C230 Combine

(Serial No. 010000 -)

JOHN DEERE

OPERATOR'S MANUAL

4LZ-11 (C230) Full-Feeder Combine, 4LZ-11A (C230) Full-Feeder Combine, and 4YL-6 (C230) Corn Combine

OMDX17082 ISSUE G2 (ENGLISH)

John Deere (Jiamusi) Agricultural Machinery Co., Ltd

Export Edition

PRINTED IN U.S.A.

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 in 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.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate or statement which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

THE TIRE MANUFACTURER'S warranty supplied with your machine may not apply outside the U.S.

If you are not the original owner of this machine, it is in your interest to contact your local John Deere dealer to inform them of this unit's serial number. This will help John Deere notify you of any issues or product improvements.

DX,IFC1-19-03APR09

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John Deere (Jiamusi) Agricultural Machinery Co., Ltd. IBC-1

Safety Instructions and Safety Signs

Recognize Safety Information

T81389—UN—28JUN13

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.

DX,ALERT-19-29SEP98

Understand Signal Words

TS187—19—30SEP88

DANGER; The signal word DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

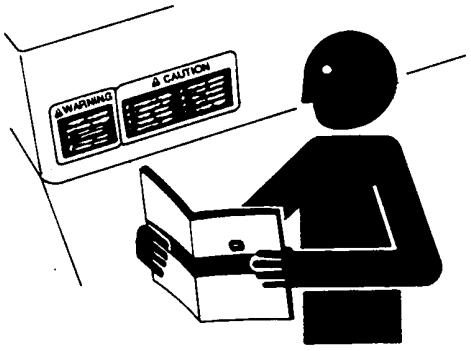
WARNING; The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION; The signal word CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. CAUTION may also be used to alert against unsafe practices associated with events which could lead to personal injury.

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.

DX,SIGNAL-19-05OCT16

Follow Safety Instructions



TS201—UN—15APR13

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.

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

DX,READ-19-16JUN09

Use Proper Tools

TS779—UN—08NOV89

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards.

Use power tools only to loosen threaded parts and fasteners.

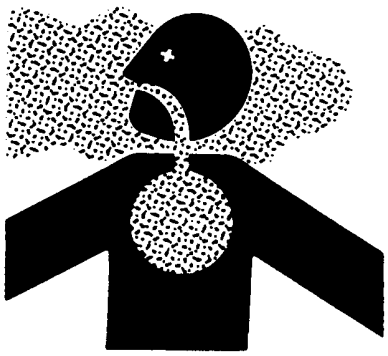
For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on

metric fasteners. Avoid bodily injury caused by slipping wrenches.

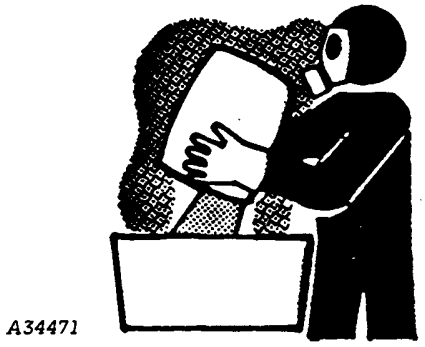
Use only service parts meeting John Deere specifications.

DX,REPAIR-19-17FEB99

Handle Agricultural Chemicals Safely



TS220—UN—15APR13



A34471—UN—11OCT88

Chemicals used in agricultural applications such as fungicides, herbicides, insecticides, pesticides, rodenticides, and fertilizers can be harmful to your health or the environment if not used carefully.

Always follow all label directions for effective, safe, and legal use of agricultural chemicals.

Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:
  - Chemicals labeled **'Danger'**: Most toxic. Generally require use of goggles, respirator, gloves, and skin protection.
  - Chemicals labeled **'Warning'**: Less toxic. Generally require use of goggles, gloves, and skin protections.
  - Chemicals labeled **'Caution'**: Least toxic. Generally require use of gloves and skin protection.
- Avoid inhaling vapor, aerosol or dust.
- Always have soap, water, and towel available when working with chemicals. If chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.
- Wash hands and face after using chemicals and before eating, drinking, smoking, or urination.
- Do not smoke or eat while applying chemicals.
- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers used for food or drink.
- Store chemicals in a secure, locked area away from human or livestock food. Keep children away.
- Always dispose of containers properly. Triple rinse empty containers and puncture or crush containers and dispose of properly.

DX,WW,CHEM01-19-24AUG10

Practice Safe Maintenance

TS218—UN—23AUG88

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 away 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.

Falling while cleaning or working at height can cause serious injury. Use a ladder or platform to easily reach each location. Use sturdy and secure footholds and handholds.

DX,SERV-19-28FEB17

Welding Near Electronic Control Units

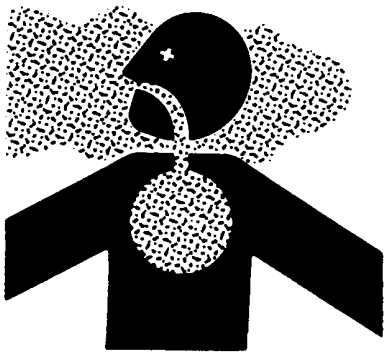
TS953—UN—15MAY90

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.
6. After welding, reverse Steps 1—5.

DX,WW,ECU02-19-14AUG09

Remove Paint Before Welding or Heating



TS220—UN—15APR13

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.

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

Avoid Heating Near Pressurized Fluid Lines

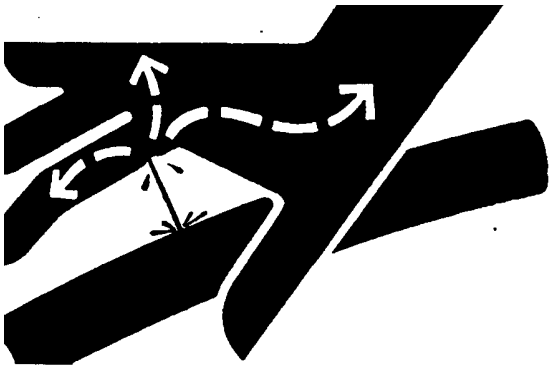
TS953—UN—15MAY90

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.

DX,TORCH-19-10DEC04

Avoid High-Pressure Fluids



X9811—UN—23AUG88

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.

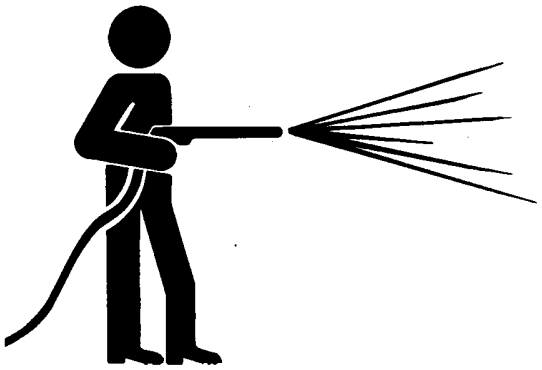
Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

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.

DX,FLUID-19-12OCT11

Work in Clean Area



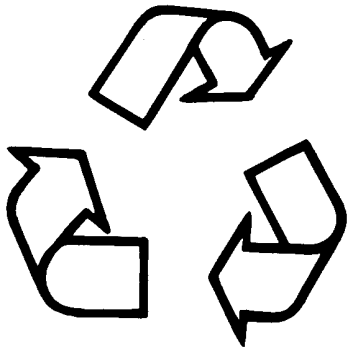
T6642EJ—UN—18OCT88

Before starting a job:

- Clean work area and machine.
- Make sure you have all necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.

DX,CLEAN-19-04JUN90

Decommissioning — Proper Recycling and Disposal of Fluids and Components



TS1133—UN—15APR13

Safety and environmental stewardship measures must be taken into account when decommissioning a machine and/or component. These measures include the following:

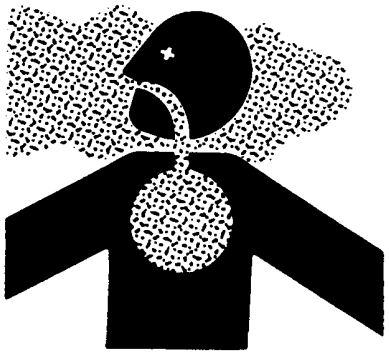
- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses, during the removal or handling of objects and materials.
- Follow instructions for specialized components.
- Release stored energy by lowering suspended machine elements, relaxing springs, disconnecting the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.
- Minimize exposure to components which may have

residue from agricultural chemicals, such as fertilizers and pesticides. Handle and dispose of these components appropriately.

- Carefully drain engines, fuel tanks, radiators, hydraulic cylinders, reservoirs, and lines before recycling components. Use leak-proof containers when draining fluids. Do not use food or beverage containers.
- Do not pour waste fluids onto the ground, down a drain, or into any water source.
- Observe all national, state, and local laws, regulations, or ordinances governing the handling or disposal of waste fluids (example: oil, fuel, coolant, brake fluid); filters; batteries; and, other substances or parts. Burning of flammable fluids or components in other than specially designed incinerators may be prohibited by law and could result in exposure to harmful fumes or ashes.
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air conditioning refrigerants which could damage the atmosphere if allowed to escape.
- Evaluate recycling options for tires, metal, plastic, glass, rubber, and electronic components which may be recyclable, in part or completely.
- Contact your local environmental or recycling center, or your John Deere dealer for information on the proper way to recycle or dispose of waste.

DX,DRAIN-19-01JUN15

Avoid Harmful Asbestos Dust



TS220—UN—15APR13

Avoid breathing dust that may be generated when handling components containing asbestos fibers. Inhaled asbestos fibers may cause lung cancer.

Components in products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates, and some gaskets. The asbestos used in these components is usually found in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust containing asbestos is not generated.

Avoid creating dust. Never use compressed air for cleaning. Avoid brushing or grinding material containing asbestos. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, apply a mist of oil or water on the material containing asbestos.

Keep bystanders away from the area.

DX,DUST-19-15MAR91

Avoid Hot Exhaust

RG17488—UN—21AUG09

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.

DX,EXHAUST-19-20AUG09

Handle Starting Fluid Safely

TS1356—UN—18MAR92

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.

Do not use starting fluid on an engine equipped with glow plugs or an air intake heater.

DX,FIRE3-19-14MAR14

Handle Fluids Safely—Avoid Fires

TS227—UN—15APR13

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.

DX,FLAME-19-29SEP98

Use of Fire Extinguisher

YC12282—UN—20DEC17

YC4693—UN—03JUL13

A—Fire Extinguisher

Machine is equipped with the portable dry powder fire extinguisher. Fire extinguisher (A) is on the left side of cab, near the front ladder. Extinguisher must be checked daily to be in place when entering or leaving the cab and when working around the machine. Fire extinguisher must be professionally serviced or replaced after use.

Portable dry powder fire extinguisher is used to put off fire with grease, oil, and chemicals.

Use fire extinguisher:

The diagram shows the recommended method to extinguish a fire. Always aim the nozzle at the base of fire.

Basic steps to use fire extinguisher are as below:

1. Remove fire extinguisher from its holder and take it to the fire scene.
2. Approach the fire in leeward direction of wind.
3. Pull safety pin from top of the fire extinguisher.
4. Hold its handle and keep fire extinguisher upright, and aim the nozzle at the fire base.
5. Squeeze handle to discharge powder from the fire extinguisher.
6. Move nozzle back and forth so that powder covers the flames.

Inspection checklist:

Check fire extinguisher at least once a month to ensure the following:

1. Is fire extinguisher placed at required location near cab ladder?
2. Is there any obstruction to the access to or the visibility of the fire extinguisher?
3. Are the operating instructions visible and facing outward?
4. Is the safety seal broken or missing?
5. Is the fire extinguisher full? (Lift it or weigh it to verify)

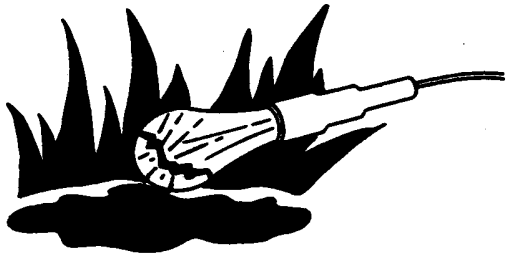
6. Is the nozzle damaged, corroded, leaking or clogged?

When inspection of the fire extinguisher reveals any deficiency, fire extinguisher must be serviced or replaced.

NOTE: If there is a fire, operator considers using the fire extinguisher first.

CP00718,000442E-19-20DEC17

Illuminate Work Area Safely

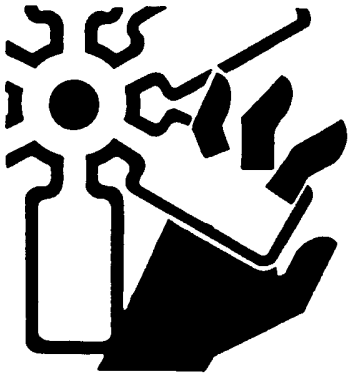


TS223—UN—23AUG88

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

DX,LIGHT-19-04JUN90

Install All Guards



TS677—UN—21SEP89

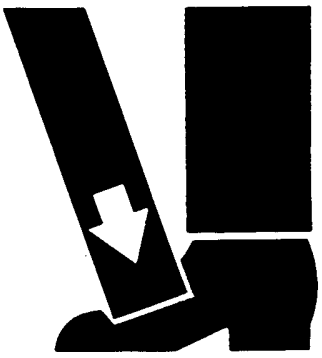
Rotating cooling system fans, belts, pulleys, and drives can cause serious injury.

Keep all guards in place at all times during engine 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.

DX,GUARDS-19-18AUG09

Use Proper Lifting Equipment



TS226—UN—23AUG88

Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual.

DX,LIFT-19-04JUN90

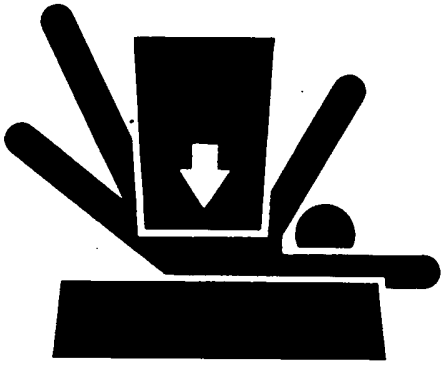
Live With Safety

TS231—19—07OCT88

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.

DX,LIVE-19-25SEP92

Support Machine Properly



TS229—UN—23AUG88

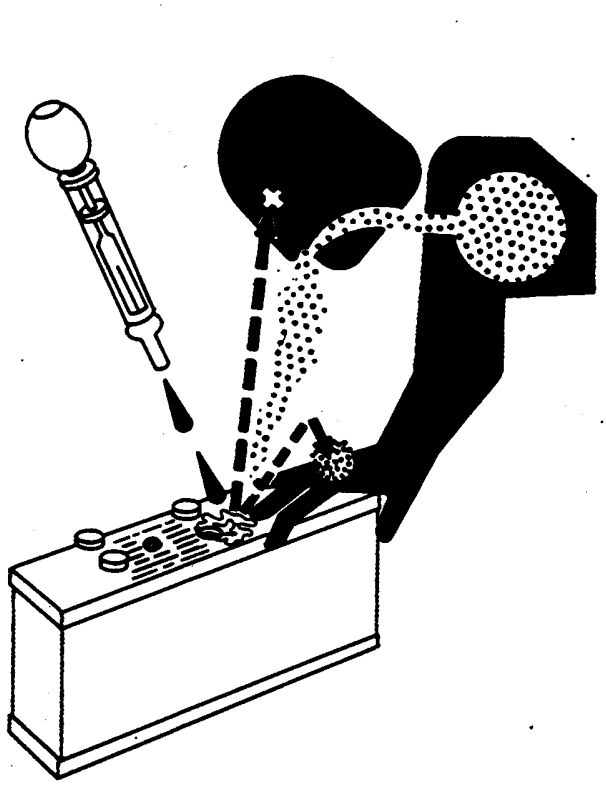
Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

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.

DX,LOWER-19-24FEB00

Prevent Acid Burns



TS203—UN—23AUG88

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

Avoid the hazard by:

1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

If you spill acid on yourself:

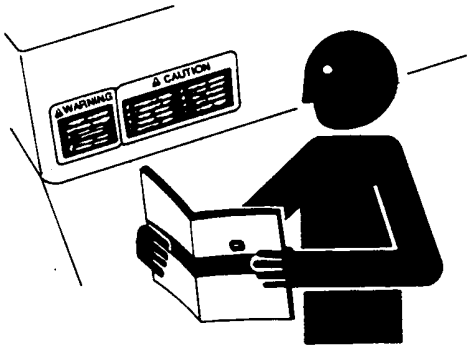
1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

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

DX,POISON-19-21APR93

Replace Safety Signs



TS201—UN—15APR13

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.

DX,SIGNS-19-18AUG09

Service Accumulator Systems Safely

TS281—UN—15APR13

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.

DX,WW,ACCLA2-19-22AUG03

Do Not Open High-Pressure Fuel System

TS1343—UN—18MAR92

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.)

DX,WW,HPCR1-19-07JAN03

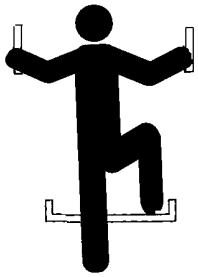
Wait Before Opening High-Pressure Fuel System

TS1343—UN—18MAR92

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, confirm that the fuel pressure is relieved.

DX,WW,HPCR2-19-09SEP14

Use Steps and Handholds Correctly



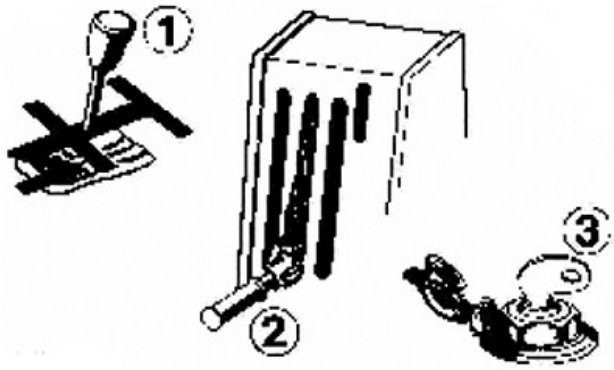
T133468—UN—15APR13

Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

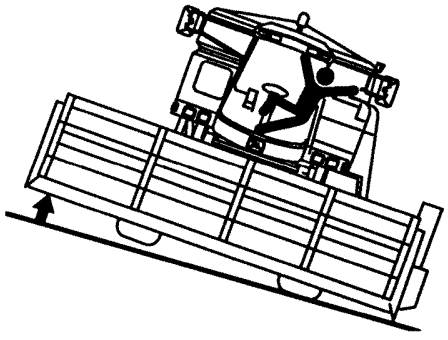
Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

DX,WW,MOUNT-19-12OCT11

Drive Combine



YC1285—UN—29NOV12



ZX002461

ZX002461—UN—16JUN95

Keep all shields and guards in place at all time during operation. Only qualified driver can drive the combine. Before starting the machine, operator is note if there are any bystanders around. Honk the horn and alert them. Be cautious when attaching the header to the machine. Follow instructions in Operator's Manual of header when attaching or detaching it.

Before starting the engine, gear-shift lever is in neutral position and threshing clutch in disengaged position.

Ground speed need match road or field conditions. When driving uphill or downhill, never make sharp turns. Especially if grain tank is full, be careful when making a turn on slope.

When making turns, always consider 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.

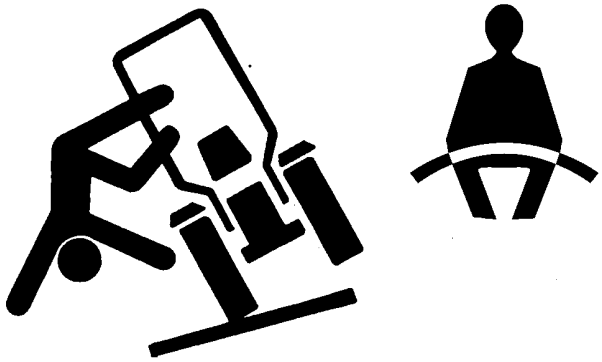
Reduce ground speed while driving on slopes and uneven roads or before making a sharp turn. When driving down a steep slope, use low gear.

Avoid holes, ditches, and obstructions which cause combine to roll over, particularly on slopes.

⚠ CAUTION: Keep hands, feet, and clothing away from power-driven parts. Never run the engine in a closed room.

CP00718,0003C58-19-07DEC17

Use Seat Belt Properly



TS1729—UN—24MAY13

Avoid crushing injury or death during rollover.

This machine is equipped with a rollover protective structure (ROPS). USE a seat belt when you operate with a ROPS.

- Hold the latch and pull the seat belt across the body.
- Insert the latch into the buckle. Listen for a click.
- Tug on the seat belt latch to make sure that the belt is securely fastened.
- Snug the seat belt across the hips.

Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.

Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion. Replace only with

replacement parts approved for your machine. See your John Deere dealer.

CP00718,0003C59-19-07DEC17

Keep Riders and Children off Machine

TS253—UN—23AUG88

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

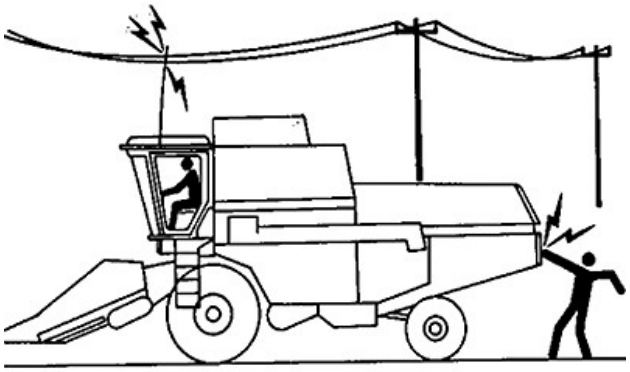
Riders are subject to injury such as being thrown off the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

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

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

CP00718,0003C5A-19-07DEC17

Avoid Electrical Power Lines



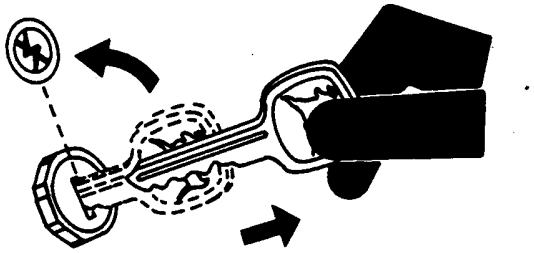
YC1287—UN—29NOV12

Put the grain tank unloading auger in transport position and lock it firmly.

When driving through the low-hanging cables in the transport position, ensure that a safe distance is kept between the highest point of the machine and the cables. Absolutely avoid touching and electric shock.

CP00718,0003C5B-19-07DEC17

Park and Leave the Machine



TS230—UN—24MAY89

Lower header onto ground.

Before leaving machine, disengage header and threshing device. Set multi-function lever to neutral position and stop the machine. Apply park brake. Remove key, and lock the cab.

Never leave machine unattended if engine is running.

Never leave cab while driving.

CP00718,0003C5C-19-07DEC17

Handle Fuel Safely—Avoid Fires

TS202—UN—23AUG88

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.

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

In Case of Fire

TS227—UN—15APR13

CAUTION: Avoid personal injury.

Stop machine immediately at the first sign of fire. Fire may be identified by the smell of smoke or sight of flames. Because fire grows and spreads rapidly, get off the machine immediately and move safely away from the fire. Do not return to the machine! The number one priority is safety.

Call the fire department. A portable fire extinguisher can put out a small fire or contain it until the fire department arrives; but portable extinguishers have limitations. Always put the safety of the operator and bystanders first. If attempting to extinguish a fire, keep your back to the wind with an unobstructed escape path so you can move away quickly if the fire cannot be extinguished.

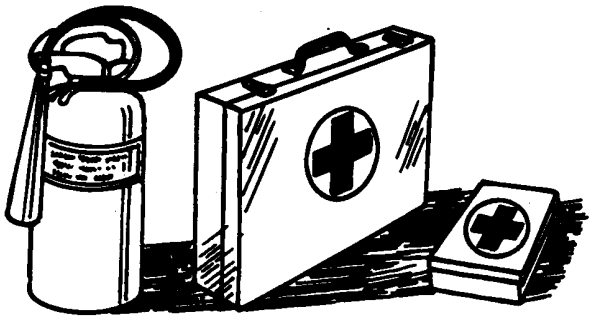
Read the fire extinguisher instructions and become familiar with their location, parts, and operation before a fire starts. Local fire departments or fire equipment distributors may offer fire extinguisher training and recommendations.

If your extinguisher does not have instructions, follow these general guidelines:

1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

DX,FIRE4-19-22AUG13

Prepare for Emergencies



TS291—UN—15APR13

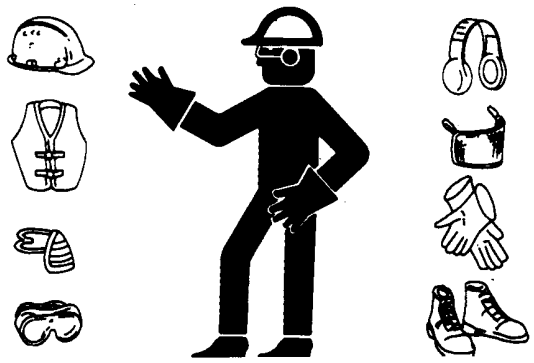
Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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

DX,FIRE2-19-03MAR93

Wear Protective Clothing



TS206—UN—15APR13

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

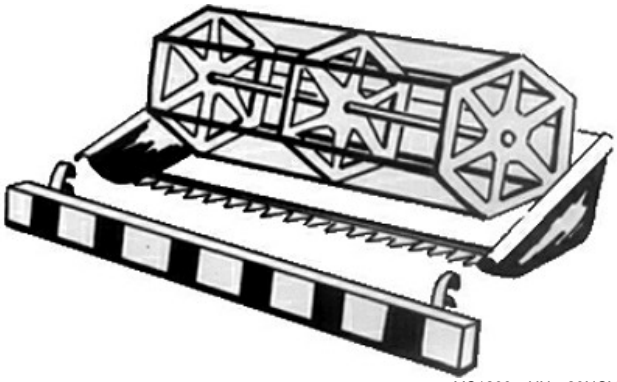
Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

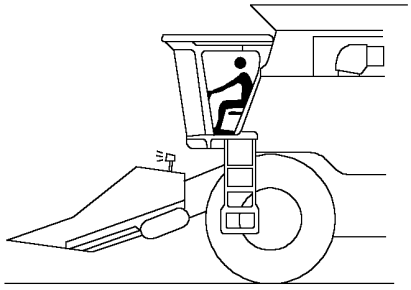
Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

DX,WEAR-19-10SEP90

Transport Combine with Header Safely



YC1290—UN—29NOV12



H52024—UN—15JUL99

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.

Provided that traffic regulations allow for transportation with header, dismount the crop divider and put the guard on the blade protection device.

Lift the header before riding on the road, but do not block the sight of the operator. Lock header, see Lock Header Height in Operator's Station section.

YC00758,00002AF-19-13NOV18

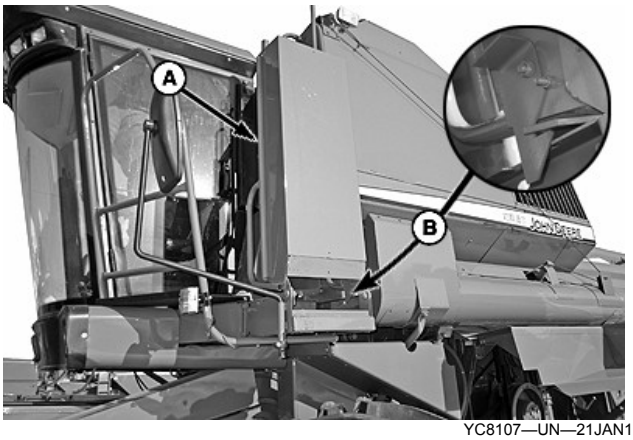
Transport Combine Without Header Safely

YC1291—UN—29NOV12

In some countries, transporting combine wider than 3 m is not allowed. In this case, the header is dismounted and is transported separately. After getting special permission, the header can be attached to the rear of the combine. But additional lights or other devices be used as alarm signals according to local requirements.

CP00718,0003C5E-19-07DEC17

Fixing Ladder at Transportation Position



YC8107—UN—21JAN15

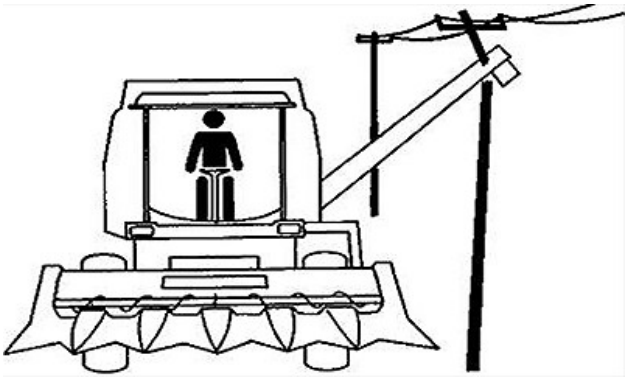
A—Ladder
B—Locking Tab

Upon transportation, fold up the cab ladder (A) and use locking tab (B) to fix it.

Pay attention to safety when unfolding the ladder.

CP00718,0003C71-19-07DEC17

Transportation Position of Unloading Auger



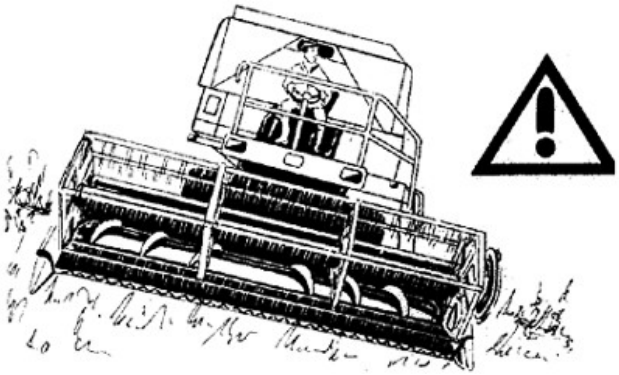
YC2739—UN—11DEC12

Before transporting, unload all the grains inside the cylinder. Fold the unloading auger to the transportation position and lock firmly.

When the combine is driven on roads, turn the grain unloading cylinder back to the transportation position.

CP00718,0003C6F-19-07DEC17

Drive on a Slope

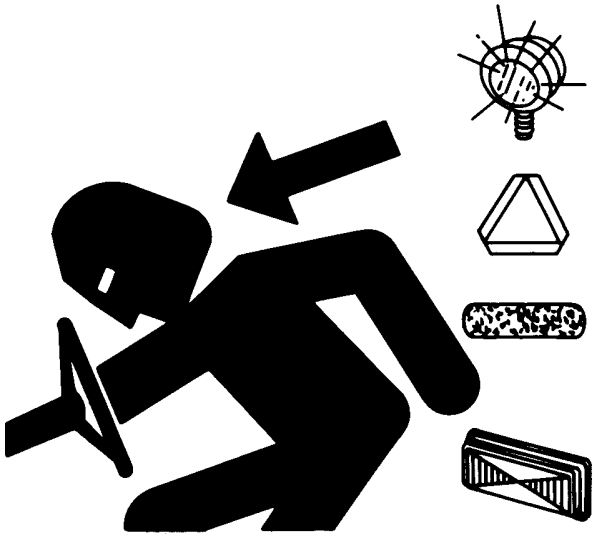


YC1295—UN—29NOV12

Be particularly cautious when driving on a slope to prevent the combine from rolling over. Never use neutral gear when driving the combine on a slope.

CP00718,0003C6E-19-07DEC17

Use Safety Lights and Devices



TS951—UN—12APR90

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. An implement safety lighting kit is available from your John Deere dealer.

DX,FLASH-19-07JUL99

Stay Clear of Header

YC1602—UN—29NOV12

Stalk rolls of the corn header, etc., cannot be completely shielded by constructional measures due to their function. Always stay clear of these moving elements during operation! Always disengage header drive, shut

off the engine, and remove key before servicing or unclogging header.

OUYC278,0000A33-19-28AUG18

Keep Hands Away from Blades

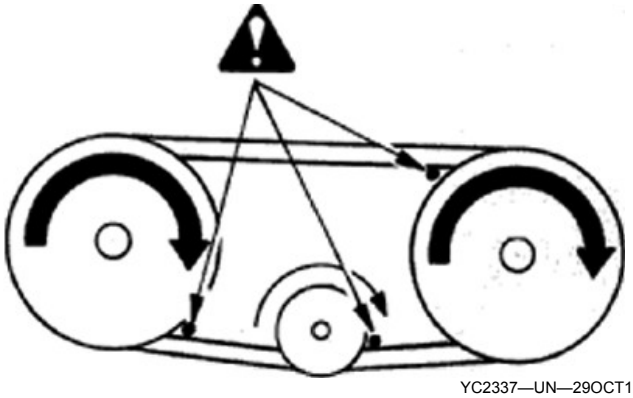
TS254—UN—23AUG88

Never attempt to clear obstructions in the front of or on header. Unless separator is disengaged, park brake is set, engine is shutoff, and key is removed.

Everyone must be clear of machine before starting engine.

CP00718,0003C60-19-07DEC17

Ensure all shields are installed



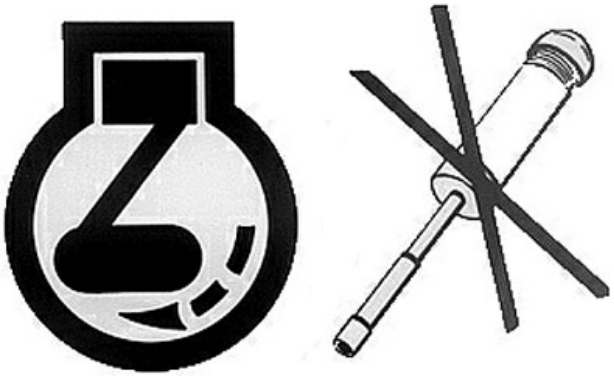
YC2337—UN—29OCT12

Ensure all shields are installed before operating combine harvester.Before removing shields, separate the threshing clutch and switch off the engine.

CAUTION: Keep hands, feet and clothing away from moving parts.

CP00834,00001EE-19-17OCT12

General Maintenance



YC1605—UN—29NOV12

Switch off the engine before carrying out lubrication and calibration.

CP00718,0003C61-19-07DEC17

Avoid Contact with Moving Parts

TS256—UN—23AUG88

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

CP00718,0003C62-19-07DEC17

Cleaning Grain Tank and Removal of Blockages Safely

YC1607—UN—29NOV12

Avoid serious injury or death from entanglement in the grain tank cross augers. For functional purposes, the cross augers cannot be covered. Do not enter the grain tank when the engine is running. Before entering the tank to clean out residual grain, always shutoff the engine, set park 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.

CP00718,0003C63-19-07DEC17

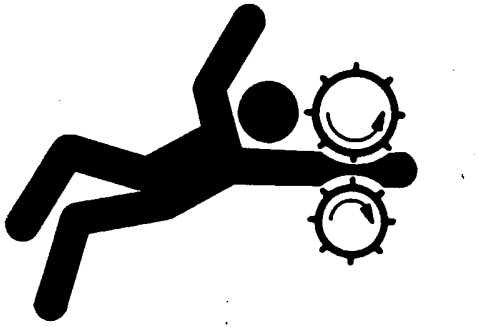
Stay Away from the Chopper

YC1608—UN—29NOV12

There are safety guards around the dangerous moving blades of the chopper. However, when the power is switched off, the blades may continue spinning for a short time. When the blades are still spinning, stay away from the chopper. Disconnect the power, switch off the engine, and remove the key. Wait until the moving parts stop spinning and then carry out maintenance of the chopper.

CP00718,0003C64-19-07DEC17

Service Machines Safely



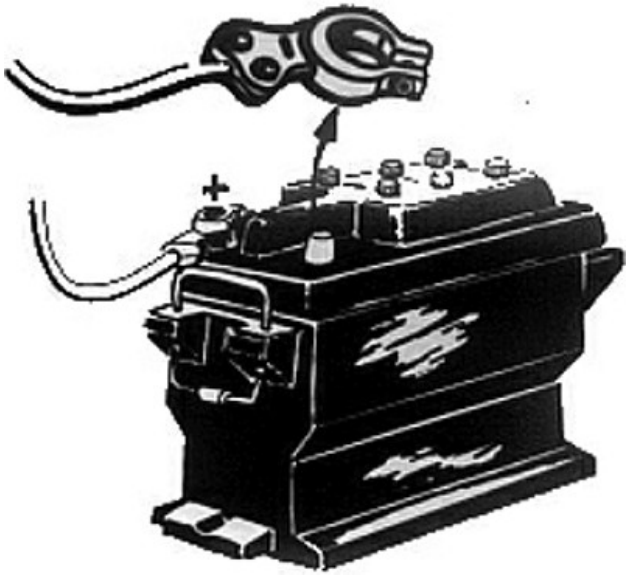
TS228—UN—23AUG88

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.

DX,LOOSE-19-04JUN90

Maintenance of electrical parts



YC1611—UN—29NOV12

When carrying out maintenance of the combine harvester electrical parts, first separate the battery grounding wire.

OUYC401,00003A8-19-14MAR12

Prevent Battery Explosions

TS204—UN—15APR13

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

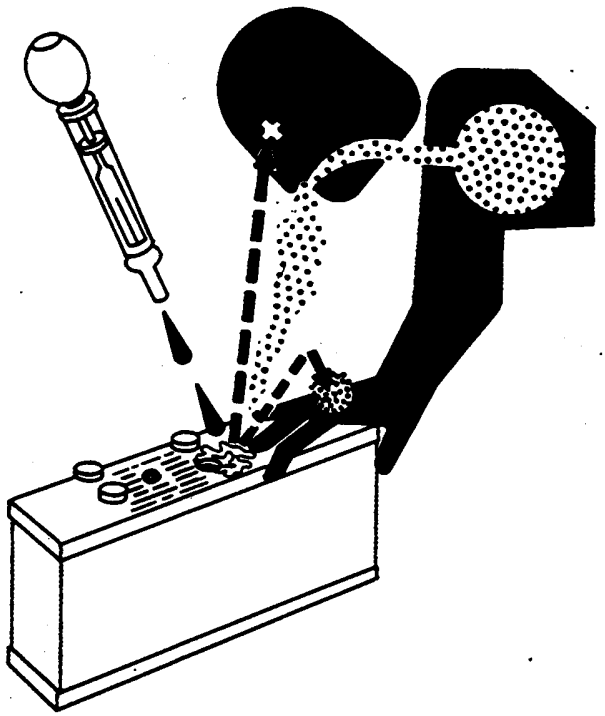
Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).

DX,SPARKS-19-03MAR93

Handling Batteries Safely

TS204—UN—15APR13



TS203—UN—23AUG88

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.

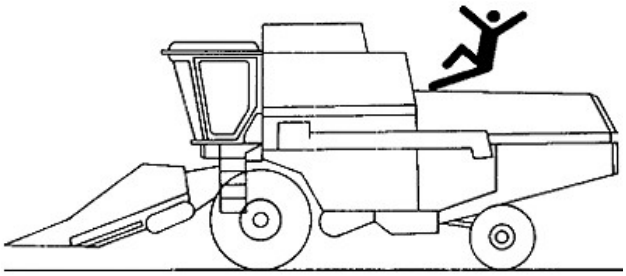
If acid is swallowed:

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.**

DX,WW,BATTERIES-19-02DEC10

Service Engine



YC1612—UN—29NOV12

Maintenance platform can be used when servicing the engine. Ensure safety and avoid accidents when climbing onto other parts of the machine, for example, falling down from the machine.

CP00718,0003C65-19-07DEC17

Remove Accumulated Crop Debris

TS227—UN—15APR13

The buildup 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 park brake and remove the key.

CP00718,0003C66-19-07DEC17

Service Cooling System Safely

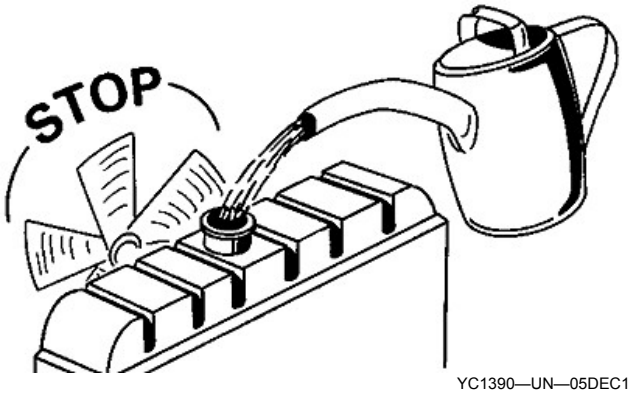
TS281—UN—15APR13

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

Shut off engine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

CP00718,0003C67-19-07DEC17

Coolant

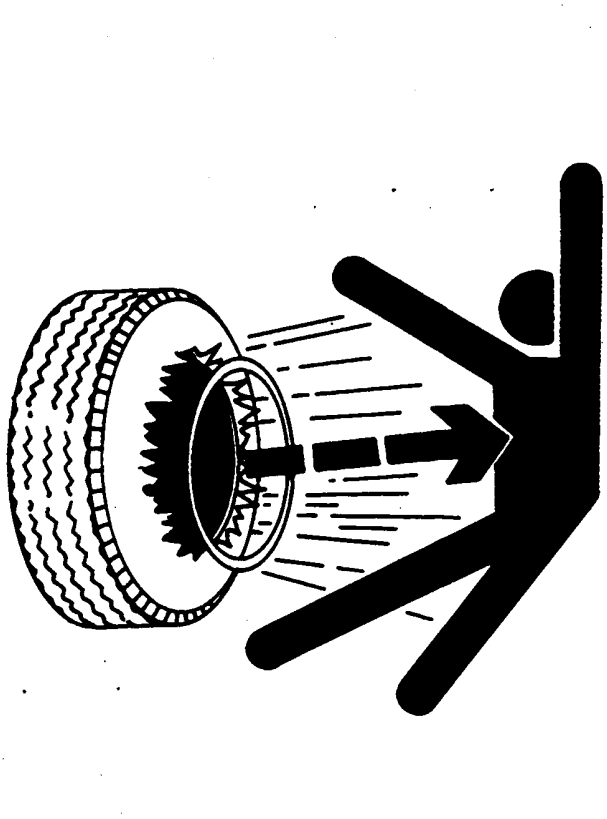


YC1390—UN—05DEC12

Before adding coolant, switch off the engine first.

CP00834,00001EF-19-05JAN13

Service Tires Safely



TS211—UN—15APR13

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.

DX,RIM1-19-27OCT08

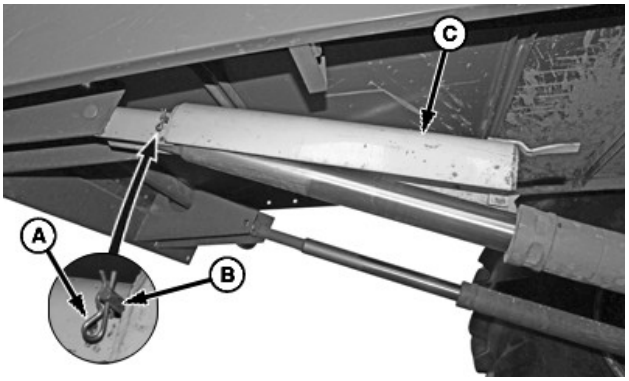
Retighten Nuts of Front and Rear Wheels

YC2754—UN—11DEC12

Refer to Wheel Bolts in Electrical, Hydraulic, and Drive Systems section and retighten the nuts and bolts of front and rear wheels. Otherwise, the wheels may fall off and the machine rollover. Lead to serious injury to the operator, and excessive damage to the machine.

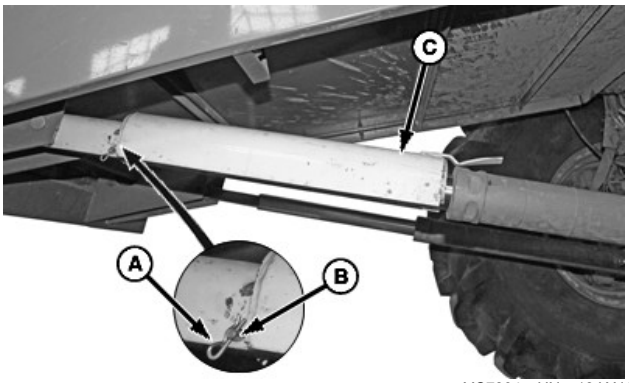
CP00718,0003C68-19-08APR19

Lock the Feeder House Lift Cylinder Safety Stops



YC7893—UN—18JAN15

Cylinder at "Unlocked" State



YC7894—UN—18JAN15

Cylinder at "Locked" State

A—Spring Pin
B—Latch
C—Safety Stop

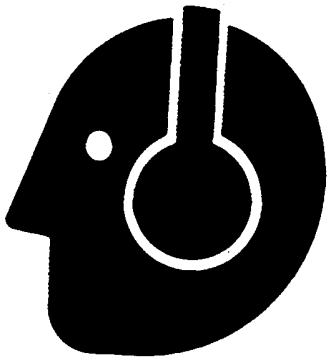
When transporting with header, or entering the header, or working under the feeder house, in order to avoid personal injuries caused by the fall of header. Lock the header height lever and safety stop (C) . Follow the procedures:

1. Lift header cylinder to highest position. Stop the machine and remove the key.
2. Place timber under lifted header or feeder house, to support header or feeder house.
3. Remove spring pin (A). Remove latch (B).
4. Place one end of the safety stop (C) on cylinder plunger.
5. Install latch (B) into the hole of the safety stop (C). Use spring pin to lock.

IMPORTANT: Before operation, set header cylinder at "unlocked" state.

CP00718,0003C69-19-07DEC17

Protect Against Noise



TS207—UN—23AUG88

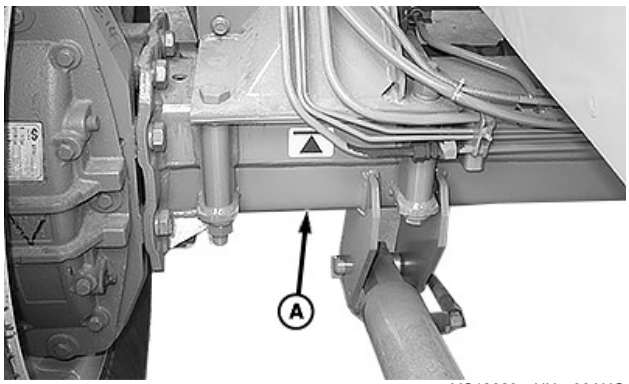
There are many variables that affect the sound level range, including machine configuration, condition and maintenance level of the machine, ground surface, operating environmental, duty cycles, ambient noise, and attachments.

Exposure to loud noise can cause impairment or loss of hearing.

Always wear hearing protection. Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

DX,NOISE-19-03OCT17

Support Front Axle



YC12629—UN—30AUG18

A—Support Point (2 used, 1 per side)

CAUTION: The machine is heavy. If it falls or rolls over, serious injury and death be caused to you or others. In case, there are no grains in the grain tank. The machine must rest on a flat and level surface, gear-shift lever, or hydraulic driven lever set in neutral position. Engage park brake and remove the key. Secure the rear wheels.

IMPORTANT: Improper jacking can damage machine. Jack can only be applied at specific location of the machine.

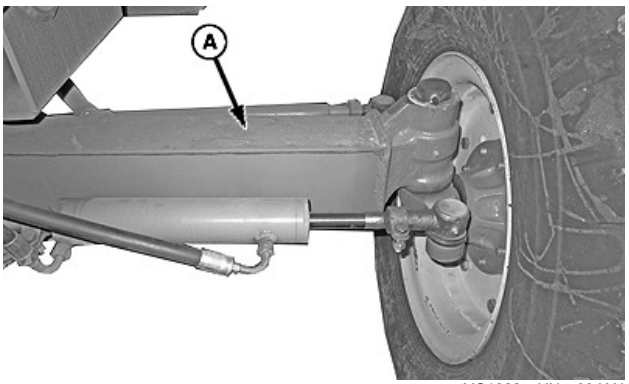
1. Park machine on a flat, level surface. Switch off the engine and remove the key.
2. Place the jack at support points (A) under the front axle.

CAUTION: The machine is heavy. If it falls or rolls over, serious injury and death be caused to you or others. Before jacking up the machine, all bystanders must stay away from the machine.

3. All bystanders stay away from the machine. Lift the machine with the jack (see Use and Precautions of Hydraulic Jack in Electrical, Hydraulic, and Drive Systems section) only to the height which is enough for removing the vehicle or for repairing tires.
4. Tighten the torque tire and the side connecting bolts in accordance with the technical specifications.
5. Lower the machine to the ground.

YC00758,00002B0-19-13NOV18

Support Rear Axle



YC1622—UN—03JAN14

A—Support Points (2 used)

CAUTION: The machine is heavy. If it falls or rolls over, serious injury and death be caused to you or others. In case, there are no grains in the grain tank. The machine must rest on a flat and level surface, gear-shift lever, or hydraulic driven lever set in neutral position. Engage park brake and remove the key. Secure the front wheels.

IMPORTANT: Improper jacking can damage machine. Jack can only be applied at specific location of the machine.

1. Park machine on a flat, level surface. Switch off the engine and remove the key.

2. Place the jack at support points (A) under the rear axle.

CAUTION: The machine is heavy. If it falls or rolls over, serious injury and death be caused to you or others. Before jacking up the machine, all bystanders must stay away from the machine.

3. All bystanders stay away from the machine. Lift the machine with the jack only to the height which is enough for removing the vehicle or for repairing tires.

4. Tighten the torque tire and the wheel connecting bolts in accordance with the technical specifications.

5. Lower the machine to the ground.

YC00758,0000338-19-27NOV18

Safety Signs

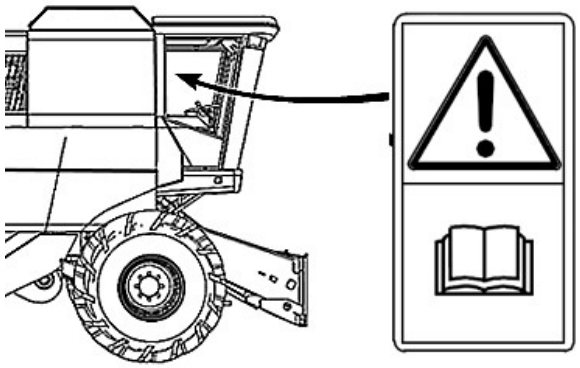
Pictorial Safety Signs

TS231—19—07OCT88

Pictorial Safety Signs

At several important places on these machine safety signs are affixed intended to signify potential hazards. The warning triangle identifies a hazard. 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 following.

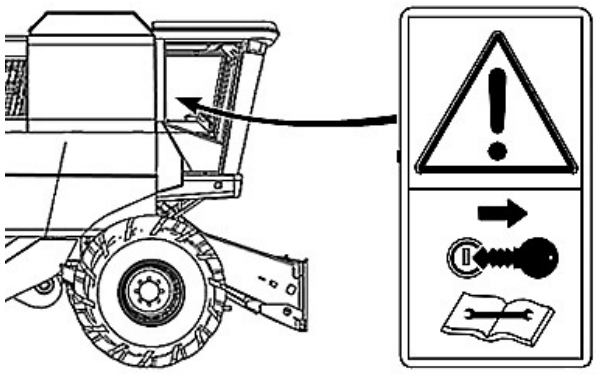
Operator's Manual



YC11193—UN—05JAN17

This operator’s manual contains all important information necessary for safe machine operation. Carefully observe all safety rules. Avoid accidents.

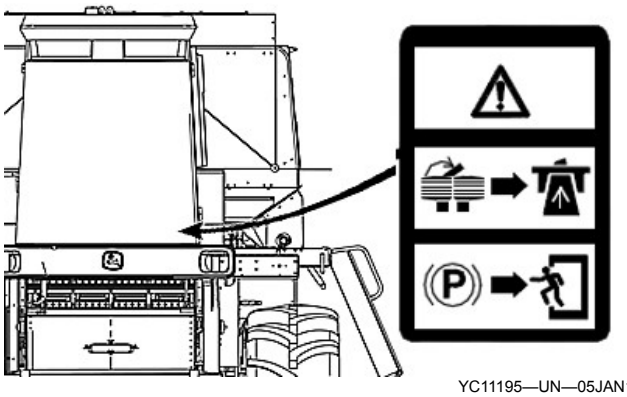
Repair and Maintenance



YC11194—UN—05JAN17

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

Park Brake

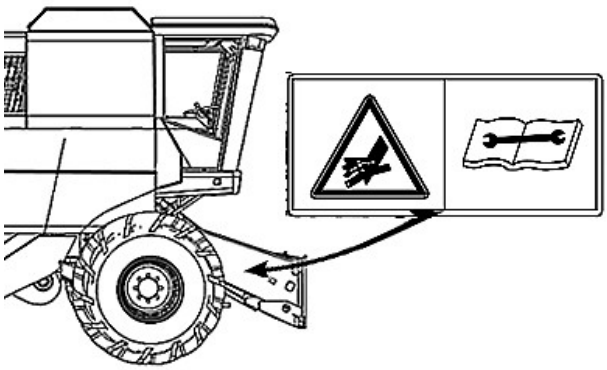


YC11195—UN—05JAN17

Lock service brakes together before driving on roadway. Set park brake before leaving machine.

Hydraulic Oil and Gas Under Pressure

NOTE: Decals are on the feeder house's left-hand and right-hand, four pieces.



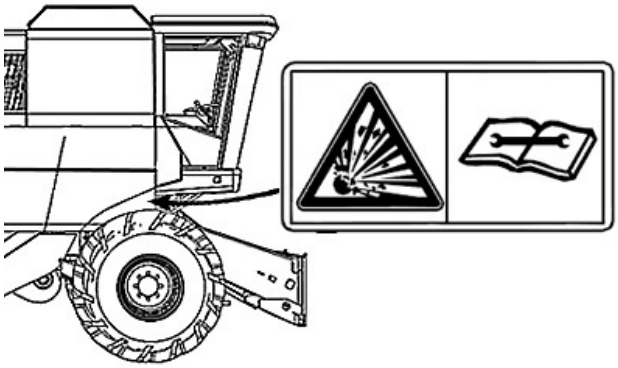
YC11196—UN—05JAN17

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 the operator's manual and repair manual for system information.
2. Stop engine and remove key.

Accumulator

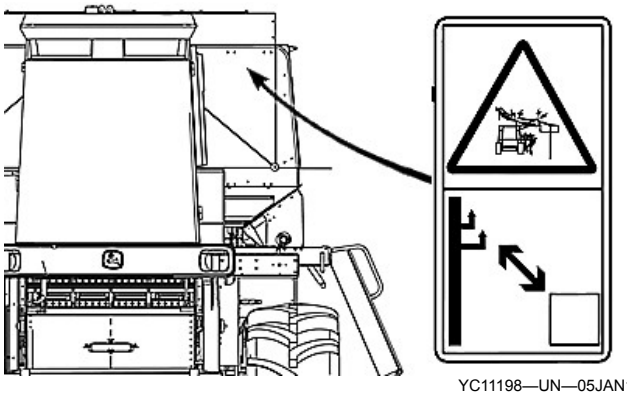


YC11197—UN—05JAN17

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

Refer to Pressure Accumulator in Electrical, Hydraulic, and Drive Systems section.

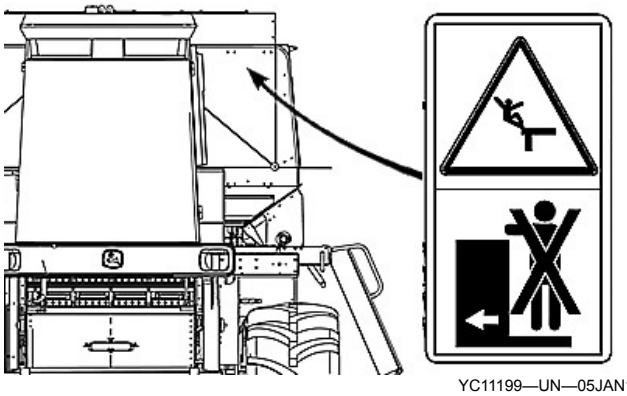
Avoid Low Hanging Power Lines



YC11198—UN—05JAN17

Avoid serious injury or death from electrocution. Do not contact electric lines. Keep the unloading auger in transport position.

Grain Tank

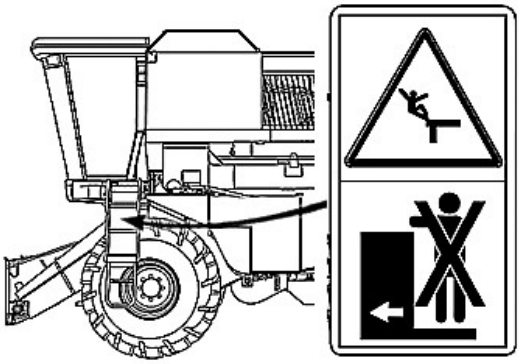


YC11199—UN—05JAN17

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

Do not allow people to stay in the operator's platform and grain tank during operation the machine.

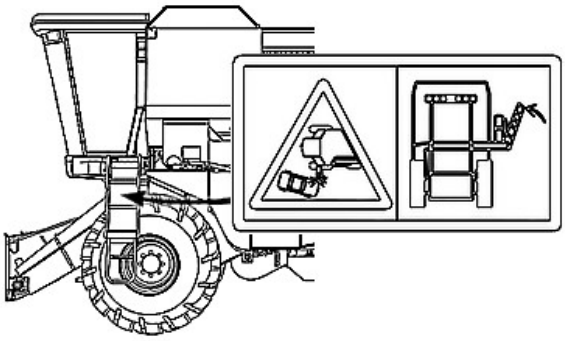
Cab/Platform Access Ladder



YC11200—UN—05JAN17

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

Avoid Motor Vehicle Collisions

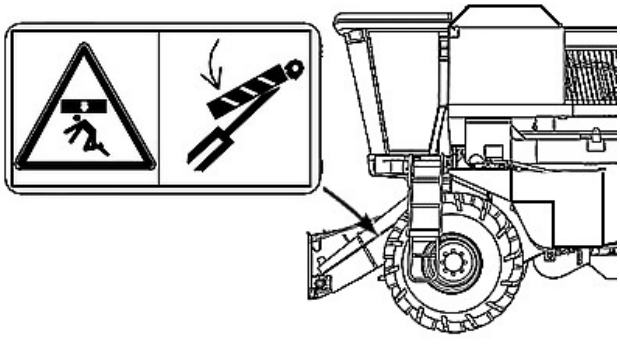


YC11201—UN—05JAN17

Avoid motor vehicle collision and serious injury or death. Always lift and lock ladder before driving machine on roadway.

Feeder House Safety Stop

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

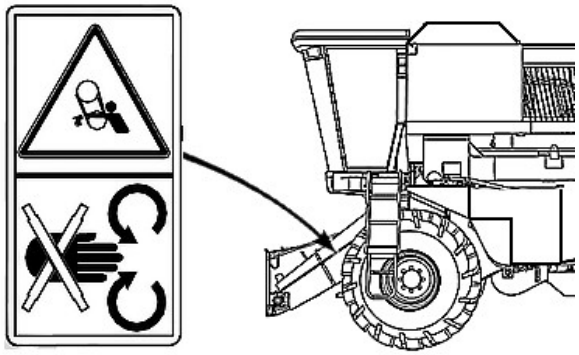


YC11202—UN—05JAN17

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

Feeder House Guard

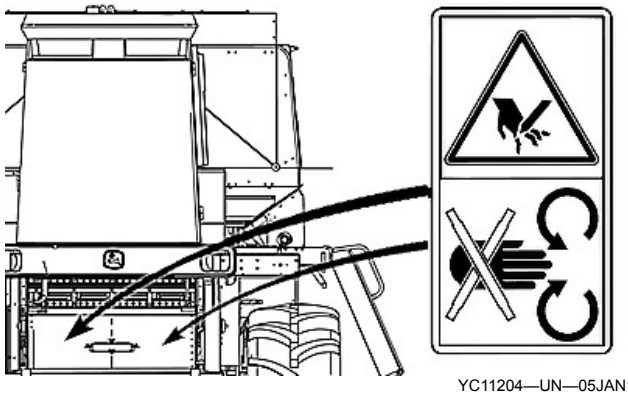
NOTE: This decal is on both sides of the feeder house.



YC11203—UN—05JAN17

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

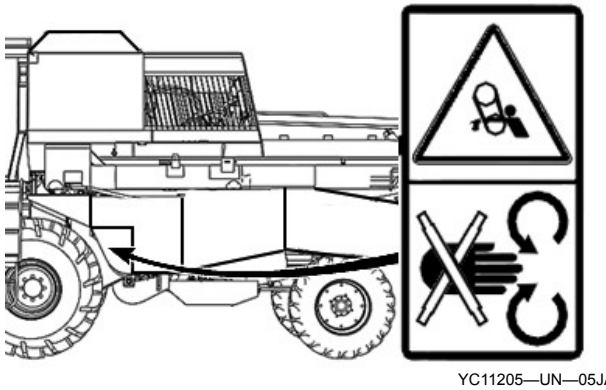
Feeder House Conveyor Chain



YC11204—UN—05JAN17

Potential hazard caused by rotating machine parts.

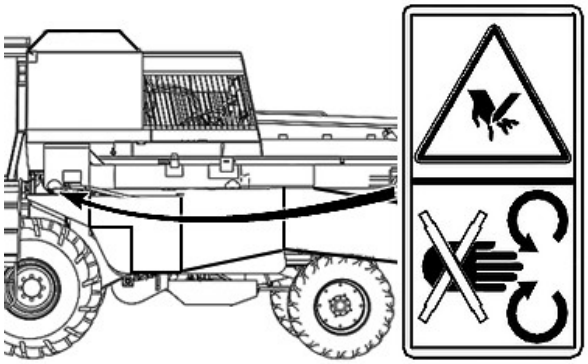
Left-Hand Guard



YC11205—UN—05JAN17

Avoid serious injury or death from entanglement. Never open shield or access the area with engine running. Stop engine and remove key.

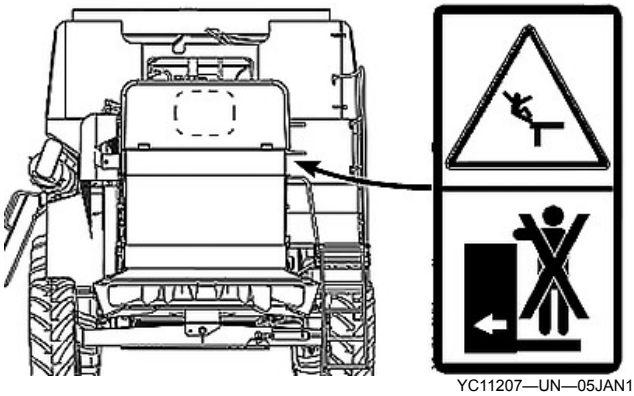
Grain Tank Cleanout Doors



YC11206—UN—05JAN17

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

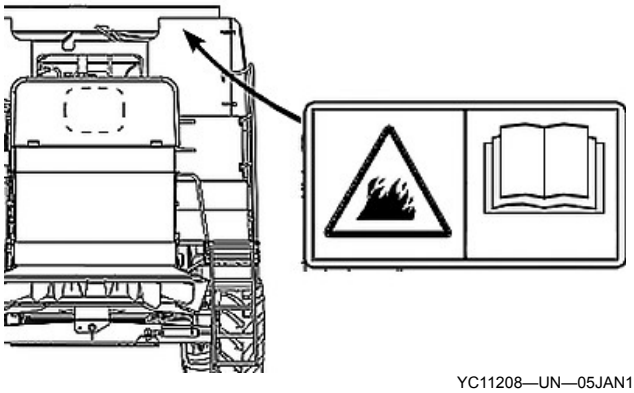
Rear Access Ladder and Service Platform



YC11207—UN—05JAN17

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

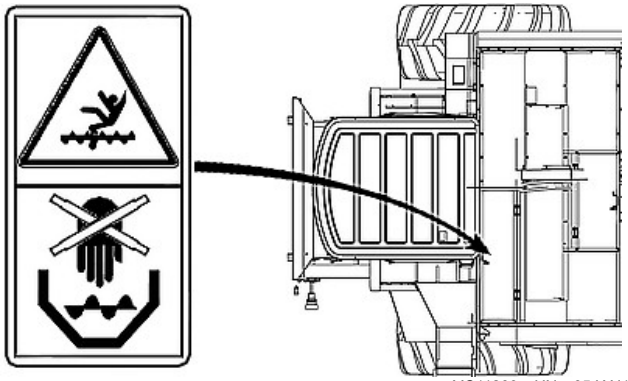
Avoid Fires



YC11208—UN—05JAN17

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.

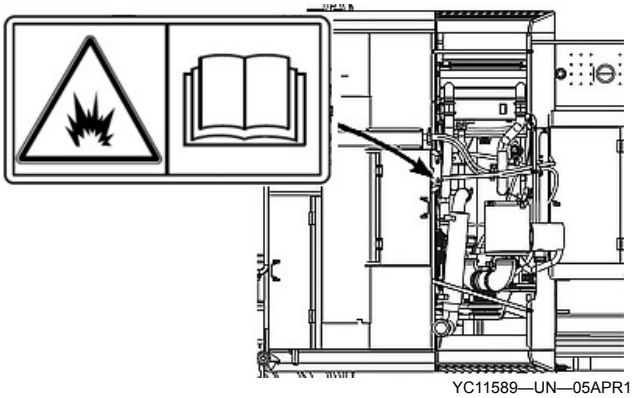
Grain Tank



YC11209—UN—05JAN17

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

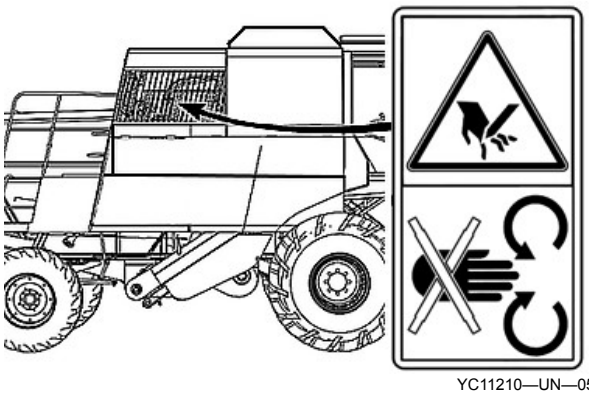
Cooling System



YC11589—UN—05APR17

Cooling system is pressurized. 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.

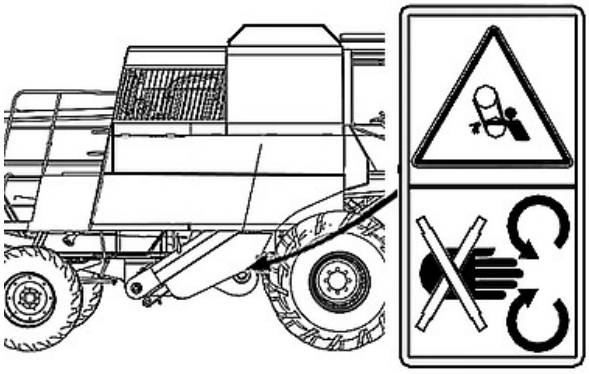
Rotary Screen Door and Radiator Fan



YC11210—UN—05JAN17

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

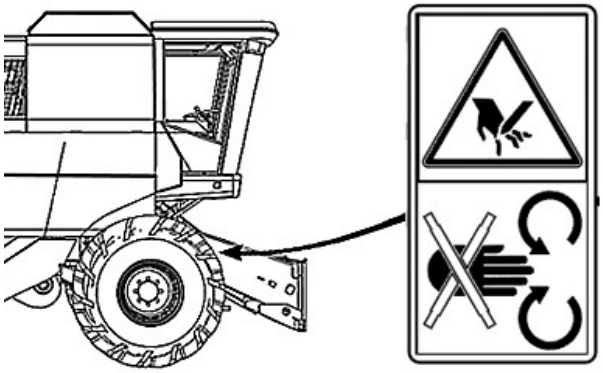
Clan Grain Elevator



YC11211—UN—05JAN17

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

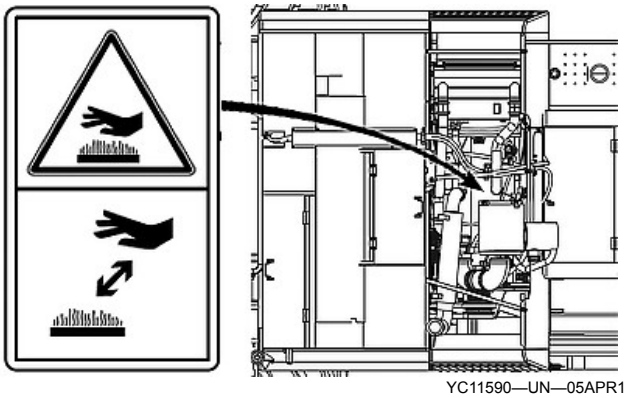
Stone Trap



YC11212—UN—05JAN17

Do not clean out stone trap until all separator and feeder house motion has stopped.

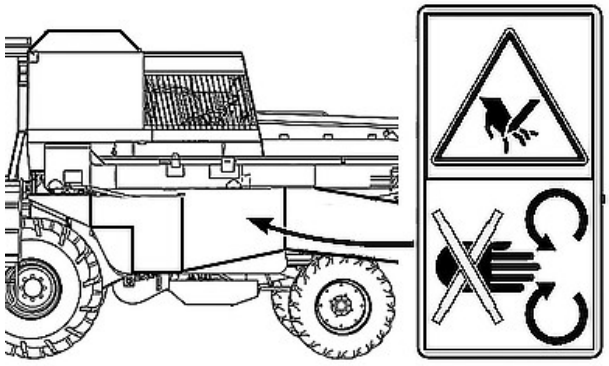
Exhaust Temperature



YC11590—UN—05APR17

Exhaust system components be hot. To avoid severe burns, keep away from the exhaust system components.

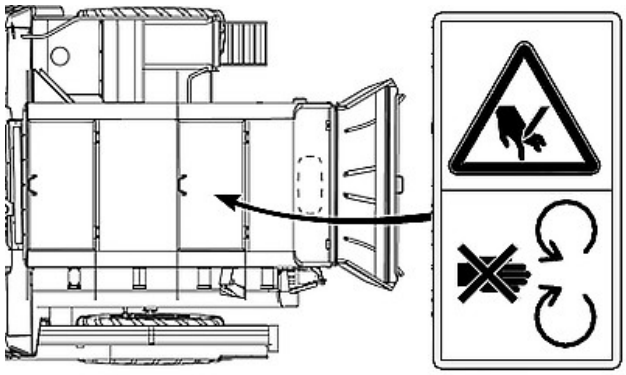
Inspection Door



YC11213—UN—05JAN17

Avoid serious injury from contact with moving components. Do not open inspection door until all motions have stopped.

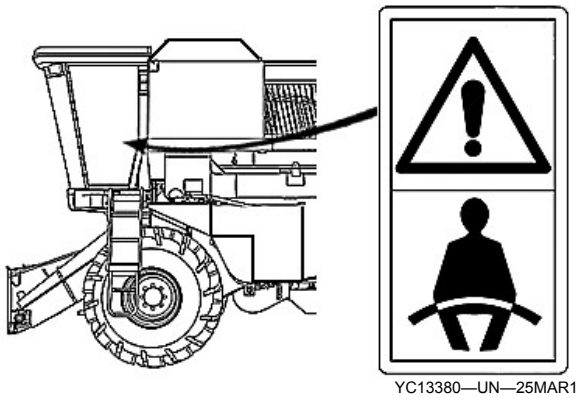
Rear Door



YC11214—UN—05JAN17

Do not open door when the combine is running.

Seat Belt



YC13380—UN—25MAR19

The instructional seat always 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.

CP00606,000178A-19-19MAR19

Controls and Instruments

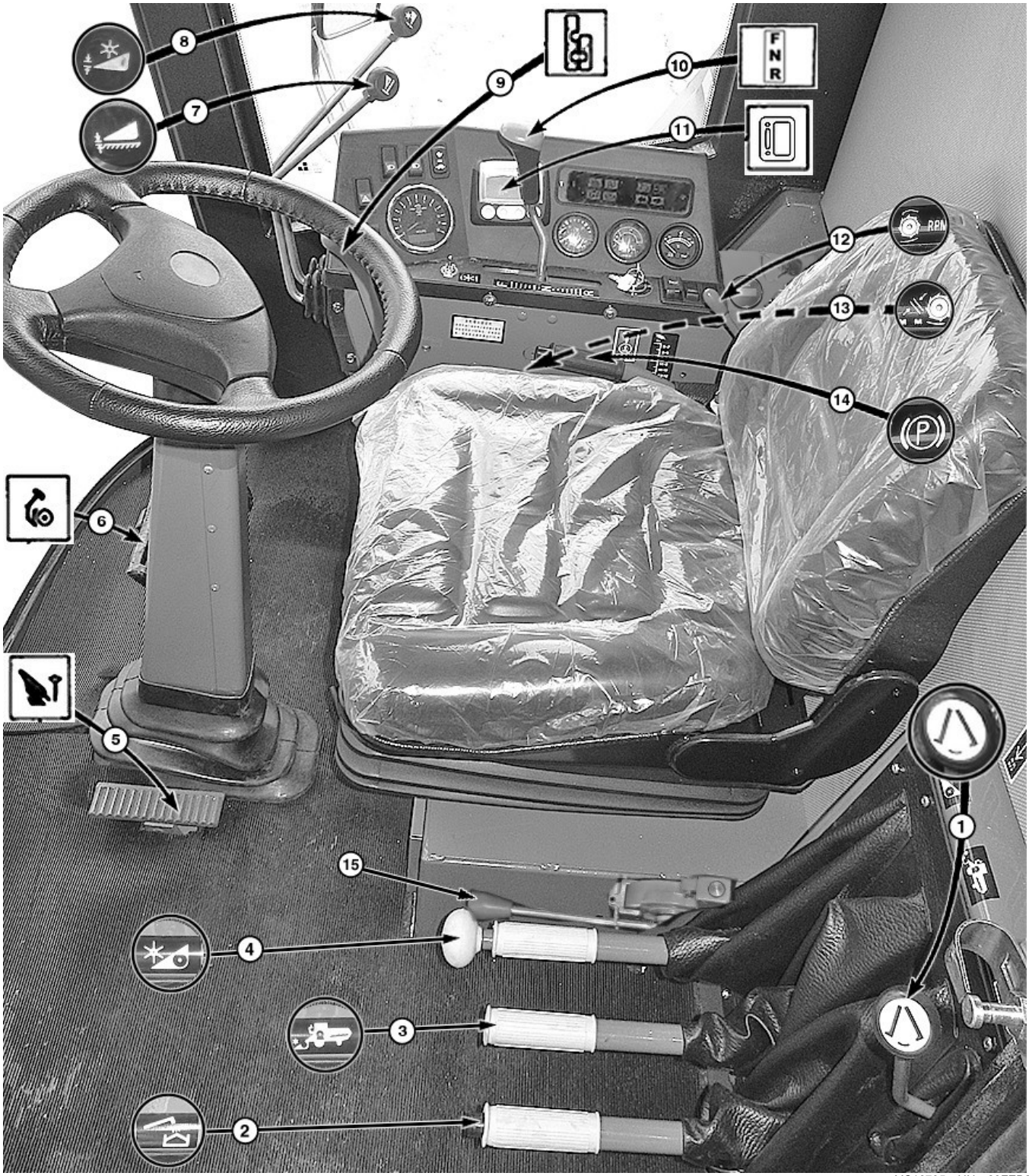
YC1536—UN—25NOV13

Before operating a new combine, make yourself familiar with the position and use of each control and instrument, in order to facilitate proper operation of combine.

CP00718,0003A7F-19-28NOV17

Controls

For the Machine with Murphy Gauge

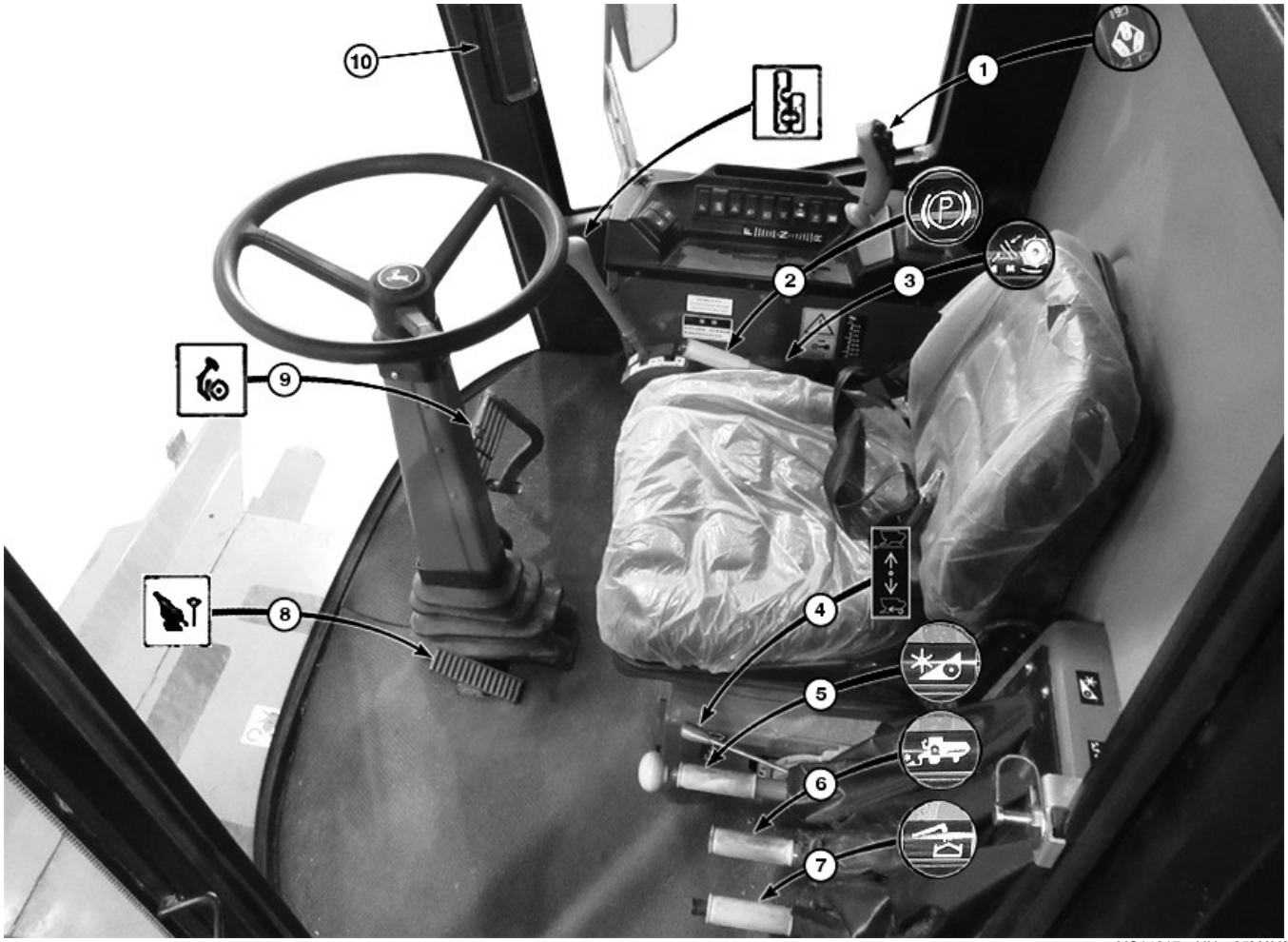


YC16795—UN—28FEB21

1—Unloading Auger Swing Lever
2—Unloading Auger Engage Lever
3—Separator Engage Lever
4—Header Engage Lever
5—Steering Column Lock Pedal
6—Service Brake Pedals
7—Header Raise/Lower Lever
8—Reel Raise/Lower Lever

9—Gear-Shift Lever
10—Hydrostatic Drive Lever
11—Murphy Gauge
12—Threshing Speed Adjustment Lever
13—Threshing Concave Clearance Adjustment Lever
14—Park Brake Lever
15—Rear Wheel Drive Lever (Option)

For the Machine with Corner Post Display

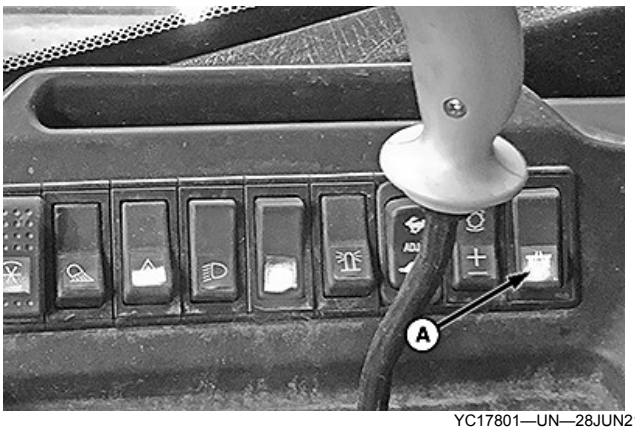


YC14817—UN—25MAY20

1—Hydrostatic Drive Lever
2—Park Brake Lever
3—Threshing Concave Clearance Adjustment Lever
4—Rear Wheel Drive Lever (Option)
5—Reel Raise/Lower Lever
6—Separator Engage Lever
7—Unloading Auger Engage Lever
8—Steering Column Lock Pedal
9—Service Brake Pedals
10—Gear-Shift Lever
11—Corner Post Display

CP00834,0008A0C-19-02MAR21

Road/Field Mode (If Equipped)



YC17801—UN—28JUN21

YC17802—UN—28JUN21

A—Road/Field Switch
B—Indicator Light

The road/field switch (A) is used when transporting the combine on roadways.

Press the lower part of the road/field switch, the indicator light on the switch and the indicator light (B) on the corner post display turn on, the road position is activated.

The road position prevents the following functions:

- Header Raise/Lower
- Reel Raise/Lower
- Unloading Auger Swing

When the field operation is required, press the upper part of the road/field switch and the indicator lights turn off. The functions above can be used.

NOTE: When the indicators turn on, the machine is in the road mode.

When the indicators turn off, the machine is in the field mode.

cp00834,1658970743235-19-27JUL22

Reel Raise/Lower Operation

NOTE: The reel raise/lower control is only applied to the combine with the cutting platform. It doesn't work on the corn combine.

Control by Reel Raise/Lower Lever

YC12199—UN—11DEC17

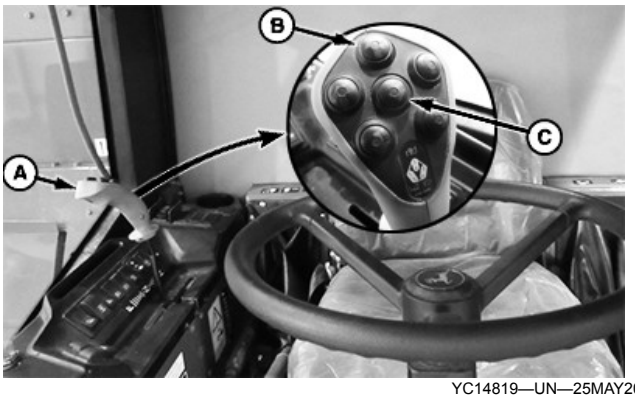
A—Reel Raise/Lower Lever

The reel raise/lower lever (A) is at the right-hand side of the seat.

Move lever backward—Raise the reel.

Move lever forward—Lower the reel.

Control by Reel Raise/Lower Buttons



YC14819—UN—25MAY20

A—Hydrostatic Drive Lever
B—Reel Raise Button
C—Reel Lower Button

The reel raise/lower control is on the hydrostatic drive lever (A).

Raise the reel by pressing the reel raise button (B).

Lower the reel by pressing the reel lower button (C).

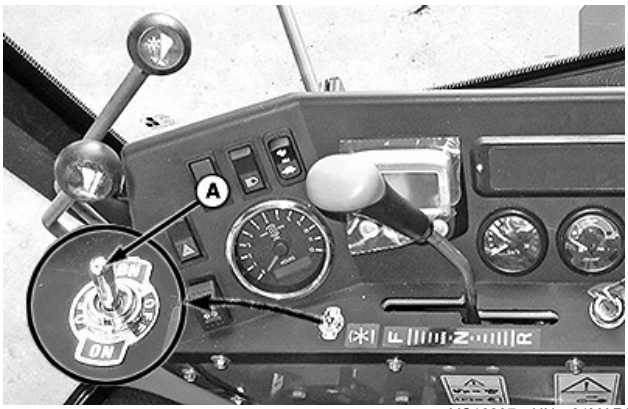
CP00834,0008A0D-19-02MAR21

Adjust Reel Speed

IMPORTANT: Avoid damage to the machine. Adjust reel speed only when reel is rotating.

NOTE: The reel speed control is only applied to the combine with the cutting platform. It doesn't work on the corn combine.

For the Machine with Murphy Gauge



YC16897—UN—01MAR21

A—Reel Speed Control Switch

The reel speed control switch (A) is at the instrument panel.

Increase speed—Toggle the switch away from the driver.

Decrease speed—Toggle the switch toward the driver.

After the adjustment, release the switch. The switch returns automatically to the neutral position.

For the Machine with Corner Post Display

YC16898—UN—02MAR21

A—Reel Speed Control Switch

The Reel speed control switch (A) is at the instrument panel.

Increase speed—Press the upper part of the switch.

Decrease speed—Press the lower part of the switch.

After the adjustment, release the switch. The switch returns automatically to the neutral position.

CP00834,0008A0E-19-02MAR21

Separator Engage Lever Operation

IMPORTANT: Engage or disengage separator only when engine is running at the low idle.

YC8773—UN—10JUN15

A—Separator Engage Lever

The separator engage lever (A) is at the left-hand side of the seat.

Move lever upward—Engage the threshing unit.

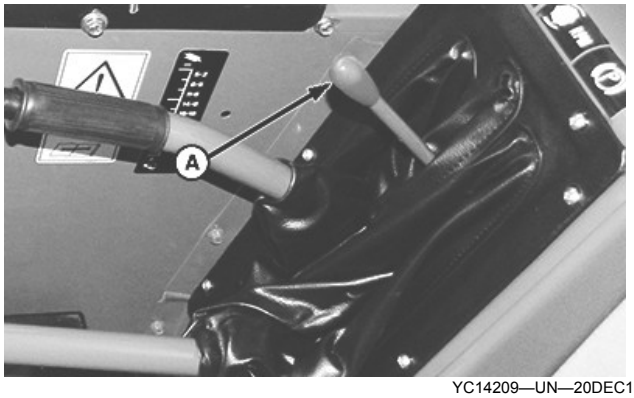
Move lever downward—Disengage the threshing unit.

CP00834,0008A0F-19-02MAR21

Adjust Threshing Speed

IMPORTANT: Avoid damage to the machine. Adjust the threshing speed only when the threshing cylinder is rotating.

Control by Threshing Speed Adjustment Lever



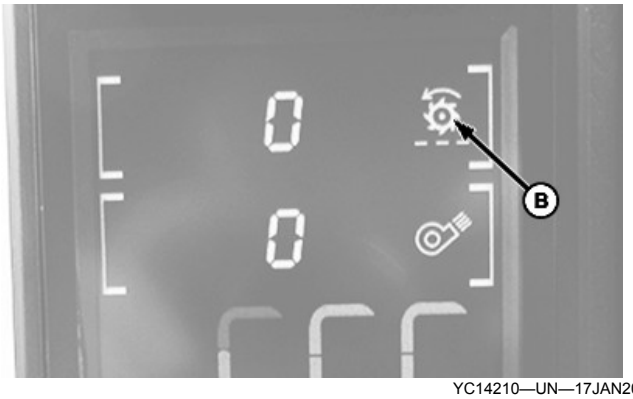
YC14209—UN—20DEC19

A—Threshing Speed Adjustment Lever

The threshing speed adjustment lever (A) is at the right-hand side of the seat.

Move lever upward—Increase the threshing speed.

Move lever downward—Decrease the threshing speed.



YC14210—UN—17JAN20

Corner Post Display

B—Corner Post Display

- For the machine with the corner post display, the threshing speed displays on the corner post display (B).

YC16796—UN—28FEB21

Threshing Speed Meter

C—Threshing Speed Meter

- For the machine with the Murphy gauge, the threshing speed displays on the threshing speed meter (C).

Control by Threshing Speed Adjustment Switch

YC14821—UN—13MAY20

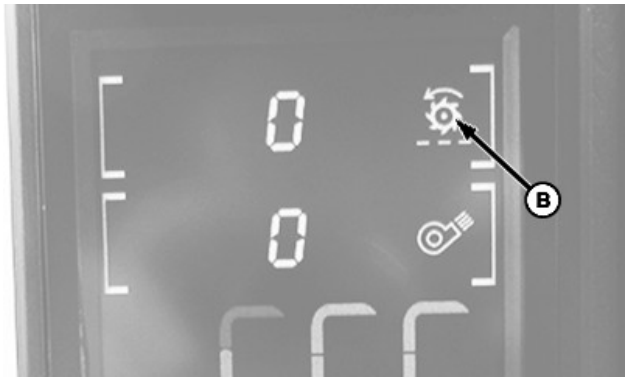
A—Threshing Speed Adjustment Switch

The threshing speed adjustment switch (A) is at the instrument panel.

Increase the threshing speed by pressing the upper part of the threshing speed adjust switch.

Decrease the threshing speed by pressing the lower part of the threshing speed adjust switch.

After the adjustment, release the threshing speed adjust switch. Then, it returns to the neutral position automatically.



YC14210—UN—17JAN20

B—Corner Post Display

The threshing speed displays on the corner post display (B).

CP00834,0008A10-19-02MAR21

Adjust Threshing Concave Clearance

YC16797—UN—28FEB21

A—Threshing Concave Clearance Adjustment Lever
B—Button

The threshing concave clearance adjustment lever (A) is at the right-hand side of the seat.

- Press button (B), push the threshing concave clearance adjustment lever downward to increase clearance.
- Press button (B), pull the threshing concave clearance adjustment lever upward to decrease clearance.
- For wheat harvesting, the inlet clearance can be adjusted to 7—29 mm, the outlet clearance to 4—19 mm.

- For rice harvesting, the inlet clearance can be adjusted to 17—39 mm, the outlet clearance to 14—29 mm.
- For corn harvesting, the inlet clearance can be adjusted to 22—44 mm, the outlet clearance to 19—34 mm.

NOTE: The clearance changes 2—3 mm with one tooth.

CP00834,0008A11-19-02MAR21

Park Brake Lever Operation

IMPORTANT: To avoid damage to the machine. Do NOT engage the park brake when the combine is moving.

YC16798—UN—01MAR21

A—Park Brake Lever
B—Button

The park brake lever (A) is located at the right-hand side of the seat.

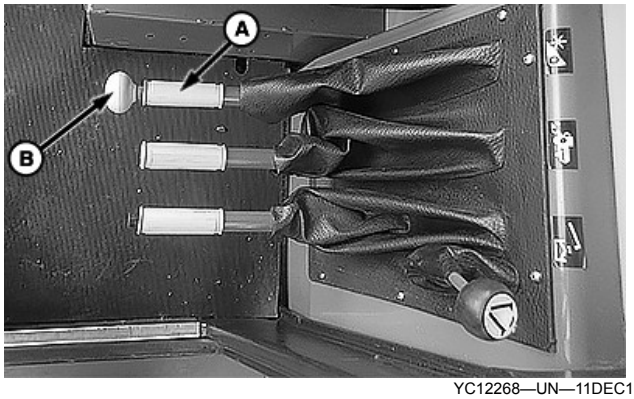
To engage the park brake, pull the park brake lever until effective braking is achieved.

To disengage the park brake, press button (B) and push the park brake lever fully downward.

CP00834,0008A12-19-02MAR21

Header Engage Lever Operation

IMPORTANT: Avoid damage to the machine. Before engage the header, engage threshing unit first.



YC12268—UN—11DEC17

A—Header Engage Lever
B—Button

The header engage lever (A) is at the left-hand side of the seat.

Press button (B), disengage header quickly.

Move lever upward—Engage the header drive.

Move lever downward—Disengage the header drive.

CP00834,0008A13-19-02MAR21

Header Raise/Lower Operation

Control by Header Raise/Lower Lever

YC12226—UN—21NOV17

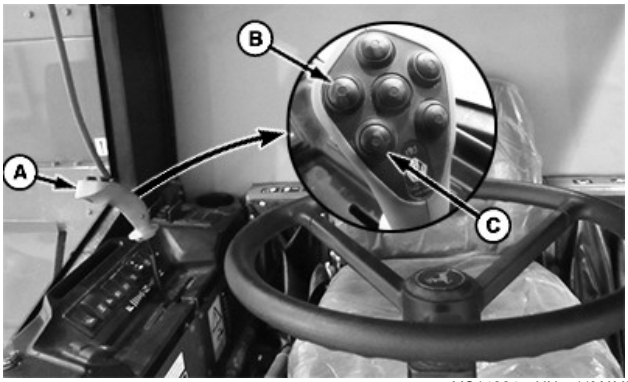
A—Header Raise/Lower Lever

The header raise/lower Lever (A) is at the right-hand side of the seat.

Move lever backward—Raise the header.

Move lever forward—Lower the header.

Control by Header Raise/Lower Buttons



YC14824—UN—11MAY20

A—Hydrostatic Drive Lever
B—Header Raise Button
C—Header Lower Button

The reel raise/lower switch is on the hydrostatic drive lever (A).

Raise the header by pressing the header raise button (B).

Lower the header by pressing the header lower button (C).

CP00834,0008A14-19-02MAR21

Unloading Auger Swing Operation

CAUTION: Unloading auger MUST be swung back to transportation position when driving combine on the road.

NOTE: The combine can be unloaded while it is moving. The grain can be unloaded during the harvesting process.

Control by Unloading Auger Swing Lever

YC1410—UN—06MAR14

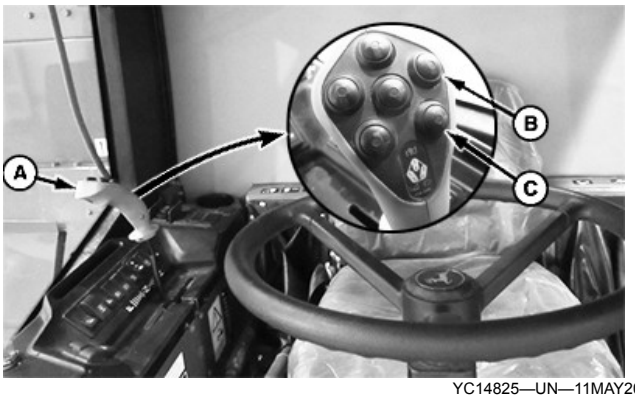
A—Unloading Auger Swing Lever

The unloading auger swing lever (A) is at the left-hand side of the seat, near the door.

Move lever upward—Turn the unloading auger to the operation position.

Move lever downward—Turn the unloading auger to the transportation position.

Control by Unloading Auger Swing In/Out Buttons



YC14825—UN—11MAY20

A—Hydrostatic Drive Lever
B—Unloading Auger Swing Out Button
C—Unloading Auger Swing In Button

The unloading auger swing control is on the hydrostatic drive lever (A).

Turn the unloading auger to the operation position by pressing the unloading auger swing out button (B).

Turn the unloading auger to the transportation position by pressing the unloading auger swing in button (C).

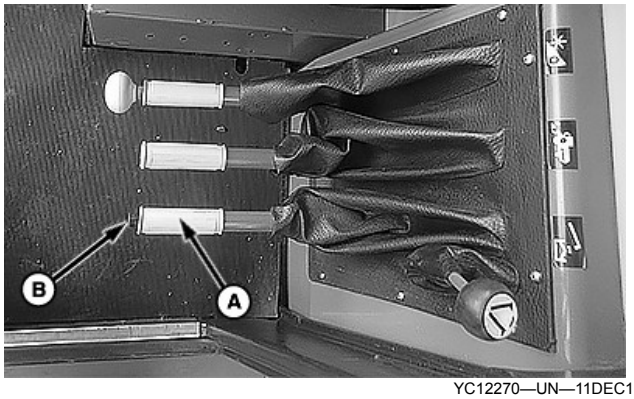
CP00834,0008A15-19-02MAR21

Unloading Auger Engage Lever Operation

IMPORTANT: Avoid damage to the machine. Before engage the unloading auger, ensure that unloading auger is at the operation position.

IMPORTANT: Avoid damage to the machine. Disengage the unloading auger only when grain is unloaded completely. Complete unloading process at one time.

NOTE: The combine can be unloaded while it is moving. The grain can be unloaded during the harvesting process.



YC12270—UN—11DEC17

A—Unloading Auger Engage Lever
B—Button

The unloading auger engage lever (A) is at the left-hand side of the seat.

Press button (B), move lever upward—Engage the unloading auger.

Press button (B), move lever downward—Disengage the unloading auger.

To engage the unloading auger, pull the unloading auger engage lever (A) slowly. Pull the unloading auger engage lever (A) quickly, when the unloading auger is rotating.

CP00834,0008A16-19-02MAR21

Rear Wheel Drive Lever Operation (Option)

IMPORTANT: When driving on roads, do not engage the rear drive. Otherwise, tires wear quickly.

YC8166—UN—16MAR15

A—Rear Wheel Drive Lever

The rear wheel drive lever (A) is on the left-hand side of the seat.

Pull the lever upward—Engage the rear wheel drive.

Push the lever downward—Disengage the rear wheel drive.

CP00834,0008A17-19-02MAR21

Throttle Switch Operation

YC12228—UN—21NOV17

Machine with Murphy Gauge

YC14826—UN—11MAY20

Machine with Corner Post Display

A—Throttle Switch

The throttle switch (A) is used to increase or decrease the engine speed.

To increase speed—Set the switch position at rabbit.

To decrease speed—Set the switch position at turtle.

CP00834,0008A18-19-02MAR21

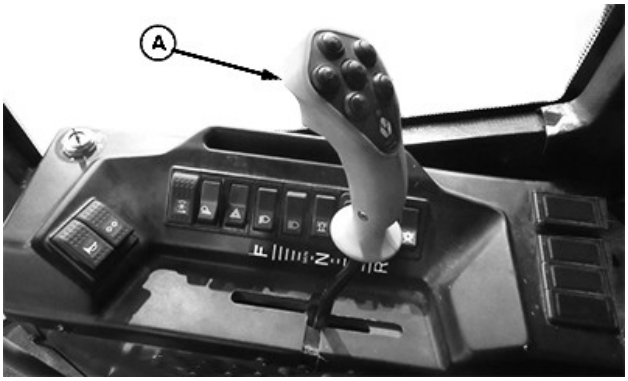
Ground Speed Control

IMPORTANT: Set the hydrostatic drive lever at neutral position when the combine is braked.

IMPORTANT: Stop the machine and move the hydrostatic drive lever to the neutral position before shifting gears.

YC11146—UN—17DEC17

Machine with Murphy Gauge



YC14827—UN—13MAY20

Machine with Corner Post Display

A—Hydrostatic Drive Lever

The hydrostatic drive lever (A) is at the right-hand side of the seat, on the instrument panel.

Drive the machine forward by pushing the hydrostatic drive lever forward. Increase the forward speed by pushing the hydrostatic drive lever further forward.

Drive the machine rearward by pulling the hydrostatic drive lever rearward. Increase the rearward speed by pulling the hydrostatic drive lever further rearward.

Put the lever in the neutral position to stop the combine.

CP00834,0008A19-19-02MAR21

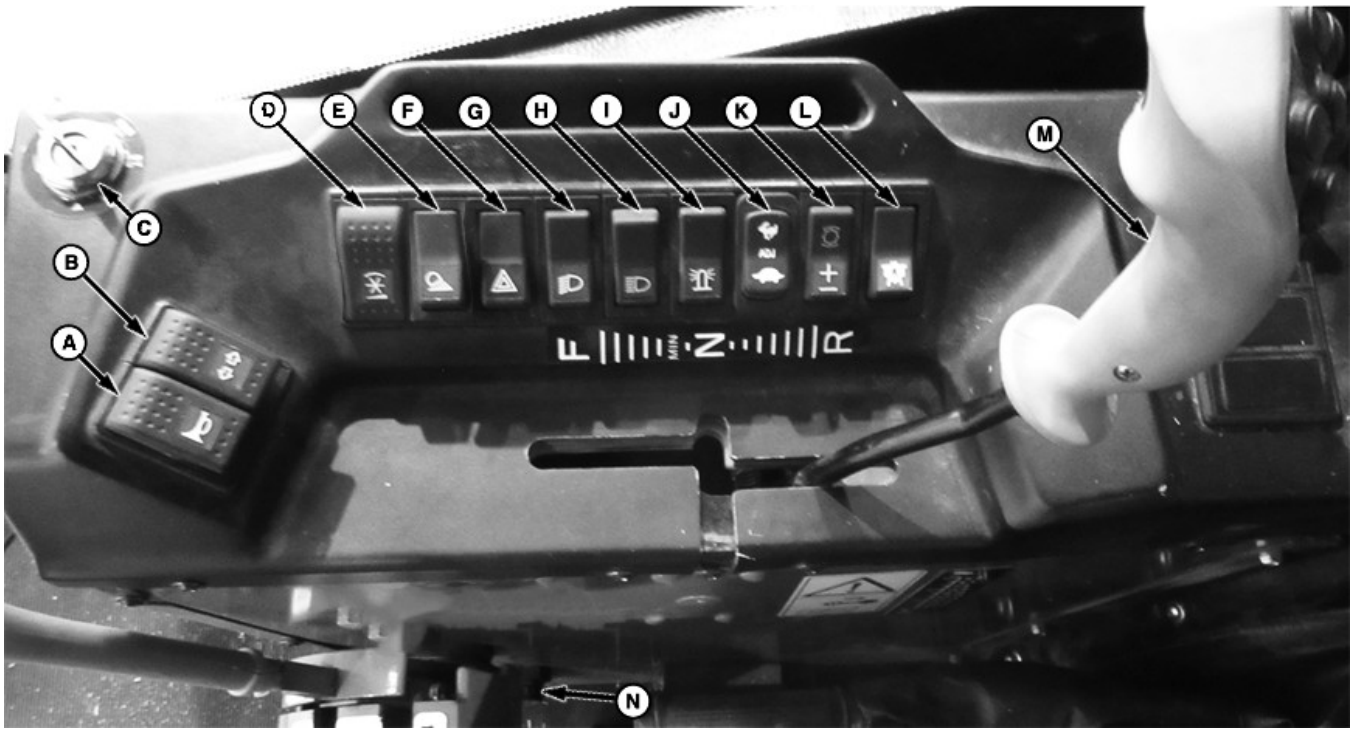
Instrument Panel

Hydrostatic Drive with Murphy Gauge

YC11136—UN—17DEC17

A—Turn-Signal Light Switch
B—Hazard Warning Light Switch
C—Light Switch
D—High/Low Beam Switch
E—Throttle Switch
F—Threshing Speed Meter
G—Murphy Gauge
H—Reel Speed Switch
I—Cleaning Fan Speed Meter
J—Ground Speed Meter
K—Fuel Gauge
L—Key Switch
M—Horn Switch
N—Worklight Switch
O—Beacon Light and Unloading Light Switch
P—Indicator Module
Q—Hydrostatic Oil Temperature Gauge
R—Diagnostic Connector

Hydrostatic Drive with Corner Post Display

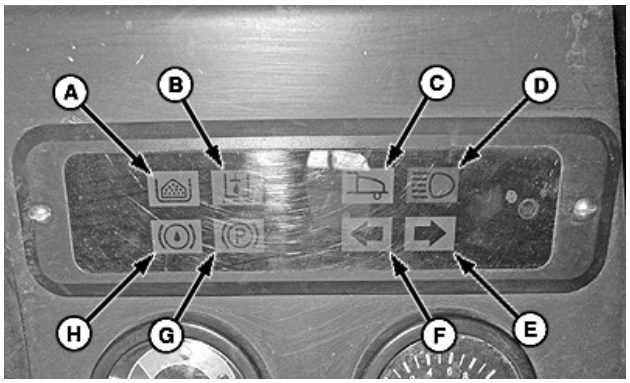


YC14828—UN—13MAY20

A—Horn Switch
B—Turn-Signal Light Switch
C—Key Switch
D—Reel Speed Switch
E—Worklight Switch
F—Hazard Warning Light Switch
G—Light Switch
H—High/Low Beam Switch
I—Beacon Light and Unloading Light Switch
J—Throttle Switch
K—Threshing Speed Switch
L—Road/Field Switch
M—Hydrostatic Drive Lever
N—Diagnostic Connector

CP00834,0008B06-19-09MAR21

Indicator Module



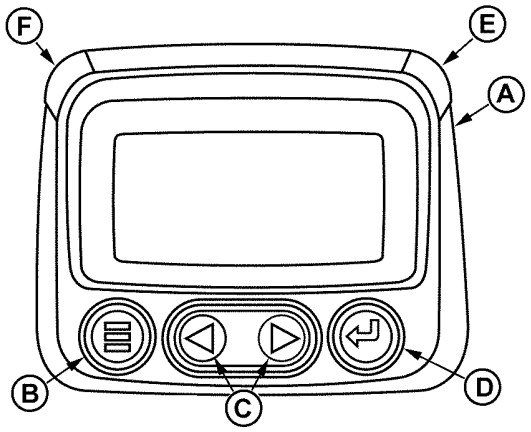
YC8388—UN—20MAY15

A—Full Grain Tank Indicator
B—Hydraulic Oil Filter Pressure Indicator
C—Rear Cover Plugged Indicator
D—High-Beam Headlight Indicator
E—Right Turn-Signal Indicator
F—Left Turn-Signal Indicator
G—Park Brake Indicator
H—Brake Fluid Level Indicator

The machine with the Murphy gauge is equipped with the indicator module.

CP00834,0008A1B-19-02MAR21

Murphy Gauge



RG13132—UN—09SEP03

A—Murphy Gauge
B—Menu Button
C—Arrow Buttons(2 used)
D—Enter Button
E—Red Indicator
F—Orange Indicator

Through Murphy Gauge (A), operator can check the engine functional data and diagnostic trouble codes (DTCs). Murphy Gauge is connected with the electronic control system and the sensors. Operator can monitor engine operation and carry out checks and troubleshooting when needed.

Press menu button (B) and various engine functions are shown in order. Imperial or metric units can be chosen. Following engine parameter menus are displayed in the Murphy Gauge diagnosis window:

- Throttle Switch Position
- Current Speed Load Percentage
- Engine Actual Torque
- Engine Speed
- Total Engine Hours
- Total Fuel Consumption
- Coolant Temperature
- Fuel Temperature
- Fuel Pressure
- Engine Oil Pressure
- Fuel Consumption Rate
- Intake Manifold Temperature
- Battery Voltage
- Engine Rated Speed
- Machine Operating Hours
- Engine Configuration Parameters
- Current Diagnostic Trouble Codes
- Saved Engine Diagnostic Trouble Codes

NOTE: Engine parameters that can be accessed relate to engine applications. Chinese and English languages can be chosen when configuring the gauge.

Diagnostic instrument includes a back-lit liquid crystal display (LCD). It can display a single parameter or up to four at the same time. Press two arrow buttons (C) on diagnostic instrument, scroll the engine parameter list to view the menu. Press the enter button (D) and select required items. Red (E) and orange (F) indicators display the valid trouble codes received at Murphy Gauge. When orange indicator is lit, a fault has occurred. It is recommended to check the machine while it can continue to run. When red indicator is lit, stop the machine at once and carry out checks.

JL31334,000178E-19-07MAY18

Main Menu Navigation

NOTE: Engine does not need to run when using the diagnosis gauge screen. To start the engine, refer to Start the Engine in Control of Combine section. All engine parameters displayed in the Murphy Gauge show that the engine is running.

YC16370—19—14OCT20

Menu Button

1. Turn key switch to the D position. A single engine parameter or four engine parameters are displayed first. Then press the Menu button.

YC16362—19—14OCT20

Menu Display

2. First, various options of Main Menu are displayed.

YC16363—19—14OCT20

Arrow Buttons

3. Press Arrow buttons, scroll, and view menu options.

YC16364—19—14OCT20

Right Arrow Button

4. Press the right arrow button to scroll down to the last option of Main Menu. Select the desired menu option.

YC16371—19—14OCT20

Use Arrow Buttons to Scroll/Display Quadrant Mode

5. Use arrow buttons to select the desired menu option. Or, press the Menu button to leave the main menu and return to the engine parameter display.

CP00834,0008303-19-14OCT20

Engine Configuration Data

NOTE: Engine configuration data is for read only.

YC16370—19—14OCT20

Menu Button

1. Turn key switch to the D position. A single engine parameter or four engine parameters are displayed first. Then press the Menu button.

YC16361—19—14OCT20

Select Engine Configuration

2. Main menu appears. Use Arrow buttons to scroll to Engine Configuration.

YC16365—19—14OCT20

Enter Button

3. When Engine Configuration is selected, press Enter button to view engine configuration data.

YC16370—19—14OCT20

Menu Button

4. Press Menu button, exit the main menu and return to the engine parameter interface.

CP00834,0008304-19-14OCT20

View Stored Codes

YC16372—19—14OCT20

Normal Operation

1. In normal operation, a single-parameter or a four-parameter interface is displayed

YC16366—19—14OCT20

Stored Codes

2. Use Arrow buttons to scroll to Stored codes.

YC16367—19—14OCT20

Enter Button

3. When Stored codes are selected, press Enter button to view stored code information.

YC16368—19—14OCT20

Arrow Buttons

4. If Next appears above the Arrow buttons, there are more fault codes. Use Arrow buttons to scroll to the next fault code and continue viewing.

YC16369—19—14OCT20

Menu Button

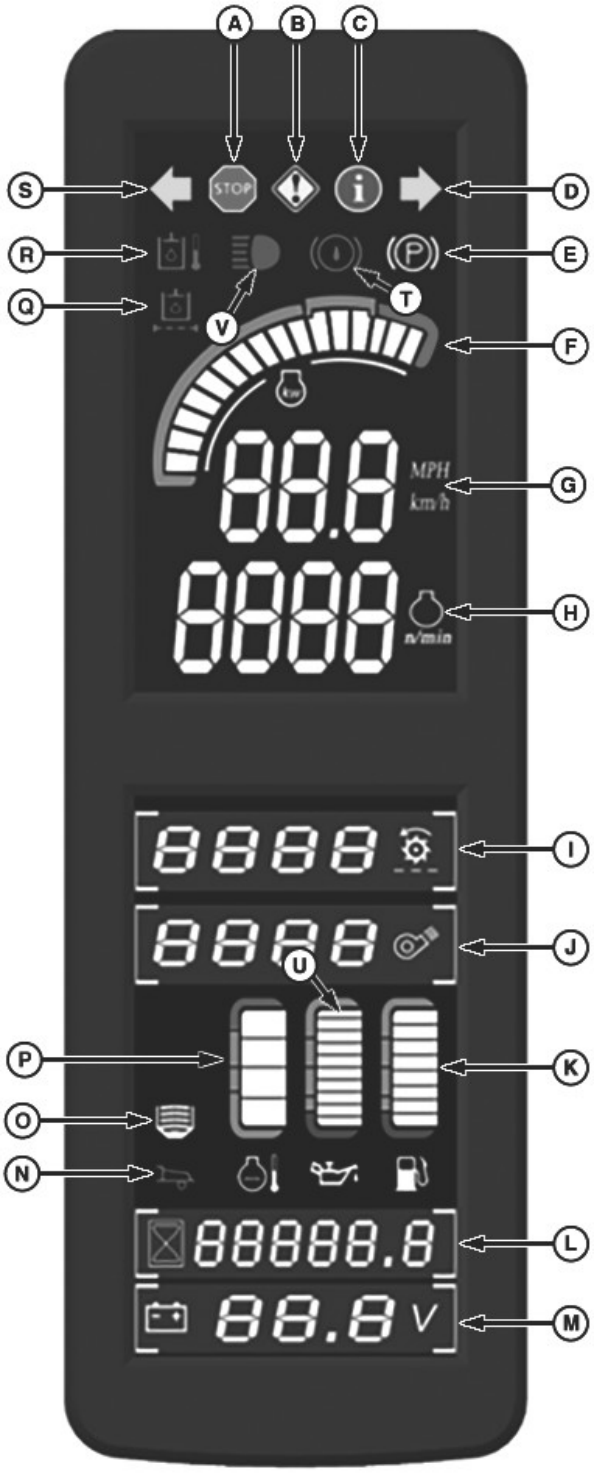
5. To view corrective actions, press Menu button and return to the engine parameter interface.

CP00834,0008305-19-14OCT20

Corner Post Display

Through the corner post display, operator can check the machine and engine functional data and diagnostic trouble codes (DTCs). Corner post display is connected with the electronic control system and the sensors. Operator can monitor engine operation and carry out checks and troubleshooting when needed.

Corner Post Display on Inspection Interface



YC14238—UN—24DEC19

After starting up, the display will light up all parameters and indicator lights to check that all display functions are normal.

STOP Indicator (red) (A): Flashes when the machine needs to be stopped at once due to a serious problem. A related diagnostic trouble code is shown until the problem is solved.

Service Alert Indicator (yellow) (B): Flashes when a problem exists with machine. Requires machine be stopped at the earliest convenience. A related diagnostic trouble code is shown.

Information Indicator (blue) (C): Flashes to alert the operator to be aware of a condition. A related diagnostic trouble code is shown. When the warning is acknowledged, the screen message disappears and the indicator turns off.

Right Turn-Signal Indicator Light (D): Flashes when a right turn is planned. Activated by the turn-signal light switch.

Park Brake Light Indicator (E): Turns on when park brake is engaged.

Engine Power Meter (F): Shows the percentage of power that the engine is using at any given time.

- Green Region: 35—100%
- Yellow Region: 101—107%
- Red Region: 108—114%

IMPORTANT: If the power meter indicator moves into the red region, engine power is maximized and machine could potentially stall. Reduce the load on the machine until the indicator moves back into green or yellow regions.

Ground Speed Indicator (G): Shows the current machine ground speed.

Tachometer (H): Shows the current engine speed.

Threshing Speed Indicator (I): Shows the current threshing speed.

Cleaning Fan Speed Indicator (J): Shows the current cleaning fan speed.

Fuel Level Indicator (K): Shows how much fuel is left in the tank. When level reaches 10% of remaining fuel, the fuel indicator flashes, an alarm sounds, and a message appears.

Working Hours (L): Shows the vehicle working hours.

Battery Voltage (M): Shows the voltage of the vehicle.

Rear Shield Blockage Indicator (N): Flashes to alert the operator that the rear shield is blocked.

Grain Tank Full Indicator (O): Flashes when grain tank is full.

Coolant Temperature Indicator (P): Shows the current coolant temperature. Green region is displayed for normal operating temperature.

Hydraulic Oil Filter Pressure Indicator (Q): Flashes to alert the operator the hydraulic oil filter pressure is high.

Hydrostatic Oil Temperature Indicator (R): Flashes to alert the operator the hydrostatic oil temperature is high.

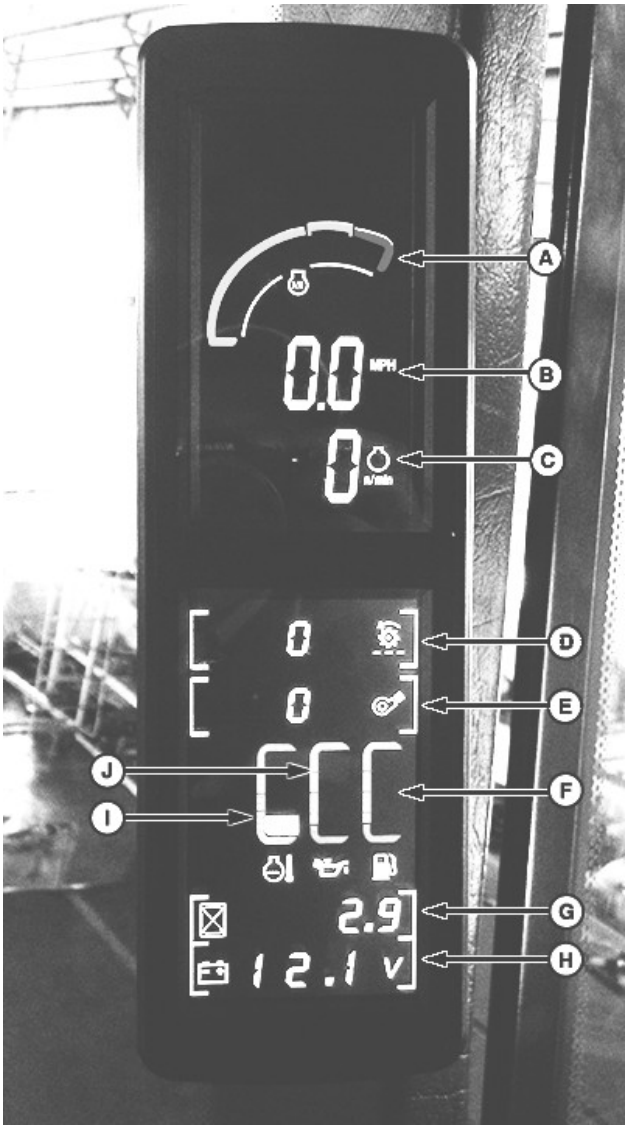
Left Turn-Signal Indicator (S): Flashes when a left turn is planned. Activated by the turn-signal light switch.

Brake Fluid Level Indicator (T): Flashes to alert the operator the brake fluid level is low.

Engine Oil Pressure Indicator (U): Shows the current engine oil pressure. Green region is displayed for normal operating pressure..

High-Beam Indicator (V): Turns on when the high-beam lights are on.

Home Page After Startup



YC14240—UN—20DEC19

A—Engine Power Meter
B—Ground Speed Indicator
C—Tachometer
D—Threshing Speed Indicator
E—Cleaning Fan Speed Indicator
F—Fuel Level Indicator
G—Working Hours
H—Battery Voltage
I—Coolant Temperature Indicator
J—Engine Oil Pressure Indicator

Information Indicators

RXA0109847—UN—20AUG10

A—STOP Indicator
B—Service Alert Indicator
C—Information Indicator

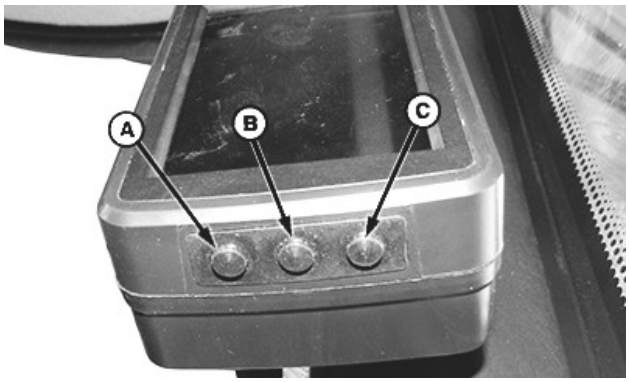
STOP, Service Alert, and Information Indicators are accompanied by an informative message, diagnostic trouble code, or fault description.

STOP Indicator (A): Light flashes continuously when machine needs to be stopped immediately.

Service Alert Indicator (B): Light flashes indicating performance or operational problem is detected that needs to be resolved as soon as possible.

Information Indicator (C): Light illuminates continuously indicating possible fault condition.

Buttons



YC14241—UN—20DEC19

A—Button
B—Button
C—Button

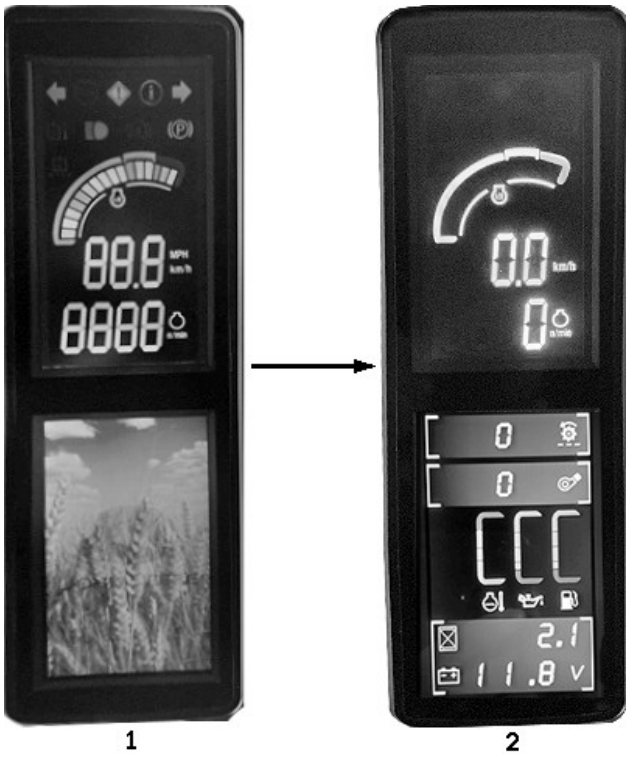
There are three buttons (A, B, and C) at the bottom of the corner post display.

Press the buttons to activate the corresponding function.

cp00834,1658972257550-19-28JUL22

Corner Post Display Menu Navigation

Main Menu Navigation



YC17401—UN—27APR21

Corner Post Display Main Page

1. Turn the key switch to the RUN position. All parameters and indicator lights are on.

   The corner post display main page switches to page 2 from page 1.

NOTE: The three buttons (A, B, and C) shown in the artwork are the three buttons at the bottom of the corner post display actually.

YC20405—UN—01AUG22

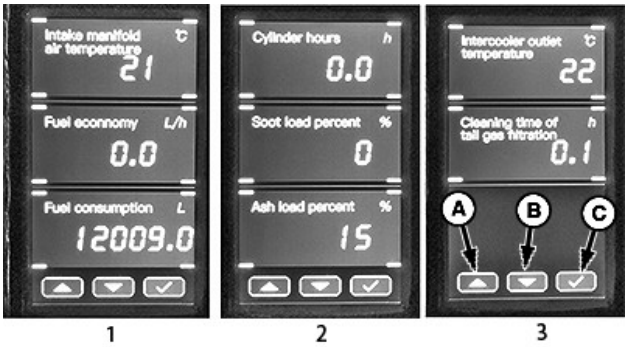
Working Data and Setting Display Area

A—Scroll Button
B—Back Button
C—Enter Button

2. Press the right-side button at the bottom of the corner post display to go to page 2 from page 1.
3. Press the scroll button (A) to select the desired submenu.
4. Press the enter button (C) to go to the submenu. Press the back button (B) to return to the main menu.

Working Data Submenu Navigation

NOTE: The three buttons (A, B, and C) shown in the artwork are the three buttons at the bottom of the corner post display actually.



YC20404—UN—01AUG22

Working Data Submenu page 1, 2, 3

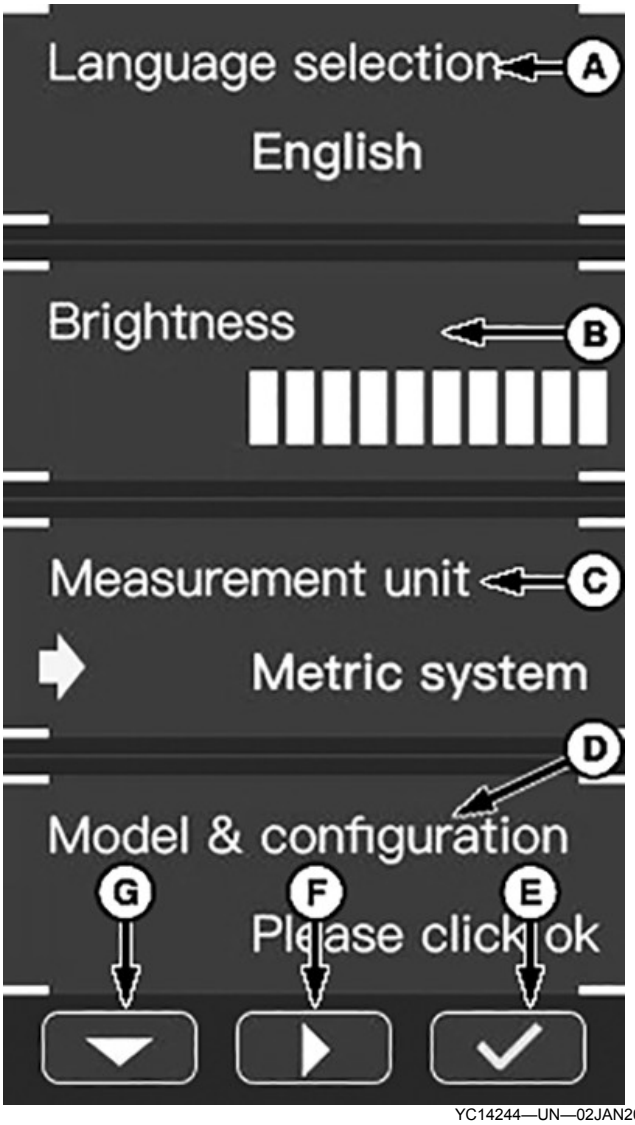
A—Scroll Up Button
B—Scroll Down Button
C—Enter Button

Press the scroll down button (B) and the scroll up button (A) to select the desired working data submenu and check the corresponding working data.

Press the enter button (C) to return to the main menu.

System Setting Submenu Navigation

NOTE: The three buttons (E, F, and G) shown in the artwork are the three buttons at the bottom of the corner post display actually.



YC14244—UN—02JAN20

System Setting Submenu

A—Language Selection
B—Brightness
C—Measurement Unit
D—Model & Configuration
E—Enter Button
F—Adjusting Button
G—Scroll Button

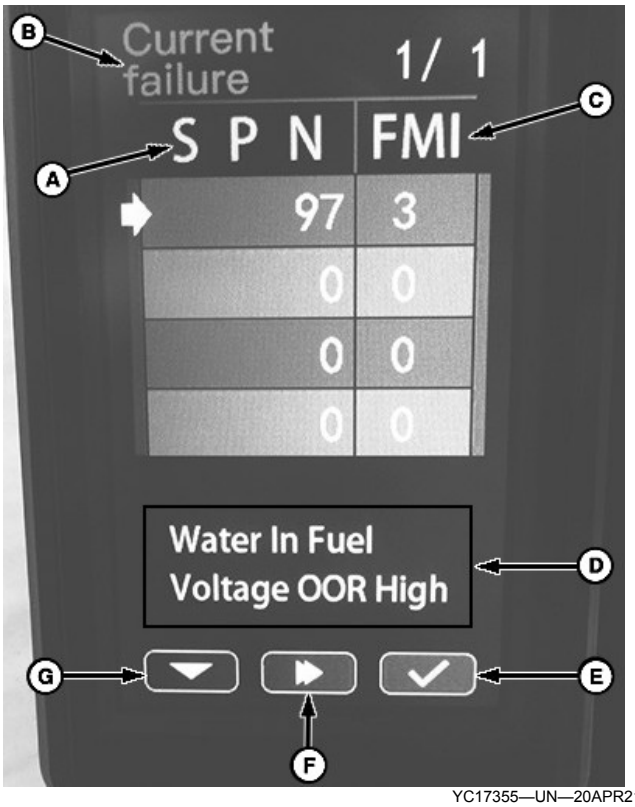
Press the scroll button (G) to select the desired system setting submenu.

- **Language Selection (A):** Press the adjusting button (F) to select the language (English or Chinese). If you are not in China, select the English language.
- **Brightness (B):** Press the adjusting button to adjust brightness.
- **Measurement Unit (C):** Press the adjusting button to change the measurement unit (metric system or imperial system).
- **Model & Configuration (D):** This submenu can not be set.

Press the enter button (E) to return to the main menu.

Current Failure Submenu Navigation

NOTE: The three buttons (E, F, and G) shown in the artwork are the three buttons at the bottom of the corner post display actually.



YC17355—UN—20APR21

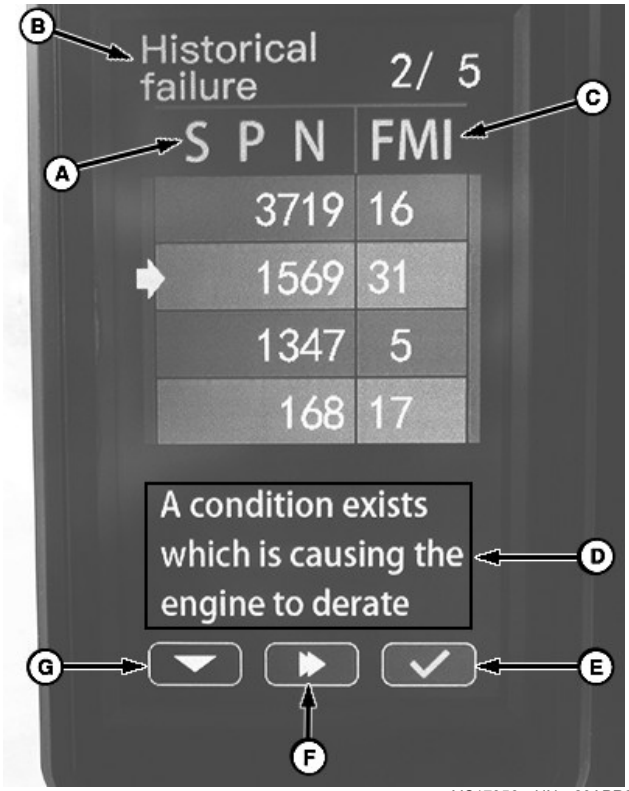
A—SPN (Suspect Parameter Number)
B—Current Failure
C—FMI (Failure Mode Indicator)
D—DTC Information Area
E—Enter Button
F—Next Button
G—Scroll Button

Press the scroll button (G) to select the desired DTC and check the DTC information. Press the next button (F) to view the DTCs in the next page.

Press the enter button (E) to return to the previous page.

Historical Failure Submenu Navigation

NOTE: The three buttons (E, F, and G) shown in the artwork are the three buttons at the bottom of the corner post display actually.



YC17356—UN—20APR21

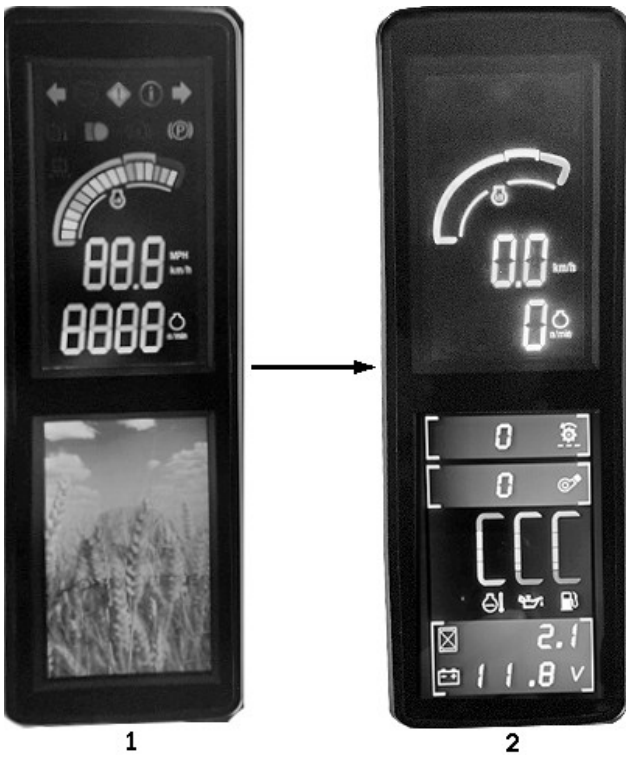
A—SPN (Suspect Parameter Number)
B—Current Failure
C—FMI (Failure Mode Indicator)
D—DTC Information Area
E—Enter Button
F—Next Button
G—Scroll Button

Press the scroll button (G) to select the desired DTC and check the DTC information. Press the next button (F) to view the DTCs in the next page.

Press the enter button (E) to return to the previous page.

cp00834,1659062872801-19-28JUL22

Corner Post Display Fault Warning Display

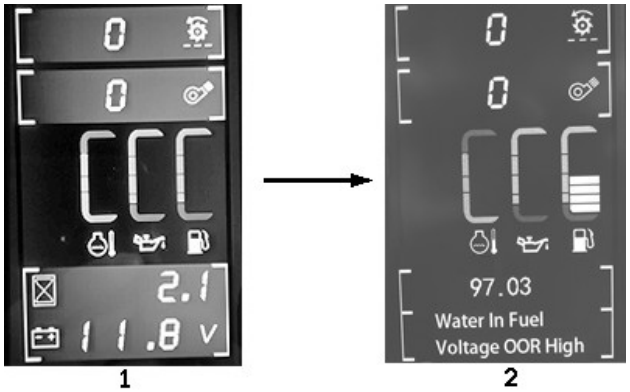


YC17401—UN—27APR21

Corner Post Display Main Page

1. Turn the key switch to the RUN position. All parameters and indicator lights are on.

   The corner post display main page switches to page 2 from page 1.



YC17405—UN—27APR21

2. If there is an active fault code, the corner post display main page switches to page 2 from page 1, the DTCs and the DTCs information will display all the time.

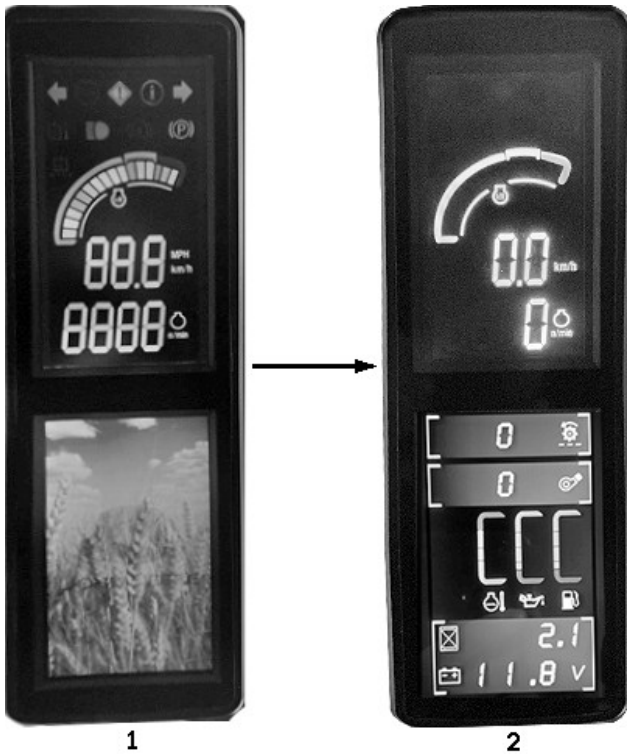
   When the fault is solved and press the right-side button at the bottom of the corner post display, the fault warning disappears.

NOTE: Clear the fault warning one by one.

cp00834,1659061097210-19-28JUL22

Corner Post Display Fault Warning Display

NOTE: Engine does not need to run when using the corner post display screen. To start the engine, refer to Start the Engine in Control of Combine section. All engine parameters displayed in the corner post display show that the engine is running.

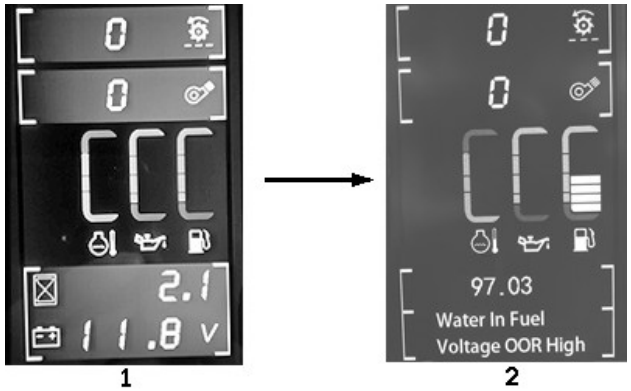


YC17401—UN—27APR21

Corner Post Display Main Page

1. Turn the key switch to the START position. All parameters and indicator lights are on.

   The corner post display main page switches to page 2 from page 1.



YC17405—UN—27APR21

2. If there is an active fault code, the corner post display main page switches to page 2 from page 1, the DTCs and the DTCs information will display all the time.

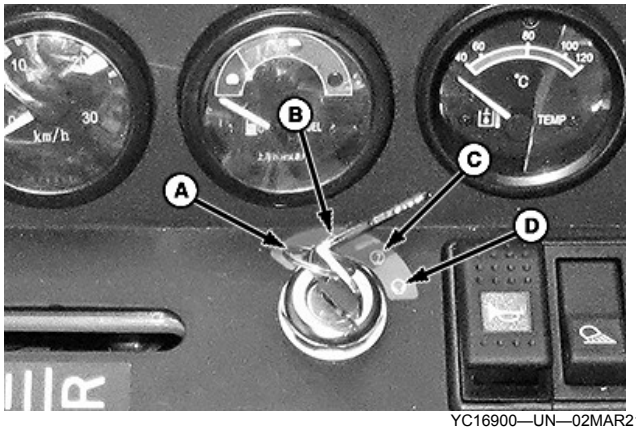
   When the fault is solved and press the right-side

button at the bottom of the corner post display, the fault warning disappears.

NOTE: Clear the fault warning one by one.

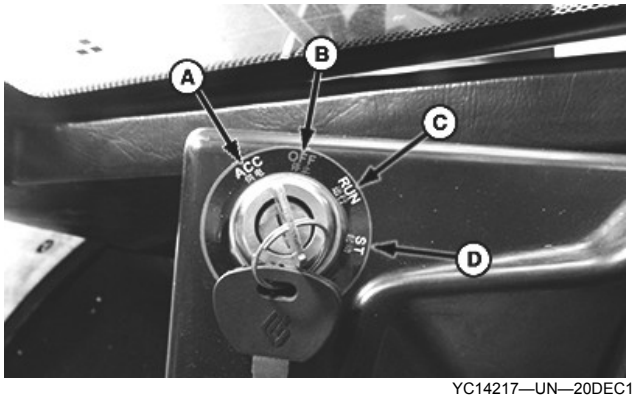
CP00834,0008D41-19-28APR21

Key Switch Operation



YC16900—UN—02MAR21

Machine with Murphy Gauge



YC14217—UN—20DEC19

Machine with Corner Post Display

A—First Position
B—Second Position
C—Third Position
D—Forth Position

Key positions are:

First position (A):

ACC—Lights, wipe, horn, radio, and air conditioning are working.

Second position (B):

STOP—Stop engine.

Third position (C):

ON—Turn on the power. Lights, wipe, horn, fuel pump, ECU, Murphy gauge, radio, and air conditioning are working.

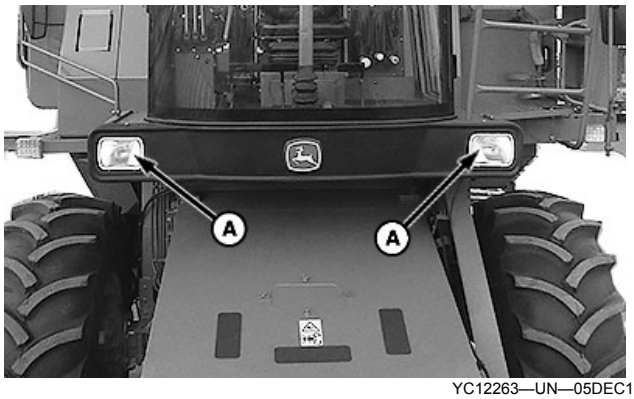
Forth position (D):

ST—Start engine.

CP00834,0008A1C-19-02MAR21

Use Headlights

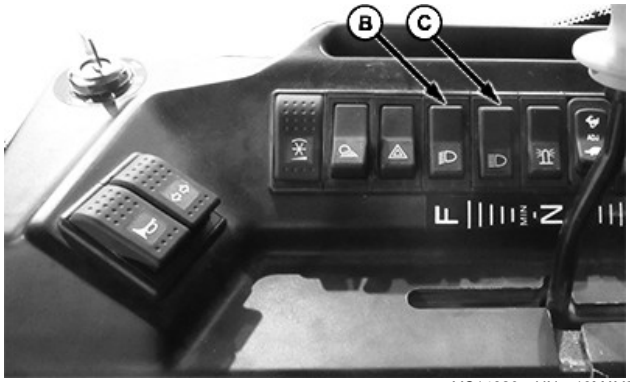
CAUTION: Accidental collision with another vehicle can cause serious injury or death to you or others. Always comply with traffic regulations when driving machine on a road. Dim headlights to low-beam for on-coming vehicles. To avoid motorist confusion, do not operate worklights when transporting on public roadways.



YC12263—UN—05DEC17

YC12233—UN—21NOV17

Machine with Murphy Gauge



YC14829—UN—13MAY20

Machine with Corner Post Display

A—Headlight (2 used)

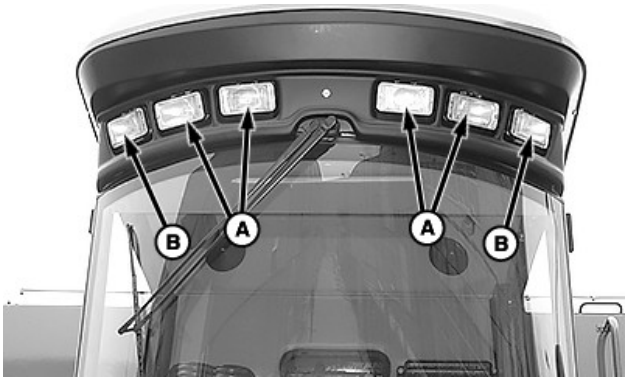
B—Light Switch
C—High/Low Beam Switch

Press the light switch (B), the low-beam headlights are on.

Keep the light switch pressed and press the high/low beam switch (C), the high-beam headlights are on

CP00834,0008B07-19-09MAR21

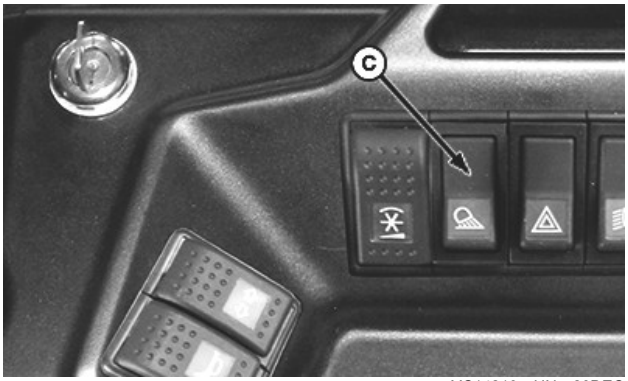
Use Worklights



YC12260—UN—05DEC17

YC12234—UN—21NOV17

Machine with Murphy Gauge



YC14219—UN—20DEC19

Machine with Corner Post Display

A—Worklight (4 used)
B—Worklight (2 used)
C—Worklight Switch

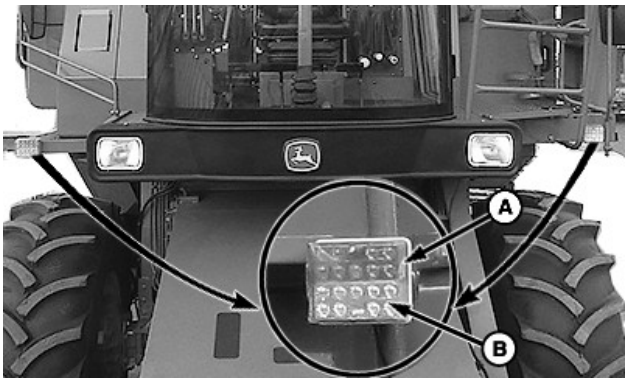
When the worklight switch (C) is in the neutral position, worklights (A) are working.

When the worklight switch is in the second position, worklights (A and B) are working.

When the worklight switch is in OFF position, worklights (A and B) are off.

CP00834,0008A1E-19-02MAR21

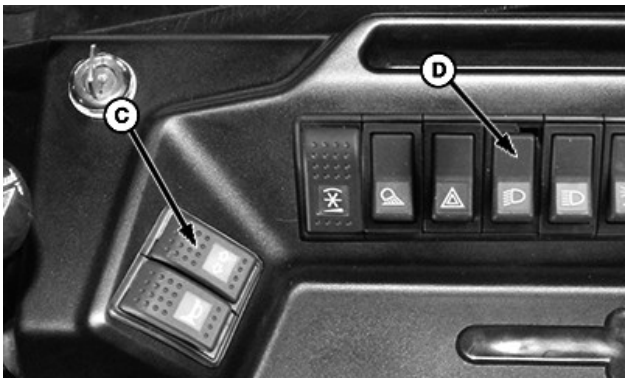
Use Front Turn-Signal Lights and Marker Lights



YC12261—UN—05DEC17

YC12235—UN—04DEC17

Machine with Murphy Gauge



YC14220—UN—20DEC19

Machine with Corner Post Display

A—Front Turn-Signal Light (2 used)
B—Front Marker Light (2 used)
C—Turn-Signal Light Switch

D—Light Switch

Front turn-signal lights (A) and front marker lights (B) are modular light.

The turn-signal light switch (C) controls front the turn-signal lights. Turn on the front turn-signal lights before turning.

The light switch (D) controls the front marker lights. Turn on the front marker lights in dark, warn vehicles.

CP00834,0008B0C-19-10MAR21

Use Tail Lights

CAUTION: When transporting on a road or highway, marker/hazard lights and tail lights 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.

YC10572—UN—08DEC16

YC12236—UN—05DEC17

Machine with Murphy Gauge

YC14221—UN—20DEC19

Machine with Corner Post Display

A—Rear Turn-Signal Light (2 used)
B—Brake Light (2 used)
C—Rear Marker Light (2 used)
D—Light Switch
E—Turn-Signal Lights Switch

The tail lights include the rear turn-signal lights (A), brake lights (B), and rear marker lights (C).

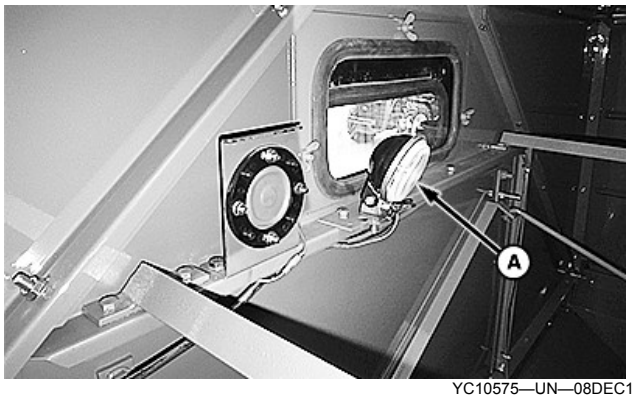
When depressing the brake pedal, brake lights are working.

When the gear-shift lever is positioned in the reverse position, brake lights are working, meantime the backup alarm is working.

The rear marker lights (C) are controlled by the light switch (D) .

CP00834,0008B0D-19-10MAR21

Use Grain Tank Light



YC10575—UN—08DEC16

YC12262—UN—05DEC17

Machine with Murphy Gauge

YC12238—UN—21NOV17

Machine with Murphy Gauge

YC14222—UN—20DEC19

Machine with Corner Post Display

YC14835—UN—13MAY20

Machine with Corner Post Display

A—Grain Tank Light
B—Light Switch

The grain tank light (A) is in the grain tank.

The light switch (B) controls the grain tank light.

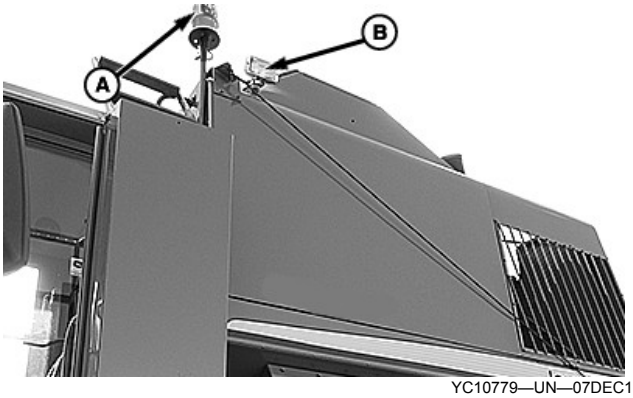
CP00834,0008B0E-19-10MAR21

A—Beacon Light
B—Unloading Light
C—Beacon Light and Unloading Light Switch

The Beacon light (A) and the unloading light (B) are at the left side of combine, controlled by the beacon light and unloading light switch (C).

CP00834,0008A22-19-02MAR21

Use Beacon Light and Unloading Light



YC10779—UN—07DEC16

Light Switches

CAUTION: When the machine fails or is in danger, stop and engage the hazard warning light switch. Turn on the hazard warning lights in foggy day.

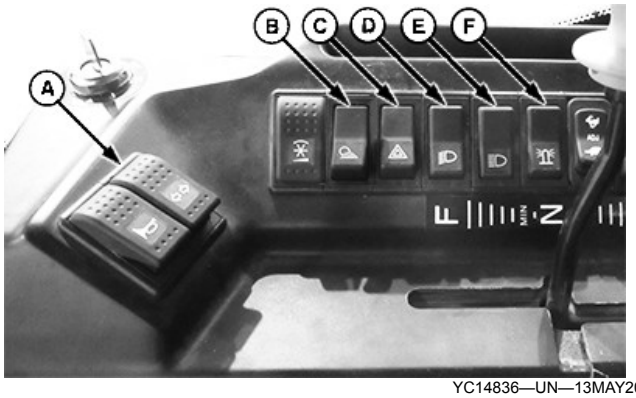
For the Machine with Murphy Gauge

YC16901—UN—02MAR21

A—Turn-Signal Light Switch
B—Hazard Warning Light Switch
C—Light Switch
D—High/Low Beam Switch
E—Worklight Switch
F—Beacon Light and Unloading Light Switch

- The turn-signal light switch (A)—Control the front and rear turn-signal lights.
- The hazard warning light switch (B)—Control the front and rear turn-signal lights.
- The light switch (C)—Control the low-beam headlights, the high-beam headlights, the grain tank light, and mark lights.
- The high/low beam switch (D)—Control the high-beam headlights.
- The worklight switch (E)—Control worklights.
- The beacon and unloading light switch (F)—Control the beacon light and the unloading light.

For the Machine with Corner Post Display



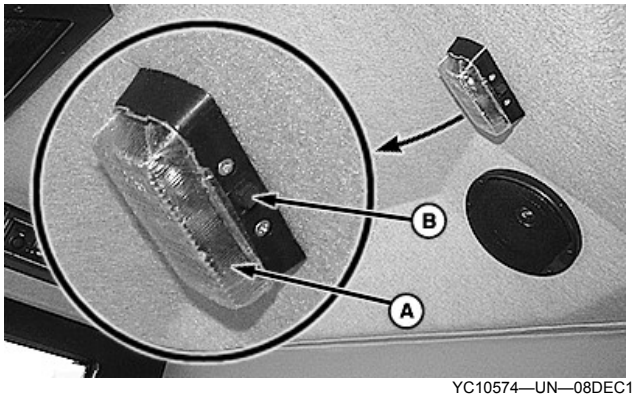
YC14836—UN—13MAY20

A—Turn-Signal Light Switch
B—Worklight Switch
C—Hazard Warning Light Switch
D—Light Switch
E—High/Low Beam Switch
F—Beacon Light and Unloading Light Switch

- The turn-signal light switch (A)—Control the front and rear turn-signal lights.
- The worklight switch (B)—Control worklights.
- The hazard warning light switch (C)—Control the front and rear turn-signal lights.
- The light switch (D)—Control the low-beam headlights, the high-beam headlights, the grain tank light, and mark lights.
- The high/low beam switch (E)—Control the high-beam headlights.
- The beacon light and unloading light switch (F)—Control the beacon light and the unloading light.

CP00834,0008B0F-19-10MAR21

Use Dome Light



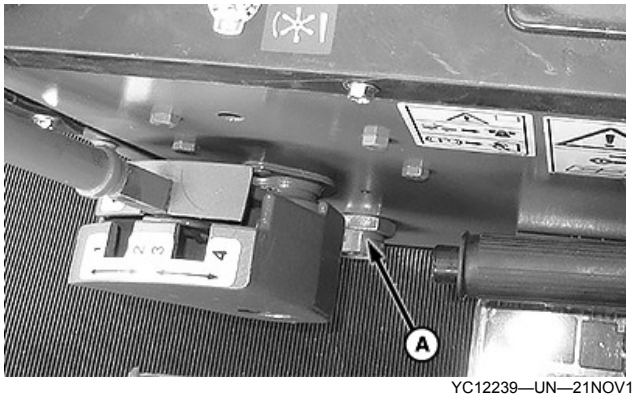
YC10574—UN—08DEC16

A—Dome Light
B—Switch

The dome light (A) and switch (B) are on the cab roof.

CP00834,0008A24-19-02MAR21

Use Diagnostic Connector



YC12239—UN—21NOV17

A—Diagnostic Connector

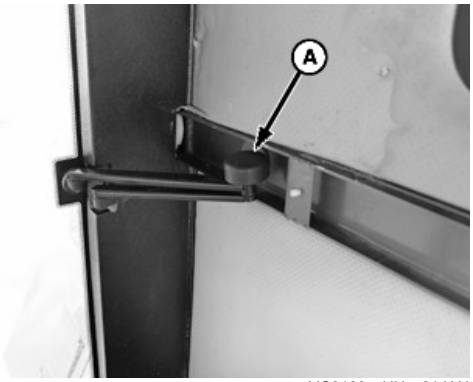
The diagnostic connector (A) is located under the gear-shift lever.

Connect the diagnostic connector, diagnose the engine failure.

CP00834,0008A25-19-02MAR21

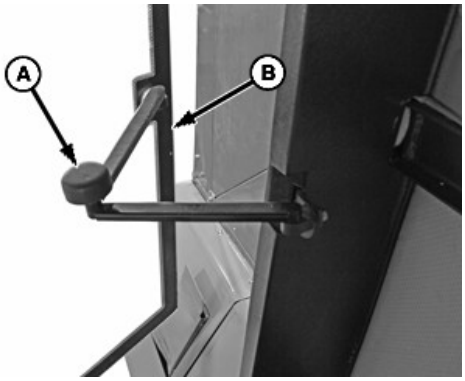
Cab Right Window (Emergency Exit)

CAUTION: If an emergency occurs and cab door cannot be opened, use right window to escape.



YC8103—UN—21JAN15

Window Close Shown



YC8104—UN—21JAN15

Window Open Shown

A—Handle
B—Right Window

When the right window (B) is closed, hold handle (A) and turn it clockwise to open the right window.

Close the right window by turning handle in reverse direction.

CP00834,0008A26-19-02MAR21

Adjust Steering Column Tilt

CAUTION: Adjust steering column only when machine is stopped. Hold steering wheel, step on pedal.

CAUTION: Avoid personal injury. Lock steering column after adjustment.

YC14832—UN—12MAY20

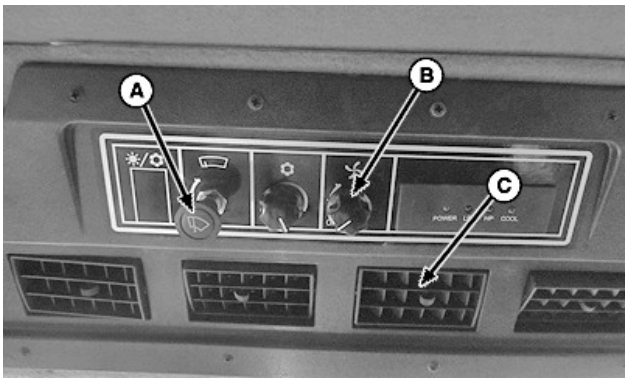
A—Steering Column Pedal
B—Steering Column

Step forward on the steering column pedal (A) to release the steering column (B) and move it to the desired position.

Step backward on the steering column pedal to lock the steering column.

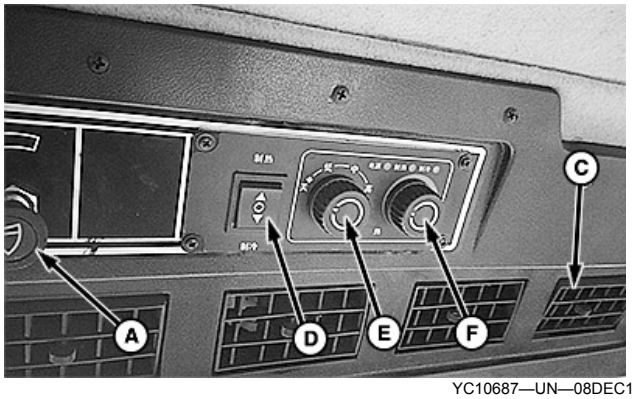
CP00834,0008A27-19-02MAR21

Cab Ceiling Control Panel



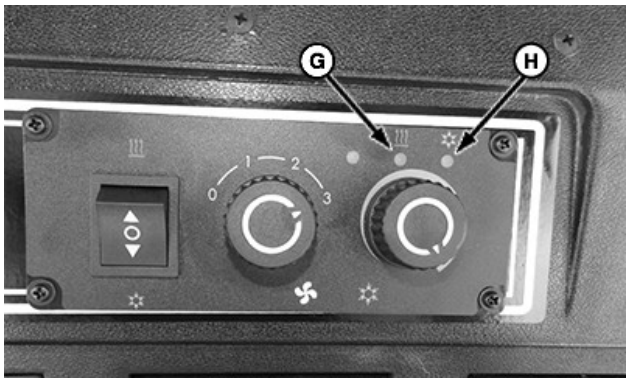
YC3234—UN—09DEC13

Cab Ceiling Control Panel



YC10687—UN—08DEC16

Cab Ceiling Control Panel (option 1)



YC13657—UN—02AUG19

Cab Ceiling Control Panel (option 2)

A—Wiper Switch
B—Air Flow Knob
C—Adjustable Air Inlet
D—Cooling/Heating Control Switch
E—Air Flow Control Knob
F—Temperature Adjustment Knob
G—Heating Indicator
H—Cooling Indicator

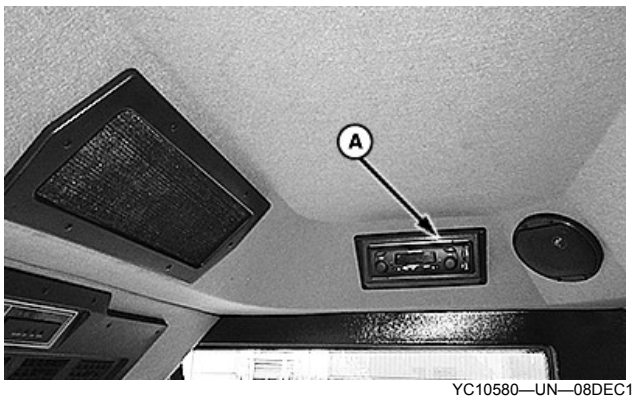
The cab ceiling control panel is at the front upper part of the cab. It controls wiper and fan.

NOTE: For the single cooling type, press the cooling/heating control switch (D) to the heating control position, the heating indicator (G) works but no heating function.

For the single heating type, press the cooling/heating control switch to the cooling control position, the cooling indicator (H) works but no cooling function.

CP00834,0008A28-19-02MAR21

Digital FM Radio (Option)



YC10580—UN—08DEC16

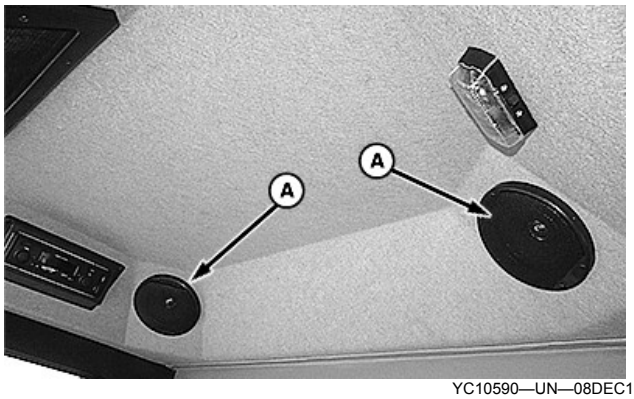
A—Radio

Combine can be equipped with a radio (A).

For more information about the radio, refer to the manufacturer's manual.

CP00834,0008A29-19-02MAR21

Speakers



YC10590—UN—08DEC16

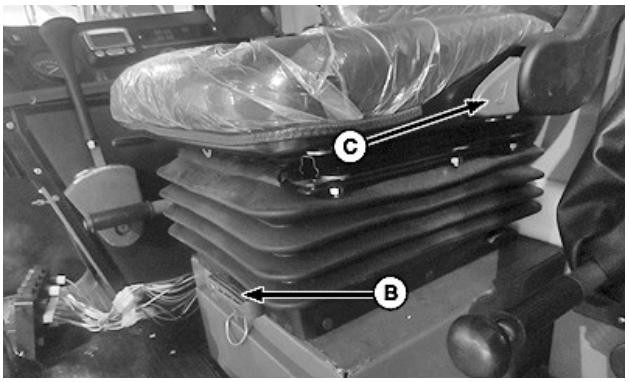
A—Speaker (2 used)

The cab ceiling is equipped with two speakers (A) at the rear.

CP00834,0008A2A-19-02MAR21

Operator's Seat

YC3181—UN—23DEC13



YC3182—UN—17DEC12

A—Fore/Aft Handle
B—Raise/Lower Handle
C—Backrest Tilt Handle

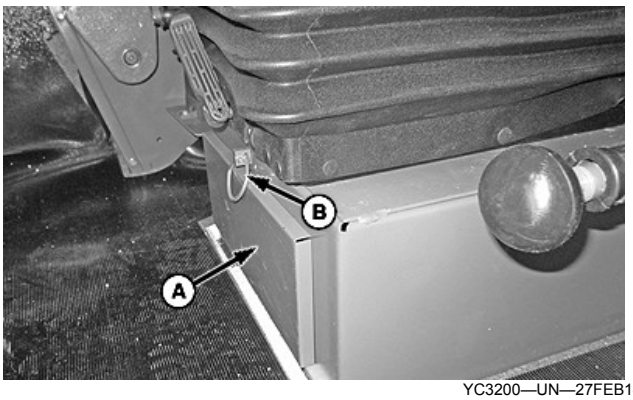
Fore/Aft Handle (A)—Pull up on the handle to slide seat forward or rearward to the desired position. Release the handle to lock.

Raise/Lower Handle (B)—Pull up on the handle to raise seat, push down on the handle to lower seat to the desired height. Release the handle to lock.

Backrest Tilt Handle (C)—Pull up on handle and adjust backrest to desired position. Release the handle to lock.

CP00834,0008A2B-19-02MAR21

Toolbox



YC3200—UN—27FEB14

A—Toolbox Door

B—Door Latch

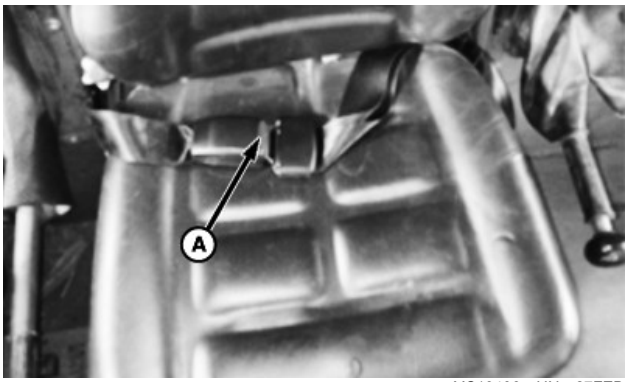
Open the toolbox door (A) by moving the door latch (B) upward.

CP00834,0008A2C-19-02MAR21

Seat Belt

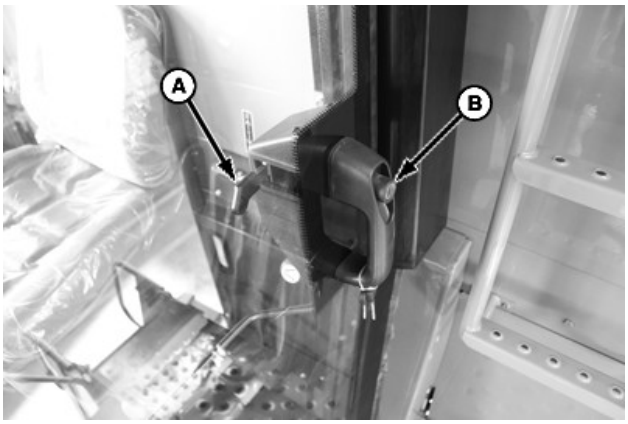
CAUTION: Inspect the seat belt and mounting hardware on your machine at least once a year. If the seat belt system, including mounting hardware, buckle, belt, or retractor, show any sign of damage such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion, the entire seat belt system should be replaced immediately. For your safety, replace the belt system only with replacement parts approved for your machine, see your John Deere dealer.

The seat belt is standard equipment on the operator seat. Lap type seat belt has a push button quick release and automatic belt retraction to allow unrestricted exiting and entering.



YC13406—UN—27FEB19
CP00834,0008A2D-19-02MAR21

Cab Door Locker



YC8106—UN—21JAN15

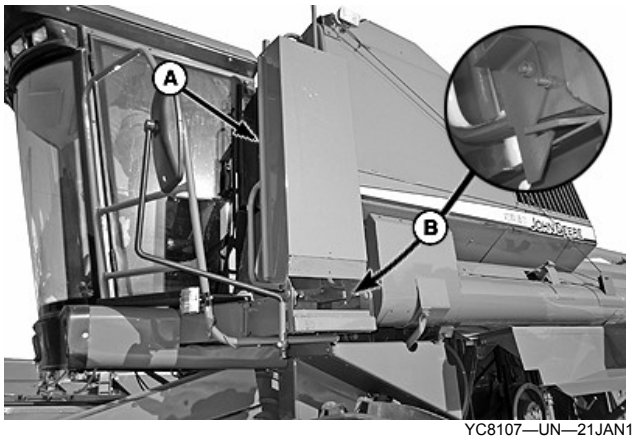
A—Handle
B—Door Locker

If the cab door is not locked, press the door locker (B) to open the door. If the door is locked, first use the key to unlock and then door can be opened.

In the cab, operator can open door by pressing handle (A).

CP00834,0008A2E-19-02MAR21

Secure Ladder in Transport Position



YC8107—UN—21JAN15

Transport Position Shown

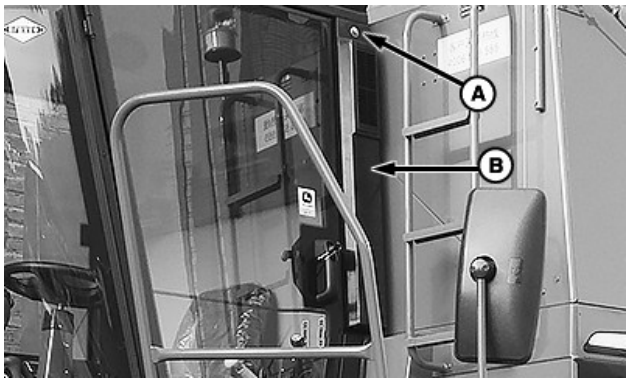
A—Ladder
B—Locking Tab

Before driving on roads, fold up ladder (A) and use the locking tab (B) to secure it in the transportation position.

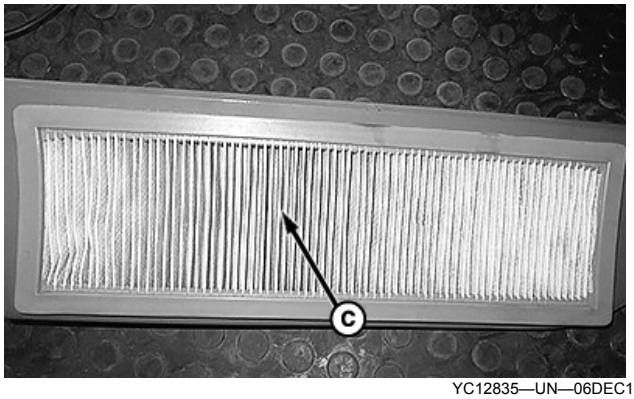
Avoid hurting others when unfolding the ladder.

CP00834,0008A2F-19-02MAR21

Clean Air Conditioner Filter



YC12834—UN—06DEC18



YC12835—UN—06DEC18

A—Screw
B—Shield
C—Filter (2 used)

1. Loose the screw (A), remove the shield (B).
2. Pat the filters (C) surface to clean the dust, or use compressed air for a deep cleaning to extend the life of the filter.
3. Change the filters (C) if find clogging by dust at the outside.
4. Install in reverse procedure.

Under normal condition, recommend:

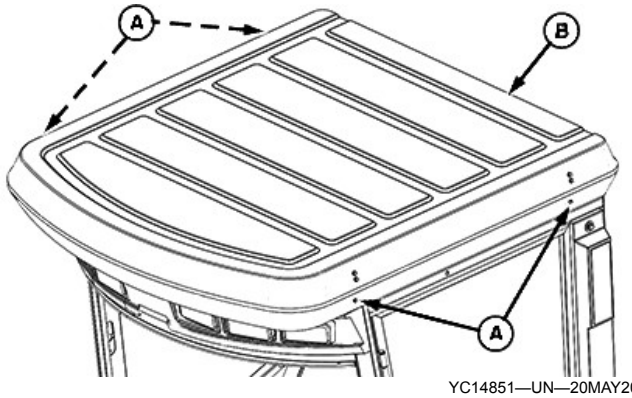
Clean air conditioner system every 10 hours when harvest corn or soy.

Clean air conditioner system every 5 hours when harvest wheat or barley.

CP00606,00003BB-19-14MAR19

Clean Air Conditioner

Service Interval—Every 200 Hours or Every Season



YC14851—UN—20MAY20

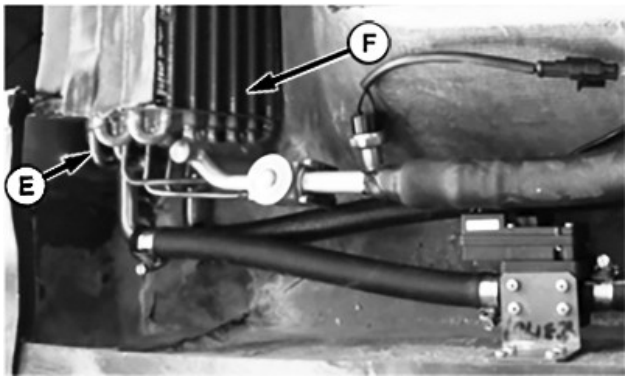
A—Bolt (4 used)
B—Top Roof

1. Stop engine and turn off the air conditioner
2. Remove all bolts (A).
3. Remove the top roof (B).

YC14852—UN—20MAY20

C—Screw (22 used)
D—Cover and Insulator

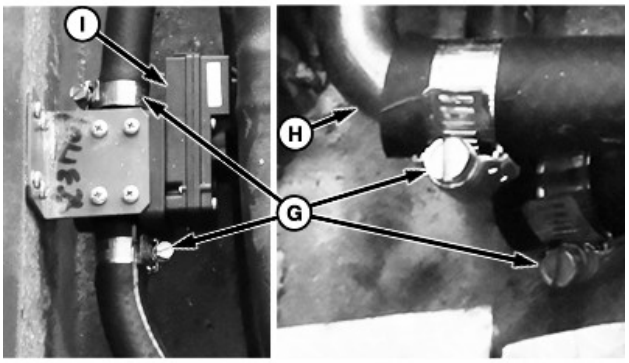
4. Remove all screws (C).



YC14853—UN—20MAY20

E—Heater Core
F—Air Conditioner Core

5. Clean the heater core (E) and the air conditioner core (F) to improve the performance of the heater and the air conditioner.



YC14854—UN—20MAY20

G—Clamp (4 used)
H—Heater Core
I—Control Valve

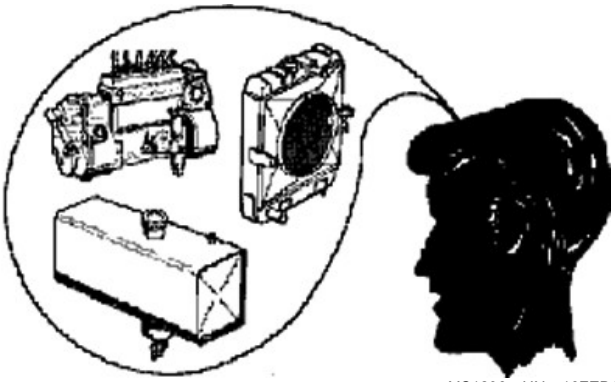
6. Check clamps (G) on the coolant hoses connected with the heater core (H) and the control valve (I), and tighten to specification.

Specification

Clamps on Coolant Hoses—Torque. . . . . 6 N·m

CP00834,0008A30-19-02MAR21

Pre-Start Checks



YC1296—UN—16FEB12

Check Daily:

Before starting the combine, check the following:

- Engine
- Cooling system
- Hydraulic system
- Fuel system
- Lubrication
- Start combine in cool weather conditions

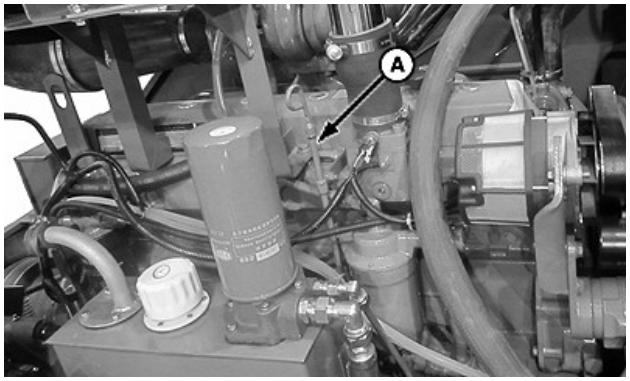
Check Engine Oil Level

Before starting the engine for the first time everyday, carry out following checks:

IMPORTANT: Keeping proper engine oil level is vital for the service life of the engine. Check engine oil level when combine is parked on level ground.

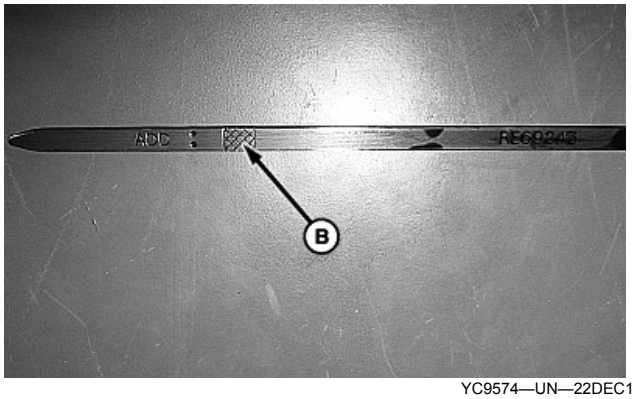
IMPORTANT: Never refill engine oil before engine oil level falls below the ADD mark.

IMPORTANT: Never fill engine oil above the top of the crosshatch pattern of the dipstick. Engine oil level should be correct if it is within the crosshatch mark. Do not operate engine when oil level is below the ADD mark on dipstick.



YC7874—UN—11DEC14

A—Oil Dipstick



YC9574—UN—22DEC15

B—Crosshatch Mark on Dipstick

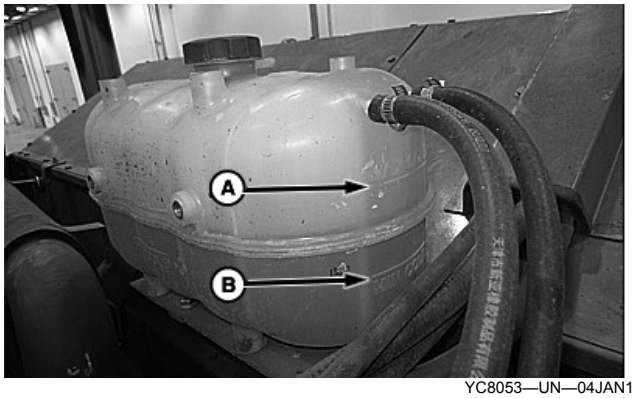
Check engine oil level with the oil dipstick (A). Refill engine oil as necessary. Use appropriate engine seasonal viscosity grade oil. For technical specifications of engine oil, see Diesel Engine Break-In Oil—Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III in Fuel, Coolant, and Lubricants section.

Check Coolant Level

CAUTION: Shut OFF engine, set park brake, and remove key. Avoid being scalded when opening the cap of expansion tank. Never open the cap when engine is hot. Open the cap slowly to relieve pressure.

IMPORTANT: A special cap is used on the expansion tank. If the cap is damaged or missing, it must be replace by an equivalent cap.

NOTE: Coolant level must be between MAX COLD and MIN COLD lines. Add coolant as needed if coolant is below MIN COLD line (A).

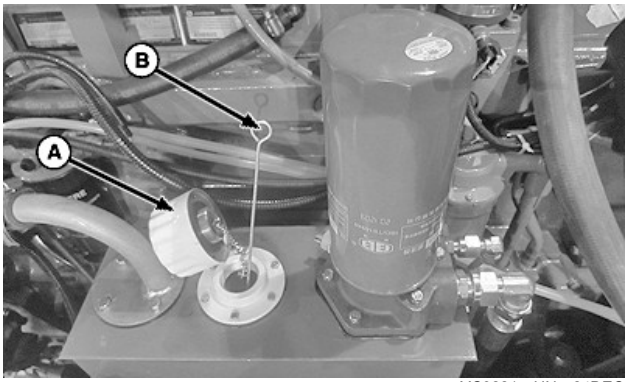


YC8053—UN—04JAN15

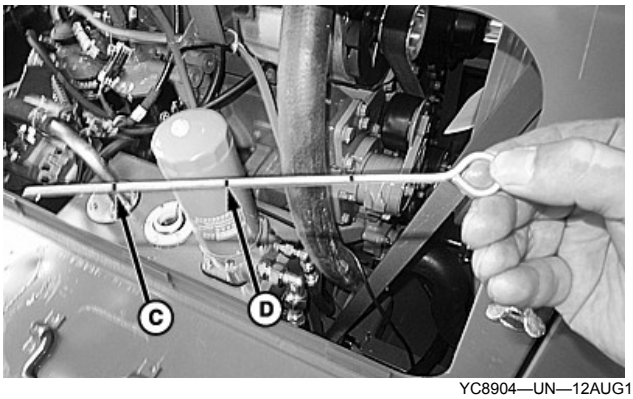
A—MAX COLD Line
B—MIN COLD Line

Allow engine to cool. Coolant level in the expansion tank should be at MAX COLD line (B).

Check Hydraulic Oil Level



YC3221—UN—24DEC13



YC8904—UN—12AUG15

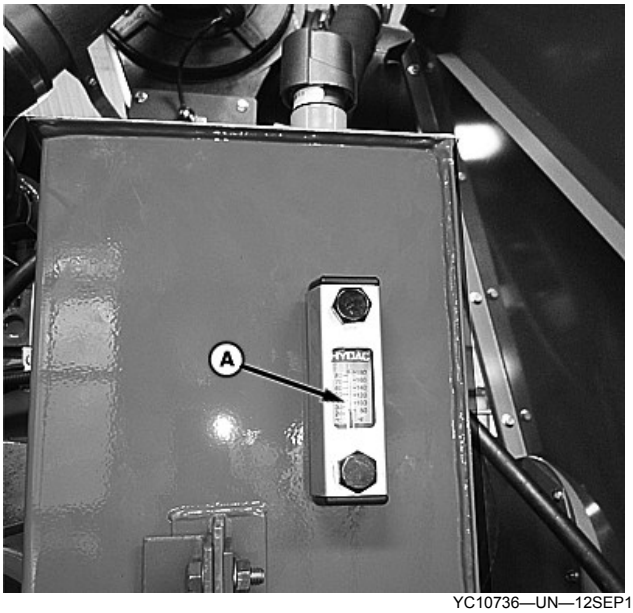
A—Filling Cap
B—Dipstick
C—Maximum Mark
D—Minimum Mark

NOTE: Retract all hydraulic cylinders and lower the header onto the ground when checking the hydraulic oil level.

1. Open the filling cap (A).
2. Remove and clean the dipstick (B).
3. Insert the dipstick and check the oil level. The oil level should be between the minimum mark (D) and maximum mark (C) on the dipstick.
4. Fill the hydraulic reservoir with the specified oil as necessary.

   For technical specifications of hydraulic oil, see Hydraulic Oil in Fuel, Coolant, and Lubricants section.

Check Hydrostatic Oil Level (Hydrostatic Drive)



YC10736—UN—12SEP16

A—Sight Glass

Check the oil level. The oil level must be at top of sight glass (A) with the feeder house fully lowered.

If the hydrostatic oil level is lower than the lowest mark, add oil as necessary.

Fill the hydrostatic reservoir with the specified oil as necessary. For technical specifications of hydrostatic oil, see Hydrostatic Drive Oil in Fuel, Coolant, and Lubricants section.

Check Fuel Tank Level

YC16902—UN—02MAR21

Machine with Murphy Gauge

YC14227—UN—12JAN20

Machine with Corner Post Display

A—Fuel Level Indicator

Before starting the engine, turn the key to D position, check level through the fuel level indicator (A).

Fill fuel tank as necessary. See Fuel Tank Filler in Operating Engine section.

Check fuel tank level before starting the machine.

Fill fuel in the fuel tank:

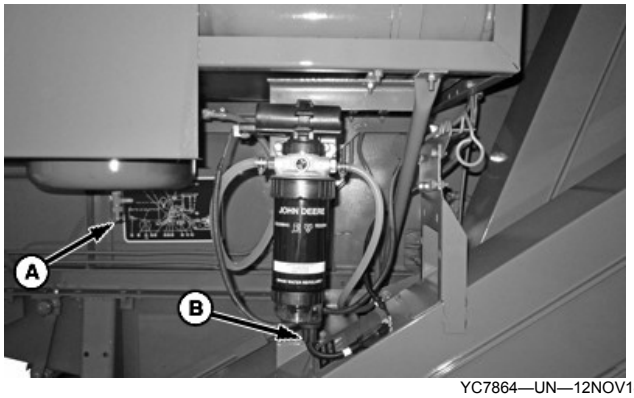
IMPORTANT: Fuel is highly flammable and can cause serious injury or death. Do not refuel machine while smoking or near an open flame or spark. Always stop engine before refueling. Always fill the fuel tank in an open air . Be sure to reinstall fuel filler cap and rear screen after filling. Always clean up spilled fuel. Do not overfill fuel tank.

YC8789—UN—30JUN15

B—Drain Valve

1. If engine does not work for a long time, remove drain valve (B) to drain water from the fuel tank. Retighten drain valve.
2. Fill with specified fuel. See Diesel Fuel in Fuel, Coolant, and Lubricants section.

Fuel System



YC7864—UN—12NOV14

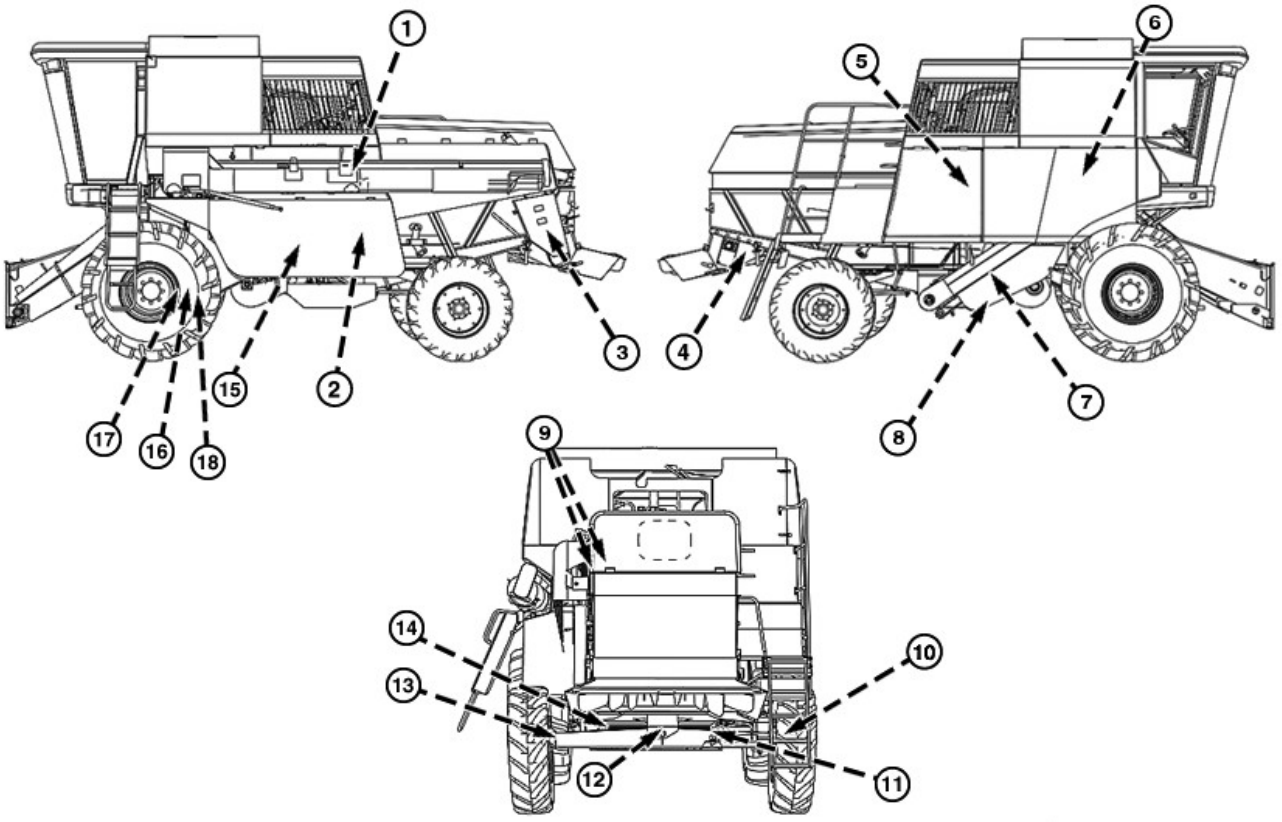
A—Drain Valve
B—Drain Valve

Before operating the combine everyday, open drain valve (A) to drain water and sediment. See Fuel Tank Sediment Bowl in Operating Engine section.

Before operating the combine everyday, open drain valve (B) to drain water and sediment. See Primary Fuel Filter in Operating Engine section.

After storing combine for a long time, bleed from the fuel system. See Bleed the Fuel System in Operating Engine section.

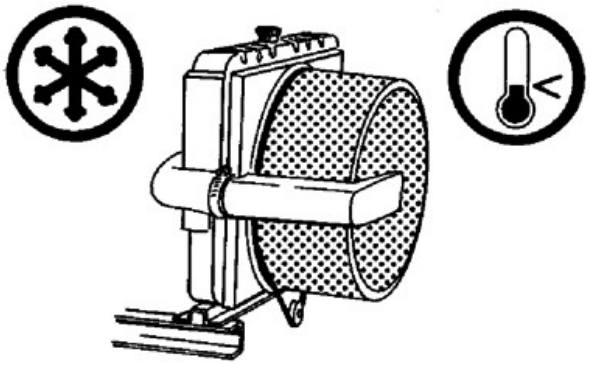
Lubricate Combine



YC10776—UN—07DEC16

Lubricate combine according to the lubrication diagrams. For the position numbers in diagram, see Lubrication Points in Lubrication and Maintenance section.

Start in Winter



YC1302—UN—16FEB12

Before starting combine in winter, ensure that rotary screen can rotate freely (no ice and snow).

CP00834,0008EFD-19-25JUN21

Start Engine

Before Starting the Engine

CAUTION: 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.

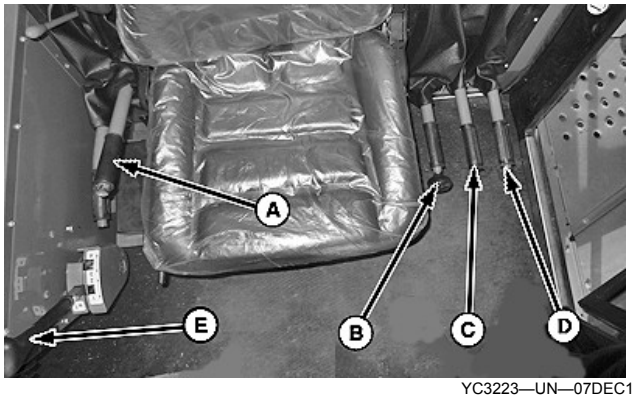
CAUTION: Sound horn before starting engine, warn others to stay clear from machine.

Start engine ONLY from the operator's seat. Do not start engine by shorting across starter terminals.

CAUTION: If the combine suddenly starts moving forward, serious personal injury can occur. Before starting the engine, make sure that park brake is engaged, and gear-shift lever is in neutral position.

IMPORTANT: To prevent damaging the starter , do not operate the starter for more than 30 seconds at a time. If engine does not start, wait at least two minutes before trying again.

Start the Engine



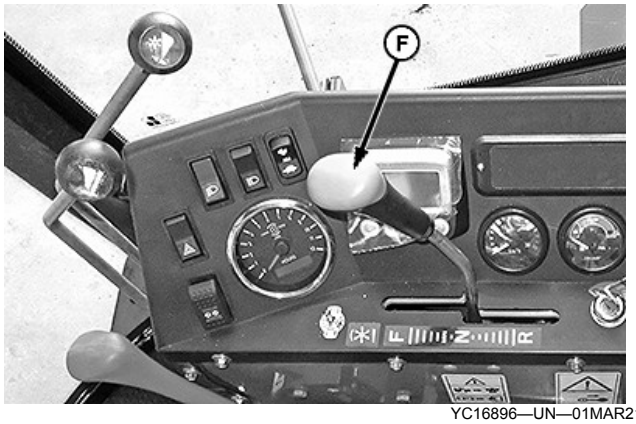
YC3223—UN—07DEC16

A—Park Brake Lever
B—Header Engage Lever
C—Separator Engage Lever
D—Unloading Auger Engage Lever
E—Gear-Shift Lever

1. Set the park brake.
2. Disengage the header engage lever (B).
3. Disengage the separator engage lever (C).
4. Disengage the unloading auger engage lever (D).

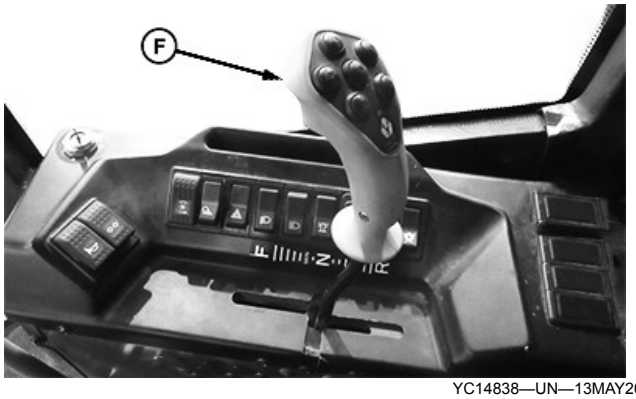
NOTE: Engine can be started when separator is disengaged.

5. Set the gear-shift lever (E) in the neutral position.



YC16896—UN—01MAR21

Hydrostatic Drive Lever (with Murphy Gauge)



YC14838—UN—13MAY20

Hydrostatic Drive Lever (with Corner Post Display)

F—Hydrostatic Drive Lever

6. Set the hydrostatic drive lever (F) in the neutral position

YC12244—UN—11DEC17

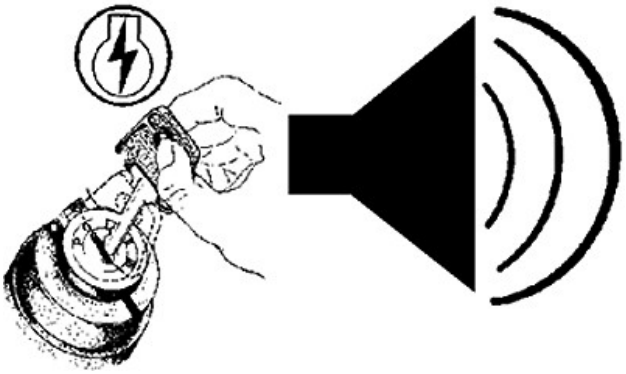
Throttle Switch (with Murphy Gauge)

YC16903—UN—02MAR21

Throttle Switch (with Corner Post Display)

A—Throttle Switch

7. Set the throttle switch (A) in low speed (turtle) position.



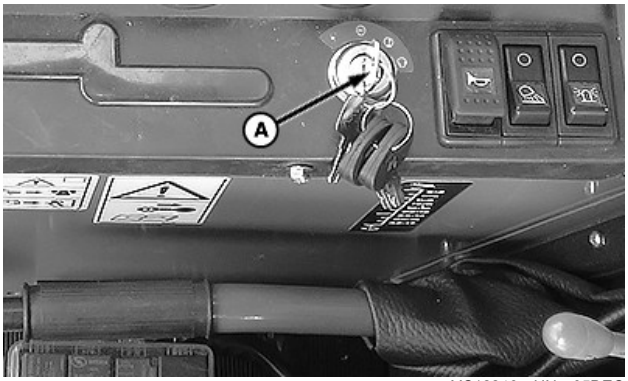
YC1306—UN—25DEC12

8. Insert key.

NOTE: When the key is inserted, an intermittent buzzer sounds due to following reasons:

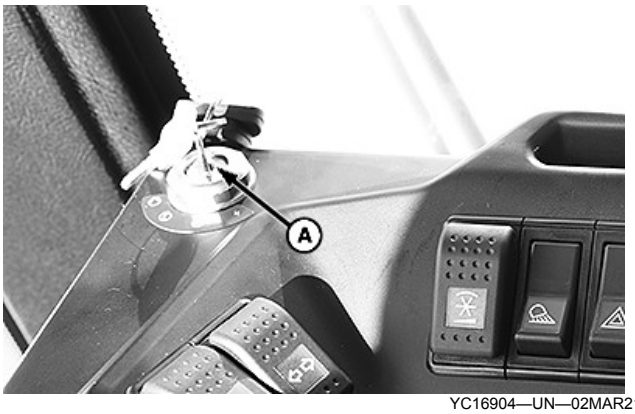
- *Park brake is engaged.*
- *The rear cover blockage warning switch is engaged, horn sounds continuously.*

9. Turn the key to the RUN position.
10. Indicators on the Murphy gauge or the corner post display go off.
11. Sound horn 5 seconds, and warn others to stay clear from machine.



YC12246—UN—05DEC17

Key Switch (with Murphy Gauge)



YC16904—UN—02MAR21

Key Switch (with Corner Post Display)

A—Key Switch

12. Turn the key (A) to the START position.
13. If the key returns to the RUN position before engine starts, wait until engine stops and restart the engine.

NOTE: When outdoor temperature is below 0ºC, use auxiliary start-up device. Each starting time cannot exceed 30 seconds. See Use Auxiliary Start-up Device to Start the Engine in Control of Combine section.

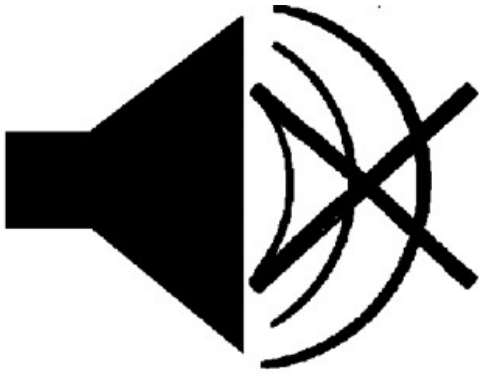
IMPORTANT: If engine is not started within 30 seconds, wait for at least 2 minutes before restart. Do not start engine after four consecutive attempts.

IMPORTANT: To avoid damaging machine, never run engine at idle speed for more than 5 minutes.

14. Set throttle switch in low speed (turtle) position, run the engine 1—2 minutes to warm oil. If temperature is below 0 ºC, extended to 2—4 minutes.
15. Other indicators on the indicator module or the corner post display are off after engine has started.

CP00834,0008A33-19-02MAR21

Intermittent Alarm System



YC1307—UN—16FEB12

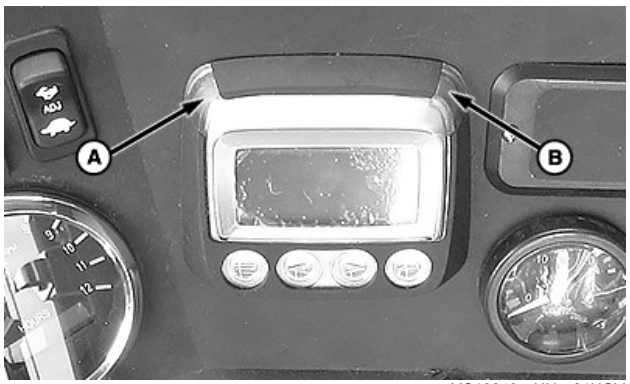
When the key is in ON position, the murphy gauge display data of engine oil pressure. Park brake indicator light is flashes and can hear the beep.

When park brake is disengaged, intermittent alarm signal stop warning. If signal continues, separator plug sensor is defective or separator is plugged. After engine has been started, indicator of engine oil pressure is extinguished.

After engine has been started, all alarm signals are off. If otherwise, check and repair defective components.

YYFSO4H,0002547-19-23FEB21

Murphy Gauge Indicator



YC12248—UN—21NOV17

A—Orange Indicator
B—Red Indicator

After turning key switch to the Run or Start position, the orange indicator (A) and the red indicator (B) go off.

Otherwise, check for additional anomalies, and repair as needed.

CP00834,0008A34-19-02MAR21

Preheat the Engine

YC12244—UN—11DEC17

Machine with Murphy Gauge

YC14826—UN—11MAY20

Machine with Corner Post Display

A—Throttle Switch

After engine has started, set the throttle switch (A) to the low speed (turtle) position (engine speed is about 1300 rpm). Run engine for 1—2 minutes. If weather is cold, increase running time to 2—4 minutes.

IMPORTANT: Never run engine at the idle speed for longer than 5 minutes.

CP00834,0008A35-19-02MAR21

Use Auxiliary Start-Up Device to Start the Engine

YC12251—UN—21NOV17

Machine with Murphy Gauge

YC14840—UN—13MAY20

Machine with Corner Post Display

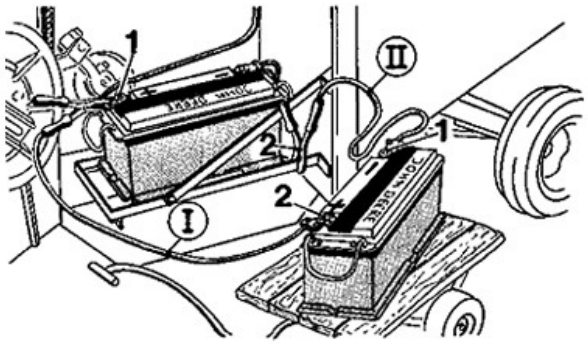
A—Throttle Switch
B—Key Switch
C—Murphy Gauge

1. Set the throttle switch (A) in the low speed (turtle) position.
2. Turn the key switch (B) to the ON position, and keep this position for 15—20 seconds.
3. Observe reading changes on the Murphy gauge (C) or the corner post display.
4. Quickly turn the key switch to the ST position.
5. After engine has started, make sure that the switch returns to the ON position (key switch automatic resets).

CP00834,0008A36-19-02MAR21

Use Parallel Battery to Start

CAUTION: Gases discharged from battery can cause explosion. Keep flame and fire away from battery. Make sure that battery connection is good. Wrong connection of cables can cause serious damage to the electrical system. Remember to connect ground cable to the negative electrode.



YC2394—UN—29OCT12

In cold weather condition, a 12-volt battery can be used in parallel with the original 12-volt electrical system of combine.

Start up procedures of using the auxiliary battery:

1. Connect auxiliary battery.
2. Start engine and run it utill charging indicator goes off.
3. Disconnect and remove auxiliary battery.
4. If needed, turn lights on.

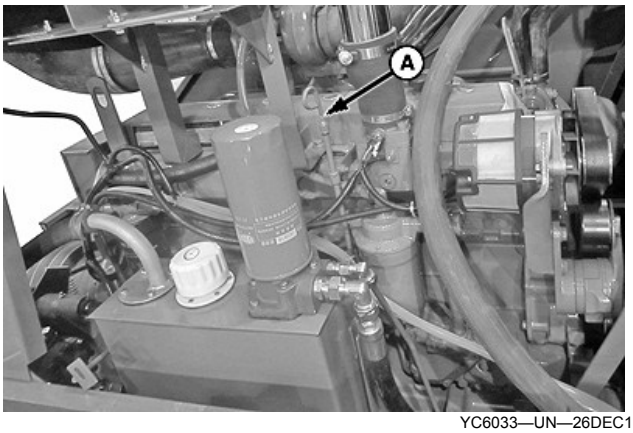
NOTE: This start-up procedure is only applicable in emergency situations.

CP00834,0008A37-19-02MAR21

Engine Break-In

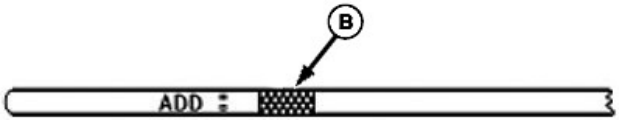
The engine is ready for normal operation. However, extra care during the first 100 hours of operation will result in more satisfactory long-term engine performance and life. DO NOT exceed 100 hours of operation with break-in oil.

1. This engine is factory-filled with John Deere DIESEL ENGINE BREAK-IN OIL (SAE 10W-30). Operate the engine at heavy loads with minimal idling during the break-in period.
2. If the engine has significant operating time at idle, constant speeds, and/or light load usage, or makeup oil is required in the first 100 hour period, a longer break-in period may be required. In these situations, an additional 100 hour break-in period is recommended using a new change of John Deere DIESEL ENGINE BREAK-IN OIL and a new John Deere oil filter.



YC6033—UN—26DEC13

A—Oil Dipstick



YC6034—UN—26DEC13

B—Crosshatch Mark on Oil Dipstick

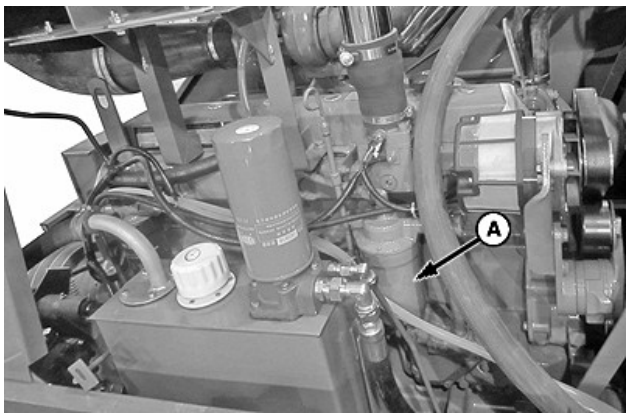
IMPORTANT: DO NOT add makeup oil until the oil level is BELOW the "ADD" mark. DO NOT fill above the crosshatch mark (B) on oil dipstick (A), whichever is present. Oil levels anywhere within the crosshatch are considered in the acceptable operating range. John Deere ENGINE BREAK-IN OIL should be used to make up any oil consumed during the break-in period.

3. Check engine oil level more frequently during engine break-in period. If oil must be added during this period, John Deere DIESEL ENGINE BREAK-IN OIL is preferred. See Diesel Engine Break-In Oil—Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III in Fuel, Coolant, and Lubricants section.
4. If John Deere engine break-in oil is not available, use engine oil of 10W-30 viscosity grade which is recommended by the American Society of Automotive Engineers and meets one of the following criteria. Change engine oil and filter after 100 operating hours:
   a. API classified CE grade;
   b. API classified CD grade;
   c. API classified CC grade;
   d. ACEA engine oil E2 series;
   e. ACEA engine oil E1 series.
5. During the first 20 hours, avoid prolonged periods of engine idling or sustained maximum load operation. If engine will idle longer than 5 minutes, stop engine.

IMPORTANT: Some increase in oil consumption may be expected when low viscosity oils are used. Check oil levels more frequently.

If temperature is below 0°C (32°F), it may be necessary to use cold weather starting aids (see Cold Weather Start in Control of Combine section).

If air temperature is below -10°C (14°F), use an engine block heater.



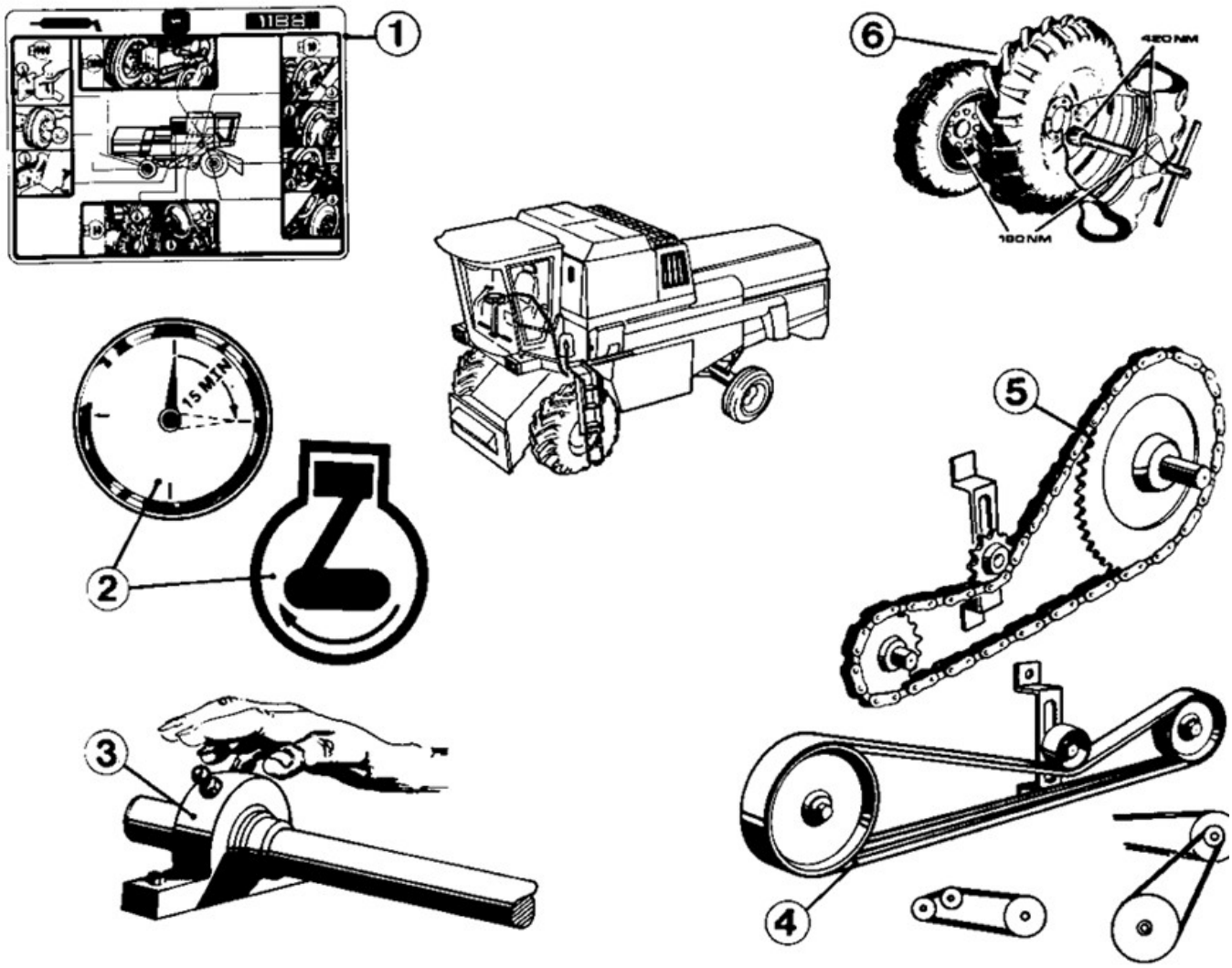
YC6032—UN—26DEC13

A—Engine Oil Filter

6. Before the first 100 hours (maximum), change engine oil and replace engine oil filter (A). (Refer to Engine Oil and Filter Service Intervals in Fuel, Coolant, and Lubricants section.) Fill crankcase with the normal seasonal viscosity grade oil. (See Diesel Engine Oil — Tier 3 and Stage III in Fuel, Coolant, and Lubricants section.)
7. Closely monitor coolant temperature in Murphy Gauge. If coolant temperature rises above 110°C, reduce load on engine. Unless temperature drops quickly, stop the engine and determine the cause of failure before resuming operation.
8. Monitor engine oil pressure in Murphy Gauge. When engine is running at low idling speed, minimum pressure is maintained at 103 kPa (1.03 bar). After engine is warmed up, pressure is increased to at least 241 kPa (2.41 bar). Maintain rated speed under full load.
9. Check alternator and fan drive V-belt for proper alignment and seating in pulley grooves.

CP00606,000177A-19-24MAY18

Machine Break-In



YC1309—UN—16FEB12

1. Switch off the engine, lubricate all lubrication points.
2. After engine has run for 15 minutes, engage and disengage all levers. If unusual sound is heard, immediately disengage separator and switch off the engine. Check diagnostic trouble codes and repair. Restart the engine and engage separator again.
3. If all transmission parts work normally, after the combine has run for 15—30 minutes, disengage the separator and switch off the engine. Check all bearings if they are over-heated.
4. Check the tension of V-belt. Adjust as necessary.
5. Check the tension of the drive chain, adjust as necessary.
6. Retighten front-wheel nuts with a torque of 420 N·m. Retighten rear-wheel bolts with a torque of 180 N·m.

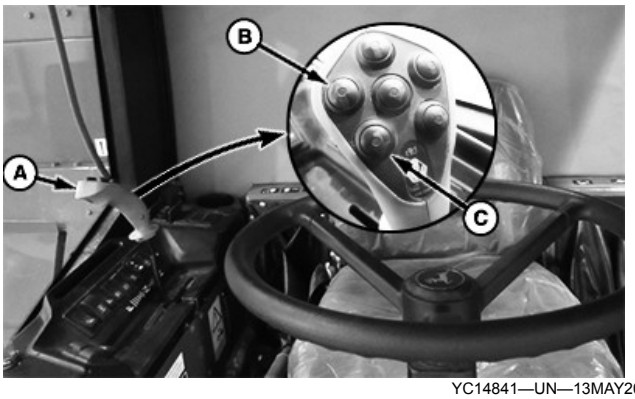
NOTE: After engine has started for a few hours, check again the tension of belts and chains.

CP00718,0003CD2-19-08DEC17

Stop Engine

1. Park the combine on the ground.

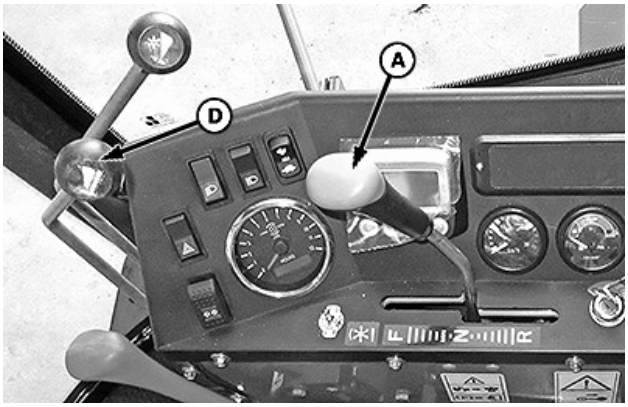
2. lower the header onto the solid level ground.



YC14841—UN—13MAY20

A—Hydrostatic Drive Lever
B—Header Raise Button
C—Header Lower Button

- For the machine with the corner post display, push the header lower button (B) to lower the header onto the solid level ground.



YC16800—UN—01MAR21

A—Hydrostatic Drive Lever
D—Header Raise/Lower Lever

- For the machine with Murphy gauge, push the header raise/lower lever (D) forward to lower header slowly onto solid level ground.

3. Set the hydrostatic drive lever (A) to the NEUTRAL position

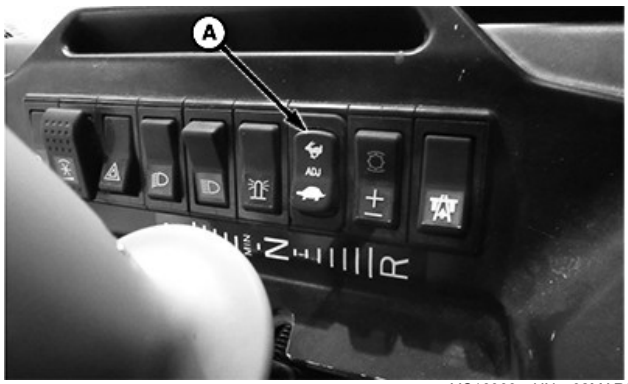
YC8051—UN—21JAN15

A—Gear-Shift Lever

4. Set gear-shift lever (A) in the NEUTRAL position.

YC12244—UN—11DEC17

Machine with Murphy Gauge



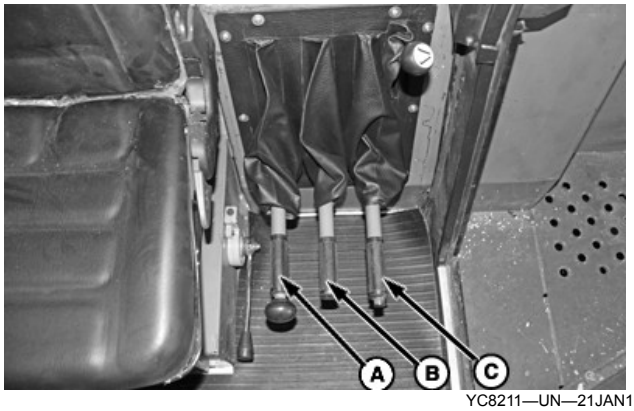
YC16903—UN—02MAR21

Machine with Corner Post Display

A—Throttle Switch

5. Set the throttle switch (A) in the low speed (turtle) position.

IMPORTANT: After full load operation, do not stop engine suddenly.



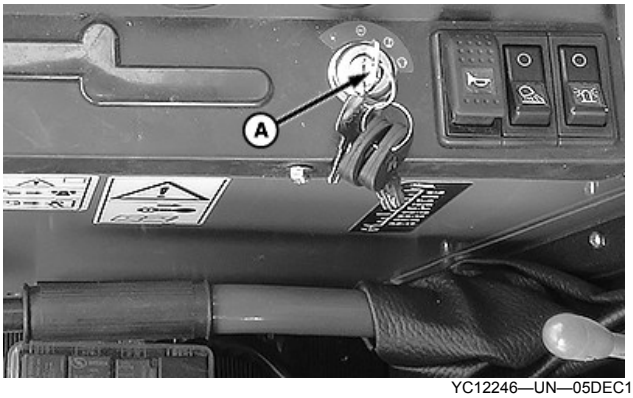
YC8211—UN—21JAN15

A—Header Engage Lever
B—Separator Engage Lever
C—Unloading Auger Engage Lever

6. Before stopping the engine, disengage the header engage lever (A), the separator engage lever (B), and the unloading auger engage lever (C).

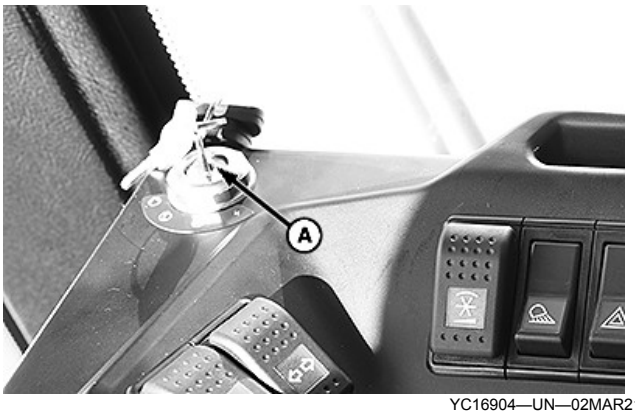
7. Before stopping the engine, run it at idle speed for 2 minutes.

IMPORTANT: If the engine is suddenly stopped, some components of the engine are over heated. Immediately restart the engine. Remove the key and stop the engine after engine runs at idle speed for 1—2 minutes,



YC12246—UN—05DEC17

Machine with Murphy Gauge



YC16904—UN—02MAR21

Machine with Corner Post Display

A—Key Switch

8. Turn the key switch (A) to shut off engine.

IMPORTANT: Set the park brake, and remove the key before leaving machine.

YC16799—UN—01MAR21

A—Park Brake Lever

9. Set the park brake.

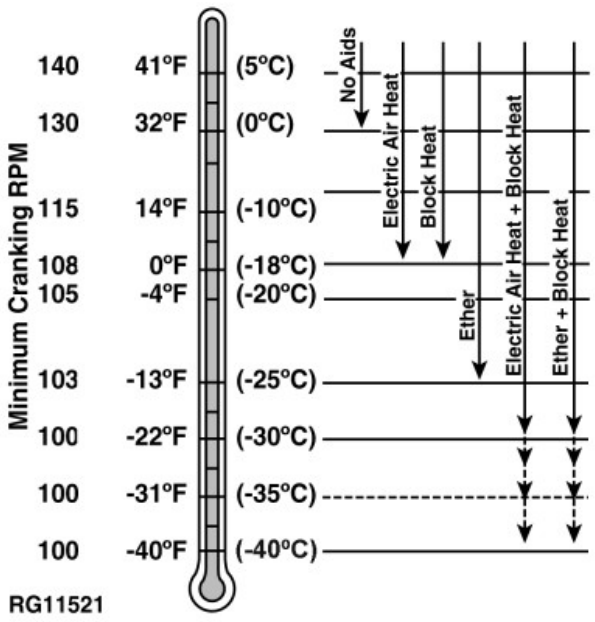
CP00834,0008A38-19-03MAR21

Start Engine in Cold Weather Conditions

YC1314—UN—29NOV12

TS1356—UN—18MAR92

Use Starting Fluid with Caution



RG11521—19—10JAN01

Cold Working Start Guide

CAUTION: If engine has air intake heater or preheat plug, never use starting fluid. Ether injection starting fluid is highly flammable and potentially explosive and can cause serious personal injury.

Do not use starting fluid near flames, sparks, or fire. Never burn or puncture a starting fluid can.

Engine is equipped with cold weather start aid such as the intake air heater, coolant heater, fuel heater, or ether injector.

Starting aids are required below 0°C (32°F). When temperature is higher, using auxiliary start aid can improve starting performance. Auxiliary start aid is also needed if load is too high when starting or idling.

Use specified engine oil (see Diesel Engine Oil — Tier 3 and Stage III in Fuel, Coolant, and Lubricants section) to start the engine in cold weather conditions.

Synthetic oil has better low temperature fluidity, especially in cold weather conditions.

If temperature is below -30°C (-22°F) or altitude is above 1500 m (5000 feet), use auxiliary start aid. (See Using Booster Battery or Charger in Control of Combine section.)

1. Carry out all checks required in Pre-Start Checks in Control of Combine section.
2. Set throttle button to low speed (turtle) position.
3. Turn key to D position, but never start the engine before engine preheat reading becomes correct.
4. Turn key switch clockwise to Q position and start the engine. After engine has started, release key switch so that it returns to D position.
5. After engine has started, run engine at idle speed (not over 1200 rpm) to preheat. (See Preheat the Engine in Control of Combine section.)

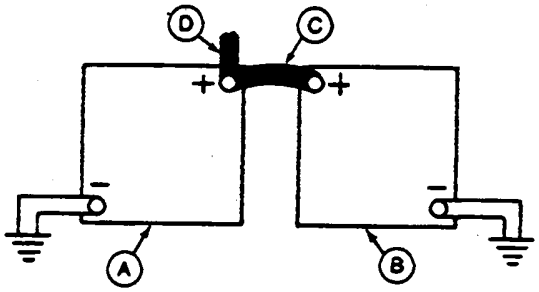
For more information about working in cold weather conditions, contact an authorized service dealer.

CP00718,0003CD4-19-08DEC17

Using Booster Battery or Charger

TS204—UN—15APR13

Battery Explosion



RG4678—UN—14DEC88

12-Volt System

A—12-volt Machine Battery
B—12-volt Booster Battery
C—Booster Cable
D—Starter Cable

Connect a 12-volt booster battery in parallel with the machine battery and aid starting in cold weather condition. A heavy load jumper cable must be used.

CAUTION: Gas released from battery can cause explosion. Keep battery away from sparks and flames. Shut off charger first before connecting or disconnecting battery charger. Make last connection and first disconnection at a position away from battery. Negative (-) cable must be connected last and disconnected first.

CAUTION: Battery terminals, connectors, and related accessories contain lead and lead compounds, as well as chemicals known to cause cancer or reproductive disease. Wash hands after contact.

IMPORTANT: Be sure that polarity is correct. Positive electrode must be connected to the positive terminal and negative electrode must be connected to the ground. Use a 12-volt booster battery for 12-volt electrical system.

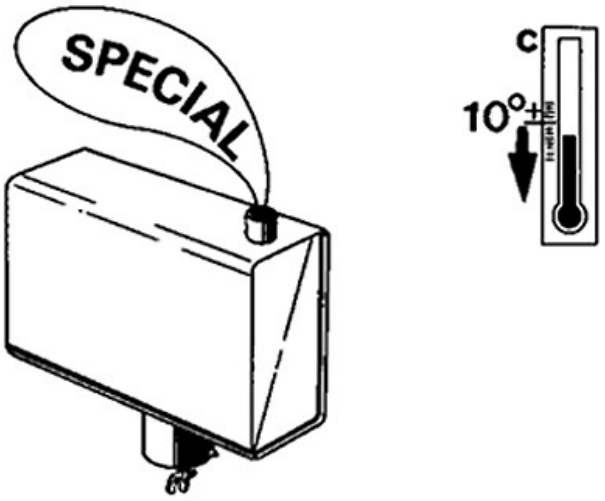
1. Connect to the booster battery to provide required voltage for the engine.

NOTE: To avoid sparks, make sure that the free end of the jumper cable does not contact the engine.

2. Connect one end of the jumper cable to the positive (+) terminal of the booster battery.
3. Connect another end of the jumper cable to the positive (+) terminal of the machine battery (connecting with starter).
4. Connect one end of another jumper cable to the negative (-) terminal of the booster battery.
5. After cable is connected, connect the negative (-) cable to the ground on the engine frame which is away from the battery.
6. Start the engine. After switching on the engine, disconnect jumper cable. First disconnect negative (-) cable.

CP00718,0003CD5-19-08DEC17

Fuel System



YC1315—UN—29NOV12

Drain water and impurities from the fuel tank, the sediment bowl, and the primary fuel filter every day before starting the engine.

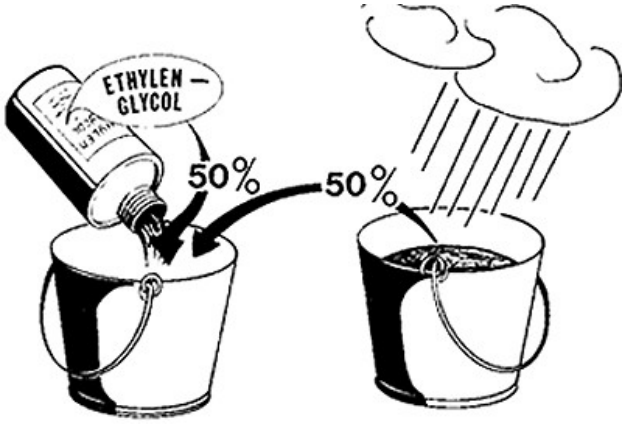
Refill fuel tank to prevent condensation and corrosion every day after harvesting, particularly after a harvest season.

In winter, when temperature is below 10°C, use special fuel or add anti-gelling compound to fuel to maintain proper viscosity.

See Diesel Fuel in Fuel, Coolant, and Lubricants section.

YC00758,0000323-19-26NOV18

Engine Cooling System



YC2395—UN—29NOV12

Coolant has been added into the engine cooling system in the factory to prevent corrosion and freezing (if air temperature is below -37°C).

It is recommended to use John Deere Cool-Gard™ II coolant.

See Diesel Engine Coolant (Engine with Wet sleeve Cylinder Liners) in Fuel, Coolant, and Lubricants section.

CP00718,0003CD7-19-08DEC17

Reminder

IMPORTANT: Only trained operators should be allowed to operate the combine.

Comply with relevant laws and regulations when driving on public roads.

CP00606,000177C-19-24MAY18

Cool-Gard is a trademark of John Deere

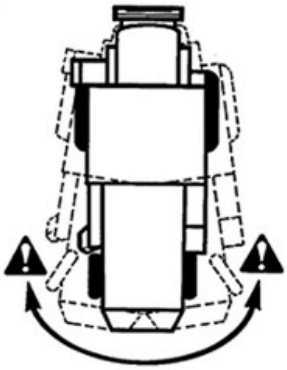
Avoid Excessive Engine Idling

YC1316—UN—24DEC12

Excessive idling causes engine coolant temperature to drop below the normal range. This, in turn, causes crankcase oil dilution , due to incomplete fuel combustion, and permits the formation of gummy deposits on valves, pistons and piston rings. It also promotes rapid accumulation of the engine sludge and unburned fuel in the exhaust system. When heated to normal temperature, engine can run at low idling speed. Factory setting of low idling speed is 1300 rpm. If the engine has been idling over 5 minutes, stop the engine first and restart it later.

CP00718,0003CD9-19-08DEC17

Steer and Drive



YC2755—UN—29OCT12

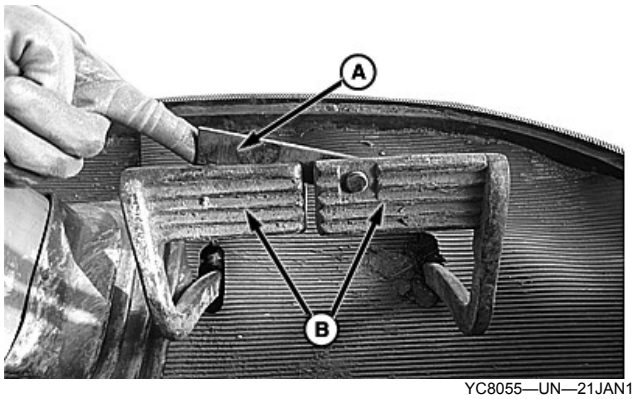
The steering wheels are at the rear of combine. Operator must be familiarized with steering.

The area at the rear of combine must have enough space to steer in both directions.

NOTE: Steering wheel is hard to turn when the combine is not running.

CP00606,000177D-19-24MAY18

Service Brake Pedals



YC8055—UN—21JAN15

YC8056—UN—04JAN15

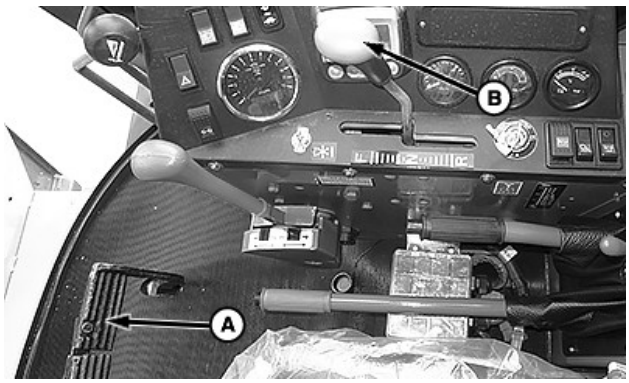
A—Latch
B—Brake Pedal (2 used)

Lock the brake pedals (B) together with latch (A) when driving on roads.

IMPORTANT: If the brake did not work, release the pedals and quickly step on it again.

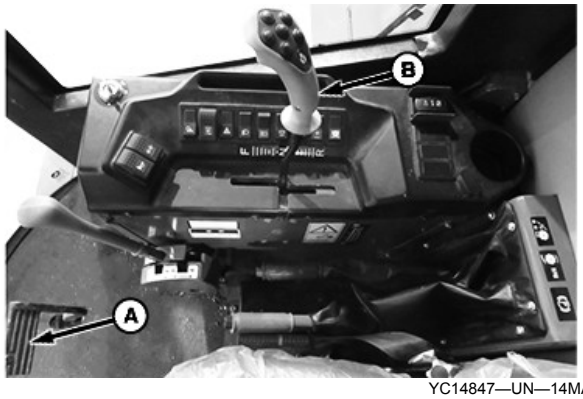
CP00834,0008A39-19-02MAR21

Operate Service Brake



YC12255—UN—21NOV17

Machine with Murphy Gauge



YC14847—UN—14MAY20

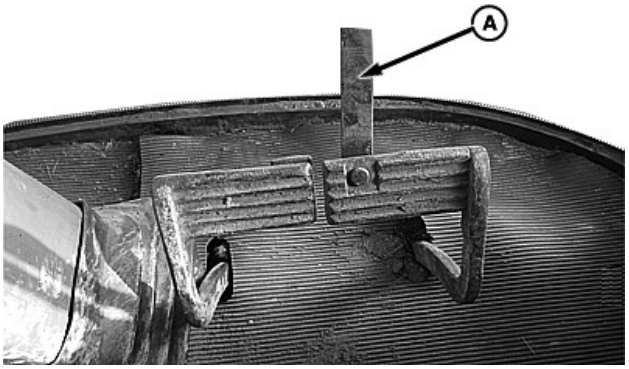
Machine with Corner Post Display

A—Service Brake Pedal (2 used)
B—Hydrostatic Drive Lever

1. Set the hydrostatic drive lever (B) to the neutral position.
2. Engage the service brake pedals (A).

CP00834,0008A3A-19-02MAR21

Operate Combine in the Field



YC8057—UN—04JAN15

A—Latch

Lift latch (A), unlock brake pedals to assist machine in sharp turns.

Press right brake pedal for a sharp turn to the right.

Press left brake pedal for a sharp turn to the left.

IMPORTANT: To brake the combine, press both pedals at the same time.

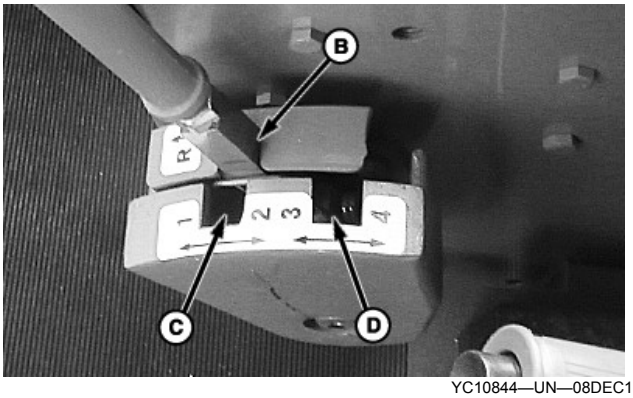
CP00718,0003CDE-19-08DEC17

Gear-Shift Operation

IMPORTANT: Shift gears when the combine is stopped steadily. Do not shift gears when the combine is moving.

YC8051—UN—21JAN15

A— Gear-Shift Lever



YC10844—UN—08DEC16

B— Slot R
C— Slot One—Two
D— Slot Three—Four

After pressing clutch pedal, place gear-shift lever (A) in required positions:

Slot R (Reverse): Place gear-shift lever in slot R (B), push forward.

Slot One—Two: Place gear-shift lever in slot one—two (C), push forward to gear one. Pull backward to gear two.

Slot Three—Four: Place gear-shift lever in slot three—four (D), push forward to gear three. Pull backward to gear four.

- Shift directly the gear-shift lever (A) to gear four for road transportation.
- Shift directly the gear-shift lever (A) to required gears when the combine is harvesting.

BVBWOZN,0004F6D-19-27JUN21

Throttle Switch

YC12244—UN—11DEC17

Machine with Murphy Gauge

YC14826—UN—11MAY20

Machine with Corner Post Display

A—Throttle Switch

There are three engine speed positions on the throttle switch (A).

Low-speed position (engine speed: 1300 rpm), medium-speed position (engine speed: 1800 rpm), and high-speed position (engine speed: 2400 rpm).

Set the throttle switch at the required position to change the engine speed (lower speed to high speed: turtle to rabbit).

CP00834,0008A3B-19-02MAR21

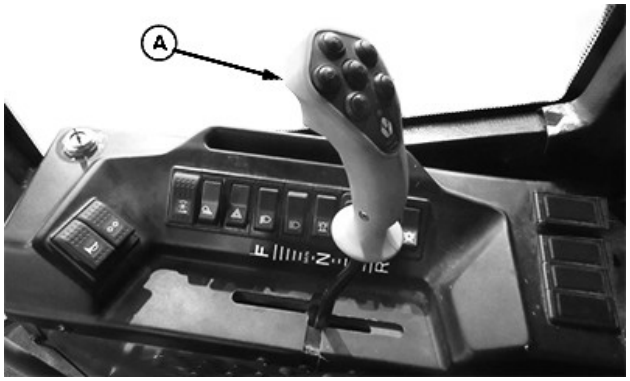
Ground Speed Control

NOTE: Before moving combine forward or backward, stop machine, set the hydrostatic drive lever in the neutral position, and shift into the desired gear.

1. Start the engine.
2. Raise the header to operation or transport position.
3. Observe obstacles and people around combine.
4. Sound horn and warn people around the machine.

YC11146—UN—17DEC17

Machine with Murphy Gauge



YC14827—UN—13MAY20

Machine with Corner Post Display

A—Hydrostatic Drive Lever

Move Forward:

1. Set the hydrostatic drive lever (A) in the NEUTRAL position.
2. Select the desired gear by the gear-shift lever.
3. Pushing the hydrostatic drive lever forward to get the desired speed

IMPORTANT: Select appropriate speed for road transportation and operation. The reverse range provides a large number of selectable speeds. Select the appropriate reverse speed for moving backward

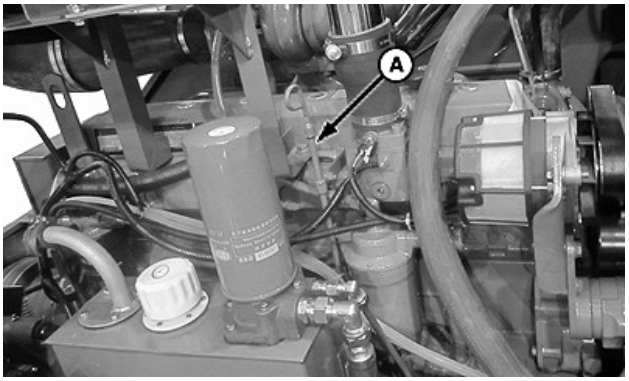
6. **Move Rearward:**
   1. Set the hydrostatic drive lever (A) in the NEUTRAL position.
   2. Select the desired gear by the gear-shift lever.
   3. Pushing the hydrostatic drive lever rearward to get the desired speed

CP00834,0008A3C-19-02MAR21

Check Engine Sump Oil Level

CAUTION: To prevent interruption of oil circulation when engine is in inclined position, oil level does not fall below the "MIN" marks on oil dipstick.

IMPORTANT: Checking engine oil level frequently can extend the engine service life.



YC7874—UN—11DEC14

A—Oil Dipstick

Oil level is kept within required range of the oil dipstick (A). Check every 10 hours (or everyday). Before removing oil dipstick (A), completely clean the area around the oil dipstick.

For more detailed information, see Pre-start Checks in Control of Combine section.

CP00606,0001780-19-24MAY18

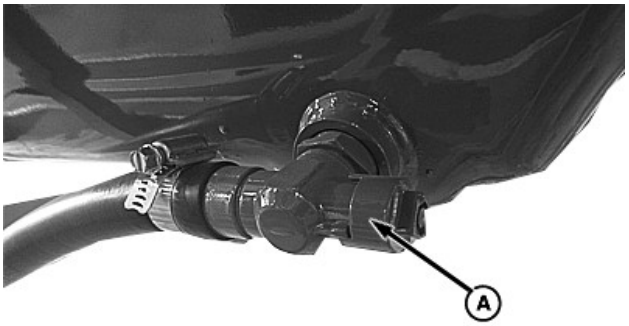
Change Engine Oil and Replace Filter

NOTE: During break-in, change engine oil and filter for the first time before 100 hours maximum of operation.

Change engine oil and filter according to the requirements, see Engine Oil and Filter Service Intervals in Fuel, Coolant, and Lubricants section. Change oil also after a harvest season.

Change engine oil and filter as follows:

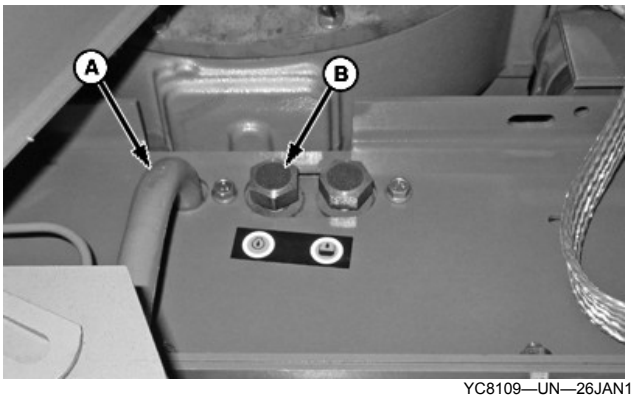
1. Warm up oil by running engine approximately 5 minutes. Shut off engine.



YC8631—UN—28FEB16

A— Drain Plug

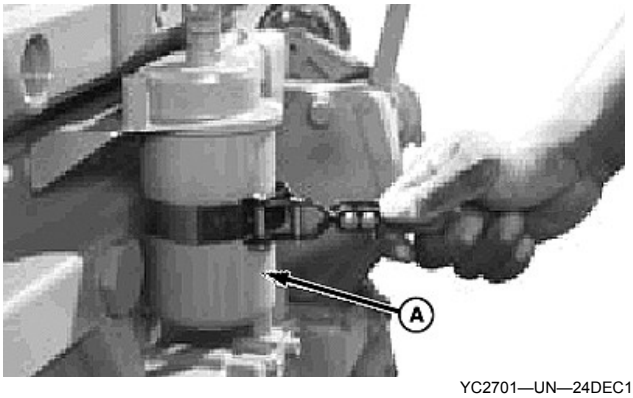
2. Loosen the drain plug (A).



YC8109—UN—26JAN15

A—Guide Pipe
B—Engine Oil Drain Plug

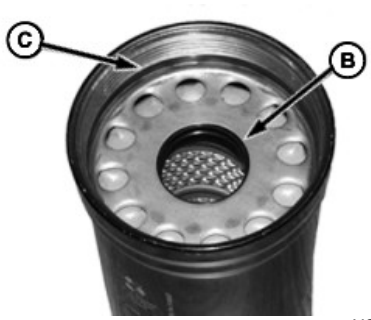
3. Loosen the engine oil drain plug (B), oil flows out from the guide pipe (A) to a suitable container.
4. Drain the crankcase oil from engine while warm.



YC2701—UN—24DEC12

A—Filter Element

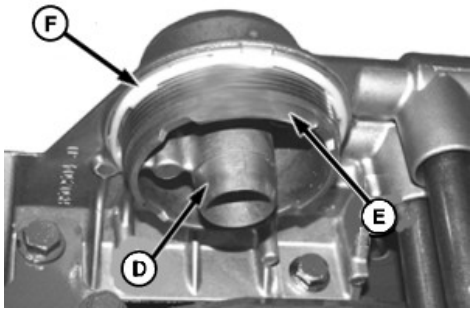
5. Turn and remove the filter element (A) using a suitable filter wrench. Discard the oil filter element.



YC9730—UN—21MAR16

B—Inner Seal
C—Outer Seal

6. Apply the clean engine oil to the new filter at the inner (B) and outer (C) seals , and the filter threads.



YC9731—UN—21MAR16

Filter and Mounting Header

D—Sealing Surface of Header
E—Sealing Surface of Header
F—Dust Seal

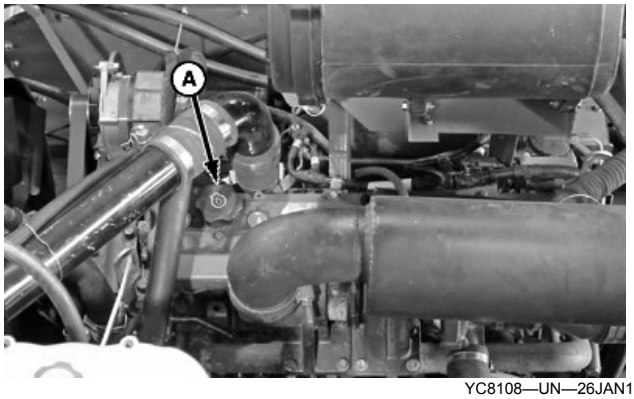
7. Wipe both sealing surfaces of header (D and E) with a clean rag. Ensure the notches in the dust seal (F) are properly installed in the slots in the housing. Replace the dust seal if damaged.

IMPORTANT: When installing the filter element, Hand tighten only. A filter wrench is used for removal only.

8. Install and tighten the oil filter by hand until firmly against the dust seal (F). DO NOT apply an extra 3/4 to 1-1/4 turn after gasket contact as done with the standard filters.
9. Tighten the drain plug.
10. Tighten the engine oil drain plug on the left-hand side of the machine.

IMPORTANT: Immediately after completing any oil change, crank engine for 30 seconds without permitting engine to start. Ensure adequate lubrication to the engine components before engine starts.

NOTE: Crankcase oil capacity varies slightly. ALWAYS fill the crankcase within the crosshatch marks on dipstick. DO NOT overfill.

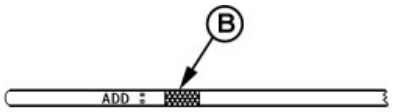


YC8108—UN—26JAN15

A—Oil Filler Cap

11. Fill engine crankcase with specified engine oil through the oil filler cap (A). (See Diesel Engine Oil — Tier 3 and Stage III in Fuel, Coolant, and Lubricants section.)

    To determine the correct oil quantity for your engine, see Engine in Table of Technical Parameters section.
12. Start engine and run to check for possible leaks.



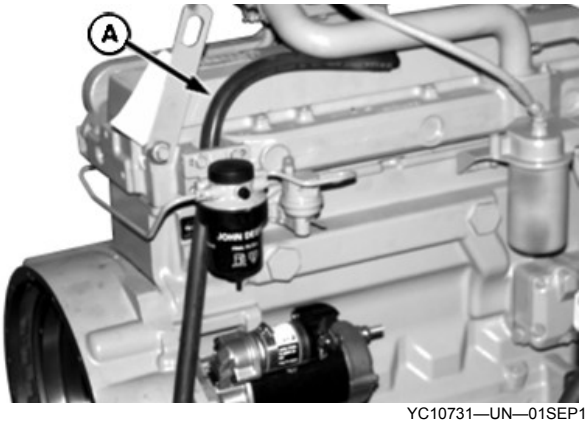
RG13730—UN—11NOV04

B—Crosshatch Marks

13. Stop engine and check oil level after 10 minutes. Ensure that oil level is within the crosshatch marks (B) on dipstick.

CP00606,0001781-19-24MAY18

Check Crankcase Ventilation System



YC10731—UN—01SEP16

A—Crankcase Ventilation Tube

If you operate the engine in the dusty conditions, check the system at shorter intervals.

1. Remove and clean the crankcase ventilation tube (A).

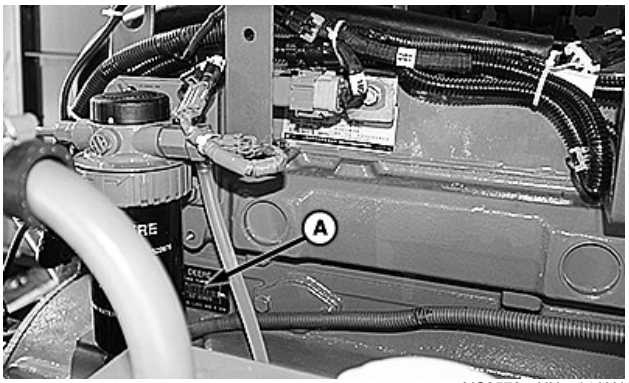
2. Install the ventilation tube. Ensure that the O-ring fits correctly the elbow adapter in the rocker arm cover. Tighten the hose clamp securely.

CP00718,0003EFA-19-12DEC17

Engine Serial Number

Record Engine Serial Number

Each engine has a John Deere engine serial number.



YC9576—UN—14JAN16

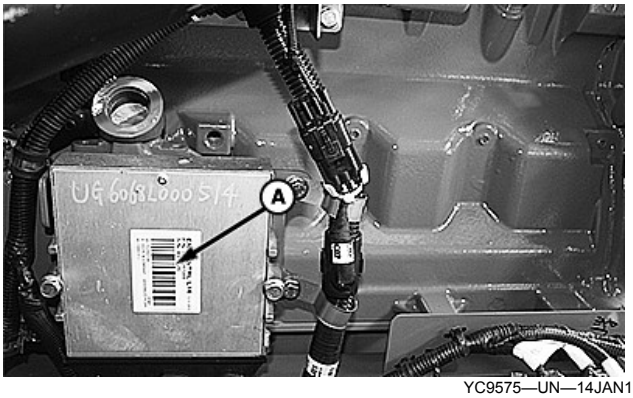
A—Engine Serial Number Plate

The engine serial number plate (A) is on the right-hand side of the cylinder block behind the fuel filter.

Record all of the numbers and letters found on your engine serial number plate in the spaces provided.

Engine Serial Number:	

Record Engine Control Unit (ECU) Serial Number



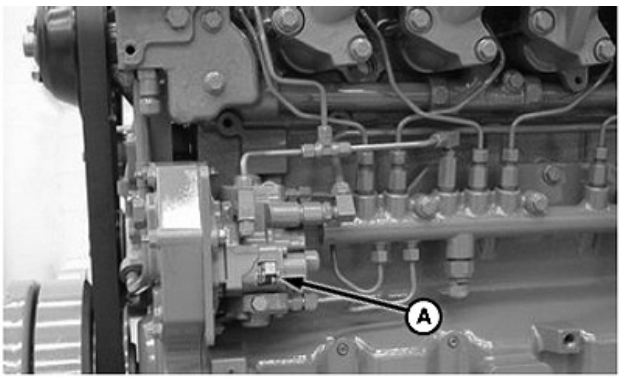
YC9575—UN—14JAN16

A—ECU Serial Number Label

Record the parts number and serial number information found on the serial number label (A) on the engine control unit (ECU) mounted on the engine.

Part No.	
Serial No.	

Record High-Pressure Fuel Pump Model Number



YC9732—UN—21MAR16

A—Serial Number Plate

Record the high-pressure fuel pump model and serial number information found on the serial number plate (A).

Model No.:	
RPM:	
Manufacture's No.:	
Serial No.:	

CP00606,0001782-19-24MAY18

Avoid Injury

YC2706—UN—29OCT12

CAUTION: Under sufficient pressure, emitted diesel can penetrate the skin, causing serious injury or death. Avoid hazard by relieving pressure before disconnecting lines. Before pressurizing this system, make sure that all joints are tightened and pipes are without damage. Fuel leak from the tiny hole is almost invisible. Use cardboard or wood plate to check for leaks, instead of using the hand. If injured by leaked fuel, immediately go to hospital for treatment.

CP00718,0003EFC-19-12DEC17

Do Not Open High-Pressure Fuel System

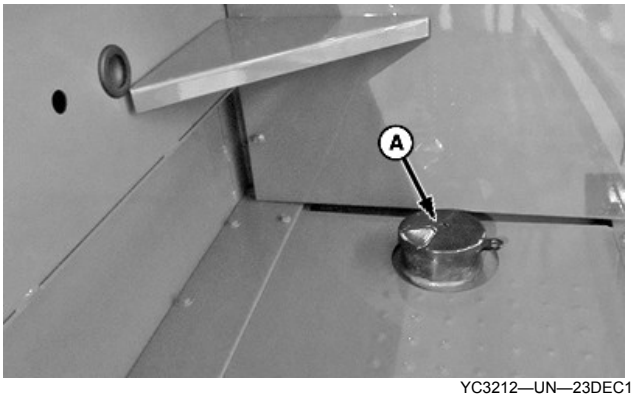
TS1343—UN—18MAR92

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.)

DX,WW,HPCR1-19-07JAN03

Fuel Tank Filler



YC3212—UN—23DEC13

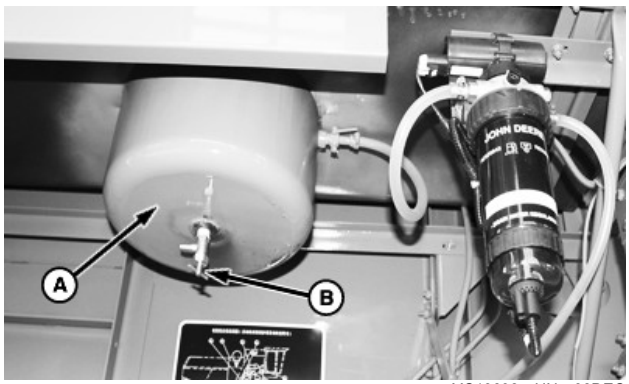
A—Filler Cap

Filler cap (A) of the fuel tank is at the lower part of the rear platform. The fuel tank filler has a vent.

Clean surrounding area before opening the filler cap.

CP00718,0003EFE-19-19DEC17

Fuel Tank Sediment Bowl



YC10698—UN—08DEC16

A—Sediment Bowl
B—Drain Valve

Sediment bowl (A) is at the lower part of the fuel tank for draining water and sediments.

Open the drain valve (B) daily before work starts. After all sentiments and water are drained out, close the drain valve.

CP00718,0003EFF-19-12DEC17

Electronic Fuel Transfer Pump

IMPORTANT: Avoid that material buildup leads to a fire or over-heating of the fuel transfer pump, clean area around the fuel transfer pump frequently.

YC3214—UN—03JAN14

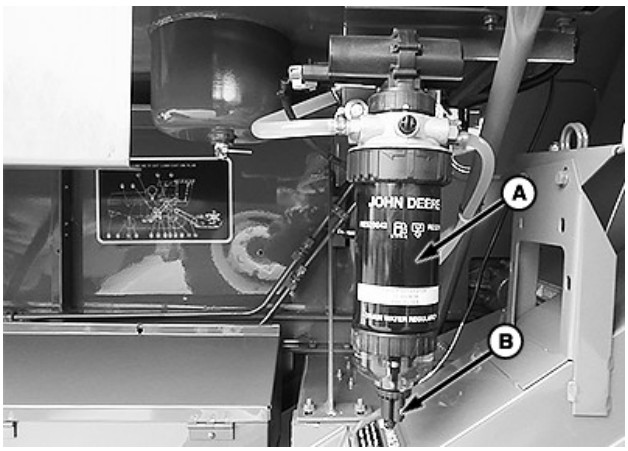
A—Electronic Fuel Transfer Pump

Electronic fuel transfer pump (A) is located above the primary fuel filter.

The engine control unit (ECU) controls electronic fuel transfer pump. When the key switch is turned to D position, electric fuel pump starts. If engine does not start within 2 minutes, engine control unit (ECU) stops the electric fuel transfer pump.

CP00718,0003F00-19-12DEC17

Primary Fuel Filter



YC11162—UN—27DEC16

A—Primary Fuel Filter
B—Drain Plug

The primary fuel filter (A) is located in front of the fuel tank.

IMPORTANT: Drain water into a suitable container and dispose of properly.

The primary fuel filter separates water from the fuel.

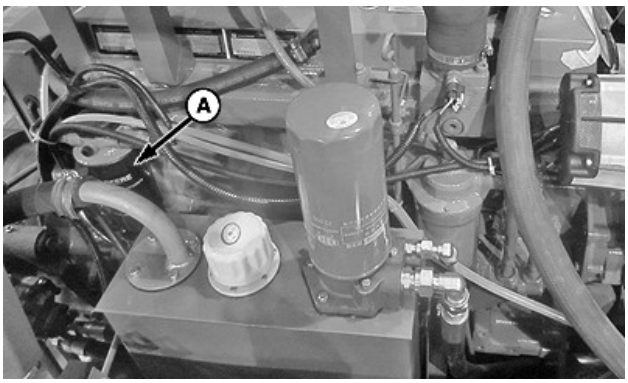
Check water and sediment in the bowl daily, shut off engine and drain water and sediment as needed.

If there is too much water in fuel, an alarm displays in the Murphy gauge or the corner post display, then change the fuel.

CP00834,0008B1E-19-10MAR21

Final Fuel Filter

IMPORTANT: Never fill the unfiltered fuel into the injection pump.



YC3230—UN—03JAN14

A—Final Fuel Filter

Final fuel filter (A) is located at the rear side of engine.

CP00718,0003F02-19-12DEC17

Replace Fuel Filter Elements

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting fuel or other lines. Tighten all connectors before applying pressure. Keep hands and body away from pinholes or nozzles from which fluids eject under high pressure. Search for leaks using a piece of cardboard or wood plate. Do not use bare hands to check for leaks.

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 result. Doctors unfamiliar with this type of injury call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.

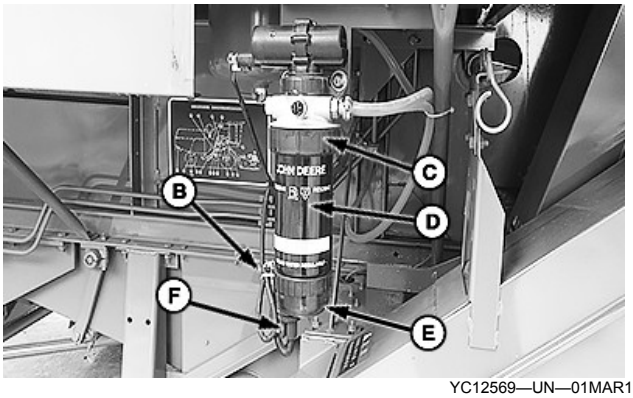
For engine equipped with the primary fuel filter and final fuel filter, change both filter elements every 200 hours.

YC8114—UN—26JAN15

Open Position Shown

A—Fuel Shutoff Valve

1. Close the fuel shutoff valve (A).
2. Thoroughly clean the fuel filter assemblies and surrounding areas.



YC12569—UN—01MAR18

Primary Fuel Filter

B—Connector
C—Retaining Ring

D—Filter Element
E—Water Separator Bowl
F—Fuel Drain Plug

YC8116—UN—26JAN15

Final Fuel Filter

G—Retaining Ring
H—Filter Element
I—Fuel Drain Plug

3. Disconnect the connector (B) of the sensor.
4. Remove the fuel drain plugs (F and I) and drain fuel into a suitable container.

NOTE: Lifting the retaining rings as they are rotated helps to get them pass raised locators.

5. Firmly grasp the retaining rings (C and G), rotate them 1/4 turn clockwise (when viewed from the top). Remove the retaining rings (C and G) and filter elements (D and H) together.
6. Inspect the filter mounting base for cleanliness. Clean as required.
7. Remove the water separator bowl (E) from filter. Drain and clean the water separator bowl. Dry with the compressed air. Install bowl onto the new filter element. Tighten securely.
8. Install the new filter elements onto the mounting bases. Be sure that filter elements are properly indexed and firmly seated on bases. It is necessary to rotate filters for correct alignment.
9. Align keys on the filter elements with slots in the filter bases.

NOTE: The proper installation is indicated when a "click" is heard and a release of the retaining ring is felt.

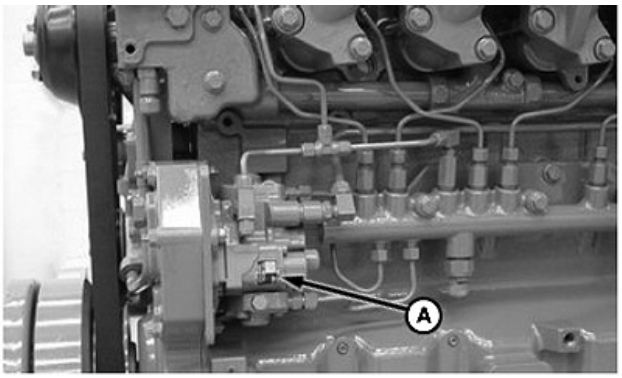
10. Install retaining rings onto the mounting bases, make sure that dust seals are in place on the filter base. Hand tighten rings counterclockwise (about 1/3 turn) to snap into the detents. Do not overtighten the retaining rings.
11. Reconnect the connector of the sensor.
12. Open the fuel shutoff valve and bleed the fuel system. Tighten the bleed plug.

CP00606,0001784-19-24MAY18

Do Not Modify Fuel System

TS1343—UN—18MAR92

High-Pressure Fuel Lines



YC9732—UN—21MAR16

A—High-Pressure Fuel Pump

CAUTION: 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.

IMPORTANT: Avoid causing seizure of pump parts, NEVER steam clean or pour cold water on an injection pump while it is still warm.

Modification or alteration of the high-pressure fuel pump (A), the injection timing, or the fuel injectors in ways not recommended by the manufacturer terminates the warranty obligation to the purchaser.

In addition, tampering with the fuel system which alters emission-related equipment on engines results in fines or other penalties, per EPA regulations or other local emission laws.

Do not attempt to service injection pump or fuel injectors yourself. Special training and special tools are required. (See your authorized servicing dealer or engine distributor.)

CP00718,0003F04-19-12DEC17

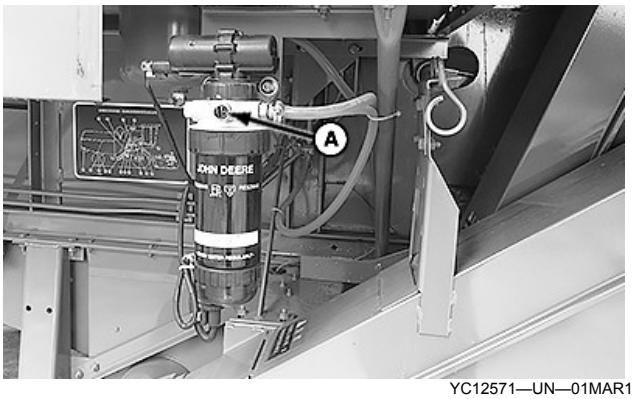
Bleed the Fuel System

Bleed the fuel system in the following situations:

- Fuel filter element is changed.
- Fuel in the tank is used up.
- Fuel line and fuel injector are removed, or fuel pump is cleaned.
- Engine is idling for a long time.

CP00718,0003F05-19-12DEC17

Bleed at the Primary Fuel Filter



YC12571—UN—01MAR18

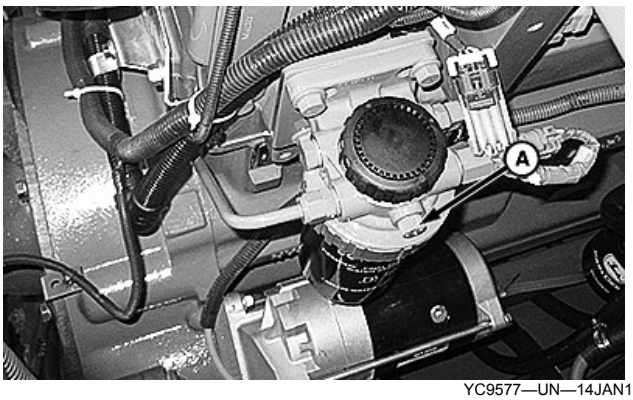
A—Bleed Screw

Bleed the low-pressure fuel system according to following steps:

1. Fill fuel tank to the full level.
2. Turn the key switch to D position, start the electronic fuel transfer pump.
3. Loosen the bleed screw (A).
4. When no air bubbles emerge, tighten the bleed screw.

CP00606,0001786-19-24MAY18

Bleed at the Final Fuel Filter



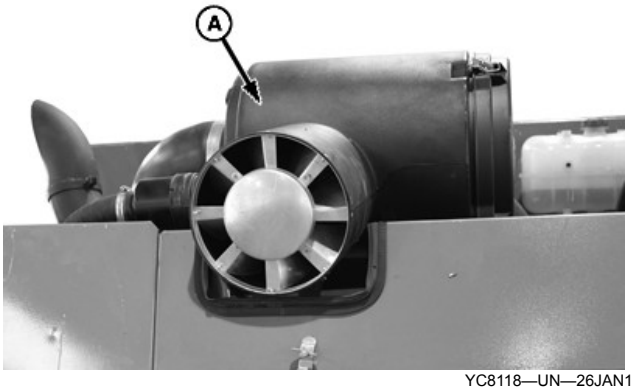
YC9577—UN—14JAN16

A—Bleed Screw

Turn the key switch to D position, start electronic fuel transfer pump. Loosen the bleed screw (A) and observe the bleed hole. When no air bubbles emerge, tighten the bleed screw.

CP00718,0003F07-19-12DEC17

Air Filter



YC8118—UN—26JAN15

A—Air Filter

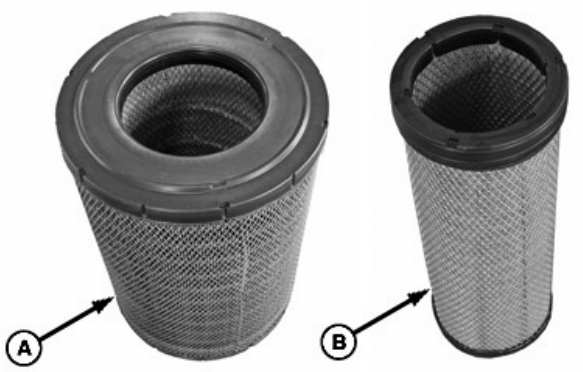
IMPORTANT: DO NOT start engine without the air filter.

Air filter (A) is located above the engine compartment.

When the Murphy Gauge shows that air filter is plugged, clean up immediately.

CP00718,0003F08-19-12DEC17

Air Filter Elements



YC8134—UN—26FEB15

A—Primary Filter Element
B—Secondary Filter Element

IMPORTANT: When installing the primary filter element and secondary filter element, make sure that the positions are correct and keep them clean.

Each filter has one dry-type primary filter element (A) and one secondary filter element (B). If the primary filter element is damaged, the secondary filter element can prevent dust from entering the engine.

CP00718,0003F09-19-12DEC17

Clean the Primary Air Filter Element

CAUTION: Shut off engine, set park brake and remove key.

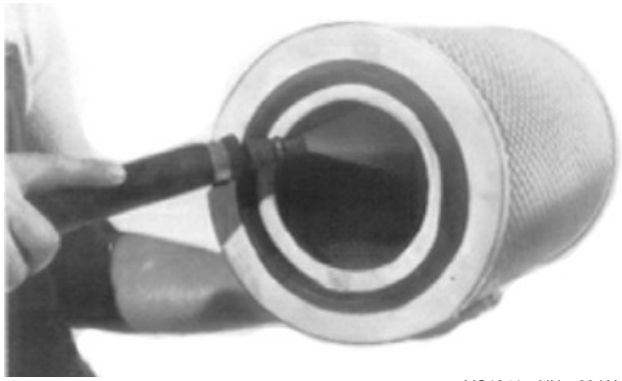
YC8135—UN—26FEB15

Cleaning in the field (simple cleaning):

When filter element is cleaned in the field, place it onto a soft surface, and use hand to pat it.

CP00718,0003F0A-19-12DEC17

Use Compressed Air to Clean the Air Filter

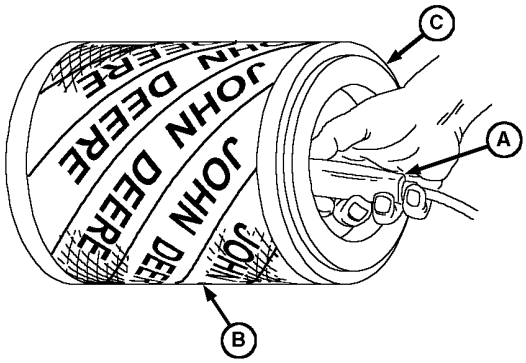


YC1341—UN—03JAN14

When using compressed air to clean the filter, blow from the inside and the pressure does not exceed 500 kPa (5 bar). After ten times of the simple cleaning, use compressed air to clean again.

CP00718,0003F0B-19-12DEC17

Check Primary Air Filter Element



H59771—UN—31AUG99

A—Light
B—Outer Screen
C—Filter Gasket

1. Check carefully for holes holding a bright light (A) inside the filter element. Scrap filter element even if it only has a tiny hole.
2. Make sure that the outer screen (B) is not bent. Vibration quickly wears the filter and even makes a hole.
3. Make sure that filter gasket (C) is in good condition. If the gasket is damaged or missing, replace the primary air filter element.

CP00718,0003F0C-19-12DEC17

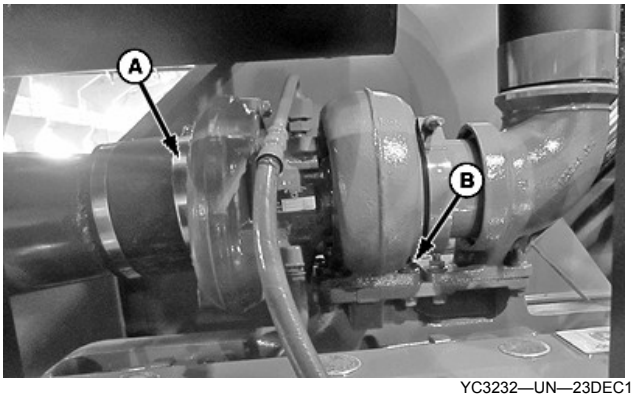
Store Air Filter Element

YC1343—UN—03JAN14

To prevent dust and damage, store the clean filter element in a plastic bag.

CP00718,0003F0D-19-12DEC17

Turbocharger



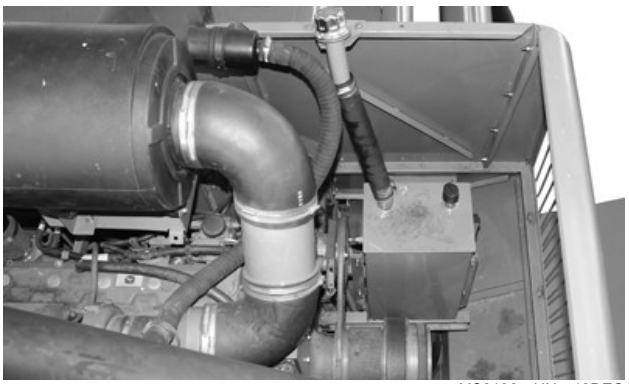
YC3232—UN—23DEC13

A—Connector
B—Connection point

Carefully check all connectors (A) and connection points (B) every 200 hours, ensure that the turbocharger and lubricant pipes do not leak.

CP00718,0003F0E-19-12DEC17

Air Intake Hose



YC8136—UN—12DEC17

Hose clamps are used to seal and connect the steel pipes and rubber hoses. Check at least once a year if all hose clamps are sealed and tight. Replace hoses and hose clamps as necessary.

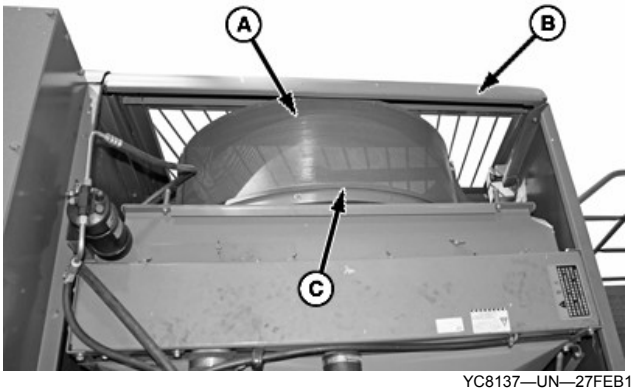
CP00718,0003F0F-19-19-12DEC17

Cooling System

Cooling system is composed of the radiator, fan, rotary screen, vacuum tube, coolant pump, thermostat, and connection hoses.

CP00718,0003F10-19-12DEC17

Clean Rotary Screen



YC8137—UN—27FEB15

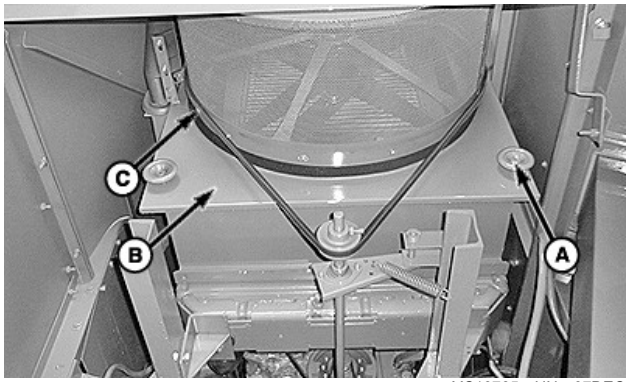
A—Rotary Screen
B—Shield
C—Drive Belt

Keep the rotary screen (A) clean. Clean the chaff and dust from the outside of rotary screen daily.

Clean several times daily in the dusty conditions.

CP00834,0008F12-19-29JUN21

Clean Radiator



YC10765—UN—07DEC16

A—Knob (2 used)
B—Rotary Screen
C—Drive Belt

IMPORTANT: Keep the radiator clean. Clean the chaff and dust on the radiator thoroughly daily.

Clean several times daily in the dusty conditions.

1. Remove the drive belt (C).
2. Remove the knobs (A).
3. Fold up and support the rotary screen (B).
4. Clean the outside of radiator by a brush. If the radiator is dirty, use the compressed air blowing from inside out.

IMPORTANT: When using compressed air for cleaning, be careful to avoid the cooling fin damage.

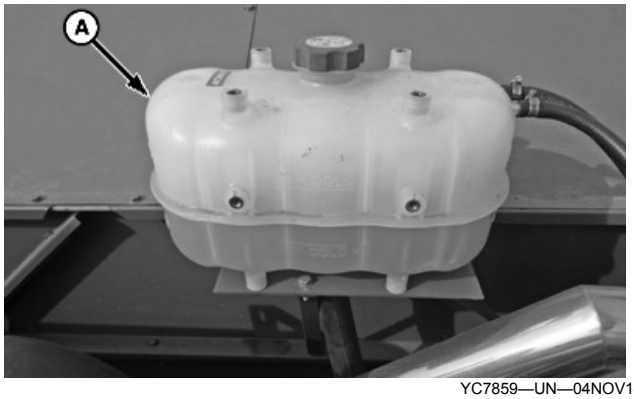
CP00834,0008F13-19-29JUN21

Engine Coolant

CAUTION: When engine is hot, cooling system is at hot state under high pressure. To avoid burning, NEVER open the expansion tank cap at the hot state.

CAUTION: Only add coolant when engine is at cold state, to avoid damage to the engine.

IMPORTANT: Before winter comes, check the condition of coolant mixture. Engine is filled with DEERE antifreeze at factory, to prevent engine from freezing at temperatures above -37°C.



YC7859—UN—04NOV14

A—Expansion Tank

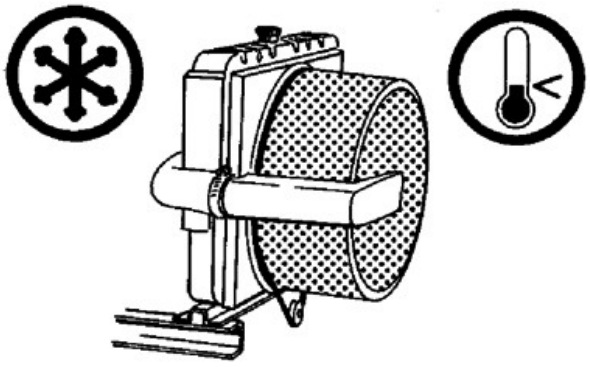
Expansion tank (A) is located outside of the rear wall of the grain tank.

Expansion tank is a translucent plastic container. Maximum (MAX) and minimum (MIN) marks are on the side of the tank, so that the coolant level can be checked without opening the tank cover.

Daily check the coolant level (or every 10 hours of operation). The coolant level is between MAX and MIN marks at the cold state.

CP00606,0001787-19-24MAY18

Winter Operation of Rotary Screen

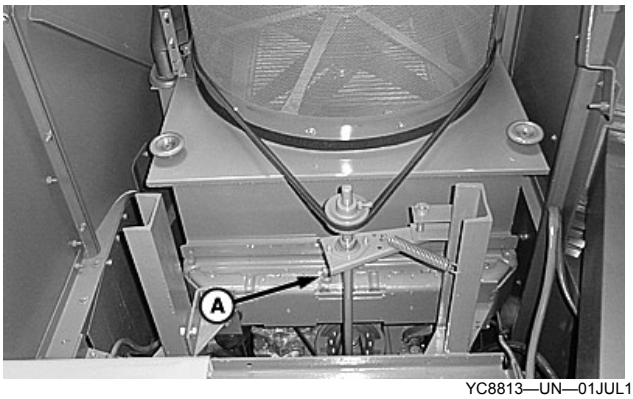


YC1302—UN—16FEB12

IMPORTANT: If the ice and snow accumulate on the rotary screen, the rotary screen belt breaks easily when engine starts. When temperature is below 0°C, ALWAYS check if the rotary screen can rotate smoothly before starting the engine.

CP00718,0003F16-19-12DEC17

Water Drain Valve



YC8813—UN—01JUL15

A—Water Drain Valve

Water drain valve (A) is located at the bottom of the radiator. Drain out the coolant by opening water drain valve as needed.

CP00606,0001789-19-24MAY18

Cooling System Flushing Procedure

IMPORTANT: It is recommended to use John Deere Cool-Gard coolant. Change interval is 2 years if using other coolant.

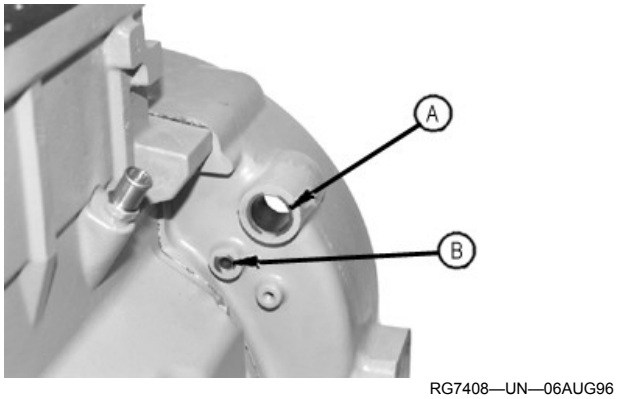
1. Flush the cooling system once every 6 years.
2. After draining all coolant, close drain valve (or plug) and add clean water.
3. Start the engine, warm the oil to the normal working temperature. Shut off engine.
4. Turn on the heater in the cab (if equipped) and keep it on until cleaning of cooling system ends.
5. Drain water before the rust and sediment settle.
6. Open the drain valve and use general cooling system cleaning agent to clean the cooling system.
7. After using cleaning agent to clean the cooling system, refill clean water into the system. When engine runs and water temperature reach normal working level, shut off engine, drain water away.
8. Close the drain valve and add the appropriate amount of John Deere Cool-Gard coolant.

CP00718,0003F18-19-12DEC17

Check and Adjust Engine Valve Clearance

CAUTION: To prevent accidental starting of engine while performing valve adjustments, always disconnect the NEGATIVE (—) battery terminal.

IMPORTANT: Valve clearance MUST BE checked and adjusted with engine COLD.



RG7408—UN—06AUG96

Flywheel Housing Timing Holes

A—Timing/Rotating Hole
B—Timing Pin Hole

1. Remove the rocker arm cover and crankcase ventilator tube.

IMPORTANT: Visually inspect contact surface of the valve tips and wear pads of rocker arm . Check all parts for excessive wear, breakage, or cracks. Replace parts that show visible damage.

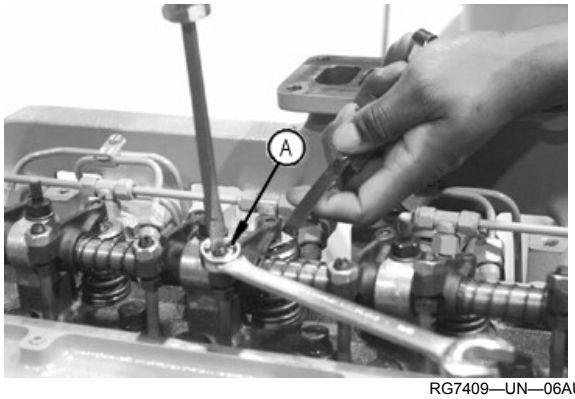
Inspect valve clearance of rocker arms. If the clearance is too big, inspect thoroughly to identify damaged parts.

2. Remove plastic plugs or cover plate from the engine timing/rotation hole (A) and timing pin hole (B).
3. Use JDE83 or JDG281A flywheel turning tool. Rotate the engine flywheel in running direction (clockwise viewed from front) until No. 1 cylinder is at TDC compression stroke. Insert JDG1571 Timing Pin in flywheel.

   If No. 1 cylinder rocker arms are loose, the engine is at No. 1 TDC compression.

   If No. 1 cylinder rocker arms are not loose, rotate engine one full revolution (360°) to No.1 TDC compression.
4. With engine lock-pinned at TDC of No. 1 compression stroke of piston. Check valve clearance to following specifications.

Specification	
Intake Valve Clearance for Checking (Rocker Arm-to-Valve Tip) (Engine Cold)—Clearance	0.31—0.38 mm
Exhaust Valve Clearance for Checking (Rocker Arm-to-Valve Tip) (Engine Cold)—Clearance	0.41—0.48 mm



RG7409—UN—06AUG96

A—Jam Nut

5. If valves need adjusting, use the adjustment procedure of valve clearance on the next page and adjust to the specification. Loosen the lock nut (A) on the rocker arm adjusting screw. Turn adjusting screw until feeler gauge slips with a slight drag. Hold the adjusting screw from turning with screwdriver and tighten the lock nut to specifications. Recheck the clearance again after tightening the lock nut. Readjust the clearance as necessary.

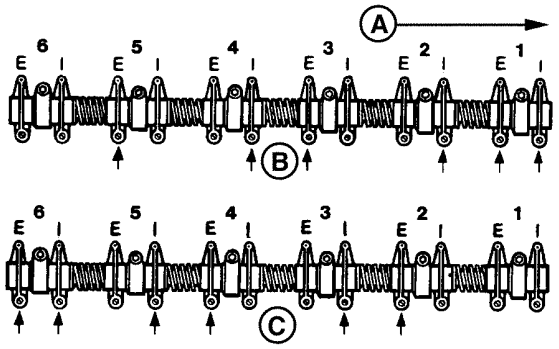
Specification	
Intake Valve Clearance for adjusting (Rocker Arm-to-Valve Tip) (Engine Cold)—Clearance	0.36 mm
Exhaust Valve Clearance for adjusting (Rocker Arm-to-Valve Tip) (Engine Cold)—Clearance	0.46 mm
Screw Jam Nut—Torque	27 N·m

6. Replace the rocker arm cover and crankcase vent tube.

CP00718,0003F19-19-12DEC17

Valve Clearance Adjustment Procedure

NOTE: Fire order is 1-5-3-6-2-4



RG4777—UN—31OCT97

A—Front of Engine
B—No. 1 Piston TDC Compression
C—No. 6 Piston TDC Compression
D—Exhaust Valve
E—Intake Valve

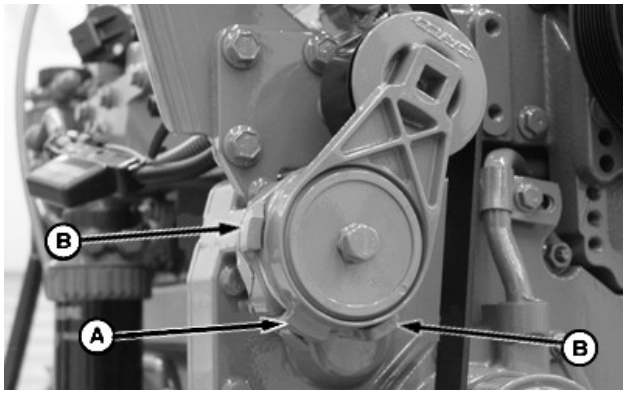
1. Lock No. 1 piston at TDC compression stroke (B).
2. Adjust valve clearance on No. 1, 3, and 5 exhaust valves and No. 1, 2, and 4 intake valves.
3. Turn crankshaft 360°. Lock No. 6 piston at TDC compression stroke (C).
4. Adjust valve clearance on No. 2, 4, and 6 exhaust valves and No. 3, 5, and 6 intake valves.

CP00718,0003F1A-19-12DEC17

Check Belt Tensioner Spring Tension and Belt Wear

Belt drive systems equipped with automatic (spring) belt tensioners cannot be adjusted or repaired. The automatic belt tensioner is designed to maintain proper belt tension over the life of the belt. If tensioner spring tension is not within specification, replace tensioner assembly.

Check Belt Wear



YC9734—UN—21MAR16

Belt Tensioner

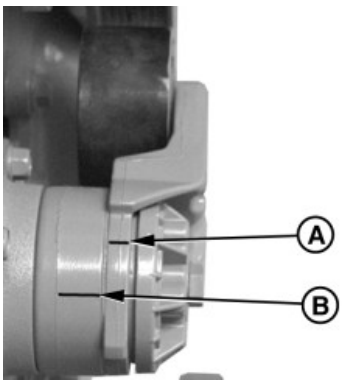
A—Cast Stop
B—Cast Stops(2 used)

The belt tensioner is designed to operate within the limit of arm movement provided by the cast stops (A and B) when correct belt length and geometry are used. Visually inspect cast stops (A and B) on belt tensioner assembly.

If the tensioner stop on the swing arm (A) is hitting the fixed stop (B), check mounting brackets (alternator, belt tensioner, idler, and so on) and the belt length.

Replace belt as needed.

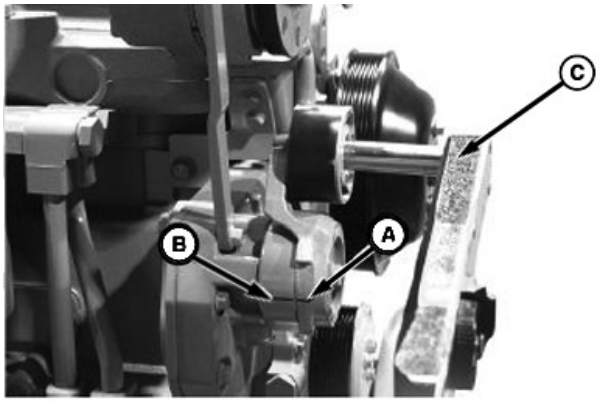
Check Tensioner Spring Tension



RG7977—UN—14NOV97

Marks on Tensioner

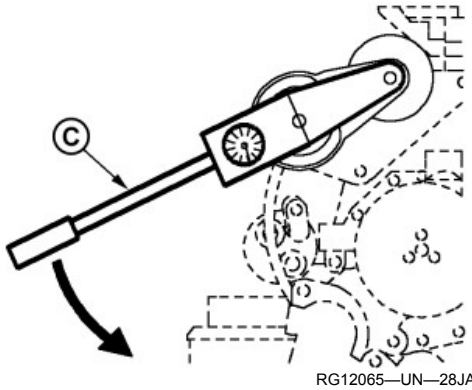
A—Mark
B—Mark



YC9735—UN—21MAR16

Align Marks

A—Mark
B—Mark
C—Torque Wrench



RG12065—UN—28JAN02

Align Torque Wrench with Pulley and Tensioner

C—Torque Wrench

A belt tension gauge does not give an accurate measure of the belt tension when the automatic spring tensioner is used. Measure tensioner spring tension using a torque wrench and procedure outlined:

NOTE: While belt is removed, inspect pulleys and bearings. Rotate and feel for hard turning or any unusual sounds. If pulleys or bearings need replacement, see your John Deere dealer.

1. Release tension on belt using a long-handled 1/2 inch drive tool in the square hole on the tensioner arm. Remove belt from pulleys.
2. Release tension on the tensioner arm and remove drive tool.
3. Put a mark (A) on the swing arm of the tensioner as shown.
4. Measure 21 mm from mark (A) on the swing arm and put a mark (B) on tensioner mounting base.
5. Install torque wrench (C) so that it is aligned with centers of pulley and tensioner. Rotate the swing arm using a torque wrench until marks (A and B) are aligned.

NOTE: Threads on the belt tensioner roller cap screw are LEFT-HAND threads.

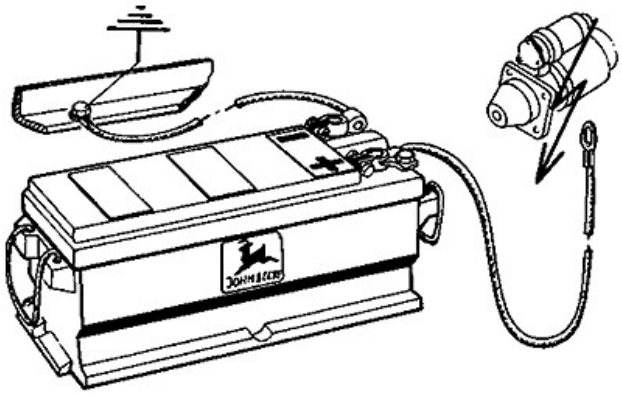
6. Record the torque wrench measurement and compare with specification. Replace tensioner assembly as required.

Specification

Spring Tension—Torque	18—22 N·m 13—16 lb·ft

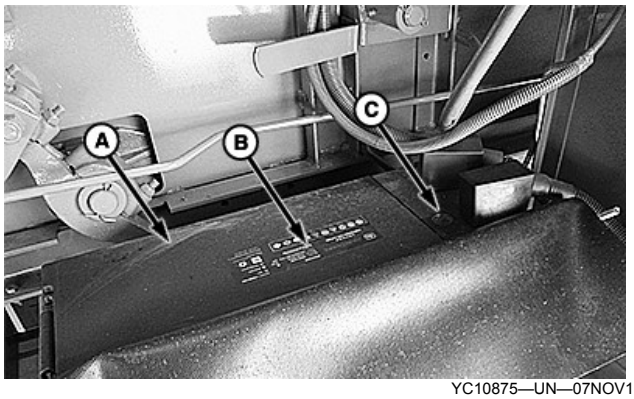
JL31334,00017CB-19-07MAY18

Precautions of Using Battery



YC3152—UN—30NOV12

1. Check if battery has cracks and leakage of electrolyte.
2. Always check if the connection of cables is firm. If necessary, use a steel brush or scraper to clear oxides on the binding post and the post head. Smear a thin layer of vaseline or lubricate grease to prevent formation of sulfate.
3. If voltage is too high, switch on the headlight. Check the voltage after headlight is lit for 30 seconds. If voltage is too low, charge the battery. Check the voltage again.
4. Use the multimeter to measure the battery terminal voltage. Usually the terminal voltage is ≥12.6 V.
5. Negative electrode of battery is grounded through the main switch (grounding), and positive electrode is connected to power supply. Do not reverse polarity of electrodes.
6. Never use wire-spark method to check the voltage. When the alternator is running, never disconnect the wiring to the battery.



YC10875—UN—07NOV16

7. When the battery becomes almost discharged, remove and recharge it. Never forcibly start the machine. Forcibly starting the machine may result in bending the electrode plate, falling off active materials and premature scrapping of battery.
8. Before repairing electrical components, disconnect the battery main switch. Otherwise, electrical components can be damaged.
9. When the combine requires welding, grounding wire of the welding machine is as close as possible to the weld. Disconnect battery main switch and remove alternator positive wire (red).
10. Measure the battery voltage. When the alternator is not working, the voltage is 12—12.5 volts. When the alternator is working, the voltage is 12.8—13.8 volts.
11. When the electrolyte level drops too fast, check for leakage or if the output voltage of alternator is too high.
12. Battery must be placed securely on the combine.

IMPORTANT: When the battery is not in use for a long time, remove and store it indoor.

CP00718,0004098-19-13DEC17

Check Battery Charge

IMPORTANT: It is forbidden to add electrolyte to the maintenance-free battery. Battery cannot be tilted.

YC16756—UN—21JAN21

A—Maintenance-Free Battery
B—Label

Maintenance-free battery (A) is in the left side of the machine. Often check the color through the electric eye (C) according to information of label (B). Recharge or change the battery according to the color.

Color	Charge state
Green	Good
Black	Recharge
White	Lack of electrolytes , change the battery.

CP00834,0009001-19-03AUG21

Basic Electrical Component Handling / Precautions for Vehicles Equipped with Computer Controlled Systems

- When the key switch is on, it is forbidden to connect jumper cable.

  Reason: That generates voltage spikes which can damage electronic components.

- Disconnect battery connections before charging (if possible).

  Reason: Electric load of machine can slow down charging process. Battery charger can generate voltage spikes which can damage electronic components.

- When starting the machine, never exceed rated working voltage.

  Reason: Operation can damage electronic components.

- When the key switch is on or machine is running normally, never connect or disconnect electrical connector.

C—Electric Eye

  Reason: Operation can interrupt the computer program and cause computer system failure, and can generate voltage spikes which can damage electronic components.

- Except for special requirements, it is forbidden to do system test when electrical components are charged or grounded.

  Reason: Incorrect voltage connected to incorrect place of the electronic system can damage electronic components.

- When welding on machine, make sure that ground connector is connected to the welded components. For best protection, disconnect all electronic control units before welding.

  Reason: Welding produces high current which can damage wiring harness of ground circulation. Welding also generates voltage spikes which can damage electronic components.

CP00718,000409A-19-13DEC17

Starter

NOTE: When repairing electrical system, disconnect the ground cable.

When starting, if the starter does not run or runs slowly, refer to the following table to carry out checks. If the starter is faulty, contact the John Deere dealer.

Service the starter once a year.

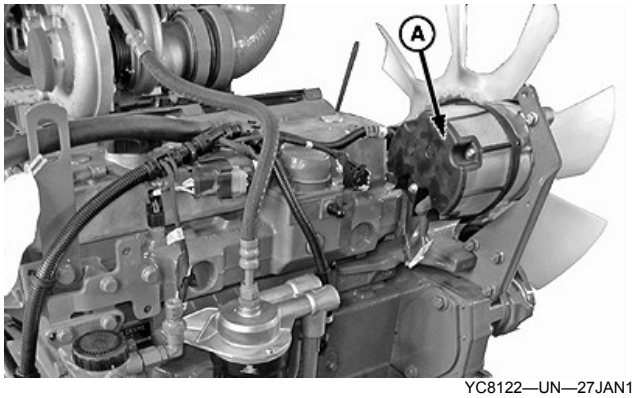
IMPORTANT: Total time for starting and preheat cannot exceed 10 seconds. Otherwise, the pre-heater, starter, and wiring can be damaged.

Cause	Maintenance measures
Ground wire is loose, dirty, or corroded.	Clean and tighten all binding posts.
Battery voltage is low.	Charge the battery.
Viscosity of engine oil is not correct.	Drain original engine oil and fill in specified engine oil.

CP00718,000409B-19-13DEC17

Alternator

IMPORTANT: If positive and negative terminals of battery are reversely connected, that can damage the alternator. When connecting the battery, ensure that positive and negative terminals are not reversed.



YC8122—UN—27JAN15

A—Alternator

Before operating the alternator (A), disconnect the ground cable.

Never ground the terminals or connect the jumper wire to any alternator terminal.

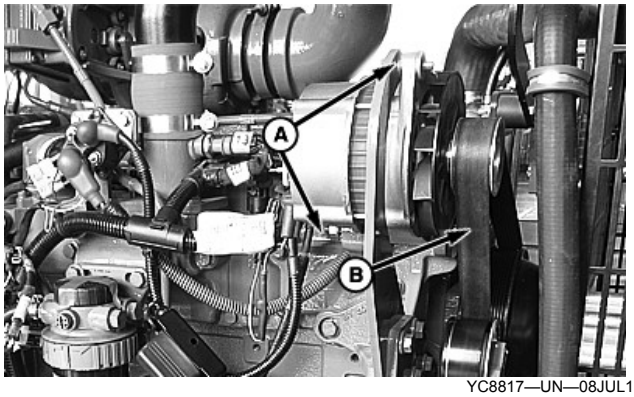
Do not connect or disconnect alternator wires when battery is connected or alternator is running.

Regularly clean up debris on the alternator cover and ensure good heat dissipation.

Avoid overloading the alternator, prohibit connecting other load or electrical equipment.

CP00606,000178B-19-25MAY18

Adjust and Check Tension of Alternator Drive Belt



YC8817—UN—08JUL15

A—Nuts (2 used)
B—Belt

IMPORTANT: Do not adjust belt too tight. Avoid damages to the belt.

Loosen nuts (A). Turn alternator downward, so that belt (B) is tensioned. Exert force of 39 N on the belt. Keep a belt deflection of 10-15 mm.

Check Alternator:

Check the alternator once annually by a qualified technician.

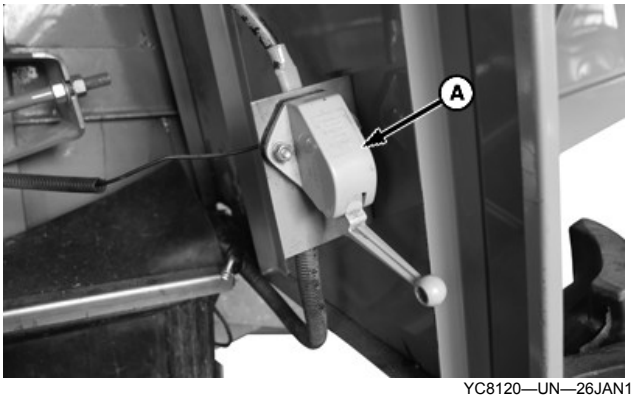
NOTE: Before servicing electrical system, disconnect battery ground cable.

JL31334,000179F-19-07MAY18

Main Switch

IMPORTANT: Main Switch does not control power to ECU. If machine is not used for a long period, disconnect battery ground cable.

IMPORTANT: In order to prevent ECU data loss, firstly turn key switch to OFF position, then set main switch back in OFF position in 30 seconds .



YC8120—UN—26JAN15

Main Switch—OFF Position Shown

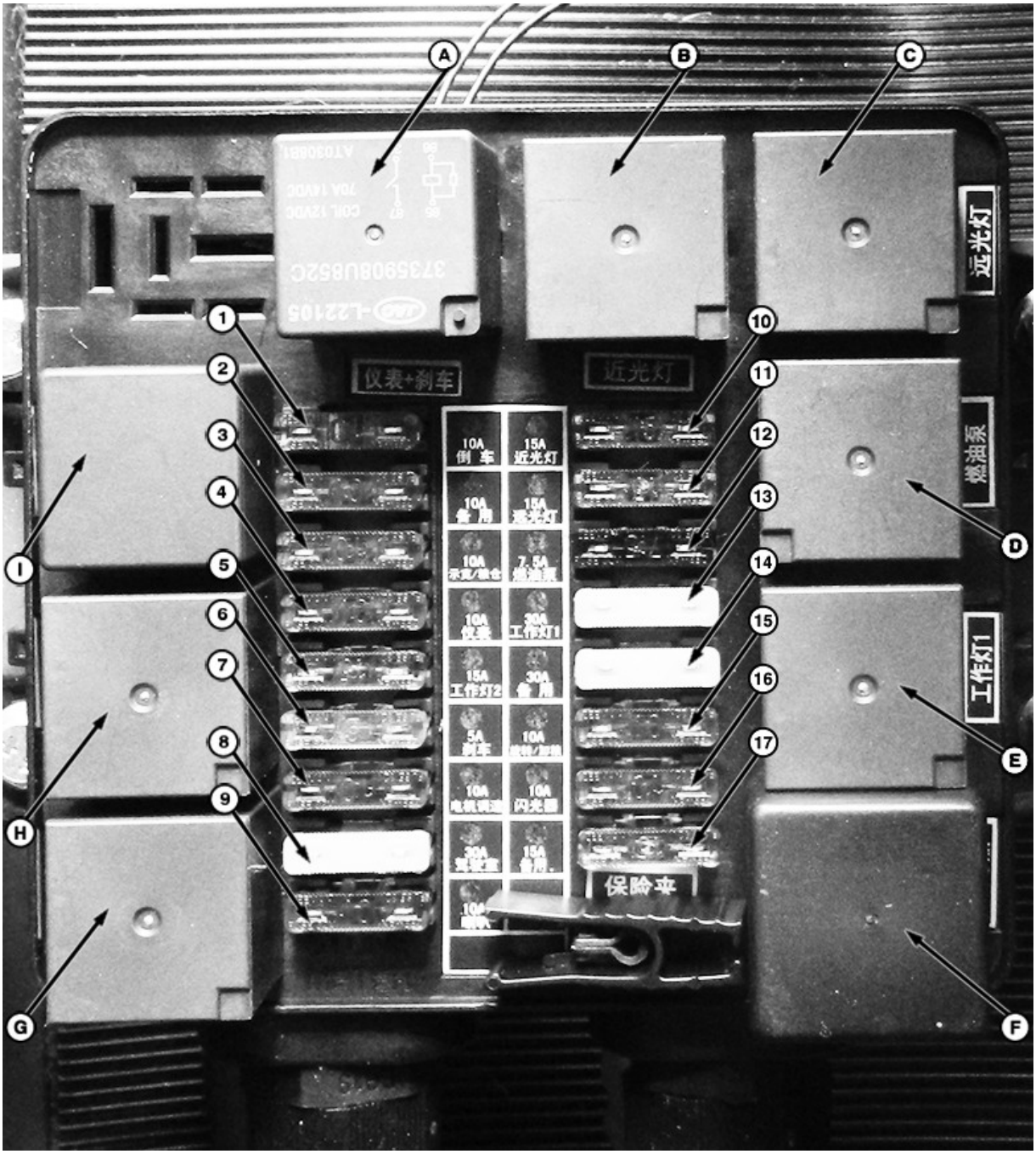
A—Main Switch

Main Switch (A) is near the battery.

At the end of operating day, set main switch back in OFF position.

CP00606,000178C-19-25MAY18

Fuse Center



YC13767—UN—18SEP19

A—Instrument Power/Brake Light Relay
B—Low Beam Light Relay
C—High Beam Light Relay
D—Transfer Pump Relay
E—Working Light Relay
F—Flasher Relay
G—Horn Relay
H—Working Light Relay
I—Start Relay

1. Reverse Light Fuse (10A)
2. Spare Fuse (10A)
3. Marker Light/Grain Tank Fuse (10A)
4. Instrument Power Fuse (10A)
5. Side Working Light Fuse (15A)
6. Brake Light Fuse (5A)
7. Reel Speed Motor Fuse (10A)
8. Cab Fuse (30A)
9. Horn Fuse (10A)

10. Low Beam Light Fuse (15A)
11. High Beam Light Fuse (15A)
12. Transfer Pump Fuse (7.5A)
13. Working Light Fuse (30A)
14. Spare Fuse (30A)
15. Unloading Beacon/Unloading Light (10A)
16. Flasher Light (10A)
17. Spare Fuse (15A)

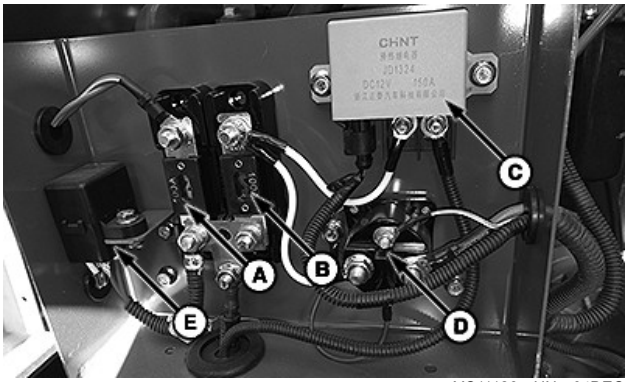
Different fuse specifications are differentiated by colors.

IMPORTANT: Never use fuses that exceed the specified values.

YC00758,000093F-19-25SEP19

Electrical Box on Engine

CAUTION: Make sure that the battery switch is turned off before replacing the fuse.



YC11126—UN—04DEC17

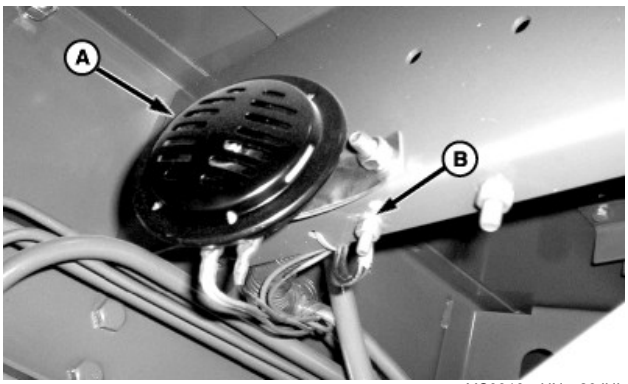
A—Main Power Supply Fuse (100A)
B—Cold Start Heater Fuse (100A)
C—Starter Relay
D—Cold Start Heater Relay
E—Fuses (ECU Fuse 20A and Key Switch Fuse 15A)

The electrical box is on the left side of the engine, includes the main power supply fuse (A), the cold start heater fuse (B), the starter relay (C), the cold start heater relay (D), and the fuses (E).

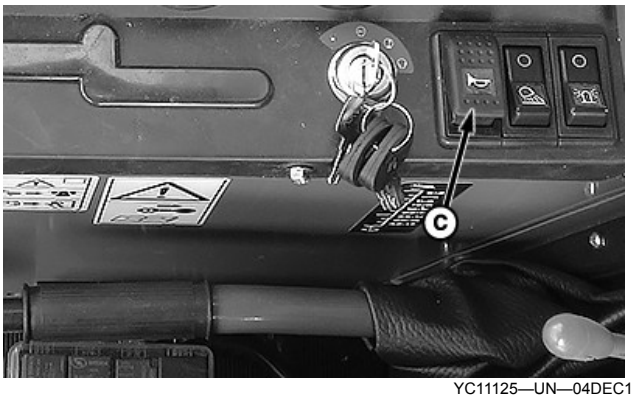
When starting the machine and the temperature is below 0°C, ECU sends out a command and the cold start heater relay is connected. Engine warms up.

CP00834,0008978-19-05FEB21

Horn



YC0316—UN—20JUL11



YC11125—UN—04DEC17

Machine with Murphy Gauge

YC14849—UN—14MAY20

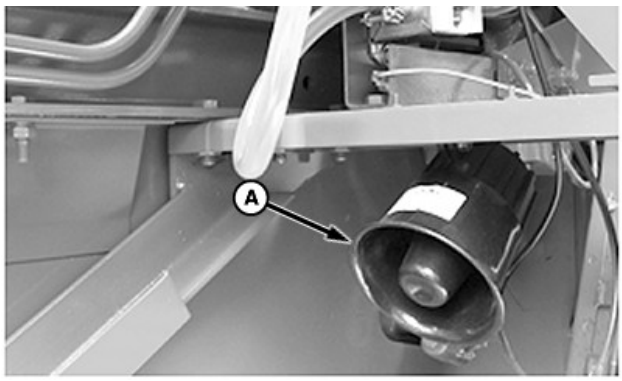
Machine with Corner Post Display

A—Horn
B—Ground Cable
C—Horn Switch

Horn (A) is under the cab, controlled by the horn switch (C) on the instrument panel.

CP00834,0008A3D-19-02MAR21

Backup Alarm



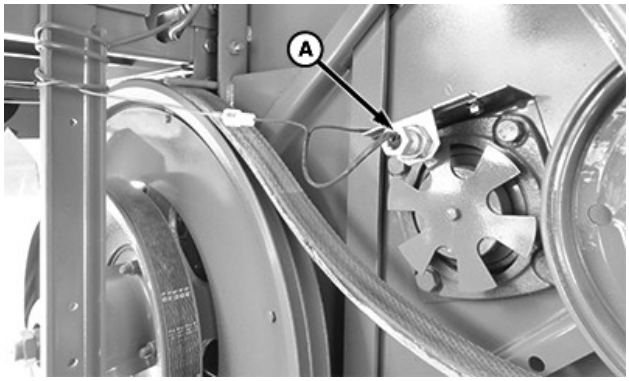
YC0319—UN—21JUL11

A—Backup Alarm

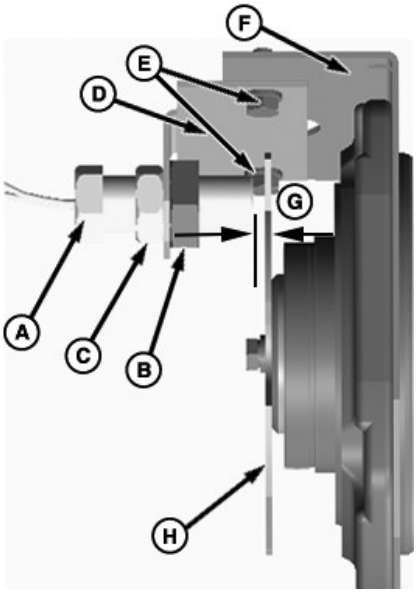
Backup alarm (A) is located at the right rear side of machine. When reverse gear is engaged, backup alarm (A) sounds to remind bystanders to stay away from the machine .

CP00718,00040A0-19-13DEC17

Threshing Speed Sensor



YC10642—UN—20JUL16



YC10646—UN—20JUL16

A—Sensor
B—Nut
C—Nut
D—Guide
E—Bolts (2 used)
F—Plate
G—Clearance (2~3 mm)
H—Tone Wheel

Threshing speed sensor (A) is located at the left side of machine.

If the position of tone wheel (H) and sensor (A) changes, adjust the clearance of the threshing speed sensor (A) .

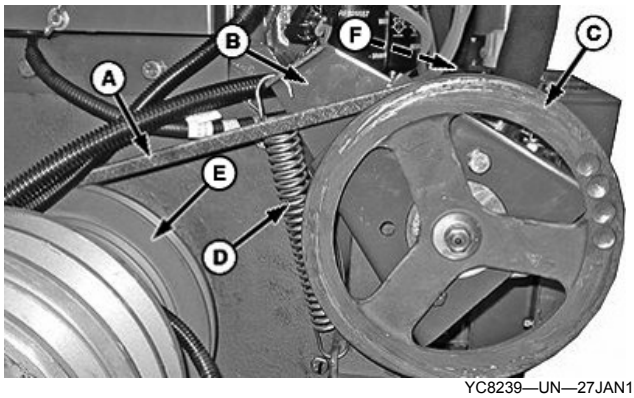
Adjustment: Adjust clearance (G) between sensor (A) and tone wheel (H) by adjusting nuts (B and C). Check clearance for avoid interference. Adjust slowly to minimize clearance. If necessary, loosen bolt (E), adjust position of guide (D) on plate (F), Align sensor (A) with tone wheel (H) are parallel. Tighten bolts (E).

Ensure the threshing speed sensor ground wire good grounding.

The torque of nuts (B and C) is 19~28 N·m.

YC00758,00004E8-19-06AUG19

Hydraulic Pump Drive Belt Tension



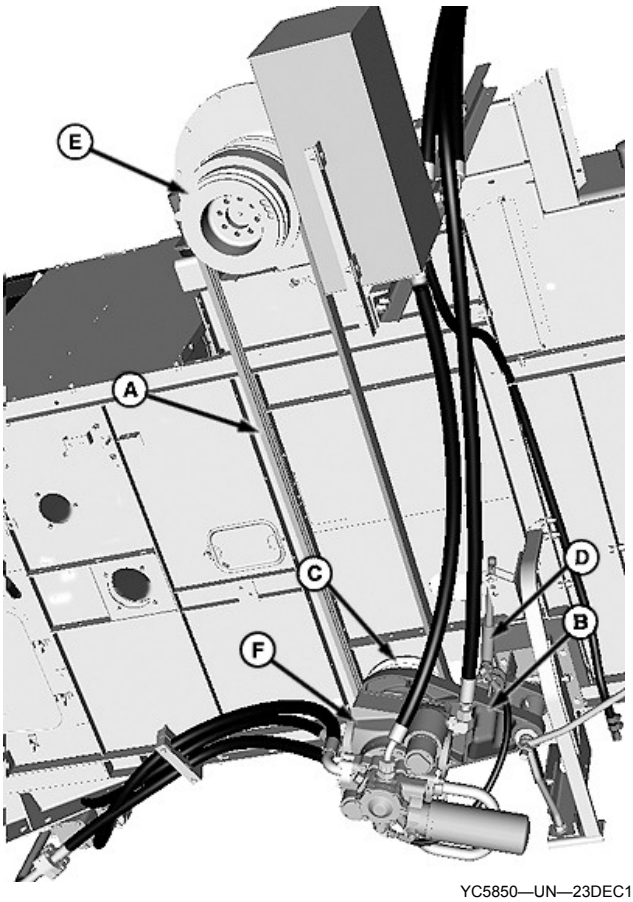
YC8239—UN—27JAN15

A—Drive Belt
B—Hydraulic Pump Bracket
C—Pulley
D—Spring
E—Engine Output Terminal
F—Hydraulic Pump

The hydraulic pump drive belt (A) is automatically tensioned by the spring (D).

CP00834,0008A3E-19-02MAR21

Hydrostatic Pump Drive Belt Tension



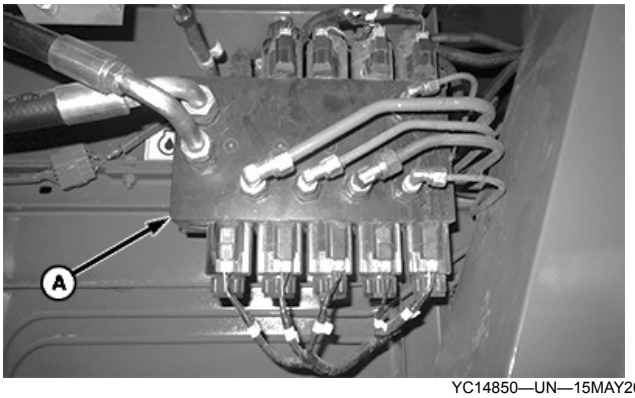
YC5850—UN—23DEC13

A—Belt
B—Bracket
C—Pulley
D—Hydraulic Cylinder
E—Engine Output Terminal
F—Hydrostatic Pump

The belt (A) is automatically tensioned by the hydraulic cylinder (D).

CP00834,0008A3F-19-02MAR21

Hydraulic Control Valve



YC14850—UN—15MAY20

A—Hydraulic Control Valve

IMPORTANT: Consult an authorized John Deere dealer in case of hydraulic control valve failure.

The hydraulic control valve (A) is installed on the right side of the vehicle.

The hydraulic control valve can control operations:

- Rise or lower header.
- Rise or lower reel.
- Swing unloading auger.
- Adjust threshing cylinder speed.

CP00834,0008A40-19-02MAR21

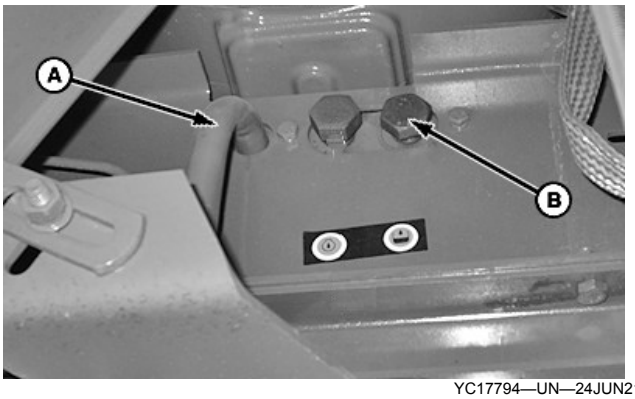
Change Hydraulic Oil and Replace Oil Filter

Change the hydraulic oil after the first 100 hours' operation, after that change oil every 500 hours' operation.

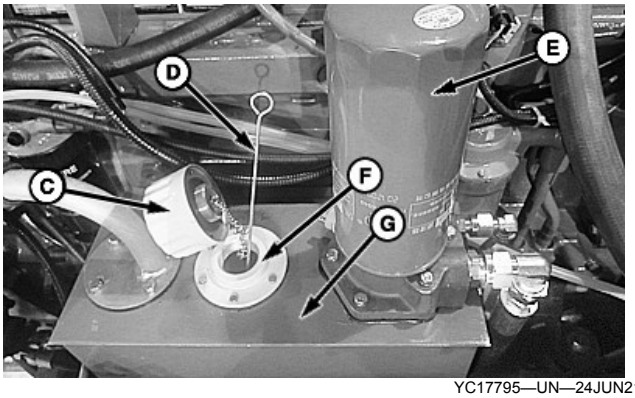
NOTE: Always replace the oil filter when changing the hydraulic oil.

After the break-in period, change the hydraulic oil and replace the oil filter. John Deere Hy-Gard™ is the recommended oil.

CAUTION: Lower the header to ground and retract all other hydraulic cylinders. Shut off engine, set park brake, and remove key.



YC17794—UN—24JUN21



YC17795—UN—24JUN21

YC17796—UN—25JUN21

Dipstick

A—Oil Drain Pipe
B—Drain Plug
C—Filling Cap
D—Dipstick
E—Oil Filter
F—Filler Neck
G—Hydraulic Reservoir
H—Maximum Mark
I—Minimum Mark

1. Loosen the drain plug (B) and drain the oil to a suitable container by the oil drain pipe (A).
2. Remove the hydraulic oil filter (E) and replace with a new oil filter.

NOTE: Grease the seal surface before install the new oil filter.

The oil filter installation: firstly install the seal, then tighten the oil filter for 3/4—5/4 turns. Do not tighten too much.

3. Tighten the drain plug.
4. Remove the filling cap (C) and fill the reservoir with the specified oil.
5. Check the oil level by the dipstick (D). The oil level should be between the minimum mark (I) and maximum mark (H) on the dipstick.
6. Start engine and run to check for possible leaks.

CP00834,0008EF9-19-25JUN21

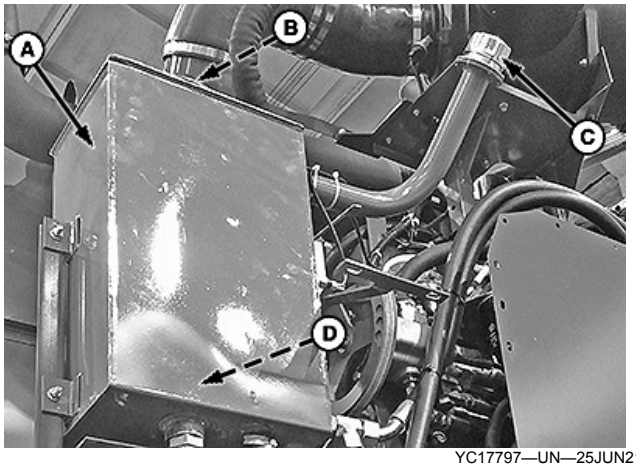
Change Hydrostatic Oil and Replace Oil Filters (Hydrostatic Drive)

Change the hydrostatic oil after the first 100 hours' operation, after that change oil every 500 hours' operation.

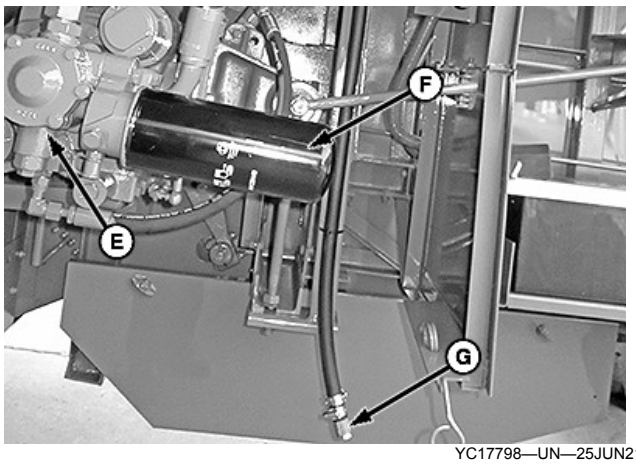
NOTE: Always replace the oil filters when changing the hydrostatic oil.

After the break-in period, change the hydrostatic oil and replace the oil filters. John Deere Hy-Gard™ is the recommended oil.

CAUTION: Lower the header to ground and retract all other hydraulic cylinders. Shut off engine, set park brake, and remove key.



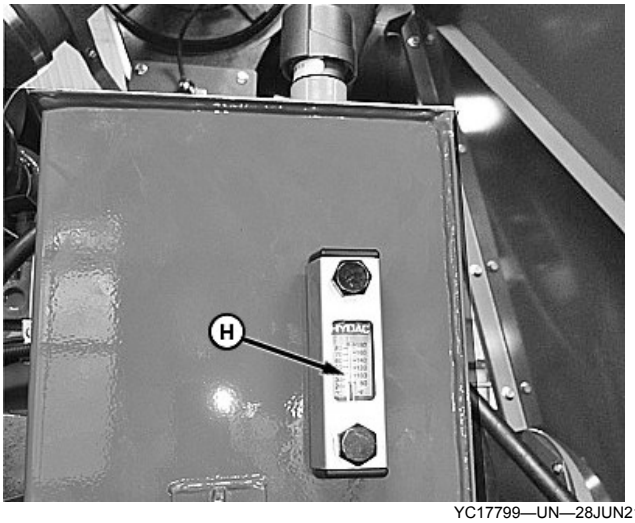
YC17797—UN—25JUN21



YC17798—UN—25JUN21

A—Hydrostatic Reservoir
B—Cap
C—Filling Cap
D—Hydrostatic Oil Filter
E—Hydrostatic Pump
F—Charge Oil Filter
G—Drain Plug

1. Loosen the drain plug (G) and drain the oil to a suitable container.
2. Remove the cap (B) and replace the hydrostatic oil filter (D).
3. Remove the charge oil filter (F) and replace with a new oil filter.
4. Tighten the drain plug.
5. Remove the filling cap (C) and fill the reservoir with the specified oil.



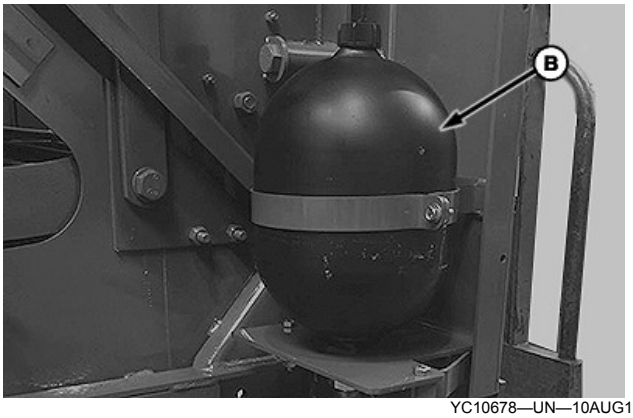
YC17799—UN—28JUN21

H—Sight Glass

6. Check the oil level. The oil level must be at top of sight glass (H) with the feeder house fully lowered.
7. Start engine and run to check for possible leaks.

CP00834,0008EFA-19-25JUN21

Accumulator



YC10678—UN—10AUG16

B—Hydraulic Accumulator (without mechanical rear drive)

To buffer against impact load from the header and protect the header cylinder, combine is equipped with the hydraulic accumulator (A).

Charge accumulator with nitrogen, refer to parameters in following table:

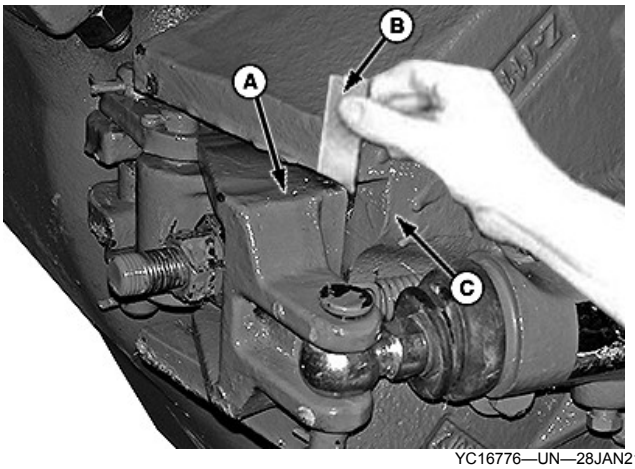
Pressure Chamber Capacity	2.8 L
Nitrogen charging pressure	4.5 MPa

YC00758,00002B3-19-13NOV18

Check and Adjust Service Brake

Check Service Brake

1. Park the combine on a level, flat surface and block the front wheels.
2. Shut off engine and remove key.



YC16776—UN—28JAN21

A—Service Brake Actuating Arm
B—Feeler Gauge
C—Brake Housing

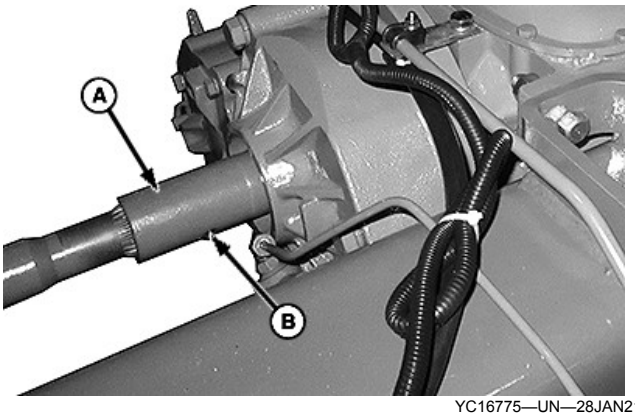
3. Check the clearance between the service brake actuating arm (A) and the brake housing (C) with a feeler gauge (B) to specification.

Specification

Brake Housing to Service Brake Actuating Arm—Clearance. . . . . 3—5 mm (0.12—0.20 in)

4. Adjust if the clearance is out of specification.

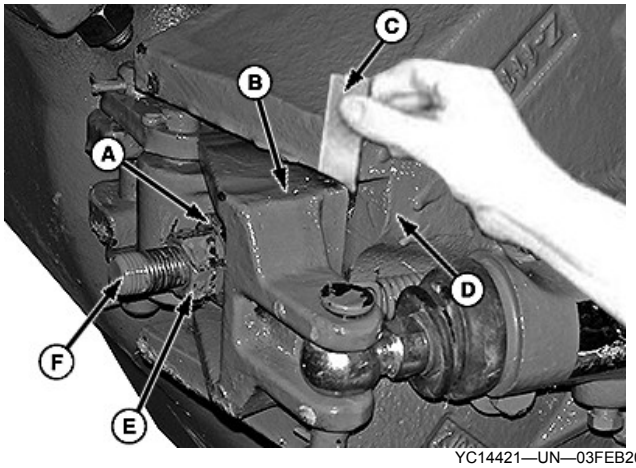
Adjust Service Brake



YC16775—UN—28JAN21

A—Coupling (2 used)
B—Spring Pin (2 used)

1. Place the gearshift lever in neutral position.
2. Remove the spring pins (B) and slide couplings (A) away from the brake housing on both sides.



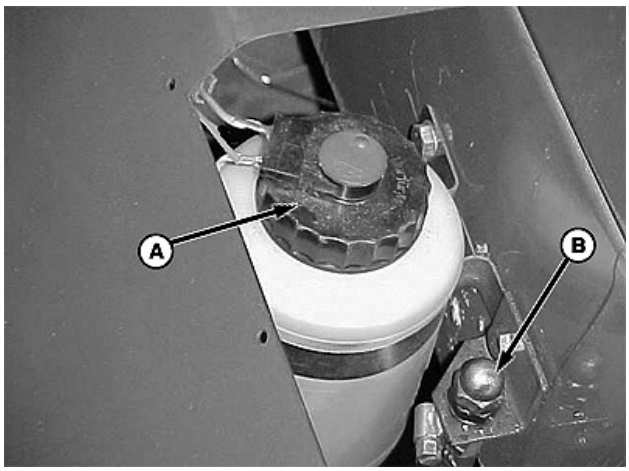
YC14421—UN—03FEB20

A—Adjusting Nut
B—Service Brake Actuating Arm
C—Feeler Gauge
D—Brake Housing
E—Lock Nut
F—Adjusting Spindle

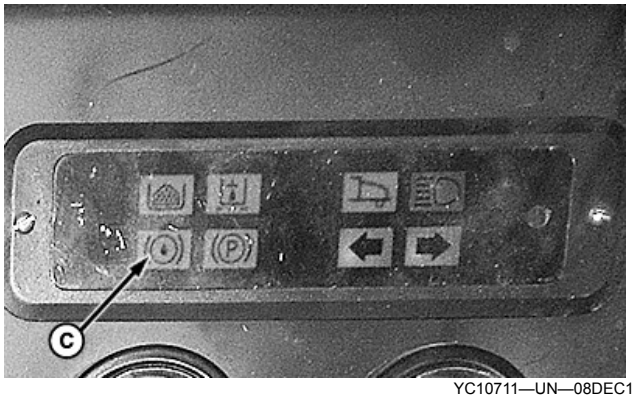
3. Insert a 3 mm feeler gauge (C) between the brake housing (D) and the service brake actuating arm (B).
4. Loosen the lock nut (E).
5. Tighten the adjusting nut (A), until the output shaft of the brake housing cannot be turned by hand, then tighten the lock nut.
6. Remove the feeler gauge after adjustment.
7. Adjust the service brake on the other side with the same method.
8. Install couplings and the spring pins.

CP00834,0008A42-19-02MAR21

Brake Fluid Reservoir

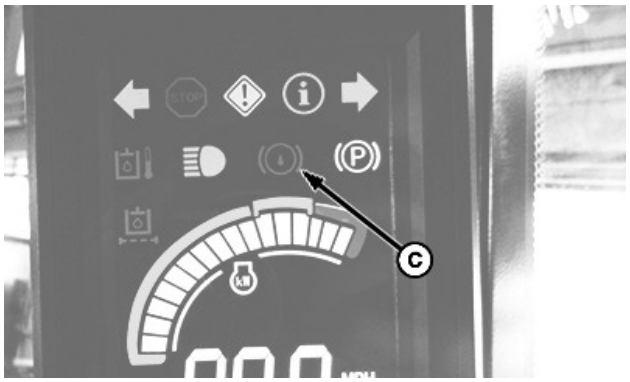


YC2842—UN—03DEC12



YC10711—UN—08DEC16

Brake Fluid Level Indicator on the Indicator Module



YC14235—UN—12JAN20

Brake Fluid Level Indicator on the Corner Post Display

A—Brake Fluid Reservoir
B—Bleeding Screw
C—Brake Fluid Level Indicator

The brake fluid reservoir (A) is equipped with an alarm device. When the brake fluid is inadequate, the brake fluid level indicator (C) lights.

Brake oil specification: 10# aviation hydraulic oil.

Always bleed the brake system after changing or repairing parts.

CP00834,0008A43-19-02MAR21

Bleed Service Brake System

NOTE: Bleed the brake system after the brake system maintenance.

1. Raise the feeder house, lower the safety stop, shut off engine, set the park brake, and remove key.
2. Check the brake fluid level. If necessary, fill with new brake fluid that meets the specification.

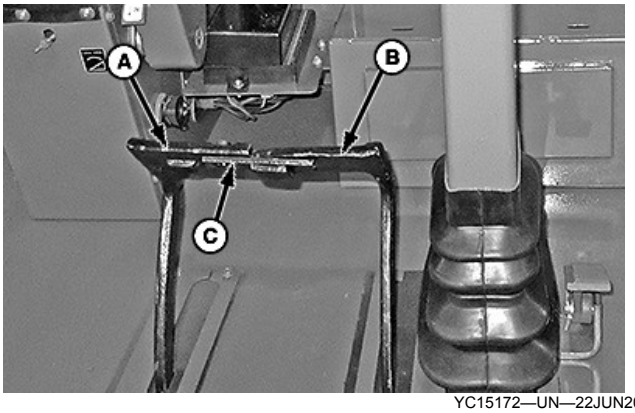
IMPORTANT: After filling, make sure that the filler cap is properly closed to prevent the brake fluid spillage.

YC16774—UN—27JAN21

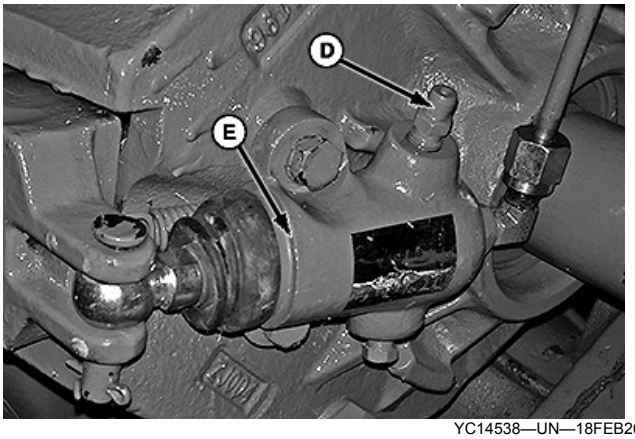
A—Bleeding Screw
B—Brake Fluid Reservoir

3. Loosen the bleeding screw (A).

NOTE: Bleeding can be done at any brake cylinder.



YC15172—UN—22JUN20



YC14538—UN—18FEB20

A—Right-Hand Brake Pedal
B—Left-Hand Brake Pedal
C—Brake Pedal Lock
D—Drain Plug
E—Left-Hand Brake Cylinder

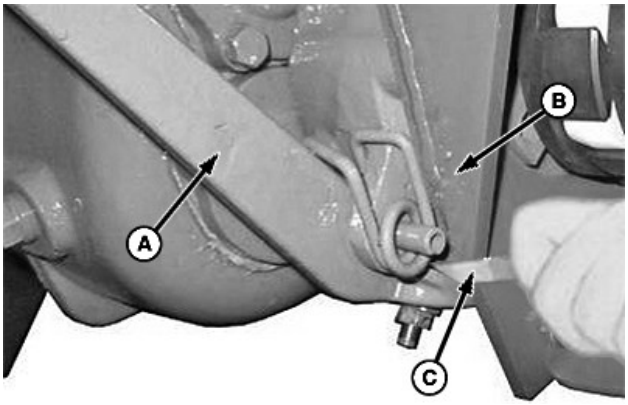
4. Connect a transparent hose to the drain plug (D), put the other end of the hose in a suitable container.
5. Loosen the drain plug.
6. Lock the brake pedals (A and B) together by the brake pedal lock (C).
7. Press the brake pedal for several times until no air bubbles comes out, then tighten the drain plug and the bleeding screw.
8. Check the brake fluid level, fill as necessary.

CP00834,0008A44-19-02MAR21

Check and Adjust Park Brake

Check Park Brake

1. Park the combine on a level, flat surface and block the front wheels.
2. Shut off engine and remove key.



YC16777—UN—28JAN21

A—Park Brake Actuating Arm
B—Brake Housing
C—Feeler Gauge

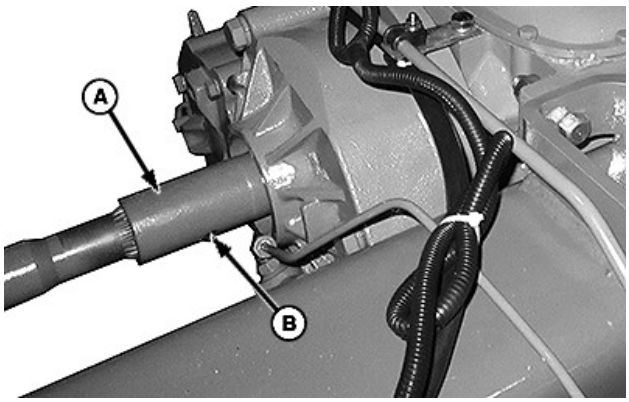
3. Check the clearance between the park brake actuating arm (A) and the brake housing (B) with a feeler gauge (C) to specification.

Specification

Brake Housing to Park Brake Actuating Arm—Clearance. . . . . 3—5 mm (0.12—0.20 in)

4. Adjust if the clearance is out of specification.

Adjust Park Brake



YC16775—UN—28JAN21

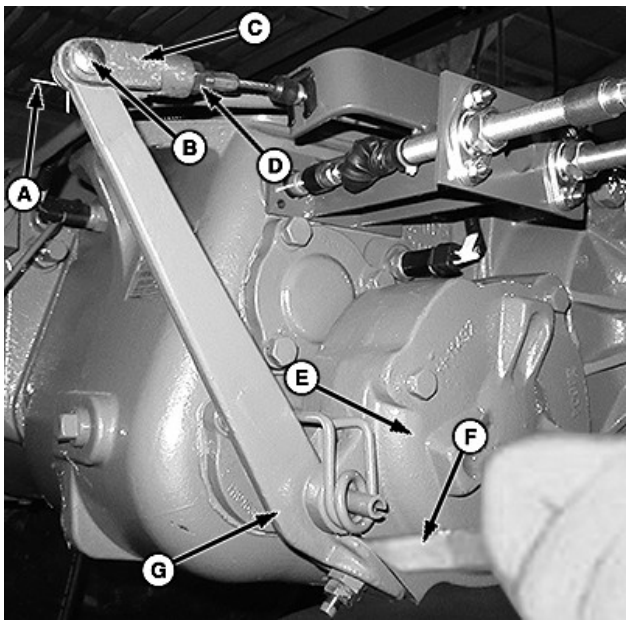
A—Coupling (2 used)
B—Spring Pin (2 used)

There are two methods to adjust the park brake:

1. **Adjust at the park brake cable**

   a. Place the gearshift lever in neutral position.

   b. Remove the spring pins (B) and slide couplings (A) away from the park brake housing on both sides.



YC16786—UN—04FEB21

A—Cotter Pin
B—Pin
C—Yoke
D—Lock Nut
E—Park Brake Housing
F—Feeler Gauge
G—Park Brake Actuating Arm

   c. Insert a 3 mm feeler gauge (F) between the park brake housing (E) and the park brake actuating arm (G).

   d. Remove the cotter pin (A) and pin (B).

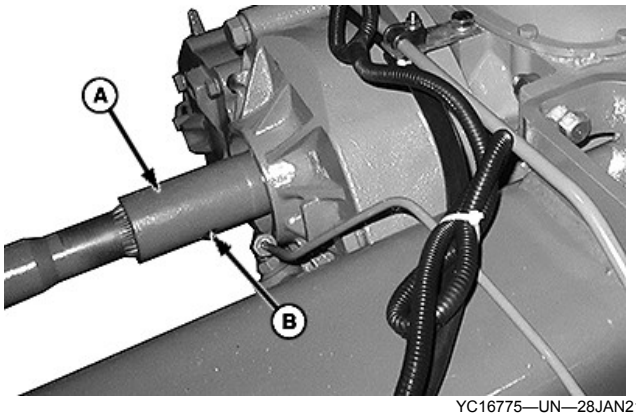
   e. Loosen the lock nut (D) and adjust the yoke (C).

   f. Install yoke and check, until the output shaft of the brake housing cannot be turned by hand. Repeat the procedures (e and f) for several times if necessary.

   g. Tighten the lock nut.

   h. Remove the feeler gauge after adjustment.

   i. Install couplings and the spring pins.



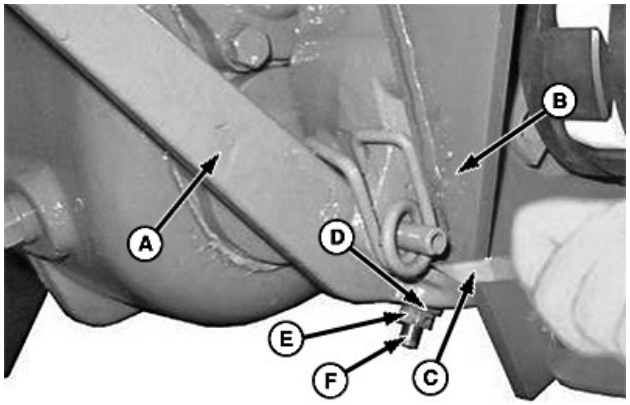
YC16775—UN—28JAN21

A—Coupling (2 used)
B—Spring Pin (2 used)

2. **Adjust at the park brake housing**

   a. Place the gearshift lever in neutral position.

   b. Remove the spring pins (B) and slide couplings (A) away from the park brake housing on both sides.



YC16781—UN—01FEB21

A—Park Brake Actuating Arm
B—Park Brake Housing
C—Feeler Gauge
D—Adjusting Nut
E—Lock Nut
F—Adjusting Spindle

   c. Insert a 3 mm feeler gauge (C) between the park brake housing (B) and the park brake actuating arm (A).

   d. Loosen the lock nut (E).

   e. Tighten the adjusting nut (D), until the output shaft of the brake housing cannot be turned by hand, then tighten the lock nut.

f. Remove the feeler gauge after adjustment.

g. Install couplings and the spring pins.

CP00834,0008A45-19-02MAR21

Transmission Oil

IMPORTANT: Under certain operating conditions, such as traveling on a slope, always fill transmission with specified oil.

YC8898—UN—09JUL15

A—Oil Filler and Level Plug
B—Oil Drain Plug

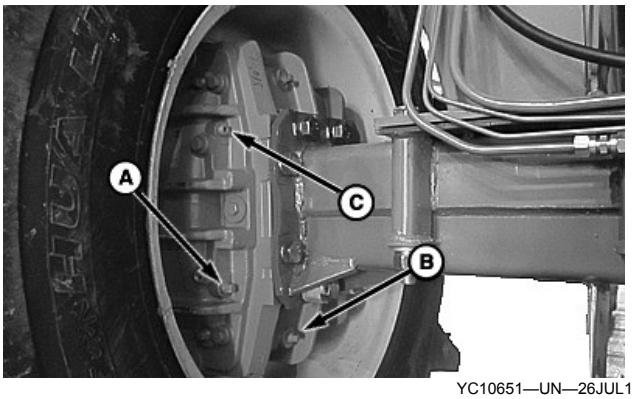
Always use a specified oil. See Gear Oil in Fuel, Coolant, and Lubricants section.

Check oil level after every 100 hours of operation. Change oil after the first 100 hours of operation. Change oil after every 500 hours of operation.

CP00834,0008A46-19-02MAR21

Final Drive Oil

IMPORTANT: Always use the specified oil.



YC10651—UN—26JUL16

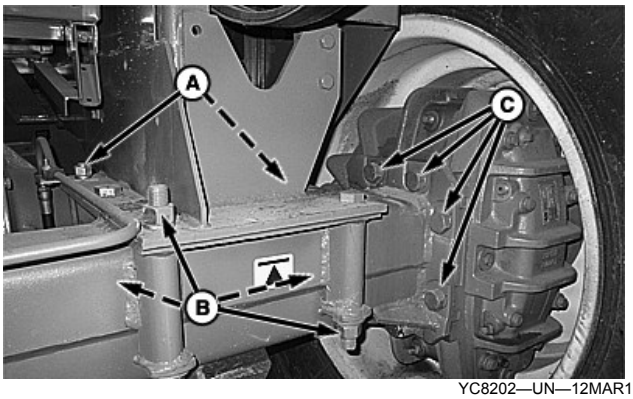
A—Oil Level Plug
B—Oil Drain Plug
C—Oil Filler and Vent Plug

Always use a specified oil. See Gear Oil in Fuel, Coolant, and Lubricants section.

Check oil level after every 100 hours of operation. Change oil after the first 100 hours of operation. Change oil after every 500 hours of operation.

CP00834,0008A47-19-02MAR21

Front Axle



YC8202—UN—12MAR15

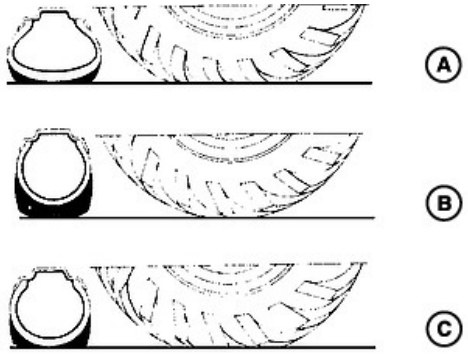
A—Nuts (2 used)
B—Nuts (4 used)
C—Bolts (8 used)

Check the torque of attaching bolts and nuts of the front axle after the first 25 hours of operation.

- Torque of nuts (A) is 240 N·m.
- Torque of nuts (B) is 435 N·m.
- Torque of nuts (C) is 435 N·m.

CP00834,0008A48-19-02MAR21

Tire Maintenance



YC12576—UN—01MAR18

A—Under Inflation
B—Over Inflation
C—Proper Inflation

Tire service life depends on proper inflation.

1. Check tires daily for damage and the correct pressure.
2. Repair any cuts or brakes as soon as possible or change tire.

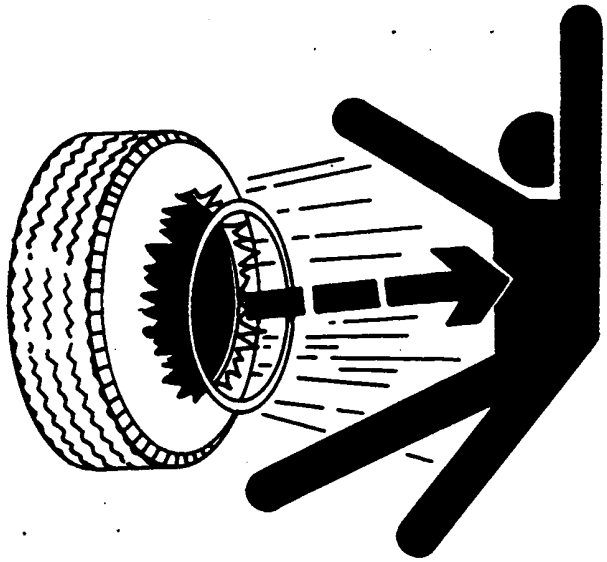
3. Avoid tires from exposure to sunlight and chemicals.

Inflation pressure of the front wheel tire 28L-26 is 170 kPa.

Inflation pressure of the rear wheel tire 14.9-24 is 180 kPa.

OUYC278,0000A34-19-28AUG18

Service Tires Safely



TS211—UN—15APR13

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.

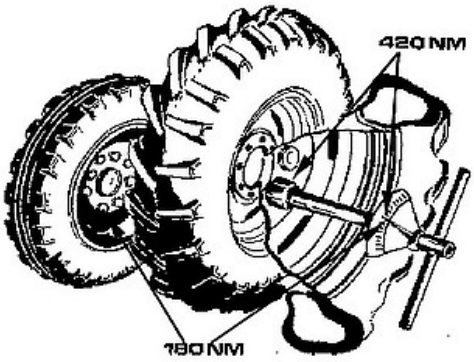
Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

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.

CP00718,00040B8-19-13DEC17

Wheel Bolts



YC12577—UN—01MAR18

Front Wheels: Check and tighten front wheel nuts to 420 N·m torque after the first hour of operation and again after the first 20 to 25 hours of operation,

Rear Wheels: Check and tighten rear wheel bolts to 180 N·m torque after the first hour of operation and again after the first 20 to 25 hours of operation,

CP00606,0001794-19-25MAY18

Wheel Lifting Devices

YC17363—UN—22APR21

Front Wheel

YC17364—UN—22APR21

Rear Wheel

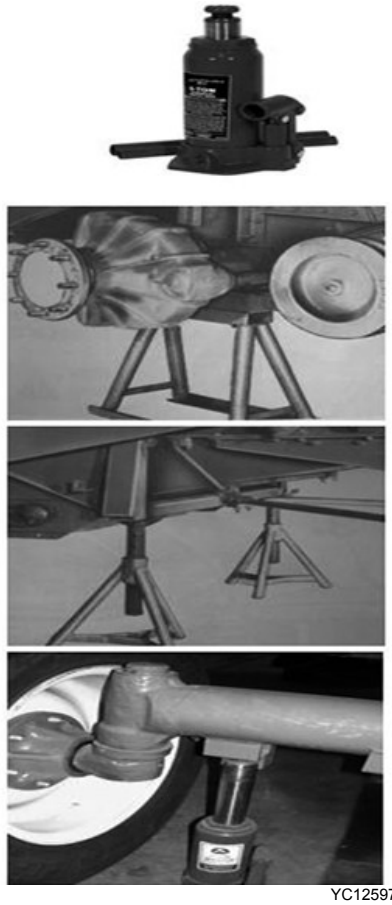
A—Lifting Device
B—Lifting Device

The lifting devices (A and B) on the wheels are used to lift the machine.

The lifting devices are installed at factory.

CP00834,0008D53-19-22APR21

Use and Precautions of Hydraulic Jack



YC12597—UN—01MAR18

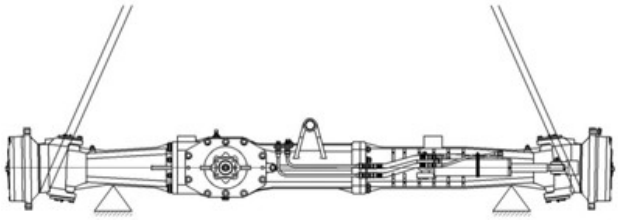
1. Before lifting, insert the slotted end of handle into the oil returning valve stem. Tighten the oil returning valve stem in clockwise direction.
2. Insert the handle into the press-hand-hole and move it up and down. The piston rod moves up steadily and lifts the load. As the jack has a limit device, the load can only be lifted to a certain height.
3. To lower the piston rod, use the slotted end of handle to turn the oil returning valve stem slightly in counterclockwise direction. The piston rod descends slowly. If there is the load, the oil returning valve stem cannot be turned too quickly.
4. Before lifting, estimate the weight of the object. Overloading is prohibited.
5. To use a jack, determine the center of gravity of the object. Choose the focal point of the jack. Place the object in a balanced way and consider the hardness of the ground. When needed, lay hard wood plates underneath to prevent the object from being skewed or even falling over when being lifted.
6. After the heavy object has been lifted, lay hard wood plates or other supporting materials under the jack, to avoid any danger caused by jack failure.(as shown in the diagram)
7. When using the jack, avoid abrupt vibrations.

NOTE: Use jacks to lift the combine and use frames to support it firmly. First loosen the front or rear wheel nuts, and remove the wheels. The frames in the diagram can be self-made.

CP00606,0001795-19-25MAY18

Rear Drive Axle Precautions (Option)

1. Hoist the axle, but not the tie rod. When storing, use dedicated shelves. Do not stack randomly, to avoid damage and oil leakage.



YC7571—UN—16JUL14

2. To avoid accidents, check the swing angle of rear axle before leaving factory.
3. Adjust the toe-in follow instructions, to avoid abnormal wear of tires.
4. When the combine is driving on roads of good conditions, power of the real drive axle is cut off.
5. Prohibit carrying out repairs or maintenance under the machine when power is not cut off, machine is not parked, safety measures are not ready.
6. Always check the bolts, nuts, and other components that are easily loose. For example, drive wheel hub nuts, main decelerator and half shaft sleeve connecting nuts. If they are loose, tighten them promptly.
7. When servicing the machine, strictly follow the required intervals and steps stated in the operator's manual, to avoid abnormal wear of gears and bearings. If operating conditions are poor, shorten the service intervals.
8. As required, use recommended brands of lubricants. When changing lubricants, never mix new and oil lubricants, different brands or lubricants from different manufacturers.
9. Performance of the rear drive axle gradually deteriorates after a certain period. Proper use and operation extend service life and maintain the reliability.
10. Nuts through riveting treatment (such as nuts at final drive) must not be loosened or removed. Be handled by professional technicians.
11. Rear drive axle must not be placed upside down when transport or installation.

CP00834,0008A49-19-02MAR21

Rear Drive Axle Break-In (Option)

Carry out rear drive axle break-in as requirement. If the drive axle break-in is not done before use, parts and components are seriously worn, so that service life is shortened.

Preparation Before Use

1. Check if all bolts, nuts, and steering limit bolts of the rear drive axle are tightened. If they are loose, tighten them at once.
2. Lubricant the fittings on the wheel hub and drive axle.
3. Through the inspection hole, check the rear axle central drive and final drive oil level.

Break-In

1. Run the machine without load. Meanwhile, carefully check the condition of rear drive axle to see if there is any abnormal sound, oil leakage, water spillage, or other abnormalities. If abnormality is found, immediately stop the machine and carry out troubleshooting before starting again.
2. After no-load break-in, if the rear drive axle is at normal state, break-in with load can be done.
3. When machine is static, start the engine, turn steering wheel steadily to the left and right. Observed the steering of rear wheels.

NOTE:

1. During machine gear I or gear II with load break-in, rear drive axle is engaged. During break-in at other gears, rear drive axle is disengaged.

2. After adding new lubricant, bleed after 4 operating hours. Otherwise, bleeding is not needed.

Operation After Break-In

1. After machine stops, drain lubricant from the rear drive axle. Meanwhile, add some kerosene or light diesel for cleaning (together with the whole drive system). After draining the cleaning agent, fill new GL-5 (85W/90) gear oil with amount: Center drive 18L, final drive 1.5L per side.
2. Check rear drive axle toe-in, adjust it if necessary.
3. Check and tighten all bolts, nuts, and screws.
4. Add lubricant at all lubricating fittings.

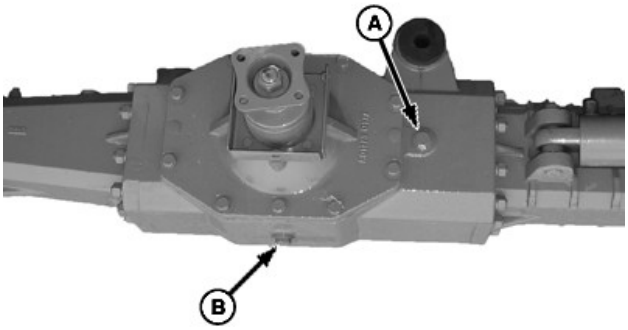
CP00834,0008A4A-19-02MAR21

Rear Drive Axle Service (Option)

IMPORTANT: For extending the service live, regularly maintain the rear drive axle.

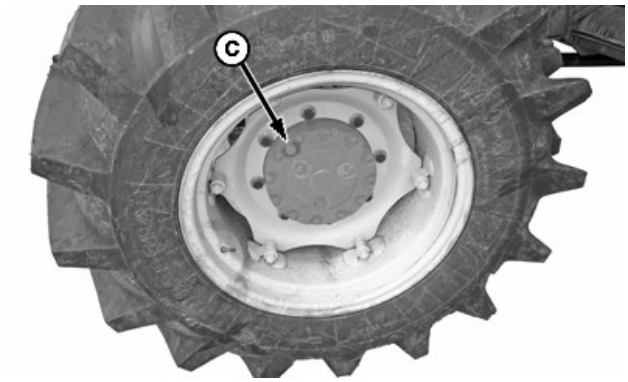
Lubrication of Rear Drive Axle

1. Apply GL-5 85W/90 gear oil to lubricate the rear drive axle.



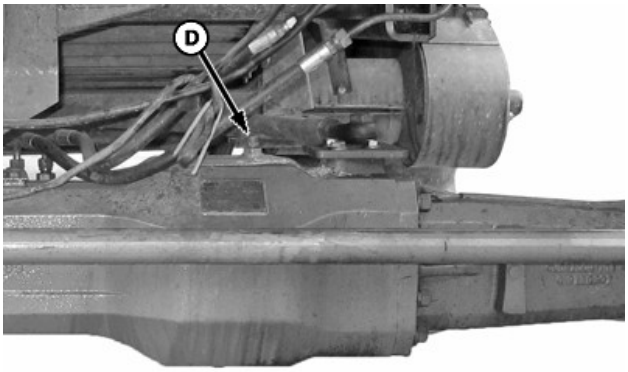
YC7572—UN—16JUL14

A—Oil Level Plug
B—Oil Drain Plug



YC7573—UN—16JUL14

C—Plug



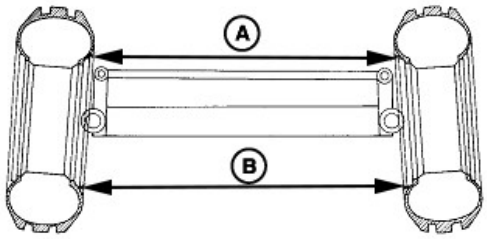
YC7574—UN—16JUL14

D—Retaining Vent Plug

2. **Central drive service:** Change lubricant every 1600 operating hours. Check oil level after 400 operating hours. Unscrew the oil level plug (A) to check. Oil level reaches the plug hole. Refill oil as needed. When changing lubricant, drain off used oil from the oil drain plug (B). Then, tighten oil drain plug. Add new lubricant through the retaining vent plug (D).
3. **Final drive service:**
   - Change lubricant every 800 operating hours. Check oil level after 200 operating hours, to prevent abnormal wear of gears caused by not enough lubricating oil.
   - When changing lubricating oil, turn wheel hub so that the plug (C) is at the lowest position. Remove oil drain plug, drain off used oil. Turn wheel hub again so that the plug is at level position. Add new lubricant through the inspection hole.
4. **Transfer case service:** To keep good working condition of the rear drive axle, add a reasonable amount of oil.
   - Fill GL-5 80W/90 gear oil to the transfer case, amount 3.2 kg.
   - After first 100 operating hours, change gear oil. Change oil every 400 operating hours thereafter.

Adjust Toe-In

NOTE: Toe-in is measured at the rear drive axle contour centerline.



YC10910—UN—10NOV16

A—Distance
B—Distance

Toe-in adjustment method: Drives combine to a level ground, straight-ahead. At the same height through the centerline of rear wheel, measure the distance (A and B) between the front end and the rear end of rear wheels. Loosen lock nuts on tie rod and assembly. Turn the tie rod so that it extends or shortens. When B-A = 2—8 mm, tighten the lock nuts.

Daily Checks

Check the bolts, nuts, and other components that are easily loose. Tighten as needed.

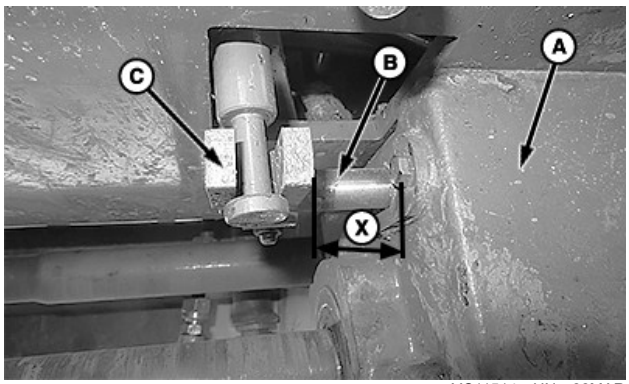
CP00834,0008A4B-19-02MAR21

Torque Requirements of Rear Drive Axle Fasteners (Option)

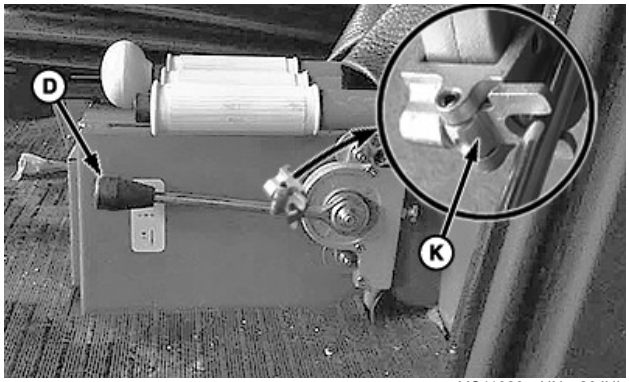
Name and assembly parts	Thread specifications	Tightening torque (N·m)
Large bevel gear and differential housing connecting bolt	M12×1.25×30	110—130
Differential holder bearing cover fastening bolt	M12×1.25×70	110—130
Small bevel connecting flange fastening nut	M20×1.5	Small bevel gear rotation torque is 1—2 N·m
Knuckle bearing pre-fastened nut	M75×2	Apply 300 N·m to tighten and return 8° to lock
Left and right half tube and fastening nut	M14×1.5	130—150
Differential holder assembly and center drive connecting bolt	M12×1.25×40	80—95
Steering shaft and knuckle connecting bolt	M12×1.25×30	110—130
Planetary gear carrier and wheel housing connecting bolt	M10×1.25×30	60—75
Steering tie rod lock nut	M30×2	220—250
Steering tie rod ball joint lock nut	M20×1.5	180—220
Stop bolt lock nut	M14×1.5	110—130
Vent valve assembly, vent plug assembly, oil drain plug	M22×1.5	50—60

CP00834,0008A4C-19-02MAR21

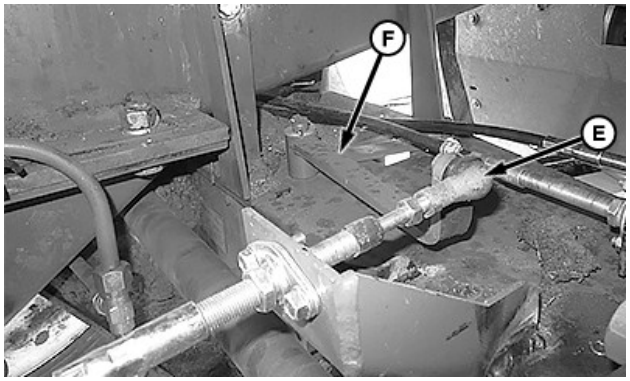
Install Flexible Cable of Rear-Wheel Drive Axle (Option)



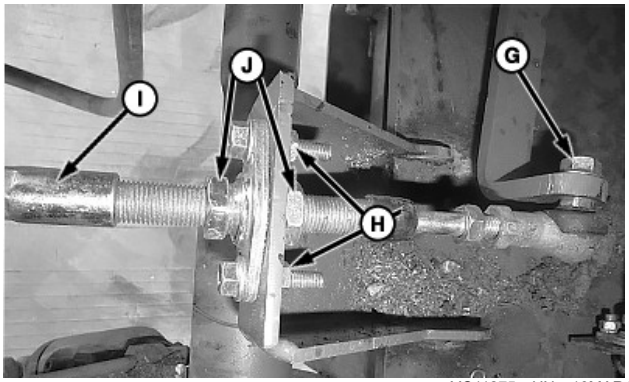
YC11514—UN—22MAR17



YC11923—UN—20JUL17



YC11274—UN—16MAR17



YC11275—UN—16MAR17

A—Gear Case
B—Shaft
C—Lock Plate
D—Rear-Wheel Drive Lever
E—Ball Joint
F—Link
G—Nut
H—Nuts (2 used)
I—Flexible Cable
J—Nuts (2 used)

K—Locker
X—Length (34 mm)

1. Push/pull the rear-wheel drive lever to control the position of shaft (B) through flexible cable.

NOTE: When gears are not placed neutral position, the length (X) which the shaft extends is 34 mm.

2. Before installing flexible cable of rear-wheel drive axle, pull the lock plate (C) to extend the shaft (B) out completely. Then the gears in gear case (A) are engaged and the length (X) is 34 mm.
3. Loosen nuts (J).
4. Engaged the rear-wheel drive lever (D), lock the rear-wheel drive lever (D) with the locker (K).
5. Connect the ball joint (E) and link (F).

IMPORTANT: DO NOT change the stoke of flexible cable (I).

6. Tighten the nut (J).

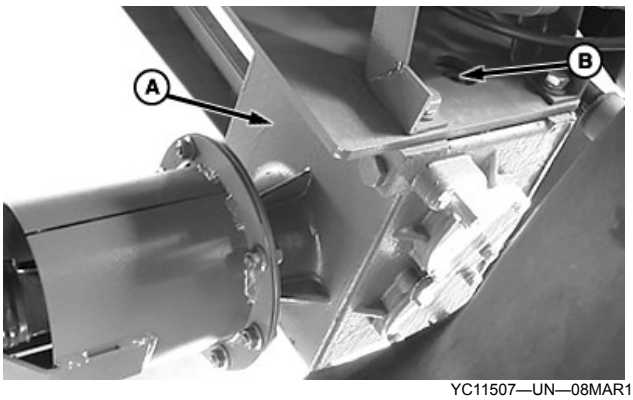
NOTE: If the connection of flexible cable is hard, move the machine slowly.

7. Unlock the locker (K). Disengage the rear-wheel drive lever (D), lock the rear-wheel drive lever (D) with the locker (K). Measure and check the length. If necessary, readjust until the length is 34 mm.
8. Check if the gear is shifted easily.

CP00834,0008A4D-19-02MAR21

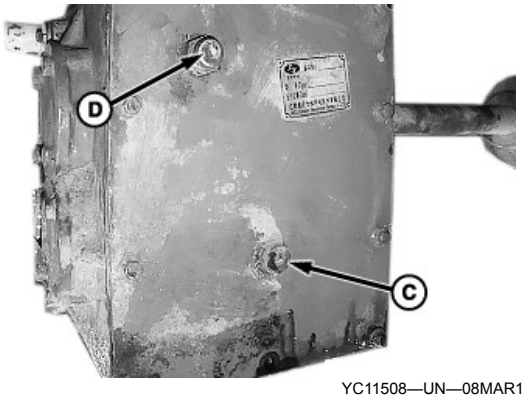
Gear Oil of Rear-Wheel Drive (Option)

IMPORTANT: Must use the recommended specified gear oil.

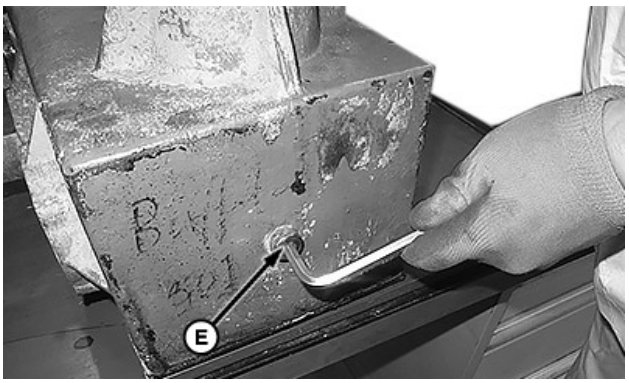


YC11507—UN—08MAR17

Upper



YC11508—UN—08MAR17



YC11509—UN—08MAR17

Lower

A—Rear-Wheel Drive Gear Case
B—Filler Port
C—Oil Level Plug
D—Bleeding Screw
E—Oil Drain Plug

Gear Oil of Rear-Wheel Drive: GL-5 80W/90.

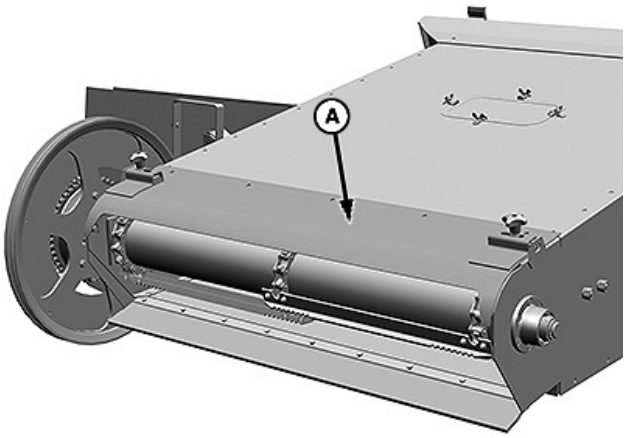
Capacity: 3.2 kg.

CP00834,0008A4E-19-02MAR21

Check the Feeder House Anti-Wind Shield Cap Screws

After one season is over, check the feeder house anti-wind shield cap screws for wear and looseness.

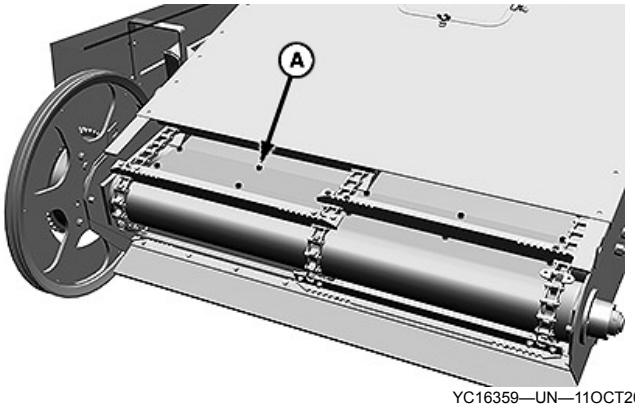
Detach the feeder house from combine.



YC16358—UN—11OCT20

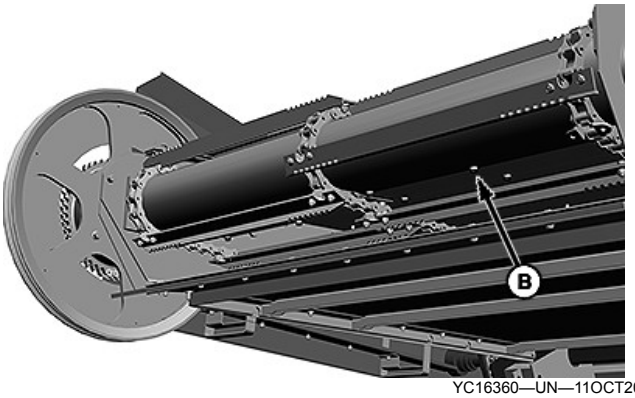
A—Cover

Remove cover (A) from the feeder house.



YC16359—UN—11OCT20

Cap Screws on the Top



YC16360—UN—11OCT20

Cap Screws at the Bottom

A—Cap Screw (12 used)
B—Cap Screw (12 used)

Check the feeder house anti-wind cap screws (A and B), tighten and replace as necessary.

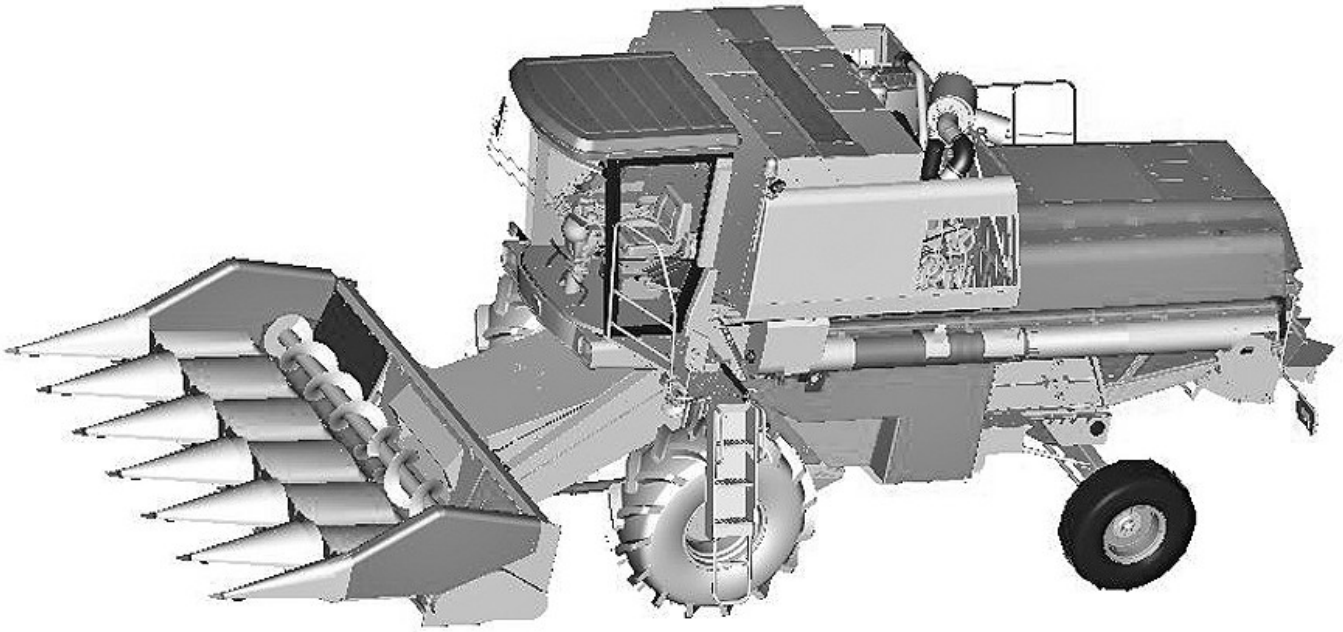
CP00834,00082E6-19-12OCT20

Choice of Harvesting Time

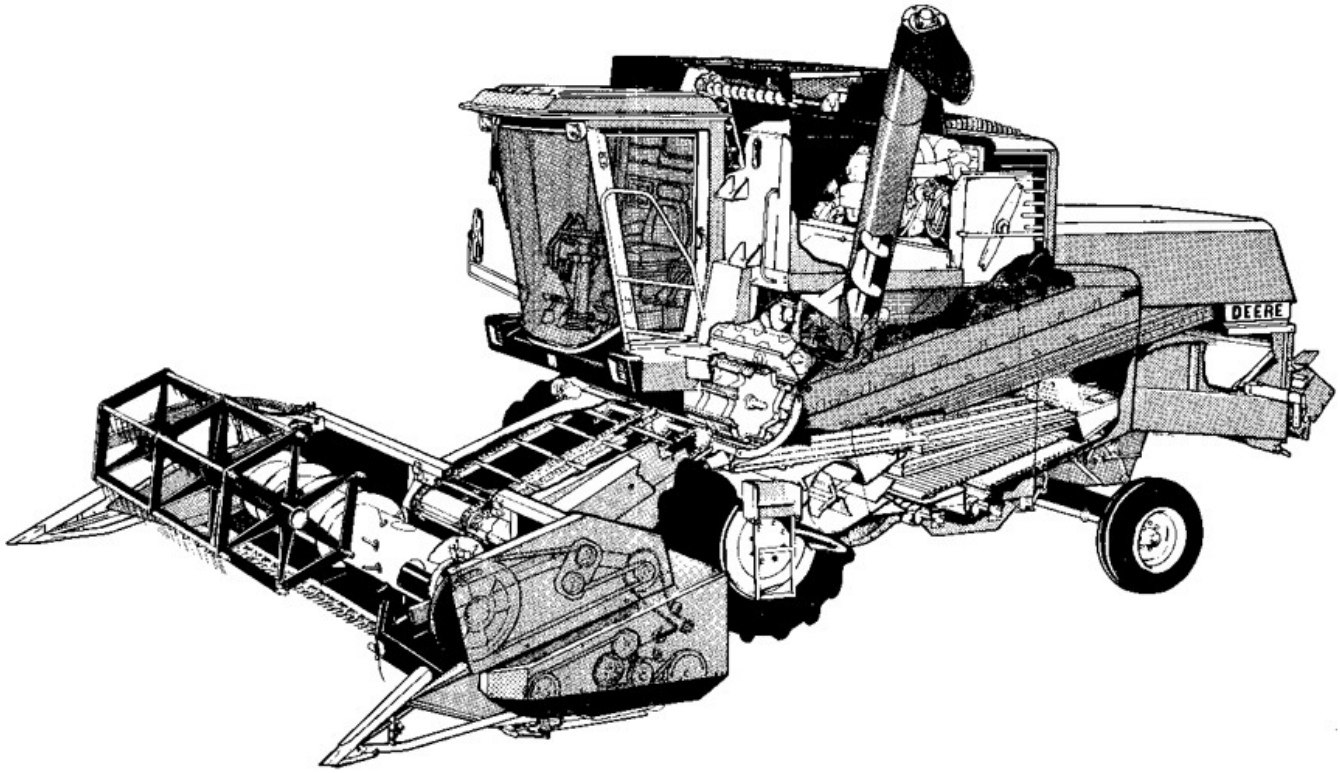
Ensure that crop is ripe. Otherwise, the harvesting quality of combine is affected.

CP00718,0004362-19-19DEC17

Avoid Grain Losses



YC6240—UN—06MAR14



YC1426—UN—19MAR14

Basic principle of adjusting the combine is to reduce losses and failures.

To achieve the objectives, pay particular attention to timely harvest. Early or late harvesting results in unnecessary losses and failures.

Make necessary adjustments to the combine according to harvest conditions and moisture content of crops.

Pay particular attention to the following losses and situations:

1. Header loss
2. Excessive tailings
3. Cracked grain
4. Excessive chaff in the grain tank
5. Separation loss
6. Cleaning loss
7. Nature grain loss
8. Unthreshed loss

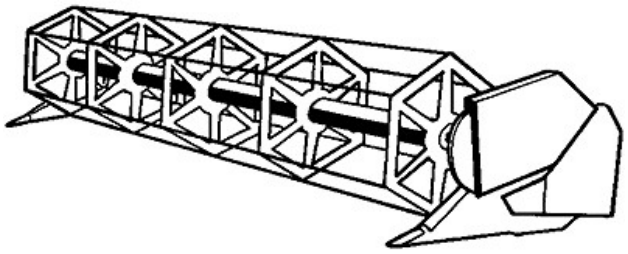
YC00758,00002B5-19-13NOV18

Header Operation

Header operation is described in a separate operator's manual.

YC6668—UN—18MAR14

Corn Header



YC1427—UN—26NOV12

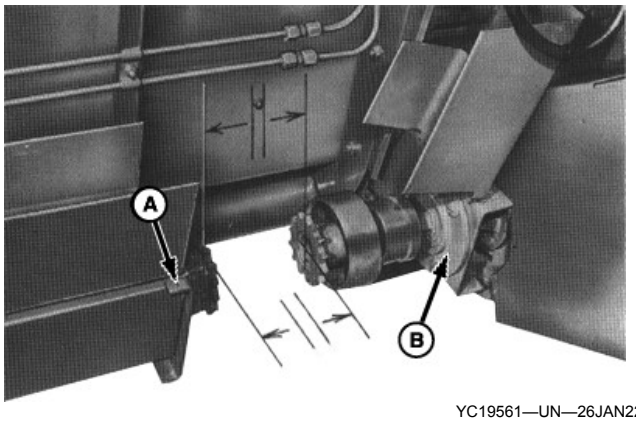
Header

YC00758,00002F7-19-21NOV18

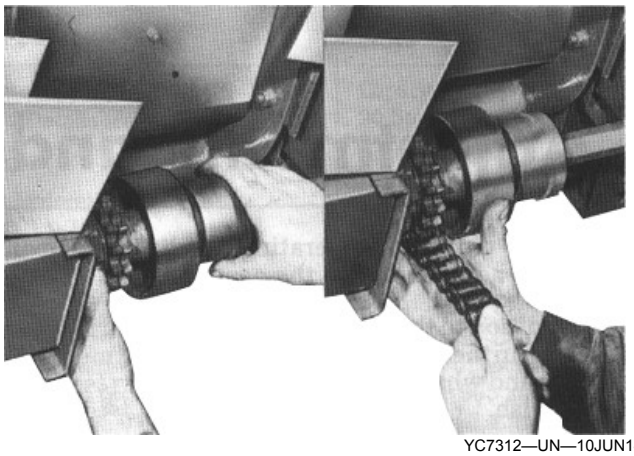
Feeder House and Header Connection

Chain Connection

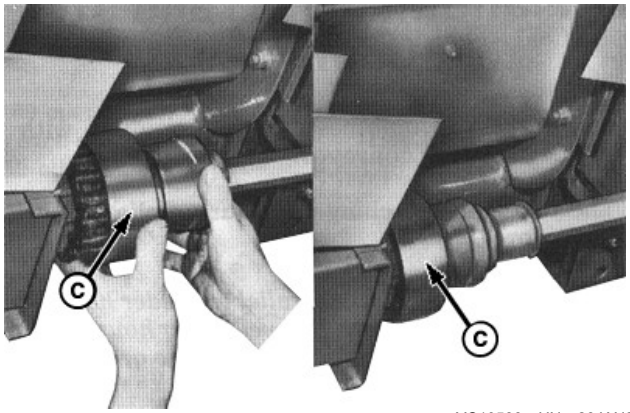
NOTE: Do not adjust the screws on bearing seat (B) at the rear of the feeder house.



YC19561—UN—26JAN22



YC7312—UN—10JUN14



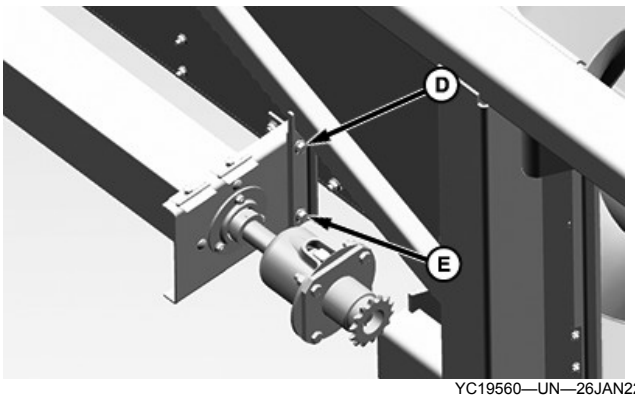
YC19586—UN—26JAN22

A—Bearing Seat
B—Bearing Seat
C—Safety Guard

Push two driveshafts together. Plates of two chain sprockets should be parallel to each other horizontally and vertically. To set these two chain sprockets at ideal position, adjust the adjustable screws on bearing seat (A).

Place the chain around the chain sprockets together when the end surfaces of two chain sprockets are in close contact or the gap between the end surfaces of two chain sprockets is even. Fix the chain and cover it with the safety guard (C).

Repeat procedure on the other side.



YC19560—UN—26JAN22

Adjustment

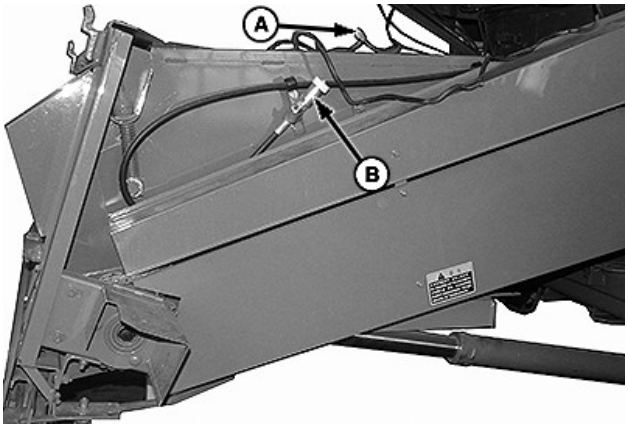
D—Bolt
E—Bolt

NOTE: Adjustments can be made when aligning chain sprockets of the feeder house and header as follows (The following instructions take the left-hand side for example, the right-hand side is adjusted in the same way):

When two chain sprockets are aligned, do not force the two chain sprockets together.

When it is found that the axes of the two shafts cannot be aligned, loosen the bolts (D and E) of the support plate at the rear of the header, so that the two chain sprockets are concentric, lock the chain, and then tighten the bolts (D and E).

Hydraulic and Electrical Connection



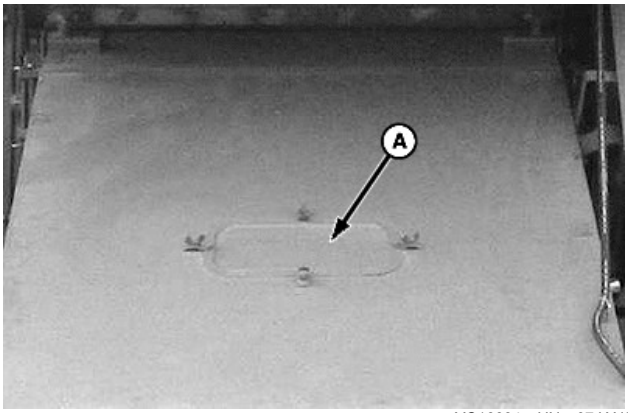
YC19771—UN—08MAR22

A—Electrical Connector
B—Hydraulic Coupler

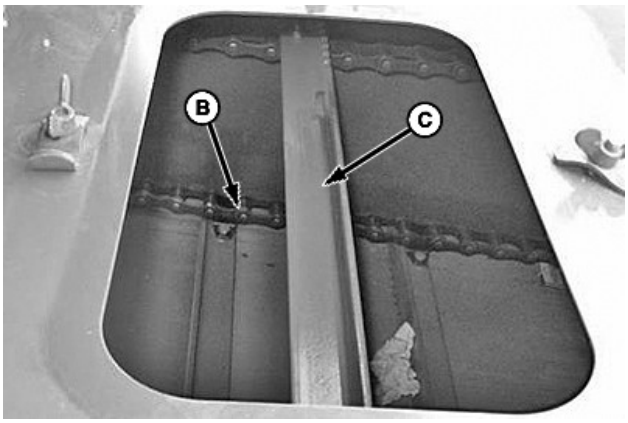
- Connect the electrical connector to the electrical component on the header.
- Connect the hydraulic coupler to the hydraulic coupler on the header.

CP00834,00020D1-19-09MAR22

Check Feeder House Conveyor Chain Tension



YC16634—UN—07JAN21



YC16635—UN—07JAN21

A—Cover
B—Conveyor Chain
C—Slat

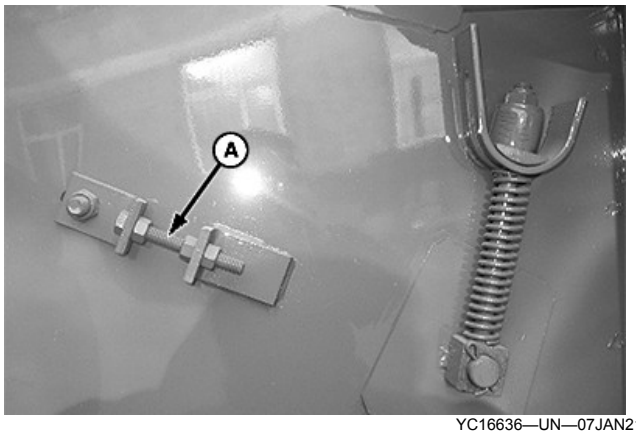
Open the cover (A), lift the slat (C) with 300 N (67 lb).

- For the small crops, the conveyor chain (B) can be lift 30—40 mm (1.2—1.6 in).
- For corn, the conveyor chain can be lift 40—50 mm (1.6—2 in).

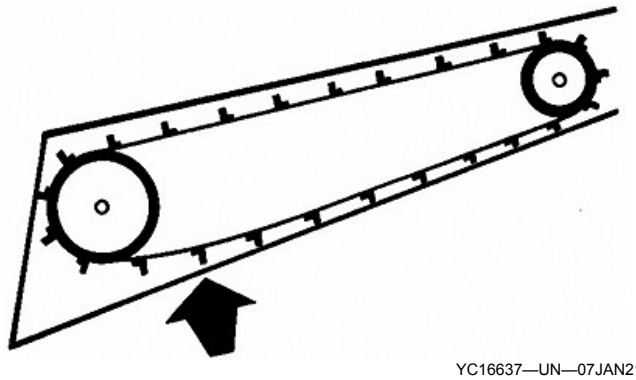
Check the tension of the conveyor chain every 10 hours.

CP00834,000897F-19-05FEB21

Adjust Feeder House Conveyor Chain Tension



YC16636—UN—07JAN21



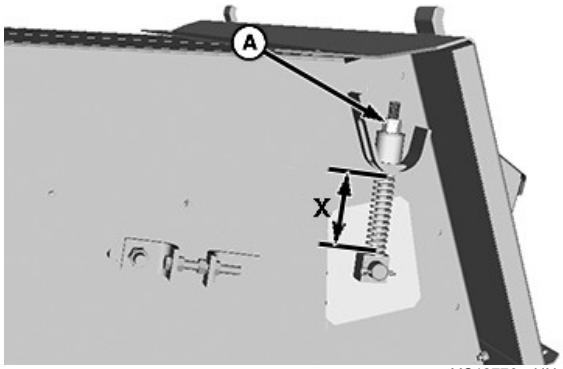
YC16637—UN—07JAN21

A—Adjusting Bolt (2 used)

Adjust the length of the adjusting bolts (A) on both sides of the feeder house, until the third slat from the front slightly touches the bottom of the feeder house.

CP00834,0008980-19-05FEB21

Adjust Feeder House Floating Drum Height



YC12776—UN—15AUG18

A—Nut (2 used)
X—Spring Length

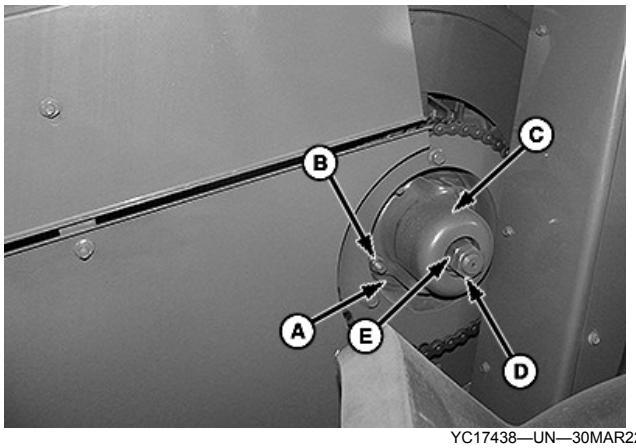
Adjust the spring length (X) with nuts (A) on both sides of the feeder house.

- For the most crops except for corn and large volume of the oil rapeseed: The spring length is 140 mm (5.5 in).
- For corn: The spring length is 107—113 mm (4.2—4.4 in).

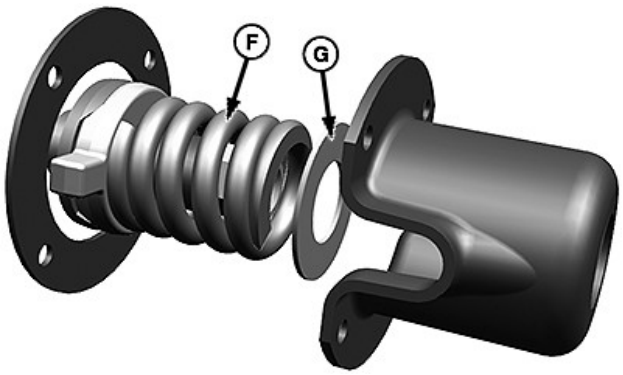
CP00834,0008981-19-05FEB21

Adjust Feeder House Slip Clutch

CAUTION: Shut OFF engine, set park brake, and remove key.



YC17438—UN—30MAR22



YC19804—UN—23MAR22

A—Shim
B—Nut (4 used)
C—Cover
D—Nut
E—Nut
F—Spring
G—Shim

When the clutch slips, adjust the clutch.

CAUTION: The slip clutch cover (C) is under pressure of the spring (F).

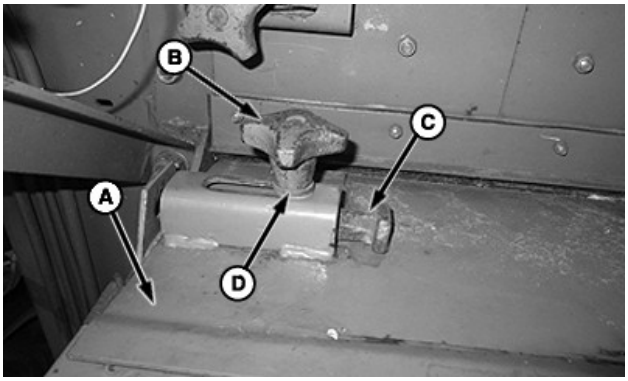
IMPORTANT: There is no need to remove nuts (D and E) for the adjustment. If the nuts are removed, firstly tighten the nuts and then install spring and cover.

NOTE: Two long bolts can be used to assist the cover removal and installation.

1. Remove nuts (B) and cover (C).
2. Increase or reduce shim (G) as required.
   - Increase shim to increase the force.
   - Reduce shim to reduce the force.
3. Install cover and tighten nuts (B).

CP00834,0008DAD-19-23MAR22

Upper Feeder House Cover



YC8079—UN—22JAN15

A—Cover
B—Grip Nut (2 used, 1 per side)
C—Latch (2 used, 1 per side)
D—Lock Washer (2 used, 1 per side)

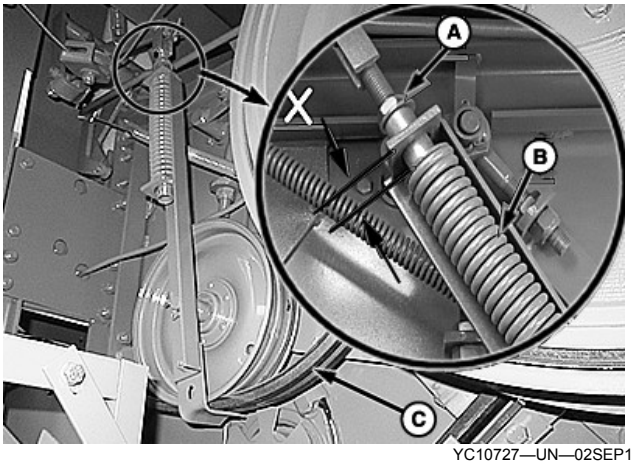
Service upper part of the feeder house through the upper feeder house cover (A).

To remove cover (A), loosen grip nuts (B), slide latches (C) together with grip nuts (B) inward and remove. Install cover (A) in reverse order.

NOTE: Make sure that lock washers (D) are located under grip nuts (B).

CP00606,000179C-19-25MAY18

Feeder House Drive Belt Tension



YC10727—UN—02SEP16

A—Lock Nut
B—Spring
C—Belt
X—Length (7—12 mm)

When the feeder house drive is engaged, the belt (C) is tensioned.

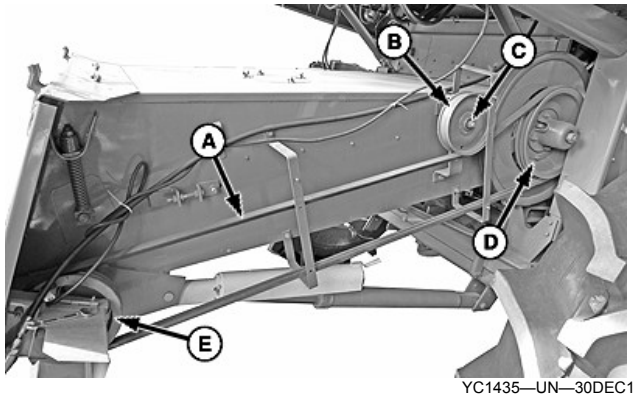
Adjustment Method: Adjust the lock nut (A), until the length (X) is 7—12 mm. Retighten the lock nut.

CP00834,0008A50-19-02MAR21

Header Drive Belt/Chain Tension

CAUTION: Shut OFF engine, set park brake, and remove key.

Belt Tension Adjustment

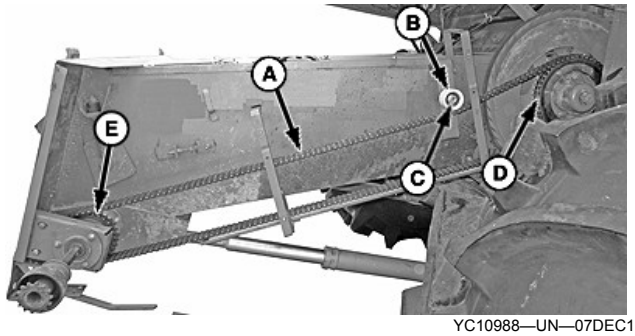


YC1435—UN—30DEC13

A—Belt
B—Idler
C—Nut
D—Drive Pulley
E—Driven Pulley

Loosen nut (C). Tension the belt (A) by adjusting idler (B). Retighten nut (C).

Chain Tension Adjustment



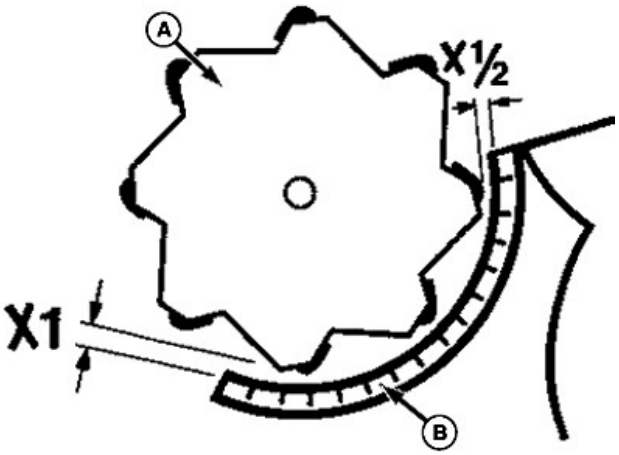
YC10988—UN—07DEC16

A—Chain
B—Idler
C—Nut
D—Drive Sprocket
E—Driven Sprocket

Loosen nut (C). Tension the belt (A) by adjusting idler (B). Retighten nut (C).

CP00834,0008A51-19-02MAR21

Threshing Unit



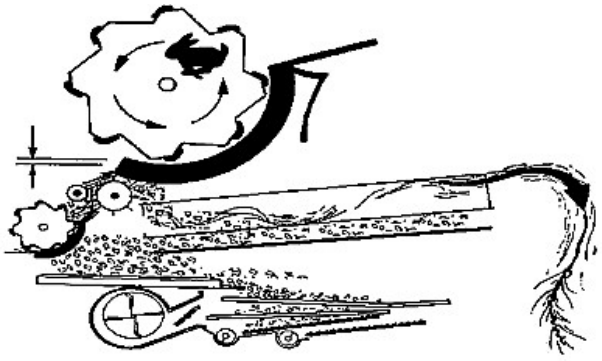
YC1436—UN—11FEB14

A—Threshing Cylinder
B—Concave

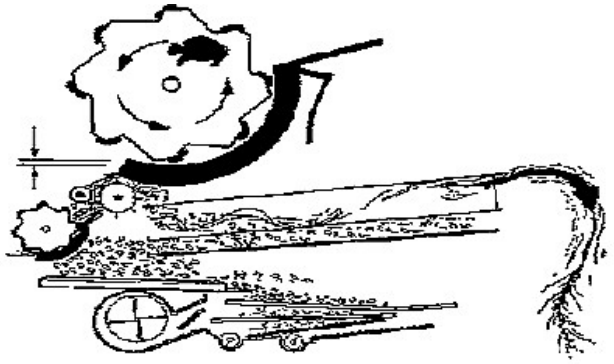
Threshing unit is the most important component of the combine, so adjust the clearance carefully between threshing cylinder (A) and concave (B).

CP00606,00017A0-19-25MAY18

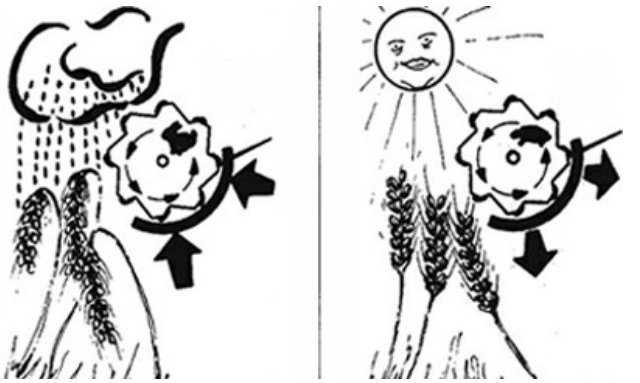
Adjust Threshing Cylinder and Concave



YC1437—UN—27FEB12



YC1438—UN—27FEB12



YC1439—UN—27NOV12

1. Higher cylinder speed and smaller threshing clearance produce a stronger threshing.

NOTE: When cylinder speed is too high and threshing clearance is too small, cracked grain results.

2. When cylinder speed is low and threshing clearance is large, a lower cracked rate results.

NOTE: When cylinder speed is low and threshing clearance is too large, threshing becomes ineffective.

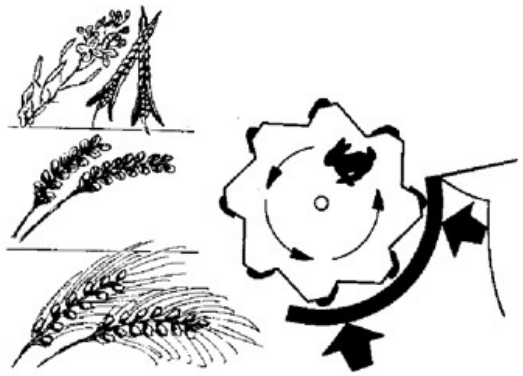
3. **Basic Adjustment:**

- Moist crops: Increase cylinder speed and/or reduce threshing clearance.
- Dry crops: Reduce cylinder speed and/or increase threshing clearance.

IMPORTANT: To get a good threshing result, it is essential to adjust cylinder speed and threshing clearance properly.

OUYC278,0000A39-19-04SEP18

Adjust Threshing Clearance Depending on Crops



YC12899—UN—18SEP18

Small grain and ordinary crops: high speed, and small threshing clearance.

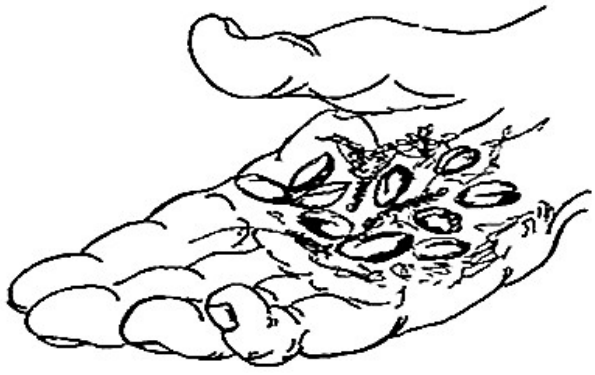
YC12900—UN—18SEP18

Corn or bean: low speed, and big threshing clearance.

YC00758,00002F8-19-21NOV18

Determine Threshing Effect

To determine threshing effect, pay attention to the following:



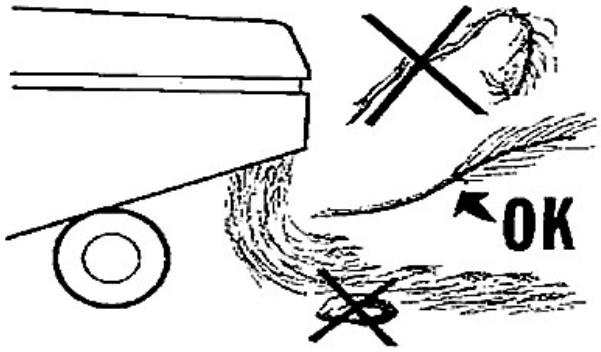
YC1442—UN—27FEB12

- Threshed straw
- Grain loss at the rear of combine
- Grain in the grain tank
- Tailings

OUYC278,0000A3A-19-28AUG18

Check Threshed Straw and Grain at the Rear of Combine

Check threshed straw and grain at the rear of combine, required as follows:



YC1443—UN—27FEB12

- Straw threshed is intact.
- Grain dropped on the ground is less.

CP00718,0004371-19-19DEC17

Grain in Grain Tank

YC3119—UN—26NOV12

Amount of cracked grain in the grain tank is kept minimal. If not, check the following:

- Are tailings excessive?
- Is cylinder speed too high?
- Is threshing clearance too small?

CP00718,0004372-19-19DEC17

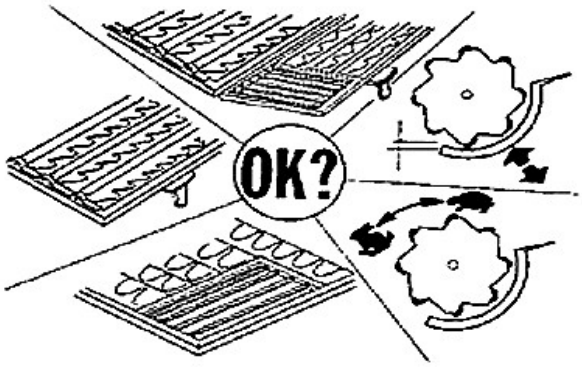
Check Tailings

YC1445—UN—27FEB12

- None of the tailings elevator paddles are transporting too many tailings.
- Most tailings are mostly unthreshed heads.
- Tailings do not contain grains, straw, and chaff.

CP00718,0004373-19-19DEC17

Excessive Tailings



YC1446—UN—27FEB12

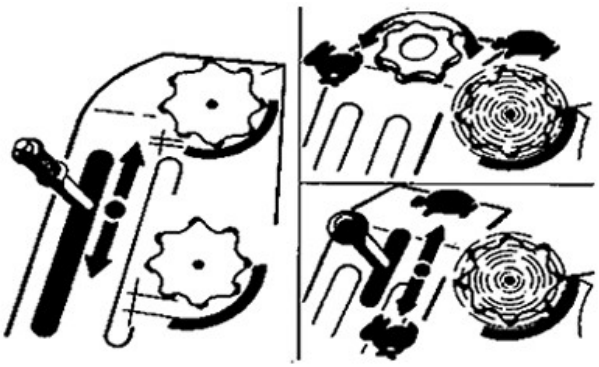
Check the following:

- Are chaffer and sieve adjusted properly?
- Is chaffer extension placed properly?
- Is grain pan extension placed properly?
- Is threshing clearance properly adjusted according to different crops?
- Is cylinder speed correct?

CP00718,0004374-19-19DEC17

Solve Threshing Problem

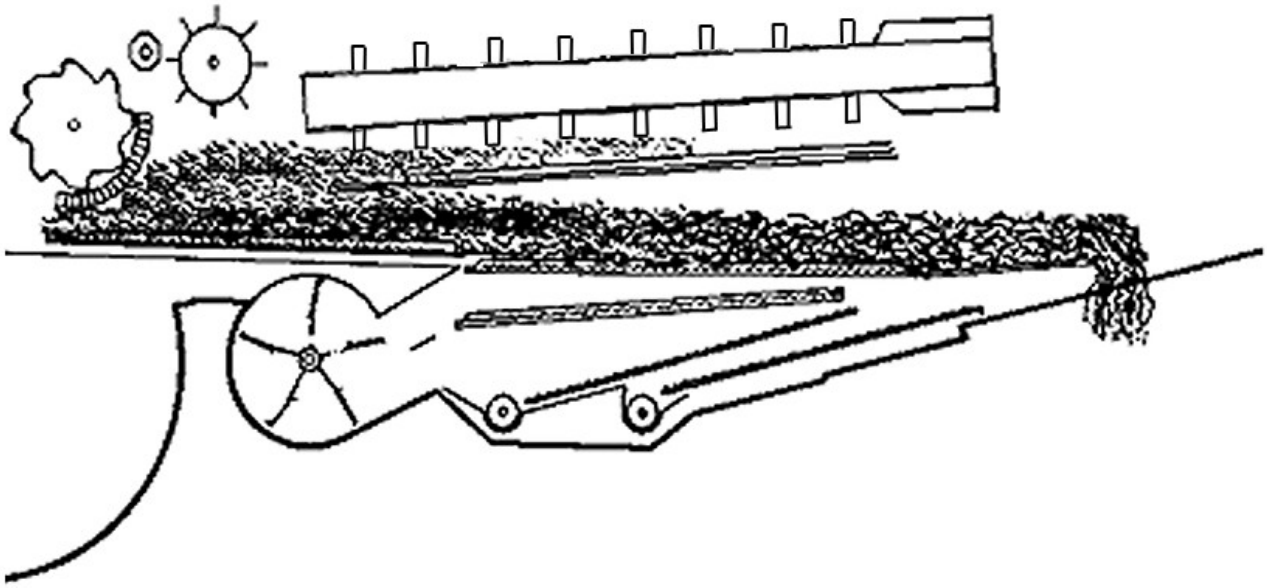
If threshing results are not satisfactory (excessive tailings, cleaning unit is not adjusted properly or other problems), refer to the followings.



YC2730—UN—29OCT12

CP00718,0004375-19-19DEC17

Over-Threshing



YC8336—UN—25MAR15

Over-threshing is due to too fast threshing speed and too tight threshing clearance.

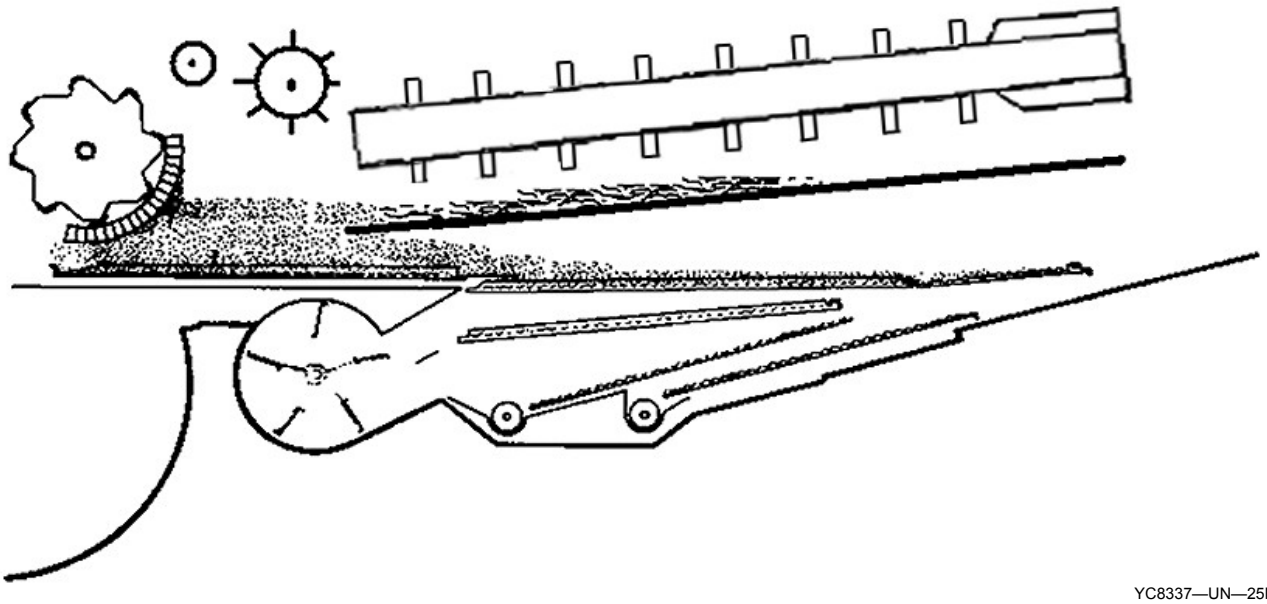
Over-threshing can be solved by decreasing the threshing speed. Decrease the threshing speed in increments of 50—100 rpm and increase the threshing clearance in increments of 1 mm. Before the second adjustment, check the result of the previous adjustment.

If over-threshing still cannot be solved, reduce ground speed. High feed rate can also lead to over-threshing.

NOTE: Check the result before performing next adjustment.

OUYC278,0000A3B-19-28AUG18

Insufficient Threshing



YC8337—UN—25MAR15

Insufficient threshing is due to the too low threshing speed and too wide threshing clearance.

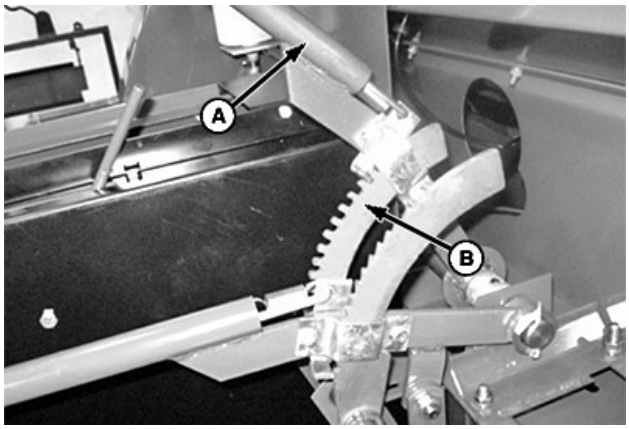
Insufficient threshing can be solved by increasing the threshing speed in increments 50—100 rpm and decrease the threshing clearance in increments in 1 mm.

Under the certain harvesting conditions, it is possible that the problem cannot be solved. Increase the ground speed in this situation.

NOTE: Check the result before performing next adjustment.

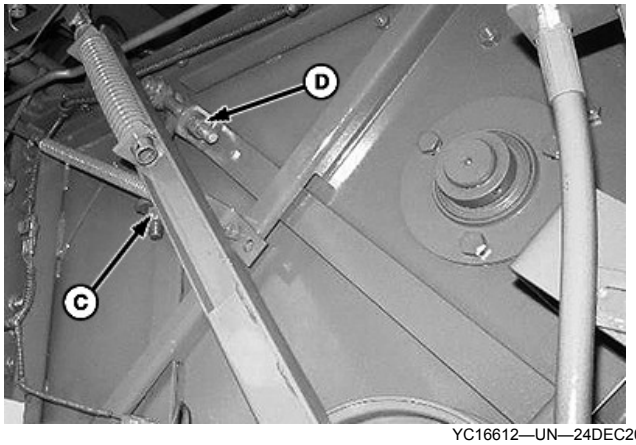
OUYC278,0000A3C-19-28AUG18

Concave Clearance Basic Setting—Wheat



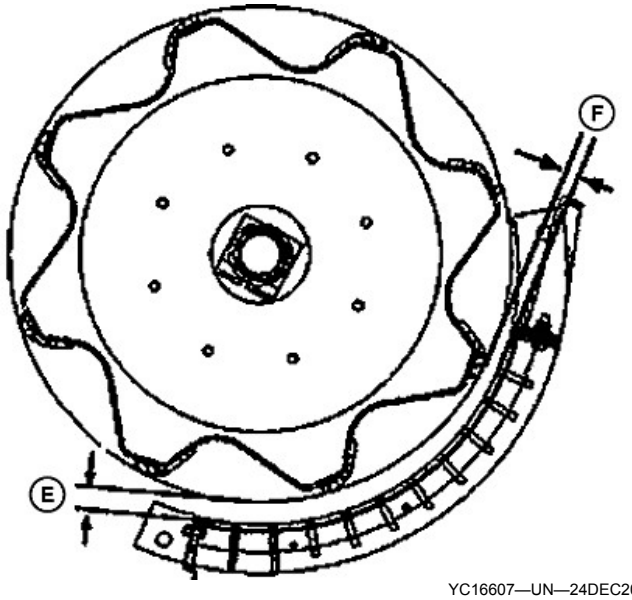
YC16611—UN—24DEC20

Concave Clearance Adjustment Lever



YC16612—UN—24DEC20

Adjustment Unit



YC16607—UN—24DEC20

Concave Clearance Measurement Location

A—Adjusting Lever
B—Sector
C—Lock Nut (2 used)
D—Lock Nut (2 used)
E—Inlet Clearance
F—Outlet Clearance

The concave clearance has been set at the factory. The inlet clearance (E) is 7—8 mm, the outlet clearance (F) is 4—5 mm.

The factory setting of the concave needs to be performed every time the concave is changed and should be verified at least once per harvesting season.

Measurement procedure:

1. Verify that the concave has to be moved through the full range with one hand from the operator seat. If the concave doesn't move freely, free up the concave.

NOTE: Never set to the second notch by pushing down on the lever.

2. Open the concave fully and slowly, pull the lever up until it engages in the second notch from the top.
3. Remove the concave inspection window covers on both sides of the combine.
4. Rotate the cylinder slowly by hand and verify the clearance between the cylinder and concave until the high bar is identified. Mark the high bar with a permanent mark like a paint dot or a center punch.
5. Measure the clearance between the high bar of the rasp bar cylinder and the second concave bar from the front and the first bar from the rear respectively.

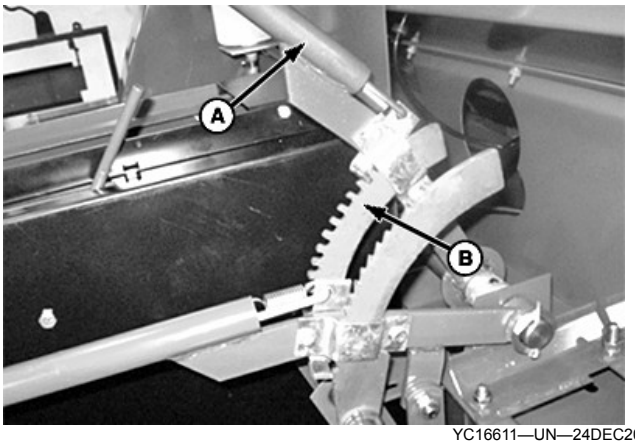
NOTE: The clearances from both sides must be same. The concave must be parallel to the cylinder side to side.

If the measurements are not align with the factory set values, adjust the concave straps to achieve the desired clearance in the front and rear of concave.

1. Loosen nuts and adjust length of eyebolts as needed by turning the lock nuts (C and D) in the appropriate direction.
2. When increasing the clearance, periodically insert a pry bar between the cylinder and the concave and pry it down.
3. Verify the clearance.

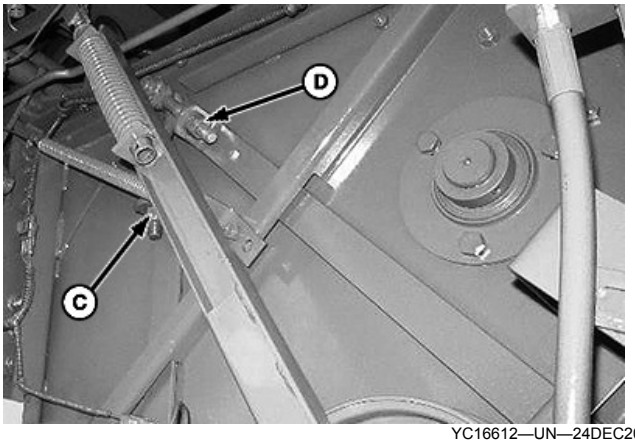
CP00834,000899C-19-05FEB21

Concave Clearance Basic Setting—Rice



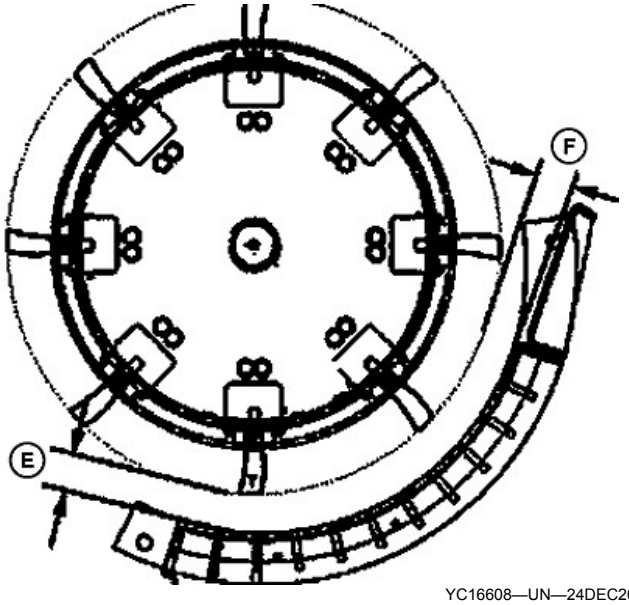
YC16611—UN—24DEC20

Concave Clearance Adjusting Lever



YC16612—UN—24DEC20

Adjustment Unit



YC16608—UN—24DEC20

Concave Clearance Measurement Location

A—Adjusting Lever
B—Sector
C—Lock Nut (2 used)
D—Lock Nut (2 used)
E—Inlet Clearance
F—Outlet Clearance

The concave clearance has been set at the factory. The inlet clearance (E) is 17—18 mm, the outlet clearance (F) is 14—15 mm.

The factory setting of the concave needs to be performed every time the concave is changed and should be verified at least once per harvesting season.

Measurement procedure:

1. Verify that the concave has to be moved through the full range with one hand from the operator seat. If the concave doesn't move freely, free up the concave.

NOTE: Never set to the second notch by pushing down on the lever.

2. Open the concave fully and slowly, pull the lever up until it engages in the second notch from the top.
3. Remove the concave inspection window covers on both sides of the combine.
4. Rotate the cylinder slowly by hand and verify the clearance between the cylinder and concave until the high bar is identified. Mark the high bar with a permanent mark like a paint dot or a center punch.
5. Measure the clearance between the high bar of the rasp bar cylinder and the second concave bar from the front and the first bar from the rear respectively.

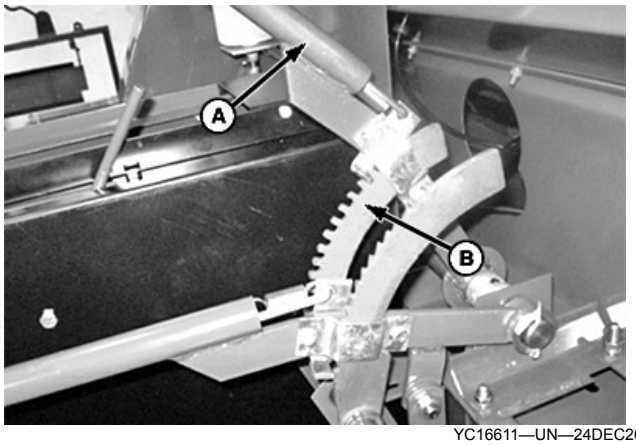
NOTE: The clearances from both sides must be same. The concave must be parallel to the cylinder side to side.

If the measurements are not align with the factory set values, adjust the concave straps to achieve the desired clearance in the front and rear of concave.

1. Loosen nuts and adjust length of eyebolts as needed by turning the lock nuts (C and D) in the appropriate direction.
2. When increasing the clearance, periodically insert a pry bar between the cylinder and the concave and pry it down.
3. Verify the clearance.

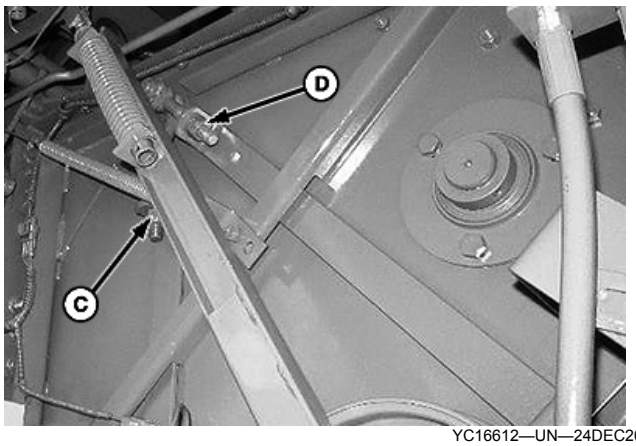
CP00834,000899D-19-05FEB21

Concave Clearance Basic Setting—Corn



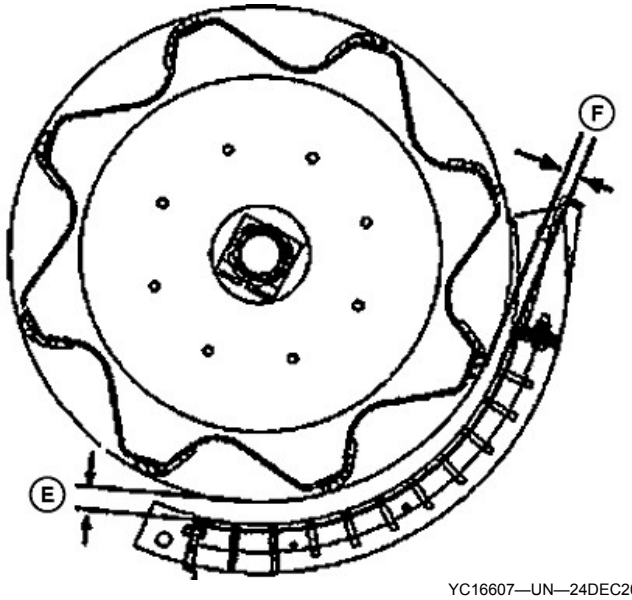
YC16611—UN—24DEC20

Concave Clearance Adjusting Lever



YC16612—UN—24DEC20

Adjustment Unit



YC16607—UN—24DEC20

Concave Clearance Measurement Location

A—Adjusting Lever
B—Sector
C—Lock Nut (2 used)
D—Lock Nut (2 used)
E—Inlet Clearance
F—Outlet Clearance

The concave clearance has been set at the factory. The inlet clearance (E) is 22—23 mm, the outlet clearance (F) is 19—20 mm.

The factory setting of the concave needs to be performed every time the concave is changed and should be verified at least once per harvesting season.

Measurement procedure:

1. Verify that the concave has to be moved through the full range with one hand from the operator seat. If the concave doesn't move freely, free up the concave.

NOTE: Never set to the second notch by pushing down on the lever.

2. Open the concave fully and slowly, pull the lever up until it engages in the second notch from the top.
3. Remove the concave inspection window covers on both sides of the combine.
4. Rotate the cylinder slowly by hand and verify the clearance between the cylinder and concave until the high bar is identified. Mark the high bar with a permanent mark like a paint dot or a center punch.
5. Measure the clearance between the high bar of the rasp bar cylinder and the second concave bar from the front and the first bar from the rear respectively.

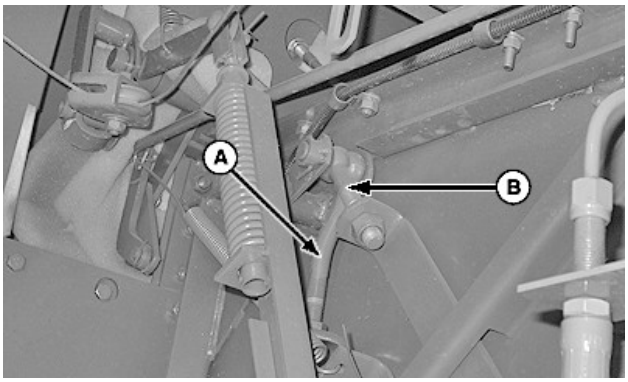
NOTE: The clearances from both sides must be same. The concave must be parallel to the cylinder side to side.

If the measurements are not align with the factory set values, adjust the concave straps to achieve the desired clearance in the front and rear of concave.

1. Loosen nuts and adjust length of eyebolts as needed by turning the lock nuts (C and D) in the appropriate direction.
2. When increasing the clearance, periodically insert a pry bar between the cylinder and the concave and pry it down.
3. Verify the clearance.

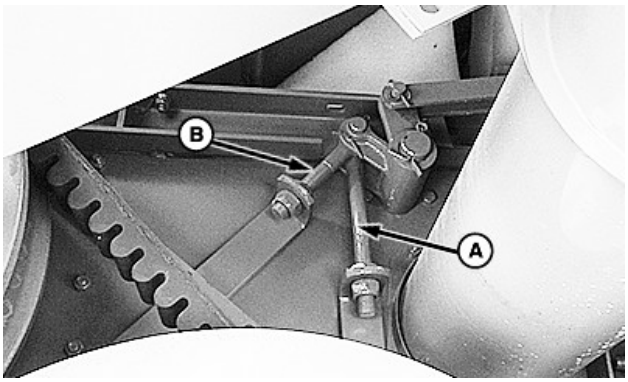
CP00834,000899E-19-05FEB21

Threshing Clearance Adjustment



YC1451—UN—31DEC13

Left-Hand Side



YC10713—UN—08DEC16

Right-Hand Side

A—Adjust Screws (2 used, 1 per side)
B—Adjust Screws (2 used, 1 per side)

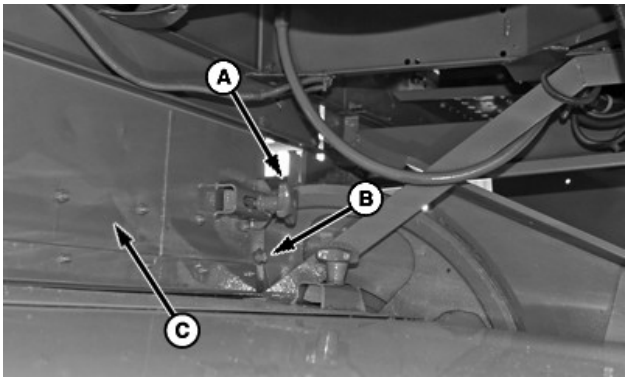
Adjust the inlet clearance by adjusting the adjust screws (A) on both sides of the machine.

Adjust the outlet clearance by adjusting the adjust screws (B) on both sides of the machine.

IMPORTANT: Adjust left and right sides simultaneously, make sure that clearance along the whole cylinder is consistent. The concave always is parallel to the cylinder. Speed and clearance determine threshing effectiveness.

OUYC278,0000A3F-19-28AUG18

Front Cylinder Inspection Cover



YC9670—UN—29FEB16

A—Grip Nut (2 used, 1 per side)
B—Bolt (2 used, 1 per side)
C—Cover

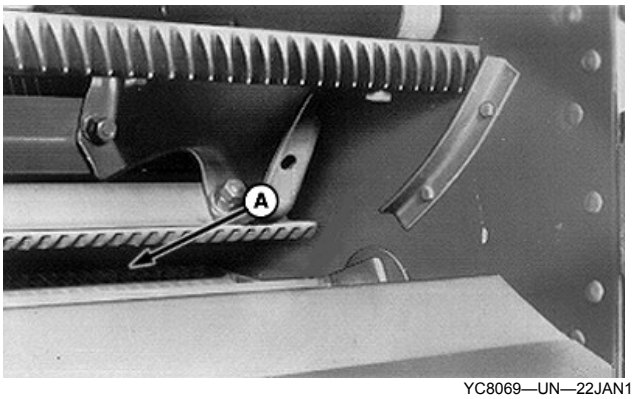
Open the cover (C), check if the cylinder is clogged.

Open the cover (C), remove the bolts (B), loosen grip nuts (A), slide the latches inward, and remove the cover (C).

Reinstall the cover (C) in reverse order.

CP00718,000437B-19-19DEC17

Stone Trap



YC8069—UN—22JAN15

A—Stone Trap

Stone trap (A) collects stones and prevents stones from damaging threshing cylinder and concave.

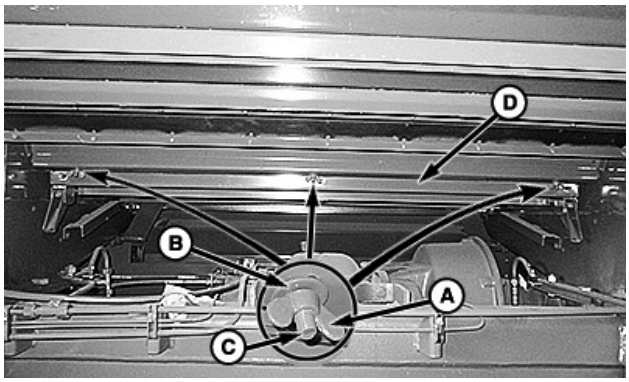
Periodically clean the stone trap (A).

CP00718,000437C-19-19DEC17

Empty Stone Trap

CAUTION: Avoid accidents. Be aware of falling stones when opening stone trap.

IMPORTANT: Clean the stone trap timely, prevent component failure and grain loss.



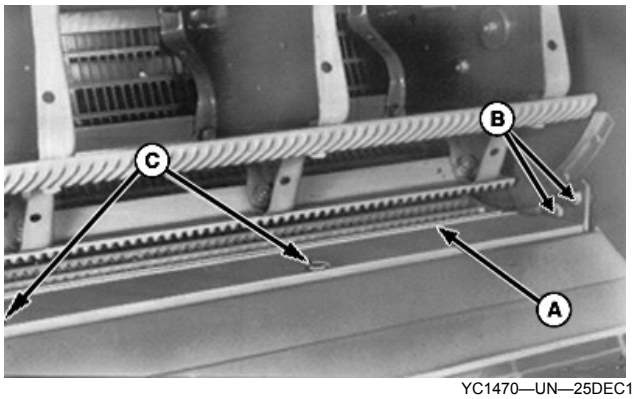
YC9630—UN—13MAR16

A—Nut
B—Bolt
C—Washer
D—Stone Trap

Loosen nuts (A), turn bolts (B) backward, and turn stone trap (D) downward to empty.

CP00606,00017A2-19-30AUG18

Stone Trap Cover Plate



YC1470—UN—25DEC12

A—Stone Trap Cover Plate
B—Cap Screws (2 used)
C—Cap Screws (2 used)

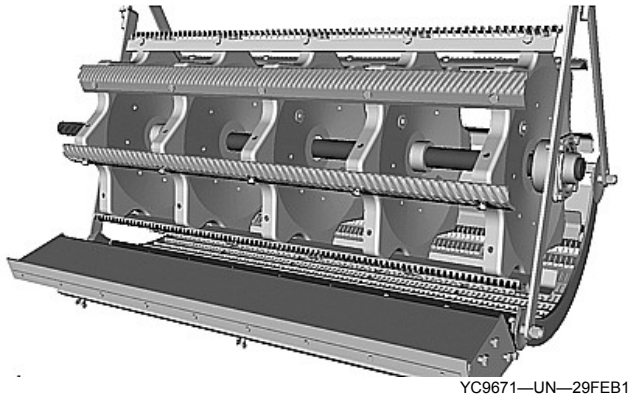
When harvesting corn, use the stone trap cover plate (A).

Stone trap cover plate is attached at each end with cap screws (B) and in the centre with cap screws (C).

OUYC278,0000A40-19-28AUG18

Cylinder Rasp Bar

Cylinder is fitted with rasp bars with knurls to the left and to the right, and placed alternately. If replacing a bar, the opposite bar must also be replaced to balance the cylinder. Rasp bars can be removed or installed without removing the cylinder.



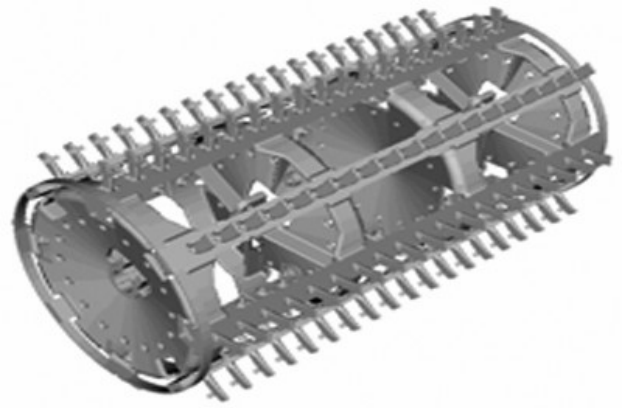
YC9671—UN—29FEB16

IMPORTANT: Retighten the fixing bolts of replaced rasp bar after the first 10 hours of operation.

CP00718,000437E-19-19DEC17

Rice Harvesting Accessories

Rice harvesting accessories include the rice cylinder and the rice concave. Rice threshing is done by the friction movement between the spike teeth of cylinder and concave.



YC1464—UN—27FEB12

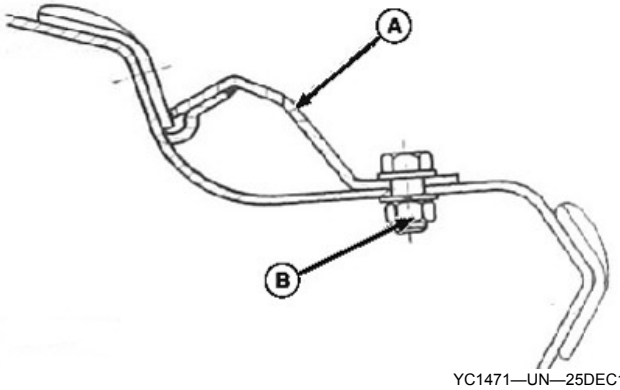
YC1465—UN—20FEB14

IMPORTANT: Replace lost or damaged spike teeth.

Install a new spike tooth using a hammer and a piece of hardwood. Tighten firmly using a nut. Spike tooth is installed with the long side at the rear in regard to direction of rotation.

YC00758,00002EA-19-20NOV18

Cylinder Closure Plate



YC1471—UN—25DEC12

A—Cylinder Closure Plate
B—Self-Locking Nut

When harvesting corn, use cylinder closure plate (A). Cylinder speed should not exceed 850 rpm.

Retighten self-locking nut (B) after the first 30 hours of operation, the torque is 80 N·m.

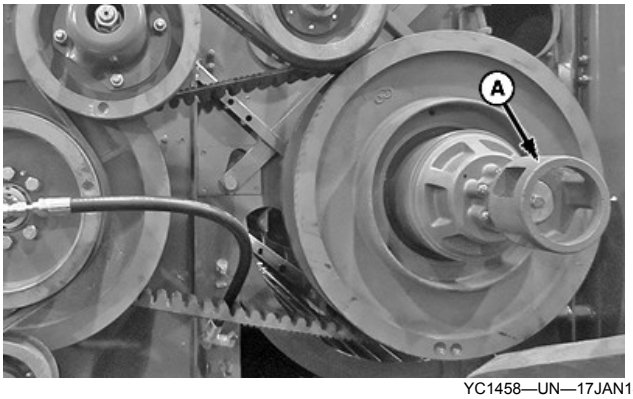
OUYC278,0000A41-19-28AUG18

Rotate Threshing Cylinder

CAUTION: Shut OFF engine, set park brake, and remove key.

CAUTION: Never unplug cylinder while engine is running. Be sure to install cover before starting combine.

CAUTION: Remind bystanders before rotating the threshing cylinder.



YC1458—UN—17JAN14

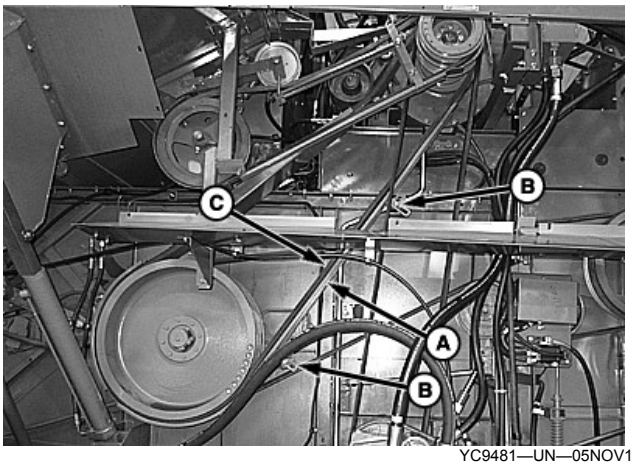
A—Hub

Rotate the threshing cylinder by rotating the hub (A) using an appropriate bar.

CP00606,0001877-19-09AUG18

Threshing Unit Belt Guide Adjustment

NOTE: When harvesting, regularly adjust the belt guide to prevent interference with the belt.



YC9481—UN—05NOV15

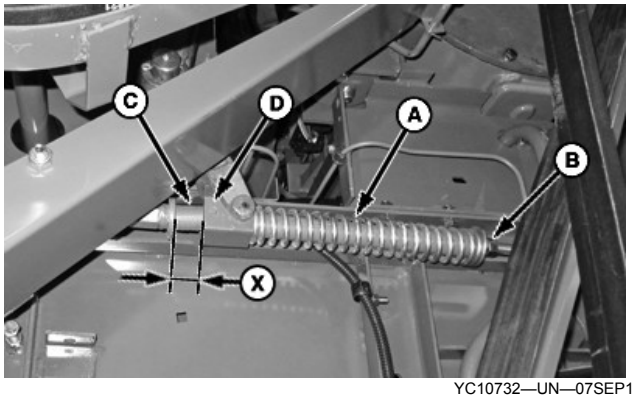
A—Belt Guide
B—Bolts (4 used)
C—Belt

Engage the separator. Loosen bolts (B). Adjust belt guide (A) until the clearance is 2—5 mm between the belt (C) and the belt guide. Retighten bolts (B).

CP00606,00017A4-19-25MAY18

Threshing Unit Belt Tension Adjustment

CAUTION: Avoid accidents. Do not adjust the combine while engine is running.



YC10732—UN—07SEP16

A—Spring
B—Nut (2 used)
C—Adjusting screw
D—Guide Block
X—Clearance (23— 27 mm)

Shut off engine and engage separator. Tension is correct when clearance (X) between adjusting screw (C) and guide block (D) is 23—27 mm. Adjust tension as needed by adjusting screw (C).

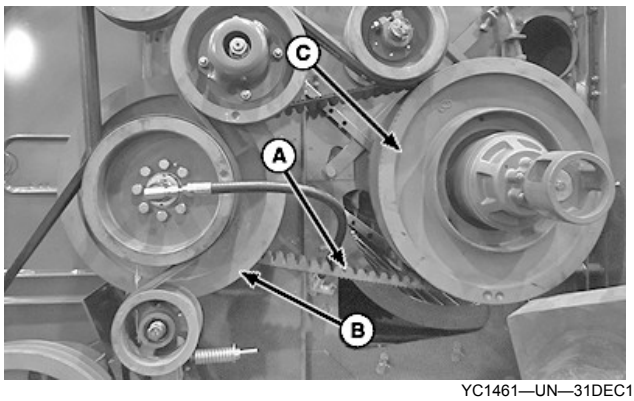
Adjustment Method: Engage separator. Loosen nuts (B) and turn adjusting screw (C). Tighten nuts (B) until the clearance (X) between adjusting screw (C) and guide block (D) is 23—27 mm. Recheck the clearance (X). Readjust if necessary.

IMPORTANT: Keep separator disengaged when the combine is not working.

CP00606,00017A5-19-25MAY18

Variable Threshing Cylinder Speed Drive

CAUTION: Avoid accidences. The internal spring has a greater pressure. Be careful when servicing.



YC1461—UN—31DEC13

A—Belt
B—Drive Pulley
C—Threshing Cylinder Pulley

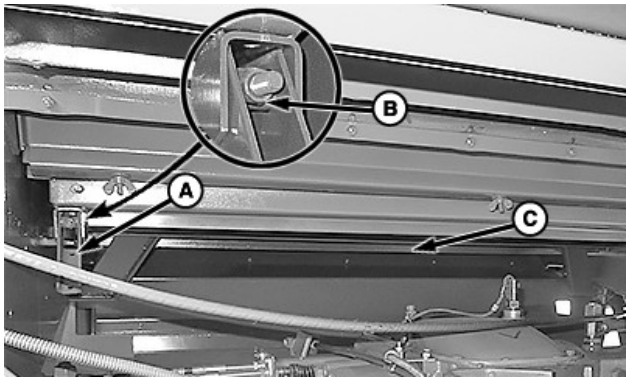
Variable threshing cylinder speed drive is composed of drive pulley (B), threshing cylinder pulley (C), and belt (A).

Variable threshing cylinder speed drive must be serviced by professionals.

CP00606,00017A6-19-25MAY18

Threshing Cleaning Unit

IMPORTANT: Clean the machine in time, prevent component failure and loss.



YC12833—UN—29AUG18

A—Clip (2 used)
B—Nut (2 used)
C—Front Grain Pan

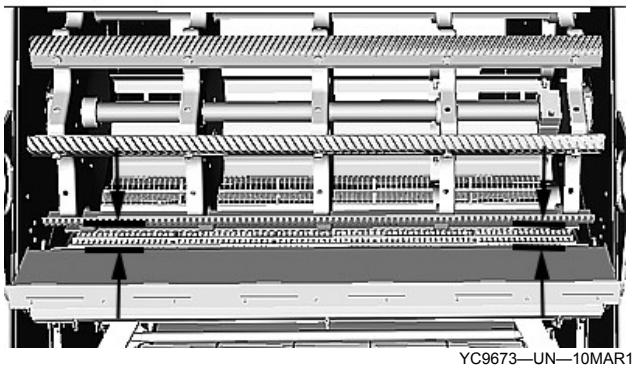
Lower the grain pan to clean the threshing unit.

Loosen the nuts (B) and open the clips (A), lower the grain pan (C) to clean the threshing unit.

CP00606,00017A7-19-30AUG18

Adjust Concave

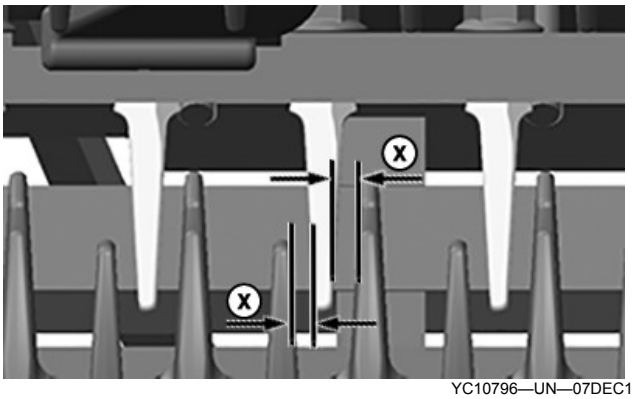
The concave is adjusted in the factory. Regularly check the concave. Ensure that the concave is in parallel with the cylinder. Related to the adjustment method, see Threshing Clearance Adjustment in Operating Machine section.



YC9673—UN—10MAR16

CP00718,0004385-19-19DEC17

Adjustment of Rice Concave and Cylinder

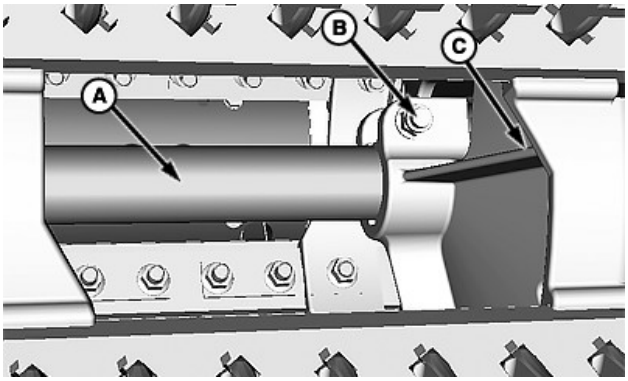


YC10796—UN—07DEC16

X—Clearance (4 mm)

When adjusting, adjust the cylinder closed to the concave, see Concave Clearance Adjustment in Operating Machine section. The clearance (X) between spike teeth of cylinder and concave is not less than 4 mm.

When rotating, clearance between spike teeth of cylinder and concave all rows should be the same.



YC10890—UN—10NOV16

A—Cylinder Shaft
B—Bolt
C—Cylinder spoke plate

Adjustment :

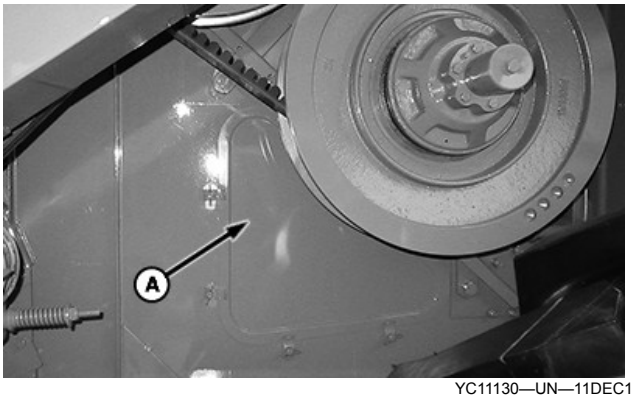
Loosen the bolt (B), adjust the position of cylinder spoke plate (C) on the cylinder shaft (A). After the clearance meet the need, retighten bolt.

YC00758,00002BB-19-14NOV18

Concave De-Awning Plates

NOTE: It is not necessary to remove the concave to install the plates.

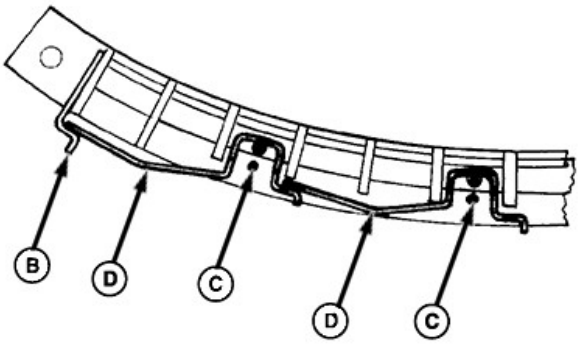
Concave de-awning plates are recommended for some crops such as barley and peas.



YC11130—UN—11DEC17

A—Cover (2 used, 1 per side)

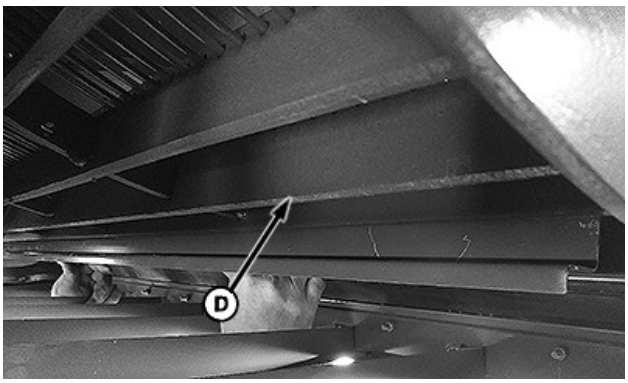
1. Remove the covers (A) at both sides of machine.



YC11132—UN—11DEC17

B—Front Support
C—Cotter Pins(2 used)
D—De-Awning Plates(2 used)

2. Clean the chaff from the front support (B) to ensure that the de-awing plate fits properly in the concave.



YC11131—UN—11DEC17

D—De-Awning Plates

3. Attach the de-awing plate (D) with the cotter pins (C).
4. Use one plate to begin. Then install the second if needed.

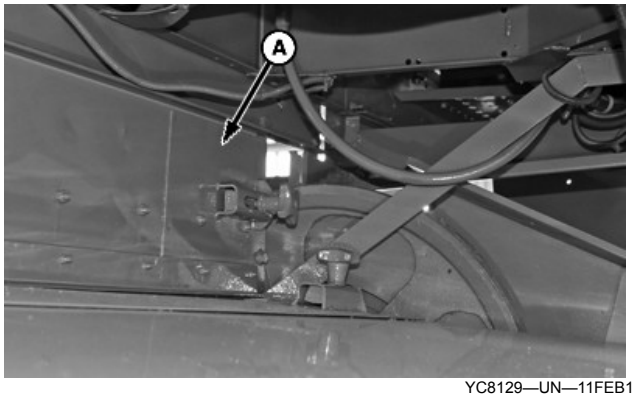
YC00758,00002BC-19-14NOV18

Clean Cylinder

CAUTION: Always warn bystanders when rotating the cylinder.

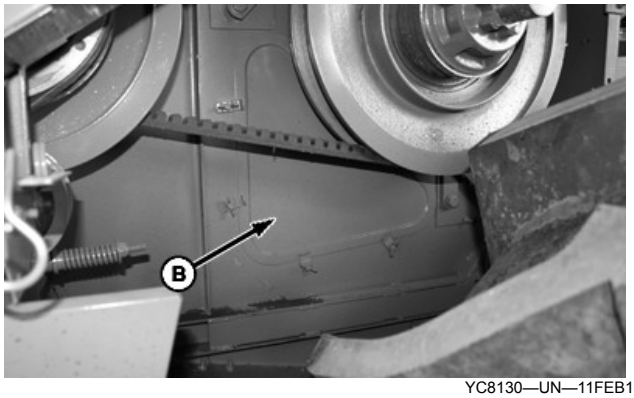
Before cleaning cylinder, ensure that the following are reliably implemented:

1. Put the header on the ground. Disengage the separator.
2. Set the gear-shift lever in neutral position and set park brake.
3. Shut off the engine.
4. Remove the key.
5. Turn off the battery disconnect switch.
6. Set the threshing clearance adjust lever in the maximum position.



YC8129—UN—11FEB15

A—Front Cover



YC8130—UN—11FEB15

B—Side Cover (2 used)

7. Open the cylinder front cover (A) and the side covers (B) for cleaning.
8. Use hooks and other tools for cleaning when needed.
9. When cleaning, remind bystanders not to rotate the cylinder.
10. Reinstall the parts removed.

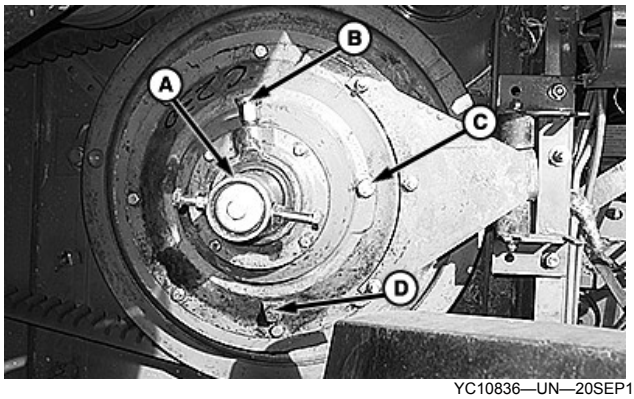
Cleaning method:

1. Open the cylinder front cover (A) and the side covers (B) for cleaning.
2. Use hooks and other tools for cleaning when needed.
3. When cleaning, remind bystanders not to rotate the cylinder.
4. Check and solve the troubles which result in the blockage. Reinstall the parts removed.

CP00606,00017AA-19-25MAY18

Threshing Cylinder Speed Reduction (Option)

Combine can be equipped with threshing cylinder speed reduction. With this reduction, the cylinder speed can be reduced about 50%.



YC10836—UN—20SEP16

A—Shift Collar
B—Vent Plug
C—Oil Filler Plug
D—Oil Drain Plug

Cylinder speed range:

- Shift collar (A) pushed in 515—1100 rpm
- Shift collar (A) pulled out 205—435 rpm

Oil change interval :

Change oil after the first 100 hours of operation. Change oil after every 500 hours of operation or at the end of every harvest season.

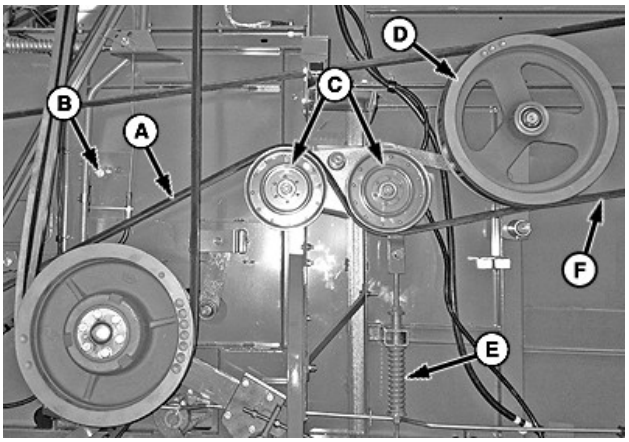
Check oil level after every 100 hours of operation.

Factory oil: 00# lithium grease. Capacity: 0.8 kg.

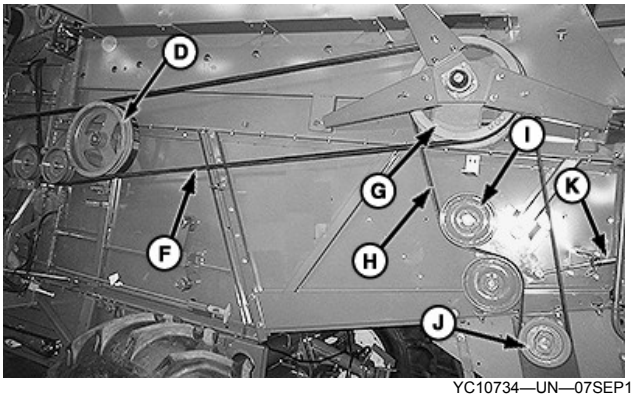
IMPORTANT: Close pulley halves when checking oil level or refilling, As oil flows slowly, check again after 15 minutes. Refill oil if necessary.

YC00758,0000327-19-26NOV18

Separator and Chopper Belt Drive



YC8836—UN—06JUL15



YC10734—UN—07SEP16

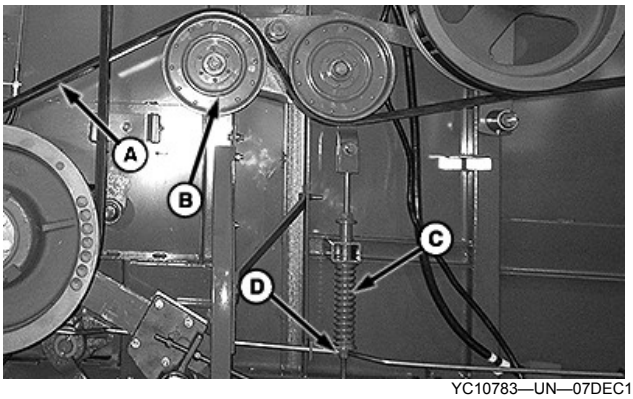
A—Belt
B—Separator Fixed Points (2 used, 1 per side)
C—Tension Pulleys (2 used)
D—Intermediate Pulley
E—Spring
F—Belt
G—Separator Drive Pulley
H—Belt
I—Tension Pulley
J—Chopper Drive Pulley
K—Spring

Separator drive is composed of belts (A and F), tension pulleys (C), and the intermediate pulley (D). Adjust tension of the belt (A) by changing the length of spring (E). The length of spring (E) is 200 mm. Both separator fixed points (B) are on the side wall of the machine.

Chopper drive is composed of belts (F and H), tension pulleys (I), intermediate pulley (D), and chopper drive pulley (J). Adjust tension of the belt (H) by changing the length of spring (K).

CP00606,00017AC-19-25MAY18

Tighten Separator Drive Belt



YC10783—UN—07DEC16

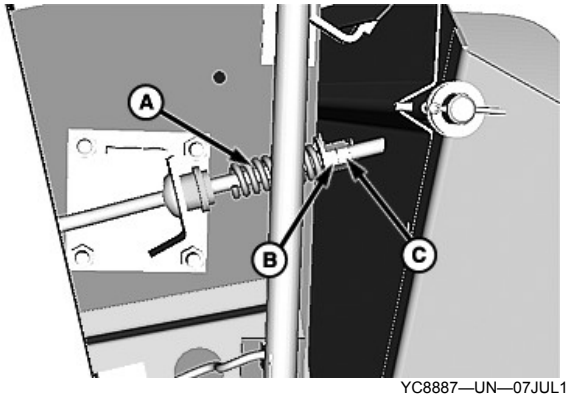
A—Drive Belt
B—Tension Pulley
C—Spring
D—Nut (2 used)

Separator drive belt (A) is tensioned by spring (C). To tension the belt, adjust the length of spring to change the position of the tension pulley (B).

Adjustment Method: Adjust nuts (D), until length of spring (C) is 130-160 mm. Retighten nuts.

CP00606,00017AD-19-25MAY18

Tighten Chopper Drive Belt



YC8887—UN—07JUL15

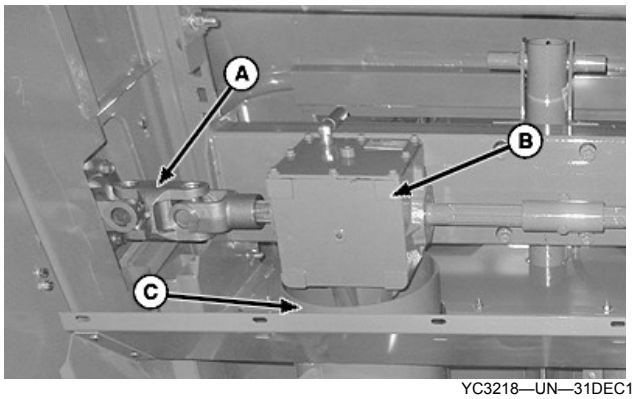
A—Spring
B—Nut
C—Nut

Chopper drive belt is tensioned by spring (A). Length of spring is adjusted according to belt working conditions. **Principle:** Under normal load, drive belt does not overheat.

Adjustment Method: Adjust nut (B) and nut (C), till length of spring (A) meets tensioning requirement of the chopper drive belt. Tighten nuts.

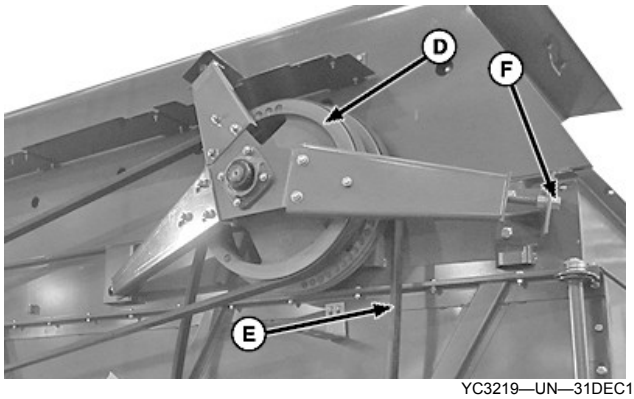
CP00606,00017AE-19-25MAY18

Rear Separator Drive



YC3218—UN—31DEC13

A—Universal Joint
B—Gear Case
C—Separator



YC3219—UN—31DEC13

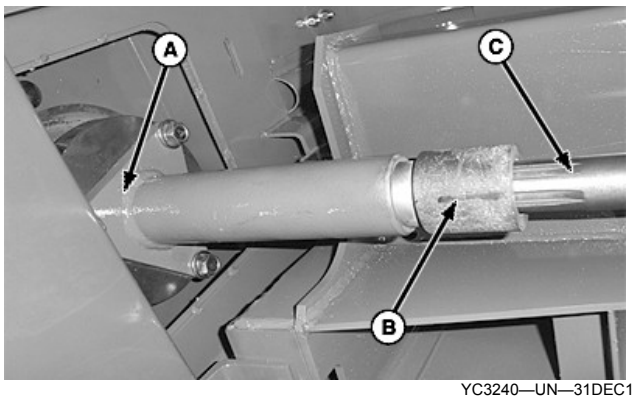
D—Separator Power Input Pulley
E—Drive Belt
F—Nut (3 used)

Power from the drive belt (E) transmits from universal joint (A) to gear case (B), and to separator (C). When installing universal joint (A), use specific tools to ensure its coaxiality. Adjust the parallelism of the input shaft through adjusting nuts (F) (at three positions).

For use of specific tools, see Use of Specific Tools in Operating Machine section.

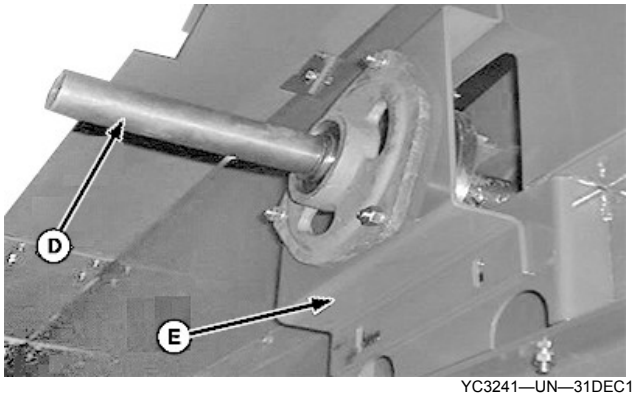
CP00606,00017AF-19-25MAY18

Use of Specific Tools



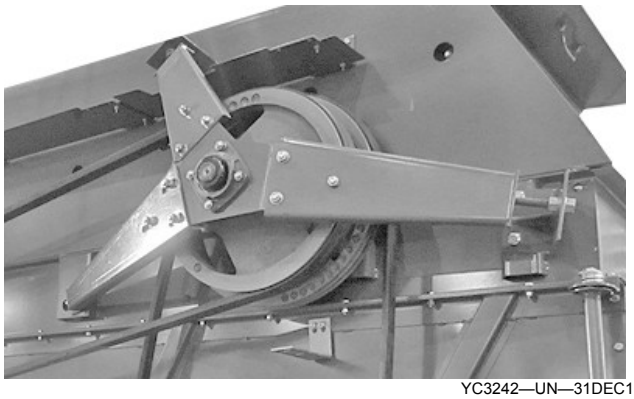
YC3240—UN—31DEC13

A—Specific Tool
B—Specific Tool
C—Gear Case Shaft



YC3241—UN—31DEC13

D—Driveshaft
E—Support Plate



YC3242—UN—31DEC13

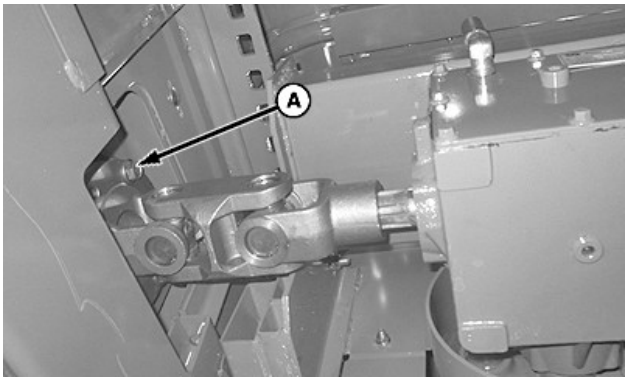
Install specific tool (A) on the driveshaft (D). Insert specific tool (B) on the gear case shaft (C).

Adjust the driveshaft (D) by hand. When the central point is found, fix support plate (E). Install other components in order.

Remove the tools. Install universal joint. When removing tools, separate specific tools (A and B). First remove specific tool (A) and then specific tool (B).

JL31334,00017BB-19-07MAY18

Replace Bearing, Tines or Deflector at the Front of Separator

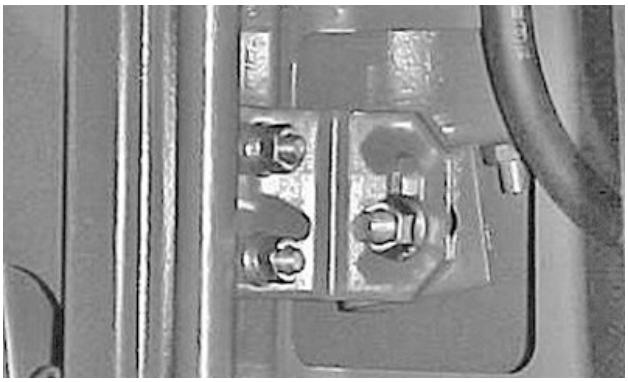


YC2734—UN—31DEC13

Rear Cover Bolt

A—Bolt (3 used)

Open the rear cover. Remove bolts (A). Move coupler to the right and remove.

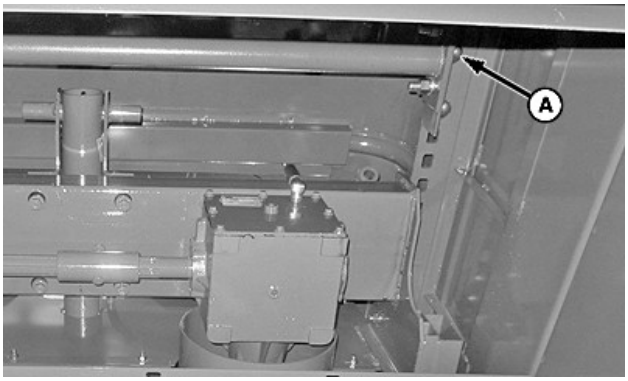


YC2735—UN—31DEC13

Front and Sidewall Retaining Bolts

A—Bolts (2 used, 1 per side)

Remove sidewall retaining bolts.

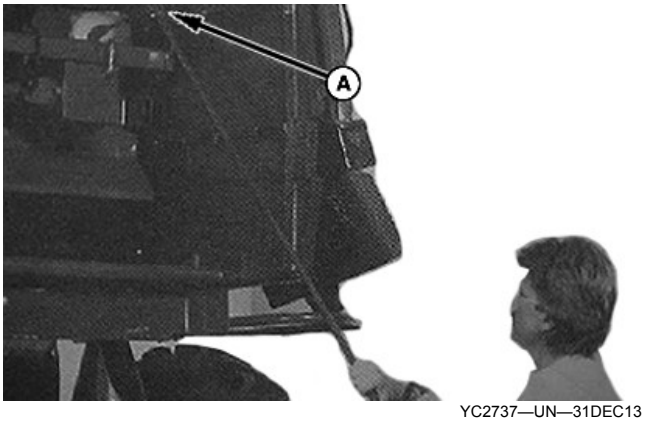


YC2736—UN—31DEC13

Separator Rear Retaining Bolts

A—Bolt

Remove retaining bolts (A) at the rear of machine.



YC2737—UN—31DEC13

Coupler

A—Coupler

NOTE: Clean the track before moving out the separator.

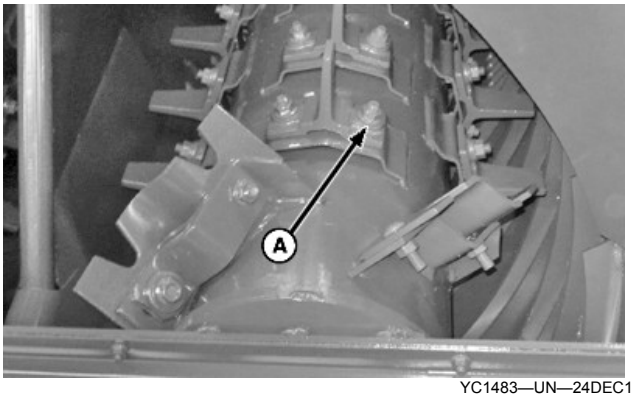
Connect handle and coupler (A) with bolts. Turn the handle counter clockwise to move cylinder to the maintenance position (a stopper is at this position on the track).

NOTE:

1. *Make sure that the separator contacts the track properly to prevent separator from falling off. When needed, use strengthened rods to prevent separator out of the rack.*
2. *Avoid moving the separator too much to prevent it from being tilt and dropping off.*
3. *Prohibit any people staying under the cylinder.*
4. *Avoid moving the separator out of the machine frequently, particularly when cleaning blockage.*

CP00718,0004391-19-19DEC17

Replace Tines



YC1483—UN—24DEC13

A—Nuts

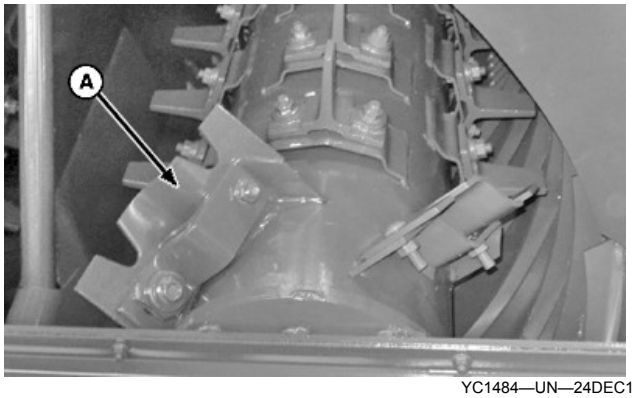
Remove bolts and nuts (A) which attach the tines.

Replace damaged and seriously worn tines.

NOTE: Replace the tines symmetrically on both sides to keep the separator balance.

CP00718,0004392-19-19DEC17

Replace Deflector



YC1484—UN—24DEC13

A—Deflector

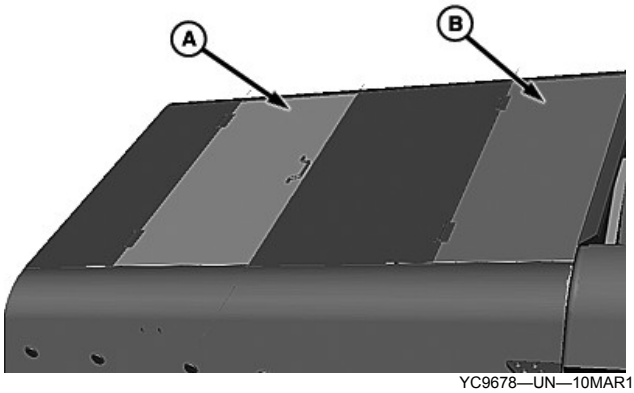
Remove bolts and nuts (A) which fix deflector (B).

Replace damaged and seriously worn tines deflector.

NOTE: Replace the deflectors symmetrically on both sides to keep the separator balance.

JL31334,00017CF-19-07MAY18

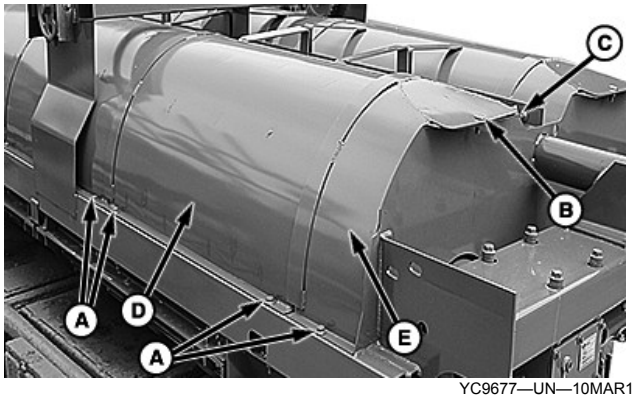
Clean Separator



YC9678—UN—10MAR16

A—Upper Panel
B—Upper Panel

1. When cleaning serious blockage or replacing tines, open the upper panels (A and B) from the rear.



YC9677—UN—10MAR16

A—Bolts(4 used)
B—Bolt
C—Nut
D—Upper Panel
E—Upper Panel

2. Remove bolts (A and B). Remove nuts (C), and remove the upper panels (D and E).

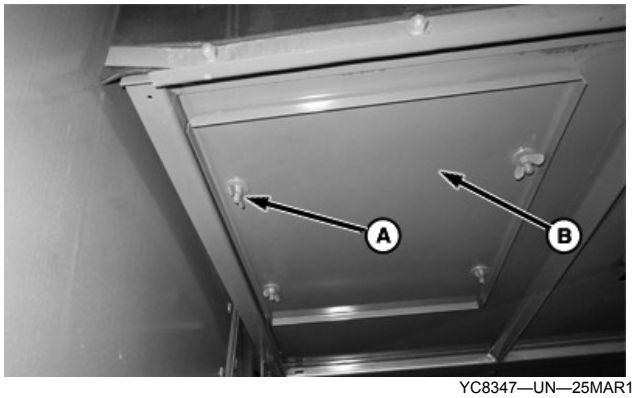
JL31334,00017BC-19-07MAY18

Clean Concave

When harvesting lodging crops, avoid soil from entering the machine and blocking concave, resulting in increased separation loss. Check concave regularly. Clear blockages as required.

CAUTION: Avoid injury. When removing cowl, be aware of falling soil and debris.

Unscrew wing nuts (A). Remove cowl (B).



YC8347—UN—25MAR15

A—Wing Nut (4 used)
B—Cowl

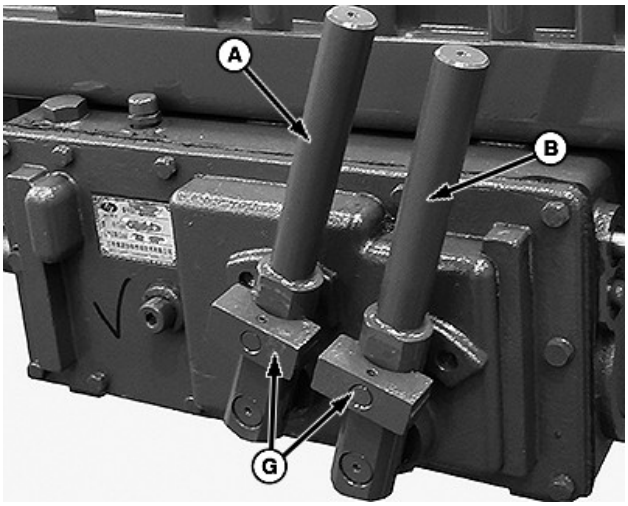
Clear blockage in concave.

YC8348—UN—25MAR15

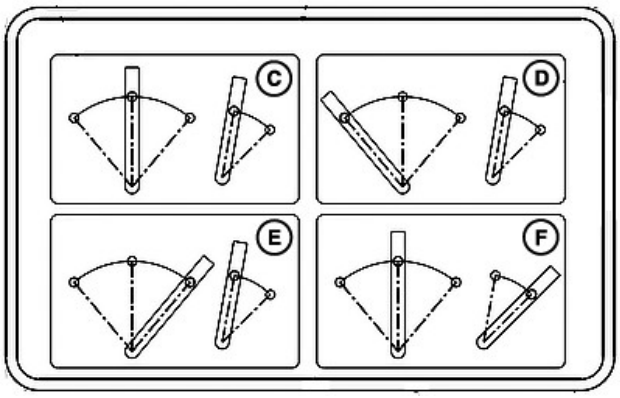
JL31334,00017D0-19-07MAY18

Adjust Separator Speed (3-Speed Gear Case)

IMPORTANT: Make sure that at least one shift lever (A or B) is positioned in neutral position during the speed adjustment process.



YC16375—UN—04NOV20



YC10730—UN—28DEC17

A—Shift Lever
B—Shift Lever
C—Neutral
D—500 rpm
E—700 rpm
F—800 rpm
G—Locks (2 used)

Combine can be equipped with the adjustable speed gear case. Change the shift levers (A and B) at different position to adjust the separator speed.

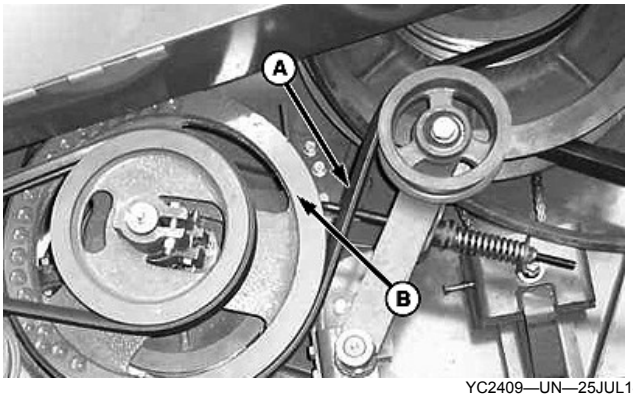
NOTE: Before switching the shift levers, place the shift levers in neutral position.

- C position: Neutral
- D position: 500 rpm
- E position: 700 rpm
- F position: 800 rpm

The locks (G) are used to lock the shift levers. Lift the locks, switch the shift levers, and then release the locks.

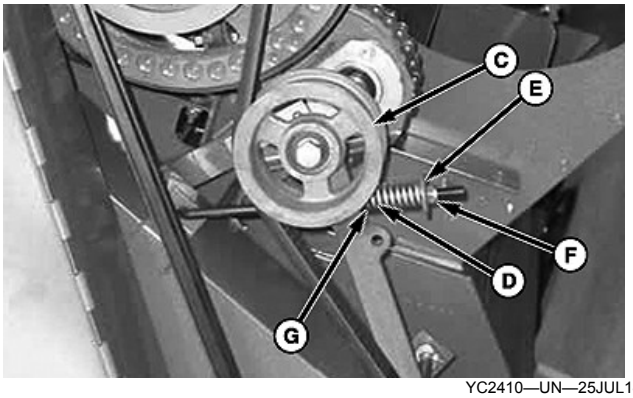
CP00834,0008337-19-04NOV20

Cleaning Shoe, Grain Elevator, and Tailings Elevator Drive



YC2409—UN—25JUL14

A—Belt
B—Drive Pulley



YC2410—UN—25JUL14

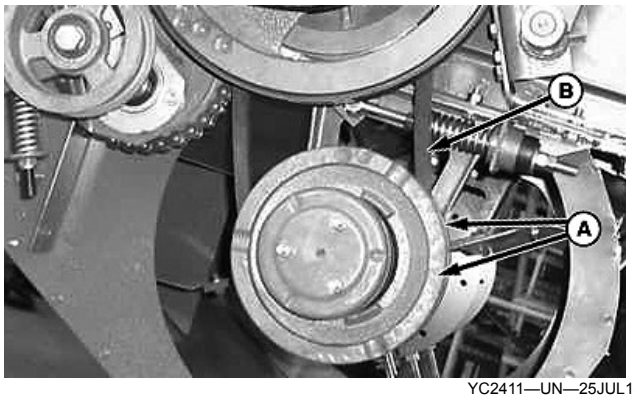
C—Tension Pulley
D—Spring
E—Washer
F—Nut
G—Spring Seat

The power from drive pulley (B) goes to tailings elevator, grain elevator, and cleaning shoes by belt (A). The belt

(A) is automatically tensioned by spring (D). The length of the tension spring is compressed to 59 mm. Change the length of spring to adjust the tension of the belt with nut (F).

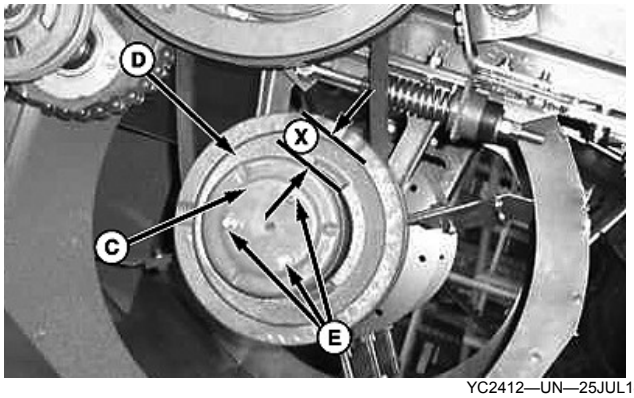
CP00606,00017B1-19-25MAY18

Cleaning Fan Drive



YC2411—UN—25JUL14

A—Variable Fan Speed Pulley(2 used)
B—Drive Belt



YC2412—UN—25JUL14

C—Spring Seat
D—Outer Half Pulley
E—Bolts (3 used)
X—Dimension (103—105 mm)

The variable fan speed pulleys (A) are adjusted under following conditions: When outer half pulley and inner half pulley are fully closed, measure dimension (X): from the outer surface of spring seat (C) to outer surface of the outer half pulley (D).

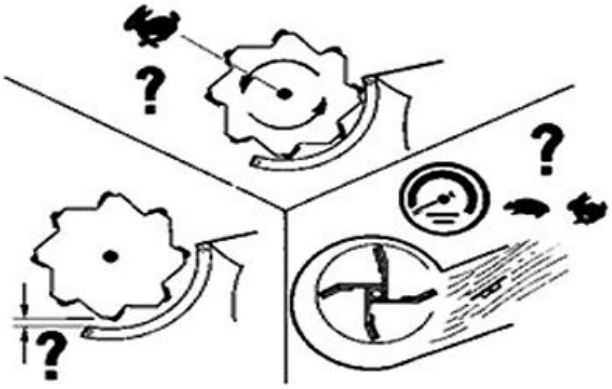
Adjust bolts (E) to change the dimension.

CP00834,0008A53-19-02MAR21

Cleaning Process

With cleaning shoe movement and fan blast, short straw is cast outside the combine, chaff is blown out. Clean grain passes through the sieve, and enters the grain auger from the upper pan. Tailings enter the tailings auger through lower pan.

YC1491—UN—27FEB12



YC1492—UN—30DEC13

As a result of over-threshing, the cleaning unit becomes overloaded, resulting in poor separation of grain from the chaff. A considerable amount of grain is lost, dropping to the ground at the rear of combine.

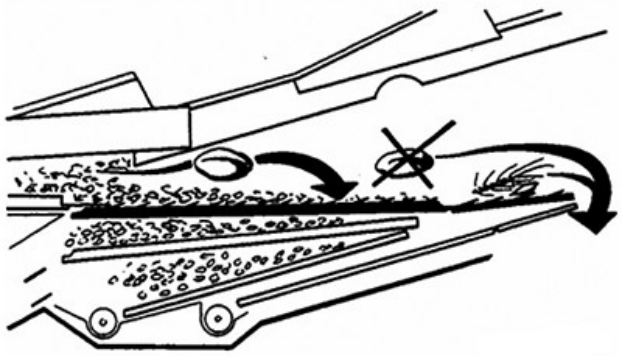
NOTE: The blast is as strong as possible, but grain loss is kept to a minimum.

If over-threshing, check the following:

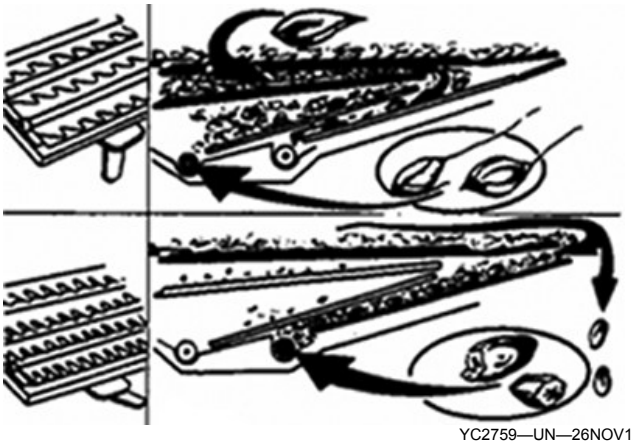
- Is threshing clearance too small?
- Is cylinder speed too high?
- Are fan speed and direction appropriate to sieve load?

OUYC278,0000A44-19-28AUG18

Adjustment of Chaffer



YC2758—UN—30OCT12



YC2759—UN—26NOV12

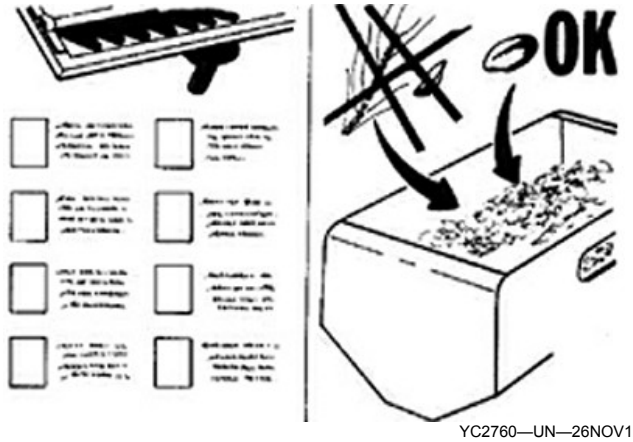
Adjust the chaffer opening wide enough so that the grain falls off before passing the length of the chaffer.

If the chaffer is opened too wide, the sieve overloads.

If the chaffer is not opened wide enough, some grain falls onto the tailings pan. There is cracked grain and some good grain is lost out of the rear of the combine.

YC00758,00002BE-19-14NOV18

Adjustment of Sieve



YC2760—UN—26NOV12

Refer to combine adjustment chart, carry out basic adjustments. The grain falls onto the pan in the front sieve. Always check the result of previous adjustment before carrying out next adjustment, ensure only little chaff or no chaff is in the grain tank.

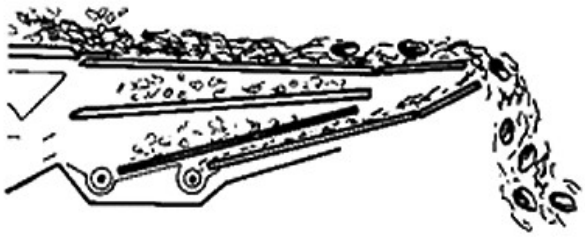
If the sieve is opened too wide, there is too much chopped straw in the grain tank.

If the sieve is not opened wide enough, there are too many grains in the tailings, and too many cracked grains in the grain tank.

CP00718,000439C-19-19DEC17

Return Pan Extension

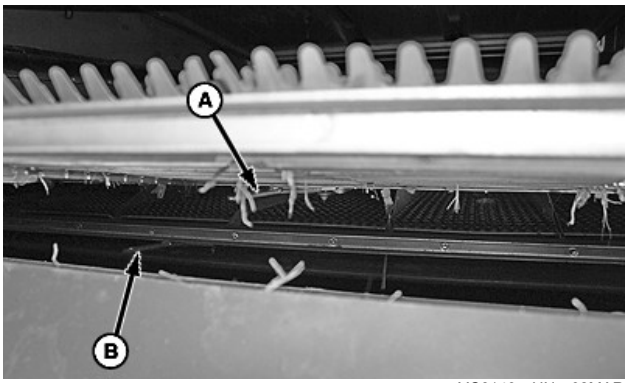
When adjusting extension, under normal harvesting conditions, it is a bit longer than chaffer extension for reducing grain loss.



YC1491—UN—27FEB12

OUYC278,0000A45-19-28AUG18

Chaffer, Sieve, and Chaffer Extension

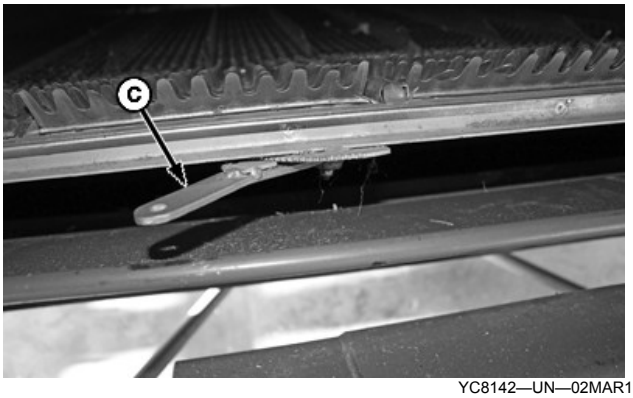


YC8143—UN—02MAR15

A—Chaffer Adjustment Lever
B—Sieve Adjustment Lever

Adjust chaffer opening at chaffer adjustment lever (A) .

Adjust sieve opening at sieve adjustment lever (B).



YC8142—UN—02MAR15

C—Chaffer Extension Adjustment Lever

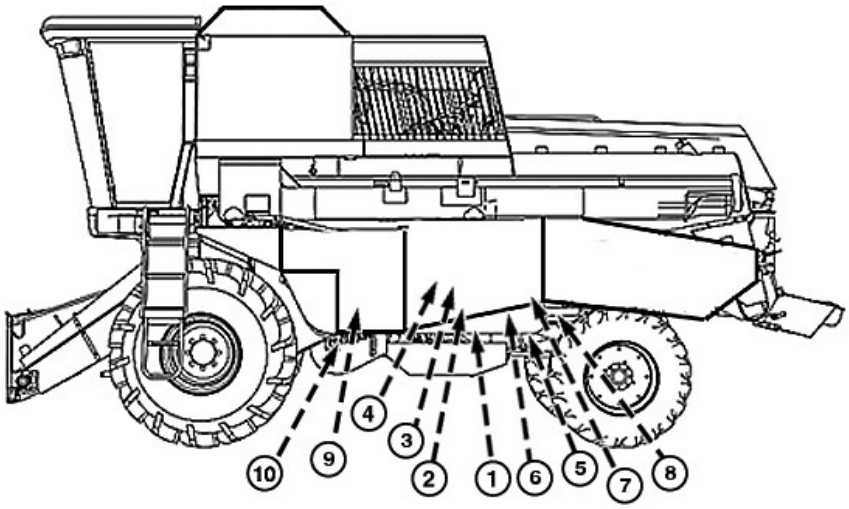
Adjust chaffer extension opening at chaffer extension adjustment lever (C).

For three levers, move to the left to increase opening, move to the right to decrease opening. Adjust opening for different crops. See Recommended Adjustment

Diagrams in Loss Evaluation and Adjustment Diagrams section.

CP00606,00017B3-19-25MAY18

Shoe Pitman and Hanger



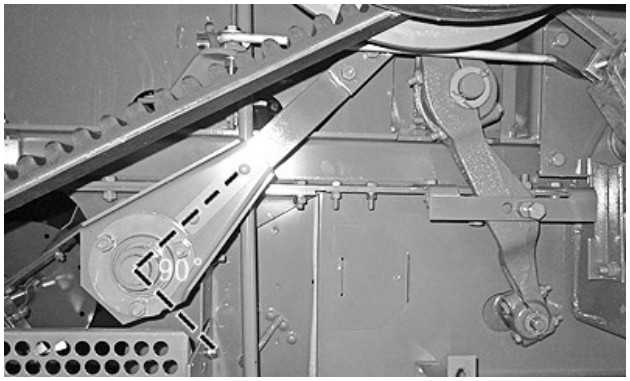
YC10855—UN—29SEP16

Rubber Mount Position-Left Hand Side

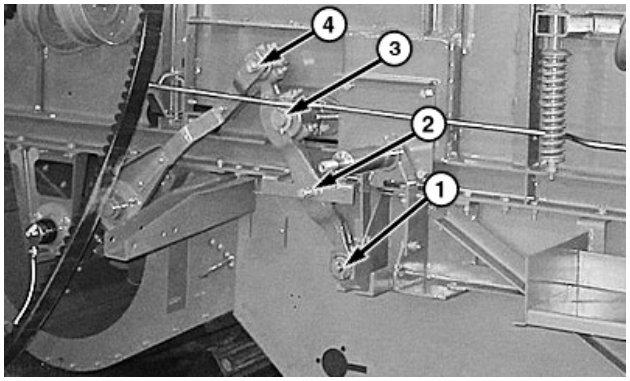
IMPORTANT: Change rubber bushings regularly.

NOTE: Rubber bushing positions on the right-hand side of combine are same as on the left-hand side.

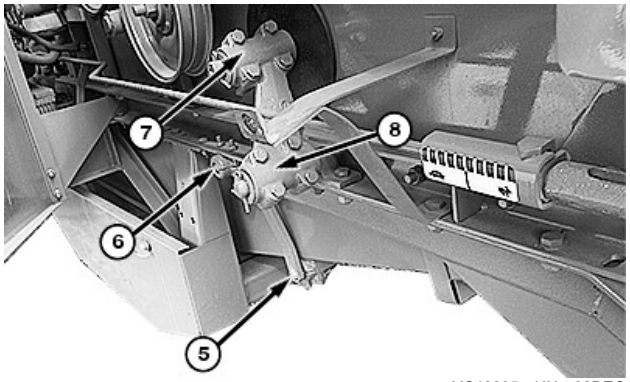
IMPORTANT: To avoid failure, change rubber bushings according to the order as shown in the diagram.



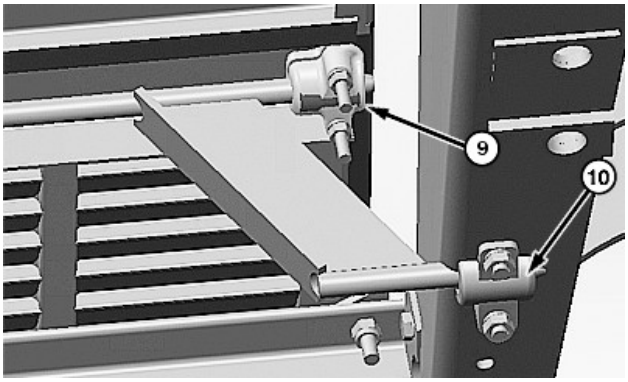
YC10854—UN—08DEC16



YC10804—UN—08DEC16



YC10805—UN—08DEC16



YC10853—UN—08DEC16

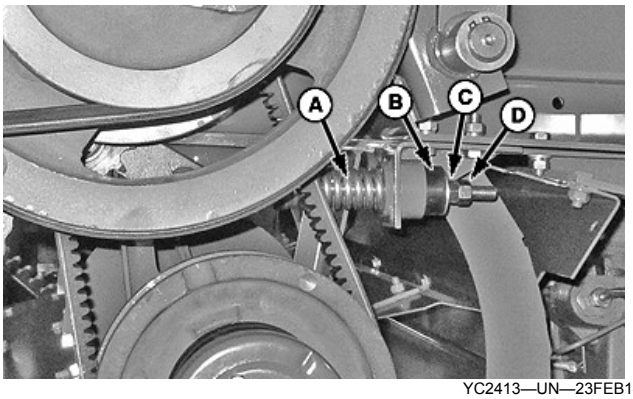
When replacing the rubber bushings on the shoe pitman and hangers, ensure that the shoe pitman is in center position.

The center position is determined as follows:

Rotate the main drive sheave by hand until the centerline through the pitman forms 90° angle with the line connecting the pivot shaft hub and the center of the crankshaft.

CP00718,000439F-19-19DEC17

Shoe Drive Tension



YC2413—UN—23FEB14

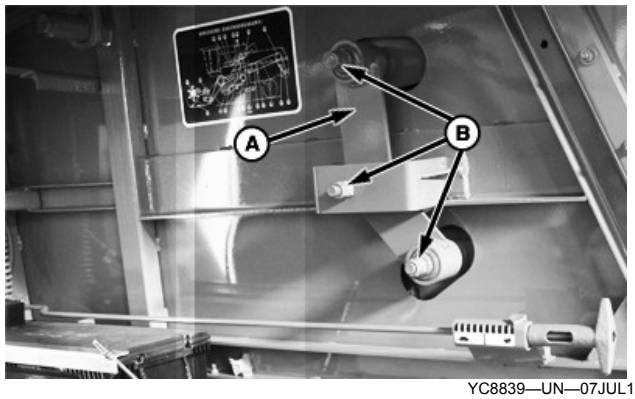
A—Spring
B—Rubber Bushing
C—Nut
D—Nut

Shoe chain drive is tensioned by spring (A). Adjust the tightness of the chain by adjustment nuts (C and D). The principle of adjusting the length of spring (A) is to minimize the impact under working conditions.

The chain drives sieve and chaffer, shaker pan, and other components. The impact load is rather large and the shoe is worn quickly. Regularly replace it according to the usage conditions.

CP00606,00017B5-19-25MAY18

Shaker Pan Drive Arm



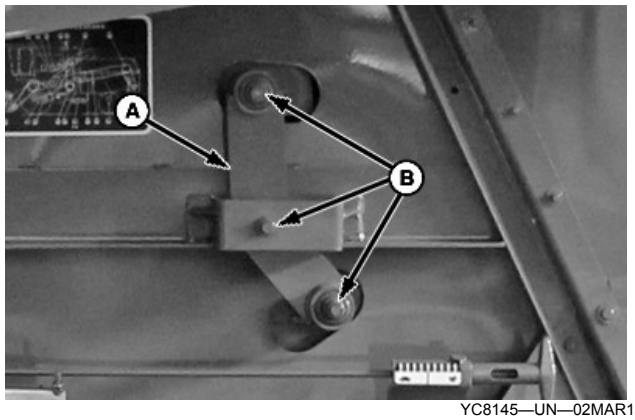
YC8839—UN—07JUL15

A—Drive Arm
B—Nuts (6 used)

The drive arm (A) drives shaker pan. Regularly check the tightness of nuts (B).

CP00606,00017B6-19-25MAY18

Shaker Drive Arm



YC8145—UN—02MAR15

A—Drive Arm
B—Nuts (3 pieces)

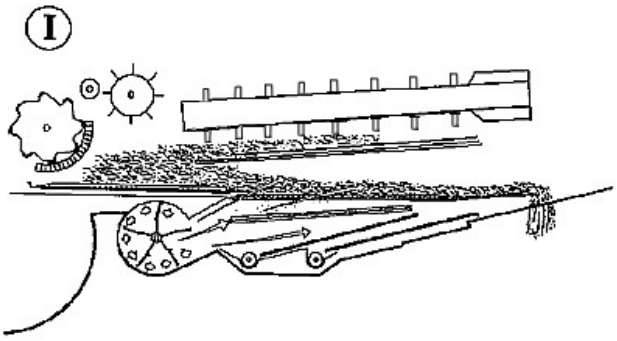
Shaker pan is driven by drive arm (A). Regularly check the tightness of nut (B) when working.

CP00606,00017B7-19-25MAY18

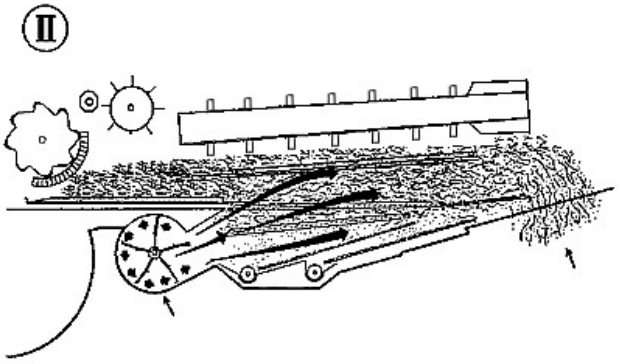
Cleaning Fan Speed

IMPORTANT: Always check the result before performing next adjustment.

NOTE: Too little fan blast causes insufficient cleaning. Too much fan blast causes loss of grain.



YC8345—UN—25MAR15



YC8346—UN—25MAR15

Before adjusting the fan speed, adjust chaffer and sieve to the maximum recommended clearance for different crops (See Recommended Adjustment Diagrams in Loss Evaluation and Adjustment Diagrams section). Increase gradually the speed from the lowest fan speed until no grain is blown out of the combine or into the tailings return.

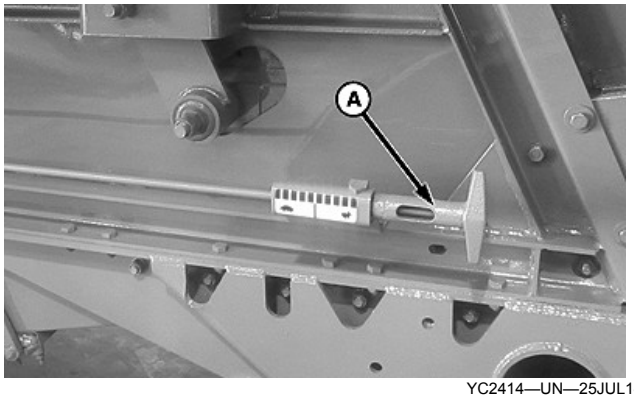
Check the results carefully. After reaching the maximum acceptable fan speed, continue to make minor adjustments to chaffer and if necessary, readjust the fan until best results are achieved.

CP00718,000426F-19-21AUG18

Adjust Fan Speed

IMPORTANT: Adjust fan speed only when the fan is running.

For recommended fan speed, see Recommended Adjustment Diagrams in Loss Evaluation and Adjustment Diagrams section.



YC2414—UN—25JUL14

A—Knob

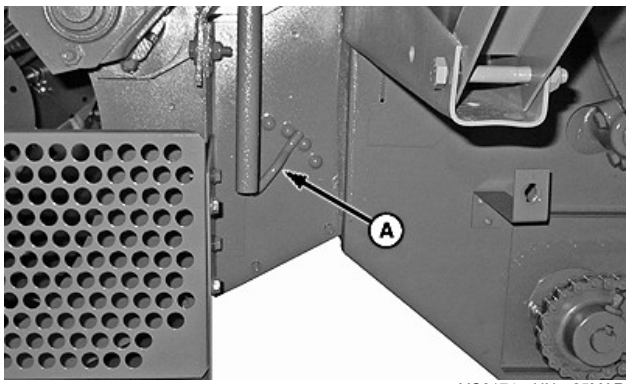
Adjust fan speed by turning the knob (A).

Increase speed — Turn knob clockwise.

Decrease speed — Turn knob counterclockwise.

CP00834,0008EF1-19-25JUN21

Adjustment of Air Flow Direction



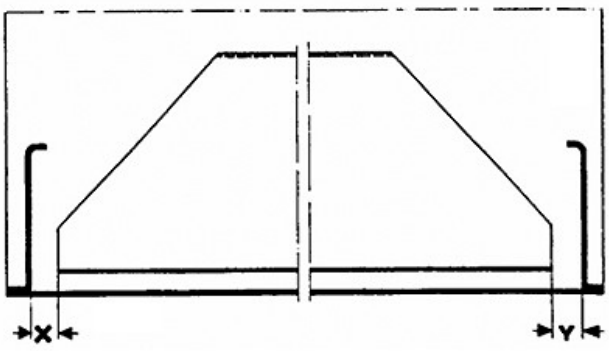
YC8174—UN—25MAR15

A—Deflector Adjustment Lever

Change air flow direction by adjusting the deflector adjustment lever (A) on the left side of combine.

CP00606,00017B9-19-25MAY18

Fan Side Clearance

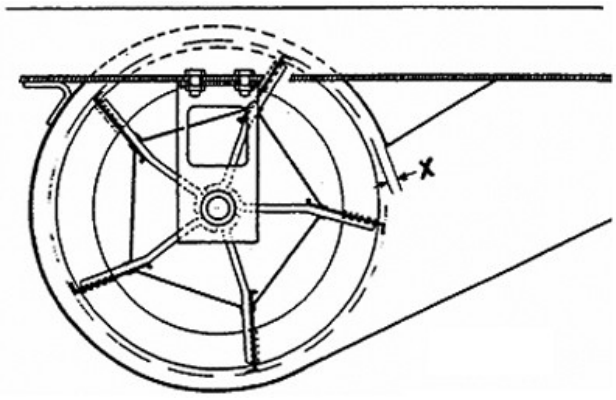


YC8301—UN—10FEB15

Fan side clearance between fan blades and housing is the same. That is, X=Y.

CP00718,00043A5-19-19DEC17

Fan Radial Clearance



YC2769—UN—26NOV12

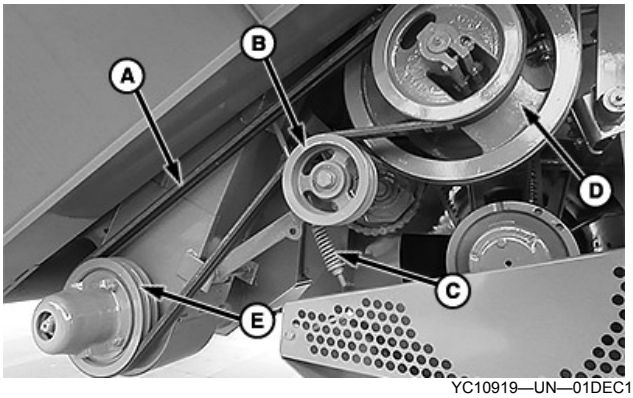
X—Clearance (12 mm)

Radial clearance (X) between fan blades and front edge of housing is 12 mm, and equal over entire width.

CP00718,00043A6-19-19DEC17

Adjust Grain Elevator Drive Belt Tension

IMPORTANT: To avoid the belt damage and transmitting inefficiently, MUST align the drive pulley (D), pulley (E), and idler (B).



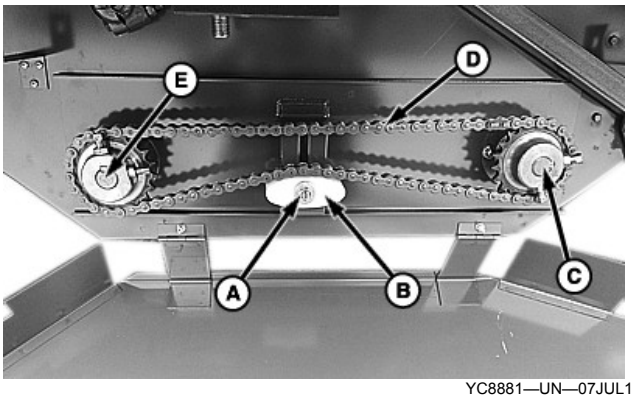
YC10919—UN—01DEC16

A—Belt
B—Idler
C—Spring
D—Drive Pulley
E—Pulley

The belt is tensioned by idler (B) automatically. Adjust the length of spring (C) to 79—81 mm.

CP00834,0008A54-19-02MAR21

Adjust Tailing Elevator Drive Chain Tension



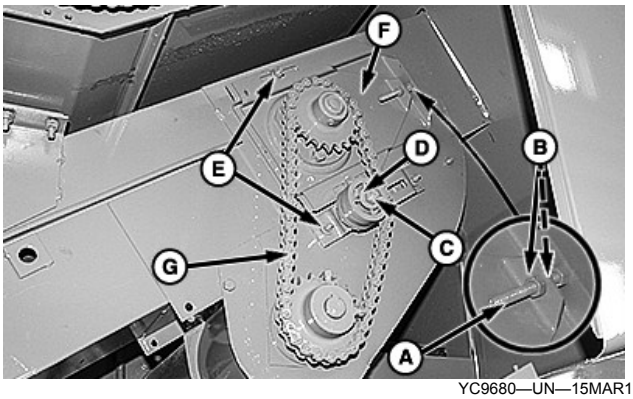
YC8881—UN—07JUL15

A—Nut
B—Idler
C—Lower Tailing Auger Shaft
D—Chain
E—Lower Grain Auger Shaft

Loose nut (A), adjust the idler (B) to the tension chain (D). Retighten nut.

CP00834,0008A55-19-02MAR21

Adjust Tension of Tailings Elevator Conveyer Chain



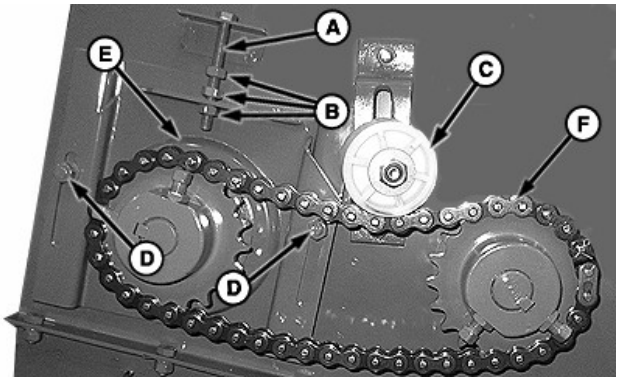
YC9680—UN—15MAR16

A— Bolt
B— Nuts (2 used)
C— Nut
D— Idler
E— Nuts (2 used)
F— Bearing Housing
G— Chain

Loosen nut (C) on idler (D). Loosen nuts (E). Adjust nuts (B) on bolt (A), Adjust the bearing housing (F) to tension tailings elevator conveyer chain. Retighten all nuts and tension chain (G) by adjusting idler as required.

CP00606,00017BC-19-25MAY18

Adjust Tension of Grain Elevator Conveyer Chain



YC8247—UN—05FEB15

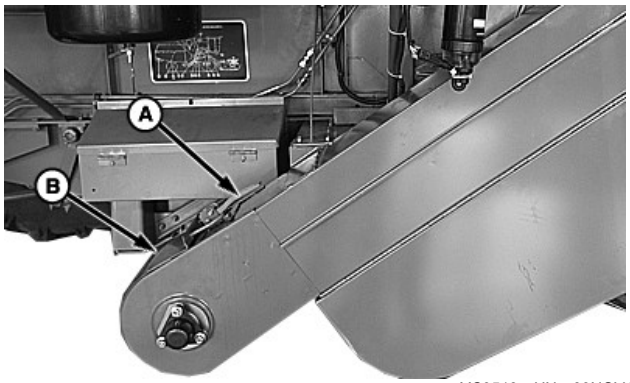
A— Bolt
B— Nuts (3 used)
C— Idler
D— Nuts (2 used)
E— Bearing Housing
F— Chain

Loosen idler (C). Loosen nuts (D). Adjust nuts (B) on bolt (A), tighten grain elevator conveyer chain by adjusting the bearing housing (E). Retighten all nuts and tension chain (F) by adjusting idler as required.

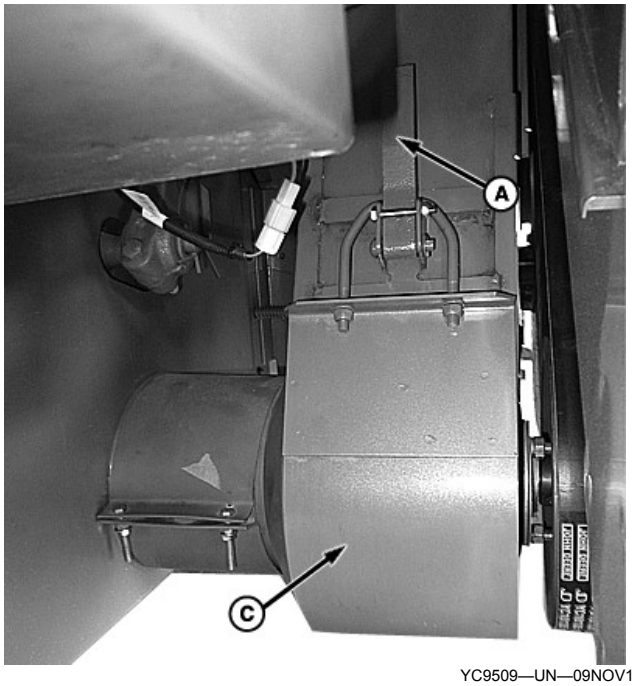
CP00606,00017BD-19-25MAY18

Elevator Lower Inspection Doors

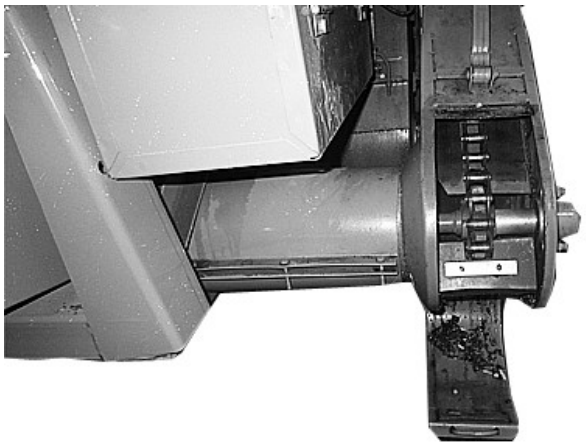
CAUTION: Avoid accidences when cleaning elevators.



YC9510—UN—09NOV15



YC9509—UN—09NOV15



YC9511—UN—09NOV15

A— Handle
B— Tailings Elevator Lower Inspection Door
C— Grain Elevator Lower Inspection Door

Open inspection doors (B and C) by pulling handle (A) to clean elevators at the end of each harvesting day or storing combine a longer period.

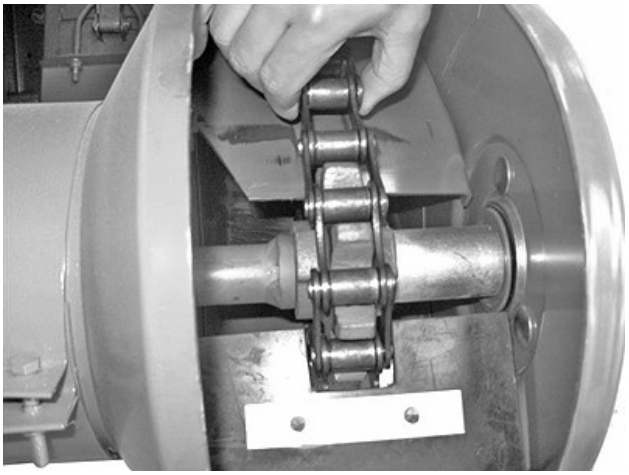
When changing crops, open doors and thoroughly clean the elevators.

Open doors and run engine, check if the chain or paddles are damaged.

CP00606,00017BE-19-25MAY18

Adjustment of Elevator Conveyor Chain

Adjustment: Tension elevator chain so that at the bottom of the chain there is 6—15 mm movement at the first link behind the chain sprocket.



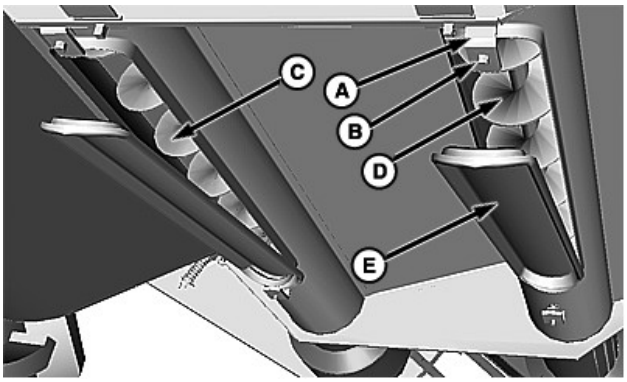
YC2884—UN—03JAN14

NOTE: If conveyor chain is too loose or too tight, the transmission efficiency and service life of relevant components are affected.

CP00718,00043AD-19-19DEC17

Clean Grain Auger and Tailings Auger

IMPORTANT: It is important to clean this area when harvesting seed and before changing crop.



YC8552—UN—24APR15

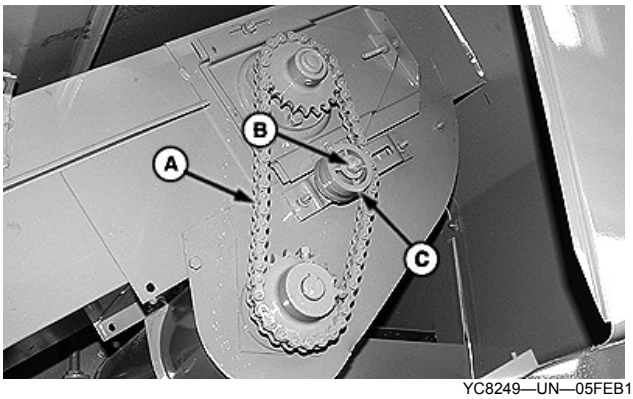
A— Retaining Clip
B— Nut
C— Tailings Auger
D— Grain Auger
E— Auger Cover

Remove nuts (B) and retaining clips (A), open cover (E), and clean grain auger (D). Install in reverse order after cleaning.

NOTE: Tailings auger (C) is cleaned in the same way as the clean grain auger.

CP00606,00017BF-19-25MAY18

Upper Tailings Auger Drive



YC8249—UN—05FEB15

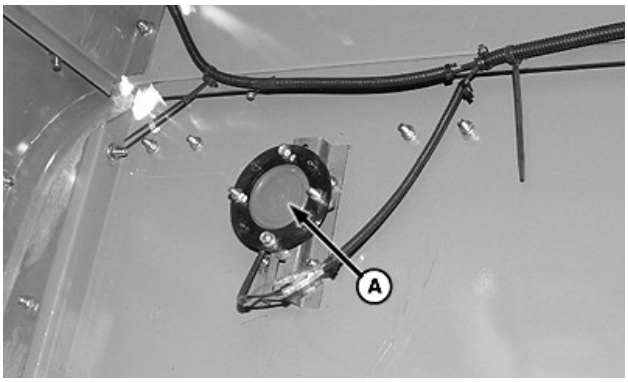
A—Chain
B—Nut
C—Idler

The chain (A) drives tailings auger. The chain is tightened by the idler (C).

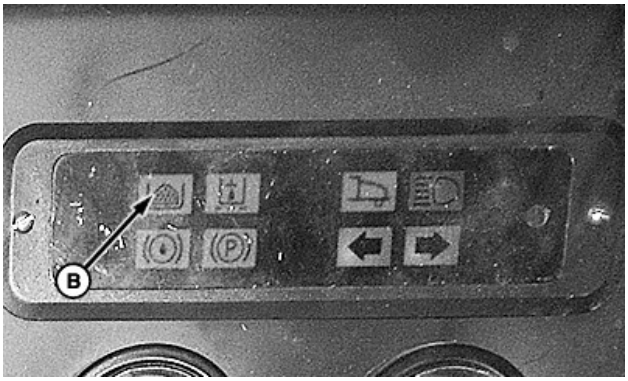
Adjustment: Loosen nut (B), adjust idler (C) to tension the chain (A) as required. Retighten nut (B).

CP00606,00017C0-19-25MAY18

Full Grain Tank Indicator

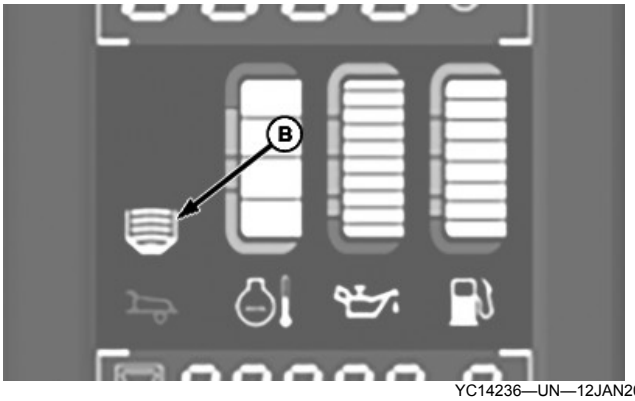


YC8238—UN—28JAN15



YC10809—UN—08DEC16

Machine with Murphy Gauge



YC14236—UN—12JAN20

Machine with Corner Post Display

A—Full Grain Tank Sensor
B—Full Grain Tank Indicator

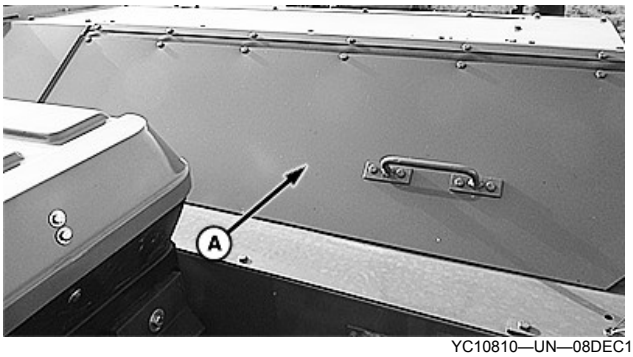
Combine is equipped with the full grain tank warning system. It is composed of the full grain tank sensor (A) in the grain tank and the full grain tank indicator (B) on the instrument panel or the corner post display.

The full grain tank indicator (B) lights up to warn the operator when the grain tank is full.

CP00834,0008A56-19-02MAR21

Grain Tank Leveling Auger Guard

CAUTION: Avoid accidents. NEVER enter the grain tank when the engine is running. Shut off the engine, remove the key, and set the park brake before entering the grain tank. Do not remove the leveling auger guard when the combine is in operation.



YC10810—UN—08DEC16

A— Grain Tank Cover

YC10811—UN—08DEC16

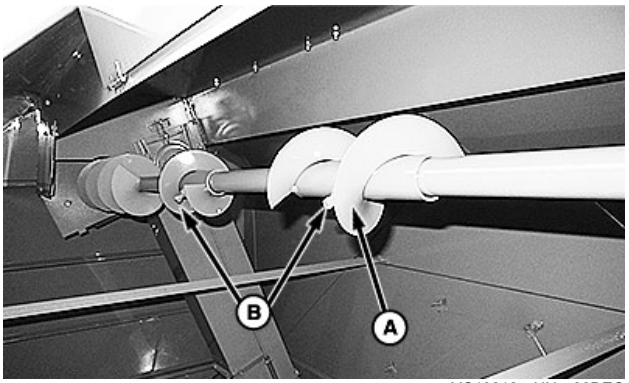
B— Leveling Auger Guard

Open grain tank cover (A), leveling auger guard (B) is found.

CP00606,00017C2-19-25MAY18

Grain Tank Leveling Auger

CAUTION: Avoid accidents. NEVER enter the grain tank when the engine is running. Must shut off the engine, remove the key, and set the park brake before entering the grain tank. Do not remove the leveling auger guard when the combine is in operation.



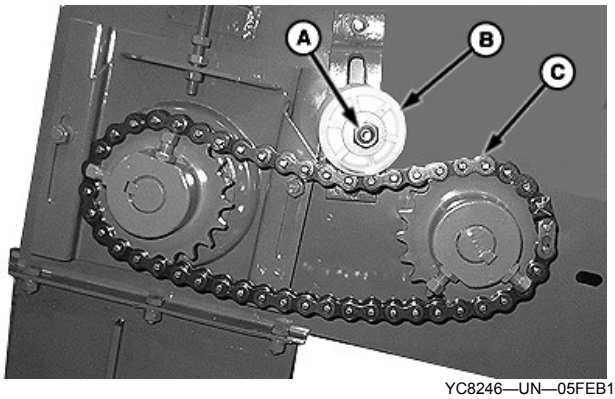
YC10812—UN—08DEC16

A— Leveling Auger Blade
B— Bolts(2 used)

Adjustment: Loosen bolts (B), adjust the position of leveling auger blades (A) for grain distributed evenly.

JL31334,00017C4-19-07MAY18

Grain Tank Leveling Auger Drive



YC8246—UN—05FEB15

A— Nut
B— Idler
C— Chain

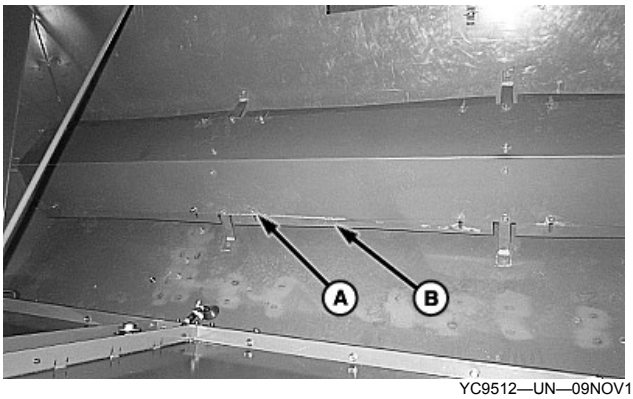
The chain (C) drives grain tank leveling auger. The chain is tightened by the idler (B).

Adjustment: Loosen nut (A), adjust the idler (B) to the tension chain (C) as required. Retighten nut.

CP00606,00017C3-19-25MAY18

Grain Tank Unloading Auger Cover

NOTE: Prevent causing blockage and damaging unloading components, NEVER stopping unloading grains before the grain tank is empty. Do not lift unloading auger covers too high to avoid overload.



YC9512—UN—09NOV15

A— Nut (12 used)
B— Unloading Auger Cover (6 used)

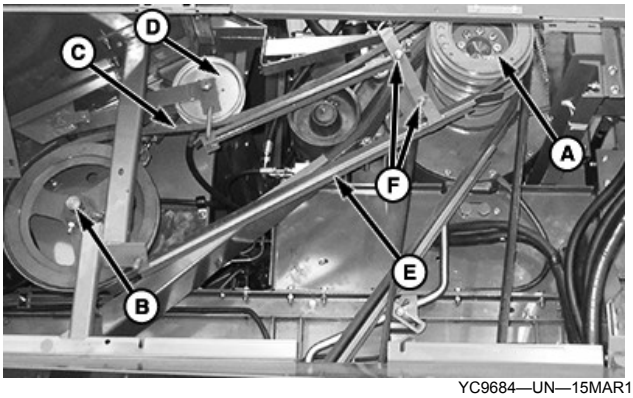
Loose nuts (A), lift or lower unloading auger covers (B) to adjust unloading speed as required.

NOTE: Six unloading auger covers are used in the grain tank.

CP00606,00017C4-19-25MAY18

Unloading Auger Drive (Left Hand)

CAUTION: Avoid accidents. Shut off the engine when adjusting.



YC9684—UN—15MAR16

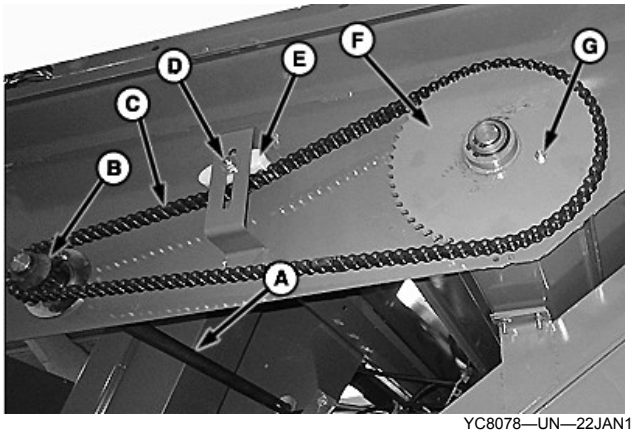
A— Engine Pulley
B— Countershaft
C— Belt
D— Idler
E— Belt Guide
F— Nuts (2 used)
X— 3—5 mm

On the left hand of combine, the power from the engine pulley (A) goes to countershaft (B) by belt (C).

Adjustment: Tension belt (C) by adjusting idler (D). Loosen nuts (F), adjust belt guide (E) until the clearance between the belt guide (E) and belt (C) is 3—5 mm. Retighten nuts (F).

CP00606,00017C5-19-25MAY18

Unloading Auger Drive (Right Hand)



YC8078—UN—22JAN15

A— Intermediate Shaft
B— Sprocket
C— Chain
D— Nut
E— Idler
F— Sprocket
G— Shear Screw

On the right hand of the machine, the power from

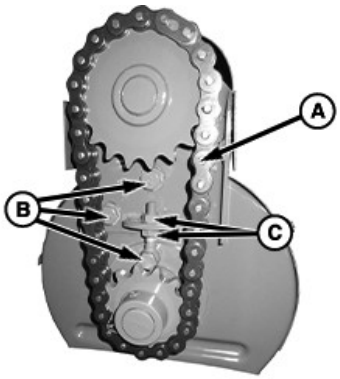
intermediate shaft (A) goes through sprocket (B), sprocket (F), and goes to unloading auger.

To adjust the tension of chain, loosen nut (D), adjust idler (E) to tension chain (C) as needed. Retighten nut (D).

IMPORTANT: The shear screw (G) is a safety feature, broken when overloaded. Replace only with original type of screw. Torque screw to 15 N·m, once it is replaced.

CP00606,00017C6-19-25MAY18

Unloading Auger Drive (at One End)



YC9679—UN—15MAR16

A— Chain
B— Nuts (3 used)
C— Nuts (2 used)

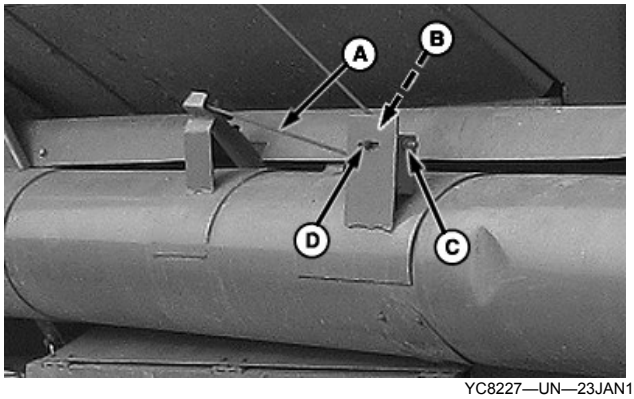
Unloading auger is driven by a universal joint shaft above the grain unloading auger and chain (A)at one end.

Open cover in the end of unloading auger, adjust the tension of chain (A). Loosen nuts (B), adjust the tension through nuts (C). Retighten nuts (B) and reinstall cover after adjustment.

CP00606,00017C7-19-25MAY18

Adjust Length of Wire Rope

Before using combine for the first time and at least once a week, check the length of wire rope.



YC8227—UN—23JAN15

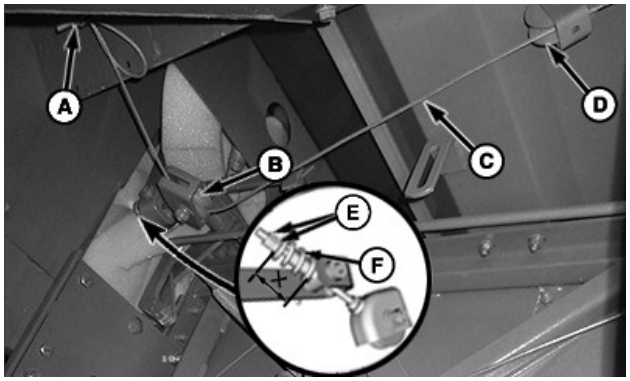
A— Wire Rope
B— Idler
C— Nut
D— Nut

Adjustment:

Swing the unloading auger in. Loosen nut (D). Adjust nut (C) to adjust idler (B). Tighten wire rope (A) until the wire rope can be pressed approximately 30—40 mm apart. Retighten nut (D).

CP00606,00017C8-19-25MAY18

Unloading Auger Automatic Cut-Out Device



YC8298—UN—06FEB15

A— Clamp
B— Pulley
C— Wire Rope
D— Guide Pulley
E— Nuts (2 used)
F— Spring
X— Length (39 mm)

For the safe operation of unloading auger, an automatic cut-out device is installed. The wire rope (C) must always be under tension when unloading auger is swung out.

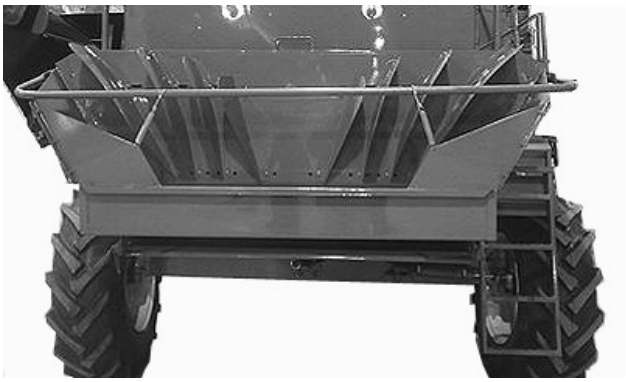
Adjustment: Swing out the unloading auger. Adjust nuts (E) to change length of spring (F) until the length (X) is 39 mm. If wire rope has stretched too much, adjust the clamp (A) to shorten.

CP00606,00017C9-19-25MAY18

Straw Chopper Equipped with Combine

CAUTION: Avoid accidents. Disengage separator drive and shut off the engine before attempting to adjust and repair.

When the chopper is in use, do not allow any person to stay behind the machine.



YC8228—UN—27JAN15

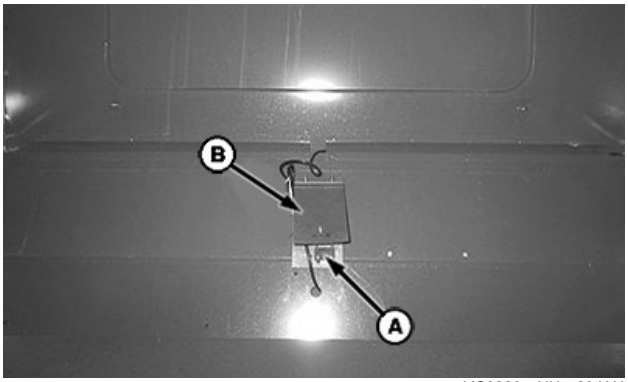
Combine is optional to be equipped with a straw chopper.

NOTE: Straw chopper is an optional device.

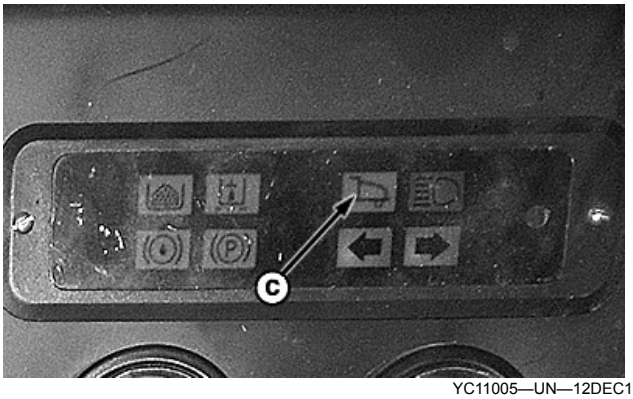
CP00606,00017CA-19-25MAY18

Rear Cover Plugged Warning

CAUTION: Shut OFF engine and set park brake before checking the rear cover plugged sensor.

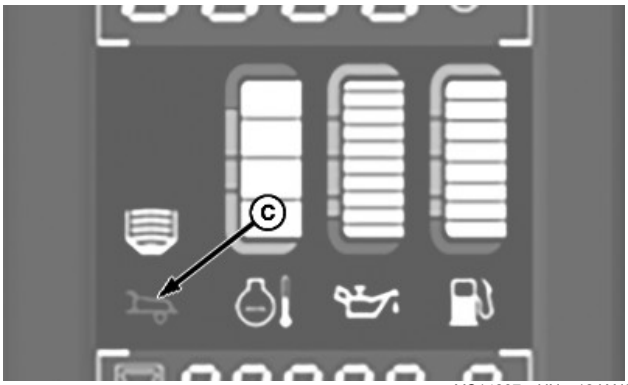


YC8226—UN—23JAN15



YC11005—UN—12DEC16

Indicator on the Indicator Module



YC14237—UN—12JAN20

Indicator on the Corner Post Display

A—Sensor
B—Induced Plate
C—Rear Cover Plugged Indicator

The rear cover plugged warning device is composed of the sensor (A) and the rear cover plugged indicator (C). When the rear cover is plugged, the rear cover plugged indicator lights up and the horn sounds.

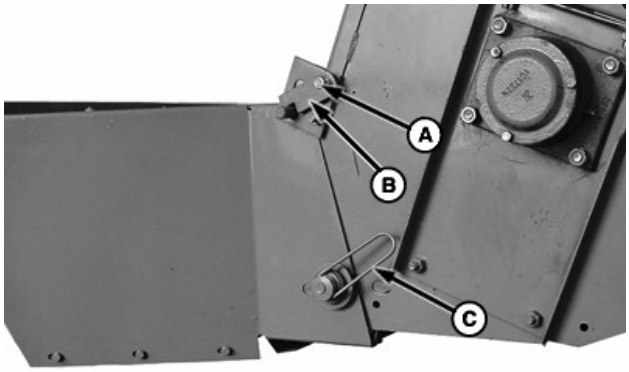
Check the rear cover plugged warning sensor daily before operating combine.

Inspection Method: Turn the key switch to ”RUN” position, press the induced plate (B) down, make sure that the horn sounds.

CP00834,0008A58-19-02MAR21

Secure Straw Chopper in Operation Position

NOTE: Operate on both side of machine synchronously.



YC8296—UN—09FEB15

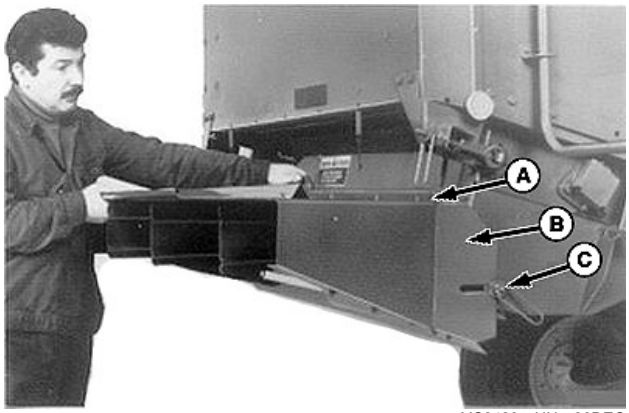
A— Nut (2 used, 1 per side)
B— Plate (2 used, 1 per side)
C— Latch (2 used, 1 per side)

Position plates (B), tighten nuts (A), and lock latches (C).

CP00606,00017CC-19-25MAY18

Attach Straw Distributor

NOTE: Must install the straw distributor before operating with straw chopper as it also serves a guard.



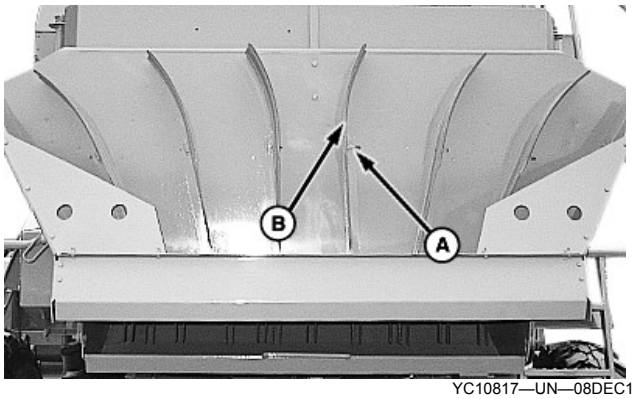
YC2429—UN—30DEC13

A— Rail
B— Straw Distributor
C— Bolt

Hang straw distributor (B) in rail (A). When tightening bolts (C), adjust distributor angle to regulate how far the chopped material is thrown.

CP00606,00017CD-19-25MAY18

Adjust Straw Deflectors



YC10817—UN—08DEC16

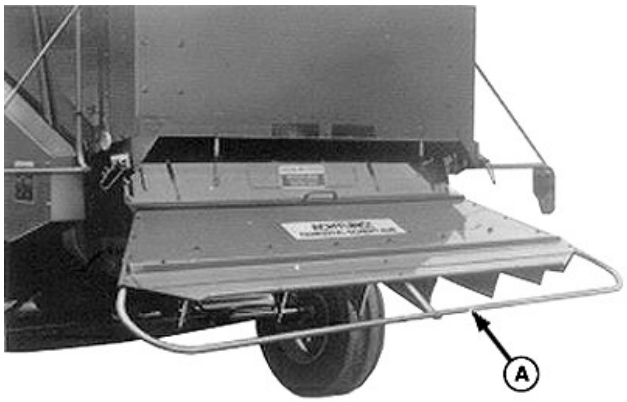
A— Bolt
B— Deflector

Loosen bolts (A). Adjust deflectors (B) as required to regulate width of chopped material.

CP00606,00017CE-19-25MAY18

Keep Guard Rail in Position

NOTE: In certain countries, the removal of the guard rail (A) is prohibited when the straw chopper is in operation.



YC2431—UN—30DEC13

A— Guard Rail

CP00718,00043C0-19-19DEC17

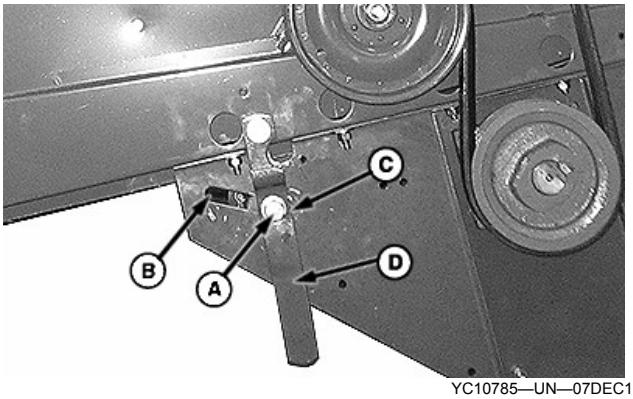
Adjust Chop Length

CAUTION: Shut OFF engine, set park brake, and remove key.

IMPORTANT: Knifebank must be fully disengaged for corn.

NOTE: Chopper can be run with knives disengaged, however chop quality decreases.

Use position in between to optimize power consumption and achieve satisfactory chop length.



YC10785—UN—07DEC16

A— Bolt (2 used)
B— Disengaged Position
C— Engaged Position
D— Handle (2 used)

Knives can be adjusted to any position. Position of knives determines the chop length of material.

Knifebank Engaged Position (C):

Loosen the bolts (A) at both sides of machine.

Move the handle (B) forward until knifeback is at the front of adjustment slot.

Tighten the bolts at both sides of machine to lock the knifebank into position.

Knifebank Disengaged Position (B)

Loosen the bolt (A) at both sides of machine.

Move the handle (B) rearward until knifebank is at the rear of adjustment slot.

Tighten the bolt at both side of machine to lock the knifebank into position.

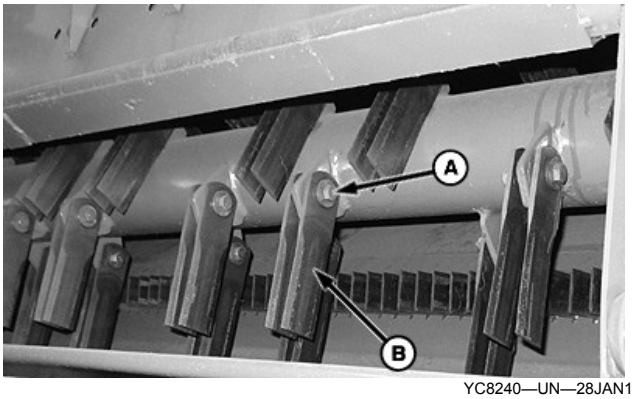
CP00834,0008A59-19-02MAR21

Replace Rotary Blades

CAUTION: Avoid accidents. Always jam the rotor when changing rotating blades.

Broken chopper blades can cause vibration. Replace the broken blade and the blade that is directly opposite immediately.

Do not sharpen blunt blades, turn, or replace blunt blades. Replace blades with new ones only. Ensures that all the blades on the rotor weigh the same.



YC8240—UN—28JAN15

A— Bolt
B— Rotary Blade

Removal: Remove bolt (A), remove the rotary blade (B). Install in reverse order.

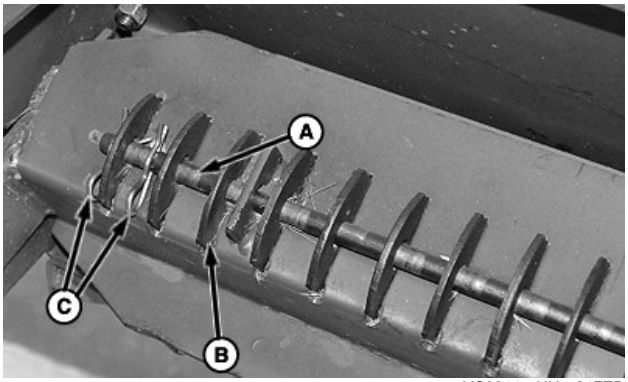
Use only 10.9 grade bolts M10×50 with self-locking nuts.

Specification	
Bolt—Torque	50 N·m

CP00606,00017D0-19-25MAY18

Replace Chopper Stationary Knife Blades

CAUTION: Shut OFF engine, set park brake, and remove key. Knife blades are sharp.



YC8244—UN—04FEB15

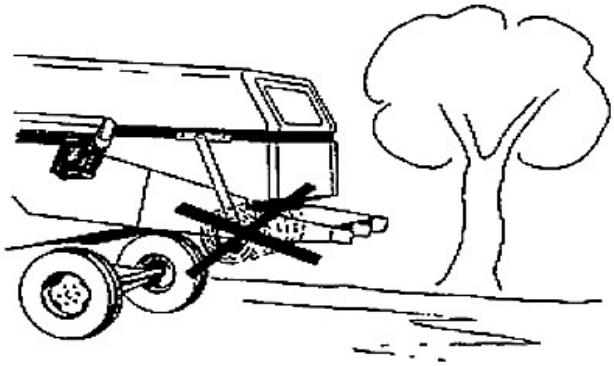
A— Retaining Rod
B— Stationary Knife Blade
C— Cotter Pins (2 used)

Remove the cotter pins (C), pull the retaining rod (A) backward as far as possible and remove. Replace the stationary knife blade (B).

CP00834,0008A5A-19-02MAR21

Road Transportation

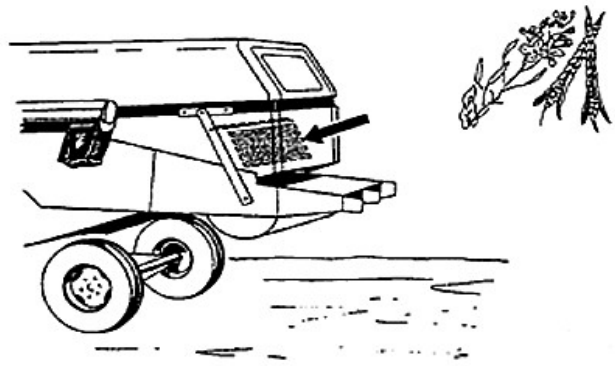
CAUTION: Must adjust the chopper to transport position before driving combine on road to avoid injury caused by running in case. Never engage the chopper when transporting the combine on the road.



YC1531—UN—07MAR12
CP00834,0008A5B-19-02MAR21

Install Deflector (Option)

When chopping bulky crops such as rape, it is recommended to install deflector.



YC1529—UN—07MAR12
CP00834,0008A5C-19-02MAR21

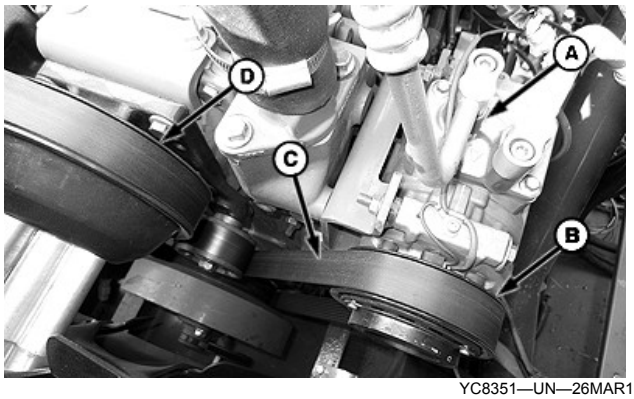
Air Conditioner General Checking Guidelines

Checking as followings:

1. Check the tension of the compressor drive belt.
2. Ensure that the compressor clutch is engaged.
3. Check if the condenser is clogged with dirt. Clean using compressed air as needed.
4. Check if the evaporator is clogged with dirt. Clean using compressed air as needed.
5. Check if the air filter cover is clogged with dirt. Clean using compressed air as needed.
6. Ensure that all electrical harnesses are connected.
7. Ensure that all pipes connectors are connected.
8. Check the refrigerant level and fill as needed.

CP00834,0008A5D-19-02MAR21

Air Conditioner Compressor Drive



YC8351—UN—26MAR15

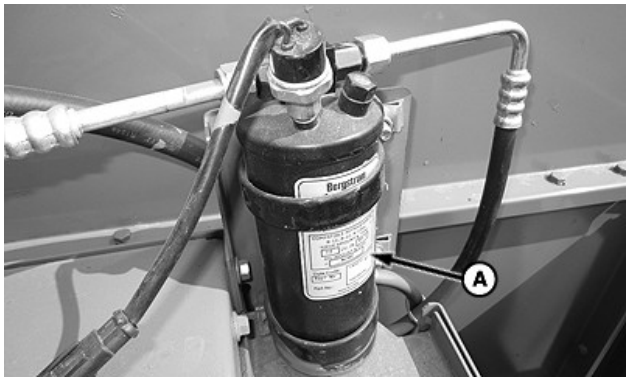
A—Compressor
B—Compressor Pulley
C—Belt
D—Fan Pulley

The power from the fan pulley (D) goes to compressor pulley (B) and finally drives compressor (A) through belt (C).

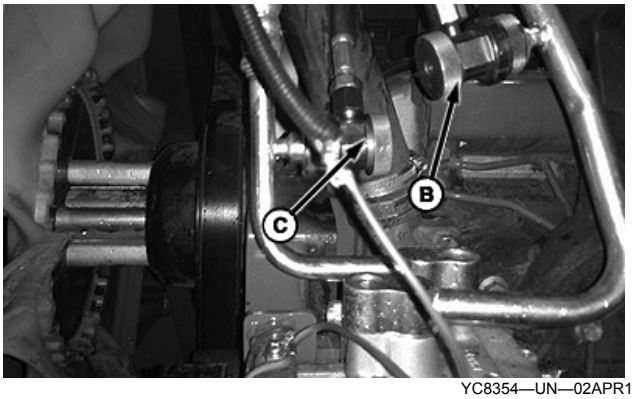
Periodically check the tension of the compressor drive belt as needed.

CP00834,0008A5E-19-02MAR21

Refrigerant and Dryer Filter



YC8353—UN—26MAR15



YC8354—UN—02APR15

A—Dryer Filter
B—Filler Connector
C—Filler Connector

The dryer filter (A) is located near the engine fan rotary screen.

Fill the refrigerant through the filler connectors (B and C) when the refrigerant level is lower.

CP00834,0008A5F-19-02MAR21

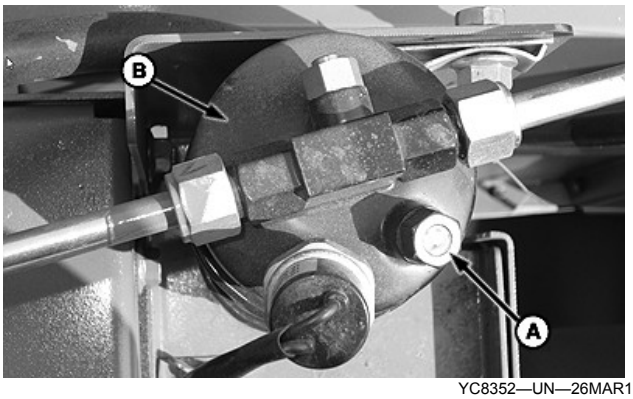
Check Refrigerant Level and Replace Dryer Filter

IMPORTANT: Check the color of dryer filter. Replace the dryer filter when the color changes to pink.

IMPORTANT: When repairing air conditioning system parts for several hours, dryer filter absorbs the water in the air and ineffective, results in clogging of the expansion valve. Replace the dryer filter as needed.

Check the refrigerant level as followings:

1. Start cold mode of air conditioner.
2. Rotate the air temperature adjustment knob, set the air conditioning system for maximum cooling.
3. Rotate the recirculation fan speed adjust knob, set the recirculation fan for maximum speed.



YC8352—UN—26MAR15

A—Sight Glass
B—Dryer Filter

4. After several minutes, check the sight glass (A) on the dryer filter (B).
5. If the refrigerant appears cloudy or foamy, refrigerant level is low and system should be recharged.

CP00834,0008A60-19-02MAR21

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, ASTM D975, or EN 15940 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 40 minimum. Cetane number greater than 47 is preferred, especially for temperatures below –20 °C (–4 °F) or elevations above 1675 m (5500 ft.).

Cloud Point should be below the expected lowest ambient temperature or **Cold Filter Plugging Point** (CFPP) should be a maximum 10°C (18°F) below the fuel cloud point.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

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).

Materials such as copper, lead, zinc, tin, brass and bronze should be avoided in fuel handling, distribution and storage equipment as these metals can catalyze fuel oxidation reactions which can lead to fuel system deposits and plugged fuel filters.

E-Diesel fuel

DO NOT use E-Diesel (Diesel fuel and ethanol blend). Use of E-Diesel fuel in any John Deere machine may void the machine warranty.

CAUTION: Avoid severe injury or death due to the fire and explosion risk from using E-Diesel fuel.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III A and B, Stage IV, and Stage V Engines Above 560 kW

- Use ONLY diesel fuel with a maximum of 500 mg/kg (500 ppm) sulfur content.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV Engines, and Stage V 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—2000 mg/kg (1000—2000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer.

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 2000—5000 mg/kg (2000—5000 ppm) REDUCES the oil and filter change interval.[1]
- 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 interval.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1-19-13JUL20

Handling and Storing Diesel Fuel

CAUTION: Reduce the risk of fire. 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 practical 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.

[1] See DX,ENOIL12,OEM, DX,ENOIL12,T2,STD, or DX,ENOIL12,T2, EXT for more information on Engine Oil and Filter Service Intervals.

When using biodiesel 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.

IMPORTANT: The fuel tank is vented through the filler cap. If a new filler cap is required, always replace it with an original vented cap.

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. Keeping the free water drained and treating the bulk fuel storage tank quarterly with a maintenance dose of a biocide will prevent microbial growth. Contact your fuel supplier or John Deere dealer for recommendations.

DX,FUEL4-19-13JAN18

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.

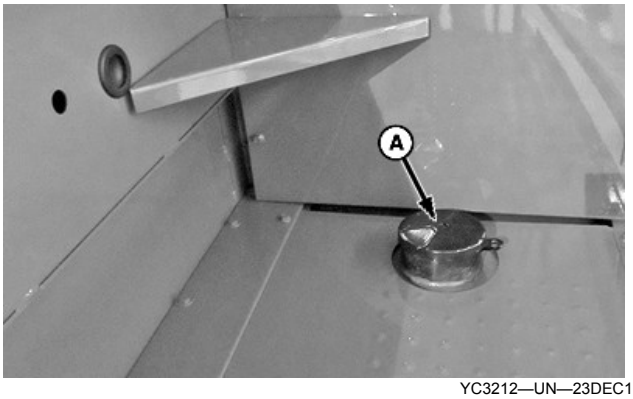
To protect the engine from debris and water, always change engine fuel filters as specified in this manual.

DX,FILT2-19-14APR11

Fill Fuel Tank

CAUTION: Be careful when handling fuel. Never fill tank when engine is running. Smoking or making flames nearby is strictly prohibited during filling tank.

Fill fuel tank at the end of each day. This prevents condensation in fuel tank as moist air cools.



YC3212—UN—23DEC13

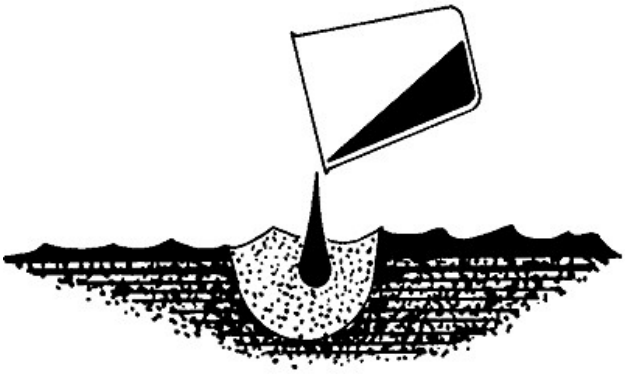
A— Filler Cap

About the position of filler cap (A) and the method of filling, see Fuel Tank Filler in Operating Engine section.

Fuel tank capacity: 300 L.

CP00606,00017D5-19-25MAY18

Comply with Rules and Regulations of Environmental Protection



YC1389—UN—07DEC12

Have environmental and ecological awareness.

Determine the correct disposal methods before discarding any liquids.

Always comply with rules and regulations of environmental protection when handling engine oil, fuel, coolant, brake fluid, filter elements, and batteries.

CP00718,00043CC-19-19DEC17

Diesel Engine Break-In Oil — Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III

New engines are filled at the factory with either John Deere Break-In™ or John Deere 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.

Break-In is a trademark of Deere & Company.
Break-In Plus is a trademark of Deere & Company

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 the oil and filter at a minimum of 100 hours and a maximum equal to the interval specified for John Deere Plus-50™ II or Plus-50™ oil.

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 an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following and change the oil and filter at a maximum of 100 hours of operation:

- API Service Classification CE
- API Service Classification CD
- API Service Classification CC
- ACEA Oil Sequence E2
- ACEA Oil Sequence E1

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 CK-4	**ACEA E9**
API CJ-4	**ACEA E7**
API CI-4 PLUS	**ACEA E6**
API CI-4	**ACEA E5**
API CH-4	**ACEA E4**
API CG-4	**ACEA E3**
API CF-4	
API CF-2	
API CF	

These oils do not allow the engine to break in properly.

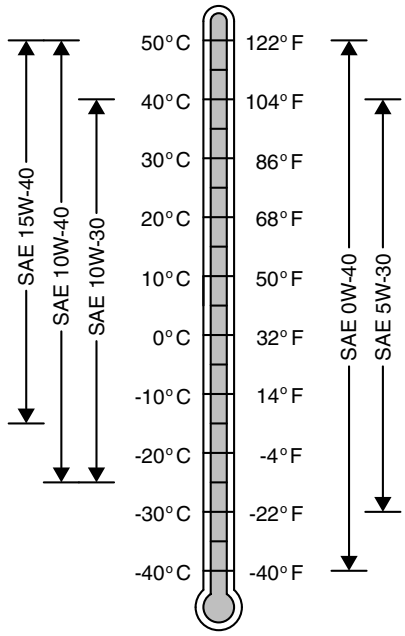
John Deere Break-In Plus™ Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

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.

DX,ENOIL4-19-02NOV16

Diesel Engine Oil — Tier 3 and Stage III

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.



TS1689—UN—18JUL07

Oil Viscosities for Air Temperature Ranges

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 standards:

- John Deere Torq-Gard™
- API Service Category CK-4
- 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

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 10 000 mg/kg (10 000 ppm).

YC00758,0000328-19-26NOV18

Plus-50 is a trademark of Deere & Company.

Torq-Gard is a trademark of Deere & Company

Engine Oil and Filter Service Intervals

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 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—5000 mg/kg (1000—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.
- DO NOT use diesel fuel with sulfur content greater than 10000 mg/kg (10000 ppm).

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 CK-4, API CJ-4, API CI-4 PLUS, API CI-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, and ACEA E4.

PowerTech™ Engine oil and filter change intervals	
Oil pan capacity	6068HYC60
Sulfur content of fuel	Lower than 1000 mg/kg (1000 ppm)
Plus-50 oil	500 hours
Other oils	250 hours
Fuel sulfur content	1000-2000 mg/kg (1000-2000 ppm)
Plus-50 oil	500 hours
Other oils	250 hours
Fuel sulfur content	2000-5000 mg/kg (2000-5000 ppm)
Plus-50 oil	500 hours
Other oils	250 hours
Fuel sulfur content	5000-10000 mg/kg (5000-10000 ppm)
Plus-50 oils	250 hours
Other oils	125 hours
Oil analysis may extend service interval of ”Other oils”, to a maximum not exceeding the interval of Plus-50 Oils.	

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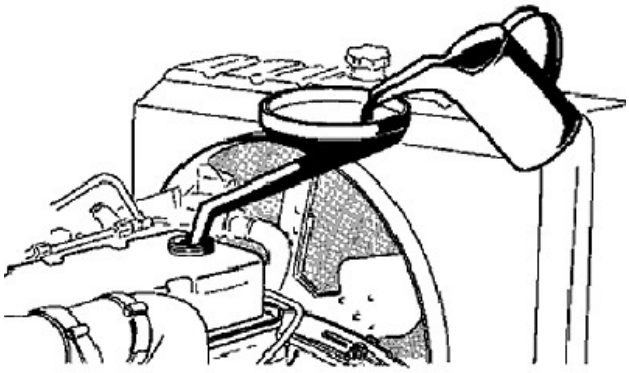
Plus-50 is a trademark of Deere & Company

Torq-Gard is a trademark of Deere & Company

Engine Crankcase Capacity (Including Filter)



YC1388—UN—07DEC12

Engine crankcase capacity (including filter) is about 19.5 L.

CP00718,00043CE-19-19DEC17

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.

DX,FILT1-19-11APR11

Diesel Engine Coolant (engine with wet sleeve cylinder liners)

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere coolants, parts, or service.

Preferred Coolants

The following pre-mix engine coolants are preferred:

- **John Deere COOL-GARD™II**
- **John Deere COOL-GARD II PG**

COOL-GARD II pre-mix coolant is available in several concentrations with different freeze protection limits as shown in the following table.

COOL-GARD II Pre-Mix	Freeze Protection Limit
COOL-GARD II 20/80	-9°C (16°F)
COOL-GARD II 30/70	-16°C (3°F)
COOL-GARD II 50/50	-37°C (-34°F)
COOL-GARD II 55/45	-45°C (-49°F)
COOL-GARD II PG 60/40	-49°C (-56°F)
COOL-GARD II 60/40	-52°C (-62°F)

Not all COOL-GARD II pre-mix products are available in all countries.

Use COOL-GARD II PG 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.

IMPORTANT: When mixing coolant concentrate with water, do not use less than 40% or greater than 60% concentration of coolant. Less than 40% gives inadequate additives for corrosion protection. Greater than 60% can result in coolant gelation and cooling system problems.

Other Coolants

Other ethylene glycol or propylene glycol base coolants may be used if they meet the following specification:

- Pre-mix coolant meeting ASTM D6210 requirements
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

If coolant meeting one of these specifications is unavailable, use a coolant concentrate or pre-mix coolant that has a minimum of the following chemical and physical properties:

- 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
- Is formulated with a nitrite-free additive package
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

Water Quality

Water quality is important to the performance of the cooling system. Deionized or demineralized water is

COOL-GARD is a trademark of Deere & Company

recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

When COOL-GARD II or COOL-GARD II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than COOL-GARD II or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.[2]

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

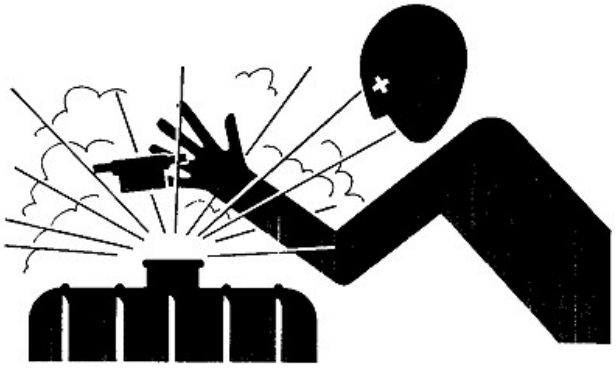
Do not use coolants that contain nitrites.

DX,COOL3-19-25AUG20

Safety Maintenance of Cooling System

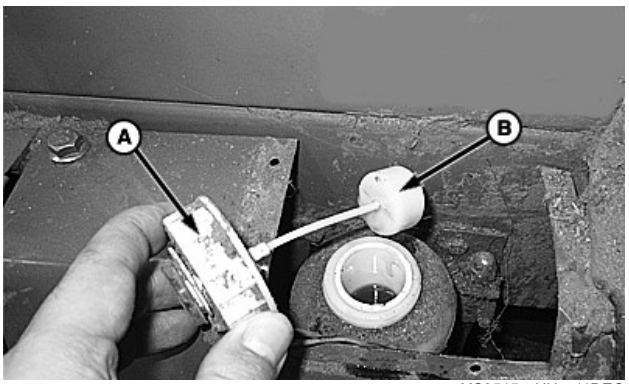
Engine cooling system is pressurized. Explosively released fluids can cause serious burns.

Switch off the engine. Open the filler cap only after the radiator has cooled down till bare hands touch. Before filler cap is fully opened, slowly loosen it to the first stopping point in order to release pressure.



YC2445—UN—16OCT12
CP00718,00043D0-19-19DEC17

Brake Fluid



YC9515—UN—11DEC17

A— Reservoir Cap
B— Oil Level Indicator

Complete capacity: 3 L.

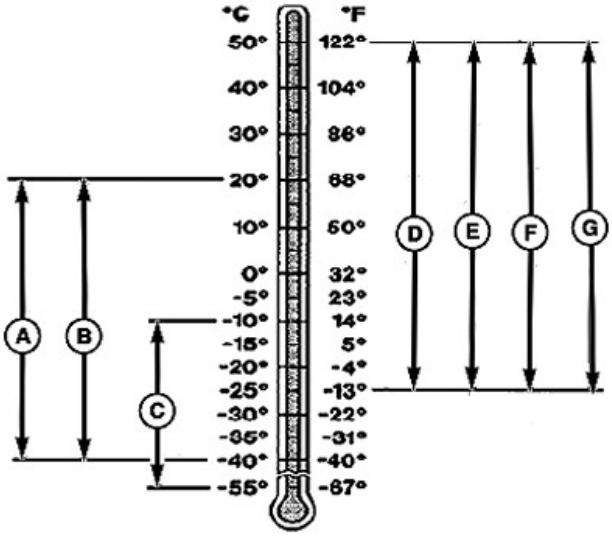
Reservoir capacity: 0.75 L.

NOTE: Add 10# aviation hydraulic oil.

The new machine has worked for first 100 hours, change brake fluid. Thereafter, change it every 500 hours or at end of the harvest season.

CP00718,00043D3-19-19DEC17

Hydraulic Oil



YC3383—UN—30DEC13

A— Low Viscosity
B— JDM J20B
C— Arctic Oil
D— Hy-Gard
E— JD UNIVERSAL OIL
F— JDM J20A
G— QUATROL

Selection of hydraulic oil:

Factory oil: Deere Hy-Gard™ oil

Hy-Gard is a trademark of Deere & Company.

[2] Coolant analysis may extend the service interval of other "Coolants" to a maximum not to exceed the interval of Cool-Gard II coolants. Coolant analysis means taking a series of coolant samples at 1000 hour increments beyond the normal service interval until either the data indicate the end of useful coolant life or the maximum service interval of Cool-Gard II is reached.

Deere Hy-Gard™ oil is recommended.

QUATROL oil or other oil can also be used. But the oil meets the Deere JDMJ20C or JDMJ20D standard. When temperature is below -40°C, use Arctic oil (APICC/SC, MIL-L-46167).

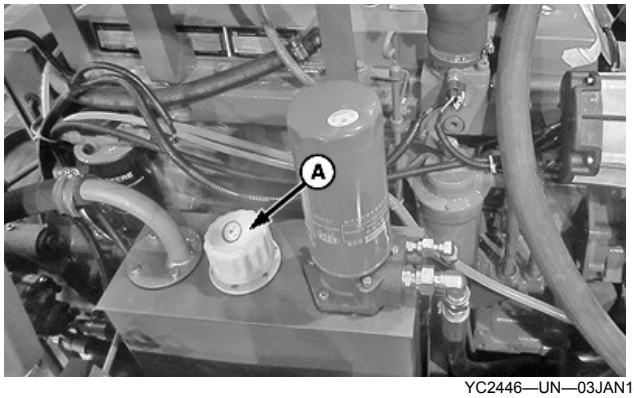
CP00834,00095A0-19-29NOV21

Hydraulic Lift System Capacity

Complete hydraulic systems: 25 L.

Reservoir capacity: 21.8 L.

NOTE: Loosen filler cap (A) and use oil dipstick to check oil level.

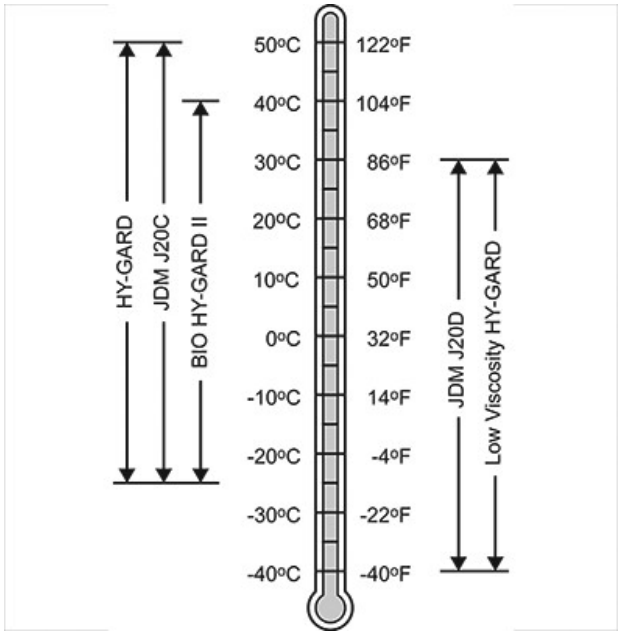


YC2446—UN—03JAN14

A— Filler Cap

CP00718,000429B-19-19DEC17

Hydrostatic Drive Oil



RG30204—UN—08MAR18

Oils for Air Temperature Ranges

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere Hy-Gard™
- John Deere Low Viscosity Hy-Gard™

Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Use John Deere Bio Hy-Gard™ II oil when a biodegradable fluid is required.[3]

DX,HYOIL-19-13JAN18

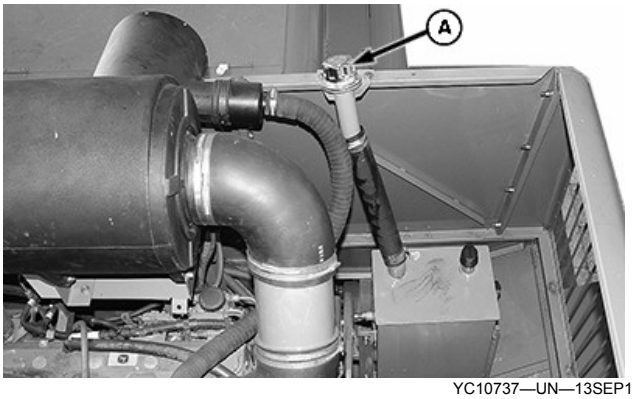
Hydrostatic System Capacity

Reservoir capacity: 33 L.

Hy-Gard is a trademark of Deere & Company.

Bio Hy-Gard is a trademark of Deere & Company

[3] Bio Hy-Gard II meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. Bio Hy-Gard II should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.



YC10737—UN—13SEP16

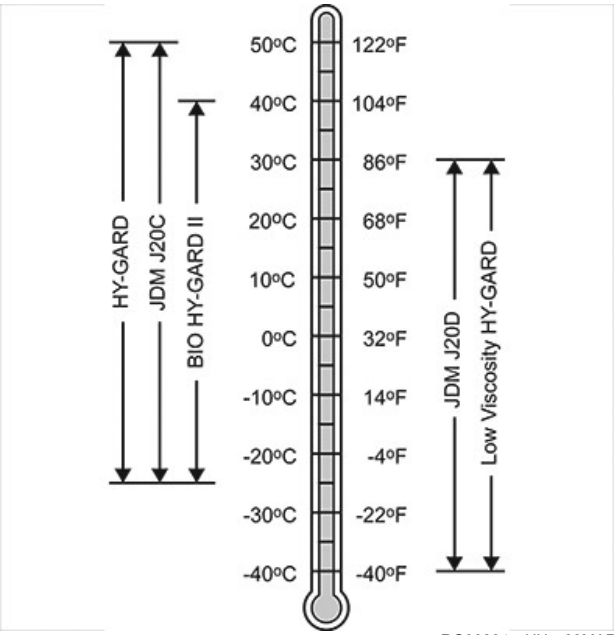
A—Filler Cap

Loosen filler cap (A) and add appropriate oil.

Check oil level, see Pre-Start Checks in Controls of Combine section.

CP00606,00003E7-19-28MAY19

Transmission and Hydraulic Oil



RG30204—UN—08MAR18

Oils for Air Temperature Ranges

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere Hy-Gard™
- John Deere Low Viscosity Hy-Gard™

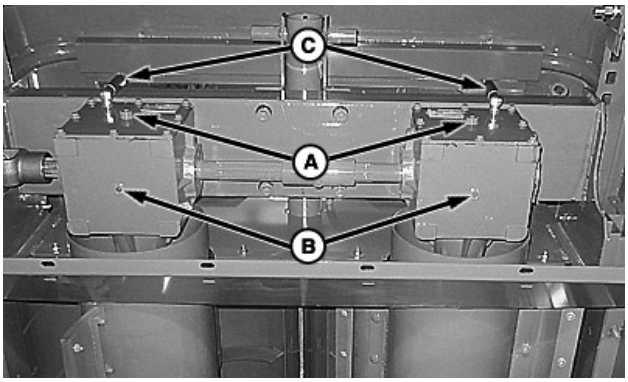
Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Use John Deere Bio Hy-Gard™ II oil when a biodegradable fluid is required.[4]

DX,ANTI-19-01JAN18

Separation Cylinder Gear Case Transmission Oil



YC10675—UN—04AUG16

Separation Cylinder Gear Case (non-adjustable speed)

A— Filler Port and Oil Level Plug
B— Oil Drain Plug
C— Bleed Screw

Posistion	Specifications	Capacity
Separator drive gear case capacity (non-adjustable speed)	Hy-Gard™	1.6 L (left-hand); 1.6 L (right-hand)
Separator drive gear case capacity (adjustable speed)	Hy-Gard™	1.6 L (left-hand); 2.5 L (right-hand)

Hy-Gard is a trademark of Deere & Company

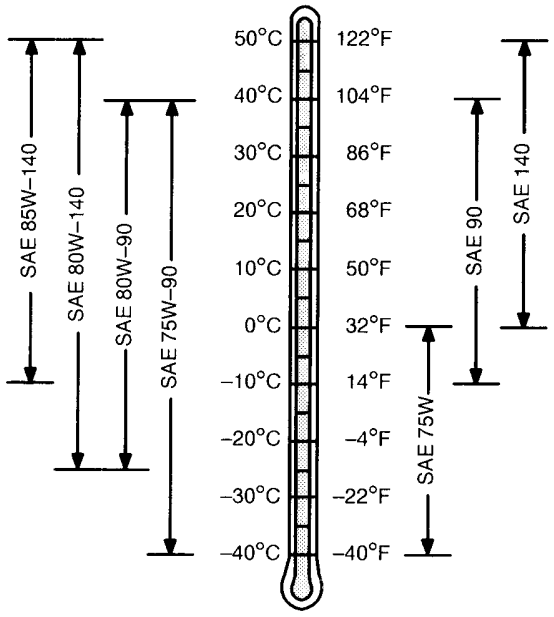
CP00606,00003E8-19-28MAY19

Hy-Gard is a trademark of Deere & Company

Bio Hy-Gard is a trademark of Deere & Company

[4] Bio Hy-Gard II meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. Bio Hy-Gard II should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.

Gear Oil



TS1653—UN—14MAR96

Oil Viscosities for Air Temperature Ranges

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

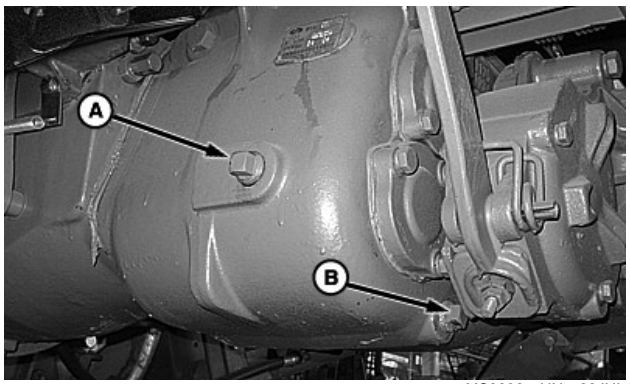
- John Deere GL-5 Gear Lubricant
- John Deere EXTREME-GARD™

Other oils may be used if they meet the following:

- API Service Category GL-5

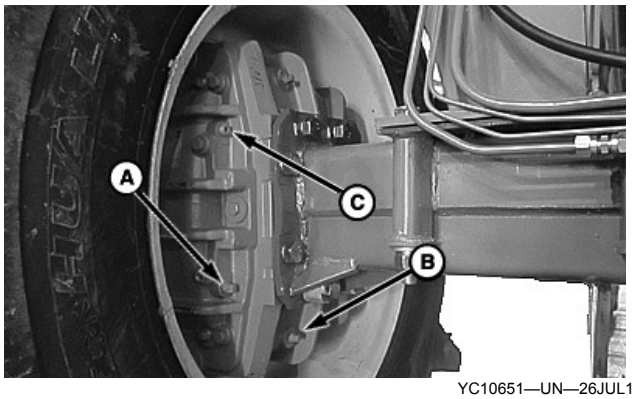
DX,GEOIL-19-14APR11

Gear Case Oil



YC8898—UN—09JUL15

Transmission



YC10651—UN—26JUL16

Final Drive

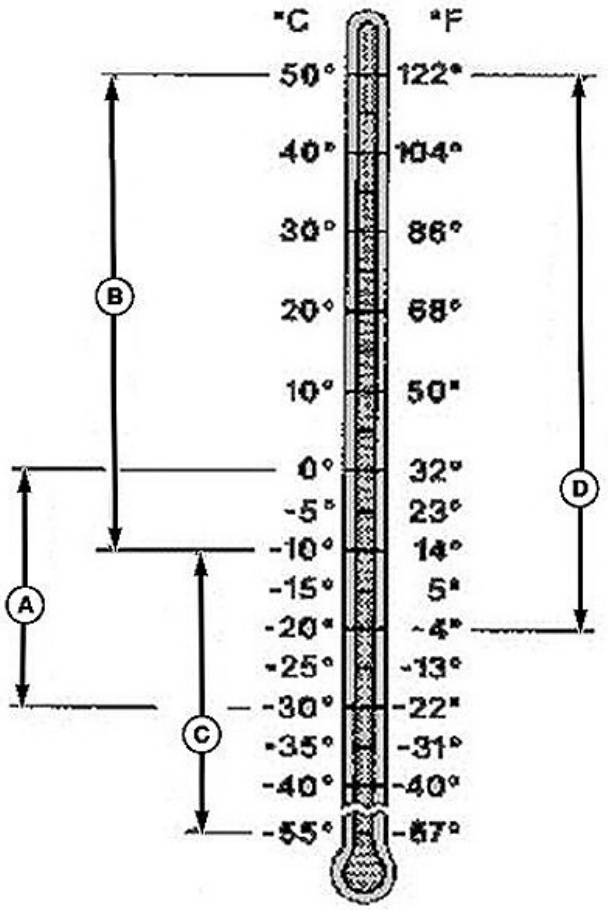
A— Filler Port and Oil Level Plug
B— Oil Drain Plug
C— Bleed Screw

Position	Specifications	Capacity
Transmission	GL-5 80W/90	6.6 L
Final drive	GL-5 80W/90	3.1 L (single side)
Cylinder Decelerator (optional)	00# Universal Lithium Lubrication Grease	0.8 kg

CP00606,00003E9-19-28MAY19

EXTREME-GARD is a trademark of Deere & Company

Pressure Resistant Universal Lubricate Grease



YC3384—UN—30DEC13

A—SAE(NLGI) No.0 or No.1
B—SAE(NLGI) No.2
C—Arctic Lubricate Grease
D—Deere Universal Lubricate Grease

Use the following lubricate grease:

Domestic brands:

1. Molybdenum disulphide lithium lubricate grease: to be used on general lubrication surface with all specifications in the below table .
2. Mobil XHP222 lubricate grease: Must use Mobil XHP222 lubricate grease at Posi- torq variable speed lower device.

Foreign brands:

1. SAE universal lubricate grease.
2. Add 3 ~ 5% molybdenum disulfide to SAE universal lubricate grease. When temperature is below -30°C, use arctic lubricate grease (MIL-G-10924C).

	Dropping point (℃)	Work penetration	Copper corrosion	Mechani-cal impurities	Moisture, % (m) ≤	Free organic acid	Free alkali, NaOH% m ≤	Enterprise standards of haerbin petrochemical plant
No. 3 molybdenum disulphide lithium lubricate grease	180	220-250	Passed	Nil	Trace	Nil	0.15	Q/SHB12-1996

CP00718,00043D7-19-19DEC17

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

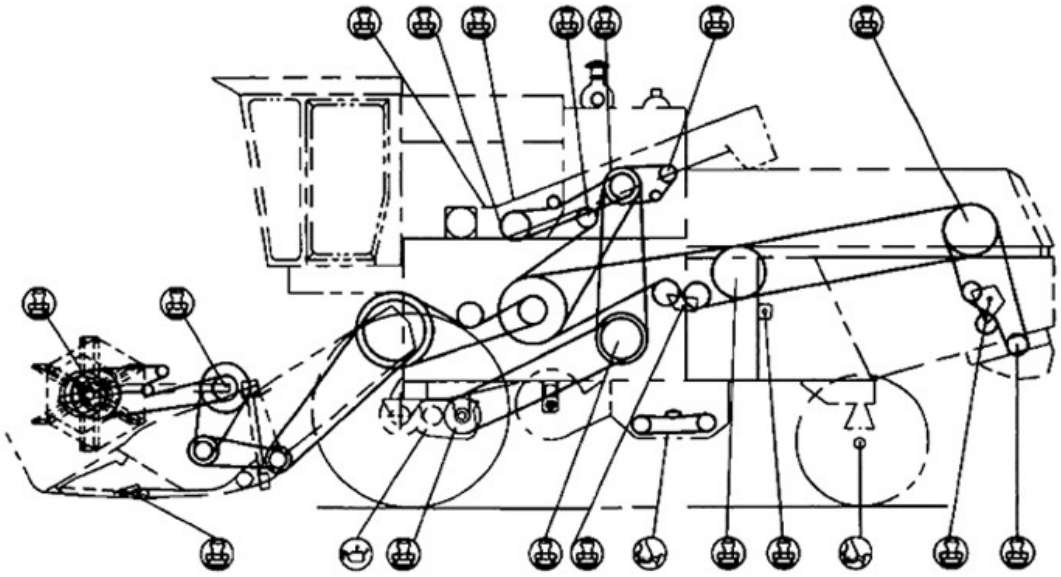
Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

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.

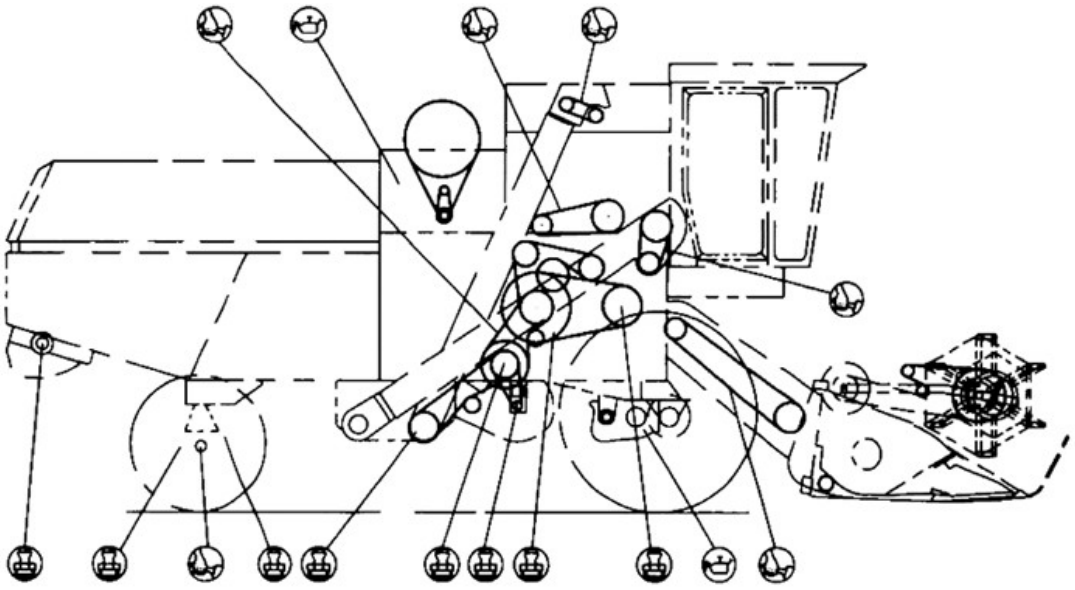
DX,LUBST-19-11APR11

Left-Hand Lubrication Chart



YC12696—UN—24MAY18
YC00758,00002C0-19-15NOV18

Right-Hand Lubrication Chart



YC12697—UN—24MAY18
YC00758,00002C1-19-15NOV18

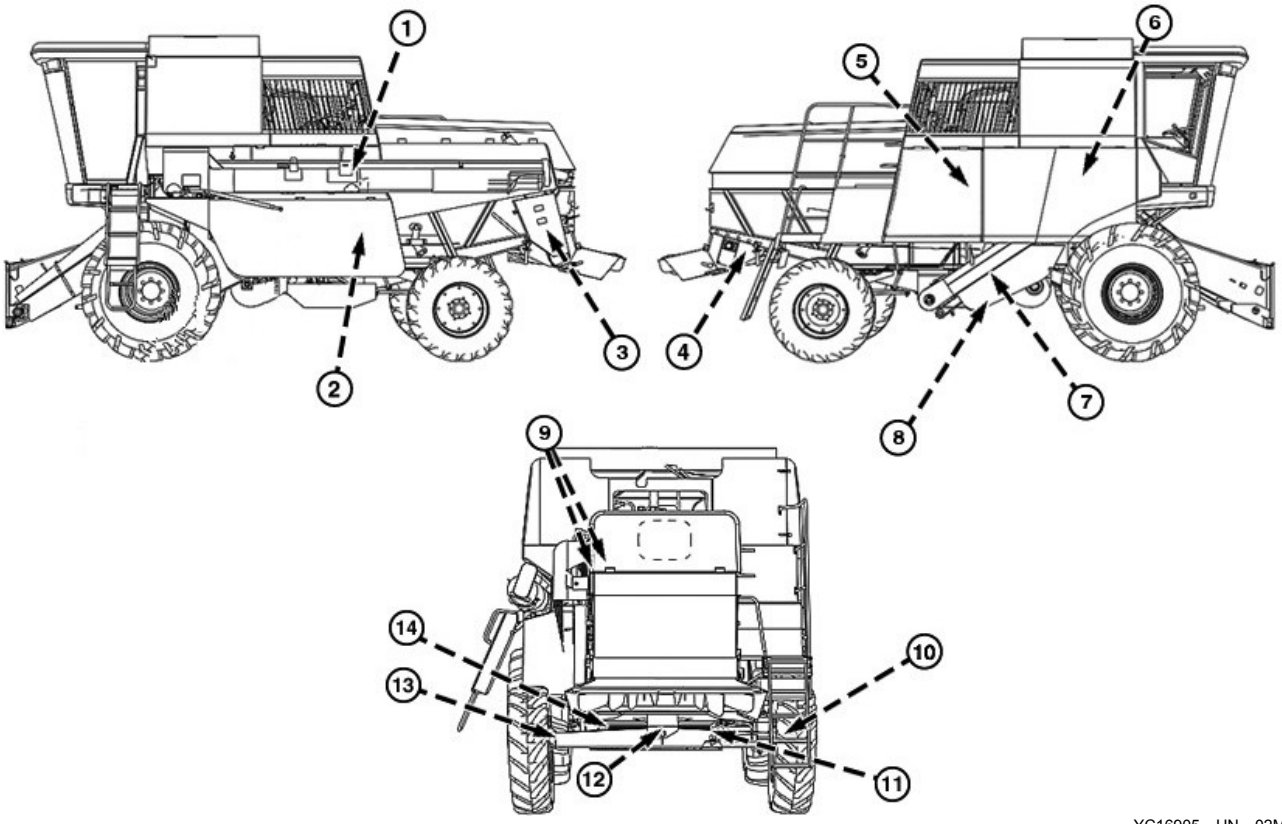
Lubrication Points

IMPORTANT: Recommended service intervals are for average conditions. Service more frequently if combine is used in extreme conditions.

CAUTION: Shut off the engine and remove the key. Lubricate machine after moving parts stopping.

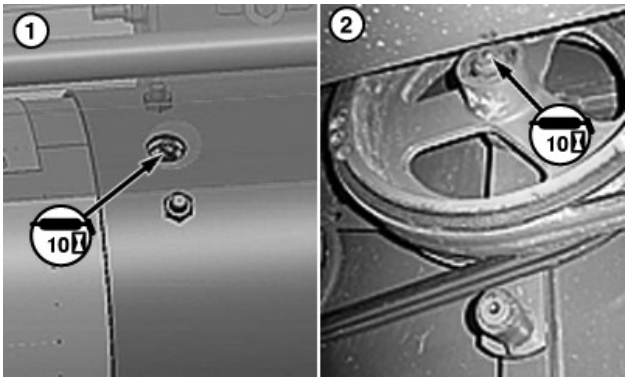
NOTE: Filling grease through lubrication points until feeling pressure returned.

Every 10 Hours



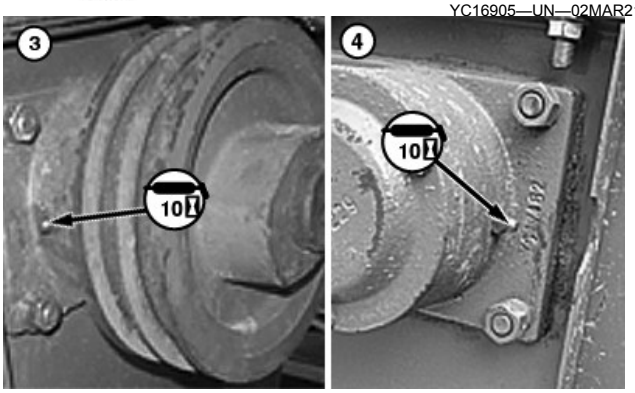
YC16905—UN—02MAR21

NOTE: Before lubricating unloading auger bracket, swing out the unloading auger, shut off the engine, and remove the key.



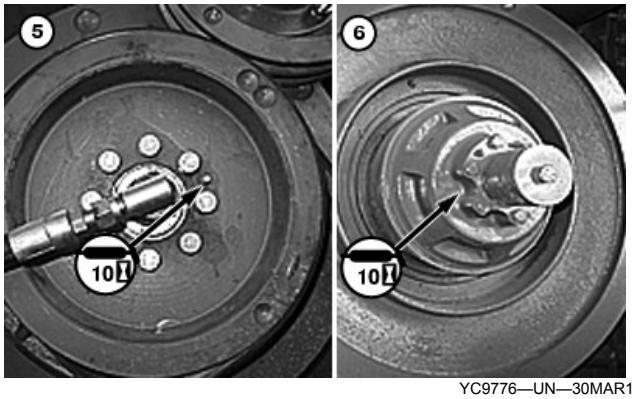
YC9774—UN—30MAR16

1. Unloading auger bracket.
2. Straw chopper drive pulley.



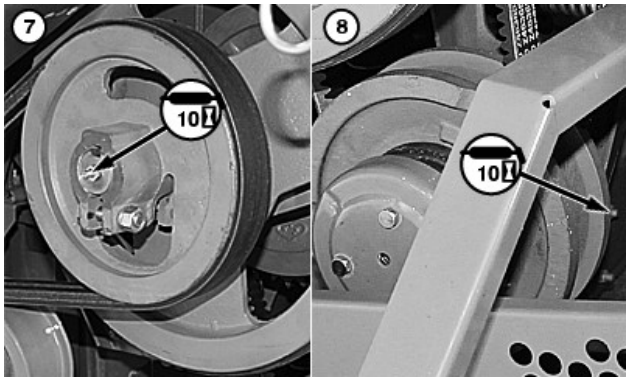
YC9775—UN—30MAR16

3. Straw chopper bearing (left-hand).
4. Straw chopper bearing (right-hand).



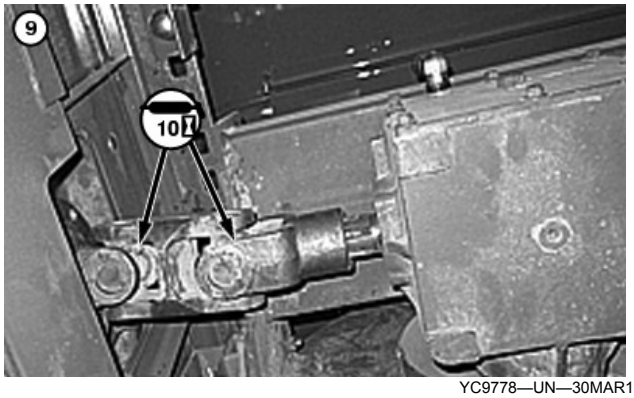
YC9776—UN—30MAR16

5. Threshing cylinder drive pulley.
6. Threshing cylinder pulley.



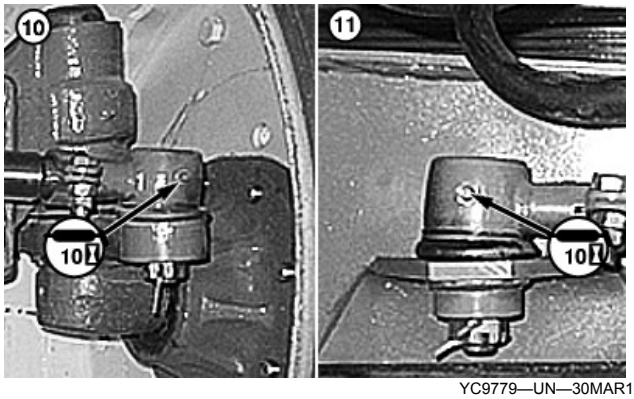
YC9777—UN—30MAR16

7. Fan variable speed drive pulley and bearing.
8. Fan variable speed pulley.



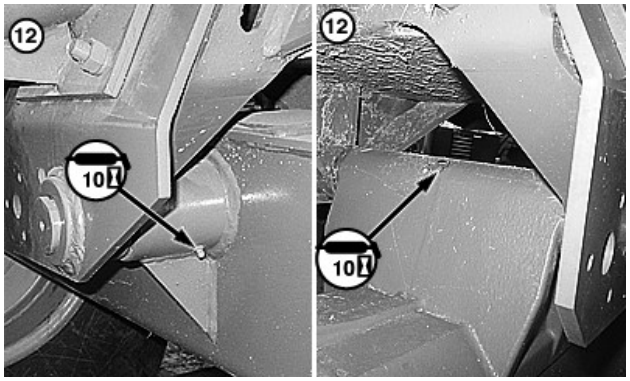
YC9778—UN—30MAR16

9. Separator drive universal joint.



YC9779—UN—30MAR16

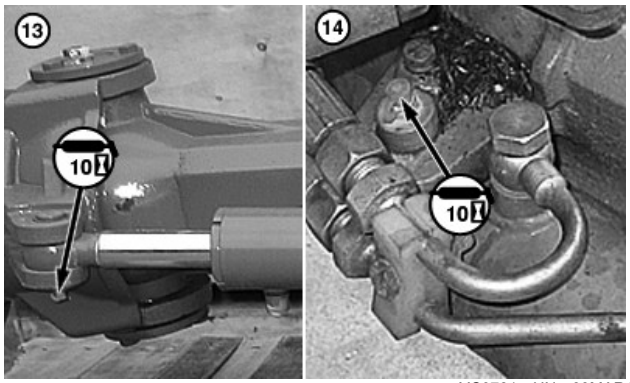
10. Steering cylinder universe joint.
11. Steering tie rod pivots.



YC9780—UN—30MAR16

12. Rear axle kingpin.

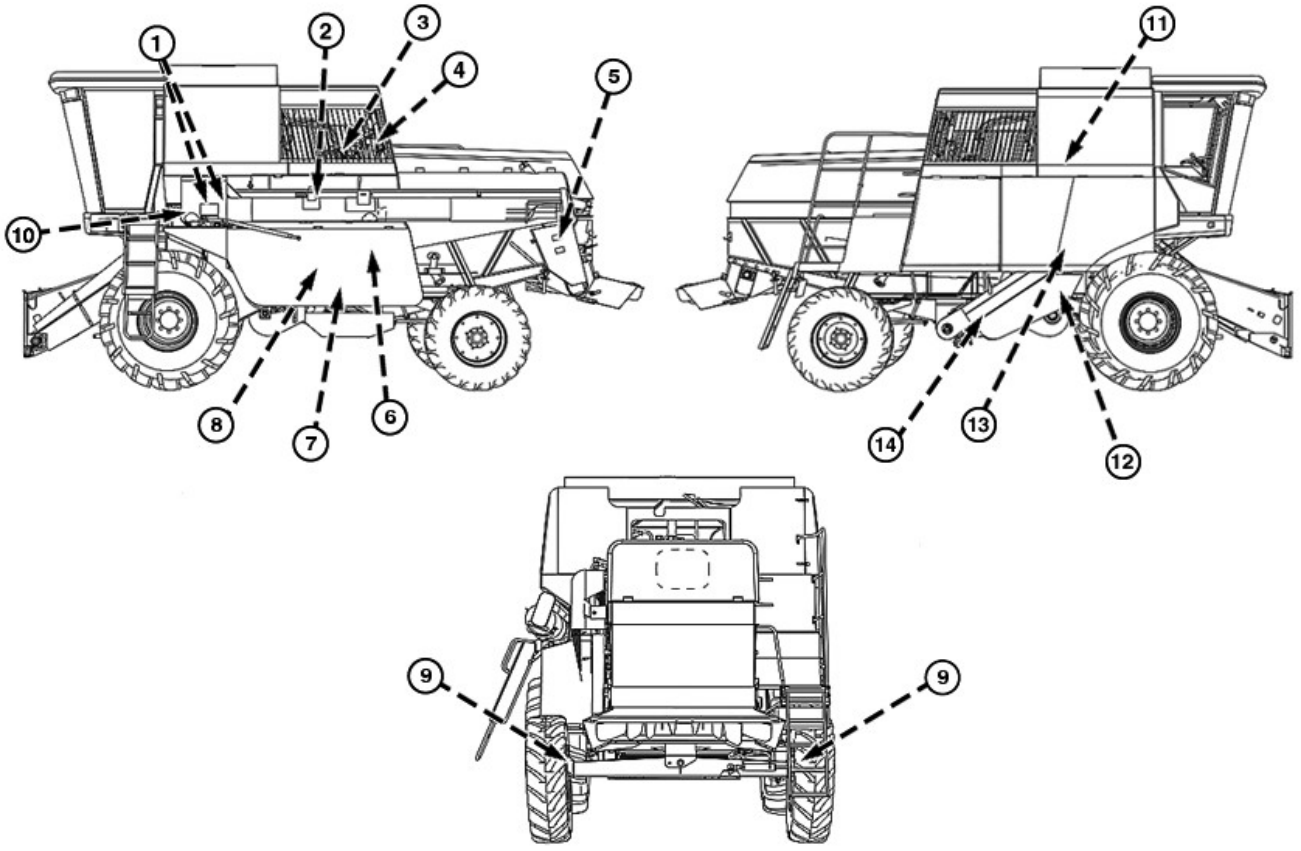
NOTE: Right graphic is used for optional rear wheel drive combine.



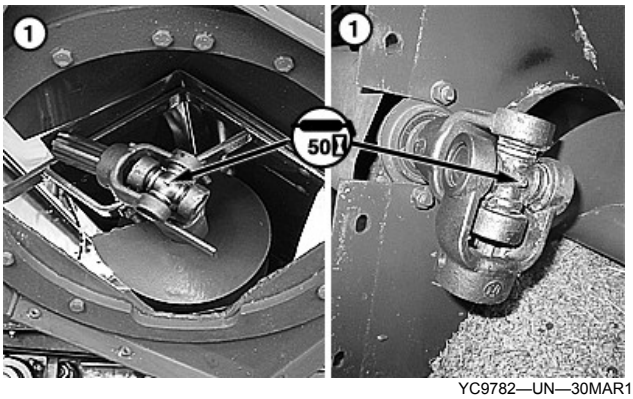
YC9781—UN—30MAR16

13. Steering cylinder universe joint (optional rear wheel drive combine).
14. Steering tie rod pivots (optional rear wheel drive combine).

Every 50 Hours

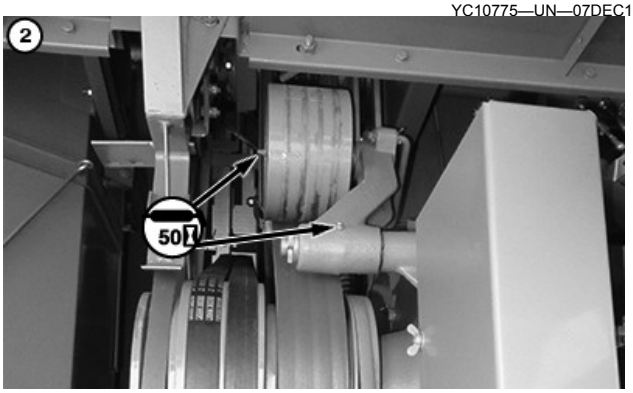


YC10775—UN—07DEC16



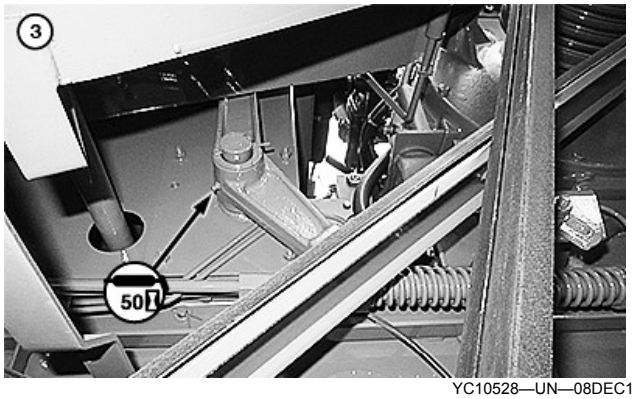
YC9782—UN—30MAR16

1. Unloading auger universal joint.



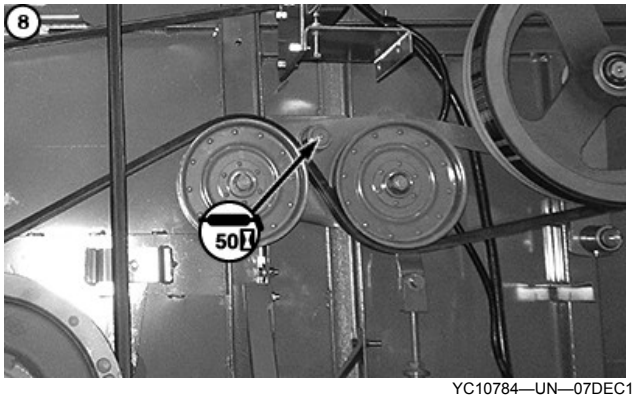
YC10773—UN—07DEC16

2. Separator engage idler and idler arm.



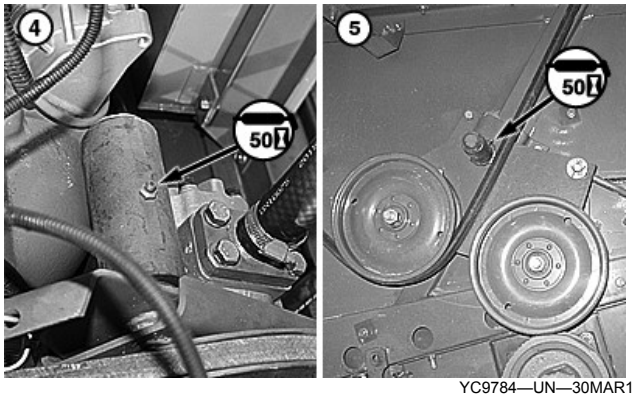
YC10528—UN—08DEC16

3. Separator engage support arm.



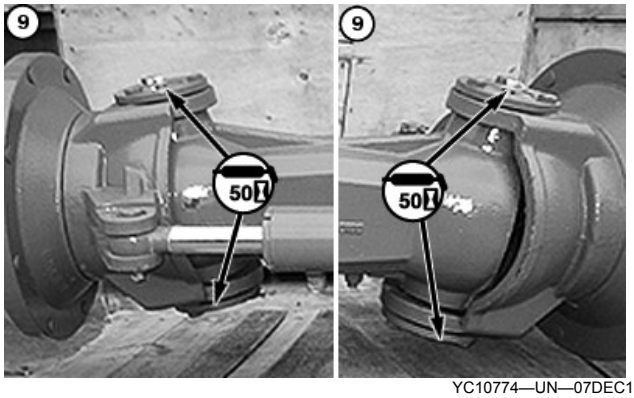
YC10784—UN—07DEC16

8. Chopper drive idler arm.



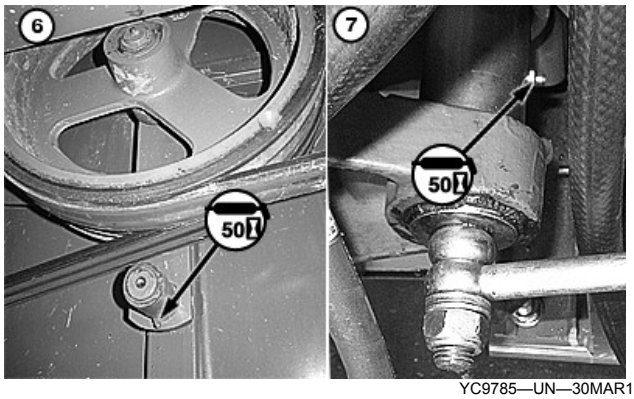
YC9784—UN—30MAR16

4. Hydraulic pump support arm.
5. Separator idler arm.



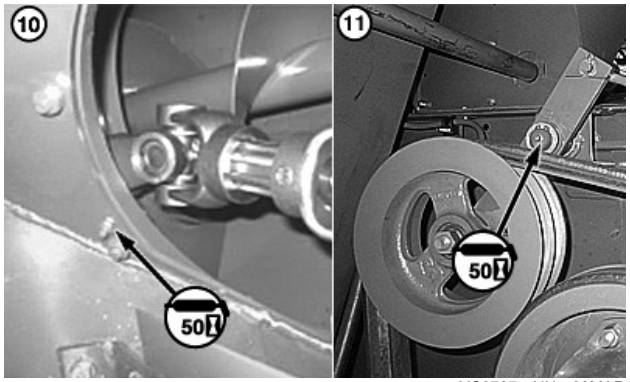
YC10774—UN—07DEC16

9. Rear axle bearing and pivot (optional rear wheel drive combine).



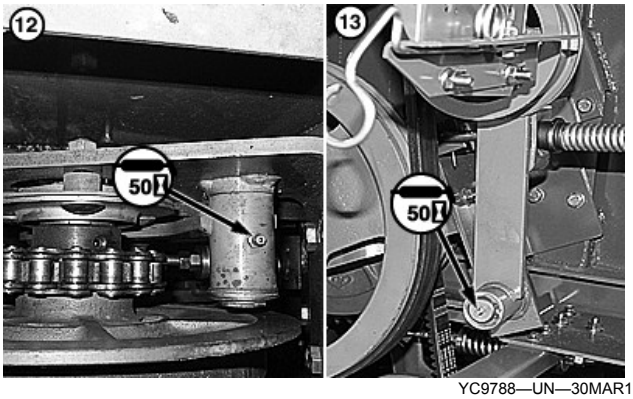
YC9785—UN—30MAR16

6. Separator drive pulley support arm.
7. Separator engage support arm.



YC9787—UN—30MAR16

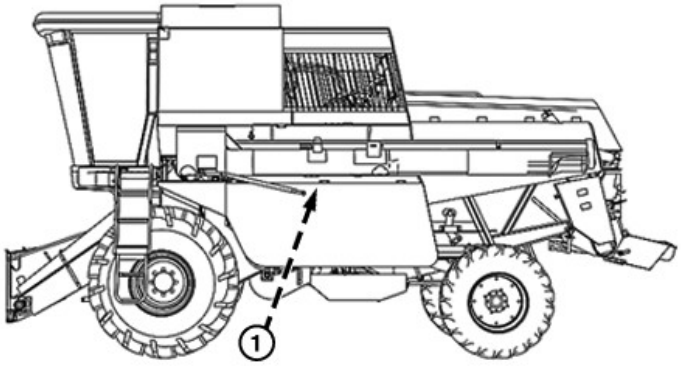
10. Unloading rotator.
11. Beater drive idler arm.

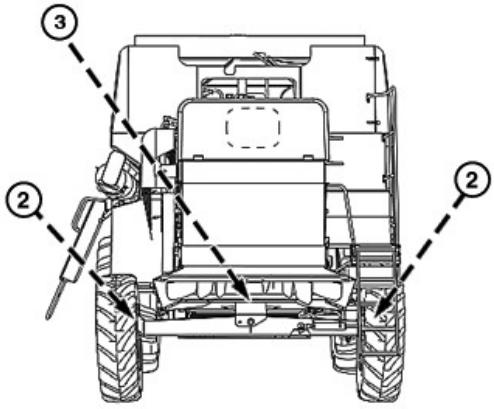


YC9788—UN—30MAR16

12. Cleaning fan idler arm.
13. Cleaning shoe idler arm.

Every 100 Hours

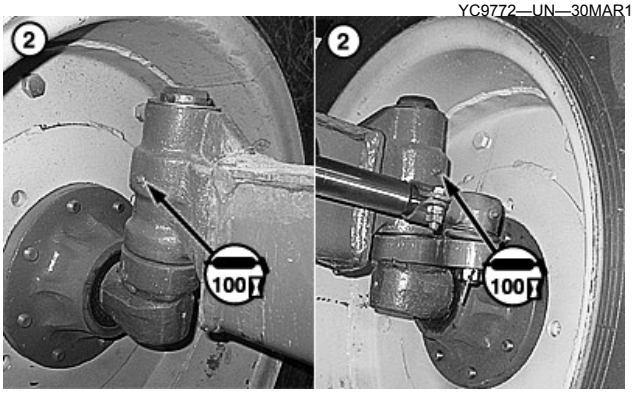




YC9772—UN—30MAR16

YC9791—UN—30MAR16

Every 100 hours

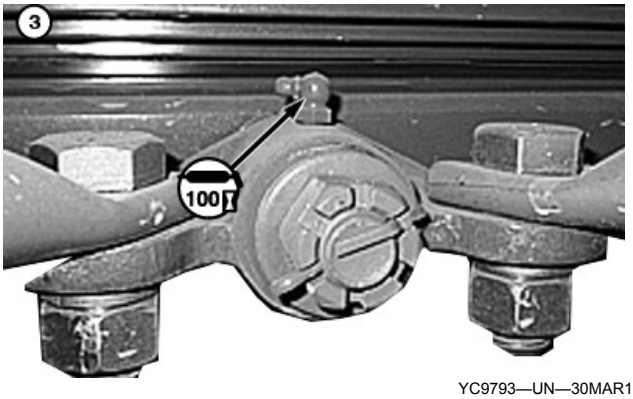


YC9792—UN—30MAR16

2. Rear axle bearing and pivot.

NOTE: This operation is suitable for bearings with lubricating pipes.

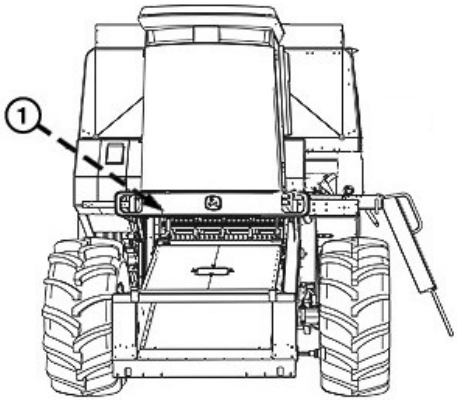
1.Front separator bearing.



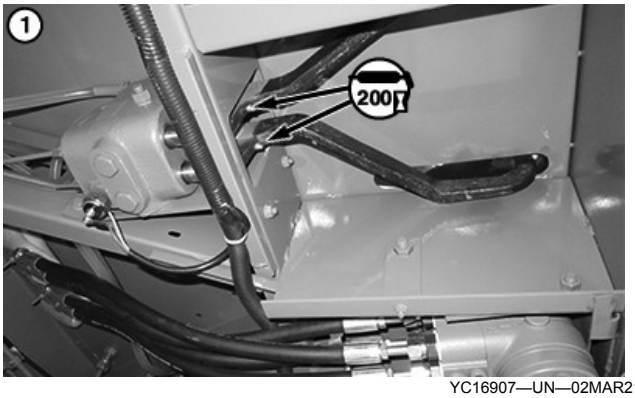
YC9793—UN—30MAR16

3. Rear axle support pivot.

Every 200 Hours



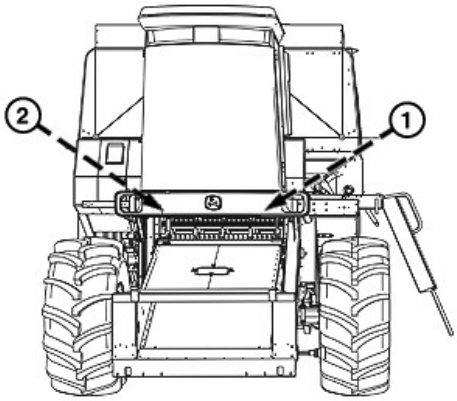
YC16906—UN—02MAR21



YC16907—UN—02MAR21

1. Service brake pedal.

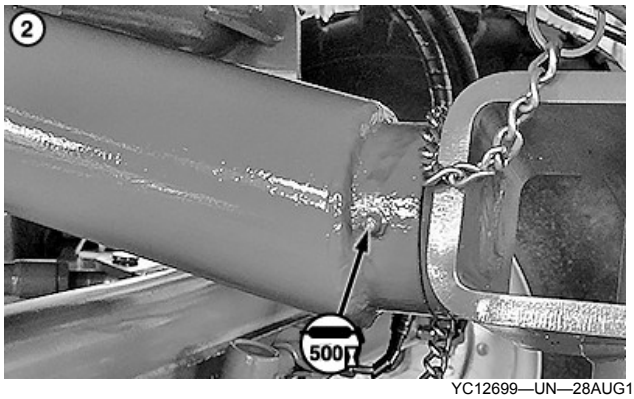
Every 500 Hours



YC10777—UN—07DEC16

YC9794—UN—30MAR16

1. Rear wheel bearings.



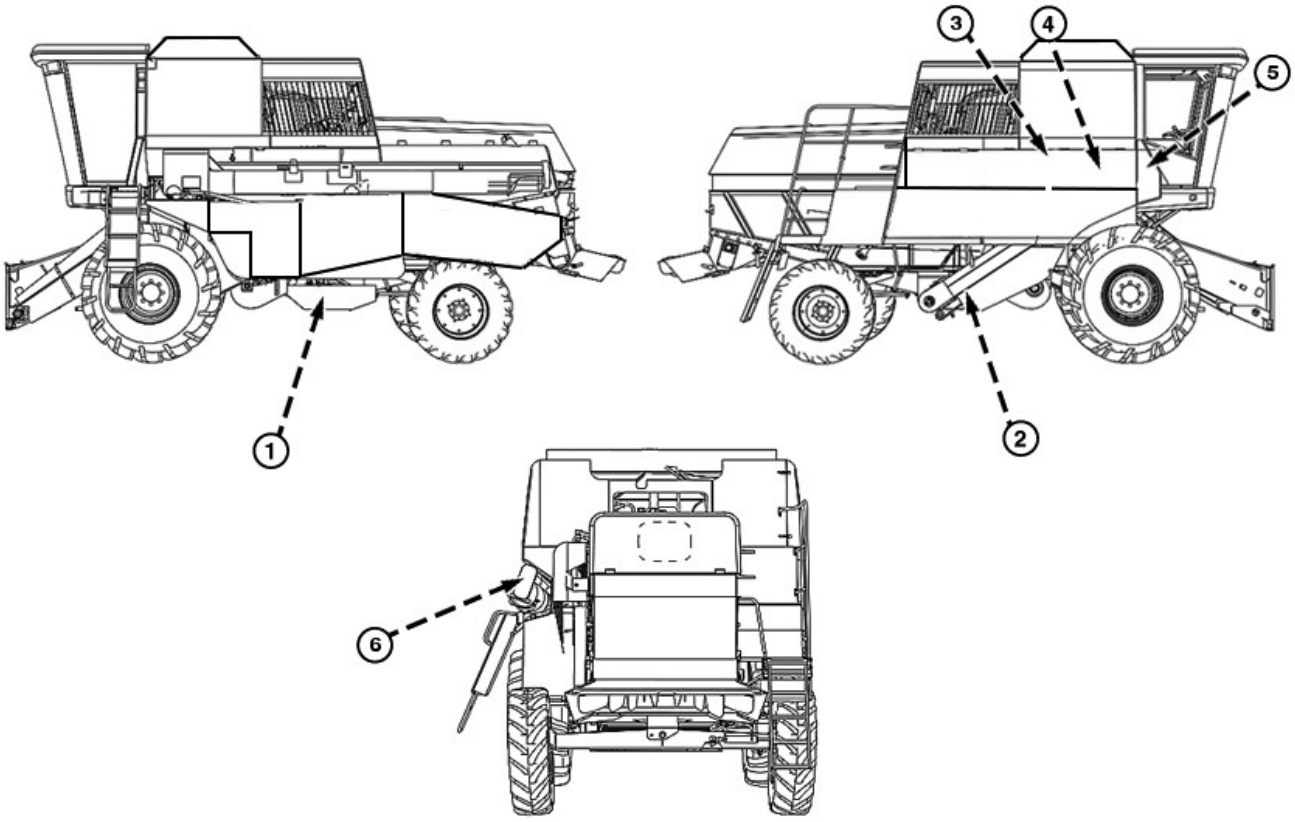
YC12699—UN—28AUG18

2. Rear axle hitch.

CP00834,0008A61-19-14JUL22

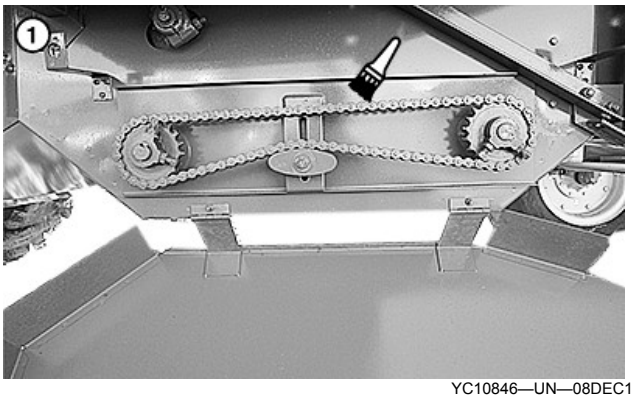
Lubrication Chains

Lubricate chains at the start or at the end of every day.



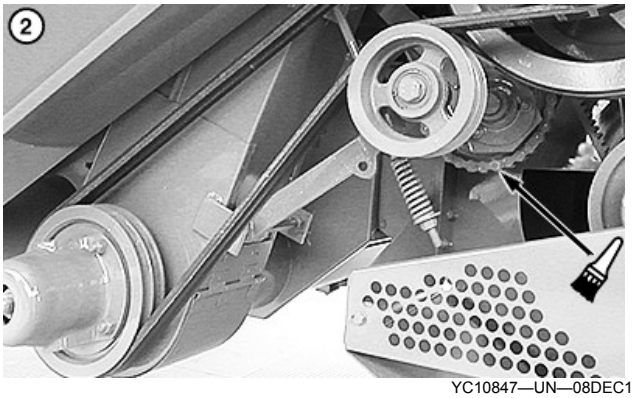
YC10845—UN—25OCT16

Chart of Chain Position



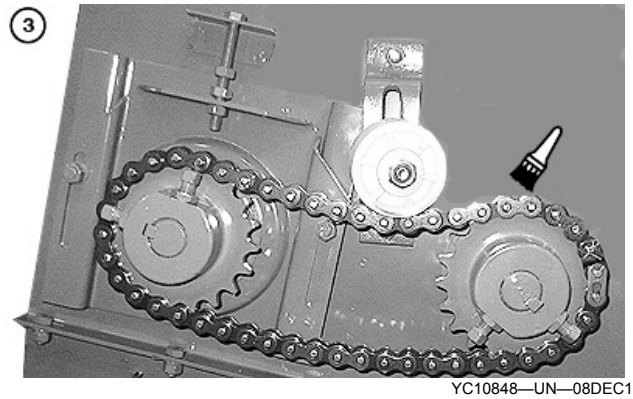
YC10846—UN—08DEC16

Elevator Drive Chain



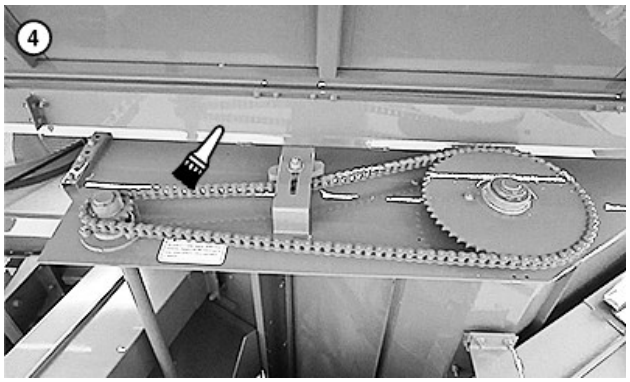
YC10847—UN—08DEC16

Cleaning Shoes Drive Chain



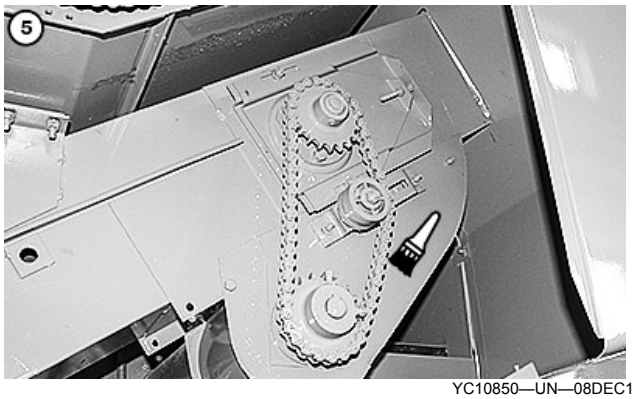
YC10848—UN—08DEC16

Grain Elevator Drive Chain



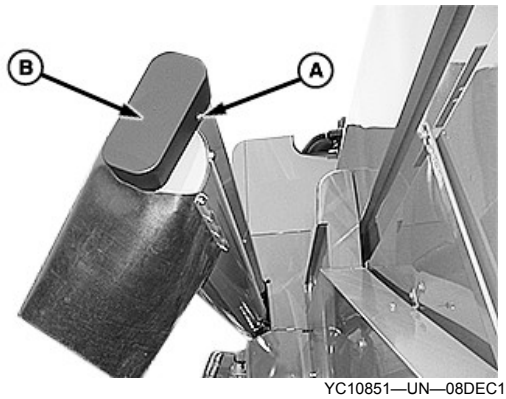
YC10849—UN—08DEC16

Unloading Auger Drive Chain



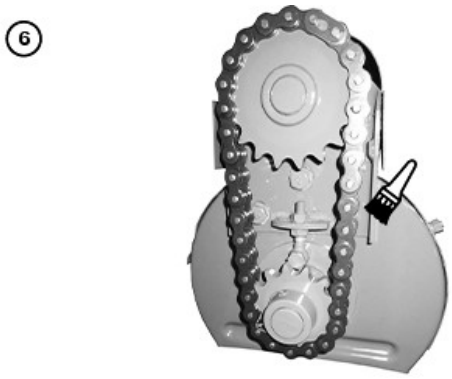
YC10850—UN—08DEC16

Tailing Elevator Drive Chain



YC10851—UN—08DEC16

A— Cap Screw (2 used)
B— Cover



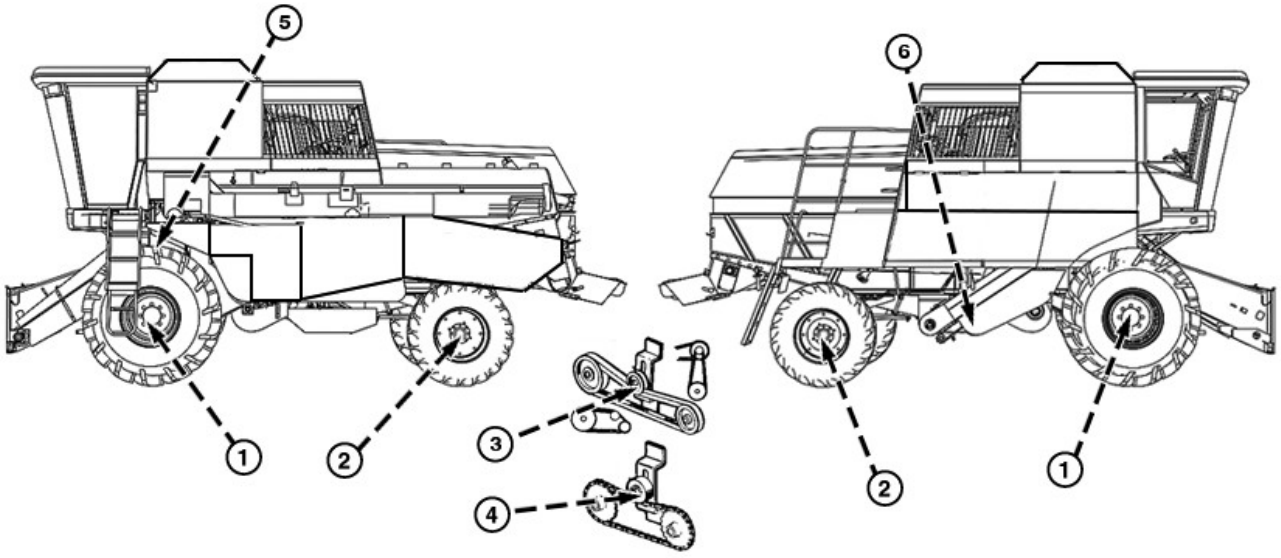
YC10852—UN—08DEC16

Unloading Auger Drive Chain (In End)

NOTE: Before lubricating unloading auger drive chain (in end), remove cap screws (A) and open cover (B).

CP00606,00017D9-19-25MAY18

First Several Hours

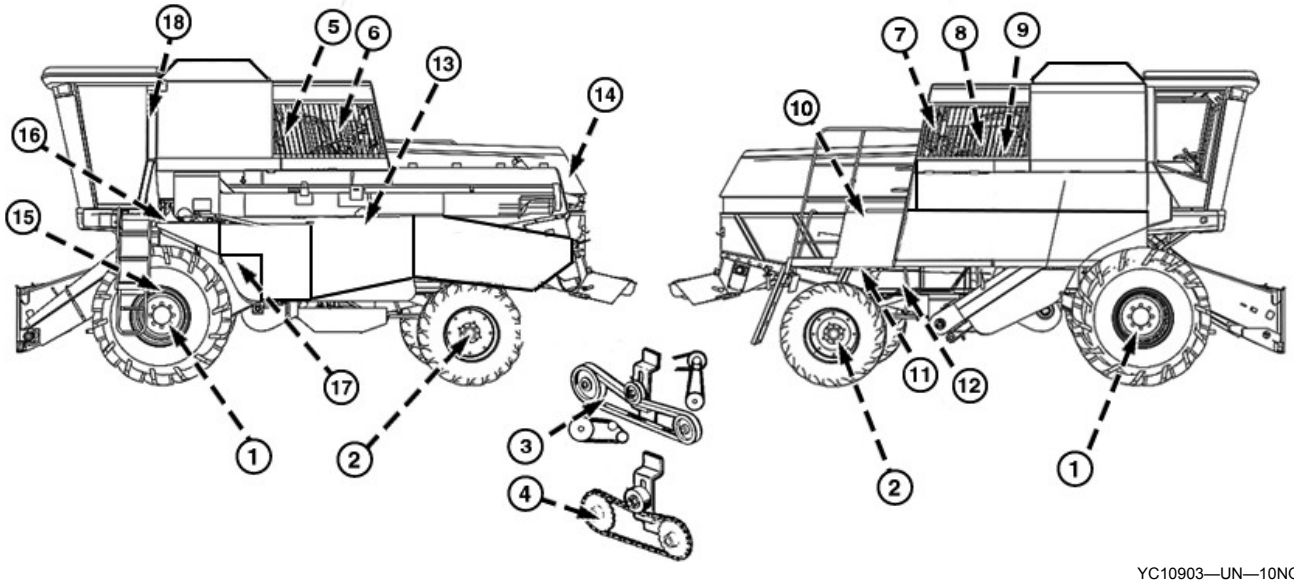


YC10901—UN—13NOV16

1. Tighten front wheel nuts with torque 420 N·m.
2. Tighten rear wheel bolts with torque 180 N·m.
3. Check and adjust the tension of belts.
4. Check and adjust the tension of chains.
5. Check and adjust feeder house slip clutch spring as needed.
6. Check and adjust elevator slip clutch spring as needed.

OUYC278,0000A49-19-29AUG18

Every 10 Hours (Daily)



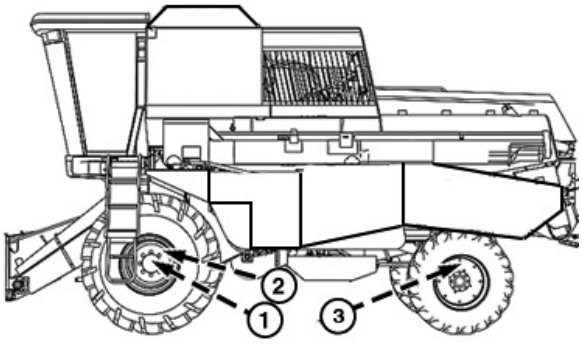
YC10903—UN—10NOV16

1. Check front wheel nuts with torque 420 N·m, check tires, and pressures.
2. Check rear wheel bolts with torque 180 N·m, check tires, and pressures.
3. Check and adjust the tension of belts.
4. Check and adjust the tension of chains.
5. Check coolant level and fill as recommended. See Engine Coolant in Operating Engine section.
6. Clean air filter elements. See Clean the Primary Air Filter Element in Operating Engine section.

7. Clean around the hydraulic reservoir filler neck and check hydraulic oil level. See Change Hydraulic Oil in Electrical, Hydraulic, and Drive Systems section.
8. Clean radiator and rotary screen. See Clean Radiator and Clean Rotary Screen in Operating Engine section.
9. Check engine crankcase oil level. For related operation, see Pre-Start Check in Operating Engine section.
10. Fill fuel tank. See Fuel Tank Filler in Operating Engine section.
11. Check and clean fuel tank sediment bowl. See Fuel Tank Sediment Bowl in Operating Engine section.
12. Check fuel filter. Empty water and impurity. See Primary Fuel Filter in Operating Engine section.
13. Check and adjust the tension of the separator clutch drive belt. See Threshing Unit Belt Tension Adjustment in Operating Machine section.
14. Check tailing volume sensor. See Rear Cover Blockage Warning Device in Operating Machine section.
15. Check and adjust the tension of the feeder house drive belt. See Feeder House Drive Belt Tension in Operating Machine section.
16. Check and clean grain pan.
17. Clean air conditioner system.

CP00834,0008A62-19-02MAR21

First 25 Hours

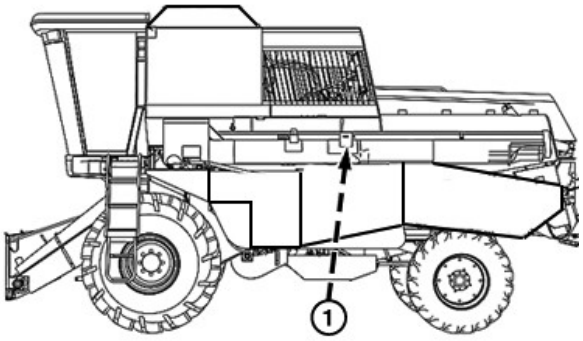


YC10908—UN—10NOV16

1. Check front axle bolts attached to frame. See Front Axle in Electrical, Hydraulic, and Drive Systems section.
2. Check and tighten front wheel nuts with torque 420 N·m.
3. Check and tighten rear wheel bolts with torque 180 N·m.

OUYC278,0000A4B-19-29AUG18

First 50 Hours

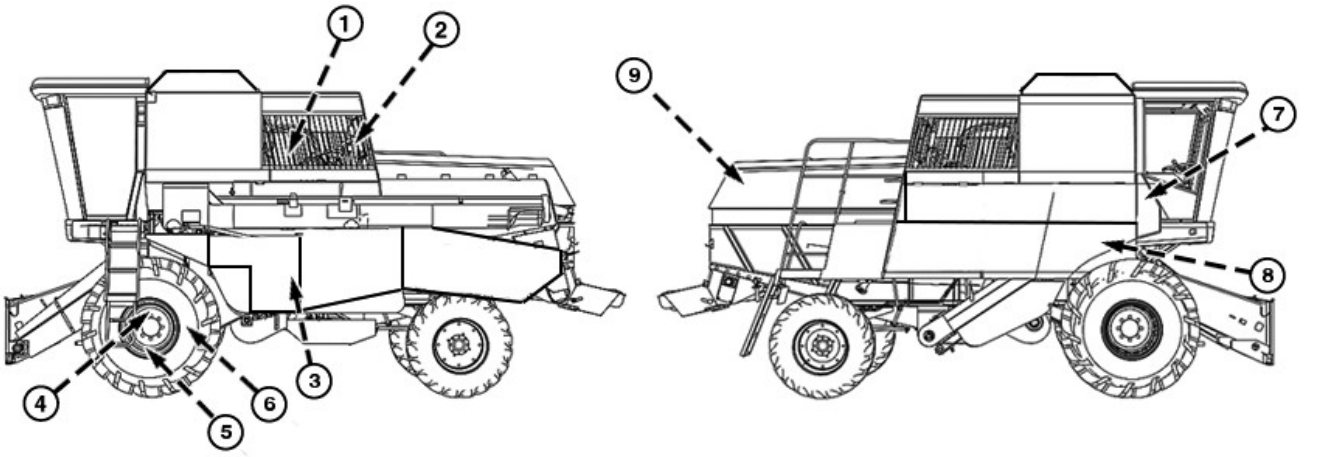


YC10909—UN—05JAN17

1. Check the tension of steel rope. See Adjust Steel Rope in Operating Machine section.

CP00718,00043DF-19-19DEC17

First 100 Hours

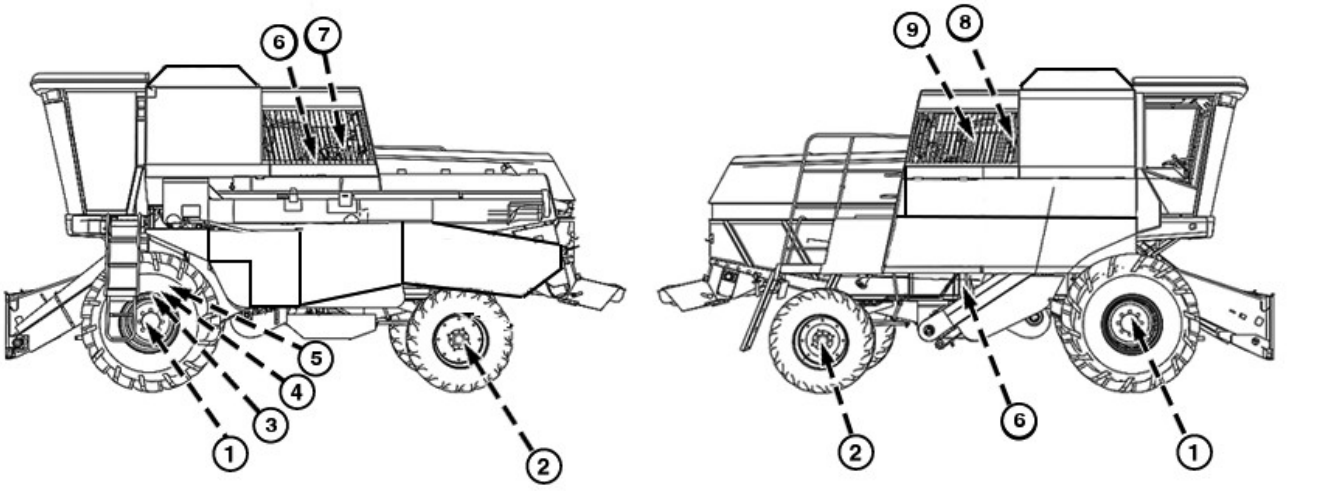


YC11021—UN—14FEB17

1. Change engine break-in oil and filter. See Change Engine Oil and Replace Filter in Operating Engine section.
2. Change hydraulic oil and replace oil filter. See Change Hydraulic Oil and Replace Oil Filter in Electrical, Hydraulic, and Drive Systems section.
3. Change hydrostatic oil and replace oil filters. See Change Hydrostatic Oil and Replace Oil Filters (Hydrostatic Drive) in Electrical, Hydraulic, and Drive Systems section.
4. Change transmission oil. See Transmission in Electrical, Hydraulic, and Drive Systems section..
5. Change final drive oil. See Final Drive in Electrical, Hydraulic, and Drive Systems section..
6. Change brake fluid. See Brake Fluid in Electrical, Hydraulic, and Drive Systems section.
7. Change separator speed reducer gear oil. See Threshing Cylinder Speed Reduction (Optional) in Operating Machine section.
8. Change separator drive gear oil. See Transmission Oil and Gear Oil Capacity in Operating Machine section.

CP00834,0008EFB-19-25JUN21

Every 200 Hours (Every Season)



YC10906—UN—06JAN17

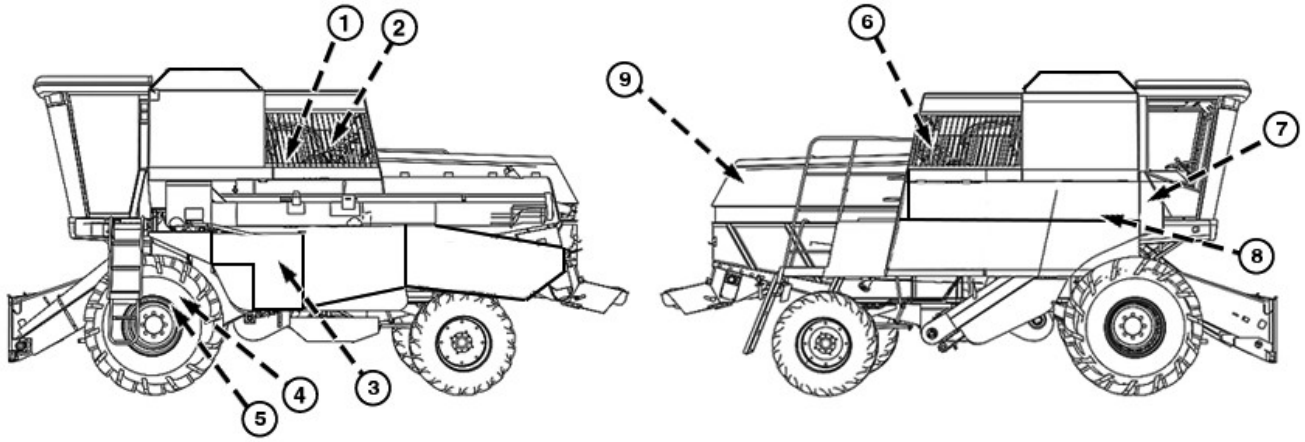
1. Tighten front wheel nuts with torque 420 N·m.
2. Tighten rear wheel bolts with torque 180 N·m.
3. Check and adjust service brake clearance. See Check and Adjust Service Brake in Electrical, Hydraulic, and Drive Systems section.
4. Adjust the flexible cable of the park brake. See

Check and Adjust Park Brake in Electrical, Hydraulic, and Drive Systems section.

5. Check front axle bolts attached to frame. See Front Axle in Electrical, Hydraulic, and Drive Systems section.
6. Check the feeder house anti-wind shield cap screws. See Check the Feeder House Anti-Wind Shield Cap Screws in Electrical, Hydraulic, and Drive Systems section.
7. Change primary fuel filter and final fuel filter elements. See Replace Fuel Filter Elements in Operating Engine section.
8. Change engine oil and filter. See Change Engine Oil and Replace Filter in Operating Engine section.
9. Check coolant level and fill as recommended. See Engine Coolant in Operating Engine section.
10. Check and tighten all clamps and connections of the turbocharger. See Turbocharger in Operating Engine section.

CP00834,0008A64-19-02MAR21

Every 500 Hours



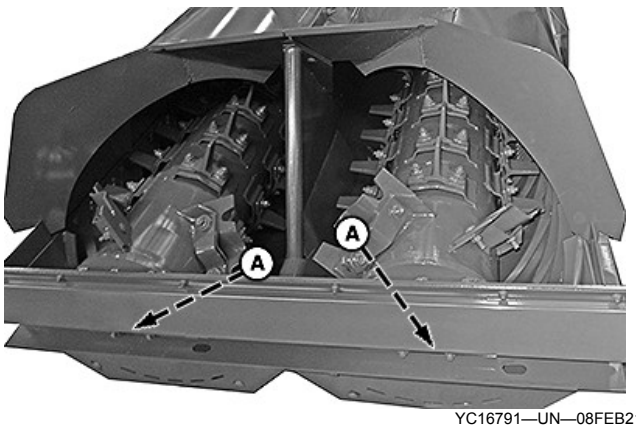
YC11022—UN—14FEB17

1. Check the starter. See Starter in Electrical, Hydraulic, and Drive Systems section.
2. Change engine oil and filter. See Change Engine Oil and Replace Filter in Operating Engine section.
3. Change hydraulic oil and replace oil filter. See Change Hydraulic Oil and Replace Oil Filter in Electrical, Hydraulic, and Drive Systems section.
4. Change hydrostatic oil and replace oil filters. See Change Hydrostatic Oil and Replace Oil Filters (Hydrostatic Drive) in Electrical, Hydraulic, and Drive Systems section.
5. Change final drive oil. See Final Drive in Electrical, Hydraulic, and Drive Systems section.
6. Change transmission oil. See Transmission in Electrical, Hydraulic, and Drive Systems section.
7. Change brake fluid. See Brake Fluid in Electrical, Hydraulic, and Drive Systems section.
8. Change separator speed reducer gear oil. See Threshing Cylinder Speed Reduction (Optional) in Operating Machine section.
9. Change separator drive gear oil. See Transmission Oil and Gear Oil Capacity in Operating Machine section.

CP00834,0008EFC-19-25JUN21

Every 1000 Hours (2 Years)

NOTE: This operation is suitable for bearings without lubricating tubes.



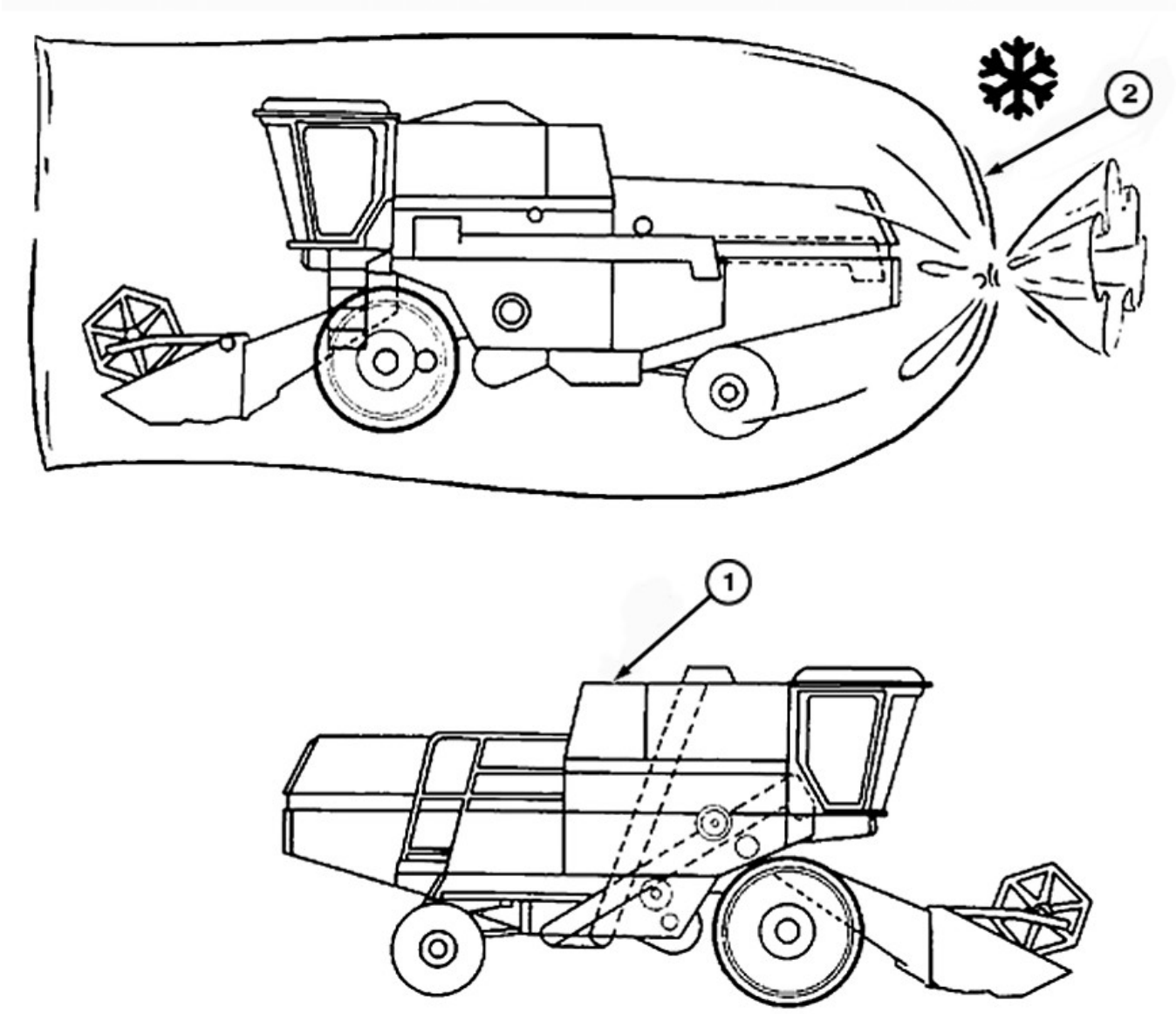
YC16791—UN—08FEB21

A—Front Separator Bearing (2 used)

Replace the front separator bearings (A).

CP00834,00089A5-19-13JUL22

Every Harvest Season

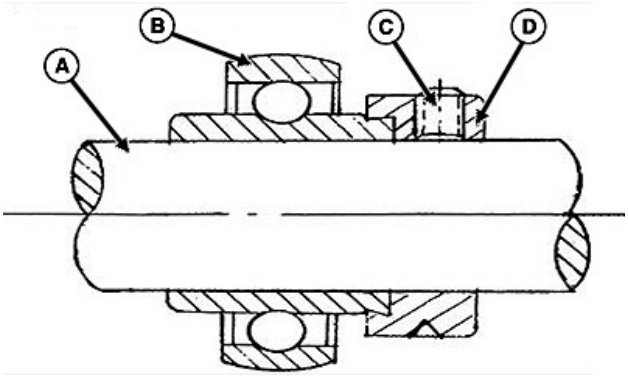


YC8233—UN—26JAN15

1. Clean engine rotary screen and radiator thoroughly.
2. Prevent the machine from corrosion.
3. Others see Storage Combine at the End of Harvest Season in Maintenance, Storage, and Transportation of Combine section.

CP00718,00043E3-19-19DEC17

Removal and Installation of Bearings (390 xxx Series) with Eccentric Sleeve



YC2448—UN—03MAR13

A— Shaft
B— Bearing
C— Set Screw
D— Eccentric Sleeve

To Install:

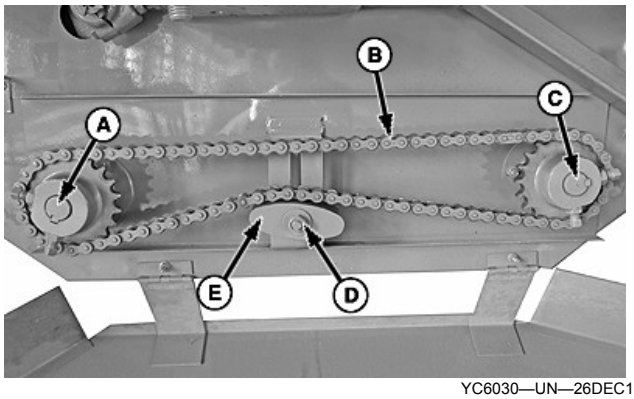
1. Install bearing (B) onto the shaft. Fasten it with the sidewall of the machine. (Before tightening the bearing seat mounting bolts, rotate the shaft for several rounds.)
2. Put on the eccentric sleeve (D). After determining the rotation direction of the shaft, tighten the eccentric sleeve (D) according to the rotation direction.
3. Put a punch against the blind hole on eccentric sleeve (D). Use a hammer to hit the punch until eccentric sleeve locks tightly.
4. Fasten set screw (C) with a hexagon wrench.

To remove:

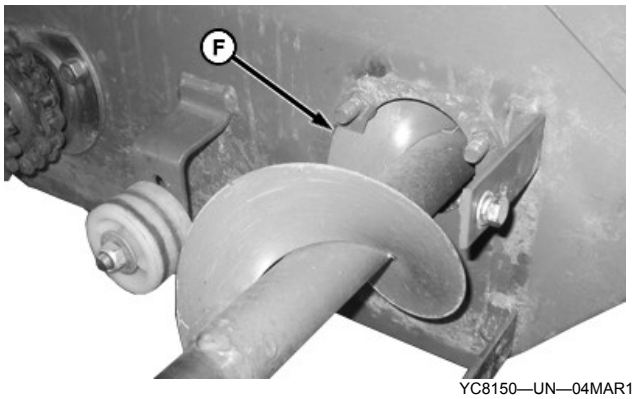
1. Loosen set screw (C) with a hexagon wrench.
2. Put punch against the blind hole on eccentric sleeve (D). Use hammer to hit the punch, in the reverse direction of shaft rotation, until eccentric sleeve is loosened.
3. Remove eccentric sleeve (D). Remove bearing seat and bearing.

CP00718,00043E4-19-19DEC17

Removal and Installation of Grain and Tailing Auger



YC6030—UN—26DEC13



YC8150—UN—04MAR15

A— Grain Auger Shaft
B— Drive Chain
C— Tailing Auger Shaft
D— Nut
E— Tension Block
F— Gap

To remove:

1. On the right side, remove bearing housing, bearing, elevator chain, and sprocket. On the left side, remove tension block (E), drive chain (B), sprocket, bearing housing, bearing, and cover. A gap (F) on the left sidewall is found.
2. Align auger blade with gap (F). Slowly swing auger out.

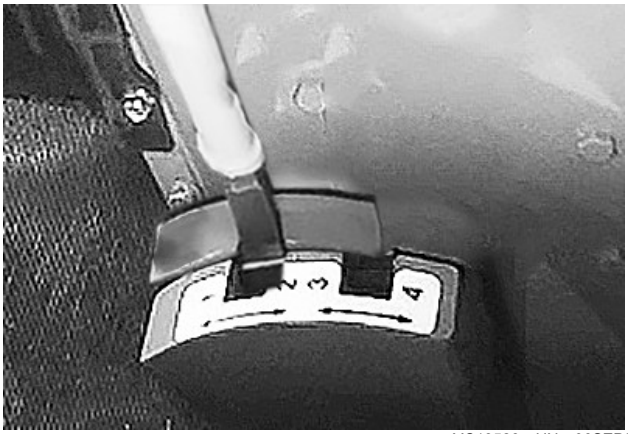
To install:

1. Align auger blade with gap (F) on the left sidewall, slowly swing auger in.
2. On the right side, install sprocket, elevator chain, bearing, and bearing housing. On the left side, install cover, bearing, bearing housing, sprocket, drive chain (B), tension block (E).

YC00758,000032A-19-26NOV18

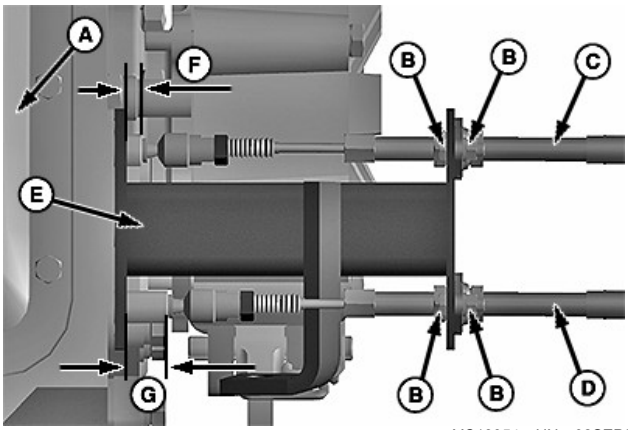
Adjust Gearshift Control Cable

CAUTION: Shut OFF engine, set park brake, and remove key.



YC18526—UN—06SEP21

1. Put the gearshift lever in the neutral position between the first gear and the second gear.



YC18354—UN—02SEP21

A—Gear Case
B—Nut (4 used)
C—Control Cable
D—Control Cable
E—Support
F—Dimension
G—Dimension

2. Loosen the nuts (B).
3. Measure the dimensions (F and G) to specifications.

Specification	
Dimension (F) between the end of the shaft and the support (E)—Length.	11 mm
Dimension (G) between the end of the shaft and the support (E)—Length.	48 mm

NOTE: After one control cable adjustment, then adjust the other control cable.

4. If the specifications are not met, adjust the dimensions by the nuts (B).
5. Tighten the nuts after adjustment.

CP00834,0009104-19-07SEP21

Storage of Combine at the End of Harvest Season

Machine: If possible, store the combine in a dry, sheltered place. Before storing, check the following:

1. Clean thoroughly the inside of the combine and its outside. Prevent residue and dust from corroding or damaging machine.
2. Remove or loosen all V-belts.
3. Thoroughly clean all chains and grease them with a brush of thick oil to avoid corrosion.
4. Thoroughly clean augers, elevators, and shoes.
5. Take protective measures under the feeder house to avoid corrosion.
6. Thoroughly lubricate the combine according to the lubrication charts.
7. Grease threads of adjusting bolts and safety clutch.
8. Relieve tension on the springs.
9. Touch up all places where paints are damaged.
10. Leave the lower and top elevator openings open.
11. Lubricate all the metallic surfaces on the hydraulic cylinder pistons and retract them.
12. Lower the header onto blocks.
13. Strut the machine with wood blocks so that the wheels do not touch the ground. Leave tires inflated.
14. Due to limitations, the combine is parked in the open air, raise it and remove the wheels. Store the wheels in a ventilated and dry place.
15. Lubricate all the linkages and friction points that need lubrication.

Engine: Protect engine against corrosion, take the following measures:

1. Clean outside of the engine with a good solvent.

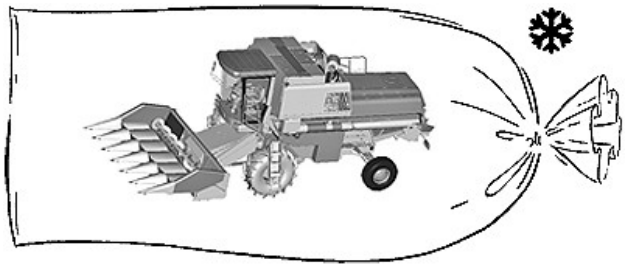
NOTE: Do NOT use gasoline.

2. Drain, wash the engine cooling system, refill recommended coolant.
3. Drain the engine oil and replace the filter, refill recommended oil .
4. Place cardboards between the fan belt and pulley to avoid adhesion.
5. Fill the tank full with fuel. Empty water and impurity in the primary filter.
6. Clean the engine air intake, replace the air filter elements.

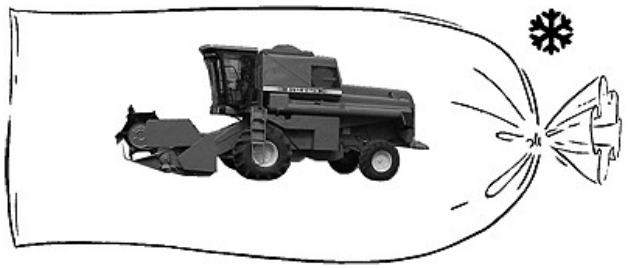
Other: Remove and clean the battery. Store it in a proper place after charging.

CP00718,00043E7-19-19DEC17

Re-Use Combine



YC10991—UN—07DEC16



YC2449—UN—18OCT12

After long period of storage, the combine must be serviced in detail before the start of each season. Ensure that the machine is in good work condition.

Machine:

1. Install belts and properly adjust tension.
2. Adjust drive chain tension properly.
3. Adjust safety clutch spring pressure properly.
4. Close elevator openings.
5. Thoroughly lubricate the combine according to the lubrication charts.
6. Check battery and recharge the battery if needed. Install battery to the machine.
7. Check the tire inflation pressures.
8. Check fire extinguisher and charging as specification in the label.

CAUTION: Do not start the engine in a closed place to avoid suffocation. Tighten attaching bolts and nuts of front and rear wheels.

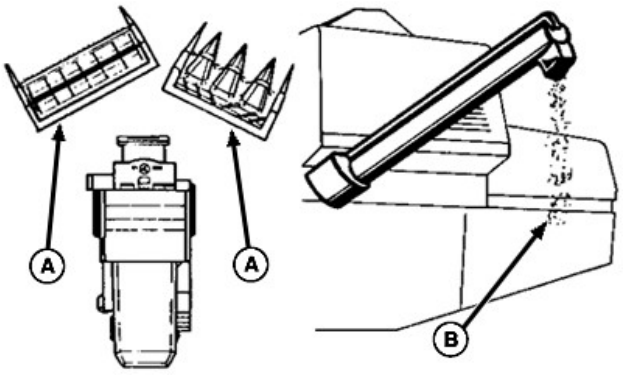
9. Run the combine at half throttle for an hour.
10. Check all bearings for overheating.

Engine:

1. Remove seal plugs in the filler cap and cardboards between the fan belt and pulleys.
2. Check coolant level.
3. Check engine oil level.
4. Run engine at lower idle speed until oil pressure indicator light goes out (about 5 seconds). Run the engine at half throttle for 5 minutes.
5. Run the engine with loaded and check for abnormal noise. Immediately switch off the engine and checks and repairs if abnormal.
6. Check all the hose and clamps. Contact the service center if leakage.

YC00758,00002C3-19-15NOV18

Transport Combine Under Own Power



YC2450—UN—05DEC12

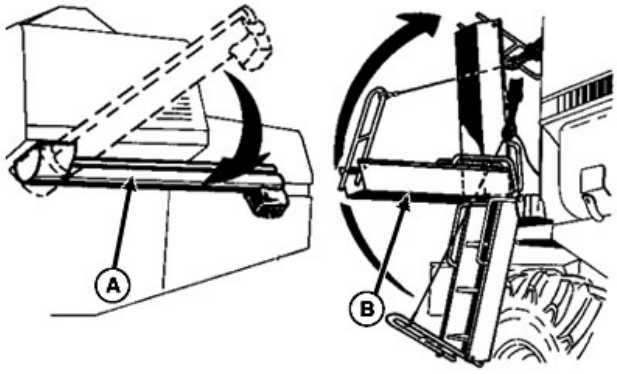
A— Header
B— Empty Grain Tank

Remove header (A) .

Empty grain tank (B).

CP00718,00043E9-19-19DEC17

Unloading Auger and Operator Station Ladder



YC2451—UN—05DEC12

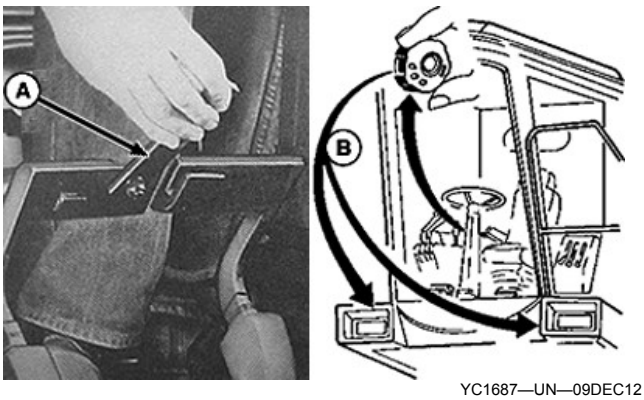
A— Unloading Auger
B— Operator Station Ladder

Swing in unloading auger (A).

Fold operator station ladder (B) upward and secure.

CP00718,00043EA-19-19DEC17

Service Brake Pedals and Lights



YC1687—UN—09DEC12

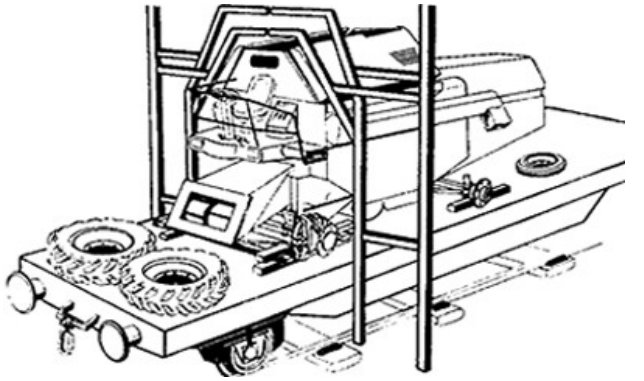
A— Service Brake Pedal
B— Lights

Couple service brake pedals (A) together for driving on public roads.

Switch on lights (B) when necessary.

CP00718,00043EB-19-19DEC17

Transportation Preparation of Combine



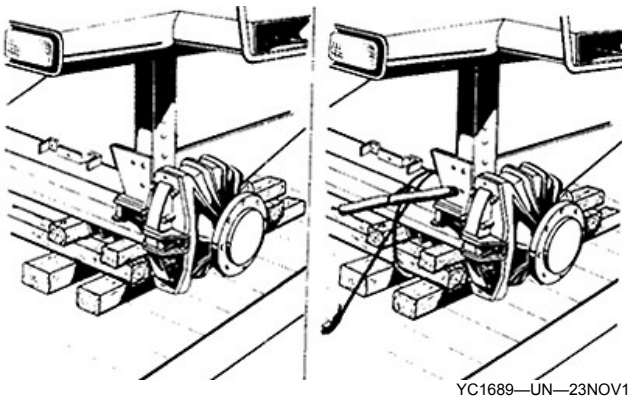
YC1688—UN—09DEC12

CAUTION: Place the combine in horizontal state on trailer for avoiding tilting.

If the combine is too high or too wide to be transported, remove front and rear wheels and secure the combine safely onto the trailer.

CP00718,00043EC-19-19DEC17

Secure Combine



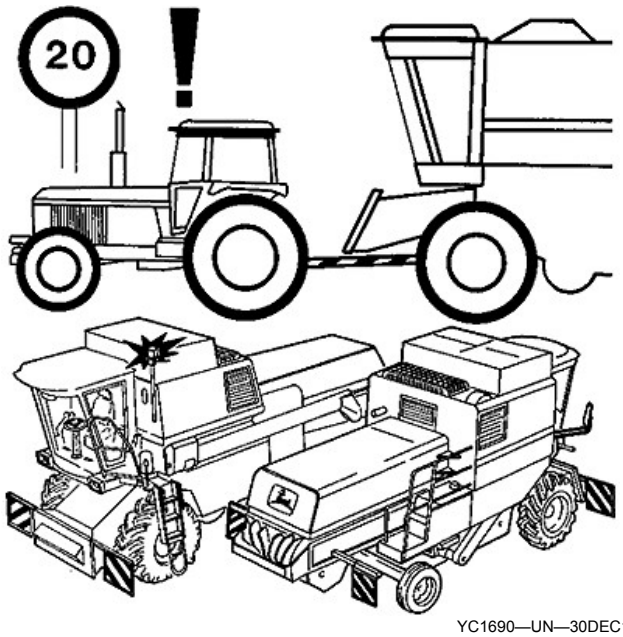
YC1689—UN—23NOV12

IMPORTANT: Lower the combine to wooden blocks for supporting. Never place final drives on trailer.

Use appropriate bindings and wooden blocks to secure front and rear axles of combine on the trailer.

CP00718,00043ED-19-19DEC17

Tow Combine



YC1690—UN—30DEC13

CAUTION: Never tow combine with a wire rope. Always use a suitable tow bar. Reliably connect tow bar to the suitable locations of front axle.

IMPORTANT: Towing at speeds higher than 20 km/h could damage tires, transmission, and final drive.

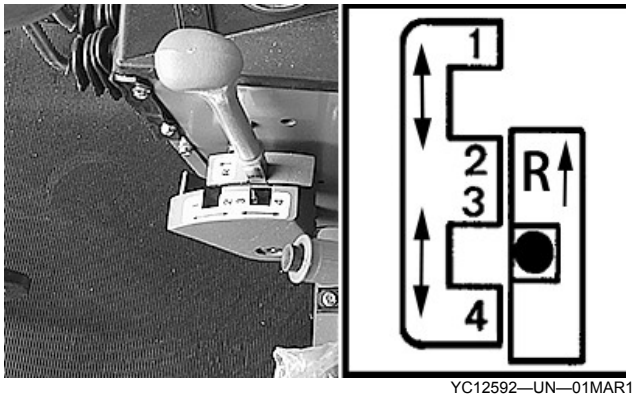
IMPORTANT: For the 4WD combine, Disengage the rear drive before towing.

Turn warning lights ON when towing the machine.

IMPORTANT: Towing hitch on the rear axle is only for header towing. Never attempt to tow the machine from the header towing hitch.

YC00758,000032B-19-26NOV18

Place Gear-Shift Lever at Neutral Position



YC12592—UN—01MAR18

IMPORTANT: Disengage park brake.

NOTE: Move gear-shift lever to neutral position as shown.

CP00606,00017DA-19-25MAY18

Fire Prevention

Fire Prevention Recommendations

Machine must be inspected periodically throughout the working day. Build up 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 this Operator's Manual greatly reduces risk of fire, chance of costly downtime and improves machine performance.

Always follow all safety procedures posted on the machine and in the Operator's Manual. Before carrying out any inspection or cleaning, switch off the engine, set park brake and remove key.

Machine is equipped with the fire extinguisher. Extinguisher must be checked daily when entering or exiting cab and when working around the machine to ensure that it is in working condition. Fire extinguishers must be replaced or professionally serviced after any use.

For additional information, see related contents in Machine Cleanout section.

CP00718,00043F0-19-19DEC17

Use Fire Extinguisher

About how to use the fire extinguisher, see Use Fire Extinguisher in Safety Instructions and Safety section.

CP00718,00043F1-19-19DEC17

Handle Fluids Safely—Avoid Fires

TS227—UN—15APR13

When you work around fuel, do not smoke or work near heaters or other fire hazards.

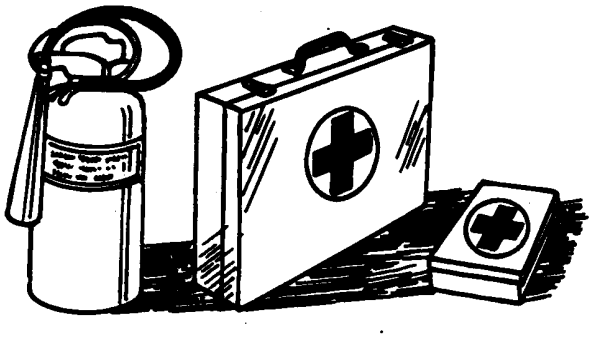
Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.

DX,FLAME-19-29SEP98

Prepare for Emergencies



TS291—UN—15APR13

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.

DX,FIRE2-19-03MAR93

Handle Starting Fluid Safely

TS1356—UN—18MAR92

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.

Do not use starting fluid on an engine equipped with glow plugs or an air intake heater.

DX,FIRE3-19-14MAR14

Remove Accumulated Crop Debris

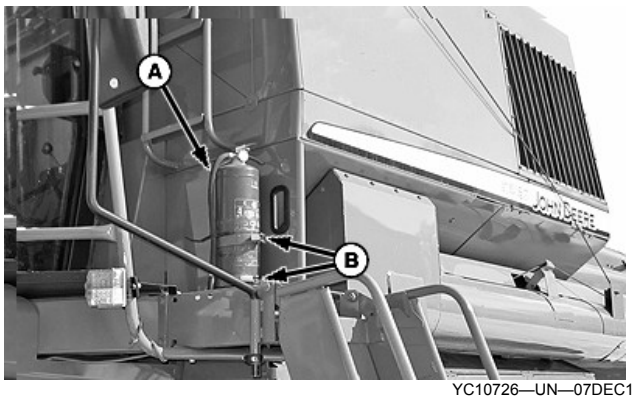
TS227—UN—15APR13

The buildup 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 park brake and remove the key.

CP00718,00043F4-19-19DEC17

Fire Extinguisher Locations

NOTE: If fire extinguisher is not equipped with machine, must order from the local dealer.



YC10726—UN—07DEC16

A— Fire Extinguisher
B— Clamp (2 Used)

The fire extinguisher (A) is on the left side of cab, closed to the grain tank. To remove fire extinguisher, loosen clamps (B) on the bracket and remove fire extinguisher from the bracket.

CP00606,00018C7-19-29MAY18

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.

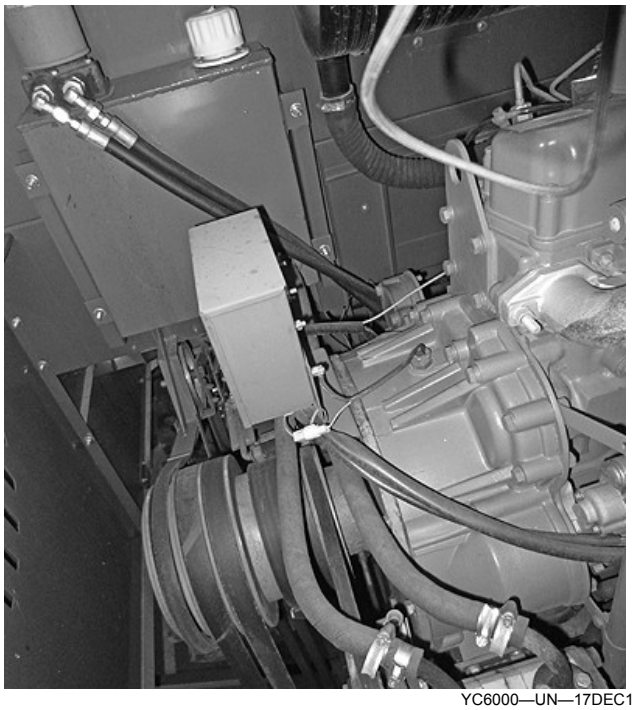
If fire can be safely extinguished, proceed carefully and follow these guidelines:

1. Remove fire extinguisher from the 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 the 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.

CP00718,00043F6-19-19DEC17

Clean Engine Compartment

CAUTION: Do not clean engine or engine compartment with engine running.



YC6000—UN—17DEC13

Dirt, oil, chaff, and crop debris in the engine compartment and on the 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 these areas frequently.

CP00718,00043F7-19-19DEC17

Machine Cleanout

General Cleaning Guidelines

Machine must be inspected periodically throughout the harvest days. 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 vary depending on a number of factors, including operating conditions, machine settings, crop conditions, operating speeds, and weather conditions. Inspections and cleanings are required multiple times throughout the harvest day, particularly in dry, hot, and windy conditions.

Some of these photographs show accumulations of crop material and other debris before cleaning. This type of accumulation is not normal; it was allowed for illustrative purposes only.

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.

Main areas that required to be inspected and cleaned frequently are:

- Engine compartment
- Engine cooling system
- Fuel tank
- Cleaning fan
- Trough
- Separating device
- Wiring harnesses and oil lines
- Gear case

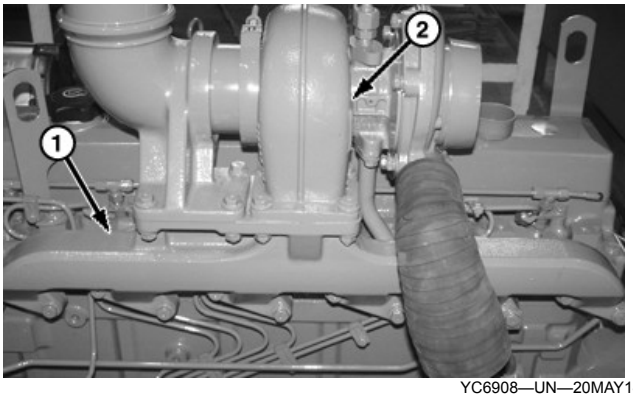
Although some other areas also are required to clean regularly, but these areas are more frequently to clean with compressed air.

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 park brake and remove key.

CP00718,00043F8-19-19DEC17

Engine Compartment

These areas around engine compartment are inspected and cleaned throughout the entire harvest day.



YC6908—UN—20MAY14

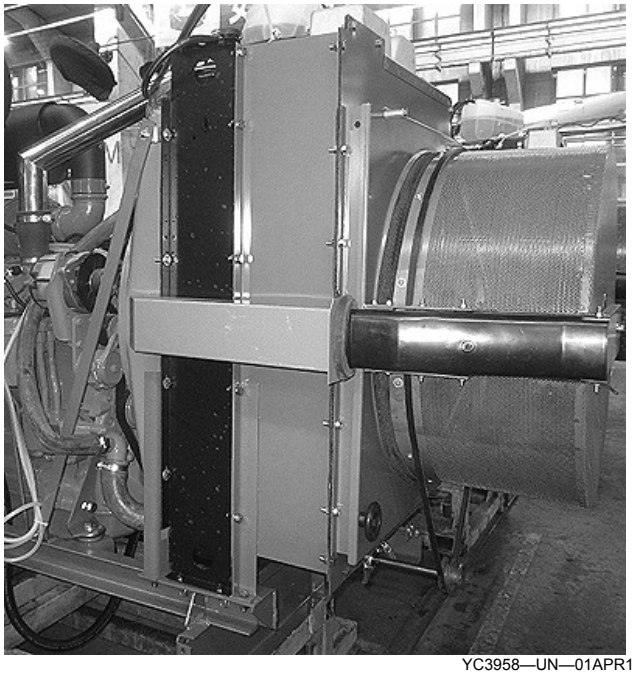
YC6002—UN—18DEC13

1. Exhaust manifold
2. Turbocharger
3. Below the engine

CP00718,00043F9-19-19DEC17

Engine Cooling System

These areas around engine cooling system are inspected and cleaned throughout the entire harvest day.



YC3958—UN—01APR13

CP00718,00043FA-19-19DEC17

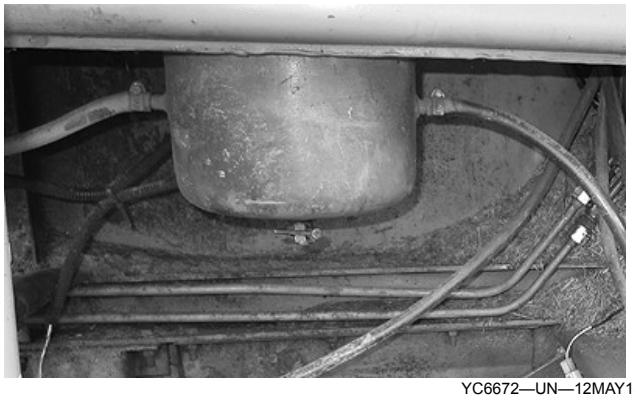
Fuel Tank

CAUTION: If oil leakage is found, stop the machine immediately. Locate the leak. Never start the machine before it has been repaired.

Regularly inspect and clean the upper part, lower part, and sides of the fuel tank and around the fuel transfer pump throughout the entire harvest day.

YC6693—UN—14MAY14

Upper



YC6672—UN—12MAY14

Lower

YC6694—UN—14MAY14

Side

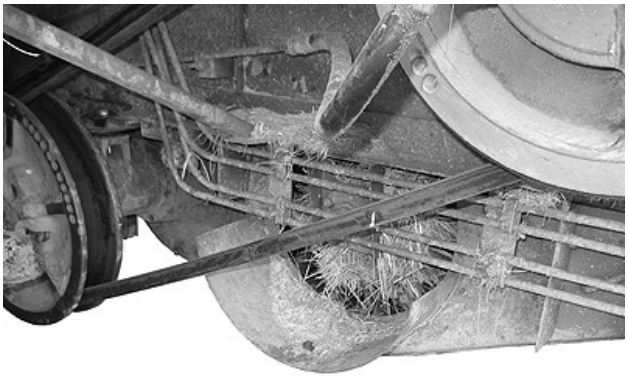
YC6682—UN—14MAY14

Fuel Transfer Pump

CP00606,00017DB-19-25MAY18

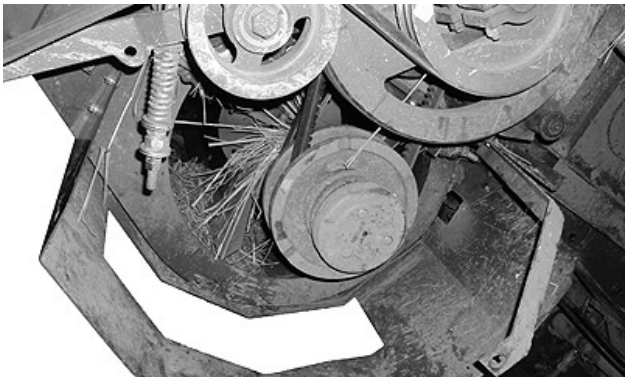
Cleaning Fan

These areas around cleaning fan are inspected and cleaned throughout the entire harvest day.



YC6686—UN—13MAY14

Left-Hand Side



YC6681—UN—13MAY14

Right-Hand Side

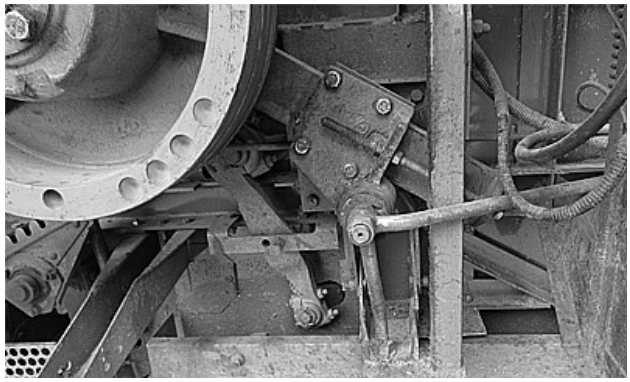
CP00606,00017DC-19-25MAY18

Trough

These areas around trough are inspected and cleaned throughout the entire harvest day.

YC6683—UN—13MAY14

Right-Hand Side



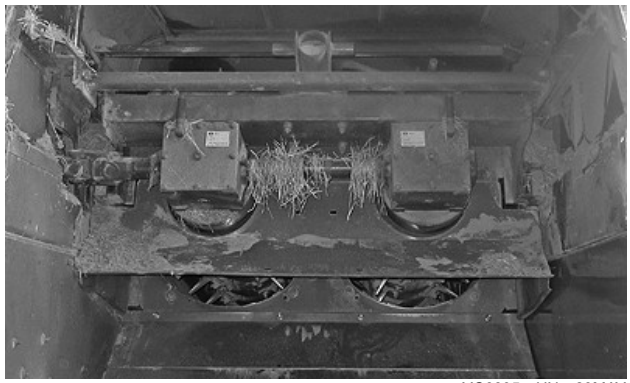
YC8892—UN—07JUL15

Left-Hand Side

CP00606,00017DD-19-25MAY18

Separator

These areas around the separator are inspected and cleaned throughout the entire harvest day.



YC6695—UN—20MAY14

Gear Case

YC6696—UN—20MAY14

YC6675—UN—13MAY14

Separator

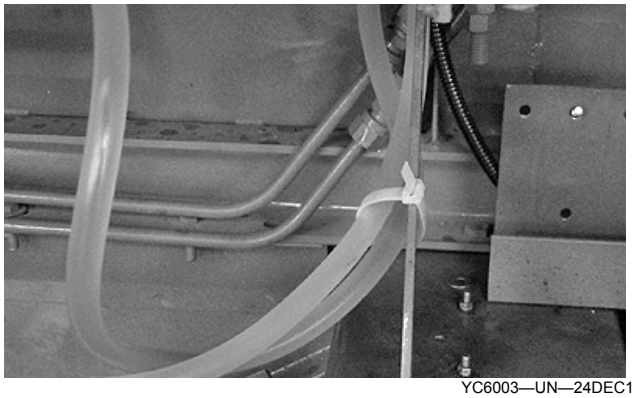
YC6676—UN—13MAY14

Upper

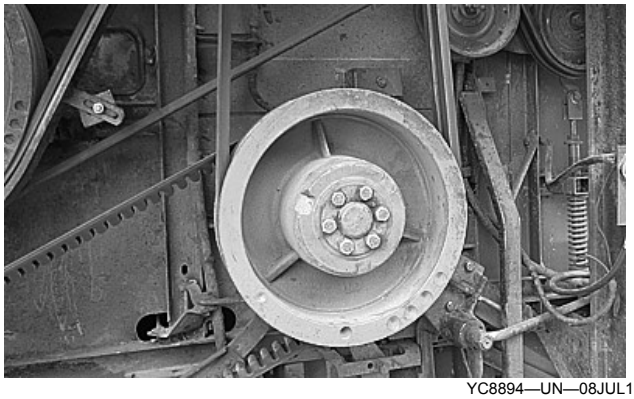
CP00606,00017DE-19-25MAY18

Wiring Harnesses and Fuel Lines

These areas around wiring harnesses and oil lines are inspected and cleaned throughout the entire harvest day.

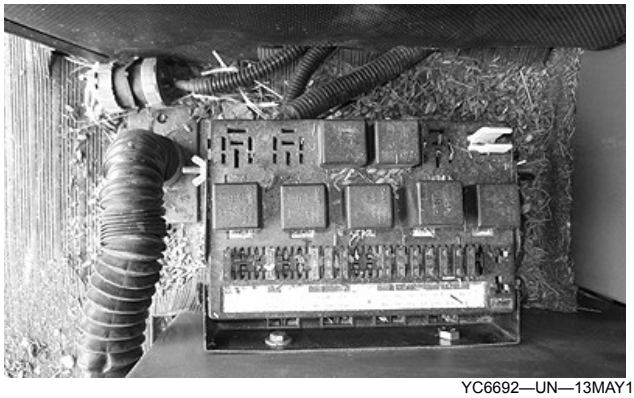


YC6003—UN—24DEC13



YC8894—UN—08JUL15

YC6677—UN—13MAY14



YC6692—UN—13MAY14

YC00758,000032C-19-26NOV18

Gear Case

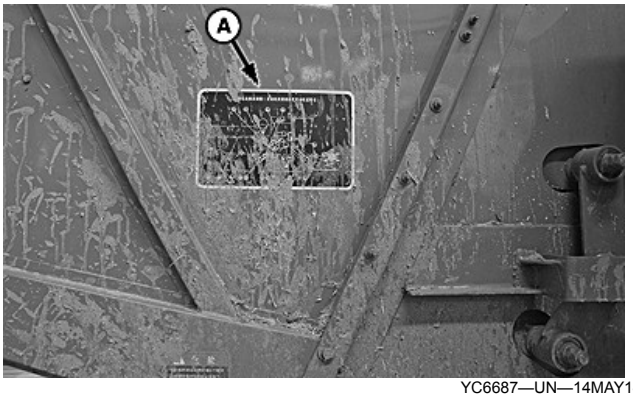
These areas around gear case and oil lines are inspected and cleaned throughout the entire harvest day.

YC6673—UN—13MAY14

CP00718,0004400-19-19DEC17

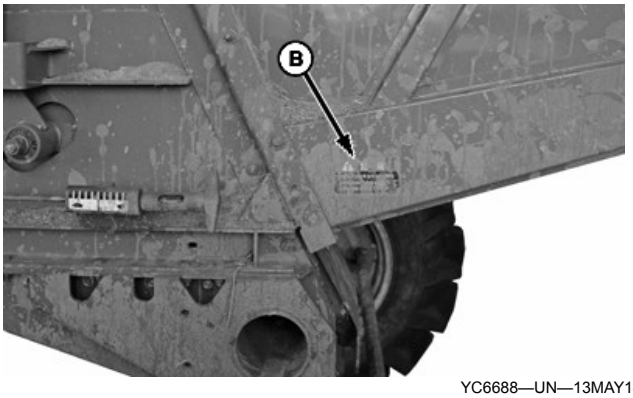
Labels

All labels are inspected and cleaned throughout the entire harvest day.



YC6687—UN—14MAY14

A— Lubrication Label



YC6688—UN—13MAY14

B— Safety Sign

JL31334,00017CA-19-07MAY18

Troubleshooting

Analysis and Troubleshooting of Failures

Most harvester usage problems are due to incorrect adjustments.

In failure analysis, potential problems are listed with corresponding recommended solutions for the operator.

CP00718,0004139-19-14DEC17

Feeder House

Symptom	Problem	Solution
Uneven or bundle-like feeding to cylinder.	Cutter central auger is too high.	Adjust central auger downward. Refer to header operator's manual.
	Front part of feeder house chain is adjusted too high.	Adjust the feed rolls so that conveyor chain plate is separated from feeder house floor with appropriate clearance.
	Feeder house chain is too tight. Feed rolls are pulled upwards.	Adjust conveyor chain with proper tension.
	Cutter drive belt slips.	Spring tensioner pulley should press on drive belt properly and firmly.
	Central auger, compared to the anti-wrapped board, is too much forward.	Adjust auger backward towards anti-wrapped board. Refer to header operator's manual.
	Feeder house drive belt slips.	Adjust tension of drive belt.
	Feeder house chain slat is damaged.	Straighten or replace the feeder house chain slat.
	Dirt, stems, and leaves accumulate on feeder house floor.	Clean feeder house floor.
Cutter or reel cannot be lifted correctly.	Air is in the hydraulic system.	Fix leaks and bleed the reel lifting system.

YC00758,000032D-19-26NOV18

Threshing and Cleaning System

Symptom	Problem	Solution
Cylinder fails to operate in high speed.	Drive belt is loose.	Adjust drive belt.
Cylinder is clogged or overloaded.	Engine speed is not correct.	Ask professionals to repair it.
	Clearance between concave and cylinder is too small or too big.	Adjust clearance between concave and cylinder.
	Cylinder rotation speed, relative to the crop, is too low.	Increase cylinder rotation speed.
	Too much crop entering the cylinder.	Reduce driving speed.

Symptom	Problem	Solution
Cylinder suffers from reverse feeding.	Engine speed is not correct.	Ask professionals to repair it.
Grain is not threshed completely.	The crop is not suitable for threshing.	Test crop humidity before harvest.
	Cylinder rotation speed is too slow.	Increase cylinder rotation speed until a good threshing result is achieved, but do not increase the speed to a critical point where grain is crushed.
	Clearance between cylinder and concave is too big.	Reduce clearance between cylinder and concave to enhance threshing.
	Feeding to cylinder is uneven.	Check the tightness of feeder house chain and its floating state during conveying.
	Not enough materials enter the harvester. Threshing is not good.	Increase driving speed.
Grain in the grain tank is seriously crushed.	Cylinder rotation speed, relative to the crop, is too high.	Reduce cylinder rotation speed until grain is not crushed, but good threshing should still be kept. And/Or, slightly widen the threshing clearance.
	Clearance between cylinder and concave is too small.	Increase the clearance between cylinder and concave until crushing stops.
	Too much grain is in the tailings. Grain is crushed during rethreshing.	Slightly increase the sieve clearance to reduce tailings.
		Reduce fan speed.
	Not enough materials enter the harvester.	Increase driving speed.
	Damaged auger trough or bent auger flighting.	Straighten the auger trough, auger flighting, or auger shaft. Replace it as needed.
Grain is lost in the separator.	Grain is lost in the separator. Loss in cleaning chamber is zero or low.	Remove the closed cover on separation cylinder concave and change the tines (starting with 2—3 pieces per side).
		Reduce driving speed.
There is nearly no bran in tailings. Grain in grain tank is clean.	Fan speed is too high and/or the opening degree of chaffer is not enough.	Reduce fan speed and/or increase the opening degree of chaffer.
There is some bran in the tailings. Grain in grain tank is clean.	Opening degree of sieve is too small.	Increase the opening degree of sieve.

Symptom	Problem	Solution
There is a large amount of bran in the tailings. Cleanliness of grain in grain tank is low.	Opening degree of sieve is too small. Fan speed is too low.	Increase the opening degree of sieve. Increase fan speed.
There is too much debris (grated weeds) in tailings.	Opening degree of chaffer and chaffer extension is too much when there are many weeds.	Reduce the opening degree of chaffer and chaffer extension.
	Cylinder rotation speed is too high and threshing clearance is too little.	Reduce cylinder speed and/or increase the clearance between cylinder and concave.
Grain in grain tank is not clean (incompletely threshed spikes).	Opening degree of sieve is too much.	Reduce opening degree of sieve.
	Incomplete threshing occurs in cylinder.	Increase cylinder rotation speed and/or decrease clearance between cylinder and concave.
Grain in grain tank is not clean (mostly bran).	Fan speed is too low.	Increase fan speed.
Grain is lost in cleaning chamber (grain in grain tank is clean).	Chaffer is closed.	Open chaffer.
	Fan speed is incorrect.	Adjust fan speed. Check tailings, loss, and cleanliness of grain in grain tank.
	Separation cylinder drops too many materials resulting in grain loss in cleaning chamber (no grain loss in separation cylinder).	Remove some finger plates from the rear of separation cylinder concave. Replace them with blocking plates.
Serious grain loss happens (when feed rate is low or high).	Fan speed is too high.	Reduce fan speed.
	Opening degree of chaffer is not enough.	Increase the opening degree of chaffer.
Serious grain loss happens (only when feeding volume is high).	Fan speed is too low.	Increase fan speed.

YC00758,00002C8-19-16NOV18

Belt Ground Drive

Symptom	Problem	Solution
Ground drive belt too tight (in the entire speed range).	Posi-Torq™ ground drive not work.	Fully lubricate Posi-Torq™ ground drive and Repair as needed.
Difficult or fails to change speed.	Clutch release incomplete	Adjust the clutch clearance.
	Gear-shift cable is adjusted improperly.	Adjust gear-shift cable.

Posi-Torq is a trademark of Deere & Company

Symptom	Problem	Solution
	Gear-shift cable damaged, dirty, corroded, or pressed.	Check, clean, adjust, or replace gear-shift cable.
	Transmission internal problem.	See an authorized John Deere dealer.

OUYC278,0000A4F-19-30AUG18

Hydrostatic Ground Drive (Option)

Symptom	Problem	Solution
Hydrostatic lever will not go in reverse.	Bent or broken parts in control linkage.	Repair or replace as required.
Linkages binding.	Frozen or worn ball joints on the control cable.	Lubricate or replace
	Bell crank or pivots binding.	Lubricate or replace.
System overheats.	Oil cooler or radiator plugged.	Blow air through core and clean.
	Lack of change oil flow.	See an authorized 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 an authorized John Deere dealer.
	By-pass valve fails to close.	See an authorized 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.
Machine will not move forward or reverse.	Transmission out of gear.	Shift transmission.
	Low oil.	Check for leaks and correct. Fill reservoir.
	Air leak in system.	Tighten connections.
	Control linkages broken or loose.	Tighten loose linkages or replace as needed.
	Lack of charge flow or charge pressure.	See an authorized John Deere dealer.
	Plugged filter.	Change filter.
	Exceeding maximum operating pressure setting.	Shift to lower gear.

Symptom	Problem	Solution
	Drive system unable to build up pressure.	See an authorized John Deere dealer.
	Relief valve open.	See an authorized John Deere dealer.
Ground drive speed erratic.	Low oil.	Check for leaks and correct. Fill reservoir.
	Plugged filter.	Change hydrostatic charge filter.
	Exceeding maximum operating pressure setting.	Shift to lower gear.
	System unable to keep charge pressure.	See an authorized John Deere dealer.
Machine will not stop when hydrostatic drive lever is in neutral position.	Control cable out of adjustment.	Adjust cable for neutral position.
Lack of power or lost power. Machine not responding to hydrostatic drive lever.	Low oil.	Check for leaks and correct. Fill reservoir.
	Plugged filter.	Change hydrostatic charge filter.
	Lack of charge flow or charge pressure.	See an authorized John Deere dealer.
	Dirty fuel filter.	Replace fuel filter.
	Water in separator bowl.	Drain water from separator bowl.
	Drive system unable to keep or build up pressure.	See an authorized John Deere dealer.
	System detects ground drive faults.	See an authorized John Deere dealer.

OUYC278,0000A50-19-30AUG18

Rear-Wheel Drive (Option)

Symptom	Problem	Solution
Central drive generates much noise.	Small bevel gear shaft bearing clearance is too large.	Adjust the clearance.
	Gear meshing is not proper.	Adjust meshing setting.
	Differential shaft is worn or stuck.	Replace.
	Planetary gear or gasket is worn.	Replace.
	Differential bearing is worn or damaged.	Replace.

Symptom	Problem	Solution
Bearing overheats.	Bearing preloaded too much.	Readjust.
	Lubrication is not enough.	Check oil level. Refill as needed.
	Bearing or tooth surface clearance is too small.	Readjust.
Final drive generates abnormal noise.	Final drive gear meshing is not proper.	Replace.
	Bearing is worn or damaged.	Replace.
Steering is difficult.	Oil leaks from steering cylinder.	Repair or replace.
Steering fails.	Steering cylinder piston is damaged.	Replace.
Final drive oil leaks.	Rotary oil seal is damaged.	Replace.
Central drive oil leaks.	Oil seal retaining ring and lips skeleton seal are damaged.	Replace.
Small bevel gear or helical bevel gear clashes.	Small bevel gear shaft and helical bevel gear are improperly installed.	Replace.
Rear tire wears heavily.	Rear wheel rim or spoke is severely deformed.	Repair rear wheel rim or spoke.
	Toe-in is improperly adjusted.	Adjust toe-in.
	Steering knuckle is seriously worn.	Replace pin shaft.
	Tire pressure is not enough during transport.	Inflate to specification.
	Rear drive input power is not cut off during transport.	Disconnect rear drive input power before transport.

OUYC278,0000A51-19-30AUG18

Steering System

Symptom	Problem	Solution
Rear wheels swing in transport speed.	Toe-in is not adjusted properly.	Adjust toe-in.
When steering at the limit position, steering arm does not contact the stopper.	Steering cylinder is not adjusted properly.	Adjust steering cylinder.

CP00718,000413E-19-14DEC17

Braking System

Symptom	Problem	Solution

Symptom	Problem	Solution
Brake pedals are soft and weak.	Brake fluid level is low and/or there is air in the system.	Check for leakage. Add brake fluid or bleed the system.
Braking force is insufficient.	Worn parts and improperly adjusted brakes.	Ask professionals to repair it.

YC00758,000032E-19-26NOV18

Engine

Symptom	Problem	Solution
It is difficult or fails to switch on the engine.	There is no fuel.	Fill and bleed the fuel system.
	Water separator bowl is blocked.	Replace filter element.
	There is water, dirt, or air in the fuel system.	Drain water. Clear away the dirt. Refill fuel and bleed the system.
	Fuel filter element is blocked.	Replace filter element and bleed.
	Fuel brand is not correct.	Use appropriate fuel according to the conditions of use.
	Fuel pump has wire coupling problem.	Check fuel pump wires.
	Fuel injector nozzle is dirty or defective.	Ask professionals to repair it.
	Actuation circuit impedance is too high.	Clean and tighten battery as well as circuit of start relay.
	Viscosity of crankcase oil is too high.	Drain it away and refill oil of suitable viscosity and quality.
	System pressure is insufficient.	Ask professionals to repair it.
Engine vibrates too much.	Engine oil is insufficient.	Fill in engine oil of suitable viscosity.
	Fuel system has gases inside.	Bleed the fuel system.
	Fuel pump has problem.	Ask professionals to repair it.
	Injector valve is stuck.	Ask professionals to repair it.
	Engine has internal problem.	Ask professionals to repair it.
Engine operates unstably and often stops.	Coolant temperature is low.	Run the preheat engine.
	Water separator bowl is blocked.	Replace filter element.
	Fuel filter element is blocked.	Replace filter element and bleed.

Symptom	Problem	Solution
	There is water, dirt, or air in the fuel system.	Drain water. Clear away the dirt. Refill fuel and bleed the system.
	Fuel injector nozzle is dirty or defective.	Ask professionals to repair it.
	Fuel pump has problem.	Ask professionals to repair it.
	Valve push rod is bent or valve is stuck.	Ask professionals to repair it.
Power is insufficient.	Water separator bowl is blocked.	Replace filter element.
	Engine is over-heated.	Refer to "Engine is over-heated" below.
	Intake air is restricted.	Clean air filter.
	Fuel filter element is blocked.	Replace filter element and bleed the system.
	High altitude operation is required.	With increasing altitude, engine will lose part of the power. Use correct high-altitude fuel.
	Fuel injector is dirty or defective.	Ask professionals to repair it.
	Fuel pump has problem.	Ask professionals to repair it.
	Intake air leaks.	Check for leakage and repair.
Engine is over-heated.	Coolant is insufficient.	Add sufficient coolant to radiator.
		Check hose or radiator for leakage. Check if joints are loose.
	There is dirt on radiator or rotary screen.	Clean radiator and rotary screen.
	Rotary screen does not move.	Drive belt is broken.
		Drive belt is off the pulley groove.
	Fan drive belt is loose or broken.	Replace the worn drive belt.
	Scale forms in cooling system.	Drain and flush cooling system.
	Thermostat is defective.	Remove and check thermostat.
	Vacuum duct is clogged.	Clean vacuum duct.
	Fan speed is low.	Increase fan speed.

Symptom	Problem	Solution
Engine oil pressure is low.	Engine oil level is low.	Check crankcase oil level and refill oil when needed.
	Engine oil brand is incorrect.	Drain the oil away. Refill engine oil of appropriate viscosity to crankcase.
	Engine oil radiator is clogged.	Ask professionals to repair it.
Engine oil consumption is too high.	Air intake system has high resistance.	Check air filter and clean air inlet.
	Engine oil leaks.	Check pipes, sealed components, and the area near drain plug for leakage.
	Viscosity of crankcase oil is too low.	Drain the oil away. Refill engine oil of appropriate viscosity to crankcase.
	Engine oil radiator is clogged.	Clean engine oil radiator.
	Cylinder scuffs.	Ask professionals to repair it.
	Internal parts are worn.	Ask professionals to repair it.
Engine fuel consumption is too high.	Air filter is dirty or clogged.	Clean air filter.
	Fuel brand is not correct.	Use correct fuel brand according to the conditions of use.
	Fuel injector is dirty or defective.	Ask professionals to repair it.
	Engine timing fails.	Ask professionals to repair it.
Engine emits black or gray smoke.	Air filter is dirty or clogged.	Check if air filter is clogged. Clean filter element.
	Fuel brand is not correct.	Use correct fuel brand according to the conditions of use.
	Fuel injector is dirty or defective.	Ask professionals to repair it.
	Air is inside the fuel system.	Bleed the fuel system.
	Muffler is defective.	Check if muffler is damaged that generates back pressure.
	Engine timing fails.	Ask professionals to repair it.
Engine emits white smoke.	Temperature of engine block is low.	Pre-heat the engine to operating temperature.
	Fuel brand is not correct.	Fuel with low cetane number cannot start the engine. Use fuel with correct cetane number.

Symptom	Problem	Solution
	Thermostat is defective.	Remove and check thermostat.

YC00758,000033F-19-27NOV18

Electrical System

Symptom	Problem	Solution
Battery cannot be charged.	Alternator belt is loose or defective.	Adjust the tightness of the belt or replace the damaged belt.
	Wiring connections are loose or corroded.	Clean and tighten battery wiring.
	Alternator or voltage regulator functions improperly.	Ask professionals to repair it.
Starter starts slowly or cannot start.	Start relay does not work.	Check the relay and wiring.
	Battery wiring connections are loose or corroded.	Clean and tighten the loose wiring connections.
	Key switch is worn or wiring terminal is loose.	Check switch and wiring.
	Viscosity of crankcase oil is too high.	Drain the oil away. Refill engine oil of appropriate viscosity to crankcase.
	Battery is insufficiently charged.	Charge the battery.
	Starter is defective.	Repair or replace the starter.
Alternator fails to generate power.	Wiring connections are bad or wrongly connected.	Refer to schematics and wiring diagram to check and ensure that all points are properly contacted.
	Starter coil is damaged.	Replace with a new alternator.
	Diode is damaged.	Change diode.
	Brush contact is bad.	Adjust or replace it with a new carbon brush.
	Belt is too loose.	Tighten the belt.
Meters do not display any indications.	Wiring connections are bad.	Check and tighten screws.
	Sensor is damaged.	Replace sensor of same specifications.
Light bulb is not lit.	Switch is defective or wiring connections are bad.	Replace it with a new switch.

Symptom	Problem	Solution
	Fuse blows or light bulb is defective.	Replace fuse and light bulb of same specifications.

CP00718,0004141-19-14DEC17

Hydraulic System

Symptom	Problem	Solution
Slow or no hydraulics.	Oil level in oil tank is too low.	Check oil level and add hydraulic oil.
	Gear pump functions badly. Relief valve is adjusted and sealed improperly.	If oil pump is sealed badly or is excessively worn, replace it with a new pump. Otherwise, adjust or replace the relief valve in control valve.
Cutter ascends or descends slowly.	Relief valve is sealed badly or is adjusted improperly.	Replace or adjust the relief valve in control valve.
	Orifice is installed in a wrong position.	Reinstall orifice in the correct position.
	Suction pipe is badly bent and does not work smoothly.	Smoothen the pipe or replace it with a new one.
Reel fails to ascend.	Quick connector of oil pipe is not screwed tightly.	Tighten quick connector.
	Orifice of control valve is blocked.	Clear the orifice of control valve.
When engine speed is low, the helm saves power. When engine speed is high, the helm is overloaded.	Seal tape of oil return ball valve is worn.	Remove long tail fixing bolts. Use a hammer and punch to hit the steel ball of ball valve to connect it with the seal tape below.
Control valve is defective.		Refer to the hydraulic control valve user's manual.

CP00718,0004142-19-14DEC17

Air Conditioner System (Optional)

Symptom	Problem	Solution
Air conditioning cannot start, neither heating nor cooling.	Machine is without electricity or power supply is disconnected.	Charge power, switch on power.
	Air-conditioner panel assembly is damaged.	Check air-conditioner panel parts. Repair or replace damaged parts.
	Air-conditioning compressor clutch cannot engage.	Check air-conditioning compressor. If necessary, repair or replace it.
	Water valve of heating system is damaged.	Check, repair, or replace it.

Symptom	Problem	Solution
Air-conditioning cooling mode temperature is too high.	Refrigerant is inadequate.	Check and fill refrigerant.
	Temperature sensor is at wrong position.	Adjust position of temperature sensor.
	Compressor drive belt is too loose.	Tension compressor drive belt.
Air-conditioning heating mode temperature is too low.	Temperature sensor is at wrong position.	Adjust position of temperature sensor.
Clutch engagement and disengagement are frequent.	Evaporator fan does not work.	Check, repair, or replace evaporator fan.
	Air intake filter and recirculation filter have dust.	Clean with compressed air.
	Evaporator has dust.	Clean with compressed air.
	Pressure control switch malfunctions.	Replace with new control switch.
	Temperature sensor is installed at wrong position.	Adjust temperature sensor position.

CP00718,0004143-19-14DEC17

Specifications

Specifications

NOTE: Specifications and design subject to change without notice.

Machine-Wheat and Rice	
Model	4LZ-11 (C230), 4LZ-11A (C230) Full-Feeder Combine
Hourly Productivity (hm^2/h)	1.0-1.7 (rice), 1.2-2.0 (wheat)
Fuel Consumption per Hectare (kg/hm^2)	16-35 (rice), 11-30 (wheat)
Feeding Rate (kg/s)	11
Total Loss Rate (%)	≤1.2% (wheat), ≤2.8% (rice)
Threshing Loss Rate (%)	≤1.0% (wheat), ≤2.5% (rice)
Crushing Rate (%)	≤1.0% (wheat), ≤1.5% (rice)
Impurity Rate (%)	≤2.0% (wheat), ≤2.0% (rice)
Cutting Width (mm)	5405 (218R/218F)
	4610 (215R/215F)
Transport Dimension (L x W x H) (without header)	7640×3600×3960 mm
Dimension (L x W x H) (working state)	9710×5000×3960 (215R/215F)
	9710×5800×3960 (218R/218F)
Ground Clearance (mm)	470—520
MachineWeight (without header) (kg)	9870 (mechanical ground drive)
	10 260 (hydrostatic ground drive)
Machine Weight (218R attached) (kg)	11 370 (mechanical ground drive)
	11 760 (hydrostatic ground drive)
Machine Weight (218F attached) (kg)	11 470 (mechanical ground drive)
	11 860 (hydrostatic ground drive)
Machine Weight (215R attached) (kg)	11 070 (mechanical ground drive)
	11 460 (hydrostatic ground drive)
Machine Weight (215F attached) (kg)	11 190 (mechanical ground drive)
	11 580 (hydrostatic ground drive)
Mean Time Between Failures (MTBF)	≥50 h
Availability	≥98%
Dynamic Ambient Noise dB (A)	≤87
Operator Ear Noise dB (A)	≤93

NOTE: 1.Hourly productivity and fuel consumption may vary according to different ground status, crops, and other natural conditions. Parameters are for reference only!

Operating performance of combine is under conditions of standard feed rate, no weeds above cutting line, crops upright, wheat-straw ratio of 0.6-1.2, grain moisture content of 12%-20%; rice-straw ratio of 1.0-2.4, grain moisture content of 15%-28%.

Machine-Corn	
Model	4YL-6 (C230) Corn Combine
Type	Self-Propelled Corn Combine
Productivity	1—1.5 hm^2/h
Fuel Consumption	16—35 kg/hm^2
Row Number	6
Row Spacing	650 mm
Total Loss	≤5%
Broken Grain	≤5%
Unthreshed Material	≤3%
Separator Loss	≤1%
Steering Radius	8500 mm
Outline Dimension (length x width x height)	10 050× 4230 × 3960 mm (with 206C header)

Machine-Corn	
Weight (corn header included)	11 370 kg (mechanical ground drive)
	11 760 kg (hydrostatic ground drive)
Mean Time Between Failures (MTBF)	≥50 h

NOTE:

1. *Productivity and fuel consumption may vary with different fields, crop types, and other natural conditions.*
2. *Under the condition of rated work load, grain moisture within 15%—25%, lowest ear height higher than 35 cm, hanging ear less than 15%, down stalk less than 5%, row spacing 650 mm, overall row offset within ± 100 mm, single row offset within ± 50 mm, stalk height high than 1.5 m, ear maturation same, and good harvesting condition, the performance can reach the requirements above.*

Threshing System	
Cylinder Type	Tangent, Rasp Bar
Cylinder Diameter	Ø610 mm
Cylinder Width	1280 mm
Cylinder Speed	420±50—1150±50 rpm
Concave Type	Grate
Concave Area	0.66 m^2

Separator System		
Separator Type		Tine Longitudinal Dual Axial-Flow Separation Rotor
Total Separator Area		2.76 m^2
Separator Drive Gear Case Capacity	Non-Adjustable	1.6 L (left side); 1.6 L (right side)
	Adjustable	2.5 L (left side); 1.6 L (right side)
Rotor Diameter		Ø418 mm
Rod Bar Number		8

Cleaning Shoe	
Chaffer Area (extension included)	2.42 m^2
Sieve Area	1.87 m^2
Cleaning Fan Type	Plate Blade and Worm Shell
Cleaning Fan Number	1
Cleaning Fan Diameter	Ø500 mm

Grain Tank and Unloading System	
Unloading Type	Mechanical
Grain Tank Capacity	4.8 m^3
Unloading Time	≤2.5 min
Elevator Conveyor Type	Slat-Chain

Ground Drive System	
Ground Drive Type	4 x 2
Steering Type	Rear-Wheel Steering
Service Brake Type	Hydraulic
Drive Wheel Tire	28L-26 12PR R-2

Ground Drive System	
Drive Wheel Tire Pressure	170 kPa (1.7 bar)
Steering Wheel Tire (2WD)	14.9-24 8PR R-1
Steering Wheel Tire (2WD) Pressure	180 kPa (1.8 bar)
Steering Wheel Tire (4WD)	14.9-24 10PR R-2
Steering Wheel Tire (4WD) Pressure	230 kPa (2.3 bar)
Ground Clearance	470—520 mm
Ground Speed	≤20 km/h (mechanical ground drive)
	≤24 km/h (hydrostatic ground drive)
Drive Wheel Tread	2633 mm
Steering Wheel Tread	2600 mm
Wheelbase	3717 mm
Transmission Case Capacity	6.6 L
Final Drive Capacity	3.1 L (each)

Engine	
Make	John Deere Tianjin Works
Model	6068HYC54
Type	Six-Cylinder, In Line, Four-Stroke, Direct Injection
Emission Grade	Tire 3/Stage IIIA
Rated Power	148 kW
Rated Speed	2400 rpm
Max. Torque	760 N·m
Cylinder Diameter x Stroke	106.5 x 127 mm
Cylinder Number	6
Displacement	6.8 L
Compression Ratio	19.0 : 1
Thermostat Open Temperature	82°C
Fuel Consumption at Rated Power	≤235 g/kw·h
Fuel Tank Capacity	300 L
Oil Capacity	19.5 L
Cooling System Capacity	39 L

Electrical System	
System Voltage	12 V
Battery Model	6-QA-165
Starter Relay	JD1320

Hydraulic System	
Hydraulic system (initial oil filling)	25 L
Hydraulic Reservoir	20 L
Pump Model	G5-15.9/6.4
Pump Rated Pressure	25/25 MPa
Pump Rated Speed	1100—3300
Pump Displacement	15.9/6.4 mL/rev
Steering Pump	BZZ1-100
Steering Relief Pressure	12.5 MPa
Displacement	100 mL/rev
Control Valve Model	31523-CAN/31532-AAV

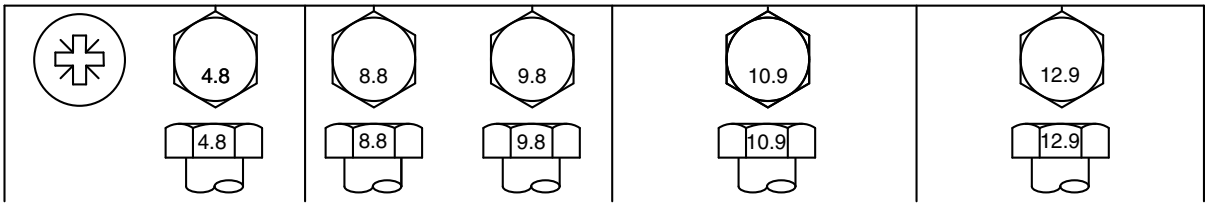
Hydraulic System	
Control Valve Relief Pressure	13.8—14.5 MPa
Flow Rate	40 L/min

Hydrostatic Ground Drive (option)	
Hydrostatic Reservoir Capacity	33 L
Pump Model	3923-425-R1
Pump Displacement	63.7 mL/rev
Overload Protection Valve Pressure	43.8 MPa
Motor Model	4633-041
Motor Displacement	75 mL/rev
Motor Relief Pressure	46.6 MPa

Cab	
Permission Passenger Amount	1 Person

CP00834,0009122-19-09SEP21

Metric Bolt and Screw Torque Values

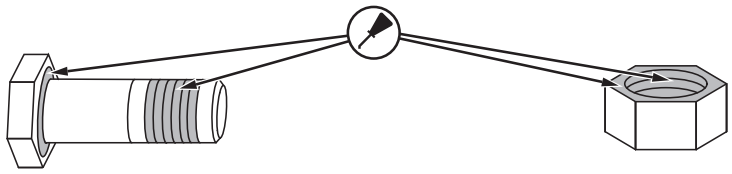


TS1742—UN—31MAY18

Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[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	3.6	31.9	3.9	34.5	6.7	59.3	7.3	64.6	9.8	86.7	10.8	95.6	11.5	102	12.6	112
									N·m	lb·ft	N·m	lb·ft	N·m	lb·ft	N·m	lb·ft
M8	8.6	76.1	9.4	83.2	16.2	143	17.6	156	23.8	17.6	25.9	19.1	27.8	20.5	30.3	22.3
			N·m	lb·ft	N·m	lb·ft	N·m	lb·ft								
M10	16.9	150	18.4	13.6	31.9	23.5	34.7	25.6	46.8	34.5	51	37.6	55	40.6	60	44.3
	N·m	lb·ft														
M12	—	—	—	—	55	40.6	61	45	81	59.7	89	65.6	95	70.1	105	77.4
M14	—	—	—	—	87	64.2	96	70.8	128	94.4	141	104	150	111	165	122
M16	—	—	—	—	135	99.6	149	110	198	146	219	162	232	171	257	190
M18	—	—	—	—	193	142	214	158	275	203	304	224	322	245	356	263
M20	—	—	—	—	272	201	301	222	387	285	428	316	453	334	501	370
M22	—	—	—	—	365	263	405	299	520	384	576	425	608	448	674	497
M24	—	—	—	—	468	345	518	382	666	491	738	544	780	575	864	637
M27	—	—	—	—	683	504	758	559	973	718	1080	797	1139	840	1263	932
M30	—	—	—	—	932	687	1029	759	1327	979	1466	1081	1553	1145	1715	1265
M33	—	—	—	—	1258	928	1398	1031	1788	1319	1986	1465	2092	1543	2324	1714
M36	—	—	—	—	1617	1193	1789	1319	2303	1699	2548	1879	2695	1988	2982	2199

Bolt or Screw Size	Class 4.8		Class 8.8 or 9.8		Class 10.9		Class 12.9	
	Hex Head[a]	Flange Head[b]	Hex Head[a]	Flange Head[b]	Hex Head[a]	Flange Head[b]	Hex Head[a]	Flange Head[b]
The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.					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 that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

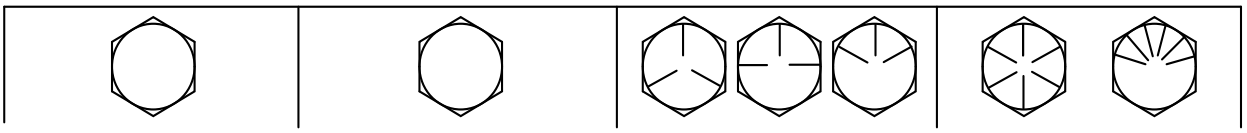


TS1741—UN—22MAY18

[a]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[b]Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ2-19-09MAY22

Unified Inch Bolt and Screw Torque Values

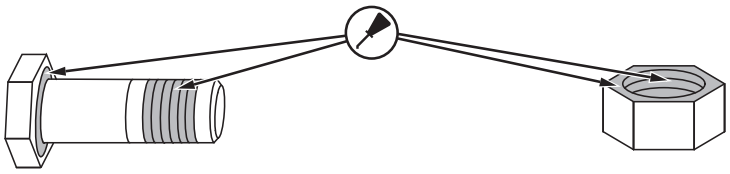


TS1671—UN—01MAY03

Bolt or Screw Size	SAE Grade 1[a]				SAE Grade 2[b]				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]	
	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	3.1	27.3	3.2	28.4	5.1	45.5	5.3	47.3	7.9	70.2	8.3	73.1	11.2	99.2	11.6	103
													N·m	lb·ft	N·m	lb·ft
5/16	6.1	54.1	6.5	57.7	10.2	90.2	10.9	96.2	15.7	139	16.8	149	22.2	16.4	23.7	17.5
									N·m	lb·ft	N·m	lb·ft				
3/8	10.5	93.6	11.5	102	17.6	156	19.2	170	27.3	20.1	29.7	21.9	38.5	28.4	41.9	30.9
					N·m	lb·ft	N·m	lb·ft								
7/16	16.7	148	18.4	163	27.8	20.5	30.6	22.6	43	31.7	47.3	34.9	60.6	44.7	66.8	49.3
	N·m	lb·ft	N·m	lb·ft												
1/2	25.9	19.1	28.2	20.8	43.1	31.8	47	34.7	66.6	49.1	72.8	53.7	94	69.3	103	75.8
9/16	36.7	27.1	40.5	29.9	61.1	45.1	67.5	49.8	94.6	69.8	104	77	134	98.5	148	109
5/8	51	37.6	55.9	41.2	85	62.7	93.1	68.7	131	96.9	144	106	186	137	203	150
3/4	89.5	66	98	72.3	149	110	164	121	230	170	252	186	325	240	357	263
7/8	144	106	157	116	144	106	157	116	370	273	405	299	522	385	572	422
1	216	159	236	174	216	159	236	174	556	410	609	449	785	579	860	634
1-1/8	305	225	335	247	305	225	335	247	685	505	751	554	1110	819	1218	898
1-1/4	427	315	469	346	427	315	469	346	957	706	1051	775	1552	1145	1703	1256
1-3/8	564	416	618	456	564	416	618	456	1264	932	1386	1022	2050	1512	2248	1658
1-1/2	743	548	815	601	743	548	815	601	1665	1228	1826	1347	2699	1991	2962	2185

Bolt or Screw Size	SAE Grade 1[a]		SAE Grade 2[b]		SAE Grade 5, 5.1 or 5.2		SAE Grade 8 or 8.2	
	Hex Head[c]	Flange Head[d]	Hex Head[c]	Flange Head[d]	Hex Head[c]	Flange Head[d]	Hex Head[c]	Flange Head[d]
The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.					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 that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.



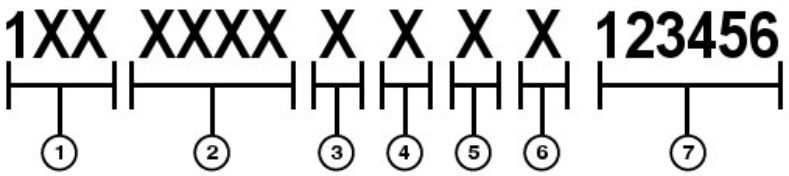
TS1741—UN—22MAY18

[a]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]Grade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.
[c]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[d]Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ1-19-09MAY22

Machine Identity and Crime Prevention Techniques

Interpreting Machine Serial Number



H105725—UN—22AUG12

1	Manufacturer Code	Harvesting Manufacturing Facilities	
		CQ - John Deere Horizontina H0 - John Deere Harvester Works JZ - John Deere Domodedovo KM - Machinenfabrik Kemper GmbH & Co. KG PY - John Deere India Pvt. Ltd	SA - SABO Maschinenfabrik GmbH YC - John Deere (Jiamusi) Agricultural Machinery Co., Ltd. YH - John Deere (Harbin) Agriculture Machinery Co., Ltd Z0 - John Deere Werke Zweibrucken
2	Machine Model Identifier		
3	Model Identifier Suffix Machine Configuration Code 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

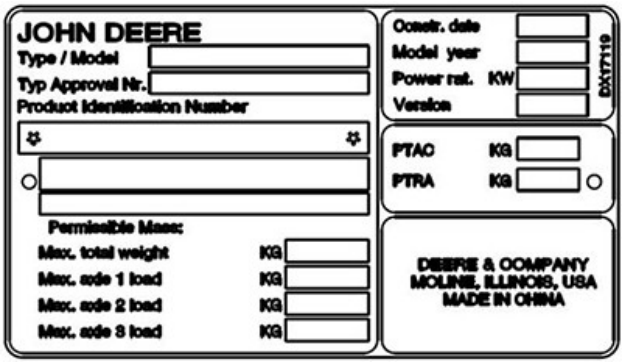
CP00596,00013C2-19-22AUG18

Identification Numbers

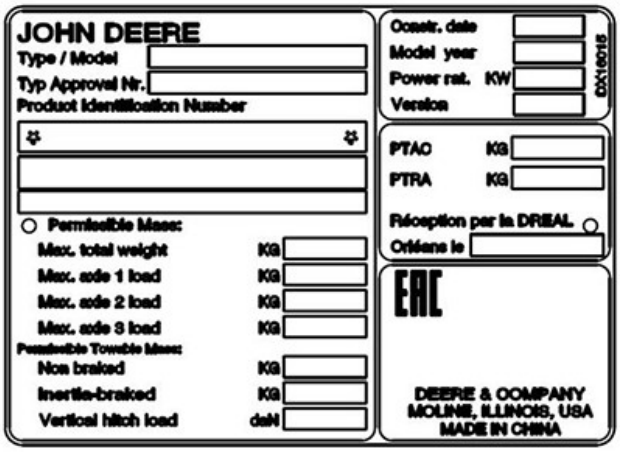
Your machine has these various identification plates. The letters and numbers stamped on these plates identify a component or assembly. ALL of these characters are needed when ordering parts or identifying a machine or component for any John Deere product support program. Also, they are needed for law enforcement to trace your machine if it is ever stolen. ACCURATELY record these characters in the spaces provided in each of the following photographs.

CP00596,00013C3-19-07AUG18

Machine Identification Plate



YC16829—UN—03FEB21



YC16830—UN—03FEB21

Record serial number:

When ordering parts, provide the product identification number (PIN) on the machine identification plate.

Machine identification plate is on the right-hand side of cab platform.

CP00834,000898E-19-05FEB21

Crime Prevention Measures

YC1679—UN—06DEC12

Properly keep the proof of ownership, prevent theft, and avoid troubles.

CP00718,0004403-19-19DEC17

Recording Identification Number

YC1680—UN—07DEC12

Record identification number:

1. Mark machine in accordance with unique numbering system.
2. Record product identification number (PIN) and the identification numbers of engine, chassis, pumps, and other components. Mark the PIN in all documents, such as insurance policy, invoices, and warranty certificate.

OUYC278,0000A54-19-30AUG18

Keep Proof of Ownership

TS1680—UN—09DEC03

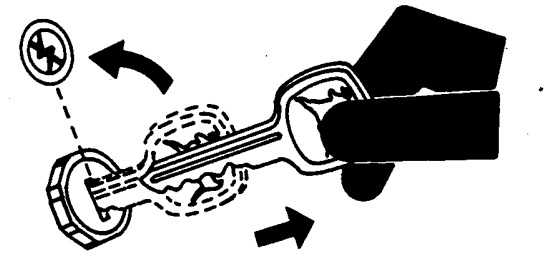
1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:

   - Mark your machine with your own numbering system

- Take color photographs from several angles of each machine

DX,SECURE1-19-18NOV03

Keep Machines Secure



TS230—UN—24MAY89

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.

DX,SECURE2-19-18NOV03

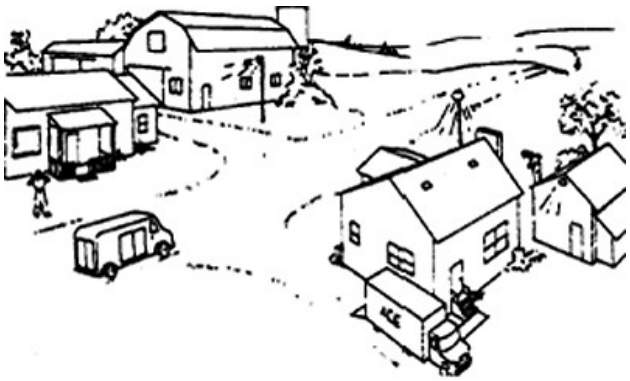
Parking Indoor

YC1682—UN—06DEC12

1. Park large equipment at the exit.
2. Lower equipment onto the ground and take out the key.
3. Remove batteries during the storage period.
4. Lock cab door, windows, and hangar door.
5. Park in a well-lit and fenced region.
6. Lower all equipment onto the ground.
7. Take out the start-up key. Remove batteries during the storage period.
8. Lock cab door, windows, and guarding devices.
9. Put the wheels in a place furthest away, so that it is difficult to mount them.

YC00758,00002CD-19-16NOV18

Avoid Damages



YC1683—UN—06DEC12

Avoid damages:

1. Install guarding devices.
2. Participate in neighborhood watch-out activities. Keep a written record of suspicious vehicles or people. Report timely to the security or police when problems are found.
3. Check if the machine identification plate is stolen. If that is so, immediately notify the security or police. Order a copy of the identification plate from the dealer.

YC00758,00002CF-19-16NOV18

Immediately Report Theft

YC1684—UN—06DEC12

Report theft immediately:

1. Immediately notify the local security or police and insurance agent.
2. Provide a complete description of the machine, all the archived identification numbers and color photos.
3. After providing the identification numbers to any local or national crime reporting centers, request to verify the identification numbers. Verify these numbers carefully to ensure accuracy.
4. Notify the local John Deere dealer of the theft and request the publication of a detailed description and identification number of the stolen machine.

YC00758,00002D0-19-16NOV18

Loss Evaluation and Adjustment Diagrams

Limit of Grain Loss

The current minimum limit of permitted grain loss is 1 ~ 2% (harvesting wheat). This value is determined by the following factor:

1. Whether harvest conditions are normal.
2. Whether harvest time is tight.
3. Whether combine operator checks the grain loss promptly.
4. Whether combine is properly adjusted.

YC00758,00002D1-19-16NOV18

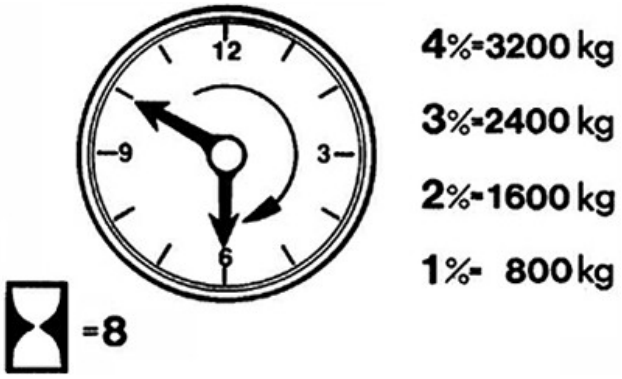
Meaning of Grain Loss

Grain loss (%)	1	2	3	4
Yield (kg/ha)	kg	kg	kg	kg
3000 4000 5000	30 40 50	60 80 100	90 120 150	120 160 200

If yield per hectare is 5000 kg, 1% grain loss equals to 50 kg loss. If adjustment is improper, combine operates at 4% loss rate, loss per hectare is 200 kg. This example shows that spending 30 minutes to adjust the combine properly can save a lot of grains.

YC00758,00002D2-19-16NOV18

First Example of Loss Calculation



YC1645—UN—26NOV12

Combine works under the condition of 4% loss. If adjustment is correct, grain loss may reduce by 1%. If yield per hectare is 5000 kg, 2 hectares are harvested per hour, 16 hectares are harvested in 8 hours.

4% 16 hectares × 200 kg = 3200 kg

3% 16 hectares × 150 kg = 2400 kg

800 kg less grain is lost.

YC00758,00002D3-19-16NOV18

Second Example of Loss Calculation

In the previous example, grain loss is reduced to 3% but the loss rate is still high. By reducing driving speed, the loss can decrease to 1.5%. After reducing speed, 1.8 hectares are harvested per hour, 14.4 hectares can be harvested in 8 hours.

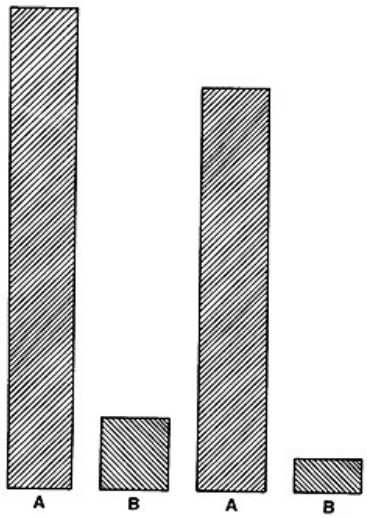
3% 16 hectares × 150 kg = 2400 kg

1.5% 14.4 hectares × 75 kg = 1080 kg

1320 kg grain loss can be reduced.

YC00758,00002D4-19-16NOV18

Example Illustration



YC1646—UN—20FEB12

A—Area covered
B—Loss percentage

8 hours 16 hectares 4% loss = 3200 kg

8 hours 14.4 hectares 1.5% loss = 1080 kg

Reduced loss = 2120 kg

Reducing grain loss of 2120 kg equals to the cost of harvesting 10 hectares.

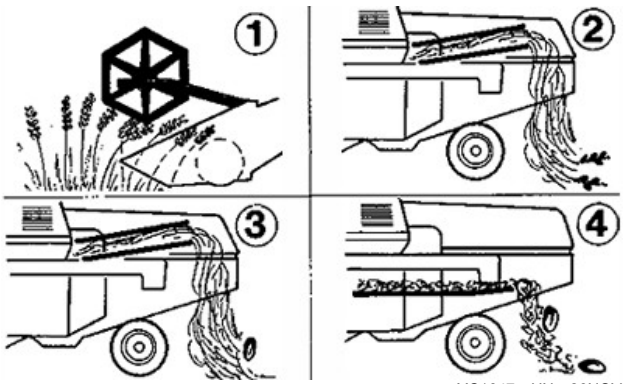
Reducing driving speed and loss appropriately can save more grains. If the operator or other personnel can check grain loss three times a day, loss can be reduced to 1 ~ 1.5%. Checking only takes half an hour.

Reducing loss by 1% means (if works 8 hours daily) saving 800 ~ 1000 kg of grains per day.

If a designated person is deployed to check loss, the harvesting result of combine is better (especially when several combines are working in the field at the same time).

YC00758,00002D5-19-16NOV18

Confirming Grain Loss



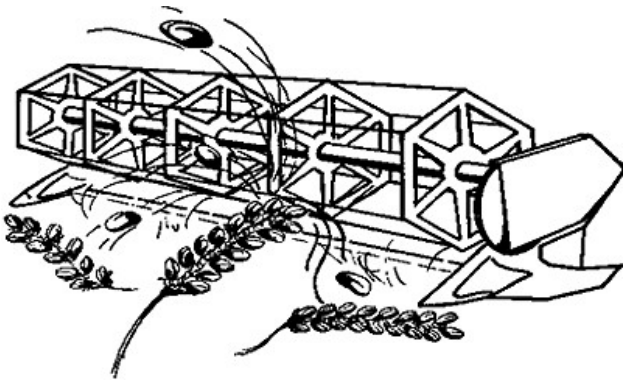
YC1647—UN—26NOV12

When combine is adjusted to its optimal, grain loss still occurs. This loss can be classified in four aspects, as follows:

1. Head loss
2. Threshing loss
3. Separation loss
4. Cleaning loss

YC00758,00002D6-19-16NOV18

Header Loss



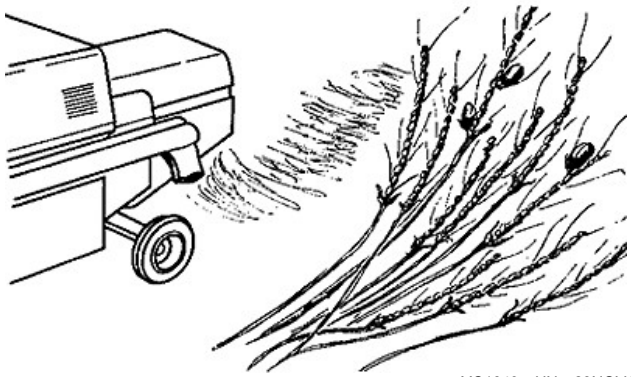
YC1648—UN—23NOV12

Header loss: It includes fallen spikes and shattered seeds blown by the reel.

The method of confirming header loss is to compare the number of grains (deduct naturally fallen grain) before and after cutting in a certain area.

YC00758,00002D7-19-16NOV18

Threshing Loss

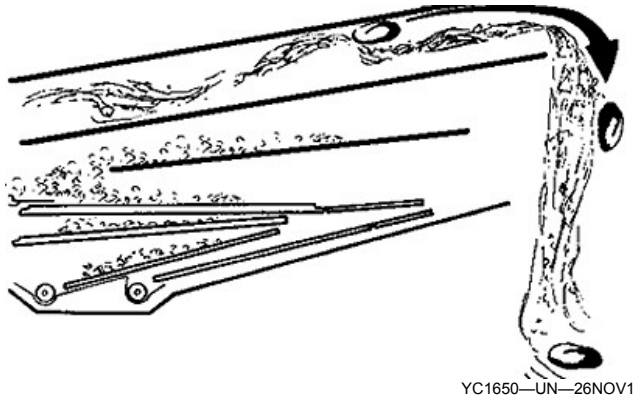


YC1649—UN—23NOV12

Threshing loss refers to non-threshed grains on spikes behind the combine. To calculate threshing loss, count the number of grains remaining on 10 threshed spikes. If three grains are found, that is equivalent to 1% loss (assuming an average of 30 grains on a spike).

YC00758,00002D8-19-16NOV18

Separation Loss



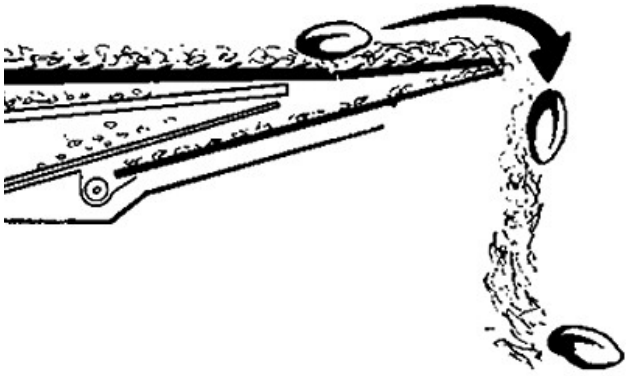
YC1650—UN—26NOV12

Separation loss is the grain mingled in stems. Insufficient threshing and excessive tailings may increase separation loss.

If after adjusting the cylinder rotation speed and threshing clearance, separation loss still does not drop, then reduce the driving speed.

YC00758,00002D9-19-16NOV18

Cleaning Loss

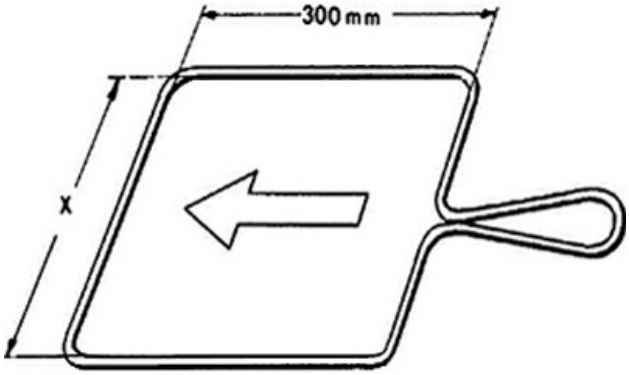


YC1651—UN—23NOV12

Cleaning loss is caused by improper adjustment of chaffer, sieves, and fan, so that grains fall onto the ground after passing through the machine. If adjustment is done correctly, cleaning loss decreases.

YC00758,00002DA-19-16NOV18

Use Wire Frames to Evaluate Grain Loss: (Example A)



YC1652—UN—09DEC12

Use wire frames (self-made) to measure according to the method below:

Place wire frames on the ground separately in the front of the header and behind the header.

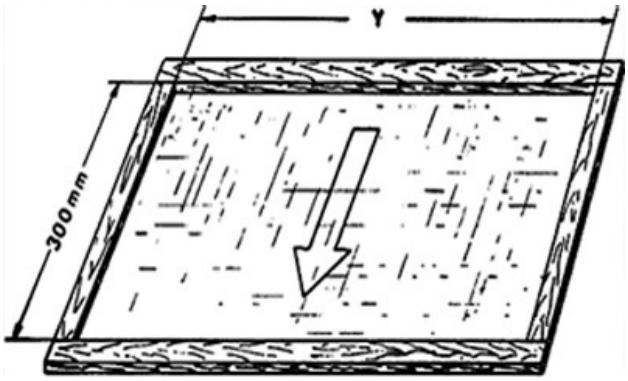
1. Count the number of grains in front of the header.
2. Count the number of grains behind the combine (within the width of separator).

When calculating loss, deduct the counted number at the front from the counted number at the rear. Multiply this value by 5. And, that is total loss.

X = 250 mm

YC00758,00002DB-19-16NOV18

Use Canvas Frame to Evaluate Grain Loss: (Example B)



YC1653—UN—09DEC12

Using canvas frame to measure is more accurate, but it requires two people to do it.

Place canvas frame below combine (within separation width). After machine has passed, remove stems and chaff from frame. Then count the number of grains in the frame.

Y—Greater than the width of combine separation device

YC00758,00002DC-19-16NOV18

Operating Performance of Full-Feeder Crop Combine

Operating standard: The People's Republic of China Machinery Industry Standard JB/T 5117-2006

Under the conditions of standard feed rate, no weed above the cutting line, crops upright, wheat-straw ratio of 0.6—1.2, grain moisture content of 12%—20%, rice-straw ratio of 1.0—2.4, grain moisture content of 15%—28%, its performance meets the following requirements.

Items	Wheat	Rice
Model	Self-propelled	Self-propelled
Tailing content rate %	≤2.0	≤2.0
Total loss rate %	≤1.2	≤3.0
Crushing rate %	≤1.0	≤1.5

Note: Recommended test water content of the wheat stem is 10%—25%, that of rice is 20%—60%.

YC00758,00002DD-19-16NOV18

Grain Loss

Grain loss is usually calculated based on loss rate. That refers to the ratio between lost grains (quality and number of grains, etc.) to receivable grain (quality and number of grains, etc.).

Use the following table to easily evaluate loss rate from the number of lost grain.

The table below shows the relationship between yield and number of lost grains (each area is 10 cm x 20 cm (similar to the size of a hand) within machine body width):

Table 1: Rice harvest: mount a cutter of size 4.57 m (15 ft) or 5.49 m (18 ft), 1 gram equals to 35 grains, loss rate ≤ 3.0%

Loss rate (%)	Yield per acre (kg)															
	300		350		400		450		500		550		600		650	
	Cutter		Cutter		Cutter		Cutter		Cutter		Cutter		Cutter		Cutter	
	15	18	15	18	15	18	15	18	15	18	15	18	15	18	15	18
	Number of grains (piece)															
0.50%	6	7	6	8	7	9	8	10	9	11	10	12	11	13	12	14
1.00%	11	13	13	15	15	18	17	20	18	22	20	24	22	27	24	29
1.50%	17	20	19	23	22	27	25	30	28	33	30	37	33	40	36	43
2.00%	22	27	26	31	30	35	33	40	37	44	41	49	44	53	48	58
2.50%	28	33	32	39	37	44	42	50	46	55	51	61	55	66	60	72
3.00%	33	40	39	46	44	53	50	60	55	66	61	73	66	80	72	86

Table 2: Wheat harvest: mount a cutter of size 4.57 m (15 ft) or 5.49 m (18 ft), 1 gram equals to 27 grains, loss rate ≤ 1.5%

Loss rate (%)	Yield per acre (kg)															
	250		300		350		400		450		500		550		600	
	Cutter		Cutter		Cutter		Cutter		Cutter		Cutter		Cutter		Cutter	
	15	18	15	18	15	18	15	18	15	18	15	18	15	18	15	18
	Number of grains (piece)															
0.50%	4	4	4	5	5	6	6	7	6	8	7	9	8	9	9	10
1.00%	7	9	9	10	10	12	11	14	13	15	14	17	16	19	17	21
1.50%	11	13	13	15	15	18	17	21	19	23	21	26	23	28	26	31

NOTE: When calculating, the loss within body width should be converted to the loss for the entire cutting width.

NOTE: The data in this table is calculated under normal conditions, according to the People's Republic of China Machinery Industry Standard, for users' reference. Users may refer to the Machinery Industry Standard on page 75-4.

YC00758,00002ED-19-21NOV18

Feeding Volume

Feeding volume: refers to the total mass of all materials (crops, weeds, etc.) fed into the threshing body per unit time. It is closely related to cutting width, operating speed, yield per acre and ratio of grain/straw (ratio between mass of grain and mass of stems, chaff, and bran of harvested materials).

Feeding volume is an important indicator to measure the machine performance.

YC00758,00002EF-19-21NOV18

Evaluation of Feeding Volume

Feeding volume can be calculated through testing the basic data of machine and field.

Feeding volume (kg/s) = yield per acre (kg) × speed (m/s) × cutting width × (1 + grain-straw ratio) / 667

It can also be evaluated by using the table below:

Table 1: Combine harvester C230 uses 4.57 m (15 ft) cutter to harvest crops. Grain/straw ratio is 1:1

Speed (m/s)	Yield per acre (kg)								
	250	300	350	400	450	500	550	600	650
	Feeding volume (kg/s)								
Gear I low speed: 0.292	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6
Gear I medium speed: 0.486	1.7	2.0	2.3	2.7	3.0	3.3	3.7	4.0	4.3
Gear I high speed: 0.681	2.3	2.8	3.3	3.7	4.2	4.7	5.1	5.6	6.1

Gear II medium-low speed: 0.778	2.7	3.2	3.7	4.3	4.8	5.3	5.9	6.4	6.9
Gear II medium speed: 0.972	3.3	4.0	4.7	5.3	6.0	6.7	7.3	8.0	8.7
Gear II high speed: 1.361	4.7	5.6	6.5	7.5	8.4	9.3	10.3	**11.2**	**12.1**
Gear III medium-low speed: 1.566	5.4	6.4	7.5	8.6	9.7	10.7	**11.8**	**12.9**	**13.9**
Gear III medium speed: 1.951	6.7	8.0	9.4	10.7	**12.0**	**13.4**	**14.7**	**16.0**	**17.4**
Gear III medium-high speed: 2.337	8.0	9.6	**11.2**	**12.8**	**14.4**	**16.0**	**17.6**	**19.2**	**20.8**

Table 2: Combine harvester C230 uses 4.57 m (15 ft) cutter to harvest crops. Grain/straw ratio is 1.25:1

Speed (m/s)	Yield per acre (kg)								
	250	300	350	400	450	500	550	600	650
	Feeding volume (kg/s)								
Gear I low speed: 0.292	1.1	1.4	1.6	1.8	2.0	2.3	2.5	2.7	2.9
Gear I medium speed: 0.486	1.9	2.2	2.6	3.0	3.4	3.7	4.1	4.5	4.9
Gear I high speed: 0.681	2.6	3.1	3.7	4.2	4.7	5.2	5.8	6.3	6.8
Gear II medium-low speed: 0.778	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2	7.8
Gear II medium speed: 0.972	3.7	4.5	5.2	6.0	6.7	7.5	8.2	9.0	9.7
Gear II high speed: 1.361	5.2	6.3	7.3	8.4	9.4	10.5	**11.5**	**12.6**	**13.6**
Gear III medium-low speed: 1.566	6.0	7.2	8.4	9.7	10.9	**12.1**	**13.3**	**14.5**	**15.7**
Gear III medium speed: 1.951	7.5	9.0	10.5	**12.0**	**13.5**	**15.0**	**16.5**	**18.0**	**19.5**
Gear III medium-high speed: 2.337	9.0	10.8	**12.6**	**14.4**	**16.2**	**18.0**	**19.8**	**21.6**	**23.4**

Table 3: Combine harvester C230 uses 4.57 m (15 ft) cutter to harvest crops. Grain/straw ratio is 1.5:1

Speed (m/s)	Yield per acre (kg)								
	250	300	350	400	450	500	550	600	650
	Feeding volume (kg/s)								
Gear I low speed: 0.292	1.3	1.5	1.8	2.0	2.3	2.5	2.8	3.0	3.3
Gear I medium speed: 0.486	2.1	2.5	2.9	3.3	3.7	4.2	4.6	5.0	5.4
Gear I high speed: 0.681	2.9	3.5	4.1	4.7	5.2	5.8	6.4	7.0	7.6
Gear II medium-low speed: 0.778	3.3	4.0	4.7	5.3	6.0	6.7	7.3	8.0	8.7
Gear II medium speed: 0.972	4.2	5.0	5.8	6.7	7.5	8.3	9.2	10.0	10.8

Gear II high speed: 1.361	5.8	7.0	8.2	9.3	10.5	**11.7**	**12.8**	**14.0**	**15.2**
Gear III medium-low speed: 1.566	6.7	8.0	9.4	10.7	**12.1**	**13.4**	**14.8**	**16.1**	**17.4**
Gear III medium speed: 1.951	8.4	10.0	**11.7**	**13.4**	**15.0**	**16.7**	**18.4**	**20.1**	**21.7**
Gear III medium-high speed: 2.337	10.0	**12.0**	**14.0**	**16.0**	**18.0**	**20.0**	**22.0**	**24.0**	**26.0**

Table 4: Combine harvester C230 uses 5.49 m (18 ft) cutter to harvest crops. Grain/straw ratio is 1:1

Speed (m/s)	Yield per acre (kg)								
	250	300	350	400	450	500	550	600	650
	Feeding volume (kg/s)								
Gear I low speed: 0.292	1.2	1.4	1.7	1.9	2.2	2.4	2.6	2.9	3.1
Gear I medium speed: 0.486	2.0	2.4	2.8	3.2	3.6	4.0	4.4	4.8	5.2
Gear I high speed: 0.681	2.8	3.4	3.9	4.5	5.0	5.6	6.2	6.7	7.3
Gear II medium-low speed: 0.778	2.1	2.6	3.0	3.4	3.8	4.3	4.7	5.1	5.5
Gear II medium speed: 0.972	4.0	4.8	5.6	6.4	7.2	8.0	8.8	9.6	10.4
Gear II high speed: 1.361	5.6	6.7	7.8	9.0	10.1	**11.2**	**12.3**	**13.4**	**14.6**
Gear III medium-low speed: 1.566	6.4	7.7	9.0	10.3	**11.6**	**12.9**	**14.2**	**15.5**	**16.8**
Gear III medium speed: 1.951	8.0	9.6	**11.2**	**12.8**	**14.5**	**16.1**	**17.7**	**19.3**	**20.9**
Gear III medium-high speed: 2.337	9.6	**11.5**	**13.5**	**15.4**	**17.3**	**19.2**	**21.2**	**23.1**	**25.0**

Table 5: Combine harvester C230 uses 5.49 m (18 ft) cutter to harvest crops. Grain/straw ratio is 1.25:1

Speed (m/s)	Yield per acre (kg)								
	250	300	350	400	450	500	550	600	650
	Feeding volume (kg/s)								
Gear I low speed: 0.292	1.4	1.6	1.9	2.2	2.4	2.7	3.0	3.2	3.5
Gear I medium speed: 0.486	2.3	2.7	3.2	3.6	4.1	4.5	5.0	5.4	5.9
Gear I high speed: 0.681	3.2	3.8	4.4	5.0	5.7	6.3	6.9	7.6	8.2
Gear II medium-low speed: 0.778	3.6	4.3	5.0	5.8	6.5	7.2	7.9	8.6	9.4
Gear II medium speed: 0.972	4.5	5.4	6.3	7.2	8.1	9.0	9.9	10.8	**11.7**
Gear II high speed: 1.361	6.3	7.6	8.8	10.1	**11.3**	**12.6**	**13.9**	**15.1**	**16.4**
Gear III medium-low speed: 1.566	7.3	8.7	10.2	**11.6**	**13.1**	**14.5**	**16.0**	**17.4**	**18.9**
Gear III medium speed: 1.951	9.0	10.8	**12.6**	**14.5**	**16.3**	**18.1**	**19.9**	**21.7**	**23.5**
Gear III medium-high speed: 2.337	10.8	**13.0**	**15.1**	**17.3**	**19.5**	**21.6**	**23.8**	**26.0**	**28.1**

Table 6: Combine harvester C230 uses 5.49 m (18 ft) cutter to harvest crops. Grain/straw ratio is 1.5:1

Speed (m/s)	Yield per acre (kg)								
	250	300	350	400	450	500	550	600	650
	Feeding volume (kg/s)								
Gear I low speed: 0.292	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	3.9
Gear I medium speed: 0.486	2.4	2.8	3.3	3.8	4.3	4.7	5.2	5.7	6.1
Gear I high speed: 0.681	3.5	4.2	4.9	5.6	6.3	7.0	7.7	8.4	9.1
Gear II medium-low speed: 0.778	4.0	4.8	5.6	6.4	7.2	8.0	8.8	9.6	10.4
Gear II medium speed: 0.972	5.0	6.0	7.0	8.0	9.0	10.0	**11.0**	**12.0**	**13.0**
Gear II high speed: 1.361	7.0	8.4	9.8	**11.2**	**12.6**	**14.0**	**15.4**	**16.8**	**18.2**
Gear III medium-low speed: 1.566	8.1	9.7	**11.3**	**12.9**	**14.5**	**16.1**	**17.7**	**19.3**	**20.9**
Gear III medium speed: 1.951	10.0	**12.0**	**14.1**	**16.1**	**18.1**	**20.1**	**22.1**	**24.1**	**26.1**
Gear III medium-high speed: 2.337	**12.0**	**14.4**	**16.8**	**19.2**	**21.6**	**24.0**	**26.4**	**28.9**	**31.3**

NOTE: In Tables 1 to 6, information in bold are examples under the operating conditions of rice harvest and rated feeding volume (11 kg/s) being exceeded

NOTE: Check values in tables. Example 1: Under conditions of 18 ft cutter, gear II medium speed of 0.972 m/s, yield 400 kg per acre, grain/straw ratio 1:1, feeding volume now is: 6.4 kg/s.

YC00758,00002FA-19-21NOV18

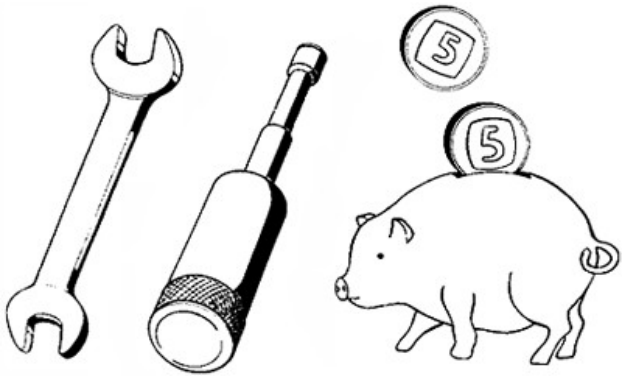
Prevent Grain Loss

Working process of combine is complicated. Factors leading to grain loss are varied. To get the best value of money, therefore, you should carefully adjust the machine according to combine diagrams and actual situations.

IMPORTANT: Separation loss of combine can be resolved by reducing the driving speed, but do not neglect adjusting other aspects to reduce loss.

Follow requirements below to reduce separation loss:

- Keep separation cylinder grid panel free of obstruction.
- Reduce weeds (lift the header).
- Avoid excessive threshing (reduce cylinder rotation speed).
- Avoid overloading the separation cylinder (reduce driving speed).



YC1654—UN—26NOV12

Follow requirements below to reduce cleaning loss:

- If broken stems accumulate on the sieve surface, increase fan speed.
- When grain is blown out of the sieve chamber, reduce fan speed.
- Use wind deflector to adjust the direction of air flow. If air is not blowing on the sieves, broken stems accumulate on sieves.
- Increase the opening degree of sieve. Lift or lower the chaffer extension (when needed, use finger-shaped chaffer according to harvest conditions).
- Keep sieve surface clean.
- Remove rear baffle.
- Reduce chaff on the sieve surface and avoid excessive threshing. When sieves are overloaded,

reduce grain on them (by reducing driving speed of combine).

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Threshing Adjustment of Combine

YC1661—UN—27NOV12

NOTE: Combine adjustment diagrams are only for the general operating conditions. Carry out different adjustments for varied crops or operating conditions.

Opening size (X) of chaffer and sieves are measured by the method in the right diagram.

NOTE: When harvesting different crops, use dedicated harvest components. Data above are recommended values. Users should base on the ground conditions, crop varieties, and other natural conditions to adjust the combine appropriately.

YC00758,0000330-19-26NOV18

Recommended Adjustment Diagrams

YC10887—UN—08DEC16

Rice

Cylinder speed (rpm) 500—950

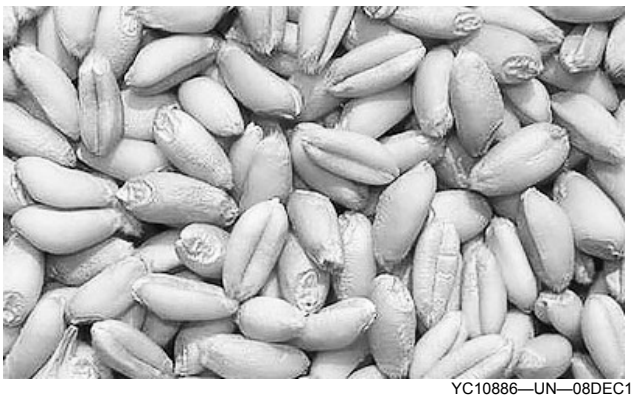
Threshing clearance:

- Inlet 14 mm
- Outlet 10 mm

Chaffer adjustment 16—19 mm

Sieve adjustment 6.5—9.5 mm

Fan speed (rpm) 800—1100



YC10886—UN—08DEC16

Wheat

Cylinder speed (rpm) 850—1100

Threshing clearance:

- Early stage inlet 7—8 mm
- Early stage outlet 4—5 mm
- Mid-late stage inlet 9—12 mm
- Mid-late stage outlet 7—10 mm

Chaffer adjustment 14—16 mm

Sieve adjustment 10—13 mm

Fan speed (r/m) 850—1100

NOTE: 1. When harvesting different crops, use dedicated harvest components. 2. Data above are recommended values. Users should base on the ground conditions, crop varieties, and other natural conditions to adjust the combine appropriately.

YC10879—UN—08DEC16

Corn

Corn

Threshing speed: 145—435 rpm

Threshing clearance:

- Inlet: 30 mm
- Outlet: 19 mm

Sieve clearance: 11—16 mm

Cleaning fan speed: 800—Max.

NOTE: Chaffer is performed sheet with square openings and cannot be adjusted.

YC00758,00002F1-19-21NOV18

Wearing Parts and Accessories

Wearing Parts

IMPORTANT: Recommend to use John Deere parts for service and maintenance. Otherwise, machine may be damaged or machine service life may be shortened.

Serial Number	Part Number	Name
1	AYC20547	Fuel filter
2	AH148879	Air filter
3	AYC18013	Hydraulic air filter
4	AYC12492	Battery
5	YC20022	Antifreeze (L)JDM H24
6	YC25104	Belt HM3854
7	YC12444	V-belt HA2321
8	YC11368	V-belt 2HB4560
9	YC10136	V-belt 60 MM2660.5
10	Z46365	Belt HJ1280
11	H165708	Belt 2HB2120
12	AYC10133	V-belt 2 MOD-D3601
13	YC10135	V-belt 2 HB2385
14	AYC10132	Belt HCC2700
15	YC10134	V-belt HC2422
16	YC10137	V-belt 2 HC5231
17	YC10138	V-belt 2HB3813
18	YC10139	V-belt 4HC3816
19	AYC19644	Tapered roller bearing
20	AYC19643	Tapered roller bearing
21	AYC19647	Tapered roller bearing
22	JD9913	Needle bearing
23	AYC22839	Bearing 6205-2Z GB/T276-1994
24	AYC19565	Release bearing 55×90×21
25	AYC19646	Tapered roller bearing
26	AYC19645	Tapered roller bearing
27	JD10087	Bearing
28	AYC23122	Tapered roller bearing
29	AYC23123	Tapered roller bearing
30	AYC23124	Tapered roller bearing
31	AYC23125	Tapered roller bearing
32	YC20261	Tapered roller bearing outer ring 30210(7210) GB/T 297-1994
33	AYC18046	Tapered roller bearing inner ring 30210(7210) GB/T 297-1994
34	AYC18076	Thrust ball bearing 51110 (8110) GB/T 301-1995
35	JD10052	Bearing
36	AYC18069	Tapered roller bearing inner ring 30204(7204EA) GB/T 297-1994
37	AYC18071	Tapered roller bearing inner ring 30206(7206EA) GB/T 297-1994
38	YC20264	Tapered roller bearing outer ring 30204(7204EB) GB/T 297-1994
39	YC20266	Tapered roller bearing outer ring 30206(7206EB) GB/T 297-1994
40	AYC22650	Tapered roller bearing
41	AYC22648	Tapered roller bearing
42	AYC22649	Tapered roller bearing
43	AYC18039	Deep groove ball bearing 6204-2RS1 (180204) GB/T 276-1994
44	AYC18067	Bearing 688910K
45	AYC18032	Deep groove ball bearing 6206-RS1 (160206) GB/T 276-1994
46	AYC18042	Deep groove ball bearing 6303-2RS1 (180303) GB/T 276-1994

Serial Number	Part Number	Name
47	AYC18038	Deep groove ball bearing 6203-2RS1 (180203) GB/T 276-1994
48	AYC15089	Tapered roller bearing inner ring 32014X(2007114A) GB/T 297-1994
49	YC20260	Tapered roller bearing outer ring 32014X(2007114B) GB/T 297-1994
50	YC20346	Tapered roller bearing outer ring 32207(7507EB) GB/T 297-1994
51	AYC18073	Tapered roller bearing inner ring 32207(7507EA) GB/T 297-1994
52	AYC10538	Chain T=38 L=107
53	AYC10539	Chain T=38 L=107
54	AYC10540	Chain T=19.05 L=13
55	AYC12156	Chain T=15.875 L=56
56	AYC12428	Chain T=38 L=157
57	AYC12452	Chain T=38 L=176
58	AYC12647	Chain T=15.875 L=123
59	AYC16508	Chain T=19.05 L=53
60	AYC17256	Chain T=15.875 L=49
61	AYC10635	Seal ring Φ110XΦ90X8
62	AYC19566	Seal ring
63	AYC22505	Seal ring
64	L53825	O-shaped ring
65	YC10667	Seal ring
66	YC12197	O-shaped ring 20x1.9
67	YC12798	O-shaped seal ring 44x3.5 (GB1235-76)
68	YC12807	O-shaped seal ring 20x2.4 (GB1256-76)
69	YC13006	O-shaped seal ring 24x2.4 GB1235-76
70	YC13007	O-shaped seal ring 16x2.4 GB1235-76
71	YC16678	O-shaped seal ring
72	YC17302	O-shaped ring
73	YC18766	O-shaped ring Φ22*2.4 GB1235-76
74	YC20339	O-shaped ring 50x3.55 GB/T 3452.1-2005
75	YC23133	O-shaped ring
76	YC23139	O-shaped ring
77	Z34562	O-shaped ring
78	Z42027	O-shaped ring 53x45x4
79	Z42028	O-shaped ring 68x60x4
80	Z42030	O-shaped ring 88x80x4
81	AYC16123	Start relay NJ3-12
82	AYC18907	Reversing relay 12 V
83	AL62707	Power switch
84	AYC10033	Magnetic proximity switch
85	AYC10160	Oil circuit switch
86	AYC10585	Switch JK260
87	AYC10654	Switch (JK107)
88	AYC10697	Main power switch JK861
89	AYC10735	Magnetic alarm switchgear
90	AYC10866	Turn signal switch JK812-1
91	AYC13693	Handbrake light switch JK931
92	AYC14347	Hydraulic brake switch JK613B
93	AYC16124	Neutral switch KN1-223
94	AYC19951	Power conversion switch
95	AZ22892	Filter oil pressure switch
96	AZ34292	Magnetic switch
97	DQ26315	Air filter vacuum alarm switch
98	AYC18051	Bearing

Serial Number	Part Number	Name
99	AYC18052	Bearing
100	AYC18053	Bearing
101	AYC18054	Bearing
102	AYC18055	Bearing
103	AYC18056	Bearing
104	AYC18057	Bearing
105	AYC18058	Bearing
106	AYC18059	Bearing
107	AYC18088	Eccentric Locking Collar
108	AYC18089	Eccentric Locking Collar
109	AYC18090	Eccentric Locking Collar
110	AYC15088	Eccentric Locking Collar
111	AYC15086	Eccentric Locking Collar
112	AYC18084	Bearing
113	AYC12572	Chain Link T=19.05
114	AYC12573	Chain Link T=19.05
115	AYC12366	Chain Link T=38
116	AYC12367	Chain Link T=38
117	AYC14422	Chain T=15.875, L=5
118	ADX11664	Push Pull Cable
119	AZ31666	Elbow Fitting
120	Z32190	V-Belt
121	H145364	Paddle
122	H150142	Finger
123	P47232	Pressed Flanged Housing
124	DX12830	V-Belt
125	YC13594	Bushing
126	Z34740	Pressed Flanged Housing
127	Z38395	Pressed Flanged Housing
128	YC17049	Paddle

YC00758,00002F4-19-21NOV18

Accessories

IMPORTANT: It is recommended to use original parts for repair and maintenance. Otherwise, machine may be damaged or machine service life may be shortened.

Serial number	Part number	Name
1	3061YC	212P-12 belt type pickup unit
2	BYC10040	HT-10 cutter transporter
3	BYC10005	Wheat threshing device
4	BYC10009	Rice threshing device
5	BYC10029	14.9-24 steering wheel
6	BYC10034	28L-26 driving wheel

YC00758,00002E4-19-20NOV18

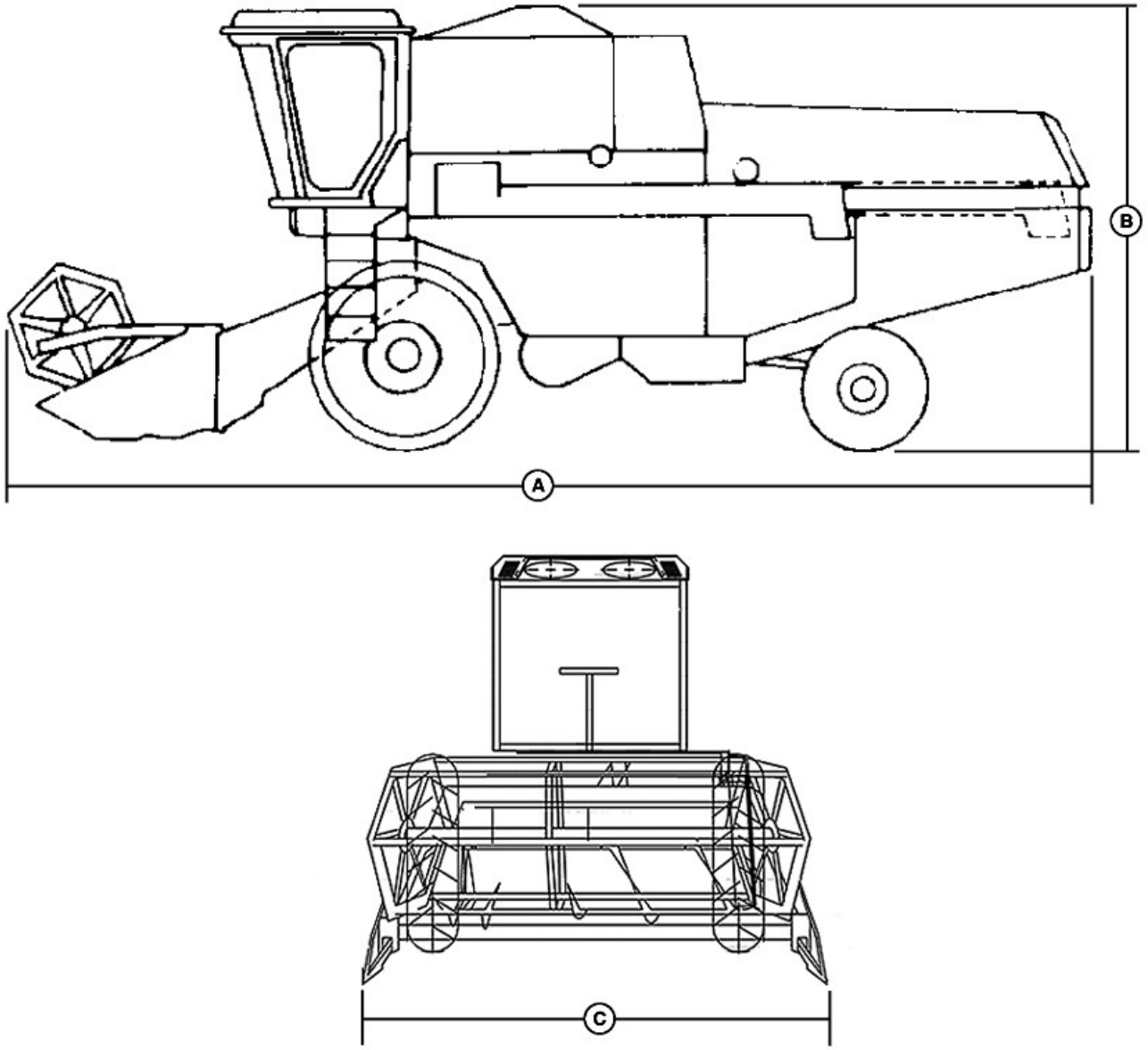
Corn Kernel Accessories

When harvesting corn kernels, change to following accessories. For changing procedures, read installation instructions: Installing Corn Harvest Components (INSYC33559).

Machine Model	Corn Harvest Component No.	Information	Remarks
C230	BDX10006	Corn Comb Separation Concave	*NOTE:* *1. Choose either cylinder decelerator or cylinder chain drive;* *2. 600 r/m roller driveshaft only applies to cylinder chain drive.*
	BYC10044	Corn Functional Components(non-adjustable speed gear case)	
	BDX10039	Corn Functional Components (adjustable speed gear case)	
	BYC10037	Cylinder Decelerator	
	BYC10045	Cylinder Chain Drive	
	BYC10049	Cylinder Closure Plate	
	BYC10050	Stone Trap Cover	
	BYC10052	Hex Shaft	
	BYC10081	Feeder House Chain Drive	
	BDX10008	600 r/m Roller Drive Wheel	
	BDX10016	Square Hole Sieve (recommended)	
	BDX10043	Long Tooth Sieve	

YC00758,00002F5-19-21NOV18

Dimension Diagrams

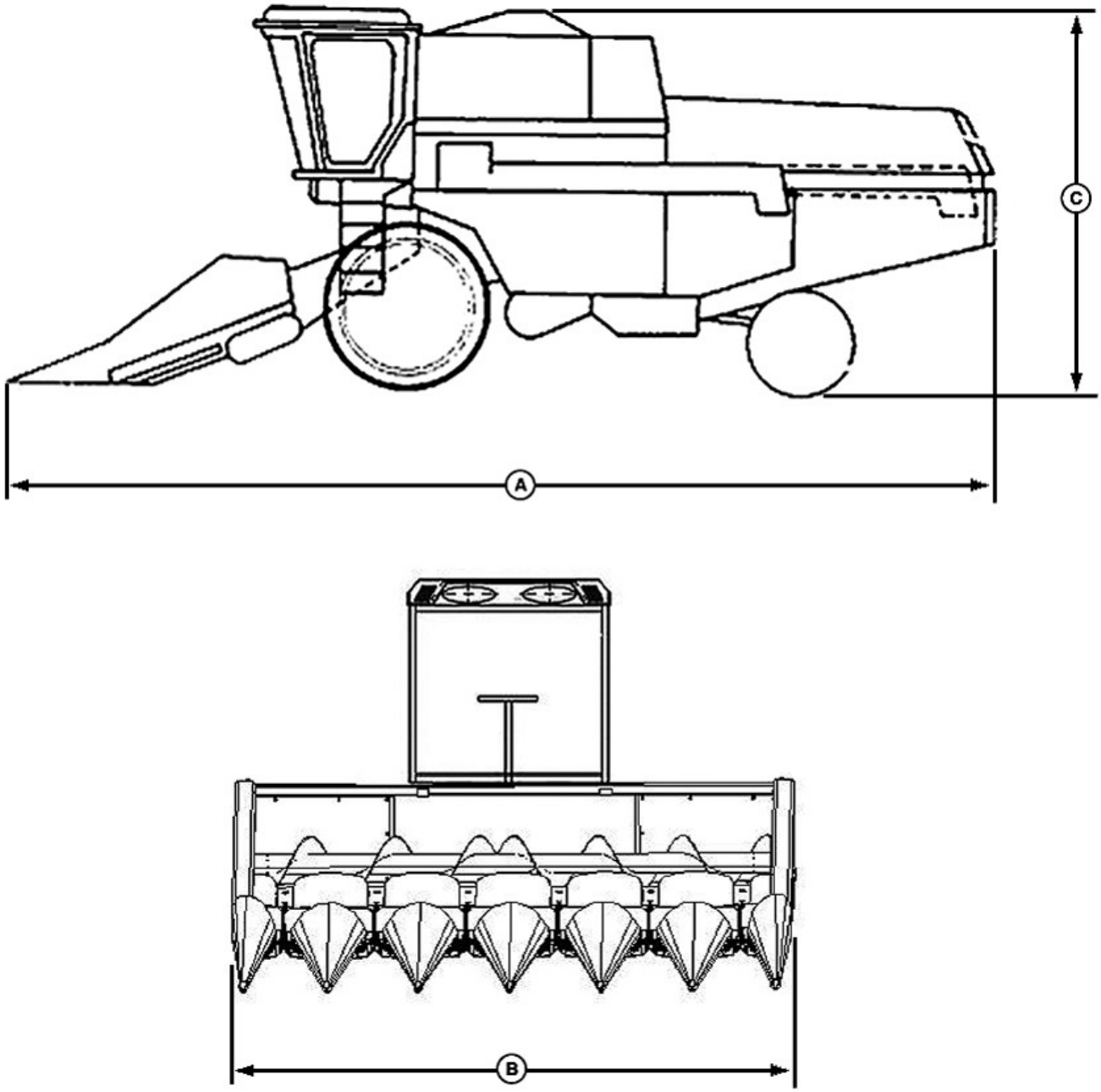


YC7890—UN—24DEC14

A—9710 mm (with cutting platform); 7640 mm (without cutting platform)
B—3960 mm
C—5800 mm (218R/218F); 5000 mm (215R/215F); 3600 mm (with cutting platform)

YC00758,00002E7-19-20NOV18

Dimension Diagrams(with corn header)



YC6450—UN—07MAR14

A—10 050mm
B—4230 mm
C—3960 mm

YC00758,00002E6-19-27MAR19

Configuration Table

IMPORTANT: The following is recommendation. Use different configurations according to the actual situation.

Harvest quality can be improved by changing different components.

Model	Main Applications	Main Configurations	Main Features	Main Machine Sales Code	Remarks
C230	Mainly for areas of rice and wheat	Rice threshing device, cutting plate separation cylinder + comb separation concave	Harvest rice mainly, can also harvest wheat if equipped with wheat threshing device (BYC10005)	All rice models	
	Mainly for areas that are larger and for harvesting wheat first and then rice or corn	Wheat threshing device, cutting plate separation cylinder + comb separation concave	Harvest wheat / barley / millet mainly, can also harvest rice if equipped with rice threshing device (BYC10009); can harvest also soybean and corn if equipped with soybean / corn accessory (refer to INSYC33559)	All wheat models	
	Mainly for areas of harvesting corn kernels	Corn kernel harvest model	Harvest corn kernels mainly, can harvest soybeans if equipped with flexible cutting platform	All corn kernel harvest models	Refer to Operator's Manual (OMYC32464)

YC00758,00002F6-19-21NOV18

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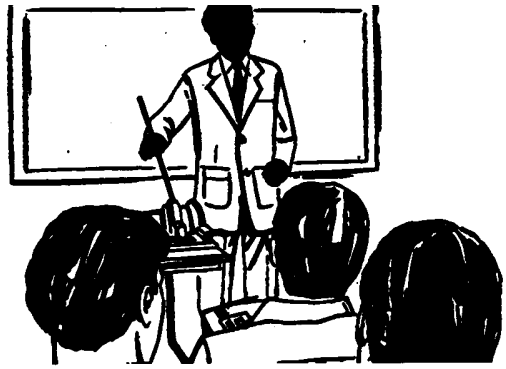

TS102—UN—23AUG88

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DX,IBC,C-19-04JUN90

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TS103—UN—23AUG88

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DX,IBC,D-19-04JUN90

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