** | |
|---|---|
| Type | Multiple Wet Discs |

| **Feed Accelerator** | |
|---|---|
| Number of Wings | 10 |

| **Separator Elements** | |
|---|---|
| Threshing Elements (TriStream™ Rotor) | Corn/Small Grain: 15 |
| Threshing Elements (Variable Stream Rotor) | Corn/Small Grain: 15<br>Rice Option: 15 elements and 12 threshing tines in dense pack locations |
| Tines (TriStream™ Rotor) | 24 |
| Tines (Variable Stream Rotor) | 20 |

| **Concave** | |
|---|---|
| Number of Concaves | 3 |
| Number of Bars Per Concave | Grain—Front 25, Mid/rear 25; Corn 31 |

**Continued on next page**

| Separator | |
|---|---|
| Number of Grates | 4 |

| Discharge Grate | |
|---|---|
| Number of Grates | 1 |

| Discharge Beater | |
|---|---|
| Number of Wings | 10 |

| Grain Tank | S680, S685 and S690 |
|---|---|
| Capacity | 14,096 L (400 bu.) Extensions<br>14,096 L (400 bu.) Covers |
| Average Unloading Rate, 134 L/sec. (3.8 bu./sec.) Unload Rate | 8035 L/min. (228 bu/min) |
| Maximum Unloading Rate, 134 L/sec. (3.8 bu./sec.) Unload Rate | 8670 L/min. (246 bu/min) |

| Grain Tank | HillMaster™ Machines |
|---|---|
| Capacity | 10,572 L (300 bu.) Extensions<br>10,572 L (300 bu.) Covers |
| Average Unloading Rate, 116 L/sec. (3.3 bu./sec.) Unload Rate | 6977 L/min. (198 bu/min) |
| Maximum Unloading Rate, 116 L/sec. (3.3 bu./sec.) Unload Rate | 7612 L/min. (216 bu/min) |

| Weight | S680, S685 and S690 | S680 HillMaster™, S685 HillMaster™ and S690 HillMaster™ |
|---|---|---|
| Machine Weight [a] | 20,420 kg (45,018 lb.) | 20,575 kg (45,360 lb.) |

[a] *Weight is based on grain machine configuration with 1250 L (330 gal.) of diesel fuel in the fuel tank, empty grain tank, and no header attached.*

| Turning Radius | |
|---|---|
| Rear Wheel Tread Width | 3.35 m (10 ft. 10 in.) |
| Turning Radius (Non-Powered Axles) | 8.02 m (26 ft. 3 in.) |
| Turning Radius (Powered Axles) | 7.73 m (25 ft. 4 in.) |

| Capacities | |
|---|---|
| Fuel Tank | 1250 L (330 gal.) |
| Cooling System w/ heater (13.5 L Tier 2/Stage II) | 61.2 L (65 qt.) |
| Cooling System w/ heater (13.5 L Interim Tier 4/Stage III B) | 85 L (90 qt.) |
| Engine Crankcase w/ filter (13.5 L Tier 2/Stage II) | 39 L (41 qt.) [a] |
| Engine Crankcase w/ filter (13.5 L Interim Tier 4/Stage III B) | 43 L (45.5 qt.) [a] |
| Final Drives | 8 L (8.5 qt.)<br>7 L (7.4 qt.) HillMaster™ |
| Extra Heavy-Duty Feeder House Reverser Gearcase w/o cooler | 3.6 L (7.7 pt.) |
| Multi-Speed Feeder House Reverser Gearcase w/ cooler (optional) | 5.2 L (11 pt.) |
| Premium Overshot Beater Gearcase (If Equipped) | 0.2 L (0.21 qt.) |
| Countershaft Drive Gearcase (Non Multi-Speed) | 1.9 L (2.04 qt.) |
| Loading Auger Gearcase | 3.8 L (4 qt.) |
| Two-Speed Separator Drive Gearcase | 4.7 L (5 qt.) |
| Engine Gearcase w/ transfer | 51 L (54 qt.) |
| Hydraulic/Hydrostatic Reservoir | 47 L (50 qt.) |

[a] *It is vital to maintain engine oil at correct levels. Always verify that oil level is at correct location on dipstick when servicing.*

OUO6075,000158F -19-29JUL13-2/2

## Dimensions (S660 and S670)

*NOTE: Dimensions are approximate and subject to change without notice.*

| Dimension | S660 | S670 |
|---|---|---|
| A | 9.80 m (32 ft. 2 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>11.00 m (36 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>12.11 m (39 ft. 7 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 9.80 m (32 ft. 2 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>11.00 m (36 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>12.11 m (39 ft. 7 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| B | 9.10 m (29 ft. 9 in.)<br>6.9 m (22 ft. 5 in.) Power Fold Auger | 9.10 m (29 ft. 9 in.)<br>6.9 m (22 ft. 5 in.) Power Fold Auger |
| C | 8.51 m (27 ft. 9 in.) | 8.51 m (27 ft. 9 in.) |
| D | 4.66 m — 4.94 m (15 ft. 3 in. — 16 ft. 2 in.)<br>10,572 L (300 bu.) Covers | 4.66 m — 4.94 m (15 ft. 3 in. — 16 ft. 2 in.)<br>10,572 L (300 bu.) Covers |
| E | 4.51 m — 4.80 m (14 ft. 8 in. — 15 ft. 8 in.)<br>Clean Grain Loading Auger | 4.51 m — 4.80 m (14 ft. 8 in. — 15 ft. 8 in.)<br>Clean Grain Loading Auger |
| F | 4.04 m — 4.32 m (13 ft. 3 in. — 14 ft. 2 in.)<br>10,572 L (300 bu.) Extensions | 4.04 m — 4.32 m (13 ft. 3 in. — 14 ft. 2 in.)<br>10,572 L (300 bu.) Extensions |
| G | 3.79 m — 4.07 m (12 ft. 4 in. — 13 ft. 4 in.) | 3.79 m — 4.07 m (12 ft. 4 in. — 13 ft. 4 in.) |
| H | 3.68 m — 3.97 m (12 ft. 1 in. — 13 ft. 0 in.) | 3.68 m — 3.97 m (12 ft. 1 in. — 13 ft. 0 in.) |
| I | 0.69 m (2 ft. 3 in.) | 0.69 m (2 ft. 3 in.) |
| J | 3.52 m (11 ft. 6 in.) | 3.52 m (11 ft. 6 in.) |
| K | 6.95 m (22 ft. 8 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>8.03 m (26 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>9.13 m (29 ft. 10 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 6.95 m (22 ft. 8 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>8.03 m (26 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>9.13 m (29 ft. 10 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| L | 4.55 m — 4.83 m (14 ft. 9 in. — 15 ft. 9 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.77 m — 5.06 m (15 ft. 7 in. — 16 ft. 6 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>5.00 m — 5.29 m (16 ft. 4 in. — 17 ft. 4 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 4.55 m — 4.83 m (14 ft. 9 in. — 15 ft. 9 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.77 m — 5.06 m (15 ft. 7 in. — 16 ft. 6 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>5.00 m — 5.29 m (16 ft. 4 in. — 17 ft. 4 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| M | 3.83 m — 4.12 m (12 ft. 6 in. — 13 ft. 5 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.13 m — 4.42 m (13 ft. 6 in. — 14 ft. 5 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>4.28 m — 4.56 m (14 ft. 0 in. — 14 ft. 10 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 3.83 m — 4.12 m (12 ft. 6 in. — 13 ft. 5 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.13 m — 4.42 m (13 ft. 6 in. — 14 ft. 5 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>4.28 m — 4.56 m (14 ft. 0 in. — 14 ft. 10 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| N [a] | 4.02 m — 4.31 m (13 ft. 2 in. — 14 ft. 1 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.07 m — 4.36 m (13 ft. 4 in. — 14 ft. 3 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>4.39 m — 4.67 m (14 ft. 4 in. — 15 ft. 3 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 4.02 m — 4.31 m (13 ft. 2 in. — 14 ft. 1 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.07 m — 4.36 m (13 ft. 4 in. — 14 ft. 3 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>4.39 m — 4.67 m (14 ft. 4 in. — 15 ft. 3 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| O [b] | 3.36 m — 3.83 m (11 ft. 0 in. — 12 ft. 6 in.)<br>Rear Tires | 3.36 m — 3.83 m (11 ft. 0 in. — 12 ft. 6 in.)<br>Rear Tires |
| P [b] | 3.45 m — 3.73 m (11 ft. 3 in. — 12 ft. 2 in.)<br>Front Tires | 3.45 m — 3.73 m (11 ft. 3 in. — 12 ft. 2 in.)<br>Front Tires |

*[a] Dimension is measured 1.22 m (4 ft.) from the grain spill point. This represents the unloading auger when centered over the grain cart.*
*[b] Due to different tire configurations, row spacings, axle configurations, wheel offsets, axle positions and spindles types, machine widths will vary. Measurements given in chart are for minimum and maximum widths. For more detailed width information, see your John Deere dealer.*

OUO6075,000158A -19-31JUL13-1/1

## Dimensions (S670 HillMaster™)

*NOTE: Dimensions are approximate and subject to change without notice.*

| Dimension | S670 HillMaster™ |
|---|---|
| A | 9.80 m (32 ft. 2 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>11.00 m (36 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| B | 9.10 m (29 ft. 9 in.)<br>6.9 m (22 ft. 5 in.) Power Fold Auger |
| C | 8.51 m (27 ft. 9 in.) |
| D | 4.66 m — 4.90 m (15 ft. 3 in. — 16 ft. 1 in.)<br>10,572 L (300 bu.) Covers |
| E | 4.51 m — 4.76 m (14 ft. 8 in. — 15 ft. 6 in.)<br>Clean Grain Loading Auger |
| F | Extensions (Not Available) |
| G | 3.79 m — 4.03 m (12 ft. 4 in. — 13 ft. 2 in.) |
| H | 3.68 m — 3.92 m (12 ft. 1 in. — 12 ft. 9 in.) |
| I | 0.69 m (2 ft. 3 in.) |
| J | 3.52 m (11 ft. 6 in.) |
| K | 6.95 m (22 ft. 8 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>8.03 m (26 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| L | 4.55 m — 4.83 m (14 ft. 9 in. — 15 ft. 9 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.77 m — 5.02 m (15 ft. 7 in. — 16 ft. 5 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| M | 3.83 m — 4.12 m (12 ft. 6 in. — 13 ft. 5 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.13 m — 4.38 m (13 ft. 6 in. — 14 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| N [a] | 4.02 m — 4.31 m (13 ft. 2 in. — 14 ft. 1 in.)<br>5.6 m (18 ft. 6 in.) Unload Auger<br>4.07 m — 4.31 m (13 ft. 4 in. — 14 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| O [b] | 3.36 m — 3.39 m (11 ft. 0 in. — 11 ft. 1 in.)<br>Rear Tires |
| P [b] | 3.45 m — 3.65 m (11 ft. 3 in. — 11 ft. 10 in.)<br>Front Tires |

*[a] Dimension is measured 1.22 m (4 ft.) from the grain spill point. This represents the unloading auger when centered over the grain cart.*
*[b] Due to different tire configurations, row spacings, axle configurations, wheel offsets, axle positions and spindles types, machine widths will vary. Measurements given in chart are for minimum and maximum widths. For more detailed width information, see your John Deere dealer.*

OUO6075,0001588 -19-31JUL13-1/1

## Dimensions (S680, S685 and S690)

*NOTE: Dimensions are approximate and subject to change without notice.*

| Dimension | S680 and S685 | S690 |
|---|---|---|
| A | 11.00 m (36 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>12.11 m (39 ft. 7 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 11.00 m (36 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>12.11 m (39 ft. 7 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| B | 9.10 m (29 ft. 9 in.)<br>6.9 m (22 ft. 5 in.) Power Fold Auger | 9.10 m (29 ft. 9 in.)<br>6.9 m (22 ft. 5 in.) Power Fold Auger |
| C | 8.51 m (27 ft. 9 in.) | 8.51 m (27 ft. 9 in.) |
| D | 4.66 m — 4.94 m (15 ft. 3 in. — 16 ft. 2 in.)<br>14,096 L (400 bu.) Covers | 4.66 m — 4.94 m (15 ft. 3 in. — 16 ft. 2 in.)<br>14,096 L (400 bu.) Covers |
| E | 4.51 m — 4.80 m (14 ft. 8 in. — 15 ft. 8 in.)<br>Clean Grain Loading Auger | 4.51 m — 4.80 m (14 ft. 8 in. — 15 ft. 8 in.)<br>Clean Grain Loading Auger |
| F | 4.29 m — 4.58 m (14 ft. 1 in. — 15 ft. 0 in.)<br>14,096 L (400 bu.) Extensions | 4.29 m — 4.58 m (14 ft. 1 in. — 15 ft. 0 in.)<br>14,096 L (400 bu.) Extensions |
| G | 3.79 m — 4.07 m (12 ft. 4 in. — 13 ft. 4 in.) | 3.79 m — 4.07 m (12 ft. 4 in. — 13 ft. 4 in.) |
| H | 3.68 m — 3.97 m (12 ft. 1 in. — 13 ft. 0 in.) | 3.68 m — 3.97 m (12 ft. 1 in. — 13 ft. 0 in.) |
| I | 0.69 m (2 ft. 3 in.) | 0.69 m (2 ft. 3 in.) |
| J | 3.51 m (11 ft. 5 in.) | 3.51 m (11 ft. 5 in.) |
| K | 8.03 m (26 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>9.13 m (29 ft. 10 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 8.03 m (26 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>9.13 m (29 ft. 10 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| L | 4.77 m — 5.06 m (15 ft. 7 in. — 16 ft. 6 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>5.00 m — 5.29 m (16 ft. 4 in. — 17 ft. 4 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 4.77 m — 5.06 m (15 ft. 7 in. — 16 ft. 6 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>5.00 m — 5.29 m (16 ft. 4 in. — 17 ft. 4 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| M | 4.13 m — 4.42 m (13 ft. 6 in. — 14 ft. 5 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>4.28 m — 4.56 m (14 ft. 0 in. — 14 ft. 10 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 4.13 m — 4.42 m (13 ft. 6 in. — 14 ft. 5 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>4.28 m — 4.56 m (14 ft. 0 in. — 14 ft. 10 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| N [a] | 4.07 m — 4.36 m (13 ft. 4 in. — 14 ft. 3 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>4.39 m — 4.67 m (14 ft. 4 in. — 15 ft. 3 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger | 4.07 m — 4.36 m (13 ft. 4 in. — 14 ft. 3 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger<br>4.39 m — 4.67 m (14 ft. 4 in. — 15 ft. 3 in.)<br>7.9 m (26 ft. 0 in.) Unload Auger |
| O [b] | 3.36 m — 3.83 m (11 ft. 0 in. — 12 ft. 6 in.)<br>Rear Tires | 3.36 m — 3.83 m (11 ft. 0 in. — 12 ft. 6 in.)<br>Rear Tires |
| P [b] | 3.45 m — 3.73 m (11 ft. 3 in. — 12 ft. 2 in.)<br>Front Tires | 3.45 m — 3.73 m (11 ft. 3 in. — 12 ft. 2 in.)<br>Front Tires |

*[a] Dimension is measured 1.22 m (4 ft.) from the grain spill point. This represents the unloading auger when centered over the grain cart.*
*[b] Due to different tire configurations, row spacings, axle configurations, wheel offsets, axle positions and spindles types, machine widths will vary. Measurements given in chart are for minimum and maximum widths. For more detailed width information, see your John Deere dealer.*

OUO6075,0001589 -19-12JUL13-1/1

## Dimensions (S680 HillMaster™, S685 HillMaster™ and S690 HillMaster™)

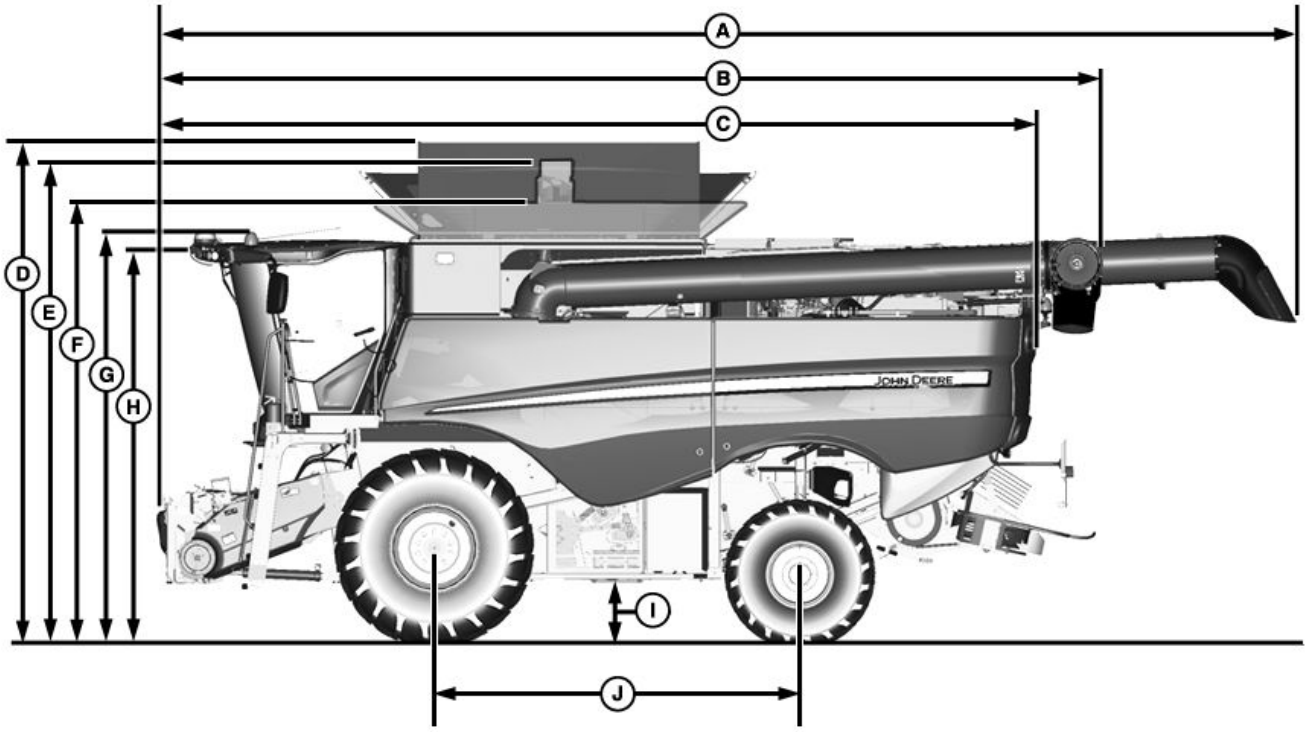
*NOTE: Dimensions are approximate and subject to change without notice.*

| Dimension | S680 HillMaster™ and S685 HillMaster™ | S690 HillMaster™ |
|---|---|---|
| A | 11.00 m (36 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger | 11.00 m (36 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| B | 9.10 m (29 ft. 9 in.)<br>6.9 m (22 ft. 5 in.) Power Fold Auger | 9.10 m (29 ft. 9 in.)<br>6.9 m (22 ft. 5 in.) Power Fold Auger |
| C | 8.51 m (27 ft. 9 in.) | 8.51 m (27 ft. 9 in.) |
| D | 4.66 m — 4.90 m (15 ft. 3 in. — 16 ft. 1 in.)<br>14,096 L (400 bu.) Covers | 4.66 m — 4.90 m (15 ft. 3 in. — 16 ft. 1 in.)<br>14,096 L (400 bu.) Covers |
| E | 4.51 m — 4.76 m (14 ft. 8 in. — 15 ft. 6 in.)<br>Clean Grain Loading Auger | 4.51 m — 4.76 m (14 ft. 8 in. — 15 ft. 6 in.)<br>Clean Grain Loading Auger |
| F | Extensions (Not Available) | Extensions (Not Available) |
| G | 3.79 m — 4.03 m (12 ft. 4 in. — 13 ft. 2 in.) | 3.79 m — 4.03 m (12 ft. 4 in. — 13 ft. 2 in.) |
| H | 3.68 m — 3.92 m (12 ft. 1 in. — 12 ft. 9 in.) | 3.68 m — 3.92 m (12 ft. 1 in. — 12 ft. 9 in.) |
| I | 0.69 m (2 ft. 3 in.) | 0.69 m (2 ft. 3 in.) |
| J | 3.52 m (11 ft. 6 in.) | 3.52 m (11 ft. 6 in.) |
| K | 8.03 m (26 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger | 8.03 m (26 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| L | 4.77 m — 5.02 m (15 ft. 7 in. — 16 ft. 5 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger | 4.77 m — 5.02 m (15 ft. 7 in. — 16 ft. 5 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| M | 4.13 m — 4.38 m (13 ft. 6 in. — 14 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger | 4.13 m — 4.38 m (13 ft. 6 in. — 14 ft. 4 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| N [a] | 4.07 m — 4.31 m (13 ft. 4 in. — 14 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger | 4.07 m — 4.31 m (13 ft. 4 in. — 14 ft. 1 in.)<br>6.9 m (22 ft. 5 in.) Unload Auger |
| O [b] | 3.36 m — 3.39 m (11 ft. 0 in. — 11 ft. 1 in.)<br>Rear Tires | 3.36 m — 3.39 m (11 ft. 0 in. — 11 ft. 1 in.)<br>Rear Tires |
| P [b] | 3.45 m — 3.65 m (11 ft. 3 in. — 11 ft. 10 in.)<br>Front Tires | 3.45 m — 3.65 m (11 ft. 3 in. — 11 ft. 10 in.)<br>Front Tires |

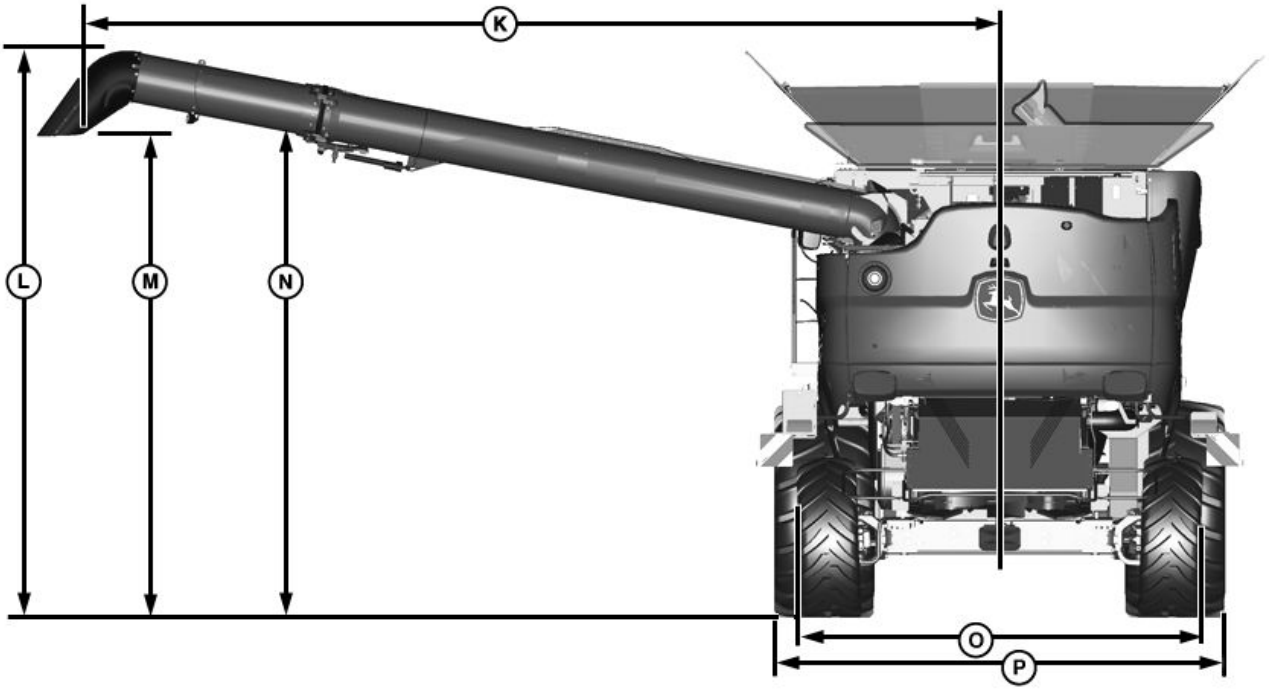
[a] *Dimension is measured 1.22 m (4 ft.) from the grain spill point. This represents the unloading auger when centered over the grain cart.*
[b] *Due to different tire configurations, row spacings, axle configurations, wheel offsets, axle positions and spindles types, machine widths will vary. Measurements given in chart are for minimum and maximum widths. For more detailed width information, see your John Deere dealer.*

OUO6075,000158B -19-12JUL13-1/1

## Dimension Reference Points




H107111 —UN—28FEB13




H107112 —UN—28FEB13

OUO6075,00013F5 -19-28FEB13-1/1

## Whole Body Vibration

The weighted root mean square acceleration to which the whole body is subjected to ranges from 0.51 to 0.73 $m/s^2$ as measured on a representative machine during typical operations and analyzed in accordance with ISO 2631. During the same operations, the weighted root mean square hand-arm vibration was less than 2.5 $m/s^2$ when analyzed in accordance with ISO 5349. These acceleration values depend on the roughness of the ground, the speeds at which the combine is operated, the operator's experience, weight and driving habits.

OUO6075,0000AA6 -19-17NOV10-1/1

## Sound Level

The A-weight sound pressure levels inside the operator's station ranged from 72.8 — 77.0 dB(A) as measured on several representative machines in accordance with ISO 5131. The sound pressure level depends upon the engine speed and load, separator settings, field and crop conditions and the type of platform used.

OUO6075,0000AA7 -19-22MAR11-1/1

## Safety Note Regarding the Subsequent Installation of Electrical and Electronic Appliances and/or Components

The machine is equipped with electronic components whose function may be influenced by electromagnetic radiation from other appliances. Such influences may be hazardous, so take the following safety instructions into account:

If electrical and electronic appliances are subsequently installed on the machine and connected to the on board system, the user must verify whether the installation affects the electronics or other components. This applies particularly to:

- Area counter
- Personal Computer
- GPS (Global Positioning System) receiver

In particular, subsequently installed electrical/electronic components must comply with the relevant edition of EMC Directive 89/336/EEC, and be CE marked.

If mobile communication systems (e.g. radio communication, telephone) are to be installed subsequently, the following extra requirements must be met:

- Only devices with an approval complying with the valid national regulation (i.e. BZT approval in Germany) shall be installed;
- The device shall be installed securely;
- Portable or mobile devices may be operated in the vehicle only if connected to a fixed outside antenna;
- Transmitters shall be installed separately from the vehicle's electronics;
- The antenna must be installed in a professional manner, with a good ground connection between the antenna and the vehicle ground.

Wiring, installation and maximum permissible current supply must be as stated in the installation instructions of the machine manufacturer.

OUO6075,0000AA8 -19-17NOV10-1/1

## EC Declaration of Conformity

**Deere & Company**
**Moline, Illinois U.S.A.**

The person named below declares that

Machine type: Combine

Model: S660, S670, S680, S685 and S690

fulfills all relevant provisions and essential requirements of the following directives:

| Directive | Number | Certification Method |
|---|---|---|
| Machinery Directive | 2006/42/EC | Self certified, per Article 5 of the Directive |
| Electromagnetic Compatibility Directive | 2004/108/EC | Self certified, per Annex II of the Directive |

Name and address of the person in the European community authorized to compile the technical construction file:

Brigitte Birk
John Deere GmbH & Co. KG
Mannheim Regional Center (Zentralfunktionen)
John Deere Strasse 70
Mannheim, Germany D-68163
EUConformity@johndeere.com

Place of declaration: East Moline, Illinois, USA

Date of declaration: January 1, 2013

Manufacturing unit: John Deere Harvester Works

Name: Tim Deutsch

Title: Global Director, Crop Harvesting Platform, Product Engineering, Ag and Turf Division

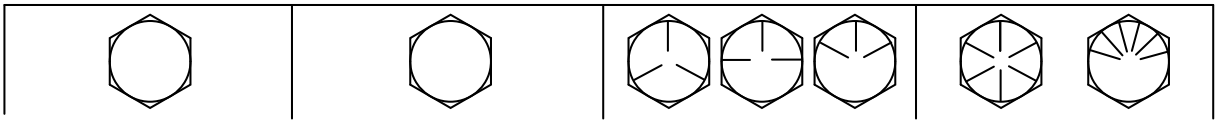
DXCE01 —UN—28APR09

CE

ZX08994,0000917 -19-19MAR13-1/1

## Unified Inch Bolt and Screw Torque Values

TS1671 —UN—01MAY03



| Bolt or Screw Size | SAE Grade 1 | | | | SAE Grade 2[a] | | | | SAE Grade 5, 5.1 or 5.2 | | | | SAE Grade 8 or 8.2 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lubricated[b] | | Dry[c] | | Lubricated[b] | | Dry[c] | | Lubricated[b] | | Dry[c] | | Lubricated[b] | | Dry[c] | |
| | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. |
| 1/4 | 3.7 | 33 | 4.7 | 42 | 6 | 53 | 7.5 | 66 | 9.5 | 84 | 12 | 106 | 13.5 | 120 | 17 | 150 |
| | | | | | | | | | | | | | N·m | lb.-ft. | N·m | lb.-ft. |
| 5/16 | 7.7 | 68 | 9.8 | 86 | 12 | 106 | 15.5 | 137 | 19.5 | 172 | 25 | 221 | 28 | 20.5 | 35 | 26 |
| | | | | | | | | | N·m | lb.-ft. | N·m | lb.-ft. | | | | |
| 3/8 | 13.5 | 120 | 17.5 | 155 | 22 | 194 | 27 | 240 | 35 | 26 | 44 | 32.5 | 49 | 36 | 63 | 46 |
| | | | N·m | lb.-ft. | N·m | lb.-ft. | N·m | lb.-ft. | | | | | | | | |
| 7/16 | 22 | 194 | 28 | 20.5 | 35 | 26 | 44 | 32.5 | 56 | 41 | 70 | 52 | 80 | 59 | 100 | 74 |
| | N·m | lb.-ft. | | | | | | | | | | | | | | |
| 1/2 | 34 | 25 | 42 | 31 | 53 | 39 | 67 | 49 | 85 | 63 | 110 | 80 | 120 | 88 | 155 | 115 |
| 9/16 | 48 | 35.5 | 60 | 45 | 76 | 56 | 95 | 70 | 125 | 92 | 155 | 115 | 175 | 130 | 220 | 165 |
| 5/8 | 67 | 49 | 85 | 63 | 105 | 77 | 135 | 100 | 170 | 125 | 215 | 160 | 240 | 175 | 305 | 225 |
| 3/4 | 120 | 88 | 150 | 110 | 190 | 140 | 240 | 175 | 300 | 220 | 380 | 280 | 425 | 315 | 540 | 400 |
| 7/8 | 190 | 140 | 240 | 175 | 190 | 140 | 240 | 175 | 490 | 360 | 615 | 455 | 690 | 510 | 870 | 640 |
| 1 | 285 | 210 | 360 | 265 | 285 | 210 | 360 | 265 | 730 | 540 | 920 | 680 | 1030 | 760 | 1300 | 960 |
| 1-1/8 | 400 | 300 | 510 | 375 | 400 | 300 | 510 | 375 | 910 | 670 | 1150 | 850 | 1450 | 1075 | 1850 | 1350 |
| 1-1/4 | 570 | 420 | 725 | 535 | 570 | 420 | 725 | 535 | 1280 | 945 | 1630 | 1200 | 2050 | 1500 | 2600 | 1920 |
| 1-3/8 | 750 | 550 | 950 | 700 | 750 | 550 | 950 | 700 | 1700 | 1250 | 2140 | 1580 | 2700 | 2000 | 3400 | 2500 |
| 1-1/2 | 990 | 730 | 1250 | 930 | 990 | 730 | 1250 | 930 | 2250 | 1650 | 2850 | 2100 | 3600 | 2650 | 4550 | 3350 |

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

*[a] Grade 2 applies for hex cap screws (not hex bolts) up to 6 in. (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.*

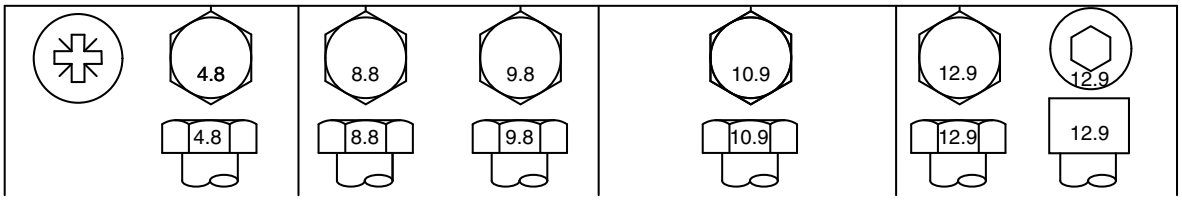
*[b] "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.*

*[c] "Dry" means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B, F13E or F13H zinc flake coating.*

DX,TORQ1 -19-12JAN11-1/1

## Metric Bolt and Screw Torque Values

TS1670 —UN—01MAY03




| Bolt or Screw Size | Class 4.8 | | | | Class 8.8 or 9.8 | | | | Class 10.9 | | | | Class 12.9 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lubricated[a] | | Dry[b] | | Lubricated[a] | | Dry[b] | | Lubricated[a] | | Dry[b] | | Lubricated[a] | | Dry[b] | |
| | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. | N·m | lb.-in. |
| M6 | 4.7 | 42 | 6 | 53 | 8.9 | 79 | 11.3 | 100 | 13 | 115 | 16.5 | 146 | 15.5 | 137 | 19.5 | 172 |
| | | | | | | | | | N·m | lb.-ft. | N·m | lb.-ft. | N·m | lb.-ft. | N·m | lb.-ft. |
| M8 | 11.5 | 102 | 14.5 | 128 | 22 | 194 | 27.5 | 243 | 32 | 23.5 | 40 | 29.5 | 37 | 27.5 | 47 | 35 |
| | | | N·m | lb.-ft. | N·m | lb.-ft. | N·m | lb.-ft. | | | | | | | | |
| M10 | 23 | 204 | 29 | 21 | 43 | 32 | 55 | 40 | 63 | 46 | 80 | 59 | 75 | 55 | 95 | 70 |
| | N·m | lb.-ft. | | | | | | | | | | | | | | |
| M12 | 40 | 29.5 | 50 | 37 | 75 | 55 | 95 | 70 | 110 | 80 | 140 | 105 | 130 | 95 | 165 | 120 |
| M14 | 63 | 46 | 80 | 59 | 120 | 88 | 150 | 110 | 175 | 130 | 220 | 165 | 205 | 150 | 260 | 190 |
| M16 | 100 | 74 | 125 | 92 | 190 | 140 | 240 | 175 | 275 | 200 | 350 | 255 | 320 | 235 | 400 | 300 |
| M18 | 135 | 100 | 170 | 125 | 265 | 195 | 330 | 245 | 375 | 275 | 475 | 350 | 440 | 325 | 560 | 410 |
| M20 | 190 | 140 | 245 | 180 | 375 | 275 | 475 | 350 | 530 | 390 | 675 | 500 | 625 | 460 | 790 | 580 |
| M22 | 265 | 195 | 330 | 245 | 510 | 375 | 650 | 480 | 725 | 535 | 920 | 680 | 850 | 625 | 1080 | 800 |
| M24 | 330 | 245 | 425 | 315 | 650 | 480 | 820 | 600 | 920 | 680 | 1150 | 850 | 1080 | 800 | 1350 | 1000 |
| M27 | 490 | 360 | 625 | 460 | 950 | 700 | 1200 | 885 | 1350 | 1000 | 1700 | 1250 | 1580 | 1160 | 2000 | 1475 |
| M30 | 660 | 490 | 850 | 625 | 1290 | 950 | 1630 | 1200 | 1850 | 1350 | 2300 | 1700 | 2140 | 1580 | 2700 | 2000 |
| M33 | 900 | 665 | 1150 | 850 | 1750 | 1300 | 2200 | 1625 | 2500 | 1850 | 3150 | 2325 | 2900 | 2150 | 3700 | 2730 |
| M36 | 1150 | 850 | 1450 | 1075 | 2250 | 1650 | 2850 | 2100 | 3200 | 2350 | 4050 | 3000 | 3750 | 2770 | 4750 | 3500 |

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

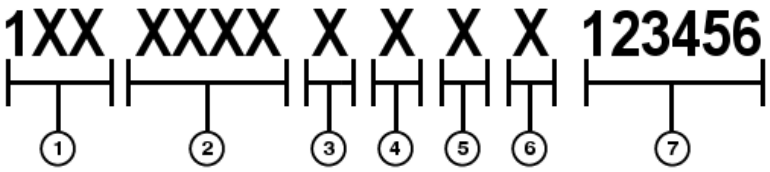
*[a] "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.*

*[b] "Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B, F13E or F13H zinc flake coating.*

DX,TORQ2 -19-12JAN11-1/1

## Interpreting Machine Serial Number

H105725 —UN—22AUG12




| | | | |
|---|---|---|---|
| 1 | Manufacturer Code | AX - John Deere Seeding Group<br>BM - John Deere Montenegro<br>CC - John Deere Arc-les-Gray<br>CD - John Deere Usine De Saran<br>CE - John Deere Iberica Getafe<br>CJ - John Deere Nigel<br>CP - John Deere Tianjin Works<br>CQ - John Deere Horizontina<br>DM - John Deere Roberine Enschede<br>DW - John Deere Davenport Works<br>DX - Deere & Company<br>EK - John Deere Orenburg<br>EX - John Deere Ottumwa Works<br>FD - DCEO-Mannheim<br>FX - DCEO-Mannheim<br>GX - John Deere Power Products<br>HX - John Deere Harvester Works<br>JX - Industrias John Deere Argentina S.A.<br>JZ - John Deere Domodedovo<br>KM - Kemper<br>KV - Knoxville<br>LG - Mannheim 5x20<br>LV - John Deere Augusta Works<br>LX - John Deere Werke Mannheim<br>MC - DCEO Parts Marketing<br>MX - John Deere Horicon Works<br>MY - John Deere Sirhind Works | N4 - John Deere Ningbo Works<br>NF - John Deere Tianjin Tractor Co.,Ltd<br>NW - John Deere Catalão<br>NX - John Deere Des Moines Works<br>PC - John Deere Intelligent Solutions Group<br>PX - Industrias John Deere S.A. de C.V.<br>PY - John Deere India Pvt. Ltd<br>RG - John Deere Power Systems<br>RX - John Deere Waterloo Works<br>SA - SABO Gummersbach<br>T8 - John Deere Thibodaux<br>TC - John Deere Turf Care<br>TX - Worldwide Construction And Forestry Division<br>TY - John Deere Merchandise Division<br>WX - John Deere Welland Works<br>WZ - John Deere Fabriek Horst B.V.<br>XJ - Ashok Leyland John Deere Construction Equipment Company, Pvt. Ltd.<br>XU - Xuzhou XCG John Deere Machinery Manufacturing Co., Ltd.<br>YC - John Deere Jiamusi Agricultural Machinery<br>YH - John Deere Harbin Works<br>YN - John Deere Tianjin Construction Works<br>YZ - John Deere Coffeyville Works<br>ZT - JDI GmbH-ISB<br>ZX - John Deere Werke Zweibrucken<br>9Q - John Deere Water |
| 2 | Machine Model Identifier | | |
| 3 | Model Identifier Suffix<br>Machine Configuration Code<br>Additional Machine Information | | Example: N, T, W, etc. |
| 4 | Check Letter | | Example: A, B, C, D, etc. |
| 5 | Calendar Year of Manufacture | | Refer to Year of Manufacture Code table |
| 6 | Additional Information | | |
| 7 | Manufacturing Serial Number | | Example: 000001, 000127, etc. |

| Year of Manufacture Code | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Year** | **Code** | **Year** | **Code** | **Year** | **Code** | **Year** | **Code** |
| 2008 | 8 | 2018 | J | 2028 | W | 2038 | 8 |
| 2009 | 9 | 2019 | K | 2029 | X | 2039 | 9 |
| 2010 | A | 2020 | L | 2030 | Y | 2040 | A |
| 2011 | B | 2021 | M | 2031 | 1 | 2041 | B |
| 2012 | C | 2022 | N | 2032 | 2 | 2042 | C |
| 2013 | D | 2023 | P | 2033 | 3 | 2043 | D |
| 2014 | E | 2024 | R | 2034 | 4 | 2044 | E |
| 2015 | F | 2025 | S | 2035 | 5 | 2045 | F |
| 2016 | G | 2026 | T | 2036 | 6 | 2046 | G |
| 2017 | H | 2027 | V | 2037 | 7 | 2047 | H |

OUO6075,0001187 -19-27AUG12-1/1

## Identification Numbers

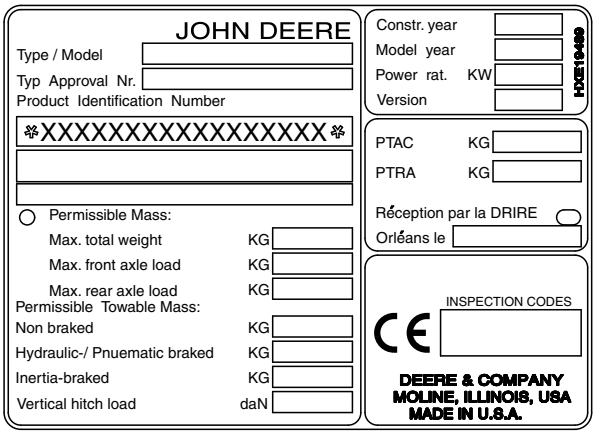
Your machine has these various identification plates. The letters and numbers stamped on these plates identify a component or assembly. ALL of these characters are needed when ordering parts or identifying a machine or component for any John Deere product support program. Also, they are needed for law enforcement to trace your machine if it is ever stolen. ACCURATELY record these characters in the spaces provided in each of the following photographs.

OUO6075,0000BE0 -19-04MAY11-1/1

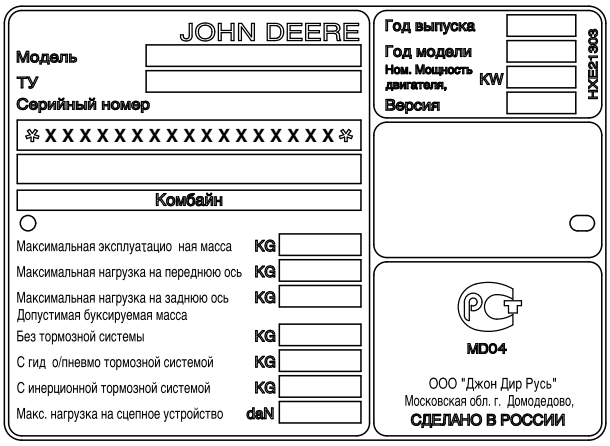
## Machine Identification Plate



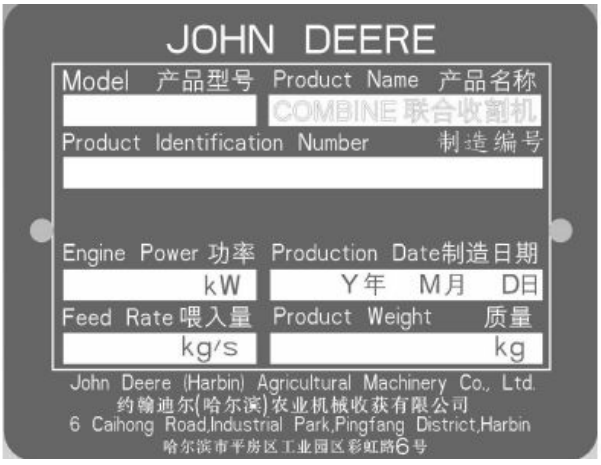

*Sample Identification Plate*




*Sample Identification Plate*




*Sample Identification Plate*



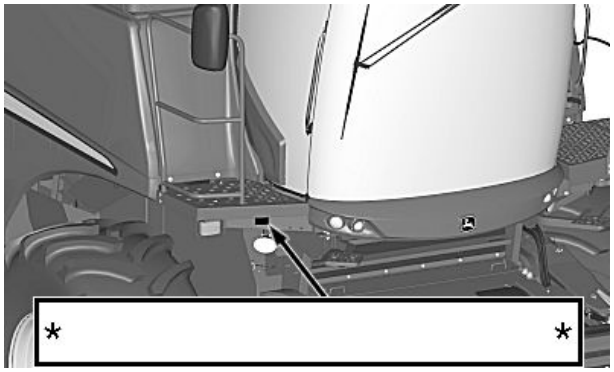

*Sample Identification Plate*

*NOTE: Machine identification plate varies depending on where machine is shipped. Locate identification plate on machine and compare with information shown here.*

OUO6075,0000F79 -19-09FEB12-1/1

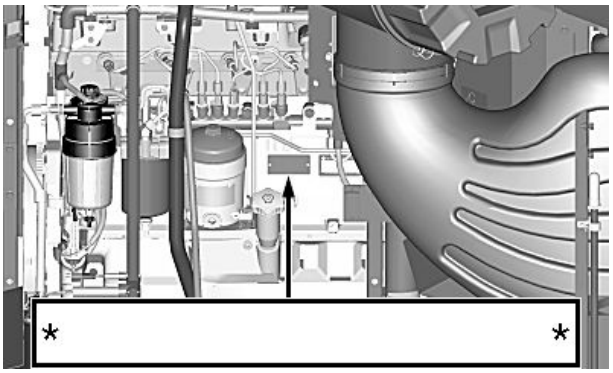
## Machine Identification Plate Location

Located on right-hand side of cab handrail landing.




OUO6075,0000BE1 -19-04MAY11-1/1

## Engine Serial Number (Tier 2/Stage II)




*S660 and S670*

S660 and S670: located on rear side of engine.

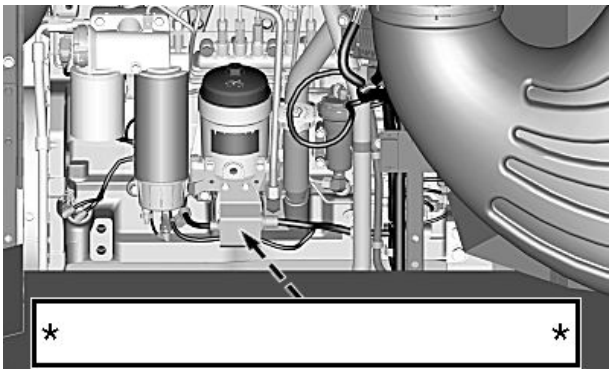



*S680 and S690*

S680 and S690: located on front side of engine above starter.

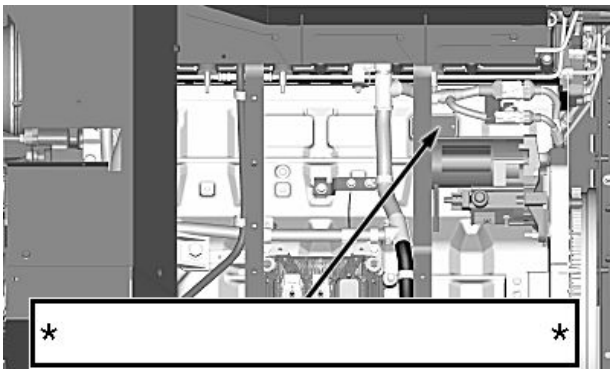
OUO6075,0001590 -19-09JUL13-1/1

## Engine Serial Number (Interim Tier 4/Stage III B)




*S660 and S670*

S660 and S670: located on rear side of engine.



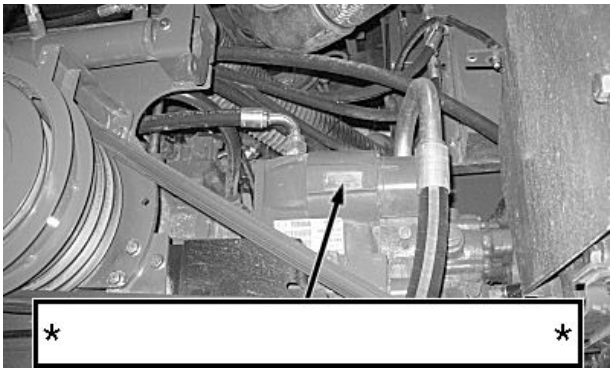

*S680, S685 and S690*

S680, S685 and S690: located on front side of engine above starter.

OUO6075,000126C -19-09OCT12-1/1

## Hydrostatic Drive Unit Pump

Located on side of hydrostatic drive pump.



H99421 —UN—14DEC10

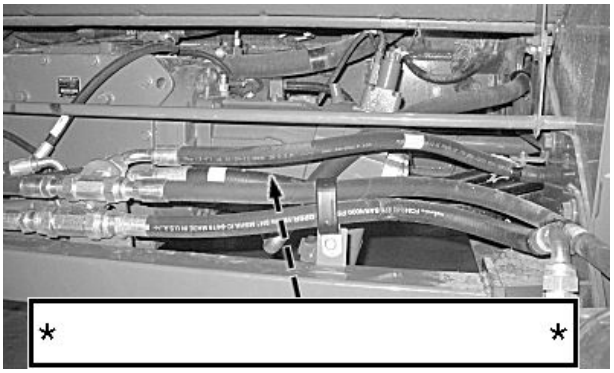
*Mechanical Shift and Push Button Shift Machines Shown*

OUO6075,0001059 -19-27FEB12-1/1

## Hydrostatic Drive Unit Motor

Mechanical Shift and Push Button Shift Machines: located on top side of hydrostatic drive motor.

ProDrive Machines: located on bottom side of hydrostatic drive motor.



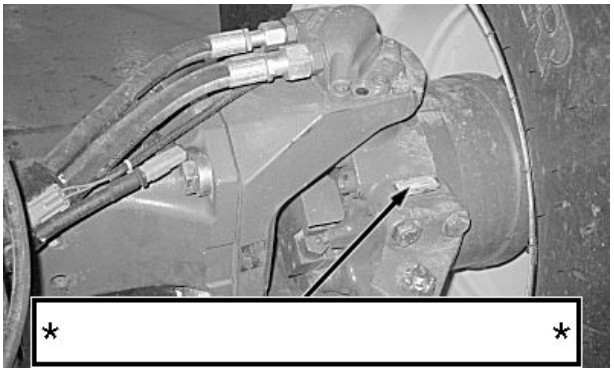
H99424 —UN—14DEC10

*ProDrive Machine Shown*

OUO6075,0001058 -19-27FEB12-1/1

## Two Speed Four-Wheel Drive Motor

Located on top side of four-wheel drive motor.

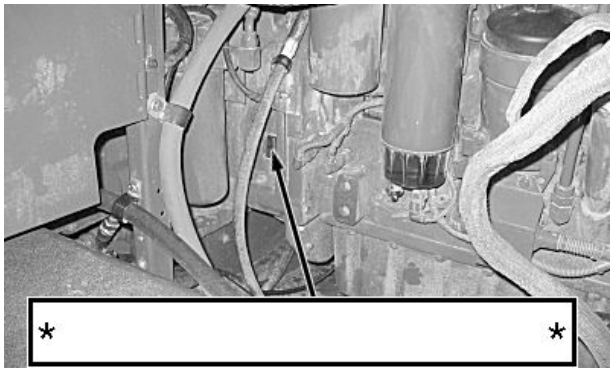


H99419 —UN—14DEC10

OUO6075,0000AF4 -19-14APR11-1/1

## Engine Gearcase

Located on rear side of engine gearcase.

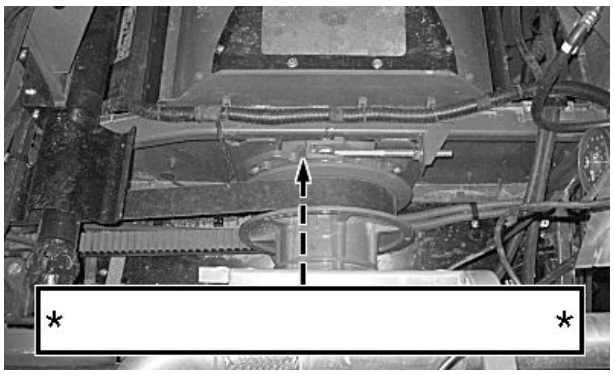


H99418 —UN—14DEC10

OUO6075,0001057 -19-27FEB12-1/1

## Rotor Drive Gearcase

Located on left-hand side of rotor drive gearcase.



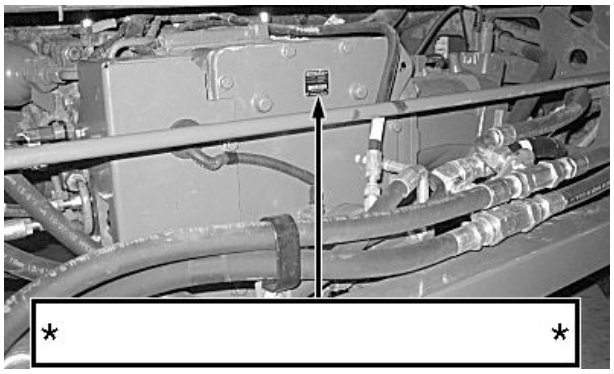
H99430 —UN—14DEC10

OUO6075,0000AF6 -19-14DEC10-1/1

## Transmission

Mechanical Shift and Push Button Shift Machines: located on side of transmission

ProDrive Machines: located on front of transmission



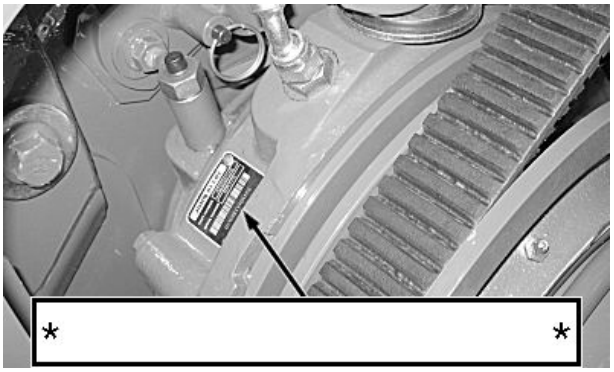
H99426 —UN—14DEC10

*ProDrive Transmission Shown*

OUO6075,0001056 -19-27FEB12-1/1

## Feeder House Reverser

Located on top side of feeder house reverser.

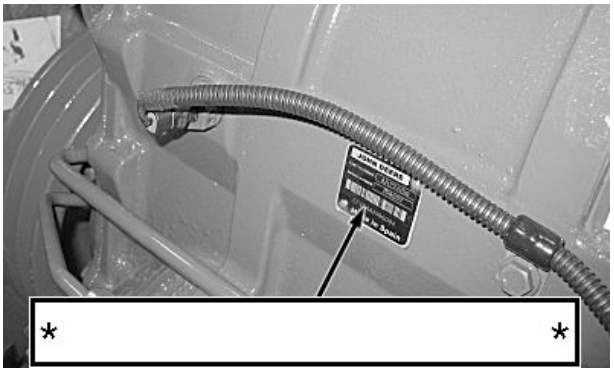


H99432 —UN—14DEC10

OUO6075,0000AF9 -19-14DEC10-1/1

## Multi-Speed Feeder House Gearcase (If Equipped)

Located on rear side of multi-speed feeder house gearcase.

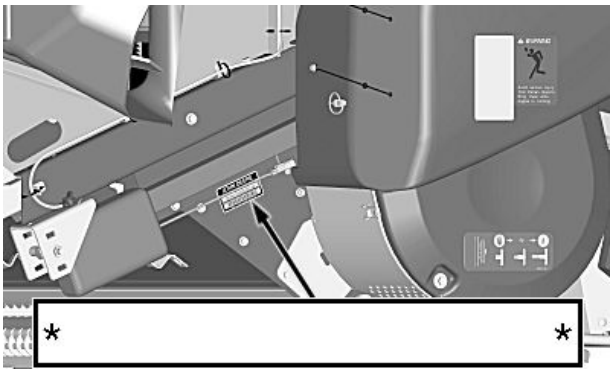


H99431 —UN—14DEC10

OUO6075,0000B00 -19-14DEC10-1/1

## Chopper (If Equipped)

Located on left-hand side of chopper.

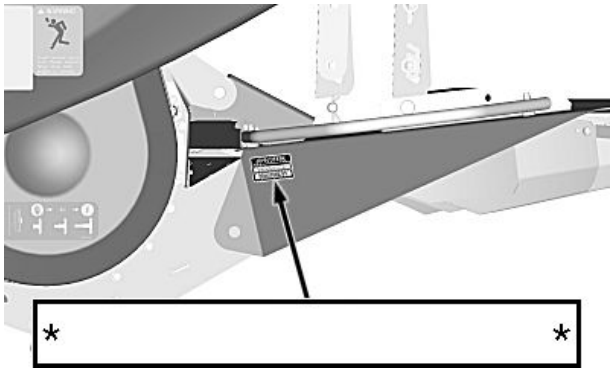


H101339 —UN—04MAY11

OUO6075,0000C27 -19-04MAY11-1/1

## Chopper Tailboard (Deluxe Residue)

Located on left-hand side of chopper tailboard.

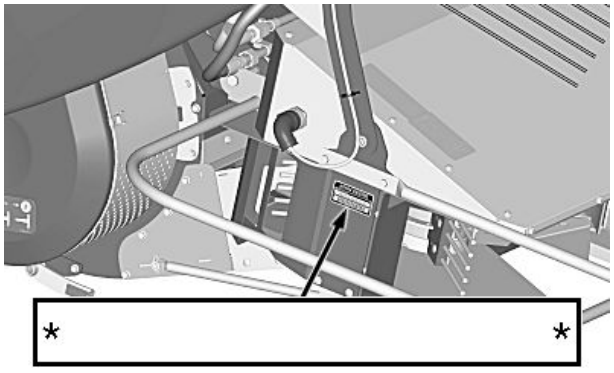



H101340 —UN—04MAY11

OUO6075,0000C28 -19-04MAY11-1/1

## Chopper Tailboard (Premium Residue)

Located on left-hand side of chopper tailboard.

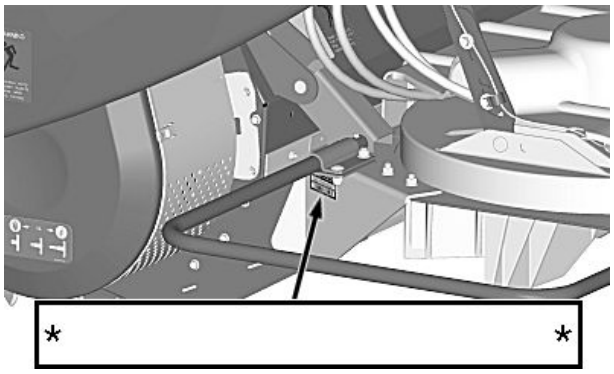



H101342 —UN—04MAY11

OUO6075,0000C29 -19-04MAY11-1/1

## PowerCast Tailboard (Deluxe Residue)

Located on left-hand side of PowerCast tailboard.




H101343 —UN—04MAY11

OUO6075,0000C2A -19-04MAY11-1/1

## Spreader (Deluxe Residue)

Located on right-hand inside of spreader.




H101344 —UN—04MAY11

OUO6075,0000C2B -19-04MAY11-1/1

## Keep Proof of Ownership

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
   - Mark your machine with your own numbering system
   - Take color photographs from several angles of each machine

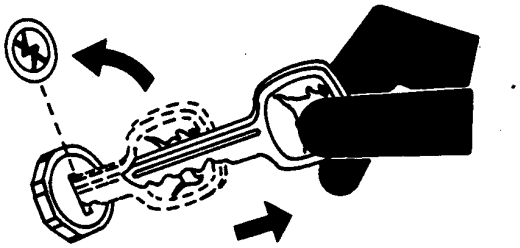



TS1680 —UN—09DEC03

DX,SECURE1 -19-18NOV03-1/1

## Keep Machines Secure

1. Install vandal-proof devices.
2. When machine is in storage:
   - Lower equipment to the ground
   - Set wheels to widest position to make loading more difficult
   - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.



TS230 —UN—24MAY89

DX,SECURE2 -19-18NOV03-1/1

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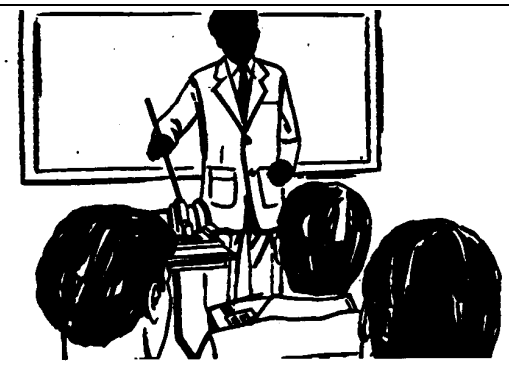
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