5080GF, 5090GF, 5100GF, 5080GV, 5090GV and 5100GV Tractors

OPERATOR'S MANUAL

5080GF, 5090GF, 5100GF, 5080GV, 5090GV and 5100GV Tractors

OMER423513 ISSUE M2 (ENGLISH)

If this product contains a gasoline engine:

⚠ WARNING

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

The State of California requires the above two warnings.

Additional Proposition 65 Warnings can be found in this manual.

John Deere GmbH & Co. KG John Deere Werk Mannheim

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 the direction of forward travel.

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

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

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection. After operating for the first 100 hours, schedule an after-sale inspection with your dealer to ensure best performance.

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

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

LX,IFC 002144 -19-03FEB02-1/1

Contents

Continued on next page

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

Continued on next page

Page

Page

Continued on next page

Continued on next page

5080GF, 5090GF and 5100GF

PULX000869 —UN—20SEP08

Tractor without Cab

PULX000868 —UN—20SEP08

Tractor with Cab

NOTE: Tractors shown may have optional equipment.

NR25796,000173F -19-25MAR09-1/1

5080GV, 5090GV and 5100GV

PULX000719 —UN—25MAY09

Tractor without Cab

PULX000615 —UN—25MAY09

Tractor with Cab

NOTE: Tractors shown may have optional equipment.

NR25796,0001740 -19-25MAR09-1/1

Recognize Safety Information

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

Follow recommended precautions and safe operating practices.

T81389 —UN—07DEC88

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

Understand Signal Words

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

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

TS187 —19—30SEP88

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

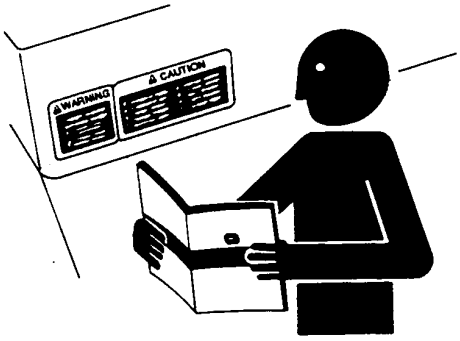
Follow Safety Instructions

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

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

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

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



TS201 —UN—23AUG88

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

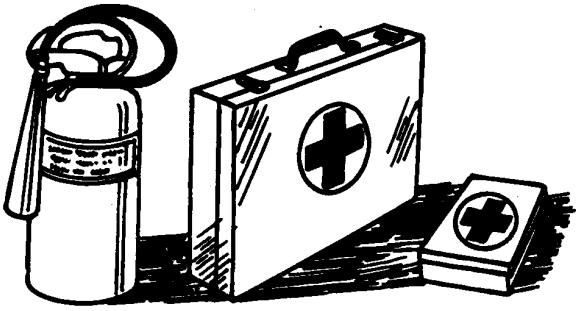
DX,READ -19-16JUN09-1/1

Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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



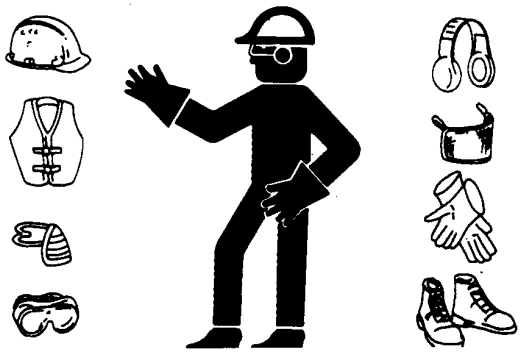
TS291 —UN—23AUG88

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

Wear Protective Clothing

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

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



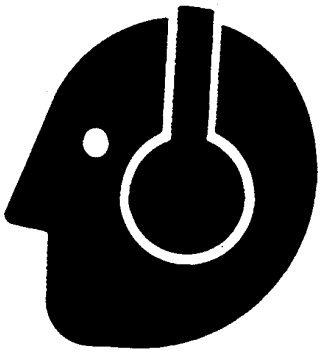
TS206 —UN—23AUG88

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

Protect Against Noise

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.



TS207 —UN—23AUG88

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

Handle Fuel Safely—Avoid Fires

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

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

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

Use only an approved fuel container for transporting flammable liquids.

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

TS202 —UN—23AUG88

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

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

Handle Starting Fluid Safely

Starting fluid is highly flammable.

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

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

Do not incinerate or puncture a starting fluid container.

TS1356 —UN—18MAR92

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

Fire Prevention

To reduce the risk of fire, your tractor should be regularly inspected and cleaned.

- Birds and other animals may build nests or bring other flammable materials into the engine compartment or onto the exhaust system. The tractor should be inspected and cleaned prior to the first use each day.
- A build up of grass, crop material and other debris may occur during normal operation. This is especially true when operating in very dry conditions or conditions where airborne crop material or crop dust is present. Any such build up must be removed to ensure proper machine function and to reduce the risk of fire. The tractor must be inspected and cleaned periodically throughout the day.
- Regular and thorough cleaning of the tractor combined with other routine maintenance procedures listed in the Operator's Manual greatly reduce the risk of fire and the chance of costly downtime.
- Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.
- Check fuel lines, tank, cap, and fittings frequently for damage, cracks or leaks. Replace if necessary.

Follow all operational and safety procedures posted on the machine and the Operator's Manual. Be careful of hot engine and exhaust components during inspection and cleaning. Before carrying out any inspection or cleaning, always shut OFF the engine, place the transmission in PARK or set parking brake, and remove the key. Removal of the key will prevent others from starting the tractor during inspection and cleaning.

DX,WW,TRACTOR,FIRE,PREVENTION -19-12OCT11-1/1

In Case of Fire

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

Stop machine operation immediately at first sign of fire. Fire may be indicated by smell of smoke or sight of smoke or flames.

If fire can be safely extinguished, proceed carefully following the instructions on your fire extinguisher. If your extinguisher does not have instructions, carefully follow these general guidelines:

1. Remove fire extinguisher from bracket.
2. Cautiously approach area of fire with wind to your back.
3. Pull safety pin from extinguisher.
4. Hold extinguisher by handles and aim hose at base of flames.
5. Squeeze handles to discharge extinguisher.
6. Move nozzle back and forth, covering flames with extinguishing agent.

TS227 —UN—23AUG88

DX,FIRE4 -19-15AUG12-1/1

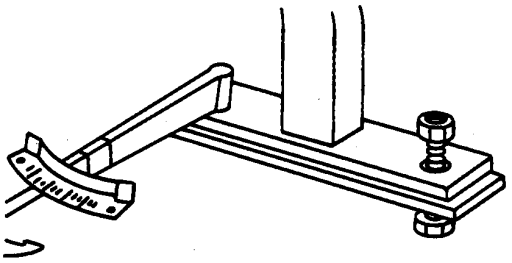
Keep ROPS Installed Properly

Make certain all parts are reinstalled correctly if the roll-over protective structure (ROPS) is loosened or removed for any reason. Tighten mounting bolts to proper torque.

The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.

The seat is part of the ROPS safety zone. Replace only with John Deere seat approved for your tractor.

Any alteration of the ROPS must be approved by the manufacturer.



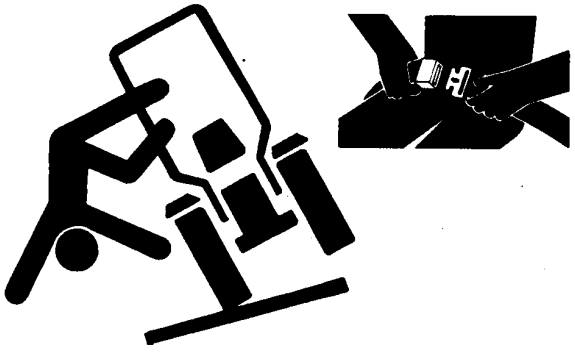
TS212 —UN—23AUG88

DX,ROPS3 -19-12OCT11-1/1

Use Foldable ROPS and Seat Belt Properly

If this tractor is equipped with a foldable ROPS, keep the ROPS in the fully extended and locked position. If the tractor is ever operated with ROPS folded (e.g., to enter a low building), drive with extreme caution. Do NOT use seat belt with the ROPS folded.

Return the ROPS to the raised, fully extended and locked position as soon as the tractor is operated under normal conditions. Always fasten your seat belt when the ROPS is fully extended and locked.



TS205 —UN—23AUG88

DX,FOLDROPS -19-31AUG99-1/1

Stay Clear of Rotating Drivelines

TS1644 —UN—22AUG95

Entanglement in rotating driveline can cause serious injury or death.

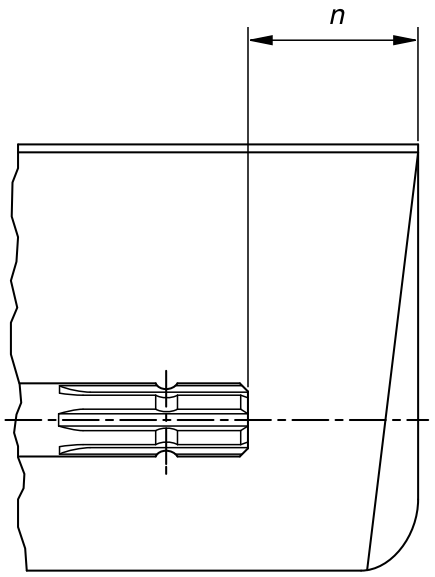
Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

Do not install any adapter device between the tractor and the primary implement PTO drive shaft that will allow a 1000 rpm tractor shaft to power a 540 rpm implement at speeds higher than 540 rpm.

Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

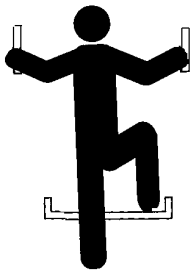
PTO Type	Diameter	Splines	n ± 5 mm (0.20 in.)
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)



H96219 —UN—29APR10

DX,PTO -19-30JUN10-1/1

Use Steps and Handholds Correctly



T133468 —UN—30AUG00

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 -19-12OCT11-1/1

Read Operator Manuals for ISOBUS Implements

In addition to GreenStar Applications, this display can be used as a display device for any implement that meets ISO 11783 standard. This includes capability to control ISOBUS implements. When used in this manner, information and implement control functions placed on the display are provided by the implement and are the responsibility of the implement manufacturer. Some of these implement functions could provide a hazard either to the Operator or a bystander. Read the operator manual provided by the implement manufacturer and observe all safety messages in manual and on implement prior to use.

NOTE: ISOBUS refers to the ISO Standard 11783

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

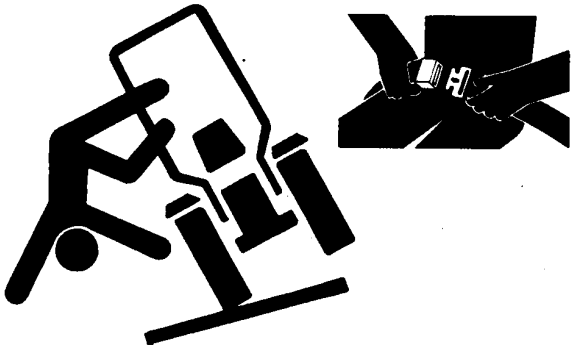
Use Seat Belt Properly

Use a seat belt when you operate with a roll-over protective structure (ROPS) or cab to minimize chance of injury from an accident such as an overturn.

Do not use a seat belt if operating without a ROPS or cab.

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.



TS205 —UN—23AUG88

DX,ROPS1 -19-29OCT07-1/1

Operating the Tractor Safely

You can reduce the risk of accidents by following these simple precautions:

- Use your tractor only for jobs it was designed to perform, for example, pushing, pulling, towing, actuating, and carrying a variety of interchangeable equipment designed to conduct agricultural work.
- This tractor is not intended to be used as a recreational vehicle.
- Read this operator's manual before operating the tractor and follow operating and safety instructions in the manual and on the tractor.
- Follow operation and ballasting instructions found in the operator's manual for your implements/attachments, such as front loaders
- Make sure that everyone is clear of machine, attached equipment, and work area before starting engine or operation.
- Keep hands, feet, and clothing away from power-driven parts

Driving Concerns

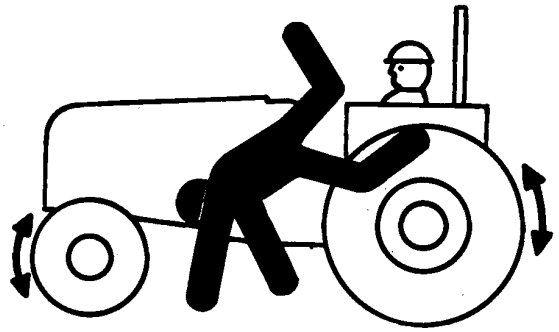
- Never get on or off a moving tractor.
- Keep all children and nonessential personnel off tractors and all equipment.
- Never ride on a tractor unless seated on a John Deere approved seat with seat belt.
- Keep all shields/guards in place.
- Use appropriate visual and audible signals when operating on public roads.
- Move to side of road before stopping.
- Reduce speed when turning, applying individual brakes, or operating around hazards on rough ground or steep slopes.
- Couple brake pedals together for road travel.
- Pump brakes when stopping on slippery surfaces.

Towing Loads

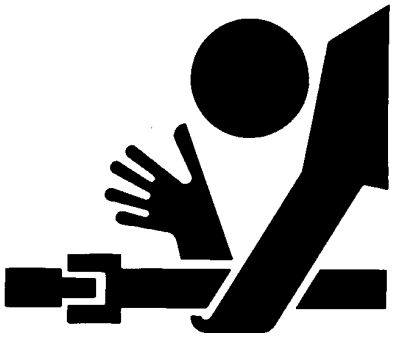
- Be careful when towing and stopping heavy loads. Stopping distance increases with speed and weight of towed loads, and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control.
- Consider the total weight of the equipment and its load.
- Hitch towed loads only to approved couplings to avoid rearward upset.

Parking and Leaving the Tractor

- Before dismounting, shut off SCVs, disengage PTO, stop engine, lower implements/attachments to ground and securely engage park mechanism, including the park pawl and park brake. In addition, if tractor is left unattended, remove key.
- Leaving transmission in gear with engine off will NOT prevent the tractor from moving.
- Never go near an operating PTO or an operating implement.
- Wait for all movement to stop before servicing machinery.



TS290 —UN—23AUG88



TS276 —UN—23AUG88

Common Accidents

Unsafe operation or misuse of the tractor can result in accidents. Be alert to hazards of tractor operation.

The most common accidents involving tractors:

- Tractor rollover
- Collisions with motor vehicles
- Improper starting procedures
- Entanglement in PTO shafts
- Falling from tractor
- Crushing and pinching during hitching

DX,WW,TRACTOR -19-21AUG09-1/1

Avoid Backover Accidents

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

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

PC10857XW —UN—24JUN10

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

Limited Use in Forestry Operation

The intended use of John Deere tractors when used in forestry operations is limited to tractor-specific applications like transport, stationary work such as log splitting, propulsion, or operating implements with PTO, hydraulic, or electrical systems.

These are applications where normal operation does not present a risk of falling or penetrating objects. Any forestry applications beyond these applications, such as forwarding and loading, requires fitment of application-specific components including Falling Object Protective Structure (FOPS) and/or Operative Protective Structures (OPS). Contact John Deere dealer for special components.

DX,WW,FORESTRY -19-12OCT11-1/1

Operating the Loader Tractor Safely

When operating a machine with a loader application, reduce speed as required to ensure good tractor and loader stability.

To avoid tractor rollover and damage to front tires and tractor, do not carry load with your loader at a speed over 10 km/h (6 mph).

To avoid tractor damage do not use a front loader or a sprayer tank if the tractor is equipped with a 3 Meter Front Axle.

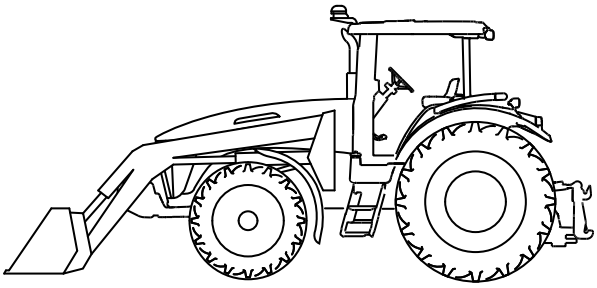
Never allow anyone to walk or work under a raised loader.

Do not use loader as a work platform.

Do not lift or carry anyone on loader, in bucket, or on implement or attachment.

Lower loader to ground before leaving operators station.

The Rollover Protective Structure (ROPS) or cab roof, if equipped, may not provide sufficient protection from load falling onto the operators station. To prevent loads from falling onto the operators station, always use appropriate implements for specific applications (that is, manure forks, round bale forks, round bale grippers, and clampers).



TS1692 —UN—09NOV09

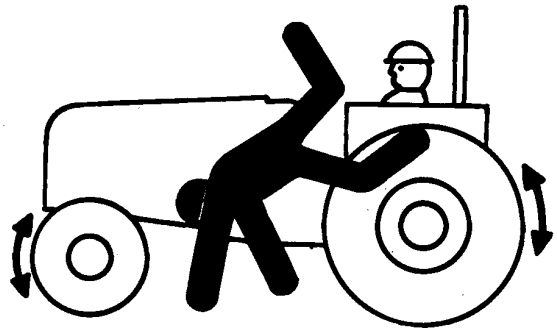
Ballast tractor in accordance to Ballast Recommendations in PREPARE TRACTOR section.

DX,WW,LOADER -19-18SEP12-1/1

Keep Riders Off Machine

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



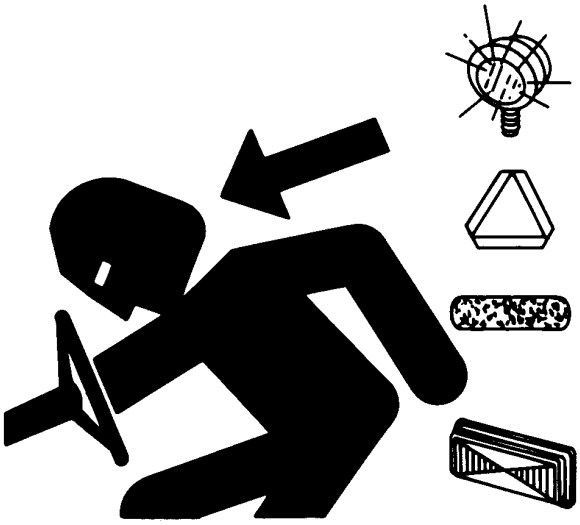
TS290 —UN—23AUG88

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

Use Safety Lights and Devices

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

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your John Deere dealer.



TS951 —UN—12APR90

DX,FLASH -19-07JUL99-1/1

Transport Towed Equipment at Safe Speeds

Do not exceed the maximum transport speed. This tractor is capable of operating at transport speeds that exceed the maximum allowable transport speed for most towed implements.

Before transporting a towed implement, determine from signs on the implement or information provided in the implement's operator manual the maximum transport speed. Never transport at speeds that exceed the implement's maximum transport speed. Exceeding the implement's maximum transport speed can result in:

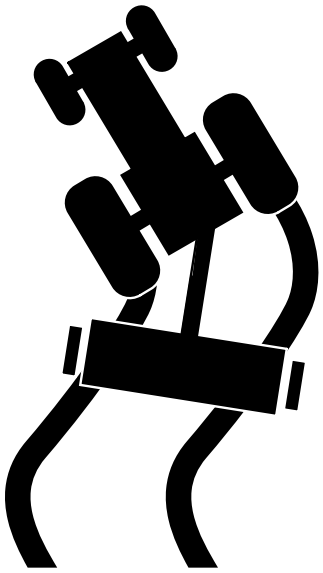
- Loss of control of the tractor/implement combination
- Reduced or no ability to stop during braking
- Implement tire failure
- Damage to the implement structure or its components

Implements without brakes:

- Do not transport at speeds greater than 32 km/h (20 mph).
- Must weigh less than 1.5 times the tractor weight and less than 1.5 t (3300 lb) when fully loaded.

Implements with brakes:

- If the manufacturer does not specify a maximum transport speed, do not tow at speeds greater than 40 km/h (25 mph).
- When transporting at speeds up to 40 km/h (25 mph) the fully loaded implement must weigh less than 4.5 times the tractor weight.



TS1686 —UN—27SEP06

- When transporting at speeds between 40—50 km/h (25—31 mph) the fully loaded implement must weigh less than 3.0 times the tractor weight.

DX,TOW1 -19-12OCT11-1/1

Use Caution On Slopes and Uneven Terrain

Avoid holes, ditches, and obstructions which cause the tractor to tip, especially on slopes. Avoid sharp uphill turns.

Driving forward out of a ditch, mired condition, or up a steep slope could cause tractor to tip over rearward. Back out of these situations if possible.

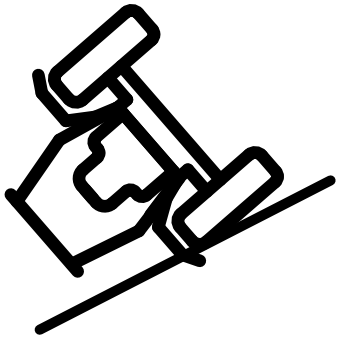
Danger of overturn increases greatly with narrow tread setting, at high speed.

Not all conditions that can cause a tractor to overturn are listed. Be alert for any situation in which stability may be compromised.

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution

Never drive near the edge of a gully, drop-off, ditch, steep embankment, or a body of water. The machine could suddenly roll over if a wheel goes over the edge or the ground caves in

Choose a low ground speed so you will not have to stop or shift while on a slope.



RXA0103437 —UN—01JUL09

Avoid starting, stopping or turning on a slope. If the tires lose traction, disengage the PTO and proceed slowly, straight down the slope.

Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction, which could cause the machine to roll over.

DX,WW,SLOPE -19-12OCT11-1/1

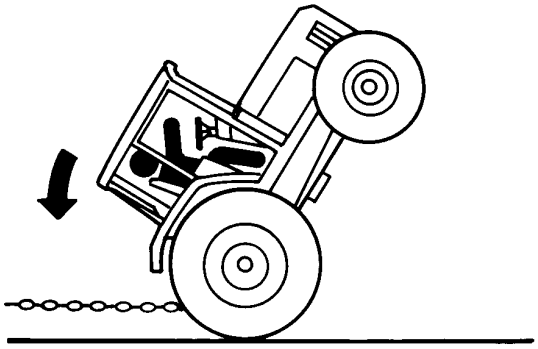
Freeing a Mired Machine

Attempting to free a mired machine can involve safety hazards such as the mired tractor tipping rearward, the towing tractor overturning, and the tow chain or tow bar (a cable is not recommended) failing and recoiling from its stretched condition.

Back your tractor out if it gets mired down in mud. Unhitch any towed implements. Dig mud from behind the rear wheels. Place boards behind the wheels to provide a solid base and try to back out slowly. If necessary, dig mud from the front of all wheels and drive slowly ahead.

If necessary to tow with another unit, use a tow bar or a long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

Always hitch to the drawbar of the towing unit. Do not hitch to the front pushbar attachment point. Before moving, clear the area of people. Apply power smoothly to take up the slack: a sudden pull could snap any towing device causing it to whip or recoil dangerously.



TS1645 —UN—15SEP95

TS263 —UN—23AUG88

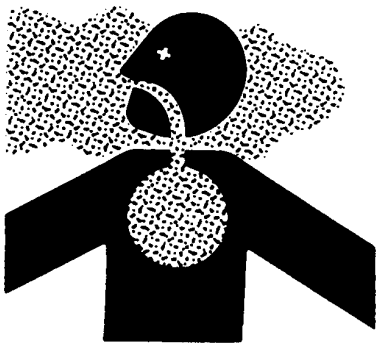
DX,MIRED -19-07JUL99-1/1

Avoid Contact with Agricultural Chemicals

This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Before leaving the cab, wear personal protective equipment as required by the pesticide use instructions. When re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.

Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.



TS220 —UN—23AUG88

TS272 —UN—23AUG88

DX,CABS -19-25MAR09-1/1

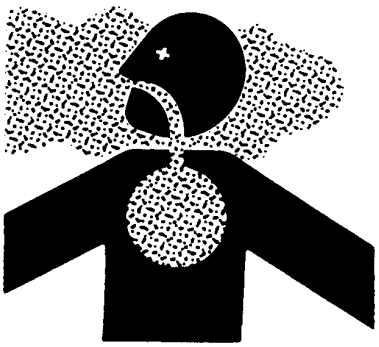
Handle Agricultural Chemicals Safely

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.



TS220 —UN—23AUG88

A34471 —UN—11OCT88

- 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 -19-24AUG10-1/1

Handling Batteries Safely

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

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

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

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

Avoid hazards by:

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

If acid is spilled on skin or in eyes:

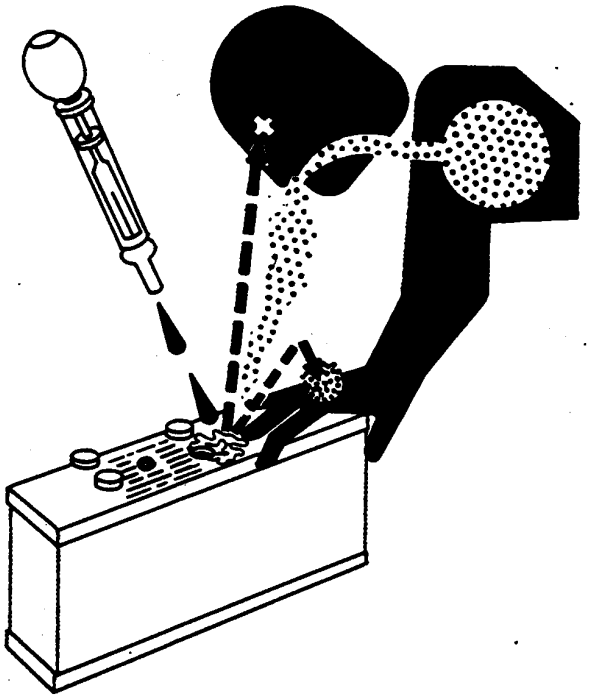
1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

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

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

TS204 —UN—23AUG88



TS203 —UN—23AUG88

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

Avoid Heating Near Pressurized Fluid Lines

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

TS953 —UN—15MAY90

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

Remove Paint Before Welding or Heating

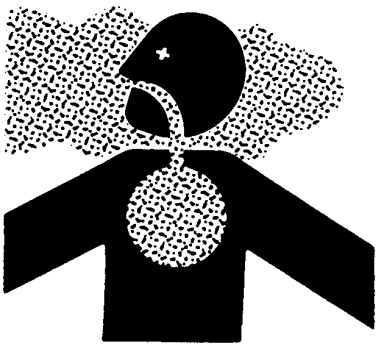
Avoid potentially toxic fumes and dust.

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

Remove paint before heating:

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

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



TS220 —UN—23AUG88

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

Dispose of paint and solvent properly.

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

Handle Electronic Components and Brackets Safely

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

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

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

TS249 —UN—23AUG88

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

Practice Safe Maintenance

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

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

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

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

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

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

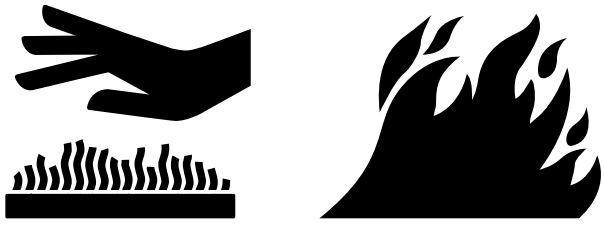
TS218 —UN—23AUG88

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

Avoid Hot Exhaust

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

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



RG17488 —UN—21AUG09

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

Clean Exhaust Filter Safely

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

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

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

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

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

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

Avoid contact with these components until cooled to safe temperatures.

If service procedure requires engine to be running:

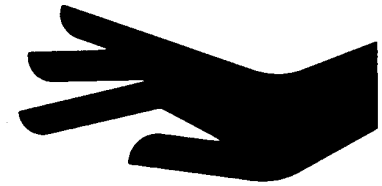
- Only engage power-driven parts required by service procedure
- Ensure that other people are clear of operator station and machine

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

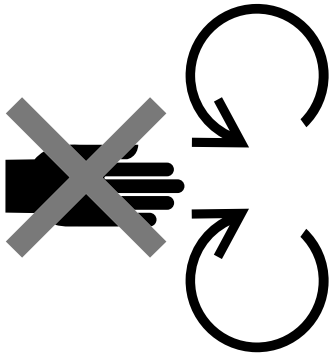
Always disable movement (neutral), set the parking brake or mechanism and disconnect power to attachments or tools before leaving the operator's station.

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

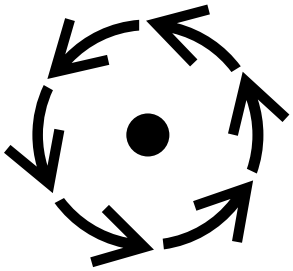
TS227 —UN—23AUG88



TS271 —UN—23AUG88



TS1693 —UN—09DEC09



TS1695 —UN—07DEC09

DX,EXHAUST,FILTER -19-12JAN11-1/1

Work In Ventilated Area

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

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

TS220 —UN—23AUG88

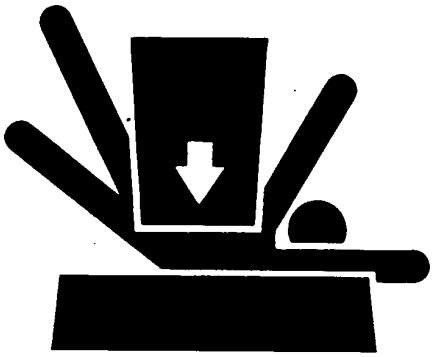
DX,AIR -19-17FEB99-1/1

Support Machine Properly

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

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

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



TS229 —UN—23AUG88

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

Prevent Machine Runaway

Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator’s seat, with transmission in neutral or park.

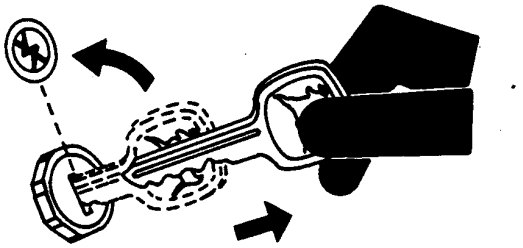
TS177 —UN—11JAN89

DX,BYPAS1 -19-29SEP98-1/1

Park Machine Safely

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



TS230 —UN—24MAY89

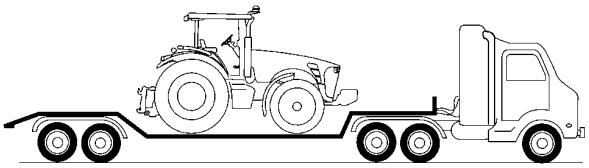
DX,PARK -19-04JUN90-1/1

Transport Tractor Safely

A disabled tractor is best transported on a flatbed carrier. Use chains to secure the tractor to the carrier. The axles and tractor frame are suitable attachment points.

Before transporting the tractor on a low-loader truck or flatbed rail wagon, make sure that the hood is secured over the tractor engine and that doors, roof hatch (if equipped) and windows are properly closed.

Never tow a tractor at a speed greater than 10 km/h (6 mph). An operator must steer and brake the tractor under tow.



RXA0103709 —UN—01JUL09

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

Service Cooling System Safely

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.

TS281 —UN—23AUG88

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

Service Accumulator Systems Safely

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

Relieve pressure from the pressurized system before removing accumulator.

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

Accumulators cannot be repaired.

TS281 —UN—23AUG88

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

Service Tires Safely

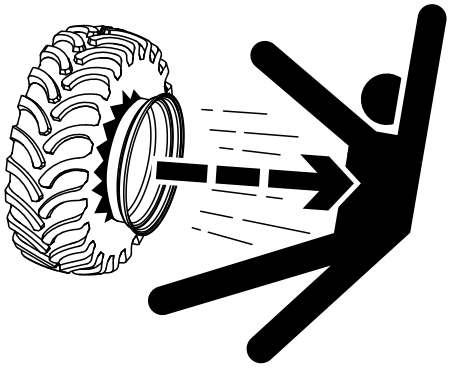
Explosive separation of a tire and rim parts can cause serious injury or death.

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

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

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

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

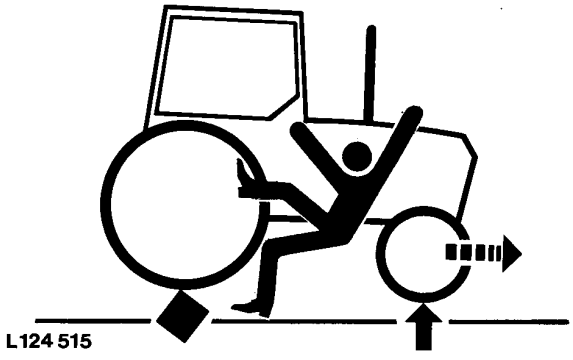


RXA0103438 —UN—11JUN09

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

Service Front-Wheel Drive Tractor Safely

When servicing front-wheel drive tractor with the rear wheels supported off the ground and rotating wheels by engine power, always support front wheels in a similar manner. Loss of electrical power or transmission hydraulic system pressure will engage the front driving wheels, pulling the rear wheels off the support if front wheels are not raised. Under these conditions, front drive wheels can engage even with switch in disengaged position.

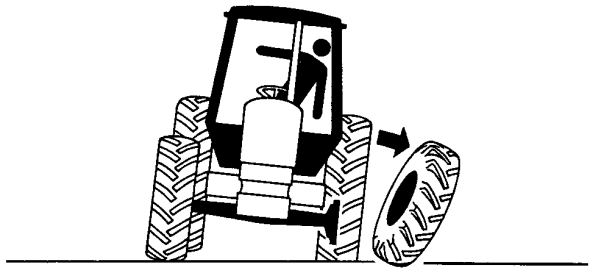


L124515 —UN—06AUG94

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

Tightening Wheel Retaining Bolts/Nuts

Torque wheel retaining bolts/nuts at the intervals specified in section Break-In Period and Service.



L124 516

L124516 —UN—03JAN95

DX,WW,WHEEL -19-12OCT11-1/1

Avoid High-Pressure Fluids

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

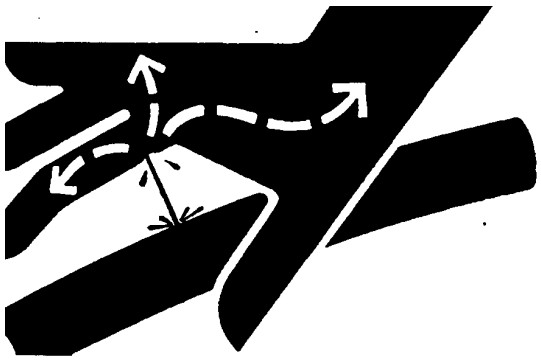
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

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

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

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

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



X9811 —UN—23AUG88

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

Do Not Open High-Pressure Fuel System

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

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

TS1343 —UN—18MAR92

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

Store Attachments Safely

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

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

TS219 —UN—23AUG88

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

Dispose of Waste Properly

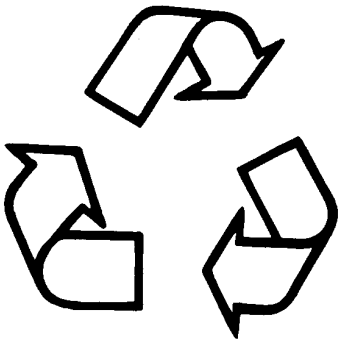
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

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

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

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

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



TS1133 —UN—26NOV90

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

Safety Decals

Pictorial Safety Signs

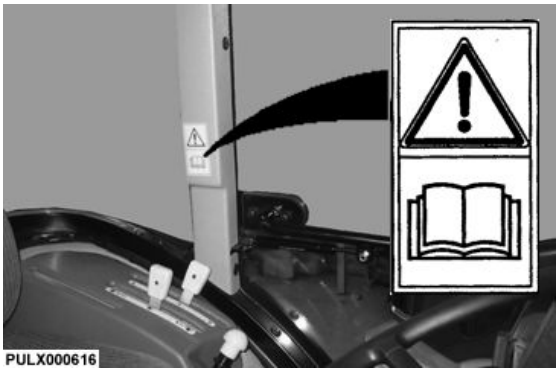
At several important places of this machine safety signs are affixed intended to signify potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety signs, their placement on the machine and a brief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

TS231 —19—07OCT88

LX,LABEL 002079 -19-01MAY92-1/1

Operator's Manual

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



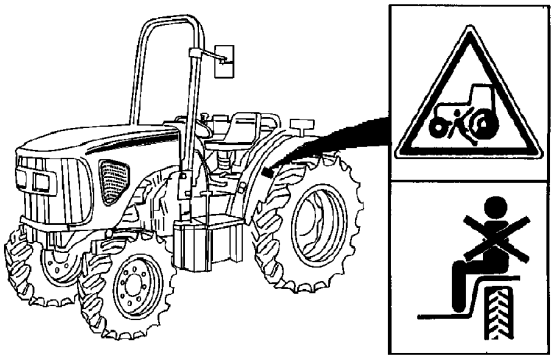
PULX000616 —UN—24JUN08

NR25796,0001742 -19-25MAR09-1/1

Riders

Riders are not permitted on tractors with open operator's station .

On tractors with cab, riders are only permitted on a properly installed passenger seat and must not restrict the operator's view.



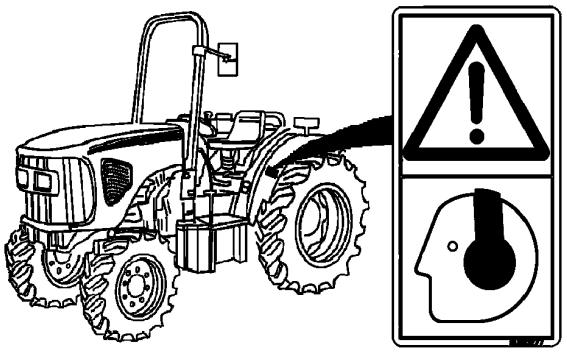
PULX000617 —UN—24JUN08

NR25796,0001743 -19-25MAR09-1/1

Noise Protection

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.



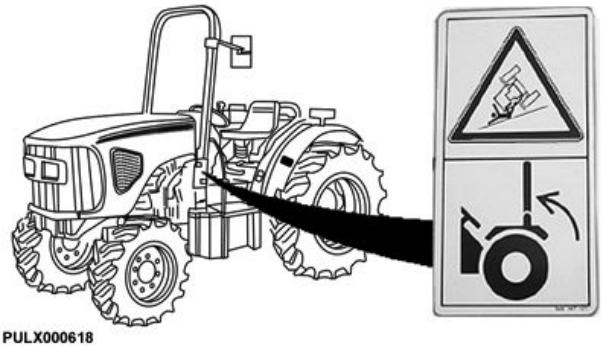
LX1057771 —UN—15OCT12

OULXBER,0001FCE -19-16OCT12-1/1

Roll-Over Protective Structure (ROPS)

Always use ROPS in fold up position and fasten seat belt.

If the ROPS is folded down, do not use the seat belt.



PULX000618

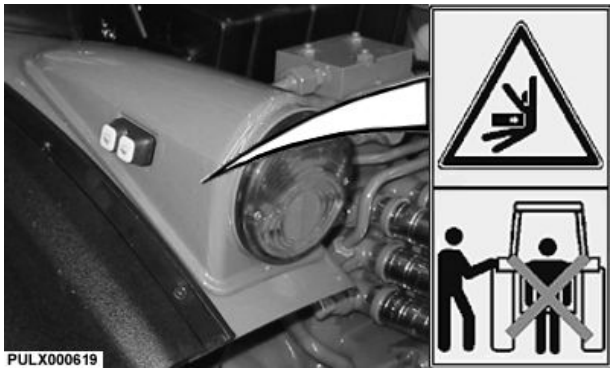
PULX000618 —UN—24JUN08

NR25796,0001744 -19-04NOV08-1/1

Hitch Remote Control

⚠ CAUTION: Stay clear of three-point hitch lift range when operating the hitch.

Apply parking brake before lifting the implement.



PULX000619

PULX000619 —UN—24JUN08

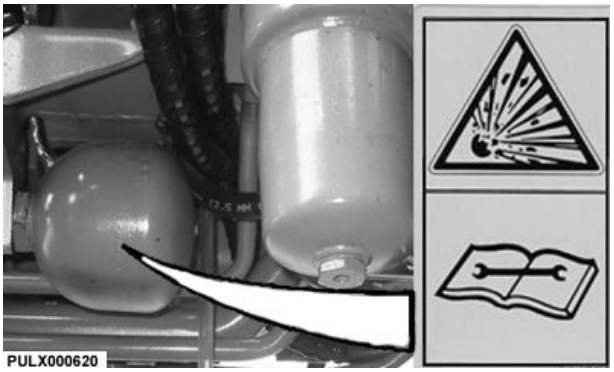
NR25796,0001745 -19-25MAR09-1/1

Accumulator

All tractors equipped with 24/12 speed transmission are equipped with an accumulator.

The accumulator is under pressure and can be removed/repaired by your John Deere dealer only.

The dealer must follow the instructions in the Technical Manual.



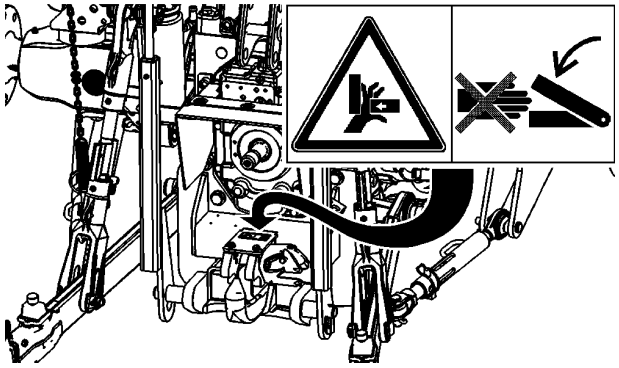
PULX000620 —UN—24JUN08

NR25796,0001746 -19-04NOV08-1/1

Pick-Up Hitch

CAUTION: If used improperly, there is a serious danger of pick-up hitch components causing injury.

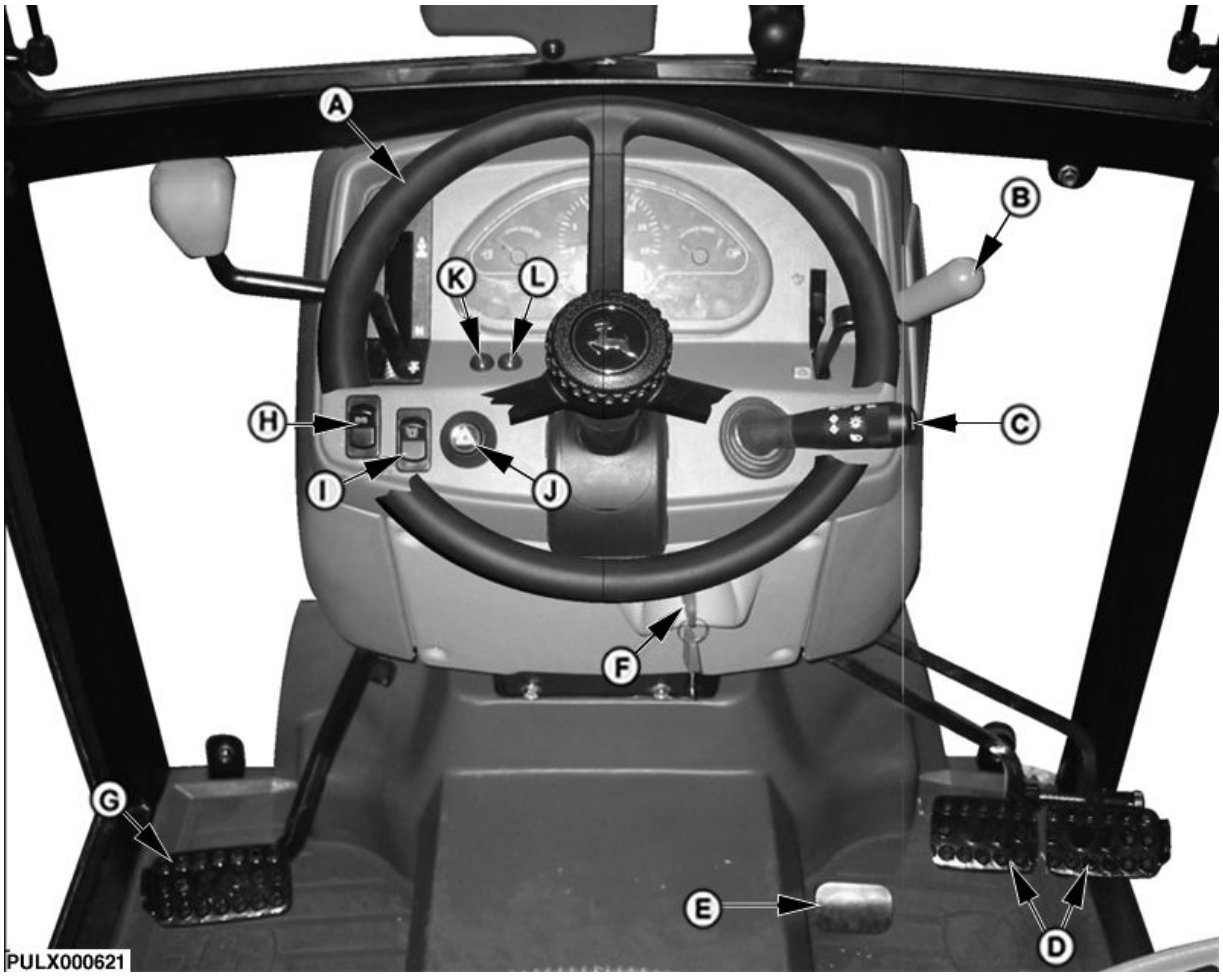
With hitch lowered, NEVER put your hand in the mounting frame or the opening of the pick-up hitch.



LX1054654 —UN—02FEB12

OULXBER,0001FD7 -19-06DEC12-1/1

Vehicle Controls

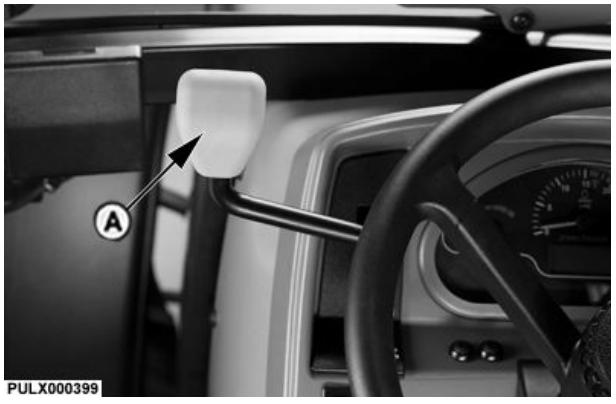


PULX000621 —UN—17JUN08

A—Steering wheel
B—Hand throttle
C—Light switch/Turn signal switch/Horn
D—Brake pedals
E—Foot throttle
F—Main switch
G—Clutch pedal
H—H4 Light switch (if equipped)
I— Beacon light switch (OOS only)
J—Hazard warning light switch
K—Clock adjust/Hour meter switch
L—Program switch

OU12401,0001C97 -19-05AUG09-1/12

A—Reverse drive lever (mechanically actuated)

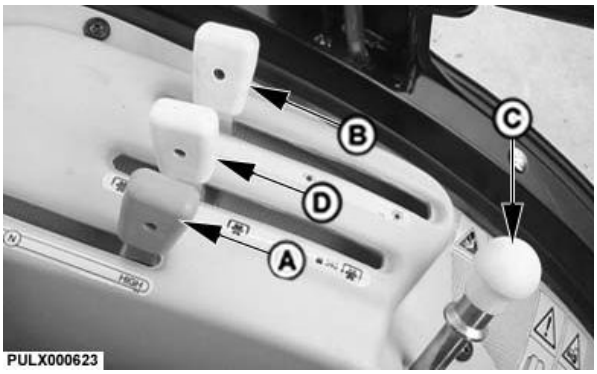


PULX000399 —UN—10JUL08

Continued on next page

OU12401,0001C97 -19-05AUG09-2/12

A—Mechanical Hi-Lo shift lever[1]
B—PTO mode selector lever[1]
C—PTO clutch lever
D—PTO speed selector lever

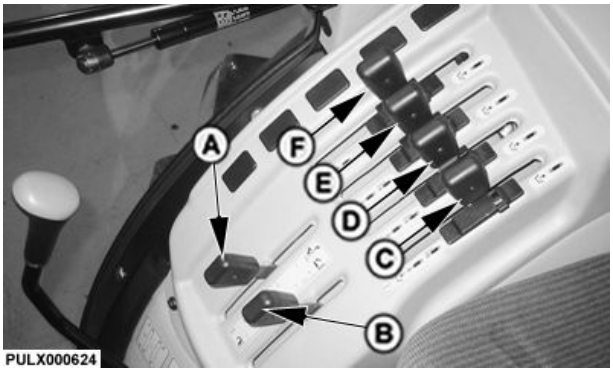


PULX000623 —UN—29JUL08

[1]*If equipped.*

OU12401,0001C97 -19-05AUG09-3/12

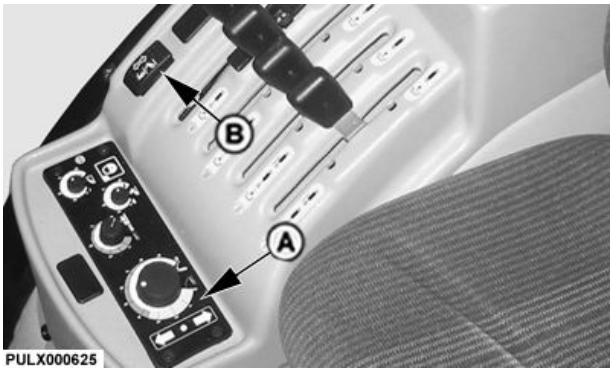
A—Hitch load control lever
B—Hitch position control lever
C—1st Selective control valve lever
D—2nd Selective control valve lever
E—3rd Selective control valve lever
F—4th Selective control valve lever



PULX000624 —UN—10JUL08

OU12401,0001C97 -19-05AUG09-4/12

A—Electronic hitch control panel
B—Raise/Lower switch[1]



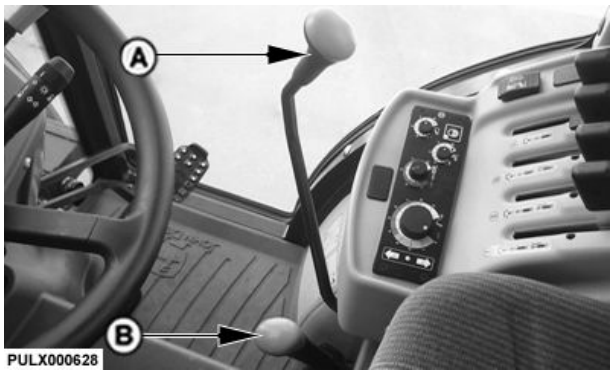
PULX000625 —UN—10JUL08

[1]*Electronic hitch only.*

Continued on next page

OU12401,0001C97 -19-05AUG09-5/12

A—Gear shift lever[1] **B—Range shift lever**

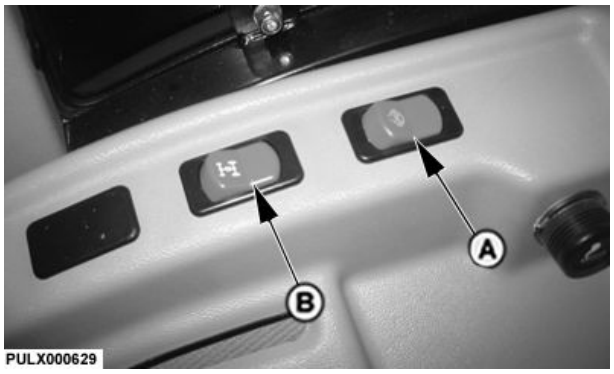


PULX000628 —UN—05JAN09

[1]*Mechanical transmission version.*

OU12401,0001C97 -19-05AUG09-6/12

A—Differential lock switch **B—Front-wheel drive switch**

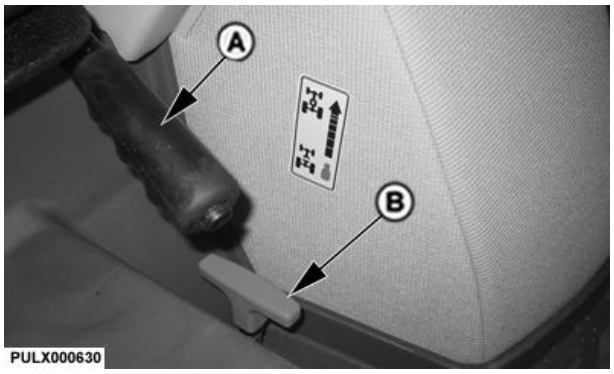


PULX000629 —UN—10JUL08

OU12401,0001C97 -19-05AUG09-7/12

In the event of service brake failure, the auxiliary brake system can be used to brake the tractor.

A—Auxiliary and Park brake **B—Front-wheel drive lever**

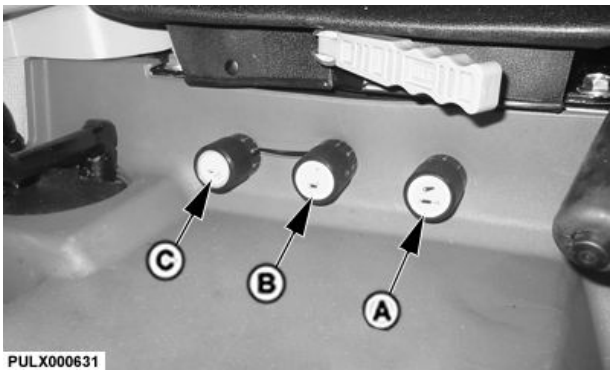


PULX000630 —UN—05JAN09

Continued on next page

OU12401,0001C97 -19-05AUG09-8/12

A—Adjusting knob (flow divider valve)[1]
B—Adjusting knob (hitch rate-of-drop valve)[2]
C—Adjusting knob (hitch sensitivity control valve)[2]



PULX000631 —UN—10JUL08

[1]If equipped.
[2]Mechanical hitch only.

OU12401,0001C97 -19-05AUG09-9/12

A—Differential lock pedal

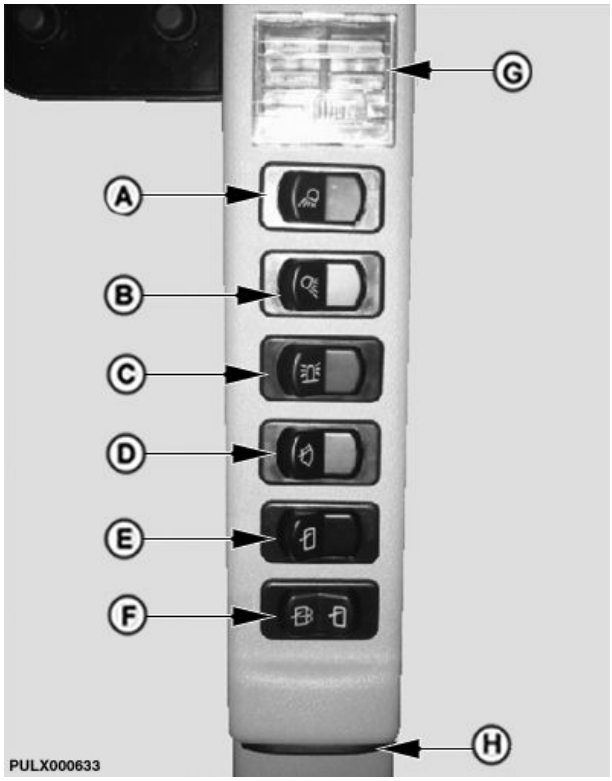
PULX000632 —UN—10JUL08

Continued on next page

OU12401,0001C97 -19-05AUG09-10/12

Right-hand cab post switches

A—Front work light switch
B—Rear work light switch
C—Beacon light switch (cab only)
D—Windshield wiper switch
E—Rear window wiper switch
F—Windshield/rear window washer switch
G—Fuse box (cab)
H—Lighting for various controls



PULX000633 —UN—10JUL08

OU12401,0001C97 -19-05AUG09-11/12

A—– Remote control switch [1]

PULX000634 —UN—10JUL08

[1]*Electronic hitch only.*

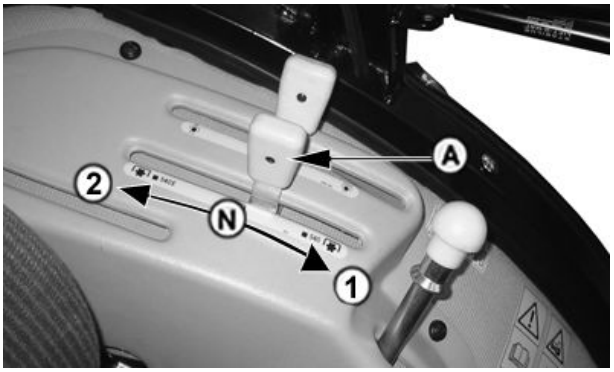
OU12401,0001C97 -19-05AUG09-12/12

PTO Speed Selector

The PTO speed selector lever (A) allows the PTO to be operated with the following speeds:

- N—Neutral
- 1—540 rpm
- 2—750 rpm (540E) or optional 1000 rpm

A—PTO speed selector lever



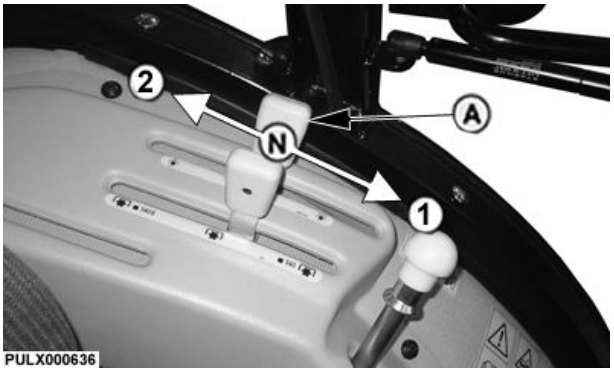
PULX000635 —UN—10JUL08

NR25796,0001748 -19-25MAR09-1/2

The PTO mode selector lever (A) allows the PTO to be operated in the following modes:

- N—Neutral
- 1—Ground drive
- 2—Engine drive

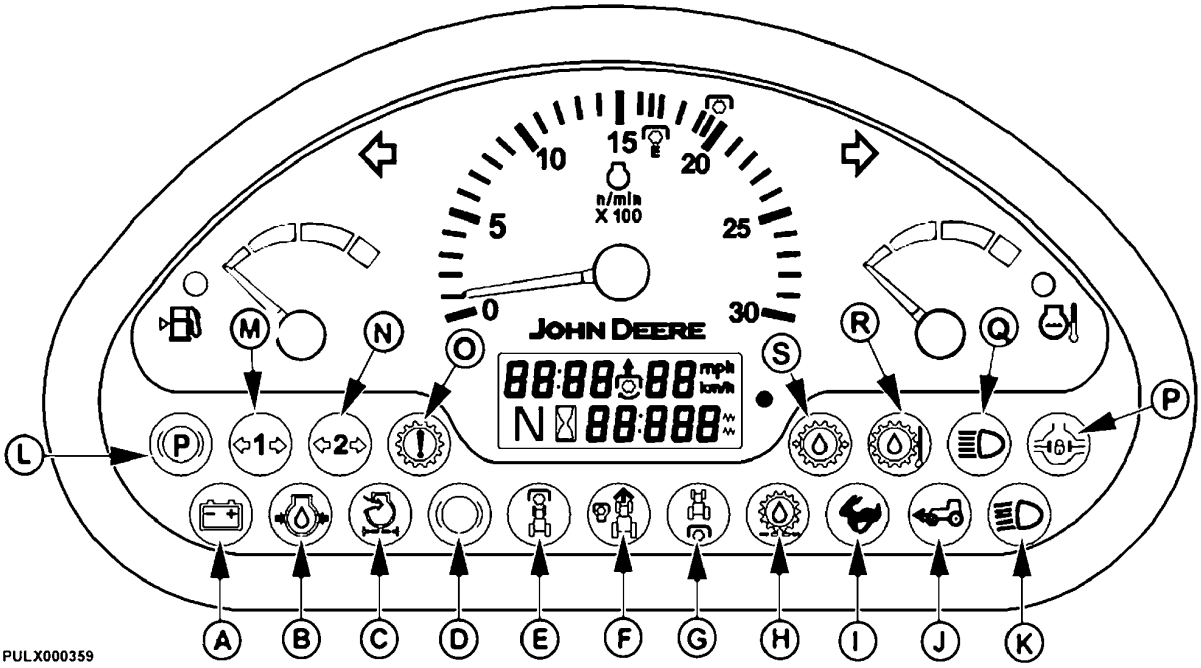
A—PTO mode selector lever



PULX000636 —UN—10JUL08

NR25796,0001748 -19-25MAR09-2/2

Instruments and Indicator Lights



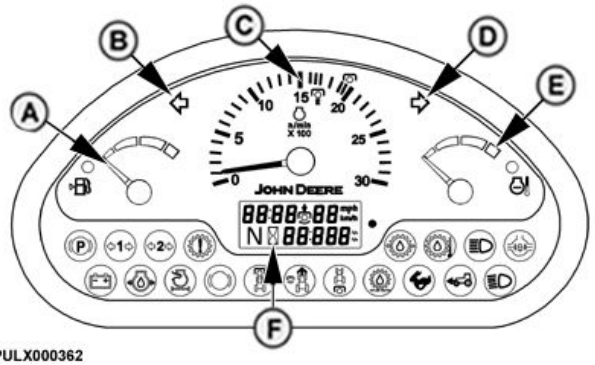
PULX000359 —UN—19SEP08

A — Alternator Indicator Light
B—Engine Oil Pressure Indicator Light
C—Air Cleaner Restriction Indicator Light
D—Brake Oil Level Indicator Light
E—Front PTO Indicator Light
F—Ground Drive PTO Indicator Light
G—Rear PTO Indicator Light
H—Transmission Oil Filter Indicator Light[1]
I— High Speed Indicator Light
J— MFWD Indicator Light
K—Low Beam Indicator Light
L—Park Brake Indicator Light
M—Turn Signal Indicator Light (First Trailer)
N—Turn Signal Indicator Light (Second Trailer)
O—Transmission Failure Light[1]
P—Differential Lock Indicator Light
Q—High Beam Indicator Light
R—Transmission Oil Temperature Light
S—Transmission Low Oil Pressure Light[1]

[1]*PowrReverser transmission only*

NR25796,0001749 -19-15JAN09-1/3

A—Fuel Gauge
B—Left-Hand Turn Signal Indicator Light
C—Engine Speed
D—Right-Hand Turn Signal Indicator Light
E—Coolant Temperature Gauge
F—LED Display



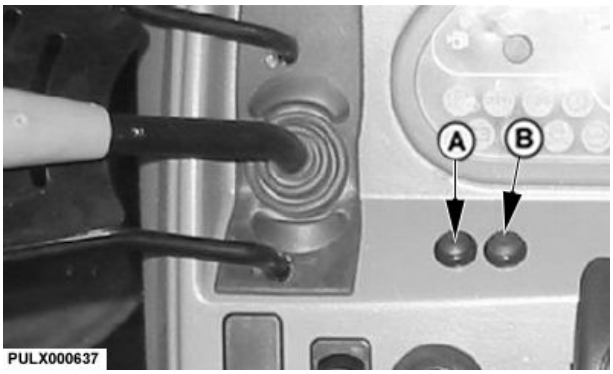
PULX000362 —UN—30JUL08

Continued on next page

NR25796,0001749 -19-15JAN09-2/3

A—Clock Adjust and Hour Meter Switch

B—Program Switch



PULX000637 —UN—19JUN08

NR25796,0001749 -19-15JAN09-3/3

Light and Horn Switch Positions

A—H4 light switch (if equipped)
B—Beacon light switch (position for OOS models only)
C—Hazard warning lights
D—Instrument panel, parking and license plate lights, high/low beam headlights, work lights, horn

PULX000647 —UN—20JUN08

NR25796,000174A -19-15JAN09-1/2

The tractor light/horn switch can be set to the following positions:

0 - OFF position; fully rotated forward

1 - First position counterclockwise; instrument panel, parking, and license plate lights

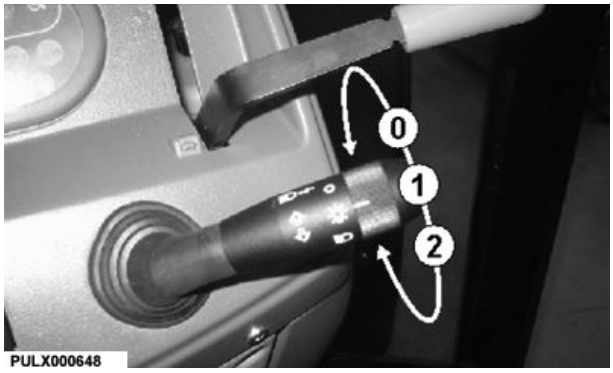
2 - Second position counterclockwise; instrument panel, license plate lights, and low beam headlights

3 - Second position counterclockwise; instrument panel, license plate lights, and high beam headlights

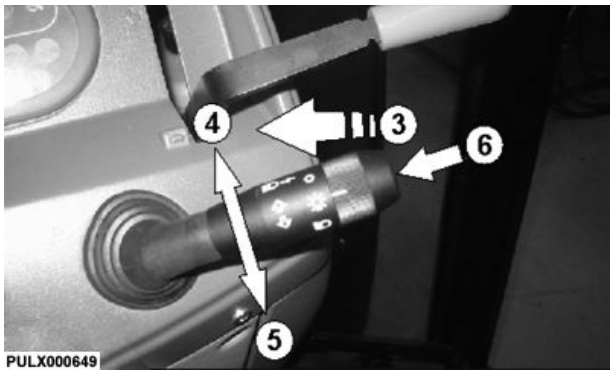
4 - Left-hand turn indicator lights

5 - Right-hand turn indicator lights

6 - Horn (press switch)



PULX000648 —UN—20JUN08



PULX000649 —UN—20JUN08

NR25796,000174A -19-15JAN09-2/2

H4 Farm Headlights

H4 farm headlights (B) may be attached to the cab frame. Switch (A) allows the operator to choose between normal headlights and these additional lights (B) (e.g. when front attachments are installed).

Comply with legal restrictions when driving on public roads.

PULX000650 —UN—15JAN09

PULX000701 —UN—10JUL08

NR25796,000174B -19-15JAN09-1/1

Full Beam Indicator Light

Full beam indicator light (A) glows when light switch is turned to position (3) and the switch is pulled in direction of the steering wheel.

Low beam indicator light (B) glows when light switch is turned to position (2). See Light and Horn Switch Positions in this Section.

PULX000702 —UN—19SEP08

NR25796,000174C -19-15JAN09-1/1

Tail Lights

The red tail lights (C) will go on when light switch is turned to position (1) or (2).

Be sure that tail light lenses are clean before driving on a public road, so other drivers can see the lights easily.

NOTE: For tractors with open operator's station, front lights (A) can be folded in to avoid contact with tree branches during work in orchards or similar.

In order to rotate front lights (A), pull lever (B) and rotate it in clockwise direction.

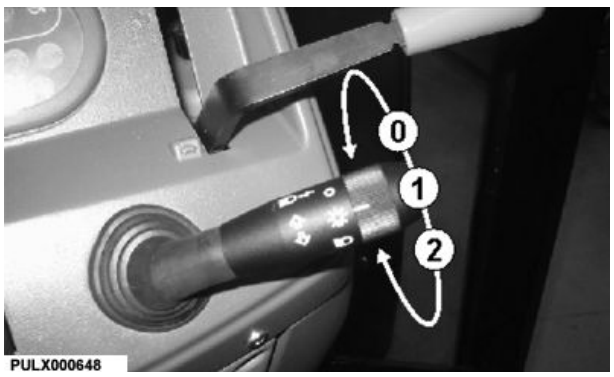
Turn front lights (A) to the correct position before driving on public roads.

A—Front lights
B—Lever
C—Tail lights

PULX000703 —UN—14JUL08

PULX000763 —UN—14JUL08

PULX000704 —UN—14JUL08



PULX000648 —UN—20JUN08

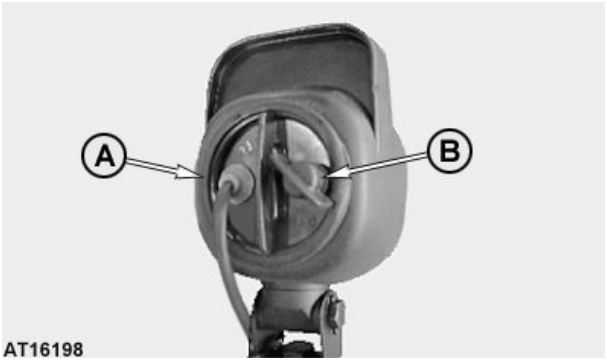
NR25796,000174D -19-15JAN09-1/1

Work Light

CAUTION: Never use the work light when driving on public roads. A clear, bright light at the rear of the tractor could confuse drivers of other vehicles as they approach from the rear.

On tractors with open operator's station the work light (A) is switched on by work light switch (B).

On tractors with cab, the work light is switched on by the work light switch in the post on the right-hand side, see “Operator's Cab Switches” in section “Operator's Station and Cab”.

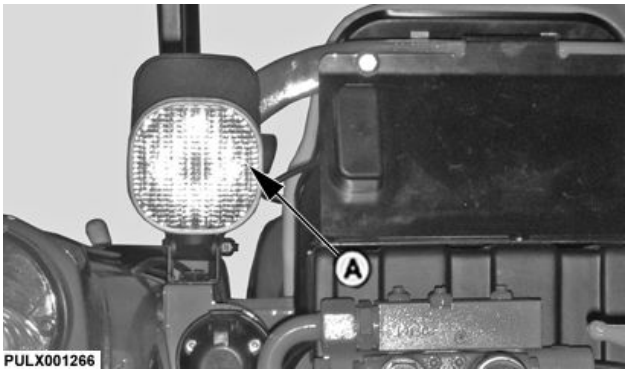


AT16198 —UN—07FEB03

OULXA64,0000CDF -19-01JUL04-1/1

Adjust Work Lights

Adjust the work lights (A) by turning them to the desired position.



Work Lights, Tractor without Cab

PULX001266 —UN—02SEP08

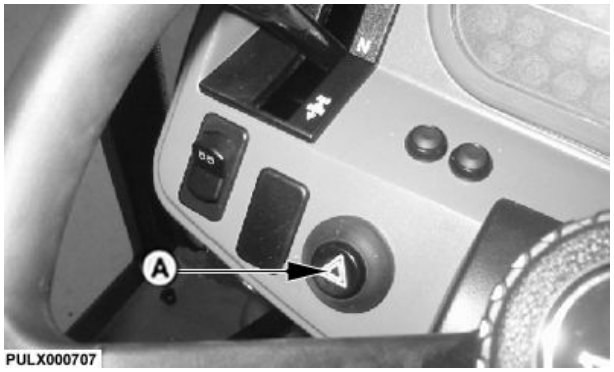
Work Lights, Tractor with Cab

PULX000705 —UN—30JUL08

NR25796,000174E -19-15JAN09-1/1

Hazard Warning Lights

If any trouble is encountered on the tractor when driving on public roads, switch on the hazard warning light switch (A).



PULX000707 —UN—20JUN08

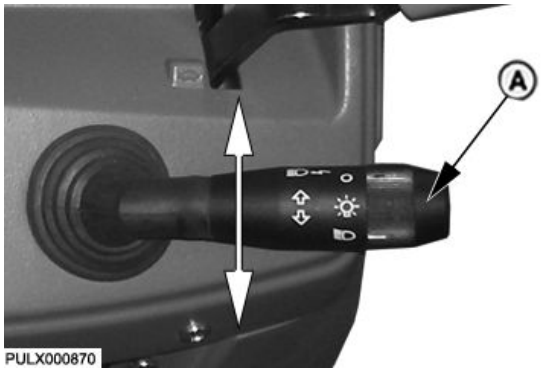
NR25796,000174F -19-04NOV08-1/1

Turn Signal Lights

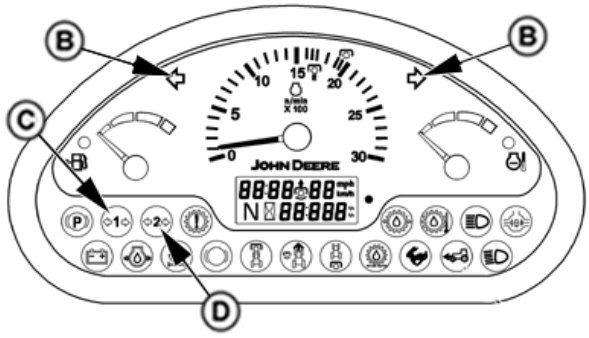
Move turn signal switch (A) from the center (off) position forward to indicate a left-hand turn or backward to indicate a right-hand turn. Indicator lights (B), located at the instrument panel, will flash to signal turn direction.

When towing one trailer, the indicator light (C) flashes. When towing two trailers, the indicator lights (C) and (D) flash.

A — Turn signal switch
B — Turn signal indicator lights
C — Turn signal indicator light for first trailer
D — Turn signal indicator light for second trailer



PULX000870 —UN—30JUL08

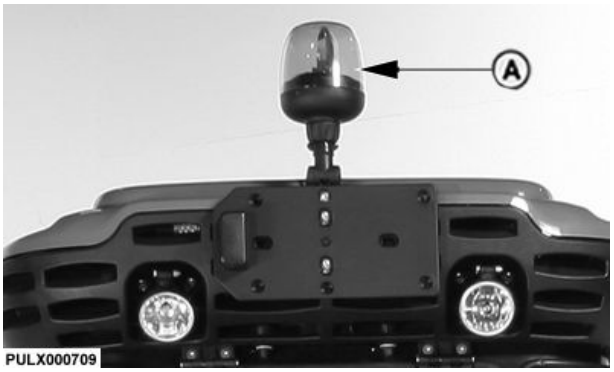


PULX000711 —UN—20JUN08

NR25796,0001750 -19-20JAN09-1/1

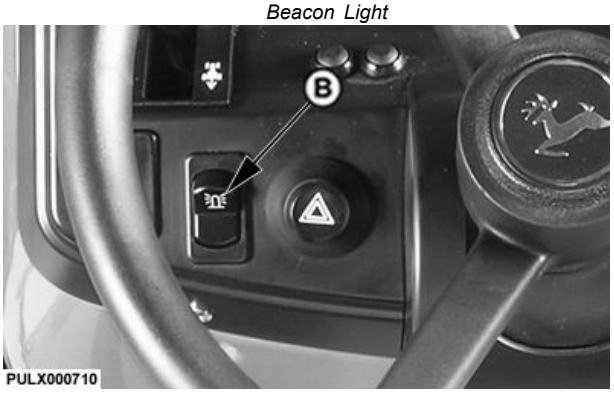
Beacon Light

The beacon light (A) is turned on by switch (B). Use beacon light (A) as requested by local regulations.



PULX000709 —UN—14JUL08

Beacon Light



PULX000710 —UN—30JUL08

Open Operator's Station

PULX000717 —UN—20JUN08

With Cab

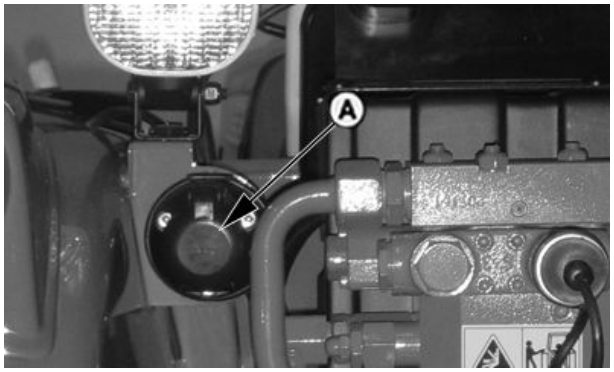
NR25796,0001751 -19-20JAN09-1/1

Seven-Terminal Trailer Socket

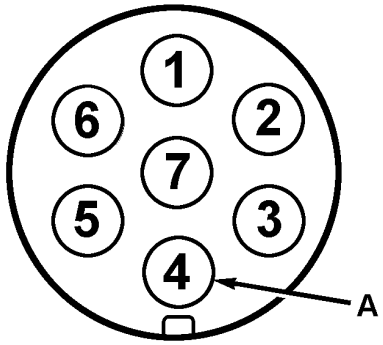
Socket (A) allows lights, turn signals, and other electrical equipment on a trailer or implement to be connected. Always use additional lighting on a mounted implement if this conceals the turn signals and other lights at the rear of the tractor.

NOTE: Suitable plugs can be obtained from your John Deere dealer.

Connection	Function	Wire color
1	left-hand turn signal	light blue/black
2	not used	
3	ground	black
4	right-hand turn signal	light blue
5	right-hand tail light and license plate light	yellow
6	right-hand and left-hand brake light	red
7	left-hand tail light	yellow/black



PULX000706 —UN—14JUL08



LX1022520

LX1022520 —UN—01MAR99

NR25796,0001752 -19-20JAN09-1/1

Cab Classification According to EN 15695-1 (for Application of Crop Protection Chemicals and Liquid Fertilizer)

Cab classification according to EN 15695-1 provides information on the effectiveness of protection against harmful substances offered by the cab.

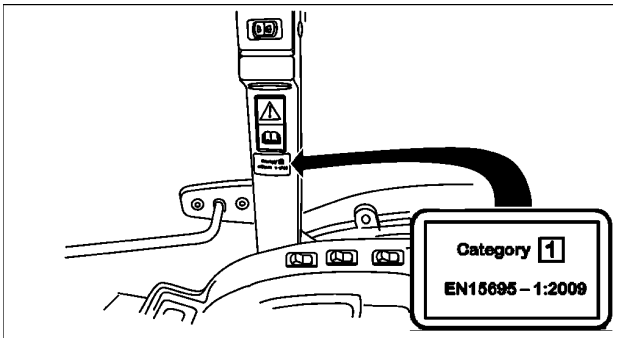
Categories 1 to 4 are used for classification and specified on a label inside the cab.

Replace label if missing or damaged. See your John Deere dealer.

A — Category 1 - The cab does not offer any protection against substances which are harmful to health.
B — Category 2 - The cab offers protection against solid airborne particles such as dust, but not against aerosols and vapors.
C — Category 3 - The cab offers protection against dust and aerosols (liquid airborne substances such as spray), but not against vapors.
D — Category 4 - The cab offers protection against dust, aerosols and vapors.

CAUTION: Before working in an environment containing hazardous substances, i.e. when using pesticides, check whether the cab offers sufficient protection. Refer to the product data sheets of the spraying liquid manufacturer specifying the category required for the cab.

CAUTION: In case of category 3 and 4 cabs, find out whether the installed filters have been checked according to EN 15695-2:2009 and whether they are suitable for the chemical being used (refer to the manufacturer's information)



LX1054626 —UN—15DEC11

Label Shown for Illustration Purposes Only (May Not Indicate the Category of the Cab Installed)

before working in an environment containing hazardous substances.

CAUTION: The cab air filters must be serviced as specified. See Section ”Lubrication and Periodic Service” or ”Service - As Required” and ”Service - Once a Year” in this Operator's Manual.

CAUTION: Refer to product data sheets and product identification of the crop protection chemicals. These contain important information on how to avoid hazards.

The following requirements must be met to offer best protection:

1. All seals (on door, windows and roof) in good condition
2. Doors, windows and roof closed
3. Grommets for cables in the cab sealed properly
4. Fan ON
5. Cab air filters in good condition

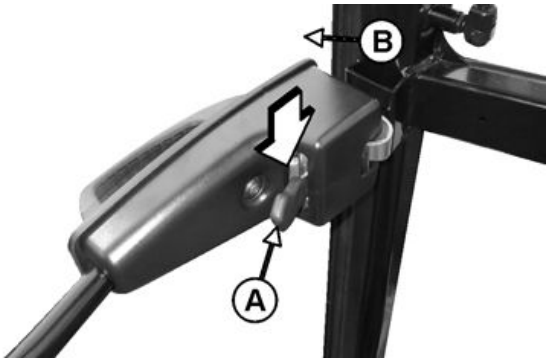
OULXBER,0001B6E -19-16DEC11-1/1

Emergency Exits

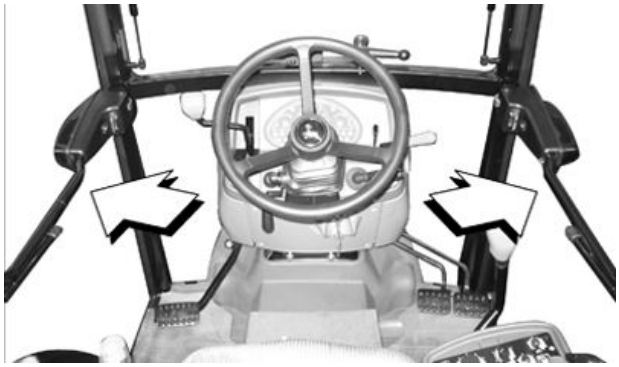
In an emergency, exit the cab through the cab doors. It is also possible to exit the cab through the open rear window.

Exit through doors

To open, pull down latch (A) and push door (B) outwards.



LX1054642 —UN—21DEC11



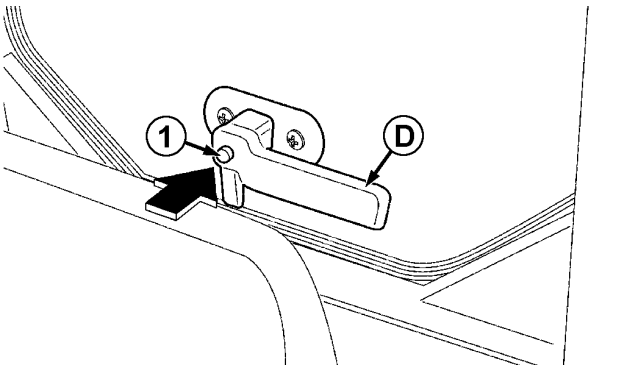
LX1054643 —UN—21DEC11

Continued on next page

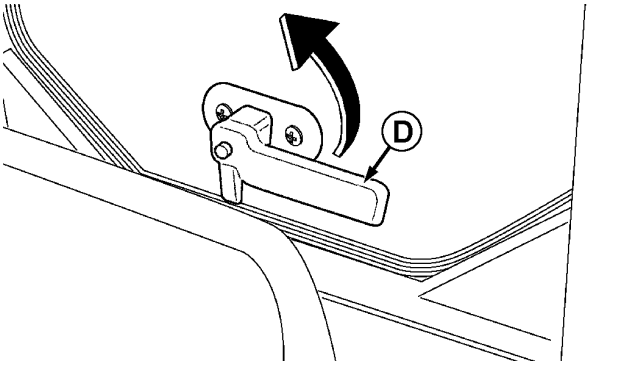
OULXBER,0001B78 -19-22DEC11-1/2

Exit through rear window

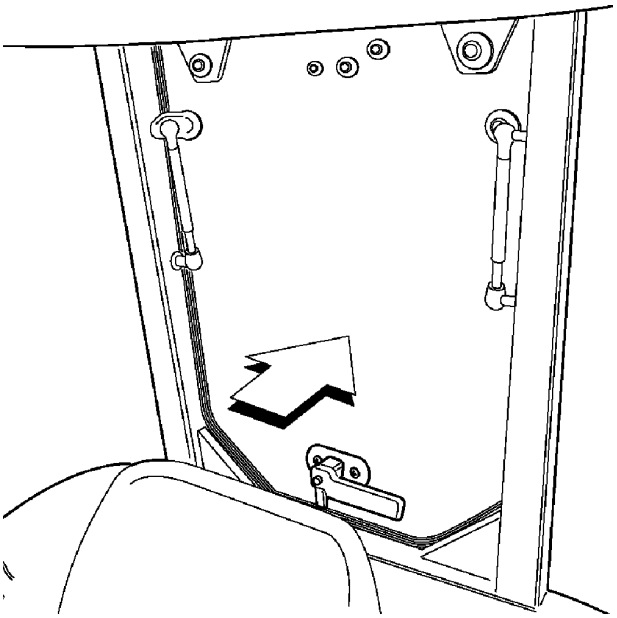
To open, press and hold knob (1) while turning lever (D) to the left. Push window outwards.



LX1054639 —UN—21DEC11



LX1054640 —UN—21DEC11



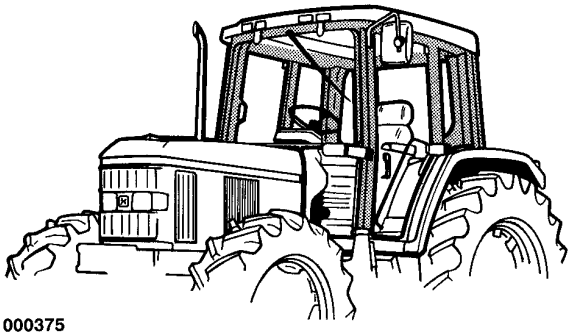
LX1054637 —UN—21DEC11

OULXBER,0001B78 -19-22DEC11-2/2

Roll-Over Protective Structure

CAUTION: A four-post roll-over protective structure (ROPS) is incorporated into each operator's cab. On this construction, as well as on ROPS on tractors without cab, do not under any circumstances modify structural members by welding on additional parts, drilling holes, cutting or grinding etc. Disregarding this instruction will affect the rigidity of the ROPS.

A tractor roll-over places a severe strain on the ROPS. Therefore, replace the ROPS immediately if structural members have been bent, buckled or otherwise damaged.



LX 000375

LX000375 —UN—03JAN95

LX,OKAB 000212 -19-01OCT90-1/1

Clean Vehicle of Hazardous Pesticides

CAUTION: During application of hazardous pesticides, pesticide residue can build up on the inside or outside of the vehicle. Clean vehicle according to use instructions of hazardous pesticides.

When exposed to hazardous pesticides, clean exterior and interior of vehicle daily to keep free of the accumulation of visible dirt and contamination.

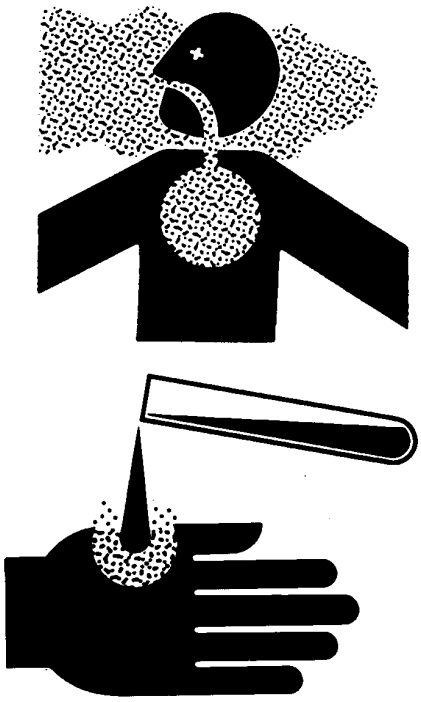
1. Sweep or vacuum the floor of cab.
2. Clean headliners and inside cowlings of cab.
3. Wash entire exterior of vehicle.
4. Dispose of any wash water with hazardous concentrations of active or non-active ingredients according to published regulations or directives.

DX,CABS2 -19-24JUL01-1/1

Avoid Contact with Agricultural Chemicals

CAUTION: This enclosed cab does not protect against inhaling vapor, aerosol or dust.

1. When operating in an environment where pesticides are present, wear a long-sleeved shirt, long-legged pants, shoes, and socks.
2. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.
3. Wear personal protective equipment as required by the pesticide use instructions when leaving the enclosed cab:
   - into a treated area
   - to work with contaminated application equipment such as nozzles which must be cleaned, changed or redirected
   - to become involved with mixing and loading activities
4. Before re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.
5. Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.



TS220 —UN—23AUG88

TS272 —UN—23AUG88

DX,CABS1 -19-25MAR09-1/1

Operating Roll-Over Protective Structure (ROPS)

CAUTION: Make certain all parts are installed correctly if roll-over protective structure (ROPS) is loosened or removed for any reason. Tighten mounting bolts to proper torque.

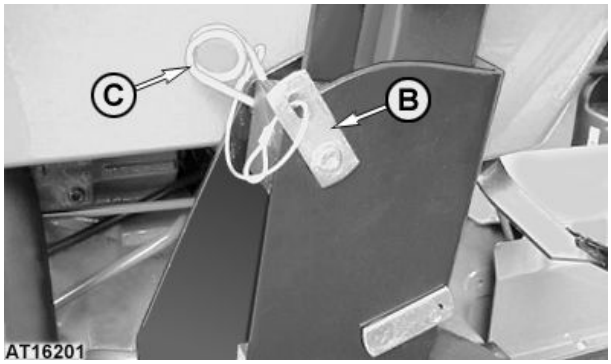
The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, as in an overturn incident, or is in any way altered by welding, bending, drilling or cutting. A damaged ROPS should be replaced, not reused. Any alteration to the ROPS must be approved by the manufacturer.

Always keep upper part of ROPS pinned in vertical position (as pictured) when operating tractor. If tractor is operated with ROPS folded (e.g. to enter a low building) drive with extreme caution.

Do not use a seat belt if operating with ROPS folded down or without ROPS.

Fold the ROPS up again as soon as the tractor is operated under normal conditions.

AT16326 —UN—11JUL03



AT16201 —UN—07FEB03

To lower ROPS:

1. Remove quick-lock pins (C) and headed pins (B).
2. Lower ROPS onto stops.
3. Reinstall pins (B) and (C) to lock ROPS in down position.

Folding ROPS into operating position:

1. Remove quick-lock pins (C) and headed pins (B).
2. Lift ROPS to position shown. Install pins (B) and quick-lock pins (C).

AJ20558,0000143 -19-12FEB08-1/1

Seat Adjustment

Adjusting Operator's Seat Position (Standard and Comfort Seat) for Tractors with Cab

Seat fore-and-aft adjustment:

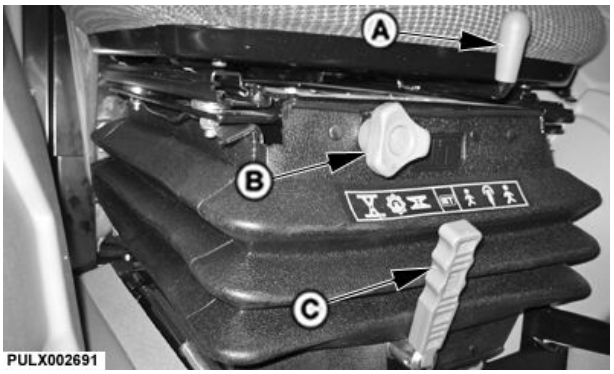
Move lever (A) and slide seat forward or backward to desired position.

Seat height adjustment:

While sitting on the seat turn knob (B).

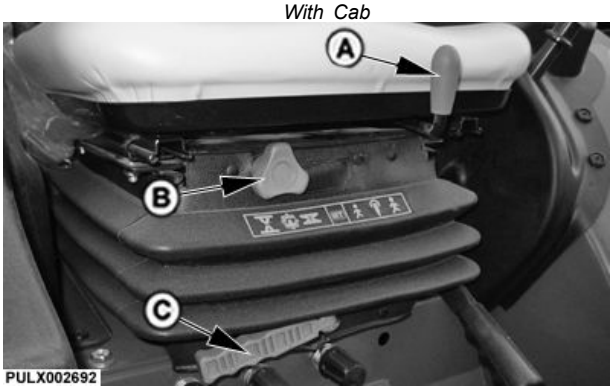
Seat suspension adjustment:

Turn the adjusting lever (C) to the desired vertical travel range.



PULX002691 —UN—06NOV08

With Cab



PULX002692 —UN—06NOV08

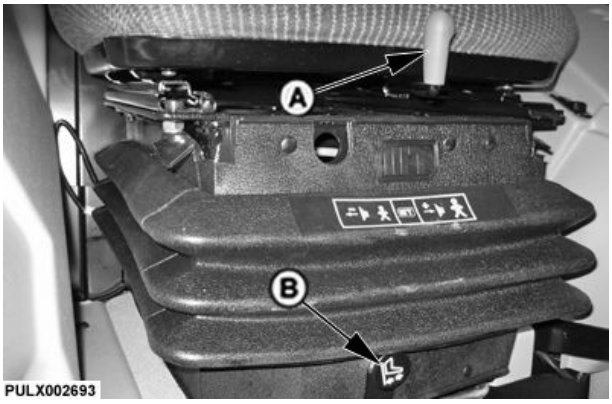
Open Operator's Station

NR25796,0001753 -19-20JAN09-1/2

Adjusting Operator's Seat Position (Air Suspension Seat) for Tractors with Cab

Move the lever (A) and slide seat forward or backward to desired position.

To adjust the seat height, operate the lower knob (B).



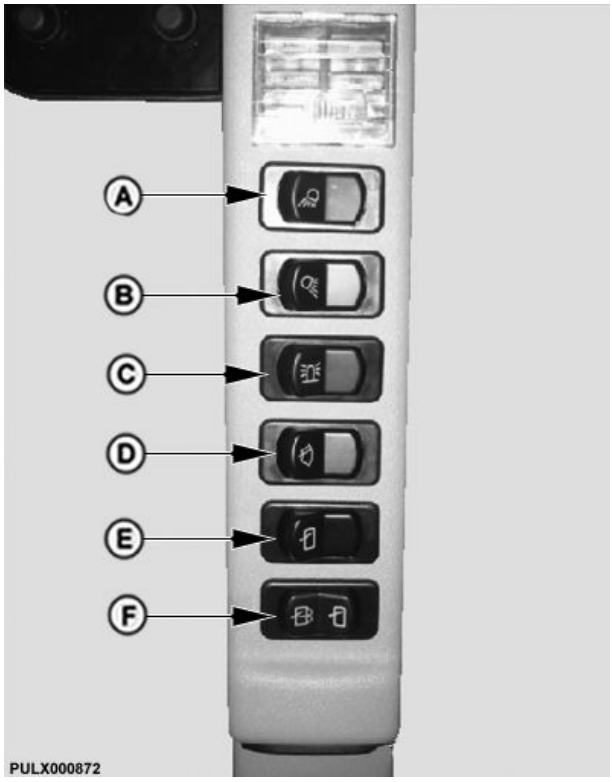
PULX002693 —UN—06NOV08

NR25796,0001753 -19-20JAN09-2/2

Operator's Cab Switches

The cab switches are located in the post on the right-hand side.

A—Front work light switch
B—Rear work light switch
C—Beacon light switch
D—Windshield wiper switch
E—Rear window wiper switch
F—Windshield/rear window washer switch

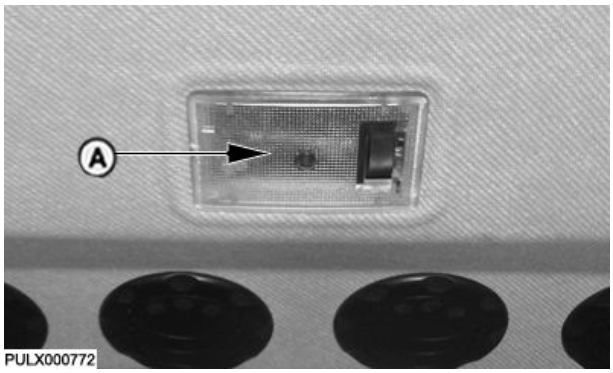


PULX000872 —UN—30JUL08

NR25796,0001754 -19-04NOV08-1/1

Dome Light

The dome light (A) can be switched on by means of the switch located at the light.



PULX000772 —UN—30JUL08

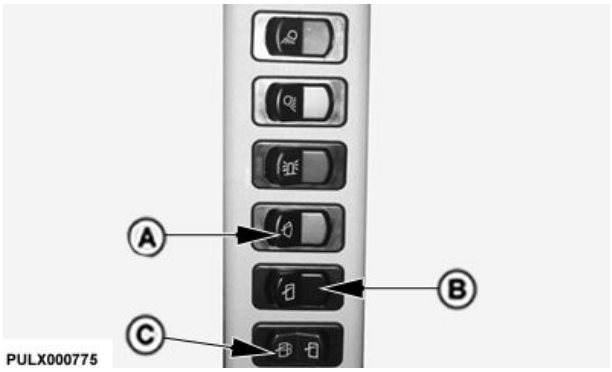
NR25796,0001755 -19-04NOV08-1/1

Wiper and Washer System

Wiper and washer system switches are located on the right-hand cab post.

Windshield and rear window wipers are operated by means of switches (A) and (B).

The washer system is operated by means of switch (C).



PULX000775 —UN—20JAN09

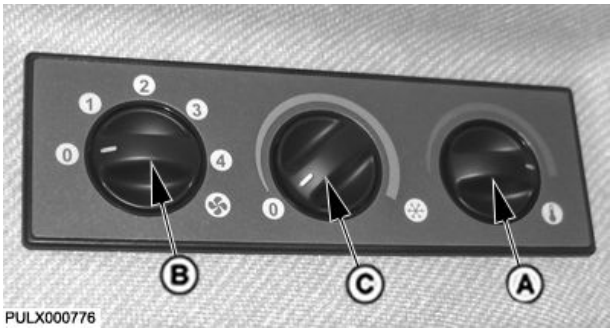
NR25796,0001756 -19-04NOV08-1/1

Heater and Air Conditioning System Controls

The cab has been designed to produce comfortable working conditions for the operator with all the windows closed. Fresh air can be brought in from outside the cab or the heated or cooled air within the cab can be recirculated.

The air conditioning system is operated with the following controls:

A—Heater control
B—Blower control
C—Air conditioner control



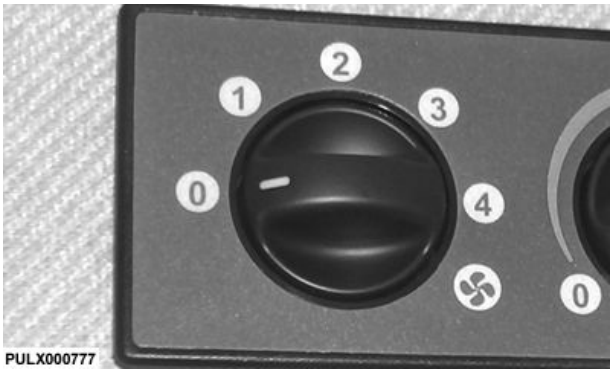
PULX000776 —UN—23JUL08

Tractors with air conditioning system

NR25796,0001757 -19-20JAN09-1/8

Blower control knob operates the four-speed blower fan. Turn the knob counterclockwise to switch off the fan.

NOTE: When the air conditioning system is switched on and fan switch is off, fan will operate at fan speed (1).

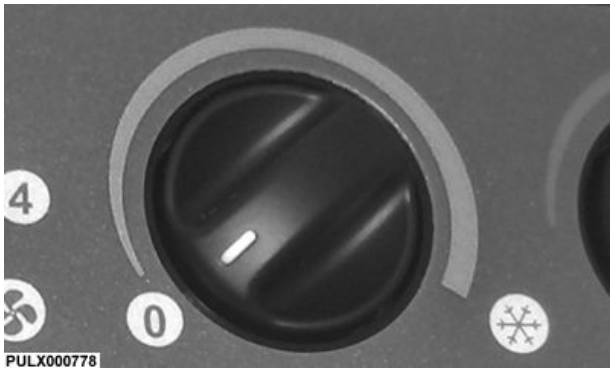


PULX000777 —UN—19SEP08

Continued on next page

NR25796,0001757 -19-20JAN09-2/8

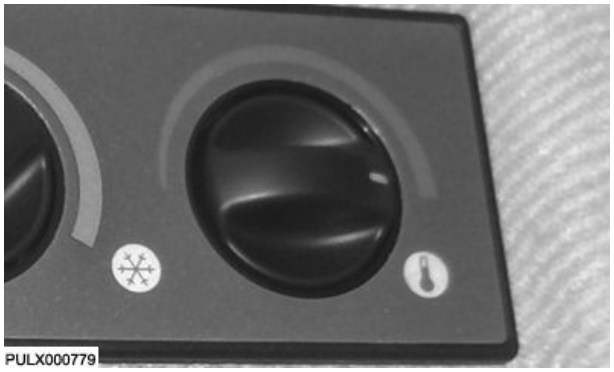
Air conditioner control knob is used to adjust the desired temperature. Turn the knob counterclockwise to switch off and clockwise to cool the air. Always turn off when not in use.



PULX000778 —UN—19SEP08

NR25796,0001757 -19-20JAN09-3/8

Heat control knob is used to adjust the heat delivered. Turn the knob counterclockwise to switch off and clockwise to heat the air. Full heat output will only be available when the engine has reached full operating temperature.



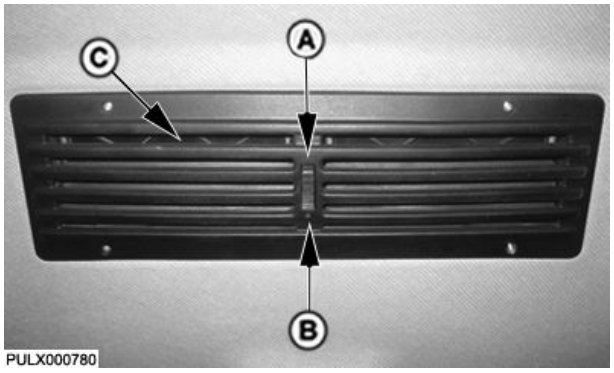
PULX000779 —UN—23JUL08

NR25796,0001757 -19-20JAN09-4/8

Air Recirculation Control

Move air recirculation control up toward (A) (close) to maximize fresh air into the cab. Moving the air recirculation control down toward (B) (open) will recirculate the air in the cab. The recirculated air will pass through the vents (C), the air filter and back into the blower.

Move air recirculation control up toward (A) (close) to obtain fresh air from outside the cab that gives the maximum cooling effect with the air conditioning off.



PULX000780 —UN—23JUL08

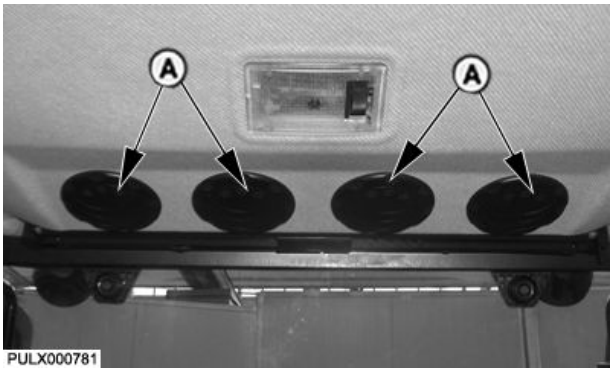
Continued on next page

NR25796,0001757 -19-20JAN09-5/8

Air Flow Louvers

Fresh air entering the cab from the outside passes through the air filter, blower, heater and air conditioner evaporator. It is blown through a set of four adjustable louvers (A) above the windshield.

CAUTION: The cab air filter is designed to remove dust from the air but may not exclude chemical vapor. Follow the chemical manufacturer's directions regarding protection from hazardous chemicals.



PULX000781—UN—30JUL08

Continued on next page

NR25796,0001757 -19-20JAN09-6/8

Cold Weather Operation

Open the air recirculation control (A) to recirculate air that has already been heated. This gives the maximum heating effect.

It will be necessary to adjust the opening of the various louvers (B) and (C) to balance the heat output between the windshield and rear window.

To move large quantities of heat to the floor, open the left-hand and right-hand louvers in row (B) and close or partially close the others. Set the blower control (D) to full speed.

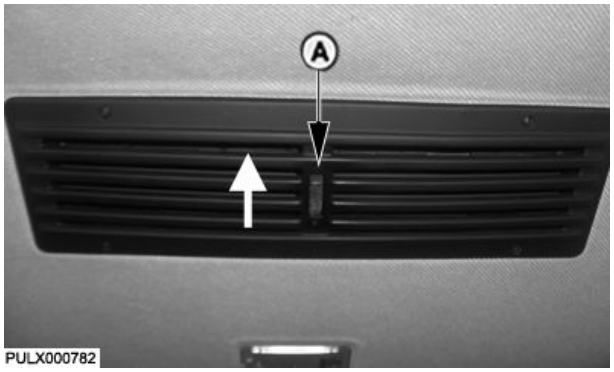
Defrosting the Windshield

Close the air recirculation control (E) to remove the humidity in the cab. When clear, open the air recirculation control to recirculate air that has already been heated. Open and direct the louvers (B) and (C) to the windshield. Set the blower control (D) to maximum.

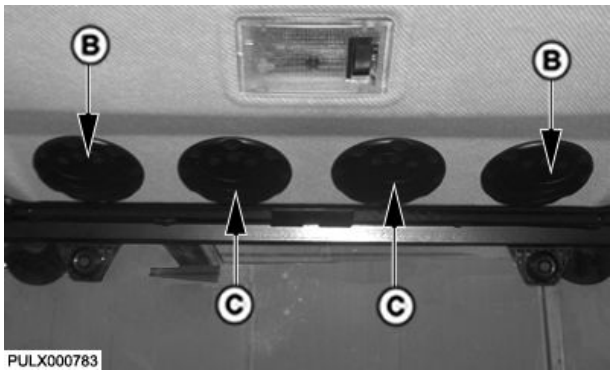
Dusty Conditions

Close the air recirculation control (E) and run the blower on maximum to pressurize the air in the cab.

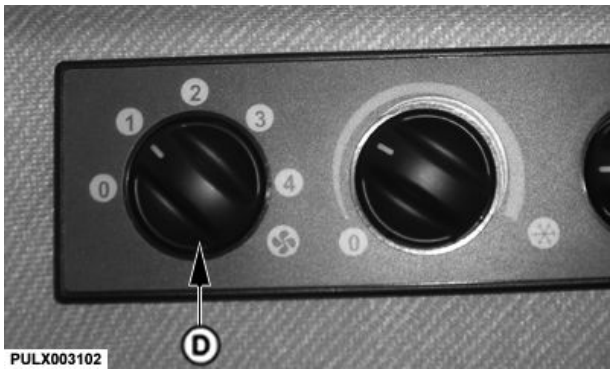
A—Air recirculation control
B—Louvers
C—Louvers
D—Blower control
E—Air recirculation control



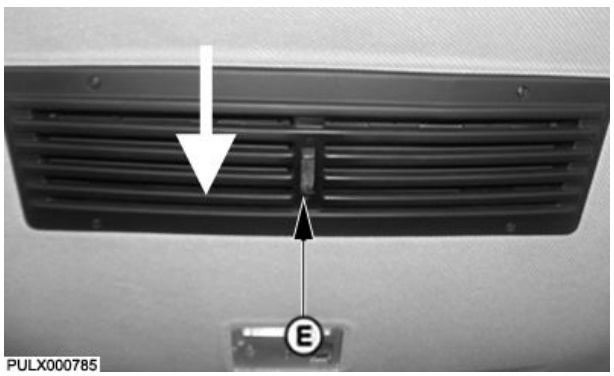
PULX000782 —UN—23JUL08



PULX000783 —UN—23JUL08



PULX003102 —UN—20JAN09



PULX000785 —UN—23JUL08

Continued on next page

NR25796,0001757 -19-20JAN09-7/8

Air Conditioning Operation

Operating the System

Make sure that all doors, windows, and the roof hatch are closed.

Make sure that the heater control (1) is turned off.

With the engine running, turn on the air conditioner temperature control (2).

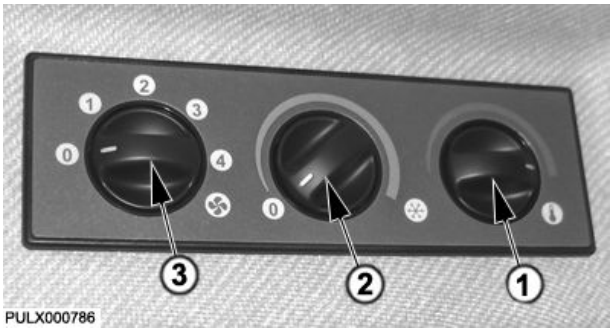
Turn on the blower control (3) to mid speed.

Fully open the air recirculation control (4) by moving left. This will recirculate the air that has been already cooled to give the best cooling effect.

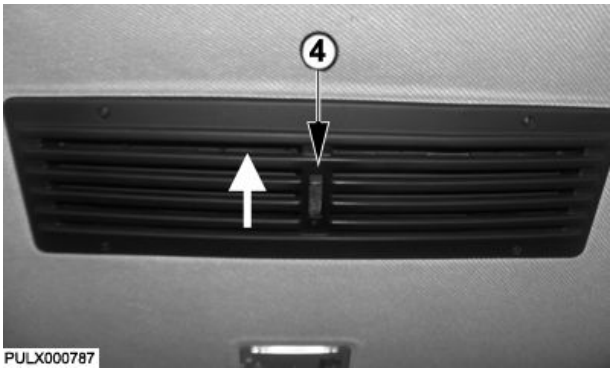
Open and adjust the louvers (5) to obtain the best cooling for the ambient temperature and humidity. Lower blower speeds result in cooler air.

When the desired temperature has been obtained, adjust the blower speed and temperature control to maintain the cooling level. If problems are experienced with the system, immediately inspect for a clogged condenser in front of the engine radiator.

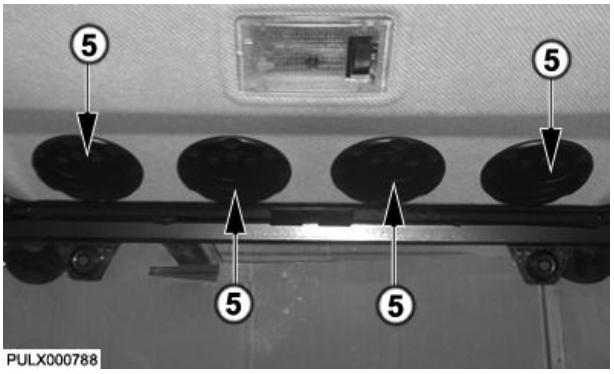
IMPORTANT: Switch on the air conditioning system for approximately 20 minutes every month, even in the cooler seasons. This lubricates the moving parts of the system, e.g. the compressor, and prevents loss of refrigerant.



PULX000786 —UN—23JUL08



PULX000787 —UN—23JUL08



PULX000788 —UN—23JUL08

NR25796,0001757 -19-20JAN09-8/8

Sun Visor

A front sun visor is available.

Push button (A) for partial or complete rewinding of the curtain.

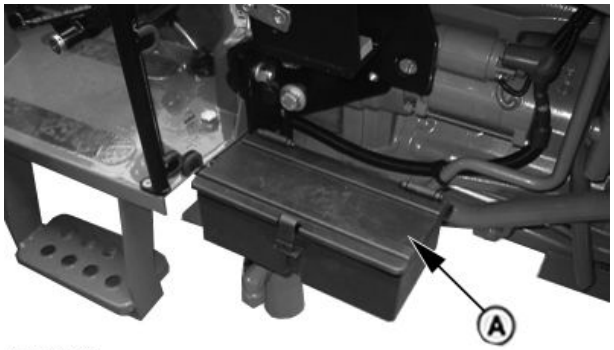
Guide curtain movement by hand to avoid any damage to it.

PULX000789 —UN—30JUL08

NR25796,0001758 -19-25MAR09-1/1

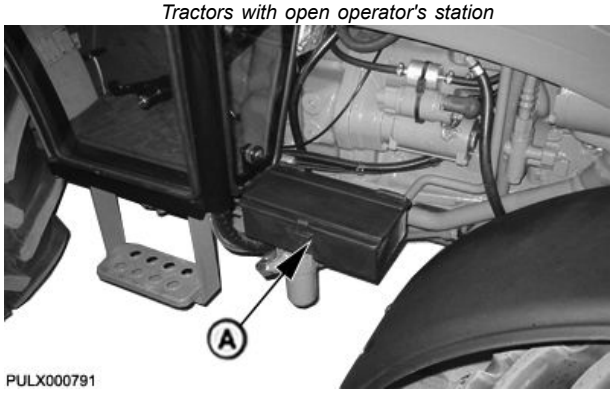
Tool Box

The tool box (A) can be used for storing a number of tools.



PULX000790 —UN—24JUL08

Tractors with open operator's station



PULX000791 —UN—06NOV08

Tractors with cab

NR25796,0001759 -19-25MAR09-1/1

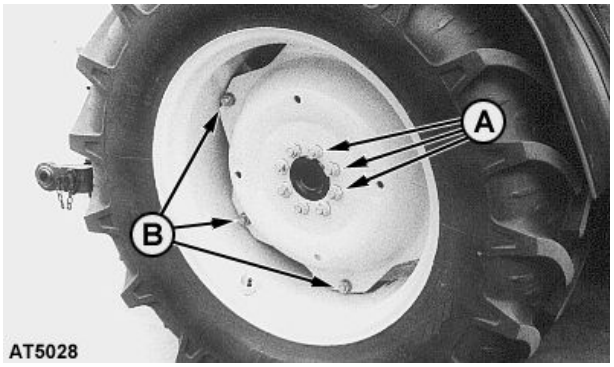
After the First 4 and 8 Hours of Operation

Tighten rear wheel nuts and bolts to specified torque

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

Specification

(A)—Torque..... 500 N·m (370 lb-ft)
(B) M18 bolt—Torque..... 300 N·m (220 lb-ft)
(B) M16 bolt—Torque..... 230 N·m (170 lb-ft)



AT5028 —UN—15AUG97

(A) — Disk to axle flange **(B) — Rim to disk**

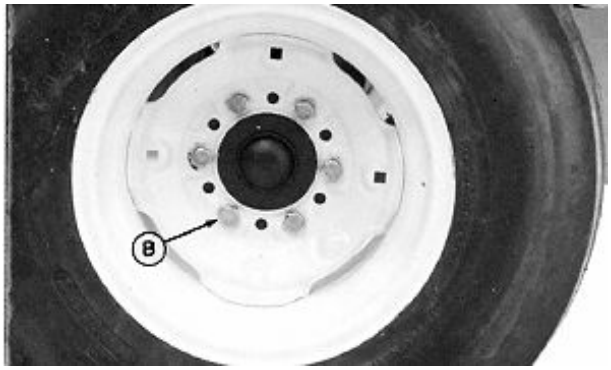
OULXA64,0000DAD -19-25JUL07-1/4

Tighten front wheel nuts and bolts to specified torque

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

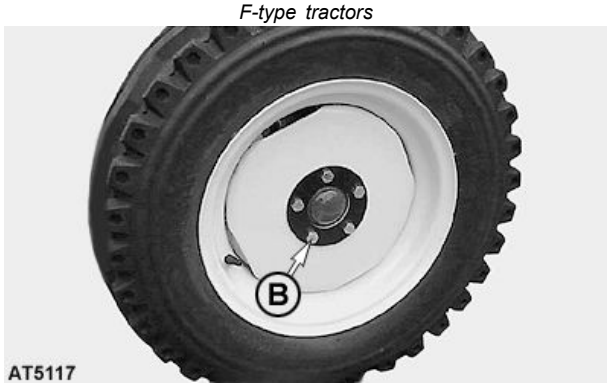
Specification

(B) F-type tractors—Torque..... 175 N·m (130 lb-ft)
(B) V-type tractors—Torque..... 160 N·m (120 lb-ft)



M46420 —UN—31JAN92

F-type tractors



AT5117 —UN—25OCT00

V-type tractors

(B) — Disk to axle flange

Continued on next page

OULXA64,0000DAD -19-25JUL07-2/4

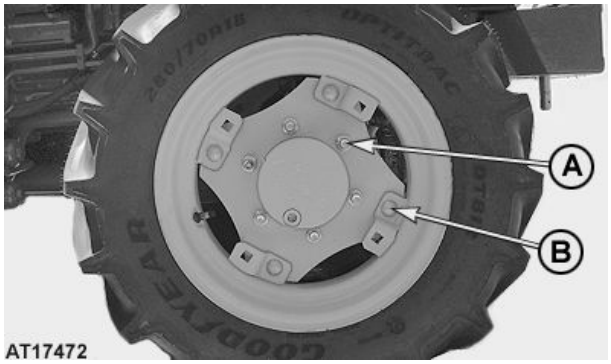
Tighten wheel nuts of front wheel drive axle

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

Specification

(A)—Torque..... 300 N·m (220 lb-ft)
(B) —Torque..... 230 N·m (170 lb-ft)

(A) — Disk to axle flange **(B) — Rim to disk**



AT17472 —UN—26JUL07

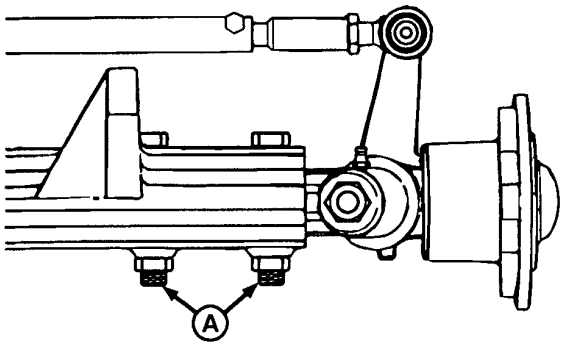
OULXA64,0000DAD -19-25JUL07-3/4

Adjustable front axle (tractors without front wheel drive)

Specification

(A)—Torque.....150 N·m (110 lb-ft)

(A) — Axle bolts



LV812 —UN—20JUL94

OULXA64,0000DAD -19-25JUL07-4/4

Within the First 100 Hours of Operation

Wheel retaining bolts

Check torque of wheel retaining bolts frequently.

Engine

The engine is filled with John Deere ENGINE BREAK-IN OIL. To break in the engine properly, comply with the following points:

- Operate the engine in the mid- to upper load range, and do not idle it for long periods of time.

- Check oil level in engine frequently.

IMPORTANT: Top up with oil only when the level has dropped to the "ADD" mark.

NOTE: During the break-in period a higher-than-usual oil consumption should be considered as normal.

- If necessary, top up with John Deere ENGINE BREAK-IN OIL to the "XXX" mark. If John Deere ENGINE BREAK-IN OIL is not available, use a diesel engine oil meeting one of the following:

- API Specification CC
- API Specification CD
- ACEA Specification E1

- If CC, CD or E1 oils are not available, then use CE or E2 types of oil.

IMPORTANT: During the first 100 hours, under NO circumstances use John Deere PLUS-50 oil or any oil that meets the following: API CH-4, API CG4, API CF4, ACEA E5, ACEA E4 or ACEA E3. These oils do not satisfy the requirements for breaking in the engine.

- After the first 100 hours, use a type of oil described in the "Fuel, Lubricants, Hydraulic Oil and Coolant" section.

OULXA64,0000B66 -19-24SEP03-1/1

After First 100 Hours of Operation

Change engine oil. See ”Service - Every 250 Hours”.

Replace engine oil filter element. See ”Service - Every 250 Hours”.

Check air intake hoses for leaks. See ”Service - Every 500 Hours”.

Change transmission/hydraulic oil filter. See ”Service - Every 250 Hours”.

Change oil in front wheel drive axle. See ”Service - Every 1500 Hours”.

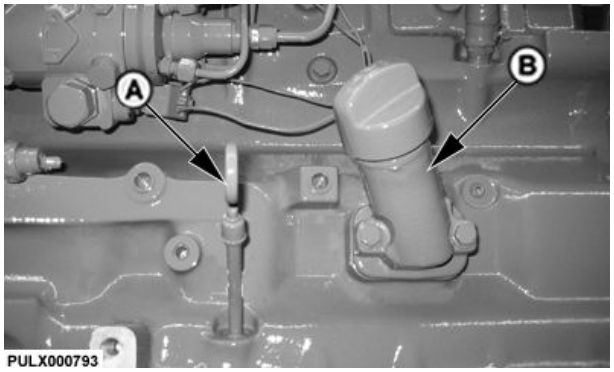
Check mounting bolts of cab or ROPS for tightness.

AJ20558,0000145 -19-12FEB08-1/1

Prestarting Checks

1. Check engine oil level. Remove dipstick (A), wipe clean and reinsert it fully. Remove and check oil level.

   Safe operating range is between the two marks on dipstick (A). Do not operate engine when oil level is below lower mark on dipstick (A). In this case add specified oil through filler neck (B). See Section 80, Fuel, Lubricants, Hydraulic Oil and Coolant.



PULX000793 —UN—20NOV08

NR25796,000175A -19-20JAN09-1/2

2. Check coolant level in expansion tank (A). If engine is cold and level is below ”LOW” mark, add coolant to bring level to ”LOW” mark.

NOTE: Coolant level with a cold engine should be at the ”LOW” mark. With engine at operating temperature, coolant level should be at the ”FULL” mark.

3. Lubricate the following items every 10 hours of operation when operating in extremely wet or muddy conditions:

   - Front axle pivot pin
   - Front axle king pins
   - Tie rod ends

   Use specified multi-purpose grease. See Section 80, Fuel, Lubricants, Hydraulic Oil and Coolant.

PULX002994 —UN—19JAN09

For detailed information, refer to Lubrication and Periodic Service in Section 85.

NR25796,000175A -19-20JAN09-2/2

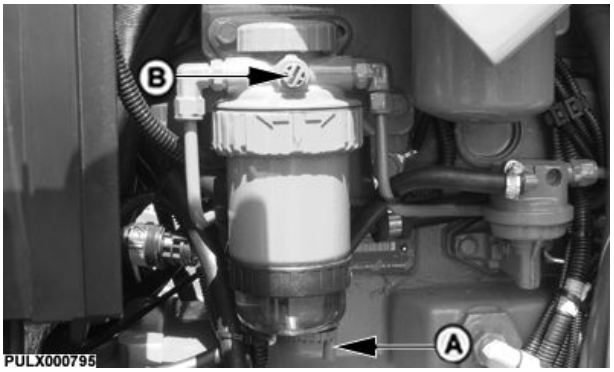
Check the Fuel Filter

CAUTION: Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.

1. Loosen drain screw (A) and bleed screw (B).
2. Retighten drain screw (A) as soon as water and sediment deposits have drained out.
3. Turn key in main switch to the right (first switch position) so that the fuel transfer pump is operating. Keep the pump running for approx. 20 seconds.
4. Close bleed screw (B) after air has been completely removed from the system.

If water was present in fuel filter, open fuel tank drain screw (C), located under the lower fuel tank, to bleed accumulated moisture and sediment from the fuel tank. After draining off any water deposits, retighten drain screw (C) until it is hand-tight.

NOTE: Place a small container under drain screw to catch draining fuel.



PULX000795 —UN—04SEP08

PULX000796 —UN—24JUL08

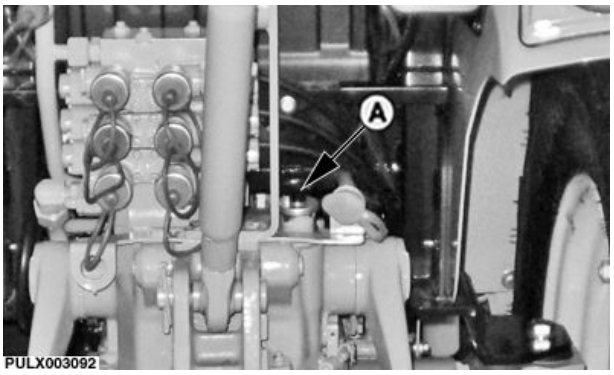
NR25796,000175B -19-22JAN09-1/1

Check Transmission/Hydraulic System Oil Level

Remove dipstick (A), wipe clean and reinsert it fully. Oil level should be between full mark and end of dipstick.

Proceed as described in ”Checking Transmission/Hydraulic System Oil Level” in Section ”Service - Daily or Every 10 Hours”.

If using implements that require a greater quantity of oil in the hydraulic circuit, the oil level must be up to mark ”XXX”.



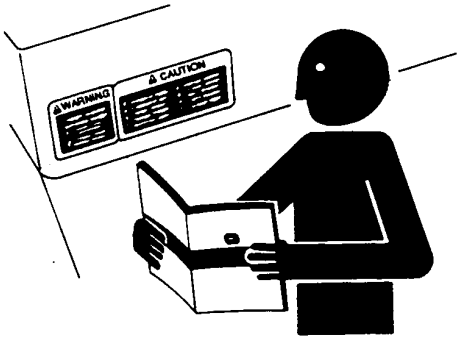
PULX003092 —UN—09APR09

NR25796,000175C -19-09APR09-1/1

Comply with Operator's Manuals of Implement Manufacturers

CAUTION: Before operating the tractor in conjunction with a mounted implement or trailer, it is the responsibility of the operator to make himself familiar with the relevant Operator's Manuals. Operator errors may have serious consequences.

Operator's Manuals and the safety decals on mounted implements and trailers provide important information on how to operate them safely. For this reason, it is important to make yourself familiar with them before starting work. Operator's Manuals must be provided for all operators of the tractor.



TS201 —UN—23AUG88

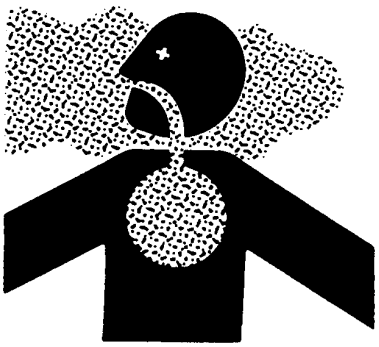
OULXBER,0001B74 -19-16DEC11-1/1

Starting the Engine

CAUTION: Prevent asphyxiation. Engine exhaust fumes can cause sickness or death to you or someone else.

If you must operate engine in a building, make sure there is adequate ventilation. Either use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to bring enough outside air into the area.

Also refer to Prevent Machine Runaway in the Safety section.



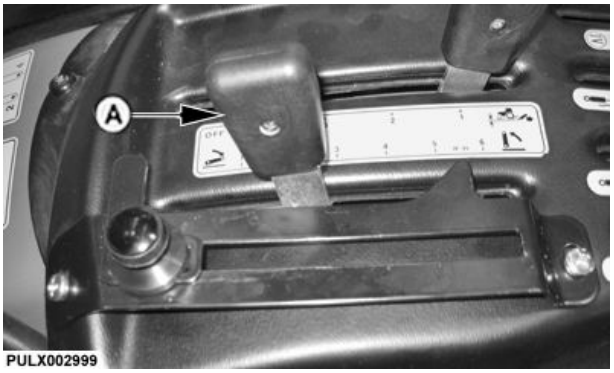
TS220 —UN—23AUG88

NOTE: If temperature is below 5° C (40° F), refer to Cold Weather Starting Procedure Using Intake Air Heater System in this Section.

NR25796,00017CD -19-21JAN09-1/7

1. Check fuel gauge to be sure that there is plenty of fuel in the tank.
2. Place hitch control lever (A) in lower position.
3. Check alternator indicator light and engine oil pressure indicator light. The indicator lights should glow when main switch is turned to the ON position.

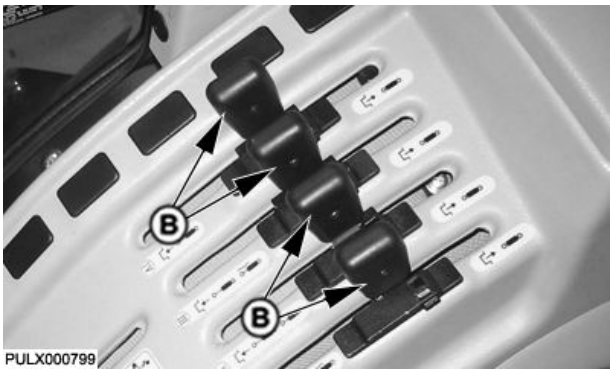
   If any light does not function properly, see your John Deere dealer.



PULX002999 —UN—19JAN09

NR25796,00017CD -19-21JAN09-2/7

4. Set selective control valve levers (B) to neutral position.



Tractor with Cab Shown

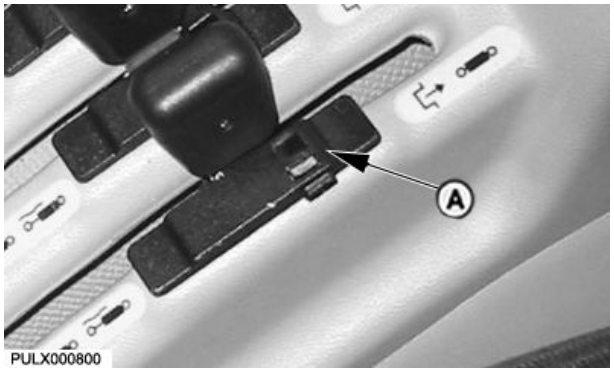
PULX000799 —UN—24JUL08

Continued on next page

NR25796,00017CD -19-21JAN09-3/7

NOTE: Apply locks (A) when driving on roads and whenever the control levers are in neutral because they are not required.

5. Locks (A) allow the control levers to be secured in neutral.



PULX000800 —UN—24JUL08

NR25796,00017CD -19-21JAN09-4/7

6. Move hand throttle lever (C) to a medium speed setting (first third of lever travel).

PULX000851 —UN—24JUL08

NR25796,00017CD -19-21JAN09-5/7

7. Move gear shift lever (T) to neutral.

NOTE: The engine will not start if gear shift lever (T) is in engaged position.

⚠ CAUTION: On tractors with 24/12 speed transmission, always engage park brake and put the gear shift lever in neutral position before restarting the tractor. Otherwise the tractor may move slightly even with the reverse drive lever in neutral position.

IMPORTANT: On tractors with 24/12 speed transmission, first move reverse drive lever to neutral position and then to the desired driving direction in order to move the tractor.

PULX001953 —UN—03OCT08

Continued on next page

NR25796,00017CD -19-21JAN09-6/7

NOTE: The engine will not start if PTO clutch lever (A) is in engaged position.

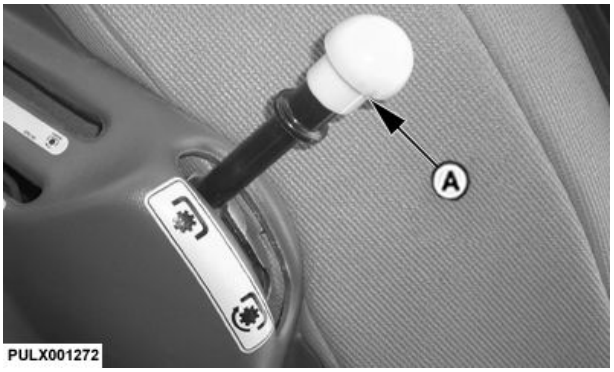
8. Turn key in main switch (E) clockwise to end position. Release key as soon as engine starts.

IMPORTANT: DO NOT operate starting motor more than 20 seconds at a time. If engine does not start, turn main switch to ZERO position and wait at least one minute for the starting motor to cool before trying again.

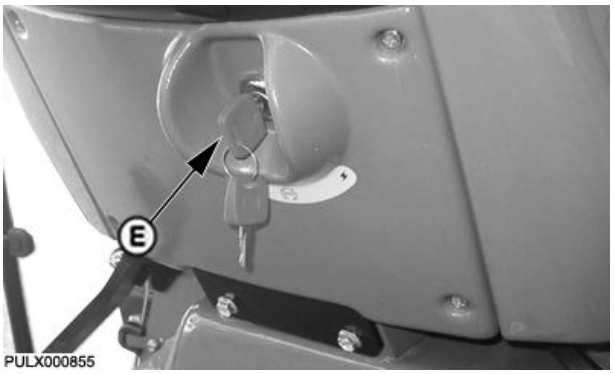
Do not adjust hand throttle lever. Run engine for a few minutes. At temperatures below zero, extend warm-up period accordingly.

CAUTION: Never operate the engine in a closed building. Make sure there is plenty of ventilation.

Danger of asphyxiation!



PULX001272 —UN—03SEP08



PULX000855 —UN—24JUL08

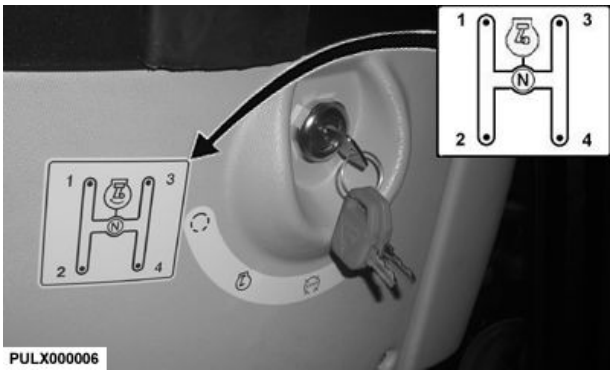
NR25796,00017CD -19-21JAN09-7/7

Neutral Start Switch

CAUTION: If a range and a gear is selected with the engine running and the reverse drive lever is not in neutral position the tractor will start moving.

Always engage parking brake and put the gear lever in NEUTRAL position before restarting the tractor. Otherwise the tractor may move slightly even with the reverse drive lever in neutral position.

NOTE: If the tractor is equipped with neutral start switch on the transmission, the gear lever has to be in neutral position, otherwise the engine will not start.



PULX000006 —UN—08FEB08

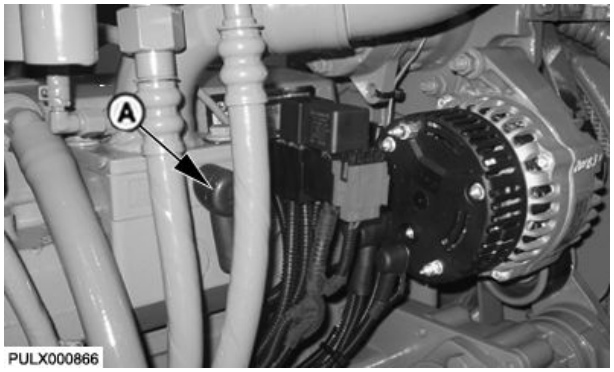
SS40167,0000040 -19-25MAR09-1/1

Cold Weather Starting Procedure Using Intake Air Heater System

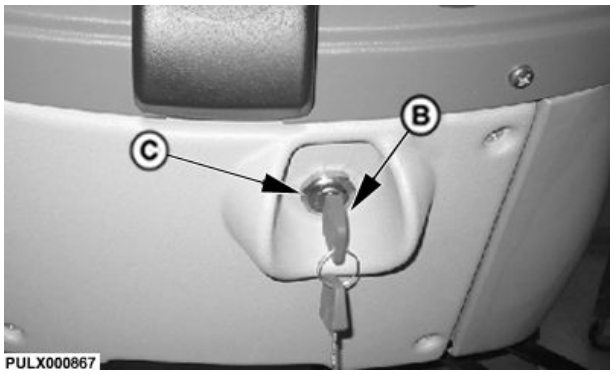
CAUTION: DO NOT use starting fluid on a tractor equipped with an intake air heater system (ask your John Deere dealer for a complete list of other starting aids available).

The tractors are equipped with an intake air heater system. An electric heating element (A) warms up the intake air.

1. Activate the intake air heater system by pushing in the main switch (C) with the ignition key (B). Hold the key in for 10 to 15 seconds with temperatures down to -18° C (0° F), for 30 seconds with temperatures down to -23° C (-10° F) and up to 45 seconds with temperatures below -23° C (-10° F).
2. Turn main switch (C) clockwise and start engine.
3. If engine runs rough, activate the intake air heater system by pressing in the main switch until engine runs smoothly.



PULX000866 —UN—29JUL08



PULX000867 —UN—29JUL08

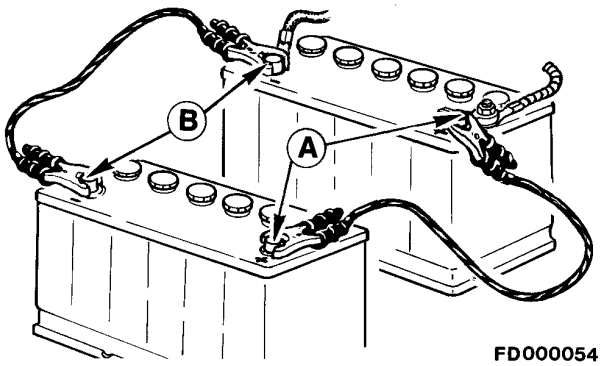
NR25796,00017CE -19-21JAN09-1/1

Start With a Booster Battery

CAUTION: Gas given off by batteries is highly explosive. Keep sparks and naked flames away from batteries. Be sure polarity is correct before making connections: ground cable to negative pole and starter cable to positive pole of battery.

Reversed polarity will damage the electrical system. Always connect positive cable first and then negative cable!

Connections to allow an additional 12-volt battery to be brought into the circuit represent an effective aid to starting. Connect positive poles (A) of battery before connecting negative poles (B).



FD000054 —UN—26JAN95

NR25796,00017CF -19-26MAR09-1/1

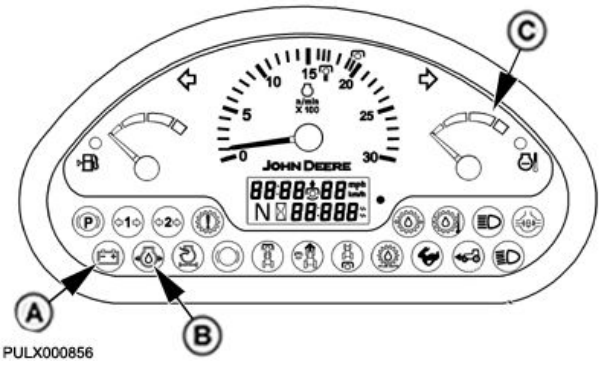
Start the Engine With a Slave Battery

IMPORTANT: If the engine is to be run for a short time without battery (using a slave battery for starting), do not raise engine speed above 1000 rpm. Furthermore, use additional current (lights) while engine is running. Insulate battery end of disconnected starter cable properly to avoid damage to both alternator and regulator.

NR25796,00017D0 -19-04NOV08-1/1

Observe Instruments After Starting the Engine

IMPORTANT: If alternator indicator light (A) or engine oil pressure indicator light (B) fail to go out or coolant temperature gauge (C) indicates hot, stop engine and determine the cause.



PULX000856

PULX000856 —UN—29JUL08

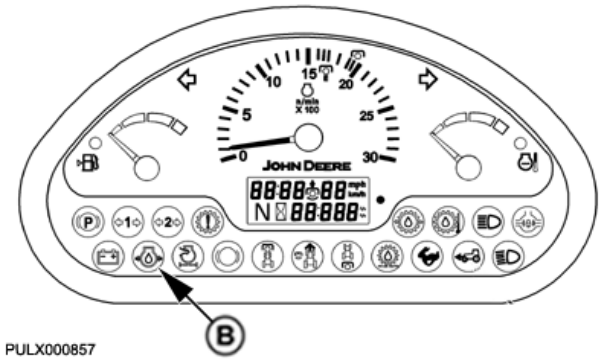
NR25796,00017D1 -19-26MAR09-1/1

Engine Oil Pressure Indicator

IMPORTANT: NEVER operate engine without sufficient oil pressure. If light glows longer than 5 seconds under normal operating conditions, stop engine and check for cause.

Engine oil pressure indicator light (B) will glow if engine oil pressure is low. Light should glow when key is turned to engage starting motor and go out when engine starts.

If low oil level is not the problem, see your John Deere dealer.



PULX000857

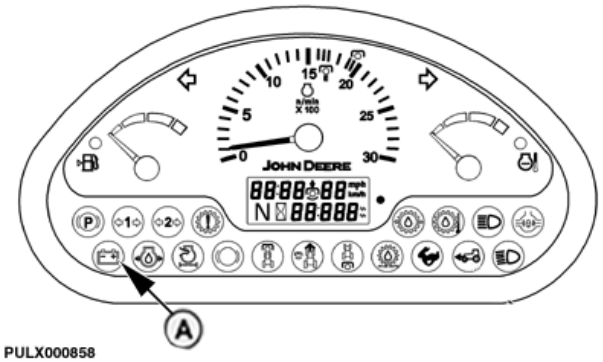
PULX000857 —UN—29JUL08

NR25796,00017D2 -19-21JAN09-1/1

Alternator Indicator Light

The alternator indicator light (A) will glow when alternator output is low. Light should glow when key is turned to engage starting motor and go out when engine starts.

If light glows longer than 5 seconds under normal operating conditions, stop engine and check for cause. If loose or broken fan belt is not the cause, see your John Deere dealer.



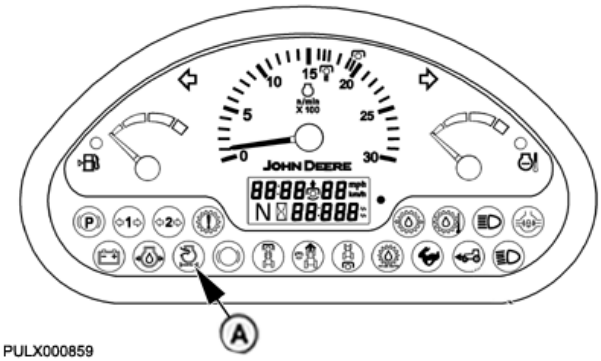
PULX000858

PULX000858 —UN—09APR09

NR25796,00017D3 -19-04NOV08-1/1

Air Cleaner Restriction Indicator Light

The air cleaner restriction indicator light (A) will glow if air cleaner becomes plugged. Service air cleaner as soon as possible.



PULX000859

PULX000859 —UN—29JUL08

NR25796,00017D4 -19-04NOV08-1/1

Coolant Temperature Gauge

The needle on the coolant temperature gauge (A) rises as engine warms up. If needle reaches red zone, stop engine and determine the cause.

Check coolant level in coolant expansion tank and radiator when engine cools. Also check grille, radiator and radiator screen for plugging. Check fan belt tension. If problem is not corrected, see your John Deere dealer.

PULX000860

PULX000860 —UN—29JUL08

NR25796,00017D5 -19-21JAN09-1/1

Observe Fuel Level

IMPORTANT: Use diesel fuel only. Refer to Section Fuel, Lubricants and Coolant for fuel specifications.

Refuel before gauge (A) reaches empty mark.

Should tractor run out of fuel and not start in several tries, air must be bled from fuel system. See Bleed Fuel System in Section 130, Service - As Required.

PULX000861

PULX000861 —UN—29JUL08

NR25796,00017D6 -19-26MAR09-1/1

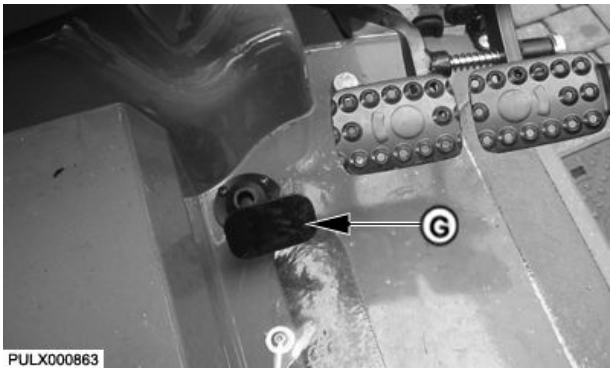
Change Engine Speeds

To increase speed, push hand throttle (F) forward.

PULX000862 —UN—29JUL08

NR25796,00017D7 -19-15DEC08-1/2

To increase engine speed temporarily above hand throttle setting, depress foot throttle (G).



PULX000863 —UN—29JUL08

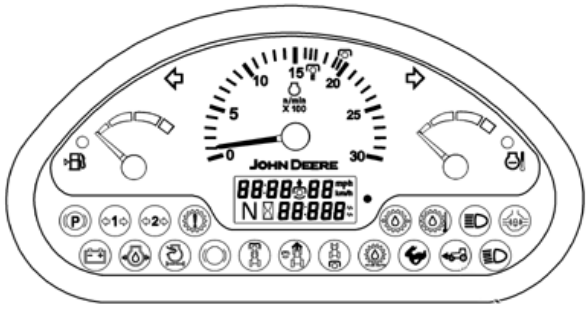
NR25796,00017D7 -19-15DEC08-2/2

Warm Up the Engine

Do not place tractor under full load until engine is properly warmed up.

1. Run engine at about 1500 rpm for several minutes.
2. Run engine at about 1900 rpm and under light load until engine reaches normal operating temperature.

NOTE: If hydraulic functions are slow, refer to Cold-Weather Operation in Section 50, Hitch.



PULX000864 —UN—29JUL08

NR25796,00017D8 -19-21JAN09-1/1

Restart a Stalled Engine

Should the engine stall when operating under load, restart it immediately to prevent abnormal heat build up and continue with normal operation or operate at slow idle for 1 or 2 minutes before stopping.

NR25796,00017D9 -19-26MAR09-1/1

Engines with Turbocharger

IMPORTANT: If the engine stalls when in operation, restart it IMMEDIATELY. This will prevent the turbocharger from overheating.

Most damage to the turbocharger is caused by not following the correct procedure when starting and shutting off the engine. After starting and before shutting off, idle the engine without load for at least 30 seconds.

NR25796,00017DA -19-26MAR09-1/1

Avoid Idling the Engine

Allowing engine to idle at low rpm uses fuel inefficiently, and can cause a build-up of carbon in the engine.

If tractor must be left with the engine running more than 3 or 4 minutes, minimum engine speed should be 1200 rpm.

PULX000864

PULX000864 —UN—29JUL08

NR25796,00017DB -19-26MAR09-1/1

Observe Engine Work and Idle Speeds

Slow idle speed should be 825 to 875 rpm. At light or no load, full throttle speed will increase to 2460 - 2510 rpm.

Engine rated speed is 2300 rpm.

Normal operating speed is 1200 to 2300 rpm. Within these limits engine can be put under full load.

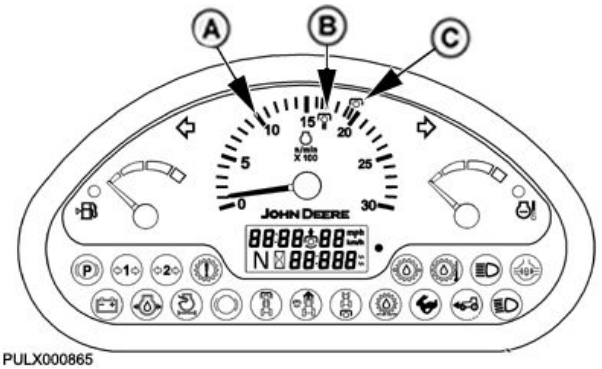
NR25796,00017DC -19-26MAR09-1/1

Speedometer, Revolution Counter and Hour Meter

Revolution counter (A) shows engine rpm, read in hundreds.

For standard 540 rpm PTO speed, increase engine speed until needle is aligned with 1938 rpm mark (C).

For 540E PTO operation, increase engine speed until needle is aligned with 1648 rpm mark (B).



PULX000865

PULX000865 —UN—29JUL08

Continued on next page

NR25796,00017DD -19-21JAN09-1/8

Digital Display - Clock Adjustment

1. With the engine running, push button (A) until clock mode is shown on the dashboard panel (B).
2. Keep button (A) pressed for more than 3 seconds to gain access to hour setup function.

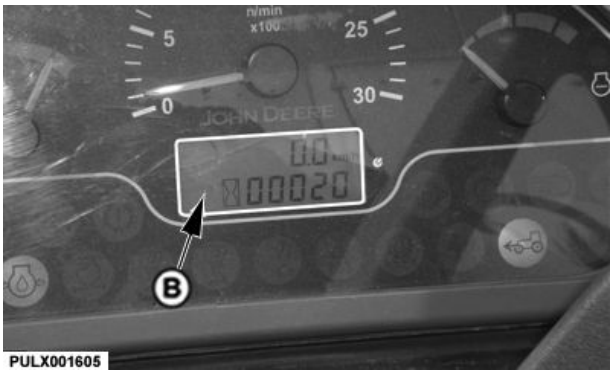
   Time Setting:

   - Hours flashing
   - Push button (A) to set correct hour (C).
   - Keep button (A) pressed to gain access to minutes setup function.
   - Minutes flashing
   - Push button (A) to set correct minutes (D).
   - Choose between 12/24h mode (E) and keep button (A) pressed for more than 3 seconds to complete the setup procedure.

A—Clock Adjustment Button
B—Dashboard
C—Hour
D—Minutes
E—12/24h mode

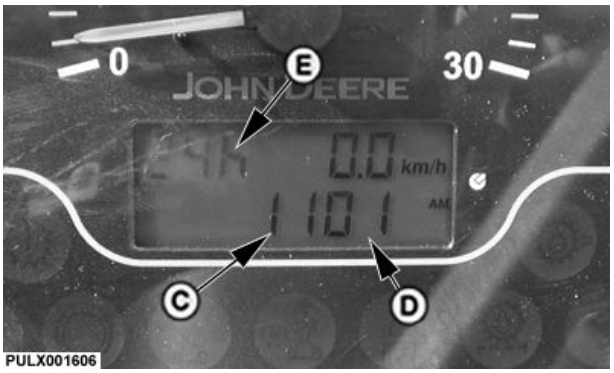
PULX001604

PULX001604 —UN—24SEP08



PULX001605

PULX001605 —UN—24SEP08



PULX001606

PULX001606 —UN—19SEP08

Continued on next page

NR25796,00017DD -19-21JAN09-2/8

Digital Display - Initial Setup Procedure

Data indicated by digital display depend on the tractor configuration:

— Tire size

— PTO rpm (540/540E or 540/1000 rpm)/

— Transmission type (24/24 or 24/12 speeds)

— Front PTO

— 2WD/4WD

If one of these factors changes (e.g. tire size), the program number must also be changed.

Refer to the chart below for the appropriate program number.

Example:

For setup of PTO/mechanical transmission or PowrReverser transmission:

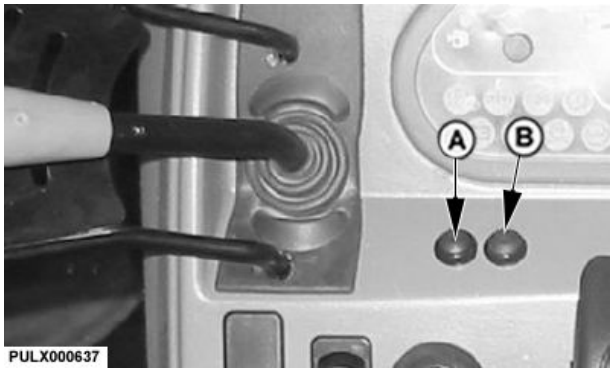
- 540 rpm PTO only (Mechanical reverser)
- **Appropriate program number: 10**

For setup of tire size :

- New tire size: 320/70-R20
- **Appropriate new program number: 309**

How to change the program number:

1. With the ignition key in OFF position, press and hold program buttons (A) and (B) and turn the key (C) to the first position.



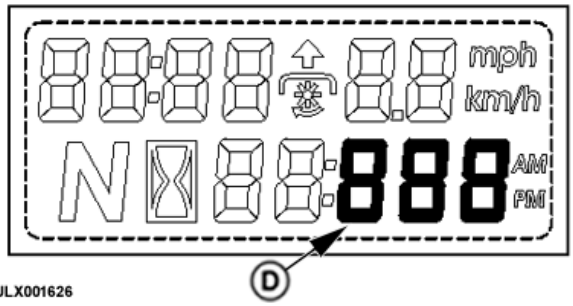
PULX000637 —UN—19JUN08

PULX000638 —UN—19JUN08

Continued on next page

NR25796,00017DD -19-21JAN09-3/8

2. **For Tire size:** Digit (D) flashes, press button (B) to choose the digit and confirm it by pressing button (A).



PULX001626

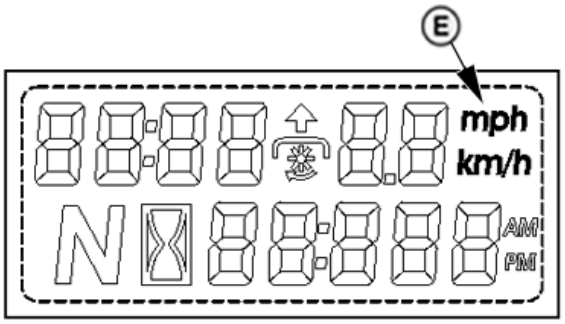
PULX001626 —UN—25SEP08

TIRE SIZE - INSTRUMENT SETUP						
REAR TIRES	**REAR TIRES**	**REAR TIRES**	**REAR TIRES**	**ROLLING CIRCUM-FERENCE (m)**	**F TYPE TRACTORS**	**V TYPE TRACTORS**
320/70-R20	11.2-R20	280/85-R20		2.955	309	287
360/70-R20	12.4-R20	320/85-R20		3.128	292	271
380/70-R20				3.225	283	263
320/70-R24	11.2-R24	280/85-R24		3.285	278	258
360/70-R24	12.4-R24	320/85-R24		3.423	266	247
9.5-R28	250/85-R28			3.402	268	249
380/70-R24	13.6-R24	340/85-R24		3.566	256	237
320/70-R28	11.2-R28	280/85-R28		3.585	254	236
480/65-R24				3.680	248	230
420/70-R24	14.9-R24	380/85-R24		3.714	246	228
360/70-R28	12.4-R28	320/85-R28		3.743	244	226
380/70-R28	13.6-R28	340/85-R28		3.870	236	219
480/70-R24	16.9-R24	420/85-R24		3.921	233	216
480/65-R28				3.980	229	213
420/70-R28	14.9-R28	380/85-R28		4.057	225	209
420/70-R30	14.9-R30	380/85-R30		4.214	216	201
480/70-R28	16.9-R28	420/85-R28	13.6-R28	4.235	215	200
12.4-R36	320/85-R36			4.362	209	194
540/65 R30				4.390	208	193
480/70-R30	16.9-R30	420/85-R30		4.423	206	191
480/70-R34	16.9-R34	420/85-R34		4.729	193	179
18.4-R26				4.285	213	198
18.4-R34	13.6-R38			4.838	189	175
16.9-R38				4.995	183	170
23.1 - 26				4.805	190	176
18.4-R30				4.629	197	183

Continued on next page

NR25796,00017DD -19-21JAN09-4/8

3. **For km/h or mph mode:** Set km/h or mph mode (E) and confirm by pressing button (A).

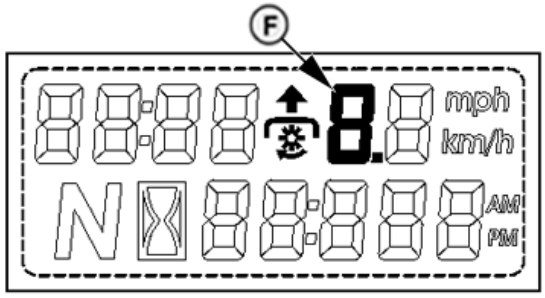


PULX001627

PULX001627 —UN—25SEP08

NR25796,00017DD -19-21JAN09-5/8

4. **For PTO/mechanical transmission or PowrReverser transmission:** Enter the value (F) and confirm by pressing button (A).



PULX001628

PULX001628 —UN—25SEP08

PROGRAM CODE FOR PTO/MECHANICAL TRANSMISSION OR POWRREVERSER TRANSMISSION			
NO.	**TRANSMISSION TYPE**	**SLOW PTO SPEED**	**FAST PTO SPEED**
4	24/12, PowrReverser	540	
5	24/12, PowrReverser	540	540E
6	24/12, PowrReverser	540	1000
10	24/24 with mechanical Hi-Lo	540	
11	24/24 with mechanical Hi-Lo	540	540E
12	24/24 with mechanical Hi-Lo	540	1000

NR25796,00017DD -19-21JAN09-6/8

5. **Front PTO: Enter the front PTO 3 digits**

   X =(PTO rpm/engine rpm) x 1000

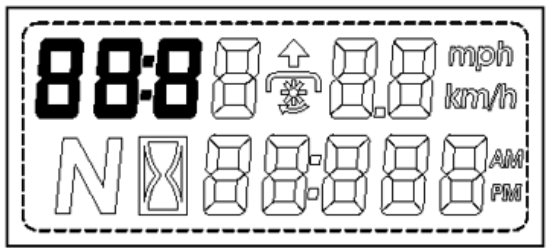
   Example: X = 1000/1648 x 1000 = 607

   Number to be used is 607.

   PTO rpm = (X x Engine rpm)/1000

   Set value by pressing button (A).

   Confirm value by pressing button (B).



PULX000643

PULX000643 —UN—30JUL08

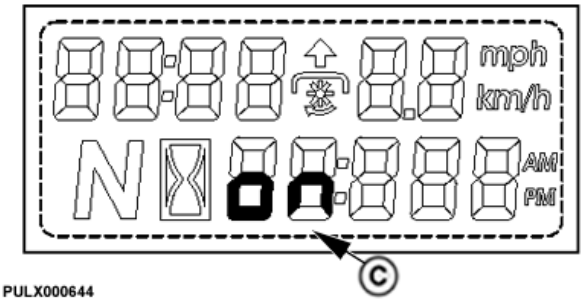
Continued on next page

NR25796,00017DD -19-21JAN09-7/8

6. **For 2WD/4WD:** Choose ”on” if tractor is equipped with hydraulically actuated four-wheel drive.
7. Choose ”OF” if tractor is equipped with two-wheel drive or mechanically actuated four-wheel drive.

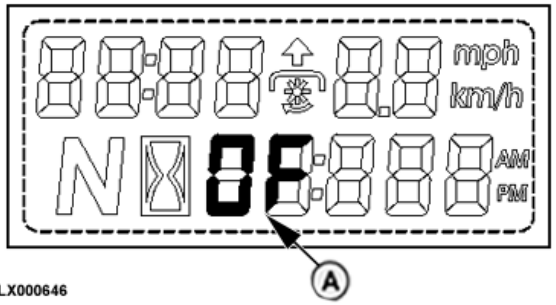
   Confirm with button (A).
8. After the last confirmation the display will show ”OFF”.
9. Turn the ignition key to OFF.

Changing of the program number is completed.



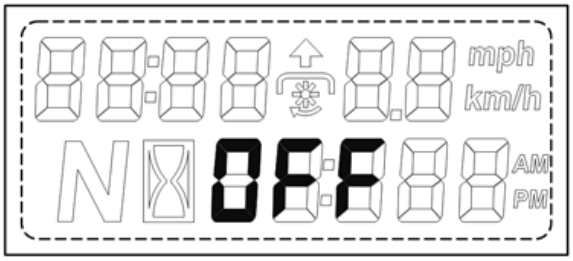
PULX000644

PULX000644 —UN—19SEP08



PULX000646

PULX000646 —UN—19SEP08



PULX001629

PULX001629 —UN—25SEP08

NR25796,00017DD -19-21JAN09-8/8

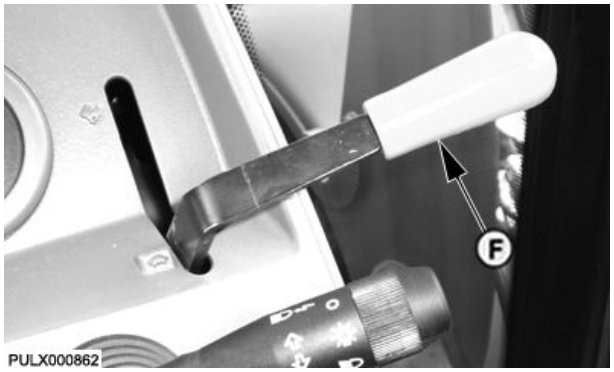
Stop the Engine

CAUTION: Lower mounted implements or equipment to the ground before leaving the tractor.

IMPORTANT: Cooling of certain engine parts is provided by engine oil. Stopping a hot engine suddenly could cause damage to these parts by overheating or lack of lubrication.

1. Pull hand throttle (F) back to slow idle position. Allow engine to idle for 1 to 2 minutes.
2. Turn main switch to the ”OFF” position.

CAUTION: Remove main switch key to prevent operation by untrained personnel.



PULX000862 —UN—29JUL08

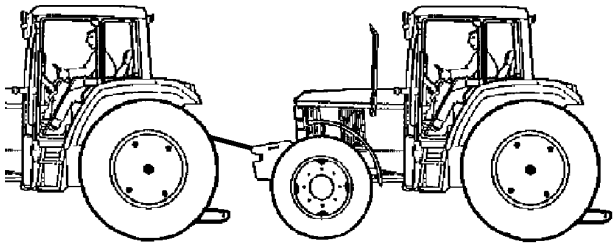
NR25796,00017DE -19-15DEC08-1/1

Park the Tractor

Apply the parking brake when parking or operating the tractor from a stationary position.

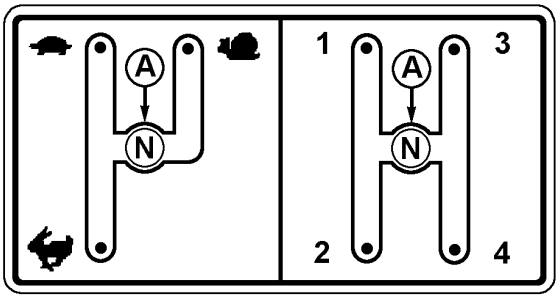
NR25796,00017DF -19-15DEC08-1/1

Tow the Tractor



AT1277

AT1277 —UN—12JUN01



AT1289

AT1289 —UN—05JUL01

A—Towing position

A disabled tractor is best transported on a flatbed carrier. See information given in Section 75, Transport.

CAUTION: Never tow the tractor at a speed greater than 10 km/h (6.2 mph).

Shift the gear lever to neutral position (A) and the range shift lever to the neutral position (A).

IMPORTANT: On tractors with front-wheel drive, switch off front-wheel drive if the engine is running.

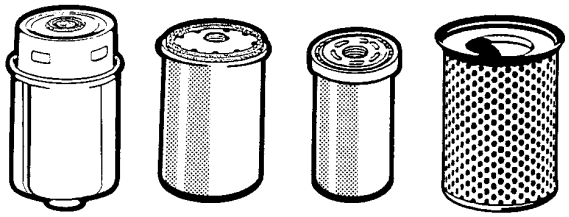
NR25796,00017E0 -19-15DEC08-1/1

Reduce Fuel Consumption

Service Correctly

Replace air cleaner element and fuel, engine oil and transmission/hydraulic filter elements at specified service intervals (see “Service” section).

Use only John Deere filters!

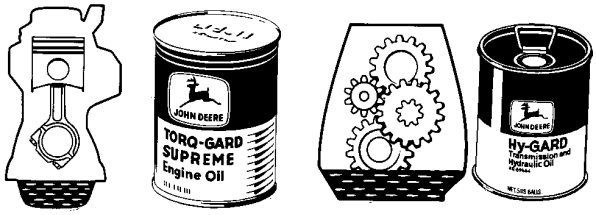


LX007829

LX007829 —UN—15AUG94

OULXA64,0000C93 -19-30JUL03-1/7

Use recommended oils and lubricants only (see “Fuel, Lubricants, Hydraulic Oil and Coolant” section).

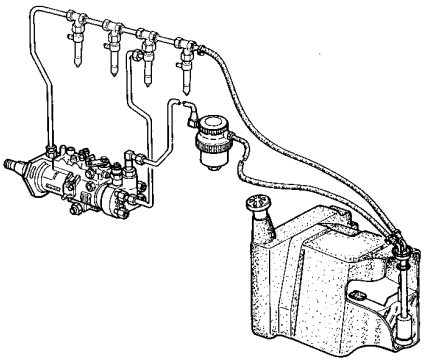


L103 642

L103642 —UN—15AUG94

OULXA64,0000C93 -19-30JUL03-2/7

Have the fuel system checked regularly by your John Deere dealer.



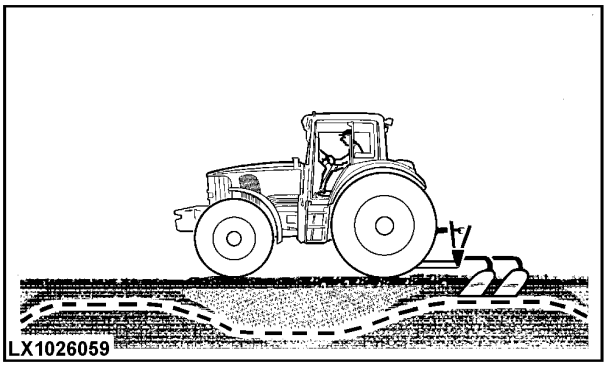
LX000 347

LX000347 —UN—15AUG94

Continued on next page

OULXA64,0000C93 -19-30JUL03-3/7

Have function of rockshaft control checked regularly by your John Deere dealer.

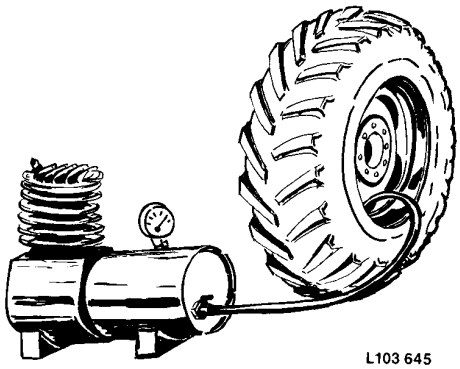


LX1026059 —UN—18MAY01

OULXA64,0000C93 -19-30JUL03-4/7

Drive with Correct Tire Pressures

Adapt tire pressures to type of work and ground conditions (consult your John Deere dealer or local tire agent).



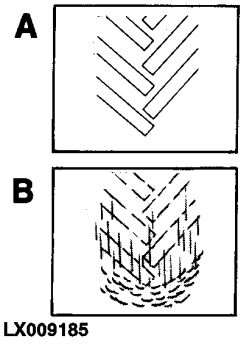
L103645 —UN—15AUG94

OULXA64,0000C93 -19-30JUL03-5/7

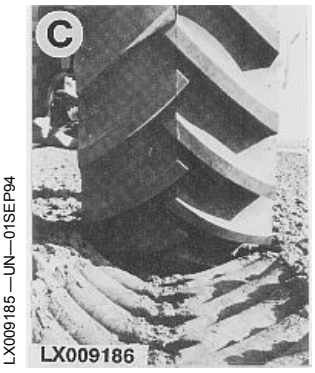
Choose Correct Ballast

Choose ballast to obtain 10 to 15% wheel slip. Use no more ballast than necessary, reduce ballast for light work.

A—Too much ballast
B—Too little ballast
C—Correct ballast



LX009185 —UN—01SEP94



LX009186 —UN—01SEP94

Continued on next page

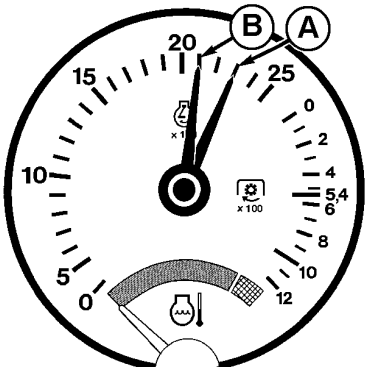
OULXA64,0000C93 -19-30JUL03-6/7

Select Correct Gear

Always drive in the highest possible gear with reduced engine speed.

Choose a gear so that engine speed (A) with engine not under load drops 150 to 250 rpm when the tractor is operating and the engine is under load (B).

NOTE: For light work, reduce engine speed below 2000 rpm. Select a gear so that engine speed drops 200 to 300 rpm when operating.



LX1017710

LX1017710 —UN—01OCT97

OULXA64,0000C93 -19-30JUL03-7/7

Operator Training Required

- Study the Operation section of this manual before operating tractor.
- Operate tractor in an open, unobstructed area under direction of an experienced operator.
- Learn use of all controls.
- Operator experience is required to learn moving, stopping, turning and other operating characteristics of tractor.

MX,DTIP,AA -19-18MAR92-1/1

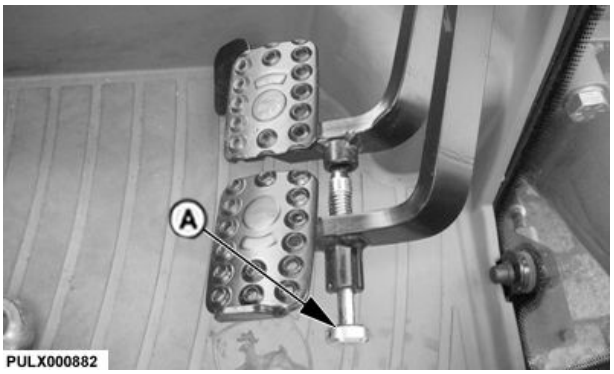
Driving Tractor on Public Roads

CAUTION: When driving on a public road, use accessory lights and devices for adequate warning to operators of other vehicles. Check local governmental regulations. Various safety devices are available from your John Deere dealer. Keep safety items in good condition. Replace missing or damaged items.

NEVER operate rear facing work light when transporting tractor. A clear bright light at the rear of the tractor could confuse drivers of other vehicles as they approach from the rear.

Before operating tractor on a road, lock brake pedals together. Use brake lightly and cautiously at transport speeds.

IMPORTANT: Refer to Section Lights for detailed descriptions of lighting operations and functions.



PULX000882

PULX000882 —UN—30JUL08

1. Couple brake pedals together using locking pin (A). Avoid hard applications of brakes. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes (refer to implement operator's manual for recommended transport speeds).

Continued on next page

NR25796,000175D -19-26MAR09-1/3

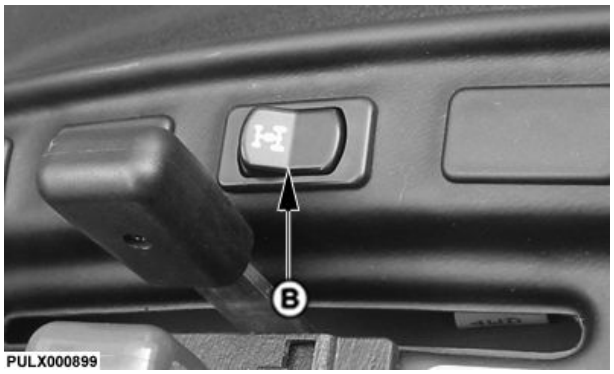
2. Turn the light switch (B) to the full beam headlights or the low beam headlights position. Never use rear work lights (A). Always dim headlights before meeting another vehicle. Keep headlights properly adjusted.
3. Use turn signals when turning. Be sure to return turn signal switch to center position after turning.

PULX000883 —UN—30JUL08

PULX000898 —UN—05AUG08

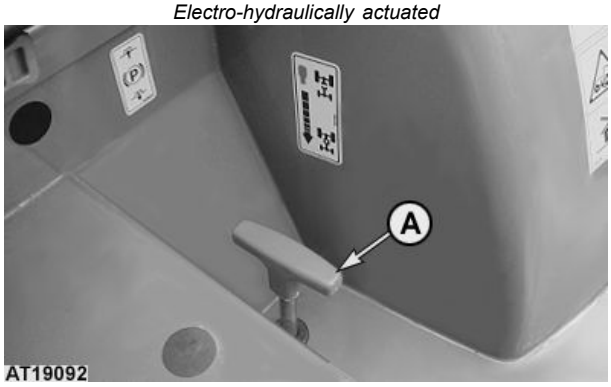
NR25796,000175D -19-26MAR09-2/3

4. Disengage front-wheel drive using switch (B) or pull lever (A). Driving on hard surfaces with front-wheel drive engaged will result in excessive wear of front tires.
5. Do not engage the differential lock. See Use Differential Lock in this Section.
6. Drive slowly enough to maintain control at all times. Slow down for hillsides, rough ground, and sharp turns, especially when transporting heavy, rear mounted equipment.
7. Before going down a hill, shift to a gear low enough to control speed without using brakes. Never coast downhill.
8. When driving downhill on icy or graveled grades, be alert for skids which could result in loss of steering control. To decrease chance of skids, reduce speed and be sure tractor has proper ballast.
9. Use additional caution when transporting towed loads under adverse surface conditions and when turning or braking on inclines. Be sure wheel tread is adjusted wide to provide maximum stability.



PULX000899 —UN—05AUG08

Electro-hydraulically actuated



AT19092 —UN—25SEP06

Mechanically actuated

NR25796,000175D -19-26MAR09-3/3

Chock Block

Place chock block in front of or behind rear wheel, when parking the tractor on sloping ground.

L102664 —UN—03JAN95

OULXA64,0000B81 -19-12MAY03-1/1

Shifting Transmission

Range, Gear, Mechanical Splitter and Electrohydraulic Hi-Lo Shifts:

IMPORTANT: To prevent unnecessary wear, never ”ride” the clutch by resting a foot on the pedal.

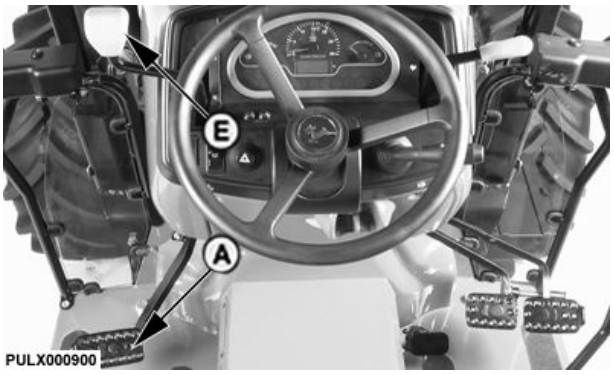
To prevent transmission damage, do not make range shifts on-the-go.

Depress clutch pedal (A) and stop tractor before shifting the range shift lever (B) and reverse drive lever (E).

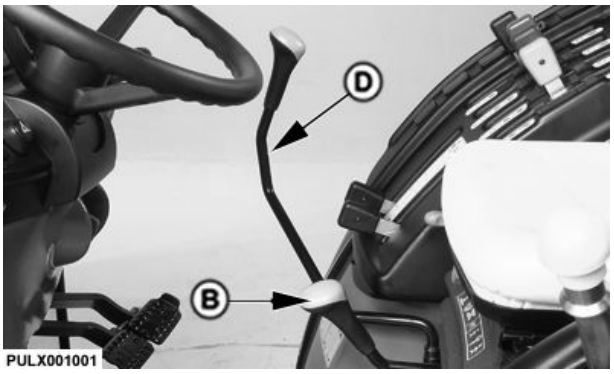
Depress clutch pedal (A) before shifting the gear shift lever (D). Gears (1), (2), (3) and (4) can be shifted on-the-go.

Depress clutch pedal (A) before shifting the mechanical Hi-Lo shift lever (C). The mechanical Hi-Lo can be shifted on-the-go.

Release clutch pedal gradually to take up load smoothly.



PULX000900 —UN—05AUG08



PULX001001 —UN—05AUG08

PULX001002 —UN—05AUG08

Continued on next page

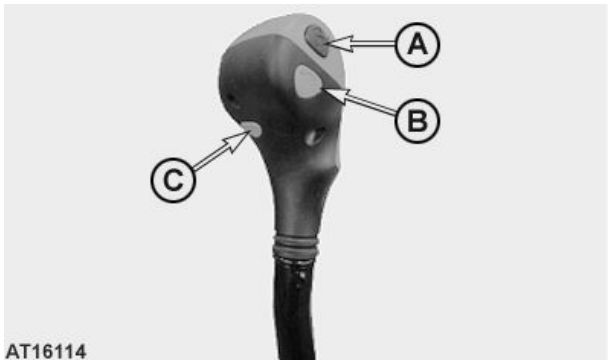
NR25796,000175E -19-21JAN09-1/3

Electrohydraulic Hi-Lo Transmission[1]

The ”Hi” or ”Lo” speed is activated by operating switch (A) or (B), located on the gear lever.

When pushing the switch (C) the clutch is disengaged, the gears can be shifted up or down. After releasing the switch (C), the clutch is engaged.

A—High Speed
B—Low Speed
C—Declutch Switch (Tractors with 24/12 Speed Transmission Only)



AT16114 —UN—03AUG07

[1] *if equipped.*

NR25796,000175E -19-21JAN09-2/3

Reverse Drive Lever

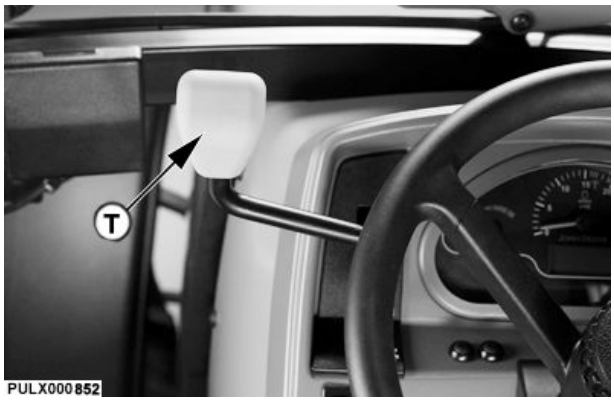
The reverse drive lever (T) has three positions:

- Forward
- Neutral
- Reverse

With clutch pedal depressed, push lever (T) forward from neutral to select forward travel or pull back from neutral to select reverse travel.

NOTE: The 24/12 speed transmission can be operated without depressing the clutch.

For further information see Shifting Transmission — 24/12 Speed Transmission in this Section.



PULX000852 —UN—19SEP08

Reverse Drive Lever (Mechanically Actuated)

PULX000853 —UN—24JUL08

Reverse Drive Lever (Electrically Actuated)

NR25796,000175E -19-21JAN09-3/3

Shifting Transmission - 24/12 Speed Transmission

To prevent transmission damage, do not make range shifts on-the-go.

Depress clutch pedal and stop tractor before shifting the range shift lever. If oil temperature is very low shift ranges only with gear shift lever in neutral position.

The reverse drive lever (B) has three positions:

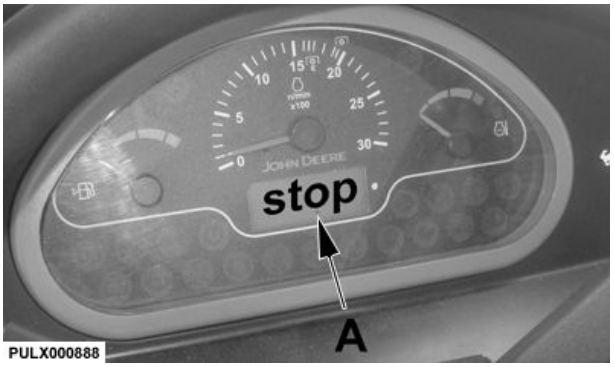
- Forward
- Neutral
- Reverse

The reverse drive lever (B) and the gear shift lever can be shifted on-the-go without depressing the clutch pedal.

Push reverse drive lever (B) forward from neutral to select forward travel or pull back from neutral to select reverse travel.

CAUTION: If a range and a gear is selected with the engine running and the reverse drive lever is not in neutral position the tractor will start moving.

On tractors with 24/12 speed transmission, always engage park brake and put the gear lever in "NEUTRAL" position before restarting the tractor.



PULX000888

PULX000888 —UN—30JUL08

PULX000889

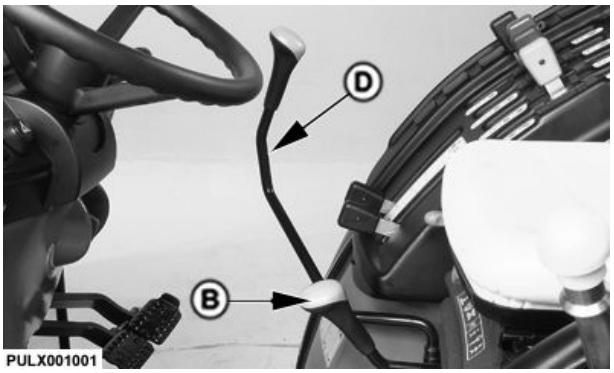
PULX000889 —UN—30JUL08

OULXBER,00018B6 -19-04FEB10-1/1

Operate Transmission Shift Levers

The transmission gear shift lever (D) operates in an H-pattern.

- Center position is neutral.
- Move the lever from neutral to the left and forward to select the first gear.
- Move the lever from neutral to the left and rearward to select the second gear.
- Move the lever from neutral to the right and forward to select the third gear.
- Move the lever from neutral to the right and rearward to select the fourth gear.



PULX001001

PULX001001 —UN—05AUG08

Range Shifting (All Tractors)

The transmission range lever (B) has three positions:

- Forward is low range.
- Rearward is high range.
- To the right and forward is creeper.

Continued on next page

SS40167,0000082 -19-24MAR09-1/3

Mechanical Hi-Lo Transmission[1]

The mechanical Hi-Lo transmission is available as an option for the 24/24 speed transmission.

With clutch pedal depressed, the mechanical Hi-Lo transmission can be shifted in any gear and on-the-go from low speed to high speed and vice versa, using lever (C).

- Forward is high speed
- Rearward is low speed

PULX001002 —UN—05AUG08

[1] *If equipped.*

SS40167,0000082 -19-24MAR09-2/3

Electro-Hydraulic Hi-Lo Transmission

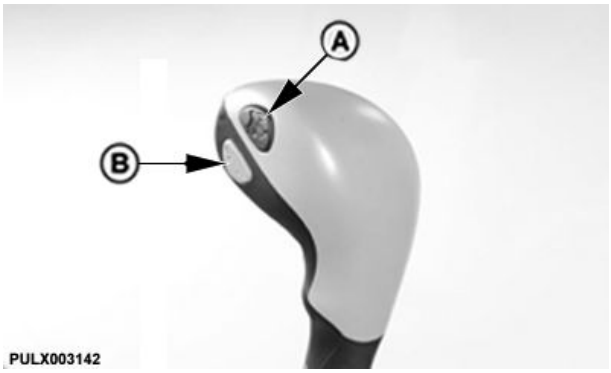
The electro-hydraulic Hi-Lo transmission is available as an option for the 24/24 speed transmission.

The electro-hydraulic Hi-Lo transmission can be shifted in any gear, on-the-go and under load, without using the clutch from low speed to high speed and vice versa, using switches (A) and (B) located on the gear shift lever.

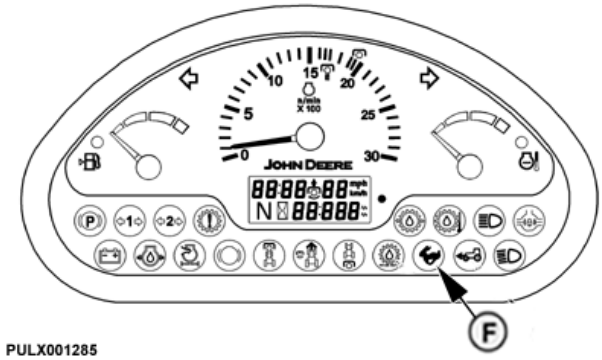
When ”Hi” speed is selected the indicator light (F) at the dashboard lights up.

A—High speed
B—Low speed

F—Indicator light



PULX003142 —UN—17MAR09



PULX001285 —UN—17MAR09

SS40167,0000082 -19-24MAR09-3/3

Use Caution On Hillsides

Operate only with the Roll-Over Protective Structure (ROPS) in the “up” or extended position whenever possible.

Avoid holes, ditches and obstructions which may cause the tractor to tip, especially on hillsides. Avoid sharp, uphill turns.

Never drive near the edge of a gully or steep embankment - it might cave in.

Driving forward out of a ditch or mired condition or up a steep slope could cause tractor to tip over rearward. Back out of these situations if possible.

While front wheel drive greatly increases traction, it does not increase stability of the tractor. With front wheel drive engaged, the tractor can climb steeper slopes but it does not become more stable. When this option is used, extra caution is needed on slopes. Compared to a 2-wheel drive, a front wheel drive tractor maintains traction on steeper slopes, increasing the possibility of a tip over.

Danger of overturn increases greatly with narrow tread setting, at high speed.

Hitch towed loads only to drawbar. When using a chain, take up the slack slowly.

AT,5NOM,37 -19-01AUG01-1/1

Select a Gear

IMPORTANT: To extend drive train life and avoid excessive soil compaction and rolling resistance, avoid ballasting for CONTINUOUS full power operations in gears slower than B-2 gear. When using front-wheel drive, ballasting to one gear slower is appropriate.

The tractor may be operated in any gear with engine speeds between 1500 rpm and 2300 rated engine rpm. Within these limits the engine can be put under full load. For light load operation, use a higher gear and lower engine speed. This saves fuel and reduces wear.

Travel speeds for different tire sizes can be found in this Section.

PULX000864

PULX000864 —UN—29JUL08

NR25796,0001761 -19-16DEC08-1/1

Travel Speeds, 30 km/h (18.5 mph) - 12/12 Speed Transmission (F-Type Tractors)

Rated engine speed:		Tire size 14.9 R28 and 420/70R28				Tire size 340/85 R28			
2300 rpm		Forward		Reverse		Forward		Reverse	
Range	Gear	km/h	mph	km/h	mph	km/h	mph	km/h	mph
A[a]	1	1.48	0.92	1.26	0.78	1.42	0.88	1.21	0.75
	2	2.16	1.34	1.84	1.14	2.08	1.29	1.77	1.10
	3	3.13	1.94	2.66	1.65	3.01	1.87	2.56	1.59
	4	4.53	2.81	3.85	2.39	4.36	2.71	3.70	2.30
B[b]	1	3.72	2.31	3.16	1.96	3.58	2.22	3.04	1.89
	2	5.43	3.37	4.62	2.87	5.22	3.25	4.44	2.76
	3	7.86	4.88	6.68	4.15	7.56	4.70	6.43	3.99
	4	11.38	7.07	9.67	6.01	10.95	6.80	9.31	5.78
C[c]	1	10	6.21	8.50	5.28	9.62	5.98	8.18	5.08
	2	14.59	9.07	12.40	7.71	14.04	8.72	11.93	7.41
	3	21.1	13.11	17.94	11.14	20.30	12.61	17.25	10.72
	4	30.55	18.98	25.97	16.14	29.39	18.26	24.98	15.52

[a] *Symbol of snail (creeper range)*
[b] *Symbol of turtle (field range)*
[c] *Symbol of rabbit (road range)*

Other tires (supplied at factory)

		14.9 R28	**= 100%**		
12.4 R24	16.4 % slower	14.9 R24	8.2 % slower	420/28 R28	same
12.4 R28	8.2 % slower	380/70 R28	4.9 % slower	420/70 R24	8.2 % slower
13.6 R24	13.1 % slower	340/85 R24	13.1 % slower		
13.6 R28	4.9 % slower	340/85 R28	4.9 % slower		

NOTE: The ground travel speeds shown in the table are theoretical. The actual speeds vary with rolling circumference, load, tire pressure, make of tire, wheel slip etc. If the precise speed is required for specific applications, then it must be obtained by measurement.

NR25796,0001762 -19-04NOV08-1/1

Travel Speeds, 30 km/h (18.5 mph) - 12/12 Speed Transmission (V-Type Tractors)

Rated engine speed:		Tire size 14.9 R28 and 420/70R28				Tire size 340/85 R28			
2300 rpm		Forward		Reverse		Forward		Reverse	
Range	Gear	km/h	mph	km/h	mph	km/h	mph	km/h	mph
A[a]	1	1.48	0.92	1.26	0.78	1.42	0.88	1.21	0.75
	2	2.16	1.34	1.84	1.14	2.08	1.29	1.77	1.10
	3	3.13	1.94	2.66	1.65	3.01	1.87	2.56	1.59
	4	4.53	2.81	3.85	2.39	4.36	2.71	3.70	2.30
B[b]	1	3.72	2.31	3.16	1.96	3.58	2.22	3.04	1.89
	2	5.43	3.37	4.62	2.87	5.22	3.25	4.44	2.76
	3	7.86	4.88	6.68	4.15	7.56	4.70	6.43	3.99
	4	11.38	7.07	9.67	6.01	10.95	6.80	9.31	5.78
C[c]	1	10	6.21	8.50	5.28	9.62	5.98	8.18	5.08
	2	14.59	9.07	12.40	7.71	14.04	8.72	11.93	7.41
	3	21.1	13.11	17.94	11.14	20.30	12.61	17.25	10.72
	4	30.55	18.98	25.97	16.14	29.39	18.26	24.98	15.52

[a] *Symbol of snail (creeper range)*
[b] *Symbol of turtle (field range)*
[c] *Symbol of rabbit (road range)*

Other tires (supplied at factory)		**340/85 R28**	**= 100%**		
12.4 R24	12.3 % slower	13.6 R28	same	11.2 R28	7.9 % slower
12.4 R28	3.5% faster	320/85 R28	3.5 % faster	360/70 R24	12.3 % slower
13.6 R24	8.8 % slower	340/85 R24	8.8 % slower	380/70 R20	17.6 % slower

NOTE: The ground travel speeds shown in the table are theoretical. The actual speeds vary with rolling circumference, load, tire pressure, make of tire, wheel slip etc. If the precise speed is required for specific applications, then it must be obtained by measurement.

NR25796,0001763 -19-04NOV08-1/1

Travel Speeds, 40 km/h (25 mph) - 24/12 Speed Transmission (F-Type Tractors)

Tire size 14.9 R28 and 420/70 R28							
Rated engine speed:		Forward				Reverse	
2300 rpm		Low		High			
Range	Gear	km/h	mph	km/h	mph	km/h	mph
A[a]	1	0.51	0.32	0.60	0.37	0.43	0.27
	2	0.74	0.46	0.87	0.54	0.63	0.39
	3	1.08	0.67	1.26	0.78	0.92	0.57
	4	1.56	0.97	1.83	1.14	1.33	0.82
B[b]	1	2.34	1.45	2.74	1.70	1.99	1.24
	2	3.41	2.12	4.00	2.49	2.90	1.80
	3	4.93	3.06	5.79	3.60	4.19	2.60
	4	7.14	4.44	8.38	5.21	6.07	3.77
C[c]	1	10.32	6.41	12.1	7.52	8.77	5.45
	2	15.05	9.35	17.66	10.97	12.79	7.95
	3	21.77	13.53	25.54	15.87	18.50	11.50
	4	31.52	19.59	36.97	22.97	26.97	16.65

Tire size 340/85 R28							
Rated engine speed:		Forward				Reverse	
2300 rpm		Low		High			
Range	Gear	km/h	mph	km/h	mph	km/h	mph
A[a]	1	0.49	0.30	0.58	0.36	0.42	0.26
	2	0.71	0.44	0.84	0.52	0.61	0.38
	3	1.04	0.65	1.21	0.75	0.88	0.55
	4	1.50	0.93	1.76	1.09	1.28	0.79
B[b]	1	2.25	1.40	2.64	1.64	1.91	1.19
	2	3.28	2.04	3.85	2.39	2.79	1.73
	3	4.74	2.95	5.57	3.46	4.03	2.50
	4	6.87	4.27	8.06	5.01	5.84	3.63
C[c]	1	9.93	6.17	11.64	7.23	8.44	5.24
	2	14.98	9.00	16.99	10.56	12.31	7.65
	3	20.94	13.01	24.57	15.27	17.80	11.06
	4	30.32	18.84	35.57	22.10	25.77	16.02

[a] *Symbol of snail (creeper range)*
[b] *Symbol of turtle (field range)*
[c] *Symbol of rabbit (road range)*

Other tires (supplied at factory) **14.9 R28 = 100%**

12.4 R24	16.4 % slower	14.9 R24	8.2 % slower	420/70 R24	8.2 % slower
12.4 R28	8.2 % slower	380/70 R28	4.9 % slower		
13.6 R24	13.1% slower	340/85 R24	13.1 % slower		
13.6 R28	4.9 % slower	340/85 R28	4.9 % slower		

NOTE: The ground travel speeds shown in the table are theoretical. The actual speeds vary with rolling circumference, load, tire pressure, make of tire, wheel slip etc. If the precise speed is required for specific applications, then it must be obtained by measurement.

NR25796,0001764 -19-04NOV08-1/1

Travel Speeds, 40 km/h (25 mph) - 24/12 Speed Transmission (V-Type Tractors)

Tire size 14.9 R28 and 420/70 R28							
Rated engine speed:		Forward				Reverse	
2300 rpm		Low		High			
Range	Gear	km/h	mph	km/h	mph	km/h	mph
A[a]	1	0.51	0.32	0.60	0.37	0.43	0.27
	2	0.74	0.46	0.87	0.54	0.63	0.39
	3	1.08	0.67	1.26	0.78	0.92	0.57
	4	1.56	0.97	1.83	1.14	1.33	0.82
B[b]	1	2.34	1.45	2.74	1.70	1.99	1.24
	2	3.41	2.12	4.00	2.49	2.90	1.80
	3	4.93	3.06	5.79	3.60	4.19	2.60
	4	7.14	4.44	8.38	5.21	6.07	3.77
C[c]	1	10.32	6.41	12.1	7.52	8.77	5.45
	2	15.05	9.35	17.66	10.97	12.79	7.95
	3	21.77	13.53	25.54	15.87	18.50	11.50
	4	31.52	19.59	36.97	22.97	26.97	16.65

Tire size 340/85 R28							
Rated engine speed:		Forward				Reverse	
2300 rpm		Low		High			
Range	Gear	km/h	mph	km/h	mph	km/h	mph
A[a]	1	0.49	0.30	0.58	0.36	0.42	0.26
	2	0.71	0.44	0.84	0.52	0.61	0.38
	3	1.04	0.65	1.21	0.75	0.88	0.55
	4	1.50	0.93	1.76	1.09	1.28	0.79
B[b]	1	2.25	1.40	2.64	1.64	1.91	1.19
	2	3.28	2.04	3.85	2.39	2.79	1.73
	3	4.74	2.95	5.57	3.46	4.03	2.50
	4	6.87	4.27	8.06	5.01	5.84	3.63
C[c]	1	9.93	6.17	11.64	7.23	8.44	5.24
	2	14.98	9.00	16.99	10.56	12.31	7.65
	3	20.94	13.01	24.57	15.27	17.80	11.06
	4	30.32	18.84	35.57	22.10	25.77	16.02

[a] *Symbol of snail (creeper range)*
[b] *Symbol of turtle (field range)*
[c] *Symbol of rabbit (road range)*

Other tires (supplied at factory) **340/85 R24 = 100%**

12.4 R24	3.5 % slower	13.6 R28	8.8 % faster	340/85 R28	8.8 % faster
12.4 R28	5.3 % faster	320/85 R28	5.3 % faster	360/70 R24	3.5 % slower
13.6 R24	same	11.2 R28	1.8 % faster	380/70 R20	8.8 % slower

NOTE: The ground travel speeds shown in the table are theoretical. The actual speeds vary with rolling circumference, load, tire pressure, make of tire, wheel slip etc. If the precise speed is required for specific applications, then it must be obtained by measurement.

NR25796,0001765 -19-04NOV08-1/1

Travel Speeds, 40 km/h (25 mph) - 24/24 Speed Transmission (F-Type Tractors)

Rated engine speed:			Tire size 14.9 R28 and 420/70R28				Tire size 340/85 R28			
2300 rpm			Forward		Reverse		Forward		Reverse	
Range	Hi-Lo	Gear	km/h	mph	km/h	mph	km/h	mph	km/h	mph
A[a]	Low	1	0.51	032	0.43	0.27	0.49	0.30	0.42	0.26
		2	0.74	0.46	0.63	0.39	0.71	0.44	0.61	0.38
		3	1.08	0.67	0.92	0.57	1.04	0.65	0.88	0.55
		4	1.56	0.97	1.33	0.82	1.50	0.93	1.28	0.79
	High	1	0.60	0.37	0.51	0.32	0.58	0.36	0.49	0.30
		2	0.87	0.54	0.74	0.46	0.84	0.52	0.71	0.44
		3	1.26	0.78	1.07	0.67	1.21	0.75	1.03	0.64
		4	1.83	1.14	1.56	0.97	1.76	1.09	1.50	0.93
B[b]	Low	1	2.34	1.45	1.99	1.24	2.25	1.40	1.91	1.19
		2	3.41	2.12	2.90	1.80	3.28	2.04	2.79	1.73
		3	4.93	3.06	4.19	2.60	4.74	2.95	4.03	2.50
		4	7.14	4.44	6.07	3.77	6.87	4.27	5.84	3.63
	High	1	2.74	1.70	2.33	1.45	2.64	1.64	2.24	1.39
		2	4.00	2.49	3.40	2.11	3.85	2.39	3.27	2.03
		3	5.79	3.60	4.92	3.06	5.57	3.46	4.73	2.94
		4	8.38	5.21	7.12	4.43	8.06	5.01	6.85	4.26
C[c]	Low	1	10.32	6.41	8.77	5.45	9.93	6.17	8.44	5.24
		2	15.05	9.35	12.79	7.95	14.48	9.00	12.31	7.65
		3	21.77	13.53	18.50	11.50	20.94	13.01	17.80	11.06
		4	31.52	19.59	26.79	16.65	30.32	18.84	25.77	16.02
	High	1	12.1	7.52	10.29	6.39	11.64	7.23	9.89	6.15
		2	17.66	10.97	15.01	9.33	16.99	10.56	14.44	8.97
		3	25.54	15.87	21.71	13.49	24.57	15.27	20.88	12.98
		4	36.97	22.97	31.42	19.53	35.57	22.10	30.23	18.78

[a] *Symbol of snail (creeper range)*
[b] *Symbol of turtle (field range)*
[c] *Symbol of rabbit (road range)*

Other tires (supplied at factory)

340/85 R28 = 100%

12.4 R24	11.5 % slower	14.9 R24	3.3 % slower	420/28 R28	4.9 % faster
12.4 R28	3.3 % slower	14.9 R28	4.9 % faster	420/70 R24	3.3 % slower
13.6 R24	8.2 % slower	340/85 R24	8.2 % slower		
13.6 R28	same	380/70 R28	same		

NOTE: The ground travel speeds shown in the table are theoretical. The actual speeds vary with rolling circumference, load, tire pressure, make of tire, wheel slip etc. If the precise speed is required for specific applications, then it must be obtained by measurement.

NR25796,0001766 -19-04NOV08-1/1

Travel Speeds, 40 km/h (25 mph) - 24/24 Speed Transmission (V-Type Tractors)

Rated engine speed:			Tire size 14.9 R28 and 420/70R28				Tire size 340/85 R28			
2300 rpm			Forward		Reverse		Forward		Reverse	
Range	Hi-Lo	Gear	km/h	mph	km/h	mph	km/h	mph	km/h	mph
A[a]	Low	1	0.51	032	0.43	0.27	0.49	0.30	0.42	0.26
		2	0.74	0.46	0.63	0.39	0.71	0.44	0.61	0.38
		3	1.08	0.67	0.92	0.57	1.04	0.65	0.88	0.55
		4	1.56	0.97	1.33	0.82	1.50	0.93	1.28	0.79
	High	1	0.60	0.37	0.51	0.32	0.58	0.36	0.49	0.30
		2	0.87	0.54	0.74	0.46	0.84	0.52	0.71	0.44
		3	1.26	0.78	1.07	0.67	1.21	0.75	1.03	0.64
		4	1.83	1.14	1.56	0.97	1.76	1.09	1.50	0.93
B[b]	Low	1	2.34	1.45	1.99	1.24	2.25	1.40	1.91	1.19
		2	3.41	2.12	2.90	1.80	3.28	2.04	2.79	1.73
		3	4.93	3.06	4.19	2.60	4.74	2.95	4.03	2.50
		4	7.14	4.44	6.07	3.77	6.87	4.27	5.84	3.63
	High	1	2.74	1.70	2.33	1.45	2.64	1.64	2.24	1.39
		2	4.00	2.49	3.40	2.11	3.85	2.39	3.27	2.03
		3	5.79	3.60	4.92	3.06	5.57	3.46	4.73	2.94
		4	8.38	5.21	7.12	4.43	8.06	5.01	6.85	4.26
C	Low	1	10.32	6.41	8.77	5.45	9.93	6.17	8.44	5.24
		2	15.05	9.35	12.79	7.95	14.48	9.00	12.31	7.65
		3	21.77	13.53	18.50	11.50	20.94	13.01	17.80	11.06
		4	31.52	19.59	26.79	16.65	30.32	18.84	25.77	16.02
	High	1	12.1	7.52	10.29	6.39	11.64	7.23	9.89	6.15
		2	17.66	10.97	15.01	9.33	16.99	10.56	14.44	8.97
		3	25.54	15.87	21.71	13.49	24.57	15.27	20.88	12.98
		4	36.97	22.97	31.42	19.53	35.57	22.10	30.23	18.78

[a] *Symbol of snail (creeper range)*
[b] *Symbol of turtle (field range)*

Other tires (supplied at factory)		**340/85 R28**	**= 100%**		
12.4 R24	12.3 % slower	13.6 R28	same	11.2 R28	7.9 % slower
12.4 R28	3.5 % faster	320/85 R28	3.5 % faster	360/70 R24	12.3 % slower
13.6 R24	8.8 % slower	340/85 R24	8.8 % slower	380/70 R20	17.6 % slower

NOTE: The ground travel speeds shown in the table are theoretical. The actual speeds vary with rolling circumference, load, tire pressure, make of tire, wheel slip etc. If the precise speed is required for specific applications, then it must be obtained by measurement.

NR25796,0001767 -19-04NOV08-1/1

Use Brakes

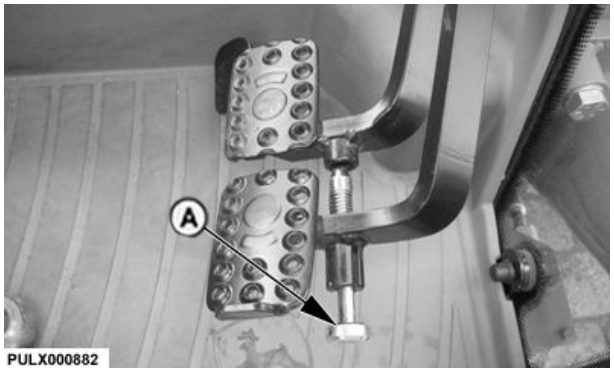
CAUTION: Before driving the tractor on a public road, lock brake pedals together using locking pin (A). Use brake lightly and cautiously at transport speeds.

When negotiating sharp turns, use individual brake to assist steering. Disengage brake pedal locking pin (A) and depress only one brake pedal.

To stop tractor, depress both brake pedals.

IMPORTANT: To prevent unnecessary wear, never "ride" the brakes by resting a foot on the pedals.

Reduce speed if towed load weighs more than the tractor and is not equipped with brakes. Avoid hard braking applications. Consult implement operator's manual for recommended transport speeds.



PULX000882 —UN—30JUL08

Use additional caution when transporting towed loads under adverse conditions, when turning or stopping on inclines.

NR25796,0001768 -19-21JAN09-1/1

Use Differential Lock

CAUTION: DO NOT operate tractor at high speed or attempt to turn with differential lock engaged.

IMPORTANT: To prevent damage to drive train, DO NOT engage differential lock when one wheel is spinning and the other is completely stopped.

When one wheel starts to lose traction, engage differential lock using the switch (B) or depressing the pedal (A).

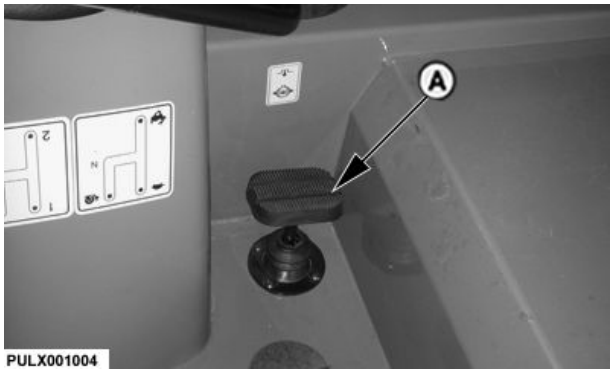
IMPORTANT: The electro-hydraulic differential lock disengages automatically when an individual brake pedal is pressed and engages again after the pedal has been released. To disengage the differential lock, press switch (B) again.

When tractor speed exceeds 20 km/h (10 mph), the electro-hydraulic differential lock will disengage automatically.

Unequal traction will keep the lock engaged. When traction equalizes, lock will disengage itself by spring action. If lock does not disengage, depress one brake pedal and then the other.

If tires repeatedly slip, then get traction, then slip again, hold pedal in the engaged position.

PULX001003 —UN—05AUG08



PULX001004 —UN—05AUG08

NR25796,0001769 -19-26MAR09-1/1

Operate Front-Wheel Drive

Use front-wheel drive as required for better traction.

CAUTION: Front-wheel drive greatly increases traction. When this option is used, extra caution is needed on slopes. Compared to 2-wheel drive, a front-wheel drive tractor maintains traction on steeper slopes, increasing the possibility of a tip over.

When driving on icy, wet or graveled surfaces, reduce speed and make sure that tractor is properly ballasted to avoid skidding and loss of steering control. For best control, engage front-wheel drive (if equipped).

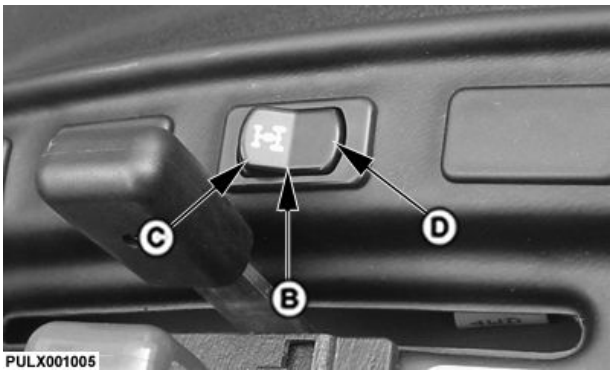
IMPORTANT: To extend tire life, engage front-wheel drive only when needed. DO NOT engage front-wheel drive when driving at high speed on public roads.

Electro-hydraulically actuated front-wheel drive only:

IMPORTANT: The front-wheel drive can be engaged and disengaged in all gears (forward and reverse), on-the-go and under load without using the clutch. Anticipate the need for front-wheel drive, make sure neither rear wheel is slipping then engage or disengage when minimum torque is being used and the tractor is moving slowly.

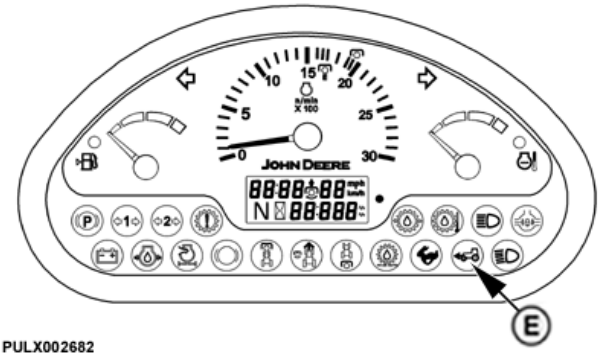
Press the front-wheel drive switch (B) in position (C) to engage and in position (D) to disengage front-wheel drive. Indicator (E) will glow when front-wheel drive is engaged.

NOTE: When the brakes are applied, front-wheel drive cuts in automatically regardless of the position selected at the front-wheel drive switch. In this case the indicator (E) does not come on.



PULX001005 —UN—05AUG08

Electro-hydraulically actuated



PULX002682 —UN—05NOV08

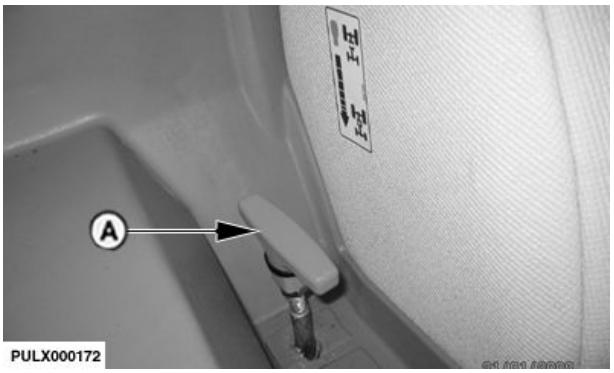
B—Front-wheel drive switch
C—Position to engage front-wheel drive
D—Position to disengage front-wheel drive
E—Front-wheel drive indicator

NR25796,000176A -19-26MAR09-1/2

Mechanically actuated front-wheel drive only:

IMPORTANT: To prevent transmission damage, DO NOT engage or disengage front-wheel drive on the go.

Depress clutch pedal and stop tractor before engaging or disengaging the front-wheel drive. Push the front-wheel drive lever (A) to engage and pull lever (A) to disengage front-wheel drive.



PULX000172 —UN—13FEB08

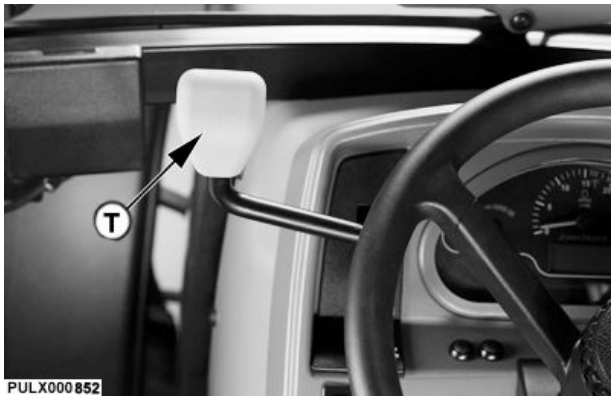
Mechanically actuated

NR25796,000176A -19-26MAR09-2/2

Stop the Tractor

CAUTION: Always engage parking brake before dismounting tractor. Leaving transmission in gear with engine stopped, without engaging parking brake, DOES NOT prevent tractor from moving.

1. Stop tractor using brakes.
2. Place reverse drive lever (T) in neutral position.

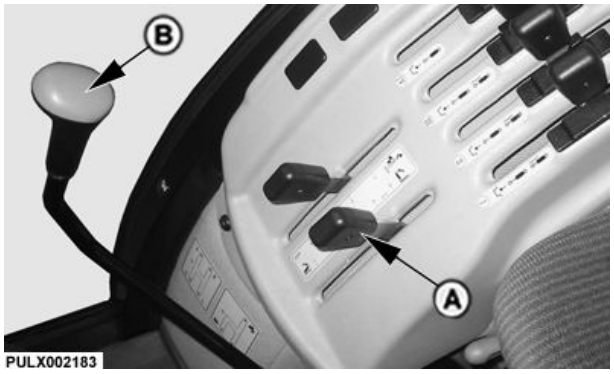


PULX000852 —UN—19SEP08

Reverse Drive Lever

SS40167,0000083 -19-24MAR09-1/3

3. Place gear shift lever (B) in neutral position.
4. Lower equipment to the ground using hitch control lever (A).



PULX002183 —UN—17OCT08

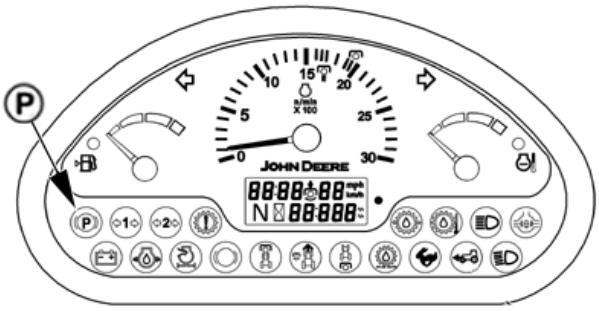
Continued on next page

SS40167,0000083 -19-24MAR09-2/3

5. Pull lever (A) up to engage parking brake. Lever will lock in raised position and parking brake indicator light (P) will glow.

PULX001008

PULX001008 —UN—07AUG08



PULX000896

PULX000896 —UN—05AUG08

SS40167,0000083 -19-24MAR09-3/3

Hydraulic Trailer Brakes

Remove cap from trailer brake coupler (A) and connect pressure hose, making sure connections are absolutely clean.

Depress brake pedals to operate hydraulic trailer brake. The braking effect depends on pressure applied to the brake pedals.

CAUTION: Never exceed a speed of 25 km/h (15 mph) when travelling with hydraulically braked trailers.

IMPORTANT: To prevent undue wear on the brakes, observe the following points:

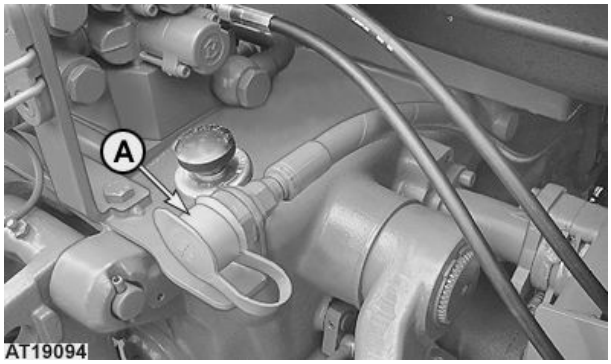
Make sure that the pressure hose is connected.

When driving downhill, select the same gear you would for driving uphill.

Check the hydraulic trailer brake regularly to make sure that it is functioning correctly.

NOTE: The tractor's park brake has no effect on the hydraulic trailer brake. Operate the trailer in accordance with the manufacturer's instructions. This is particularly important when operating the park brake of the trailer.

Indicator light (M) on the dashboard will light up when the oil level in the brake reservoir is low.



AT19094 —UN—27MAR07

PULX000897 —UN—05AUG08

OU12401,0001C98 -19-05AUG09-1/1

Hitch

Maximum Lifting Force

Information on maximum lifting force can be found in the Specifications section.

NOTE: Legal restrictions relating to axle loads and tire load capacity must be complied with. Due to these legal restrictions, maximum permitted lifting force may be less than the stated value.

OU12401,0001BBF -19-23MAY09-1/1

Match Tractor Power to Implement

IMPORTANT: Tractor power should be matched to the size of certain implements. Excessive power can damage an implement, and too large an implement can damage the tractor. (Refer to your implement operator's manual for minimum and maximum power requirements before attaching an implement.)

AT,5NOM,45 -19-01SEP97-1/1

Three-Point Hitch Components

PULX003090

PULX003090 —UN—09APR09

A—Lift arms
B—Lift links
C—Stabilizing system
D—Center link
E—Draft links

NR25796,000176D -19-09APR09-1/1

Hitch Control Levers

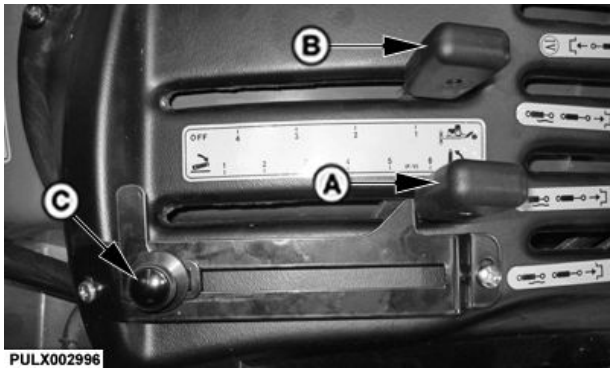
The hitch position is controlled by two levers, the position control lever (A) and the draft control lever (B).

CAUTION: To avoid unintentional lowering of the implement during transport, use stop (C) to lock position control lever (A).

During transport and when hitch is not in use, push draft control lever (B) all the way forward.

The position control lever (A) raises the three-point hitch when pulled rearward and lowers the three-point hitch when moved forward. For further information refer to Use the Hitch Position Control in this Section.

The draft control lever (B) controls the three-point hitch position relative to draft loads. For further information refer to Use the Draft Control in this Section.



PULX002996 —UN—19JAN09

NR25796,000176E -19-21JAN09-1/1

Use the Hitch Position Control

CAUTION: To prevent unexpected movement of hitch, move draft control lever (B) to full forward position before attaching an implement.

Move draft control lever (B) forward when you DO NOT want hitch to adjust automatically to draft load, such as attaching implement to tractor.

Use position control lever (A) to control the three-point hitch position. Position control should be used for transporting implements and end-of-field operations.

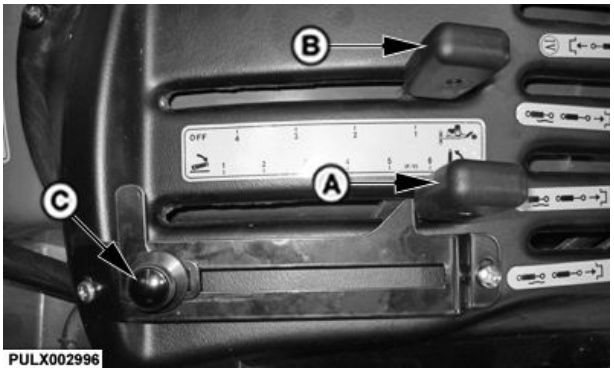
IMPORTANT: Be careful not to raise implement too far, as this may cause damage to the rear part of the tractor.

CAUTION: To avoid unintentional lowering of the implement during transport, use stop (C) to lock position control lever (A).

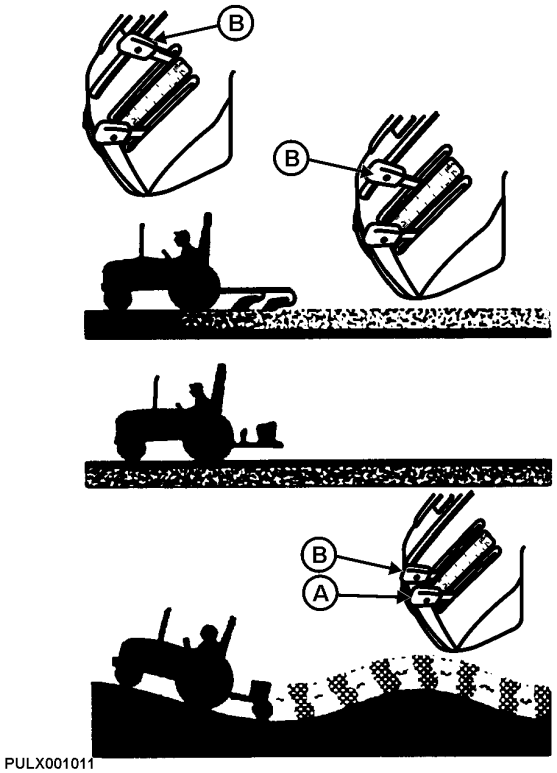
During transport and when hitch is not in use, push draft control lever (B) all the way forward.

CONSTANT DEPTH of implements on level terrain and for non-ground engaging implements such as spreaders or sprayers. Place position control lever (A) at desired depth.

FLOAT operation for implements with skids or depth gauge wheels designed to carry full implement weight. Push both levers (A) and (B) all the way forward so implement can follow the ground contour.



PULX002996 —UN—19JAN09



PULX001011 —UN—07AUG08

NR25796,000176F -19-26MAR09-1/1

Position Control Lever Stop

For convenience, set adjustable depth. Operate implement a few minutes to determine proper height, then unscrew ring nut (D). Move stop up against lever, and lock stop in position by tightening ring nut (D). Hitch will then lower to same position each time lever is pushed forward to stop.

PULX002997 —UN—19JAN09

NR25796,0001770 -19-19JAN09-1/1

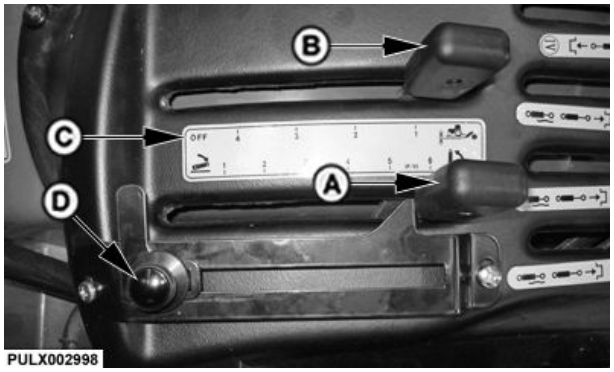
Use the Draft Control

The hitch is equipped with a variable draft control system.

Use draft control when:

• Operating with a fully mounted implement in hilly and swale terrain. The implement will raise and lower to follow the ground contours while maintaining a nearly constant depth.

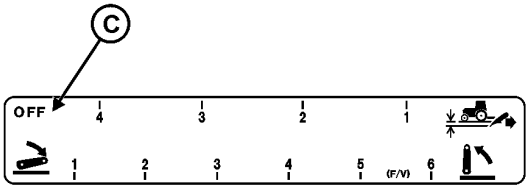
• Operating in varying soil conditions. The implement is raised slightly to get through tough spots so you do not have to shift to a lower gear.



PULX002998 —UN—19JAN09

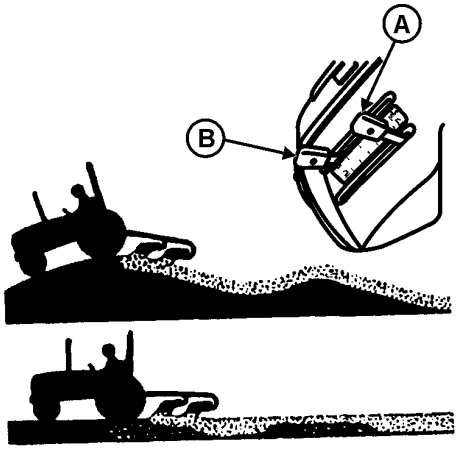
⚠ CAUTION: When hitch is not in use, push draft control lever (B) all the way forward.

Draft control lever (B) controls amount of load required before three-point hitch responds. With lever moved fully forward to the position marked ”OFF” (C), there is no draft control. Placing the lever toward the rear position reduces the amount of draft load required to override the position setting set by the position control lever (A) and raise the hitch.



Draft sensitivity ranges can be changed by repositioning the center link. For further information refer to Position the Center Link in this Section.

For draft control operation, initially move position control lever (A) in its fully forward position and the draft control lever (B) in the fully rearward (least draft) position. Then, with the tractor moving, push the draft control lever (B) forward to increase the load to the desired setting.



PULX001013

PULX001013 —UN—07AUG08

Pull position control lever (A) rearward to set maximum depth of implement. Set position control lever stop (D) so control lever can be brought back to the same position each time. The maximum depth will prevent the hitch from lowering all the way when the tractor begins to slip. The position control lever (A) can also be raised slightly to override the draft control setting to help get through slippery spots without getting stuck.

The position control lever (A) can be moved fully rearward to raise the three-point hitch at the end of the field.

NR25796,0001771 -19-26MAR09-1/1

Flow Divider Valve Control

The tractor may be equipped with a flow divider valve (A) , which splits the amount of oil for the SCVs between the double-acting SCVs/hitch (B) and single-acting SCV (C).

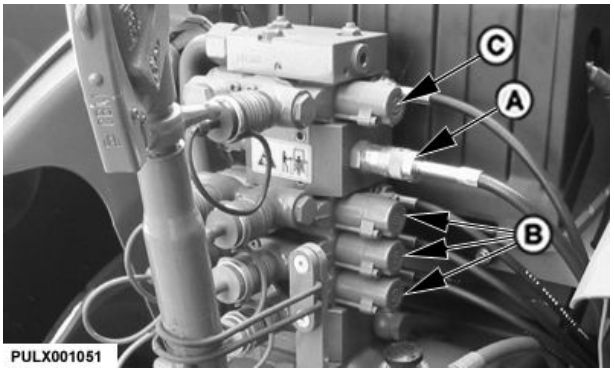
With knob (D), this allocation can be adjusted infinitely from 90% for double-acting SCVs and 10% for single-acting SCV to 10% for double-acting SCVs and 90% for single-acting SCV.

Turn knob (D) clockwise = Up to 90% of oil to SCVs I, II, III and hitch.

Turn knob (D) counterclockwise = Up to 90% of oil to SCV IV.

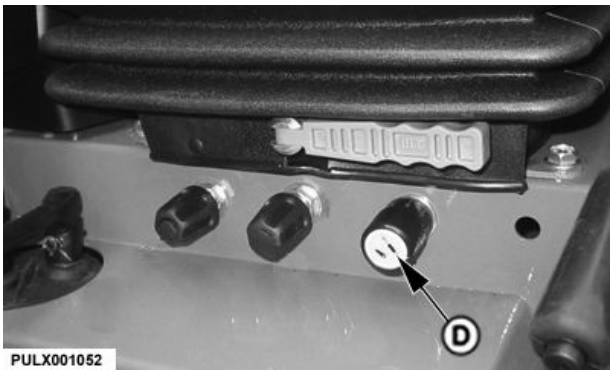
NOTE: On tractors equipped with third pump, the flow divider is used only to divide the flow for the SCVs.

A—Flow Divider Valve
B—Double-Acting SCVs/hitch
C—Single-Acting SCV
D—Knob



PULX001051

PULX001051 —UN—18AUG08



PULX001052

PULX001052 —UN—07NOV08

NR25796,0001772 -19-26MAR09-1/1

Adjust the Rate-of-Drop

CAUTION: Excessive rate-of-drop may cause damage or injury. Fully lowering the implement should require at least 2 seconds.

Hitch drops faster when a heavy implement is attached. Adjust rate-of-drop so that it is slow enough to be safe and prevent implement damage.

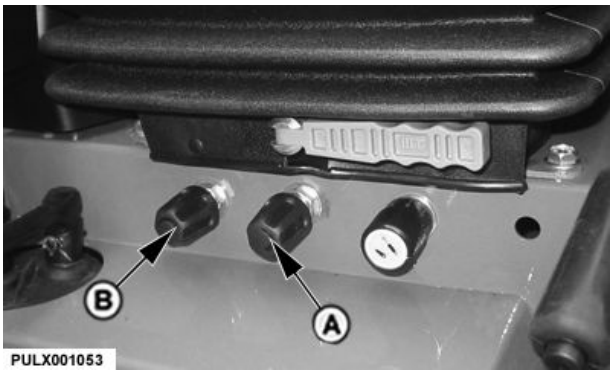
Turn rate-of-drop adjusting knob (A) clockwise to slow down hitch drop; turned all the way to the stop corresponds to lock of hitch (for example for transport). Turn counterclockwise to increase rate-of-drop.

Adjust the Sensitivity

Turn sensitivity adjusting knob (B) clockwise to increase the sensitivity of hitch. Turn counterclockwise to reduce sensitivity.

This adjustment is in addition to the different positioning of center link (see Position the Center Link in this Section).

In some specific cases the high sensitivity of the hitch may involve vibrations.



PULX001053

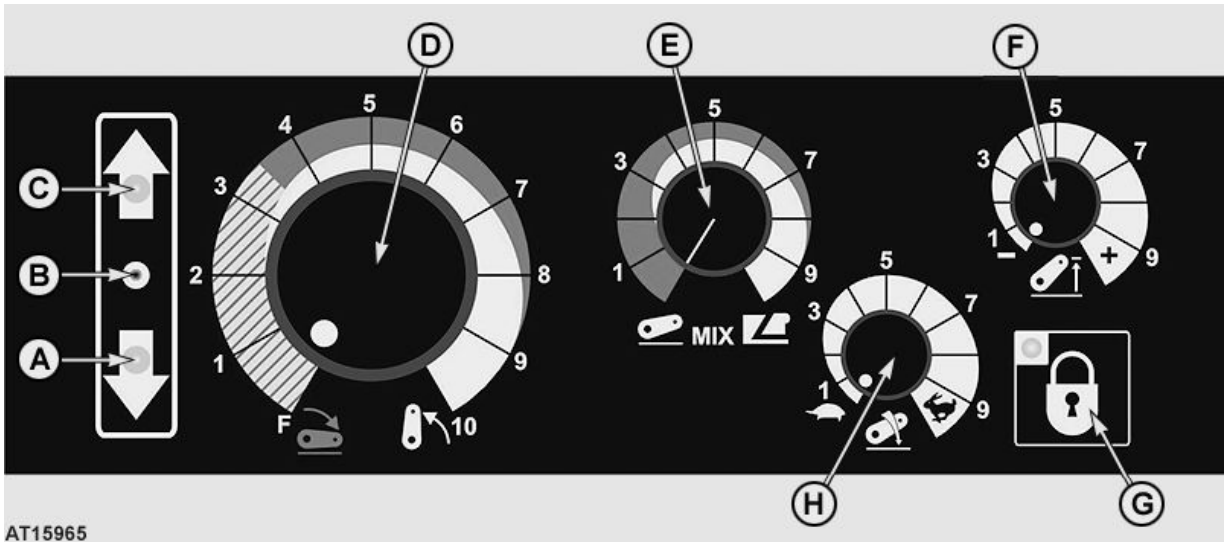
PULX001053 —UN—07NOV08

A—Rate-of-drop adjusting knob
B—Sensitivity adjusting knob

To eliminate vibrations, turn knob (B) progressively counterclockwise.

NR25796,0001773 -19-16DEC08-1/1

Electronic Hitch Sensing II (EHS II)



AT15965 —UN—06MAY08

EHS II control panel

A—Hitch movement indicator LED "hitch lowering"
B—Hitch movement indicator LED "hitch stop"
C—Hitch movement indicator LED "hitch raising"
D—Depth control switch
E—Mode control switch
F—Height limit memory switch
G—Transport lock switch (with red LED)
H—Lowering speed control switch

OULXA64,00019AA -19-09OCT06-1/1

Transporting mounted implements (EHS II)

Use the transport lock switch to prevent unintentional lowering of the implement during transport.

To activate the transport lock, press and hold the switch for more than 5 seconds. The hitch will then raise the implement to the previously adjusted height limit (see "Height Adjustment").

A red LED indicates that the transport lock is activated.

CAUTION: Ensure that the height limit is adjusted correctly and that the height limit control is activated (green LED at height limit memory switch).

Otherwise the hitch will lift the implement all the way up which can cause injuries or damage.

Transport lock switch (with red LED)

OULXA64,00019AB -19-09OCT06-1/1

Depth adjustment (EHS II)

Adjust the desired depth using the depth control switch. For best hitch sensitivity, set the depth control switch to a value between ”F” and ”3.5”.

NOTE: Depth cannot be adjusted beyond the height previously set with the height limit memory switch.

Depth control switch

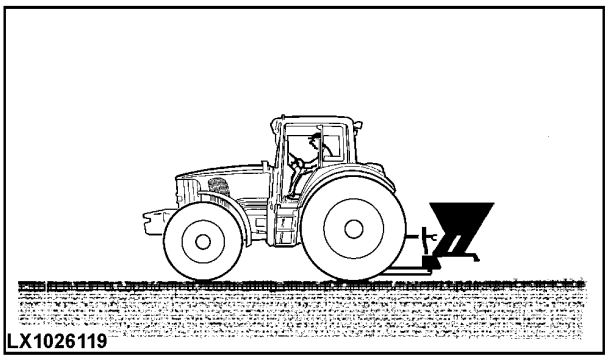
OULXA64,00019AD -19-09OCT06-1/1

Load/depth adjustment (EHS II)

⚠ CAUTION: Before connecting implements to the three-point hitch, load/depth control must be moved to the fully counterclockwise position (depth control) to prevent unintentional raising or lowering of the hitch.

With load/depth control in the fully counterclockwise position, the implement is held at the selected position.

Fix control position



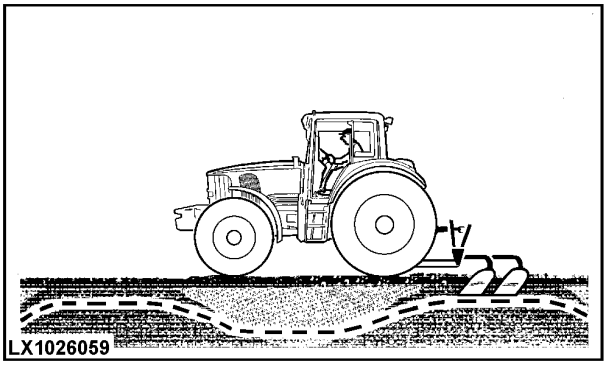
Position control

Continued on next page

OULXA64,00019AE -19-10OCT06-1/3

With load/depth control in fully clockwise position, the implement is raised as resistance (soil density) increases and lowered as resistance decreases, thus maintaining the preselected load.

Load control position



LX1026059 —UN—18MAY01

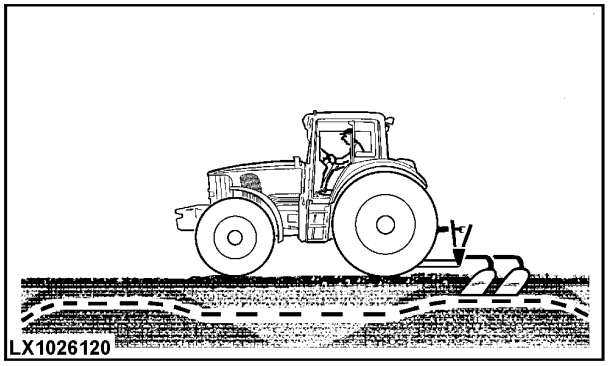
Load control

Continued on next page

OULXA64,00019AE -19-10OCT06-2/3

The "MIX" positions of the load/depth control allow the effects of depth control and/or load control to be infinitely varied as the ground conditions require.

Mixed control position



Mixed control

OULXA64,00019AE -19-10OCT06-3/3

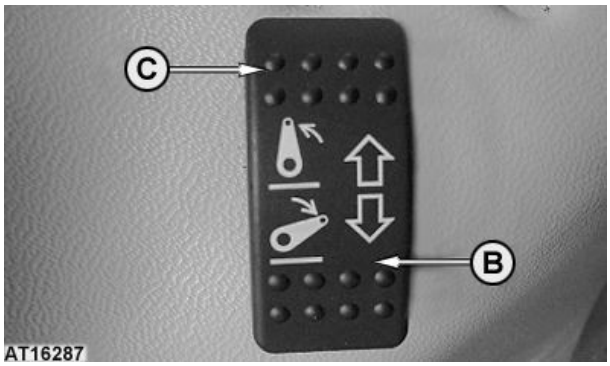
Raise/Lower Switch (EHS II)

To raise the hitch press the raise symbol on the switch, to lower the hitch press the lower symbol. The relevant LED on the EHS control panel lights up.

Whenever it is necessary, the movement of the hitch can be stopped immediately by a short pushing on the raise switch or lower switch.

The switch does not operate when transport lock is activated.

B—Lower **C—Raise**



Raise/lower switch

OULXA64,00019B3 -19-09OCT06-1/1

Height adjustment (EHS II)

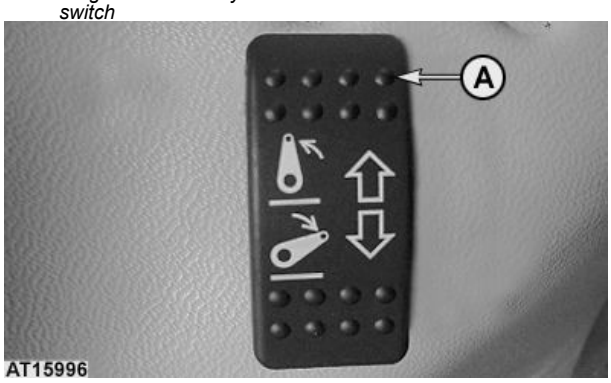
To adjust the desired maximum implement height turn the height limit memory switch fully counterclockwise.

Press the raise symbol (A) at the raise/lower switch to raise the hitch.

Turn height limit memory switch clockwise (increase the height) and/or counterclockwise (decrease the height) to adjust the height.

IMPORTANT: The height limit control is always activated and overrides all other movement orders. The selected height is never exceeded. Each time the implement is changed, the height must be adjusted again. Otherwise the hitch will lift the implement all the way up which can cause injuries or damage.

Height limit memory switch



OULXA64,00019AC -19-09OCT06-1/1

Adjusting rate-of-drop (EHS II)

IMPORTANT: To avoid damaging the attached implement, turn the lowering speed selector switch fully counterclockwise (turtle) if the hitch is not used.

To adjust the lowering speed of implement, press the raise symbol (C) at the raise/lower switch to raise the hitch.

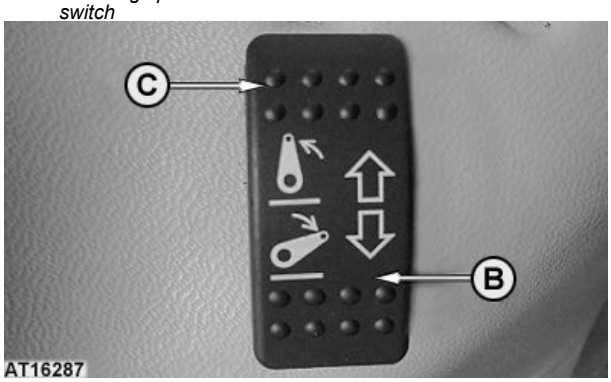
Turning the switch counterclockwise (turtle) decreases the lowering speed and turning the switch clockwise (rabbit) increases the lowering speed.

Press the lowering symbol (B) at the raise/lower switch to lower the hitch. Repeat it if necessary.

NOTE: Lowering speed will vary depending on implement weight and hydraulic oil temperature.

A change in lowering speed has no effect on draft control.

Lowering speed control switch



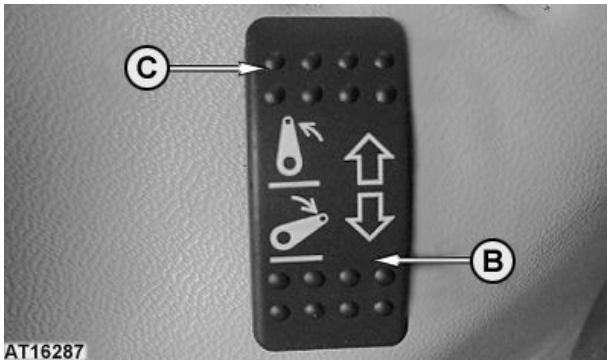
Raise/lower switch

OULXA64,00019AF -19-09OCT06-1/1

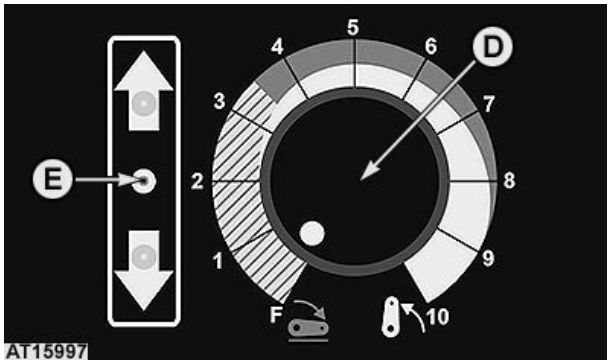
Reset the Electronic Hitch Sensing II (EHS II)

If the EHS-System detects that the actual hitch position differs from the previously selected position, the hitch movement indicator LED (E) flashes. Press the raise/lower switch (B) or slowly turn the depth control switch (D) to the left or to the right until the LED is OFF.

B—Raise/lower switch "lower"
C—Raise/lower switch "raise"
D—Depth control switch
E—Hitch movement indicator LED "hitch stop"



AT16287 —UN—23JUN03



AT15997 —UN—10OCT06

OULXA64,00019B5 -19-09OCT06-1/1

Hitch Remote Control (EHS II)

Two external buttons (A) and (B) allow the hitch to be operated from outside the cab. Pressing one of these buttons for the first time deactivates the EHS system (hitch does not move).

NOTE: Transport lock switch must be deactivated.

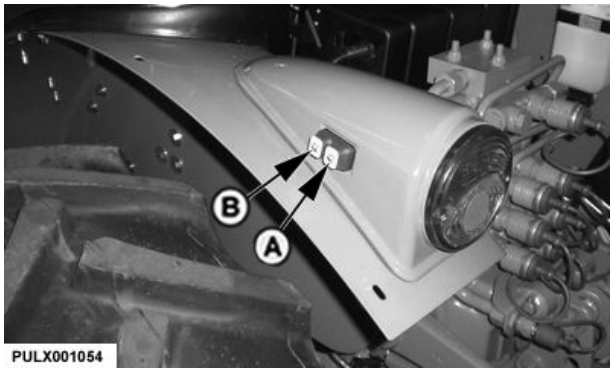
When pressing one of the remote control buttons again, the hitch begins to move in the desired direction and the hitch movement indicator LED (E) goes on or starts flashing

NOTE: To reactivate the hitch control via EHS II panel, press the raise/lower switch (C) (lower position) or turn the depth control switch (D) slowly to the left or to the right until the hitch movement indicator LED (E) is OFF or stops flashing.

CAUTION: Stay clear of three-point hitch lift range when operating the remote control.

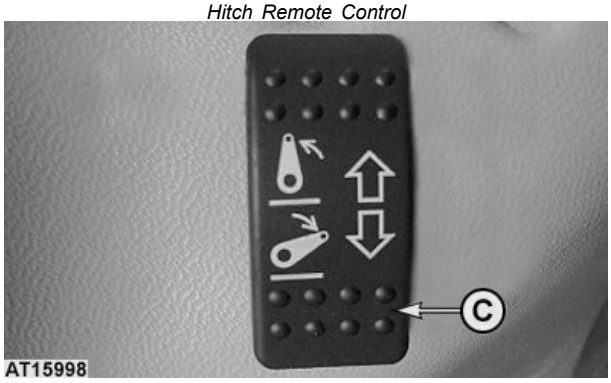
Apply parking brake before lifting the implement.

A—Remote control button, raise hitch
B—Remote control button, lower hitch
C—Raise/lower switch
D—Depth control switch
E—Hitch movement indicator LED (hitch stop)

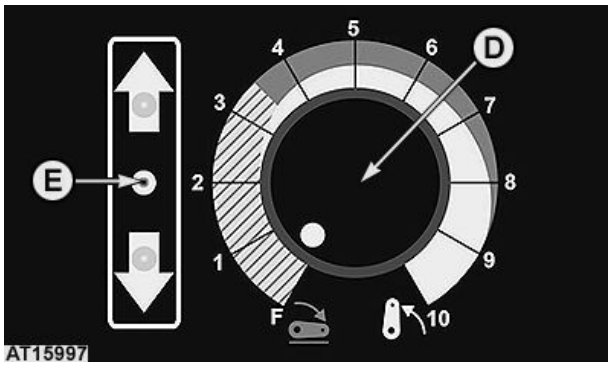


PULX001054 —UN—18AUG08

Hitch Remote Control



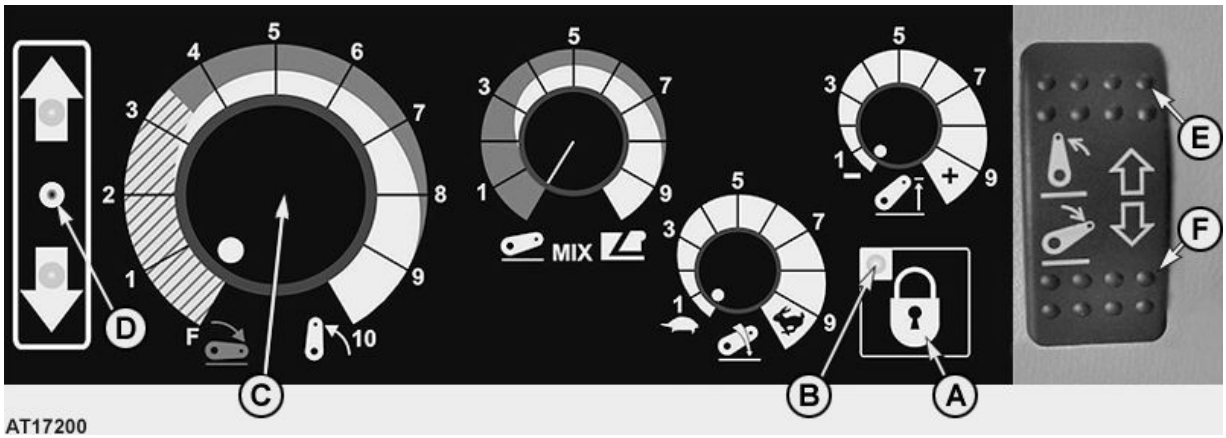
AT15998 —UN—11OCT06



AT15997 —UN—10OCT06

NR25796,0001774 -19-26MAR09-1/1

Calibrating the EHS II-System



AT17200 —UN—06MAY08

⚠ CAUTION: During calibration, the hitch moves over its entire range from fully lowered to fully raised, without reference to the set position values. During calibration, there is no way to influence the movements of the hitch. In an emergency, switch off the ignition.

Preliminary work:

1. For calibration, attach a weight of approx. 50 kg (100 lb) to the draft links.
2. Heat the transmission oil to approx. 40°C (104°F).
3. Raise the hitch as high as it will go.
4. Shut off the engine, switch the ignition OFF and turn all the hitch potentiometers to the left to their minimum settings (see illustration).

Start the automatic calibration process:

1. Start the engine.
2. Press and hold transport lock key (A).
3. At the same time press the raise/lower switch at raise symbol (E).
4. Release the two switches simultaneously.
5. The LED (B) starts to flash.
6. Briefly touch the raise/lower switch two times at lower symbol (F) – the hitch lowers.
7. Wait until the hitch is all the way down, then briefly touch the raise/lower switch at raise symbol (E). The hitch starts to rise.
8. When the hitch has risen as high as it will go, press the transport lock key (A) to end calibration.
9. The control unit returns to its normal operating mode and LED (B) stops flashing.
10. Now LED (D) starts to flash because the position setting does not match the actual position of the hitch.
11. To rectify, set depth setting switch (C) to position "10" and slowly turn it to the left until the LED stops flashing.
12. Ignition OFF.
13. Start the engine once again and check that the hitch operates correctly.

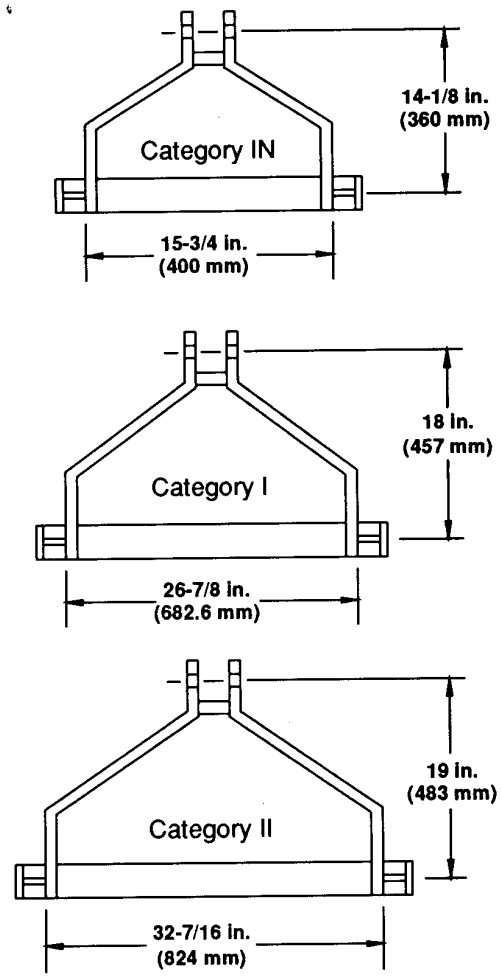
OULXA64,00019A9 -19-11OCT06-1/1

Prepare the Implement

Category IN and I, 3-Point Hitches are narrower and used on smaller implements than Category II implements. Refer to the chart below to identify implement category.

Category II implements should have the top hole of the implement mast located 483 mm (19 in.) above the lower pins. Drill another hole in top mast or extend top mast if necessary.

Hitch Category	Mast Height	Width Between Lower Pins	Pin Sizes	
			Lower	Upper
IN	360 mm (14-1/8 in.)	400 mm (15-3/4 in.)	22 mm (7/8 in.)	19 mm (3/4 in.)
I	457 mm (18 in.)	682.6 mm (26-7/8 in.)	22 mm (7/8 in.)	19 mm (3/4 in.)
II	483 mm (19 in.)	824 mm (32-7/16 in.)	28 mm (1-1/8 in.)	25.4 mm (1 in.)



LV616 —19—13JUN94

LV,5400NRH,B9 -19-15DEC08-1/1

Converting Category II Hitch to Category IN or Category I

Tractor center link and draft link ends are sized for Category II implement attaching pins.

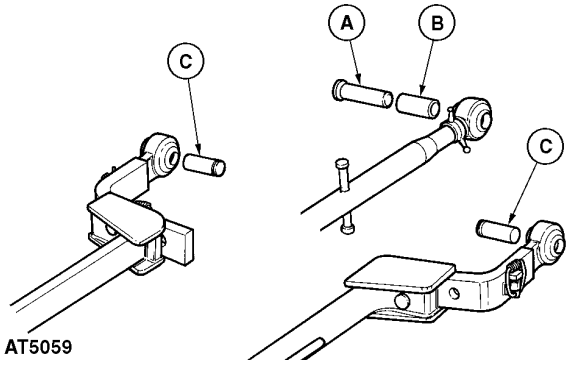
If Category IN or Category I implements are to be used, the Category II hitch can be converted as follows:

Install bushing (B) to reduce diameter of center link end. Smaller implement mast pin (A) is also needed when bushing is installed.

Install bushings (C) in end of draft links.

See your John Deere dealer for parts.

NOTE: Refer to "Positioning Draft Link Ends" in this section for further information on hitch conversions.



AT5059 —UN—28AUG97

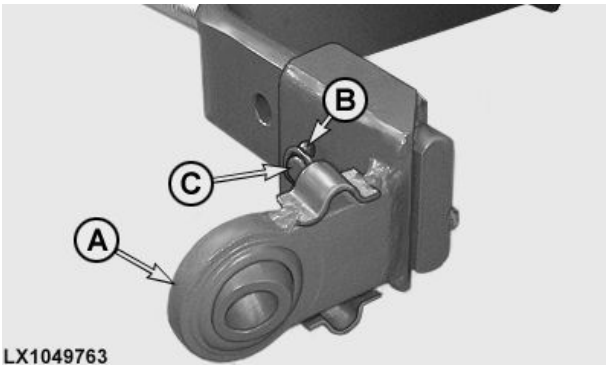
AT,5NOM,51 -19-01SEP97-1/1

Positioning Draft Link Ends

Draft link ends are adjustable for Category IN, I and II implements.

The different positions are obtained by changing the position of the brackets (A) after removing lock pin (B) and pin (C).

Re-install pin (C) and lock pin (B) once the desired setting is obtained.



LX1049763 —UN—19JUL10

AT,5NOM,52 -19-19JUL10-1/1

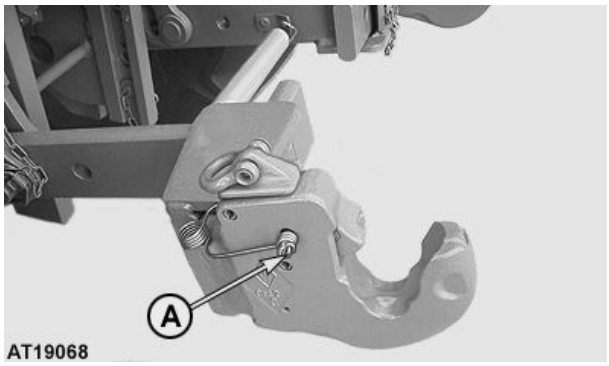
Quick-Coupling (Hook-Type) Draft Links

These draft links are intended for Category I and Category II implements. Implements can be attached to and removed from the draft links without the driver having to leave his seat.

Lock for draft link hooks

CAUTION: When implements with asymmetrical load (e.g. side-mounted mowing unit) are attached and when driving through high-growing bushes and trees (e.g. when working in the forest), the draft links must be secured against opening accidentally.

Use John Deere AL165485 lock parts kit (A) at both of the coupler hooks.



AT19068 —UN—20SEP06

A—Lock parts kit

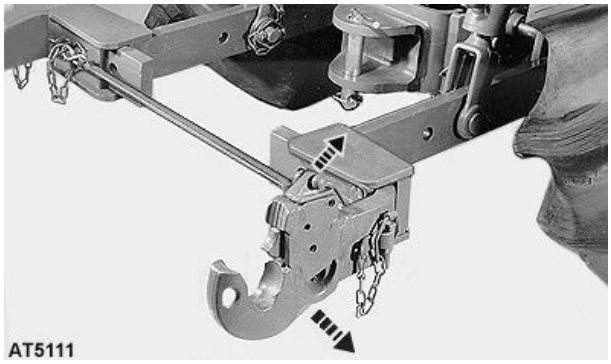
Continued on next page

NR25796,0001775 -19-26MAR09-1/2

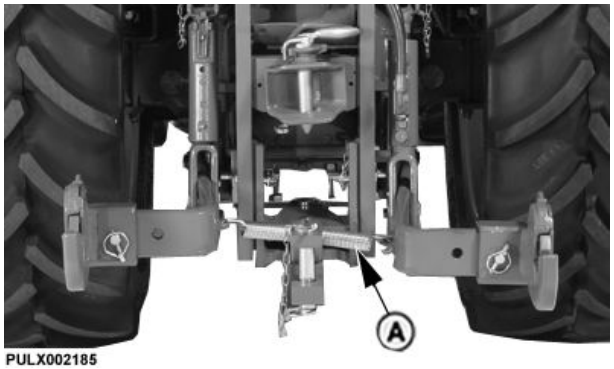
Attaching implement

1. Remove adjusting spring rod (A)[1].
2. With draft links lowered, reverse tractor until the coupler hooks are below the implement hitch pins.
3. Slowly raise draft links until pins are engaged in coupler hooks and locked into position.
4. Adjust center link to required length and attach to top attaching point of implement mast.

IMPORTANT: Make absolutely certain that implement is correctly locked to coupler hooks.



AT5111 —UN—17APR00



PULX002185 —UN—17OCT08

[1] *If equipped.*

NR25796,0001775 -19-26MAR09-2/2

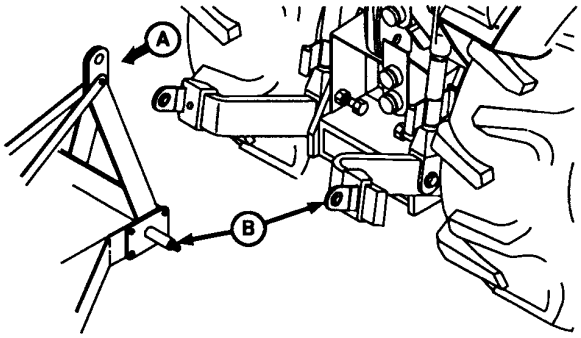
Attach Implements to Three-Point Hitch

1. Be sure drawbar will not interfere with implement. If necessary, move drawbar ahead, or remove it. Check for any other potential interference points.

CAUTION: Do not stand between tractor and implement unless the parking brake is applied firmly.

CAUTION: Prevent unexpected movement of hitch by placing draft sensing lever in the forward or OFF position before attaching implement to hitch.

IMPORTANT: When attaching three-point hitch mounted or drawn implements for the first time, conduct a trial to ensure that implement will not damage cab in any position. With hitch-mounted implements, pay attention to the highest lift position; with drawn implements, be careful when turning sharply.



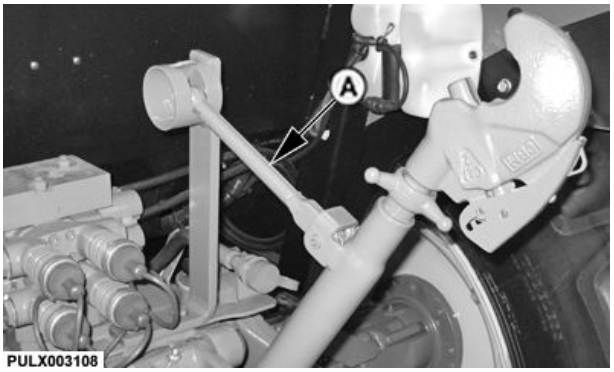
LV734 —UN—25JUN94

2. Back tractor up to implement (A) so hitch points (B) align. Place transmission levers in neutral, engage park brake and stop engine BEFORE leaving the tractor seat.

Continued on next page

NR25796,0001777 -19-22JAN09-1/3

3. To remove center link from transport hook, lift center link locking rod (A).
4. Attach center link to implement top mast.
5. Adjust center link and lift links as necessary. See Level the Hitch in this Section.

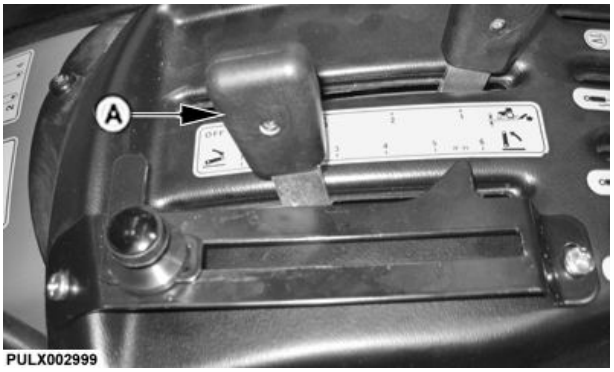


PULX003108 —UN—22JAN09

NR25796,0001777 -19-22JAN09-2/3

CAUTION: To avoid bodily injury or machine damage whenever an implement, implement quick coupler, or other attachment is connected to the tractor three-point hitch, check full range of operation for interference, binding or PTO separation.

6. Using position control lever (A), lower implement, then raise slowly and check for any point of interference.



PULX002999 —UN—19JAN09

NR25796,0001777 -19-22JAN09-3/3

Adjust Sway Blocks

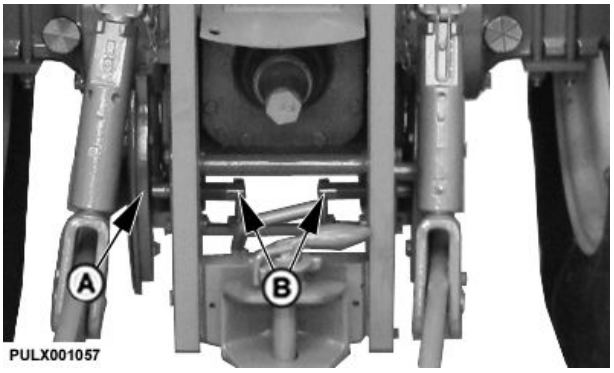
NOTE: Check implement operator's manual for instruction on whether to allow side sway.

Sway blocks (A) are used to limit side sway of draft links.

Adjust sway blocks by changing the length of the screws (B) on one side for work outside centered position of the implement.

If attachment (plow, disk) needs side sway in operating position, adjust sway blocks tight to the frame by turning screws (B).

When needed to limit side sway, adjust blocks out away from frame to contact draft links and limit side-to-side motion.



PULX001057 —UN—18AUG08

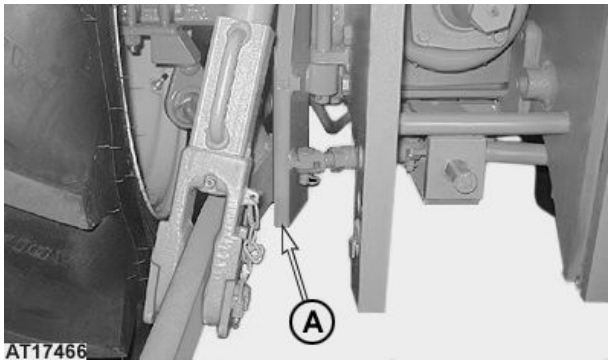
NR25796,0001778 -19-04NOV08-1/1

Hydraulic Adjustment of Sway Blocks

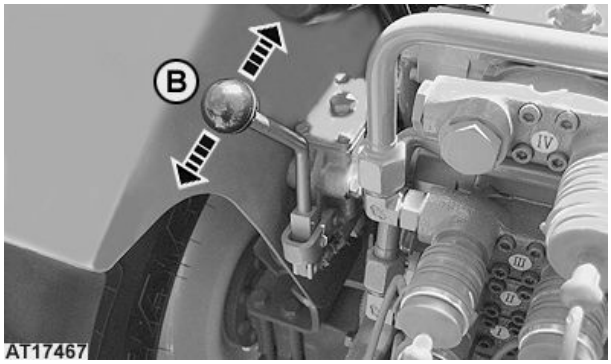
IMPORTANT: Check implement Operator's Manual for instructions on whether to allow side sway.

Sway blocks (A) are used to limit side sway of draft links.

1. If attachment (plow, disk) needs side sway in operating position, adjust sway blocks tight to the frame.
2. When needed to limit side sway, adjust blocks outward from frame to touch draft links and limit side-to-side. This is obtained progressively, operating the hand pump lever (B) rearward.
3. Operate the hand pump lever (B) in the opposite direction to increase side away.



AT17466 —UN—26JUL07



AT17467 —UN—26JUL07

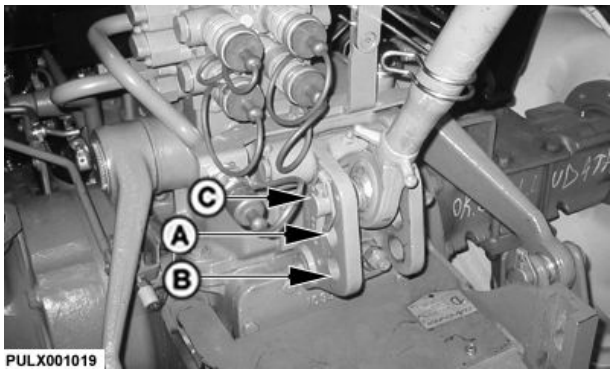
OULXA64,0000DB6 -19-24JUL07-1/1

Position the Center Link

The center link bracket has holes which allow three different positions for attaching the center link. The position effects the draft sensing sensitivity.

Move the center link attachment to holes (A) or (C) if:

- Excessive hitch activity or hunting occurs in draft control operation.
- The rear of the implement raises too much when lifted. The lowest position provides the greatest lifting height and less lifting force and should be used when working with a plow.
- The draft control lever range is too small.



PULX001019 —UN—07AUG08

Move the center link attachment to holes (A) or (B) if:

- The hitch response in draft control operation is unsatisfactory and the engine speed drops too far before raising the implement.
- The rear of the implement droops and drags the ground as the implement is lifted.

NR25796,0001779 -19-16DEC08-1/1

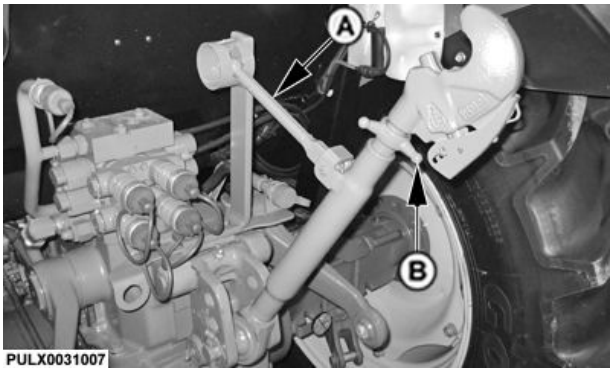
Level the Hitch

1. Lower implement to take weight off hitch.
2. Adjust center link to level implement front to rear: Unlock locking rod (A). Loosen ring nut (B). Rotate center link body clockwise to lengthen center link or counterclockwise to shorten it.

Length of link must be kept within the following limits (measured at the center link ends):
- Minimum length 530 mm (20.87 in.)
- Maximum length 730 mm (28.74 in.)

IMPORTANT: DO NOT deviate from the specified dimensions. Link body threads could be damaged.

Relock the locking rod (A) if link is not in use.



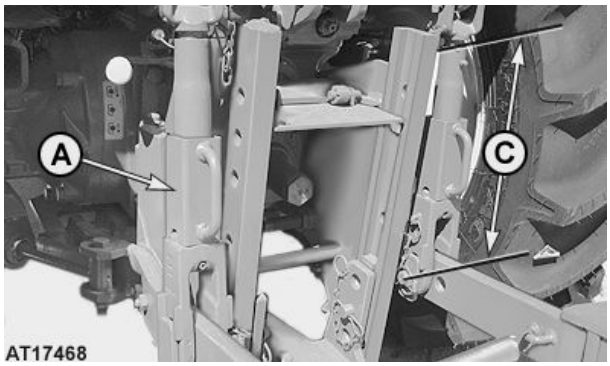
PULX003107 —UN—21JAN09

NR25796,000177A -19-23JAN09-1/3

3. Adjust right-hand or left-hand link to level implement side to side: Slide up the sleeve (A) then turn it clockwise to raise draft link or counterclockwise to lower it.

   After adjustment of lower level align the slot in the sleeve (A) with the pin in the rod to prevent turning of parts during operation.

Length (C) of links must be kept within the following limits:
- Minimum length 430 mm (17 in.)
- Maximum length 560 mm (22 in.)



AT17468 —UN—26JUL07

Continued on next page

NR25796,000177A -19-23JAN09-2/3

4. Adjust for vertical float:

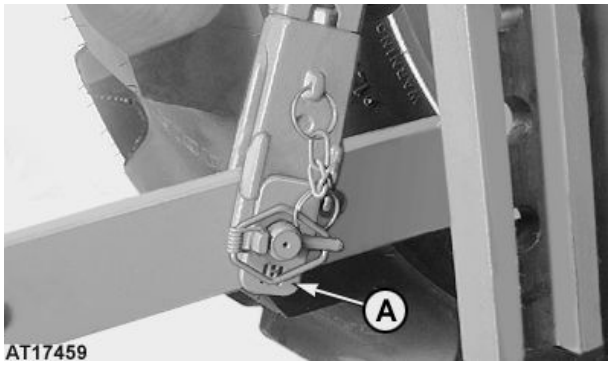
   Depending on the position of the plate, draft links can be adjusted to allow for vertical float or to lock out float.

   Vertical float:

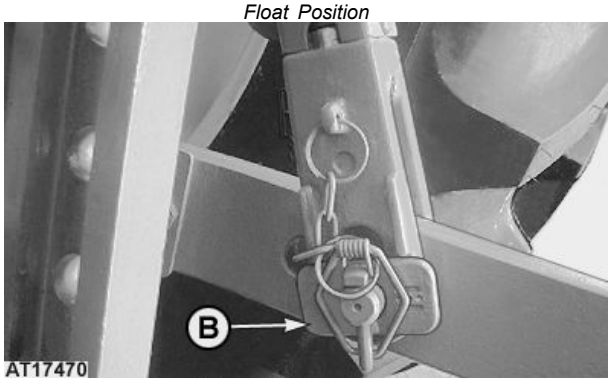
   Plate in vertical position (A).

   No float:

   Plate in horizontal position (B).



Float Position



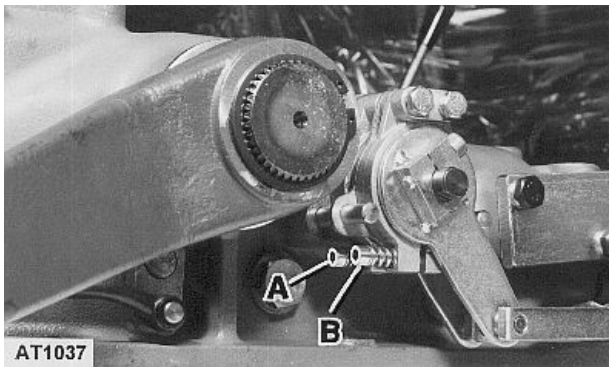
No Float Position

NR25796,000177A -19-23JAN09-3/3

Adjust Hitch Control Lever Friction

IMPORTANT: Ensure the engine is not running and the hitch is in lowered position.

If hitch position control lever or draft control lever do not stay in set position, increase relevant lever friction by tightening draft control lever screw (B) and/or position control lever screw (A) until the desired friction is obtained.



SS40167,000004D -19-22JAN09-1/1

Cold-Weather Operation

If the oil is cold, hydraulic functions including steering may be slow.

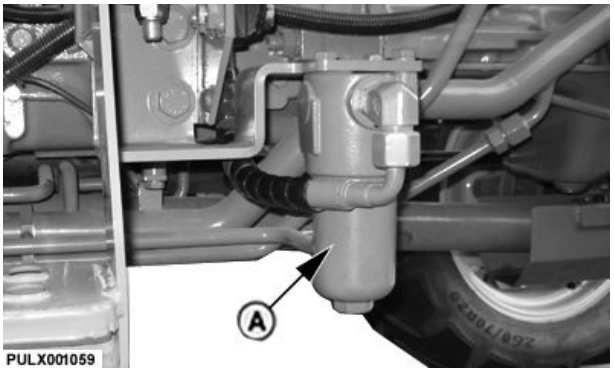
NOTE: Cold oil will not flow easily through the filter screen or hydraulic system filter (A).

Once the oil is warmed up, the hydraulic system (including the steering system) will operate normally again.

IMPORTANT: To prevent damage to the hydraulic pump or relief valve, warm-up time MUST NOT be less than 2 to 3 minutes.

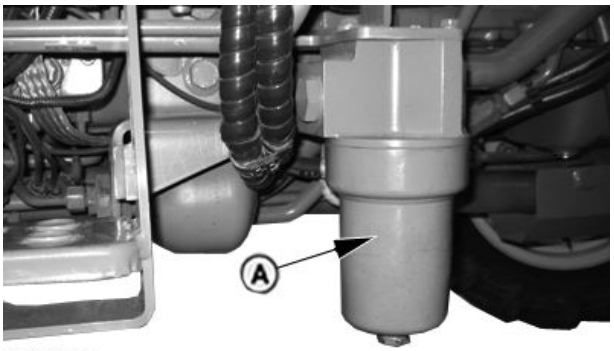
1. Start engine and run it at about 1000 rpm.
2. Turn and hold steering wheel in full left or right position.

NOTE: On PowrReverser transmission only. If the oil filter is clogged while oil is at normal operating temperature, transmission oil filter indicator light (B) will glow.



PULX001059

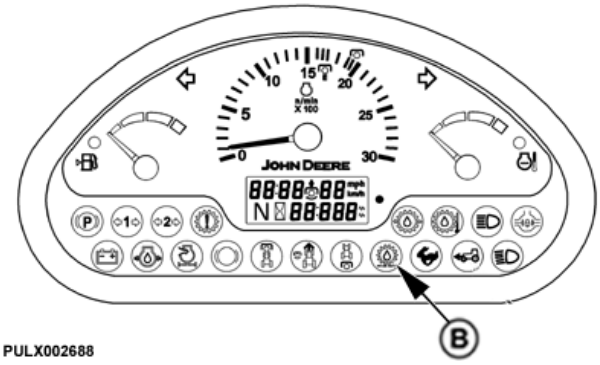
PULX001059 —UN—07NOV08



PULX001267

PULX001267 —UN—07NOV08

24/12 Transmission



PULX002688

PULX002688 —UN—06NOV08

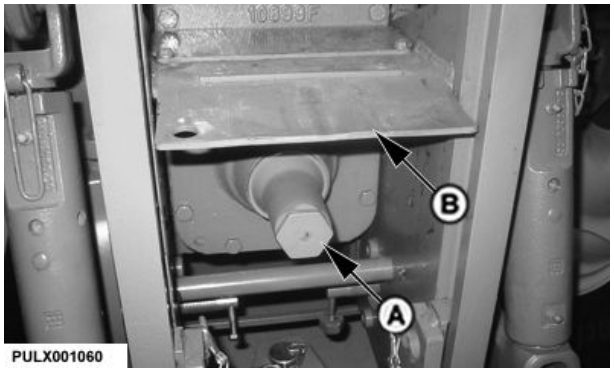
NR25796,000177B -19-22JAN09-1/1

PTO Guard

CAUTION: Remove PTO cap (A) only when the PTO is to be used.

As soon as PTO-driven implement is removed, re-install cap over PTO stub shaft.

The master shield (B) can be folded up to allow an implement to be connected, but it must be folded down again afterwards. *There are various versions of PTO guard that are not shown here.*



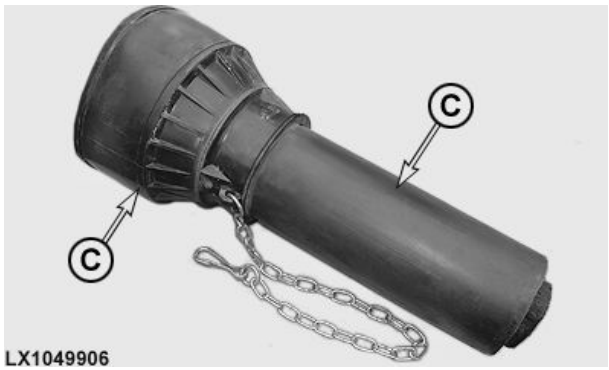
PULX001060 —UN—18AUG08

CAUTION: Never operate PTO unless the master shield is in the position shown. Switch off the PTO before raising the implement.

CAUTION: Before using the PTO, the maximum permissible angle of articulation on the telescoping driveline must be ascertained. During operation, there must be no contact between the PTO guard and the telescoping driveline. This is particularly important when turning corners.

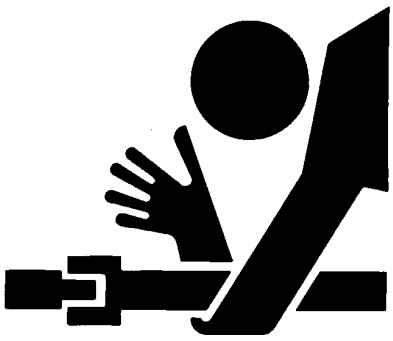
With Type 3 PTOs (dia. 45 mm, 20 splines), clearance in the area of the PTO guard may be restricted. Bear this in mind when operating; avoid unnecessary damage.

When connecting the PTO, wear gloves.



LX1049906 —UN—18FEB11

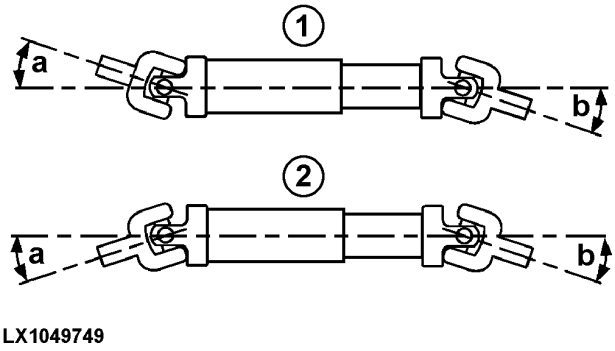
CAUTION: Always put a guard (C) on the telescoping driveline and take action to prevent it from turning with the shaft. Do not operate the telescoping driveline unless a guard is installed that covers the PTO shaft completely and does not turn with the shaft.



TS276 —UN—23AUG88

NR25796,00016E5 -19-20DEC11-1/1

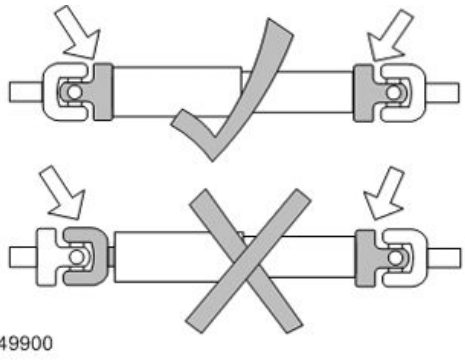
Operating Instructions



LX1049749

Articulation on Telescoping Driveline

1— Z-shaped layout **2— W-shaped layout**



LX1049749 —UN—21MAY10

LX1049900 —UN—22FEB11

Align Forks Correctly

As far as possible, angles (a) and (b) at the universal joints should be the same at both ends of the telescoping driveline.

In applications where this is not the case (e.g. sharp turns with PTO engaged), it is recommended to use a continuous-velocity drive shaft.

NOTE: The two schematic drawings do not show any guards on the telescoping driveline. A guard is mandatory when using telescoping drivelines.

IMPORTANT: Only operating conditions described in the Operator's Manuals of the various implements are permitted. This applies particularly to maximum permissible angle of articulation, to the use of freewheel clutches and overload clutches, and to the prescribed amount of overlap when shaped pipes are pushed together.

IMPORTANT: Before using a PTO-driven implement, take action to ensure that the telescoping driveline is lubricated regularly. Comply with instructions in the Operator's Manual provided by the manufacturer.

IMPORTANT: On multi-component telescoping drivelines, the yokes at each end must be aligned as shown. The yokes at each end must NOT be at 90° to one another (see arrows in illustration on the right).

OU12401,0000CD6 -19-20DEC11-1/1

Attaching PTO-Driven Implement

CAUTION: Shut off engine and disengage PTO before attaching PTO-driven equipment.

CAUTION: High-inertia implements do not come to a standstill the moment the PTO control lever is shifted to the disengaged position. Do NOT approach the implement while it is "coasting down". Do not work on the implement until it has stopped.

CAUTION: Before attempting to clean, adjust or lubricate a PTO-driven machine, the three-point hitch or u.j. shaft, always make sure the PTO is switched off and stopped, the tractor engine is shut off and the ignition key is removed.

1. Turn key off to stop engine.
2. Attach implement to tractor before connecting PTO drive line. Lock three-point hitch in upward position if it is not to be used.
3. Rotate PTO shield upward for clearance. With engine off, turn shaft slightly by hand if necessary to line up splines. Connect drive line to PTO shaft. Pull out on shaft to be sure drive line is locked to PTO shaft. Place PTO shield in downward position.
4. Be sure all shields are in place and in good condition. Never operate PTO unless master shield is properly installed. WITH ENGINE STOPPED, check integral shields on drive line by making sure they rotate freely on shaft. Lubricate or repair as necessary.
5. Check carefully for any interference, make sure three-point hitch is locked in the upward position if it is not used.

OULXA64,0000C75 -19-01JUL04-1/1

Operating the Rear PTO (Mechanical Version)

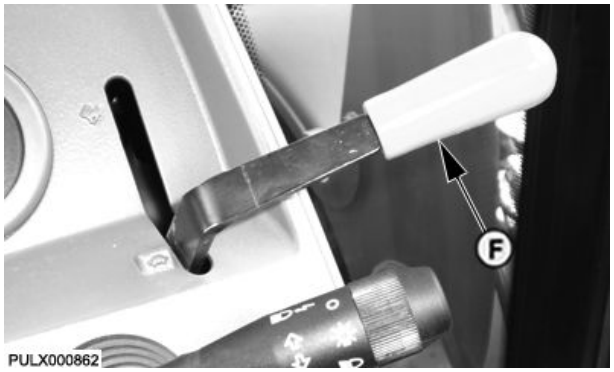
NOTE: Engine will not start if PTO clutch lever is engaged.

1. Start engine and, using hand throttle lever (F), select correct engine speed for PTO operation.

   Rated PTO speeds are achieved at the following engine speeds:

540 rpm rear PTO	1938 rpm
540E rpm rear PTO	1648 rpm
1000 rpm rear PTO.....	1962 rpm

NOTE: Direct reading of PTO rpm value is possible on dashboard (H) when the PTO is engaged.



PULX000862

PULX000862 —UN—29JUL08

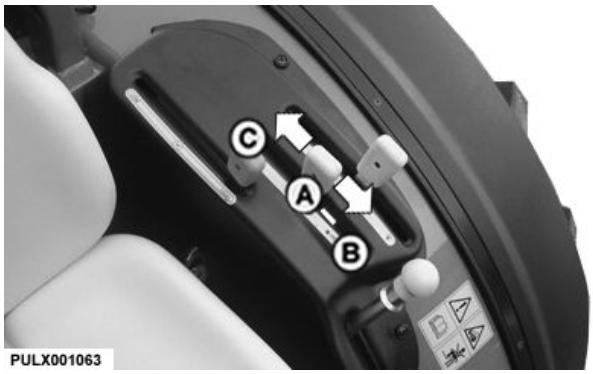
PULX001062

PULX001062 —UN—18AUG08

OULXBER,00018BC -19-18FEB10-1/3

2. Select the PTO speed if the tractor is equipped with 540 and 540E or 540 and 1000 PTO option. Move lever forward (B) for 540 or rearward (C) for 540E or 1000 operation. Position (A) is neutral. This lever is on left side control console. If dual speed PTO is not provided, this lever will not be installed.

IMPORTANT: The PTO speed selector lever must only be used when no equipment is connected to the PTO.



PULX001063

PULX001063 —UN—18AUG08

Continued on next page

OULXBER,00018BC -19-18FEB10-2/3

3. Make sure that PTO mode selector lever (A)[1] on the left side is in rear position (PTO operation dependent on engine speed).
4. Move PTO engagement lever (B) forward to engage PTO.

   PTO indicator (D) will light up when the PTO is engaged.

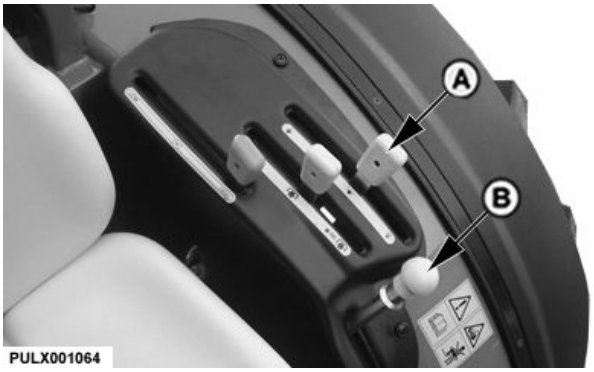
CAUTION: Turn key off to stop engine and make sure all mechanisms have stopped before cleaning out machine or making any adjustments to PTO driven implement.

5. Pull lever (B) back to disengage PTO.

   For ground speed PTO operation move PTO mode selector lever (A)[1] forward. For this operation the tractor has to be stopped. If coupling is not possible move tractor slowly forward to allow the gears to connect. In this case, PTO engagement is independent from position of PTO engagement lever (B). If ground speed PTO is engaged, the ground speed PTO indicator (C) will glow.

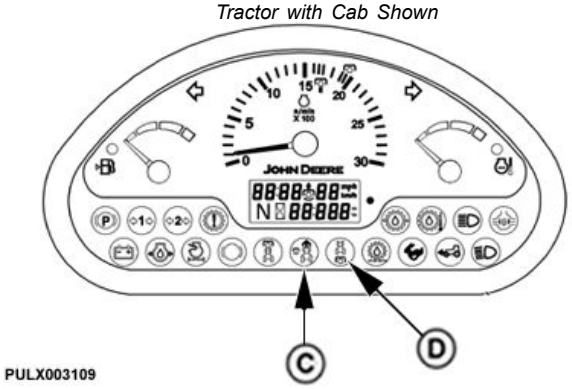
   If PTO ground speed mode is activated, the PTO engagement lever (B) has no effect.

CAUTION: Even if PTO engagement lever (B) is in disengaged position, the PTO will turn when moving the tractor.



PULX001064 —UN—18AUG08

Tractor with Cab Shown



PULX003109 —UN—22JAN09

A—PTO Mode Selector Lever
B—PTO Engagement Lever
C—Ground Speed PTO Indicator
D—PTO Indicator

[1] *If equipped.*

OULXBER,00018BC -19-18FEB10-3/3

Operating the Electro-Hydraulic Rear PTO

NOTE: The electro-hydraulic rear PTO is available for 24/12 transmission only.

The ground drive PTO is optional.

To engage the PTO, pull switch (A) out and to disengage the PTO, push switch (A) in.

Indicator light (D) will come on when the PTO is engaged and go out when the PTO is disengaged.

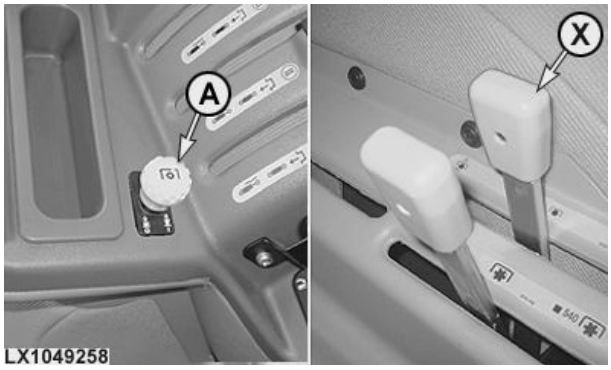
To select ground drive PTO, move PTO selector lever (X) forward and to select independent PTO, move PTO selector lever (X) backward.

- Lever (X) forward = Ground Drive PTO
- Lever (X) backward = Independent PTO

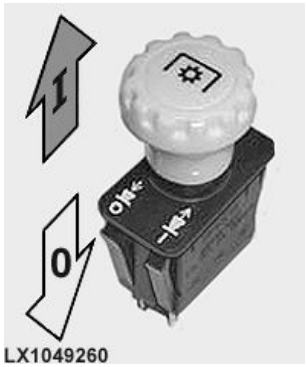
NOTE: The tractor must be stationary to engage ground drive PTO. If engagement is not possible, slowly drive the tractor forward to allow the gears to mesh.

Indicator light (C) will come on when ground drive PTO is engaged and go out when ground drive PTO is disengaged.

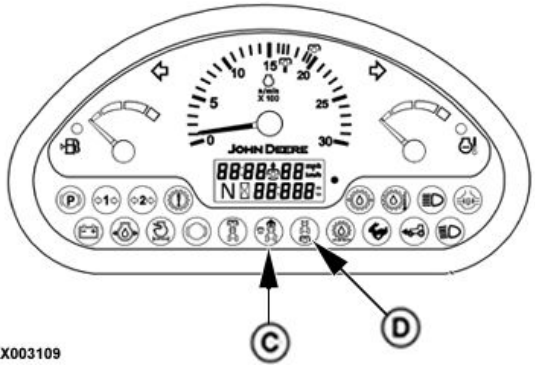
A—PTO Switch
C—Indicator Light (Ground Drive PTO)
D—Indicator Light (PTO Engaged)
X—PTO Mode Selector Lever



LX1049258 —UN—02FEB10



LX1049260 —UN—02FEB10



PULX003109 —UN—22JAN09

Continued on next page

OULXBER,00018B4 -19-18FEB10-1/4

Selecting the PTO Speed

1. Start engine and, using hand throttle lever (F), select correct engine speed for PTO operation.

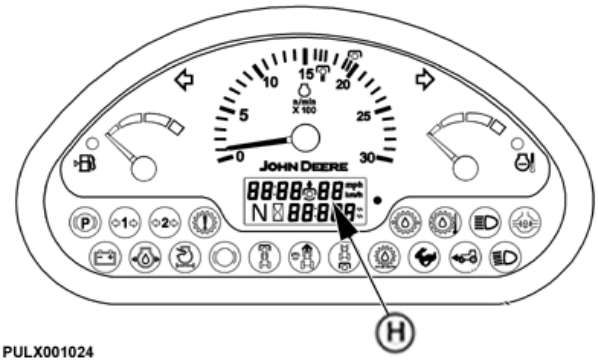
   Rated PTO speeds are achieved at the following engine speeds:

540 rpm rear PTO	engine speed 1938 rpm
540E rpm rear PTO	engine speed 1648 rpm
1000 rpm rear PTO.....	engine speed 1962 rpm

NOTE: Direct reading of PTO rpm value is possible on dashboard (H) when the PTO is engaged.

PULX000862

PULX000862 —UN—29JUL08



PULX001024

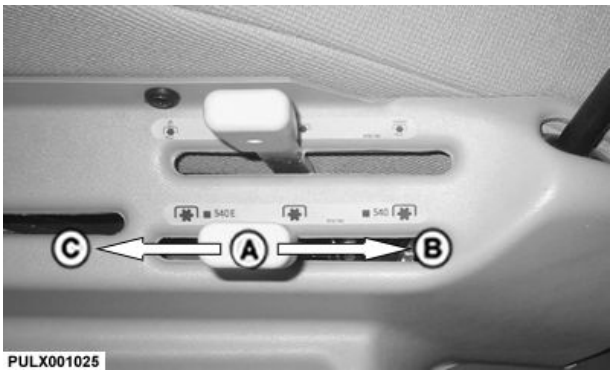
PULX001024 —UN—18AUG08

OULXBER,00018B4 -19-18FEB10-2/4

2. Lever (A) is used to select the PTO speed (dual speed PTO is optional).

   - Move lever to position (B) for 540 rpm
   - Move lever to position (C) for 540E or 1000 rpm

IMPORTANT: The PTO speed selector lever must only be used when no equipment is connected to the PTO.



PULX001025

PULX001025 —UN—18AUG08

Continued on next page

OULXBER,00018B4 -19-18FEB10-3/4

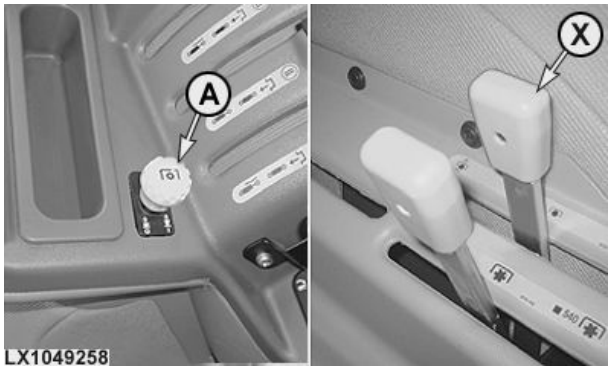
3. Make sure that PTO mode selector lever (X)[1] is in rear position (independent PTO operation).
4. Pull out PTO switch (A) to engage the rear PTO.

   PTO engagement indicator (D) will come on when PTO is engaged.

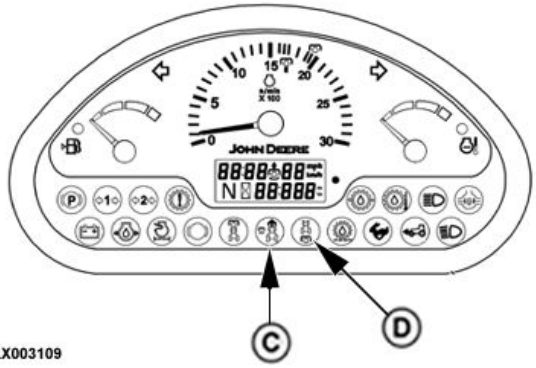
CAUTION: Turn key off to stop engine and make sure that all mechanisms have stopped before cleaning out machine or making any adjustments to PTO driven implement.

5. Push in PTO switch (A) to disengage PTO.

A—PTO Switch
C—Ground Speed PTO Indicator
D—PTO Engagement Indicator
X—PTO Mode Selector Lever



LX1049258 —UN—02FEB10



PULX003109 —UN—22JAN09

[1] *If equipped.*

OULXBER,00018B4 -19-18FEB10-4/4

Select Ground Drive PTO Speeds

CAUTION: Pay attention to the direction in which the PTO stub shaft rotates. The PTO stub shaft changes the direction in which it rotates depending on whether the tractor is travelling forward or reversing. The ground speed PTO remains engaged until lever (B) is moved backward. The ground drive PTO remains active if it is already engaged when the engine is restarted; it starts to rotate as soon as the vehicle moves.

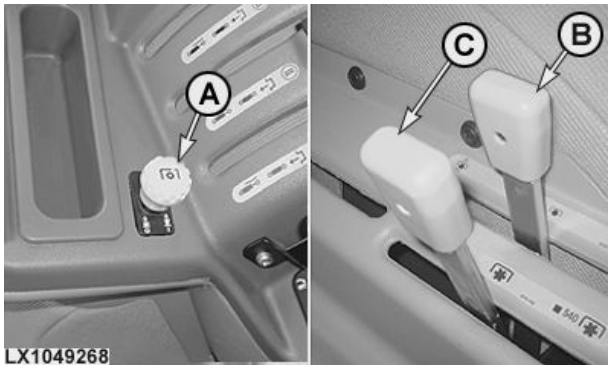
IMPORTANT: The tractor must be stationary to engage ground drive PTO. If engagement is not possible, slowly drive the tractor forward to allow the gears to mesh.

1. Electro-hydraulic version: Press PTO switch (A) in to disengage PTO.

   Mechanical version: Pull PTO engagement lever (D) rearward to disengage PTO.
2. Move PTO mode selector lever forward to engage ground drive PTO.
3. Use PTO speed selector lever to select PTO speed (see table).

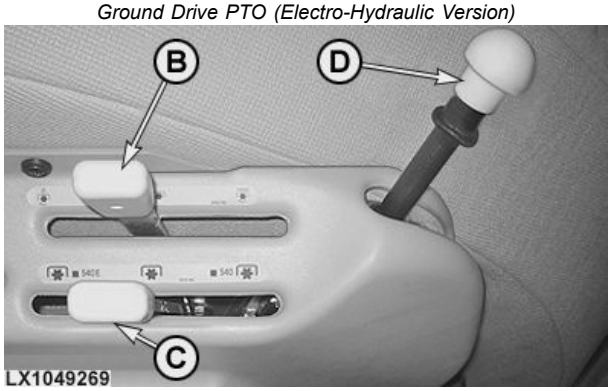
Ground Drive PTO Speeds	Number of PTO drive shaft revolutions per one revolution of rear wheels		
Tractor	Speed selector lever at 540	Speed selector lever at 540E	Speed selector lever at 1000
5GV, 30 km/h	11.43	13.43	20.90
5GV, 40 km/h	9.08	10.67	16.61
5GF, 30 km/h	11.43	13.43	20.90
5GF, 40 km/h	9.78	11.49	17.88

CAUTION: Always comply with implement specifications when selecting the PTO speeds.



LX1049268 —UN—26FEB10

Ground Drive PTO (Electro-Hydraulic Version)



LX1049269 —UN—26FEB10

Ground Drive PTO (Mechanical Version)

A—PTO Switch
B—PTO Mode Selector Lever
C—PTO Speed Selector Lever
D—PTO Engagement Lever

See additional information given in the Operator's Manual of the implement.

OULXBER,00018C5 -19-26FEB10-1/1

Ballast

Select Ballast

CAUTION: When determining front and rear axle ballast, ensure that permissible axle loads and the maximum permissible machine weight (including mounted implements) are not exceeded. See Section 150, Specifications.

Comply with local regulations regarding installation and maximum permissible number of weights. In order to maintain steerability, at least 20% of unladen mass must be on the front axle. Unladen mass is the mass of the tractor without special equipment, attachments, trailer ballast, but with hydraulic oil and lubricants, a full fuel tank and an operator weighing 75 kg (165 lb).

CAUTION: Use suitable lifting tackle/hoists when handling weights.

Safety and performance of your tractor depend on correct ballasting of front axle (front weights) and rear axle (wheel weights, filling tires with liquid ballast, pickup weight).

NR25796,000130B -19-22JAN09-1/1

Ballast Limitations

Ballast is limited by either tire capacity or tractor capacity. Each tire has a recommended carrying capacity which should not be exceeded (see in Section 65 "Wheels, Tires and Treads").

If a greater traction is needed, a larger single tire should be considered.

In this case the selected tires should be amongst those approved and the front to rear tire combination for front wheel drive version should be such as to maintain the correct front wheel lead.

See your John Deere dealer for information and details.

In any case the maximum ballast weight allowed is:

— Maximum front ballast[a]: ..... 400 kg (882 lb)

— Maximum rear ballast: ..... 200 kg (441 lb)

[a] *without basic weight*

IMPORTANT: Under no circumstances must axle and tire capacity be exceeded, see "Weights" in Section 150 "Specifications".

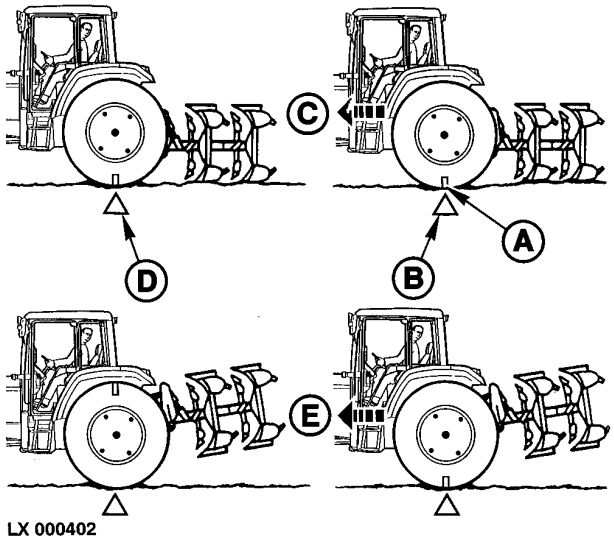
AJ20558,000014A -19-13FEB08-1/1

Measuring Rear Wheel Slip

1. Mark tire (A).
2. Mark starting point on the ground (B).
3. Drive tractor forward with implement lowered until ten revolutions of the rear wheel have been made (C).
4. Again place a marker on the ground (D).
5. Now raise implement and again drive between the two markers on the ground. Note number of revolutions made between the two markers (E).

The number of revolutions gives the following percentage of wheel slip:

- 10.0 revolutions = 0% wheel spin
- 9.5 revolutions = 5% wheel spin
- 9.0 revolutions = 10% wheel spin
- 8.5 revolutions = 15% wheel spin
- 8.0 revolutions = 20% wheel spin
- 7.5 revolutions = 25% wheel spin
- 7.0 revolutions = 30% wheel spin



LX 000402

LX000402 —UN—15AUG94

FD,WEIGHT001218 -19-01SEP98-1/1

Front Weights

One basic weight and additional front weights may be installed on the tractor, if required. See the table for information on the various ballast configurations that may be installed on each tractor type.

On **all tractors:** up to 8 additional weights, 50 kg (110 lb) each, can be installed on the basic weight.

CAUTION: Additional front ballast may be needed for transporting rear mounted implements. When implement is raised, drive slowly over rough ground, regardless of how much ballast is used.

CAUTION: Consider max. permissible axle loads (see Section 150, Specifications).

Ballast	
Basic weight (a)	125 kg (276 lb)
Max. number of weights Weight each	8 50 kg (110 lb)
Total additional weight (b)	= 400 kg (882 lb)
Total weight (a) + (b)	525 kg (1158 lb)

NR25796,0000049 -19-11MAR09-1/1

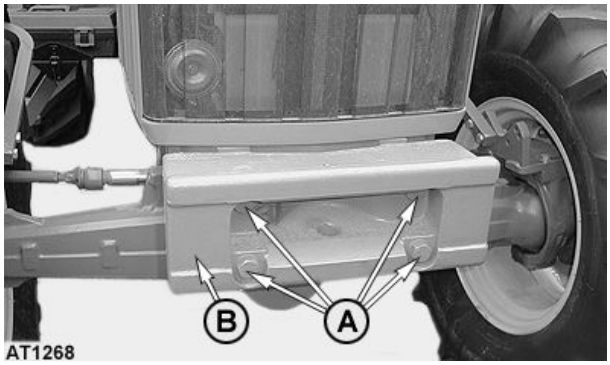
Installing Front Weights

IMPORTANT: Tighten the basic weight attaching screws (A) to 550 N·m (405 lb-ft) and the screws (C) on front weights (D) to 230 N·m (170 lb-ft).

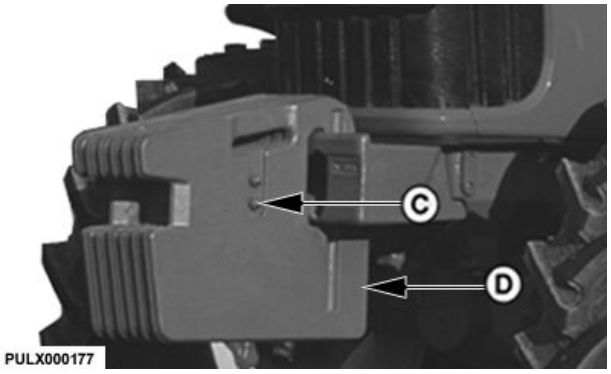
Install the basic weight (B) with screws (A) and place additional weights (D) as required. Secure them with screws (C).

IMPORTANT: When installing six or more front weights, they must be installed to form a jaw.

A—Screw (4 used)
B—Basic weight
C—Screw (2 used)
D—Front weight



AT1268 —UN—15MAY01



PULX000177 —UN—04MAR08

SS40167,0000D04 -19-04MAR08-1/1

Ballasting Two Wheel Drive Tractors

Add ballast to front end if needed for stability. Heavy pulling and heavy rear mounted implements tend to lift front wheels. Add enough ballast to maintain steering control and prevent tip-over.

Refer to the implement operator's manual to determine the minimum number of front weights that are required for your tractor model.

OULXA64,0000315 -19-26JUN01-1/1

Ballasting Front Wheel Drive Tractors

Ideal tire slippage for front wheel drive tractors is 8-12 percent. To reduce wheel slip to this level, more weight is needed on the front than without front wheel drive tractors. The ideal weight split is 40 percent front, 60 percent rear, of total tractor weight.

OULXA64,0000316 -19-26JUN01-1/1

With Weight in Three-Point Hitch

NOTE: Keep the three-point hitch raised when driving. This maximizes ground clearance.

CAUTION: When the tractor is parked, always lower the pick-up weight to the ground.

IMPORTANT: Always make sure the tractor is balanced/ballasted properly.

IMPORTANT: Never use the hitch jaw in the front of the pick-up weight for towing loads.

MHM611,12 -19-01MAR00-1/1

Service Tires Safely

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

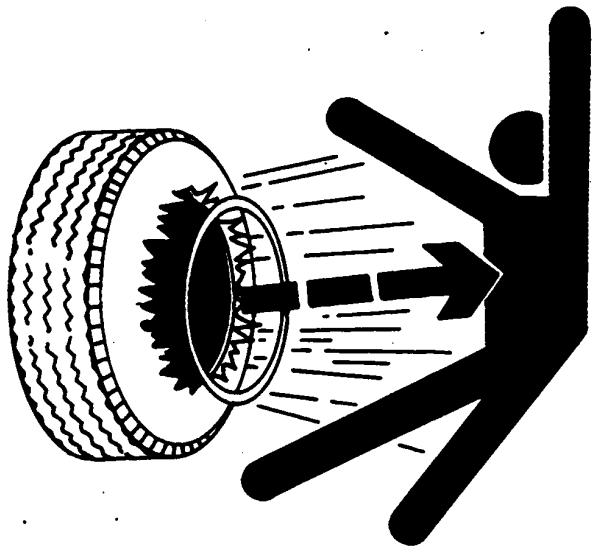
Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure.

Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

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

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



TS211 —UN—23AUG88

NR25796,000130A -19-25MAR09-1/1

Changing Wheels Safely

Due to the big size and the heavy weight of tractor wheels, pay attention to the following points when changing wheels:

- Before changing wheels, place tractor on firm, level ground.
- Engage park lock* and prevent the tractor from rolling away by putting down chock blocks.
- Remove the ignition key to prevent unauthorized operation.
- When removing rear wheels, prevent front axle oscillation by using wedges.
- When jacking up the tractor, only use the recommended lifting points, see ”Jack Up the Tractor - Lifting Points” in Section 85 of this Operator's Manual.
- Use a stable lifting jack with sufficient lifting force. See Specifications and Loads and Weights in Section 150.
- Stop jacking up the tractor when the wheel is completely off the ground.
- Use a suitable wheel dolly, especially when removing a rear wheel. This is available as special tool KJD10581 at your John Deere dealer.
- Support the tractor when a wheel is removed. Support stands are available as special tools JT02043 and JT02044 at your John Deere dealer.
- When installing wheels, make sure that the correct torques are applied, see ”Tighten Wheel Bolts and Wheel Weights” in this Operator's Manual.

**If not equipped with park lock, apply park brake instead.*

LX1049987 —UN—15JUL11

KJD10581—Wheel Dolly
JT02043—Support Stand, 482 to 736 mm (19 to 29 in.)
JT02044—Support Stand, 863 to 1117 mm (34 to 44 in.)

CAUTION: Do not operate the tractor until the wheel change has been completed.

When changing wheels, make sure that no-one is standing in the danger zone.

When removing a wheel, make sure that the tractor is supported safely.

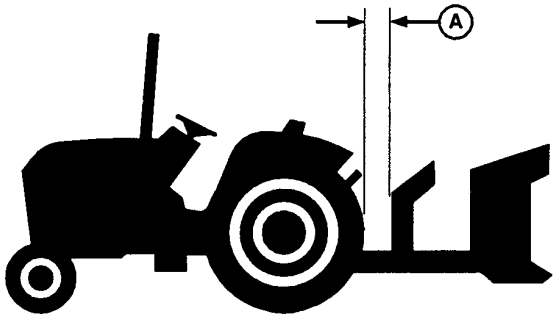
When storing removed wheels, make sure that they cannot fall.

OULXBER,0001B76 -19-20DEC11-1/1

Check Implement-to-Tire Clearance

IMPORTANT: Check for adequate clearance (A) between outside diameter of the tire and implement with hitch in raised position.

When large diameter rear tires are installed on a tractor with a 3-Point hitch, a quick coupler or similar device is required to provide adequate implement-to-tire clearance.



LV736 —UN—25JUN94

LV,5400NWT,B1 -19-30MAY96-1/1

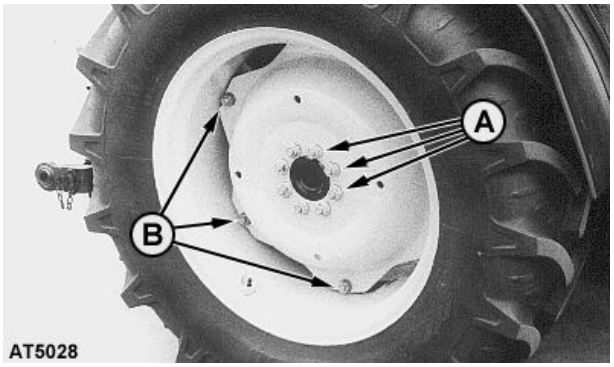
Tighten Wheel Bolts

Tighten rear wheel nuts and bolts to specified torque

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

Specification

(A)—Torque..... 500 N·m (370 lb-ft)
(B) M18 bolt—Torque..... 300 N·m (220 lb-ft)
(B) M16 bolt—Torque..... 230 N·m (170 lb-ft)



AT5028 —UN—15AUG97

(A) — Disk to axle flange **(B) — Rim to disk**

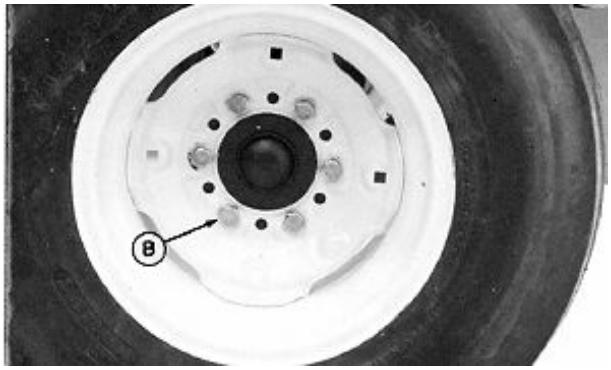
OULXA64,0000D65 -19-24JUL07-1/4

Tighten front wheel nuts and bolts to specified torque

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

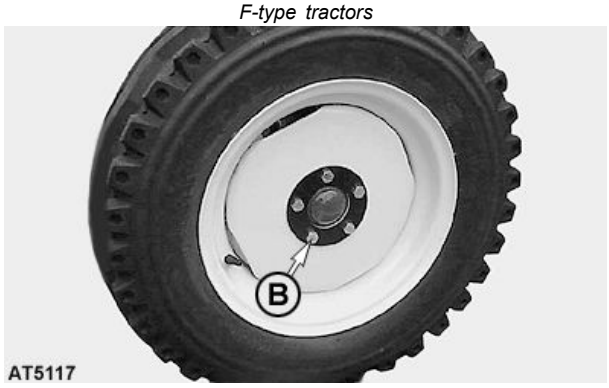
Specification

(B) F-type tractors—Torque..... 175 N·m (130 lb-ft)
(B) V-type tractors—Torque..... 160 N·m (120 lb-ft)



M46420 —UN—31JAN92

F-type tractors



AT5117 —UN—25OCT00

(B) — Disk to axle flange

Continued on next page

OULXA64,0000D65 -19-24JUL07-2/4

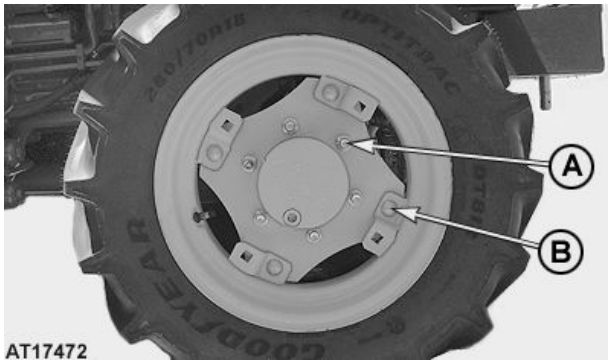
Tighten wheel nuts of front wheel drive axle

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

Specification

(A)—Torque..... 300 N·m (220 lb-ft)
(B) —Torque..... 230 N·m (170 lb-ft)

(A) — Disk to axle flange **(B) — Rim to disk**



AT17472 —UN—26JUL07

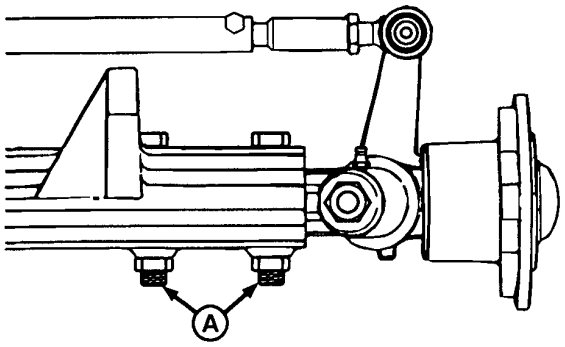
OULXA64,0000D65 -19-24JUL07-3/4

Adjustable front axle (tractors without front wheel drive)

Specification

(A)—Torque.....150 N·m (110 lb-ft)

(A) — Axle bolts



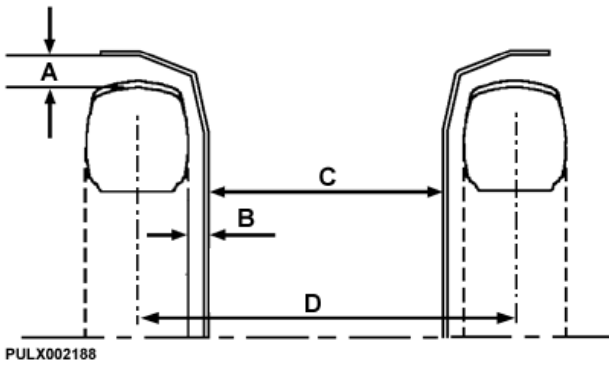
LV812 —UN—20JUL94

OULXA64,0000D65 -19-24JUL07-4/4

Observe Rear Wheel Tread Width Limitations

IMPORTANT: When changing rear tires, check clearance (A) and (B) between tires and fenders.

The tires must clear the fenders by at least:



PULX002188 —UN—09NOV08

Tire Size	F-Type Tractors			
	Minimum Values			
	A	B	C	D
320/85 R24	163 mm (6 in.)	67.5 mm (3 in.)	540 mm (21 in.)	1004 mm (40 in.)
340/85 R24	146 mm (6 in.)	62.5 mm (3 in.)	540 mm (21 in.)	1004 mm (40 in.)
360/70 R24	166.5 mm (7 in.)	51.5 mm (2 in.)	540 mm (21 in.)	1004 mm (40 in.)
380/70 R24	143.5 mm (6 in.)	35 mm (1.38 in.)	540 mm (21 in.)	1004 mm (40 in.)
420/70 R24	113.5 mm (4 in.)	23 mm (1 in.)	540 mm (21 in.)	1004 mm (40 in.)
12.4 R28 (320/85 R28)	112.5 mm (4 in.)	52 mm (2 in.)	540 mm (21 in.)	964 mm (38 in.)
13.6 R28 (340/85 R28)	95.5 mm (4 in.)	46.5 mm (2 in.)	540 mm (21 in.)	986 mm[a] (39 in.)
14.9 R28 (380/85 R28)	61.5 mm (2 in.)	31.5 mm (1 in.)	540 mm (21 in.)	986 mm[a] (39 in.)
380/70 R28	94 mm (4 in.)	32 mm (1 in.)	540 mm (21 in.)	986 mm[a] (39 in.)
420/70 R28	63 mm (2 in.)	80 mm (3 in.)	540 mm (21 in.)	986 mm (39 in.)

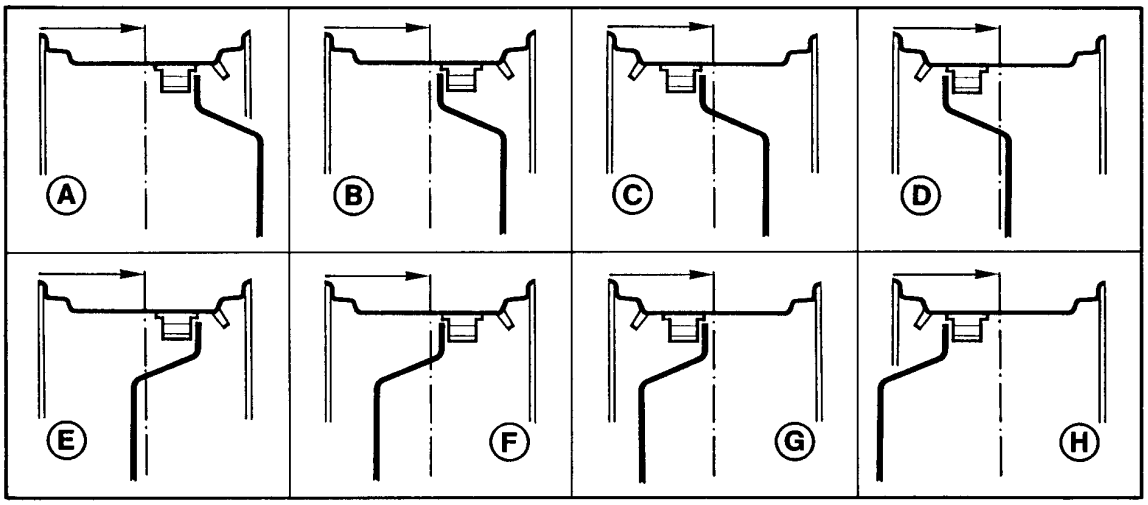
[a]Only if equipped with draft link kit ER067947 or ER067948.

Tire Size	V-Type Tractors			
	Minimum Values			
	A	B	C	D
380/70 R20	196 mm (8 in.)	22.5 mm (1 in.)	540 mm (21 in.)	965 mm[a] (38 in.)
320/85 R24	163 mm (6 in.)	29.5 mm (1 in.)	540 mm (21 in.)	928 mm[a] (37 in.)
340/85 R24	146 mm (6 in.)	24 mm (1 in.)	540 mm (21 in.)	928 mm[a] (37 in.)
360/70 R24	166.5 mm (7 in.)	62.5 mm (2 in.)	540 mm (21 in.)	1026 mm (40 in.)
9.5 R28 (250/85 R28)	169 mm (7 in.)	21 mm (1 in.)	540 mm (21 in.)	829 mm[a] (33 in.)
11.2 R28 (280/85 R28)	146.5 mm (6 in.)	21 mm (1 in.)	540 mm (21 in.)	872 mm[a] (34 in.)
12.4 R28 (320/85 R28)	112.5 mm (4 in.)	58 mm (2 in.)	540 mm (21 in.)	976 mm (38 in.)
13.6 R28 (340/85 R28)	95.5 mm (4 in.)	30.5 mm (1.20 in.)	540 mm (21 in.)	954 mm (38 in.)

[a]Only if equipped with draft link kit ER067947 or ER067948.

NR25796,00017C5 -19-09AUG10-1/1

Adjust Rear Wheel Tread



AT1152

AT1152 —UN—03DEC96

Rear wheel tread can be adjusted by re-positioning or reversing the rims or by reversing the wheel disks.

IMPORTANT: Always mount nuts on rim side.

In addition, the complete wheel can be installed on the other side of the tractor. The arrow on side wall of tire must point in the direction of forward travel.

IMPORTANT: The distance between the side wall of the tire and the fender must not be less than 15 mm (0.6 in.). Distance between edge of tire and fender must not be less than 30 mm (1.18 in.).

After adjustment has been completed tighten wheel retaining bolts to specified torque. See Section 30, Break-In Period.

NOTE: The illustration shows the right-hand rear wheel. Tread widths are measured at the lowest point of the tires.

If wheels are removed to adjust tread, tighten wheel retaining bolts or nuts to specified torque. See Tighten Wheel Bolts in this Section.

F-Type Tractors

	Position of Rims and Wheel Disks (F-Type Tractors)							
Tires	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
320/85 R24 340/85 R24 360/70 R24 380/70 R24	1004 mm[a] (39.5 in.)	1102 mm[a] (43.4 in.)	1198 mm (47.2 in.)	1296 mm (51 in.)	1212 mm (47.7 in.)	1310 mm (51.6 in.)	1406 mm (55.4 in.)	1504 mm (59.2 in.)
420/70 R24	—	1102 mm[a] (43.4 in.)	1198 mm[a] (47.2 in.)	1296 mm (51 in.)	1212 mm (47.7 in.)	1310 mm (51.6 in.)	1406 mm (55.4 in.)	1504 mm (59.2 in.)
12.4 R28 320/85 R28	—	964 mm[a] (38.0 in.)	1142 mm (45.0 in.)	1246 mm (49.1 in.)	1260 mm (49.6 in.)	1364 mm (53.7 in.)	1542 mm (60.7 in.)	1646 mm (64.8 in.)
13.6 R28 340/85 R28 14.9 R28 380/70 R28 380/85 R28 14.9 R28	—	986 mm[b] (38.8 in.)	1120 mm[a] (44.1 in.)	1224 mm (48.2 in.)	1282 mm (50.5 in.)	1386 mm (54.6 in.)	1520 mm (59.8 in.)	1624 mm (63.9 in.)
420/70 R28	—	—	1120 mm[a] (44.1 in.)	1224 mm (48.2 in.)	1282 mm (50.5 in.)	1386 mm (54.6 in.)	1520 mm (59.8 in.)	1624 mm (63.9 in.)
380/70 R28	—	786 mm[a] 30.94 in.	1120 mm[a] (44.1 in.)	1224 mm (48.2 in.)	1282 mm (50.5 in.)	1386 mm (54.6 in.)	1520 mm (59.8 in.)	1624 mm (63.9 in.)

[a] *Not if tractor is equipped with pick-up hitch.*
[b] *Only if equipped with draft link kit ER067947 or ER067948.*

Continued on next page

V-Type Tractors

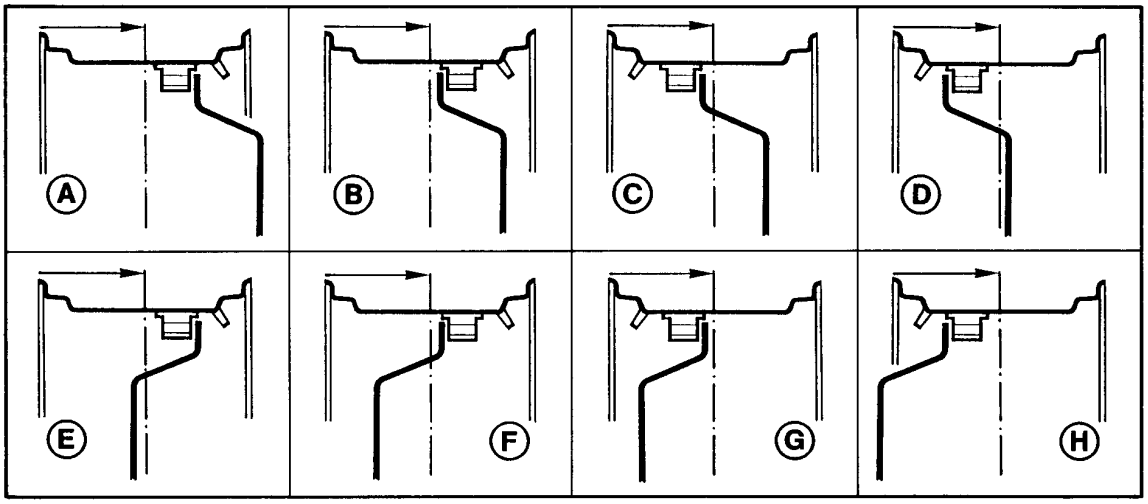
	Position of Rims and Wheel Disks (V-Type Tractors)							
Tires	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
250/85 R28 9.5-R28	—	829 mm[a] (32.6 in.)	835 mm[a] (32.9 in.)	937 mm (36.9 in.)	1027 mm (40.4 in.)	1129 mm (44.4 in.)	1135 mm (44.7 in.)	1237 mm (48.7 in.)
12.4-R28 320/85 R28	—	—	—	976 mm[a] (38.4 in.)	990 mm (39 in.)	1094 mm (43.1 in.)	1272 mm (50.1 in.)	1376 mm (54.2 in.)
320/85 R24	—	—	928 mm[a] (36.5 in.)	1026 mm (40.4 in.)	942 mm[a] (37.1 in.)	1040 mm (40.9 in.)	1136 mm (44.7 in.)	1234 mm (48.6 in.)
340/85 R24	—	—	928 mm[a] (36.5 in.)	1026 mm (40.4 in.)	942 mm[a] (37.1 in.)	1040 mm (40.9 in.)	1136 mm (44.7 in.)	1234 mm (48.6 in.)
360/70 R24	—	—	—	1026 mm (40.4 in.)	—	1040 mm (40.9 in.)	1136 mm (44.7 in.)	1234 mm (48.6 in.)
13.6-R28 340/85 R28	—	—	—	954 mm[a] 37.6 in.	1012 mm (39.8 in.)	1116 mm (43.9 in.)	1250 mm (49.2 in.)	1354 mm (53.3 in.)
380/70-R20	—	—	965 mm[a] (38 in.)	1055 mm (41.53 in.)	—	995 mm[a] (39.17 in.)	1119 mm (44.05 in.)	1209 mm (47.6 in.)
11.2 R28	—	—	872 mm[a] (34.3 in.)	976 mm (38.4 in.)	990 mm (39 in.)	1094 mm (43.2 in.)	1272 mm (50.1 in.)	1376 mm (54.1 in.)

[a]*Only if equipped with draft link kit ER067947 or ER067948.*

NR25796,0001780 -19-09AUG10-2/2

Adjust Front Wheel Tread (Tractors with Front Wheel Drive)

F-Type Tractors



AT1152

AT1152 —UN—03DEC96

Front wheel tread can be adjusted by re-positioning or reversing the rims or by reversing the wheel disks.

IMPORTANT: Always mount nuts on rim side.

In addition, the complete wheel can be installed on the other side of the tractor. The arrow on side wall of tire must point in the direction of forward travel.

NOTE: The illustration shows the right-hand front wheel. Tread widths are measured at the lowest point of the tires.

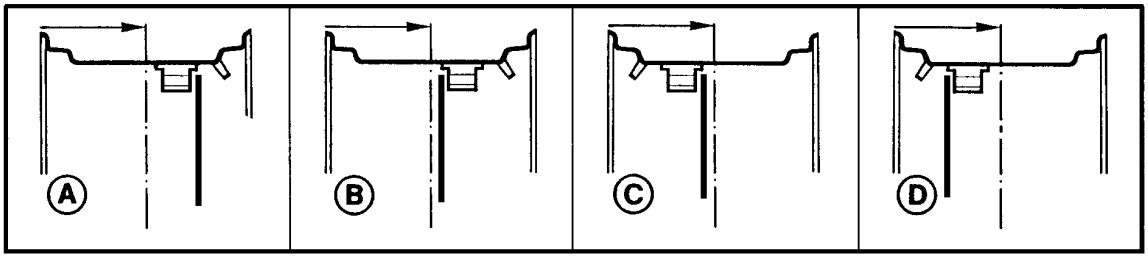
If front wheels are removed to adjust tread, tighten front wheel attaching nuts to specified torque. See Tighten Wheel Bolts in this Section.

	Position of Rims and Wheel Disks (F-Type Tractors)							
Tires	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
7.50-16	1066 mm (42 in.)	1066 mm (42 in.)	1262 mm (49.7 in.)	1262 mm (49.7 in.)	1066 mm (42 in.)	1066 mm (42 in.)	1262 mm (49.7 in.)	1262 mm (49.7 in.)
7.50-18	1049 mm (41.3 in.)	1139 mm (44.8 in.)	1187 mm (46.7 in.)	1277 mm (50.2 in.)	1049 mm (41.3 in.)	1139 mm (44.8 in.)	1187 mm (46.7 in.)	1277 mm (50.2 in.)
10.0/75-15.3	1082 mm (42.6 in.)	1082 mm (42.6 in.)	1246 mm (49.1 in.)	1246 mm (49.1 in.)	1082 mm (42.6 in.)	1082 mm (42.6 in.)	1246 mm (49.1 in.)	1246 mm (49.1 in.)
250/80 R16	1046 mm (41.2 in.)	1046 mm (41.2 in.)	1286 mm (50.6 in.)	1286 mm (50.6 in.)	1046 mm (41.2 in.)	1046 mm (41.2 in.)	1286 mm (50.6 in.)	1286 mm (50.6 in.)
250/80 R18	1030 mm (40.6 in.)	1120 mm (44.1 in.)	1204 mm (47.4 in.)	1294 mm (50.9 in.)	1030 mm (40.6 in.)	1120 mm (44.1 in.)	1204 mm (47.4 in.)	1294 mm (50.9 in.)
280/70 R18	1031 mm (40.6 in.)	1121 mm (44.1 in.)	1205 mm (47.4 in.)	1295 mm (51 in.)	1031 mm (40.6 in.)	1121 mm (44.1 in.)	1205 mm (47.4 in.)	1295 mm (51 in.)
260/70 R20	916 mm (36 in.)	1006 mm (39.6 in.)	1054 mm (41.5 in.)	1144 mm (45 in.)	916 mm (36 in.)	1006 mm (39.6 in.)	1054 mm (41.5 in.)	1144 mm (45 in.)

Continued on next page

NR25796,0001781 -19-26MAR09-1/2

V-Type Tractors



AT5086

AT5086 —UN—15AUG97

Front wheel tread can be adjusted by re-positioning or reversing the rims or by reversing the wheel disks.

IMPORTANT: Always mount nuts on rim side.

In addition, the complete wheel can be installed on the other side of the tractor. The arrow on side wall of tire must point in the direction of forward travel.

NOTE: The illustration shows the right-hand front wheel. Tread widths are measured at the lowest point of the tires.

If front wheels are removed to adjust tread, tighten front wheel attaching nuts to specified torque. See Tighten Wheel Bolts in this Section.

	Position of Rims and Wheel Disks (V-Type Tractors)			
Tires	**A**	**B**	**C**	**D**
6.00-16	888.3 mm (35 in.)	954.3 mm (37.6 in.)	1006.3 mm (39.6 in.)	1072.3 mm (42.2 in.)
6.50-16	892.5 mm (35.1 in.)	892.5 mm (35.1 in.)	1005.5 mm (39.6 in.)	1066.5 mm (42 in.)
7.50-16*	892 mm (35.1 in.)	953 mm (37.5 in.)	1005 mm (39.6 in.)	1066 mm (42 in.)
7.50 R16**	891.6 mm (35.1 in.)	952.6 mm (37.5 in.)	1004.6 mm (39.6 in.)	1065.6 mm (42 in.)
8.25-16	891.4 mm (35.1 in.)	952.4 mm (37.5 in.)	1004.4 mm (39.5 in.)	1065.4 mm (41.9 in.)
10.0/75-15.3	877.3 mm (34.5 in.)	943.3 mm (37.1 in.)	1015.3 mm (40 in.)	1081.3 mm (42.6 in.)
200/70 R16	905.7 mm (35.7 in.)	971.7 mm (38.3 in.)	991.7 mm (39 in.)	1057.6 mm (41.6 in.)
240/70 R16	846.6 mm (33.3 in.)	912.6 mm (35.9 in.)	1048.6 mm (41.3 in.)	1114.6 mm (43.9 in.)
260/70 R16	845.9 mm (33.3 in.)	911.9 mm (35.9 in.)	1047.9 mm (41.3 in.)	1113.9 mm (43.9 in.)

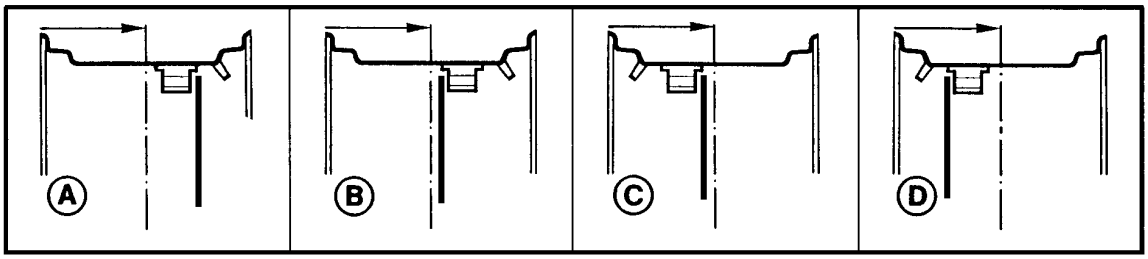
NOTE: With this tire size, rim type varies depending on the size of rear tires.

** 7.50-16 tires from Goodyear.*

*** 7.50 R16 tires from Conti Farmer AC.*

NR25796,0001781 -19-26MAR09-2/2

Adjust Front Wheel Tread (Tractors without Front Wheel Drive)



AT5086

AT5086 —UN—15AUG97

Front rims are offset to provide two tread spacings, at each axle setting.

If wheels are removed to adjust tread, tighten wheel retaining bolts or nuts to specified torque. See Tighten Wheel Bolts in this Section.

Tread Settings Depending on Axle Settings (F-Type Tractors)				
Tires	**A**	**B**	**C**	**D**
6.50-16[a]	997 mm (39.25 in.)	997 mm (39.25 in.)	1095 mm (43.11 in.)	1095 mm (43.11 in.)
6.50-16	1063 mm (48.9 in.)	1063 mm (48.9 in.)	1261 mm (49.65 in.)	1261 mm (49.65 in.)
7.50-16	1095 mm (43.11 in.)	1095 mm (43.11 in.)	1231 mm (48.46 in.)	1231 mm (48.46 in.)

[a] *Galaxy*

Tread Settings Depending on Axle Settings (V-Type Tractors)				
Tires	**A**	**B**	**C**	**D**
6.50-R16*	775.2 mm (30.5 in.)	775.2 mm (30.5 in.)	973.2 mm (38.3 in.)	973.2 mm (38.3 in.)
7.50-R16	806.8 mm (31.7 in.)	806.8 mm (31.7 in.)	942.8 mm (37.1 in.)	942.8 mm (37.1 in.)
7.50-R16[a]	807.9 mm (31.8 in.)	807.9 mm (31.8 in.)	943.9 mm (37.2 in.)	943.9 mm (37.2 in.)

[a] *Galaxy*

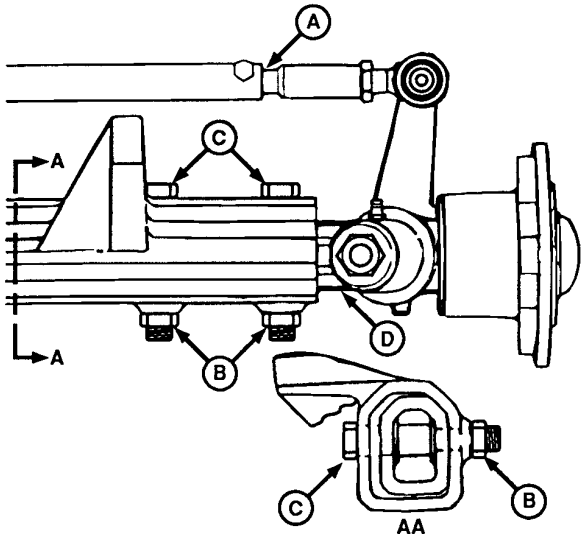
*NOTE: * 6.50-R16 tires for combination with rear tire 11.2-R28*

NR25796,0001782 -19-09AUG10-1/1

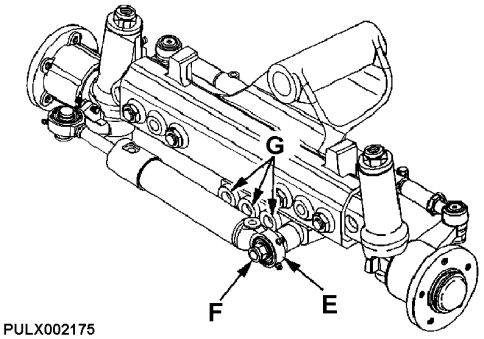
Adjusting Front Axle Tread Width

IMPORTANT: DO NOT place jack under engine oil pan.

1. Jack up front end of tractor.
2. When making large tread adjustments it may be necessary to change the tie rod length (A) before or during axle adjustments. See Check Toe-In and Adjust Toe-In in this Section.
3. Change the steering cylinder (E) anchoring position to axle body in relation to the change of tread width using the available holes (G). Tighten lock nut (F) to 250 N·m (184 lb-ft.)
4. Remove nuts (B), cap screws (C) and bushings from front axle (two on each side).
5. Slide axle knees (D) to desired position. Both sides should be adjusted to the same spacing.
6. Reinstall cap screws (C), bushings and nuts (B) on each side. Tighten hardware to 150 N·m (110 lb-ft).
7. Set toe-in. Refer to Check Toe-In and Adjust Toe-In for your axle type in this Section.



LV810 —UN—08JUL94



PULX002175

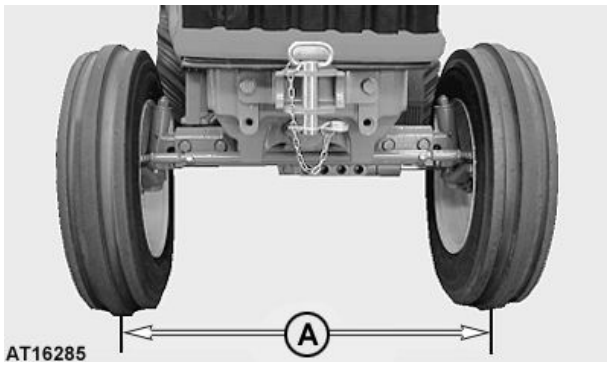
PULX002175 —UN—16OCT08

NR25796,0001783 -19-22JAN09-1/1

Check Toe-In

Without front-wheel drive

1. Park machine on level surface.
2. Turn steering wheel so front wheels are in the straight-ahead position. Stop engine.
3. Measure distance (A) between tires at hub level in front of axle. Record measurement and mark the tires.
4. Move tractor back about 1 m (3 ft.), so mark is at hub level behind the axle. Again, measure distance between tires at same point on tire. Record measurement.
5. Determine the difference between front and rear measurements. If the front measurement is smaller, toe is ”in”. If the rear is smaller, toe is ”out”.



AT16285

AT16285 —UN—23JUN03

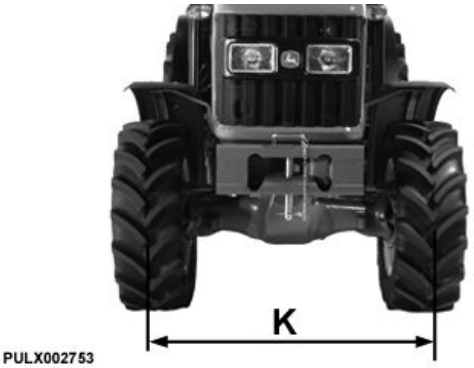
6. Distance (A) at front of tires must be 3 - 6 mm (1/8 -1/4 in.) less than distance measured at rear of tires. Adjust toe-in if necessary. See procedure in this Section.

Continued on next page

NR25796,0001784 -19-04FEB09-1/2

With front-wheel drive

1. Disengage front wheel drive and park tractor on smooth, level surface. Steer front wheels straight ahead. Stop engine.
2. Measure distance (K) between centerline of tires at hub level in front of axle, using an outside bar of each tire or an inside bar of each tire. Record measurement and mark the tires.
3. Move tractor back about 1 m (3 ft.), so mark is at hub level behind the axle. Again, measure distance between tires at same point on tire. Record measurement.
4. Determine the difference between front and rear measurements. If the front measurement is smaller, toe is ”in”. If the rear is smaller, toe is ”out”. The difference may be in either direction (toe-in or toe-out), but should be less than 2 mm (0.08 in.). Adjust toe-in if necessary. See procedure in this Section.



PULX002753

PULX002753 —UN—20NOV08

NR25796,0001784 -19-04FEB09-2/2

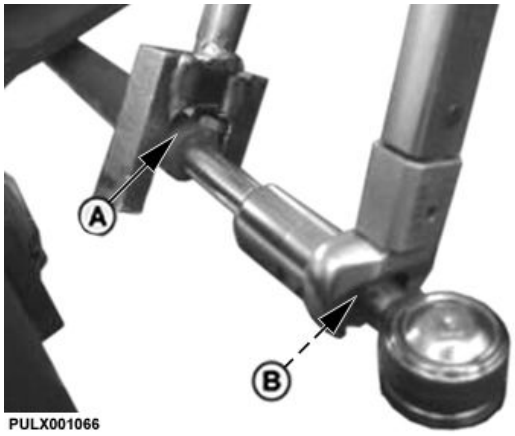
Adjust Toe-In

Without front-wheel drive

1. Loosen lock nuts (B) on both ends of tie rod.
2. Turn inner tube (A) to lengthen or shorten tie rod until toe-in is 3 - 6 mm (0.12 - 0.24 in.).

Tie Rod Rotation	Approximate Change in Toe-In
1/2 turn	8 mm (0.31 in.)
1 turn	16 mm (0.63 in.)

3. Tighten lock nuts (B) to 140 N•m (103 lb-ft).



PULX001066

PULX001066 —UN—18AUG08

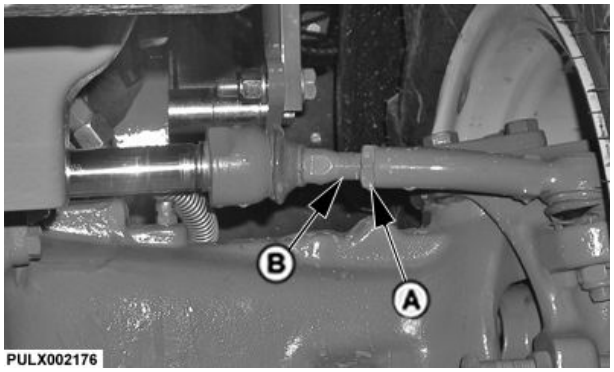
NR25796,0001785 -19-04FEB09-1/2

With front-wheel drive

1. Loosen lock nuts (A) on both ends of tie rod.
2. Adjust both sides equally by rotating the inner rod (B) to lengthen or shorten tie rod, as needed to obtain toe-in or toe-out of less than 2 mm (0.08 in.).

Tie Rod Rotation	Approximate Change in Toe-In
1/8 turn	4 mm (0.16 in.)
1/4 turn	8 mm (0.31 in.)
1/2 turn	16 mm (0.63 in.)

3. Tighten lock nuts (A) to 120 N•m (88 lb-ft).



PULX002176

PULX002176 —UN—16OCT08

NR25796,0001785 -19-04FEB09-2/2

Steering Angle Adjustment

NOTE: The tractor must be ready for operation when the steering angle is adjusted. Tires, fenders, implements and different types of ballast are factors that affect each tractor differently.

Steering angle must be the same on both sides.

CAUTION: The engine must be shut off when the adjustment is made. RISK OF CRUSHING!

1. Lift front of tractor until the front axle can swing to its limits.
2. Support the tractor safely.
3. Move the right side of the axle upwards until it reaches the stop.
4. Turn the steering to full lock in both directions.
5. If necessary, loosen lock nut (B) and adjust steering angle as per specification using screw (A).

Mechanical Front-Wheel Drive Tractors—Specification

Minimum Clearance, Steering Stop—Distance	25 mm 1 in.

Two-wheel drive tractors—Specification

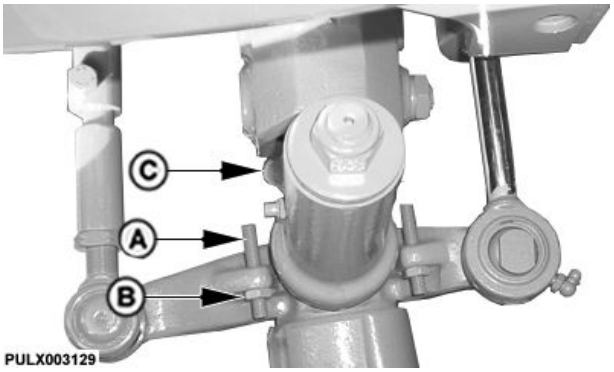
Minimum Clearance, Steering Stop [1]—Distance	25 mm 1 in.
Minimum Clearance, Steering Stop at Tie Rod [2]—Distance	23 mm 0.92 in.
Minimum Clearance, Steering Stop at Steering Cylinder [2]—Distance	17 mm 0.68 in.

6. Tighten lock nut to specified torque.

Specification

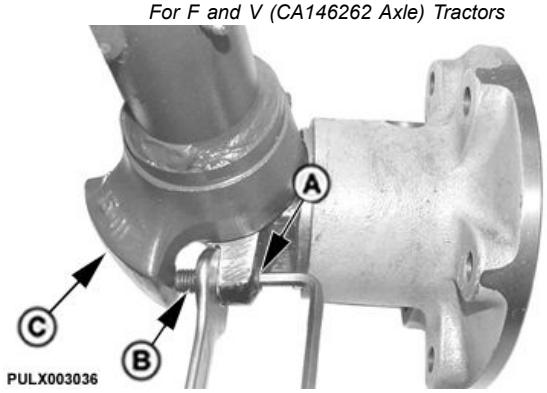
Front axle without front-wheel drive—Torque	56 N·m 41 lb-ft
Front axle with front-wheel drive—Torque	125 N·m 92 lb-ft

[1]F and V, CA128971 axle
[2]F and V, CA146262 axle



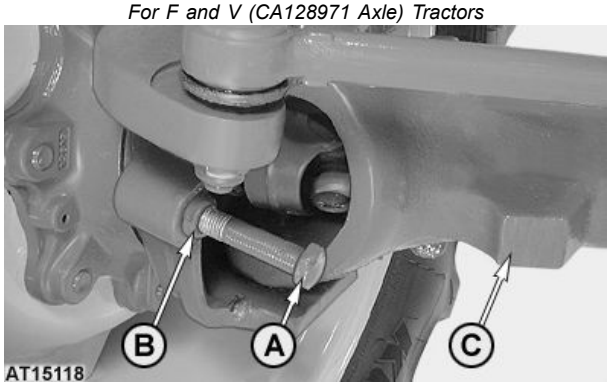
PULX003129 —UN—10FEB09

For F and V (CA146262 Axle) Tractors



PULX003036 —UN—04FEB09

For F and V (CA128971 Axle) Tractors



AT15118 —UN—24SEP03

Front axle with front-wheel drive

A—Adjusting screw
B—Lock nut
C—Stop

7. Repeat this procedure on the left side.

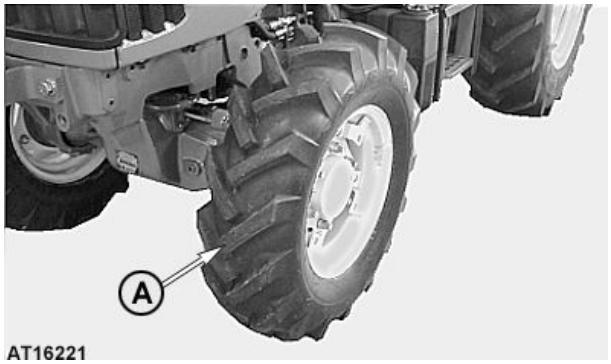
NR25796,0000048 -19-11MAR09-1/1

Direction of Tire Rotation

When mounting or changing tires, make sure arrow on flank of tires points in the direction of forward travel (A).

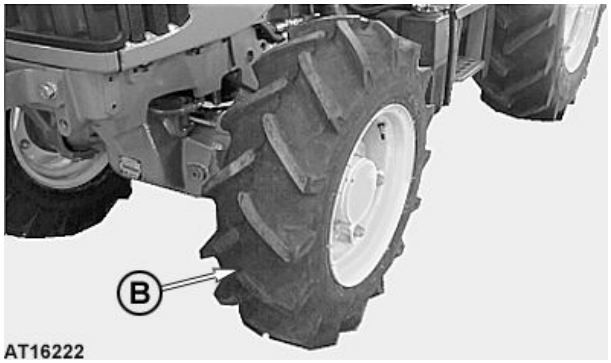
When tractors with front wheel drive are to be used primarily for transport purposes or front loader operation, turn tires against usual rolling direction of tire lugs (B). Tire life is increased by 25 to 30% and better traction is achieved.

Because of reduced traction and tire self-cleaning effects, this arrangement is not recommended for field work under wet conditions.



AT16221

AT16221 —UN—10FEB03



AT16222

AT16222 —UN—10FEB03

OULXA64,0000D6C -19-09SEP03-1/1

Tire Pressures

Long life and satisfactory performance of the tires depend on proper tire inflation. Under-inflation of tires leads to rapid wear. Over-inflated tires reduce traction and increase wheel slippage.

Since correct tire pressures depend not only on working conditions and load but also on tractor model, tire size and manufacturer, we recommend that you approach your John Deere dealer or tire company for advice.

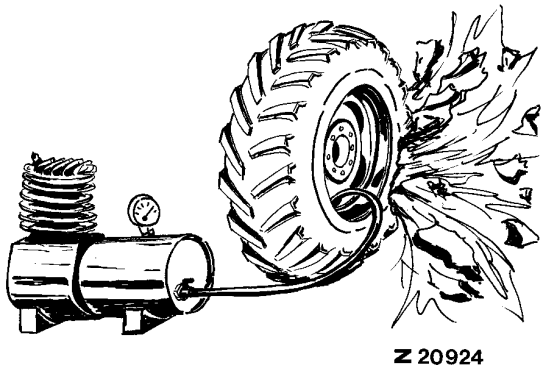
AG,OU12401,170 -19-28MAR00-1/1

Mounting Tires

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do NOT attempt to mount a tire unless you have the proper equipment and experience to perform the job safely. Have it done by your John Deere dealer or a qualified tire repair service.

When seating tire beads on rims, never exceed maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead and reinflate.

Detailed agricultural tire mounting instructions, including the necessary safety precautions, are available from your local tire manufacturer agents.



Z 20924

Z20924 —UN—15AUG94

OULXA64,0000C96 -19-31JUL03-1/1

Tire Combinations

In order to achieve maximum drawbar pull, maintain proper steerability, reduce tire wear and fuel consumption, comply with the correct tire combinations shown below.

Should front wheel drive front tires show excessive wear in comparison with rear tires, the front tires must be replaced in order to maintain the predetermined tire ratio.

IMPORTANT: When replacing tires, consult your tire dealer. Mixing worn and new tires, bias and radial or tires of different diameters or loaded radii can reduce tire life and overall tractor performance.

Using any tire combination, other than those listed below could result in premature tire and power train wear due to excessive underspeed or overspeed.

	FRONT TIRES (F-TYPE TRACTORS)								
REAR TIRES	280/70 R18[a]	280/70 R18[b]	10.0/75-15.3	280/70 R18	7.50-16 4WD	7.50-18	250/80 R16	260/70 R20	250/80-18
380/70 R28[a]	X	-	-	-	-	-	-	-	-
380/85 R28 (14.9 R28)[b] 420/70 R28 380/70 R28 420/70 R24	-	X	-	-	-	-	-	-	-
320/85 -24	-	-	X	-	-	-	-	-	-
12.4 R28 (320/85 R28)	-	-	-	X	-	-	-	-	-
340/85-24	-	-	-	-	X	-	-	-	-
13.6 R28 (340/85 R28)	-	-	-	-	-	X	-	-	-
360/70R24	-	-	X	-	-	-	-	-	-
380/70R24	-	-	-	-	-	-	X	-	-
14.9 R28 (380/85 R28)	-	-	-	-	-	-	-	X	-
380/70 R28[c]	-	-	-	-	-	-	-	-	X

[a] *CONTI AC 70T*
[b] *Firest. R 6000*
[c] *PIRELLI*

	FRONT TIRES (V-TYPE TRACTORS)							
REAR TIRES	7.50-16[a]	260/70 R16	6.00-16	7.50-16	240/70R16	8.25-16	10.0/75-15.3	200/70R16
320/85 R28 (12.4 R28)[a]	X	-	-	-	-	-	-	-
340/85 R24 (13.6 R24)[a]	-	X	-	-	-	-	-	-
280/85-28 320/85 -24	-	-	X	-	-	-	-	-
12.4 R28 (320/85 R28)	-	-	-	X	-	-	-	-
13.6 R28 (340/85 R28) 360/70R24	-	-	-	-	X	-	-	-
340/85 R28[b]	-	-	-	-	-	X	-	-
340/85-24[b]	-	-	-	-	-	-	X	-
380/70R20	-	-	-	-	-	-	-	X

[a] *CONTI AC 85*
[b] *PIRELLI*

*NOTE: *See your John Deere dealer for information about the availability of these tires.*

NR25796,0001786 -19-19JUL10-1/1

Use Correct Hose Tips

If your tractor is equipped with a selective control valve (SCV), the couplers receptacles accept a standard hose tip as recommended by ISO[1] and SAE[2]. Adapters are available to allow connecting the older John Deere hose tips to the ISO couplers on your tractor.

[1] *International Standards Organization*
[2] *Society of Automotive Engineers*

OULXA64,000024F -19-20JUN01-1/1

Levers for Selective Control Valves

The control levers (A) can have four settings depending on the configuration identified by the decals.

The remote cylinder retracts when the lever is moved backwards to the "Retract" position.

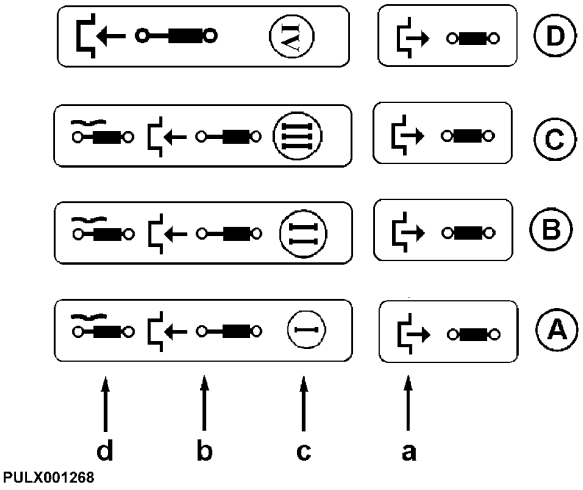
The remote cylinder extends when the lever is moved forward to the "Extend" position.

The remote cylinder is held in place when the lever is in "Neutral".

When the lever is in the "Float" position (i.e. piston moves freely inside remote cylinder), the mounted implement follows the ground contours.

a— Retract
b— Extend
c— Neutral position
d— Float position

PULX001067 —UN—18AUG08



PULX001268 —UN—08SEP08

NR25796,0001787 -19-26MAR09-1/2

Locks (A) allow the control levers to be secured in neutral.

NOTE: Apply locks (A) when driving on roads and whenever the control levers are in neutral because they are not required.

PULX001069 —UN—18AUG08

NR25796,0001787 -19-26MAR09-2/2

Control Lever and Coupler Identification

Standard Version:

The tractor can be equipped with:

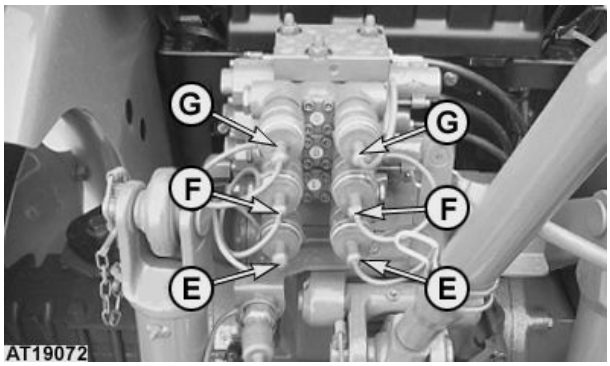
- One double-acting SCV.
- Up to two additional double-acting SCVs.

Fore-and-aft movement of lever (A) operates the couplers (E).

Fore-and-aft movement of lever (B) operates the couplers (F)[1].

Fore-and-aft movement of lever (C) operates the couplers (G)[1].

PULX003101 —UN—03MAR09



AT19072 —UN—20SEP06

[1] *if equipped.*

Continued on next page

NR25796,0001788 -19-26MAR09-1/2

Optional Version:

The tractor can be equipped with:

- One single-acting SCV in fourth position.
- Three additional double-acting SCVs.
- A flow divider valve.

Fore-and-aft movement of lever (A) operates the rear couplers (E) and the mid-mounted couplers (E1).

Fore-and-aft movement of lever (B) operates the rear couplers (F) and the mid-mounted couplers (F1).

Fore-and-aft movement of lever (C) operates the rear couplers (G) and the mid-mounted couplers (G1).

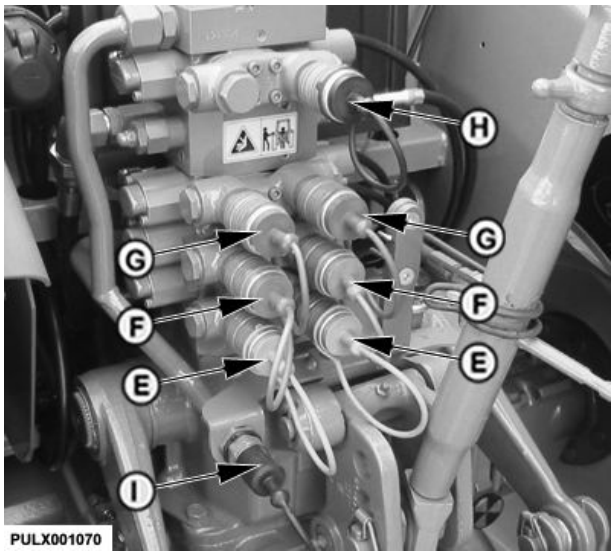
Fore-and-aft movement of lever (D) operates the rear couplers (H) and the mid-mounted couplers (H1).

The flow divider valve (P) splits the amount of oil for the SCVs between the double-acting SCVs/hitch and single-acting SCV.

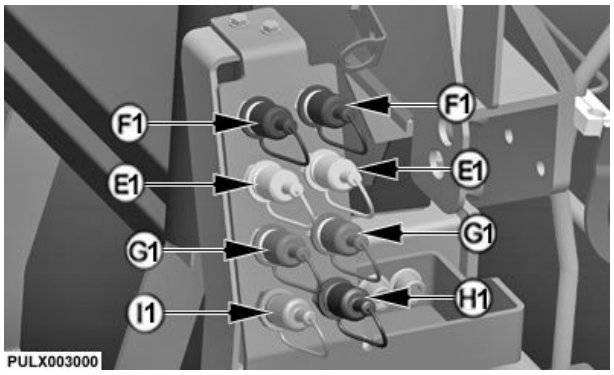
NOTE: On tractors equipped with third pump, the flow divider is used only to divide the flow for the SCVs.

Pressure-free return couplers (I) and (I1) are used to return oil from the equipment connected to couplers (H) and (H1).

PULX001067 —UN—18AUG08



PULX001070 —UN—18AUG08



PULX003000 —UN—20JAN09

NR25796,0001788 -19-26MAR09-2/2

Flow Divider Valve

The tractor may be equipped with a flow divider valve (A), which splits the amount of oil for the SCVs between the double-acting SCVs/hitch (B) and single-acting SCV (C).

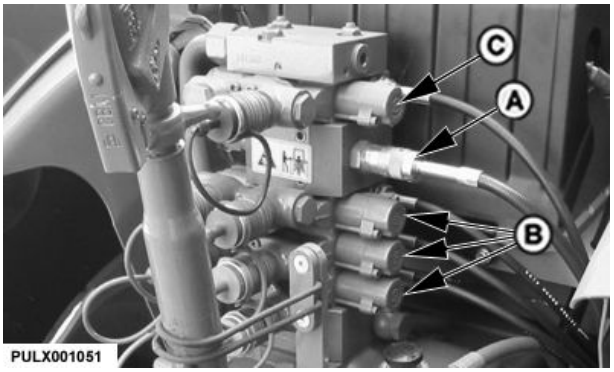
With knob (D), this allocation can be adjusted infinitely from 90% for double-acting SCVs and 10% for single-acting SCV to 10% for double-acting SCVs and 90% for single-acting SCV.

Turn knob (D) clockwise = Up to 90% of oil to SCVs I, II, III and hitch.

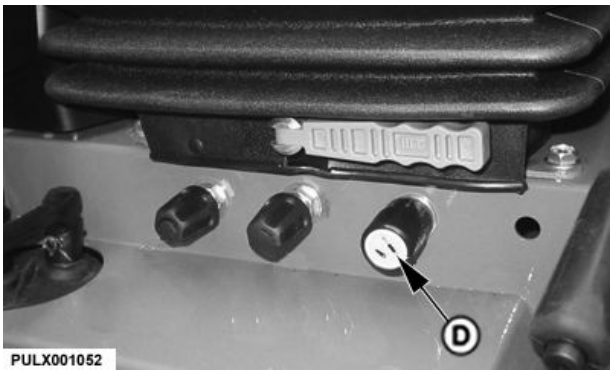
Turn knob (D) counterclockwise = Up to 90% of oil to SCV IV.

NOTE: On tractors equipped with third pump, the flow divider is used only to divide the flow for the SCVs.

A—Flow divider valve
B—Double-Acting SCVs/hitch
C—Single-Acting SCV
D—Knob



PULX001051 —UN—18AUG08



PULX001052 —UN—07NOV08

NR25796,0001789 -19-26MAR09-1/1

Maximum Permissible Oil Withdrawal

To operate large hydraulic cylinders such as those used on tipping trailers, 10 liters (2.6 U.S. gal.) of oil may be drawn from the transmission case through the connecting lines.

This figure applies when the oil in the transmission case is at the minimum mark on the dipstick. If the oil is up to the maximum mark, a further 5 liters (1.3 U.S. gal.) may be withdrawn.

Never perform heavy jobs such as towing, operating a PTO or driving fast when withdrawal results in the oil level dropping below the minimum mark.

HY-GARD is a trademark of Deere & Company.

If required, a further 10 liters (2.6 U.S. gal.) may be added to the transmission case; this increases the amount that may be withdrawn accordingly.

During oil withdrawal, the tractor should not be inclined in any direction by more than 18° (32 %). If the tractor is inclined by more than 18° (32 %), only a correspondingly lower quantity of oil may be withdrawn.

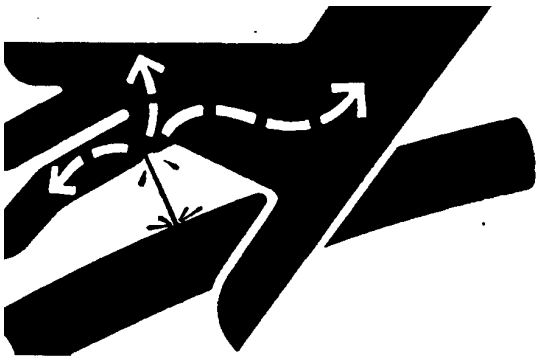
For refilling, use only John Deere HY-GARD® Transmission and Hydraulic Oil or its equivalent.

OULXA64,0000251 -19-20JUN01-1/1

Connecting Cylinder Hoses

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

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

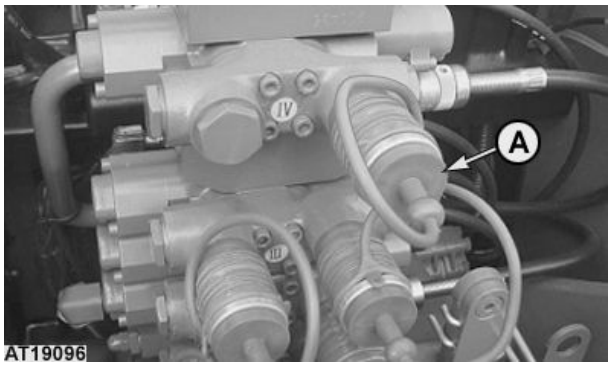


X9811 —UN—23AUG88

1. Remove dust caps (if equipped) from hose ends.

OULXA64,0000D61 -19-04OCT06-1/4

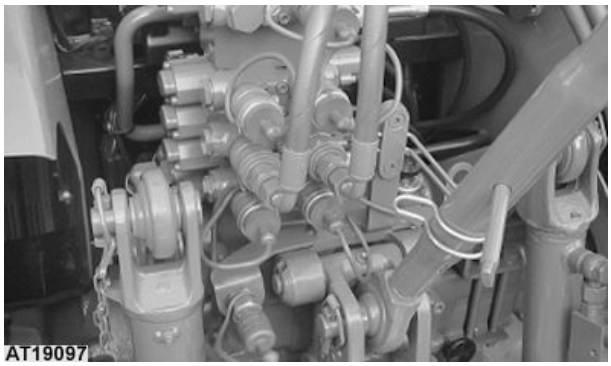
2. Pull dust plugs (A) from couplers.
3. Make sure hose end and coupler receptacles are clean.



AT19096 —UN—06MAY08

OULXA64,0000D61 -19-04OCT06-2/4

4. Check hoses to see which is used for extending cylinder. This hose must be connected to the couplers in order to extend cylinder when SCV levers are moved rearward or inward.



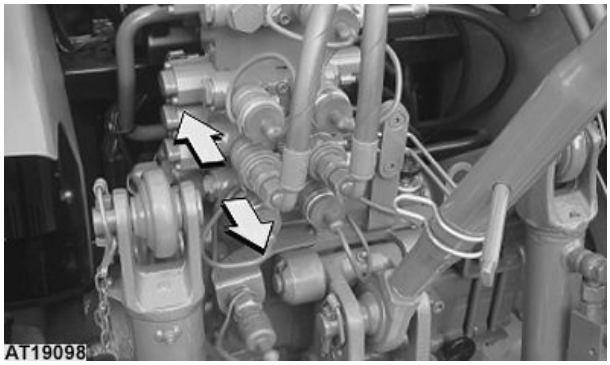
AT19097 —UN—06MAY08

Continued on next page

OULXA64,0000D61 -19-04OCT06-3/4

CAUTION: Hydraulic hoses can fail due to physical damage, kinks, age and exposure. Check hoses regularly. Replace damaged hoses.

5. To connect each hose, push hose tip firmly into coupler receptacle.
6. Pull lightly on hose to make sure connection is tight.



AT19098 —UN—06MAY08

OULXA64,0000D61 -19-04OCT06-4/4

Connect Hose Under Pressure

IMPORTANT: Implement must be raised slightly, by pulling back lever (A), (B), (C) or (D) to reset coupler check valves, before it can be moved.

If hoses should accidentally be disconnected from tractor during use, clean hose tip and coupler receptacle. Hoses can be reinstalled as previously described with minimal loss of oil.

PULX001067 —UN—18AUG08

NR25796,000178A -19-16DEC08-1/1

Remote Hydraulic Cylinders

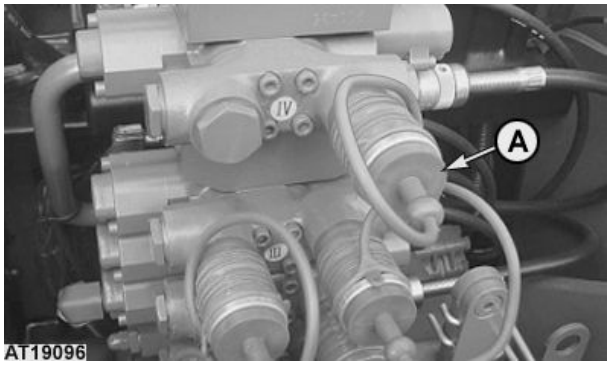
Connecting single-acting cylinder

IMPORTANT: The volume of oil required to extend cylinder must not lower transmission/hydraulic oil level below end of dipstick. Check oil level with cylinder fully extended.

In order for lever to work properly, a single-acting cylinder should be connected only to receptacle (A).

Correcting reversed cylinder response

CAUTION: If cylinder response is reversed, extending when it should retract, reverse cylinder hose connections at coupler.



AT19096 —UN—06MAY08

Continued on next page

NR25796,000178B -19-26MAR09-1/6

Neutral position

Spring pressure returns levers (A), (B), (C) and (D) to a centered position (see arrow). With the control lever in this position, the remote cylinder is hydraulically locked in position.

PULX001067 —UN—18AUG08

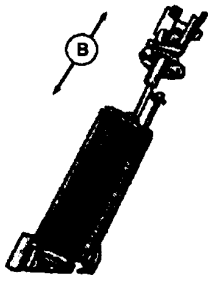
NR25796,000178B -19-26MAR09-2/6

Retracting cylinder

Pull lever (A), (C), (D) or (E) from neutral to the rear and hold it against spring pressure.

This retracts cylinder (B) (arrow down) connected to SCV I, II or III coupler receptacles.

PULX001073 —UN—18AUG08



M47174 —UN—31JAN92

Continued on next page

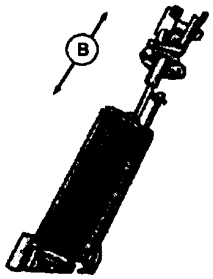
NR25796,000178B -19-26MAR09-3/6

Extending cylinder

Push lever (A), (C), (D) or (E) from neutral to the front and hold it against spring pressure.

This extends cylinder (B) (arrow up) connected to SCV I, II or III coupler receptacles.

PULX001074 —UN—18AUG08

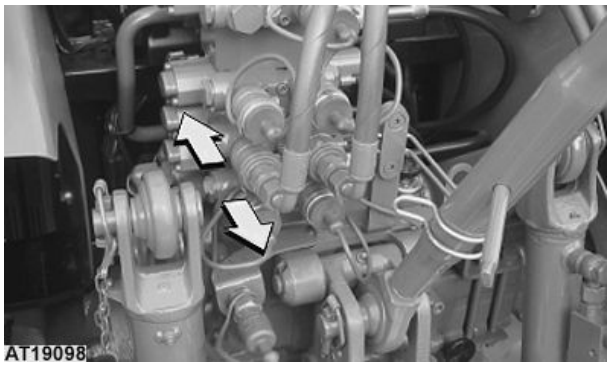


M47174 —UN—31JAN92

NR25796,000178B -19-26MAR09-4/6

Disconnecting cylinder hoses

1. If possible, retract remote cylinder as much as possible to protect cylinder rod from damage.
2. With as much hydraulic pressure as possible relieved from hoses, pull hoses from couplers.
3. Make sure dust plugs for receptacles and dust caps for hoses are clean, then reinstall.

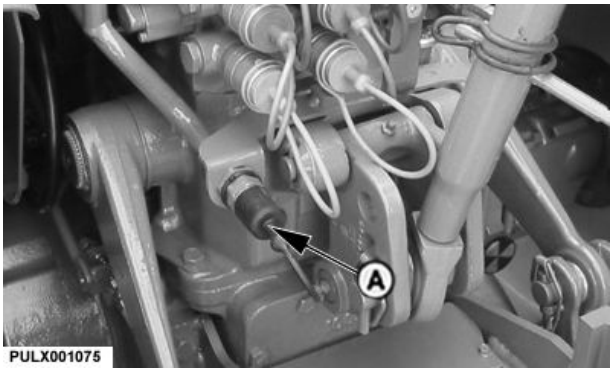


AT19098 —UN—06MAY08

NR25796,000178B -19-26MAR09-5/6

Return line to sump

For some applications (front loader for example) it may be necessary to connect the oil return hose to the sump via quick coupler (A).



PULX001075 —UN—18AUG08

NR25796,000178B -19-26MAR09-6/6

Drawbar

The tractor is equipped with a drawbar with vertical load allowed (A).

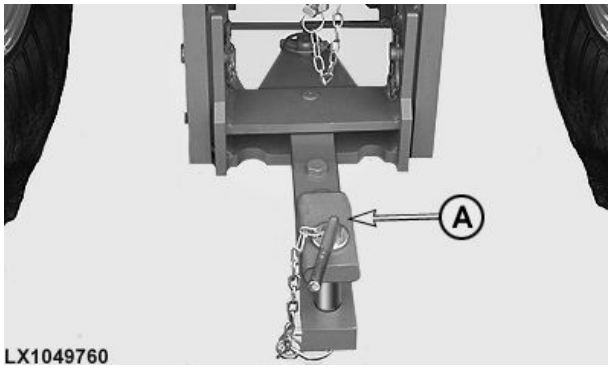
For maximum traction and efficiency, drawbar should be positioned in the center, short position (see implement operator's manual for more information).

Maximum permissible static vertical loads and towable drawbar loads are stated in the Specifications section.

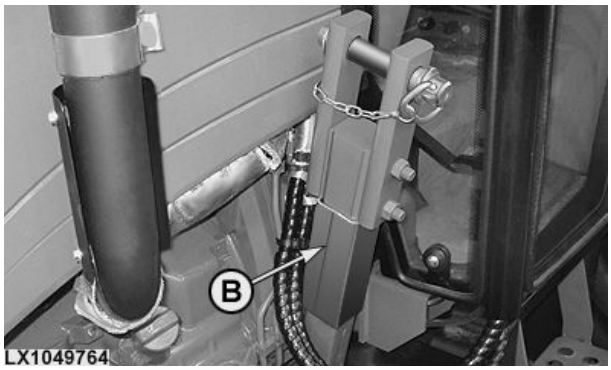
Store the drawbar in bracket (B) if not used.

NOTE: Have components that are subject to wear checked and replaced (if necessary) by your John Deere dealer (see Service / Every 500 Hours).

NOTE: Towing on public roads with the swinging drawbar set to one side is not permitted!



LX1049760 —UN—15JUL10



LX1049764 —UN—21JUL10

OULXA64,0000C76 -19-19JUL10-1/1

Height Adjustable Trailer Hitches

These hitches can be adjusted up or down according to the implement height and to obtain clearance for the center link or PTO operation.

Depending on legal requirements in the different countries, hitches of EEC or CUNA type are available.

Adjust sliding hitch height

CAUTION: Use the CUNA hitch system for trailers with pivoting towing eyes only.

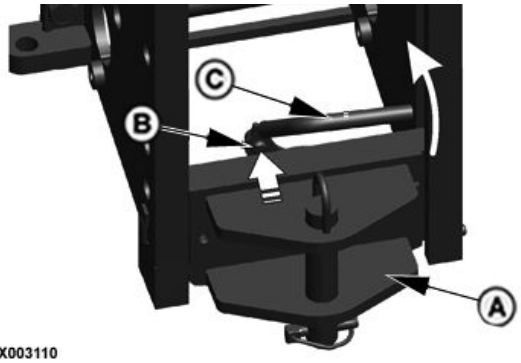
CAUTION: Use the EEC hitch system for trailers with non-pivoting towing eyes only.

1. Support hitch (A) with one hand and with the other hand simultaneously pull pin (B) and release lever (C) to the left.
2. Move hitch (A) to the required position and push the quick release lever (C) to the right and down to lock it.
3. Make sure that the side locking pins have fully engaged in the side support slots.

NOTE: If necessary, hitch (A) can be removed by pulling it out from the top.

Maximum permissible static vertical loads and towable drawbar loads are stated in the Specifications section.

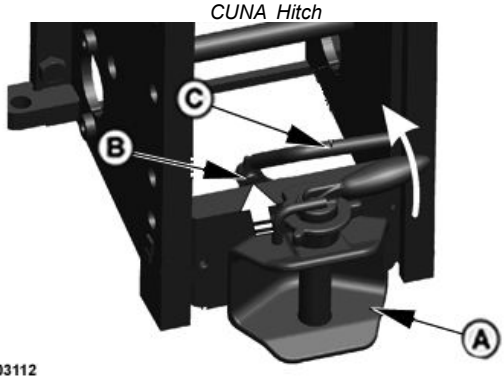
NOTE: Have components that are subject to wear checked and replaced (if necessary) by your John Deere dealer. See Service - Every 500 Hours.



PULX003110

PULX003110 —UN—22JAN09

CUNA Hitch



PULX003112

PULX003112 —UN—22JAN09

EEC Hitch

NR25796,000178C -19-19JUL10-1/1

Pick-Up Hitch

The pick-up hitch is operated using the hitch controls and the release lever (A).

1. Raise draft links to maximum height.
2. Pull and hold release lever (A) (located behind the seat) to unlock the hook.
3. With lever (A) still pulled, lower draft links until the hook is at desired height. Release lever (A).
4. Reverse the tractor to position the hook under the trailer towing eye.
5. Raise draft links to engage hook in trailer towing eye, then continue to raise the hitch until hook (B) engages in its lock position. Lever (A) will return to its home position.
6. Lower the draft links slightly until the trailer weight is supported by the hook.
7. Check that the pick-up hitch is locked correctly. It will **not lower** when the draft links are lowered.

IMPORTANT: If the release lever is hard to operate or the hook does not lock properly (step 5 or step 7 above), have your John Deere dealer check the setting of the lift links (C) or of the pick-up hitch hook.

Pick-up hitch components that are subject to wear must be checked every 250 hours. Replace them if necessary.

CAUTION: Before driving away, make sure the pick-up hitch is fully raised and locked.

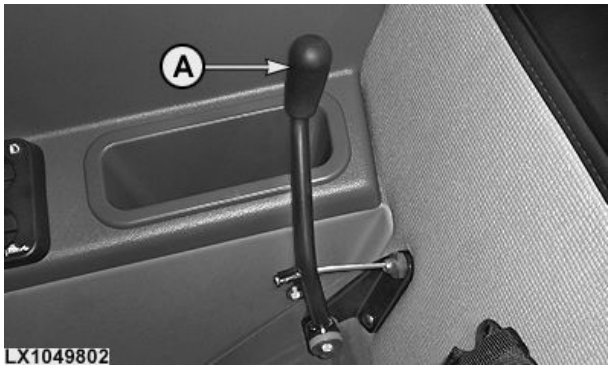
With the pick-up hitch lowered, NEVER reach between hook mechanism and transmission housing. Risk of injury!

NOTE: Lubricate the pick-up hitch every 250 hours, see Service - Every 250 Hours.

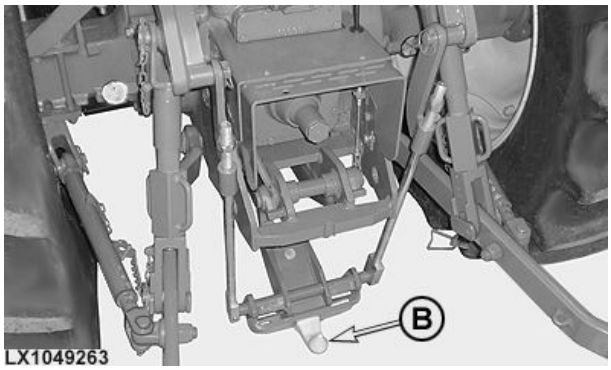
For maximum permissible static vertical loads and towable loads, see Specifications.

Drawbar: It is possible to replace the hook of the pick-up hitch with a drawbar. To do this proceed as described above in steps 1, 2 and 3. Then shut off the engine and change hook or drawbar.

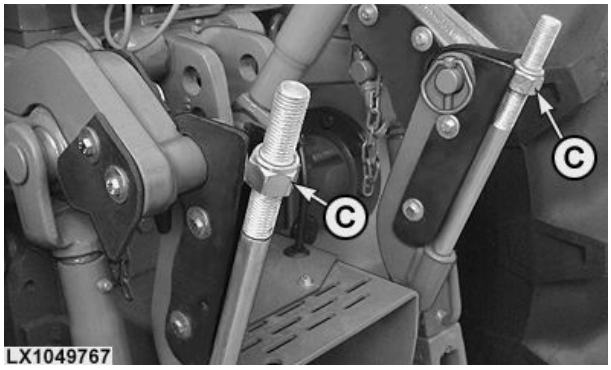
Remove the retaining pins of the hook frame and carefully pull out the hook to replace it with the drawbar. To reinstall hook, reverse removal procedure.



LX1049802 —UN—25AUG10



LX1049263 —UN—08FEB10



LX1049767 —UN—21JUL10

A—Release Lever
B—Hook
C—Lift Link Adjusting Nuts

CAUTION: Take care to reinstall all securing pins and inspect the pick-up hitch pivots for obstructions.

Continued on next page

Pick-up hitch decal

Understand all functions before operating the pick-up hitch. Replace pick-up hitch decal if worn and illegible.

OULXBER,00018B8 -19-06DEC12-2/2

Transporting the Tractor

A disabled tractor is best transported on a flatbed carrier.

Before transporting the tractor on a low truck or flat-bed rail wagon, make sure that the engine hood is secured and that doors, roof hatch (if equipped) and windows are closed and latched.

OU12401,00009BF -19-01JUL02-1/1

Towing Tractor

CAUTION: NEVER tow tractor faster than 16 km/h (10 mph). Have an operator steer and brake tractor.

When the engine is not running, more force is required to turn the steering wheel and pedal travel is longer (no hydraulic assistance).

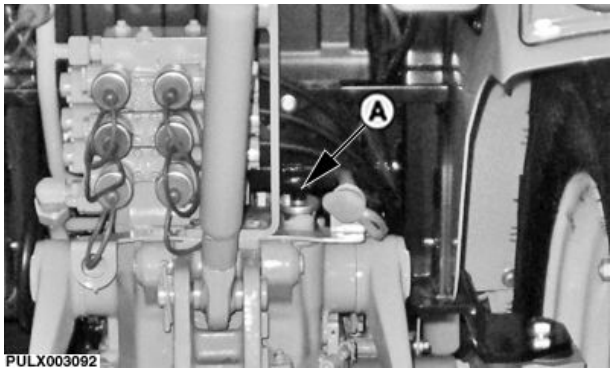
IMPORTANT: To prevent damage to the transmission/hydraulic system, observe the following precautions:

1. Be sure transmission/hydraulic system oil is to the full mark on the dipstick (A). If the tractor is to be towed with the front wheels raised, add 1 liter of oil for each 9 cm (3-1/2 in.) the wheels are raised. DO NOT raise front wheels more than 30 cm (12 in.) above ground.

NOTE: After transporting tractor, drain oil that was added for towing.

2. Make sure the differential lock is disengaged.
3. Make sure range and gear shift levers are in neutral.

IMPORTANT: If the engine is capable of running, switch off front-wheel drive. If the engine is not capable of running, disconnect the universal-jointed drive shaft; this prevents excessive wear on the tires.



PULX003092 —UN—09APR09

IMPORTANT: The jaw hitch at the front weights may be used for towing on metalled roads only.

NR25796,000178D -19-09APR09-1/1

Engine Oil and Filter Service Intervals—Tier 3 and Stage III A Engines

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 service 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 10 000 mg/kg (10 000 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 CJ-4, API CI-4 PLUS, API CI-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, and ACEA E4.

NOTE: The 500 hour extended oil and filter change interval is only allowed if all of the following conditions are met:

- *Engine equipped with an extended drain interval oil pan.*
- *Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm).*
- *Use of John Deere Plus-50 II ™ or John Deere Plus-50 oil.*
- *Use of an approved John Deere oil filter.*

	Tier 3 and Stage III A - PowerTech™ Plus				**Tier 3 and Stage III A - PowerTech™**		
	Oil Pan Size (L/kW)				Oil Pan Size (L/kW)		
Oil pan capacity	Greater than or equal to 0.10	Greater than or equal to 0.12	Greater than or equal to 0.14	Greater than or equal to 0.22	Greater than or equal to 0.10	Greater than or equal to 0.12	Greater than or equal to 0.14
Fuel Sulfur	Less than 1000 mg/kg (1000 ppm)				Less than 1000 mg/kg (1000 ppm)		
Plus-50 Oils	375 hours	500 hours	500 hours	500 hours	375 hours	500 hours	500 hours
Other Oils	250 hours	250 hours	250 hours	250 hours	250 hours	250 hours	250 hours
Fuel Sulfur	1000—2000 mg/kg (1000—2000 ppm)				1000—2000 mg/kg (1000—2000 ppm)		
Plus-50 Oils	300 hours	300 hours	500 hours	500 hours	300 hours	400 hours	500 hours
Other Oils	200 hours	200 hours	250 hours	250 hours	200 hours	200 hours	250 hours
Fuel Sulfur	2000—5000 mg/kg (2000—5000 ppm)				2000—5000 mg/kg (2000—5000 ppm)		
Plus-50 Oils	250 hours	250 hours	300 hours	500 hours	275 hours	350 hours	500 hours
Other Oils	150 hours	150 hours	200 hours	250 hours	150 hours	175 hours	250 hours
Fuel Sulfur	5000—10 000 mg/kg (5000—10 000 ppm)				5000—10 000 mg/kg (5000—10 000 ppm)		
Plus-50 Oils	Contact John Deere dealer				187 hours	250 hours	250 hours
Other Oils	Contact John Deere dealer				125 hours	125 hours	125 hours
Oil analysis may extend the service interval of "Other Oils", to a maximum not to exceed the interval for Plus-50 Oils.							

Plus-50 is a trademark of Deere & Company
Torq-Gard is a trademark of Deere & Company
PowerTech is a trademark of Deere & Company

DX,ENOIL13,T3,OEM -19-21JUN10-1/1

Engine Oil and Filter Service Intervals—Tier 2 and Stage II Engines

Recommended oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of the diesel fuel. Actual service intervals also depend on operation and maintenance practices.

Use oil analysis to evaluate the condition of the oil and to aid in selection of the proper oil and filter service interval. Contact your John Deere dealer for more information on engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

Diesel fuel sulfur content affects engine oil and filter service intervals.

- Use of diesel fuel with sulfur content less than 500 mg/kg (500 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 500—5000 mg/kg (500—5000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

IMPORTANT: To avoid engine damage:

- **Reduce oil and filter service intervals by 50% when using biodiesel blends greater than B20. Oil analysis may allow longer service intervals.**
- **Use only approved oil types.**

Approved Oil Types:

- "Plus-50 Oils" include John Deere Plus-50™ II and John Deere Plus-50.
- "Other Oils" include John Deere Torq-Gard™, API CJ-4, API CI-4 PLUS, API CI-4, API CH-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, ACEA E4, and ACEA E3.

Engine Oil and Filter Service Intervals	
Fuel Sulfur	Less than 500 mg/kg (500 ppm)
Plus-50 Oils	375 hours
Other Oils	250 hours
Fuel Sulfur	500—5000 mg/kg (500—5000 ppm)
Plus-50 Oils	275 hours
Other Oils	150 hours
Fuel Sulfur	5000—10 000 mg/kg (5000—10 000 ppm)
Plus-50 Oils	187 hours
Other Oils	125 hours
Oil analysis may extend the service interval of "Other Oils", to a maximum not to exceed the interval for Plus-50 Oils.	

Plus-50 is a trademark of Deere & Company
Torq-Gard is a trademark of Deere & Company

DX,ENOIL12,T2,STD -19-21JUN10-1/1

John Deere Break-In™ Plus Engine Oil

New engines are filled at the factory with John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In™ Plus Engine Oil, as needed to maintain the specified oil level.

During the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and maximum equal to the interval specified for John Deere Plus-50™ II oil.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

After engine overhaul, fill the engine with John Deere Break-In™ Plus Engine Oil.

If John Deere Break-In™ Plus Engine Oil is not available, use an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following:

- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

If one of these oils is used during the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and a maximum of 250 hours.

IMPORTANT: Do not use any other engine oils during the initial break-in of a new or rebuilt engine.

John Deere Break-In™ Plus Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50™ II or other diesel engine oil as recommended in this manual.

Break-In Plus is a trademark of Deere & Company
Plus-50 is a trademark of Deere & Company.

DX,ENOIL16 -19-20APR11-1/1

Extended Diesel Engine Oil Service Intervals

When John Deere PLUS-50™ oil is used with the specified John Deere filter, the service interval for engine oil and filter changes may be increased by 50% but not to exceed a maxium of 500 hours.

When ACEA E7, ACEA E6, ACEA E5, or ACEA E4 oils are used with specified John Deere filter, use engine oil analysis to determine if the service interval for engine oil and filter changes may be increased by a maximum of 50% but not to exceed 500 hours.

If John Deere PLUS-50™, ACEA E7, ACEA E6, ACEA E5, or ACEA E4 oils are used with other than the specified John Deere filter, change the engine oil and filter at the normal service interval.

If John Deere TORQ-GARD SUPREME™, API CJ-4, API CI-4 PLUS, API CI-4, API CH-4, or ACEA E3 oils are used, change the engine oil and filter at the normal service interval.

If API CG-4, API CF-4, or ACEA E2 oils are used, change the engine oil and filter at 50% of the normal service interval.

PLUS-50 is a trademark of Deere & Company
TORQ-GARD SUPREME is a trademark of Deere & Company

DX,ENOIL8 -19-13SEP06-1/1

Transmission and Hydraulic Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

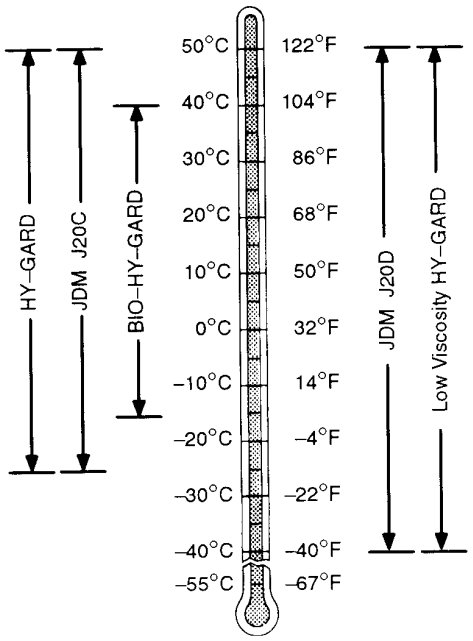
- John Deere HY-GARD ™
- John Deere Low Viscosity HY-GARD ™

John Deere BIO-HY-GARD ™ oil is also recommended.

Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Arctic oils (such as Military Specification MIL-L-46167B) may be used at temperatures below -30°C (-22°F).



TS1625 —UN—12DEC94

HY-GARD is a registered trademark of Deere & Company.
BIO-HY-GARD is a trademark of Deere & Company.

DX,HYOIL2 -19-01DEC94-1/1

Front-Wheel Drive Axle Oil

Use oil with a viscosity based on the expected air temperature range during the period between oil changes.

The following oil is preferred.

John Deere HY-GARD™

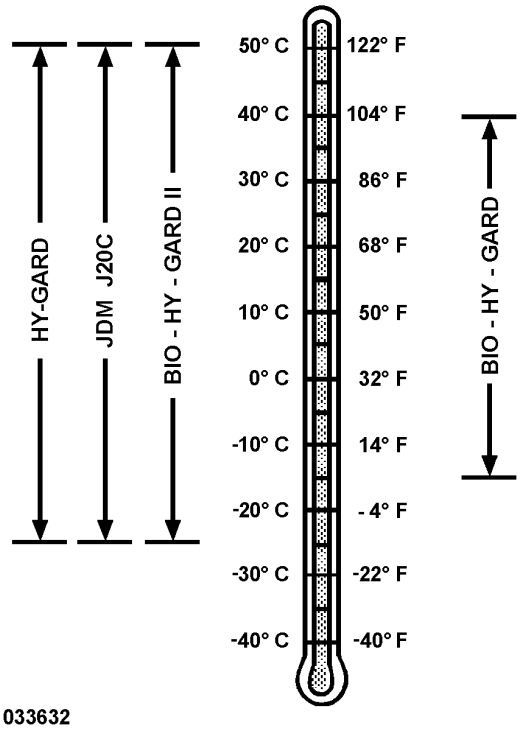
Other oils may be used if they meet the following:

John Deere Standard JDM J20C

Use one of the following oils when a biodegradable fluid is required:

John Deere BIO-HY-GARD II™[1] or BIO-HY-GARD™[1]

NOTE: Do NOT use BIO-HY-GARD on braked axles.



LX1033632

HY-GARD is a trademark of Deere & Company.
BIO-HY-GARD II is a trademark of Deere & Company.
BIO-HY-GARD is a trademark of Deere & Company.

[1]BIO-HY-GARD II meets or exceeds the minimum biodegradability of 80 % within 21 days according to CEC L-33-A-93 test method. BIO-HY-GARD meets or exceeds the minimum biodegradability of 80 % within 21 days according to CEC L-33-T-82 test method. These oils should not be mixed with mineral oils because this reduces the biodegradability and makes proper oil recycling impossible.

LX,OILFA1 -19-30APR04-1/1

Multiluber Grease

John Deere Multiluber Grease is recommended.

You may also use SAE Multipurpose Grease meeting NLGI Consistency Number 000.

DX,GREA2 -19-11APR11-1/1

Mixing of Lubricants

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

Consult your John Deere dealer to obtain specific information and recommendations.

DX,LUBMIX -19-18MAR96-1/1

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST -19-11APR11-1/1

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to both conventional and synthetic lubricants.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER -19-11APR11-1/1

John Deere COOL-GARD™ II Coolant Extender

Some coolant additives will gradually deplete during engine operation. For John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate, replenish coolant additives between drain intervals by adding John Deere COOL-GARD II Coolant Extender.

John Deere COOL-GARD II Coolant Extender should not be added unless indicated by coolant testing.

John Deere COOL-GARD II Coolant Extender is a chemically matched additive system for use with all John Deere COOL-GARD II coolants. John Deere COOL-GARD II Coolant Extender is not intended for use with nitrite-containing coolants.

COOL-GARD is a trademark of Deere & Company

IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:

- **John Deere COOL-GARD II**
- **John Deere COOL-GARD II PG**

The use of non-recommended supplemental coolant additives may result in additive drop-out, gelation of the coolant, or corrosion of cooling system components.

Add the recommended concentration of John Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

DX,COOL16 -19-20APR11-1/1

Heavy Duty Diesel Engine Coolant

The engine cooling system is filled to provide year-round protection against corrosion and cylinder liner pitting, and winter freeze protection to -37°C (-34°F). If protection at lower temperatures is required, consult your John Deere dealer for recommendations.

The following engine coolants are preferred:

- John Deere COOL-GARD™ II Premix
- John Deere COOL-GARD II PG Premix

Use John Deere COOL-GARD II PG Premix when a non-toxic coolant formulation is required.

Additional Recommended Coolants

The following engine coolant is also recommended:

- John Deere COOL-GARD II Concentrate in a 40–60% mixture of concentrate with quality water.

John Deere COOL-GARD II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate coolants do not require use of supplemental coolant additives.

Other Coolants

John Deere COOL-GARD II and COOL-GARD II PG coolants might not be available in the geographical area where service is performed.

If these coolants are unavailable, use a coolant concentrate or prediluted coolant intended for use with heavy duty diesel engines and with a minimum of the following chemical and physical properties:

- Is formulated with a quality nitrite-free additive package.
- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

The additive package must be part of one of the following coolant mixtures:

- ethylene glycol or propylene glycol base prediluted (40—60%) heavy duty coolant
- ethylene glycol or propylene glycol base heavy duty coolant concentrate in a 40—60% mixture of concentrate with quality water

Water Quality

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

Do not use coolants that contain nitrites.

COOL-GARD is a trademark of Deere & Company

DX,COOL3 -19-14APR11-1/1

Supplemental Coolant Additives

Some coolant additives will gradually deplete during engine operation. For nitrite-containing coolants, replenish coolant additives between drain intervals by adding a supplemental coolant additive as determined necessary by coolant testing.

John Deere Liquid Coolant Conditioner is recommended as a supplemental coolant additive for nitrite-containing coolants.

John Deere Liquid Coolant Conditioner is not designed for use with John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, or COOL-GARD II Concentrate.

IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:

- **John Deere COOL-GARD II**
- **John Deere COOL-GARD II PG**

If other coolants are used, consult the coolant supplier and follow the manufacturer's recommendation for use of supplemental coolant additives.

The use of non-recommended supplemental coolant additives may result in additive drop-out and gelation of the coolant.

Add the manufacturer's recommended concentration of supplemental coolant additive. DO NOT add more than the recommended amount.

COOL-GARD is a trademark of Deere & Company

DX,COOL4 -19-14APR11-1/1

Operating in Warm Temperature Climates

John Deere engines are designed to operate using glycol base engine coolants.

Always use a recommended glycol base engine coolant, even when operating in geographical areas where freeze protection is not required.

John Deere COOL-GARD™ II Premix is available in a concentration of 50% ethylene glycol. However, there are situations in warm temperature climates where a coolant with lower glycol concentration (approximately 20% ethylene glycol) has been approved. In these cases, the low glycol formulation has been modified to provide the same level of corrosion inhibitor as John Deere COOL-GARD II Premix (50/50).

COOL-GARD is a trademark of Deere & Company

IMPORTANT: Water may be used as coolant *in emergency situations only.*

Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation will occur when water is used as the coolant, even when coolant conditioners are added.

Drain cooling system and refill with recommended glycol base engine coolant as soon as possible.

DX,COOL6 -19-03NOV08-1/1

Testing Diesel Engine Coolant

Maintaining adequate concentrations of glycol and inhibiting additives in the coolant is critical to protect the engine and cooling system against freezing, corrosion, and cylinder liner erosion and pitting.

Test the coolant solution at intervals of 12 months or less and whenever excessive coolant is lost through leaks or overheating.

Coolant Test Strips

Coolant test strips are available from your John Deere dealer. These test strips provide a simple, effective method to check the freeze point and additive levels of your engine coolant.

When Using John Deere COOL-GARD II

John Deere COOL-GARD II Premix™ , COOL-GARD II PG Premix and COOL-GARD II Concentrate are maintenance free coolants for up to six years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix or COOL-GARD II PG premix. Test the coolant condition annually with coolant test strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II Coolant Extender as directed.

COOL-GARD is a trademark of Deere & Company

Add only the recommended concentration of John Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

When Using Nitrite-Containing Coolants

Compare the test strip results to the supplemental coolant additive (SCA) chart to determine the amount of inhibiting additives in your coolant and whether more John Deere Liquid Coolant Conditioner should be added.

Add only the recommended concentration of John Deere Liquid Coolant Conditioner. DO NOT add more than the recommended amount.

Coolant Analysis

For a more thorough evaluation of your coolant, perform a coolant analysis. The coolant analysis can provide critical data such as freezing point, antifreeze level, pH, alkalinity, nitrite content (cavitation control additive), molybdate content (rust inhibitor additive), silicate content, corrosion metals, and visual assessment.

Contact your John Deere dealer for more information on coolant analysis.

DX,COOL9 -19-11APR11-1/1

Storing Fuel

If there is a very slow turnover of fuel in the fuel tank or supply tank, it may be necessary to add a fuel conditioner to prevent water condensation. Contact your John Deere dealer for proper service or maintenance recommendations.

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

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 practicable to minimize condensation.

Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering. Monitor water content of the fuel regularly.

When using 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 and prevent water condensation. Contact your fuel supplier for recommendations.

DX,FUEL4 -19-14APR11-1/1

Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590 or ASTM D975 is acceptable for use at all percentage mixture levels.

Required Fuel Properties

In all cases, the fuel shall meet the following properties:

Cetane number of 43 minimum. Cetane number greater than 47 is preferred, especially for temperatures below –20°C (–4°F) or elevations above 1500 m (5000 ft.).

Cold Filter Plugging Point (CFPP) should be at least 5°C (9°F) below the expected lowest temperature or **Cloud Point** below the expected lowest ambient temperature.

Fuel lubricity should pass a maximum scar diameter of 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

Diesel fuel quality and sulfur content must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

Sulfur content for Interim Tier 4 and Stage III B engines

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

Sulfur Content for Tier 3 and Stage III A Engines

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED
- Use of diesel fuel with sulfur content 1000–5000 mg/kg (1000–5000 ppm) REDUCES oil and filter change intervals.
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 500 mg/kg (500 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 500–5000 mg/kg (500–5000 ppm) REDUCES the oil and filter change interval
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer

Sulfur Content for Other Engines

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is recommended.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change intervals.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

IMPORTANT: Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1 -19-11APR11-1/1

Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold weather operation, a little extra care is necessary. The information below outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold weather aids.

Use Winter Grade Fuel

When temperatures fall below 0°C (32°F), winter grade fuel (No. 1-D in North America) is best suited for cold weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

Cloud point is the temperature at which wax will begin to form in the fuel and this wax causes fuel filters to plug. **Pour point** is the lowest temperature at which movement of the fuel is observed.

NOTE: On average, winter grade diesel fuel has a lower Btu (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low power complaints in cold weather operation.

Air Intake Heater

An air intake heater is an available option for some engines to aid cold weather starting.

Ether

An ether port on the intake is available to aid cold weather starting.

CAUTION: Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.

Coolant Heater

An engine block heater (coolant heater) is an available option to aid cold weather starting.

Seasonal Viscosity Oil and Proper Coolant Concentration

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

Diesel Fuel Flow Additive

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold weather season. This generally extends operability to about 10°C (18°F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

IMPORTANT: Treat fuel when outside temperature drops below 0°C (32°F). For best results, use with untreated fuel. Follow all recommended instructions on label.

BioDiesel

When operating with biodiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) at 5°C (41°F) to treat biodiesel fuels during the cold weather season. Use B5 or lower blends at temperatures below 0°C (32°F). Use only winter grade petroleum diesel fuel at temperatures below -10°C (14°F).

Winterfronts

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

Radiator Shutters

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93°C (200°F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

DX,FUEL10 -19-20APR11-1/1

Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.

Fuel lubricity should pass a maximum scar diameter of 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

If fuel of low or unknown lubricity is used, add John Deere Fuel-Protect Diesel Fuel Conditioner (or equivalent) at the specified concentration.

Lubricity of Biodiesel Fuel

Fuel lubricity can improve significantly with biodiesel blends up to B20 (20% biodiesel). Further increase in lubricity is limited for biodiesel blends greater than B20.

DX,FUEL5 -19-14APR11-1/1

Biodiesel Fuel

Biodiesel fuel is comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats. Biodiesel blends are biodiesel mixed with petroleum diesel fuel on a volume basis.

Before using fuel containing biodiesel, review the Biodiesel Use Requirements and Recommendations in this Operator's Manual.

Environmental laws and regulations can encourage or prohibit the use of biofuels. Operators should consult with appropriate governmental authorities prior to using biofuels.

All John Deere Engines with Exhaust Filter (Released 2011 and After)

While 5% blends (B5) are preferred, biodiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used. Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

Biodiesel concentrations above B20 can harm the engine's emission control systems and should not be used. Risks include, but are not limited to, more frequent stationary regeneration, soot accumulation, and increased intervals for ash removal.

John Deere approved fuel conditioners, which contain detergent and dispersant additives, are required when using B20, and are recommended when using lower biodiesel blends.

All John Deere Engines Excluding Exhaust Filter (Primarily Released Prior to 2012)

While 5% blends (B5) are preferred, biodiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used. Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

These John Deere engines can operate on biodiesel blends above B20 (up to 100% biodiesel). Operate at levels above B20 ONLY if the biodiesel is permitted by law and meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 might not fully comply with or be permitted by all applicable emissions regulations. Expect up to a 12% reduction in power and an 18% reduction in fuel economy when using 100% biodiesel.

John Deere approved fuel conditioners, which contain detergent and dispersant additives, are required when using B20, and are recommended when using lower biodiesel blends.

Biodiesel Use Requirements and Recommendations

The petroleum diesel portion of all biodiesel blends must meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standards.

Biodiesel users in the U.S. are strongly encouraged to purchase biodiesel blends from a BQ-9000 Certified Marketer and sourced from a BQ-9000 Accredited Producer (as certified by the National Biodiesel Board). Certified Marketers and Accredited Producers can be found at the following website: http://www.bq9000.org.

Biodiesel contains residual ash. Ash levels exceeding the maximums allowed in either ASTM D6751 or EN14214 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present).

The fuel filter can require more frequent replacement, when using biodiesel fuel, particularly if switching from diesel. Check engine oil level daily prior to starting engine. A rising oil level can indicate fuel dilution of the engine oil. Biodiesel blends up to B20 must be used within 90 days of the date of biodiesel manufacture. If used, biodiesel blends above B20 must be used within 45 days from the date of biodiesel manufacture.

When using biodiesel blends up to B20, the following must be considered:

- Cold weather flow degradation
- Stability and storage issues (moisture absorption, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to biodiesel on used engines.)
- Possible fuel leakage through seals and hoses (primarily an issue with older engines)
- Possible reduction of service life of engine components

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the specifications provided in this Operator's Manual.

Consult your John Deere dealer for approved fuel conditioners to improve storage and performance with biodiesel fuels.

The following must also be considered if using biodiesel blends above B20:

- Possible coking or blocked injector nozzles, resulting in power loss and engine misfire if John Deere approved fuel conditioners are not used
- Possible crankcase oil dilution (requiring more frequent oil changes)
- Possible lacquering or seizure of internal components
- Possible formation of sludge and sediments
- Possible thermal oxidation of fuel at elevated temperatures
- Possible compatibility issues with other materials (including copper, lead, zinc, tin, brass, and bronze) used in fuel handling equipment
- Possible reduction in water separator efficiency
- Possible damage to paint if exposed to biodiesel

Continued on next page

DX,FUEL7 -19-29AUG12-1/2

- Possible corrosion of fuel injection equipment
- Possible elastomeric seal and gasket material degradation (primarily an issue with older engines)
- Possible high acid levels within fuel system
- Because biodiesel blends above B20 contain more ash, using blends above B20 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present)

IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines. Their use could cause engine failure.

DX,FUEL7 -19-29AUG12-2/2

Testing Diesel Fuel

A fuel analysis program can help to monitor the quality of diesel fuel. The fuel analysis can provide critical data such as cetane number, fuel type, sulfur content, water content, appearance, suitability for cold weather operations, bacteria, cloud point, acid number, particulate contamination, and whether the fuel meets specification.

Contact your John Deere dealer for more information on diesel fuel analysis.

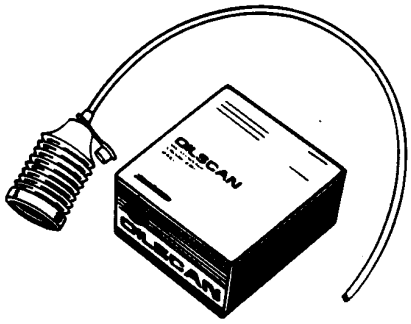
DX,FUEL6 -19-14APR11-1/1

Oilscan™ and CoolScan™

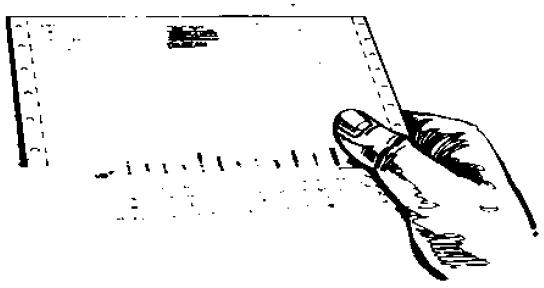
Oilscan™ and CoolScan™ are John Deere sampling programs to help you monitor machine performance and identify potential problems before they cause serious damage.

Oil and coolant samples should be taken from each system before its recommended change interval.

Check with your John Deere dealer for the availability of Oilscan™ and CoolScan™ kits.



T6828AB —UN—15JUN89



T6829AB —UN—26AUG11

Oilscan is a trademark of Deere & Company
CoolScan is a trademark of Deere & Company

DX,OILSCAN -19-13SEP11-1/1

Safe Maintenance and Cleaning

CAUTION: To perform service work at locations that are difficult to reach, it is essential to use suitable platforms or safety ladders.

Particular care is required to perform service work and cleaning jobs at locations that are difficult to reach, e.g. adjusting roof-mounted lights, servicing the cooling system, adjusting the right outside mirror on tractors without a door on the right side and many other similar tasks.

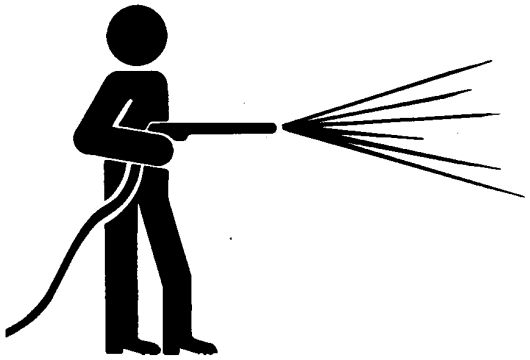
CAUTION: It is NOT permissible to stand on tractor components to perform such tasks unless the tractor components are intended for this purpose. There is an acute risk of falling, especially if the tractor components are wet, dirty, or coated with ice.

TS249 —UN—23AUG88

OULXBER,0001A59 -19-21FEB11-1/1

Using High Pressure Washers

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90° angle.



T6642EJ —UN—18OCT88

FX,CLEAN -19-07FEB95-1/1

Lubrication and Periodic Service

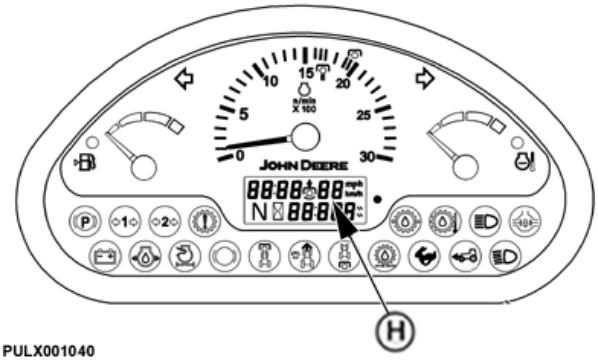
CAUTION: Do not lubricate or adjust the tractor while the engine is running unless recommended to do so.

IMPORTANT: Recommended service intervals are for average conditions. Service MORE OFTEN if tractor is operated under adverse conditions.

The intervals at which the various parts should be checked, lubricated, serviced or adjusted are based on the actual hours of operation as shown on the hour meter (A). The meter operates whenever the engine is running and shows the accumulated hours of engine operation.

Using hour meter (A) as a guide, perform all services at the hourly intervals indicated on the following pages.

Always check to make sure that the hour meter is serviceable.



PULX001040

PULX001040 —UN—02SEP08

IMPORTANT: After servicing, cleaning or repairing your machine, re-install any safety guards or shields before operating the tractor again.

NR25796,00016F5 -19-25MAR09-1/1

Use Correct Lubricant

IMPORTANT: Use only lubricants meeting specifications outlined in Fuels and Lubricants Section when performing tractor service.

MX,LMIP,B -19-18MAR92-1/1

Service Tractor Safely

Disengage power to attachments and stop engine before making any repairs or adjustments.

Do not change engine governor setting or overspeed engine.

Keep the vehicle and attachments in good operating condition.

Keep safety devices in place and in working condition.

Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.

Before you work on any part of the engine, stop the engine, and let it cool. Hot engine parts can burn skin on contact.

Never run engine unless Forward/Neutral/Reverse lever is in neutral position.

Be careful to prevent clothing, jewelry, or long hair from getting caught in the fan blades, drive belts, or any other moving engine parts.

Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

AT,5SOM,116 -19-01OCT96-1/1

When Performing Services

The hood (A) is a protective element.

CAUTION: Never perform any service work near rotating or moving parts. Never remove or open any service doors or other guards when engine is running or hot. No service must be performed on or around the engine with engine running.

Prevent unintentional operation of engine or starting motor when hood is open or guards are removed.

PULX001041 —UN—29AUG08

NR25796,000178E -19-26MAR09-1/1

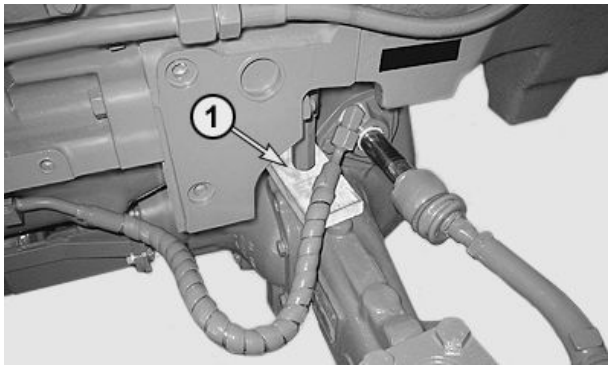
Jack Up the Tractor - Lifting Points

The illustrations show the recommended lifting points for jacking up the tractor. Use a stable lifting jack with sufficient lifting force. See Specifications and Loads and Weights in Section 150.

Raise rear of tractor:

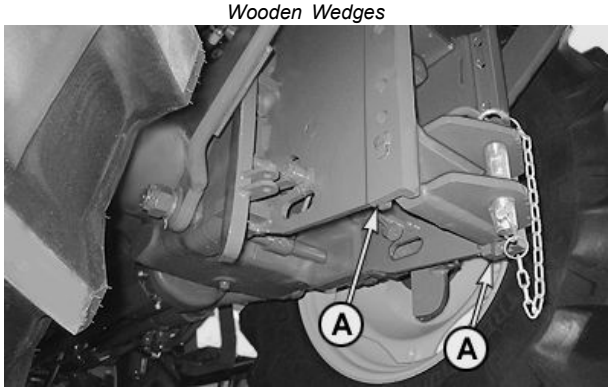
1—Wooden Wedges

A—Raise Rear of Tractor



LX1054627 —UN—21DEC11

Wooden Wedges



LX1054634 —UN—21DEC11

Raise Rear of Tractor

OULXBER,0001B79 -19-22DEC11-1/3

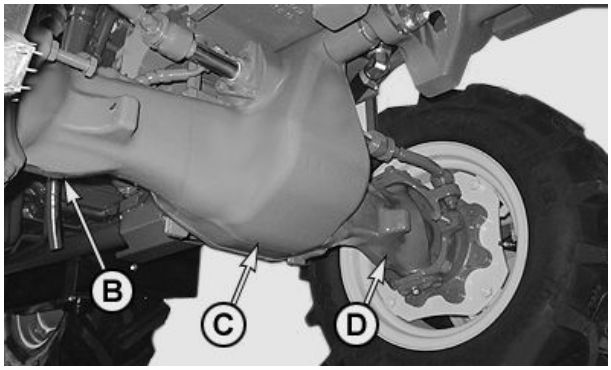
Raise front of tractor:

B—Raise Right End of Axle, e.g. to Remove Right Front Wheel

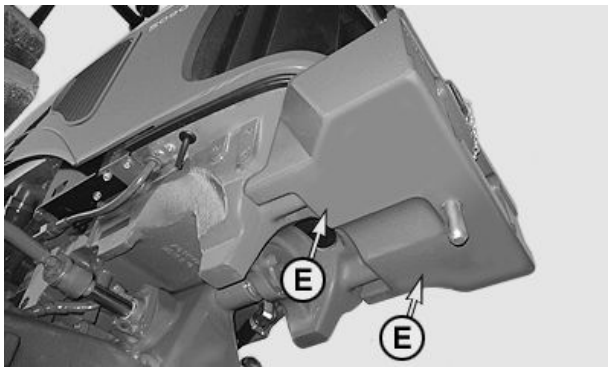
C—Raise Center of Axle (Use Wooden Wedges to Prevent Axle from Tilting)

D—Raise Left End of Axle, e.g. to Remove Left Front Wheel

E—Raise Front End of Tractor under the Basic Weight



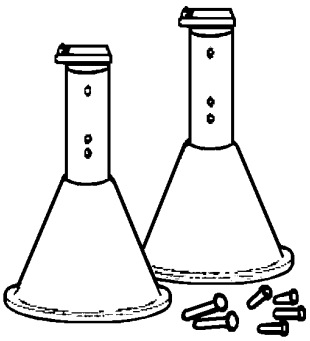
LX1054632 —UN—21DEC11



LX1054630 —UN—21DEC11

Continued on next page

OULXBER,0001B79 -19-22DEC11-2/3



JT07211 —UN—14DEC06

Support Stands JT02043 and JT02044

JT02043—Support Stand, 482 to 736 mm (19 to 29 in.)

JT02044—Support Stand, 863 to 1117 mm (34 to 44 in.)

CAUTION: Use approved lifting equipment only.

Jack up tractor on firm, level ground only.

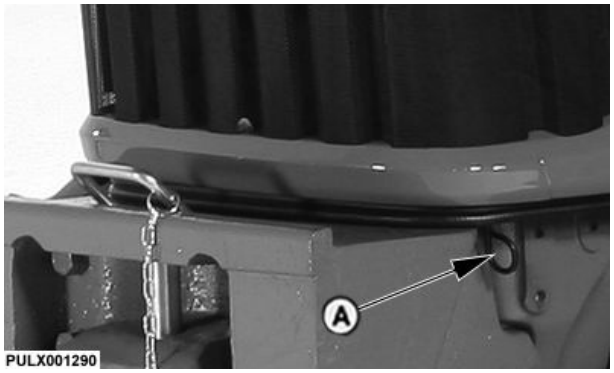
Before doing any further work on the tractor, first secure it using suitable support stands.

The special John Deere tools shown can be used for this purpose. These support stands are available from your John Deere dealer.

OULXBER,0001B79 -19-22DEC11-3/3

Open Hood

Pull latch (A) and lift the hood up.



PULX001290 —UN—05SEP08

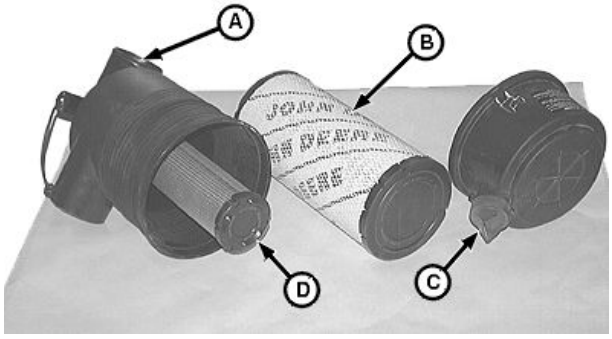
Hood latch

NR25796,000178F -19-04NOV08-1/1

Air Intake System Components

Air enters the intake system through the open end of the air cleaner canister (A). A major portion of the dust is separated out by air turbulence action caused by the primary air cleaner element (B) and passed out into the radiator inlet air flow through the dust unloader valve (C). If the primary element becomes plugged, dust is filtered out by the secondary element (D).

A — Air Cleaner Canister
B — Primary Air Cleaner Element
C — Dust Unloader Valve
D — Secondary Element

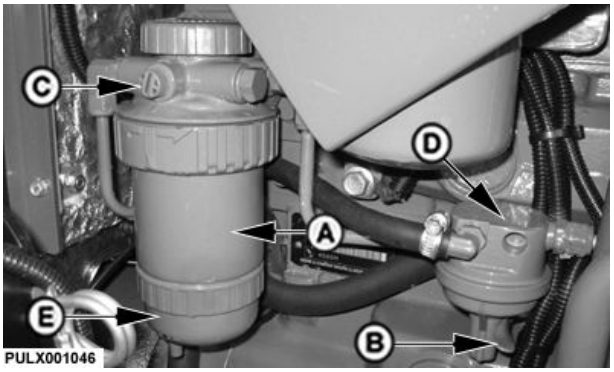


LV3026 —UN—17AUG99

OULXA64,000026D -19-20JUN01-1/1

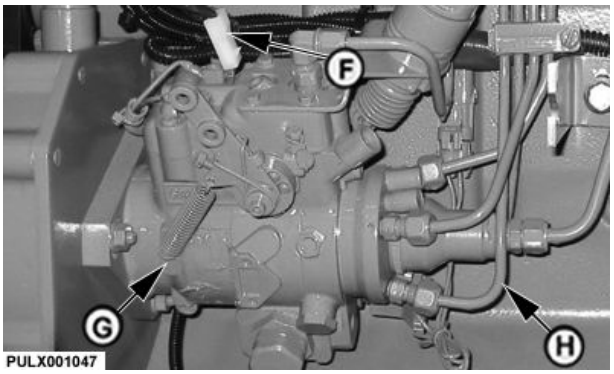
Fuel System Components

A — Fuel filter
B— Priming pump
C— Bleed screw
D—Fuel transfer pump
E—Water separator bowl
F— Electric fuel shut-off connector
G—Fuel injection pump
H—Fuel line



PULX001046

PULX001046 —UN—03OCT08



PULX001047

PULX001047 —UN—03OCT08

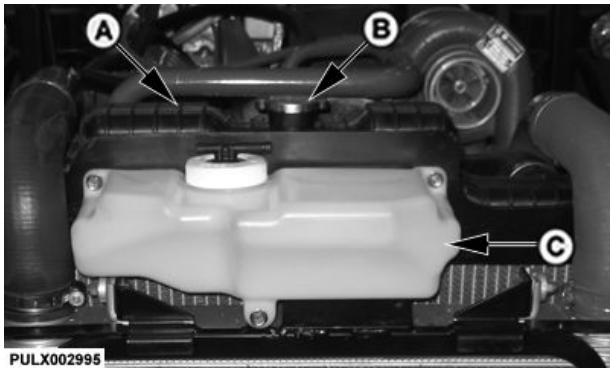
NR25796,0001790 -19-04NOV08-1/1

Engine Cooling System Components

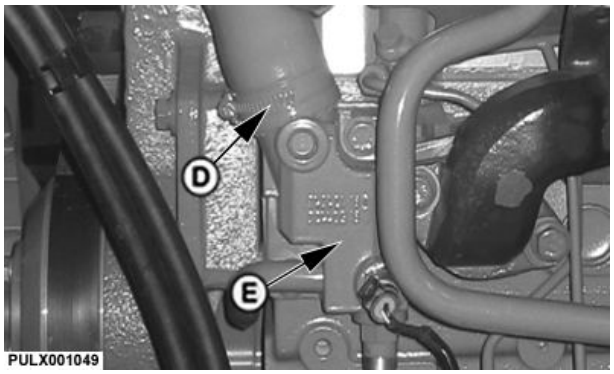
IMPORTANT: Never pour cold water into the cooling system of a hot engine, as it might crack cylinder block or head. DO NOT operate engine without coolant for even a few minutes.

The tractors are equipped with a remote coolant recovery tank. Make-up coolant is added to the coolant recovery tank rather than directly to the radiator.

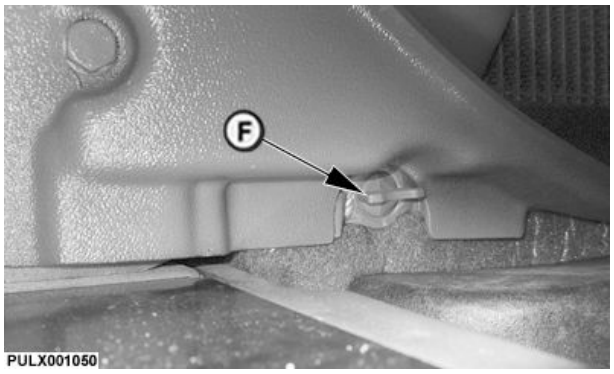
A—Radiator cap
B—Radiator
C—Coolant recovery tank
D—Upper radiator hose
E—Thermostat housing
F—Radiator drain valve



PULX002995 —UN—19JAN09



PULX001049 —UN—27AUG08

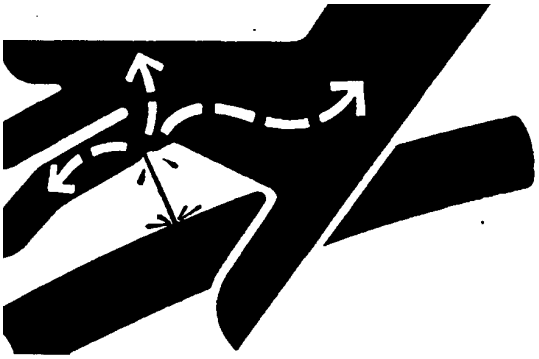


PULX001050 —UN—27AUG08

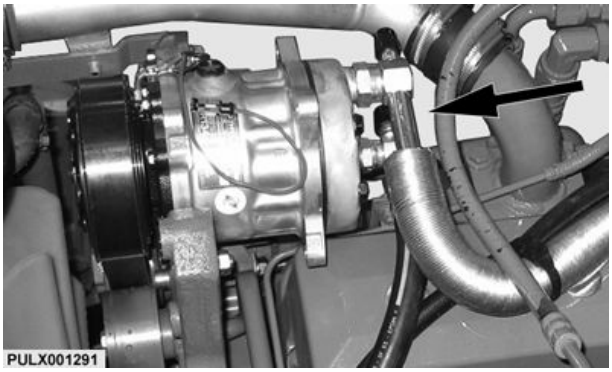
Drain valve - lower right-hand side of radiator shown

NR25796,0001791 -19-26MAR09-1/1

Air Conditioning System



X9811 —UN—23AUG88



PULX001291 —UN—08SEP08

If the cooling effect is intermittent, clean front grille, side panels, radiator and condenser. If necessary, check and clean cab air filter. Should all these procedures not solve the problem and the system still not work properly, the refrigerant level in the system may be low. See your John Deere dealer.

CAUTION: The refrigerant in the system is under pressure. If it escapes it can penetrate the skin or the eyes and it can cause burns.

IMPORTANT: The system is filled with R134a refrigerant. Servicing it requires special procedures and equipment. See your John Deere dealer.

At ambient temperatures below 0 °C (32 °F) operate the compressor by switching on the air conditioning system for 10 to 15 minutes at least once per month. Run the engine at 1500 rpm. This will ensure that the seals in the compressor are lubricated and prevent them from becoming dry and brittle.

IMPORTANT: Frequently check air conditioning components for leaks or damage. Wear protective clothing. If air conditioning components are contaminated with oil, this may indicate a refrigerant leak. If there is any doubt, contact your John Deere Dealer.

IMPORTANT: Never interrupt the circuit, as this will allow all the refrigerant to escape.

CAUTION: Refrigerant is harmful to the eyes and skin. If a leak is detected, put on safety glasses and wear protective clothing. Call your John Deere dealer, who has the special equipment required to service and repair the air-conditioning circuit.

NOTE: Only the operations described here in this Operator's Manual may be carried out without the special equipment.

Any service that is required for the air conditioning system has to be performed by your John Deere Dealer. See Section 130, Service as Required.

NR25796,0001792 -19-26MAR09-1/1

Observe Electrical Service Precautions

CAUTION: Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive. To avoid sparks, connect negative (ground) cable (B) last and disconnect it first. When using a booster battery, follow instructions in the Section 40 "Operating the Engine".

To avoid shocks and burns, disconnect battery negative (ground) cable (B) before servicing any part of the electrical system, and then remove positive cable (A) if removing battery.

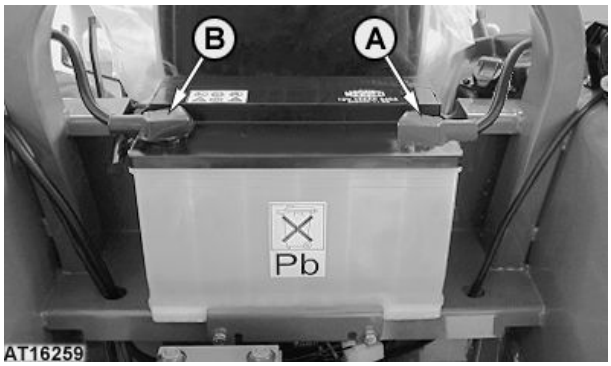
Keep all electrical shields in place.

CAUTION: Depending on the manufacturers, the arrangement of battery connections may differ.

Pay close attention to the symbols marked on the battery.

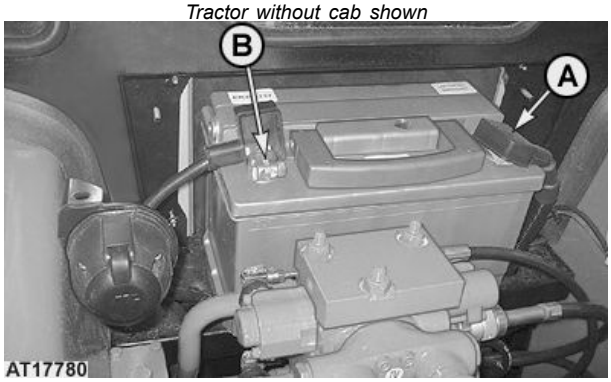
To avoid sparks, connect negative (ground) cable last and disconnect it first.

TS204 —UN—23AUG88



AT16259 —UN—28MAY03

Tractor without cab shown



AT17780 —UN—25JUL07

Tractor with cab shown

SS40167,0000C3B -19-01FEB08-1/1

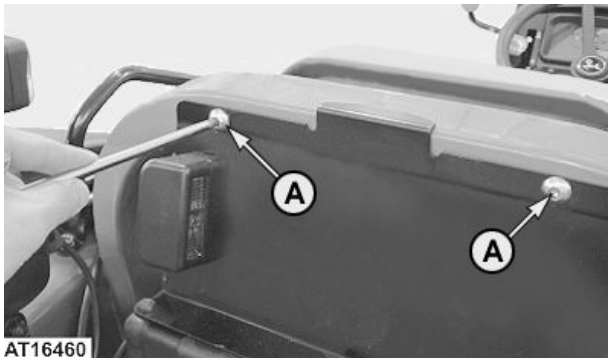
Battery

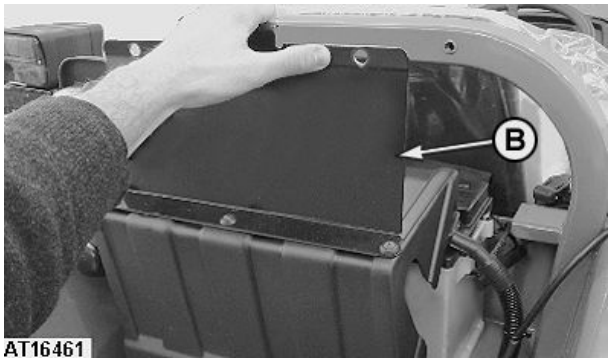
Access to Battery on Tractors without Cab

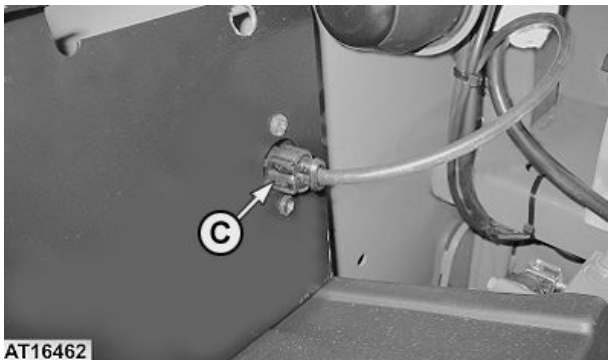
Battery is located at the rear of the tractor, behind the seat.

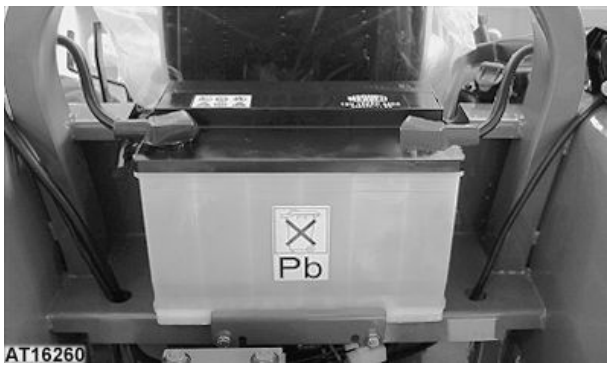
To gain access:

1. Remove screws (A).
2. Remove plate support (B) and disconnect wiring connector (C).









Access to Battery

Continued on next page

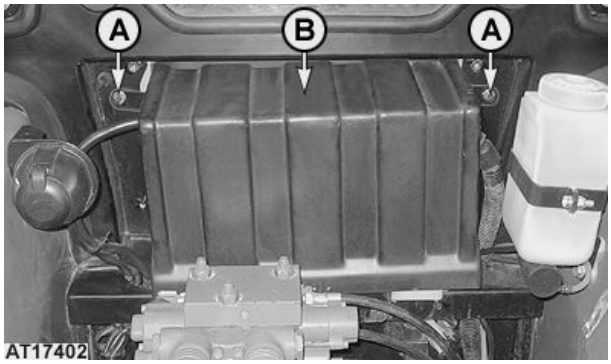
NR25796,0001824 -19-23JAN09-1/6

Access to Battery on Tractors with Cab

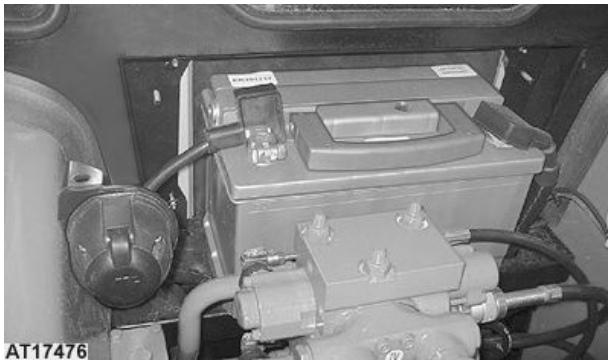
Battery is located at the rear of the tractor.

To gain access:

1. Remove nuts (A).
2. Remove cover (B).



AT17402 —UN—31MAY07

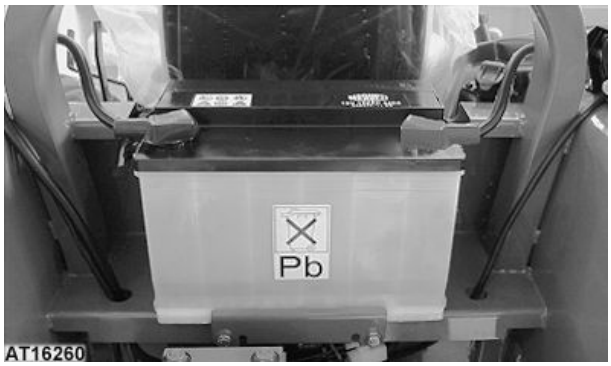


AT17476 —UN—25JUL07

NR25796,0001824 -19-23JAN09-2/6

Clean and Check Battery

Wipe battery with a damp cloth. Clean and tighten connections if needed. It is not necessary to check fluid level (maintenance-free battery).



AT16260 —UN—28MAY03

Tractor without Cab

AT17476 —UN—25JUL07

Tractor with Cab

Continued on next page

NR25796,0001824 -19-23JAN09-3/6

Removal

1. Loosen the nut retaining negative (ground) battery cable (B) and remove the cable connection. Then loosen the nut retaining positive cable (A) and remove the cable connection.

⚠ CAUTION: Depending on the manufacturers, the arrangement of battery connections may differ.

Pay close attention to the symbols marked on the battery.

To avoid sparks, connect negative (ground) cable last and disconnect it first.

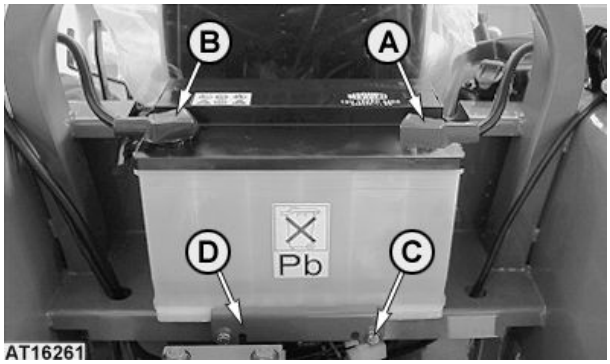
2. **On Tractors with Cab only:**

NOTE: Depending on tractor equipment, it may be necessary to remove the battery from inside the cab.

   a. Pull seat forward.

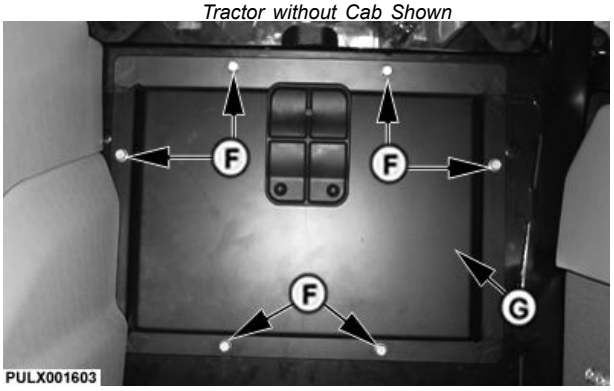
   b. Remove nuts (F) and cover (G).

3. Loosen screws (C) to remove the battery hold-down (D).
4. Lift and slide the battery from the battery tray.



AT16261 —UN—28MAY03

Tractor without Cab Shown



PULX001603 —UN—19SEP08

NR25796,0001824 -19-23JAN09-4/6

Servicing

1. Keep battery clean by wiping with a damp cloth. Keep connections (A) and (B) clean and tight.

⚠ CAUTION: To avoid sparks, connect negative (ground) cable last and disconnect it first.

2. Keep battery fully charged, especially during cold weather. If a battery charger is connected, connect the positive lead to the positive battery terminal (A), then connect the negative charger lead to the negative battery terminal (B).

Replacement

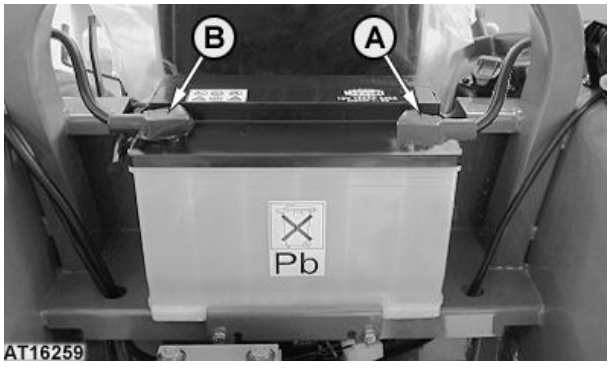
⚠ CAUTION: To avoid sparks, connect negative (ground) cable last and disconnect it first.

Pay close attention to the symbols marked on the battery.

When replacing battery, use a John Deere battery or equivalent.

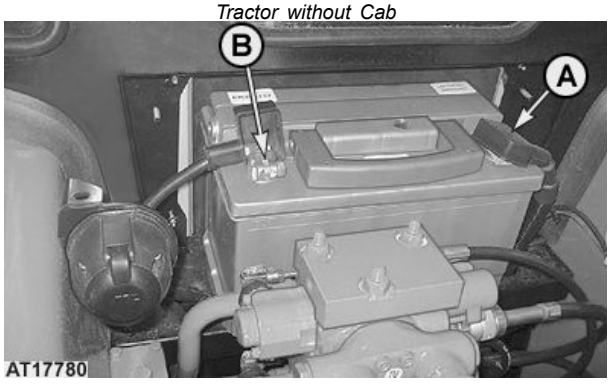
Battery Specifications

12 V, 100 Ah



AT16259 —UN—28MAY03

Tractor without Cab



AT17780 —UN—25JUL07

Tractor with Cab

Continued on next page

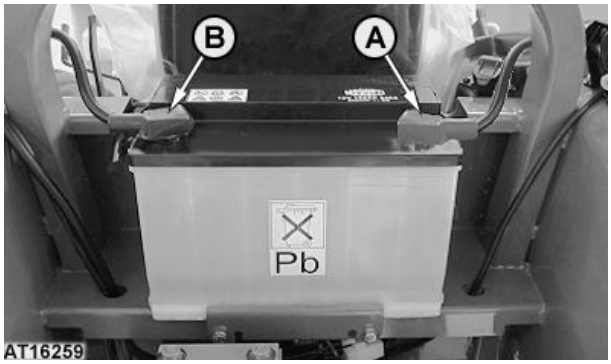
NR25796,0001824 -19-23JAN09-5/6

Charging

Under normal use, it is not necessary to add electrolyte to maintenance-free batteries. Keep battery fully charged, especially during cold weather.

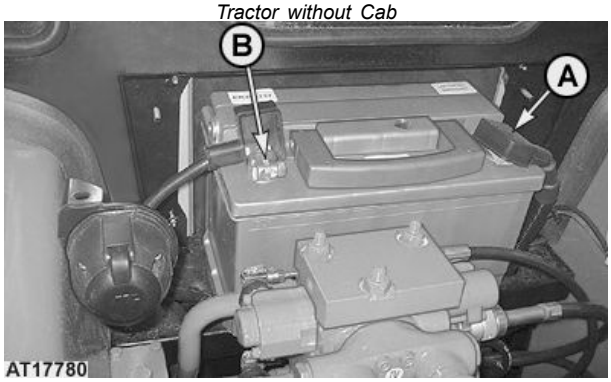
CAUTION: Gas given off by battery is explosive. Keep sparks and flames away from battery. Before connecting or disconnecting a battery charger, turn charger off.

1. With charger off, connect positive battery charger lead to positive battery terminal (A), then connect negative charger lead to negative battery terminal (B).
2. Turn charger on and recharge the battery following battery manufacturer's instructions for using charger.
3. To disconnect battery charger, turn charger off. Remove negative charger lead first, followed by positive charger lead.



AT16259 —UN—28MAY03

Tractor without Cab



AT17780 —UN—25JUL07

Tractor with Cab

TS204 —UN—23AUG88

NR25796,0001824 -19-23JAN09-6/6

Bulb Replacement — Safety Instructions

When replacing a bulb, always comply with the following safety instructions:

CAUTION: Always switch the lights off before you change a bulb.

CAUTION: First allow the bulb to cool down (may cause burns).

CAUTION: Wear safety goggles and gloves when changing the bulb.

CAUTION: The bulb is made of glass and contains gas; the bulb is under high pressure, so there is a risk of it shattering.

CAUTION: Do NOT use any bulbs that have fallen on the ground or have scratches on their surface, as there is a risk of them shattering.

CAUTION: Make sure that the bulb is seated correctly in its holder in the light.

CAUTION: Check the light for signs of damage and make sure the seals are seated correctly.

IMPORTANT: Use only bulbs that require 12 volts and are of the same type and wattage as the bulb that is being replaced.

IMPORTANT: Never touch the glass surface of the bulb, hold it only by its base.

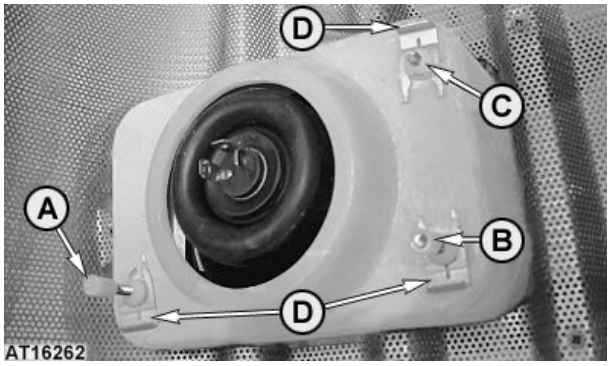
IMPORTANT: Use a clean cloth and alcohol to remove any fingerprints from the glass bulb.

OULXA64,0000CCB -19-18AUG03-1/1

Adjusting Head Lamps

1. Open the hood.
2. Turn screws (A and B) counterclockwise to lower lamp beam or clockwise to raise lamp beam.
3. To adjust lamp beam in toward center of tractor, turn screw (A) counterclockwise and screws (B and C) clockwise, using an equal number of turns on each screw.
4. To adjust beam out from center of tractor, turn screws (B and C) counterclockwise and screw (A) clockwise, using an equal number of turns on each screw.

NOTE: Clips (D) need not be removed for adjustment.

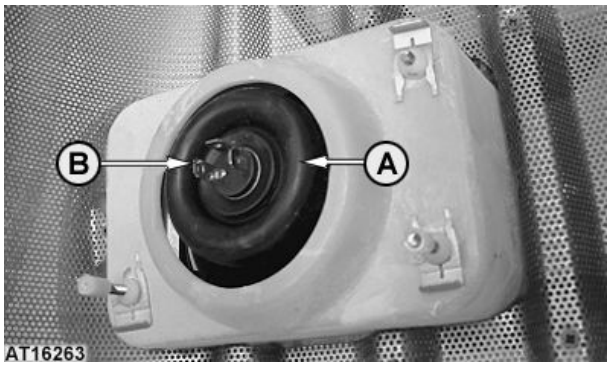


AT16262 —UN—28MAY03

OULXA64,0000BE4 -19-19MAY03-1/1

Replace Head Lamp Bulb

1. Ignition OFF.
2. Remove connector from bulb (B).
3. Remove dust seal (A).
4. Remove bulb.
5. Install new bulb, dust seal (A) and connector on bulb (B).

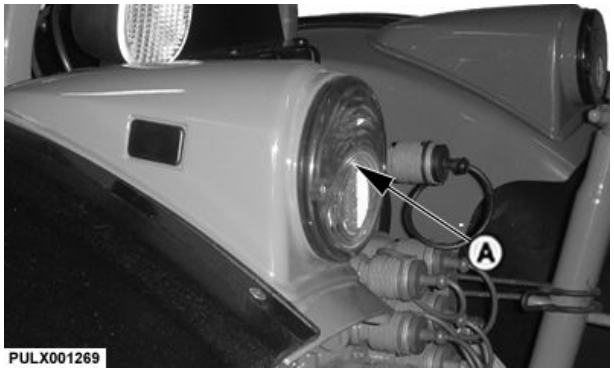


AT16263 —UN—28MAY03

OULXA64,0000C09 -19-27MAY03-1/1

Replace Clearance, Brake and Turn Signal Light Bulbs

1. Ignition OFF.
2. Remove the two screws holding the lens in position. Remove lens (A).
3. Push the bulb into the socket against spring pressure. Turn the bulb and pull to remove it.
4. Push the new bulb into the socket, then turn the bulb until it locks in the socket.
5. Clean and install the lens (A).

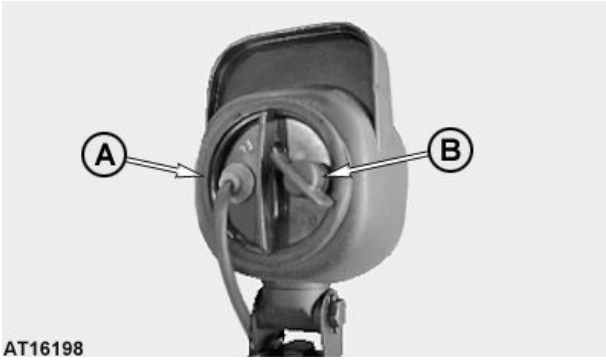


PULX001269 —UN—03SEP08

NR25796,0001793 -19-22JAN09-1/1

Replace Rear Work Lamp Bulb

1. Ignition OFF
2. Remove the cover (B) from rear side of body (A) to get access to the bulb.
3. Push the bulb into the socket against spring pressure. Turn the bulb and pull to remove.
4. Push the new bulb into the socket, then turn the bulb until it locks in the socket.
5. Clean the lens and reinstall the cover.



AT16198 —UN—07FEB03

OULXA64,0000D6D -19-10SEP03-1/1

Tire Pressures

Long life and satisfactory performance of the tires depend on proper tire inflation. Under-inflation of tires leads to rapid wear. Over-inflated tires reduce traction and increase wheel slippage.

Since correct tire pressures depend not only on working conditions and load but also on tractor model, tire size and manufacturer, we recommend that you approach your John Deere dealer or tire company for advice. The tire pressures shown in the table should therefore be considered as a standard guide only. The tire pressures shown are for field operation. If you are operating 20% or more on roads, increase tire pressures according to the manufacturer's specifications.

NOTE: Refer to"Load Capacity of Tires" in Section 150 "Specifications"

Rear wheels
- All tires: 160 kPa (1.6 bar; 23 psi)

Front wheels (two wheel drive)
- Tires 6.50-16: 310 kPa (3.1 bar; 45 psi)
- Tires 7.50-20: 280 kPa (2.8 bar; 41 psi)

Front wheels (front wheel drive)
- Tires 250/80-16: 370 kPa (3.7 bar; 54 psi)
- Tires 250/80-18: 370 kPa (3.7 bar; 54 psi)

AJ20558,000014B -19-13FEB08-1/1

Daily or Every 10 Hours

Component	Description	Lubricant
Engine	Check oil level; clean crankcase vent tube	Engine oil
Fuel filter	Drain water and sediment	
Cooling system	Check coolant level	
Transmission and hydraulic system	Check oil level	
Air cleaner valve cap	Clean out dust, if necessary	
Lights	Check lights are functioning properly	
Front axle and front wheels	Lubricate bearings (only necessary when operating in extremely wet and muddy conditions)	Multipurpose grease
Front wheel drive axle	Lubricate front axle and drive shaft (only necessary when operating in extremely wet and muddy conditions)	Multipurpose grease
Rear axle bearings	Lubricate (only necessary when operating in extremely wet and muddy conditions)	Multipurpose grease
Three-point hitch	Lubricate (only necessary when operating in extremely wet and muddy conditions)	Multipurpose grease
Wagon hitch	Lubricate (only necessary when operating in extremely wet and muddy conditions)	Multipurpose grease

NR25796,0001794 -19-26MAR09-1/1

After the First 100 Hours

Component	Description	Lubricant
Engine	Drain and refill with fresh oil (see Service - Every 250 Hours)	Engine oil
Engine oil filter	Replace filter element. Replace with a John Deere element (see Service - Every 250 Hours)	
Transmission/hydraulic oil filter	Replace filter element (see Service - Every 250 Hours)	
Front axle (tractors with front wheel drive)	Drain and refill with fresh oil (see Service - Every 1500 Hours)	Front wheel drive axle oil
Wheels	Check tightness of rim and disk (see Service - Every 250 Hours)	
Air intake hoses	Check connections for leaks (see Service - Every 500 Hours)	
Operator's cab, open operator's station and ROPS	Check mounting bolts for tightness	

NR25796,0001795 -19-26MAR09-1/1

Every 250 Hours

(In addition carry out 10 hour service)

Component	Description	Lubricant
Engine[a, b, c]	Drain and refill with fresh oil.	Engine oil
Engine oil filter	Replace filter element. Replace with a John Deere element.	
Transmission/hydraulic oil filter	Replace filter element; check oil level.	
Clutch and PTO clutch	Check free play, lubricate clutch release bearing.	Moly High Temperature EP Grease
Brake system	Check oil level.	John Deere HY-GARD™
Park brake and foot brake	Check free play.	
Wheels	Check tightness of rim and disk.	
Steering system	Lubricate tie rod ends.	Multipurpose grease
Front axle and front wheels	Lubricate bearings.	Multipurpose grease
Front wheel drive axle	Check oil level in axle housing and final drives; lubricate front axle and drive shaft.	Multipurpose grease
Rear axle bearings	Lubricate.	Multipurpose grease
Pick-up hitch	Lubricate.	Multipurpose grease
Wagon hitch	Lubricate; check hitch functions correctly.	Multipurpose grease
Electrical system	Check alternator/fan belt. Clean and check the battery. Adjust A/C compressor belt	
Neutral start circuit	Check circuit functions correctly.	
Cab	Clean cab air filter.	
Engine drive belt	Check and adjust engine drive belt tension.	

[a] Change engine oil every 125 hours if diesel fuel has a sulfur content greater than 0.5 percent.
[b] If John Deere PLUS-50™ or an oil meeting ACEA E5 or E4 is used the oil change interval will be extended by 50 %. Engine oil must be changed at least once a year.
[c] Change engine oil every 500 hours, if John Deere Premium oil is used and diesel fuel has a sulfur content of less than 0.10 % (1000 ppm).

HY-GARD is a trademark of Deere & Company
PLUS-50 is a trademark of Deere & Company

NR25796,0001796 -19-08FEB10-1/1

Every 500 Hours

(In addition carry out 10 and 250 hour services)

Component	Description	Lubricant
Engine	Drain and refill with fresh oil	Engine oil
Fuel filter	Replace filter element	
Fuel tank	Drain residue	
Transmission/hydraulic oil filter	Replace filter element; check oil level	
Three-point hitch	Lubricate	Multipurpose grease
Air intake hoses	Check connections for leaks	
Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch, pick-up hitch	Have your John Deere dealer check the components for wear and replace them, if necessary.	

NR25796,0001797 -19-26MAR09-1/1

Every 750 Hours

(In addition carry out 10 and 250 hour services)

Component	Description	Lubricant
Engine speeds	Check engine speeds (have speeds adjusted by your John Deere dealer)	
Front axle	Have end play of front axle pivot pin checked by your John Deere dealer	
Operator's cab, open operator's station and ROPS	Check mounting bolts for tightness	

NR25796,0001798 -19-26MAR09-1/1

Once Every Year

Component	Description	Lubricant
Seat belt	Check seat belt and seat belt attachment for signs of wear.	
Engine	Drain and refill with fresh oil at least once a year (see Service - Every 250 Hours)	Engine oil
Cooling system	If COOL-GARD II is used check condition with test stripes.	

OULXA64,0000CAB -19-30AUG10-1/1

Every 1250 Hours

(In addition carry out 10 and 250 hour services)

Component	Description	Lubricant
Transmission and hydraulic system	Change suction strainer; drain and refill with fresh oil	John Deere HY-GARD™

HY-GARD is a trademark of Deere & Company

OULXA64,0000D71 -19-01JUL04-1/1

Every 1500 Hours

(In addition carry out 10, 250, 500 and 750 hour services)

Component	Description	Lubricant
Front axle (tractors with front wheel drive)	Drain and refill with fresh oil	Front wheel drive axle oil
Brake System	Have drained and refilled with fresh oil by your John Deere dealer	John Deere HY-GARD™
Engine air cleaner and cab air filters	Replace air cleaner and cab air filters	

HY-GARD is a trademark of Deere & Company

OULXA64,000027B -19-04SEP03-1/1

Every 2000 Hours or Every Two Years

(In addition carry out 10, 250 and 500 hour services)

Component	Description	Lubricant
Engine valves	Have valve tappet clearances checked by your John Deere dealer.	
Cooling system	Have the system drained, flushed and refilled by your John Deere dealer*	
Thermostat	Have thermostat checked by your John Deere dealer*	
	**If cooling system is filled with John Deere COOL-GARD, do not carry out this service before 3000 hours of operation.*	

OULXA64,0000C0D -19-01JUL04-1/1

Every 6000 Hours

(In addition carry out 10, 250, 500, 750, 1500 and 2000 hour services)

Component	Description	Lubricant
Cooling system	Have the system drained, flushed and refilled by your John Deere dealer*	
Thermostat	Have thermostat checked by your John Deere dealer*	
	**If cooling system is not filled with John Deere COOL-GARD™ II, carry out this service every 2000 hours of operation.*	

OULXA64,0000C0C -19-20DEC11-1/1

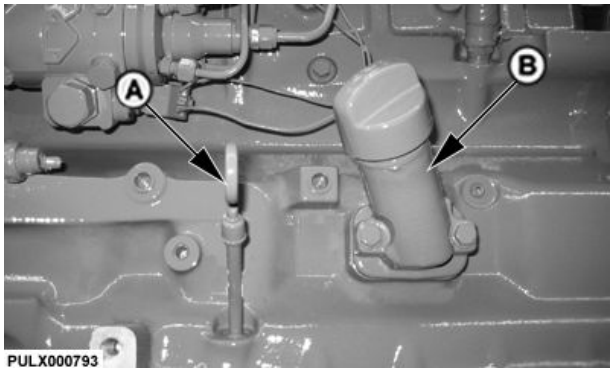
As Required

Component	Description	Lubricant
Injection nozzles and pump	Have these checked by your John Deere dealer	
Radiator	Clean	
Cooling system	Check coolant level	
Fuel system	Check fuel filter; bleed system	
Engine air cleaner and cab air filters	Clean the air cleaner and cab air filters	
Air conditioning system	Have system checked and serviced by your John Deere dealer	
Front wheel bearings (tractors without front wheel drive)	Have bearings cleaned, lubricated and adjusted by your John Deere dealer	
Brakes	Have these checked by your John Deere dealer	
Tires	Check tire pressure	
Lubricating points	Lubricate, if tractor has been washed with high-pressure water	Multipurpose grease
Electrical system	Replace alternator/fan belt	
Fuses	Replace	
Hand throttle	Adjust friction	
Digital display	Program setting (if equipped)	

OULXA64,000027D -19-20MAY03-1/1

Check Engine Oil Level

1. Park tractor on level ground and pull out dipstick. Oil level should be between two marks on dipstick (A). DO NOT operate engine when oil level is below low mark on dipstick.
2. If level is low, add oil through oil filler (B) until even with upper mark. DO NOT over-fill. Use seasonal viscosity grade oil. See Fuel, Lubricants, Hydraulic Oil and Coolant in Section 80.



PULX000793 —UN—20NOV08

NR25796,0001799 -19-04NOV08-1/1

Clean Engine Crankcase Vent Tube

CAUTION: Reduce compressed air to less than 210 kPa (2 bar) (30 psi) when using for cleaning purposes. Clear area of bystanders, guard against flying chips, and wear personal protection equipment including eye protection.

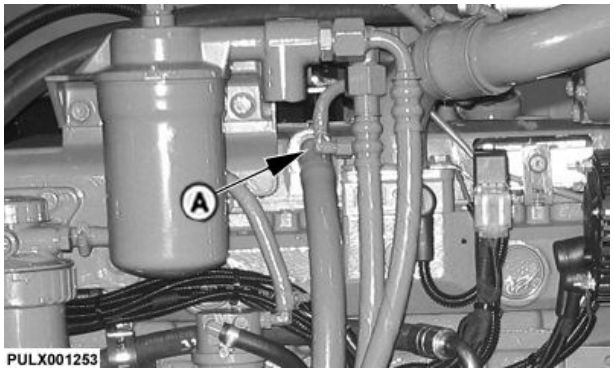
Check if outlet of engine crankcase vent tube (A) is free from dirt.

If the outlet is strongly polluted remove crankcase vent tube (A) from engine.

Wash in solvent or blow clean with compressed air.

Reassemble vent tube to engine.

Be sure vent tube is not kinked or pinched.



A—Crankcase Vent Tube

PULX001253 —UN—28AUG08

NR25796,000179A -19-04NOV08-1/1

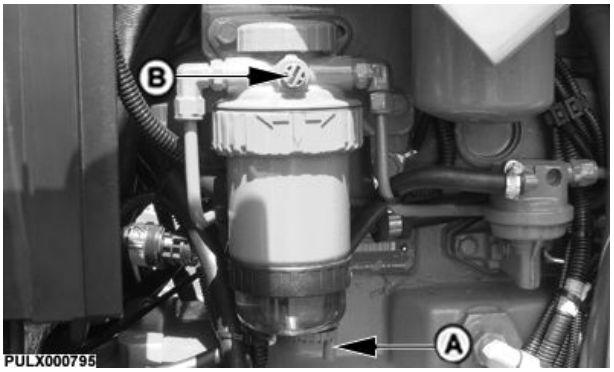
Check the Fuel Filter

CAUTION: Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.

1. Loosen drain screw (A) and bleed screw (B).
2. Retighten drain screw (A) as soon as water and sediment deposits have drained out.
3. Turn key in main switch to the right (first switch position) so that the fuel transfer pump is operating. Keep the pump running for approx. 20 seconds.
4. Close bleed screw (B) after air has been completely removed from the system .

If water was present in fuel filter, open fuel tank drain screw (C), located under the lower fuel tank, to bleed accumulated moisture and sediment from the fuel tank. After draining off any water deposits, retighten drain screw (C) until it is hand-tight.

NOTE: Place a small container under drain screw to catch draining fuel.



PULX000795 —UN—04SEP08

PULX000796 —UN—24JUL08

NR25796,000179B -19-26MAR09-1/1

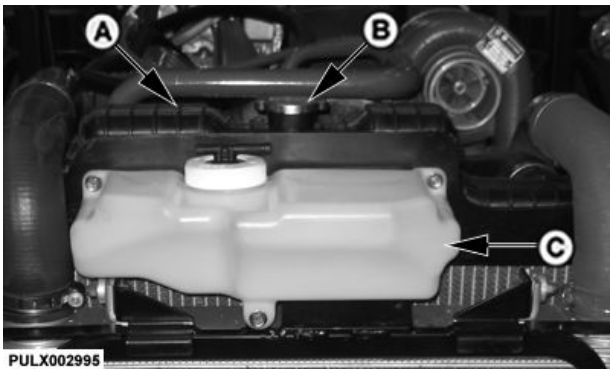
Check Coolant Level

CAUTION: Only remove radiator cap (B) when engine is cold. Slowly loosen cap to first stop to relieve pressure before removing completely.

IMPORTANT: Periodically check coolant level in radiator (A). If cap should become defective, coolant would not be drawn from expansion tank and could cause engine to overheat. Replace cap as necessary.

1. Check level in coolant recovery tank (C).
2. If engine is cool and level is below LOW add coolant to recovery tank (C) to bring level to LOW.

TS281 —UN—23AUG88



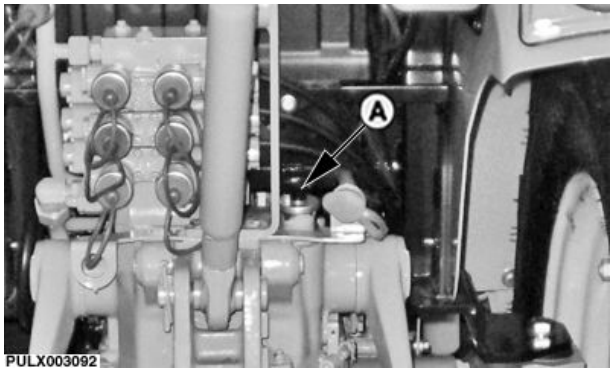
PULX002995 —UN—19JAN09

NR25796,000179C -19-19JAN09-1/1

Check Transmission/Hydraulic System Oil Level

IMPORTANT: Check oil level when oil is cold. If possible, check the oil level in the morning after the tractor has been standing overnight.

1. Park tractor on level ground.
2. Apply parking brake (transmission in neutral).
3. Lower draft links and front-mounted implements.
4. Remove dipstick (A), wipe clean and re-insert it fully. Oil level should be between full mark and end of dipstick.
5. Add specified oil at (A) if level is low, see section Fuel, Lubricants, Hydraulic Oil and Coolant.



PULX003092 —UN—09APR09

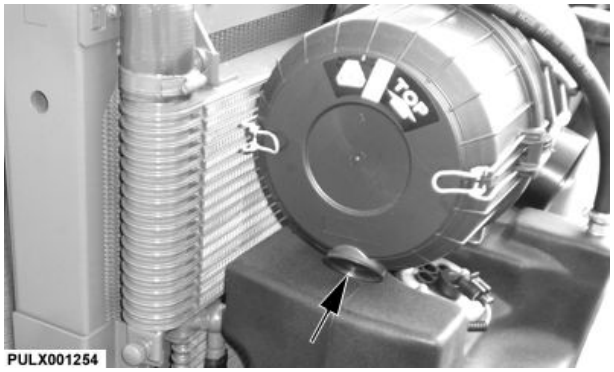
NR25796,000179D -19-09APR09-1/1

Clean the Dust Unloading Valve

IMPORTANT: Never run the engine when the dust unloading valve is removed!

During the harvest, grass and chaff may adversely affect the performance of the dust unloading valve. Remove and clean the dust unloading valve as necessary. Replace any damaged valve immediately.

NOTE: In dusty conditions, clean the dust unloading valve every day.



PULX001254 —UN—11OCT08

NR25796,000130C -19-26MAR09-1/1

Checking on Lights

Check that the lights are operating correctly, especially before driving on public roads.

Comply with all legal regulations.

LX,LICHT 002082 -19-01FEB92-1/1

Other Service Jobs

If the tractor is used in particularly wet and muddy terrain, apply extra lubrication as follows:

- Front axle (tractors without front-wheel drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear axle
- Three-point hitch
- Wagon hitch

These jobs are described in “Service - Every 250 Hours” and “Service - Every 500 Hours”.

OULXA64,0000D77 -19-17SEP03-1/1

Change Engine Oil and Filter

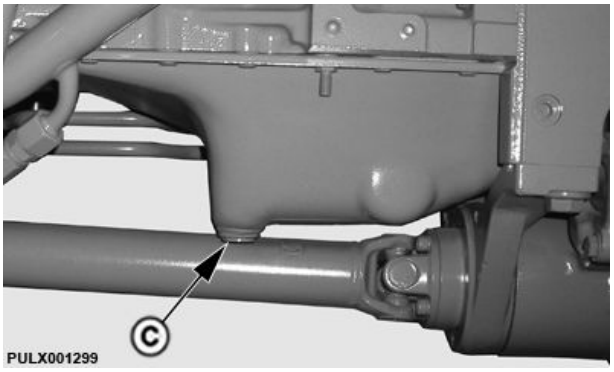
IMPORTANT: Change oil whenever a seasonal change in temperature makes oil of a different viscosity necessary.

NOTE: Carry out first oil change after first 100 hours of operation. Engine oil must be changed at least once a year.

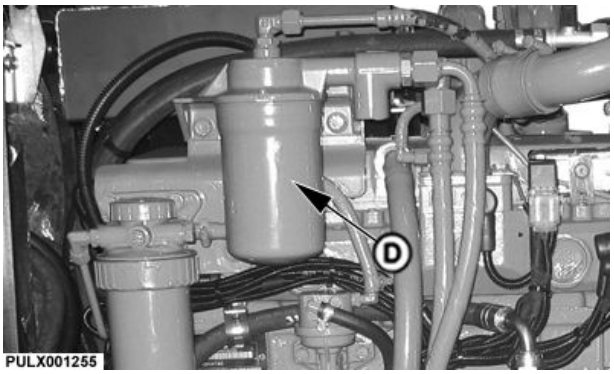
Drain oil with engine shut off, but with engine oil still warm.

1. Remove oil drain plug (C) and drain oil.
2. Replace engine oil filter (D) while changing oil. Apply a film of oil on the new oil filter gasket and install new engine oil filter (D). Hand tighten plus $^{1}/_{2}$ turn.
3. Install drain plug (C) and tighten to 50 N·m (37 lb-ft) (use new seal ring).

C—Drain plug **D—Engine oil filter**



PULX001299 —UN—08SEP08



PULX001255 —UN—28AUG08

NR25796,00017E1 -19-23JAN09-1/2

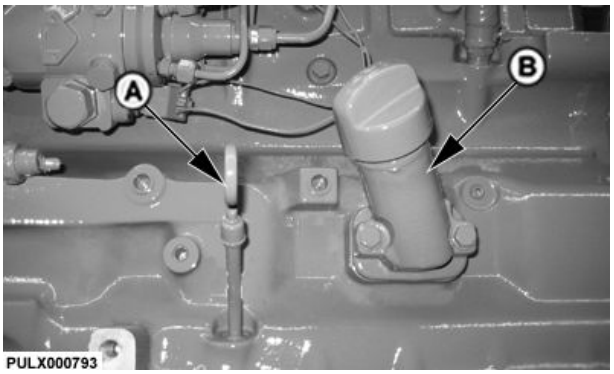
4. Fill crankcase with fresh oil of proper viscosity at filler neck (B). See Section Fuel, Lubricants, Hydraulic Oil and Coolant.

Specification	
Engine Crankcase —Capacity	8.0 L 8.5 U.S. qt.

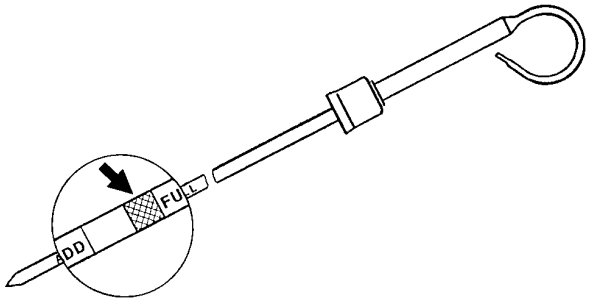
IMPORTANT: Change engine oil every 125 hours if diesel fuel has a sulfur content greater than 0.5 percent.

5. Wait 15 minutes then recheck oil level. Oil should be up the XXX mark on the dipstick (A). If necessary, top up with oil.
6. Run engine for a short time and check for leaks at filter base and drain plug.

A—Dipstick **B—Filler neck**



PULX000793 —UN—20NOV08



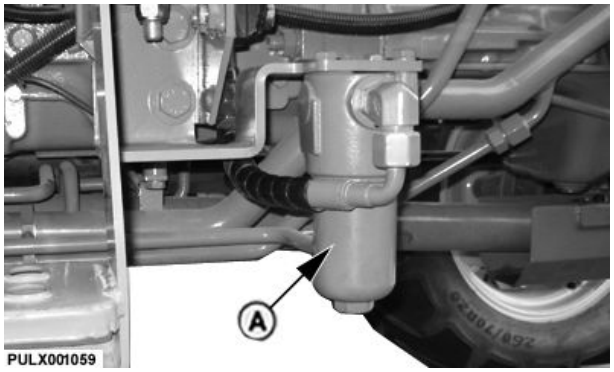
FD000047

FD000047 —UN—13MAR96

NR25796,00017E1 -19-23JAN09-2/2

Replace Transmission/Hydraulic Oil Filter

1. Remove filter (A). Apply a film of oil to new gasket and install new filter. Hand tighten plus 1/2 turn.
2. Run engine several seconds and recheck transmission/hydraulic oil level.
3. Add transmission oil if required (see Section 80 Fuel, Lubricants, Hydraulic Oil and Coolant).

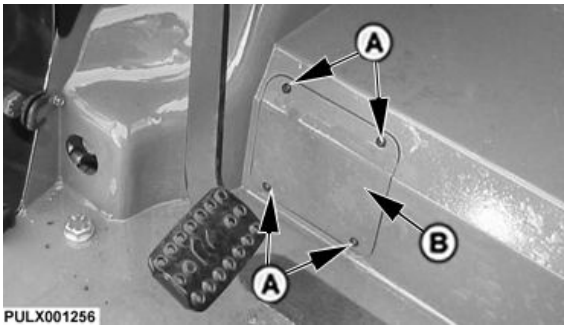


PULX001059 —UN—07NOV08

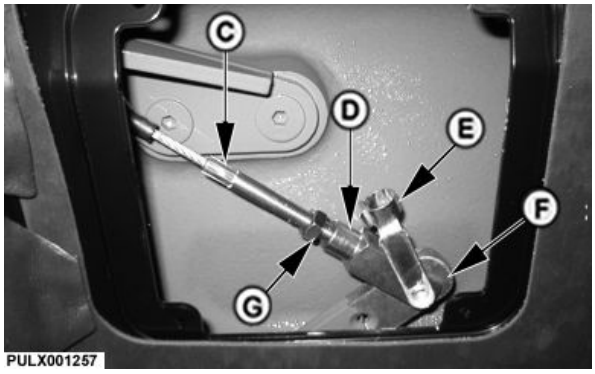
SS40167,0000091 -19-20MAR09-1/1

Check Clutch Pedal Free Travel

1. To check and adjust, unscrew screws (A) and remove cover (B).
2. Disconnect the linkage.
3. Move clutch lever (F) all the way up.
4. Turn yoke (D) until the holes in yoke and clutch lever (F) are aligned.
5. Check if pin (E) can be inserted in the holes.
6. Turn yoke (D) counterclockwise by full turns to move clutch lever (F) towards the right.
7. Connect clutch lever (F) and yoke (D) using pin (E) and lock nut.
8. Depress the clutch pedal ten times.
9. Release lock nut on pin (E).
10. Repeat steps 3 through 5.
11. Turn yoke (D) counterclockwise by 2 and a half turns to move clutch lever (F) towards the right.
12. Connect clutch lever (F) and yoke (D) using pin (E) and lock nut.
13. Select a gear and make sure clutch does not drag.
14. Adjustment is complete if step 13 is OK. If not, repeat steps 9 through 13 turning yoke (D) by two turns.



PULX001256 —UN—22JAN09



PULX001257 —UN—22JAN09

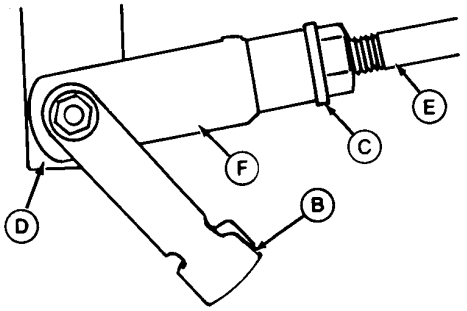
A—Screw
B—Cover
C—Cable
D—Yoke
E—Pin
F—Clutch lever
G—Lock nut

NR25796,00017E3 -19-22JAN09-1/1

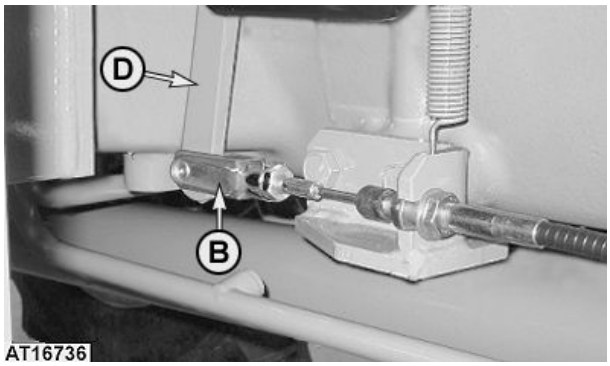
Adjust PTO Clutch Linkage

1. Remove clip pin (B) from PTO clutch linkage.
2. Loosen lock nut (C).
3. Adjust length of rod (E) so the clip pin (B) can be inserted with the rod (E) pulled forward and the arm (D) pulled rearward to eliminate freeplay. Lengthen rod (E) by 1/2 turn of yoke (F) to provide a slight amount of lever freeplay.
4. Reinstall clip pin (B) and tighten lock nut (C).

B—Clip pin
C—Lock nut
D—Arm
E—Rod
F—Yoke



M46418A —UN—22APR94



AT16736 —UN—21FEB05

NR25796,00017E4 -19-22JAN09-1/1

Check Brake System Oil Level

The brakes are hydraulically operated by an independent circuit having a separate oil reservoir.

If oil level is low, disconnect connector (B), remove cap (A) and add John Deere low viscosity Hy-Gard JD20D or 10W20 mineral oil.

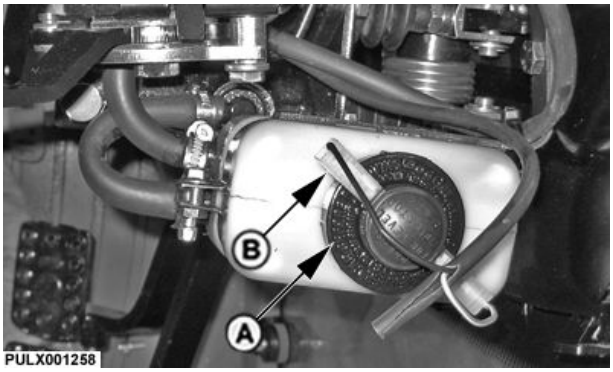
With the main switch ON, the indicator light (D) will light up when the oil level in the brake system is low.

To check electrical system, press on the top of the cap; indicator light (D) must light up.

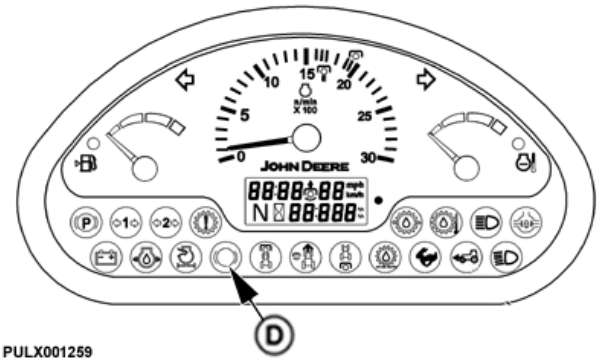
Check also for leaks in case of low oil level.

CAUTION: Any service of the brake system must be performed by your John Deere Dealer.

A—Cap
B—Connector
D—Indicator light



PULX001258 —UN—28AUG08



PULX001259 —UN—02SEP08

NR25796,00017E5 -19-26MAR09-1/1

Check Brake Operation

Shut off the engine and check that the brakes are operating properly:

1. One at a time, press down on the left and right brake pedals (do this several times to each pedal). Distinct resistance should be noticeable at each of the two pedals. If no resistance can be felt at the pedals, see your John Deere dealer.
2. Check to make sure the pedals do not settle to the end of stroke within 10 seconds after being applied. If leakage exceeds this rate or if one pedal settles faster than the other, see your John Deere dealer.
3. Press both pedals down at the same time. Distinct resistance should occur at both pedals at roughly the same height. If the height at which resistance can be felt differs by more than 51 mm (2 in.), see your John Deere dealer.

IMPORTANT: Any noticeable drift downward from the point of resistance indicates brake leakage. See your John Deere dealer.

PULX001260 —UN—02SEP08

Distinct pedal resistance and balance between the left and right pedals are important for emergency braking with the two brakes coupled together.

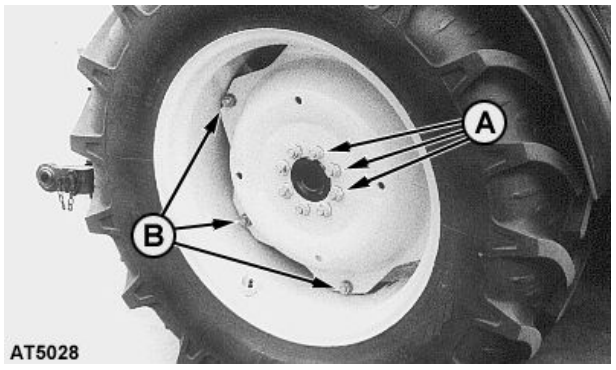
NR25796,00017E6 -19-26MAR09-1/1

Tighten Wheel Bolts

Tighten rear wheel nuts and bolts to specified torque

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

Specification	
Disk to Axle Flange—Torque	500 N·m 370 lb-ft
M18 Bolt, Rim to Disk—Torque	300 N·m 220 lb-ft
M16 Bolt, Rim to Disk—Torque	230 N·m 170 lb-ft



AT5028 —UN—15AUG97

A — Disk to axle flange **B — Rim to disk**

Continued on next page

NR25796,00017E7 -19-22JAN09-1/3

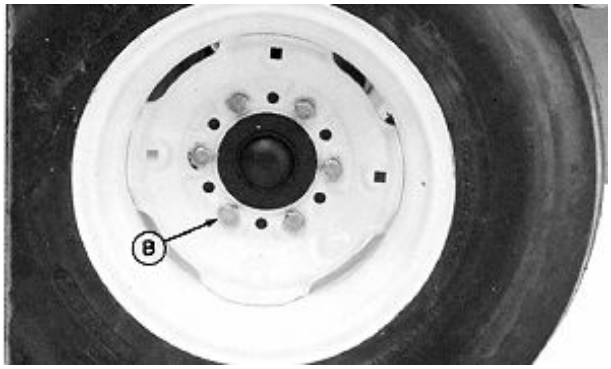
Tighten front wheel nuts and bolts to specified torque

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

Specification

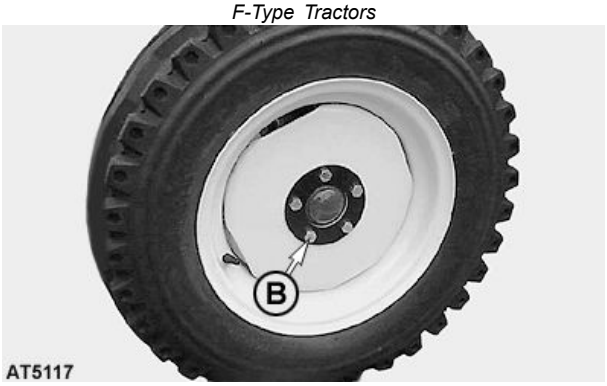
Disk to Axle Flange, F-Type Tractors—Torque	175 N·m (130 lb-ft)
Disk to Axle Flange V-Type Tractors—Torque	160 N·m (120 lb-ft)

B — Disk to axle flange



M46420 —UN—31JAN92

F-Type Tractors



AT5117 —UN—25OCT00

V-Type Tractors

NR25796,00017E7 -19-22JAN09-2/3

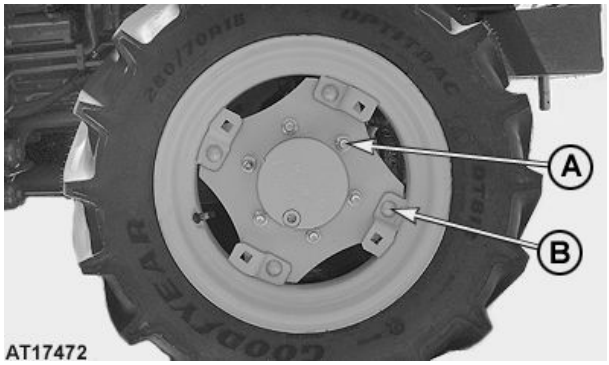
Tighten wheel nuts of front wheel drive axle

IMPORTANT: Check tightness of rim, disk and wheel bolts after 10 hours every time you replace wheels.

Specification

Disk to Axle Flange—Torque	300 N·m (220 lb-ft)
Rim to Disk—Torque	230 N·m (170 lb-ft)

A — Disk to axle flange **B — Rim to disk**



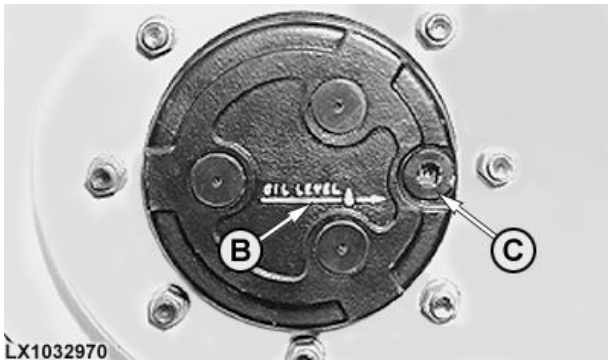
AT17472 —UN—26JUL07

NR25796,00017E7 -19-22JAN09-3/3

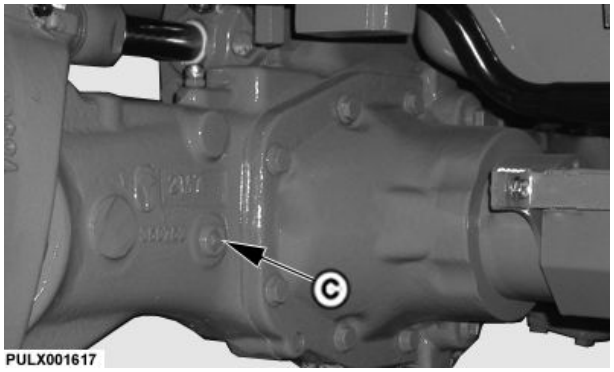
Check Oil Levels of Front Wheel Drive Axle

1. Turn wheel until OIL LEVEL mark (B) on final drives (both sides) is horizontal.
2. Remove level plugs (C). Oil should be level with plug bore.
3. If level is low, add specified oil (see Section 80 Fuel, Lubricants, Hydraulic Oil and Coolant).
4. Re-install level plugs (C) and tighten to 60 N·m (44 lb-ft).

NOTE: Change oil in axle housing and final drives after the first 100 hours of operation. Then replace after every 1500 hours of operation or once every 2 years, whichever occurs first.



LX1032970 —UN—03JUL03

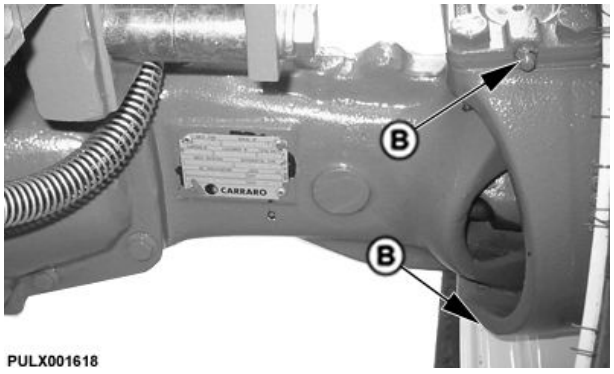


PULX001617 —UN—21SEP08

NR25796,00017E8 -19-04NOV08-1/1

Lubricate Front Axle King Pins

On tractors equipped with front wheel drive axle, apply several shots of multipurpose grease to upper and lower front axle king pin fittings (B).

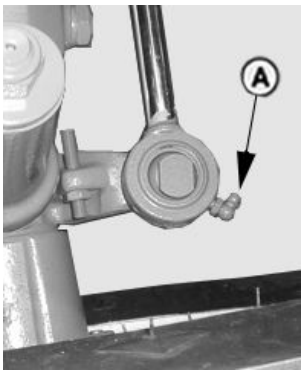


PULX001618 —UN—22SEP08

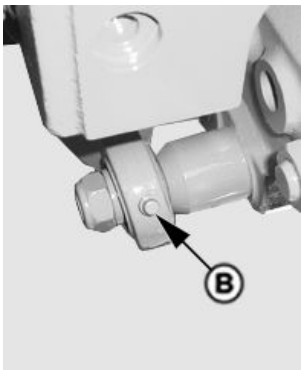
Continued on next page

NR25796,00017E9 -19-26MAR09-1/2

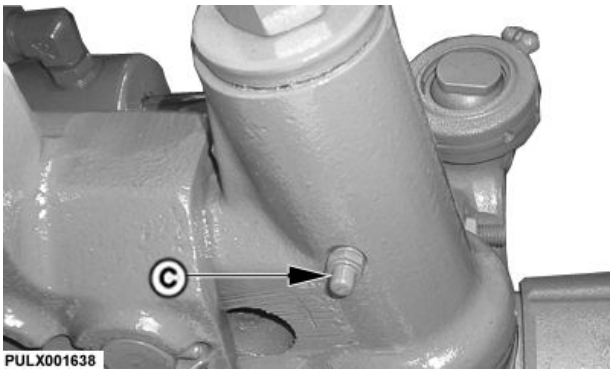
On tractors equipped with adjustable front axle, apply several shots of multipurpose grease to fittings (A) to (C).



PULX001646 —UN—26SEP08



PULX001644 —UN—26SEP08

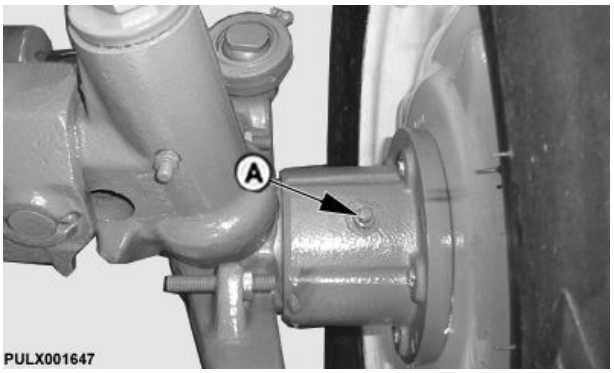


PULX001638 —UN—26SEP08

NR25796,00017E9 -19-26MAR09-2/2

Lubricate Hub Bearings (Tractors without Front Wheel Drive)

Lubricate hub bearings (A) on both sides with several strokes of multipurpose grease.

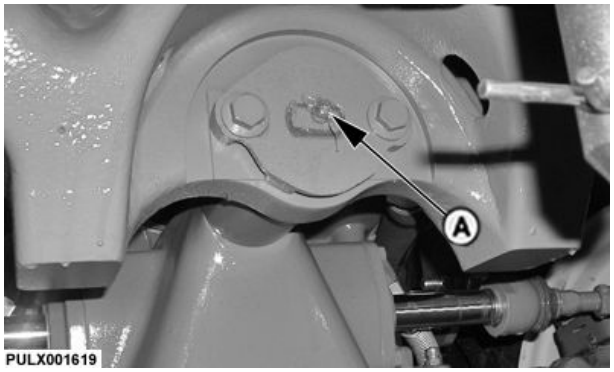


PULX001647 —UN—26SEP08

NR25796,00017EA -19-26MAR09-1/1

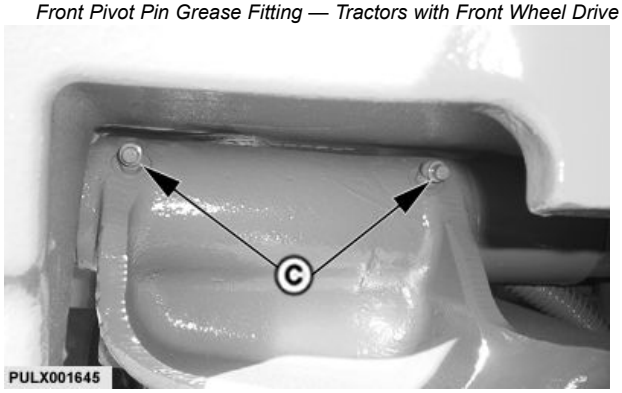
Lubricate Front Axle Pivot Pins

Lubricate grease fittings (A) and (C) for front axle pivot pins with several shots of multipurpose grease (see Section 80 Fuel, Lubricants, Hydraulic Oil and Coolant).



PULX001619 —UN—22SEP08

Front Pivot Pin Grease Fitting — Tractors with Front Wheel Drive



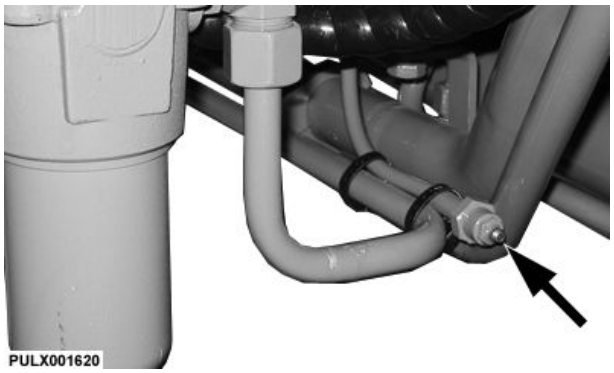
PULX001645 —UN—26SEP08

Pivot Pin Grease Fitting — Tractors without Front Wheel Drive

NR25796,00017EB -19-04NOV08-1/1

Lubricate Clutch Release Bearing

Lubricate grease fitting of clutch release bearing with several strokes of Moly High Temperature EP Grease (see Section 80 Grease).

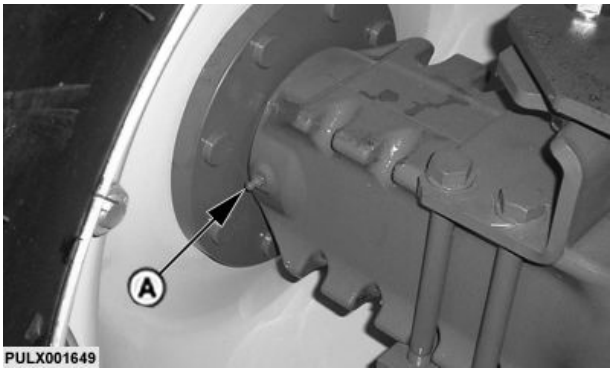


PULX001620 —UN—22JAN09

NR25796,00017EC -19-22JAN09-1/1

Lubricate Rear Axle Bearings

Lubricate rear axle grease fittings (A) with several strokes of multipurpose grease. See Section 80 Fuel, Lubricants, Hydraulic Oil and Coolant.

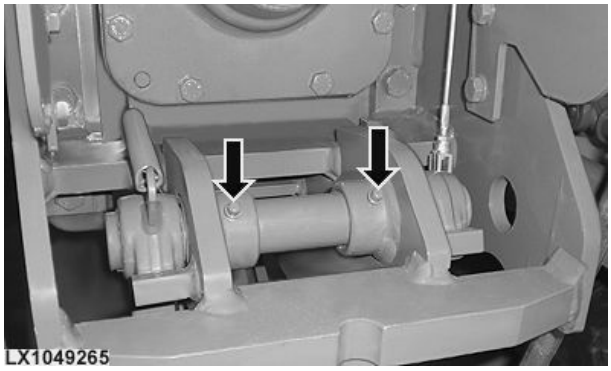


PULX001649 —UN—26SEP08

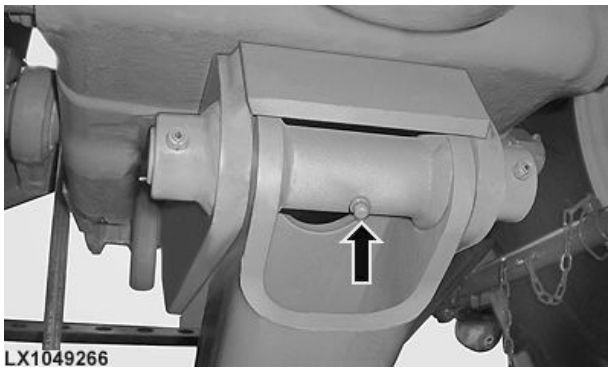
NR25796,00017ED -19-23JAN09-1/1

Lubricate Pick-Up Hitch (if equipped)

Lubricate grease fittings (see arrows) with several shots of multipurpose grease (see Section 80, Fuel, Lubricants, Hydraulic Oil and Coolant).



LX1049265 —UN—08FEB10



LX1049266 —UN—08FEB10

OULXBER,00018B9 -19-08FEB10-1/1

Pick-Up Hitch (If Equipped), Check Torques of Attaching Bolts

Check torques of attaching bolts:

- Three cap screws and one hex. socket screw M16x40 - 160 N·m (118 lb-ft).
- Four cap screws M16x45 - 160 N·m (118 lb-ft).

NR25796,0001818 -19-23JAN09-1/1

Check Belt Wear and Tension

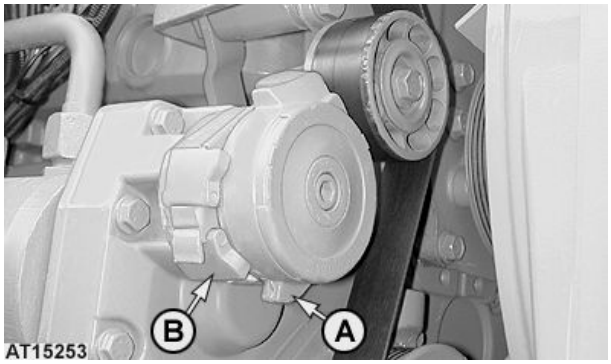
Tractor with automatic tensioner

NOTE: 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 belt. If tensioner spring tension is not within specification, replace tensioner assembly. This has to be checked by your John Deere Dealer.

Checking the belt for wear:

- The belt tensioner is designed to operate within the limit of arm movement provided by the tensioner stop (A) and fixed stop (B), provided the belt is the correct length and is following the correct path.
- Visually inspect tensioner stop (A) and fixed stop (B) on belt tensioner assembly.
- If the tensioner stop (A) on the swing arm is hitting the fixed stop (B), check mounting brackets (alternator, belt tensioner, idler pulley, etc.) and belt length. Replace belt if necessary.



AT15253 —UN—13JUL04

A—Tensioner stop **B—Fixed stop**

NR25796,00017EE -19-26MAR09-1/1

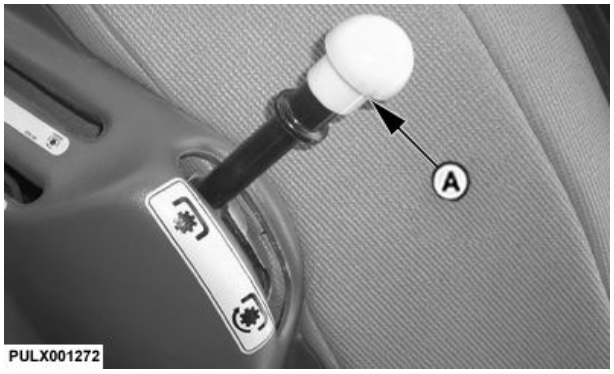
Check Neutral Start System

Turning the main switch should crank the engine only if gearshift lever (T) is in neutral position and PTO clutch lever (A) is disengaged.

⚠ CAUTION: If starting motor turns engine in one or both of the following steps, have the neutral start system repaired by your John Deere dealer.

1. Move gearshift lever (T) out of neutral and turn the main switch to start position. Starting motor must NOT turn engine.
2. Engage PTO clutch lever (A) and turn the main switch to start position. Starting motor must NOT turn engine.

PULX001953 —UN—03OCT08



PULX001272 —UN—03SEP08

NR25796,00017EF -19-04NOV08-1/1

Clean Cab Air Filters

CAUTION: The cab air filters do not protect against inhaling harmful pesticides. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Every time the engine primary filter element is serviced, also remove the cab air filters (one on each side) and the recirculated air filter, and clean them with compressed air directed from the clean side.

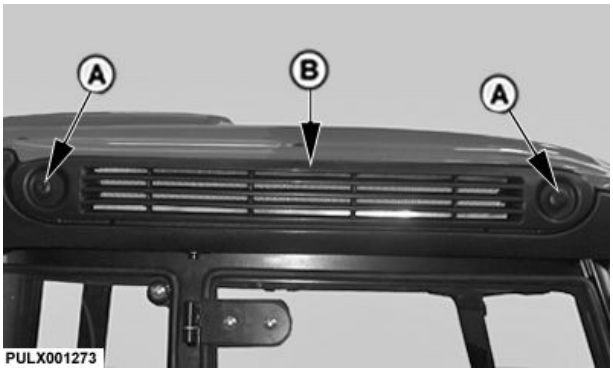
Remove screws (A) and filter cover (B).

On both ends of the filter, turn lever (C) upwards.

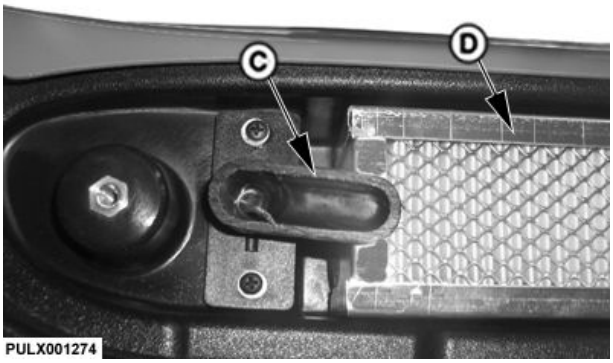
Remove cab air filter element (D).

Replace cab air filters with engine primary filter element (the latest after 1500 hours of operation or 2 years).

A—Screws
B—Filter cover
C—Lever
D—Air filter element



PULX001273 —UN—03SEP08



PULX001274 —UN—03SEP08

NR25796,00017F0 -19-26MAR09-1/1

Change Engine Oil and Filter

IMPORTANT: Change engine oil every 500 hours, if John Deere Premium oil is used and diesel fuel has a sulfur content of less than 0.10% (1000 ppm).

IMPORTANT: Change oil whenever a seasonal change in temperature makes oil of a different viscosity necessary.

NOTE: Carry out first oil change after first 100 hours of operation. Engine oil must be changed at least once a year.

Drain oil with engine shut off, but with engine oil still warm.

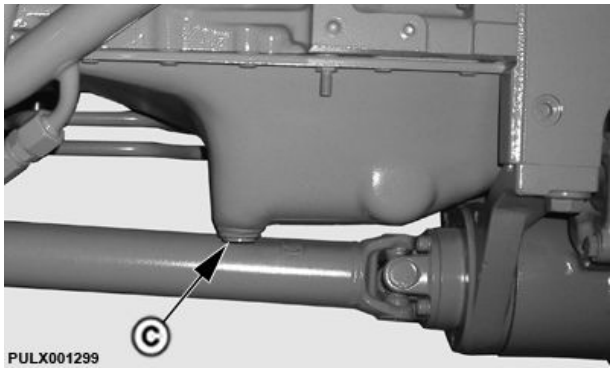
1. Remove oil drain plug (C) and drain oil.
2. Replace engine oil filter (D) while changing oil. Apply a film of oil on the new oil filter gasket and install new engine oil filter (D). Hand tighten plus $^{1}/_{2}$ turn.
3. Install drain plug (C) and tighten to 50 N·m (37 lb-ft) (use new seal ring).
4. Fill crankcase with fresh oil of proper viscosity at filler neck (B). See Section Fuel, Lubricants, Hydraulic Oil and Coolant.

Specification	
Engine Crankcase —Capacity	8.0 L 8.5 U.S. qt.

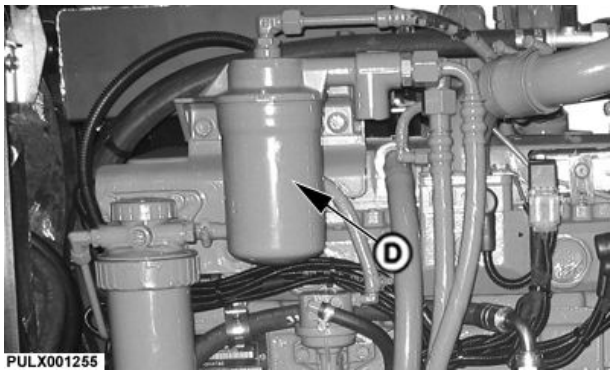
IMPORTANT: Change engine oil every 125 hours if diesel fuel has a sulfur content greater than 0.5 percent.

5. Wait 15 minutes then recheck oil level. Oil should be up the XXX mark on the dipstick (A). If necessary, top up with oil.
6. Run engine for a short time and check for leaks at filter base and drain plug.

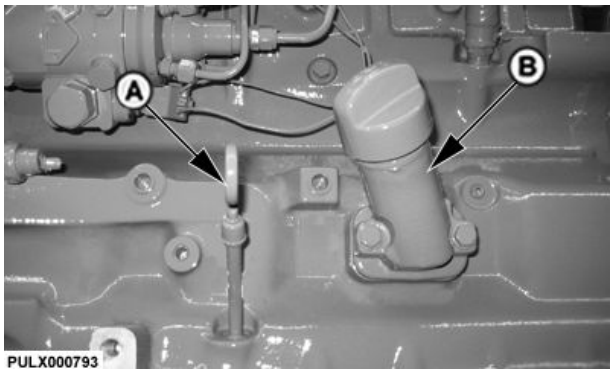
A—Dipstick
B—Filler neck
C—Drain plug
D—Engine oil filter



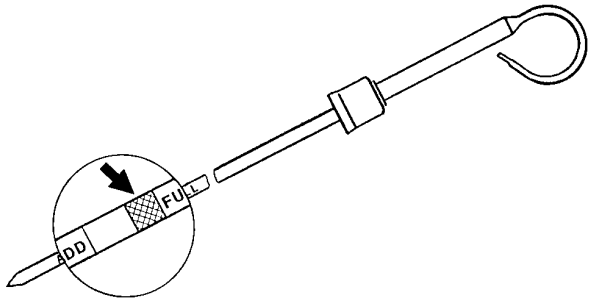
PULX001299 —UN—08SEP08



PULX001255 —UN—28AUG08



PULX000793 —UN—20NOV08



FD000047

FD000047 —UN—13MAR96

NR25796,000179F -19-26MAR09-1/1

Drain Water and Sediment from Fuel Tank

CAUTION: Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.

Open fuel tank drain screw (C) to bleed accumulated moisture and sediment from the fuel tank. Tighten drain screw (C) when clear fuel runs from fitting.

NOTE: Place a small container under drain screw (C) to catch draining fuel.

PULX000796 —UN—24JUL08

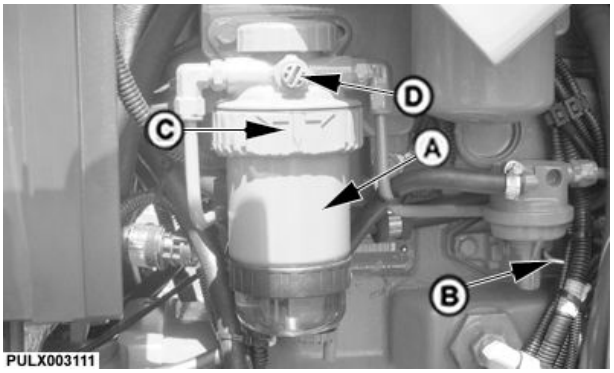
NR25796,00017A0 -19-22JAN09-1/1

Replace Fuel Filter

CAUTION: Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.

Replace fuel filter element (A) at least once a year.

1. Remove right-hand side panel.
2. Remove retaining ring (C) and filter.
3. Install new fuel filter element (A) with retaining ring (C), hand tighten.
4. Open bleed screw (D).
5. Operate priming pump (B) until fuel flows.
6. Close bleed screw (D).



PULX003111 —UN—22JAN09

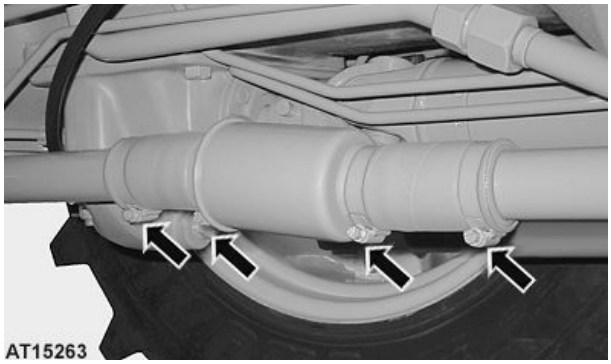
A—Fuel filter element
B—Priming pump
C—Retaining ring
D—Bleed screw

NR25796,00017A1 -19-22JAN09-1/1

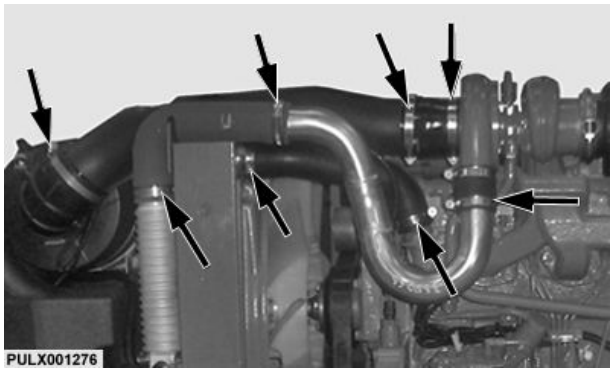
Check Hoses and Hose Clamps

Check hose clamps of the following systems for tightness:
- Air Cleaner to engine intake or turbocharger
- Cooling system
- Hydraulic system
- Fuel system

Check all hoses for cracks which could cause leaks or possible failure. Replace as necessary.



AT15263 —UN—13JUL04



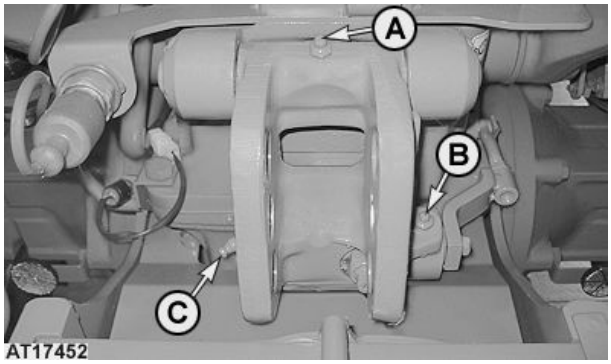
PULX001276 —UN—03SEP08

NR25796,00017A2 -19-04NOV08-1/1

Lubricate Center Link Bracket

Lubricate grease fittings (A), (B) and (C) of center link bracket with several strokes of multipurpose grease (see Section 80 Fuel, Lubricants, Hydraulic Oil and Coolant).

A—Grease fitting
B—Grease fitting
C—Grease fitting

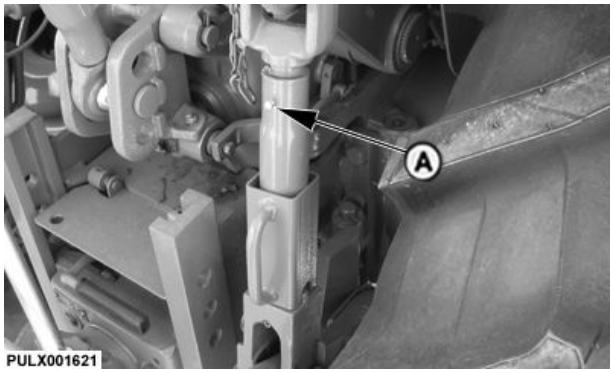


AT17452 —UN—16JUL07

NR25796,00017A3 -19-04NOV08-1/1

Lubricate 3-Point Hitch

Lubricate left-hand and right-hand lift link (A) with several strokes of multipurpose grease. See Section 80 Fuel, Lubricants, Hydraulic Oil and Coolant.



PULX001621 —UN—07NOV08

NR25796,00017A4 -19-22JAN09-1/1

Service — Every 750 Hours

Check Engine Idle Speeds

Slow idle speed is 825 to 875 rpm.

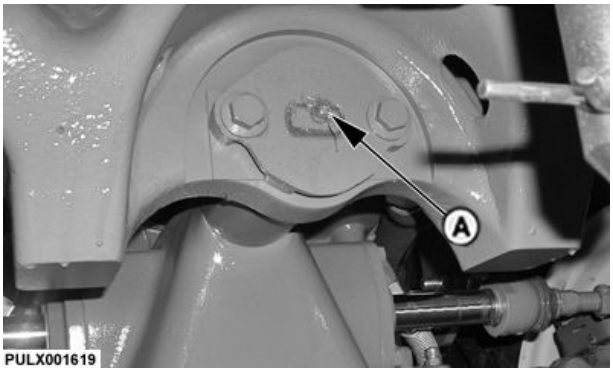
With no load, fast idle speed should be a maximum of 2460 - 2510 rpm on all tractors.

If idle speeds are not correct, see your John Deere dealer.

OULXA64,0000BFB -19-22MAY03-1/1

Check Front Axle Pivot Pin

Ask your John Deere dealer to check the front axle pivot pin (A) for correct end play.



PULX001619 —UN—22SEP08

NR25796,000179E -19-04NOV08-1/1

Mounting Bolts of Operator's Cab / Open Station and ROPS

Check mounting bolts for tightness.

OULXA64,0000CCC -19-18AUG03-1/1

Checking the Seat Belt (If Equipped)

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 if the belt needs to be changed.

OULXA64,0000CD1 -19-20AUG03-1/1

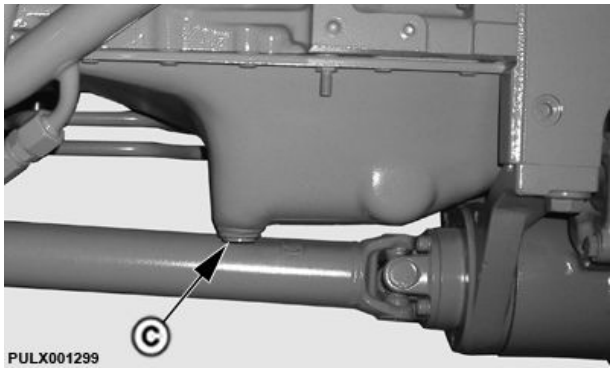
Change Engine Oil and Filter

IMPORTANT: Change oil whenever a seasonal change in temperature makes oil of a different viscosity necessary.

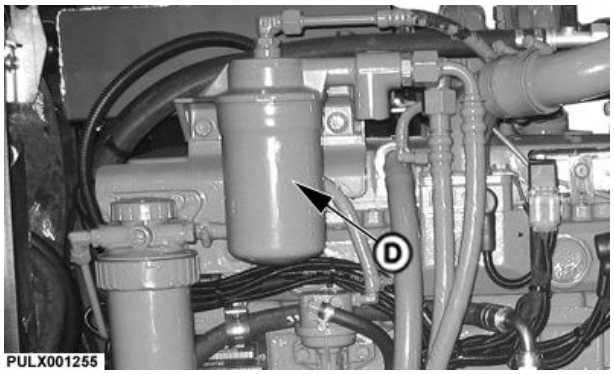
NOTE: Carry out first oil change after first 100 hours of operation. Engine oil must be changed at least once a year.

Drain oil with engine shut off, but with engine oil still warm.

1. Remove oil drain plug (C) and drain oil.
2. Replace engine oil filter (D) while changing oil. Apply a film of oil on the new oil filter gasket and install new engine oil filter (D). Hand tighten plus $^{1}/_{2}$ turn.
3. Install drain plug (C) and tighten to 50 N·m (37 lb-ft) (use new seal ring).



PULX001299 —UN—08SEP08



PULX001255 —UN—28AUG08

C—Drain plug **D—Engine oil filter**

Continued on next page

NR25796,00017A5 -19-26MAR09-1/2

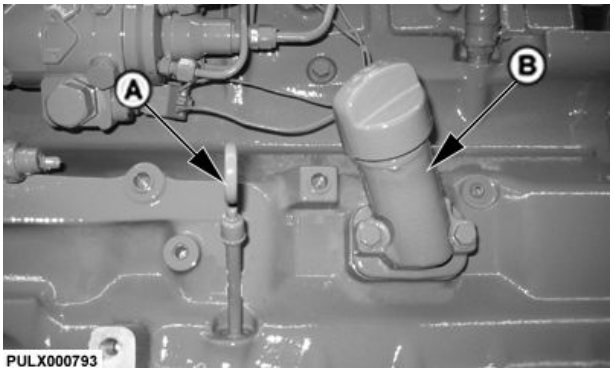
4. Fill crankcase with fresh oil of proper viscosity at filler neck (B). See Section Fuel, Lubricants, Hydraulic Oil and Coolant.

Specification	
Engine Crankcase —Capacity	8.0 L (8.5 U.S. qt.)

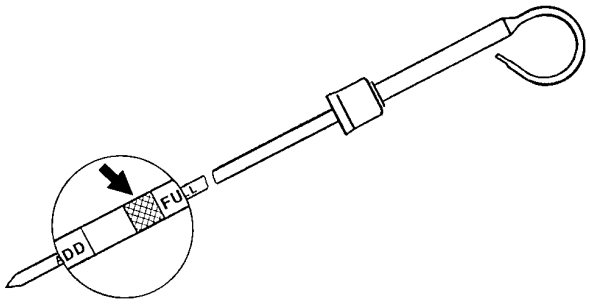
IMPORTANT: Change engine oil every 125 hours if diesel fuel has a sulfur content greater than 0.5 percent.

5. Wait 15 minutes then recheck oil level. Oil should be up the XXX mark on the dipstick (A). If necessary, top up with oil.
6. Run engine for a short time and check for leaks at filter base and drain plug.

A—Dipstick **B—Filler neck**



PULX000793 —UN—20NOV08



FD000047

FD000047 —UN—13MAR96

NR25796,00017A5 -19-26MAR09-2/2

Check Condition of Diesel Engine Coolant

John Deere COOL-GARD™ II Premix and COOL-GARD II Concentrate are maintenance free coolants for up to 6 years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix. Test the coolant condition annually with Coolant Test Strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II COOLANT EXTENDER as directed.

COOL-GARD is a trademark of Deere & Company

OULXBER,0001952 -19-09AUG10-1/1

Inspect Hydraulic Hoses

IMPORTANT: Check hydraulic hoses regularly – at least once a year – for leaks, kinks, cuts, tears, rubbing, bulges, corrosion, exposed fabric and other signs of wear and damage.

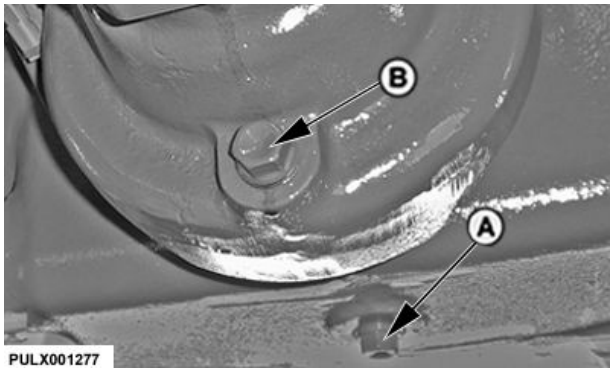
Replace worn or damaged hoses immediately.

Replacement hoses are available from your John Deere dealer.

OULXBER,0001B73 -19-16DEC11-1/1

Change Transmission/Hydraulic Oil and Suction Strainer

Remove drain screw (A) from transmission case and drain oil. On tractors equipped with front wheel drive, also remove drain screw (B). Lower hitch to remove trapped oil.



PULX001277 —UN—03SEP08

NR25796,00017A6 -19-23JAN09-1/2

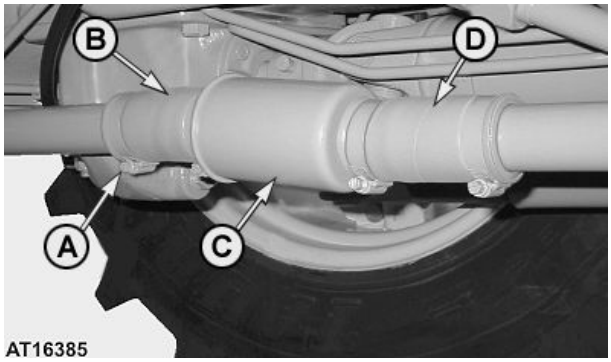
Remove the four clamps (A) and hoses (B) and (D).

Replace strainer (C) with a new one.

Make sure that the arrow on the strainer body points forward.

Re-install the clamps (A).

Fill transmission with specified transmission/hydraulic oil (see Section Fuel, Lubricants, Hydraulic Oil and Coolant) as described in Check Transmission/Hydraulic System Oil Level in Section Service - Daily or Every 10 Hours.



AT16385 —UN—29JAN04

NR25796,00017A6 -19-23JAN09-2/2

Changing Oil in Front-Wheel Drive Axle

Replace oil in axle housing and final drives after the first 100 hours of operation. Then replace after every 1500 hours of operation or once every two years, whichever occurs first. Always use a transmission oil listed in the "Fuel, Lubricants, Hydraulic Oil and Coolant" section.

Always drain oil while it is still warm, i.e. immediately after a prolonged period of operation.

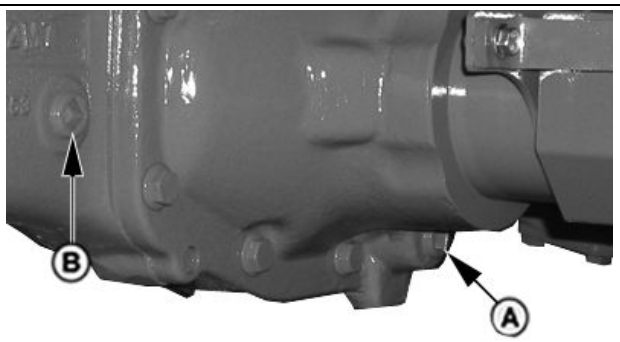
LX,OACH 000414 -19-01MAR94-1/1

Change Oil in Front-Wheel Drive Axle Housing

1. Remove drain plug (A) and drain oil into a suitable container.
2. Re-install drain plug (A) and tighten to 70 N·m (52 lb-ft).
3. Remove oil level/filler plug (B).
4. Refill with John Deere Hy-Gard™, see Section Fuel, Lubricants and Coolant. Oil should be level with plug bore.
5. Re-install plug (B) and tighten to 70 N·m (52 lb-ft).

For capacities, see Specifications.

Hy-Gard is a trademark of Deere & Company



PULX001622

PULX001622 —UN—22SEP08

NR25796,00017A7 -19-26MAR09-1/1

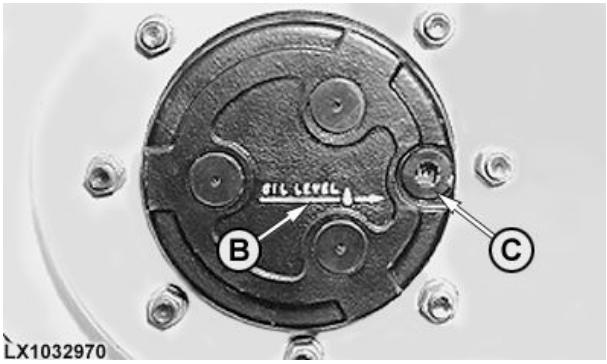
Change Oil in Front-Wheel Drive Final Drives

1. Tractor should be positioned on level ground to assure correct oil levels when refilling.
2. Turn wheel until drain plug (C) is at the bottom. Remove drain plug and drain oil into a suitable container.
3. Turn the wheel until "OIL LEVEL" mark (B) is horizontal.
4. Refill with John Deere HY-GARD™, see Section "Fuel, Lubricants and Coolant". Oil should be level with plug bore.
5. Reinstall drain plug (C) and tighten to 60 N·m (44 lb-ft).

   Repeat steps for other side.

IMPORTANT: Recheck oil level after 30 minutes. Add oil as needed.

HY-GARD is a trademark of Deere & Company



LX1032970

LX1032970 —UN—03JUL03

For capacities, see "Specifications".

OULXA64,0000DF4 -19-02OCT03-1/1

Change Brake System Oil

CAUTION: Any service of the brake system must be performed by your John Deere Dealer.

OULXA64,0000C00 -19-22MAY03-1/1

Engine Air Filter

IMPORTANT: Never run the engine without the primary filter element!

If the air filter indicator lamp glows during operation, remove and clean the primary filter element (C).

The service interval may be extended briefly, e.g. until the next suitable opportunity. Provided the filter is serviced properly, this will not adversely affect its performance.

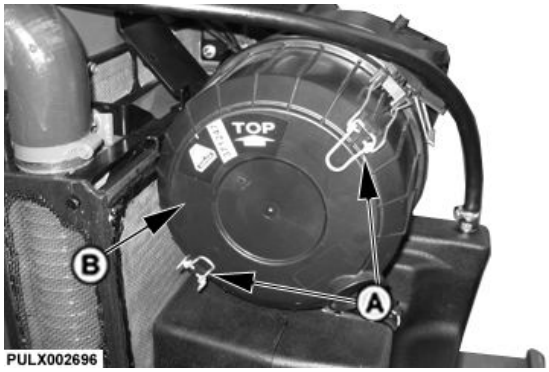
The primary filter element (C) can be cleaned up to five times. Thereafter, or at the latest after 1500 hours of operation (or 2 years), it must be replaced.

Open the hood, then release catches (A). Remove cover (B). Pull the primary filter element (C) out of the filter housing.

Install in reverse order.

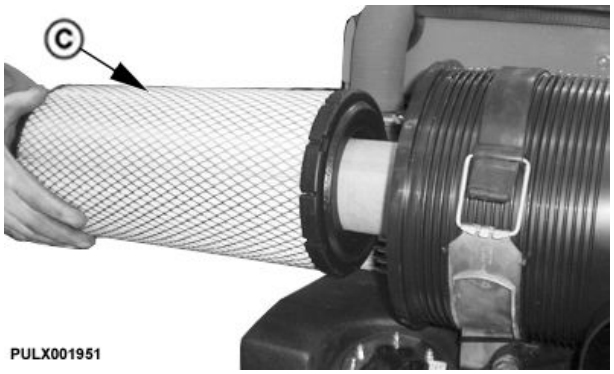
Put on the cover (B) and close the catches (A).

IMPORTANT: Never close the hood or start the engine unless the filter is locked securely.



PULX002696

PULX002696 —UN—07NOV08



PULX001951

PULX001951 —UN—03OCT08

NR25796,00017A8 -19-26MAR09-1/1

Clean Cab Air Filters

CAUTION: The cab air filters do not protect against inhaling harmful pesticides. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Every time the engine primary filter element is serviced, also remove the cab air filters (one on each side) and the recirculated air filter, and clean them with compressed air directed from the clean side.

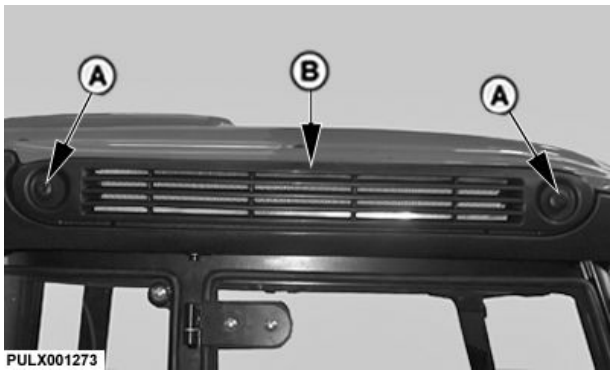
Remove screws (A) and filter cover (B).

On both ends of the filter, turn lever (C) upwards.

Remove cab air filter element (D).

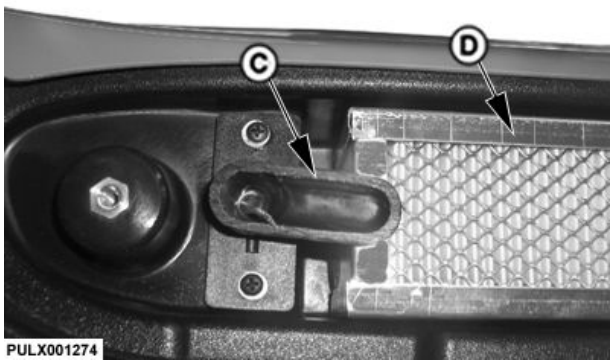
Replace cab air filters with engine primary filter element (the latest after 1500 hours of operation or 2 years).

A—Screws
B—Filter cover
C—Lever
D—Air filter element



PULX001273

PULX001273 —UN—03SEP08



PULX001274

PULX001274 —UN—03SEP08

NR25796,00017A9 -19-26MAR09-1/1

Service — Every 2000 Hours or 2 Years

Adjust Engine Valve Clearance

Ask your John Deere dealer to make engine valve clearance adjustment and inspect fuel injectors.

OULXA64,0000C03 -19-22MAY03-1/1

Service — Every 3000 Hours or 3 Years

Information Regarding Coolant Service Intervals

The initial service interval for coolant is 4000 hours of operation or 4 years, if COOL-GARD™ II is used. The interval may decrease if other coolants are used. The most important service intervals are shown in the table.

NOTE: See also "Drain Intervals for Diesel Engine Coolant" in Section 80, Fuel, Lubricants, Hydraulic Oil and Coolant. There you will find details about the service intervals and the relevant preconditions.

Hours of operation (at the latest after x years)	Coolant according to John Deere specification	COOL-GARD™ II
2000 (after 2 years)	X	—
4000 (after 4 years)	—	Applicable if condition of COOL-GARD™ II **was not** tested anually.
6000 (after 6 years)	—	Applicable if condition of COOL-GARD™ II **was** tested anually.

OULXBER,0001951 -19-16DEC11-1/1

Change Coolant

Have cooling system drained, flushed and refilled by your John Deere dealer.

NOTE: If cooling system is not filled with John Deere COOL-GARD, carry out this service every 2000 hours of operation.

OULXA64,0000C04 -19-22MAY03-1/1

Check Thermostat

Have thermostat checked by your John Deere dealer.

NOTE: If cooling system is not filled with John Deere COOL-GARD, carry out this service every 2000 hours of operation.

OULXA64,0000C05 -19-22MAY03-1/1

Clean Radiator and Oil Cooler

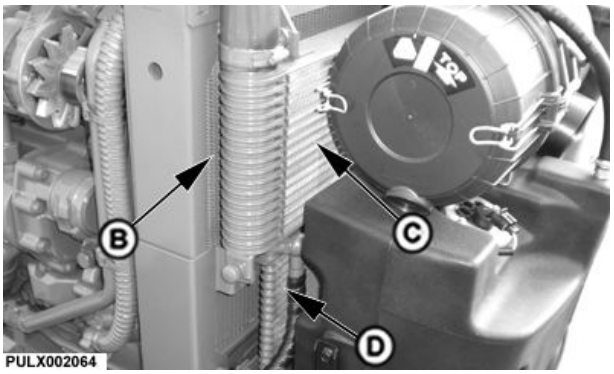
NOTE: To facilitate the cleaning, remove air conditioning system condenser. See Cleaning Air Conditioning System Condenser in this Section.

1. Whenever dirt builds up on front grille (A), stop engine and brush clean.
2. Open the hood and see if dirt has built up on charge air cooler (C), radiator (B) and oil cooler (D). If so, remove it using a brush or compressed air.

CAUTION: Reduce compressed air pressure to less than 210 kPa (2 bar; 30 psi) when using for cleaning purposes. Clear area of bystanders, guard against flying chips, and wear personal protection equipment including eye protection.

3. If a more thorough cleaning is necessary, clean radiator (B) from behind with compressed air or water. Straighten any bent fins.

PULX001278 —UN—04SEP08

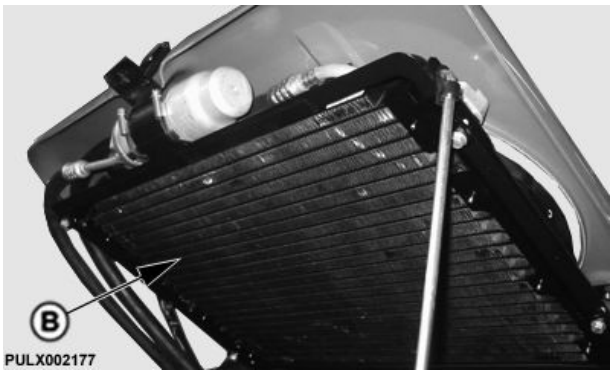


PULX002064 —UN—12OCT08

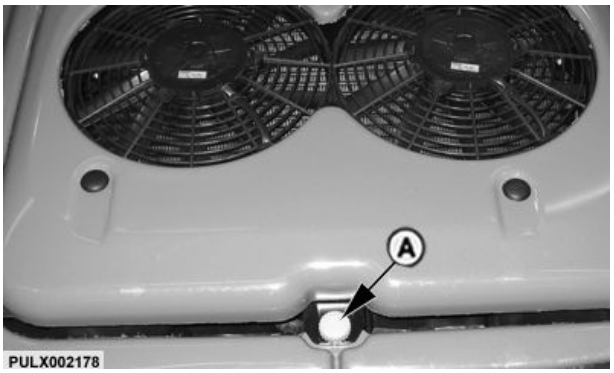
NR25796,00017AA -19-22JAN09-1/1

Clean Air Conditioning System Condenser

Loosen knurled-head screw (A). Pull out cover for cleaning condenser (B).



PULX002177 —UN—16OCT08



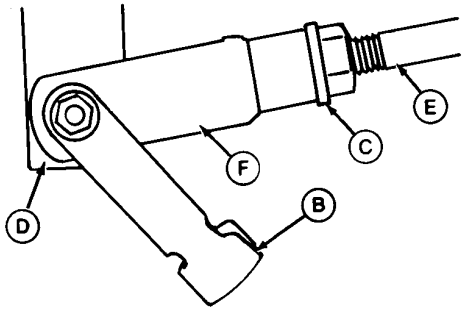
PULX002178 —UN—16OCT08

NR25796,00017AB -19-04NOV08-1/1

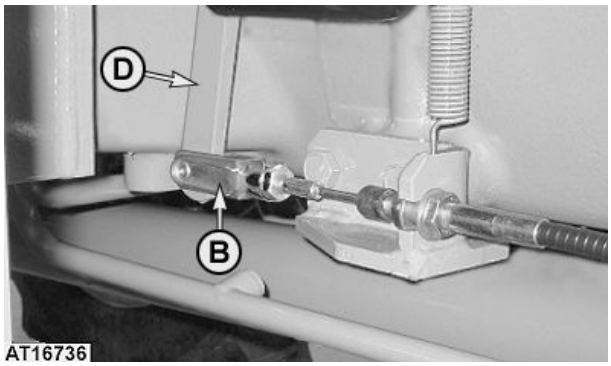
Adjust PTO Clutch Linkage

1. Remove clip pin (B) from PTO clutch linkage.
2. Loosen lock nut (C).
3. Adjust length of rod (E) so the clip pin (B) can be inserted with the rod (E) pulled forward and the arm (D) pulled rearward to eliminate freeplay. Lengthen rod (E) by 1/2 turn of yoke (F) to provide a slight amount of lever freeplay.
4. Reinstall clip pin (B) and tighten lock nut (C).

B—Clip pin
C—Lock nut
D—Arm
E—Rod
F—Yoke



M46418A —UN—22APR94



AT16736 —UN—21FEB05

NR25796,00017AC -19-22JAN09-1/1

Inspect All Tires

Inspect tires and check inflation pressures. For correct tire pressures refer to “Tire Pressures” in Section 80 “Fuel, Lubricants, Hydraulic Oil and Coolant“.

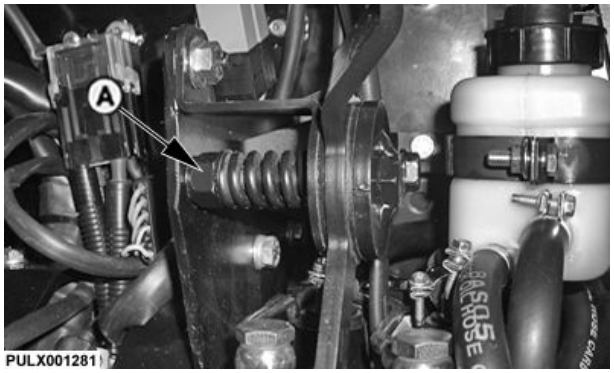
OULXA64,000029D -19-20JUN01-1/1

Adjust Hand Throttle

When throttle linkage becomes loose and does not stay in set position, adjust as follows:

1. Remove rear cowl cover.
2. Adjust friction with adjusting nut (A). The spring provides tension on the adjusting nut.

A—Adjusting nut



PULX001281 —UN—04SEP08

NR25796,00017AD -19-04NOV08-1/1

Service Air Cleaner at Regular Intervals

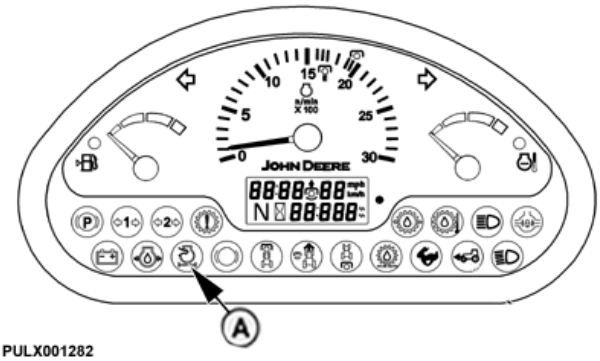
A dual element air cleaner is standard.

IMPORTANT: Check unloading valve frequently. Empty as often as needed to keep it from filling with dust. If valve is allowed to fill with dust, air cleaner element will become plugged rapidly.

A dirty element is indicated when the air cleaner restriction light (A) is on. A dirty element can result in loss of power or excessive smoke.

Replace air cleaner elements at least once a year. Primary element should be replaced after having been cleaned five times.

The smaller secondary element should be removed only when being replaced, normally once a year.



PULX001282

PULX001282 —UN—04SEP08

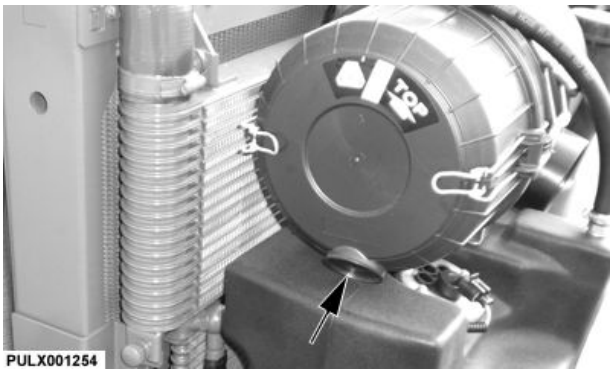
NR25796,00017AE -19-04NOV08-1/1

Clean the Dust Unloading Valve

IMPORTANT: Never run the engine when the dust unloading valve is removed!

During the harvest, grass and chaff may adversely affect the performance of the dust unloading valve. Remove and clean the dust unloading valve as necessary. Replace any damaged valve immediately.

NOTE: In dusty conditions, clean the dust unloading valve every day.



PULX001254

PULX001254 —UN—11OCT08

NR25796,00017AF -19-26MAR09-1/1

Engine Air Filter

IMPORTANT: Never run the engine without the primary filter element!

If the air filter indicator lamp glows during operation, remove and clean the primary filter element (C).

The service interval may be extended briefly, e.g. until the next suitable opportunity. Provided the filter is serviced properly, this will not adversely affect its performance.

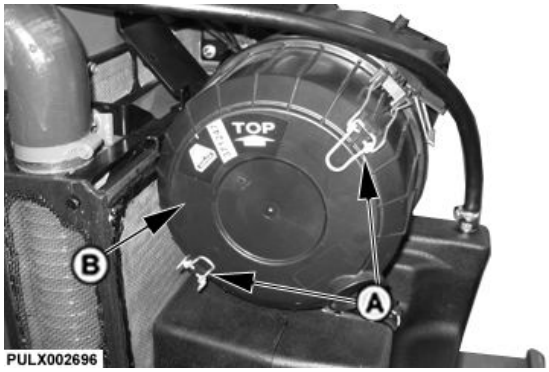
The primary filter element (C) can be cleaned up to five times. Thereafter, or at the latest after 1500 hours of operation (or 2 years), it must be replaced.

Open the hood, then release catches (A). Remove cover (B). Pull the primary filter element (C) out of the filter housing.

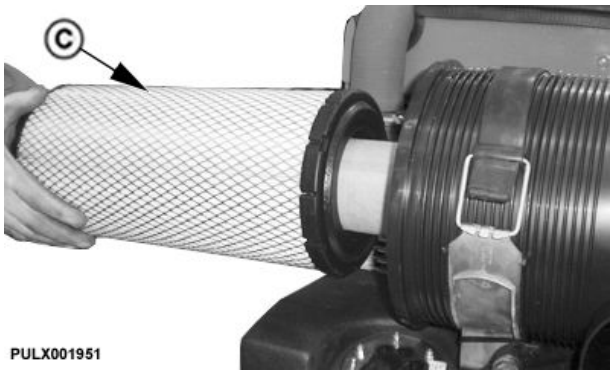
Install in reverse order.

Put on the cover (B) and close the catches (A).

IMPORTANT: Never close the hood or start the engine unless the filter is locked securely.



PULX002696 —UN—07NOV08



PULX001951 —UN—03OCT08

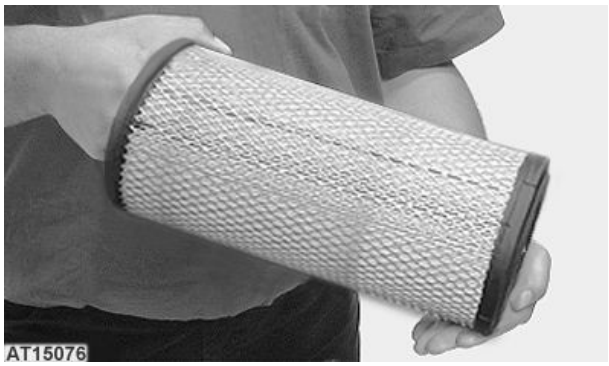
NR25796,00017A8 -19-26MAR09-1/1

Cleaning the Primary Filter Element

When the element must be serviced in the field, tap it on the palm of your hand as a temporary measure.

IMPORTANT: The guide ring must not be damaged or deformed.

When you return to your service area, clean the filter element thoroughly, or replace it with a new one.



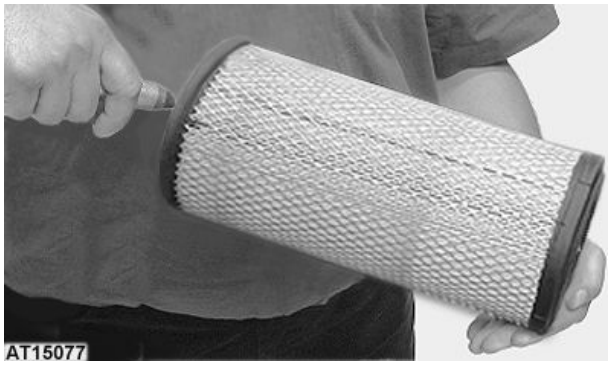
AT15076 —UN—06AUG03

OULXA64,0000CA1 -19-06AUG03-1/1

Cleaning a Dusty Element

If tapping element does not remove dust, blow out the dust with compressed air by inserting nozzle inside the element and blowing from the inside of the filter to the outside. Pressure must not exceed 600 kPa (6 bar; 90 psi).

Replace element if air filter indicator light continues glowing after the element has been cleaned.



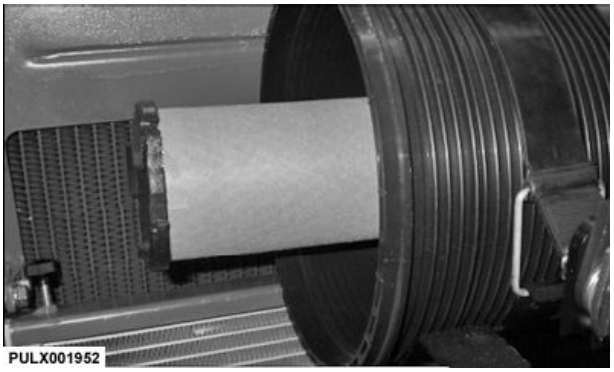
AT15077 —UN—06AUG03

OULXA64,0000CAA -19-25SEP06-1/1

Secondary (Safety) Element

This filter must be changed if it becomes damaged. Change it at every fifth change of the air filter primary element, and at the latest after 1500 hours of operation.

IMPORTANT: Always replace secondary (safety) filter element, do not attempt to clean it.



PULX001952 —UN—06NOV08

NR25796,00017B1 -19-26MAR09-1/1

Installation

Slide a serviced or new primary filter element (rubber seal first) as far as it will go into the filter housing. Put on the cover and close the catches.

IMPORTANT: Never close the hood or start the engine unless the filter is locked securely.

OULXA64,0000C9E -19-06AUG03-1/1

Clean Cab Air Filters

CAUTION: The cab air filters do not protect against inhaling harmful pesticides. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Every time the engine primary filter element is serviced, also remove the cab air filters (one on each side) and the recirculated air filter, and clean them with compressed air directed from the clean side.

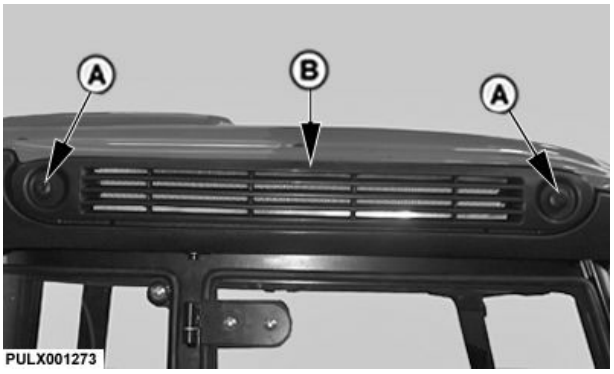
Remove screws (A) and filter cover (B).

On both ends of the filter, turn lever (C) upwards.

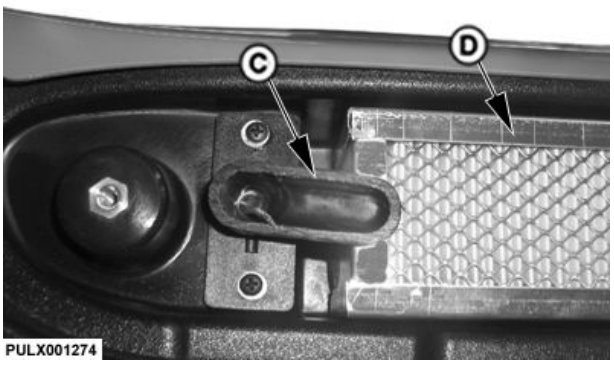
Remove cab air filter element (D).

Replace cab air filters with engine primary filter element (the latest after 1500 hours of operation or 2 years).

A—Screws
B—Filter cover
C—Lever
D—Air filter element



PULX001273 —UN—03SEP08



PULX001274 —UN—03SEP08

NR25796,00017A9 -19-26MAR09-1/1

Check Belt Wear and Tension

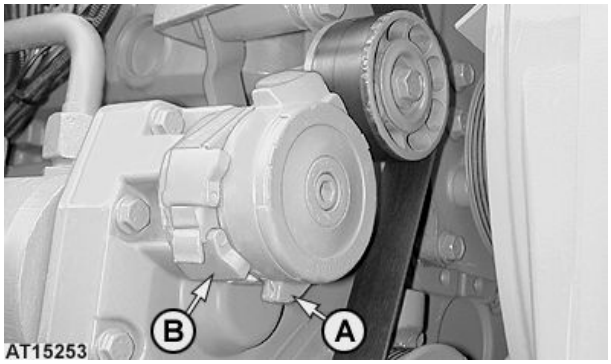
Tractor with automatic tensioner

NOTE: 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 belt. If tensioner spring tension is not within specification, replace tensioner assembly. This has to be checked by your John Deere Dealer.

Checking the belt for wear:

- The belt tensioner is designed to operate within the limit of arm movement provided by the tensioner stop (A) and fixed stop (B), provided the belt is the correct length and is following the correct path.
- Visually inspect tensioner stop (A) and fixed stop (B) on belt tensioner assembly.
- If the tensioner stop (A) on the swing arm is hitting the fixed stop (B), check mounting brackets (alternator, belt tensioner, idler pulley, etc.) and belt length. Replace belt if necessary.



AT15253 —UN—13JUL04

A—Tensioner stop **B—Fixed stop**

NR25796,00017B3 -19-22JAN09-1/1

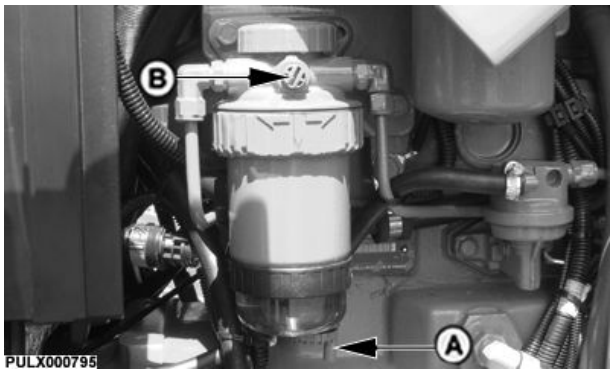
Check the Fuel Filter

CAUTION: Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.

1. Loosen drain screw (A) and bleed screw (B).
2. Retighten drain screw (A) as soon as water and sediment deposits have drained out.
3. Turn the main (key) switch to the first position to the right so that the fuel transfer pump is operating. Keep the pump running for approx. 20 seconds.
4. Close bleed screw (B) after air has been completely removed from the system.

If water is present in fuel filter, open fuel tank drain screw (C), located under the lower fuel tank, to bleed accumulated moisture and sediment from the fuel tank. After draining off any water deposits, retighten drain screw (C) until it is hand-tight.

NOTE: Place a small container under drain screw to catch draining fuel.



PULX000795 —UN—04SEP08

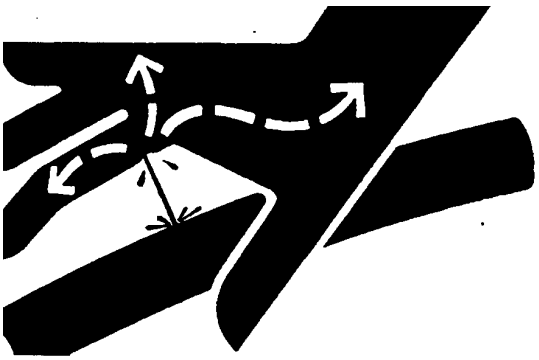
PULX000796 —UN—24JUL08

NR25796,00017B4 -19-26MAR09-1/1

Bleed Fuel System

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

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



X9811 —UN—23AUG88

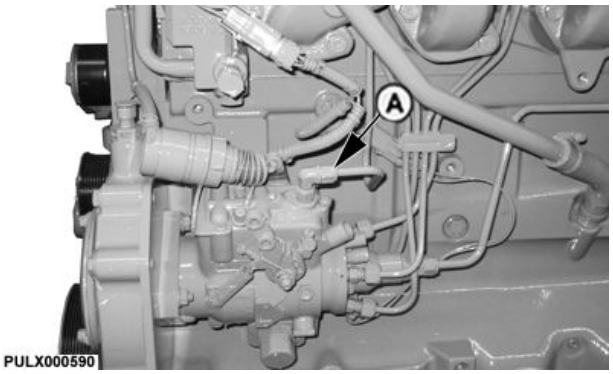
1. Fuel tank must be full with fuel shut-off valve open.

NR25796,00017B5 -19-23JAN09-1/2

IMPORTANT: To avoid injection pump damage, DO NOT attempt to start the engine while bleeding the fuel system.

2. Loosen fuel return line (A) at fuel injection pump.

   Operate the hand primer on fuel transfer pump until fuel appears at the opening, then tighten fuel return line (A).



PULX000590 —UN—19NOV08

NR25796,00017B5 -19-23JAN09-2/2

Lubricate All Lubricating Points

If the tractor has been washed with high-pressure water, lubricate all lubricating points.

NR25796,00017B6 -19-26MAR09-1/1

Prevent Battery Explosions

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).

TS204 —UN—23AUG88

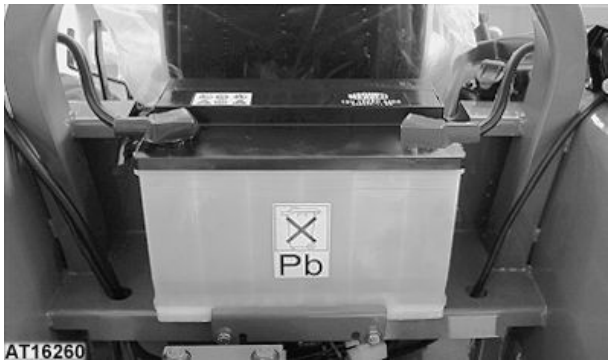
DX,SPARKS -19-03MAR93-1/1

Battery - Checking Specific Gravity

Use an hydrometer to check the specific gravity of the electrolyte in each battery cell.

A fully charged battery should have a specific gravity reading of 1.28. Recharge battery if reading drops below 1.20.

NOTE: In tropical regions, the battery is fully charged when the reading is 1.23.



AT16260 —UN—28MAY03

OULXA64,0000D87 -19-18SEP03-1/1

Starting Motor

If the starting motor fails to operate after the starter switch has been operated, the complete starter system must be thoroughly checked. Check specific gravity of battery with an hydrometer and make sure that none of the cables are broken or worn through and that none of the cable connections are loose or corroded.

If the above checks fail to improve the operation of the starting motor, see your John Deere dealer.

OULXA64,0000C9D -19-06AUG03-1/1

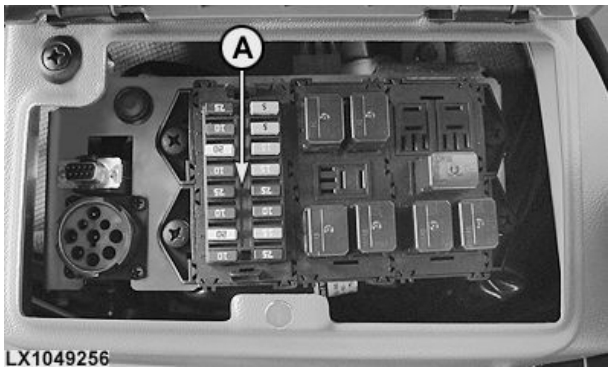
Fuses and Relays

General

IMPORTANT: To prevent damage to the electrical system, NEVER use a fuse with a rating higher than the one already installed. If original size fuse will not carry electrical load and continues to blow, have the electrical system checked by your John Deere dealer.

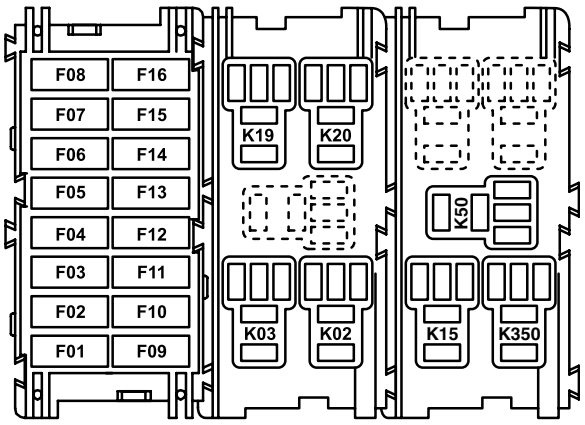
All electrical circuits are protected by fuses. Amperage rating is marked on each fuse.

The fuse box (A) is located in the rear right console.



LX1049256

LX1049256 —UN—30JUL10



LX1049257

LX1049257 —UN—02AUG10

- **F01— 10 amp fuse, cigarette lighter**
- **F02— 20 amp fuse, 3-terminal power socket**
- **F03— 10 amp fuse, 3-terminal power socket**
- **F04— 7.5 amp fuse, fuel shut-off solenoid valve and fuel transfer pump**
- **F05— 10 amp fuse, beacon light**
- **F06— 20 amp fuse, hazard light**
- **F07— 10 amp fuse, air suspension seat and rear work light**
- **F08— 7.5 amp fuse, diagnostic socket and 24/12-speed transmission circuit**
- **F09— 7.5 amp fuse, differential lock switch, Hi-Lo switches, Hi-Lo solenoid valves, differential solenoid valve, PTO switches, speed sensor and instrument panel power supply (IGN)**
- **F10— 15 amp fuse, front-wheel drive switch, front-wheel drive solenoid valve, cab, stop light**
- **F11— 10 amp fuse, horn, hazard switch**
- **F12— 7.5 amp fuse, instrument panel power supply (BAT) and 24/12-speed transmission circuit**
- **F13— 15 amp fuse, high beam indicator and high beam lights**
- **F14— 15 amp fuse, low beam indicator and low beam lights**
- **F15— 5 amp fuse, right tail light, right clearance light, 7-terminal socket, cigarette lighter backlight and backlight for rocker switches**
- **F16— 5 amp fuse, left tail light, left clearance light, work light switch, license plate light, spot light, front and rear wiper switch, control panel backlight, windshield and rear window washer pump switch and backlight**
- **K02— Relay, High-Low solenoid valve (ON), high position**
- **K03— Relay, High-Low solenoid valve (OFF), low position**
- **K15— Relay, declutch (24/12 transmission only)**
- **K19— Relay, low beam**
- **K20— Relay, high beam**
- **K50— Relay, drive clutch proportional solenoid valve (24/12 transmission only)**
- **K350— Relay, PTO switch enabling (24/12 transmission only)**

Continued on next page

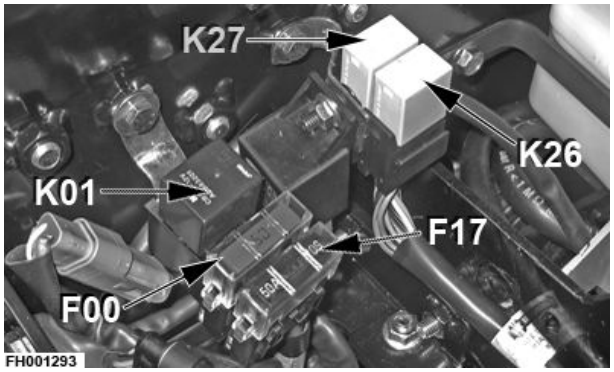
Main Fuses and Relays

IMPORTANT: To prevent damage to the electrical system, NEVER use a fuse with a rating higher than the one already installed. If original size fuse will not carry electrical load and continues to blow, have the electrical system checked by your John Deere dealer.

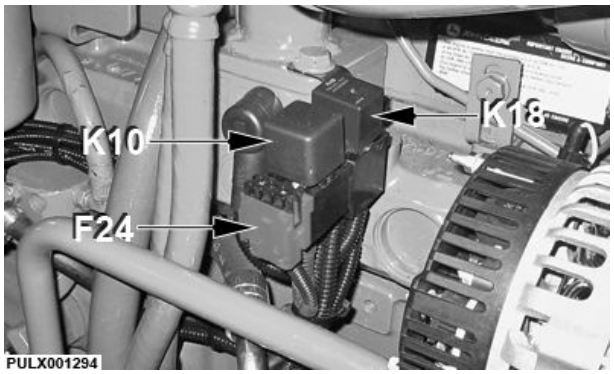
Main fuses are installed for protection of the electrical system.

The main fuses and relays are located on right-hand side of the engine near the alternator.

F00— 50 amp main fuse for main wiring circuit
F17— 50 amp main fuse for cab wiring circuit[1]
F24— 20 amp fuse for electronic hitch sensing circuit (EHS)[1]
K01— Starter relay
K10— Intake air heater relay[1]
K18— Relay of electronic hitch sensing (EHS)[1]
K26— Relay of left-hand H4 additional headlights
K27— Relay of right-hand H4 additional headlights



PULX001293 —UN—08SEP08



PULX001294 —UN—08SEP08

[1]*If equipped.*

Continued on next page

OULXBER,00018B3 -19-26AUG10-2/3

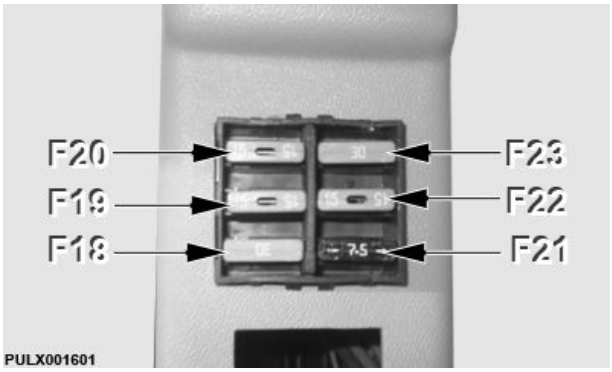
Cab Fuse Box[1]

The cab fuses are located in the post on the right-hand side.

Cab fuses F25 and F26 are located in the post on the left-hand side.

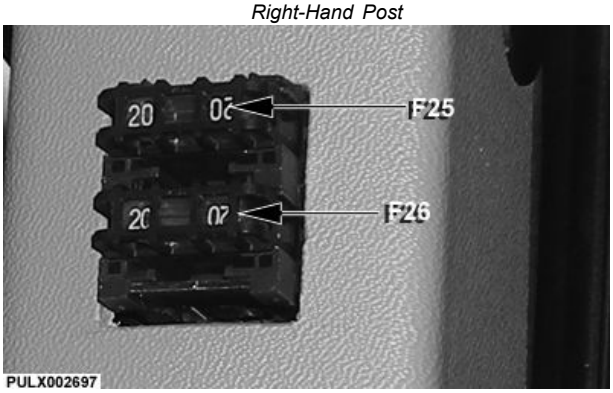
The fuses protect the following circuits:

F18— 30 amp fuse, front work lights
F19— 15 amp fuse, rear work lights
F20— 15 amp fuse, beacon light and radio
F21— 7.5 amp fuse, radio
F22— 15 amp fuse, front and rear wiper and windshield washer system
F23— 30 amp fuse, air-conditioning and A/C compressor
F25— 20 amp fuse, fan motor M09
F26— 20 amp fuse, fan motor M08



PULX001601 —UN—09SEP08

Right-Hand Post



PULX002697 —UN—07NOV08

Left-Hand Post

[1]*If equipped.*

OULXBER,00018B3 -19-26AUG10-3/3

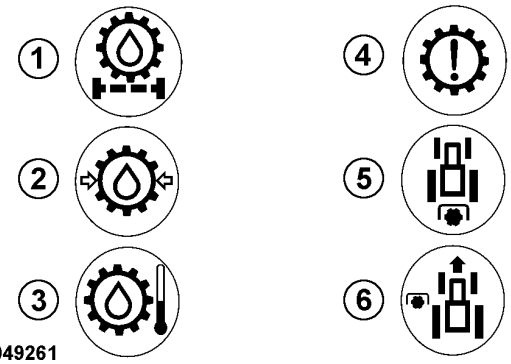
Diagnostic Trouble Codes (24/12 Transmission Only)

IMPORTANT: In case of a failure, a DIAGNOSTIC TROUBLE CODE is displayed on the digital display. If a diagnostic trouble code is displayed, stop the engine and find the meaning of the code in the table below.

If any other code not shown in the table is displayed, contact your John Deere Dealer.

PULX000864 —UN—29JUL08

PULX000864



LX1049261 —UN—02FEB10

LX1049261

1— Oil Filter Restriction Indicator Light
2— Oil Pressure Indicator Light
3— Transmission Oil Temperature Indicator Light
4— EHM III Warning Light
5— PTO Enabling Indicator Light
6— Ground Drive PTO Indicator Light

CODE	Indicator Lights 1, 2, 3, 4, 5 and 6	Meaning	Operator Action
OIL L	3 is flashing	Oil temperature below -20 °C (-4 °F).	Warm up transmission oil before driving the tractor.
OIL H	3 is flashing	Oil temperature above 120 °C (248 °F).	Clean oil cooler and check oil level. See your John Deere Dealer if problem persists.
ECU	4 is on continuously	Control unit fault.	See your John Deere Dealer immediately.
Fnr 5	4 is on continuously	Signal failed at reverse drive lever.	See your John Deere Dealer immediately.
StoP	-	Hardware initial check in process.	Wait until check is completed.
SLIPP	4 is flashing	Heat build-up due to excessive clutch slip.	Fully release clutch pedal, always operate transmission in correct gear. If code is still present, see your John Deere Dealer.
FH P1	4 is flashing	Forward high clutch pressure not in spec.	Shift to neutral, then to forward low or reverse and back to forward high. If code is still present, see your John Deere Dealer. Forward high mode is disabled as long as this code is displayed; use forward low or reverse mode only.
FL P1	4 is flashing	Forward low clutch pressure not in spec.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
RE P1	4 is flashing	Reverse clutch pressure not in spec.	Shift to neutral, then to forward high or forward low and back to reverse. If code is still present, see your John Deere Dealer. Reverse mode is disabled as long as this code is displayed; use forward high or forward low mode only.
EErr	4 is flashing	Flash memory writing failure.	Shut off engine, turn main switch off, wait for 10 seconds and then restart engine. If code is still present, see your John Deere Dealer.
CAn	4 is flashing	CAN BUS failure.	CAN BUS functions impaired. See your John Deere Dealer as soon as possible.
OIL S	4 is flashing	Oil temperature sensor signal out of range.	Clutch modulation impaired. See your John Deere Dealer as soon as possible.

Continued on next page

OULXBER,00018B0 -19-04FEB10-1/4

CODE	Indicator Lights 1, 2, 3, 4, 5 and 6	Meaning	Operator Action
PEd 1	4 is flashing	Clutch pedal potentiometer signal too low.	Avoid operating clutch pedal. See your John Deere Dealer immediately.
PEd 2	4 is flashing	Clutch pedal potentiometer signal too high.	Avoid operating clutch pedal. See your John Deere Dealer immediately.
PEd 3	4 is flashing	Clutch pedal potentiometer and clutch pedal switch signals not consistent.	Avoid operating clutch pedal. See your John Deere Dealer immediately.
FH CO	4 is flashing	Forward high clutch valve failure.	Shift to neutral, then to forward low or reverse and back to forward high. If code is still present, see your John Deere Dealer. Forward high mode is disabled as long as this code is displayed; use forward low or reverse mode only.
FL CO	4 is flashing	Forward low clutch valve failure.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
rE CO	4 is flashing	Reverse clutch valve failure.	Shift to neutral, then to forward high or forward low and back to reverse. If code is still present, see your John Deere Dealer. Reverse mode is disabled as long as this code is displayed; use forward high or forward low mode only.
OC L	4 is flashing	Forward low clutch valve, power consumption too high.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
FH CH	4 is flashing	Forward high clutch valve, unintentional power consumption.	Shift to neutral, then to forward low or reverse and back to forward high. If code is still present, see your John Deere Dealer. Forward high mode is disabled as long as this code is displayed; use forward low or reverse mode only.
FL CH	4 is flashing	Forward low clutch valve, unintentional power consumption.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
rE CH	4 is flashing	Reverse clutch valve, unintentional power consumption.	Shift to neutral, then to forward high or forward low and back to reverse. If code is still present, see your John Deere Dealer. Reverse mode is disabled as long as this code is displayed; use forward high or forward low mode only.
Fnr 2	4 is on continuously	Forward-Reverse problem with the reverse drive lever.	Stop operating the tractor. See your John Deere Dealer immediately.
nEU	4 is flashing	Forward-Neutral or Reverse-Neutral problem with the reverse drive lever.	Shift reverse drive lever to neutral to clear display. Ensure the reverse drive lever is always shifted properly. See your John Deere Dealer as soon as possible.
SUP 1	4 is on continuously	Control unit supply voltage too low.	Stop operating the tractor. See your John Deere Dealer immediately.
SUP 2	4 is on continuously	Control unit supply voltage too high.	Stop operating the tractor. See your John Deere Dealer immediately.
OC Hr	4 is flashing	Forward high or reverse clutch valves, power consumption too high.	Shift to neutral, then to forward low. See your John Deere Dealer as soon as possible. Reverse and forward high mode are disabled as long as this code is displayed; use forward low mode only.
OC P1	5 is flashing	PTO shut-off valve, power consumption too high.	Do not use rear PTO. See your John Deere Dealer as soon as possible.
OC P2	-	PTO indicator light 5 or 6, power consumption too high.	PTO still functional but with no feedback from indicator lights. See your John Deere Dealer as soon as possible.

Continued on next page

OULXBER,00018B0 -19-04FEB10-2/4

CODE	Indicator Lights 1, 2, 3, 4, 5 and 6	Meaning	Operator Action
OC n	4 is on continuously	EHM III Shut-Off valve, power consumption at supply pin too high.	Stop operating the tractor. See your John Deere Dealer immediately.
OC nP	4 is on continuously	EHM III Shut-Off valve or PTO Shut-Off valve, power consumption at return pin too high.	Stop operating the tractor. See your John Deere Dealer immediately.
SUP 3	4 is on continuously	Sensor supply voltage too high.	Stop operating the tractor. See your John Deere Dealer immediately.
SUP 4	4 is on continuously	Sensor supply voltage too high.	Stop operating the tractor. See your John Deere Dealer immediately.
PEd 5	4 is flashing	Clutch pedal potentiometer, output signal out of range.	Avoid operating clutch pedal. See your John Deere Dealer immediately.
FH SE	4 is flashing	Forward high clutch, pressure sensor signal out of range.	Shift to neutral, then to forward low or reverse and back to forward high. If code is still present, see your John Deere Dealer. Forward high mode is disabled as long as this code is displayed; use forward low or reverse mode only.
FL SE	4 is flashing	Forward low clutch, pressure sensor signal out of range.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
rE SE	4 is flashing	Reverse clutch, pressure sensor signal out of range.	Shift to neutral, then to forward high or forward low and back to reverse. If code is still present, see your John Deere Dealer. Reverse mode is disabled as long as this code is displayed; use forward high or forward low mode only.
nr SE	4 is flashing	Pressure at EHM III system detected without engine being on.	See your John Deere Dealer as soon as possible.
CF SE	4 is flashing	Pressure at differential lock detected without engine being on.	See your John Deere Dealer as soon as possible.
FH PH	4 is on continuously	Forward high clutch pressure detected with clutch disengaged.	Stop operating the tractor. See your John Deere Dealer immediately.
FL PH	4 is on continuously	Forward low clutch pressure detected with clutch disengaged.	Stop operating the tractor. See your John Deere Dealer immediately.
rE PH	4 is on continuously	Reverse clutch pressure detected with clutch disengaged.	Stop operating the tractor. See your John Deere Dealer immediately.
nr PH	4 is on continuously	Pressure at EHM III system detected with shut-off valve disengaged.	Stop operating the tractor. See your John Deere Dealer immediately.
-	2 is on continuously	Pressure at EHM III system too low.	Check oil level and transmission oil filter. See your John Deere Dealer as soon as possible.
-	1 is flashing	Transmission oil filter restriction (with oil temperature above 20 °C; 68 °F).	Change transmission oil filter.
FH PL	4 is flashing	Forward high clutch pressure too low.	Shift to neutral, then to forward low or reverse and back to forward high. If code is still present, see your John Deere Dealer. Forward high mode is disabled as long as this code is displayed; use forward low or reverse mode only.
FL PL	4 is flashing	Forward low clutch pressure too low.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
rE PL	4 is flashing	Reverse clutch pressure too low.	Shift to neutral, then to forward high or forward low and back to reverse. If code is still present, see your John Deere Dealer. Reverse mode is disabled as long as this code is displayed; use forward high or forward low mode only.
SPd 1	4 is flashing	Output speed sensor fails.	Clutch modulation impaired. See your John Deere Dealer as soon as possible.
Spd 2	4 is flashing	Output speed sensor signal failure.	Clutch modulation impaired. See your John Deere Dealer as soon as possible.

Continued on next page

OULXBER,00018B0 -19-04FEB10-3/4

CODE	Indicator Lights 1, 2, 3, 4, 5 and 6	Meaning	Operator Action
FH CS	4 is flashing	Forward high clutch, unexpected slipping.	Shift to neutral, then to forward low or reverse and back to forward high. If code is still present, see your John Deere Dealer. Forward high mode is disabled as long as this code is displayed; use forward low or reverse mode only.
FL CS	4 is flashing	Forward low clutch, unexpected slipping.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
rE CS	4 is flashing	Reverse clutch, unexpected slipping.	Shift to neutral, then to forward high or forward low and back to reverse. If code is still present, see your John Deere Dealer. Reverse mode is disabled as long as this code is displayed; use forward high or forward low mode only.
FL C1	4 is flashing	Forward low clutch, solenoid valve power consumption out of spec.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
FL PC	4 is flashing	Forward low clutch, valve characteristics not normal.	Shift to neutral, then to forward high or reverse and back to forward low. If code is still present, see your John Deere Dealer. Forward low mode is disabled as long as this code is displayed; use forward high or reverse mode only.
Fnr 6	4 is flashing	Declutch relay fails.	See your John Deere Dealer as soon as possible.
OC AL	4 is on continuously	High power consumption at all outputs.	Stop operating the tractor. See your John Deere Dealer immediately.
Fnr 7	4 is on continuously	Problem in the declutching circuit.	Stop operating the tractor. See your John Deere Dealer immediately.
FH C1	4 is flashing	Forward high clutch, solenoid valve power consumption out of spec.	Shift to neutral, then to forward low or reverse and back to forward high. If code is still present, see your John Deere Dealer. Forward high mode is disabled as long as this code is displayed; use forward low or reverse mode only.
FH PC	4 is flashing	Forward high clutch, valve characteristics not normal.	Shift to neutral, then to forward low or reverse and back to forward high. If code is still present, see your John Deere Dealer. Forward high mode is disabled as long as this code is displayed; use forward low or reverse mode only.
PtO 1	-	PTO pressure detected with PTO solenoid valve in off position.	See your John Deere Dealer as soon as possible.
PtO 2	5 and 6 are flashing	PTO pressure detected with PTO shut-off valve in off position.	Do not use rear PTO. See your John Deere Dealer as soon as possible.
PtO 3	5 is flashing	No pressure detected with independent PTO engaged.	Do not use rear PTO. See your John Deere Dealer as soon as possible.
PtO 4	-	No pressure detected with PTO shut-off valve engaged.	See your John Deere Dealer as soon as possible.
PtO 5	5 is flashing	Independent PTO command failure.	Do not use rear PTO. See your John Deere Dealer as soon as possible.
rE C1	4 is flashing	Reverse clutch, solenoid valve power consumption out of spec.	Shift to neutral, then to forward high or forward low and back to reverse. If code is still present, see your John Deere Dealer. Reverse mode is disabled as long as this code is displayed; use forward high or forward low mode only.

OULXBER,00018B0 -19-04FEB10-4/4

CODE	Indicator Lights 1, 2, 3, 4, 5 and 6	Meaning	Operator Action
rE PC	4 is flashing	Reverse clutch, valve characteristics not normal.	Shift to neutral, then to forward high or forward low and back to reverse. If code is still present, see your John Deere Dealer. Reverse mode is disabled as long as this code is displayed; use forward high or forward low mode only.
dAtA	4 is on continuously	Flash memory calibration parameters corruption.	Place reverse drive lever in forward position to restore default values and then press clutch pedal to save values in flash memory. See your John Deere Dealer.

OULXBER,00018B0 -19-04FEB10-5/4

Engine Troubleshooting

Symptom	Problem	Solution
Engine hard to start or will not start	Improper starting procedure.	Reviewing starting procedure.
	No fuel.	Check fuel tank.
	Air in fuel system.	Bleed fuel system.
	Hand primer left raised.	Push primer down.
	Cold weather.	Use cold weather starting procedure.
	Slow starter speed.	See “Starter Cranks Slowly”.
	Crankcase oil too heavy.	Use oil of proper viscosity.
	Improper type of fuel.	Consult fuel supplier; use proper type fuel for operating conditions.
	Water, dirt, or air in fuel system.	Drain, flush, fill and bleed system.
	Clogged fuel filter.	Replace filter element.
	Dirty or faulty injectors.	Have John Deere dealer check injectors.
	Injection pump shut-off not reset.	Turn key switch to “OFF” then to “ON”.
	Fuel shut-off valve closed.	Open fuel shut-off valve.
Engine knocks	Insufficient oil.	Add oil.
	Injection pump out of time.	See your John Deere dealer.
	Low coolant temperature.	Remove and check thermostat.
	Engine overheating.	See “Engine Overheats”.
Engine runs irregularly or stalls frequently	Low coolant temperature.	Remove and check thermostat.
	Clogged fuel filter.	Replace filter element.
	Water, dirt, or air in fuel system.	Drain, flush, fill, and bleed system.
	Dirty or faulty injectors.	Have John Deere dealer check injectors.
	Improper type of fuel.	Use proper fuel.
Below normal engine temperature	Defective temperature gauge or sender.	Check gauge, sender and connections.

Continued on next page

AT,5SOM,198 -19-01NOV98-1/4

Symptom	Problem	Solution
Lack of power	Engine overloaded.	Reduce load or shift to lower gear.
	Low fast idle speed.	See your John Deere dealer.
	Intake air restriction.	Service air cleaner.
	Clogged fuel filter.	Replace filter element.
	Improper type of fuel.	Use proper fuel.
	Overheated engine.	See “Engine Overheats”.
	Below normal engine temperature.	Remove and check thermostat.
	Improper valve clearance.	See your John Deere dealer.
	Dirty or faulty injectors.	Have John Deere dealer check injectors.
	Injection pump out of time.	See your John Deere dealer.
	Turbocharger not functioning.	See your John Deere dealer.
	Leaking exhaust manifold gasket.	See your John Deere dealer.
	Implement improperly adjusted.	See implement operator's manual.
	Restricted fuel line.	Clean or replace fuel line.
	Restricted return line.	Clean or replace return line.
	Improper ballast.	Adjust ballast to load.
Low oil pressure	Low oil level.	Add oil.
	Improper type of oil.	Drain, fill crankcase with oil of proper viscosity and quality.
High oil consumption	Crankcase oil too light.	Use proper viscosity oil.
	Oil leaks.	Check for leaks in lines, around gaskets and drain plugs.
	Restricted crankcase vent tube.	Clean vent tube.
	Defective turbocharger.	See your John Deere dealer.
Engine emits white smoke	Improper type fuel.	Use proper fuel.
	Low engine temperature.	Warm up engine to normal operating temperature.

Continued on next page

AT,5SOM,198 -19-01NOV98-2/4

Symptom	Problem	Solution
	Defective thermostat.	Remove and check thermostat.
	Defective injection nozzles.	See your John Deere dealer.
	Engine out of time.	See your John Deere dealer.
Engine emits black or grey exhaust smoke	Improper type of fuel.	Use proper fuel.
	Clogged or dirty air cleaner.	Service air cleaner.
	Engine overloaded.	Reduce load or shift to a low gear.
	Injection nozzles dirty.	See your John Deere dealer.
	Engine out of time.	See your John Deere dealer.
	Turbocharger not functioning.	See your John Deere dealer.
Engine overheats	Dirty radiator core, or grille screens.	Remove all trash.
	Engine overloaded.	Shift to lower gear or reduce load.
	Low engine oil level.	Check oil level. Add oil as required.
	Low coolant level.	Fill radiator to proper level, check radiator, expansion tank, and hoses for loose connection or leaks.
	Faulty radiator cap.	See your John Deere dealer.
	Loose or defective fan belt.	Adjust belt tension; replace belt, if necessary
	Cooling system needs flushing.	Flush cooling system.
	Defective thermostat.	Remove and check thermostat.
	Defective temperature gauge or sender.	See your John Deere dealer.
	Incorrect grade of fuel.	Use proper fuel.
High fuel consumption.	Improper type of fuel.	Use proper fuel.
	Clogged or dirty air cleaner.	Service air cleaner.
	Engine overloaded.	Reduce load or shift to a lower gear.
	Improper valve clearance.	See your John Deere dealer.
	Injection nozzles dirty.	See your John Deere dealer.

Continued on next page

AT,5SOM,198 -19-01NOV98-3/4

Symptom	Problem	Solution
	Engine out of time.	See your John Deere dealer.
	Implement improperly adjusted.	See implement operator's manual.
	Low engine temperature.	Check thermostat.
	Excessive ballast.	Adjust ballast to load.
	Defective turbocharger.	See your John Deere dealer.
	Restricted air intake system.	Check system.
	Plugged crankcase vent tube.	Clean vent tube.

AT,5SOM,198 -19-01NOV98-4/4

Transmission Troubleshooting

Symptom	Problem	Solution
Transmission oil overheats	Low oil supply.	Fill system with correct oil.
	Clogged transmission-hydraulic oil filter.	Replace filter.
	Internal hydraulic leak.	See your John Deere dealer.
	Hitch feedback linkage improperly adjusted.	Reset linkage. See your John Deere dealer.
	Hydraulic motor not plumbed correctly.	See your John Deere dealer.
Low transmission pressure.	Low oil supply.	Fill system with correct oil.
	Clogged transmission-hydraulic oil filter.	Replace filter.

MX,TSIP,BA2 -19-24JUL95-1/1

Brakes Troubleshooting

Symptom	Problem	Solution
No solid pedal feel	Air in system.	See your John Deere dealer.
Pedal settles	Rear brake piston seal leaking.	See your John Deere dealer.
Excessive pedal travel	Air in system.	See your John Deere dealer.
Brakes drag during transport	Brakes out of adjustment.	See your John Deere dealer.

MX,TSIP,DA1 -19-24JUL95-1/1

Rockshaft and Quick-Coupler 3-Point Hitch Troubleshooting

Symptom	Problem	Solution
Insufficient transport clearance	Center link too long.	Adjust center link.
	Lift links to long.	Adjust lift links.
	Implement not level.	Level implement.
	Implement not properly adjusted.	See implement operator's manual.
	Center link in upper holes.	Move center link to lower holes.
	Sway chains adjusted to short.	Lengthen sway chains.
Hitch drops slowly	Rockshaft rate-of-drop control not properly set.	Adjust rate-of-drop knob.
Hitch fails to lift or lifts slowly	Excessive load on hitch.	Reduce load.
	Hitch fails to lift or lifts slowly	Adjust flow divider valve and /or change the allocation.
	Low oil level.	Fill system with proper oil.
	Hydraulic oil too cold.	Allow oil to warm.
	Transmission-hydraulic oil filter clogged.	Replace filter.
	Transmission-hydraulic filter screen clogged.	Clean or replace screen.
Implement will not operate at desired depth	Lift links too short.	Adjust lift links.
	Lack of penetration.	See implement operator's manual
	Improper setting of limit stop.	Reset position limit.
	Improper setting of draft lever.	See section “Rockshaft and Three-Point Hitch”.
Insufficient or no hitch response to draft load	Center link in upper holes.	Move center link to lower holes.
	Draft control lever in “Off” position.	Move lever rearward.
	Lift links too short.	Adjust lift links.
	Flow divider valve closed	Adjust flow divider valve and/or change the allocation
	Lack of penetration.	See implement operator's manual.
	Rate-of-drop too slow.	Adjust rate-of-drop valve.

Continued on next page

Symptom	Problem	Solution
Hitch too responsive	Center link in lower holes.	Move center link to upper holes.
	Sensitivity valve set too responsive	Adjust sensitivity valve
Hitch drops too fast	Rate-of-drop set too fast.	Adjust rate-of-drop.

OULXA64,00002A7 -19-01JUL04-2/2

Remote Hydraulic Cylinders Troubleshooting

Symptom	Problem	Solution
Direction of remote cylinder travel is reversed	Improper hose connections.	Reverse hose connections.
Hoses will not couple	Improper hose male tips.	Replace tip with ISO Standard tips.
Remote cylinder will not lift load	Excessive load.	Reduce load.
	Flow divider valve closed.	Adjust flow divider valve.
	Hoses not completely installed.	Attach hoses correctly.
	Incorrect remote cylinder size.	Use correct size cylinder.
Automatic return to neutral position of no. 2 SCV lever does not function and direction of remote cylinder travel is reversed	Improper hose connections.	Reverse hose connections.

OULXA64,00002A8 -19-01JUL04-1/1

Electrical System Troubleshooting

Symptom	Problem	Solution
Battery will not charge	Loose or corroded connections.	Clean and tighten connections.
	Sulfated or worn-out battery.	Replace battery.
	Loose or defective fan belt.	Adjust belt tension or replace belt.
Charging system indicator glows with engine running	Low engine speed.	Increase speed.
	Defective battery.	Replace battery.
	Defective alternator.	See your John Deere dealer.
	Slipping fan belt.	Tighten belt.
Starter inoperative	Gear shift lever in gear.	Move lever to neutral.
	PTO lever in engaged position.	Move PTO lever to disengaged position.
	Low battery output.	Charge or replace battery.
	Blown fuse.	Replace fuse.
Starter cranks slowly	Low battery output.	Charge or replace battery.
	Crankcase oil too heavy.	Use proper viscosity oil.
	Loose or corroded connections.	Clean and tighten loose connections.
Light system does not function; rest of electrical system functions	Blown fuse.	Replace fuse.
Entire electrical system does not function	Faulty battery connection.	Clean and tighten connections.
	Sulfated or worn-out batteries.	Replace battery.
	Blown fuse.	Replace fuse.
Relay(s) sticking or nonfunctional; repeated failures	Diode to protect circuit from arcing has failed.	Replace diode module.

SS40167,0000093 -19-20MAR09-1/1

Heater and A/C System Troubleshooting (Cab)

Symptom	Problem	Solution
All cab electrical switches do not work	Loose, defective or blown fusible link.	See your John Deere dealer.
Blower malfunctioning	Blower does not work.	Check both blower fuses.
Heater does not work	Heater core or hoses clogged or damaged.	Flush cooling system. Replace heater core or hoses. See your John Deere dealer.
Air conditioning does not work	Compressor belt loose or slipping.	Adjust belt tension. Replace belt if necessary.
	Blown fuse.	Replace fuse.
	Defective switch.	Replace switch.
	Faulty wiring or loose connections.	Repair or replace wiring.
	Defective compressor clutch.	See your John Deere dealer.
Drafts	Poor air distribution	Adjust directional air louvers. Set blower switch to medium or low positions.
Inadequate air flow	Clogged air filters.	Clean filters.
	Evaporator core air flow restricted.	Clean evaporator and housing with compressed air.
	Faulty blower fan motors.	See your John Deere dealer.
	Defective blower switch.	See your John Deere dealer.
	Faulty wiring or loose connections.	Repair or replace wiring.
Water leaking or dripping from evaporator core compartment	Loose hose clamp.	Tighten clamp.
	A/C drain tubes plugged.	Clean drain tubes.
Strange odors inside operator's cab	Dirty air filters.	Clean filters.
	Evaporator condenser pan dirty.	Clean pan and outlet with compressed air.
	Drain tubes plugged.	Clean drain tubes.
Partial frosting and sweating of lines combined with poor cooling	Compressor belt slipping.	Adjust compressor belt tension.
	Loss of refrigerant.	Check system for leaks. See your John Deere dealer.

Continued on next page

AT,5SOM,251 -19-01NOV98-1/2

Symptom	Problem	Solution
	Expansion valve malfunctioning.	See your John Deere dealer.
Ice particles blowing from evaporator	Control dial set too low.	Adjust the temperature control to a warmer position.
Failure to cool	Insufficient blower speed.	Increase blower speed.
	Dirty air filters.	Clean filters.
	Debris on front grille and side screens.	Clean grille and screens.
	Lint or dirt on condenser fins.	Blow out condenser fins with compressed air.
	Refrigerant is lost or extremely low.	See your John Deere dealer.
	Loose compressor drive belt.	Adjust belt tension.
	Compressor clutch not engaging.	Check wiring or see your John Deere dealer.
	Expansion valve not functioning.	See your John Deere dealer.
	Restriction in refrigerant system.	See your John Deere dealer.
	Faulty wiring or loose connections.	Repair or replace wiring.
	Defective temperature control switch.	See your John Deere dealer.
	Outside temperature too low (below 21°C; 70°F).	Wait until day gets warmer. If there is a malfunction in system—see your John Deere dealer.
	Condenser is overheating.	Clean condenser screens, cores and fins of condenser and radiator.
	Severe restriction in high side.	See your John Deere dealer.
	Burned out clutch field or faulty field.	See your John Deere dealer.
	Short circuit in control circuit or failure of a switch in circuit.	See your John Deere dealer.
Hissing noise at expansion valve	Loss of refrigerant.	Check system for leaks.
	Restriction in refrigerant system.	Check for kinks in hoses.
		Check receiver-dryer for uniformity of temperature. If temperature is not uniform, see your John Deere dealer.

AT,5SOM,251 -19-01NOV98-2/2

Wipers, Work Lights and Dome Light (Cab) Troubleshooting

Symptom	Problem	Solution
All cab electrical switches do not work	Loose, defective or blown fusible link.	See your John Deere dealer.
Window wiper(s) and washer will not run	Blown fuse.	Replace fuse.
	Defective switch(es).	Replace switch(es).
	Defective motor(s).	See your John Deere dealer.
	Faulty wiring or loose connections.	Repair or replace wiring.
Work lights do not work	Blown fuse.	Replace fuse.
	Defective bulb or switch.	Replace bulb or switch.
	Faulty wiring or loose connections.	Repair or replace wiring.
Dome light does not work	Blown fuse.	Replace fuse.
	Defective bulb or switch.	Replace bulb or switch.
	Defective door switch(es).	Replace switch(es).
	Faulty wiring or loose connections.	Repair or replace wiring.

AT,5SOM,242 -19-01NOV98-1/1

Storage for Long Period

The following storage preparations are good for long term tractor storage up to one year. When this time is up, run the engine until it reaches operating temperature and operate some hydraulic functions. Afterwards retreat tractor for an extended storage period.

IMPORTANT: Any time your tractor will not be used for over six (6) months, the following recommendations for storing it and removing it from storage will help to minimize corrosion and deterioration.

Change engine oil and replace filter. Change transmission oil and filter. Used oil will not give adequate protection.

Clean air cleaner.

Draining and flushing of cooling system is not necessary if engine is to be stored only for several months. However, for extended storage periods of a year or longer, it is recommended that the cooling system be drained, flushed and refilled. Refill with appropriate coolant.

Fill the fuel tank.

Remove fan/alternator belt, if desired.

Remove and clean battery. Store it in a cool, dry place and keep it fully charged.

Clean the exterior of the tractor with salt-free water and touchup any scratched or chipped painted surfaces with a good quality paint.

Coat all exposed (machined) metal surfaces with grease or corrosion inhibitor if not feasible to paint.

Seal all openings such as the vent tube and exhaust outlet.

Store the machine in a dry, protected place. If the tractor must be stored outside, cover it with a waterproof canvas or other suitable protective material and use a strong waterproof tape.

Block up the tractor so that tires do not touch the ground. Protect tires from heat and sunlight.

Secure clutch pedal in disengaged position (all tractors except tractors with 24/12 transmission).

OULXA64,0000C1A -19-01JUL04-1/1

Remove Tractor from Storage

1. Check tire inflation pressure, see section Lubrication and Periodic Service.
2. Unseal all openings sealed in Storing Tractor.
3. Install battery.

IMPORTANT: If, on tractors with cab, the air conditioning system compressor has seized do not run the engine with compressor clutch engaged. Drive belt or compressor damage could be the result.

4. On tractors with cab: Check that compressor pulley moves freely and is not seized.
5. Adjust tension of alternator/fan belt and on tractors with cab, compressor drive belt.
6. Release clutch pedal.
7. Check levels of engine oil, transmission-hydraulic oil, and engine coolant, add if necessary.
8. Drain a small amount of fuel from fuel tank to purge any moisture condensation that has collected.
9. Fill fuel tank.
10. Perform all appropriate 10-hour, 250-hour and 500-hour services as instructed in section Lubrication and Periodic Service.

IMPORTANT: DO NOT operate starting motor more than 20 seconds at a time. Wait at least 2 minutes for starting motor to cool before trying again.

11. Pull hand throttle (F) all the way back, and crank engine until oil pressure rises.

PULX000862 —UN—29JUL08

12. Connect wiring lead to fuel injection pump shut-off solenoid.
13. Start engine. Operate engine at slow idle for several minutes. Warm up carefully and check all systems before placing tractor under load.

NR25796,00017B7 -19-16DEC08-1/1

Specifications

Engine

Engine type		
— 5080 tractor		4045HAT80
— 5090 tractor		4045HAT81
— 5100 tractor		4045HAT82
Aspiration		Turbocharger and air-to-air aftercooled
Power at rated speed	**acc. to ECE-R24**	**acc. to 97/68 EC**
— 5080 tractor	54.5 kW (74 hp)	60 kW (80 hp)
— 5090 tractor	62 kW (84 hp)	67 kW (90 hp)
— 5100 tractor	69 kW (94hp)	74 kW (100 hp)
Maximum torque		
— 5080 tractor		325 N·m at 1600 rpm
— 5090 tractor		365 N·m at 1600 rpm
— 5100 tractor		375 N·m at 1600 rpm
Number of cylinders		4
Bore		106.5 mm (4.19 in.)
Stroke		127 mm (5.00 in.)
Displacement		4525 cm^3 (275.5 cu.in.)
Compression ratio		19.0 : 1
Firing order		1-3-4-2
Valve clearance		
Intake valve clearance		0.36 mm (0.014 in.)
Exhaust valve clearance		0.46 mm (0.018 in.)
Slow idle		850-900 rpm
Fast idle		2425-2475 rpm
Rated engine speed		2300 rpm
Operating speed range		1200—2300 rpm
Engine oil capacity (including oil filter)		8.0 L (2.0 U.S.gal.)
Speed for PTO operation		
— 540 rpm rear PTO		1938 rpm
— 540E rpm rear PTO		1648 rpm
— 1000 rpm rear PTO		1962 rpm

NR25796,00017B8 -19-24MAR09-1/1

Transmission

Transmission	Availability
- 12/12 synchronized gears	Standard
- 24/24 synchronized gears with mechanical Hi-Lo	Optional
- 24/24 synchronized gears with electro-hydraulic Hi-Lo	Optional
- 24/12 synchronized gears with electro-hydraulic Hi-Lo and declutch switch on gear shift lever	Optional
Gear selections	Lever
Shifting	Manual
Final drive	Planetary
Clutch	
- 12/12 transmission	Dual, dry
- 24/24 transmission	Dual, dry
- 24/12 transmission only	3 electro-hydraulic wet clutches
- 24/12 transmission only	PTO with electro-hydraulic wet clutch

NR25796,00017B9 -19-09FEB10-1/1

Hydraulic System

Type	Position and draft control
Pump	Tandem gear
Pump displacement	
- Steering	11.9 cm^3 (0.73 cu.in.)
- Implement	22.7 cm^3 (1.39 cu.in.)
- Implement (Optional)	28.79 cm^3 (1.76 cu.in.)
Flow rate[a]	
- Steering	24.6 L/min (6.5 gpm)
- Implement	46.9 L/min (12.4 gpm)
- Implement (Optional)	59.6 L/min (15.8 gpm)
- Optional 3rd hydraulic pump	20 L/min (5.3 gpm)
Maximum pressure	
- Steering	13000-13500 kPa (130-135 bar; 1885-1958 psi)
- Implement	19000-19500 kPa (190-195 bar; 2756-2683 psi)
- Optional 3rd hydraulic pump	19000-19500 kPa (190-195 bar; 2756-2683 psi)
Steering system	Hydrostatic power
SCV flow rate	
- Standard	45 L/min (11.9 gpm)
- Optional	59 L/min (15.6 gpm)

[a] *Flow rate at 90 % pump efficiency and engine at rated speed*

NR25796,00017BA -19-15FEB10-1/1

Electrical System

Type	12-volt, negative ground
Battery	12 volts, 100 Ah
Alternator:	
— tractors without cab	45 A
— tractors with cab	95 A
Starting motor:	12 volts, 2.8 kW

NR25796,00017BB -19-04NOV08-1/1

Capacities

Fuel tank	
- Front tank	38.5 L (10.2 U.S. gal)
- Side tank	35 L (9.2 U.S. gal)
- Total	73.5 L (40.2 U.S. gal)
Cooling system	
- Tractors without cab	10.5 L (11 U.S. qt.)
- Tractors with cab	13 L (13.7 U.S. qt.)
Crankcase (including filter change)	8 L (8.5 U.S. qt.)
Transmission/hydraulic system[a]	
- 12/12 transmission with front wheel drive	38 L (10.0 U.S. gal)
- 24/24 transmission without front-wheel drive	36 L (9.5 U.S. gal)
- 24/24 transmission with front-wheel drive	37.5 L (9.9 U.S. gal)
- 24/12 transmission with front wheel drive	38 L (10.0 U.S. gal)
Front-wheel drive axle	
- final drives, each	0.6 L (0.6 U.S. qt.)
- axle housing	5.5 L (5.8 U.S. qt.)
Brake system	
- oil reservoir	0.32 L (0.34 U.S. qt.)
Air conditioning system	
- R134a refrigerant	1.2 kg (2.64 lb)

[a] *Oil volume may vary depending on the configuration of the hydraulic system.*

NR25796,00017BC -19-15FEB10-1/1

Sound Level

Max. sound level at operator's ear	86 dB(A)	Measurement method in accordance with Directive 2009/76/EC, Annex II
Maximum pass-by noise	89 dB(A)	Measurement method in accordance with Directive 2009/63/EC

NR25796,00017BD -19-18JAN12-1/1

Fuel System

Type	mech. distributor-type injection pump
Fuel filter	FUELGARD™ filter

FUELGARD is a trademark of Deere & Company.

OULXA64,0000C7F -19-25JUL03-1/1

Brakes

Type	Oil immersed multi disk
Number of disks per side	5
Outer diameter of disks	165 mm (6.5 in.)
Inner diameter of disks	110 mm (4.3 in.)

NR25796,00017BE -19-04NOV08-1/1

Three-Point Hitch

Category	I and II

OULXA64,00003B6 -19-22SEP08-1/1

Maximum Lifting Force

Maximum lifting force	24.6 kN (2509 kgf; 5530 lbf)
Hitch lift capacity at 610 mm	16.3 kN (1662 kgf; 3664 lbf)

OU12401,0001C99 -19-15FEB10-1/1

Loads and Weights

Maximum permissible loads

	Static vertical loads
- on drawbar extended 250 mm (9.8 in.)	1200 kg (2645 lb)
- on drawbar extended 350 mm (13.8 in.)	1100 kg (2425 lb)
- on drawbar extended 450 mm (17.8 in.)	900 kg (1984 lb)
- on wagon hitch (EEC)	1300 kg (2866 lb)
- on wagon hitch (Cuna C)	1500 kg (3306 lb)
- on hook of pick-up hitch	2000 kg (4409 lb)

NOTE: Traffic regulations in certain countries may restrict the permissible loads and total weight to figures lower than those quoted above.

NR25796,00017BF -19-10FEB10-1/1

Towable Loads

Depending on how the towed load is braked, the following weights and speeds are permitted:

Trailer brake system	Max. weight of load	Max. travel speed
- unbraked	3000 kg (6615 lb)	25 km/h (15.5 mph)
- independently braked	4000 kg (8820 lb)	25 km/h (15.5 mph)
- overrun brake	5550 kg (12236 lb)	25 km/h (15.5 mph)
- hydraulic brake	11000 kg (24250 lb)	25 km/h (15.5 mph)

There may be legal limits in force that restrict weights and/or travel speeds to figures lower than those quoted here.

NR25796,00017C0 -19-26MAR09-1/1

Shipping Weights

Shipping weights of tractors without front-wheel drive:	Unit	5080 F/V	5090 F/V	5100 F/V
• At front axle	kg (lb)	1020 - 1090 kg (2249 - 2403 lb)	1020 - 1090 kg (2249 - 2403 lb)	1020 - 1090 kg (2249 - 2403 lb)
• At rear axle	kg (lb)	1400 - 1530 kg (3086 - 3373 lb)	1400 - 1530 kg (3086 - 3373 lb)	1400 - 1530 kg (3086 - 3373 lb)
• Total	kg (lb)	2420 - 2620 kg (5335 - 5776 lb)	2420 - 2620 kg (5335 - 5776 lb)	2420 - 2620 kg (5335 - 5776 lb)
Shipping weights of tractors with front-wheel drive:	**Unit**	**5080 F/V**	**5090 F/V**	**5100 F/V**
• At front axle	kg (lb)	1145 - 1290 kg (2524 - 2844 lb)	1145 - 1290 kg (2524 - 2844 lb)	1145 - 1290 kg (2524 - 2844 lb)
• At rear axle	kg (lb)	1420 - 1640 kg (3130 - 3615 lb)	1420 - 1640 kg (3130 - 3615 lb)	1420 - 1640 kg (3130 - 3615 lb)
• Total	kg (lb)	2570 - 2930 kg (5666 - 6460 lb)	2570 - 2930 kg (5666 - 6460 lb)	2570 - 2930 kg (5666 - 6460 lb)

NOTE: Tare weight (according to EEC 74/150) is the unladen weight of tractor in running order, excluding optional accessories but including coolant, oils, full fuel tank, tools and operator (75 kg; 165 lb).

NR25796,00017C1 -19-26MAR09-1/1

Axle Load Limits and Maximum Permissible Weights, F-Type Tractors

Max. permissible load on tractors without front-wheel drive:	Unit	5080GF, 5090GF and 5100GF
• At front axle	kg (lb)	1230 - 1490 (2712 - 3285)
• At rear axle	kg (lb)	2290 - 3000 (5049 - 6614)
• Total	kg (lb)	3500 - 4200* (7716 - 9259*)

Max. permissible load on tractors with front-wheel drive:	Unit	5080GF, 5090GF and 5100GF
• At front axle	kg (lb)	1330 - 2200 (2932 - 4850)
• At rear axle	kg (lb)	2290 - 3000 (5049 - 6614)
• Total	kg (lb)	3500 - 4500* (7716 - 9920*)

NOTE: The max. permissible total weight is the weight of tractor and equipment allowed for driving on public roads up to 40 km/h (25 mph), without, however, exceeding individual axle and tire capacity.

CAUTION: Under no circumstances must this weight be exceeded.

IMPORTANT: Comply with maximum load capacity of tires.

NOTE: Traffic regulations in certain countries may restrict the permissible axle loads and total weight to figures lower than those quoted above.

** in certain countries limited to 3500 kg; 7716 lb*

OULXBER,000193F -19-19JUL10-1/1

Axle Load Limits and Maximum Permissible Weights, V-Type Tractors

Max. permissible load on tractors without front-wheel drive:	Unit	5080GV, 5090GV and 5100GV
• At front axle	kg (lb)	1060 - 1230 (2337 - 2712)
• At rear axle	kg (lb)	2060 - 3000 (5049 - 6614)
• Total	kg (lb)	3120 - 4200* (6878 - 9259*)

Max. permissible load on tractors with front-wheel drive:	Unit	5080GV, 5090GV and 5100GV
• At front axle	kg (lb)	975 - 2200 (2150 - 4850)
• At rear axle	kg (lb)	2060 - 3000 (4542 - 6614)
• Total	kg (lb)	3035 - 4300* (6691 - 9480*)

NOTE: The max. permissible total weight is the weight of tractor and equipment allowed for driving on public roads up to 40 km/h (25 mph), without, however, exceeding individual axle and tire capacity.

CAUTION: Under no circumstances must this weight be exceeded.

IMPORTANT: Comply with maximum load capacity of tires.

NOTE: Traffic regulations in certain countries may restrict the permissible axle loads and total weight to figures lower than those quoted above.

** in certain countries limited to 3500 kg; 7716 lb*

OULXBER,0001940 -19-13DEC11-1/1

Load Capacity of Tires

See tables below.

IMPORTANT: Comply with maximum permissible axle loads. See Weights, in this Section. Never exceed the maximum permissible axle loads.

NOTE: The axle loads quoted here for normal operation apply only for travel speeds up to 40 km/h (25 mph) and at an inflation pressure of 160 kPa (1.6 bar; 23 psi).

NOTE: The following values are those indicated in the ETRTO (EUROPEAN TIRE AND RIM TECHNICAL ORGANISATION) manual.

Consequently these values may change depending on the specifications of the tire manufacturers.

For details, ask your John Deere dealer or the tire manufacturer.

F-Type Tractors Maximum Permissible Axle Load (Depending On Tires)

F-Type Tractors without Front Wheel Drive							
Front Axle Load				Rear Axle Load			
Tire Size	Load Index	Pressure	Load	Tire Size	Load Index	Pressure	Load
6.50-16	118A8	4.2	2646 kg (5833 lb)	420/70 R24	130A8	1.6	3800 kg (8378 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	420/70 R24	130A8	1.6	3800 kg (8378 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	380/85 R28 (14.9 R28)	133A8	1.6	4120 kg (9083 lb)
				14.9 R28 (380/85 R28)	128A8	1.6	3600 kg (7937 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	380/85 R28 (14.9 R28)	133A8	1.6	4120 kg (9083 lb)
				14.9 R28 (380/85 R28)	128A8	1.6	3600 kg (7937 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	380/70 R28	127A8	1.6	3500 kg (7716 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	380/70 R28	127A8	1.6	3500 kg (7716 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	320/85 R24	122A8	1.6	3000 kg (6614 lb)
				12.4 R24	119A8	1.6	2720 kg (5997 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	320/85 R24	122A8	1.6	3000 kg (6614 lb)
				12.4 R24	119A8	1.6	2720 kg (5997 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	360/70 R24	122A8	1.6	3000 kg (6614 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	360/70 R24	122A8	1.6	3000 kg (6614 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	380/70 R24	125A8	1.6	3300 kg (7275 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	380/70 R24	125A8	1.6	3300 kg (7275 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	420/70 R28	133A8	1.6	4120 kg (9083 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	420/70 R28	133A8	1.6	4120 kg (9083 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	380/70 R20	122A8	1.6	3000 kg (6614 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	380/70 R20	122A8	1.6	3000 kg (6614 lb)
F-Type Tractors with Front Wheel Drive							
Front Axle Load				Rear Axle Load			
Tire Size	Load Index	Pressure	Load	Tire Size	Load Index	Pressure	Load
280/70 R18	114A8	2.4	2360 kg (5203 lb)	380/70 R28	127A8	1.6	3500 kg (7716 lb)
10.0/75-15.3	106A8	3.1	1900 kg (4189 lb)	320/85 R24	122A8	1.6	3000 kg (6614 lb)

Continued on next page

NR25796,00017C4 -19-19JUL10-1/3

F-Type Tractors with Front Wheel Drive							
Front Axle Load				Rear Axle Load			
Tire Size	Load Index	Pressure	Load	Tire Size	Load Index	Pressure	Load
				12.4 R24	119A8	1.6	2720 kg (5997 lb)
280/70 R18	114A8	2.4	2360 kg (5203 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
7.50-16	92A8	2.8	1260 kg (2778 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
7.50 R18	104A8	3.2	1800 kg (3968 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
10.0/75-15.3	106A8	3.1	1900 kg (4189 lb)	360/70 R24	122A8	1.6	3000 kg (6614 lb)
250/80-16	110A8	3.1	2120 kg (4674 lb)	380/70 R24	125A8	1.6	3300 kg (7275 lb)
260/70 R20	113A8	2.4	2300 kg (5071 lb)	380/85 R28 (14.9 R28)	133A8	1.6	4120 kg (9083 lb)
				14.9 R28 (380/85 R28)	128A8	1.6	3600 kg (7937 lb)
250/80-18	112A8	3.1	2240 kg (4938 lb)	380/70 R28	127A8	1.6	3500 kg (7716 lb)
280/70 R18	114A8	2.4	2360 kg (5203 lb)	380/70 R28	127A8	1.6	3500 kg (7716 lb)
280/70 R18	114A8	2.4	2360 kg (5203 lb)	420/70 R24	130A8	1.6	3800 kg (8378 lb)
280/70 R18	114A8	2.4	2360 kg (5203 lb)	420/70 R28	133A8	1.6	4120 kg (9083 lb)
250/80-16	110A8	3.7	2120 kg (4674 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
260/70 R20	113A8	2.4	2300 kg (5071 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
250/80-18	112A8	3.1	2240 kg (4938 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
7.50-16	92A8	2.8	1260 kg (2778 lb)	380/70 R24	125A8	1.6	3300 kg (7275 lb)
260/70 R20	113A8	2.4	2300 kg (5071 lb)	380/70 R28	127A8	1.6	3500 kg (7716 lb)
260/70 R20	113A8	2.4	2300 kg (5071 lb)	380/70 R24	125A8	1.6	3300 kg (7275 lb)
250/80-18	112A8	3.1	2240 kg (4938 lb)	380/70 R28	127A8	1.6	3500 kg (7716 lb)

V-Type Tractors Maximum Permissible Axle Load (Depending On Tires)

V-Type Tractors without Front Wheel Drive							
Front Axle Load				Rear Axle Load			
Tire Size	Load Index	Pressure	Load	Tire Size	Load Index	Pressure	Load
6.50-16	118A8	4.2	2646 kg (5833 lb)	360/70 R24	122A8	1.6	3000 kg (6614 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	360/70 R24	122A8	1.6	3000 kg (6614 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3000 kg (6614 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	380/70 R20	122A8	1.6	3000 kg (6614 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	380/70 R20	122A8	1.6	3000 kg (6614 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	320/85 R24	122A8	1.6	3000 kg (6614 lb)
				12.4 R24	119A8	1.6	2720 kg (5997 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	320/85 R24	122A8	1.6	3000 kg (6614 lb)
				12.4 R24	119A8	1.6	2720 kg (5997 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3200 kg (7055 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3200 kg (7055 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)

Continued on next page

NR25796,00017C4 -19-19JUL10-2/3

V-Type Tractors without Front Wheel Drive							
Front Axle Load				Rear Axle Load			
Tire Size	Load Index	Pressure	Load	Tire Size	Load Index	Pressure	Load
6.50-16	118A8	4.2	2646 kg (5833 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
7.50-16	98A8	2.8	1500 kg (3307 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	250/85 R28 (9.5 R28)[a]	112A8	1.6	2240 kg (6938 lb)
				9.5 R28 (240/85 R28)	109A8	1.6	2060 kg (4542 lb)
6.50-16	118A8	4.2	2646 kg (5833 lb)	280/85 R28	118A8	1.6	2640 kg (5820 lb)
				11.2 R28	116A8	1.6	2500 kg (5512 lb)
V-Type Tractors with Front Wheel Drive							
Front Axle Load				Rear Axle Load			
Tire Size	Load Index	Pressure	Load	Tire Size	Load Index	Pressure	Load
7.50-16	92A8	2.8	1260 kg (2778 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
260/70 R16	109A8	2.4	2060 kg (4542 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
260/70 R16	109A8	2.4	2060 kg (4542 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
6.00-16	95A8	2.75	974 kg (2147 lb)	320/85 R24	122A8	1.6	3000 kg (6614 lb)
				12.4 R24	119A8	1.6	2720 kg (5997 lb)
7.50 R16[b]	102A8	3.2	1700 kg (3738 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
6.50 R16[c]	96A8	3.2	1420 kg (3131 lb)	280/85 R28	118A8	1.6	2640 kg (5820 lb)
				11.2 R28	116A8	1.6	2500 kg (5512 lb)
8.25-16	98A8	2.3	1500 kg (3307 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
10.0/75-15.3	106A8	3.1	1900 kg (4189 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
240/70 R16	104A8	2.4	1800 kg (3968 lb)	360/70 R24	122A8	1.6	3000 kg (6614 lb)
200/70 R16	94A8	2.4	1340 kg (2954 lb)	380/70 R20	122A8	1.6	3000 kg (6614 lb)
240/70 R16	104A8	2.4	1800 kg (3968 lb)	250/85 R28 (9.5 R28) [a]	112A8	1.6	2240 kg (4938 lb)
				9.5 R28 (240/85 R28)	109A8	1.6	2060 kg (4542 lb)
10.0/75-15.3	106A8	3.1	1900 kg (4189 lb)	280/85 R28	118A8	1.6	2640 kg (5820 lb)
				11.2 R28	116A8	1.6	2500 kg (5512 lb)
260/70 R16	109A8	2.4	2060 kg (4542 lb)	280/85 R28	118A8	1.6	2640 kg (5820 lb)
				11.2 R28	116A8	1.6	2500 kg (5512 lb)
240/70 R16	104A8	2.4	1800 kg (3968 lb)	320/85 R24	122A8	1.6	3000 kg (6614 lb)
				12.4 R24	119A8	1.6	2720 kg (5997 lb)
7.50-16	92A8	2.8	1260 kg (2778 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
8.25-16	98A8	2.3	1500 kg (3307 lb)	340/85 R28	127A8	1.6	3500 kg (7716 lb)
				13.6 R28 (340/85 R28)	123A8	1.6	3100 kg (6834 lb)
6.50 R16[c]	96A8	3.2	1420 kg (3131 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
260/70 R16	109A8	2.4	2060 kg (4542 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)
7.50 R16[b]	102A8	3.2	1700 kg (3738 lb)	320/85 R28 (12.4 R28)	124A8	1.6	3200 kg (7055 lb)
				12.4 R28 (320/85 R28)	121A8	1.6	2900 kg (6393 lb)
6.50 R16[c]	96A8	3.2	1420 kg (3131 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)

NR25796,00017C4 -19-19JUL10-3/3

V-Type Tractors with Front Wheel Drive							
Front Axle Load				Rear Axle Load			
Tire Size	Load Index	Pressure	Load	Tire Size	Load Index	Pressure	Load
10.0/75-15.3	106A8	3.1	1900 kg (4189 lb)	340/85 R24 (13.6 R24)	125A8	1.6	3300 kg (7275 lb)
				13.6 R24	121A8	1.6	2900 kg (6393 lb)

[a] *Traker KLEBER*
[b] *STR GOODYEAR*
[c] *Super Vigne KLEBER*

NR25796,00017C4 -19-19JUL10-4/3

Load Capacity of Tires With Front Loader

Load capacity with front loader is obtained by multiplying the load capacity of the tire by the percentage given in the table (load capacity varies from tire manufacturer to tire manufacturer).

To obtain precise figures, see the tire manual provided by the tire manufacturer.

Permissible load capacity in percent

Speed		without front-wheel drive PR[a] tires	with front-wheel drive PR[a] tires	with front-wheel drive A6[a] tires	with front-wheel drive A8[b] tires
km/h	mph	%	%	%	%
8	5.0	150	140	150	150
15	9.0	—	—	134	134
20	12.5	135	120	123	123
25	15.5	115	107	111	111
30	18.5	100	100	100	107
35	21.5	—	—	95	103
40	25.0	—	—	90	100

[a] *Tires up to 30 km/h (18.5 mph)*
[b] *Tires up to 40 km/h (25 mph)*

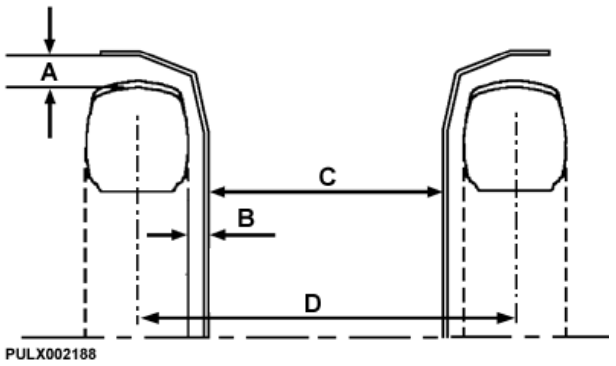
NOTE: Max. travel speed with front loader is 8 km/h (5 mph). Max. front tread width with front loader is 1.80 m (71 in.).

OULXA64,0000C86 -19-28JUL03-1/1

Observe Rear Wheel Tread Width Limitations

IMPORTANT: When changing rear tires, check clearance (A) and (B) between tires and fenders.

The tires must clear the fenders by at least:



PULX002188 —UN—09NOV08

Tire Size	F-Type Tractors			
	Minimum Values			
	A	B	C	D
320/85 R24	163 mm (6 in.)	67.5 mm (3 in.)	540 mm (21 in.)	1004 mm (40 in.)
340/85 R24	146 mm (6 in.)	62.5 mm (3 in.)	540 mm (21 in.)	1004 mm (40 in.)
360/70 R24	166.5 mm (7 in.)	51.5 mm (2 in.)	540 mm (21 in.)	1004 mm (40 in.)
380/70 R24	143.5 mm (6 in.)	35 mm (1.38 in.)	540 mm (21 in.)	1004 mm (40 in.)
420/70 R24	113.5 mm (4 in.)	23 mm (1 in.)	540 mm (21 in.)	1004 mm (40 in.)
12.4 R28 (320/85 R28)	112.5 mm (4 in.)	52 mm (2 in.)	540 mm (21 in.)	964 mm (38 in.)
13.6 R28 (340/85 R28)	95.5 mm (4 in.)	46.5 mm (2 in.)	540 mm (21 in.)	986 mm[a] (39 in.)
14.9 R28 (380/85 R28)	61.5 mm (2 in.)	31.5 mm (1 in.)	540 mm (21 in.)	986 mm[a] (39 in.)
380/70 R28	94 mm (4 in.)	32 mm (1 in.)	540 mm (21 in.)	986 mm[a] (39 in.)
420/70 R28	63 mm (2 in.)	80 mm (3 in.)	540 mm (21 in.)	986 mm (39 in.)

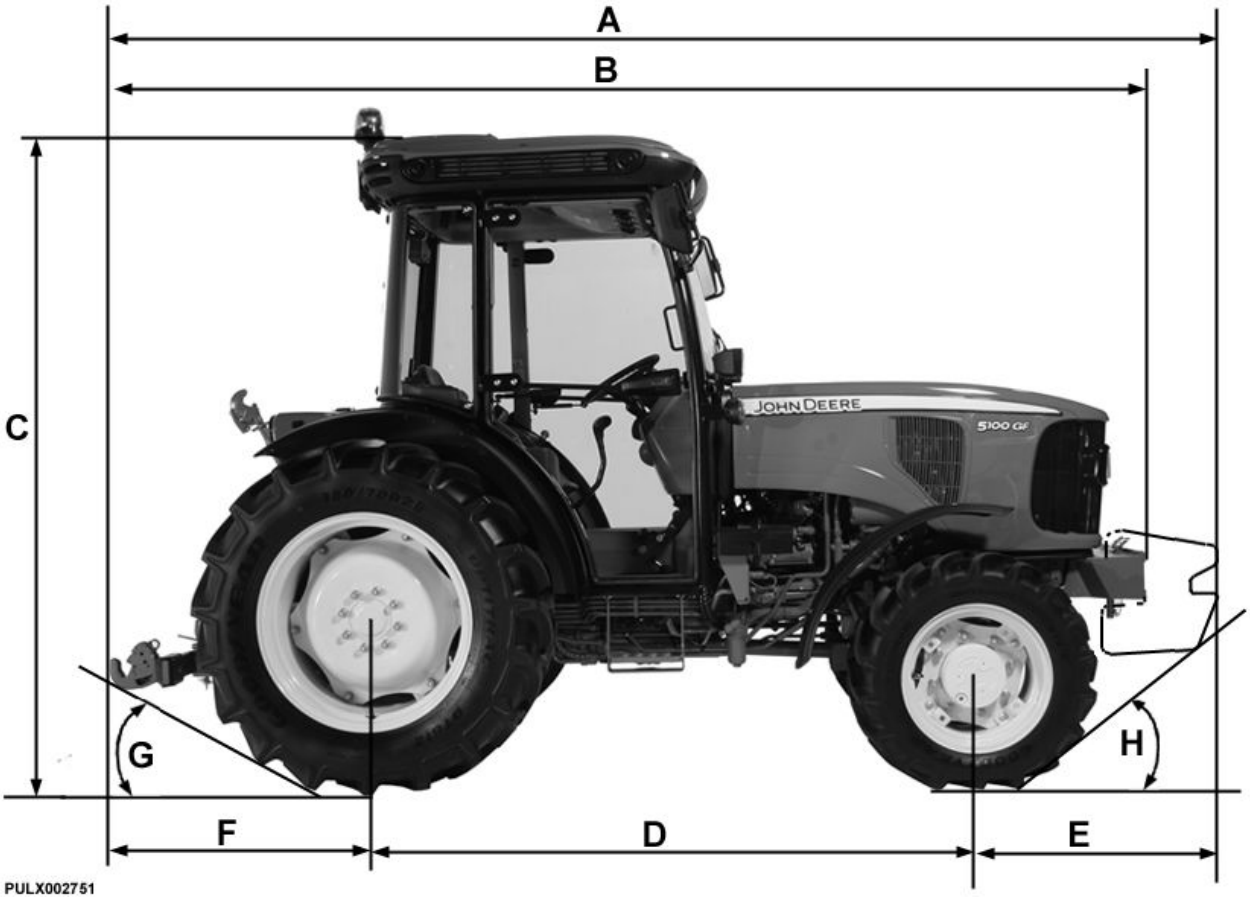
[a]Only if equipped with draft link kit ER067947 or ER067948.

Tire Size	V-Type Tractors			
	Minimum Values			
	A	B	C	D
380/70 R20	196 mm (8 in.)	22.5 mm (1 in.)	540 mm (21 in.)	965 mm[a] (38 in.)
320/85 R24	163 mm (6 in.)	29.5 mm (1 in.)	540 mm (21 in.)	928 mm[a] (37 in.)
340/85 R24	146 mm (6 in.)	24 mm (1 in.)	540 mm (21 in.)	928 mm[a] (37 in.)
360/70 R24	166.5 mm (7 in.)	62.5 mm (2 in.)	540 mm (21 in.)	1026 mm (40 in.)
9.5 R28 (250/85 R28)	169 mm (7 in.)	21 mm (1 in.)	540 mm (21 in.)	829 mm[a] (33 in.)
11.2 R28 (280/85 R28)	146.5 mm (6 in.)	21 mm (1 in.)	540 mm (21 in.)	872 mm[a] (34 in.)
12.4 R28 (320/85 R28)	112.5 mm (4 in.)	58 mm (2 in.)	540 mm (21 in.)	976 mm (38 in.)
13.6 R28 (340/85 R28)	95.5 mm (4 in.)	30.5 mm (1.20 in.)	540 mm (21 in.)	954 mm (38 in.)

[a]Only if equipped with draft link kit ER067947 or ER067948.

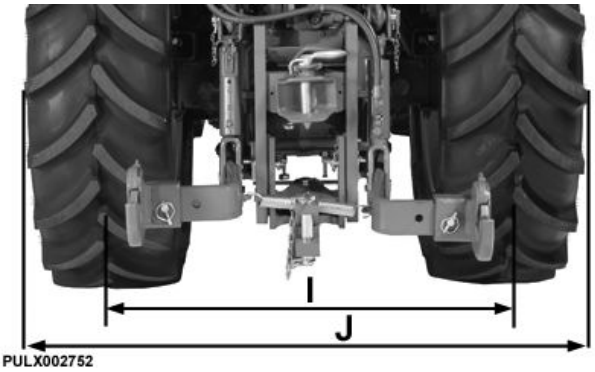
NR25796,00017C5 -19-09AUG10-1/1

Dimensions, F-Type Tractors



PULX002751

PULX002751 —UN—17NOV08



PULX002752

PULX002752 —UN—17NOV08

PULX002753

PULX002753 —UN—20NOV08

		5080GF		5090GF		5100GF	
(A) Overall Length with Base Weight	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	3886 (153)	3886 (153)	3886 (153)	3886 (153)	3886 (153)	3886 (153)
• Tractors with 2-Post ROPS	mm (in.)	3886 (153)	3886 (153)	3886 (153)	3886 (153)	3886 (153)	3886 (153)

Continued on next page

NR25796,00017C6 -19-26MAR09-1/3

		5080GF		5090GF		5100GF	
(B) Overall Length without Base Weight	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	4319 (170)	4319 (170)	4319 (170)	4319 (170)	4319 (170)	4319 (170)
• Tractors with 2-Post ROPS	mm (in.)	4319 (170)	4319 (170)	4319 (170)	4319 (170)	4319 (170)	4319 (170)

		5080GF		5090GF		5100GF	
(C) Overall Height	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	2435 (96)	2435 (96)	2435 (96)	2435 (96)	2435 (96)	2435 (96)
• Tractors with 2-Post ROPS	mm (in.)	2632 (104)	2632 (104)	2632 (104)	2632 (104)	2632 (104)	2632 (104)

		5080GF		5090GF		5100GF	
(D) Wheel Base	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	2093 (85)	2085 (85)	2093 (85)	2085 (85)	2093 (85)	2085 (85)
• Tractors with 2-Post ROPS	mm (in.)	2093 (85)	2085 (85)	2093 (85)	2085 (85)	2093 (85)	2085 (85)

		5080GF		5090GF		5100GF	
(E) Length from Center of Front Wheel to Base Weight Edge	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	1138 (45)	1146 (45)	1138 (45)	1146 (45)	1138 (45)	1146 (45)
• Tractors with 2-Post ROPS	mm (in.)	1138 (45)	1146 (45)	1138 (45)	1146 (45)	1138 (45)	1146 (45)

		5080GF		5090GF		5100GF	
(F) Length from Center of Rear Wheel to Draft Link Edge	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	1088 (43)	1088 (43)	1088 (43)	1088 (43)	1088 (43)	1088 (43)
• Tractors with 2-Post ROPS	mm (in.)	1088 (43)	1088 (43)	1088 (43)	1088 (43)	1088 (43)	1088 (43)

		5080GF		5090GF		5100GF	
(G) Angle of Daft Link from Ground	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	degrees and minutes	25° 10'	25° 10'	25° 10'	25° 10'	25° 10'	25° 10'
• Tractors with 2-Post ROPS	degrees and minutes	25° 10'	25° 10'	25° 10'	25° 10'	25° 10'	25° 10'

		5080GF		5090GF		5100GF	
(H) Angle of Base Weight Edge from Ground	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	degrees and minutes	22° 12'	20° 6'	22° 12'	20° 6'	22° 12'	20° 6'
• Tractors with 2-Post ROPS	degrees and minutes	22° 12'	20° 6'	22° 12'	20° 6'	22° 12'	20° 6'

		5080GF		5090GF		5100GF	
(I) Rear Wheel Tread Width	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	986-1624 (39-64)	986-1624 (39-64)	986-1624 (39-64)	986-1624 (39-64)	986-1624 (39-64)	986-1624 (39-64)
• Tractors with 2-Post ROPS	mm (in.)	986-1624 (39-64)	986-1624 (39-64)	986-1624 (39-64)	986-1624 (39-64)	986-1624 (39-64)	986-1624 (39-64)

Continued on next page

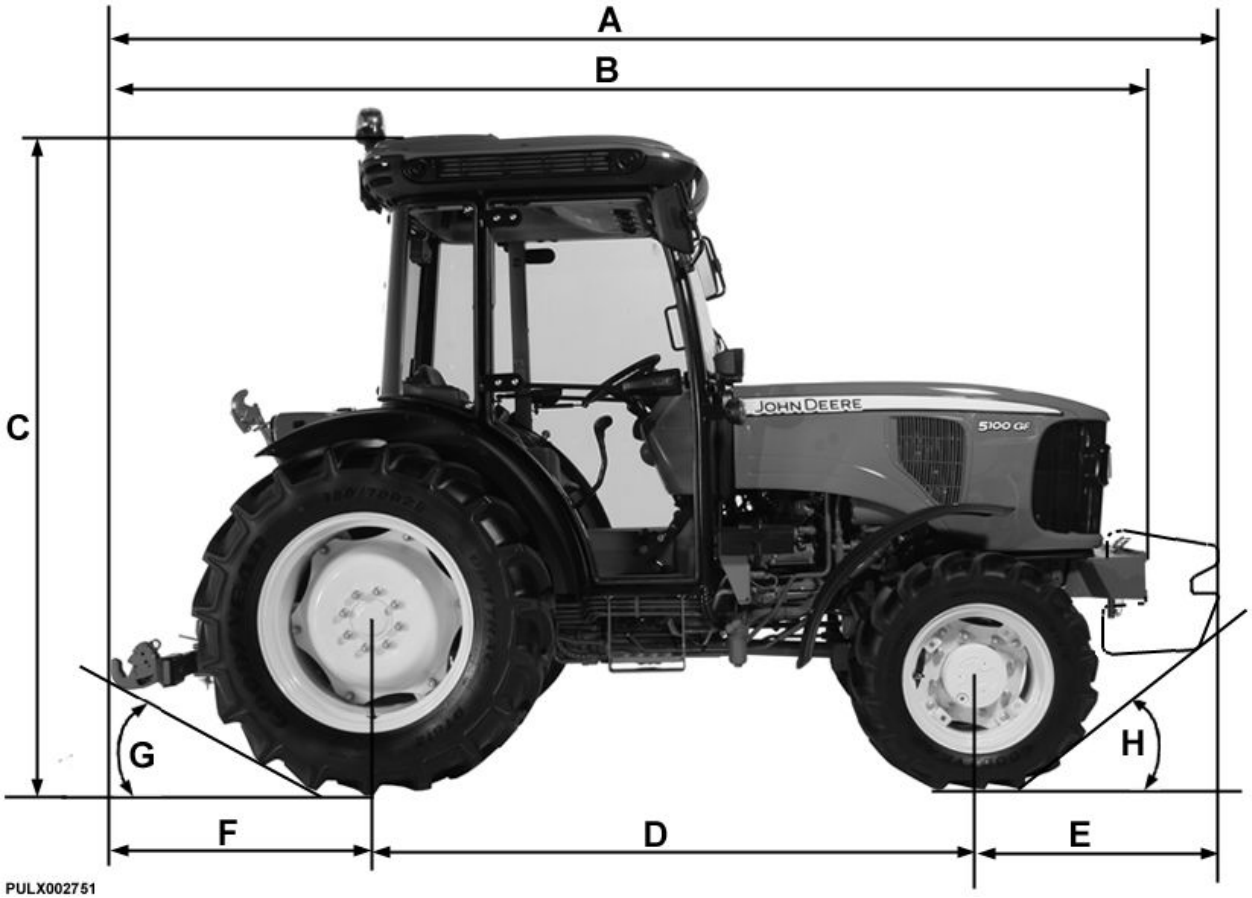
		5080GF		5090GF		5100GF	
(J) Maximum Width	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	2011 (79)[a]	2011 (79)[a]	2011 (79)[a]	2011 (79)[a]	2011 (79)[a]	2011 (79)[a]
• Tractors with 2-Post ROPS	mm (in.)	2011 (79)[a]	2011 (79)[a]	2011 (79)[a]	2011 (79)[a]	2011 (79)[a]	2011 (79)[a]

[a]with 12.4 R24 rear tires and 7.50-16 front tires; tread width = 1018 mm (40.08 in.)

		5080GF		5090GF		5100GF	
(K) Front Wheel Tread Width	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	1054-1408 (41-55)	1095-1231 (43-48)	1054-1408 (41-55)	1095-1231 (43-48)	1054-1408 (41-55)	1095-1231 (43-48)
• Tractors with 2-Post ROPS	mm (in.)	1054-1408 (41-55)	1095-1231 (43-48)	1054-1408 (41-55)	1095-1231 (43-48)	1054-1408 (41-55)	1095-1231 (43-48)

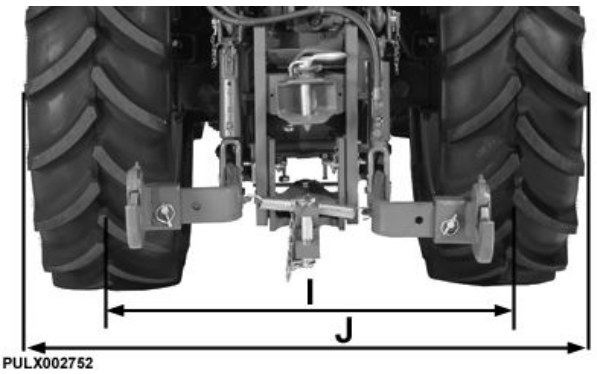
NR25796,00017C6 -19-26MAR09-3/3

Dimensions, V-Type Tractors



PULX002751

PULX002751 —UN—17NOV08



PULX002752

PULX002752 —UN—17NOV08

PULX002753

PULX002753 —UN—20NOV08

		5080GV		5090GV		5100GV	
(A) Overall Length with Base Weight	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	3886 (153)	3886 (153)	3886 (153)	3886 (153)	3886 (153)	3886 (153)
• Tractors with 2-Post ROPS	mm (in.)	3886 (153)	3886 (153)	3886 (153)	3886 (153)	3886 (153)	3886 (153)

Continued on next page

NR25796,00017C7 -19-26MAR09-1/3

		5080GV		5090GV		5100GV	
(B) Overall Length without Base Weight	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	4319 (170)	4319 (170)	4319 (170)	4319 (170)	4319 (170)	4319 (170)
• Tractors with 2-Post ROPS	mm (in.)	4319 (170)	4319 (170)	4319 (170)	4319 (170)	4319 (170)	4319 (170)

		5080GV		5090GV		5100GV	
(C) Overall Height	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	2410 (95)	2410 (95)	2410 (95)	2410 (95)	2410 (95)	2410 (95)
• Tractors with 2-Post ROPS	mm (in.)	2607 (103)	2607 (103)	2607 (103)	2607 (103)	2607 (103)	2607 (103)

		5080GV		5090GV		5100GV	
(D) Wheel Base	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	2093 (85)	2085 (85)	2093 (85)	2085 (85)	2093 (85)	2085 (85)
• Tractors with 2-Post ROPS	mm (in.)	2093 (85)	2085 (85)	2093 (85)	2085 (85)	2093 (85)	2085 (85)

		5080GV		5090GV		5100GV	
(E) Length from Center of Front Wheel to Base Weight Edge	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	1138 (45)	1146 (45)	1138 (45)	1146 (45)	1138 (45)	1146 (45)
• Tractors with 2-Post ROPS	mm (in.)	1138 (45)	1146 (45)	1138 (45)	1146 (45)	1138 (45)	1146 (45)

		5080GV		5090GV		5100GV	
(F) Length from Center of Rear Wheel to Draft Link Edge	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	1088 (43)	1088 (43)	1088 (43)	1088 (43)	1088 (43)	1088 (43)
• Tractors with 2-Post ROPS	mm (in.)	1088 (43)	1088 (43)	1088 (43)	1088 (43)	1088 (43)	1088 (43)

		5080GV		5090GV		5100GV	
(G) Angle of Daft Link from Ground	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	degrees and minutes	23° 30'	23° 30'	23° 30'	23° 30'	23° 30'	23° 30'
• Tractors with 2-Post ROPS	degrees and minutes	23° 30'	23° 30'	23° 30'	23° 30'	23° 30'	23° 30'

		5080GV		5090GV		5100GV	
(H) Angle of Base Weight Edge from Ground	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	degrees and minutes	21°	20° 6'	21°	20° 6'	21°	20° 6'
• Tractors with 2-Post ROPS	degrees and minutes	21°	20° 6'	21°	20° 6'	21°	20° 6'

		5080GV		5090GV		5100GV	
(I) Rear Wheel Tread Width	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	954-1354 (38-53)	954-1354 (38-53)	954-1354 (38-53)	954-1354 (38-53)	954-1354 (38-53)	954-1354 (38-53)
• Tractors with 2-Post ROPS	mm (in.)	954-1354 (38-53)	954-1354 (38-53)	954-1354 (38-53)	954-1354 (38-53)	954-1354 (38-53)	954-1354 (38-53)

Continued on next page

		5080GV		5090GV		5100GV	
(J) Maximum Width	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	1707 (67)[a]	1707 (67)[a]	1707 (67)[a]	1707 (67)[a]	1707 (67)[a]	1707 (67)[a]
• Tractors with 2-Post ROPS	mm (in.)	1707 (67)[a]	1707 (67)[a]	1707 (67)[a]	1707 (67)[a]	1707 (67)[a]	1707 (67)[a]

[a]with 12.4 R24 rear tires and 7.50-16 front tires; tread width = 1018 mm (40.08 in.)

		5080GV		5090GV		5100GV	
(K) Front Wheel Tread Width	**Unit**	**4WD**	**2WD**	**4WD**	**2WD**	**4WD**	**2WD**
• Tractors with Cab	mm (in.)	1004-1064 (40-42)	1068-1204 (42-47)	1004-1064 (40-42)	1068-1204 (42-47)	1004-1064 (40-42)	1068-1204 (42-47)
• Tractors with 2-Post ROPS	mm (in.)	1004-1064 (40-42)	1068-1204 (42-47)	1004-1064 (40-42)	1068-1204 (42-47)	1004-1064 (40-42)	1068-1204 (42-47)

NR25796,00017C7 -19-26MAR09-3/3

Safety Note Regarding the Subsequent Installation of Electrical and Electronic Appliances and/or Components

The machine is equipped with electronic components whose function may be influenced by electromagnetic radiation from other appliances. Such influences may be hazardous, so take the following safety instructions into account:

No tampering with the tractor's on-board electrical system is permitted. Subsequent installation of electrical/electronic appliances in the machine must make use of the sockets and connectors provided for this purpose. In every case, the user must verify whether the installation affects the electronics or other components. This applies particularly to:

- Implement control units/monitors
- Performance monitors
- Audio/video systems, communications systems

In particular, subsequently installed electrical/electronic components must comply with the relevant edition of EMC Directive 89/336/EEC, and be CE marked.

If mobile communication systems (e.g. radio communication, telephone) are to be installed subsequently, the following extra requirements must be met:

- Only devices with an approval complying with the valid national regulation (i.e. BZT approval in Germany) shall be installed;
- The device shall be installed securely;
- Portable or mobile devices may be operated in the vehicle only if connected to a fixed outside antenna;
- Transmitters shall be installed separately from the vehicle's electronics;
- The antenna must be installed in a professional manner, with a good ground connection between the antenna and the vehicle ground.

Wiring, installation and maximum permissible current supply must be as stated in the installation instructions of the machine manufacturer.

AJ20558,000014C -19-13FEB08-1/1

How to Calculate Maximum Permissible Download on Trailer Hitch

Calculation of maximum permissible download at the trailer hitch in relation to Load Index (LI)

- The load index can be read on the sidewall of the tire. If the index is not provided, refer to the tire's load capacity as quoted by the tire manufacturer.
- The load index is quoted in conjunction with a Speed index (SI)
- As a rule, the load capacity of the tire in kg can be derived directly from the LI; see the following table:

LI	kg	LI	kg	LI	kg	LI	kg
90	600	111	1090	132....	2000	153....	3650
91	615	112	1120	133....	2060	154....	3750
92	630	113	1150	134....	2120	155....	3875
93	650	114	1180	135....	2180	156....	4000
94	670	115	1215	136....	2240	157....	4125
95	690	116	1250	137....	2300	158....	4250
96	710	117	1285	138....	2360	159....	4375
97	730	118	1320	139....	2430	160....	4500
98	750	119	1360	140....	2500	161....	4625
99	775	120....	1400	141....	2575	162....	4750
100....	800	121....	1450	142....	2650	163....	4875
101....	825	122....	1500	143....	2725	164....	5000
102....	850	123....	1550	144....	2800	165....	5150
103....	875	124....	1600	145....	2900	166....	5300
104....	900	125....	1650	146....	3000	167....	5450
105....	925	126....	1700	147....	3075	168....	5600
106....	950	127....	1750	148....	3150	169....	5800
107....	975	128....	1800	149....	3250	170....	6000
108....	1000	129....	1850	150....	3350	171....	6150
109....	1030	130....	1900	151....	3450	172....	6300
110....	1060	131....	1950	152....	3550	173....	6500

As a general rule, SI A8 implies a top speed of 40 km/h (25 mph), while SI B implies a top speed of 50 km/h (31 mph). If the SI is different, the manufacturer's instructions apply.

Calculate maximum trailer hitch download as follows:

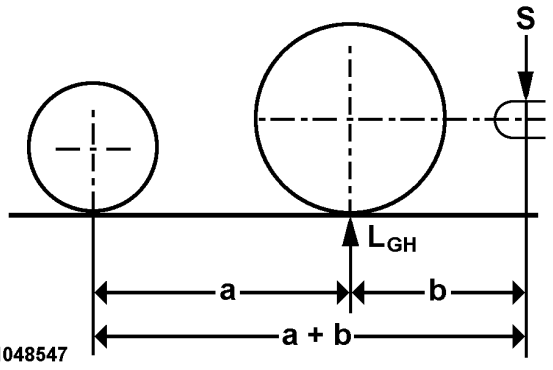
$$S = \frac{(H_{max} - L_{GH}) * a}{a + b}$$, where

$H_{max.}$ = the smaller value from 2*load capacity of a tire on the rear axle and the maximum permissible rear axle load in kg

L_{GH} = the mass in kg acting on the ground through the rear wheels (to be ascertained by weighing)

a = the wheelbase (the horizontal distance between the front and rear axles)

b = the rear overhang (the horizontal distance between the center of the rear axle and center of the hitch point)



LX1048547 —UN—20JUL09

Example of how to calculate maximum trailer hitch download:

Given that: Empty mass on rear axle L_{GH} = 1800 kg

Wheelbase a = 2100 mm

Overhang b = 600 mm

Tire marking = 130A8

Maximum permitted speed of tractor = 40 km/h (25 mph)

Permissible rear axle load = 3500 kg

$H_{max.}$ = 3500 kg
(1900 kg * 2 = 3800 kg, rear axle load = 3500 kg)

$$S = \frac{(3500\ kg - 1800\ kg) * 2100\ mm}{2100\ mm + 600\ mm} = 1322\ kg$$

CAUTION: At least 20% of the vehicle's total unladen mass must be on the front axle.

Trailer hitch download must not exceed the trailer hitch limit specified by the manufacturer.

OU12401,0001C7D -19-18JUL09-1/1

How to Calculate Permissible Mass

Calculating permissible tractor mass and permissible trailer mass on the basis of the D value

EC-approved, dynamically tested trailer hitches are always provided with a D value. This is calculated as follows:

$$D = \frac{G * A * B}{A + B}$$, where

D = D value of hitch
G = Gravitational constant 9.81 m/s^2
A = Tractor mass
B = Trailer mass

To calculate trailer mass for a given D value and a given tractor mass, and to calculate tractor mass for a given D value and a given trailer mass, use the following formulas:

Tractor mass $A = \frac{D * B}{G * B - D}$

Trailer mass $B = \frac{D * A}{G * A - D}$

*NOTE: If when calculating A the product of G*B exceeds the D value, or if when calculating B the product of G*A exceeds the D value, then the result of this calculation is negative. Even so, the D value is sufficient for every combination of tractor mass and trailer mass.*

Example of how to calculate permissible trailer mass:

Given that: D value, D = 55 kN = 55000 N
Tractor mass A = 7000 kg

$$B = \frac{55000\ N * 7000\ kg}{9.81\ m/s^2 * 7000\ kg - 55000\ N} = 28163\ kg$$

Pay close attention to permissible towed mass and tractor mass!

OU12401,0001C7C -19-14JUL09-1/1

Vibration

All operator's seats approved by John Deere are component type-approved in accordance with 78/764/EEC, being allocated an average of the vibration acceleration actually measured at the seat (a_{wS}), equivalent to ≤ 1.25 m/s^2.

This value must NOT be used to calculate vibration stress as per 2002/44/EC! Local John Deere dealers can provide assistance in assessing vibration stress.

Measures to reduce vibration may include:

- Appropriate style of driving, e.g. not too fast
- Correctly adjusted operator's seat
- Correct tire pressure

OULXBER,000193E -19-19JUL10-1/1

Serial Numbers

Identification Plates

Each tractor has the identification plates shown on these pages. The letters and numbers stamped on the plates identify a component or assembly. ALL these characters are needed when ordering parts or identifying a tractor or component. Also, they are needed for law enforcement to trace your tractor if it is ever stolen. ACCURATELY record these characters in the spaces provided.

AT,5SOM,211 -19-15JAN97-1/1

Product Identification Number

The machine's product identification number plate (A) is located on the left-hand side of the front support.

Due to different regulations, in some countries the location and dimensions of the identification plate can vary.

Product Identification Number (13 Digits)

*													*

LX1049762 —UN—19JUL10

NR25796,0001826 -19-19JUL10-1/1

Engine Serial Number

The engine serial number plate is located on the right-hand side of the engine and behind the fuel filter.

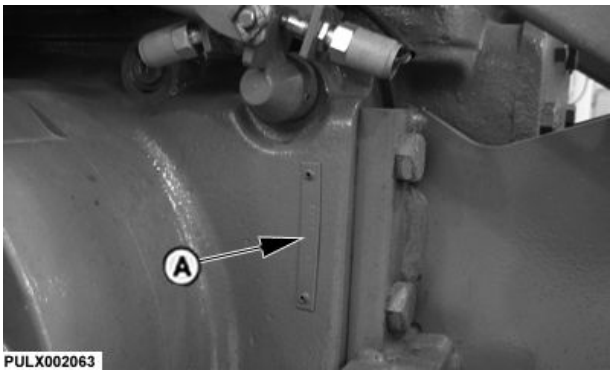
Engine Serial Number_____

AT16163 —UN—24JAN03

NR25796,00017CB -19-26MAR09-1/1

Transmission Serial Number

The transmission (drive train) serial number (A) is located at the rear of the machine on the bottom left-hand corner of the PTO housing.



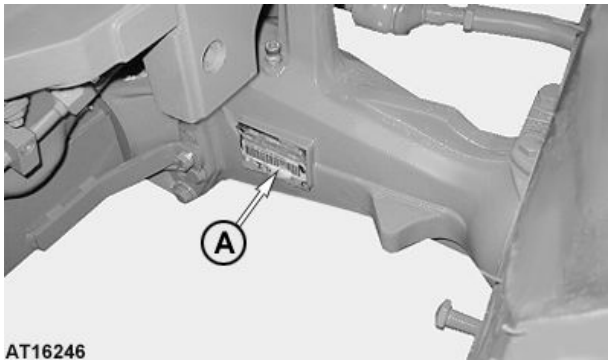
PULX002063 —UN—12OCT08

NR25796,00017CC -19-04NOV08-1/1

Front Wheel Drive Serial Number

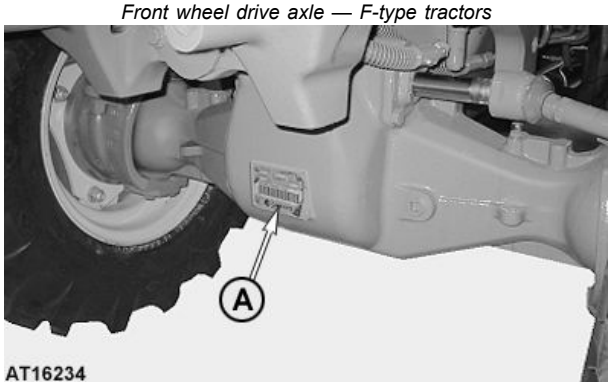
The Front Wheel Drive serial number plate (A) is located on the rear side of the right-hand axle housing.

Front Wheel Drive Serial Number_____



AT16246 —UN—11FEB03

Front wheel drive axle — F-type tractors



AT16234 —UN—11FEB03

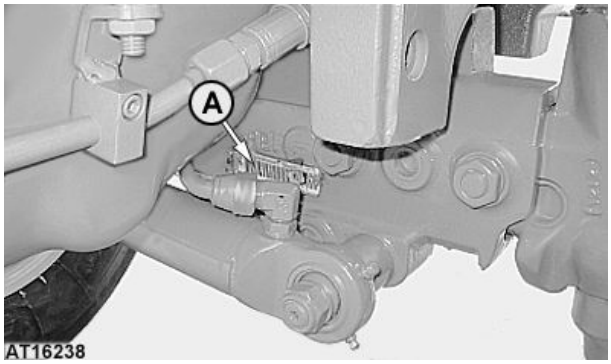
Front wheel drive axle — V-type tractors

OULXA64,0000D84 -19-11SEP03-1/1

Front Axle Serial Number (Tractros with Two-Wheel Drive)

The front axle serial number plate (A) is located on the rear side of the right-hand axle housing.

Front Axle Serial Number_____



AT16238 —UN—11FEB03

OULXA64,0000D83 -19-11SEP03-1/1

Index

Continued on next page

Continued on next page

Continued on next page

Continued on next page

Page

U

V

W

John Deere Service Keeps You On the Job

John Deere Parts

We help minimize downtime by putting genuine John Deere parts in your hands in a hurry.

That's why we maintain a large and varied inventory—to stay a jump ahead of your needs.

TS100 —UN—23AUG88

DX,IBC,A -19-04JUN90-1/1

The Right Tools

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.

TS101 —UN—23AUG88

DX,IBC,B -19-04JUN90-1/1

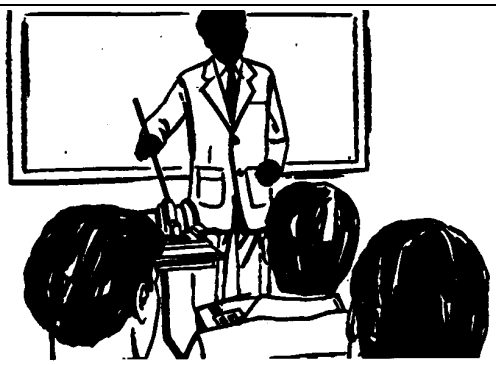
Well-Trained Technicians

School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result?

Experience you can count on!



TS102 —UN—23AUG88

DX,IBC,C -19-04JUN90-1/1

Prompt Service

Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances: see us, depend on us.

JOHN DEERE SERVICE SUPERIORITY: We'll be around when you need us.

TS103 —UN—23AUG88

DX,IBC,D -19-04JUN90-1/1