6105D, 6115D, 6130D and 6140D Tractors, Operator's Manual (North America Edition) (050001-)

JOHN DEERE

OPERATOR'S MANUAL

6105D, 6115D, 6130D and 6140D Tractors (North America Edition, January 2014) (050001-)

OMSU30710 ISSUE L3 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

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.

John Deere Mexico
PRINTED IN INDIA

Foreword

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

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

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

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

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

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

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

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

This tractor is designed solely for use in customary agricultural or similar operations. 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.

Continued on next page

PY15197—UN—04JUN12

SP21231,00002CC-19-23JAN14-2/2

Required Emission-Related Information

Service Provider

A repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall, and all other services paid for by John Deere must be performed at an authorized John Deere service center.

DX,EMISSIONS,REQINFO-19-08DEC23-1/1

Gasoline Engine Coolant

Preferred Coolants

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties including the emissions warranty are not conditioned on the use of John Deere coolants, parts, or service.

The following pre-mix engine coolants are preferred:

- **John Deere COOL-GARD™II**
- **John Deere COOL-GARD II PG**

COOL-GARD II pre-mix coolant is available in several concentrations with different freeze protection limits as shown in the following table.

COOL-GARD II pre-mix	Freeze Protection Limit
COOL-GARD II 20/80	-9°C (16°F)
COOL-GARD II 30/70	-16°C (3°F)
COOL-GARD II 50/50	-37°C (-34°F)
COOL-GARD II 55/45	-45°C (-49°F)
COOL-GARD II PG 60/40	-49°C (-56°F)
COOL-GARD II 60/40	-52°C (-62°F)

Not all COOL-GARD II pre-mix products are available in all countries.

Use COOL-GARD II PG when a non-toxic coolant formulation is required

Additional Recommended Coolants

The following engine coolant is also recommended:

- John Deere COOL-GARD II Concentrate in a 40—60% mixture of concentrate with quality water.

IMPORTANT: When mixing coolant concentrate with water, do not use less than 40% or greater than 60% concentration of coolant. Less than 40% gives inadequate additives for corrosion protection. Greater than 60% can result in coolant gelation and cooling system problems.

Other Coolants

Other ethylene glycol or propylene glycol base coolants may be used if they meet the following specifications:

- Pre-mix coolant meeting ASTM D6210 requirements
- Are nitrite-free
- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

If coolant meeting one of these specifications is unavailable, use a coolant concentrate or pre-mix coolant that has a minimum of the following chemical and physical properties:

- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Is formulated with a nitrite-free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

Water Quality

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

When COOL-GARD II or COOL-GARD II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than COOL-GARD II or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.[1]

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

[1] Coolant analysis may extend the service interval of other "Coolants" to a maximum not to exceed the interval of Cool-Gard II coolants. Coolant analysis means taking a series of coolant samples at 1000 hour increments beyond the normal service interval until either the data indicate the end of useful coolant life or the maximum service interval of Cool-Gard II coolants is reached.

DX,COOL5-19-13JAN18-1/1

Look For Supplemental Information

Occasionally new or revised information will become available after manuals are printed. To get this up-to-date information into your hands, publication supplements are prepared and supplied to the field in the machine literature package.

Supplements can be supplied in the following forms and are usually identified with one of these titles:

- Direction(s) Sheet
- Installation Instructions
- Publications Supplement

Before your initial review of the Operator's Manual, look through the machine literature package to see if any supplemental information has been provided. If supplied, review this information to determine which operating procedures are impacted or modified by the revised instructions. Pay close attention to "CAUTION" and "IMPORTANT" statements as they address your safety, the safety of others, and safe operation of the machine.

When Operator's Manuals are revised, the supplemental information is incorporated directly into the manual, thereby eliminating the supplement.

PX03972,000053E-19-17DEC08-1/1

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

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Recognize Safety Information

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

Follow recommended precautions and safe operating practices.

T81389—UN—28JUN13

DX,ALERT-19-03OCT22-1/1

Understand Signal Words

TS187—19—30SEP88

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

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

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

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards. DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

DX,SIGNAL-19-05OCT16-1/1

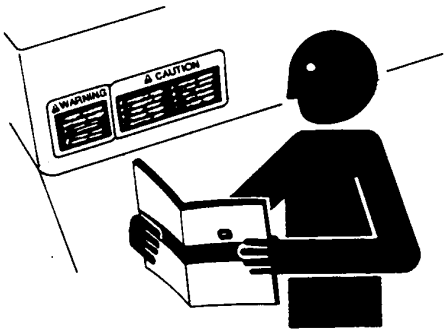
Follow Safety Instructions

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

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

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

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



TS201—UN—15APR13

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

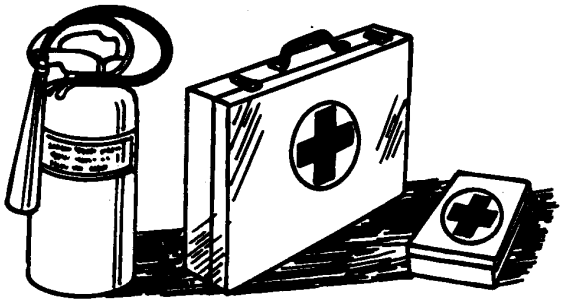
DX,READ-19-01AUG22-1/1

Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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



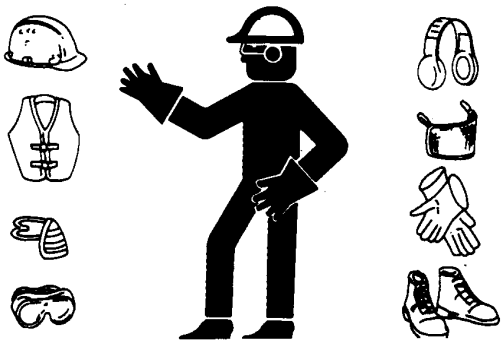
TS291—UN—15APR13

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

Wear Protective Clothing

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

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



TS206—UN—15APR13

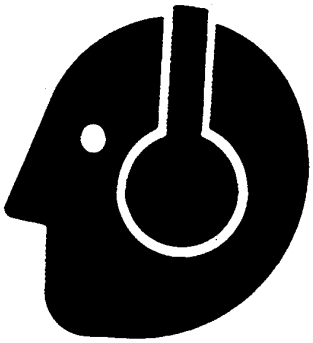
DX,WEAR2-19-03MAR93-1/1

Protect Against Noise

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

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

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



TS207—UN—23AUG88

DX,NOISE-19-03OCT17-1/1

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.

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

TS202—UN—23AUG88

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.

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

TS1356—UN—18MAR92

DX,FIRE3-19-14MAR14-1/1

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: Avoid personal injury.

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

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

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

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

TS227—UN—15APR13

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

DX,FIRE4-19-22AUG13-1/1

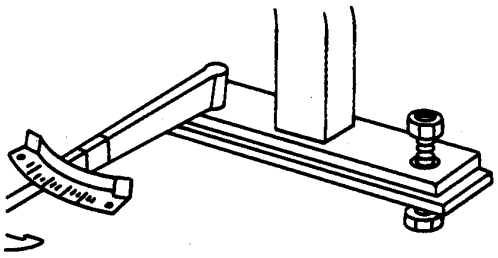
Keep ROPS Installed Properly

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.



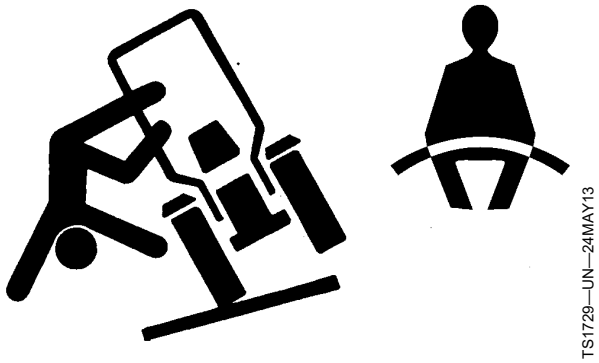
TS212—UN—23AUG88

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

Use Foldable ROPS and Seat Belt Properly

Avoid crushing injury or death during rollover.

- If this machine is equipped with a foldable rollover protective structure (ROPS), keep the ROPS in the fully extended and locked position. USE a seat belt when you operate with a ROPS in the fully extended position.
  - Hold the latch and pull the seat belt across the body.
  - Insert the latch into the buckle. Listen for a click.
  - Tug on the seat belt to make sure that the belt is securely fastened.
  - Snug the seat belt across the hips.
- If this machine is operated with the ROPS folded (for example, to enter a low building), drive with extreme caution. DO NOT USE a seat belt with the ROPS folded.
- Return the ROPS to the raised, fully extended position as soon as the machine is operated under normal conditions.



TS1729—UN—24MAY13

DX,FOLDROPS-19-22AUG13-1/1

Stay Clear of Rotating Drivelines

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.

Only use power take-off driveshafts with adequate guards and shields.

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 driveshaft 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.

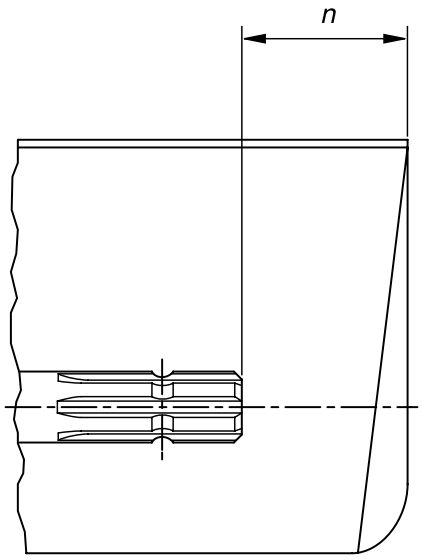
The angle at which the primary implement PTO driveshaft can be inclined may be reduced depending on the shape and size of the tractor master shield and the shape and size of the guard of the primary implement PTO driveshaft.

Do not raise implements high enough to damage the tractor master shield or guard of primary implement PTO driveshaft. Detach the PTO driveline shaft if it is necessary to increase implement height. (See Attching/Detaching PTO Driveline)

When using Type 3/4 PTO, inclination and turning angles may be reduced depending on type of PTO master shield and coupling rails.

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.)
4	57.5 mm (2.264 in.)	22	100 mm (4.00 in.)

TS1644—UN—22AUG95



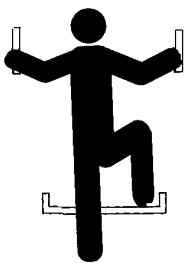
H96219—UN—29APR10

DX,PTO-19-28FEB17-1/1

Use Steps and Handholds Correctly

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.



T133468—UN—15APR13

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

Read Operator's Manuals for ISOBUS Controllers

In addition to GreenStar™ Applications, this display can be used as a display device for any ISOBUS Controller that meets ISO 11783 standard. This includes capability to control ISOBUS implements. When used in this manner, information and control functions placed on the display are provided by the ISOBUS Controller and are the responsibility of the ISOBUS Controller manufacturer.

GreenStar is a trademark of Deere & Company

Some of these functions could pose a hazard to either the operator or a bystander. Read the Operator's Manual provided by the ISOBUS Controller manufacturer and observe all safety messages in manual and on ISOBUS Controller product prior to use.

NOTE: ISOBUS refers to the ISO Standard 11783

DX,WW,ISOBUS-19-15JUL15-1/1

Use Seat Belt Properly

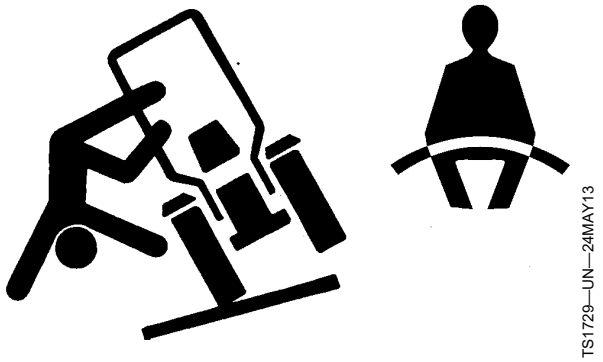
Avoid crushing injury or death during rollover.

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

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

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

Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion. Replace only with replacement parts approved for your machine. See your John Deere dealer.



TS1729—UN—24MAY13

DX,ROPS1-19-22AUG13-1/1

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.
- Operators must be mentally and physically capable of accessing the operator's station and/or controls, and operating the machine properly and safely.
- Never operate machine when distracted, fatigued, or impaired. Proper machine operation requires the operator's full attention and awareness.
- 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.
- Follow the instructions outlined in the operator's manual of any mounted or trailed machinery or trailer. Do not operate a combination of tractor-machine or tractor-trailer unless all instructions have been followed.
- Make sure that everyone is clear of machine, attached equipment, and work area before starting engine or operation.
- Stay clear of the three-point linkage and pickup hitch (if equipped) when controlling them.
- Keep hands, feet, and clothing away from power-driven parts.

Driving Concerns

- Never get on or off a moving tractor.
- Complete any required training prior to operating vehicle.
- 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 a 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.
- Stability degrades when attached implements are at high position.
- Couple brake pedals together for road travel.
- Pump brakes when stopping on slippery surfaces.
- Regularly clean fenders and fender valances (mud flaps) if installed. Remove dirt before driving on public roadways.

Heated and Ventilated Operator's Seat

- An overheated seat heater can cause a burn injury or damage to the seat. To reduce the risk of burns, use caution when using the seat heater for extended periods of time, especially if the operator cannot feel temperature change or pain to the skin. Do not place objects on the seat, such as a blanket, cushion, cover, or similar item, which can cause the seat heater to overheat.

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, place implement/attachment control devices in neutral, and securely engage park mechanism, including the park pawl and park brake. In addition, if the 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.

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 are:

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

DX,WW,TRACTOR-19-08MAY19-1/1

Avoid Backover Accidents

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

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

PC10857XW—UN—15APR13

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

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.

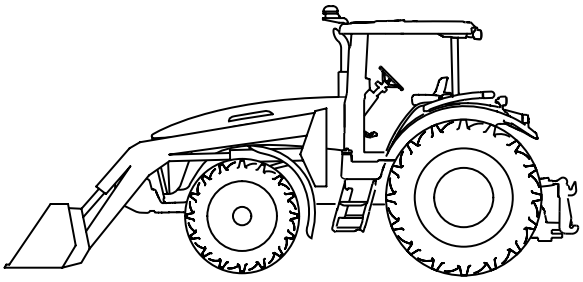
Never allow anyone to walk or work under a raised loader.

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

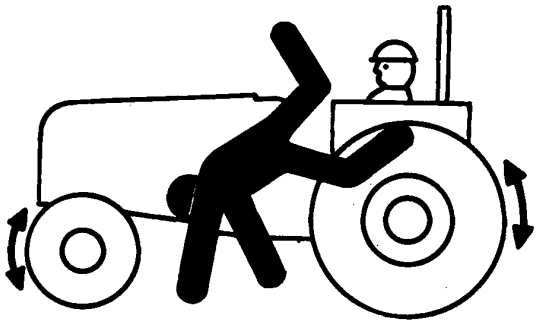
Ballast tractor in accordance to Ballast Recommendations in PREPARE TRACTOR section.

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.

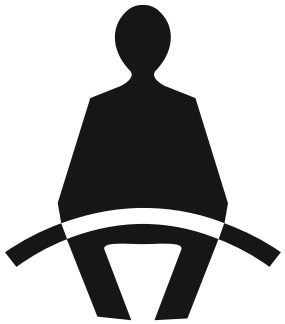


TS290—UN—23AUG88

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

Instructional Seat

The instructional seat, if so equipped, has been provided only for training operators or diagnosing machine problems.



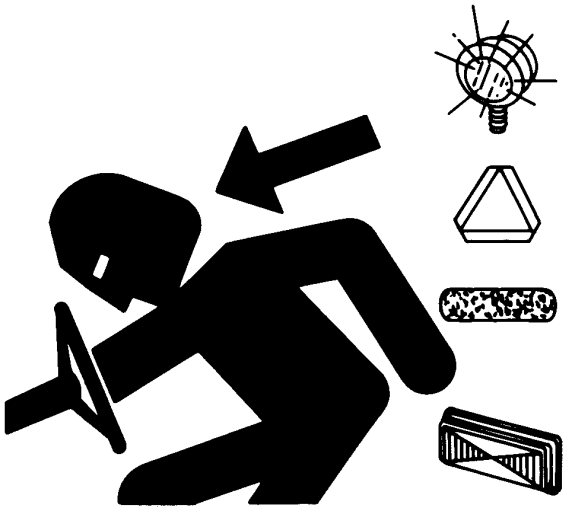
TS1730—UN—24MAY13

DX,SEAT,NA-19-22AUG13-1/1

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

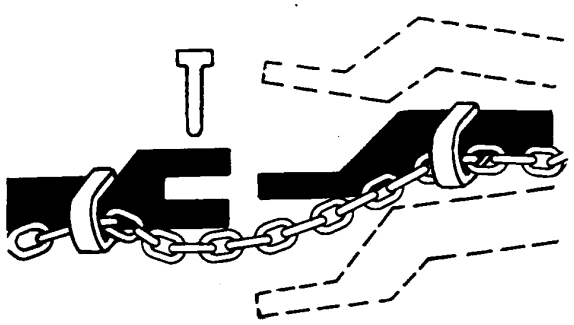
DX,FLASH-19-07JUL99-1/1

Use a Safety Chain

A safety chain will help control drawn equipment should it accidentally separate from the drawbar.

Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning.

See your John Deere dealer for a chain with a strength rating equal to or greater than the gross weight of the towed machine. Do not use safety chain for towing.



TS217—UN—23AUG88

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

Transport Towed Equipment at Safe Speeds

Do not exceed the maximum transport speed. This towing unit may be capable of operating at transport speeds that exceed the maximum allowable transport speed for 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 towing unit/implement combination
- Reduced or no ability to stop during braking
- Implement tire failure
- Damage to the implement structure or its components

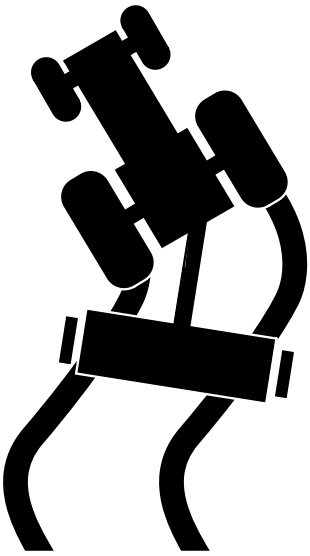
Implements shall be equipped with brakes if the maximum fully loaded weight is greater than 1500 kg (3307 lbs) and greater than 1.5 times the weight of the towing unit.

Example: Implement mass is 1600 kg (3527 lbs) and towing unit mass is 1600 kg (3527 lbs), example implement is not required to have brakes.

Implements without brakes: Do not transport at speeds greater than 32 km/h (20 mph).

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).



TS1686—UN—27SEP06

- When transporting at speeds up to 40 km/h (25 mph) the fully loaded implement must weigh less than 4.5 times the towing unit weight.
- When transporting at speeds between 40—50 km/h (25—31 mph) the fully loaded implement must weigh less than 3.0 times the towing unit weight.

When towing a trailer, become familiar with the braking characteristics and ensure the compatibility of the tractor/trailer combination in regard to the deceleration rate.

DX,TOW1-19-28FEB17-1/1

Use Caution on Slopes, Uneven Terrain, and Rough Ground

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 the tractor to tip over rearward. Back out of these situations if possible.

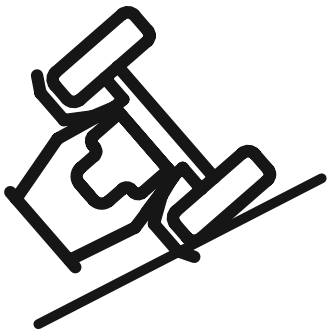
Danger of overturn increases greatly with narrow tread setting, at high speed.

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.

Uneven terrain or rough ground can cause loss-of-control and tip-over accidents, which can result in severe injury or death. Operation on uneven terrain or rough ground requires extra caution.

Never drive near the edge of a gully, drop-off, ditch, steep embankment, or a body of water. The machine could



RXA0103437—UN—01JUL09

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.

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-19-28FEB17-1/1

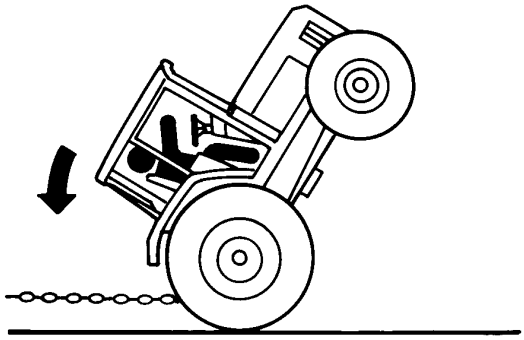
Freeing a Mired Machine

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

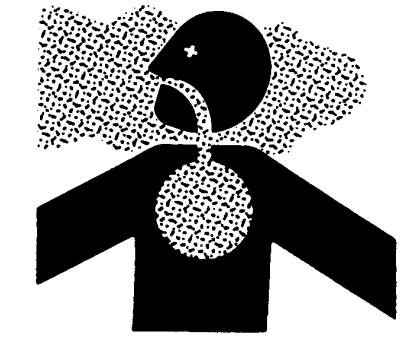
DX,MIRED-19-07JUL99-1/1

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—15APR13

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.
- 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.

TS220—UN—15APR13

A34471

A34471—UN—11OCT88

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:

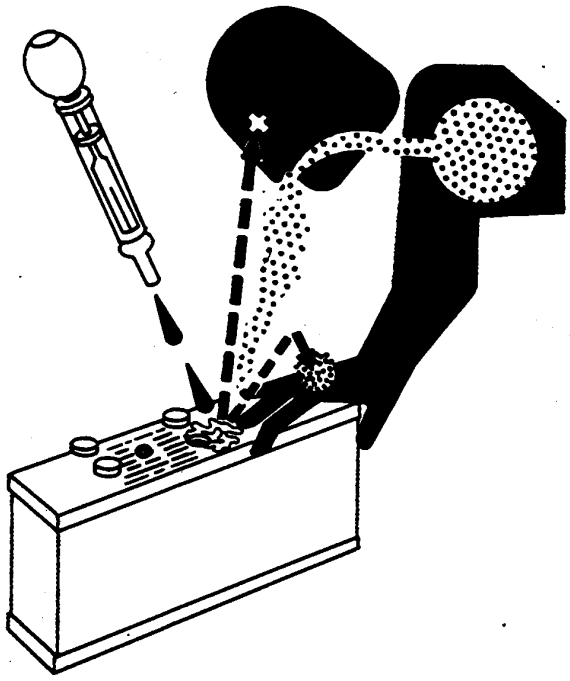
1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

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—15APR13



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

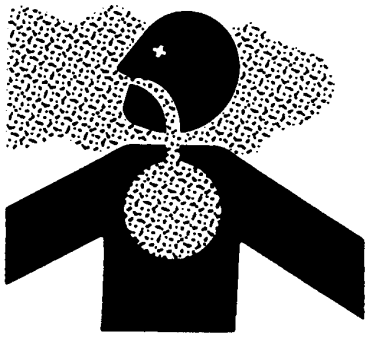
Avoid potentially toxic fumes and dust.

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—15APR13

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

Dispose of paint and solvent properly.

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

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 away from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

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

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

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

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

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

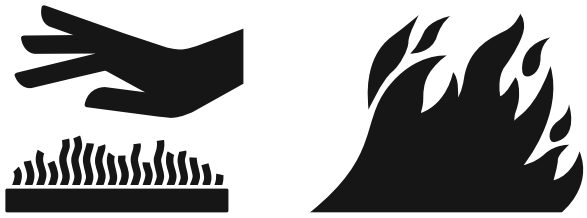
TS218—UN—23AUG88

DX,SERV-19-28FEB17-1/1

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:

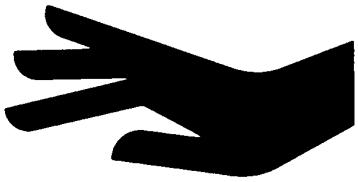
- Only engage power-driven parts required by service procedure
- Ensure that other people are clear of operator station and machine

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

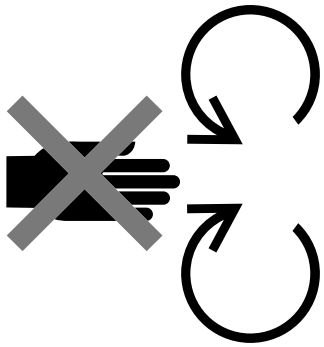
Always disable movement (neutral), set the parking brake or mechanism and disconnect power to attachments or tools before leaving the operator's station.

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

TS227—UN—15APR13



TS271—UN—23AUG88



TS1693—UN—09DEC09

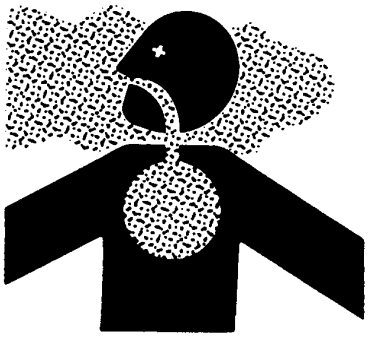
TS1695—UN—07DEC09

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—15APR13

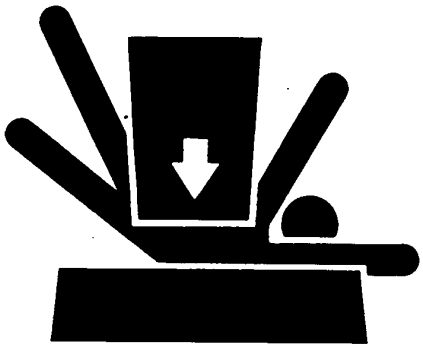
DX,AIR-19-17FEB99-1/1

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.

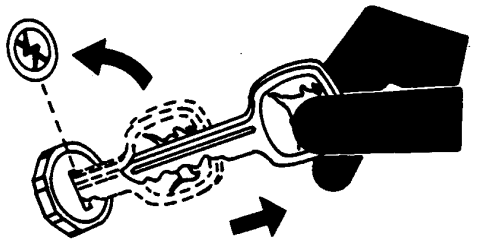
TS177—UN—11JAN89

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

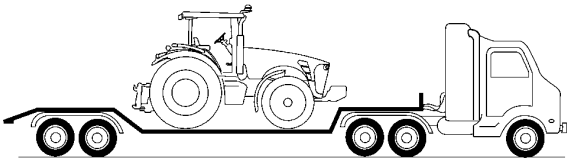
DX,PARK-19-04JUN90-1/1

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—15APR13

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—15APR13

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.

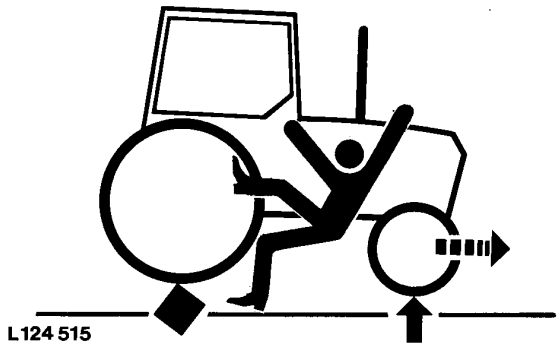
RXA0103438—UN—11JUN09

Wheels and tires are heavy. When handling wheels and tires use a safe lifting device or get an assistant to help lift, install, or remove.

DX,WW,RIMS-19-28FEB17-1/1

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.

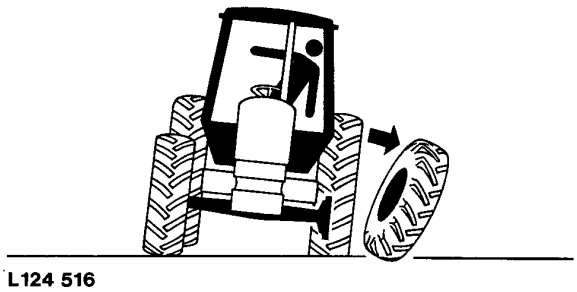


L124515—UN—06AUG94

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.

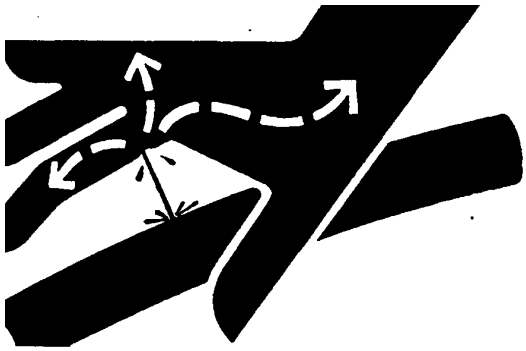
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

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.

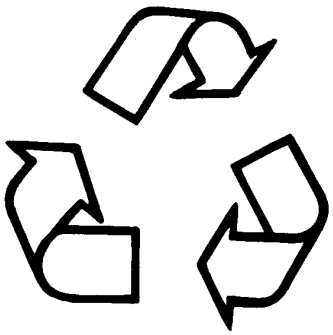
TS219—UN—23AUG88

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

Decommissioning — Proper Recycling and Disposal of Fluids and Components

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

- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses, during the removal or handling of objects and materials.
- Follow instructions for specialized components.
- Release stored energy by lowering suspended machine elements, relaxing springs, disconnecting the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.
- Minimize exposure to components which may have residue from agricultural chemicals, such as fertilizers and pesticides. Handle and dispose of these components appropriately.
- Carefully drain engines, fuel tanks, radiators, hydraulic cylinders, reservoirs, and lines before recycling components. Use leak-proof containers when draining fluids. Do not use food or beverage containers.
- Do not pour waste fluids onto the ground, down a drain, or into any water source.
- Observe all national, state, and local laws, regulations, or ordinances governing the handling or disposal of waste fluids (example: oil, fuel, coolant, brake fluid); filters; batteries; and, other substances or parts. Burning of flammable fluids or components in other than specially designed incinerators may be prohibited by law and could result in exposure to harmful fumes or ashes.
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air conditioning refrigerants which could damage the atmosphere if allowed to escape.
- Evaluate recycling options for tires, metal, plastic, glass, rubber, and electronic components which may be recyclable, in part or completely.
- Contact your local environmental or recycling center, or your John Deere dealer for information on the proper way to recycle or dispose of waste.



TS1133—UN—15APR13

DX,DRAIN-19-01JUN15-1/1

Replace Damaged or Missing Safety Signs

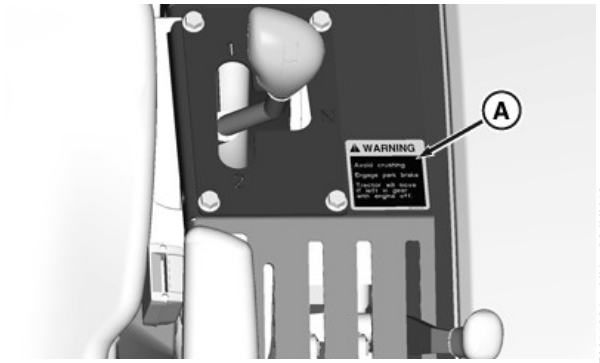
IMPORTANT: Install new safety signs if old signs are damaged, lost or can not be read. Install a new safety sign when replacing any part that previously had a safety sign.

Keep safety signs clean and in good condition. Replacement signs are available from your John Deere dealer.

TS231—19—07OCT88

OUMX005,00015FD-19-22MAR05-1/1

Warning Decal — Park Brake



PY15201—UN—02JUN12

Park Brake Warning Label (OOS Tractor)

A— Engage Park Brake Warning Decal

PY15503—UN—21JUN12

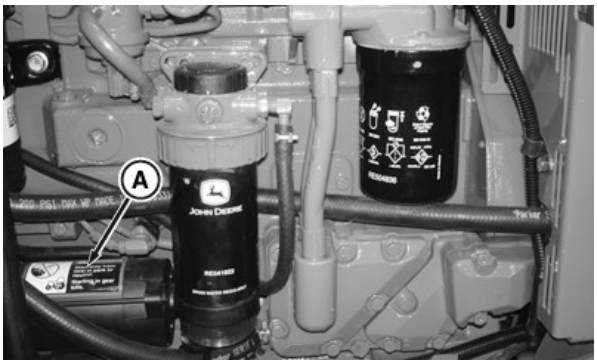
P/N: SU294211

Avoid crushing. Engage park brake.

Tractor will move if left in gear with engine off.

SP21231,000029D-19-04JUL12-1/1

Danger Decal — Starting Engine



PY15203—UN—02JUN12

Engine Right-Hand Side

PY155502—UN—21JUN12

P/N: T146102

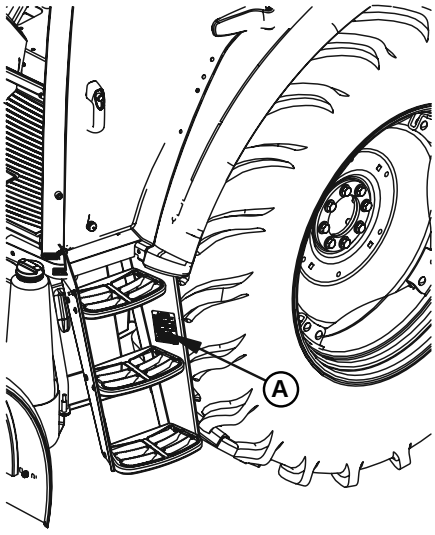
A— Starting Engine Decal

Start only from seat in park or neutral.

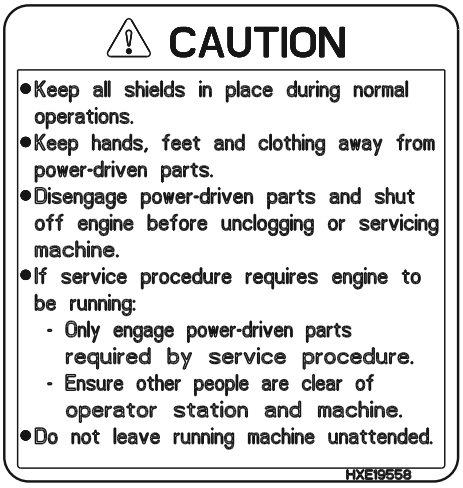
Starting in gear kills.

SP21231,000029E-19-04JUL12-1/1

Caution Decal - Power-Driven Parts



PY15629—UN—07SEP12



PY15630—UN—07SEP12

P/N: HXE19558

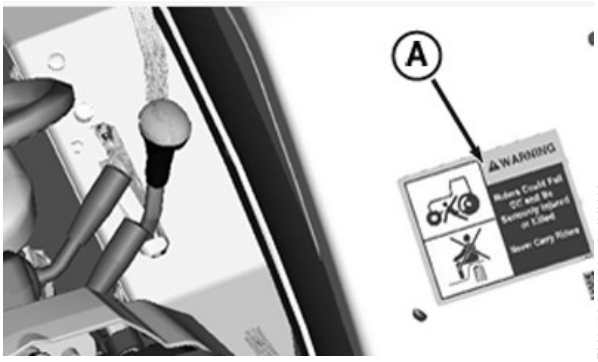
A— Caution Decal

Power-Driven Parts

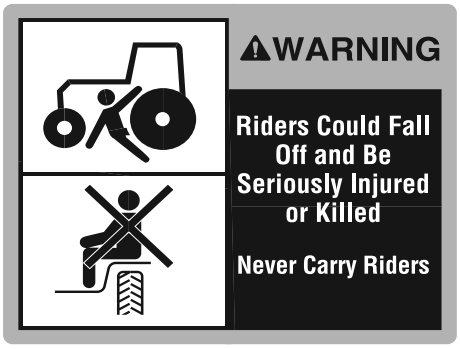
- Keep all shields in place during normal operations.
- Keep hands, feet and clothing away from power-driven parts.
- Disengage power-driven parts and shut off engine before unclogging or servicing machine.
- If service procedure requires engine to be running:
  1. Only engage power-driven parts required by service procedure.
  2. Ensure other people are clear of operator station and machine.
- Do not leave running machine unattended.

SV86979,0000044-19-07SEP12-1/1

Warning Decal — Keep Riders Off



PY15524—UN—27JUN12



PY15504—UN—21JUN12

P/N: R208983

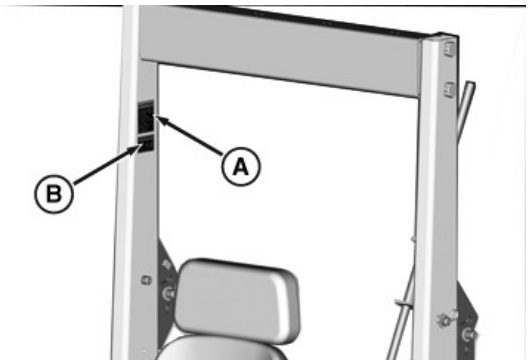
A— Warning Decal

Riders could fall off and be seriously injured or killed.

Never carry riders.

SV86979,0000043-19-20AUG12-1/1

Warning Decal — ROPS



PY15206—UN—02JUN12

Right-Hand Side

PY15505—UN—21JUN12

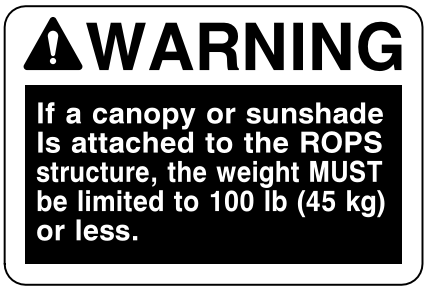
(A) P/N: R135987

To maintain unimpaired operator protection and manufacturer's ROPS certification:

- Damaged ROPS structures must be replaced, not repaired or revised.
- Any alteration to the ROPS must be approved by the manufacturer.

If a canopy or sunshade is attached to the ROPS structure, the weight MUST be limited to 100 lb (45 kg) or less.

A—Operator Protection Decal B—ROPS Safety Decal

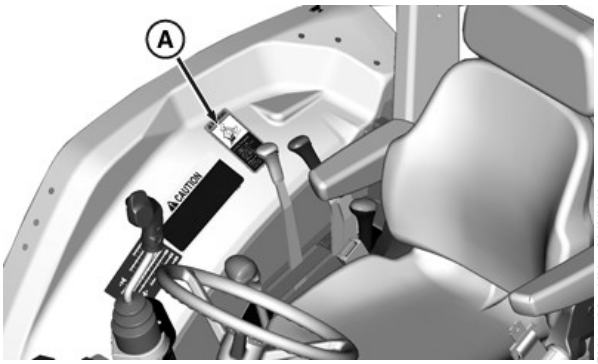


PY15506—UN—21JUN12

(B) P/N: R141735

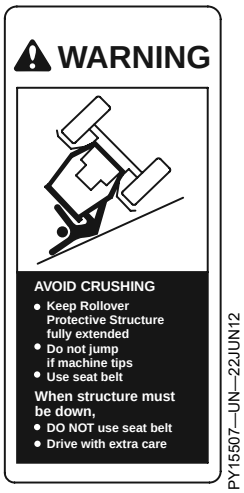
SV86979,0000041-19-04JUL12-1/1

Warning Decal — Avoid Crushing



PY15523—UN—22JUN12

Right-Hand Side



PY15507—UN—22JUN12

P/N: R117491

A— Warning Decal

AVOID CRUSHING

- Keep Rollover Protective Structure fully extended.
- Do not jump if machine tips.
- Use seat belt.

When structure must be down:

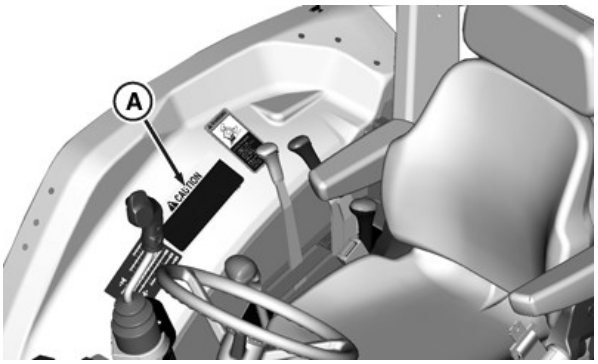
- DO NOT use seat belt.
- Drive with extra care.

SV86979,0000042-19-22AUG12-1/1

Caution Decal — Safety Instructions

1. Read Operator's Manual before operating this tractor.
2. Keep all shields in place.
3. Hitch towed loads only to drawbar to avoid rearward upset.
4. Make certain everyone is clear of machine before starting engine operation.
5. Keep all riders off tractor and equipment.
6. Keep hands, feet and clothing away from power-driven parts.
7. Reduce speed when turning or applying individual brakes or operating around hazards, on rough ground or steep slopes.
8. Couple brake pedals together for road travel.
9. Use flashing warning lights on highway unless prohibited by law.
10. Stop engine, lower equipment to ground and shift to "PARK" or set brakes securely before dismounting.
11. Wait for all movement to stop before servicing machinery.
12. Remove key if leaving tractor unattended.

A— Caution Decal



PY15202—UN—22JUN12

Right-Hand Side

PY15508—UN—21JUN12

P/N: R117679

SV86979,0000048-19-23JUN12-1/1

Safety Decals — Cab

PY15511—UN—21JUN12

Inside of the Cab

PY15509—UN—21JUN12

P/N: R135987

AVOID CRUSHING:

- Do not jump if machine tips.

Continued on next page

SP21231,00002D8-19-21AUG12-1/2

USE SEAT BELT:

- Pull belt fully from retractors and adjust for best protection.

To maintain unimpaired operator protection and manufacturer's ROPS certification:

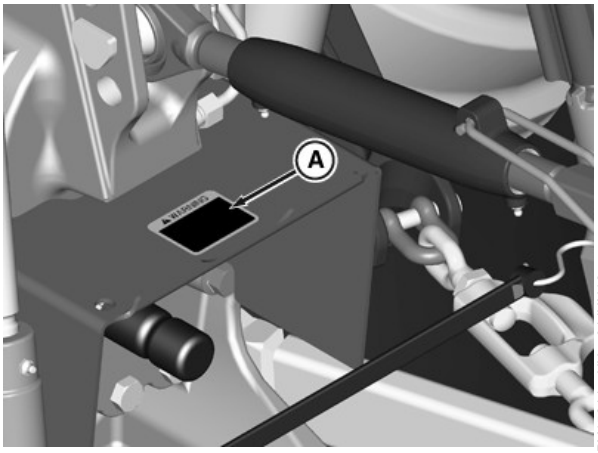
- Damaged ROPS structures must be replaced, not repaired or revised.
- Any alteration to the ROPS must be approved by the manufacturer.

CAUTION:

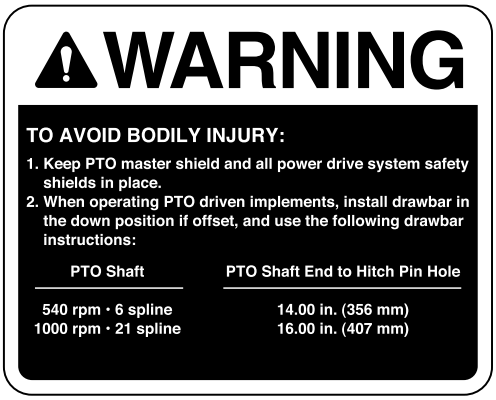
1. Read Operator's Manual before operating this tractor.
2. Keep all shields in place.
3. Hitch towed loads only to drawbar to avois rearward upset.
4. Make certain everyone is clear of machine before starting engine operation.
5. Keep all riders off tractor and equipment.
6. Keep hands, feet and clothing away from power-driven parts.
7. Reduce speed when turning or applying individual brakes or operating around hazards, on rough ground or steep slopes.
8. Couple brake pedals together for road travel.
9. Use flashing warning lights on highway unless prohibited by law.
10. Stop engine, lower equipment to ground and shift to "PARK" or set brakes securely before dismounting.
11. Wait for all movement to stop before servicing machinery.
12. Remove key if leaving tractor unattended.

SP21231,00002D8-19-21AUG12-2/2

Warning Decal — PTO Shield and Drawbar Instructions



PY15244—UN—04JUN12



PY15510—UN—21JUN12

P/N: R212165

A— Warning Decal

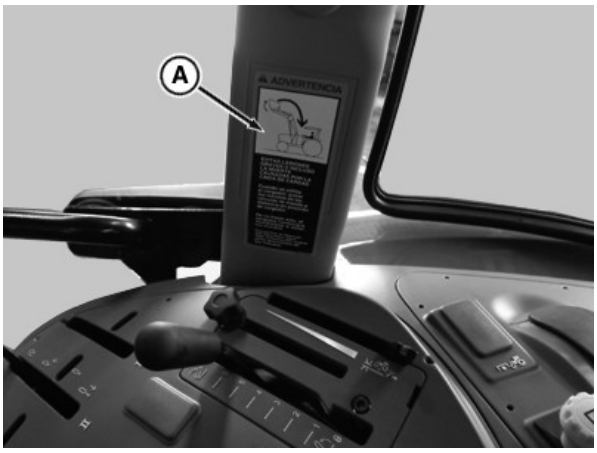
To Avoid Bodily Injury:

1. Keep PTO master shield and all power drive system safety shields in place.
2. When operating PTO driven implements, install drawbar in the down position if offset, and use the following drawbar instructions:

PTO Shaft	PTO Shaft End to Hitch Pin Hole
540 rpm, 6 spline	14.00 in (356 mm)
1000 rpm, 21 spline	16.00 in (407 mm)

SV86979,0000039-19-04JUL12-1/1

Warning Decal - SCV Selector Knobs in Loader Position, Cab



PY13187—UN—30NOV12

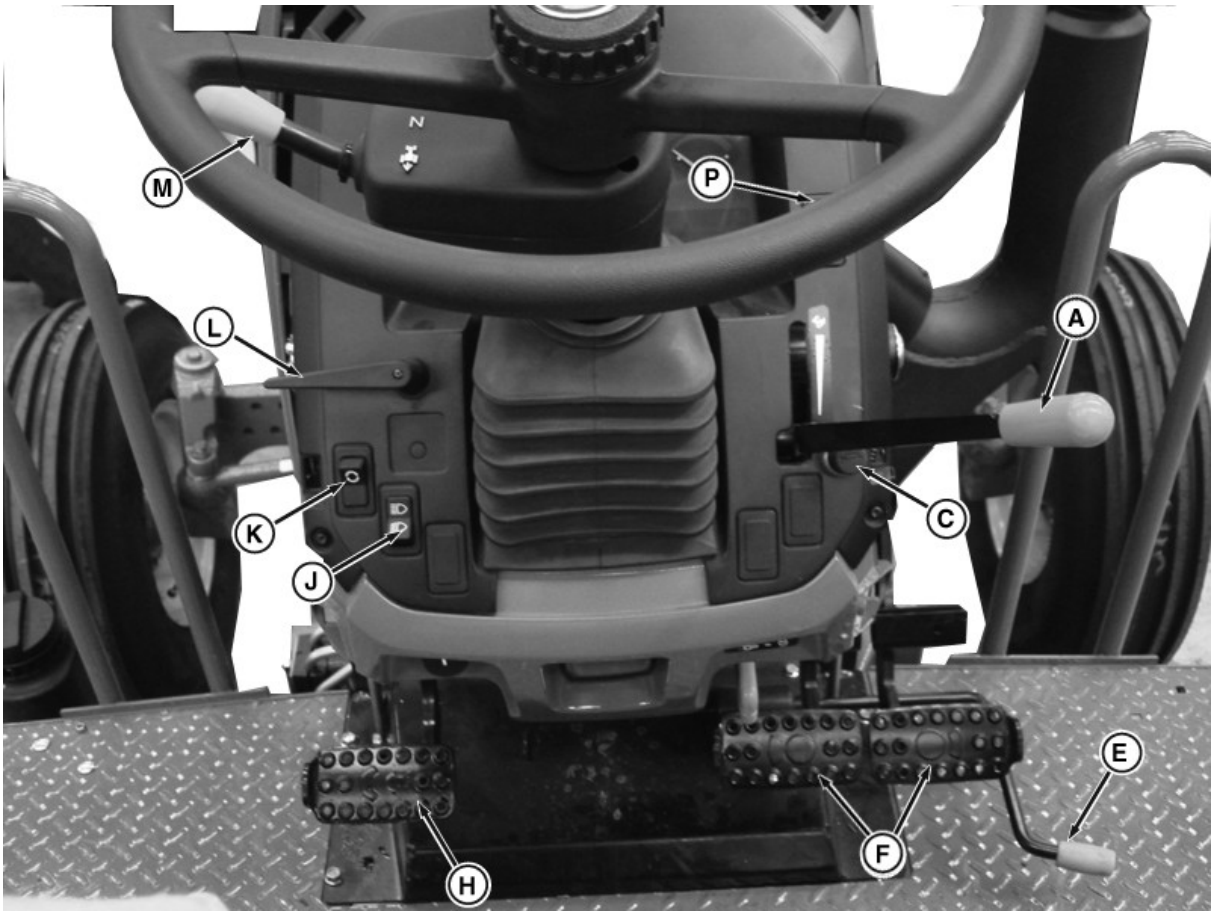
P16655—UN—07JAN13

R117493

- Avoid injury or death caused by falling loads.
- When using loader always put SCV selector knobs in loader position.
- If you do not, loader will continue to move after controls are released.
- See Operators Maual for use of other knob positions.

PX03972,0000065-19-07JAN13-1/1

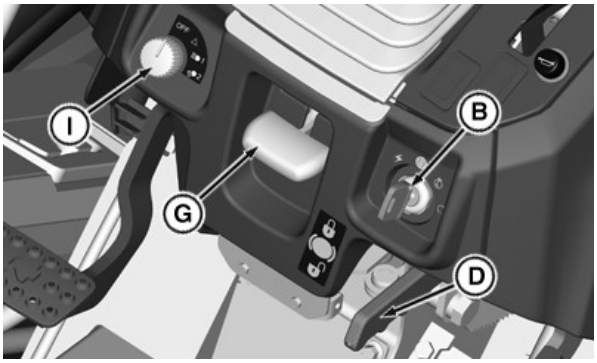
Tractor Controls



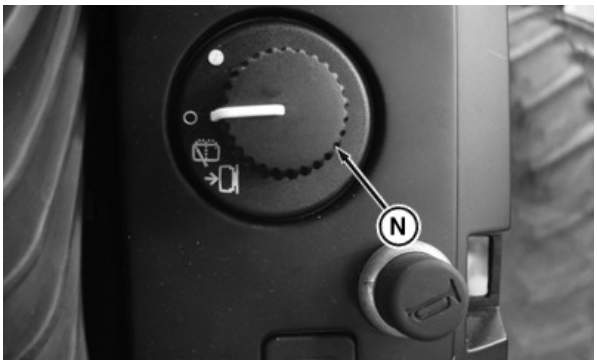
PY15167—UN—10AUG12

Continued on next page

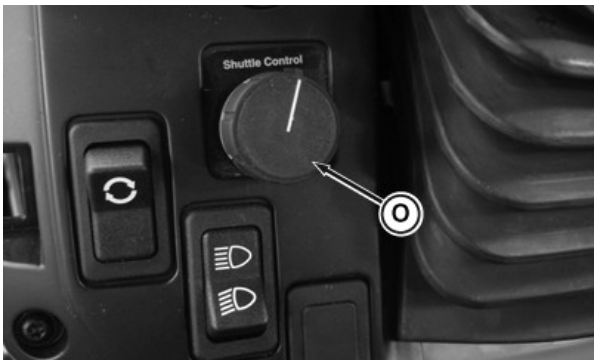
SP21231,00002B7-19-10AUG12-1/2



PY16312—UN—10AUG12



PY15168—UN—01JUN12

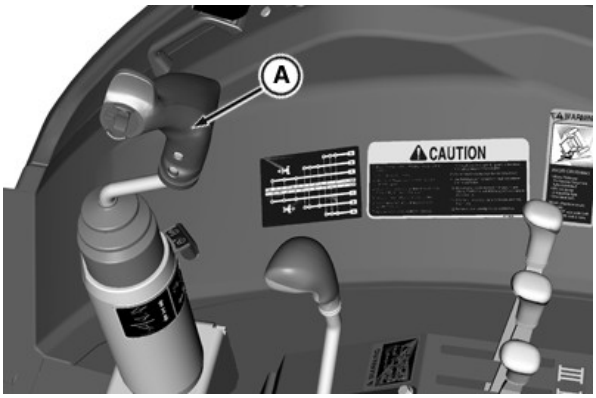


PY15169—UN—01JUN12

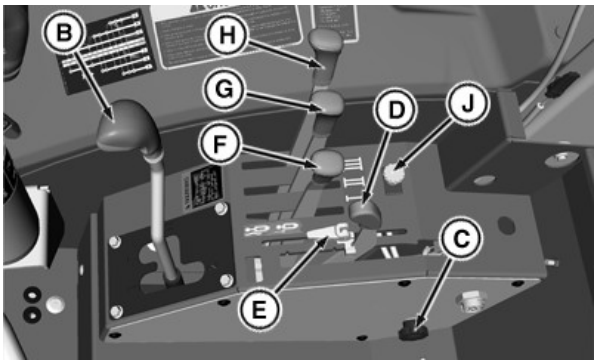
A—Hand Throttle (OOS)
B—Ignition Switch
C—Horn Button
D—Parking Brake Lever
E—Foot Throttle
F—Brake Pedals
G—Steering Wheel Tilt Lever (If Equipped)
H—Clutch Pedal
I—Light Switch
J—High/Low Beam Switch
K—Roll Mode Switch
L—Turn Signal Lever
M—PowrReverser Lever
N—Wiper Switch (Cab)
O—Shuttle Control (If Equipped)
P—Exhaust Filter Cleaning Mode Switch

SP21231,00002B7-19-10AUG12-2/2

Tractor Controls—Right-Hand Panel



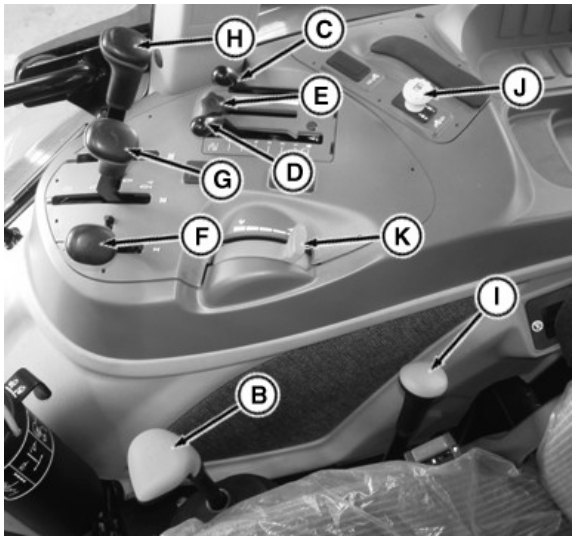
PY15170—UN—16AUG12



PY15171—UN—10AUG12

OOS Only

A—Multi-Function Control Lever (If Equipped)
B—Gear Shift Lever
C—Rockshaft Draft Control Knob / Lever
D—Rockshaft Position Control Lever
E—Position Control Stop Knob
F—SCV I Control Lever
G—SCV II Control Lever (If Equipped)
H—SCV III Control Lever (If Equipped)
I—Range Lever (Cab)
J—PTO Switch
K—Hand Throttle



PY15542—UN—03JUL12

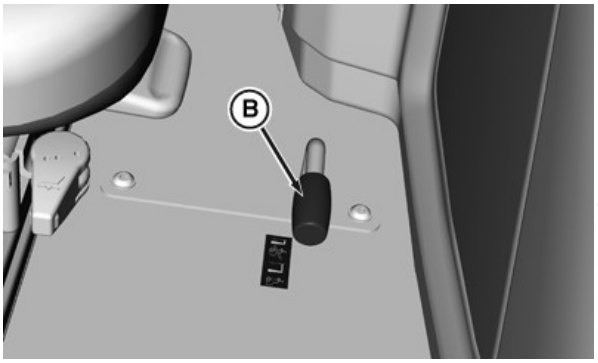
Cab Only

SP21231,00002B8-19-04JUL12-1/1

Tractor Controls—Left-Hand Panel

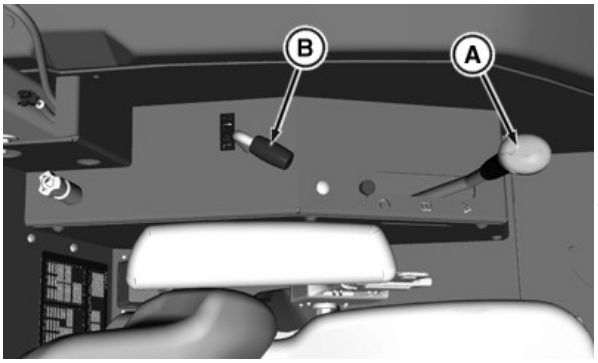
A—Transmission Range Lever

B—Mechanical Front-Wheel Drive (MFWD) Lever (If Equipped)



PY16647—UN—20AUG12

Cab Only



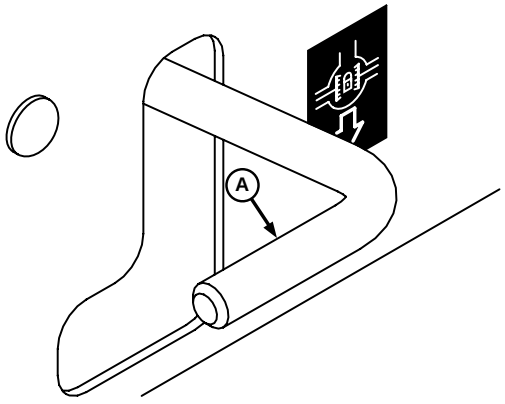
PY15173—UN—10AUG12

OOS Only

SP21231,00002B9-19-20AUG12-1/1

Tractor Controls—Differential Lock Pedal

A—Differential Lock Pedal



P9039—UN—01NOV00

Differential Lock Pedal

SP21231,00002BA-19-01JUN12-1/1

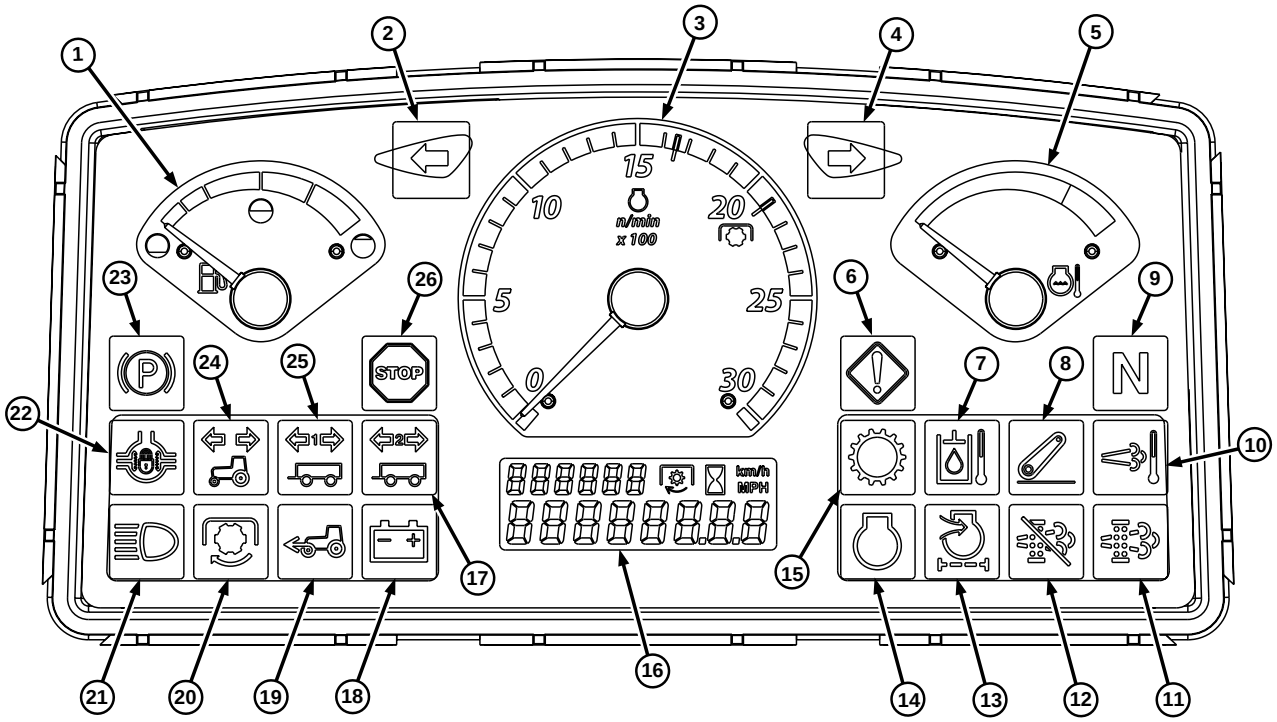
Tractor Controls—Rockshaft Rate-of-Drop Knob

A—Rockshaft Rate-of-Drop Knob

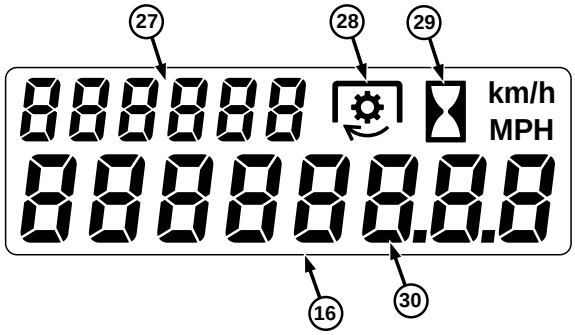
PY15174—UN—01JUN12

SP21231,00002BB-19-01JUN12-1/1

Instrument Panel



PY15153—UN—31MAY12



LV14307—UN—17MAY11

1	**Fuel Level Gauge**	Indicates amount of fuel remaining in tank.
2	**Left Turn Indicator**	Flashes when turn signal switch is switched to left-hand side.
3	**Tachometer**	Indicates engine speed, revolutions per minute (RPM).
4	**Right Turn Indicator**	Flashes when turn signal switch is switched to right-hand side.
5	**Engine Coolant Temperature Gauge**	Indicates engine coolant temperature. Red area indicates overheat (coolant level too low, dirty radiator, or clogged screen). SHUT OFF engine IMMEDIATELY to prevent damage. If necessary, have John Deere dealer diagnose vehicle.
6	**Service Alert Indicator**	Illuminates when a malfunction occurs (review error message in Information Display). If necessary, have John Deere dealer diagnose vehicle.
7	**Hydraulic Oil Temperature**	Illuminates when hydraulic oil overheats
8	**Electrohydraulic Hitch Indicator**	Illuminates when hitch malfunction occurs (review error message in Information Display). If necessary, have John Deere dealer diagnose vehicle.
9	**Neutral Indicator**	Illuminates when transmission reverser (if equipped) in neutral position. Flashes when operator improperly shifted reverse. If necessary cycle reverser lever back to neutral. If flashing and Transmission Information indicator are illuminated at the same time, this indicates a malfunction (review error message in Information Display). If necessary, have John Deere dealer diagnose vehicle.

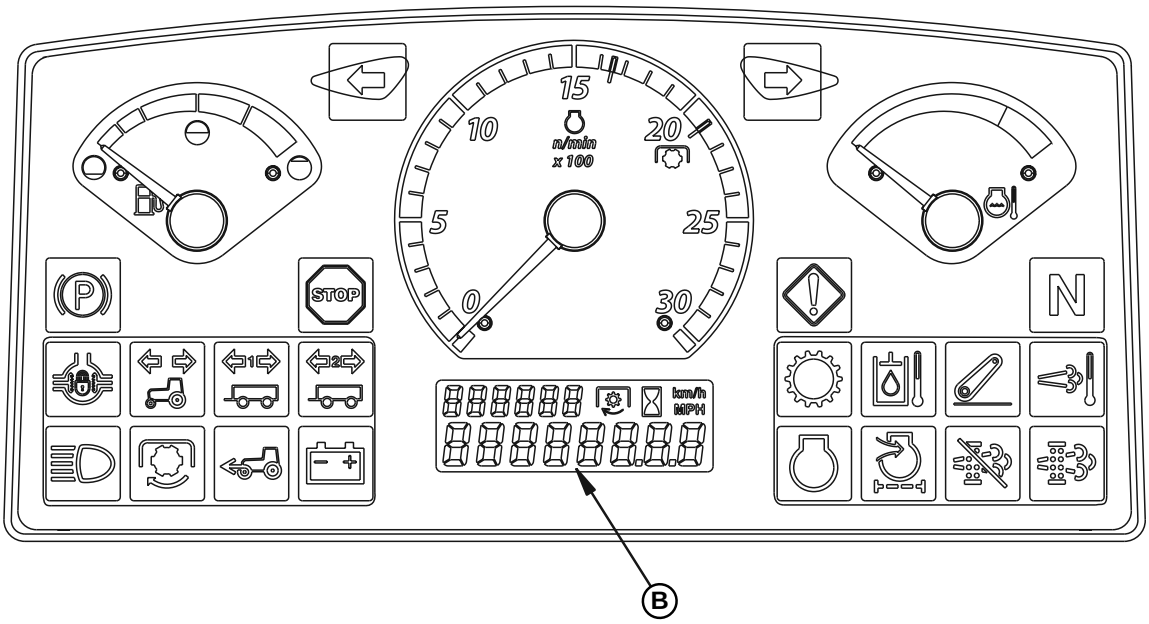
Continued on next page

SP21231,00002A7-19-08AUG12-1/2

10	**High Exhaust Temperature Indicator**	Illuminates when the presence of temperatures inside the exhaust filter allow an active filter cleaning to occur.
11	**Exhaust Filter Indicator**	Illuminates when soot level in the filter are high and exhaust filter cleaning is needed.
12	**Exhaust Filter Disabled Indicator**	Illuminates when the exhaust filter cleaning switch had been disabled.
13	**Engine Air Cleaner Restriction Indicator**	Illuminates when air cleaner element clogged (clean or replace element). If necessary, have John Deere dealer diagnose vehicle.
14	**Engine Information Indicator**	Illuminates when engine malfunction occurs (check oil level and review error message in Information Display). If necessary, have John Deere dealer diagnose vehicle.
15	**Transmission Information Indicator**	Illuminates when transmission malfunction occurs (review error message in Information Display). If necessary, have John Deere dealer diagnose vehicle.
16	**Information Display**	Displays speedometer, hour meter, transmission speed selection (Hi, Lo, or R) (if equipped), diagnostic trouble codes (if equipped), and on-board diagnostics (if equipped) information.
17	**Trailer 2 Indicator**	Starts flashing when trailer turn-signal or hazard warning lights are switched on.
18	**Charging System Indicator**	Illuminates when alternator malfunction occurs. If necessary, have John Deere dealer diagnose vehicle.
19	**MFWD Engaged Indicator**	Illuminates when mechanical front-wheel drive is engaged.
20	**PTO Engaged Indicator**	Illuminates when rear PTO is engaged.
21	**High Beam Indicator**	Illuminates when the headlights are switched on high beam.
22	**Differential Lock Indicator**	Illuminates when differential lock in engaged.
23	**Park Brake Indicator**	Illuminates when park brake is engaged.
24	**Vehicle Indicator**	Starts flashing when vehicle turn-signal or hazard warning lights are switched on.
25	**Trailer 1 Indicator**	Starts flashing when trailer turn-signal or hazard warning lights are switched on.
26	**STOP Indicator**	Illuminates when a serious malfunction occurs. SHUT OFF engine IMMEDIATELY and determine cause (review error message in Information Display). If necessary, have John Deere dealer diagnose vehicle.
27	**Vehicle Information Display**	Shows Hi/ Lo (If equipped). When in diagnostic mode, display shows name of controller (i.e. ECU) that is experiencing fault.
28	**PTO Icon**	Illuminates when PTO speed is selected.
29	**Hour Meter Icon**	Illuminates when engine hours are being displayed at (27).
30	**Vehicle Information Display**	Shows vehicle wheel speed, and engine hours, and PTO speed (if equipped). When in diagnostic mode, display shows diagnostic code information.

SP21231,00002A7-19-08AUG12-2/2

Information Display (Roll Mode Switch)



PY16304—UN—08AUG12

Roll mode switch (A) controls two different information display modes, "Normal" and "Diagnostic".

Information Display - Normal Mode

Roll mode switch (A) and information display (B) default to the normal mode. In normal mode: Information display (B) provides a numeric representation of engine hours, vehicle speed, or PTO speed.

- Press and release the roll mode switch (A) to cycle through the display (B) values (engine hours, vehicle speed, and PTO speed).

Roll Mode Sequence Order
Engine Hours
Vehicle Speed
PTO Speed[a]
Regeneration Progress Stage 1[b]
Regeneration Progress Stage 2[b]
Regeneration Progress Stage 3[b]

[a] *If Equipped.*
[b] *Item(s) shall only be available when a valid value is present.*

PY16305—UN—08AUG12

A—Roll Mode Switch **B—Information Display**

- Engine hours are displayed when the key switch is first turned on.
- Engine hours are displayed for at least 7 seconds prior to automatically switching to any other value.
- The display (B) automatically transitions to the vehicle speed when the tractor begins moving.
- The display (B) automatically transitions to PTO speed when the PTO is engaged.
- The display (B) disables automatic scrolling once the roll mode switch (A) is pressed or used to scroll through display modes.
- The PTO speed is only displayed, when the enable PTO speed display is configured in ICC diagnostic address 026 (1 = enabled) [If vehicle is equipped with electro-hydraulic PTO.]
- The display (B) only re-enables automatic scrolling when the key switch is cycled on and off.
- During exhaust filter cleaning process, the display (B) transitions through the various exhaust filter cleaning states.

Information Display - Diagnostic Mode

The diagnostic mode has two levels of access; “Customer” and “Technician”.

- Customer access = Press and hold roll mode switch for 5 seconds to begin diagnostic session. This allows access to see diagnostic trouble codes and a limited amount of diagnostic addresses.
- Technician access = **Only for John Deere dealer use.**

Continued on next page

PX07220,000167A-19-31JAN13-2/1

Accesses everything in customer mode plus vehicle set up, configuration, and calibration.

Customer access; recall, record, and clear diagnostic trouble codes:

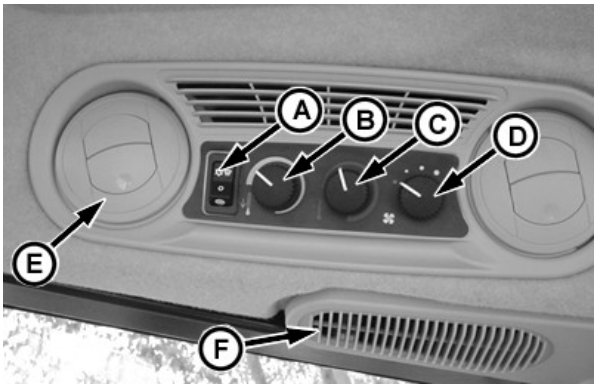
- Press and hold the roll mode switch for 5 seconds to begin diagnostic session.
- Upon entering diagnostic, any active or previously active codes will automatically appear in a scrolling fashion with each one showing the control unit (3 letter abbreviation) and the code number (XXXXXX.XX).
- To view and /or clear diagnostic trouble codes for any given control unit, you must do the following:

1. Use the right turn signal switch to scroll to the desired control unit.
2. Press and release the roll mode switch to enter the diagnostic addresses for that desired control unit.
3. Use the right turn signal switch to scroll to diagnostic address 001 for that desired control unit.
4. If codes are present the word “codes” will appear. If not, the word “none” will appear.
5. Press and release the roll mode switch to view all codes details for this control unit.
6. Any codes present in that control unit will appear there in scrolling fashion for multiple codes.
7. To access the option for clearing codes for this selected control unit, present and release the right turn signal switch.
8. The question “CLR?” will appear.
9. To clear the codes, press and release the roll mode switch.
10. To go back to the entire control unit list, press and release the left turn signal switch.
11. Proceed to the next desired control unit by repeating steps 1-10.

PX07220,000167A-19-31JAN13-1/1

Overhead Control Panel

A—Air Conditioning/Defrost Switch
B—Air Conditioning Temperature Control Knob
C—Heater Temperature Control Knob
D—Blower Speed Knob
E—Directional Air Louver (6 used)
F—Recirculating Air Intake (2 used)

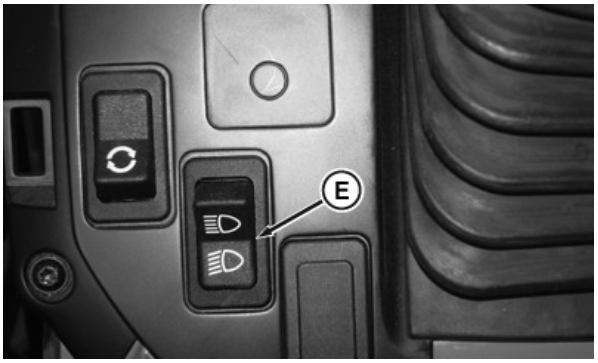


P12646A—UN—04JUL05

Right-Hand Side

SP21231,00002BC-19-01JUN12-1/1

Light Switch Positions



PY14591—UN—07AUG12

SK35149,0000526-19-07AUG12-1/2

A—OFF : All lights off. Instrument panel will illuminate for approximately 6 seconds after switch is turned off.

B—Warning Light : Warning lights flash, instrument panel illuminates, turn signal arrows on instrument panel flash and courtesy light (cab) is on. This position is for driving on roads during daytime.

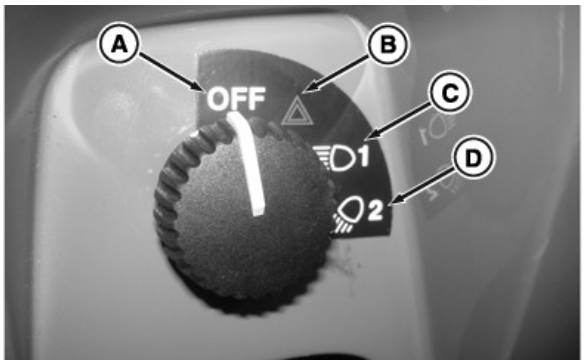
C—Road lights (Position 1) : Head lights and tail lights (red) on, warning lights flash, instrument panel illuminates, turn signal arrows on instrument panel flash and courtesy light (cab) is on. This position is for driving on roads during daytime or nighttime.

D—Field lights (Position 2) : Head lights and tail lights (red) on, work lights on, instrument panel illuminates and courtesy light (cab) is on. This position is for field use only.

CAUTION: Never use work lights when driving on roads. Dim headlights for oncoming traffic. Bright lights could blind or confuse other drivers.

E—High/Low beam switch : Active when light switch is in positions (C or D).

- Switch DOWN—Low/dim headlights on



PY14590—UN—30MAY12

(If Equipped)

A—OFF
B—Warning Light Position
C—Road Lights Position
D—Field Light Position
E—High/Low Beam Switch

- Switch UP—High/bright headlights on. High beam indicator on instrument panel also illuminates.

Dim headlights when approaching other vehicles, bright lights may blind or confuse other drivers.

Light Switch Operation				
Position	**Tail Lights**	**Head Lights**	**Work Lights**	**Warning Lights**
OFF	OFF	OFF	OFF	OFF
Triangle (Warning)	OFF	OFF	OFF	FLASH
1 (Road)	ON	ON	OFF	FLASH
2 (Field)	ON	ON	ON	OFF

SK35149,0000526-19-07AUG12-2/2

Using Headlights

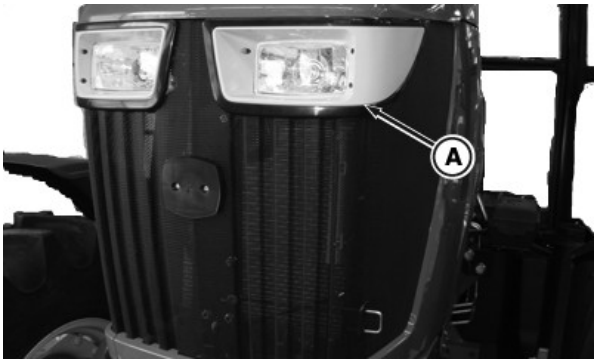
CAUTION: Never use work lights when driving on roads. Dim headlights for oncoming traffic. Bright lights could blind or confuse other drivers.

Dual-beam headlights (A) are used for highway driving, day or night. They are turned on in road lights position (B) or field lights position (C) with the light switch.

Always dim headlights by moving high/low beam switch (D) to low beam position when meeting another vehicle.

Keep headlights adjusted properly. (See ADJUST HEADLIGHTS in Maintenance—Electrical System section.)

A—Headlights
B—Road Lights Position
C—Field Lights Position
D—High/Low Beam Switch



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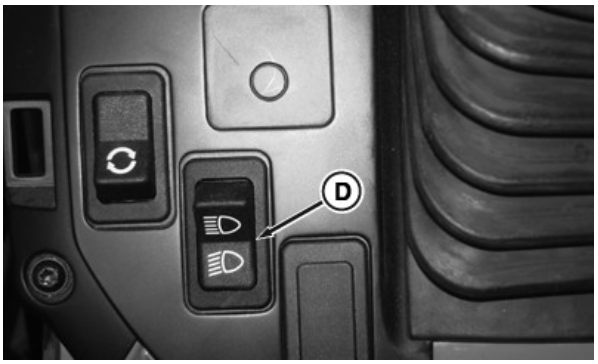

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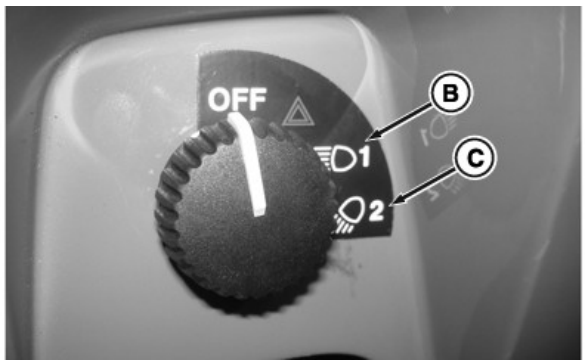


PY14594—UN—30MAY12

Cab Switch Shown

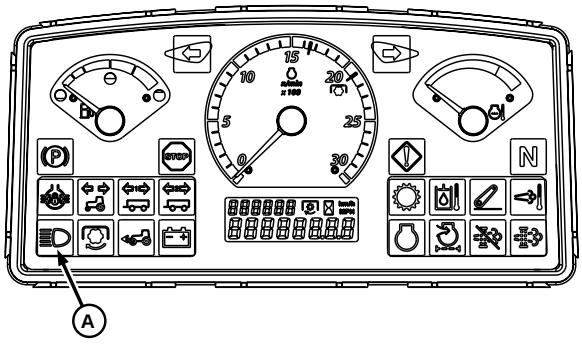
SK35149,0000527-19-07AUG12-1/1

High Beam Indicator

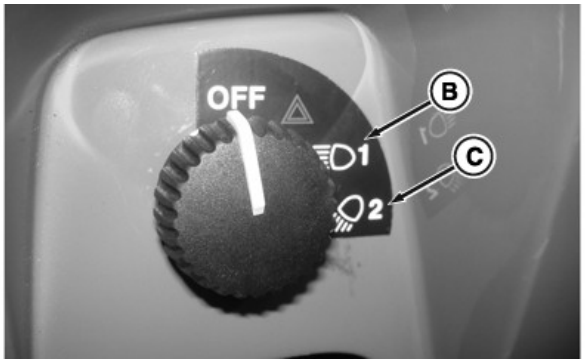
High beam indicator (A) should glow with key in ON or OFF position and light switch in following positions:

- Road lights position (B) and high/low beam switch UP.
- Field lights position (C) and high/low beam switch UP.

A—High Beam Indicator
B—Road Lights Position
C—Field Lights Position



PY15154—UN—04JUN12



PY14594—UN—30MAY12

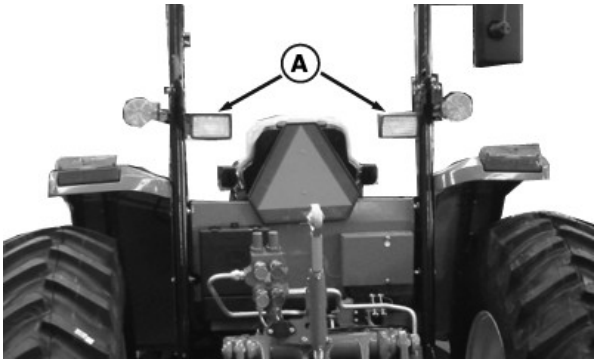
SK35149,0000528-19-07AUG12-1/1

Using Work Lights — OOS (If Equipped)

CAUTION: Rear-facing work lights may blind or confuse driver of other vehicles approaching from behind. When driving or transporting tractor on public roads, use road lights (B) only.

Work lights (A) are for field work only. Do NOT use when driving on public roads. Work lights are on when switch is turned to field light position (C).

A—Work Lights
B—Road Lights Position
C—Field Lights Position

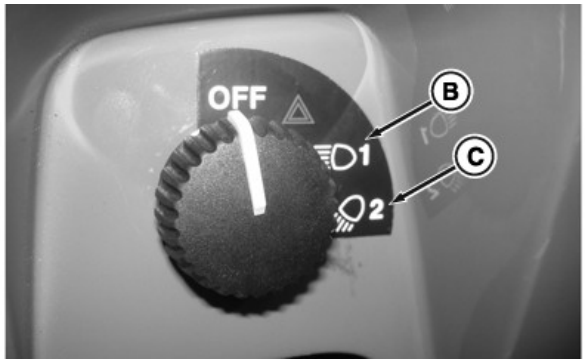


PY14597—UN—30MAY12

Rear Work Lights

PY14595—UN—30MAY12

Front Work Lights



PY14594—UN—30MAY12

SK35149,000052A-19-07AUG12-1/1

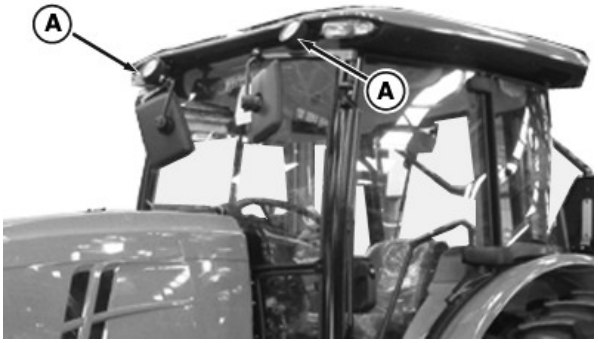
Using Work Lights — Cab

CAUTION: When operating on a road, move light switch to road lights position (D) and use switch (E) on either bright or dim headlight positions. Never use work lights when transporting on roads. Clear, bright lights at the rear of the tractor could confuse drivers of other vehicles as they approach from the rear.

NOTE: Front and rear work lights adjust freely by hand.

Work lights (A and B) are for field work only. Do NOT use when driving on public roads. Work lights are on when switch is turned to field light position (C).

A—Front Work Lights
B—Rear Work Lights
C—Field Lights Position
D—Road Lights Position
E—High/Low Beam Switch



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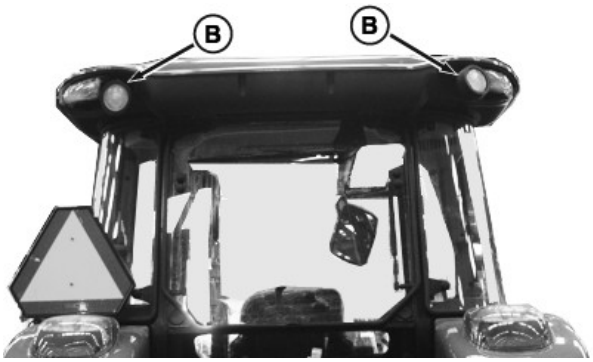

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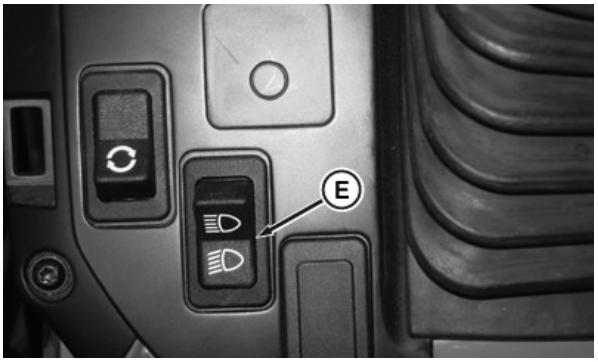

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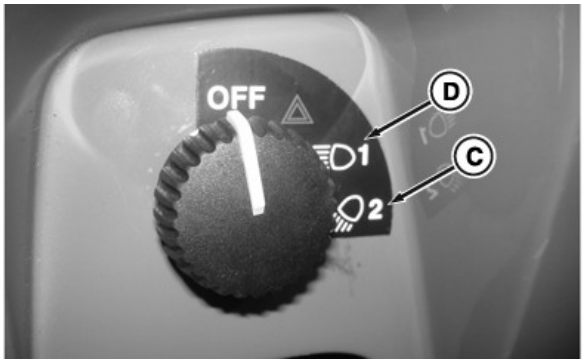


PY14600—UN—04JUN12

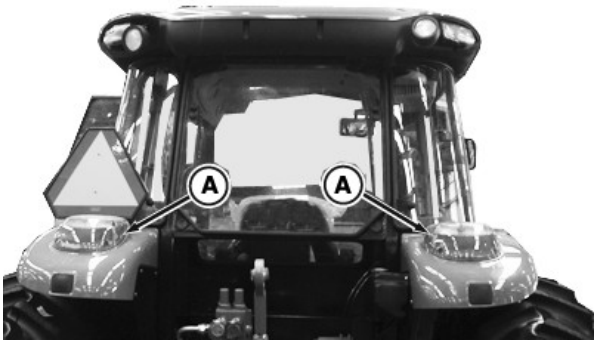
SK35149,000052B-19-07AUG12-1/1

Using Tail Lights

Tail lights (A) are on when switch is turned to positions (B) or (C). Brake lights are on when key is in run position and service brake is applied.

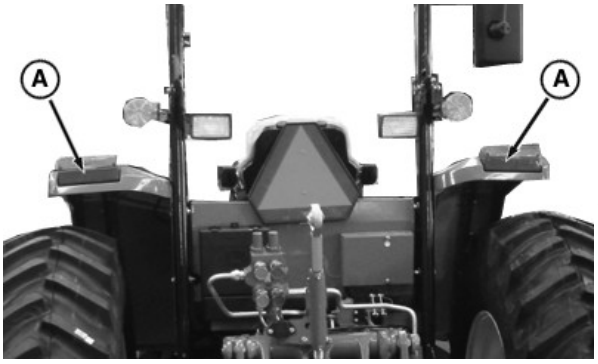
Be sure tail light lenses are clean before driving on a road, so other drivers can see them easily.

A—Tail Lights (Red)
B—Road Lights Position
C—Field Lights Position



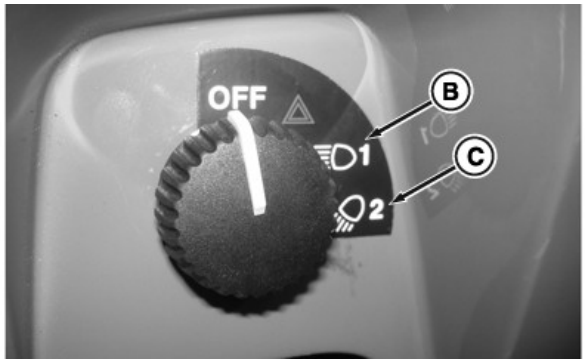
PY14603—UN—04JUN12

Tail Lights — CAB



PY16306—UN—08AUG12

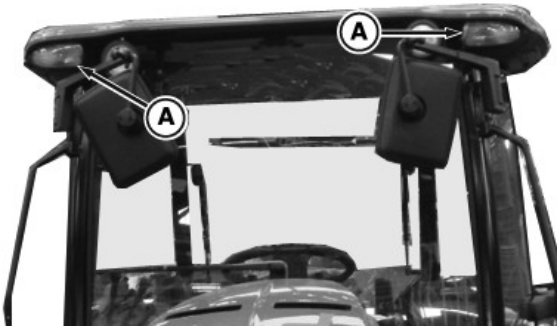
Tail Lights — OOS



PY14594—UN—30MAY12

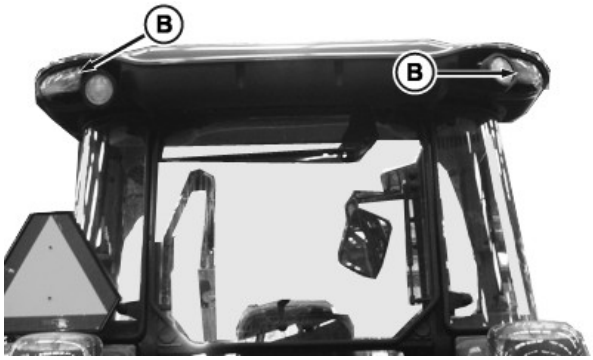
SK35149,000052D-19-08AUG12-1/1

Using Warning Lights



PY14604—UN—04JUN12

Front Lights — Cab



PY14605—UN—04JUN12

Rear Lights — Cab

PY16308—UN—08AUG12

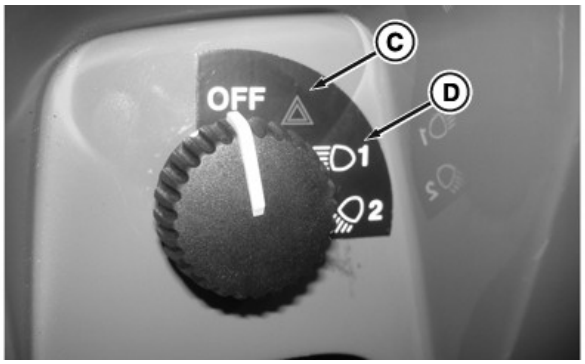
Front Lights — OOS

PY16307—UN—08AUG12

Rear Lights — OOS

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

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



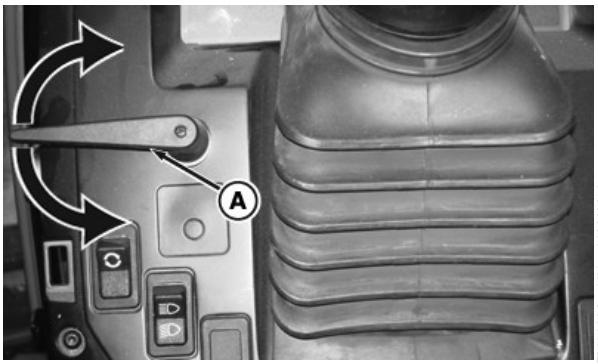
PY14606—UN—04JUN12

A—Front Warning Lights
B—Rear Warning Lights
C—Warning Lights Position
D—Road Lights Position

Warning lights (A and B) flash when switch is turned to warning light position (C). They also flash when switch is in road lights position (D).

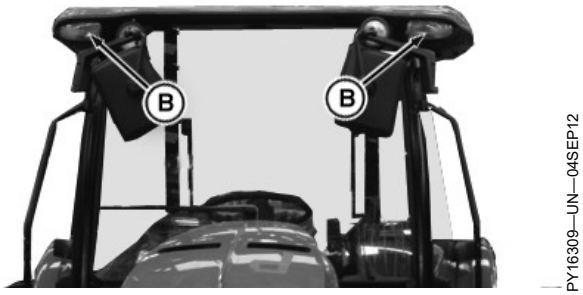
SK35149,000052E-19-08AUG12-1/1

Using Turn Signals

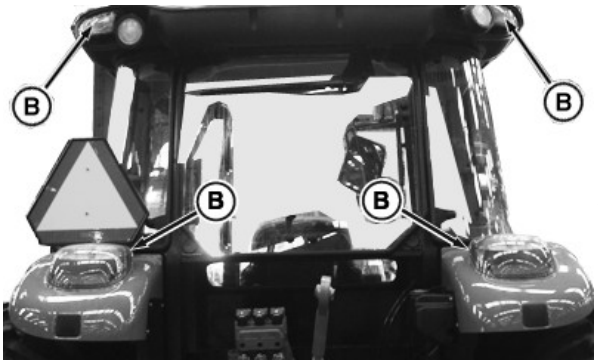


Cab Shown

OOS



Front Turn Signal Lights—Cab



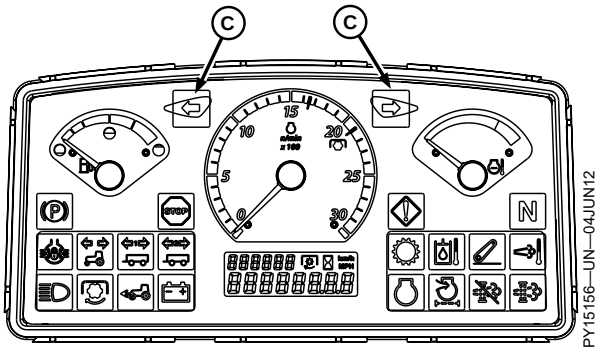
Rear Turn Signal Lights—Cab

With key in RUN position, move turn signal lever (A):

- DOWN—Left-hand turn
- UP—Right-hand turn

NOTE: Make sure to manually return lever to CENTER position after turning.

A—Turn Signal Lever
B—Turn Signal Lights
C—Directional Arrows



Instrument Panel

SK35149,000052F-19-08AUG12-1/1

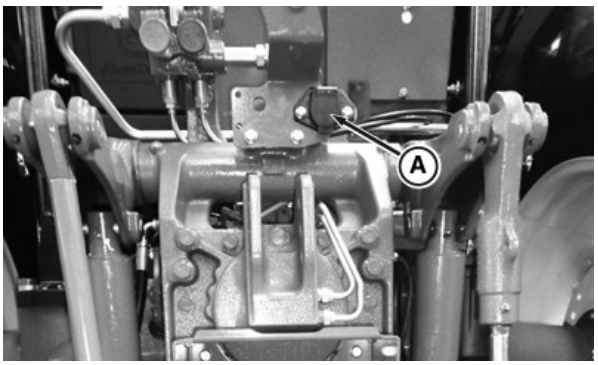
Using Seven-Terminal Outlet—*If Equipped*

Outlet (A) is used to connect lights, turn signals and remote electrical equipment on trailers or implements. Always use auxiliary lighting on towed implements when tractor rear signals and other lights are not clearly visible from behind.

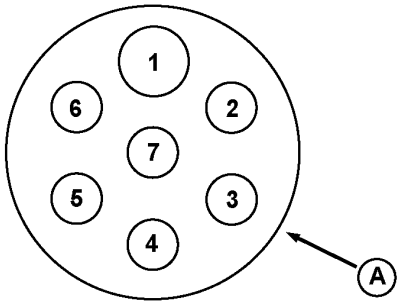
NOTE: Matching plug is available through your John Deere dealer.

Terminal	Function
1	Ground
2	Work Light
3	Left Turn
4	Brake Light
5	Right Turn
6	Tail Light
7	Auxiliary

A—Seven-Terminal Outlet



PY14610—UN—15JUN12



RW21249A—UN—29APR99

SK35149,0000530-19-30MAY12-1/1

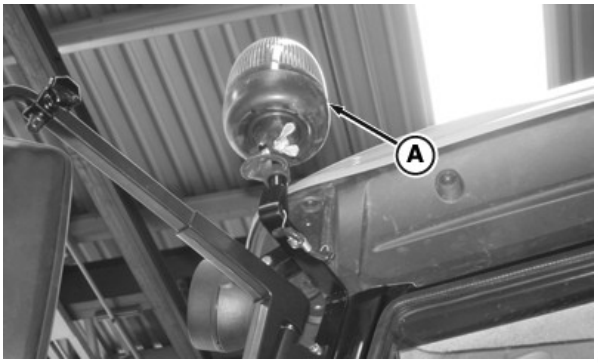
Operating Rotating Beacon Light—If Equipped

Depress switch (B) to activate light (A).

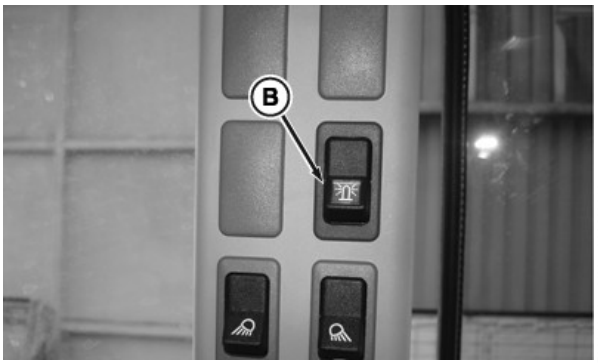
To remove light for storage or clearance:

1. Loosen wing nut and lift light from tube.
2. Install cap on tube end to protect light socket.

A—Light **B—Switch**



PY14611—UN—30MAY12



PY14612—UN—30MAY12

Right-Hand Post

SK35149,0000531-19-30MAY12-1/1

Operating Foldable 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. (See specification in ROPS MAINTENANCE OR REPLACEMENT, in General Maintenance and Inspection section.)

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 must 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 shown) when operating tractor. If tractor is operated with ROPS folded (e.g., to enter a low building), drive with extreme caution and DO NOT use seat belt.

Raise ROPS up again and pin in vertical position as soon as the tractor is operated under normal conditions.

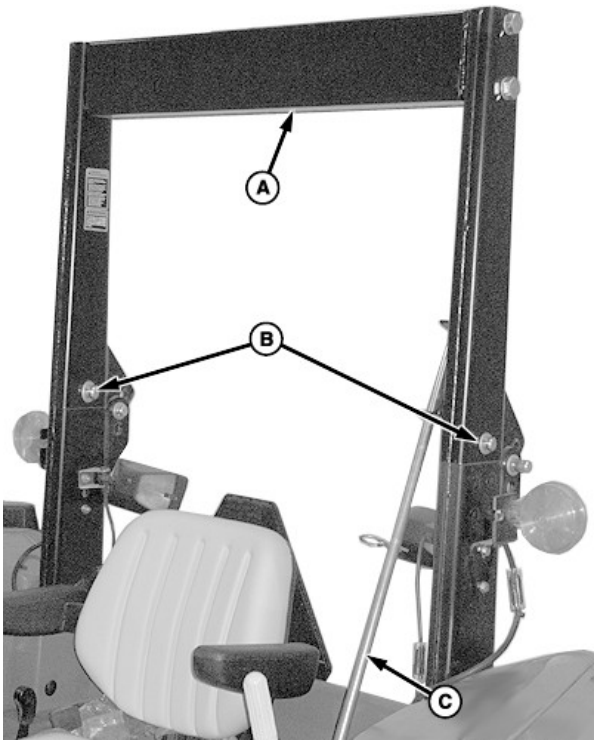
Lower ROPS Crossbar

1. Remove pin clips and retaining pins (B).
2. Using handlebar (C), lower ROPS crossbar (A).
3. Reinstall retaining pins and pin clips into holes (D) in ROPS to lock crossbar down.

Put ROPS in Operating Position

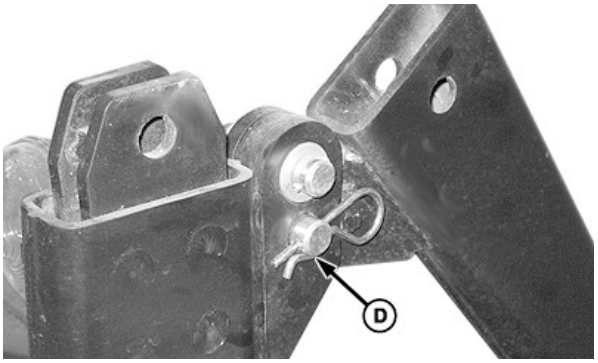
1. Remove pin clips and retaining pins.
2. Using handlebar, raise ROPS crossbar to vertical position.
3. Reinstall retaining pins and pin clips into holes in ROPS to lock crossbar.

A—ROPS Crossbar
B—Pin Clip and Retaining Pin
C—Handlebar
D—Hole

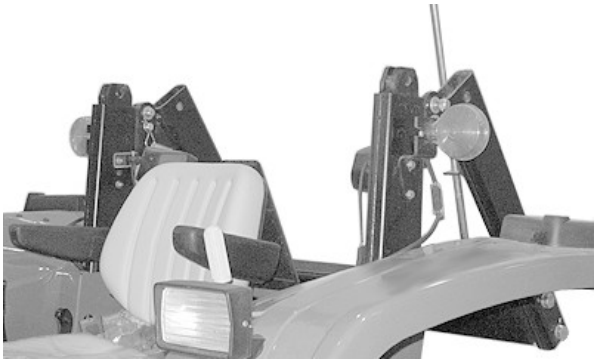


P15216—UN—28JAN08

Operating Position



P15217—UN—28JAN08



P15218—UN—28JAN08

ROPS Folded

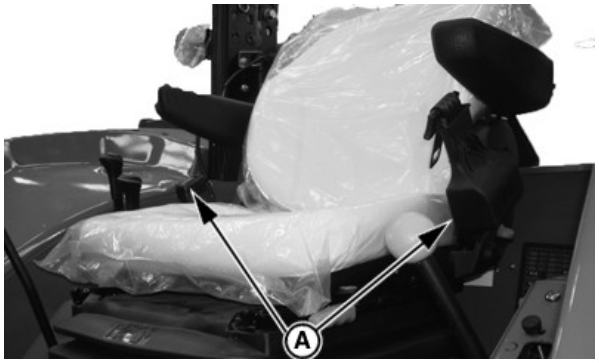
NS43404,000043E-19-29JAN08-1/1

Using Seat Belt

CAUTION: Use a seat belt when you operate with a roll-over protective structure (ROPS) to minimize chance of injury from an accident such as an overturn. DO NOT use seat belt when ROPS is folded down.

To properly retain operator, seat belt (A) must fit snugly across abdomen. Seat belt extends as necessary to fit comfortably.

Inspect seat belt and mounting hardware annually. (See INSPECT SEAT BELTS in General Maintenance and Inspection section.)



PY15262—UN—30MAY12

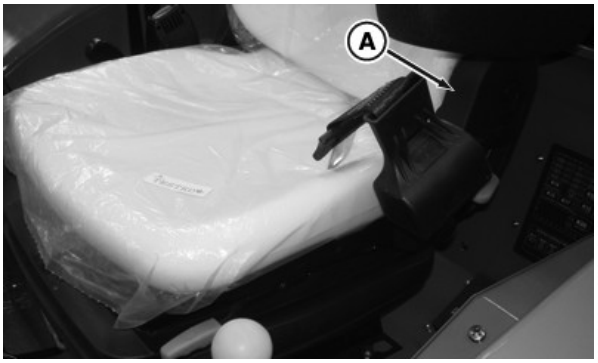
A—Seat Belt

SK35149,0000542-19-01JUN12-1/2

Armrest Height:

1. Pry plastic cover (A) away from seat.
2. Loosen nut (B).
3. Slide armrest up or down in adjustment slots to desired height and tighten hardware.
4. Repeat procedure for opposite armrest.

A—Plastic Cover **B—Nut**



PY14631—UN—01JUN12

P15415—UN—09APR08

SK35149,0000542-19-01JUN12-2/2

Adjusting Mechanical Suspension Seat

CAUTION: To avoid accidents, adjust seat before driving.

Continued on next page

SK35149,0000543-19-23JUN12-1/2

Forward or Backward: Lift lever (A), move seat to desired position and release lever to lock in position.

Backrest: Lift lever (B) and tilt backrest to desired position. Release lever to lock in place.

Weight: Rotate lever (C) away from seat and turn:

- Clockwise—Increase load
- Counterclockwise—Reduce load

Desired weight setting appears in display window (D). Weight level range is 50-130 kg (110-285 lbs.). Rotate lever toward seat when done.

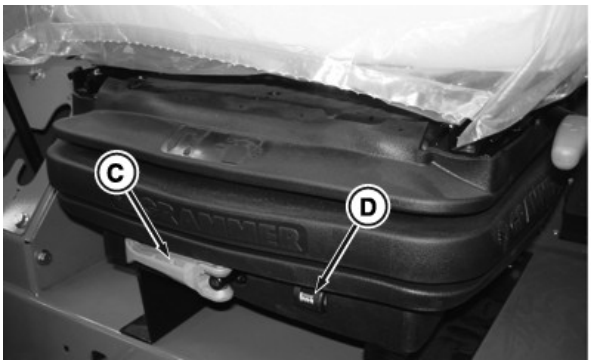
IMPORTANT: Internal damage could occur to the seat mechanism. When turning weight adjustment lever to reduce load; stop turning handle when seat reaches minimum weight adjustment position and handle resistance increases.

NOTE: Suspension should not bottom out when properly adjusted.

Height: To adjust the seat upward, lift seat pan until it clicks into place (maximum of 3 detent positions). To adjust downward, lift the seat to the stop position and then lower it.

A—Forward/Backward Adjustment Lever
B—Backrest Adjustment Lever
C—Weight Adjustment Lever
D—Display Window

PY14632—UN—23AUG12



PY14633—UN—01JUN12

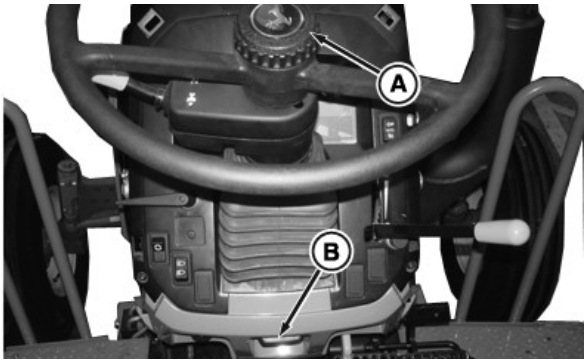
SK35149,0000543-19-23JUN12-2/2

Adjusting Steering Wheel

Tilt (If Equipped): Lift lever (B) and move steering column to desired angle. Release lever to lock into position.

Wheel Height (Telescoping) (If Equipped): Loosen ring (A) and raise or lower steering wheel to desired height. Tighten ring to lock into position.

A—Height Adjustment Ring
B—Angle Adjustment Lever



PY14634—UN—01JUN12

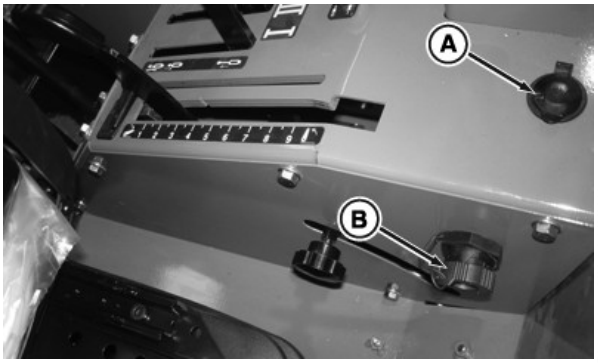
SK35149,0000544-19-02JUN12-1/1

Accessory Electrical Outlets

NOTE: Outlets are protected by two 30-amp fuses.

A—(12-Volt Power) Outlet

B—Service ADVISOR™ Outlet (Tractors with electronic controllers)



PY14635—UN—01JUN12

Right-Hand Panel

Service ADVISOR is a trademark of Deere & Company

SK35149,0000545-19-02JUN12-1/1

Operator's Manual Storage Compartment

Lift tab and open storage compartment cover located on rear of left fender.

OUMX005,0002916-19-07APR08-1/1

Using Seat Belt

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

To properly retain operator, seat belt (A) must fit snugly across abdomen. Seat belt extends as necessary to fit comfortably.

Inspect seat belt and mounting hardware annually. (See INSPECT SEAT BELTS in General Maintenance and Inspection section.)

A—Seat Belt

PY15236—UN—02JUN12

SV86979,0000022-19-02JUN12-1/1

Adjusting Seat (Mechanical Suspension)

CAUTION: To avoid accidents, adjust seat before driving.

BS13987,000013C-19-13APR15-1/3

Forward or Backward: Lift lever (A), move seat to desired position and release lever to lock in position.

Backrest: Lift lever (B) and tilt backrest to desired position. Release lever to lock in place.

Weight: Rotate lever (C) away from seat and turn:

- Clockwise—Increase load
- Counterclockwise—Reduce load

Desired weight setting appears in display window (D). Weight level range is 50-130 kg (110-285 lbs.). Rotate lever toward seat when done.

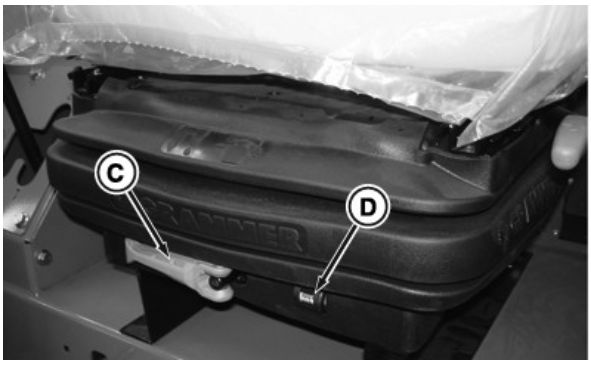
IMPORTANT: Internal damage could occur to the seat mechanism. When turning weight adjustment lever to reduce load; stop turning handle when seat reaches minimum weight adjustment position and handle resistance increases.

NOTE: Suspension should not bottom out when properly adjusted.

Height: To adjust the seat upward, lift seat pan until it clicks into place (maximum of 3 detent positions). To adjust downward, lift the seat to the stop position and then lower it.

1. Pry plastic cover (A) away from seat.
2. Loosen nut (B).
3. Slide armrest up or down in adjustment slots to desired height and tighten hardware.
4. Repeat procedure for opposite armrest.

PY14632—UN—23AUG12



PY14633—UN—01JUN12

A—Forward/Backward Adjustment Lever
B—Backrest Adjustment Lever
C—Weight Adjustment Lever
D—Display Window

Continued on next page

BS13987,000013C-19-13APR15-2/3

Armrest Height:

1. Pry plastic cover (A) away from seat.
2. Loosen nut (B).
3. Slide armrest up or down in adjustment slots to desired height and tighten hardware.
4. Repeat procedure for opposite armrest.

A— Plastic Cover **B— Nut**

P15427—UN—10APR08

P15428—UN—10APR08

BS13987,000013C-19-13APR15-3/3

Adjusting Seat (Air Suspension)

CAUTION: To avoid accidents, adjust seat before driving.

Continued on next page

BS13987,000013D-19-07SEP12-1/3

Seat Bottom—Forward/Backward: Lift lever (A) to allow seat bottom to slide forward or backward. Release lever to lock in position.

Seat Bottom—Angle: Lift lever (B) to allow seat to tilt up or down. Release lever to lock in position.

Height (Air Suspension) Adjustment: While seated, move lever (C):

- Down—Seat lowers. Release lever to lock seat in position.
- Up:
  a. Turn key switch to RUN position. Seat raises.
  b. Release lever to lock seat in position.
  c. Turn key switch to OFF position.

Forward or Backward Suspension: Rotate lever (D) to desired position:

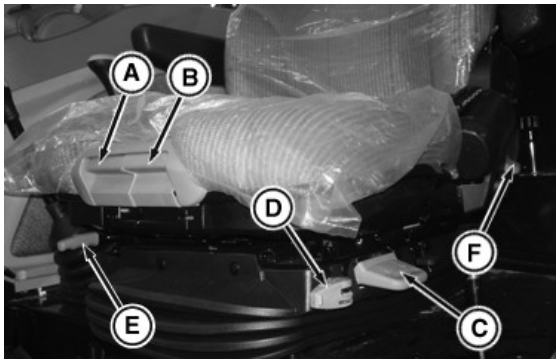
- Lever facing front (shown)—Lock
- Lever facing rear—Unlock

Forward or Backward Adjustment: Lift lever (E) and move seat to desired position. Release lever to lock in position.

Backrest—Angle: Lift lever (F) and tilt backrest to desired position. Release lever to lock in place.

Backrest—Lumbar Support: Turn knob (G) to increase or decrease support to lower back.

A—Seat Bottom Forward/ Backward Position Lever
B—Seat Bottom Angle Lever
C—Height (Air Suspension) Adjustment Lever
D—Forward/Backward Suspension Lock
E—Forward/Backward Adjustment Lever
F—Backrest Angle Adjustment Lever
G—Backrest Lumbar Support Knob



PY15631—UN—07SEP12

P15228—UN—30JAN08

Back of Seat

Continued on next page

BS13987,000013D-19-07SEP12-2/3

Armrest Height:

1. Pry plastic cover (A) away from seat.
2. Loosen nut (B).
3. Slide armrest up or down in adjustment slots to desired height and tighten hardware.
4. Repeat procedure for opposite armrest.

A—Plastic Cover **B—Nut**

P15427—UN—10APR08

Left Arm Rest Shown

P15428—UN—10APR08

BS13987,000013D-19-07SEP12-3/3

Adjusting Steering Wheel

Tilt: Lift lever (B) and move steering column to desired angle. Release lever to lock into position.

Wheel Height (Telescoping): Loosen ring (A) and raise or lower steering wheel to desired height. Tighten ring to lock into position.

A—Height Adjustment Ring **B—Angle Adjustment Lever**

PY15237—UN—02JUN12

SV86979,0000023-19-02JUN12-1/1

Accessory Electrical Outlets

NOTE: Outlet is protected by two 30-amp fuses.

A— Cigarette Lighter
B—12-Volt Electric Outlet
C— Service ADVISOR™ Outlet (Tractors with electronic controllers)

PY15528—UN—22JUN12

Right Hand Panel

PY15527—UN—22JUN12

Service ADVISOR is a trademark of Deere & Company

SV86979,0000024-19-23JUN12-1/1

Operator's Manual Storage Compartment

Lift tab (A) and pull cover away from seat.

A—Tab

P15224—UN—29JAN08

OUMX005,0002918-19-29JAN08-1/1

Opening Windows

Side and rear windows can be opened for better ventilation.

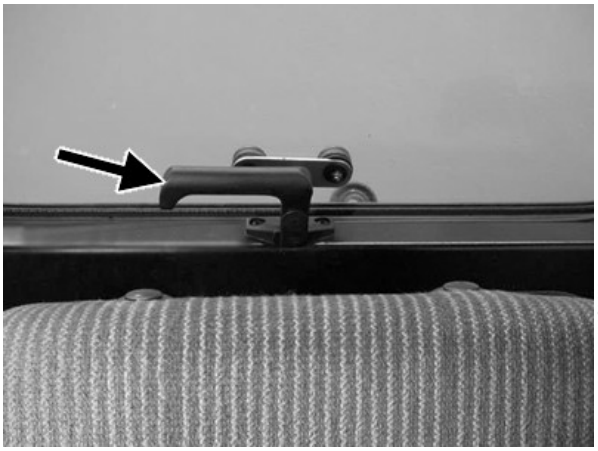
Side: Pull handle toward rear and push to lock open.

Rear: Rotate handle clockwise and push out.

NOTE: Rear window opening provides a large exit path if cab doors are blocked in case of an emergency.

P12674—UN—24NOV03

Left-Side Window



P12675—UN—24NOV03

Rear Window

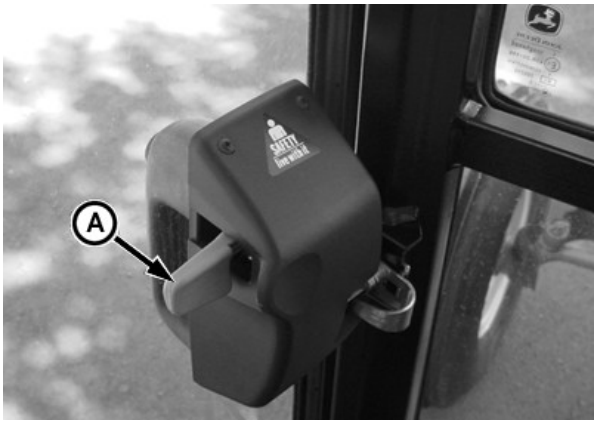
NS43404,0000443-19-29JAN08-1/1

Opening Door

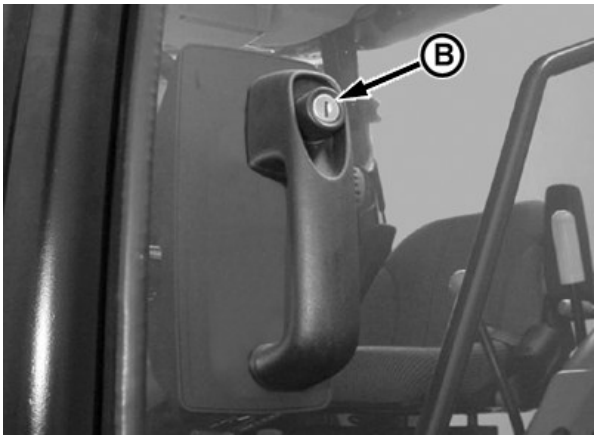
Pull handle (A) from inside of cab and push door.

Press knob (B) from outside of cab and pull door.

A—Handle **B—Knob**



P12676—UN—04JUL05



P12677—UN—24NOV03

OUMX005,0002919-19-29JAN08-1/1

Emergency Exit

CAUTION: Make sure no one is near emergency exit. Panel will fall out when retaining pin (A) is removed.

NOTE: Option not available in North America.

Remove retaining pin (A) and push on right-hand glass panel.

A—Retaining Pin

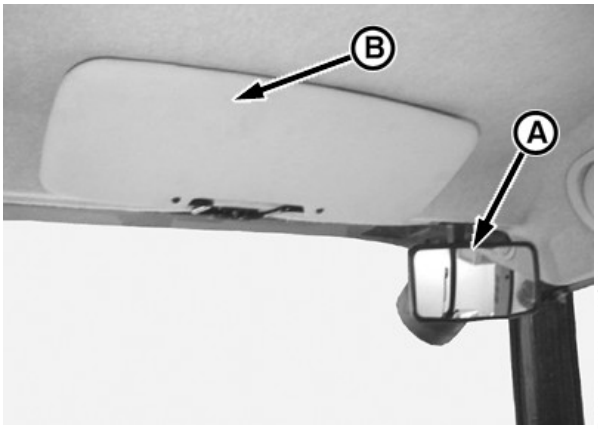
P12678A—UN—07JUL05

Right-Hand Side Panel

NS43404,0000445-19-26MAR08-1/1

Inside Rear View Mirror and Sun Visor

A—Inside Rear View Mirror **B—Sun Visor**



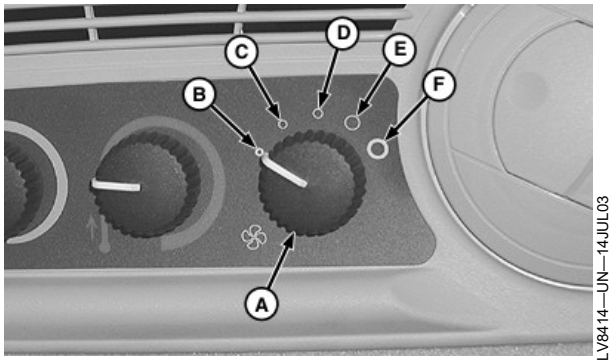
P12679—UN—24NOV03

OUMX005,000291A-19-29JAN08-1/1

Adjusting Blower Speed

Turn control knob (A) to desired setting. For rapid cab cool down, use the purge setting (F).

A—Blower Speed Control Knob **D—Medium**
B—Off **E—High**
C—Low **F—Purge**



LV8414—UN—14JUL03

OUO1043,00002B7-19-28JUN04-1/1

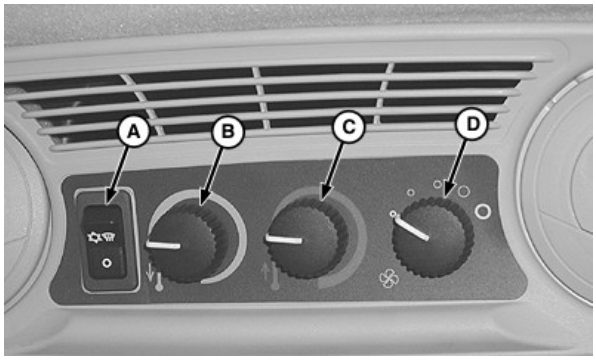
Controlling Temperature

Push top half of switch (A) to turn air conditioning and deicing ON and push bottom half to turn it OFF.

Turn control knob (B) to adjust air conditioning temperature.

Turn control knob (C) to adjust heater temperature.

A—Air Conditioning and Deicing Switch **C—Heater Temperature Control Knob**
B—Air Conditioning Temperature Control Knob **D—Blower Speed Control Knob**



LV8415—UN—14JUL03

OUO1032,00016CE-19-14APR05-1/1

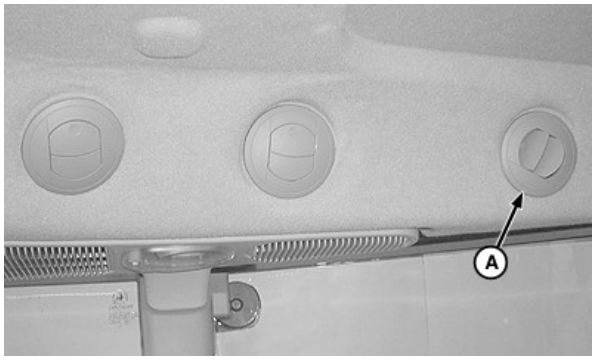
Deicing, Demisting or Defrosting Windshield

1. Aim two front vents (A) toward windshield.

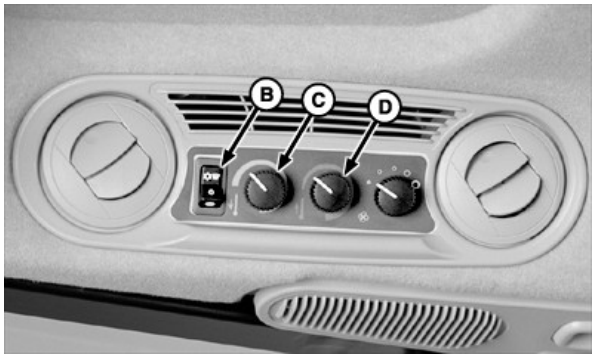
NOTE: Closing middle and rear vents will help clear windshield faster.

2. Press top half of deicing switch (B) and turn A/C temperature control knob (C) to full counterclockwise position.
3. Turn heater temperature control knob (D) clockwise to obtain desired temperature.

A—Front Vent
B—Deicing Switch
C—A/C Temperature Control Knob
D—Heater Temperature Control Knob



LV8596—UN—14AUG03



LV10324—UN—21SEP04

OUO1023,00027F1-19-14MAR06-1/1

Optimizing A/C and Heater Performance

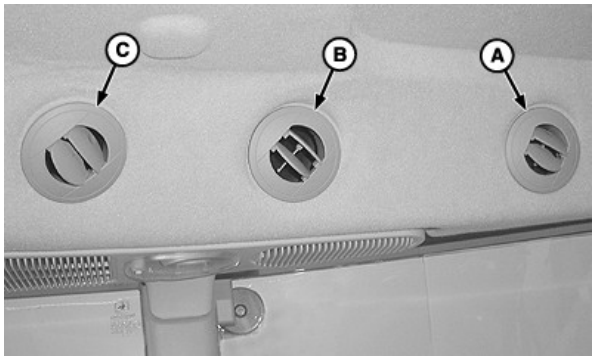
Adjust individual vents to target heating or cooling:

- Position front vents (A) toward legs and mid-body.
- Position middle vents (B) toward your head.
- Position rear vents (C) toward your back.

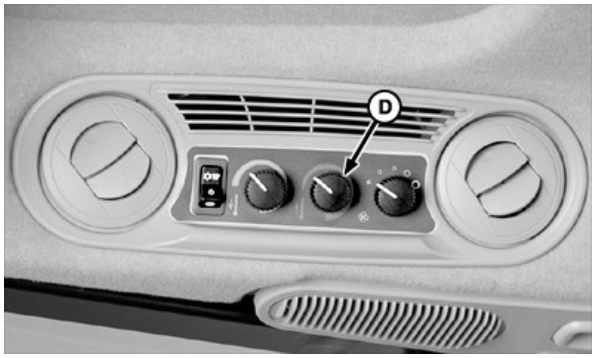
NOTE: For maximum cooling effect, turn heater temperature control knob (D) to full counterclockwise position.

Position all vents (A, B, and C) down to heat the floor and feet.

A—Front Vent
B—Middle Vent
C—Rear Vent
D—Heater Temperature Control Knob



LV10325—UN—21SEP04



LV10326—UN—21SEP04

OUO1080,00002AB-19-26MAR08-1/1

Operating Windshield Wiper and Washer

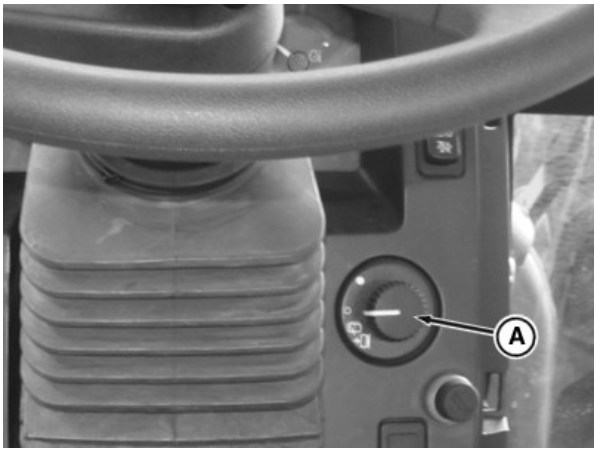
Rotate wiper switch (A) to move windshield wipers to OFF, SLOW or FAST position.

Push switch to activate windshield washer.

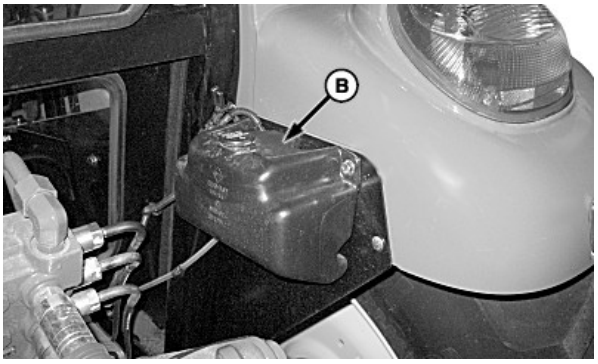
Fill reservoir (B) with non-freezing windshield washer fluid. Reservoir is located behind cab on inside of right rear fender.

A—Windshield Wiper/Washer Switch

B—Washer Fluid Reservoir



PY15239—UN—02JUN12



P14855—UN—29JAN08

Rear, Right-Hand Side

SV86979,0000025-19-02JUN12-1/1

Operating Rear Window Wiper and Washer—If Equipped

Switch (A) has three positions:

- Top WASH position—Hold switch down to activate washer.
- Center ON position—Rear window wiper is activated.
- Bottom OFF position.

A—Rear Window Wiper/Washer Switch

PY15240—UN—02JUN12

SV86979,0000026-19-02JUN12-1/1

Using Auxiliary Power Strip (If Equipped)

IMPORTANT: Power strip is not a surge suppressor. Electrical equipment with program memory requires protection from damage of electrical surges and spikes.

The power strip provides six outlets of 12-volt power with grounds. This power is 30-amp switched and 30-amp unswitched. The connectors can be used when connecting auxiliary equipment.

Adapters plug directly into power strip as unswitched power. To change to switched power on power plug adapter or standard adapter (three wires), remove small tab at end of slot on plug and rotate plug 180°.

*NOTE: The small white dot on adapter plug face next to cap hinge indicates circuit is **unswitched**. If dot is opposite cap hinge, circuit is **switched**.*

Adapters are available from your John Deere dealer for the following:

LV9485—UN—28JUL04

Top of Right-Hand Console

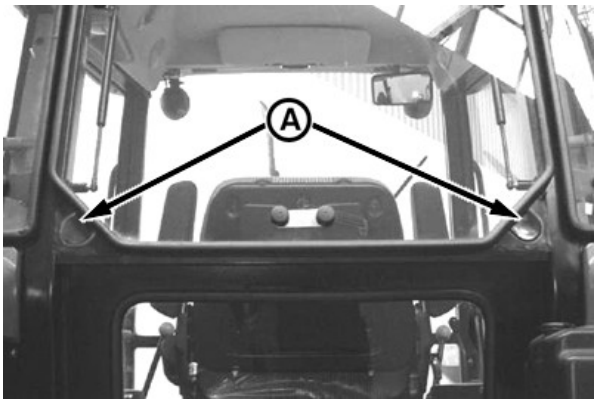
- Power plug adapters
- Three-way convenience adapters
- Standard adapters

OUMX005,00018F6-19-21JUL04-1/1

Routing Cables and Harnesses

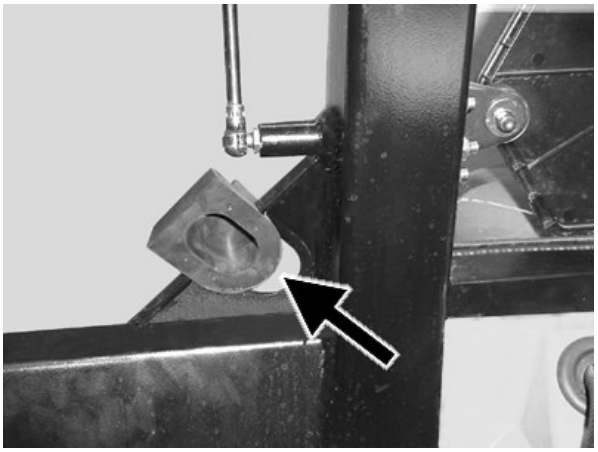
Rear window frame of cab has two openings, allowing cables/harnesses to be routed. Open the window and remove rubber plugs (A). Cut rubber plugs at the incisions provided, to allow cables/harnesses to be routed through the plugs. Connect the cable/harness ends, insert rubber plugs and close the window.

A—Rubber Plugs



P12681—UN—24NOV03

Outside of Cab

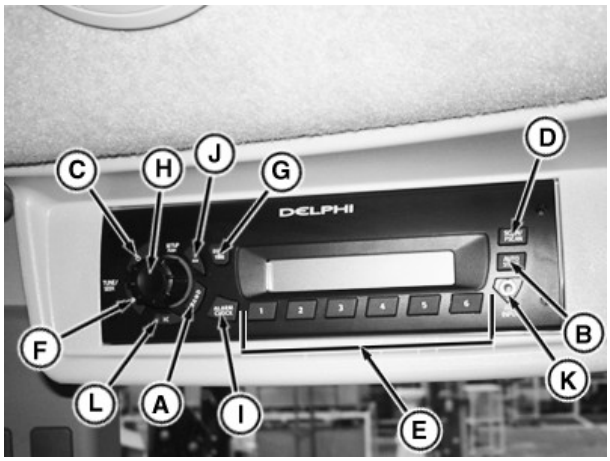


P12682—UN—24NOV03

Inside of Cab

OUMX005,000291C-19-29JAN08-1/1

Operating Radio (AM/FM)



PY15241—UN—02JUN12

A—Band
B—Auto Store
C—Power
D—Scan
E—Preset Stations
F—Tune
G—Display/Time
H—On/Volume
I—Alarm Clock
J—Aux Button
K—Aux Input
L— Seek

Press BAND (A) to select FM1, FM2, AM, SAT or WX (Weather).

Press TUNE (F) once to tune to the next higher station. Press SEEK (L) once to tune to the next lower station.

Press and hold both TUNE (F) and BAND (A) to switch between manual tune mode and ”seek” mode.

Holding SEEK longer than half a second begins the ”seek” function. When a station with a strong enough signal is found, ”seek” function will stop at that station.

Press SCAN (D) to scan all stations. When a strong enough signal is found, the station will play for 5 seconds then continue to scan until SCAN is pressed again.

Storing Preset Stations:

1. Select FM1, FM2, AM, SAT or WX.
2. Tune to desired station.
3. Press and hold one of the six preset buttons (E) to store the selected station.
4. Repeat procedure for remaining preset buttons.

Press AUTO (B) until ”AUTO” and the ”AS” icon appear to automatically store the six strongest stations of a selected band. Press AUTO again to restore original presets.

Press DISPL/TIME (G) to switch between displays. When the receiver is in AM, FM1, FM2, SAT or WX, the display will switch between frequency and time of day.

Adjust volume, bass, treble, fade, and balance by pressing and releasing ON/Volume knob (H) repeatedly until desired function appears on display. Rotate ON/Volume knob for adjustment.

Press Alarm Clock (I) to set the Alarm

Press Aux button (J) to play audio from external devices by connecting to Aux Input (K)

SV86979,0000027-19-02JUN12-1/1

Operating Radio with Compact Disc Player (If Equipped)

NOTE: Press Power with ignition switched off. Radio will play up to one hour, then shut off automatically.

Press BAND to select FM1, FM2, AM, SAT or WX (Weather).

Press TUNE (F) once to tune to the next higher station. Press SEEK (R) once to tune to the next lower station.

Press and hold both TUNE (F) and BAND to switch between manual tune mode and ”seek” mode.

Holding SEEK longer than half a second begins the ”seek” function. When a station with a strong enough signal is found, ”seek” function will stop at that station.

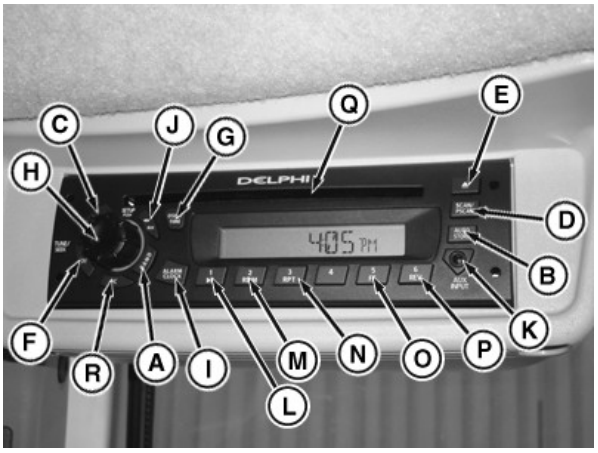
Press SCAN (D) to scan all stations. When a strong enough signal is found, the station will play for 5 seconds then continue to scan until SCAN is pressed again.

Storing Preset Stations:

1. Select the desired band (FM1, FM2, AM, SAT or WX)
2. Tune to desired station.
3. Press and hold one of the six preset buttons to store the selected station.
4. Repeat procedure for remaining preset buttons.

Press DISPL/TM SET button to switch between displays. When the receiver is in AM, FM1, FM2, SAT or WX, the display will switch between frequency and time of day.

Adjust volume, bass, treble, fade, and balance by pressing and releasing ON/VOLUME knob repeatedly until desired function appears on display. Rotate ON/AUDIO knob for adjustment.



PY15243—UN—02JUN12

A—Band
B—AutoStore
C—Power
D—Scan
E—Eject CD
F—Tune
G—Disp/Tune
H—On/Volume
I—Alarm Clock
J—Aux Button
K—Aux Input
L—Pause
M—Preset Station/RDM Random
N—Preset Station/RPTRepeat
O—Preset Station/FFFast Forward
P—Preset Station/REVFast Reverse
Q—Slot
R—Seek

SV86979,0000029-19-02JUN12-1/1

Operating Compact Disc Player (If Equipped)

Switch ignition and receiver to ON position.

Insert compact disc into slot (O), label side up.

Press (F) to forward to the next track. Press (R) to reverse to the beginning of the track.

Press (N) to repeat the current track. Press (M) for random track selection.

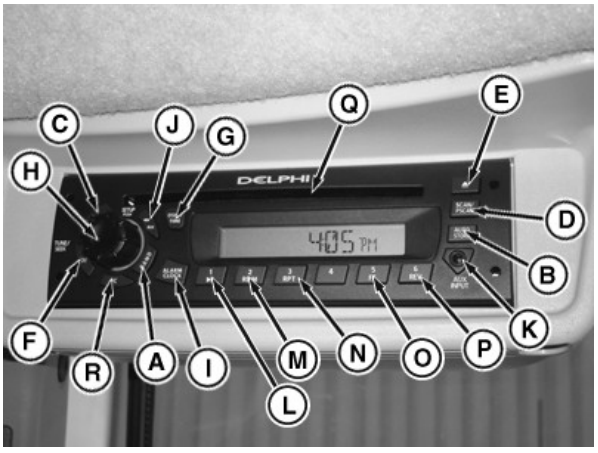
Press and hold (P)to fast reverse. Release to play at normal speed.

Press (L) to pause the CD. Press (L) again to resume play.

Press and hold (O) to fast forward. Release button to play at normal speed.

Press (E) to eject CD.

Press (D) to advance to next track on CD. The CD will play 10 seconds of that track and then play each successive track for 10 seconds. Press (D) again to cancel.



PY15243—UN—02JUN12

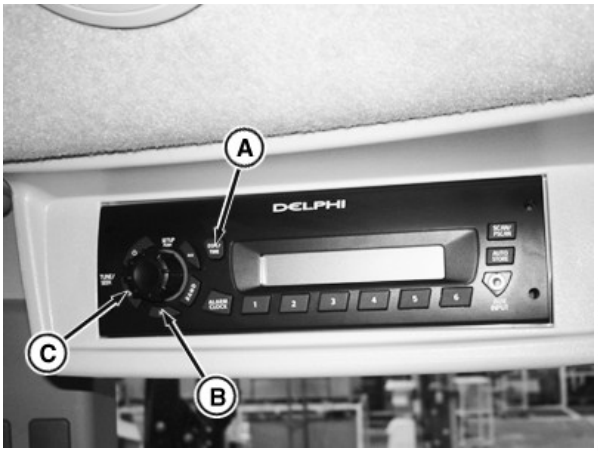
A—Band
B—AutoStore
C—Power
D—Scan
E—Eject CD
F—TuneForward
G—Disp/Tune
H—On/Volume
I—Alarm Clock
J—Aux Button
K—Aux Input
L—Pause
M—RDM Random
N—RPTRepeat
O—FFFast Forward
P—REVFast Reverse
Q—Slot
R—SeekReverse

SV86979,000002A-19-02JUN12-1/1

Setting Clock

1. Switch ignition to ON position.
2. Press and hold DSPL/TM SET (A) button until the ”hours” digits flash.
3. Press SEEK (B) or TUNE (C) to set the correct hour.
4. Press and hold DSPL/TM SET until the ”minutes” digits flash.
5. Press SEEK or TUNE to set correct minute. The seconds are reset to zero when minute setting is changed.

A—DSPL/TM SET
B—SEEK
C—TUNE



PY15242—UN—02JUN12

SV86979,0000028-19-02JUN12-1/1

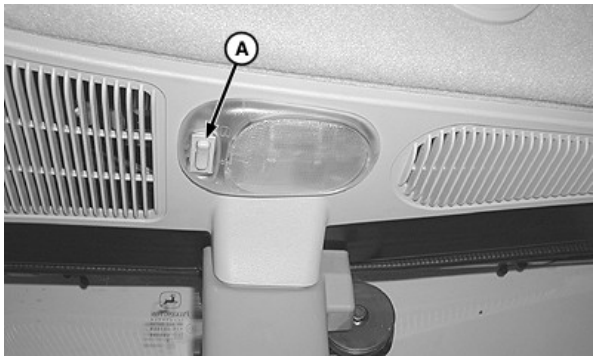
Using Dome Light

Dome light switch (A) has three positions:

- ON turns the dome light on.
- Dome light comes on when left-hand door is opened and off when left-hand door is closed.
- OFF turns the dome light off.

IMPORTANT: Before exiting cab, turn dome light to OFF or DOOR position to avoid causing battery to lose its charge.

A—Dome Light Switch



LV8418—UN—14JUL03

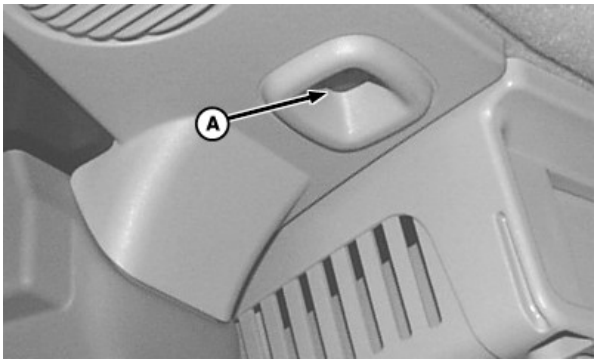
OUO1023,00028C5-19-25MAR08-1/1

Using Courtesy Light

Courtesy light (A) is on when light switch is in the following positions:

- Warning Light Position
- Road Lights Position
- Field Lights Position

A—Courtesy Light



LV09217—UN—22JUL04

Light above Right-Hand Control Panel

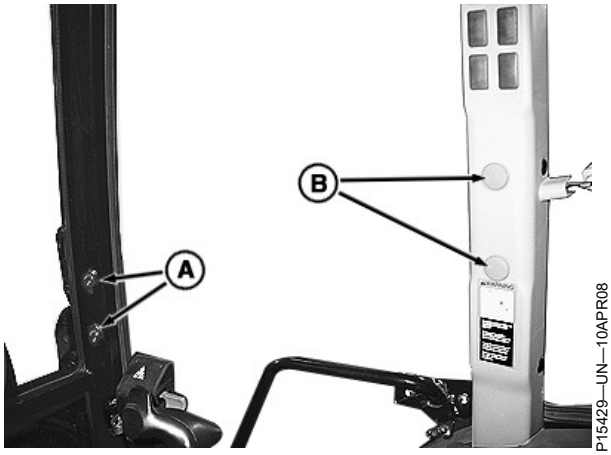
SD74272,000030D-19-09AUG12-1/1

Using Monitor Mounts

There are two locations to attach monitors and controls in the cab:

- Front right post (A).
- Right center post (remove plugs [B]).

A—Mounting Locations **B—Plugs (Mounting Locations)**



OUMX005,000291E-19-10APR08-1/1

Engine Operation—*Break-In Check*

IMPORTANT: The engine is ready for normal operation. However, extra care during the initial break-in period will result in more satisfactory long-term engine performance and life.During the initial operation of a new engine, change the oil and filter between a minimum of 100 hours and a maximum equal to the specified John Deere Plus 50 or John Deere Plus 50 II engine oil.

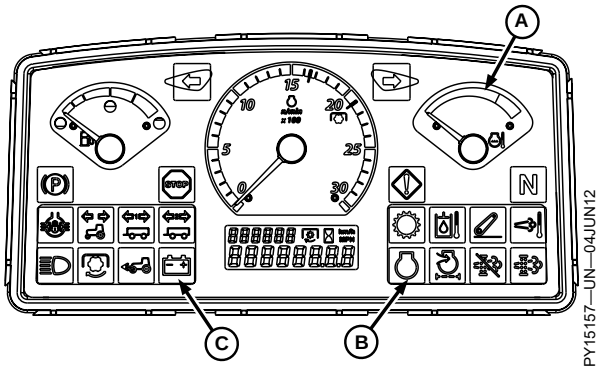
1. Warm up engine at slow rpm. Check coolant temperature gauge (A), oil pressure (B) and charging (C) warning indicators.
2. **Operate the engine at heavy loads with minimal idling during the break-in period.**
   During the first 20 hours, avoid prolonged periods of engine idling or sustained maximum load operation. If engine will idle longer that 5 minutes, stop the engine.
3. Check engine oil, coolant, transmission/hydraulic, and mechanical front wheel drive (if equipped) fluid levels frequently. Watch for fluid leaks.

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

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

IMPORTANT: This engine is factory-filled with John Deere ENGINE BREAK-IN OIL.

If the engine has significant operating time at idle, constant speeds, and/or light load usage, or makeup oil is required in the first 100 hour period, a longer break-in period may be required. In these situations, an additional 100 hour break-in period is recommended, using a new change of John Deere Engine BREAK-IN OIL and a new John Deere oil filter.



A—Coolant Temperature Gauge
B—Oil Pressure Indicator
C—Charging Indicator

Check engine oil level more frequently during engine break-in period.

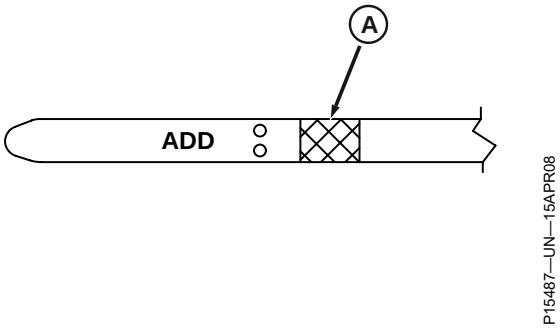
Do not add make-up oil until the oil level is BELOW the ADD mark on dipstick. If make-up oil is required during the break-in period, John Deere Engine Break-In Plus oil should be used whenever possible.

SP21231,00002AF-19-21JUN12-1/2

DO NOT fill above the crosshatch pattern (A) or the FULL mark, whichever is present. Oil levels anywhere within the crosshatch are considered in the acceptable operating range.

Break-In Plus may be changed any time between 100 and 500 hours (or 24 months in the case of low annual usage such as emergency generator sets).See CHANGING ENGINE OIL AND REPLACING FILTER in Lubrication and Maintenance/500 Hour Section.) Fill crankcase with seasonal viscosity grade oil. (See DIESEL ENGINE OIL, in Fuels, Lubricants, and Coolant Section.)

If John Deere Engine Break-In Plus oil is not available for whatever reason, please use 10W-30 viscosity grade of John Deere Plus-50 II (CJ-4) as the make-up oil. If 10W-30 Plus-50 II (CJ-4) is also not available, then use 15W-40 viscosity grade of Plus-50 II (CJ-4) as the make-up oil.



Dipstick Crosshatch Pattern

A—Crosshatch Pattern

SP21231,00002AF-19-21JUN12-2/2

Break-In Service—*During First 10 Hours of Operation*

IMPORTANT: Keep wheel hardware tight to avoid tractor damage. Check torque on wheel bolts before operating, twice during first ten hours of operation, after fifty hours of operation, and periodically thereafter.

- **Use only John Deere ENGINE BREAK-IN OIL if needed. (See DIESEL ENGINE BREAK-IN OIL in Fuels, Lubricants and Coolant section.)**
- **Perform service listed for 10 hours in SERVICE INTERVAL CHART in Maintenance and Service Intervals section.)**
- **Tighten wheel bolts. (See Wheels, Tires and Treads section.)**

NS43404,0000456-19-02APR08-1/1

Break-In Check—*After First 50 Hours of Operation*

- **Tighten wheel bolts. (See Wheels, Tires and Treads section.)**
- **Check alternator/fan belt tension.**
- **Tighten air intake hose clamps. (See CHECK ENGINE AIR INTAKE SYSTEM in General Maintenance and Inspection section.)**
- **Check cooling system hose clamps. (See CHECK COOLING SYSTEM FOR LEAKS in Maintenance—Cooling System section.)**
- **Check brake linkage and brake pedal adjustment. (See ADJUST BRAKE PEDAL FREE TRAVEL in General Maintenance and Inspection section.)**
- **Perform service listed for 50 hours in SERVICE INTERVAL CHART in Maintenance and Service Intervals section.**

RW29387,0000121-19-02APR08-1/1

Break-In Check—*After First 100 Hours of Operation*

IMPORTANT: If tractor has too much operating time at idle,constant speeds, and/or light load usage, or make-up oil is required during the first 100-hour period, a longer break-in period may be needed without changing Break-In Plus oil until 500 hours. (See Fuel, Lubricants and Coolant section.)

- **Change engine oil and filter. (See procedure in Lubrication section.)**
- **Replace transmission/hydraulic oil filter. (See procedure in Lubrication section.)**
- **Change MFWD axle oil and MFWD wheel hub oil. (See procedures in Lubrication section.)**

SV86979,000003E-19-19JUN12-1/1

Service Daily Before Start-Up

1. Check engine oil level. (See CHECK ENGINE OIL LEVEL in Lubrication section.)
2. Check hydraulic oil level through sight glass. (See CHECK TRANSMISSION/HYDRAULIC SYSTEM OIL LEVEL in Lubrication section.)
3. Drain water and sediment from fuel filters. (See procedure in Maintenance—Fuel System section.)
4. Check level in coolant overflow reservoir. (See CHECK COOLANT LEVEL in Maintenance—Cooling System section.)
5. Clean air filter dust unloading valve. (See procedure in General Maintenance and Inspection Section).

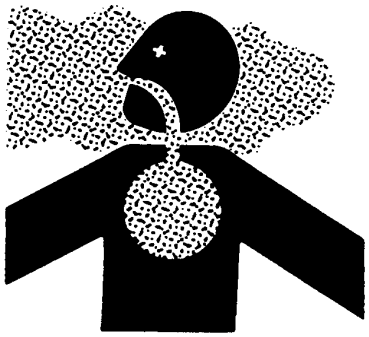
IMPORTANT: If operating in extremely wet or muddy conditions, lubricate several additional components daily.

6. If operating in extremely wet or muddy conditions, lubricate the following at 10-hour service intervals (See procedures in Lubrication section):
   - Front axle pivot pin
   - Steering linkage
   - MFWD shaft
   - Front wheel bearings (2WD)
   - Rear axle bearings
   - Hood latch

SD74272,000030E-19-09AUG12-1/1

Before Starting the Engine, OOS

CAUTION: Prevent asphyxiation by providing adequate ventilation. If operating indoors, use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to thoroughly ventilate the area.



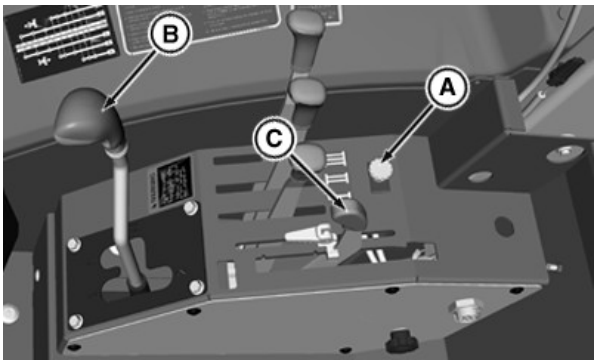
TS220—UN—15APR13

SP21231,00002BD-19-04JUL12-1/2

1. Put gear shift lever (B) in NEUTRAL.
2. **Transmission with PowrReverser™:** Put lever (D) in NEUTRAL.
3. **PTO:** Press switch (A) back to disengaged position (shown).
4. **Rockshaft:** Push hitch control lever (C) forward.
5. Turn key to RUN position.
   - All indicator bulbs light momentarily
   - Check fuel level gauge to be sure tractor has plenty of fuel
   - Charging system (battery) and Neutral (N) indicators stay on
   - Numbers display in hour meter window
   - An audible “beep” will sound briefly

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

A—PTO Switch
B—Gear Shift Lever
C—Hitch Control Lever
D—PowrReverser Lever



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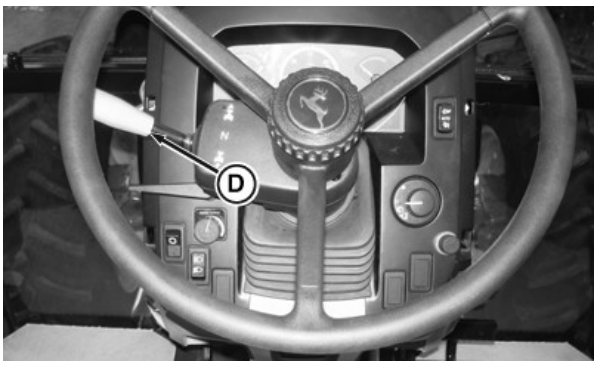


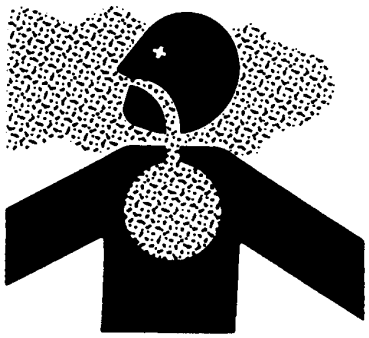
PY15176—UN—28JUN12

PowrReverser Lever

SP21231,00002BD-19-04JUL12-2/2

Before Starting the Engine, Cab

CAUTION: Prevent asphyxiation by providing adequate ventilation. If operating indoors, use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to thoroughly ventilate the area.



TS220—UN—15APR13

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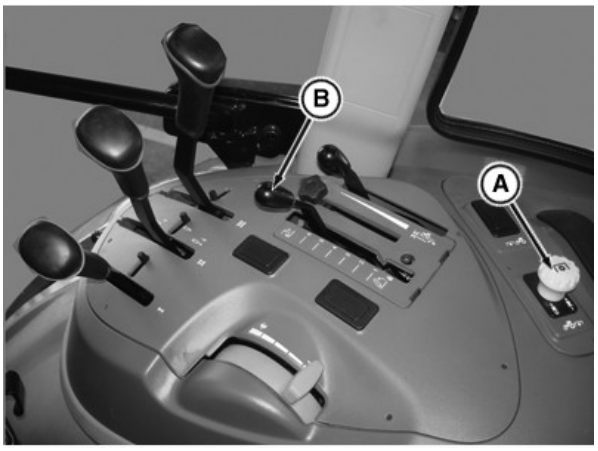
SV86979,0000049-19-09AUG12-1/2

1. Put gear shift lever (C) in NEUTRAL.
2. **Transmission with PowrReverser™:** Put lever (D) in NEUTRAL.
3. **PTO:** Press switch (A) back to disengaged position (shown).
4. **Rockshaft:** Push hitch control lever (B) forward.
5. Turn key to RUN position.
   - All indicator bulbs light momentarily
   - Check fuel level gauge to be sure tractor has plenty of fuel
   - Charging system (battery) and Neutral (N) indicators stay on
   - Numbers display in hour meter window
   - An audible “beep” will sound briefly

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

A—PTO Switch
B—Hitch Control Lever
C—Gear Shift Lever
D—PowrReverser Lever (If Equipped)



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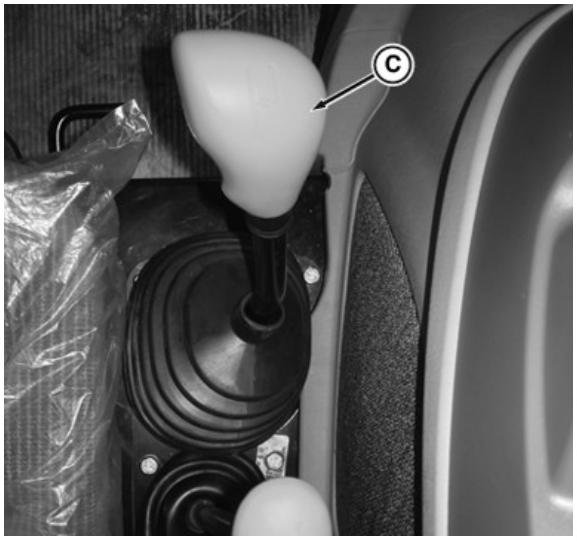

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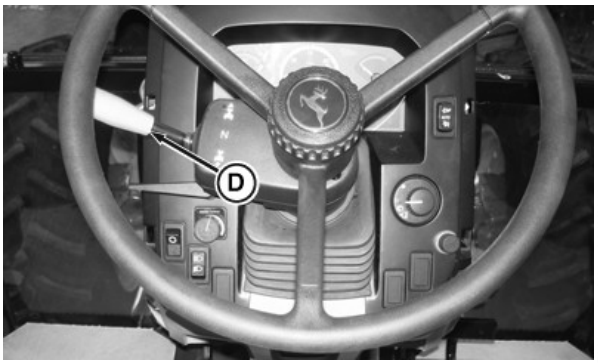


PY15176—UN—28JUN12

PowrReverser Lever

SV86979,0000049-19-09AUG12-2/2

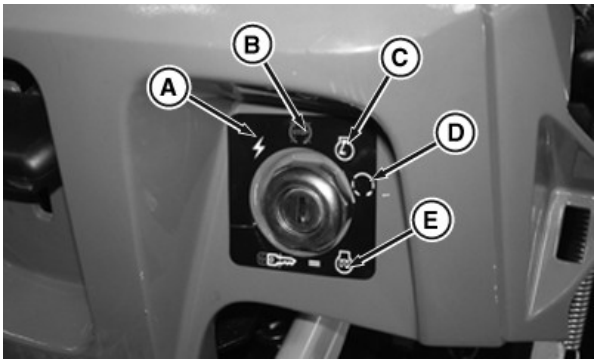
Operating Ignition Switch

Accessory Position (A): Turn key to ACCESSORY position to power electrical functions.

Stop Position (B): Turn key to STOP position to turn off electrical accessories and to shut down engine.

Run Position (C): Turn key to RUN position and check to see if all indicator bulbs light before advancing to START position. If temperature is below 5°C (41°F), refer to STARTING IN COLD WEATHER in this section.

Start Position (D): Turn key to START position to crank and start engine. Key returns to RUN position when released.



PY15177—UN—01JUN12

A—Accessory Position
B—Stop Position
C—Run Position
D—Start Position
E—Cold Weather Start Symbol

SP21231,00002C1-19-13JUN12-1/1

Starting the Engine, OOS

CAUTION: NEVER start engine while standing on ground. Do not start engine by shorting across starter terminals. Machine will start in gear and move if normal circuitry is bypassed.

IMPORTANT: DO NOT run a cold engine at full throttle. Idle engine at 1200 rpm until it warms to operating temperature.

DO NOT use starting fluid.

NOTE: If temperature is below 5 °C (40 °F), refer to STARTING IN COLD WEATHER in this section.

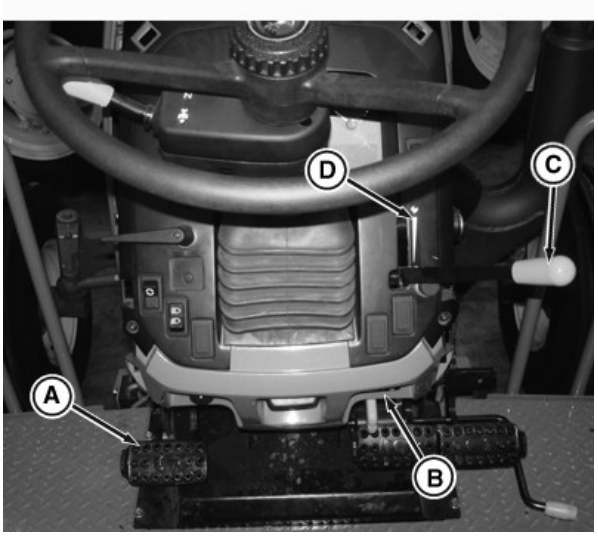
1. Start from operator's seat with gear shift lever or PowrReverser™ lever (if equipped) in NEUTRAL.
2. Make sure PTO lever is in disengaged position.
3. Push hand throttle (C) forward, approximately 1/3 of full throttle, as shown on fast/slow indicator (D). Engine may not start with throttle pulled completely down.

IMPORTANT: DO NOT operate starter more than 20 seconds at a time. If engine does not start, wait at least 2 minutes for the starter motor to cool before trying again.

4. Depress clutch pedal (A) and turn key (B) to START position. Release key when engine starts. If key is released before engine starts, wait until starter and engine stop turning before trying again.
5. Warm up tractor carefully. Charging and oil pressure warning indicators should go off and stay off. Coolant temperature gauge should begin to move into normal range.
6. Avoid unnecessary engine idling.

A—Clutch Pedal
B—Ignition Switch
C—Hand Throttle
D—Fast/Slow Indicator

TS177—UN—11JAN89



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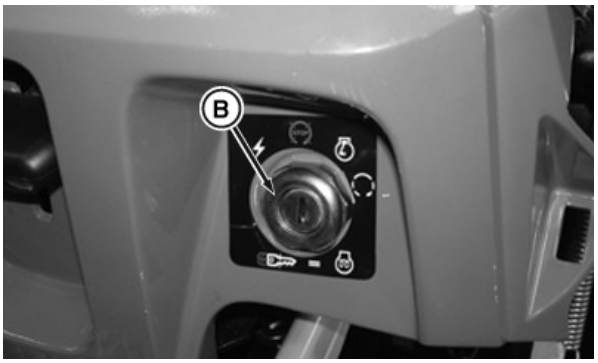

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SP21231,00002BE-19-27JUN12-1/1

Starting the Engine, Cab

CAUTION: NEVER start engine while standing on ground. Do not start engine by shorting across starter terminals. Machine will start in gear and move if normal circuitry is bypassed.

IMPORTANT: DO NOT run a cold engine at full throttle. Idle engine at 1200 rpm until it warms to operating temperature.

DO NOT use starting fluid.

NOTE: If temperature is below 5 °C (40 °F), refer to STARTING IN COLD WEATHER in this section.

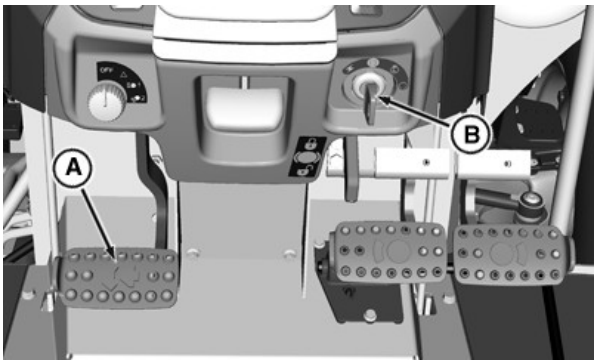
1. Start from operator's seat with gear shift lever or PowrReverser™ lever (if equipped) in NEUTRAL.
2. Make sure PTO lever is in disengaged position.
3. Push hand throttle (C) forward, approximately 1/3 of full throttle, as shown on fast/slow indicator (D). Engine may not start with throttle pulled completely down.

IMPORTANT: DO NOT operate starter more than 20 seconds at a time. If engine does not start, wait at least 2 minutes for the starter motor to cool before trying again.

4. Depress clutch pedal (A) and turn key (B) to START position. Release key when engine starts. If key is released before engine starts, wait until starter and engine stop turning before trying again.
5. Warm up tractor carefully. Charging and oil pressure warning indicators should go off and stay off. Coolant temperature gauge should begin to move into normal range.
6. Avoid unnecessary engine idling.

A—Clutch Pedal
B—Ignition Switch
C—Hand Throttle
D—Fast/Slow Indicator


TS177—UN—11JAN89



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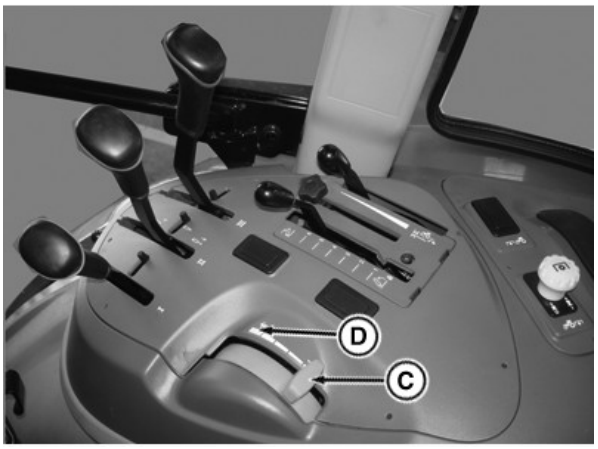

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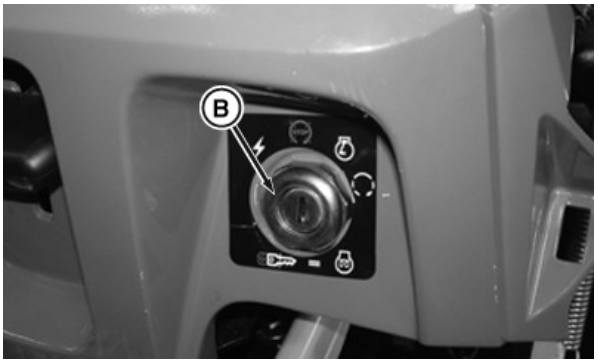


PY15179—UN—01JUN12

SV86979,000004E-19-28JUN12-1/1

Starting in Cold Weather (If Equipped)

CAUTION: DO NOT use starting fluid on engines equipped with glow plugs or air intake heaters. Ether injector starting fluid is highly flammable and may explode, causing serious injury.

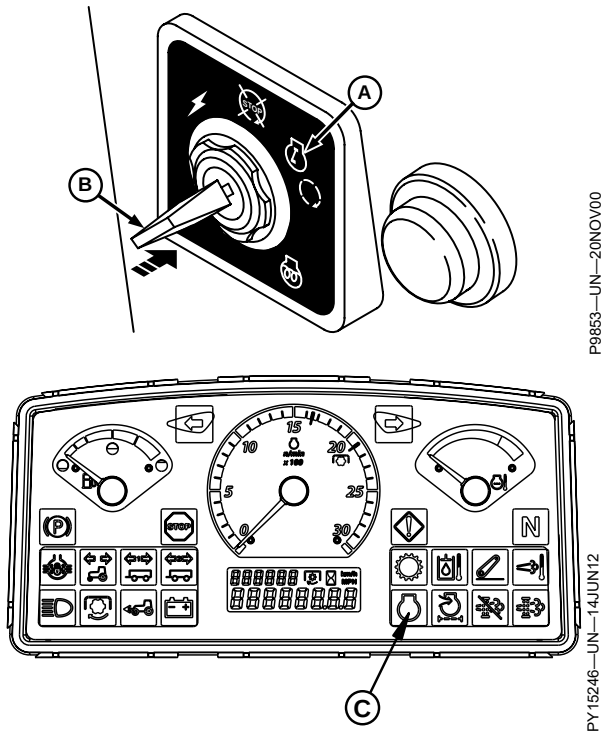
DO NOT use starting fluid near fire, sparks, or flames. DO NOT incinerate or puncture a starting fluid container.

1. Follow steps as listed under STARTING THE ENGINE, earlier in this section, then proceed as follows according to the instrument (gauge) panel on your engine.

NOTE: Glow plugs operate automatically through the ECU. The Engine Preheater Indicator light (B) on these engines, should always illuminate when theswitch is turned ON. In warm weather, the light illuminates briefly as a light check. In cold weather, the light remains on during the automatic operation of the glow plugs. Operating time depends on temperature. Do not crank engine until light turns off.

2. Turn key (B) to run position (A) ON to activate glow plugs, but DO NOT crank engine until Engine Preheater Indicator light (C) turns off.
3. Follow remaining steps as listed earlier in “Starting Engine” section.

Additional information on cold weather operation is available from your authorized servicing dealer.



Activating Glow Plugs (if applicable) with Key Start Switch

A—RUN Position
B—Ignition Key
C—Engine Information Indicator

SP21231,00002DA-19-15JUN12-1/1

Using Engine Coolant Heater (If Equipped)

CAUTION: To avoid shock or hazardous operation, always use a three-wire heavy-duty electrical cord (minimum gauge 10 AWG and no longer than 7.6 m [25 ft]) equipped with three connectors. If a two-to-three contact adapter is used at the wall receptacle, connect green wire to a good ground.

Immerse element in coolant before connecting heater to power source. NEVER energize heater in air.

Located on side of the engine, the 110-volt coolant heater warms the engine coolant, reduces oil drag, eases starting, and shortens warm-up time.

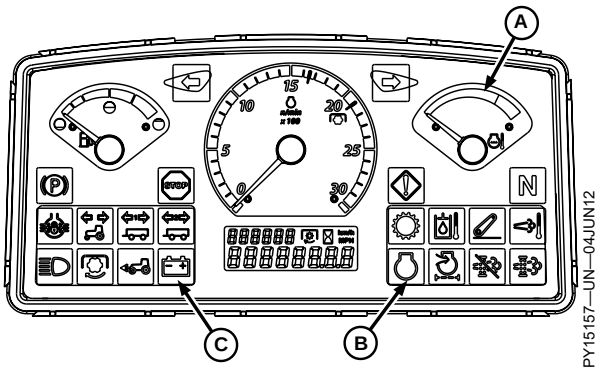
Connect heater plug to a ground fault protected 110-volt electrical outlet.

OUMX005,0002922-19-30JAN08-1/1

Check Instruments After Starting

IMPORTANT: If coolant temperature gauge (A) goes into the red zone, or either oil pressure or charging system indicators (B or C) remain on, stop engine and determine the cause.

A—Coolant Temperature Gauge
B—Engine Information Indicator
C—Charging System Indicator



Instrument Panel PowerReverser/Wet Clutch Tractors

SP21231,00002A8-19-09AUG12-1/1

Stop/Operator Alert Indicator

ENGINE STOP Indicator (A): Light illuminates and audible alarm beeps to alert operator that a serious malfunction has occurred, which requires immediate attention or the tractor will be damaged.

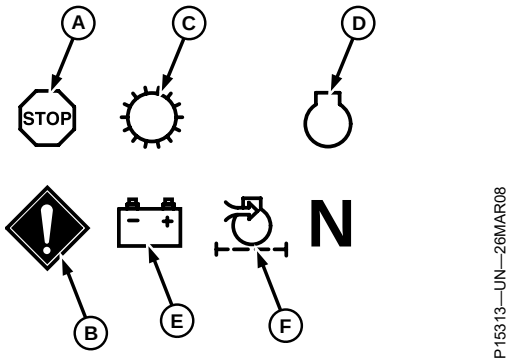
Immediately stop operations, reduce engine speed to idle, then shut down engine. Correct problem before restarting.

Malfunctions that will cause STOP indicator light to come on include:

- Low engine oil pressure
- High hydraulic oil temperature (PowrReverser/Wet Clutch Tractors)
- High coolant temperature
- Water in fuel
- High manifold air temperature

Service ALERT Indicator (B): Light illuminates and audible alarm beeps to inform operator that a performance or operational problem has been detected, which needs to be resolved as soon as possible. Continued operations can cause a Operator Alert to escalate into a STOP indicator. If appropriate corrective action is not taken soon (serviced, repaired, operated in a different manner), a significant reduction in performance will occur, resulting in machine damage.

Malfunctions that will cause Service indicator light to come on include:



STOP Indicator

A—STOP Indicator
B—Operator Alert Indicator
C—Transmission Information Indicator (PowrReverser/ Wet Clutch Tractors)
D—Engine Information Indicator
E—Charging System Indicator
F—Engine Air cleaner Restriction indicator

- Low engine oil pressure
- High hydraulic oil temperature (PowrReverser/Wet Clutch Tractors)
- High coolant temperature
- Rear PTO switch on and operator out of seat
- Water in fuel
- High manifold air temperature

OU1092A,00001CD-19-17APR08-1/1

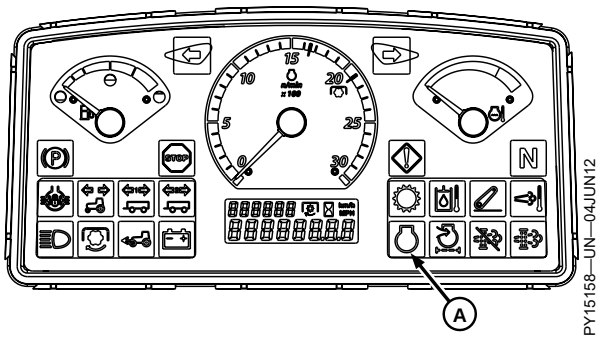
Oil Pressure Indicator

Oil pressure indicator (A) will light if engine oil pressure is low. Indicator should be on when key is turned to RUN position and off when engine starts.

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

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

A—Oil Pressure Indicator



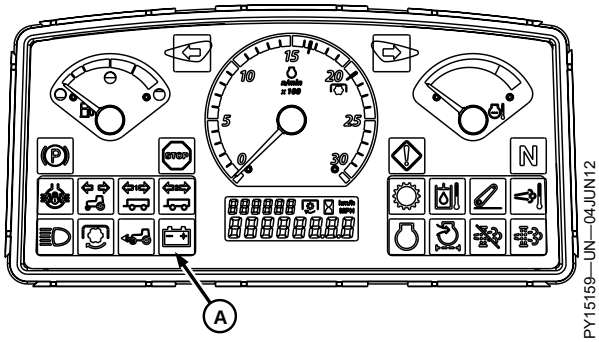
SP21231,00002A9-19-09AUG12-1/1

Charging System Indicator

Charging system indicator (A) will light when alternator output is low. Indicator should light when key is turned to RUN position and go out when engine starts.

If indicator stays on for longer than five seconds in normal operation, stop engine and check for cause. If loose or broken fan belt is not the cause, see your John Deere dealer.

A—Charging System Indicator



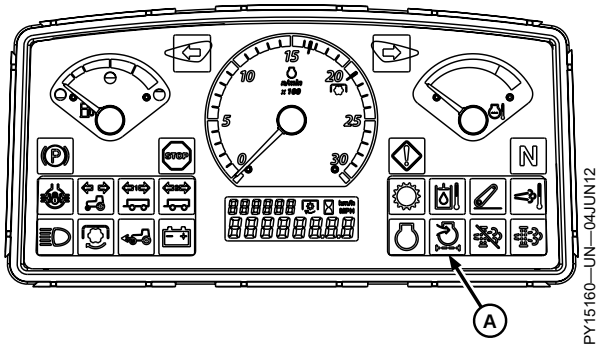
SP21231,00002AA-19-01JUN12-1/1

Air Restriction Indicator

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

Indicator should light momentarily when key is turned to START position and go off when engine starts.

A—Air Restriction Indicator



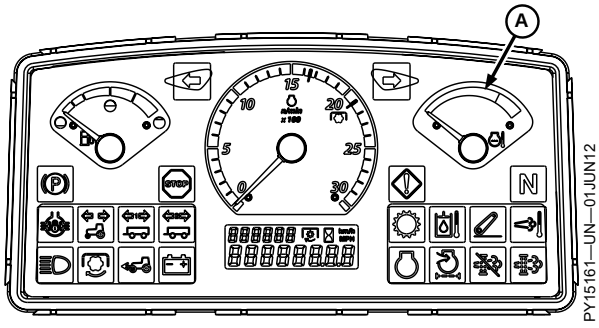
SP21231,00002AB-19-01JUN12-1/1

Coolant Temperature Gauge

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

CAUTION: Do not remove reservoir cap until coolant has had a chance to cool down. Always loosen reservoir cap slowly to relieve any excess pressure.

A—Coolant Temperature Gauge



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SP21231,00002AC-19-02JUN12-1/2

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

SP21231,00002AC-19-02JUN12-2/2

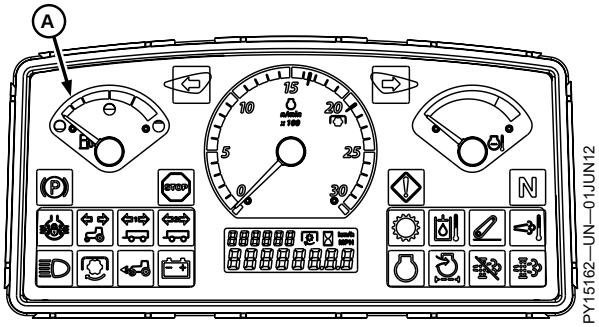
Fuel Level Gauge

Stop to refuel before gauge (A) reaches empty mark.

IMPORTANT: Use diesel fuel only. (See Fuels, Lubricants and Coolant section for fuel specifications.)

Should tractor run out of fuel and not start in several tries, bleed air from fuel system. (See BLEED FUEL SYSTEM in Maintenance—Fuel System section.)

A—Fuel Level Gauge



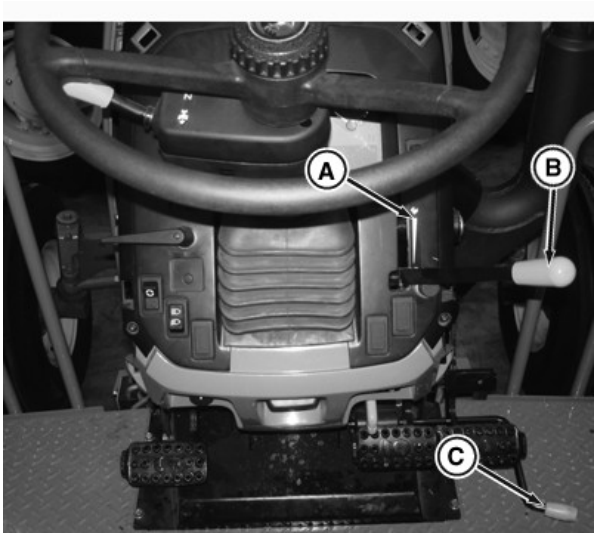
SP21231,00002AD-19-01JUN12-1/1

Changing Engine Speed, OOS

To increase or decrease engine speed, use hand throttle (B). Engine will maintain set speed until hand throttle is moved again. Maximum speed is attained with lever all the way up, and minimum speed with lever all the way down, as indicated by the fast/slow indicator (A) on instrument panel.

To temporarily increase engine speed, use foot throttle (C). Engine speed will return to prior speed as soon as foot throttle lever is released.

A—Fast/Slow Indicator
B—Hand Throttle
C—Foot Throttle



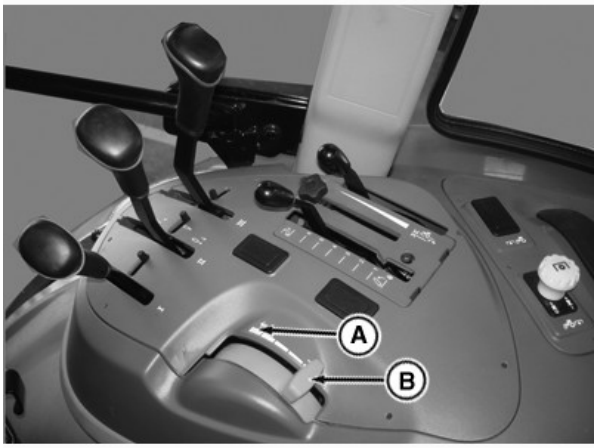
SP21231,00002BF-19-23JUN12-1/1

Changing Engine Speed, Cab

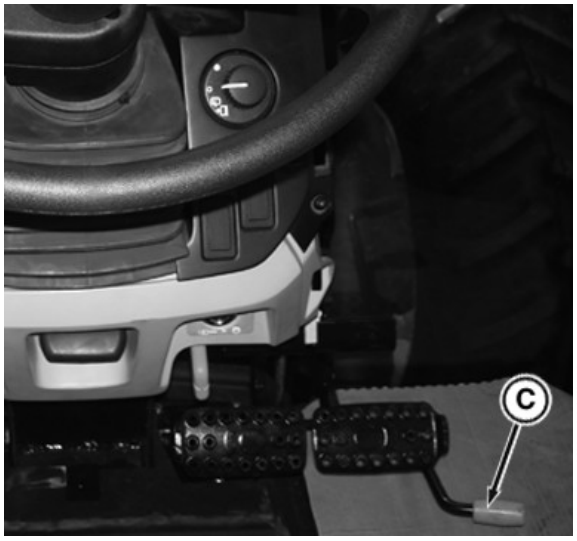
To increase or decrease engine speed, use hand throttle (B). Engine will maintain set speed until hand throttle is moved again. Maximum speed is attained with lever all the way up, and minimum speed with lever all the way down, as indicated by the fast/slow indicator (A) on instrument panel.

To temporarily increase engine speed, use foot throttle (C). Engine speed will return to prior speed as soon as foot throttle lever is released.

A—Fast/Slow Indicator
B—Hand Throttle
C—Foot Throttle



PY15537—UN—22JUN12



PY15536—UN—29JUN12

SV86979,000004D-19-23JUN12-1/1

Warming Up the Engine

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

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

PX07220,0000018-19-16APR04-1/1

Restart Stalled Engine

IMPORTANT: Be sure to observe the following, or damage to turbocharger could occur.

Should the engine stall when operating under load, depress clutch and restart it immediately to prevent abnormal heat build up. Continue with normal operation or run engine at slow idle for one or two minutes before stopping.

PX07220,0000019-19-16APR04-1/1

Avoid Low Speed Idling

Allowing engine to idle for long periods at low speed uses fuel inefficiently, and can cause a buildup of carbon in the engine.

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

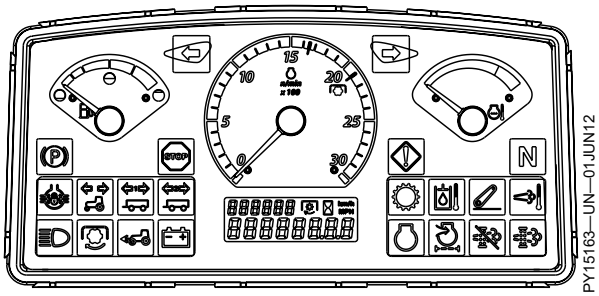
PX07220,000001A-19-25MAR08-1/1

Observe Engine Work and Idle Speeds

Slow idle speed should be 900 ± 10rpm depending on model. At light or no load, full throttle speed will increase to 2300 ± 10 rpm depending on model. See slow and fast idle in Specifications Section.

Normal working speed is 1800—2200 rpm rated speed. Within these limits, engine can be put under full load.

IMPORTANT: When using tractor under heavy loads, always use full throttle (maximum engine rpm), do not set throttle at low speeds to work with heavy tillage or implements requiring high power.



SP21231,00002B0-19-19JUN12-1/1

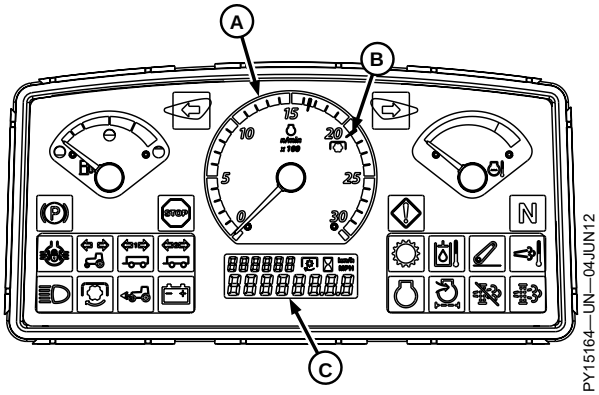
Working with Speedometer / Hour Meter

Tachometer (A) shows engine revolutions per minute, read in hundreds.

For 540 or 1000 rpm PTO, increase engine speed until tachometer needle is aligned with 2100 rpm mark (B).

Hour meter (C) shows hours of operation in full hours and tenths.

A—Tachometer
B—2100 rpm Mark
C—Speed/Hour Meter



SP21231,00002AE-19-09AUG12-1/1

Stopping the Engine, OOS

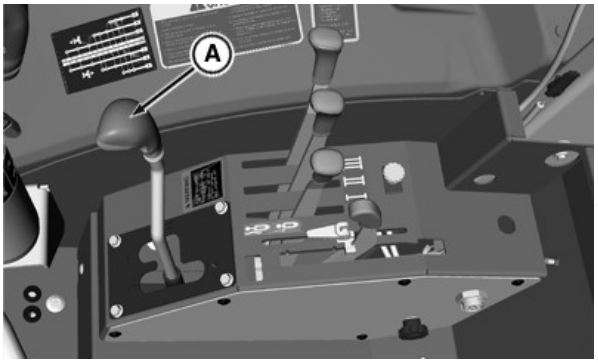
IMPORTANT: Certain engine parts are cooled by engine oil. Stopping a hot engine could cause damage by overheating or lack of lubrication.

1. Pull hand throttle (E) down to slow idle position.
2. Put gear shift lever (A) or PowrReverser™ lever (B) in NEUTRAL.
3. Lock brake pedals together using bar (C).
4. Push brake pedals down and pull up on lever (D) to set parking brake.
5. Lower all equipment to the ground, put all SCV levers in NEUTRAL and disengage PTO.
6. Allow engine to idle for one to two minutes.

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

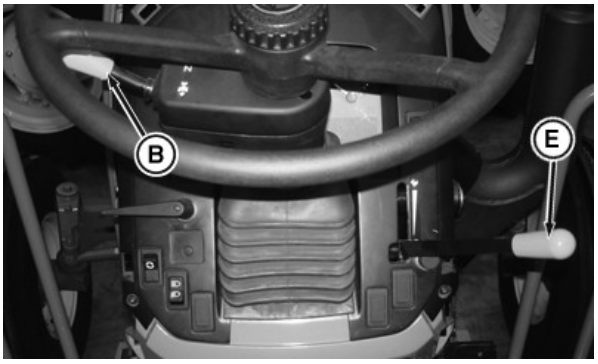
7. Turn key to STOP and remove from switch.

A—Gear Shift Lever
B—PowrReverser™ Lever
C—Brake Pedals Locking Bar
D—Parking Brake Lever (If Equipped)
E—Hand Throttle Lever



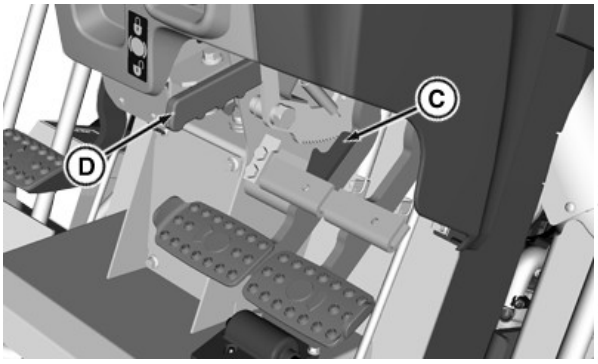
PY15181—UN—13AUG12

OOS Shown



PY15182—UN—01JUN12

PowrReverser™



PY16313—UN—13AUG12

SP21231,00002C0-19-13AUG12-1/1

Stopping the Engine, Cab

IMPORTANT: Certain engine parts are cooled by engine oil. Stopping a hot engine could cause damage by overheating or lack of lubrication.

1. Pull hand throttle (E) down to slow idle position.
2. Put gear shift lever (A) or PowrReverser™ lever (B) in NEUTRAL.
3. Lock brake pedals together using bar (C).
4. Push brake pedals down and pull up on lever (D) to set parking brake.
5. Lower all equipment to the ground, put all SCV levers in NEUTRAL and disengage PTO.
6. Allow engine to idle for one to two minutes.

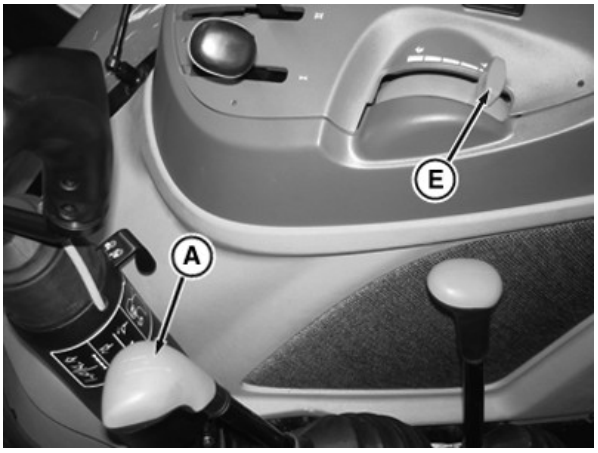
CAUTION: Remove key from ignition switch to prevent operation by untrained personnel.

7. Turn key to STOP and remove from switch.

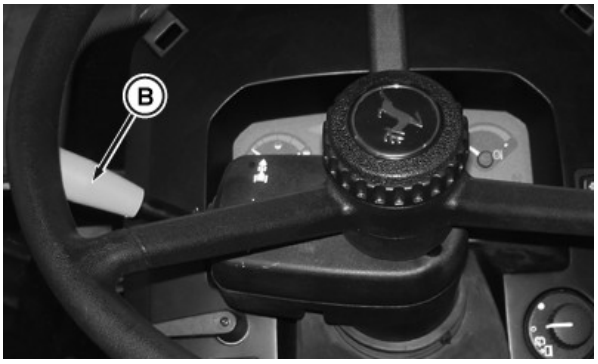
Continued on next page

SV86979,0000050-19-21AUG12-1/2

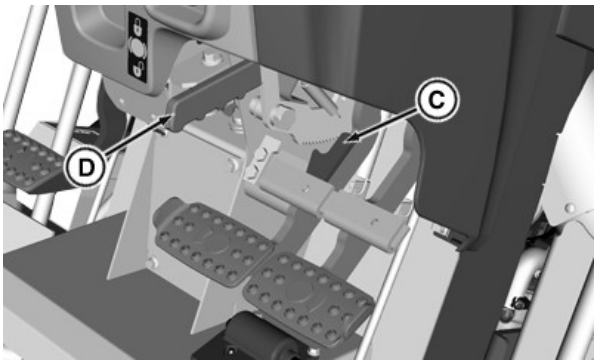
A—Gear Shift Lever
B—PowrReverser™ Lever
C—Brake Pedals Locking Bar
D—Parking Brake Lever (If Equipped)
E—Hand Throttle Lever



PY15553—UN—04JUL12



PY15534—UN—28JUN12



PY16313—UN—13AUG12

SV86979,0000050-19-21AUG12-2/2

Using a Booster Battery or Charger

CAUTION: Battery gas is explosive. Keep sparks and flames away from battery. Make last connection and first disconnection at a point away from booster battery.

IMPORTANT: Be sure polarity is correct before making connections. Reversed polarity may damage electrical system or possibly cause battery to explode.

When using two or more booster batteries, batteries MUST be connected in PARALLEL. DO NOT connect batteries in SERIES.

TS204—UN—15APR13

Booster Battery

1. Access battery. (See procedure in Maintenance—Electrical System section.)

NS43404,000056B-19-30JAN08-1/2

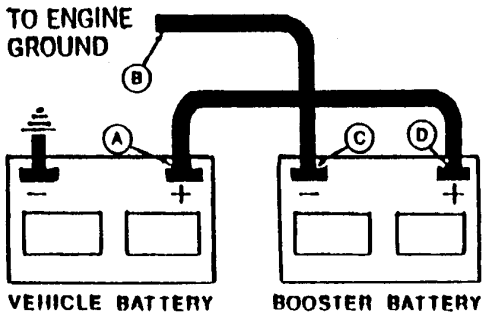
2. Connect red positive (+) booster cable to booster battery positive post (D).
3. Connect other end of positive (+) booster cable to tractor battery positive (+) post (A).
4. Connect black negative (—) booster cable to booster battery negative (—) post (C).
5. Connect other end of negative (—) booster cable to engine ground (B), away from battery and starter.
6. Turn key to START position.
7. When engine starts, remove negative (—) cable first, then positive (+) cable.

Battery Charger

1. With charger OFF, attach red positive lead to positive (+) battery terminal and negative charger lead to a good ground on the engine block, away from battery.

IMPORTANT: DO NOT set battery charger to higher than 12 VOLTS.

2. Switch charger ON and charge battery according to charger manufacturer's instructions.



M71044—19—24JUL90

A—Tractor Battery Positive (+) Post
B—Engine Ground
C—Booster Battery Negative (—) Post
D—Booster Battery Positive (+) Post

3. Switch charger OFF. Disconnect negative charger lead first, then positive lead.

NS43404,000056B-19-30JAN08-2/2

Exhaust Filter System Overview

Your machine is equipped with an emission compliant engine, which cleans and filters the engine exhaust. Under normal machine operation and with system in Automatic (AUTO) mode, the system requires minimal operator interaction. Please read the Exhaust Filter Cleaning sections to understand when and where operator interaction may be required.

To avoid unnecessary buildup of diesel particulates or soot in the exhaust filter system:

- Utilize AUTO exhaust filter cleaning mode.
- Avoid unnecessary idling.
- Use proper engine oil. (See Fuels, Lubricants, and Coolants section for recommendations.)
- Use only ultra low sulfur fuel. (See Fuels, Lubricants, and Coolants section for recommendations.)

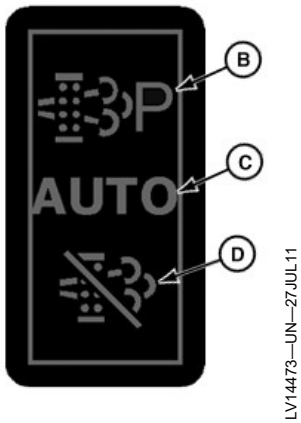
Use three position exhaust filter cleaning mode switch (A) to select exhaust filter cleaning modes; Parked (B), AUTO (C), and Disable (D).

IMPORTANT: When vehicle use is not suited for higher temperatures created by exhaust filter cleaning, use the Disable mode (D). Be sure to re-enable Automatic mode (C) as soon as possible to avoid unnecessary soot built up in exhaust filter.

Remember to select Disable mode (D) when temporarily connected to an indoor ducted exhaust system during vehicle diagnostic and repair activities.

Exhaust Filter Indicators

Exhaust Filter Cleaning Mode Switch—Location



Exhaust Filter Cleaning Mode Switch

A—Exhaust Filter Cleaning Mode Switch
B—Parked
C—Automatic (AUTO)
D—Disable

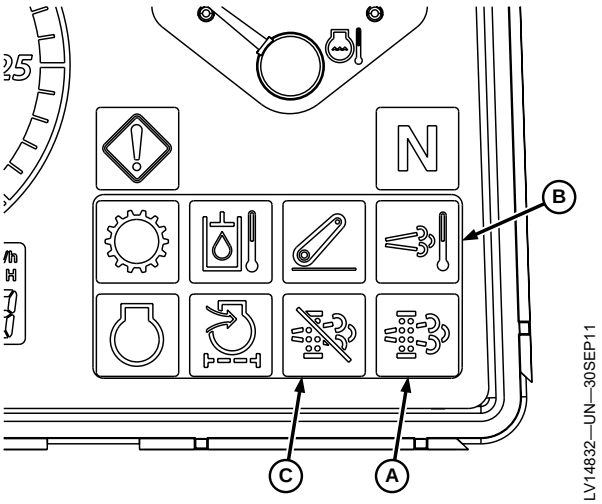
SP21231,0000289-19-01JUN12-1/6

Exhaust Filter Indicator (restriction) (A) - Indicates that buildup in the exhaust filter requires cleaning.

High Exhaust Temperature Indicator (B) - Indicates temperature in the exhaust filter high enough to conduct cleaning.

Exhaust Filter Disabled Indicator (C) - Indicates exhaust filter cleaning system is disabled.

Operator Information



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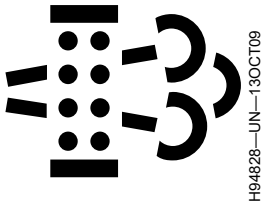
SP21231,0000289-19-01JUN12-2/6

1. Exhaust Filter Indicator

Description	Recommended Procedure
High level of soot at exhaust filter, the exhaust filter requires cleaning. *NOTE: Engine power is reduced if no cleaning is carried out.*	Activate automatic filter cleaning; see **Automatic Exhaust Filter Cleaning**. Alternatively, exhaust filter cleaning with tractor parked may be carried out; see **Parked Exhaust Filter Cleaning**.

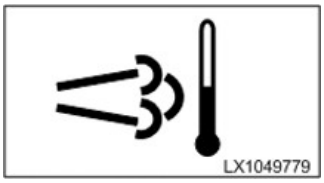


SP21231,0000289-19-01JUN12-3/6

2. High Exhaust Temperature Indicator

Description	Recommended Procedure
Exhaust filter cleaning is taking place. Exhaust temperature may be high.	Do not interrupt automatic exhaust filter cleaning unless absolutely necessary; see **Automatic Exhaust Filter Cleaning**.

LX1049779—UN—22JUL10

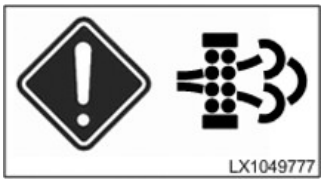


SP21231,0000289-19-01JUN12-4/6

3. Parked Exhaust Filter Cleaning Required

Description	Recommended Procedure
Very high level of soot at exhaust filter, the exhaust filter requires cleaning. Note: Engine power is reduced.	Perform **Parked Exhaust Filter Cleaning**.

LX1049777—UN—22JUL10

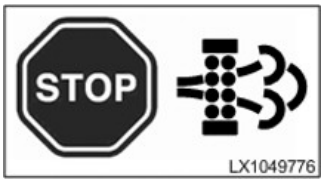


SP21231,0000289-19-01JUN12-5/6

4. Service Exhaust Filter Cleaning Required

Description	Recommended Procedure
Extreme level of soot in exhaust filter. When this level of contamination is reached, service cleaning must be performed. Note: Engine power is reduced.	Contact your John Deere dealer and get the dealer to service-clean the exhaust filter. See **Service Exhaust Filter Cleaning**.

LX1049776—UN—22JUL10



SP21231,0000289-19-01JUN12-6/6

Automatic (AUTO) Exhaust Filter Cleaning

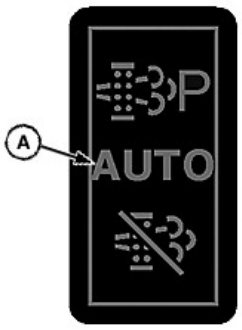
Automatic exhaust filter cleaning is started when soot in the exhaust filter reaches a certain level. This occurs less frequently if the engine is operated for long periods under conditions where passive exhaust filter cleaning takes place. Automatic exhaust filter cleaning is initiated and performed without any intervention on the part of the operator. Automatic exhaust filter cleaning is performed only if the relevant function is activated on the exhaust filter cleaning mode switch.Select center detent of Exhaust Filter Cleaning Switch (A) to enable Automatic (AUTO) Exhaust Filter Cleaning mode.

If the system determines that soot buildup in the exhaust filter requires cleaning, an automatic cleaning is initiated and performed without any intervention on the part of the operator. High Exhaust Temperature Indicator (B) remains illuminated during the exhaust filter cleaning.

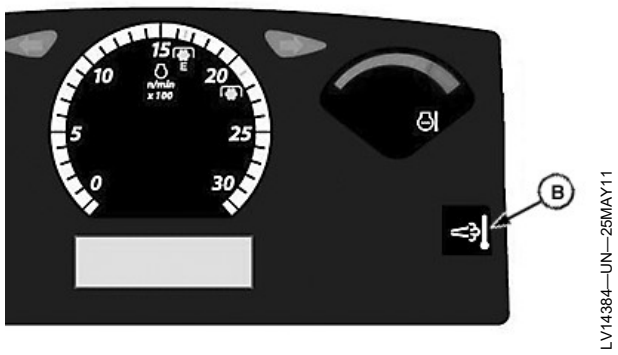
Do not disable automatic exhaust filter cleaning unless it is absolutely necessary.

CAUTION: To prevent fires, be sure to routinely clear any combustible materials (crop debris, animal nests, etc.) from the area of the engine and exhaust filter. Exhaust filter cleaning uses extremely high temperature.

IMPORTANT: See also *Clean Exhaust Filter Safely* in Section 05.



Exhaust Filter Cleaning Mode Switch



A—AUTO mode switch position

B—High Exhaust Temperature Indicator

SP21231,000028A-19-28MAY12-1/1

Disabled Exhaust Filter Cleaning

IMPORTANT: It is recommended to operate vehicle with the exhaust filter cleaning mode switch in the AUTO position (D).

Continued on next page

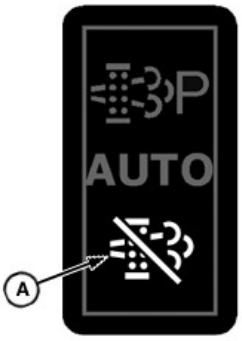
SP21231,000028B-19-28MAY12-1/2

If your vehicle must be used in a situation not suited for higher temperatures created during exhaust filter cleaning, the system can be temporarily disabled. Be sure to enable automatic (AUTO) mode as soon as possible to avoid soot buildup in the exhaust filter.Select bottom detent of Exhaust Filter Cleaning Switch (A) to engage Disable Exhaust Filter Cleaning mode. Exhaust Filter Disabled Indicator (B) is on.

While in disabled mode, if the system determines that soot buildup in the exhaust filter requires cleaning, Exhaust Filter Indicator - Restriction (C) comes on. Move Exhaust Filter Cleaning Switch (D) to engage Automatic (AUTO) Exhaust Filter Cleaning mode. High Exhaust Temperature Indicator (B) remains illuminated during the exhaust filter cleaning.

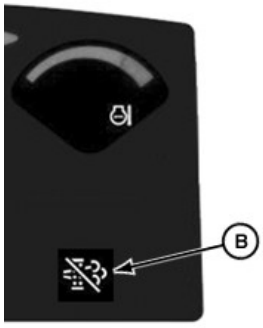
Do not disable automatic exhaust filter cleaning unless it is absolutely necessary. If disabled mode use frequently, the system will eventually activate a parked exhaust filter cleaning. Meaning the vehicle will run a longer cleaning process and can not be unloaded.

A—Exhaust Filter Cleaning Switch - Disable selected
B—Exhaust Filter Disabled Indicator
C—Exhaust Filter Indicator - Restriction
D—Exhaust Filter Cleaning Switch - AUTO selected
E—High Exhaust Temperature Indicator



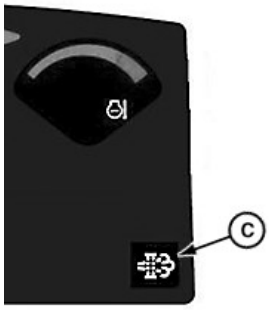
LV14390—UN—25MAY11

Exhaust Filter Cleaning Switch - Disable selected

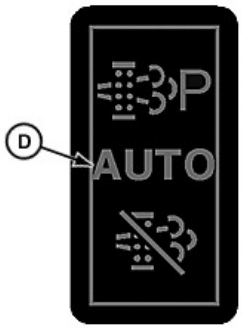


LV14476—UN—27JUL11

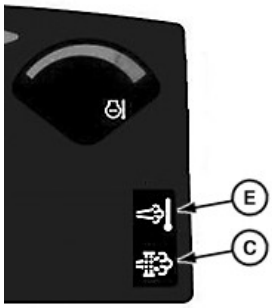
Exhaust Filter Cleaning Disable Indicator



LV14385—UN—27JUL11



LV14391—UN—27JUL11



LV14392—UN—27JUL11

SP21231,000028B-19-28MAY12-2/2

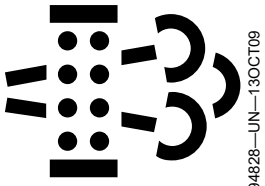
Parked Exhaust Filter Cleaning

IMPORTANT: If operator disregards indicators and continues to operate vehicle without allowing an automatic cleaning, engine performance will be reduced. A parked exhaust filter cleaning procedure must be performed.

When Service Alert and Exhaust Filter Cleaning Indicator (on dash) are illuminated, Exhaust Filter Cleaning Indicator on switch (top position) is blinking, and engine power is reduced, exhaust filter is restricted, and the system requires a parked cleaning. Operator will hear five consecutive tones.

H94831—UN—13OCT09

Service Alert Indicator



H94828—UN—13OCT09

Exhaust Filter Cleaning Indicator (IP) - Restriction

LV14837—UN—03OCT11

Exhaust Filter Cleaning Switch - Parked mode

Continued on next page

SP21231,000028C-19-28MAY12-1/2

CAUTION: Comply with *Clean Exhaust Filter Safely* in Section 05.

IMPORTANT: Select a suitable space to park the vehicle and lower any implements all the way down to the ground.

No other vehicle functions may be used while exhaust filter cleaning is taking place with the vehicle parked. Excluded from this are functions that may be required for an emergency shutdown of the vehicle.

Do not start exhaust filter cleaning if the fuel gauge has been showing a low fuel level for a long time.

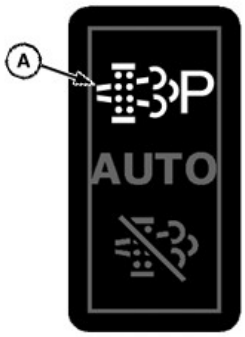
1. Stop tractor, place transmission in park position, disengage PTO, and set engine idle to low 900 RPM.
2. Position and hold the exhaust filter cleaning switch in the parked cleaning position (A) for 3 seconds then release.

IMPORTANT: If necessary, a parked exhaust filter cleaning process can be canceled by manually advancing throttle, or engaging transmission, or stopping engine.

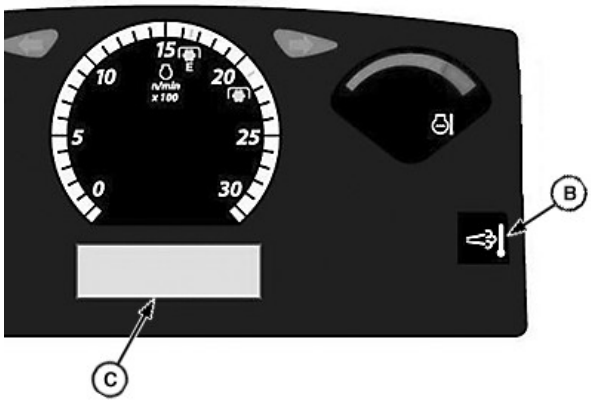
3. The engine speed will ramp up to 1800 RPM and the park cleaning symbol on the switch will blink.
4. During the parked cleaning process the high exhaust temperature indicator (B) and park cleaning symbol on the switch will illuminate.

NOTE: The parked exhaust filter cleaning process will take 30 to 45 minutes to complete.

5. A percent numeric value of the parked cleaning process is shown in information display (C). First a preparation stage value increases from 1 to 100. During the preparation stage, the exhaust filter cleaning system increases engine speed to increase exhaust temperature. Second an exhaust filter cleaning value increases from 1 to 100. During the cleaning stage, diesel particulates or soot is cleaned from exhaust filter.
6. When the parked cleaning process is complete the park cleaning symbol on the switch turns off and the high exhaust system temperature indicator (B) remains on for 30 seconds after completion.
7. After high exhaust temperature indicator (B) turns off, continue vehicle operations as normal



Exhaust Filter Cleaning Switch - Parked mode



Parked Cleaning In Process

A—Parked Cleaning Position
B—Exhaust Filter Indicator
C—Information Display

NOTE: The system defaults to Automatic (AUTO) exhaust filter cleaning mode.

If not returning vehicle to operation, allow engine time to return to normal operating temperature before stopping engine.

IMPORTANT: If operator disregards indicators and continues to operate vehicle without allowing a parked cleaning, engine performance will be reduced. A service exhaust cleaning procedure must be performed by John Deere dealer.

SP21231,000028C-19-28MAY12-2/2

Service Exhaust Filter Cleaning

IMPORTANT: Repeated cancellation or ignoring indicators to perform a parked exhaust filter cleaning procedure will cause additional engine power limitations which eventually lead to a dealer require service.

When STOP indicator (B) and exhaust filter cleaning indicator - restriction (C) are illuminated at the same time; contact your John Deere dealer.

Continued on next page

SP21231,000028D-19-28MAY12-1/2

If level of soot at exhaust filter is extreme, the icon shown opposite appears and engine power is reduced. In this case, contact your John Deere dealer and get the dealer to service-clean the exhaust filter.

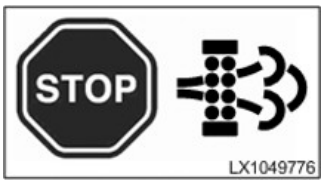
Automatic exhaust filter cleaning and filter cleaning with tractor parked are no longer possible at this time.

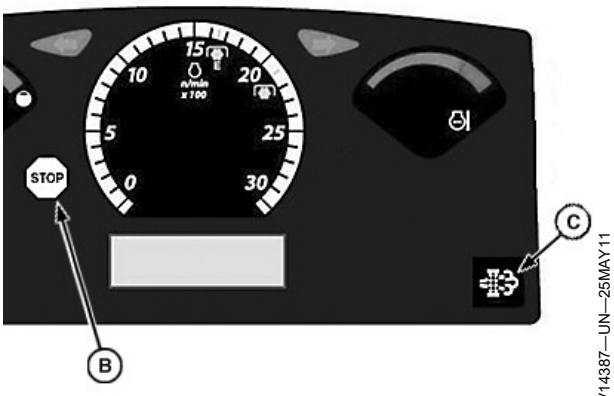
*NOTE: If the tractor is switched off after this icon appears, it will not reappear immediately if the engine is restarted, and the tractor is **briefly** capable of operating, albeit with reduced power. This is intentional, the intention being to allow the dealer to perform service-cleaning.*

Tips for avoiding service-cleaning:

- Do not de-activate exhaust filter cleaning unless it is absolutely necessary.
- Avoid unnecessary idling.
- Do not interrupt cleaning process unless it is absolutely necessary.
- If possible, do not shut off the engine while the indicator light for exhaust filter cleaning is on.
- Take note of information displayed for the operator, and act accordingly.

LX1049776—UN—22JUL10





LV14387—UN—25MAY11

B—Stop Indicator

C—Exhaust Filter Cleaning Indicator - Restriction

SP21231,000028D-19-28MAY12-2/2

Operator Training Required

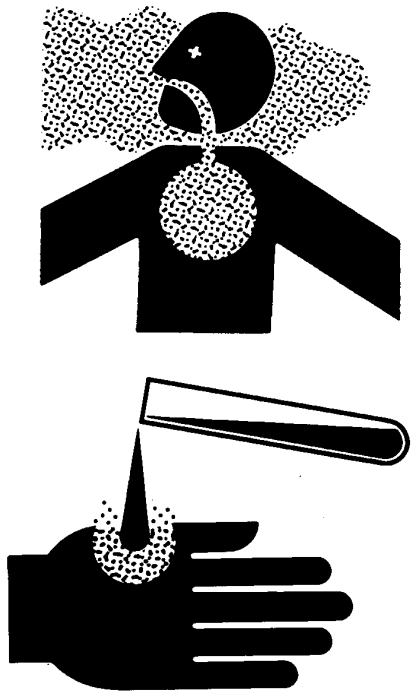
- First, study Operating the Engine section, then this section of the manual before operating tractor.
- Operate tractor in an open, unobstructed area under the direction of an experienced operator.
- Learn use of all controls.
- Operator experience is required to learn moving, stopping, turning and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

PX07220,000001F-19-16APR04-1/1

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—15APR13

TS272—UN—23AUG88

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

Cleaning Tractor of Hazardous Pesticides

CAUTION: Avoid personal injury. Clean inside of cab and outside of tractor after application of hazardous pesticides. Pesticide residue can build up.

Clean exterior and interior of tractor daily to prevent contamination:

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

AG,RX15494,1680-19-26AUG99-1/1

Driving on Public Roads

CAUTION: When transporting on a public road or highway, 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.

Observe the following precautions when driving tractor on roads:

1. Ballast tractor correctly.
2. **Cab:** Clean windows and adjust rear-view mirrors.
3. Use foot throttle instead of hand throttle.

Continued on next page

SP21231,00002C2-19-09AUG12-1/3

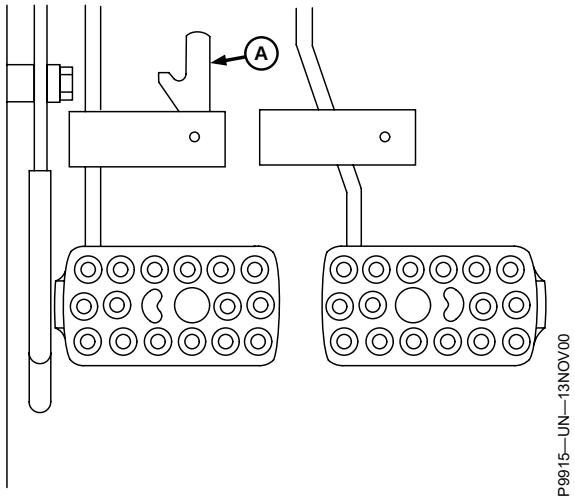
CAUTION: Before operating tractor on a road, lock brake pedals together. Use brakes lightly and cautiously at transport speeds.

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

4. Couple brake pedals together using brake pedal locking bar (A). Avoid hard application of brakes. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes. (Consult implement operator's manual for recommended transport speeds.)

   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.

A—Brake Pedal Locking Bar



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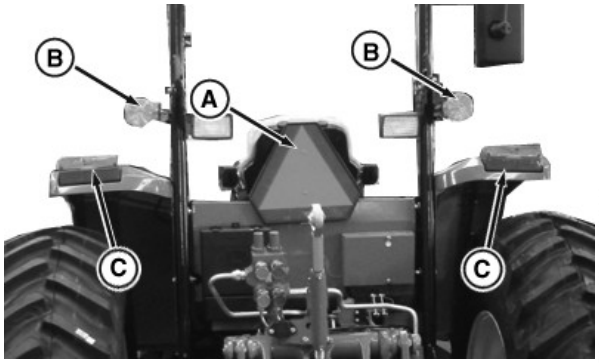
SP21231,00002C2-19-09AUG12-2/3

5. Check local laws and regulations for lighting requirements. Clean Slow Moving Vehicle (SMV) emblem (A), warning lights (B) and tail/warning lights (C). If towed or rear-mounted equipment obstructs view of safety devices, install SMV emblem and warning lights on equipment. (See your John Deere dealer.)

   A seven-terminal outlet at rear of tractor supplies power to warning lights on towed or rear-mounted equipment. (See description of outlet in Lights section.)

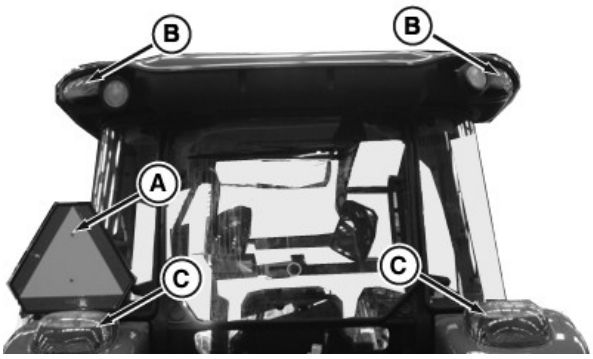
6. **MFWD (if equipped):** To reduce tire wear, disengage front wheel drive.
7. **Loader Cylinders (if equipped):** Engage transport lock to eliminate possibility of loader movement during transport by inadvertently bumping the multi-function control lever.
8. Rear Hitch: Lock hitch in transport position to eliminate the possibility of lowering an implement during transport by inadvertently bumping the raise/lower lever.
9. Use turn signal lever (D) when turning. Return lever to center position after turning.
10. Turn light switch to position (E).
11. Move switch (F) to low beam position (down) when meeting another vehicle. Never use floodlights or any lights which could blind or confuse other drivers.
12. Drive slowly to maintain safe control. Before descending a hill, shift to a gear low enough to control speed without using brakes. Slow down for rough ground and sharp turns, especially when transporting heavy, rear-mounted equipment.

A—SMV Emblem
B—Warning Lights
C—Tail/Warning Lights
D—Turn Signal Lever
E—Road Lights
F—High/Low Beam Switch



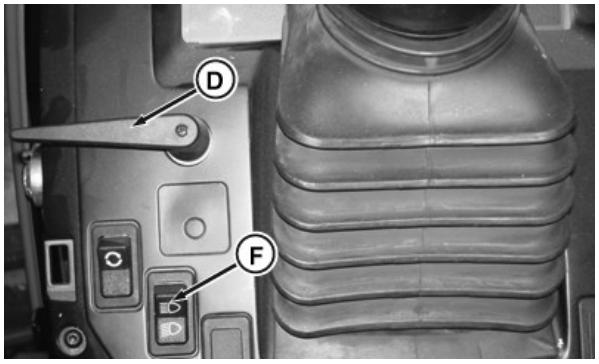
PY15184—UN—01JUN12

OOS



PY15185—UN—22JUN12

Cab



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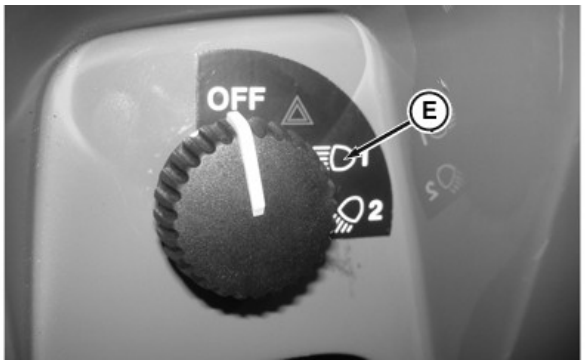


PY15187—UN—22JUN12

SP21231,00002C2-19-09AUG12-3/3

Using Emergency Exit (Cab)

Rear window opening provides a large exit path if the cab door(s) or sides of cab are blocked in an emergency situation.

OUMX005,0002923-19-27MAR08-1/1

Use Caution on Hillsides

OOS: Operate only with the Roll-Over Protective Structure (ROPS) in the UP or extended position whenever possible. Always use your seat belt when the ROPS is in the UP or extended position to minimize chance of injury from an overturn accident.

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.

MFWD (if equipped): While mechanical front wheel drive greatly increases traction, it does not increase the stability of the tractor. With MFWD engaged, the tractor can climb steeper slopes, but does NOT become more stable. 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.

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.

NS43404,000046E-19-02FEB08-1/1

Operating PowrReverser™ Transmission (PRT), OOS

Range shift lever (A) provides three speed ranges: A, B and C.

Gear shift lever (B) provides three forward and reverse travel speeds (1, 2, 3).

PowrReverser lever (C) provides travel direction (forward or reverse).

NOTE: The clutch pedal must be fully depressed one time after engine is started.

This is normally done when engaging a speed gear from neutral. When the tractor is started with speed gear engaged (FNR is in neutral), the tractor will not move when the PowrReverser lever is set to F or R, until the clutch pedal has been fully depressed one time.

- Nine forward and reverse speeds are available when using range and gear shift levers

IMPORTANT: Top shaft synchronizer works only on speed gears. To prevent transmission damage, do not attempt to change range while in motion. To shift into a different range; stop tractor, depress clutch pedal fully and decrease engine speed.

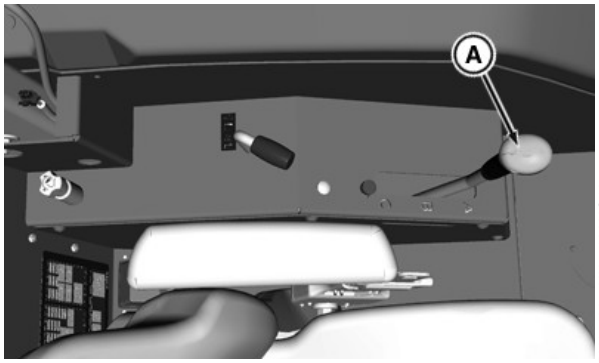
The clutch pedal must be FULLY depressed in order to make a gear (speed) shift. If the clutch pedal is not fully depressed, the shift lever can not be moved beyond neutral. Should this occur, depress the clutch pedal further. If the clutch pedal free travel is out of specification, see your John Deere dealer to readjust clutch pedal linkage.

To prevent unnecessary clutch wear, never "ride" the clutch by resting foot on the pedal.

PowrReverser lever: With tractor stopped, select desired travel direction (forward or reverse). Travel direction change can be done without depressing the clutch pedal.

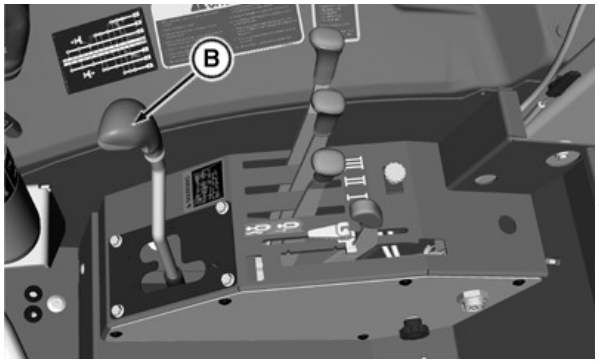
Range Shift: Tractor must come to a **complete stop** when shifting into any speed range.

1. After the tractor has stopped, lower engine rpm to idle speed.
2. Depress clutch pedal FULLY.
3. Select desired speed range (A, B, C).
4. Slowly release clutch pedal to gradually take up load.
5. Increase engine speed once shift is completed.

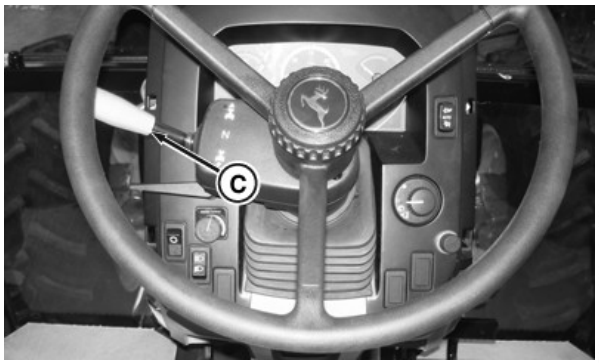


PY15188—UN—13AUG12

Left-Hand Panel (OOS Shown)



PY15189—UN—13AUG12



PY15191—UN—01JUN12

A—Range Shift Lever
B—Gear Shift Lever
C—PowrReverser Lever

Gear (speed) Shift: Changing gears can be made **on-the-go**, without stopping.

1. With tractor in motion, depress clutch pedal (C) FULLY.
2. Select desired speed (1, 2, 3).
3. Slowly release clutch pedal to gradually take up load.

SP21231,00002C3-19-23JUN12-1/1

Operating PowrReverser™ Transmission (PRT), Cab

Range shift lever (A) provides three speed ranges: A, B and C.

Gear shift lever (B) provides three forward and reverse travel speeds (1, 2, 3).

PowrReverser lever (C) provides travel direction (forward or reverse).

NOTE: The clutch pedal must be fully depressed one time after engine is started.

This is normally done when engaging a speed gear from neutral. When the tractor is started with speed gear engaged (FNR is in neutral), the tractor will not move when the PowrReverser lever is set to F or R, until the clutch pedal has been fully depressed one time.

- Nine forward and reverse speeds are available when using range and gear shift levers

IMPORTANT: Top shaft synchronizer works only on speed gears. To prevent transmission damage, do not attempt to change range while in motion. To shift into a different range; stop tractor, depress clutch pedal fully and decrease engine speed.

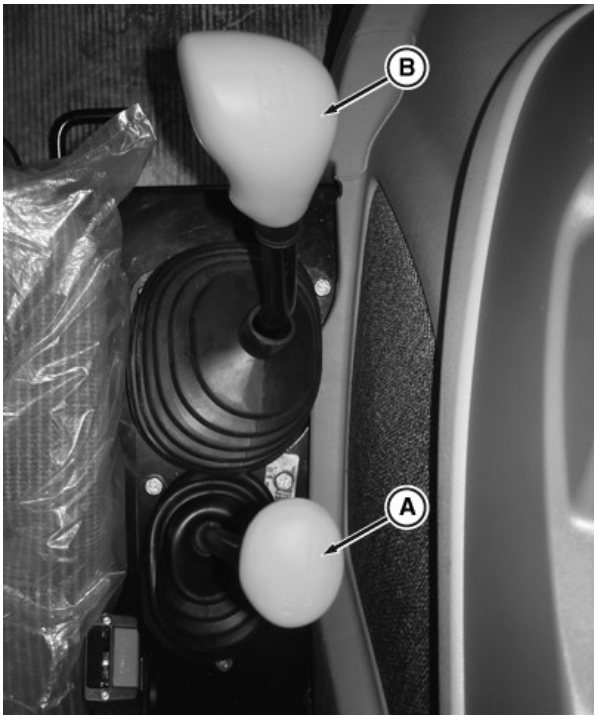
The clutch pedal must be FULLY depressed in order to make a gear (speed) shift. If the clutch pedal is not fully depressed, the shift lever can not be moved beyond neutral. Should this occur, depress the clutch pedal further. If the clutch pedal free travel is out of specification, see your John Deere dealer to readjust clutch pedal linkage.

To prevent unnecessary clutch wear, never "ride" the clutch by resting foot on the pedal.

PowrReverser lever: With tractor stopped, select desired travel direction (forward or reverse). Travel direction change can be done without depressing the clutch pedal.

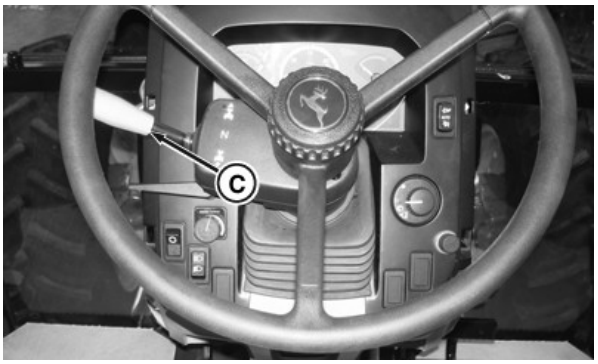
Range Shift: Tractor must come to a **complete stop** when shifting into any speed range.

1. After the tractor has stopped, lower engine rpm to idle speed.
2. Depress clutch pedal FULLY.
3. Select desired speed range (A, B, C).
4. Slowly release clutch pedal to gradually take up load.
5. Increase engine speed once shift is completed.



PY15533—UN—22JUN12

Right Hand Side (Cab)



PY15191—UN—01JUN12

A—Range Shift Lever
B—Gear Shift Lever
C—PowrReverser Lever

Gear (speed) Shift: Changing gears can be made **on-the-go**, without stopping.

1. With tractor in motion, depress clutch pedal (C) FULLY.
2. Select desired speed (1, 2, 3).
3. Slowly release clutch pedal to gradually take up load.

SV86979,000004B-19-09AUG12-1/1

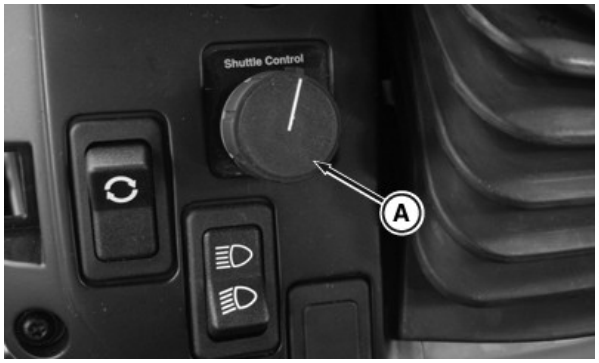
Using Infinitely Variable Shuttle (If Equipped)

Infinitely variable shuttle (A) adjusts load take-up and acceleration when making directional changes with PowrReverser™ lever during repetitive cycle work (loader operation).

In full left (counterclockwise) position (shown) load take-up and acceleration ramp-up are slow to respond.

When operating with high load and ballast, turn control knob clockwise to speed-up acceleration and load take-up response.

IMPORTANT: When operating in full right (clockwise) position on concrete or paved surfaces, premature tire wear can occur.



PY15192—UN—01JUN12

A—Infinitely Variable Shuttle

SP21231,00002C4-19-01JUN12-1/1

Selecting a Gear

IMPORTANT: To extend drive train life and avoid excessive soil compaction and rolling resistance when using ballast, operate one gear lower than normal.

The tractor may be operated in any gear with engine speeds between 1600 and 2100 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.

PX07220,0000023-19-16APR04-1/1

Using Brakes

CAUTION: Before operating tractor on a road, lock pedals together with locking bar (A). Use brakes lightly and cautiously at transport speeds.

For field work, brake pedals (B) should NOT be locked together. Instead, apply right brake pedal lightly to assist in making sharp right-hand turns and left pedal for left-hand turns.

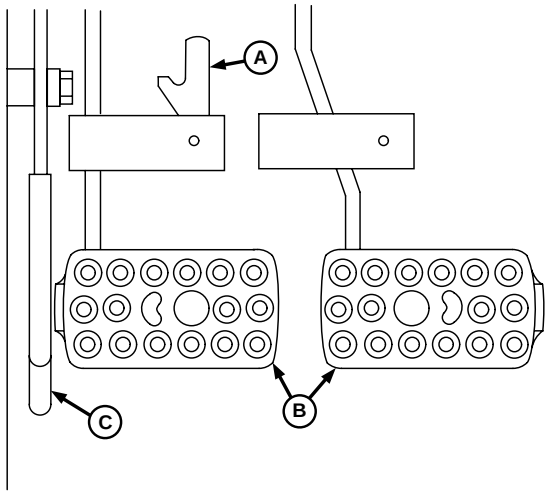
CAUTION: Always set parking brake before dismounting. Leaving transmission in gear with engine off WILL NOT prevent tractor from moving.

To set parking brake, lock brake pedals together with locking bar, depress brake pedals and pull up on parking brake lever (C) after coming to a complete stop. Parking brake lever keeps brake pedals down. To release lever, push down briefly on brake pedals. Lever will drop down on its own.

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

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

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



P9598—UN—12SEP00

A—Brake Pedal Locking Bar
B—Brake Pedals
C—Parking Brake Lever

PX07220,0000024-19-25JUN08-1/1

Using 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 by depressing pedal (A) down. Tractor wheels must be turning before engaging differential lock. If possible, engage differential lock before entering conditions where tires may slip.

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.

A—Differential Lock Pedal

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

PX07220,0000025-19-27MAR08-1/1

Operating Mechanical Front-Wheel Drive (If Equipped)

Use front-wheel drive as required for better traction.

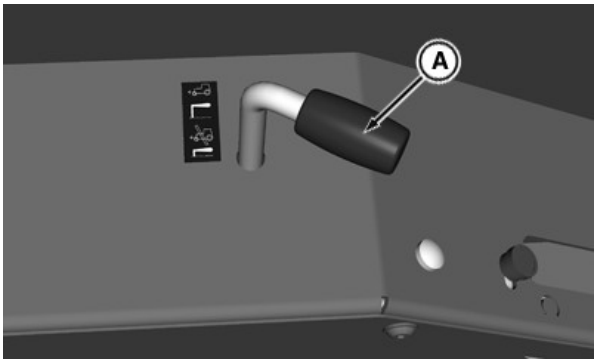
CAUTION: Front-wheel drive greatly increases traction. When using this option, extra caution is needed on slopes. Compared to two-wheel drive, front-wheel drive maintains traction on steeper slopes, increasing the possibility of a tip over.

When driving on icy, wet or gravel surfaces, reduce speed and be sure tractor is properly ballasted to avoid skidding and to prevent loss of steering control. Front-wheel drive provides better control under these road conditions.

IMPORTANT: To extend front tire life, engage front-wheel drive only when needed in the field. Front tires turn slightly faster than rear tires with MFWD engaged and will wear very quickly if driven in MFWD mode on hard surface for an extended period. Unless absolutely necessary, do not engage MFWD when driving on hard surfaces.

Do not install tire chains on front wheels: chains will strike and damage tractor.

While towing an implement and pushing down on MFWD lever to disengage, lever may resist to disengage MFWD. When this occurs the load must first be relieved from the power train. See step 3 below.



A—MFWD Lever

Front-wheel drive may be engaged and disengaged while in motion.

1. To engage, pull up on MFWD lever (A).
2. To disengage, push lever back down.
3. If lever will not go down easily, this means the load must first be relieved from power train. Operator may push down on lever while doing one of the following in order to relieve load:
   - Reduce speed and drive tractor straight ahead at for a few feet.
   - Stop tractor, then operate in reverse direction for a short distance, if changing from a forward direction.

PX07220,0000003-19-23JUN12-1/1

Stopping Tractor (OOS)

1. Stop tractor travel by depressing on clutch pedal first or while using the brakes.
2. Put gear shift lever (A) or PowrReverser lever (B) (if equipped) in NEUTRAL before or while using the brakes.

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.

3. Pull hand throttle (E) down to slow idle position. Allow engine to idle for 1—2 minutes.

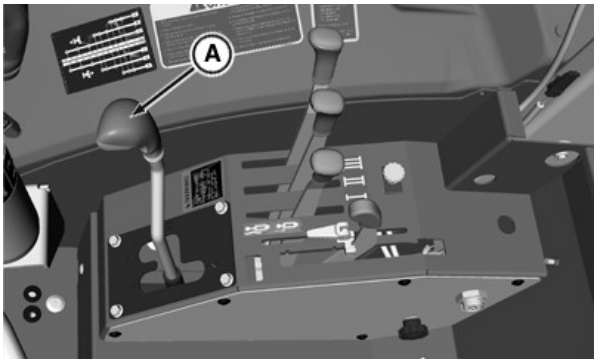
CAUTION: Always set parking brake before dismounting. Leaving transmission in gear with engine off WILL NOT prevent tractor from moving.

4. Lock brake pedals together with locking bar (C). Push brake pedals down and pull up on lever (D) to set parking brake.
5. Move rockshaft lever forward and lower all equipment to the ground.
6. Put all SCV levers in NEUTRAL.
7. Disengage PTO.

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

8. Turn key to STOP position and remove from switch.

A—Gear Shift Lever
B—PowrReverser™ Lever
C—Brake Pedals and Locking Bar
D—Parking Brake Lever
E—Hand Throttle



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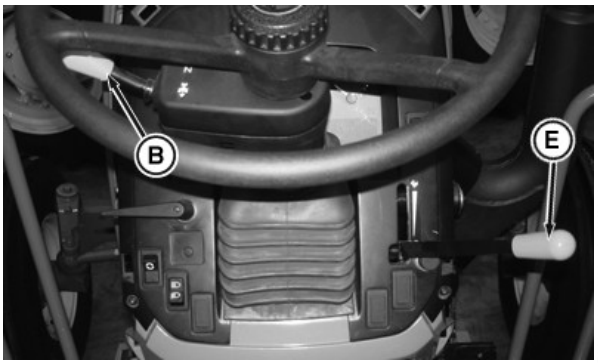

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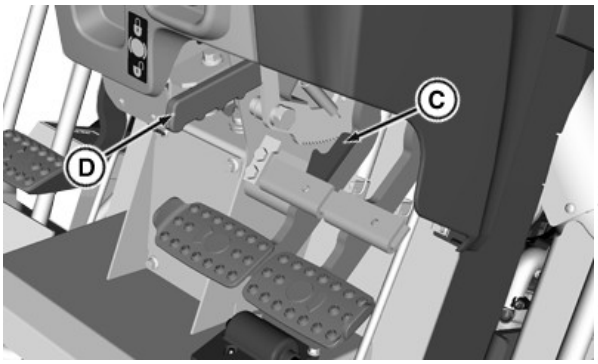
PowrReverser



PY16313—UN—13AUG12

SP21231,00002C5-19-13AUG12-1/1

Stopping Tractor (Cab)

1. Stop tractor travel by depressing on clutch pedal first or while using the brakes.
2. Put gear shift lever (A) or PowrReverser lever (B) in NEUTRAL before or while using the brakes.

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.

3. Pull hand throttle (E) down to slow idle position. Allow engine to idle for 1—2 minutes.

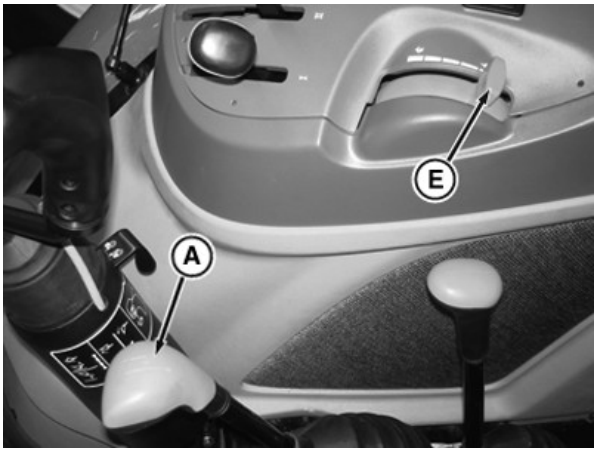
CAUTION: Always set parking brake before dismounting. Leaving transmission in gear with engine off WILL NOT prevent tractor from moving.

4. Lock brake pedals together with locking bar (C). Push brake pedals down and pull up on lever (D) to set parking brake.
5. Move rockshaft lever forward and lower all equipment to the ground.
6. Put all SCV levers in NEUTRAL.
7. Disengage PTO.

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

8. Turn key to STOP position and remove from switch.

A—Gear Shift Lever
B—PowrReverser™ Lever
C—Brake Pedals and Locking Bar
D—Parking Brake Lever
E—Hand Throttle



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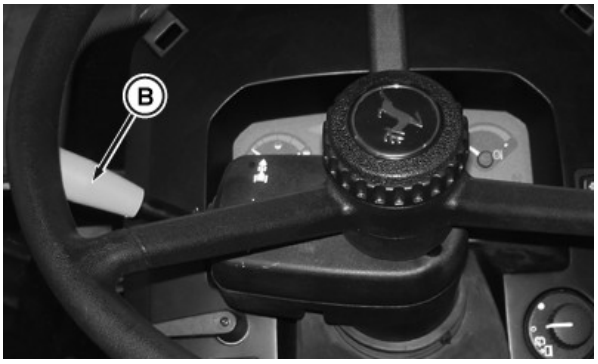

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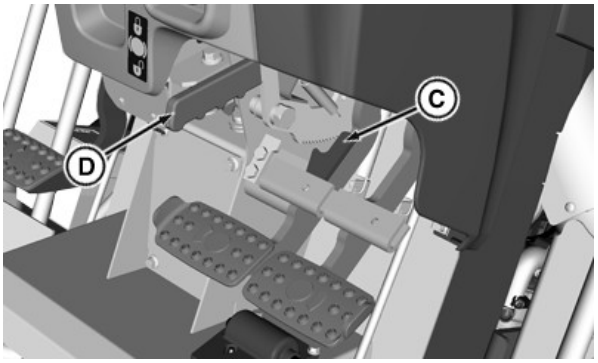


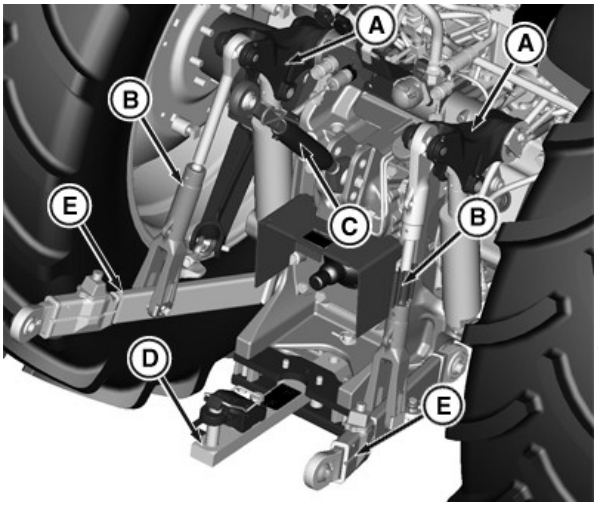
PY16313—UN—13AUG12

SD74272,000030F-19-14AUG12-1/1

3-Point Hitch Component Identification

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.)

A—Lift Arms
B—Lift Links
C—Center Link
D—Drawbar
E—Draft Links



PY16645—UN—14AUG12

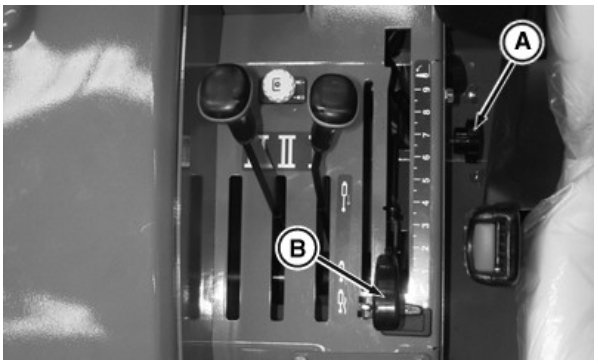
BS13987,0000130-19-14AUG12-1/1

Rockshaft Control Levers

The rockshaft is controlled by position control lever (B) and draft control lever (A). Position control lever raises the hitch when pulled rearward, and lowers the hitch when moved forward.

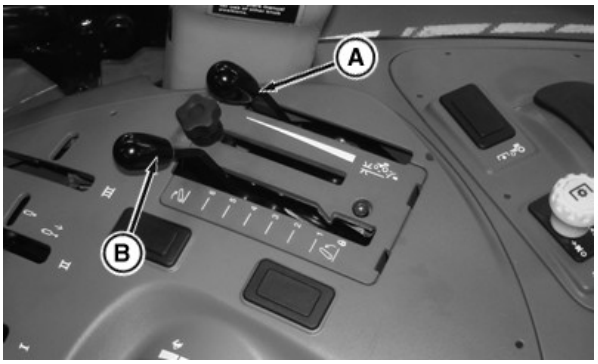
Draft control lever controls hitch position relative to draft loads.

A—Rockshaft Draft Control Lever
B—Rockshaft Position Control Lever



PY15227—UN—31MAY12

Control levers for OOS



PY15302—UN—13JUN12

Control levers for Cab

SV86979,0000019-19-09AUG12-1/1

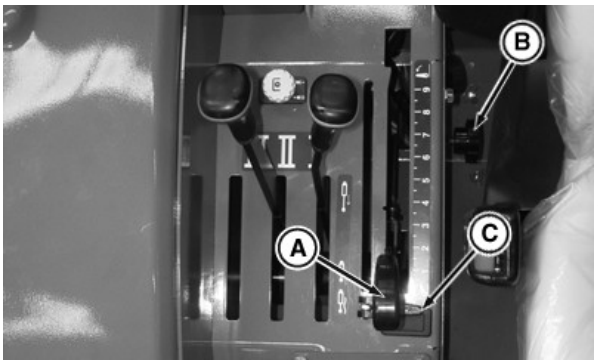
Using Rockshaft Position Control

CAUTION: To prevent unexpected movement, put draft control lever (B) in full forward position before attaching implement.

Rear hitch position lever (A) controls 3-point hitch mounted implement raise or lower movement and ground depth penetration.

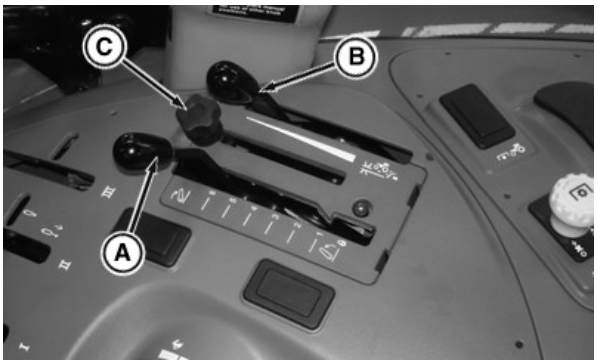
IMPORTANT: Draft control setting automatically influences actual hitch position. For independent position control, move draft control lever (B) in full forward position.

A—Position Control Lever
B—Draft Control Lever
C—Position Control Lever Stop



PY16310—UN—09AUG12

Control Levers of OOS



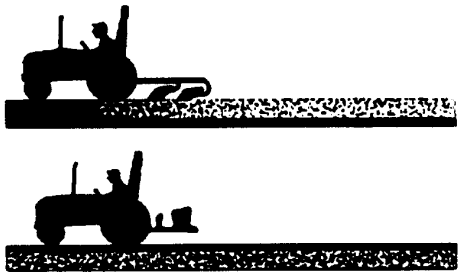
PY16311—UN—09AUG12

Control Levers of CAB

SD74272,0000310-19-09AUG12-1/3

NOTE: A few minutes of implement operation may be required to determine the best depth. Set desired depth with stop (C). Hitch returns implement to previous above or below ground depth.

Depth Control (level, in-ground, on-ground, and non-ground engaged situations): Position lever (A) at desired depth.



LV09233—UN—26JUL04

Depth Control

Continued on next page

SD74272,0000310-19-09AUG12-2/3

Float Control (uneven, ride on-ground contour situations): Position lever (A) and draft lever (B) fully forward.

NOTE: Ensure implement skids or height gauge wheels are set correctly to carry full implement weight. Ensure hitch draft link arms are adjusted for any required lateral float.

Height at Turn (end of field turn around situations): Position lever (A) rearward until implement is out of ground.

Implement Transport (load and non-load sense usage): Position lever (A) fully rearward.

LV9457—UN—26JUL04

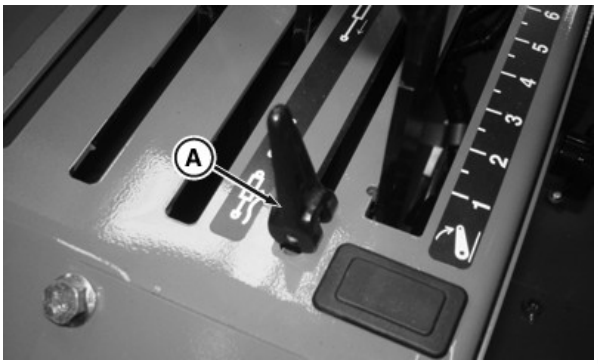
SD74272,0000310-19-09AUG12-3/3

Setting Position Control Lever Stop

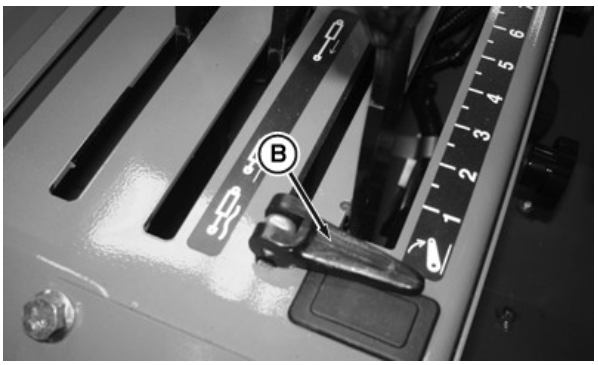
NOTE: Position control lever stop is used when operating depth or height needs to be repeated often.

1. Operate implement for a few minutes to determine proper depth or height.
2. Raise lever stop (A), and slide against position control lever. Lock stop in position by pressing lever down (B). Rockshaft will now lower to same position each time control lever is pushed forward to the stop.

A—Lever Stop **B—Lever Stop in Down Position**



PY15226—UN—31MAY12



PY15225—UN—31MAY12

SV86979,0000017-19-31MAY12-1/1

Using Draft Control (If equipped)

Rear hitch draft control lever (B) controls 3-point hitch mounted implement ground penetration response to varying soil conditions.

Mechanical Draft Control:

With lever (B) fully FORWARD = No draft sensing.

With lever (B) fully REARWARD = Reduces the amount of draft load required to override the depth setting (position preset by lever (A)).

Draft Load Sensing Operation:

Place position control lever (A) to fully REARWARD position and the draft control lever (B) in the fully forward (least draft response) position.

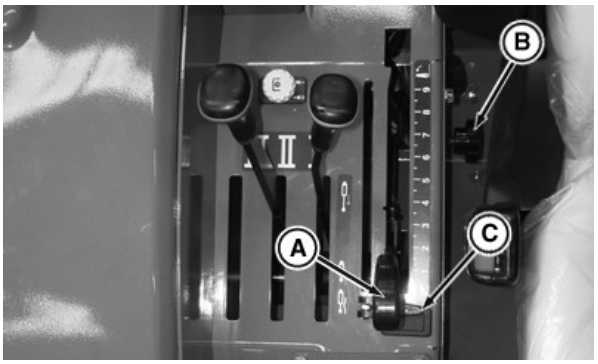
With tractor moving, push position control lever (A) FORWARD to set implement operating depth.

Set position control lever stop (C) so control lever can be brought back to the same position.

NOTE: Operating depth setup prevents the 3-point hitch from lowering all the way when the tractor begins to slip.

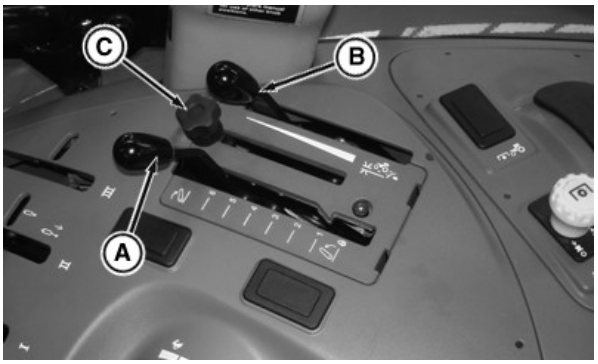
Pull draft control lever (B) rearward until desired draft sensing sensitivity is obtained.

NOTE: Position control lever (A) can also be raised slightly to override the draft control setting to help get through slippery spots without getting stuck. Position control lever (A) can be moved fully rearward to raise the hitch at the end of the field.



PY16310—UN—09AUG12

Control Levers of OOS



PY16311—UN—09AUG12

Control Levers of CAB

A—Position Control Lever
B—Draft Control Lever
C—Position Control Lever Stop

SD74272,0000311-19-09AUG12-1/3

Terrain Contour (irregular ground levels) Situations: Implement rises and lowers to follow the ground contours while maintaining a nearly constant depth.

PULV000236—UN—08MAR08

Terrain Contour

SD74272,0000311-19-09AUG12-2/3

Variable Soil (ground hardness) Situations: Implement rises slightly to get through tough spots and operator does not need to shift to lower gear.

PULV000237—UN—08MAR08

Variable Soil

SD74272,0000311-19-09AUG12-3/3

Adjusting Rockshaft Rate-of-Drop

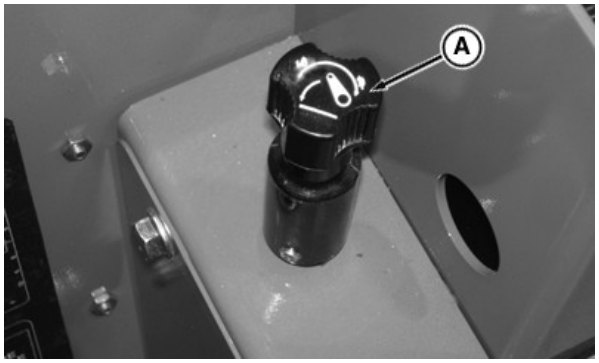
CAUTION: Excessive rate-of-drop may cause damage to equipment or injury to machine operator. Fully lowering implement should require at least two seconds.

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

Adjust rockshaft rate-of-drop. Turn knob:

- Clockwise—Slow rate-of-drop
- Counterclockwise—Fast rate-of-drop

A—Rockshaft Rate-of-Drop Knob



PY15228—UN—31MAY12

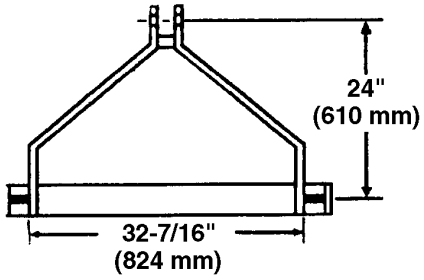
Floor Behind Seat

SV86979,000001B-19-09AUG12-1/1

Preparing Implement

Category II implements should have the top hole of the implement mast located 610 mm (24 in.) above the lower pins. Drill another hole in top mast or extend top mast if necessary.

Mast Height	Width Between Lower Pins	Pin Size	
		Lower	Upper
610 mm (24 in.)	824 mm (32-7/16 in.)	28 mm (1-1/8 in.)	25.4 mm (1 in.)



P10112—UN—27FEB01

Implement Mast

PX07220,000002D-19-16APR04-1/1

Attaching Implements to 3-Point Hitch

1. Be sure drawbar will not interfere. If necessary, move drawbar forward or remove it. Check for any other potential interference.

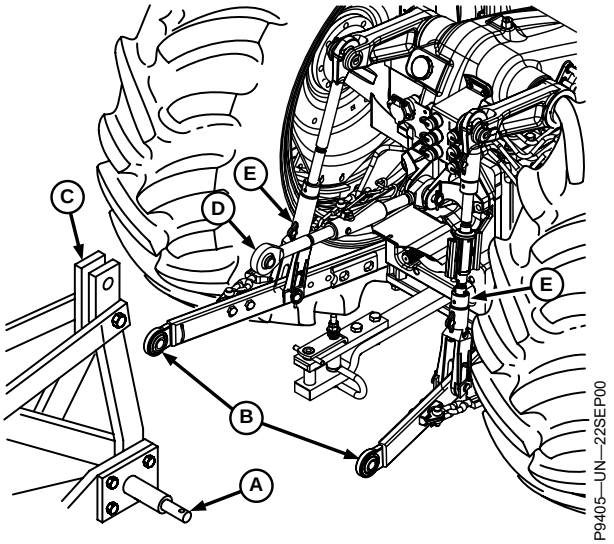
CAUTION: Prevent unexpected movement of rockshaft by placing draft sensing knob all the way down before attaching implement to hitch.

2. Back tractor up to implement so hitch points align. Place gear shift lever or PowrReverser™ lever (if equipped) in NEUTRAL and set parking brake.
3. Pull hand throttle all the way down and allow engine to idle for 1—2 minutes, then turn engine off.
4. Slip draft links (B) over implement hitch pins (A) on both sides and retain with locking pins.

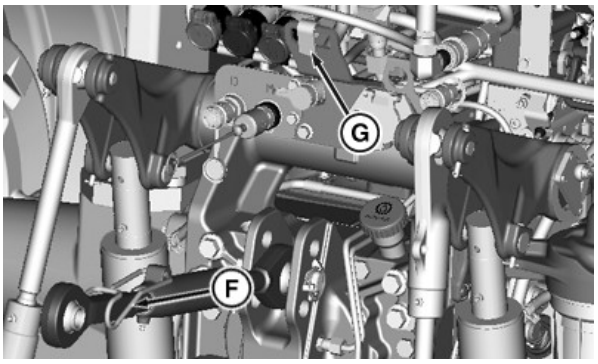
NOTE: Locking pins can be stored on draft links through holes in sway chain ears when not in use.

5. Lift locking clip (F) and rotate tab (G) to rear to release center link (D) from transport hook.
6. Attach center link to implement top mast (C). Retain with pin and locking pin.
7. Adjust center link and lift links (E) as necessary. (See LEVELING THE HITCH in this section.)

A—Implement Hitch Pins
B—Draft Links
C—Implement Top Mast
D—Center Link
E—Lift Links
F—Center Link Locking Clip
G—Tab



P9405—UN—22SEP00



PY16644—UN—14AUG12

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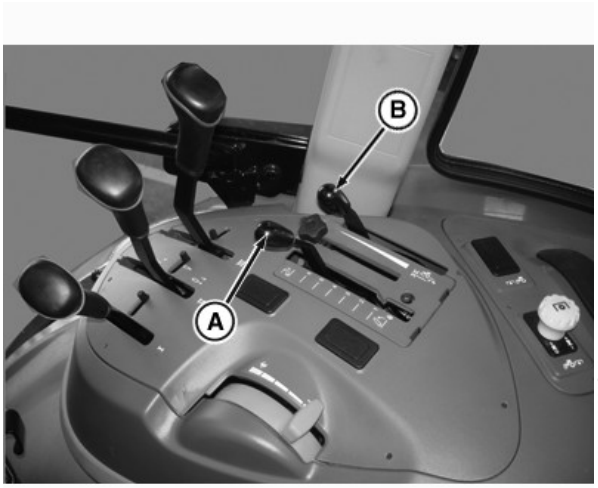
BS13987,000012F-19-14AUG12-1/2

CAUTION: To avoid bodily injury or machine damage whenever an implement, implement quick coupler, or other attachment is connected to the 3-Point Hitch, check full range of operation for interference, binding or PTO separation.

8. Start engine.
9. Before attaching or detaching implement, place load/draft control (B) into lowest setting.
10. Use position control lever (A) to raise or lower implement.

A—Rockshaft Position Control Lever **B—Draft Control Lever**



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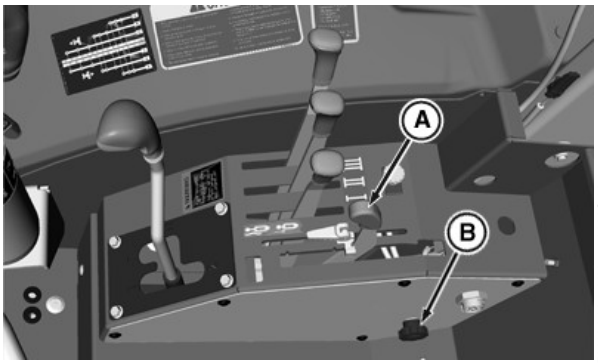
Cab Only



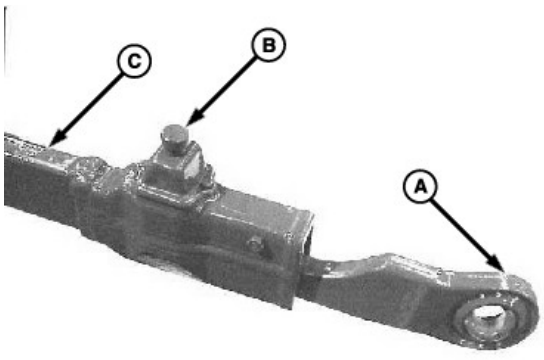
PY16643—UN—14AUG12

OOS Only

BS13987,000012F-19-14AUG12-2/2

Attaching Implement with Telescoping Draft Links (If Equipped)

1. Position tractor in line with implement hitch pins. Back tractor up close to implement. Place gear shift lever or PowrReverser™ lever (if equipped) in NEUTRAL and set parking brake.
2. Pull hand throttle all the way down and allow engine to idle for 1—2 minutes, then turn engine off.
3. Pull up knob (B) and pull out draft link end (A). Slip draft link end over implement hitch pin and retain with quick-lock pin. Repeat procedure on opposite side.
4. Raise or lower each draft link body (C) to align it with link end.
5. Slowly back up tractor to lock link ends into place.



P9663—UN—15SEP00

A—Draft Link End **C—Draft Link Body**
B—Release Knob

NS43404,0000480-19-07APR08-1/1

Adjusting Hitch Side Sway

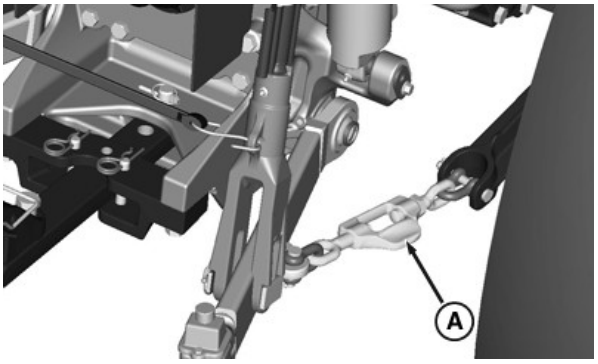
NOTE: Check implement operator's manual for instructions on whether to allow side sway.

Use sway chain turnbuckle (A) to take up chain slack as needed.

IMPORTANT: Do not shorten chains so short they do not allow hitch to be raised completely. If chain prevents hitch from rising, hydraulic relief valve will open, causing excessive oil heating and pump or equipment damage.

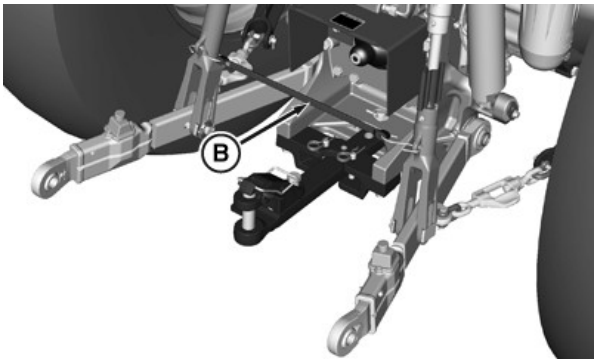
NOTE: Use spring or rubber strap (B) to keep draft links clear of rear tires when draft links are not attached to implement.

A—Sway Chain Turnbuckle **B—Strap**



PY16639—UN—16AUG12

Right-Hand Side Shown



PY16640—UN—16AUG12

BS13987,000012D-19-13AUG12-1/1

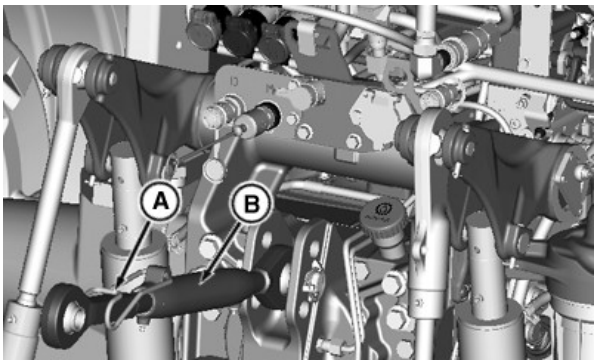
Leveling the Hitch

1. Lower implement to take weight off hitch.

IMPORTANT: Do NOT attempt to extend center link beyond limits of locking clip or to raise lift links past the stops. Link body threads could be damaged.

NOTE: Maximum adjustment range of the center link can only be obtained if the ends are positioned equally within the body when attached to an implement.

2. Adjust center link to level implement front-to-rear.
   a. Unlatch locking clip (A). Rotate center link body (B):
      - CLOCKWISE—Lengthen center link (Maximum length: 720 mm [28.3 in.])
      - COUNTERCLOCKWISE—Shorten center link (Minimum length: 570 mm [22.4 in.])



PY16641—UN—14AUG12

A—Locking Clip **B—Center Link Body**

   b. Latch locking clip.

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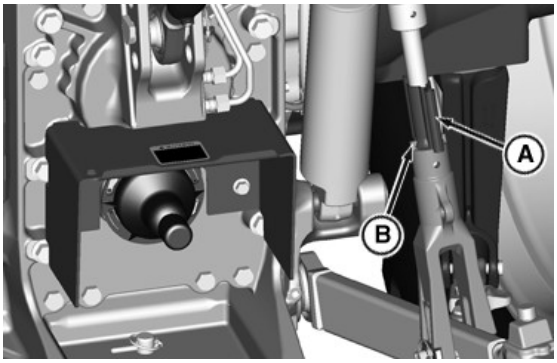
BS13987,000012E-19-07SEP12-1/2

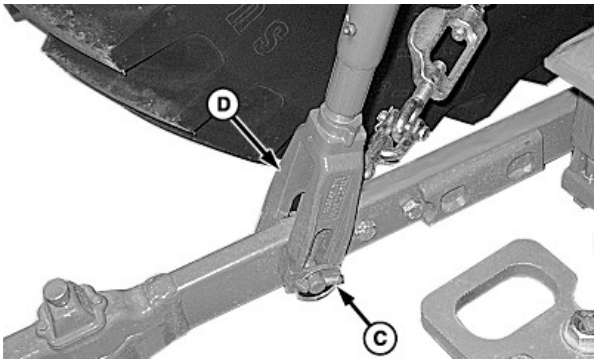
3. Adjust right-hand lift link to level implement side-to-side.
   a. Lift locking handle (A) and turn:
      - CLOCKWISE—Lower lift link
      - COUNTERCLOCKWISE—Raise lift link
   b. Lower handle and turn it to engage slot onto lower body to prevent change of adjustment during operation.
4. Adjust left-hand lift link to level implement side-to-side:
   a. Remove locking pin and lower link pin (C). Rotate lower end assembly (D):
      - CLOCKWISE—Shorten (raise) lift link
      - COUNTERCLOCKWISE—Lengthen (lower) lift link
   b. Install lower link pin and locking pin.

Adjust left and right-hand lift links to accommodate various tire sizes or implement heights. For greatest range of up and down hitch motion, set lift links so that when fully lowered, draft link balls are approximately 178 mm (7 in.) off the ground.

A—Locking Handle
B—Slot
C—Lower Link Pin
D—Lower End Assembly



Right-Hand Lift Link



Left-Hand Lift Link

BS13987,000012E-19-07SEP12-2/2

Adjusting Lateral Float

To allow the draft link to raise slightly as implement follows ground contour, place head of pin and rectangular washer (A) in vertical position.

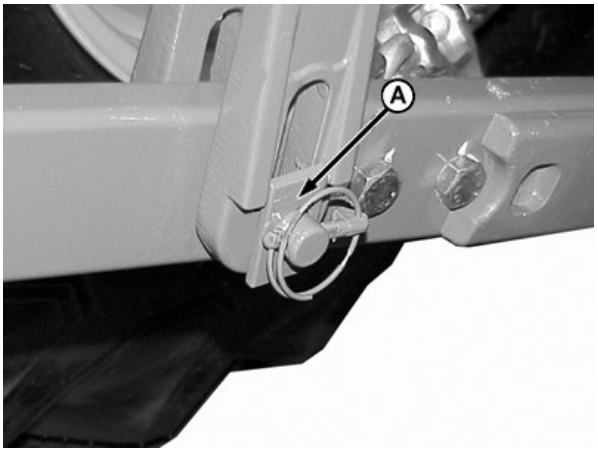
To hold implement rigid, place head of pin and rectangular washer (B) in horizontal position.

Vertical (float) position: Hitch-mounted implements (cultivator or mower), equipped with ground gauging skids or wheels which may cause the implement to twist relative to the tractor.

Horizontal (rigid) position: Plows and ground engaging implements that should not twist relative to the tractor.

A—Pin in Vertical (Float) Position

B—Pin in Horizontal (Rigid) Position



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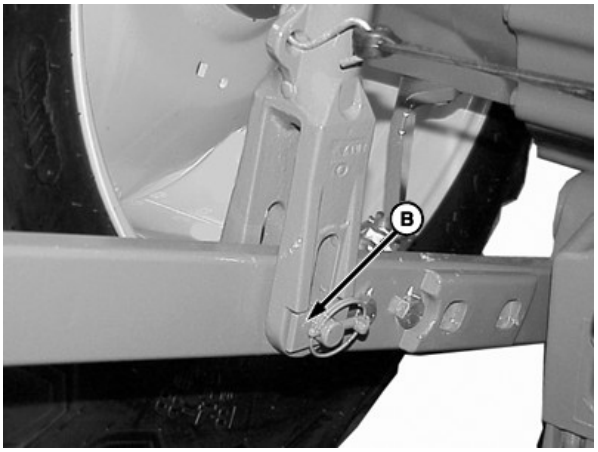

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NS43404,0000483-19-04FEB08-1/1

Open Center Hydraulic System

IMPORTANT: The hydraulic system design used on this tractor is known as an open center system. In general, it is not recommended to use continuous flow hydraulic motors with this type of system. Some hydraulic motors designed for open centered systems (high flow at low pressure) can be used if a pressure compensated flow control valve is used to control speed. The deluxe three-function SCV has a pressure compensating flow control valve built into the 1st SCV. If the tractor is equipped with a dual function SCV, you will need to control motor speed with an independent pressure compensated flow control valve. Using a non-compensated flow control valve such as a needle valve may cause over heating of the hydraulic system. Consult your nearest John Deere dealer or service facility for more information regarding this type of application.

Hydraulic motor applications such as those used in vacuum blower motors, centrifugal sprayer pumps, hydraulically driven rakes or other similar applications may cause overheating of the hydraulic system if the hydraulic motors are not correctly sized for an open center system. In such cases, the use of a PTO-driven hydraulic pump is strongly recommended.

Open center systems cannot be used for implements requiring "active" down force such as no-till, folding, air disk and no-till air drills as well as used to maintain optimum press wheel down-force on air hoe-drills.

Open center hydraulic systems with Deluxe Three-Function SCV's can be used with hydraulic motors requiring high flow at low pressure but not on motors requiring low flow at high pressure or overheating will occur and possible damage to hydraulic system.

Anytime one of above applications is considered, consult your nearest John Deere dealer or service facility for information on how to open center system in these applications.

Failure to observe this application information will likely cause serious damage to tractor hydraulic system.

OU1092A,00001CC-19-14APR08-1/1

Warming Transmission-Hydraulic System Oil

CAUTION: Overheated hydraulic oil can cause personal injury and component malfunctions. To prevent hydraulic oil from overheating, DO NOT hold SCV or multi-function lever (if equipped) in operating position for an extended period of time.

SV86979,0000013-19-21NOV13-1/2

Hydraulic system may be slow to function when tractor is started in cold weather. Cold oil will not flow easily through the hydraulic system filter (A).

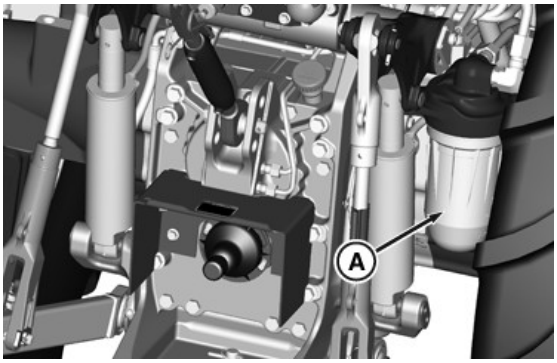
Steering may be slow until system warms up.

Hydraulic system will function normally when oil warms up.

1. Depress clutch pedal, start engine and idle at about 1000 rpm.

IMPORTANT: To prevent damaging hydraulic pump or relief valve, DO NOT exceed 2—3 minutes warm-up time with steering wheel held in full left or full right turn position.

2. With nothing installed in SCV couplers, move one SCV lever to raise or lower position and hold it for no more than 3 minutes.



A—Hydraulic Oil Filter

SV86979,0000013-19-21NOV13-2/2

Use Correct Hose Tips

If your tractor is equipped with selective control valves (SCV), the coupler receptacles accept a standard hose tip as recommended by ISO and SAE. Adapters to allow connecting older John Deere hose tips to the ISO couplers in your tractor are available from your John Deere dealer.

P14905—UN—10FEB08

NS43404,0000486-19-28NOV07-1/1

SCV Control Lever and Coupler Identification

SCV levers control oil flow to hydraulic hose couplers at the rear of the tractor.

SCV I Lever (A) operates couplers (D).

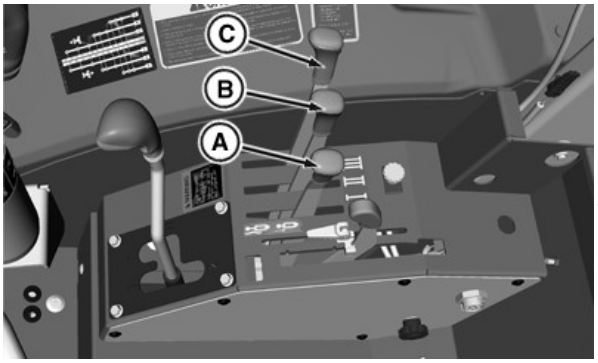
SCV II Lever (B) operates couplers (E).

SCV III Lever (C) operates couplers (F).

A—SCV I Lever (Green)
B—SCV II Lever (Blue)
C—SCV III Lever (Brown) (if Equipped)
D—SCV I Couplers (Green Cover)
E—SCV II Couplers (Blue Cover)
F—SCV III Couplers (Brown Cover) (if Equipped)

PY15219—UN—01JUN12

SCV Control Levers For CAB



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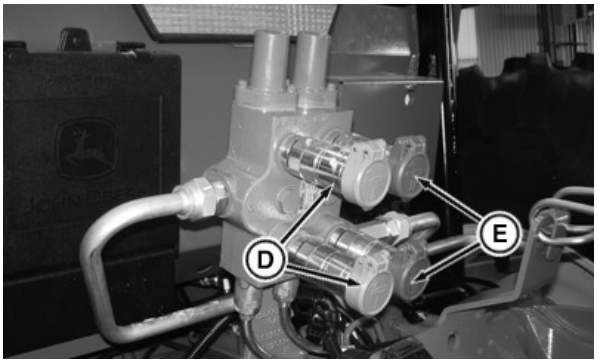
SCV Control Levers For OOS



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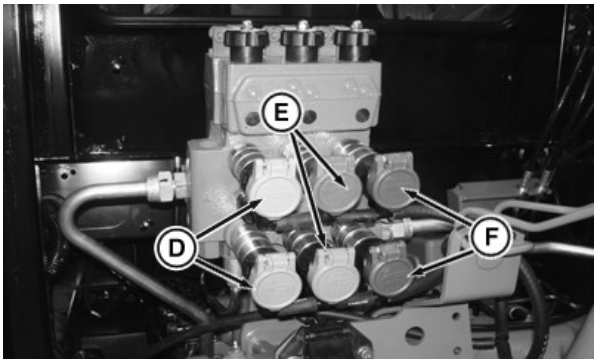
Two-Function Valve



PY15221—UN—01JUN12

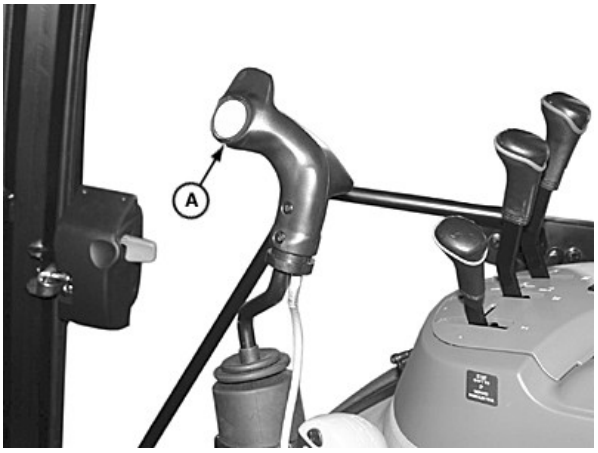
Three-Function Deluxe Valve (If Equipped)

BS13987,0000131-19-16AUG12-1/1

Mid-Mount SCV Control Lever and Coupler Identification—If Equipped

Lever (A) controls oil flow to corresponding selective control valve (SCV) couplers, located at the right side of tractor.

A—Multifunction Control Lever



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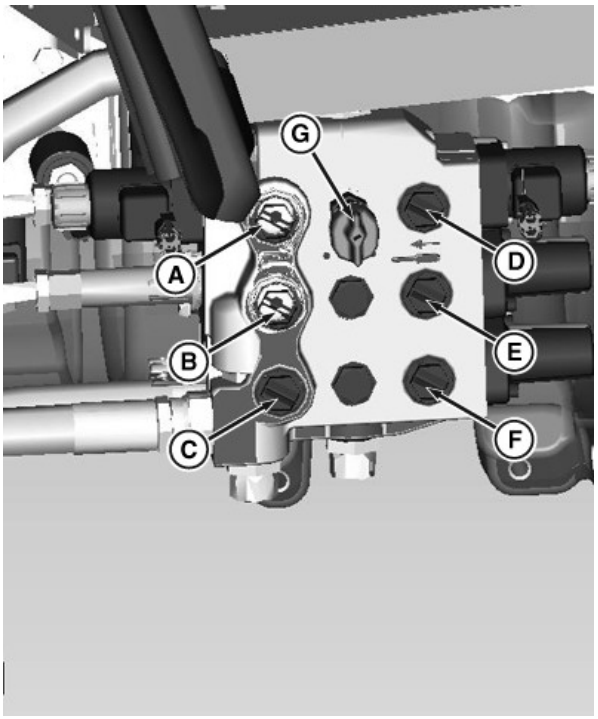
BS13987,0000132-19-16AUG12-1/2

Right-hand side couplers are for extension; left-hand side couplers are for retraction.

A— Third-Function Cylinder — Rod (Green)
B— Boom Cylinder — Rod End (Red)
C— Bucket Cylinder — Head End (Yellow)
D— Cylinder — Head End (orange)
E— Boom Cylinder — Head End (Blue)
F— Bucket Cylinder — Rod End (Black)
G— Adjustable Flow Control



PY15522—UN—22JUN12

BS13987,0000132-19-16AUG12-2/2

Connecting or Disconnecting High-Pressure 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.

1. If possible, retract remote cylinder as much as possible to protect rod from damage.

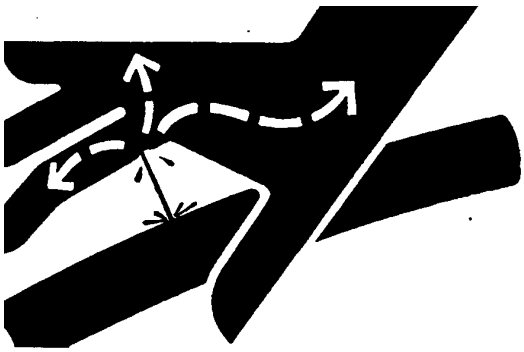
   IMPORTANT: Implement must be raised slightly, by pulling back on lever to reset coupler check valves, before it can be lowered.

   a. If hose accidentally pulls from tractor during use, clean hose tip and coupler before reconnecting. Hoses can be reinstalled with minimal loss of oil.

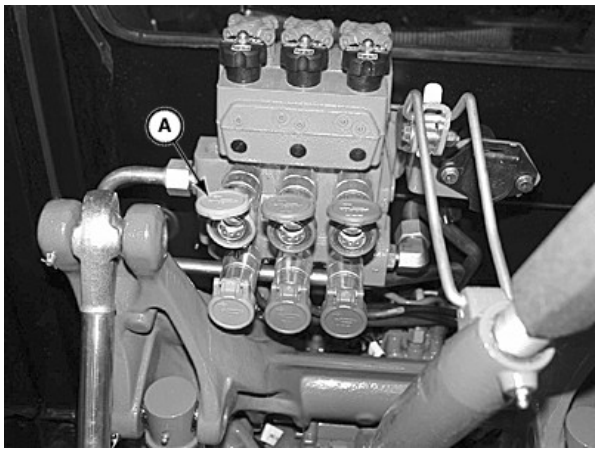
   b. After reinstalling hose, extend and retract cylinder to properly seat connector and reset check valve.

2. With as much hydraulic pressure relieved as possible from hoses, pull hoses from couplers.

3. **Rear SCV:** Wipe clean, then close coupler covers (A). Install dust caps on hose ends.



X9811—UN—23AUG88



LV14590—UN—10AUG11

A—Coupler Covers

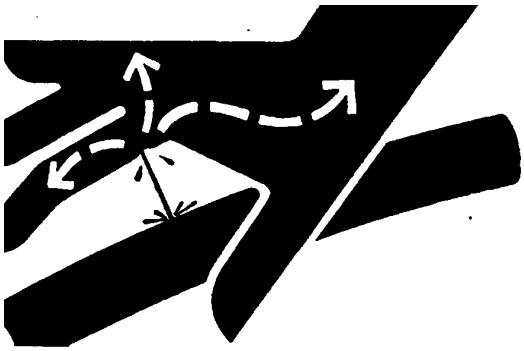
Mid-Mount Valve (If Equipped): Make sure coupler dust plugs and hose end dust caps are clean, then install.

BS13987,0000133-19-16AUG12-1/1

Connecting Cylinder Hoses—Rear SCV

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by moving all rear SCV control levers and mid-mount joystick in all directions to relieve 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

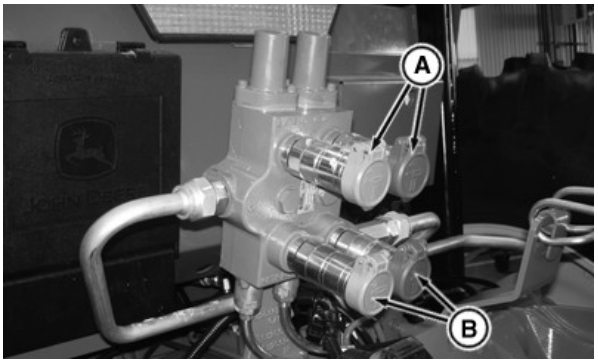
1. Identify extend and retract hoses.

Continued on next page

BS13987,0000134-19-16AUG12-1/3

2. SCV couplers are identified by symbols on the covers:
   - EXTEND—Top couplers (A)
   - RETRACT—Bottom couplers (B)

A—Top (extend) Couplers **B—Bottom (retract) Couplers**



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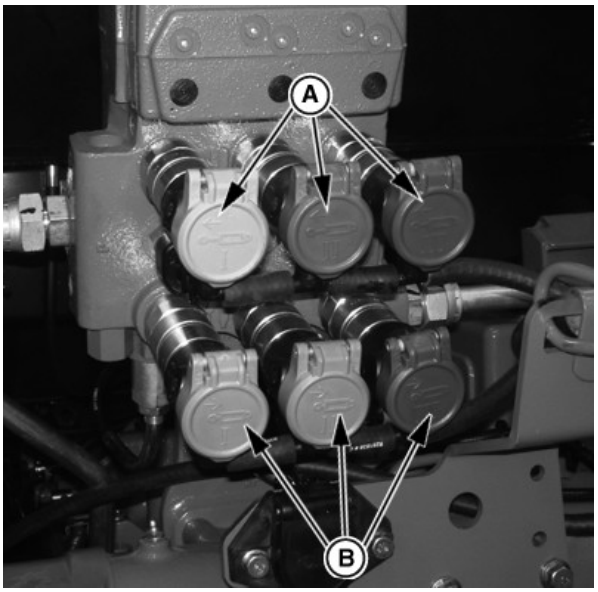


PY15229—UN—01JUN12

BS13987,0000134-19-16AUG12-2/3

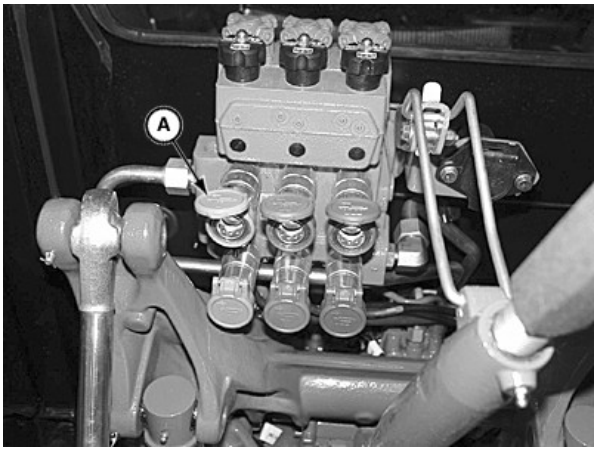
3. Remove dust caps (if equipped) from hose ends.
4. Open coupler covers (A).

CAUTION: Hydraulic hoses can fail due to physical damage, kinks, age and exposure. Check hoses regularly. Replace damaged hoses.

5. Making sure hose end and coupler are clean, push hose tip firmly into coupler. Pull on hose to make sure positive connection was made.

CAUTION: Hoses that have been reversed when connecting pose a serious hazard. If SCV lever is pushed all the way forward to float or regenerate position, implement would drop suddenly, potentially causing serious injury or death. Never attempt to use float or regenerate position before you have performed the following verification step.

6. To make sure hoses have been connected to correct receptacle, pull SCV lever I slightly back of center. This should raise implement. If implement lowers instead of rising, hoses are reversed and need to be connected correctly.



LV14590—UN—10AUG11

A—Coupler Covers

BS13987,0000134-19-16AUG12-3/3

Connecting and Operating Single-Acting Cylinder

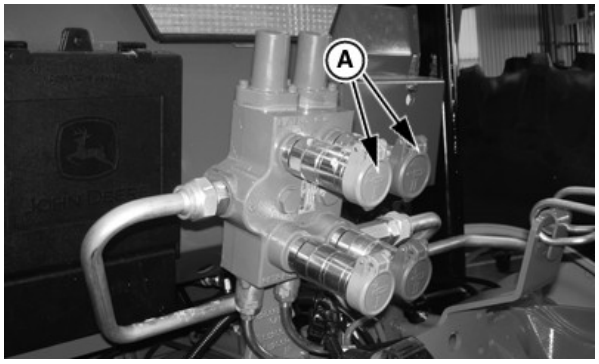
Single-acting cylinder should only be connected to EXTEND couplers (A).

IMPORTANT: Volume of oil required to extend cylinder will lower transmission-hydraulic oil level. With cylinder fully extended, check oil level and fill to proper level. (See CHECKING TRANSMISSION-HYDRAULIC SYSTEM OIL LEVEL in Lubrication section.)

Pull SCV control lever back to pressurize and extend single-acting cylinder.

Push SCV control lever full forward to “float” position to retract cylinder.

A—Top (extend) Couplers



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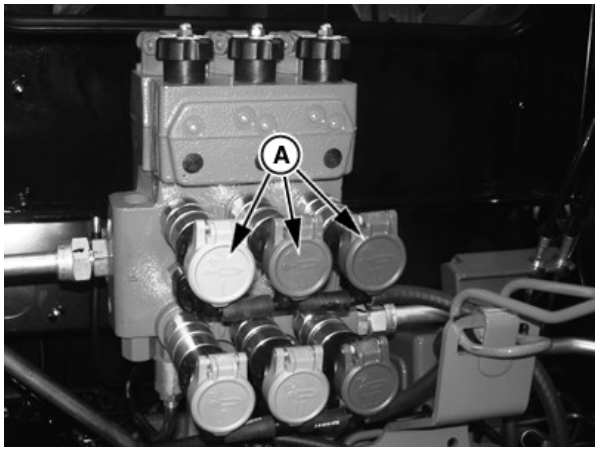
Two-Section Valve



PY15231—UN—01JUN12

Three-Section Deluxe Valve (If Equipped)

BS13987,0000135-19-17AUG12-1/1

Operating SCV Control Levers—Single or Two-Function Valve

CAUTION: Overheated hydraulic oil can cause personal injury and component malfunctions. To prevent hydraulic oil from overheating, DO NOT hold SCV control lever in operating position for an extended period of time.

Extend and Retract Cylinders

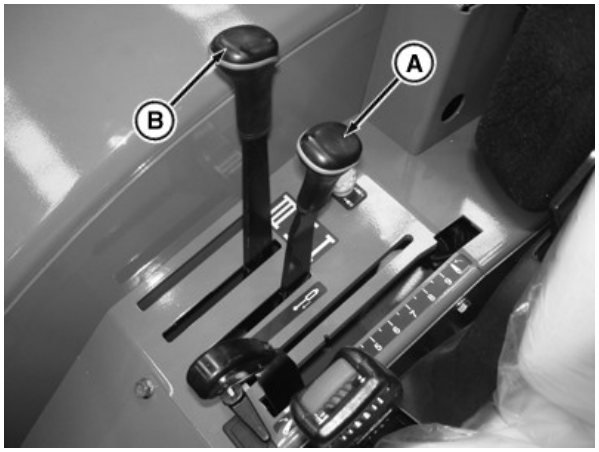
With hoses properly connected to couplers, pull lever back against spring pressure to extend remote cylinder. Spring pressure returns lever to neutral when released. With lever in neutral, remote cylinder is hydraulically locked in position. Push lever forward against spring pressure to retract cylinder.

Float Position

Push lever forward, through retract, into detent to operate “float” feature.

“Float” operation allows cylinder to extend and retract freely, such as when an implement follows ground contour.

Manually return lever to neutral when “float” is no longer required.



PY15232—UN—01JUN12

OOS Shown

A—SCV I Lever **B—SCV II Lever**

Hydraulic Motor Operation

See USING REAR SCV TO OPERATE HYDRAULIC MOTOR in this section.

SV86979,000001D-19-01JUN12-1/1

Setting Detents and Operating SCV Control Levers—Three-Function Deluxe Valve (If Equipped)

Setting Control Lever Detents

Each section of the deluxe SCV has selectable detents, used to change control lever operations to meet operating requirements of different implements. Detent settings only affect extend and retract lever positions, not “float”.

NOTE: Read operator's manual symbol (A) is for reference only and is not a selectable setting.

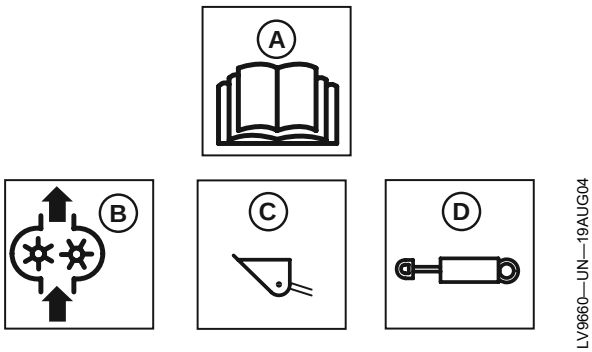
The three settings are:

- (B)—Continuous Detent (Motor)
- (C)—No Detent (Loader)
- (D)—Automatic Detent (Cylinder)

NOTE: Knob setting stop is in the front, center position (white triangles).

SCV Knob Position—Operation	Control Lever Detent
Centered—Loader operation	No Detent—Lever returns to neutral when released
Turn counterclockwise—Motor operation	Continuous Detent—Holds lever in operating position until manually returned to neutral
Turn clockwise—Cylinder operation	Automatic Detent—Lever automatically returns to neutral when cylinder reaches end of stroke

IMPORTANT: To avoid overheating hydraulic oil and damage to tractor, use SCV I when long duration “continuous” (motor) operation is required. Section I of the deluxe SCV has a flow control valve which, when properly adjusted, provides flow to operate an implement at required speed. Only motors requiring high flow at low pressure can be used on open center hydraulic systems. Do not use with motors requiring low flow at high pressure, oil will overheat and cause damage to hydraulic system. See your nearest John Deere dealer for more information on hydraulic motor applications.



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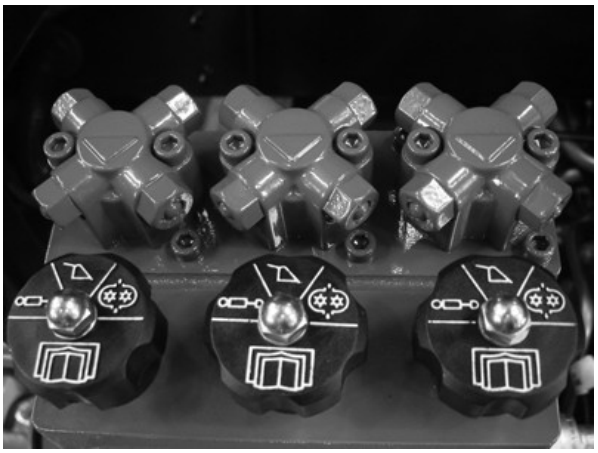


PY15233—UN—01JUN12

A—Read Operator's Manual
B—Continuous Detent (Motor)
C—No Detent (Loader)
D—Automatic Detent (Cylinder)

Valve sections II and III can be set to “continuous” (motor) detent, but should only be used for intermittent applications (not exceeding 10 min/hr maximum) or hydraulic oil will overheat and damage tractor.

Continued on next page

SV86979,000001E-19-01JUN12-1/2

Operating Control Levers

Extend and Retract Cylinders: With hoses properly connected to couplers, pull lever back to extend remote cylinder or push forward to retract.

- When selector knob is set to **No Detent (Loader)** position, lever returns to neutral when released.
- When selector knob is set to **Automatic Detent (Cylinder)** position, lever automatically returns to neutral when cylinder reaches the end of stroke.
- When selector knob is set to **Continuous Detent (Motor)** position, lever must be manually returned to neutral.

With lever in neutral, remote cylinder is hydraulically locked in position.

Float Position: Push lever forward, through retract, into detent to operate “float” feature. “Float” operation allows cylinder to extend and retract freely, such as when an implement follows ground contour. Manually return lever to neutral when “float” is no longer required.

PY15219—UN—01JUN12

Cab Shown

A—SCV I Lever
B—SCV II Lever
C—SCV III Lever

Hydraulic Motor Operation

See USING REAR SCV TO OPERATE HYDRAULIC MOTOR in this section.

SV86979,000001E-19-01JUN12-2/2

Using Rear SCV to Operate Hydraulic Motor

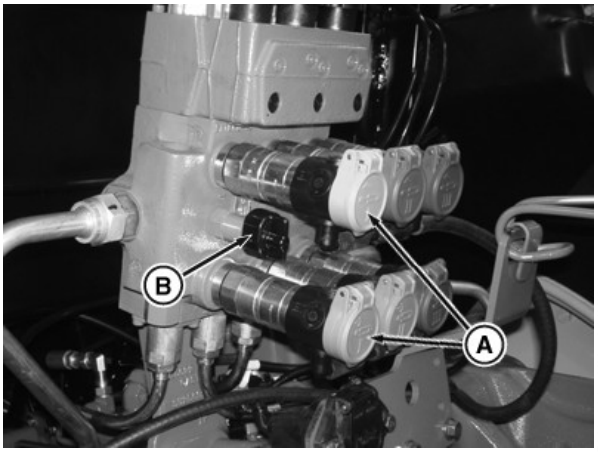
Three-Function Deluxe Valve Section I Only

IMPORTANT: Use SCV I (A), with adjustable (internal) flow control valve (B) for hydraulic motor operations. Only motors requiring high flow at low pressure can be used on open center hydraulic systems. Do not use with motors requiring low flow at high pressure, oil will overheat and cause damage to hydraulic system. See your nearest John Deere dealer for more information on hydraulic motor applications.

IMPORTANT: Never regulate SCV I oil flow with an external flow control valve. Having two flow control valves in the same hydraulic circuit can overheat oil causing component malfunctions and damage.

Deluxe Valve Sections II or III

Use external flow control valve to regulate oil flow when operating a hydraulic motor three-function deluxe valve sections II or III, without internal flow control.



PY15234—UN—01JUN12

Three-Function Deluxe Valve Shown

A—SCV I
B—Adjustable Flow Control Valve

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BS13987,0000136-19-16AUG12-1/2

Hydraulic Motor Hose Connections and Control Lever Operations

1. Shut off engine.
2. Move SCV control lever full forward, into “float” detent. With three-function deluxe valve, use SCV I control lever (A).

IMPORTANT: Motor must receive oil from retract port of SCV so when stopping motor, lever doesn't have to move through neutral to get to float position. Neutral standby pressure may cause back-pressure damage to hydraulic motor or hoses.

3. Connect hydraulic motor hoses to SCV couplers **(pressure to retract, return to extend)** that correspond to selected control lever. With three-function deluxe valve, use SCV I couplers. Return oil may also be routed to a hydraulic motor return port (If Equipped) (See Using Hydraulic Motor Return Connection).
4. Some hydraulic motors have a separate case drain line for internal leakage. The case drain line must be routed to the drain port to direct oil to sump (zero back pressure) (See Using Hydraulic Motor Case Drain Connection—If Equipped).
5. **Three-Function Deluxe Valve:** Set control lever detent for continuous “motor” operation. See SETTING DETENTS AND OPERATING SCV CONTROL LEVERS—THREE-FUNCTION DELUXE VALVE (IF EQUIPPED).
6. Start engine.
7. Activate SCV by moving lever forward to retract detent position and adjust hydraulic flow rate per hydraulic motor manufacturers guidelines.

Cab Shown

A—SCV I Control Lever

8. Shut off hydraulic motor by moving SCV control lever to float position (full forward). Stopping hydraulic motor by moving SCV to neutral position will cause high pressure oil to be trapped between SCV and motor. This may cause damage to motor seals. This also applies to other pumps and motors using the SCV pressure and return couplers.

IMPORTANT: Do not use “neutral” lever position to stop hydraulic motor; use “float”. Neutral standby pressure may cause back-pressure damage to hydraulic motor or hoses.

9. To stop hydraulic motor, move control lever full forward into “float” detent.
10. Shut off engine and disconnect hoses from couplers.

BS13987,0000136-19-16AUG12-2/2

Using Three-Function Deluxe SCV to Operate Loader

CAUTION: Avoid injury or death caused by falling loads. When using Three-Function Deluxe SCV to operate loader, detents must be set in No Detent (Loader) positions, for loader movement to stop when control lever is released. Moving control lever to a detented position would cause the loader to unexpectedly rise to full height and the load to fall back on the operator or suddenly lower to the ground causing crushing injury.

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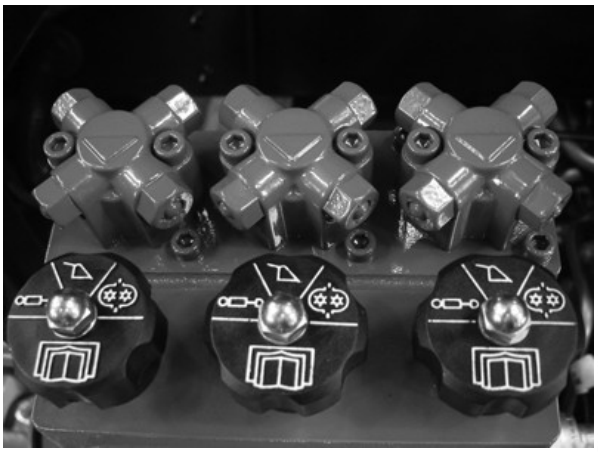

PY15233—UN—01JUN12

No Detent (Loader) Position

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Adjusting Flow Control—Three-Function Deluxe Valve (If Equipped)

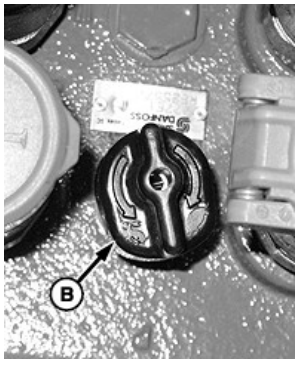
CAUTION: Excessive operating speed may cause injury or machine damage.

Decrease flow rate if hydraulic oil overheats, remote cylinder moves too quickly or if hydraulic motor turns too fast.

Flow control adjustment only affects the number I section of rear SCV and the electro-hydraulic (grapple) section of the mid-mount control valve. Other valve sections are not affected by this adjustment.

To adjust flow rate and operating speed, loosen lock nut (A) (if equipped) and turn flow control knob (B):

- Counterclockwise “Rabbit”—Increase flow rate and speed
- Clockwise “Turtle”—Decrease flow rate and speed



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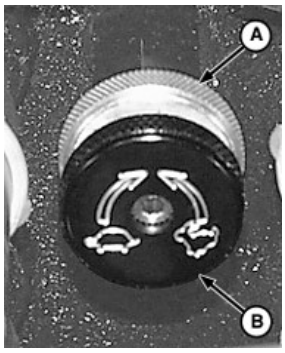
SCV (Rear)



LV12597—UN—21APR05

Mid-Mount Valve

A—Lock Nut (If Equipped)

B—Flow Control Knob

NOTE: Rear SCV: If detent kicks out before end of cycle, use SCV I and adjust flow control.

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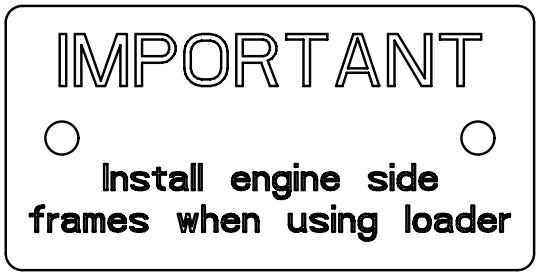
Operate Mid SCV Multi-Function Control Lever—If Equipped

CAUTION: Overheated hydraulic oil can cause personal injury and component malfunctions. To prevent hydraulic oil from overheating, DO NOT hold multi-function control lever in operating position for an extended period of time.



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BS13987,0000137-19-16AUG12-1/5

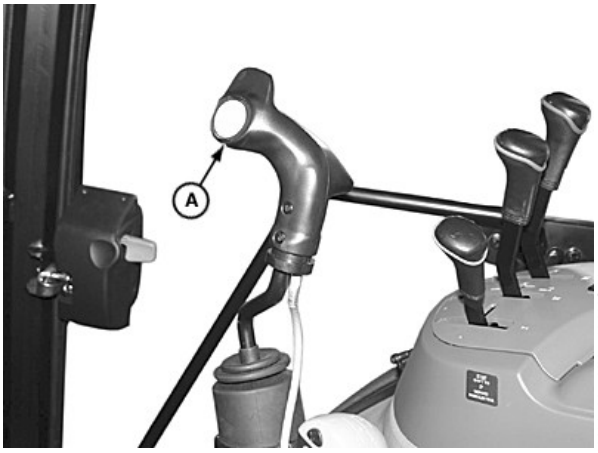
Multi-function lever controls any hydraulically driven device connected to mid selective control valve (SCV), most commonly a loader.

NOTE: Multi-function lever and loader operation depend on hose to coupler connection. See "Connect Cylinder Hoses to Mid SCV—If Equipped" in this section.

1. A single function operates when control lever (A) is moved straight away from center, in one of four primary directions (front, back, left, or right).
   - Front—Boom Lower (B)
     - Full-front (I) is a detented position used for "float" operations.
   - Back—Boom Raise (C)
   - Left—Bucket Rollback (Curl) (D)
   - Right—Bucket Tilt (Dump) (E)
     -
2. Two functions operate simultaneously when lever is moved at 45° angles from primary directions, into a two-function zone (F). Two-function zones are: Boom Lower/Bucket Dump, Bucket Dump/Boom Raise, Boom Raise/Bucket Curl, Bucket Curl/Boom Lower.
3. When lever is released to spring-centered neutral position, mid-mount valve holds boom and bucket in position.
4. Cylinder operating speed depends on how far from center the control lever is moved. When lever is first moved from center, hydraulic functions operate slowly (G), then move progressively faster as lever is moved further away from center, out to fast speed operating position (H).
5. Third functions controlled by switch (J) can be operated simultaneously with any single and two function operations.

"Float": Push lever full forward into detent when "float" is desired. "Float" position (I) allows loader boom to move up and down freely while traveling over rough ground. Manually return lever to neutral when "float" is no longer needed.

A—Multi-Function Control Lever
B—Front—Boom Lower
C—Back—Boom Raise
D—Left—Bucket Rollback (Curl)
E—Right—Bucket Tilt (Dump)
F—Two-Function Zone
G—Slow Speed
H—Fast Speed
I—Detented "Float" Position
J—Third-Function Operations



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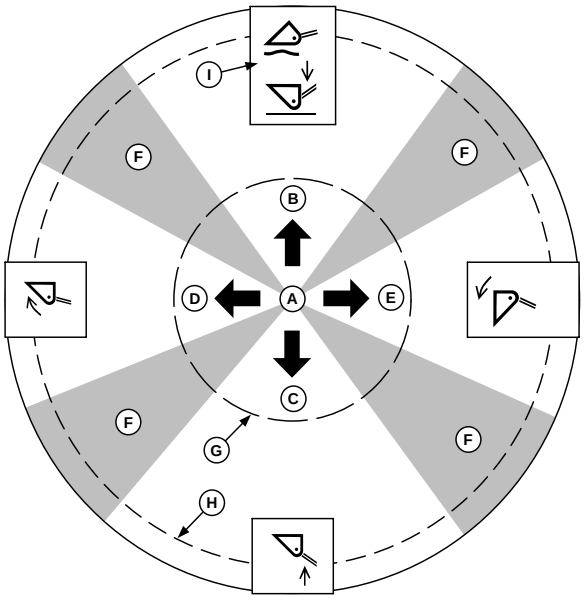

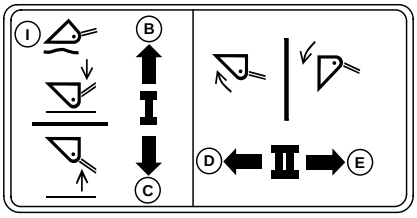

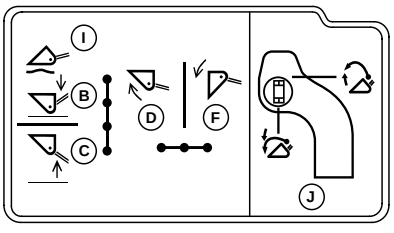

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BS13987,0000137-19-16AUG12-2/5

Transport Lock

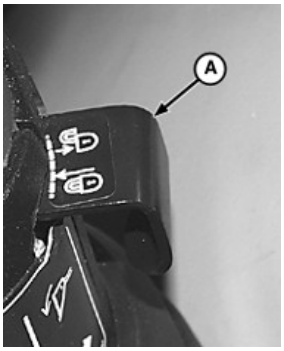
CAUTION: To prevent loader movement, engage control lever transport lock (A) before dismounting tractor. Control lever must be in center (neutral) position for lock to engage.

Transport lock does not lock out switch operated third-function hydraulics, which are active anytime the key is ON.

- Push IN to lock.
- Pull OUT to unlock.

NOTE: Lock is engaged when dashed line is in against body and lever does not move.

A—Transport Lock



Locked

Unlocked

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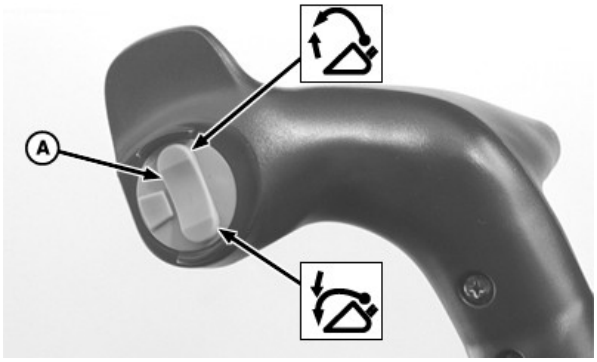
Third-Function (Electrohydraulic)

Switch (A) controls third-function hydraulics connected to three-function mid-mount valve. Third-function hydraulics are active anytime the key is ON.

- Top half pressed: Attachment retract/raise (grapple open).
- Bottom half pressed: Attachment extend/lower (grapple close).

NOTE: Front switch is not operational in this application.

A—Mid SCV Third-Function Switch



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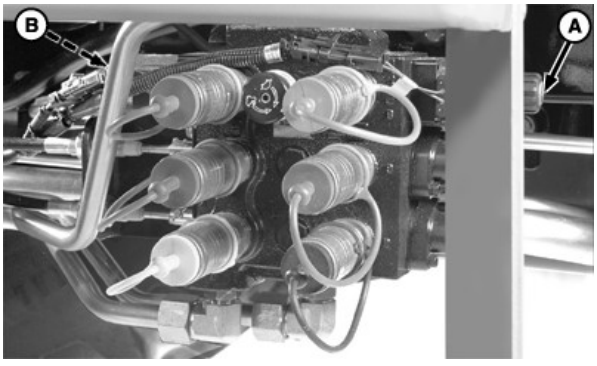
Manually Operating Third-Function (Electro-Hydraulic) Valve Section

Third-function (grapple) valve section can be manually operated if an electrical malfunction occurs.

Insert a small diameter punch through access hole (A or B) and push spool to either extend or retract cylinders as needed to release load.

A—Access Hole (Extend) **B—Access Hole (Retract)**



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Using Hydraulic Motor Case Drain Connection (If Equipped)

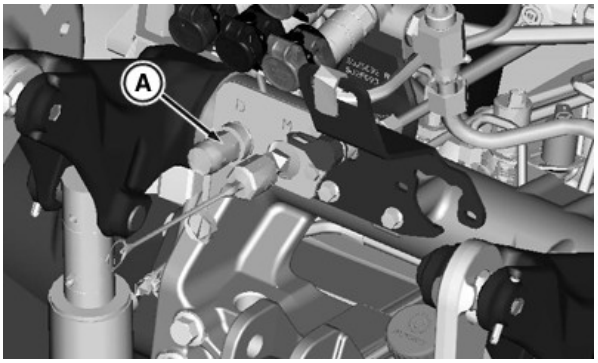
Some implement motors have a case drain line used to bleed oil off the motor case and protect the shaft seal.

If implement motor is equipped with a case drain hose, attach it to flat-faced drain connector (A). Make sure hose coupler and drain connector are clean before attaching.

Install protective dust cap when connector is not in use.

Parts for this attachment are available from your John Deere dealer.

A—Flat-Faced Drain Connector



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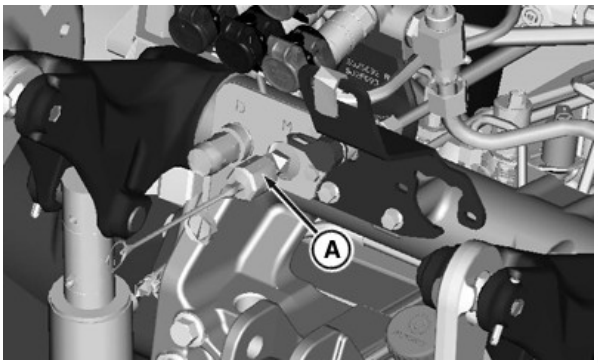
Using Hydraulic Motor Return Connection (If Equipped)

Some implements, such as a post pounder, require use of a high flow or fast return-to-sump connection.

If a high flow return connection is needed, remove cap (A) on valve stack housing and attach hose fitting to connector.

Motor return parts are available from your John Deere dealer.

A—Motor Return Connector Cap



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Observe Drawbar Load Limitations

IMPORTANT: Certain heavy equipment, such as a loaded single-axle trailer, can place excessive strain on drawbar. Strain is greatly increased by speed and rough ground.

For drawn PTO-driven implements, drawbar must be in the extended hole position.

Static vertical load on drawbar should not exceed specification.

Drive slowly with heavy loads.

Specification	
Static vertical load short position - Standard Drawbar—Capacity	1250 kg (2756 lb)
Static vertical load extended position - Standard Drawbar—Capacity	1000 kg (2204 lb)
Static vertical load short position - Heavy Duty Drawbar—Capacity	1900 kg (4189 lb)
Static vertical load extended position - Heavy Duty Drawbar—Capacity	1200 kg (2645 lb)

BS13987,0000138-19-17AUG12-1/1

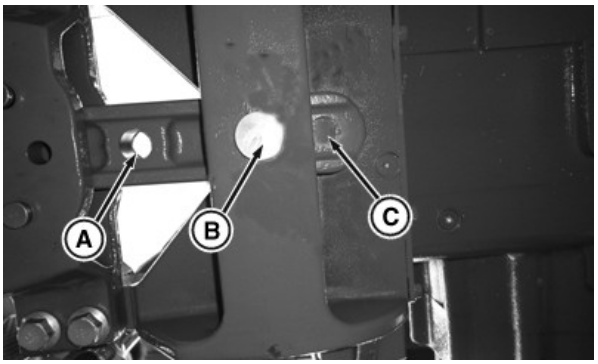
Adjusting Drawbar Length

Hole (A): SHORT position

Hole (C): EXTENDED position

1. Loosen and remove drawbar retaining pin (B).
2. Slide drawbar forward or rearward to desired position.
3. Align holes and install retaining pin.

A—Hole, RETRACTED (short) Drawbar Position
B—Retaining Pin
C—Hole, EXTENDED Drawbar Position



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Adjusting Drawbar Height

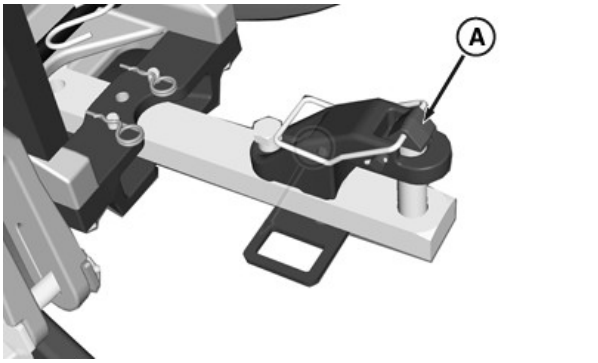
Height of drawbar is adjusted by turning offset (A) up or down.

Remove clevis assembly (if equipped) and slide drawbar out and turn it over. (See ADJUSTING DRAWBAR LENGTH in this section.)

Install drawbar and attach clevis assembly (if equipped) to the top of the drawbar.

IMPORTANT: If equipped, clevis assembly must always be on top of drawbar if used.

A—Offset



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Adjusting Drawbar Side-to-Side

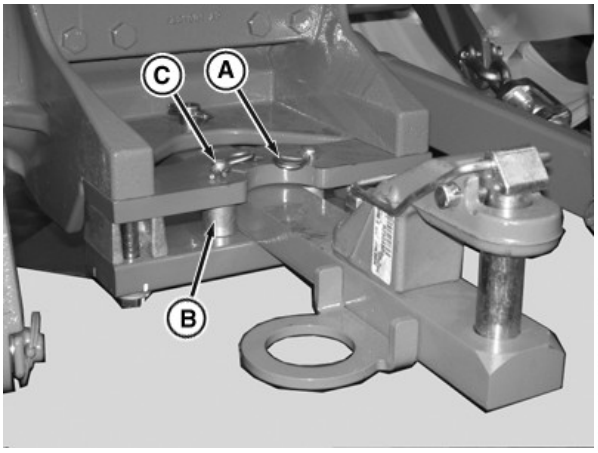
CAUTION: To avoid personal injury, use retaining pins to hold drawbar stationary when operating PTO-driven implements.

Right Side Swing: Support bottom of pin (C) and remove spring clip (A), pin and spacer (B).

Left Side Swing: Repeat procedure on left-hand side pin assembly.

Full Swing (side-to-side): Remove both pin assemblies.

A—Spring Clip
B—Spacer
C—Retaining Pin



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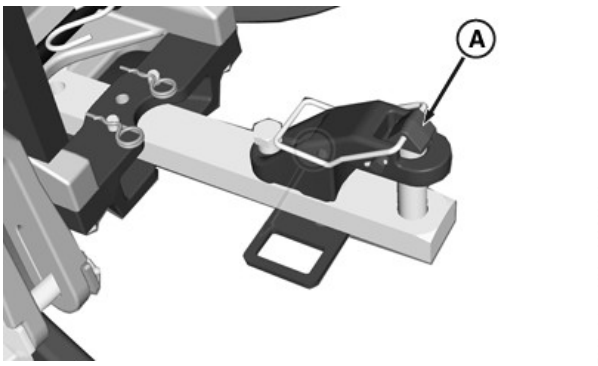
Using Clevis Assembly (If Equipped)

IMPORTANT: Remove clevis assembly before attaching PTO-driven equipment. Clevis may cause interference with PTO shaft.

Clevis assembly (A) must be attached ONLY to top of drawbar. If drawbar is turned over, remove clevis assembly and attach to top of drawbar.

Connect implement to drawbar, using pin of clevis assembly.

A—Clevis Assembly



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Changing Reversible PTO Stub Shaft (If Equipped)

CAUTION: 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 PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

Avoid personal injury. PTO shaft may be hot from operation. Wear gloves and allow shaft to cool before changing.

IMPORTANT: Implements can be operated at 540 rpm only if the power input never exceeds 56 PTO kW (75 PTO hp). Operating PTO at lower speeds under heavy load could damage PTO.

For implement power requirements of 56 PTO kW (75 PTO hp) up to 86 PTO kW (115 PTO hp), PTO shaft must be switched to 1000 rpm end, as described below.

TS1644—UN—22AUG95

NOTE: The 1000 rpm stub shaft has 21 splines for heavy PTO loads. The 540 rpm stub shaft has 6 splines for loads requiring less than 56 PTO kW (75 PTO hp). Consult implement operator's manual to determine shaft suitability, depending on implement power requirement.

1. Raise PTO shield (If equipped).

Continued on next page

OUMX005,0002929-19-07APR08-1/2

2. Rotate ends of snap ring (A) to align with flat surface of PTO stub shaft.
3. Remove snap ring and pull out shaft.
4. Clean stub shaft thoroughly. Coat splines with John Deere HD Non-Clay grease.

IMPORTANT: Avoid damage to PTO. Clean bore (C) thoroughly when installing PTO shaft for 1000 rpm use.

5. Install shaft into PTO housing.

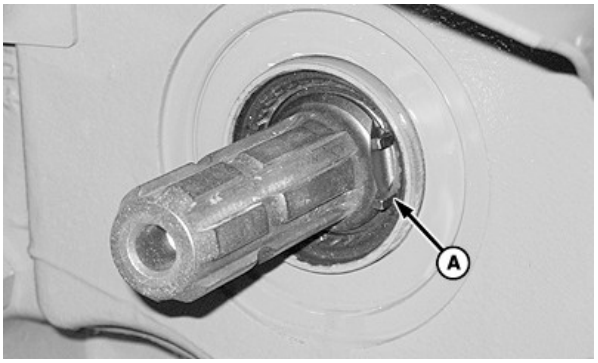
   540 rpm shaft: Rotate shaft back and forth while installing, to ensure shaft is properly seated in housing; continue to push shaft in while installing snap ring.

   1000 rpm shaft: Rotate shaft back and forth while installing until engagement is felt.

NOTE: Shaft is properly engaged when shaft turns with high effort.

6. Install snap ring in groove (B) to retain shaft.
7. Lower PTO shield (if equipped).

A—Snap Ring
B—Snap Ring Groove
C—Bore



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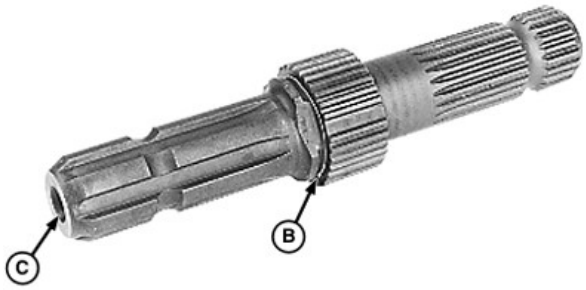

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OUMX005,0002929-19-07APR08-2/2

Attaching PTO-Driven Implement

CAUTION: 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 PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

To avoid injury, stop engine before attaching implement or working in area of implement hitch.

TS1644—UN—22AUG95

1. Stop engine and remove key. (See procedure in Operating the Engine section.)

Continued on next page

SV86979,000003A-19-04JUN12-1/2

IMPORTANT: If equipped, remove clevis assembly on drawbar when using PTO-driven equipment.

The drawbar must be in extended hole position to attach PTO-driven implement.

Short position hole should never be used for PTO-driven implement.

2. Lock drawbar in center, no-sway position. (See ADJUSTING DRAWBAR SIDE-TO-SIDE in this section.)
3. Put drawbar in EXTENDED position. (See ADJUSTING DRAWBAR LENGTH in this section.)
4. Remove clevis assembly, if equipped.

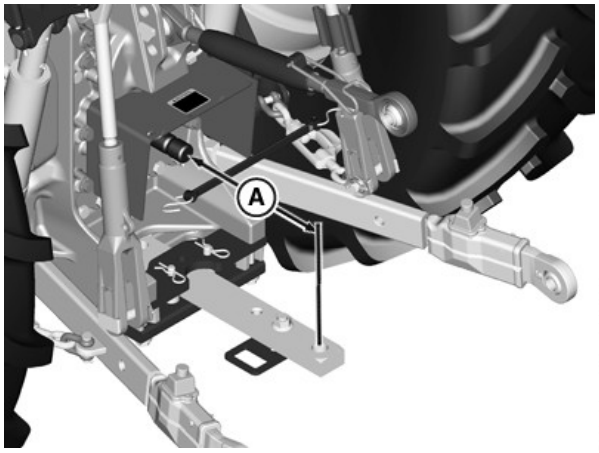
PTO Shaft	Distance from PTO Shaft End to Hitch Pin Hole (A)
540 rpm - 6 Splines[a]	356 mm (14.0 in.)
1000 rpm - 21 Splines[a]	406 mm (16.0 in.)

[a] *35 mm (1-3/8 in.) Shaft Diameter*

5. Attach implement to drawbar before connecting PTO driveline. Raise hitch to full-up (transport) position if not used.

   If implement will be connected to 3-point hitch, be sure drawbar will not interfere. Remove if necessary.

6. Lift up PTO shield (if equipped).



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A—PTO Shaft-to-Pin Hole Distance

7. Turn PTO shaft by hand to line up splines. Connect driveline to PTO shaft. Pull out on shaft to be sure driveline is locked to PTO shaft.
8. Lower PTO shield (if equipped) to centered position.
9. Check for interference.

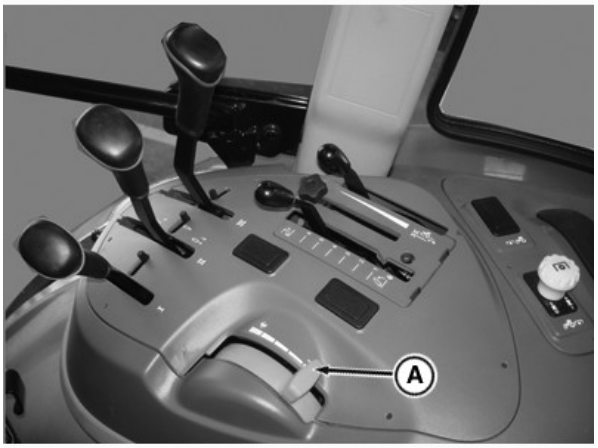
SV86979,000003A-19-04JUN12-2/2

Operating Tractor PTO

NOTE: Engine will not start if PTO control switch is engaged.

1. Depress clutch pedal, start engine, engage PTO and push hand throttle lever (A) forward to desired PTO speed.

A—Hand Throttle Lever



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Cab Only

PY15214—UN—30MAY12

OOS Only

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NOTE: If operator is NOT on seat when PTO switch is On:

- ***OOS:*** *Operator Alert Indicator (C) will turn ON*
- ***Cab:*** *Audible alarm will sound*

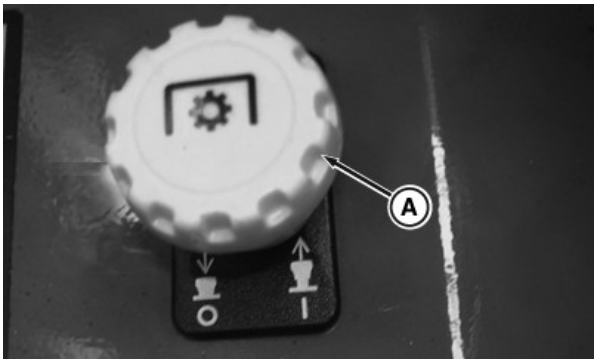
2. Pull the PTO Switch (A) up, to engage PTO. Indicator light (B) will turn on when PTO is engaged.

CAUTION: Avoid personal injury. Stop engine and allow PTO driveline to stop before adjusting, connecting or cleaning PTO-driven implement.

To avoid entanglement with rotating shaft, always disengage PTO when not in use.

3. Push the PTO switch down to disengage PTO.

A—PTO Switch
B—PTO Indicator Light
C—Operator Alert Indicator



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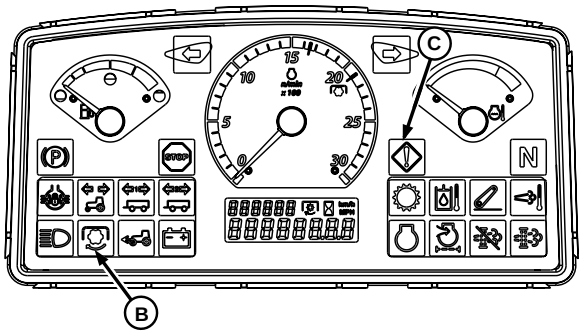

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Performance Ballasting

Planning for Maximum Productivity

Proper ballasting is an important factor in tractor performance. Maximum productivity can be achieved only if tractor weight is appropriate for the job.

John Deere provides additional information on performance ballasting in two of the manuals in the series "Fundamentals of Machine Operations".

(See John Deere Service Literature Available in this manual.):

- "Tractors" provides information on determining correct tractor weight and ballast selection.
- "Machinery Management" provides information on implement matching and increasing productivity.
- Your John Deere dealer can assist you with information on these subjects.

OUO1023,00028F5-19-28MAR08-1/1

Selecting Ballast Carefully

Match amount of ballast needed for each job. What is right for one job may be wrong for another job. Ballast for traction and stability.

Factors determining amount of ballast:
- Soil surface—loose or firm
- Type of implement—integral/semi-integral or towed
- Travel speed—slow or fast
- Tractor power output—partial or full load
- Tire size

Ballasting MFWD-Equipped Tractors

Ideal tire slippage for MFWD-equipped tractors is 8—12%. To reduce wheel slip to this level, more weight is needed on the front than with two-wheel-drive tractors. The ideal weight split is 40% front, 60% rear, of total tractor weight. In some cases liquid ballast will be needed in front tires to obtain this weight split.

If equipped with a loader, provide adequate ballast to rear wheels.

NOTE: Implement codes are used to determine proper ballast for stability and steering control. Refer to the implement code in your implement operator's manual, along with USING IMPLEMENT CODES in this section, to determine the minimum number of front weights that are required for your tractor model. In some cases, additional front ballast is required for optimum field performance. If more assistance is needed, see your John Deere dealer.

Matching Ballast to Work Load

Use no more ballast than necessary, and remove ballast when it is no longer needed.

Rather than weighing tractor down to pull heavy loads, try to reduce load. Pulling a lighter load at a higher speed is more economical and more efficient.

Too Little Ballast		Too Much Ballast	
1.	Excessive wheel slip	1.	Increased load
2.	Power loss due to churning soil	2.	Power loss due to carrying extra weight
3.	Tire wear	3.	Tire strain
4.	Fuel waste	4.	Soil compaction
5.	Lower productivity	5.	Fuel waste
		6.	Lower productivity

Ballast Limitations

Ballast should be limited by either tire capacity or tractor capacity. Each tire has a recommended carrying capacity which should not be exceeded (see Wheels, Tires and Treads section). If a greater amount of weight is needed for traction, a larger single tire should be considered.

Ballast can be added as either liquid or cast iron.

Checking for Correct Ballast

The best way to check for correct ballast is to measure amount of travel reduction (% slip) of the drive wheels. Under normal field conditions, travel reduction should be 10—15% (8— 12% for MFWD tractors)..

Add more weight to drive wheels if slip is excessive. If there is less than minimum recommended slip, weight should be removed.

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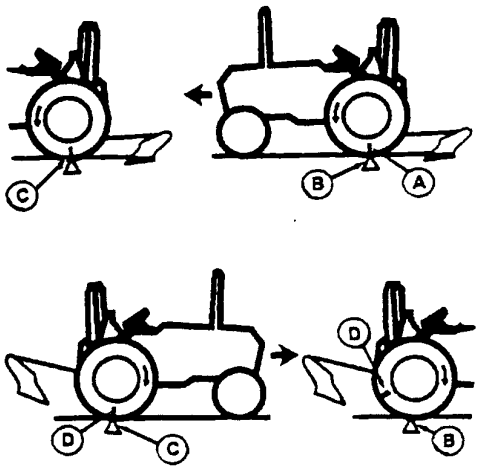
Measuring Wheel Slip—Manually



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A—Initial Tire Mark **B—Ground Starting Point** **C—10 Revolutions Ground Mark** **D—Second Tire Mark**

1. Place a mark (A) on a rear tire which is easily observed (a chalk mark is recommended).
2. With tractor working and implement lowered, mark a starting point (B) on the ground at the place where tire mark (A) meets the ground.
3. Mark the ground again where tire mark (A) completes 10 full revolutions (C).
4. With implement raised, return in the opposite direction. At the second mark on the ground (C), mark tire a second time (D).
5. While driving the tractor along the same path (implement raised), count the tire revolutions required to reach starting point (B).
6. Use the non-loaded wheel revolutions count in “Wheel Slippage Chart” to determine slippage.

NOTE: Ideal wheel slippage is 10-15 % for 2WD tractors, 8-12 % for tractors with MFWD.

7. Adjust ballast or load to give correct slippage.

NOTE: Available horsepower is greatly reduced when wheel slip drops below minimum percentage.

WHEEL SLIPPAGE CHART		
Non-Loaded Wheel Revolutions (Step 5)	**Estimated % Slip**	**Recommended Action**
10	0	Remove Ballast
9-1/2	5	Remove Ballast
9	10	CORRECT BALLAST
8-1/2	15	CORRECT BALLAST
8	20	Add Ballast
7-1/2	25	Add Ballast
7	30	Add Ballast

OUO6070,0000059-19-26JAN08-1/1

Ballasting Front End for Transport

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: Weights are heavy. Use proper lifting equipment.

Front weight support (A) and additional weights can be installed.

Specification

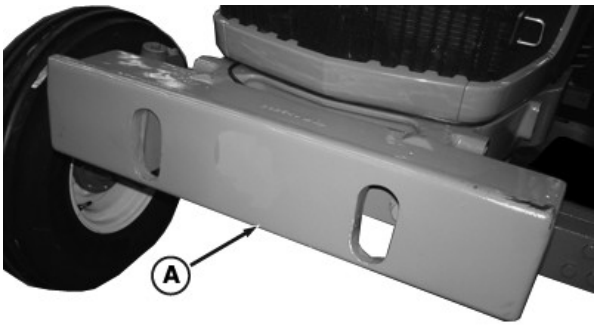
Front Weight Support—Weight	84 kg (185 lb)
Additional Weight—Weight (each)	47 kg (104 lb)

1. Install desired number of weights (C) on front weight support, up to maximum allowed.
   - 18 Total Additional Weights
2. To hold weights in place, insert two retaining bolts (B) in opposite direction, one right-to-left, the other left-to-right. Place retainers (D) as shown. Tighten retaining bolts to specification.

Specification

Weight Retaining Bolt—Torque	230 N·m (170 lb-ft)

A—Front Weight Support
B—Retaining Bolt (2 Used)
C—Additional Weights
D—Retainers and Nuts (2 Used)



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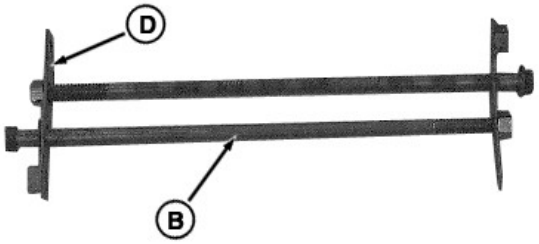

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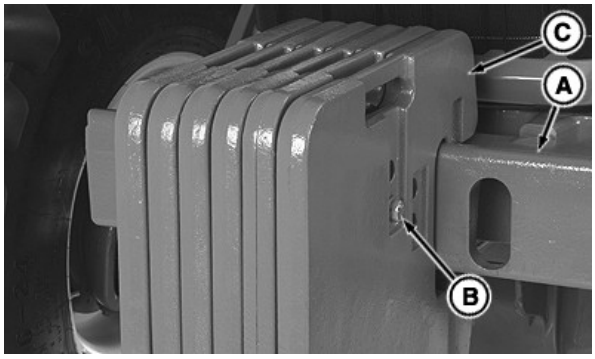

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Determining Maximum Rear Ballast

IMPORTANT: Do not overload tires. If maximum weight shown in chart is not enough for safety, reduce load or install heavier ply tires.

Too much ballast causes excessive soil compaction and rolling resistance, and shortens drive train life. Ballast must not exceed the weight required to provide traction for continuous full power loads in third gear. Remove ballast if tractor engine labors when pulling heavy loads in the first three gears.

Rear wheel ballast must not be such that the engine cannot support full load at rated engine speed, while the tractor is moving at 7 km/h (4.3 mph). If the engine labors or stalls below 7 km/h (4.3 mph), it indicates that there is too much ballast on the rear wheels.

Chart shows carrying capacity per tire.

MAXIMUM LOAD PER WHEEL		
Tire Size Bias ply Tires	Ply Rating	Capacity kg (lb)
18.4-34	8	2550 (5623)
18.4-38	8	2700 (5954)

OUO6070,000005C-19-07MAR17-1/1

Determining Maximum Front Ballast

Use appropriate front ballast for a particular operating condition. Two-wheel drive tractors should only have enough ballast to maintain safe steering control. Remove ballast when it is no longer needed.

Chart shows carrying capacity per tire.

IMPORTANT: Do not overload tires. If maximum weight shown in chart is not enough for safety, reduce load or install tires with a higher load rating.

MAXIMUM LOAD PER WHEEL		
Tire Size	Ply Rating	Capacity kg (lb)
10.0-16	6	965 (2128)
13.6-24	6	1350 (2977)
14.9-24	8	1510 (3330)

OUO6070,000005D-19-28MAR08-1/1

Adding Rear Ballast For Front Loader

CAUTION: To help prevent personal injury or death from tractor/loader rollover, add recommended amount of ballast to tractor. The amount of ballast listed is the minimum required for normal loader operation. For some operations, additional ballast may be required to maximize stability. Select one of the following ballasting options.

BALLAST RECOMMENDATIONS 6105D, 6115D, 6130D AND 6140D TRACTORS WITH GL4 Loader				
GL4 SL				
MFWD TRACTORS		**Ballast**	**Heavy Duty Front Tire Load Index**	**Regular Duty Front Tire Load Index**
OPTION 1	3-Point Hitch	1200 kg (2645.5 lb)	124 kg (273.4 lb)	114 kg (251.3 lb)
	Rear Axle	500 kg (1102.3 lb)		
OPTION 2	Rear Axle	N/A		
GL4 NSL				
MFWD TRACTORS		**Ballast**	**Heavy Duty Front Tire Load Index**	**Regular Duty Front Tire Load Index**
OPTION 1	3-Point Hitch	800 kg (1763.7 lb)	119 kg (262.3 lb)	108 kg (238.1 lb)
	Rear Axle	0 kg (0 lb)		
OPTION 2	Rear Axle	1200 kg (2645.5 lb)	122 kg (269 lb)	112 kg (247 lb)
BALLAST RECOMMENDATIONS 6105D, 6115D, 6130D AND 6140D TRACTORS WITH GL3 Loader				
GL3 SL				
MFWD TRACTORS		**Ballast**	**Heavy Duty Front Tire Load Index**	**Regular Duty Front Tire Load Index**
OPTION 1	3-Point Hitch	1000 kg (2204.6 lb)	122 kg (269 lb)	113 kg (249.1 lb)
	Rear Axle	0 kg (0 lb)		
OPTION 2	Rear Axle	1450 kg (3196.6 lb)	125 kg (275.6 lb)	118 kg (260.1 lb)
GL3 NSL				
MFWD TRACTORS		**Ballast**	**Heavy Duty Front Tire Load Index**	**Regular Duty Front Tire Load Index**
OPTION 1	3-Point Hitch	500 kg (1102.3 lb)	121 kg (266.7 lb)	113 kg (249.1 lb)
	Rear Axle	0 kg (0 lb)		
OPTION 2	Rear Axle	750 kg (1653.4 lb)	123 kg (271.2 lb)	116 kg (255.7 lb)

Ballast Notes:

1. Per ASABE EP562 a minimum rear tread setting of 1825 mm is recommended. Above ballast based on this tread setting.
2. Due to some tractor loader combinations resulting in high front axle loads, 3-point hitch ballast is required as noted
3. Open operator station 4 cylinder tractors require additional 350 kg rear axle ballast when hitch ballast used (additional 100 kg for 6 cylinders).
4. Open operator station 4 cylinder tractors require additional 500 kg rear axle ballast when hitch ballast not used (additional 150 kg for 6 cylinders).
5. Rear axle ballast based on steel wheels. For cast wheels, reduce requirement by 220 kg per wheel.

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Using Cast Iron Weights

Cast iron weights are available for rear tires. They can be installed on the inside or outside of wheel. See your John Deere dealer for more information and recommendations on weight use and placement.

Specification

Cast Iron Weights—Weight. . . . . 55 kg (121 lb)

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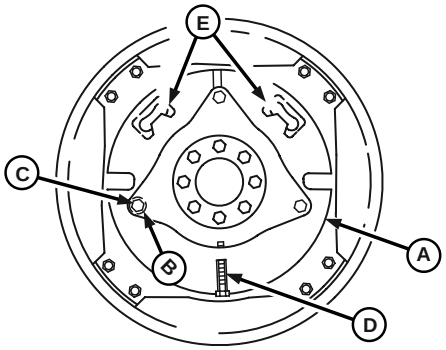
Installing Rear Cast Iron Weights



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IMPORTANT: Maximum number of weights that can be installed on rear tires is four (4) on each tire.

CAUTION: Rear weights weigh 55 kg (121 lb) each. Handle with care! Use appropriate equipment or have the job done by your John Deere dealer.

CAUTION: When installing or removing QUICK-TATCH weights, always position wheels so that weight retainer jaws are at the top. This prevents weights from falling when retaining bolt is removed.

NOTE: Spacers are required when weights won't fit into rim's dish. If weights do fit, spacers are optional.

1. Attach FIRST weight (A) to wheel disk, using three spacers (B) if necessary, with bolts, washers and nuts (C). Note that bolts go through first weight and into the rim so that washers and nuts tighten onto rim, not onto weights. This makes it easy to check regularly for tightness.
2. To install ADDITIONAL weights, position wheel so that one of retainer jaws (E) is at top. Hang next weight in retainer jaw and secure with bolt, washer and nut (D) as shown. Proceed in similar fashion with other additional weights, up to maximum allowable.
3. Tighten all bolt retaining nuts to specification. Tighten again after a few hours of service. Check tightness regularly.

P10151—UN—26MAR01

Four Maximum Weights Installed

A—First Weight
B—Spacer (3 Used)
C—First Weight Retaining Bolt, Washer and Nut (3 Sets Used)
D—Additional Weight Retaining Bolt, Washer and Nut
E—Retainer Jaws

Specification

Retaining Bolts—Torque. . . . . 230 N·m (170 lb-ft)

OUO6070,000005F-19-12OCT00-1/1

Using Liquid Weight

CAUTION: Installing liquid ballast requires special equipment and training. Have the job done by your John Deere dealer or a tire service store.

IMPORTANT: NEVER fill tire to more than 90 percent full. More solution would leave too little air space to absorb shocks. Damage to tire could occur.

A solution of water and calcium chloride provides safe, economical ballast. Used properly, it will not damage tires, tubes, or rims.

Use calcium chloride to prevent water from freezing. A mixture of 0.6 kg per liter (5 lb of calcium chloride per gallon) will not freeze solid above —45°C (—53°F).

NOTE: Use of alcohol as liquid ballast is not recommended. Calcium chloride solution is heavier and more economical.

Fill tubeless tires slightly above valve level (minimum 75 percent full). Less solution would expose part of rim, possibly causing corrosion. Tube-type tires may be filled to any level below 90 percent.

Charts on this page show how much each tire size holds if filled to 75 percent full.

LIQUID WEIGHT FOR FRONT TIRES With 0.6 kg/L (5 lb/gal) Calcium Chloride Solution	
Tire Size	**Liquid Weight per Tire kg (lb)—75% Full**
10.0-16	64 kg (142 lb)
13.6-24	144 kg (317 lb)
14.9-24	178 kg (392 lb)

LIQUID WEIGHT FOR REAR TIRES With 0.6 kg/L (5 lb/gal) Calcium Chloride Solution	
Tire Size	**Liquid weight per Tire kg (lb)—75% Full**
18.4-34	378 kg (834 lb)
18.4-38	503 kg (1110 lb)

OUO6070,0000060-19-28MAR08-1/1

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.)

PX07220,0000027-19-16APR04-1/1

Using Implement Codes

CAUTION: Do not attempt to transport an implement without adequate front ballast. Lack of steering control may result.

With maximum front ballast, do not attempt to transport an implement whose code exceeds:

- **217 for 2WD**
- **225 for MFWD**

John Deere engineers have developed a code to determine how much front ballast is needed for stability and steering control.

1. Find implement code in implement operator's manual.
2. Use the following charts to determine how many front weights are required on your tractor model and configuration.

   Example: An implement with a code 194 to be used 2WD tractor requires 10 front weights.

Implement Code Charts

Following charts give Implement Codes for the various combinations of tractors and tire sizes.

2WD Tractor with 10.0-16 front tires	
BALLAST	**CODE**
Front Support Only	128
1 Starter Weight	137
2 Weights	149
4 Weights	160
6 Weights	171
8 Weights	183
10 Weights	194
12 Weights	205
14 Weights	217

MFWD Tractor with 14.9-24 or 13.6-24 front tires	
BALLAST	**CODE**
Front Support Only	137
1 Starter Weight	146
2 Weights	157
4 Weights	168
6 Weights	180
8 Weights	191
10 Weights	202
12 Weights	214
14 Weights	225

NS43404,00004A9-19-07APR08-1/1

Service Tires Safely

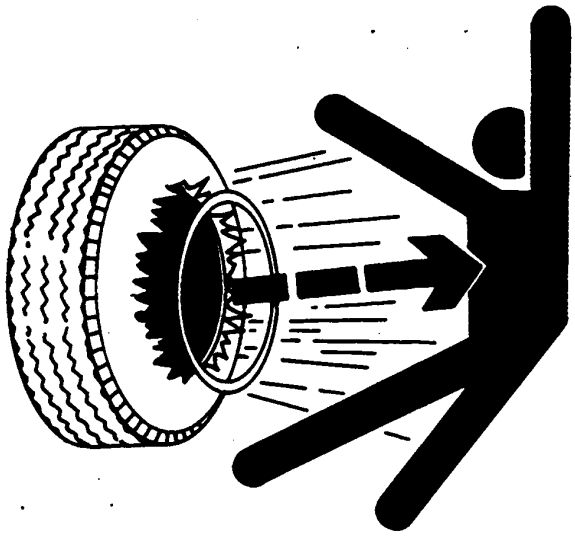
Explosive separation of a tire and rim parts can cause serious injury or death.

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.



TS211—UN—15APR13

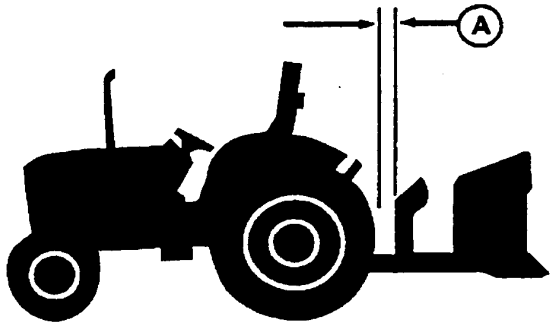
DX,RIM-19-24AUG90-1/1

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 may be required to provide adequate implement-to-tire clearance.

A—Clearance



M47177—UN—31JAN92

MX,WTIP,AA1-19-21APR94-1/1

Check Tire Inflation Pressure

Check tires daily for damage or noticeably low pressure.

At least every 100 hours of operation, check inflation pressure with a gauge. Use an accurate gauge having 10 kPa (0.1 bar) (1 psi) graduations.

If tires contain liquid ballast, use a special air-water gauge and measure with valve stem at bottom.

NOTE: When furrow plowing or during hillside operation, tire pressure can be increased 28 kPa (0.28 bar) (4 psi) ABOVE maximum to prevent tire wrinkling or buckling.

NOTE: Following inflation information applies to both front and rear tires and Tire Inflation Pressure Chart.

1. All inflation pressures are calculated for 29 km/h (18 mph) travel speeds.
2. Check tire inflation pressure while tires are cool, using an accurate dial or stick-type gauge having 10 kPa (0.1 bar) (1 psi) graduations. Over-inflation reduces performance and increases strain on both tire and rim.
3. Operation of tires at the inflation pressures listed on chart will result in optimum tractive performance of the tire/vehicle system.
4. Inflation pressures less than 80 kPa (12 psi) should be monitored regularly because of the increased risk of low pressure air leaks (especially due to leaking valve cores.)
5. Tractors operating on steep side slopes should increase inflation pressures 28 kPa (4 psi) above the values listed to compensate for lateral weight transfer.
6. Tires run as singles in high traction conditions sometimes experience bead slip if the bead was not fully seated or if too much lubricant was used to mount the tire. Increasing the inflation pressure will compensate for this condition but will not cause reduced traction. Consult your tire dealer if this problem occurs.
7. If higher load capacities are needed, contact your John Deere dealer for tire manufacturer's load and inflation table information.

OUO6070,0000062-19-14APR08-1/1

Tire Inflation Pressure Chart

Front Tires			With Little or No Added Weight			With Maximum Ballast or Heavy Mounted Implement		
Tire Size	**Ply Rating**	**Tread**	**kPa**	**(bar)**	**(psi)**	**kPa**	**(bar)**	**(psi)**
10.0-16	8	F2						
12.4-24	8	R1						
13.6-24	8	R1						
14.9-24	8	R1	83	(0.83)	(12)	137	(1.37)	(20)
Rear Tires			**With Little or No Added Weight**			**With Maximum Ballast or Heavy Mounted Implement**		
Tire Size	**Ply Rating**	**Tread**	**kPa**	**(bar)**	**(psi)**	**kPa**	**(bar)**	**(psi)**
12.4-42	10	R1						
16.9-38	8	R1						
18.4-34	8	R1	83	(0.83)	(12)	137	(1.37)	(20)
18.4-38	8	R1	83	(0.83)	(12)	137	(1.37)	(20)

SK35149,000053B-19-01JUN12-1/1

Front and Rear Tire Combinations—2WD Axle

Rear Tire Size	Front Tire Size	6115D	6130D, 6140D
18.4-34	10.6-16	Optional	No
18.4-38	10.6-16	Optional	No

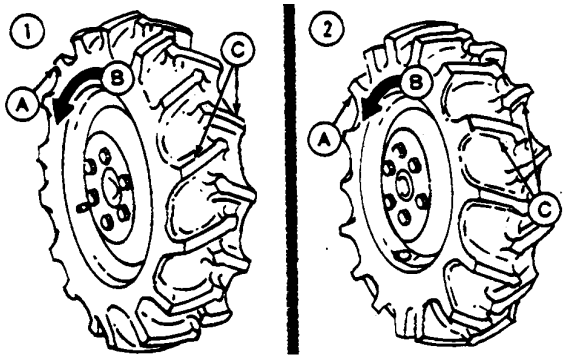
SP21231,00002D2-19-04JUN12-1/1

Front and Rear Tire Combinations—MFWD

Rear Tire Size	Front Tire Size	6105D	6115D	6130D	6140D
18.4-34	13.6-24	Standard	Standard	Optional	Optional
18.4-38	14.9-24	Optional	Optional	Standard	Standard
12.4-42	12.4-24	Optional	Optional	Optional	Optional
16.9-38	13.6-24	Optional	Optional	Optional	Optional
460/85R-34	340/85R-24	Optional	Optional	Optional	Optional
460/85R-38	380/85R-24	Optional	Optional	Optional	Optional

SK35149,000053C-19-01JUN12-1/1

Selecting Front Tire Rolling Direction



RW510—UN—06APR89

Left Tire (Viewed From Rear)

A—Front Tire (Viewed from Rear) **B—Rolling Direction of Tire** **C—Tire Lugs**

(1)—Under most conditions, front tires (A) should be mounted with the direction of tire lugs (C) the same as the tire rolling direction (B).

(2)—If tractor is mainly used for loader operations, lug direction may be reversed on the MFWD axle for improved tire wear.

MX,WTIP,HA2-19-07DEC06-1/1

Tighten Wheel/Axle Hardware Correctly

⚠ CAUTION: NEVER operate tractor with a loose rim, wheel, hub, or axle.

Any time hardware is loosened, tighten to specified torque.

NOTE: Follow checking procedure when a new tractor is first used, or wheels have been off.

1. After driving tractor about 100 m (109 yd), and before placing it under load, tighten hardware to specified torque.
2. Check hardware after working three hours and again after 10 hours.
3. Check all hardware frequently and keep it tight.

OUO6070,0000064-19-12OCT00-1/1

Tighten Bolts—Adjustable Front Axle

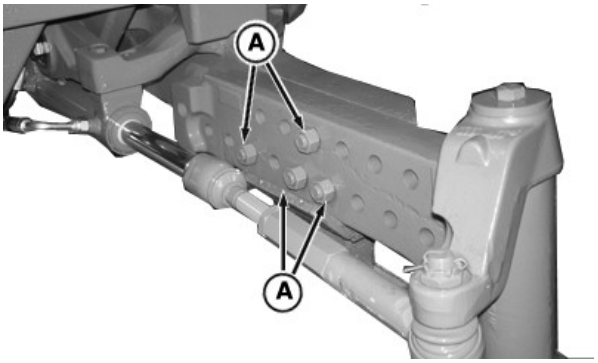
Specification

Adjustable Front Axle—Axle-to-Knee Bolts—Torque. . . . . 480 N·m (350 lb-ft)

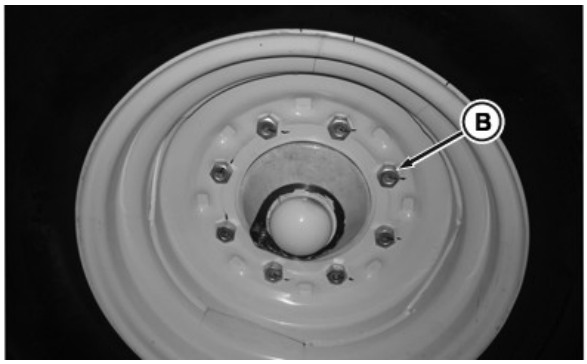
Adjustable Front Axle—Disk-to-Flange Bolts—Torque. . . . . 250 N·m (185 lb-ft)

A—Axle-to-Knee Bolts (4 used each side)

B—Wheel Disk-to-Axle Flange Bolts (8 used each side)



PY14614—UN—01JUN12



PY14613—UN—01JUN12

SK35149,0000532-19-01JUN12-1/1

Tighten Bolts—MFWD Axle

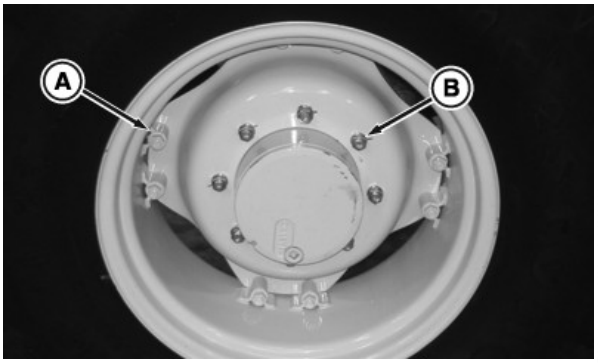
Specification

Wheel Rim-to-Disk Bolts—Torque. . . . . 245 N·m (180 lb-ft)

Wheel Disk-to-Axle Flange Bolts—Torque. . . . . 300 N·m (220 lb-ft)

A—Wheel Rim-to-Disk Bolts (8 used each side)

B—Wheel Disk-to-Axle Flange Bolts (8 used each side)



PY14619—UN—01JUN12

SK35149,0000533-19-01JUN12-1/1

Tighten Bolts—Rear Axle

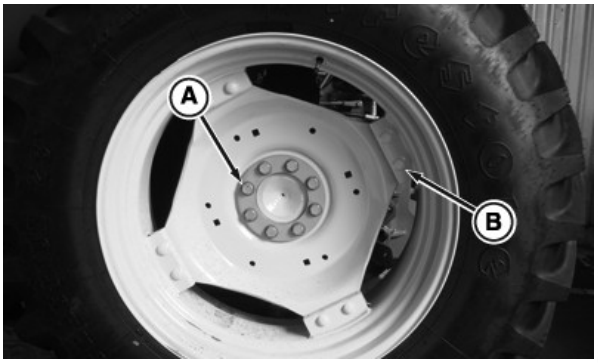
Specification

Wheel Rim-to-Disk Bolts—Torque. . . . . 310 N·m (230 lb-ft)

Wheel Disk-to-Flange Bolts (Steel Disk)—Torque. . . . . 500 N·m (370 lb-ft)

A—Wheel Disk-to-Axle Flange Bolts (8 used each side)

B—Wheel Rim-to-Disk Bolts (8 used each wheel)



PY14615—UN—01JUN12

Steel Disk

SK35149,0000534-19-01JUN12-1/1

Tread Settings—Adjustable Front Axle (2WD Axle)

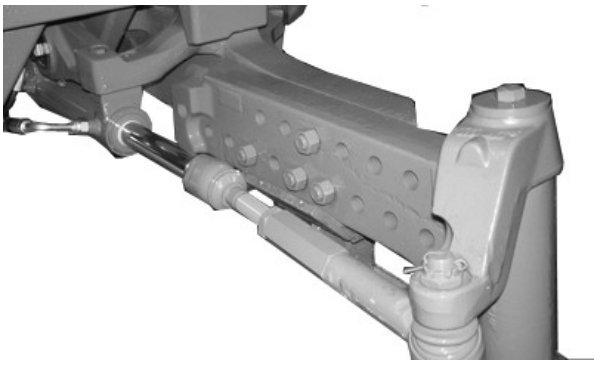
Each side of the front axle can be adjusted in increments of 51 mm (2 in.). Make sure adjustment is equal on both sides.

Wheel rim can be positioned as shown by (C) or (D) in the diagram. Positioning wheel rim as (D) provides an additional 44 mm (1.75 in.) tread width.

NOTE: Number 1 wheel position corresponds to axle adjustment at most inward location, resulting in narrowest tread.

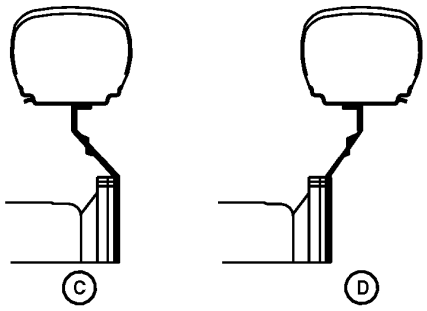
The extension provided with the tractor is 102 mm (4 in.) long. Contact your John Deere dealer to order the optional 204 mm (8 in.) extension.

NOTE: Replace 102 mm (4 in.) extension with optional 204 mm (8 in.) extension. Do NOT use together.



PY14616—UN—01JUN12

Adjustable Front Axle with 102 mm (4 in.) Extension



LV1515—UN—05MAR96

TREAD WIDTH Centerline-to-Centerline		
Tire Size	**10.00-16**	
Wheel Position	**C**	**D**
1 Without Extension	—	1533 mm (60.4 in.)
2 Without Extension	1591 mm (62.7 in.)	1635 mm (64.4 in.)
3 With 102 mm (4 in.) Extension	1693 mm (66.7 in.)	1737 mm (68.4 in.)
4 With 102 mm (4 in.) Extension	1795 mm (70.7 in.)	1839 mm (72.4 in.)
5 With Optional 204 mm (8 in.) Extension	1896 mm (74.7 in.)	1941 mm (76.4 in.)
6 With Optional 204 mm (8 in.) Extension	1998 mm (78.7 in.)	2043 mm (80.4 in.)

SK35149,0000535-19-01JUN12-1/1

Adjusting Front Wheel Tread (2WD Axle)

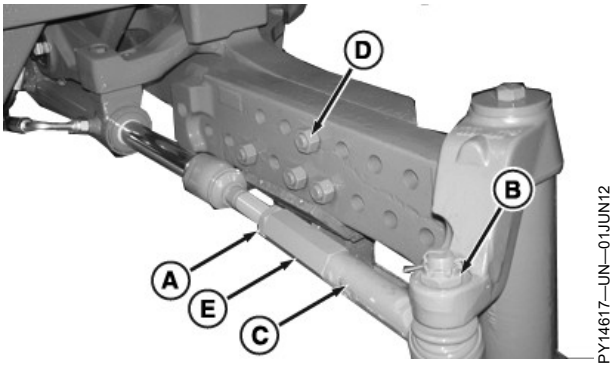
IMPORTANT: Do not place jack under engine oil pan.

1. Jack up front end of tractor.
2. Loosen nut (A). Remove cotter pin, slotted nut (B) and tie-rod (C).
3. Remove extensions (E), if equipped, to obtain a minimum of 1700 mm (66.9 in.) tread width.
4. Remove axle bolts and nuts (D).
5. Reposition axle ends to the desired front wheel tread. Install axle bolts and nuts. Tighten to specification.

Specification

Front Axle Nuts—Torque. . . . . 400 N·m (295 lb-ft)

6. Adjust (C and E) as required. Tighten nut (A).
7. Install slotted nut and cotter pin .
8. When making large tread adjustments, it may be necessary to adjust toe-in. (See procedure in this section.)



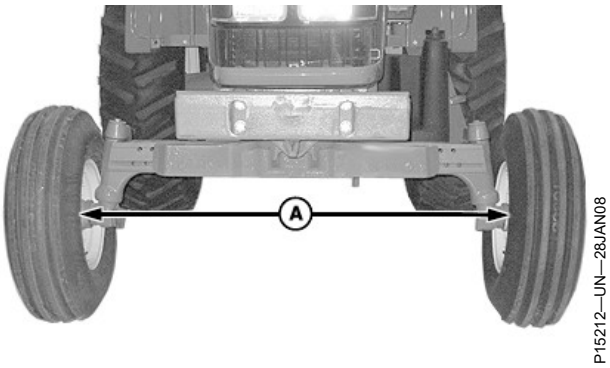
Front Axle With Extension

A—Nut
B—Slotted Nut
C—Tie-Rod
D—Bolt and Nut (4 used each side)
E—Tie-Rod Extension

SK35149,0000536-19-01JUN12-1/1

Checking Toe-In—Adjustable Front Axle (2WD)

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 rim flange-to-rim flange 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 rim flanges 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.
6. Distance (A) at **front** of tires should be 3—9 mm (1/8—3/8 in.) less than distance measured at **rear** of tires. Adjust toe-in if necessary. (See procedure in this section.)



A—Front Axle Toe-In Distance

OUMX005,000290F-19-28JAN08-1/1

Adjusting Toe-In—Adjustable Front Axle (2WD)

NOTE: Adjust toe-in equally at both tie-rods.

1. Loosen jam nut (A).
2. Remove cotter pin and slotted nut (B).
3. Remove tie-rod (C) from spindle assembly.
4. Turn tie-rod end to lengthen or shorten, as needed, to desired toe-in.
5. Install tie-rod end and slotted nut. Tighten nut to specification. Install cotter pin.

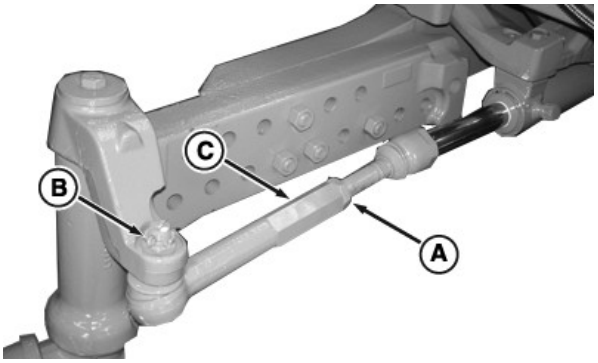
Specification

Slotted Nut (B)—Torque. . . . . 100 N·m (74 lb-ft)

6. Tighten jam nut (A) to specification.

Specification

Jam Nut (A)—Torque. . . . . 250 N·m (185 lb-ft)



PY14618—UN—01JUN12

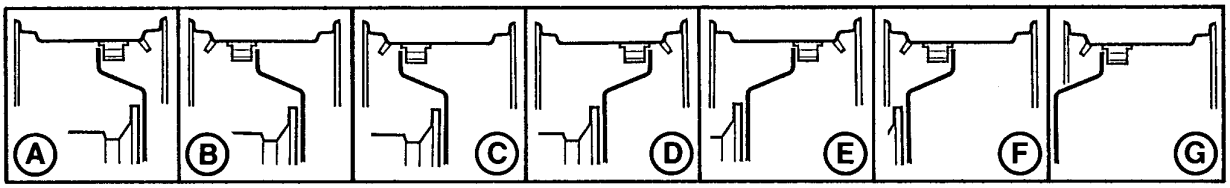
Front Axle with 102 mm (4 in.) Extension

A—Jam Nut
B—Slotted Nut
C—Tie-rod (with extension)

7. Repeat on opposite side.

SK35149,0000537-19-01JUN12-1/1

Tread Settings—MFWD Axle



LX012555

LX012555—UN—27JUN96

Front wheel tread can be adjusted by repositioning or by reversing wheel rims. In addition, the complete wheel can be reversed by installing it on the opposite side of the tractor. When using this option, make sure the arrow on the tire sidewall is pointing in the direction of forward travel.

TREAD WIDTH							
Rims and Wheel Disk Positions							
Tire Size	A	B	C	D	E	F	G
340/85 R24	N/A	1520 mm (59.8 in.)	1630 mm (64.2 in.)	1744 mm (68.7 in.)	1854 mm (73.0 in.)	1923 mm (75.7 in.)	2033 mm (80.0 in.)
380/85 R24	N/A	1515 mm (59.6 in.)	1629 mm (64.1 in.)	1722 mm (67.8 in.)	1854 mm (73.0 in.)	1936 mm (76.2 in.)	2036 mm (80.2 in.)
12.4-24	1539 mm (60.6 in.)	1635 mm (64.4 in.)	1738 mm (68.4 in.)	1624 mm (63.9 in.)	1736 mm (68.3 in.)	1834 mm (72.2 in.)	1940 mm (76.4 in.)
13.6-24	N/A	1523 mm (60.0 in.)	1634 mm (64.3 in.)	1752 mm (69.0 in.)	1854 mm (73.0 in.)	1924 mm (75.7 in.)	2033 mm (80.0 in.)
14.9-24	N/A	1527 mm (60.1 in.)	1638 mm (64.5 in.)	1740 mm (68.5 in.)	1853 mm (73.0 in.)	1928 mm (75.9 in.)	2039 mm (80.3 in.)

PX07220,000165A-19-25JUN12-1/1

Tread Settings—Multi-Position Rear Wheels (Steel Disks)

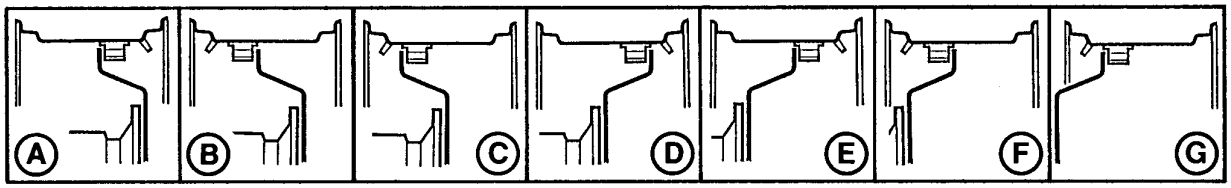
Wheel tread on rear axle with multi-position wheels can be adjusted by repositioning or exchanging the rims or by reversing the wheel disks.

Wheel tread can also be adjusted by exchanging the complete wheel to the opposite side of the tractor. (This maneuver permits the change from disk dished-in to disk dished-out operations without disassembling the wheel.) When changing rear wheels from one side to the other, the arrow on side wall of tire should point in the direction of forward rotation.

The relationship of the wheel disk and rim in obtaining the different tread settings is shown in the following diagrams.

A study of these diagrams before attempting to change tread settings will save unnecessary labor.

PX07220,000165B-19-25JUN12-1/2



LX012555

LX012555—UN—27JUN96

IMPORTANT: After setting wheel spacing, tighten rim-to-disk and disk-to-flange bolts. Drive tractor 100 m (109 yd) and tighten again.

Specification

Multi-Position Rear Wheels Rim-to-Disk Bolts (Steel Disk)—Torque. . . . . 245 N·m (180 lb-ft)

Multi-Position Rear Wheels Disk-to-Flange Bolts (Steel Disk)—Torque. . . . . 175 N·m (130 lb-ft)

	TREAD WIDTH Centerline-to-Centerline						
Tire Sizes	**A**	**B**	**C**	**D**	**E**	**F**	**G**
460/85 R34	N/A	1508 mm (59.4 in.)	1616 mm (63.6 in.)	1717 mm (67.6 in.)	1815 mm (71.5 in.)	1910 mm (75.2 in.)	2005 mm (78.9 in.)
460/85 R38	N/A	1522 mm (59.9 in.)	1615 mm (63.6 in.)	1717 mm (67.6 in.)	1821 mm (71.7 in.)	1907 mm (75.1 in.)	2006 mm (79.0 in.)
12.4-42	N/A	1503 mm (59.2 in.)	N/A	1832 mm (72.1 in.)	N/A	N/A	N/A
16.9-38	N/A	1512 mm (59.5 in.)	1612 mm (63.5 in.)	1715 mm (67.5 in.)	1820 mm (71.7 in.)	1922 mm (75.7 in.)	2018 mm (79.4 in.)
18.4-38	N/A	1512 mm (59.5 in.)	1621 mm (63.8 in.)	1714 mm (67.5 in.)	1813 mm (71.4 in.)	1912 mm (75.3 in.)	2012 mm (79.2 in.)

PX07220,000165B-19-25JUN12-2/2

Checking Toe-In—MFWD Axle

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 tire tread midpoint 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 tire midpoints. 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”.
6. Distance between midpoints at **front** of tires should 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.)

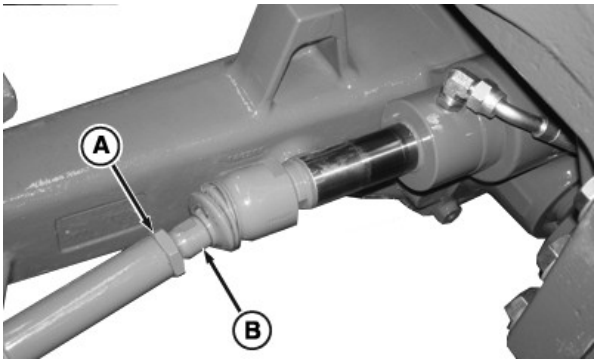
SK35149,0000538-19-01JUN12-1/1

Adjusting Toe-In—MFWD Axle

1. Loosen jam nut (A) on right and left-hand side tie rod.
2. Adjust each side by rotating inner rod (B) to lengthen or shorten tie rod as needed, to obtain toe-in of no more than 3 mm (1/8 in.).
3. Tighten jam nuts after adjustment.

Specification	
Tie Rod Jam Nut—Torque	328 to 363 N·m (242 to 267 lb-ft)

A—Jam Nut **B—Inner Rod**



Left-Hand Side Shown

SK35149,0000539-19-01JUN12-1/1

Steering Stop Adjustment (MFWD Axle)

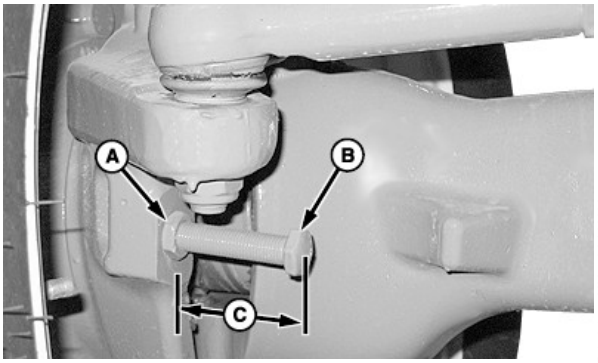
IMPORTANT: Check for interference with front weights, tie rods, side frames and/or grille screen during full turn and full oscillation. A minimized turn radius may be obtained by utilizing a shorter stop position.

NOTE: Make sure dimension (C) is set to same value on right-and left-hand wheels.

Front wheel steering angle must be kept within certain limits according to tire size and tread width. Refer to one of the following tables to set adjustment dimension (C) by loosening lock nut (A) and turning adjusting screw (B). Tightening lock nut to specification.

Specification

Lock Nut—Torque. . . . . 200 N·m (150 lb-ft)



P15215—UN—28JAN08

Left-Hand Side Shown

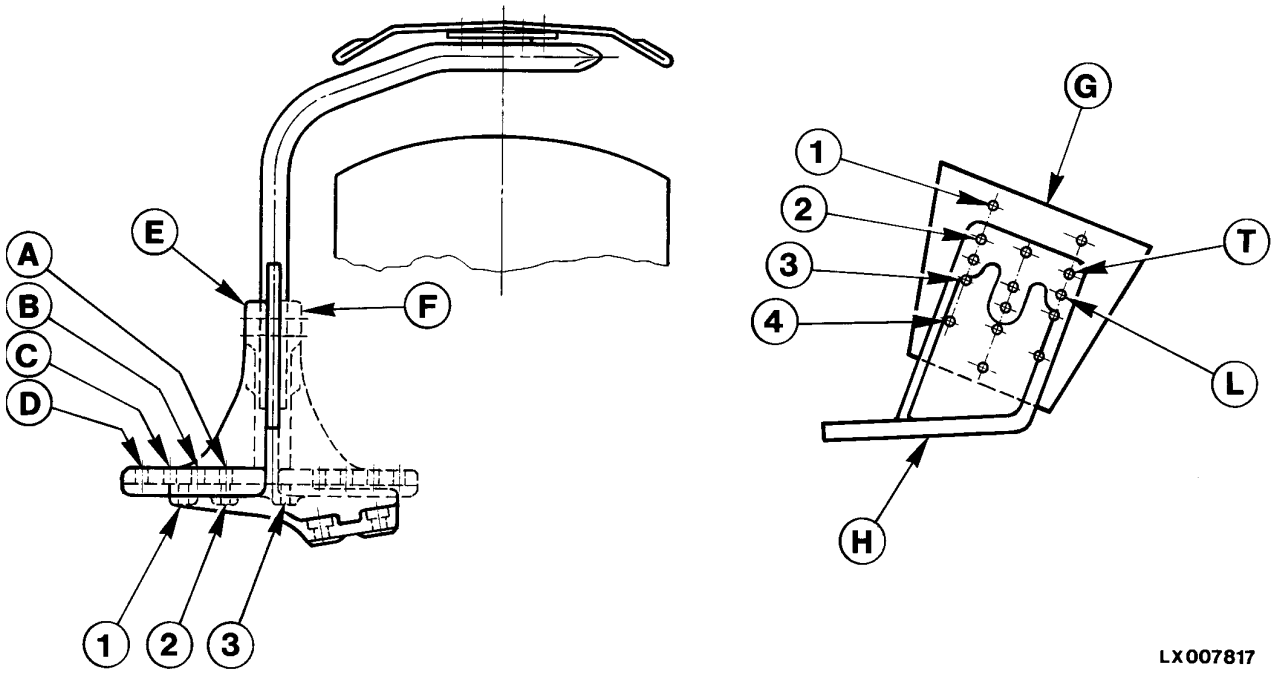
A—Lock Nut
B—Adjusting Screw
C—Dimension

Without Fenders							
	Rim and Wheel Disk Positions (See TREAD SETTING—MFWD AXLE in this section.)						
	A	B	C	D	E	F	G
Tire Size	Dimension (C)	Dimension (C)	Dimension (C)	Dimension (C)	Dimension (C)	Dimension (C)	Dimension (C)
340/85 R24	N/A	55 mm (2.2 in.)	31 mm (1.2 in.)	22 mm (0.9 in.)	22 mm (0.9 in.)	23 mm (0.9 in.)	23 mm (0.9 in.)
380/85 R24	N/A	76 mm (3.0 in.)	39 mm (1.5 in.)	41 mm (1.6 in.)	24 mm (0.9 in.)	24 mm (0.9 in.)	24 mm (0.9 in.)
12.4-24	27 mm (1.1 in.)	23 mm (0.9 in.)	23 mm (0.9 in.)	23 mm (0.9 in.)	23 mm (0.9 in.)	23 mm (0.9 in.)	23 mm (0.9 in.)
13.6-24	N/A	59 mm (2.3 in.)	29 mm (1.1 in.)	22 mm (0.9 in.)	22 mm (0.9 in.)	22 mm (0.9 in.)	22 mm (0.9 in.)
14.9-24	N/A	55 mm (2.2 in.)	30 mm (1.2 in.)	22 mm (0.9 in.)	22 mm (0.9 in.)	22 mm (0.9 in.)	22 mm (0.9 in.)

With Fenders							
	Rim and Wheel Disk Positions (See TREAD SETTING—MFWD AXLE in this section.)						
	A	B	C	D	E	F	G
Tire Size	Dimension (C)	Dimension (C)	Dimension (C)	Dimension (C)	Dimension (C)	Dimension (C)	Dimension (C)
340/85 R24	N/A	81 mm (3.2 in.)	64 mm (2.5 in.)	57 mm (2.2 in.)	56 mm (2.2 in.)	56 mm (2.2 in.)	54 mm (2.1 in.)
380/85 R24	N/A	85 mm (3.3 in.)	76 mm (3.0 in.)	53 mm (2.1 in.)	53 mm (2.1 in.)	53 mm (2.1 in.)	53 mm (2.1 in.)
12.4-24	76 mm (3.0 in.)	61 mm (2.4 in.)	59 mm (2.3 in.)	58 mm (2.3 in.)	59 mm (2.3 in.)	58 mm (2.3 in.)	61 mm (2.4 in.)
13.6-24	N/A	82 mm (3.2 in.)	67 mm (2.6 in.)	59 mm (2.3 in.)	60 mm (2.4 in.)	60 mm (2.4 in.)	64 mm (2.5 in.)
14.9-24	N/A	88 mm (3.5 in.)	80 mm (3.1 in.)	65 mm (2.6 in.)	65 mm (2.6 in.)	65 mm (2.6 in.)	65 mm (2.6 in.)

PX07220,000165C-19-25JUN12-1/1

Front Fender Adjustment (MFWD Axle)



LX007817—UN—16AUG94

Fenders must be installed in correct position depending on tire size and tread width. Fender width is 400 mm (15.7 in.). The following table indicates correct position for a given tire size, wheel and rim disk position.

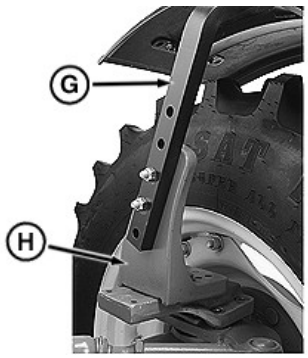
Explanation of Table Positions

D-2—Indicates which holes (1, 2, or 3 and A, B, C or D) are bolted together.

NOTE: Every time bracket position is reversed, left-hand side bracket must be installed on right-hand side of tractor and vice versa.

L/2—Shows whether upper (T) or lower (L) bracket holes must be used, together with corresponding holes (1, 2, 3 or 4) in fender.

NOTE: Upper holes (T) in bracket are not used in this particular machine and tire sizes.



P153337—UN—28MAR08

E—Bracket Facing Out
F—Bracket Facing In
G—Fender
H—Bracket

Fender Position and Height—indicates correct fender position and height on axle, for example : D-2 , L3.

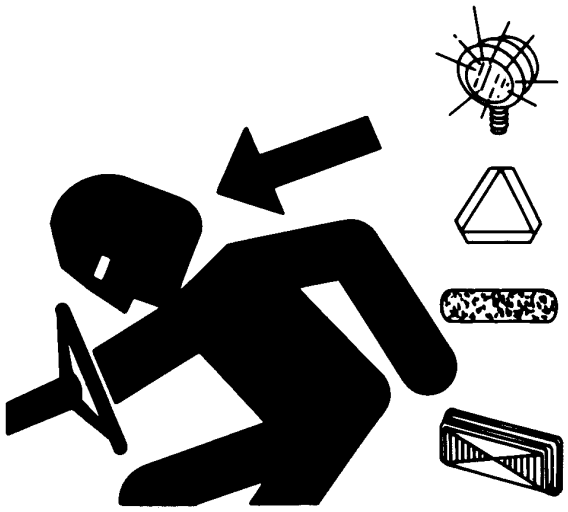
	Position of Adjustable Rims and Wheel Disks						
Tire Size	**A**	**B**	**C**	**D**	**E**	**F**	**G**
340/85 R24	N/A	D-3	B-3	A-3	A-3	A-3	A-3
380/85 R24	N/A	B-2	B-3	A-3	A-3	A-3	A-3
12.4-24	C-3	A-3	A-3	A-3	A-3	A-3	A-3
13.6-24	N/A	D-3	B-3	A-3	A-3	A-3	A-3
14.9-24	N/A	B-2	C-3	A-3	A-3	A-3	A-3

PX07220,000165D-19-25JUN12-1/1

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

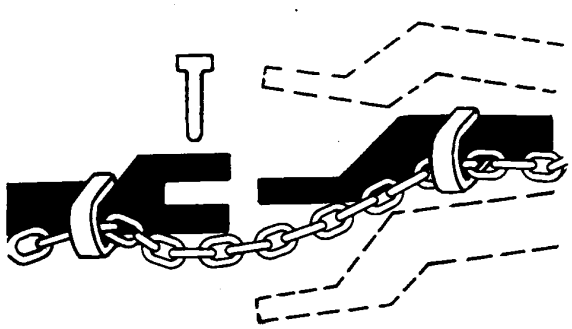
DX,FLASH-19-07JUL99-1/1

Use a Safety Chain

A safety chain will help control drawn equipment should it accidentally separate from the drawbar.

Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning.

See your John Deere dealer for a chain with a strength rating equal to or greater than the gross weight of the towed machine. Do not use safety chain for towing.



TS217—UN—23AUG88

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

Driving Tractor on Roads

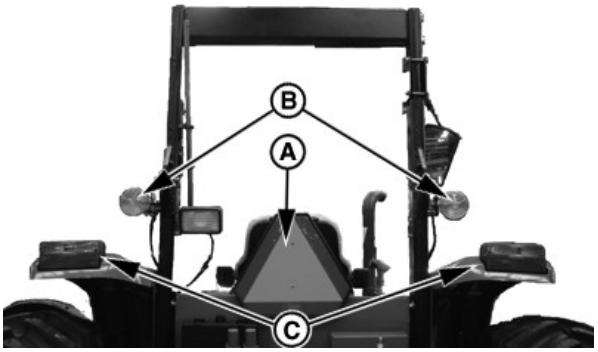
CAUTION: Observe the following precautions when operating on a road.

1. Before operating tractor on highway be sure tail/turn signal lights (C) and flashing warning/turn signal lights (B) work properly. Install Slow Moving Vehicle (SMV) emblem (A), reflectors and auxiliary lighting equipment as required by local safety regulations. Clean SMV emblem for best visibility.

CAUTION: Never operate work lights (if equipped) when transporting tractor. Clear bright light(s) at the rear of the tractor could confuse drivers of other vehicles as they approach from behind. Use only road lights for transporting.

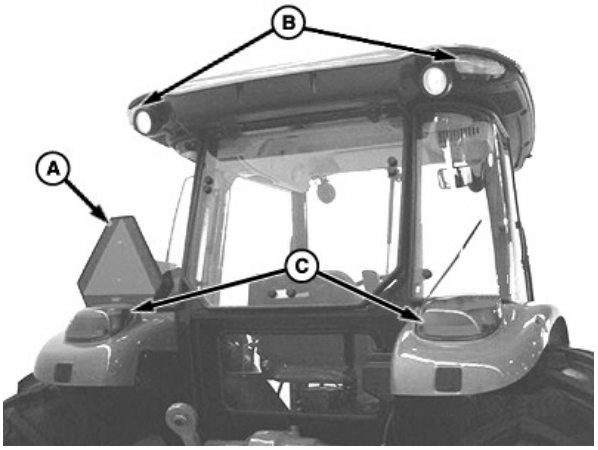
IMPORTANT: Refer to Lights section for detailed description of lighting operations and functions.

A—SMV Emblem
B—Warning/Turn Signal Lights
C—Tail/Turn Signal Lights



PY15251—UN—30MAY12

OOS



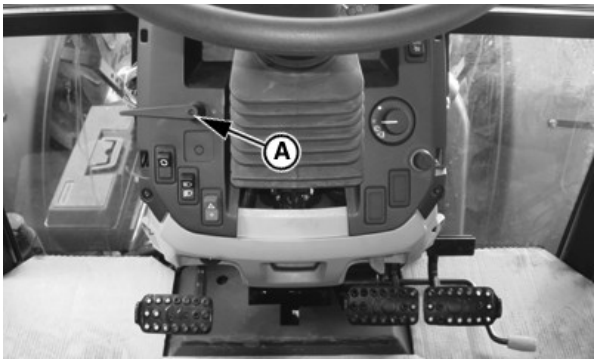
P14874—UN—20NOV07

Cab

BS13987,000013B-19-17AUG12-1/5

2. Use turn signals when turning. Be sure to return turn signal lever (A) to center position after turning.

A—Turn Signal Lever



PY15252—UN—30MAY12

Cab Shown

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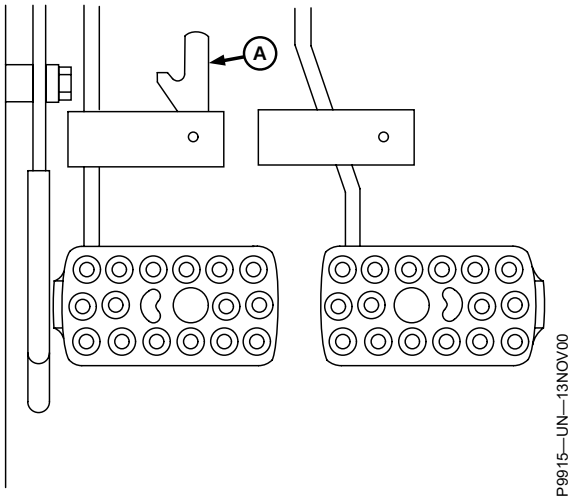
BS13987,000013B-19-17AUG12-2/5

3. Before driving on a road, couple brake pedals together using locking bar (A). Avoid hard applications of brakes.
4. Drive slowly enough to maintain safe control at all times. Slow down for hillsides, rough ground, and sharp turns, especially when transporting heavy, rear-mounted equipment.
5. Before going down a hill, shift to a gear low enough to control speed without using brakes. Never coast down hill with clutch disengaged. This can overspeed clutch disc and cause severe clutch damage.
6. When transporting 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.

A—Locking Bar

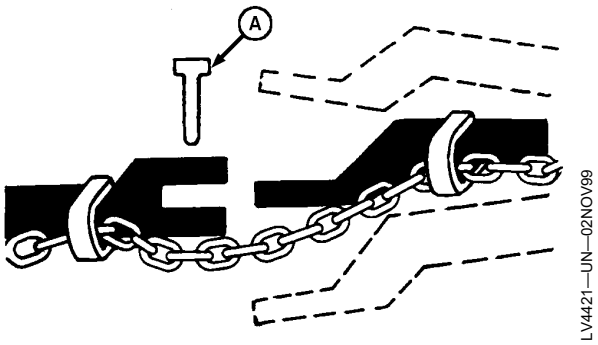


BS13987,000013B-19-17AUG12-3/5

CAUTION: A safety chain will help drawn equipment should it accidentally separate from the drawbar. Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning. See your John Deere dealer for a chain with a strength rating equal to or greater than the gross weight of the towed machine. Do not use safety chain for towing.

IMPORTANT: Safety chain is provided for transport only. It must not be used for pulling or towing implements or other items not attached to drawbar, or damage to your tractor may result.

7. **Transporting towed loads**: Lock drawbar pin (A) in place and use safety chain to help control drawn equipment should it accidentally separate from drawbar while transporting.



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BS13987,000013B-19-17AUG12-4/5

CAUTION: 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.

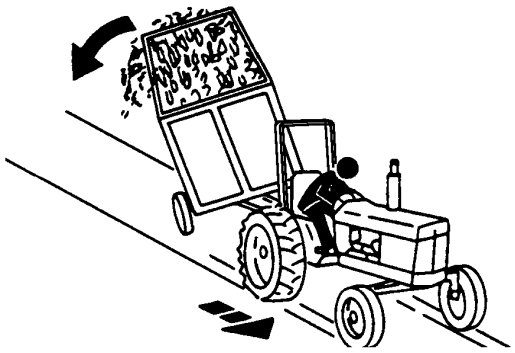
Observe these recommended maximum road speeds, or local speed limits which may be lower:

If towed equipment does not have brakes, do not go faster than 32 km/h (20 mph) and do not tow loads more than 1.5 times the tractor weight.

If towed equipment has brakes, do not go faster than 40 km/h (25 mph) and do not tow loads more than 4.5 times the tractor weight.

Make sure the load does not exceed the recommended weight ratio. Add ballast to recommended maximum for tractor, lighten the load, or get a heavier towing unit. The tractor must be heavy and powerful enough with adequate braking power for the towed load. Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

8. Use caution when operating tractor at transport speeds. Reduce speed if towed load weighs more than tractor and is not equipped with brakes. (See towed equipment operator's manual for recommended transport speeds.)



LV4042—UN—09JUL99

9. Use additional caution when transporting towed loads under adverse surface conditions, when turning and on inclines.
10. Heavy towed or rear mounted implements may start swaying in transport. Excessive swaying will result in loss of steering control. Drive slowly and avoid quick turns of steering wheel. Refer to your implement operator's manual regarding maximum travel speed limitations.

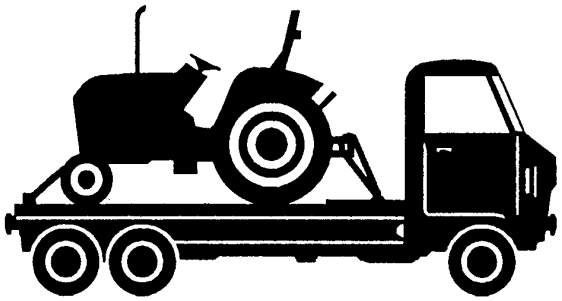
BS13987,000013B-19-17AUG12-5/5

Transporting on Carrier

CAUTION: Avoid personal injury from unexpected machine movement. Chain tractor to carrier securely. DO NOT chain around mechanical front wheel-drive (MFWD) shaft or axle housing. Drive carrier slowly.

A disabled tractor is best transported on a flatbed carrier. Use chains to secure the tractor to the carrier.

IMPORTANT: Seal exhaust to prevent dirt from entering and damaging engine and/or turbocharger.



LV610—UN—22APR94

OUO1023,00028BE-19-13APR06-1/1

Towing Tractor

CAUTION: Never tow tractor faster than 16 km/h (10 mph). Have an operator steer and brake tractor.

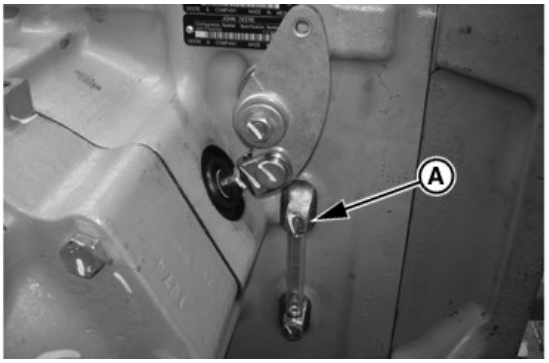
IMPORTANT: To avoid damaging transmission/hydraulic system, observe the following precautions prior to towing tractor:

1. Be sure transmission/hydraulic system oil is up to the full level line on sight glass (A). If the tractor is to be towed with the front wheels raised, add 1 liter (1 qt) of oil to hydraulic fill port (B) for each 90 mm (3-1/2 in.) the wheels are raised. Do not raise front wheels more than 305 mm (12 in.) above ground.

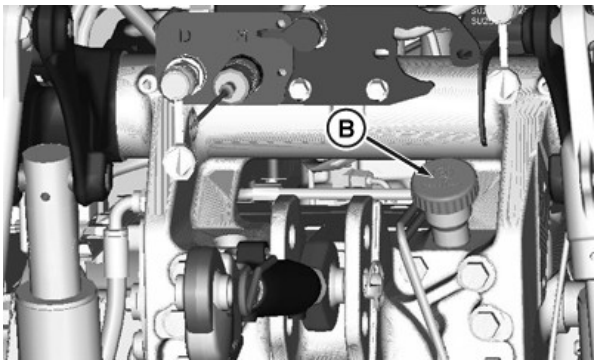
NOTE: After transporting tractor, drain oil that was added for towing.

2. Make sure differential lock is disengaged and gear shift lever is in neutral position, “N”.
3. Range selector lever must be placed in tow lock position (C), located between B and C range marks. Loosen lock knob (D) to bring locking plate out into range slot. Move range lever into lock position, then tighten lock knob down. Range gearbox is now locked in neutral so no power can be transmitted to rear wheels.

A—Oil Level Sight Glass
B—Hydraulic Oil Fill Port
C—Tow Lock Position
D—Tow Lock Knob



PY15254—UN—30MAY12



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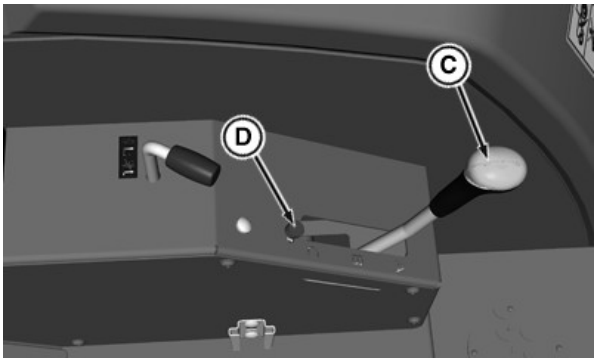


PY15253—UN—16AUG12

SP21231,0000298-19-22JUN12-1/1

Handle Fuel Safely—Avoid Fires

Use only diesel fuel.

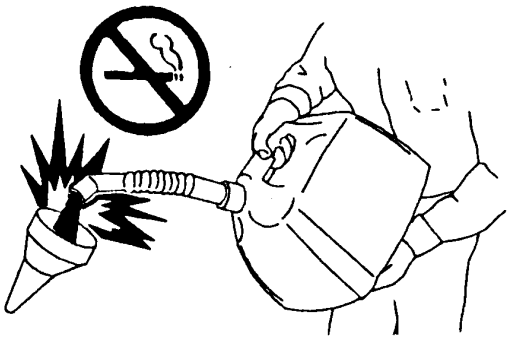
Handle fuel with care, it is highly flammable.

Do not refuel machine:
- While you smoke.
- When machine is near open flame or sparks.
- When engine is running. Stop engine.

Fill fuel tank outdoors.

Help prevent fires:
- Clean oil, grease and dirt from machine.
- Clean up spilled fuel immediately.

Do not store machine with fuel in tank in a building where fumes may reach an open flame or spark.



M73115—UN—09MAR90

MX,FIRE,5A1-19-22JUL94-1/1

Handle Fluids Safely—Avoid Fires

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

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

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

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

TS227—UN—15APR13

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

Cold Weather Operation

IMPORTANT: Viscosity grade selection is critical for cold weather operation of the transmission. Preheat procedures are required when operating transmission at temperatures lower than the oil's MINIMUM critical temperature.

NOTE: See TRANSMISSION AND HYDRAULIC OIL, in this section, for MINIMUM viscosity grade for a given transmission operating temperature.

Warm-Up Procedures

If preheating transmission with Auxiliary Source, preheat transmission oil to MINIMUM temperature before operating.

As an Alternate Procedure, operate tractor with transmission in neutral for approximately 20 minutes, or until oil has warmed to MINIMUM temperature as recommended above.

MX,FLIP,B-19-18MAR92-1/1

Hot Weather Operation

NOTE: See TRANSMISSION AND HYDRAULIC OIL, in this section, for correct viscosity grade for a given transmission operating temperature.

Use higher than normal viscosity grade under following conditions:

- Ambient temperatures consistently above 30° C (86° F).
- Frequent stop-and-go driving in hot weather.
- Repeated climbing of high grades in hot weather.

OUO6070,00000DF-19-15FEB01-1/1

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, ASTM D975, or EN 15940 is acceptable for use at all percentage mixture levels.

Required Fuel Properties

In all cases, the fuel shall meet the following properties:

Cetane number of 40 minimum. Cetane number greater than 47 is preferred, especially for temperatures below –20 °C (–4 °F) or elevations above 1675 m (5500 ft.).

Cloud Point should be below the expected lowest ambient temperature or **Cold Filter Plugging Point** (CFPP) should be a maximum 10°C (18°F) below the fuel cloud point.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

Diesel fuel quality and sulfur content must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

Materials such as copper, lead, zinc, tin, brass and bronze should be avoided in fuel handling, distribution and storage equipment as these metals can catalyze fuel oxidation reactions which can lead to fuel system deposits and plugged fuel filters.

E-Diesel fuel

DO NOT use E-Diesel (Diesel fuel and ethanol blend). Use of E-Diesel fuel in any John Deere machine may void the machine warranty.

CAUTION: Avoid severe injury or death due to the fire and explosion risk from using E-Diesel fuel.

[1] See DX,ENOIL12,OEM, DX,ENOIL12,T2,STD, or DX,ENOIL12,T2,EXT for more information on Engine Oil and Filter Service Intervals.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV, and Stage V Engines Above 560 kW

- Use ONLY diesel fuel with a maximum of 500 mg/kg (500 ppm) sulfur content.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV Engines, and Stage V Engines

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

Sulfur Content for Tier 3 and Stage III A Engines

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—2000 mg/kg (1000—2000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer.

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 2000—5000 mg/kg (2000—5000 ppm) REDUCES the oil and filter change interval.[1]
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur Content for Other Engines

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change interval.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1-19-01NOV22-1/1

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 practical to minimize condensation.

Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering. Monitor water content of the fuel regularly.

When using biodiesel fuel, the fuel filter may require more frequent replacement due to premature plugging.

Check engine oil level daily prior to starting engine. A rising oil level may indicate fuel dilution of the engine oil.

IMPORTANT: The fuel tank is vented through the filler cap. If a new filler cap is required, always replace it with an original vented cap.

When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel. Keeping the free water drained and treating the bulk fuel storage tank quarterly with a maintenance dose of a biocide will prevent microbial growth. Contact your fuel supplier or John Deere dealer for recommendations.

DX,FUEL4-19-13JAN18-1/1

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 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

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,FUEL5-19-07FEB14-1/1

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 calculated cetane index, fuel type, sulfur content, water content, appearance, suitability for cold weather operations, bacteria, cloud point, acid number, particulate contamination, and whether the fuel meets ASTM D975 or equivalent specification.

Contact your John Deere dealer for more information on diesel fuel analysis.

DX,FUEL6-19-13JAN18-1/1

Biodiesel Fuel

Biodiesel is a fuel comprised of monoalkyl 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 / regulations may encourage or prohibit the use of biofuels. Operators should consult with appropriate governmental authorities prior to using biofuels.

US / Canada

While 5% blends are preferred (B5), biodiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used in all John Deere engines. Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751 (US), EN 14214 (EU), or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

Biodiesel concentrations above B20 may harm the engine's emission control systems and should not be used in the US and Canada. Risks may include, but not be limited to, more frequent stationary regeneration, soot accumulation, and increased intervals for ash removal.

Biodiesel users in the U.S. are strongly encouraged to purchase biodiesel blends from a BQ9000 Certified Marketer and sourced from a BQ9000 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.

Other regions

John Deere engines can operate on biodiesel blends below and above B20 (up to 100% biodiesel). Operate at levels above B20 ONLY if the biodiesel meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 may not fully comply with 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 containing detergent/dispersant additives are required.

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 standard.

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.

John Deere approved fuel conditioners containing detergent/dispersant additives are required when using B20 blends and recommended when using lower biodiesel blends. Biodiesel blends up to B20 must be used within 90 days of the date of biodiesel manufacture. 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, oxidation, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to biodiesel on used engines.)

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 when using biodiesel blends above B20:

- Possible coking and/or blocked injector nozzles, resulting in power loss and engine misfire if John Deere approved fuel conditioners containing detergent/ dispersant additives are not used
- Possible crankcase oil dilution, requiring more frequent oil changes
- Possible lacquering and/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

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.

SV86979,000003D-19-19JUN12-1/1

Fill Fuel Tank

CAUTION: 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.

Fuel tank is filled through fill cap (A). Fill fuel tank at end of each day's operation. This prevents condensation in tank as moist air cools.

Specification

Fuel Tank—Capacity. . . . . 158 L (41.7 gal)

NOTE: To reduce fuel gelling and control wax separation during cold weather, John Deere Fuel Flow Improver, or equivalent, may be added to fuel or bulk storage tank.

A—Fuel Tank Filler Cap

TS202—UN—23AUG88

P15486—UN—15APR08

OUMX005,000290B-19-15APR08-1/1

John Deere Break-In Plus™ Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V

New engines are filled at the factory with John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In Plus™ Engine Oil, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

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.

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 CK-4
- 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,ENOIL16-19-13JAN18-1/1

Diesel Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ II is the recommended engine oil.

Extended service intervals may apply when John Deere Plus-50™ II engine oil is used. Refer to the engine oil drain interval table and consult your John Deere dealer for more information.

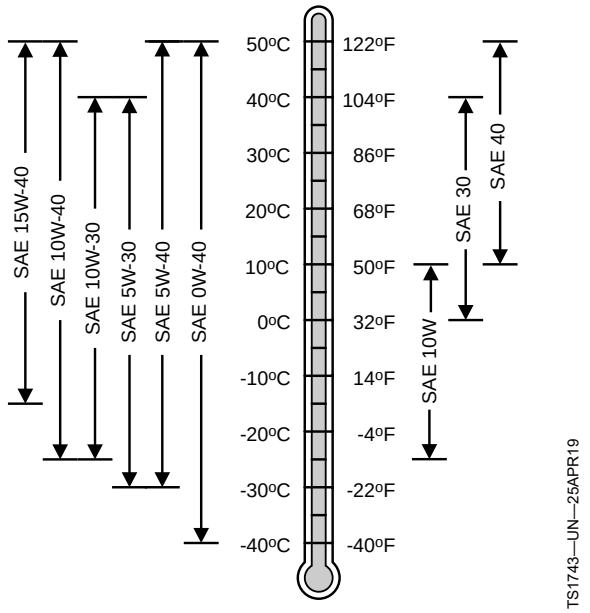
If John Deere Plus-50™ II engine oil is not available, engine oil meeting one or more of the following may be used:

- API Service Category CK-4
- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

DO NOT use engine oil containing more than 1.0% sulfated ash, 0.12% phosphorus, or 0.4% sulfur.

Multi-viscosity diesel engine oils are preferred.

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.



Oil Viscosities for Air Temperature Ranges

IMPORTANT: Use only ultra low sulfur diesel (ULSD) fuel with a maximum sulfur content of 15 mg/kg (15 ppm).

Plus-50 is a trademark of Deere & Company

DX,ENOIL14-19-23APR19-1/1

Extended Diesel Engine Oil Service Intervals — Non-Emissions Certified and Certified Tier 1 and Stage I

When John Deere Plus-50™ II or John Deere Plus-50™ 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 maximum of 500 hours.

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 or other qualified service provider 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.

When ACEA E9, 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. Oil analysis means taking a series of oil samples at 50 hour increments beyond the normal service interval until either the data indicates the end of useful oil life or the maximum service interval is reached.

If John Deere Plus-50™ II or John Deere Plus-50™, ACEA E9, 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™, API CK-4, 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.

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**

Plus-50 is a trademark of Deere & Company
Torq-Gard is a trademark of Deere & Company

DX,ENOIL6-19-13JAN18-1/1

Oil Filters

Filtration of oils is critical to proper operation and lubrication.

Always change filters regularly as specified in this manual.

Use filters meeting John Deere performance specifications.

DX,FILT-19-18MAR96-1/1

Diesel Engine Coolant (engine with wet sleeve cylinder liners)

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere coolants, parts, or service.

Preferred Coolants

The following pre-mix engine coolants are preferred:

- **John Deere COOL-GARD™II**
- **John Deere COOL-GARD II PG**

COOL-GARD II pre-mix coolant is available in several concentrations with different freeze protection limits as shown in the following table.

COOL-GARD II Pre-Mix	Freeze Protection Limit
COOL-GARD II 20/80	-9°C (16°F)
COOL-GARD II 30/70	-16°C (3°F)
COOL-GARD II 50/50	-37°C (-34°F)
COOL-GARD II 55/45	-45°C (-49°F)
COOL-GARD II PG 60/40	-49°C (-56°F)
COOL-GARD II 60/40	-52°C (-62°F)

Not all COOL-GARD II pre-mix products are available in all countries.

Use COOL-GARD II PG when a non-toxic coolant formulation is required.

Additional Recommended Coolants

The following engine coolant is also recommended:

- John Deere COOL-GARD II Concentrate in a 40—60% mixture of concentrate with quality water.

IMPORTANT: When mixing coolant concentrate with water, do not use less than 40% or greater than 60% concentration of coolant. Less than 40% gives inadequate additives for corrosion protection. Greater than 60% can result in coolant gelation and cooling system problems.

Other Coolants

Other ethylene glycol or propylene glycol base coolants may be used if they meet the following specification:

- Pre-mix coolant meeting ASTM D6210 requirements
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

If coolant meeting one of these specifications is unavailable, use a coolant concentrate or pre-mix coolant that has a minimum of the following chemical and physical properties:

- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Is formulated with a nitrite-free additive package
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

Water Quality

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

When COOL-GARD II or COOL-GARD II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than COOL-GARD II or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.[1]

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

Do not use coolants that contain nitrites.

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[1] Coolant analysis may extend the service interval of other "Coolants" to a maximum not to exceed the interval of Cool-Gard II coolants. Coolant analysis means taking a series of coolant samples at 1000 hour increments beyond the normal service interval until either the data indicate the end of useful coolant life or the maximum service interval of Cool-Gard II is reached.

DX,COOL3-19-25AUG20-1/1

Operating in Warm Temperature Climates

John Deere engines are designed to operate using recommended engine coolants.

Always use a recommended engine coolant, even when operating in geographical areas where freeze protection is not required.

IMPORTANT: Water may be used as coolant *in emergency situations only.*

Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation occur when water is used as the coolant, even when coolant conditioners are added.

Drain cooling system and refill with recommended engine coolant as soon as possible.

DX,COOL6-19-17FEB20-1/1

Liquid Coolant Conditioner

John Deere Liquid Coolant Conditioner is recommended for wet-sleeve diesel engines not having a coolant filter option. See your John Deere dealer. Other conditioners may be used if they contain non-chromate inhibitors.

CAUTION: Coolant conditioner contains alkali. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Do not take internally. In case of contact, immediately wash skin with soap and water. For eyes, flush with large amounts of water for at least 15 minutes. Call physician. Keep out of reach of children.

Do not remove reservoir cap or drain coolant until coolant is cold. Always loosen reservoir cap slowly to relieve any excess pressure.

IMPORTANT: Do not use liquid conditioner if engine is equipped with a John Deere Coolant Filter Conditioner, since the correct inhibitors are already contained inside the filter. If both are used, a gel-type deposit is created which could inhibit heat transfer and block coolant flow. John Deere Liquid Coolant Conditioner does not protect against freezing.

Add 30 ml of John Deere Liquid Coolant Conditioner for every liter of coolant added (1 fluid ounce per quart). When servicing cooling system at 2000 hours, only 1/2 of the original charge is required.

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Coolant Conditioner Required		
Coolant Capacity	**With Fresh Coolant**	**At 2000 Hour Service**
13.5 L (14.3 qt)	405 ml (14.4 oz)	203 ml (7.2 oz)

NS43404,00004D0-19-30JUN10-1/1

Additional Information About Diesel Engine Coolants and John Deere LIQUID COOLANT CONDITIONER

Engine coolants are a combination of three chemical components: ethylene glycol or propylene glycol antifreeze, inhibiting coolant additives, and quality water.

Coolant Specifications

Some products, including John Deere COOL-GARD™ Premix coolant, are fully formulated coolants that contain all three components in their correct concentrations. Do not add an initial charge of supplemental coolant additives or water to John Deere COOL-GARD Premix.

John Deere COOL-GARD Concentrate contains both ethylene glycol and inhibiting coolant additives. Mix COOL-GARD Concentrate with quality water, but do not add an initial charge of supplemental coolant additives.

Replenish Coolant Additives

Some coolant additives will gradually deplete during engine operation. Periodic replenishment of inhibitors is required, even when John Deere COOL-GARD Premix, COOL-GARD Concentrate, or COOL-GARD PG Premix is used. Follow the recommendations in this manual for the use of supplemental coolant additives.

Why use John Deere LIQUID COOLANT CONDITIONER?

Operating without proper coolant additives will result in increased corrosion, cylinder liner erosion and pitting, and other damage to the engine and cooling system. A simple mixture of ethylene glycol or propylene glycol and water will not give adequate protection.

John Deere LIQUID COOLANT CONDITIONER is an additive system designed to reduce corrosion, erosion, and pitting when used with nitrite-containing diesel engine coolants such as John Deere COOL-GARD Premix, COOL-GARD Concentrate, and COOL-GARD PG Premix. Maintaining John Deere COOL-GARD coolants with John Deere LIQUID COOLANT CONDITIONER provides optimum protection for up to 5 years or 5000 hours of operation.

Avoid Automotive-type Coolants

Never use automotive-type coolants (such as those meeting ASTM D3306). These coolants do not contain the correct additives to protect heavy-duty diesel engines. They often contain a high concentration of silicates and may damage the engine or cooling system. Do not treat an automotive engine coolant with a supplemental coolant additive because the high concentration of additives can result in additive fallout.

Water Quality

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate. All water used in the cooling system should meet the following minimum specifications for quality:

Chlorides	<40 mg/L
Sulfates	<100 mg/L
Total dissolved solids	<340 mg/L
Total hardness	<170 mg/L
pH	5.5 to 9.0

Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

Ethylene Glycol	Freeze Protection Limit
40%	-24°C (-12°F)
50%	-37°C (-34°F)
60%	-52°C (-62°F)
Propylene Glycol	**Freeze Protection Limit**
40%	-21°C (-6°F)
50%	-33°C (-27°F)
60%	-49°C (-56°F)

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

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DX,COOL7-19-03NOV08-1/1

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.

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.

COOL-GARD is a trademark of Deere & Company

DX,COOL9-19-11APR11-1/1

Transmission and Hydraulic Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

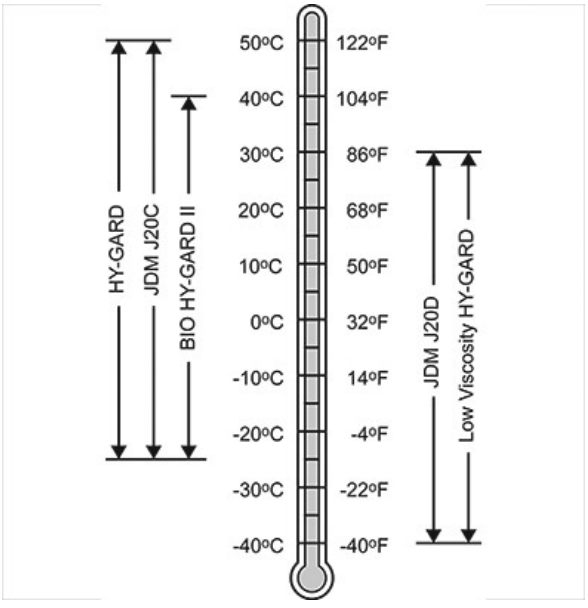
The following oils are preferred:

- John Deere Hy-Gard™
- John Deere Low Viscosity Hy-Gard™

Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Use John Deere Bio Hy-Gard™ II oil when a biodegradable fluid is required.[1]



Oils for Air Temperature Ranges

Hy-Gard 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-T-82 test method. Bio Hy-Gard II should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.*

DX,ANTI-19-01JAN18-1/1

Use Correct Transmission/Hydraulic Filter Element

To protect systems, replace transmission/hydraulic oil filter with a John Deere service filter element.

See Lubrication and Maintenance section for recommended filter change intervals.

SD74272,0000313-19-16AUG12-1/1

MFWD Axle and Wheel Hub Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes. Refer to temperature chart.

The following oils are preferred:

- API Service Classification GL-5
- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

OUMX005,000290C-19-26JAN08-1/1

Multipurpose Extreme Pressure (EP) Grease

IMPORTANT: For automated lubrication systems different ambient air temperatures need to be considered.

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

John Deere SD Polyurea Grease is preferred.

The following greases are also recommended:

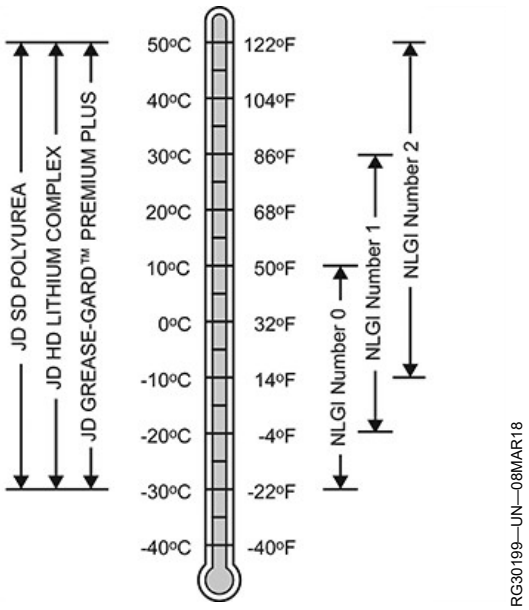
- John Deere HD Lithium Complex Grease
- John Deere Grease-Gard™ Premium Plus

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB
- ISO-L-X-BDHB 2 or DIN KP 2 N-10 Lithium Complex, Non-Synthetic Base Oil (100 to 220 mm2/s @ 40°C)

IMPORTANT: Some types of thickeners, base oils, and additives used in greases are not compatible with others. Mixing greases should be avoided. Consult your grease supplier before mixing different types of grease.

Grease-Gard is a trademark of Deere & Company



Greases for Air Temperature Ranges

DX,GREA1-19-13JAN18-1/1

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

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 John Deere branded fluids or fluids that have been tested and/or approved for use in John Deere equipment.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER-19-13JAN18-1/1

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

Maintenance and Service Intervals

Additional Service Information

This is not a detailed service manual. It contains only information needed for operation and routine maintenance.

If you want more detailed service information, order a Technical Manual through your John Deere dealer.

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Service Tractor Safely

Disengage power to attachments and stop engine before making any repairs or adjustments.

Do not 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 start engine unless gear shift lever or PowrReverser™ lever (if equipped) is in NEUTRAL position.

Be careful to prevent clothing, jewelry or long hair from getting caught in the fan blades, drive belt or any other moving engine parts.

PY15198—UN—04JUN12

Unauthorized modifications to the machine may impair performance and/or safety and affect machine life.

SP21231,00002CD-19-02JUN12-1/1

Service Interval Chart—Daily or 10 Hours / Weekly or 50 Hours / FIRST 100 Hours / 250 Hours

Item	Daily or 10 Hours	Weekly or 50 Hours	FIRST 100 Hours	250 Hours
Check engine oil level	•			
Check coolant level	•			
Drain water from fuel filters	•			
Clean air filter dust unloading valve.	•			
Check transmission-hydraulic system oil level	•			
Lubricate steering linkage [a]	•			
Lubricate front axle pivot pins [a]	•			
Clean and check battery		•		
Inspect all tires		•		
Lubricate front axle pivot pins		•		
Lubricate steering linkage		•		
Lubricate rear axle bearings [a]		•		
Lubricate MFWD axle shaft		•		
Inspect tractor for loose hardware		•		
Adjust clutch pedal free travel		•		
Replace transmission-hydraulic oil filter			•	
Change engine oil and filter			•	
Change MFWD axle and wheel hub oil			•	
Inspect engine air intake filters				•
Check oil level in MFWD axle and wheel hubs				•
Inspect alternator/fan belt				•
Lubricate 3-point hitch				•
Inspect and clean fuel tank filler cap				•
Drain water from fuel tank				•
Check neutral start system				•
Check and adjust brake pedal free travel				•
Inspect ROPS/Cab mounting hardware				•
Clean cab air filters				•

[a] *Only necessary in extremely wet or muddy conditions*

SD74272,0000314-19-16AUG12-1/1

Service Interval Chart—500 Hours / 1000 Hours / Annually / 1500 hours / 2000 Hours or Two Years / 5000 Hours or Five Years

Item	500 Hours	1000 Hours	Annually	1500 Hours	2000 Hours / Two Years	5000 Hours / Five Years
Change engine oil and filter * [a]	•					
Replace fuel filters	•					
Replace transmission-hydraulic oil filter	•					
Lubricate front wheel bearings (2WD axle)	•					
Tighten all hose clamps	•					
Check cooling system for leaks	•					
Lubricate rear axle bearings	•					
Check engine idle speed	•					
Inspect air intake hose, turbo air cooler pipes and hose clamps	•					
Clean cab air filters	•					
Change transmission-hydraulic oil and filter		•				
Change MFWD axle and wheel hub oil		•				
Clean engine crankcase vent tube (OCV)[b]				•		
Change engine oil and filter			•			
Replace engine air intake filters			•			
Inspect seat belt			•			
Service Exhaust Filter				•		
Drain, flush and refill engine cooling system[c]					•	
Adjust engine valve clearance[d]					•	
Drain, flush and refill engine cooling system[e]						•
Test or replace thermostat						•

[a] When using any lubricant other than JD PLUS 50 II oil and filter, lower this service interval to 250 hours
[b] Minimal service interval will be at least 1500 hours or when the service indicator light comes on or as indicated by the diagnostic gauge. Critical emission related service required before 1500 hours is not necessary to keep the emissions-related warranty valid. For EGR-related filters and coolers, PCV valves, crankcase vent filters, and fuel injector tips (cleaning only), the minimum interval is 1,500 hours.
[c] Can be extended to 5000 hours or 5 years if John Deere COOL-GARD II is used.
[d] See your John Deere dealer for service.
[e] If John Deere COOL-GARD II is used.

SP21231,00002D3-19-18JUN12-1/1

Service—As Required

- Adjust Hand Throttle Friction
- Inspect Engine Air Cleaner Elements[1]
- Inspect Engine Air Intake System[1]
- Clean Front Grille, Side Screens, Radiator, Condenser (cab) and Oil, Fuel or Air Coolers (if equipped)
- Bleed Fuel System[2]
- Clean and Check Battery
- Charge Battery
- Lubricate Operator Seat Slide Rails [3]
- Lubricate Hood Latch[3]
- Replace Bulbs; Floodlights, Headlights, Tail/Turn Lights and Warning Lights
- Adjust Headlights
- Service Exhaust Filter

[1] Service more often if operated in extremely dusty conditions.
[2] See your John Deere dealer for service.
[3] Only necessary after pressure washing.

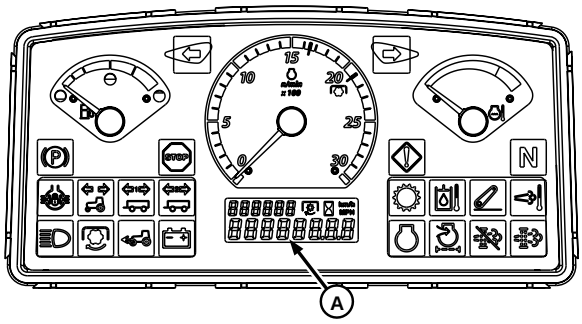
SP21231,00002A2-19-30MAY12-1/1

Observe Service Intervals

Using hour meter (A) as a guide, perform all services at the hourly intervals indicated. Keep a service record on charts provided in the Lubrication and Maintenance Record Charts section.

IMPORTANT: Recommended service intervals are for average conditions. Service more often if tractor is operated under adverse conditions.

A—Hour Meter



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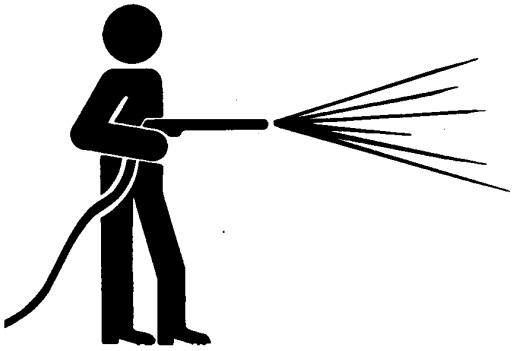
Using High-Pressure Washers

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps, or other sensitive parts and components can cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.



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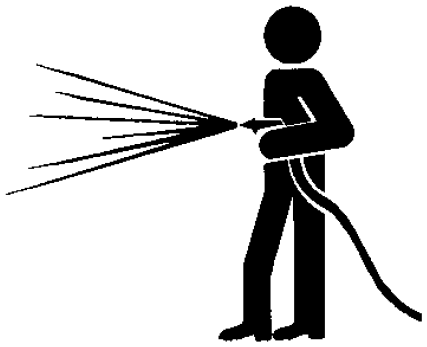
FX,CLEAN-19-06FEB95-1/1

Use Compressed Air

IMPORTANT: Directing pressurized air at electronic/electrical components or connectors, may cause build-up of static electricity and product malfunctions.



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Opening Hood

Pull latch handle (A) and lift hood up.

A—Handle

SP21231,000029B-19-30MAY12-1/1

Inspect Engine Air Intake Filters

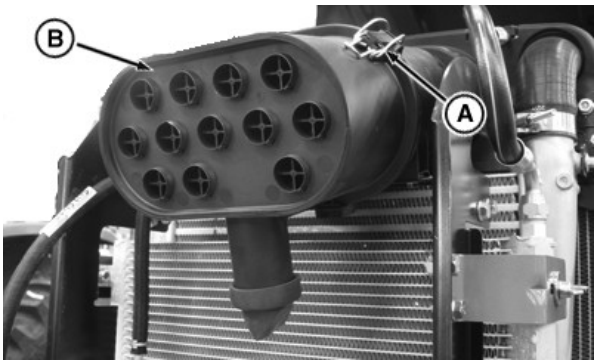
Service Interval—250 Hours

A dual element air cleaner is standard. A dirty primary element is indicated when air restriction indicator on instrument panel illuminates. A dirty element can result in loss of power or excessive smoke.

Clean primary element when indicator on instrument panel illuminates or every 250 hours.

Both elements should be replaced at the same time annually, regardless of condition.

1. Raise hood.
2. Loosen latch (A) and remove cover (B).



A—Latch **B—Cover**

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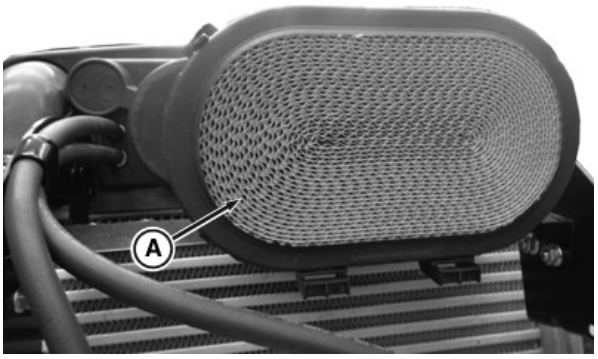
SP21231,000029A-19-16AUG12-1/3

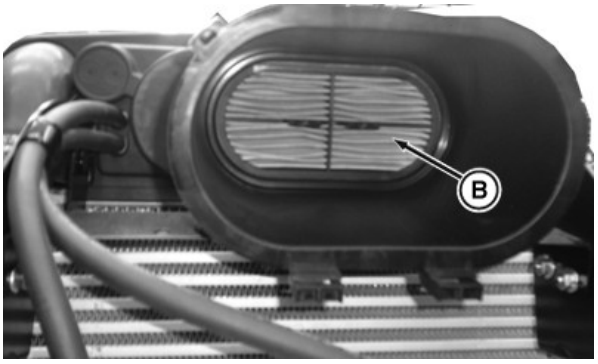
IMPORTANT: Do not use compressed air to clean filter, resulting in filter damage.

3. Pull out primary filter element (A). Do not use excessive force. If filter does not pull out with ease, move side-to-side to remove safely.
4. Clean primary element by tapping on palm of your hand.
5. Check rubber seal around filter element for cracks and holes. Replace if element shows any imperfections.
6. Secondary filter element (B) should only be removed when being replaced. If it looks dirty or damaged do not attempt to clean, replace it.

A—Primary Filter Element **B—Secondary Filter Element**



Primary Element



Secondary Element

SP21231,000029A-19-16AUG12-2/3

7. Reinstall primary element with rubber seal first (arrows on label pointing into filter housing). Push in all the way.

IMPORTANT: If primary filter is not damaged and indicator on instrument panel remains illuminated, replace both filters.

8. Close cover and raise catch.
9. Lower hood.

SP21231,000029A-19-16AUG12-3/3

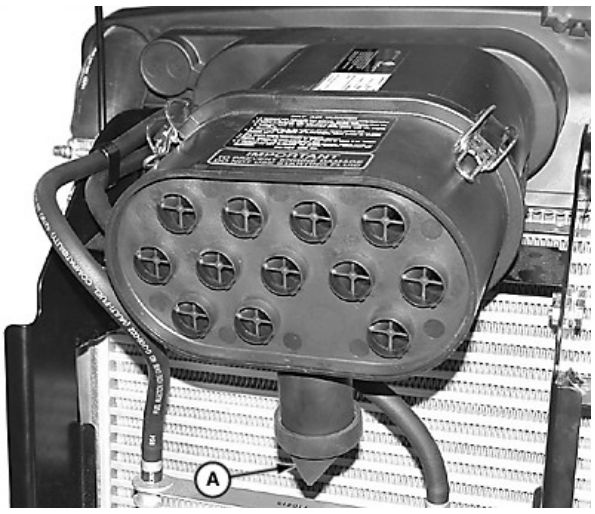
Cleaning Air Filter Dust Unloading Valve

Service Interval—Daily/10 Hours

IMPORTANT: Avoid damage! Prevent damage to the engine. Never operate engine without air cleaner elements and rubber dust unloading valve installed.

1. Park machine safely. (See Park Machine Safely in the Safety section.)
2. Raise hood.
3. Clean out dust unloading valve (A) by squeezing the end to open and remove any excessive buildup of dust and dirt. Replace if damaged.
4. Lower hood.

A—Dust Unloading Valve



LV14647—UN—17AUG11

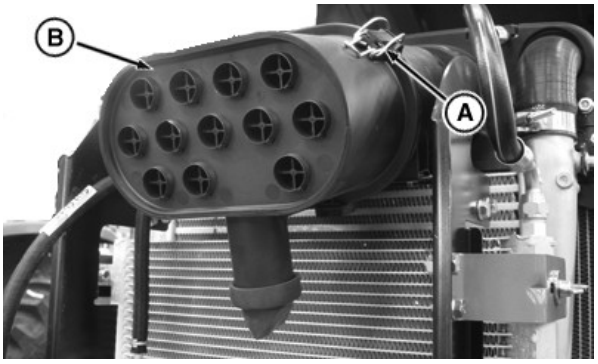
SD74272,0000315-19-16AUG12-1/1

Replace Engine Air Intake Filters

Service Interval—Annually*
** Interval can vary according to operating conditions*

1. Raise hood.
2. Loosen latch (A) and remove cover (B).

A—Latch **B—Cover**



PY15256—UN—16AUG12

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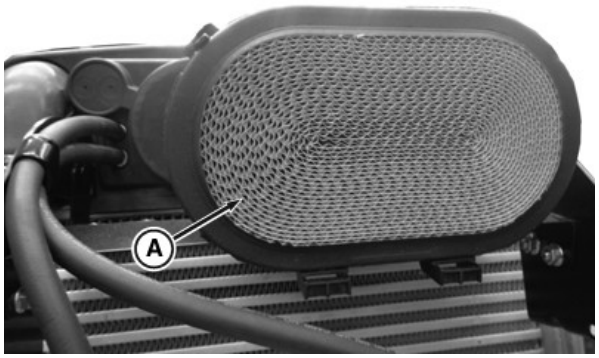
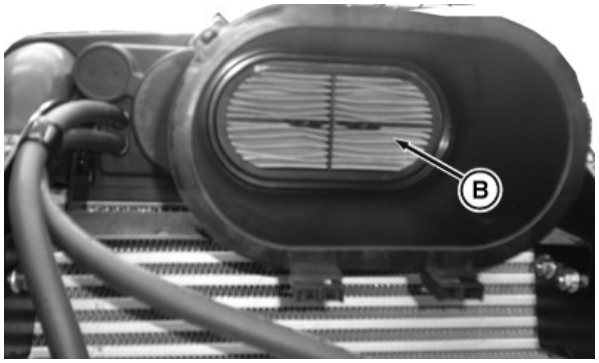
SP21231,000029C-19-16AUG12-1/3

3. Pull out primary filter element (A). Do not use excessive force. If filter does not pull out with ease, move side-to-side to remove safely.
4. Pull out secondary element (B) using handle on filter's frame.
5. Install new secondary element. Push in all the way.

A—Primary Filter Element **B—Secondary Filter Element**



Primary Element



Secondary Element

SP21231,000029C-19-16AUG12-2/3

6. Install new primary element with rubber seal first (arrows on label pointing into filter housing). Push in all the way.
7. Close cover and raise catch.
8. Lower hood.

SP21231,000029C-19-16AUG12-3/3

Inspect Engine Air Intake System

IMPORTANT: Do not overtighten clamps.

Make sure all air intake clamps are tight.

Check all pipes for dents and other imperfections. Replace as necessary.

Check all hoses for cracks that may cause leaks or possible failure. Replace as necessary.

SP21231,0000299-19-30MAY12-1/1

Adjust Brake Pedal Free Travel

Service Interval—250 Hours

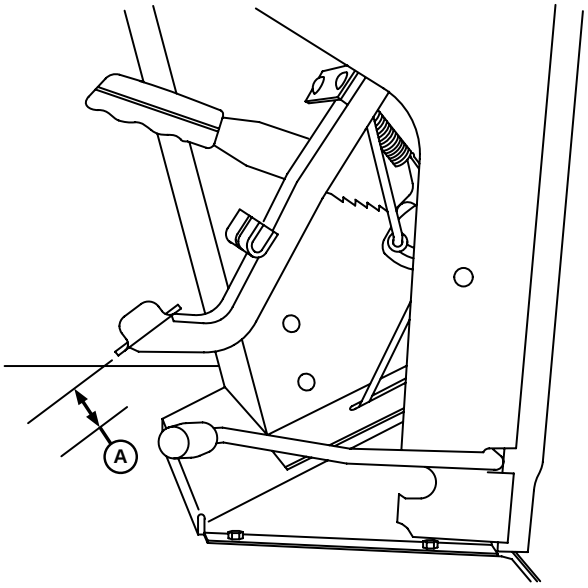
1. Park on level surface. Chock wheels to prevent machine movement.
2. Unlock brake pedals.
3. Apply approximately 10 kg (20 lb) force on one brake pedal and measure distance (A) between engaged pedal and disengaged pedal. If free travel is not within specification, adjust linkage.

Specification

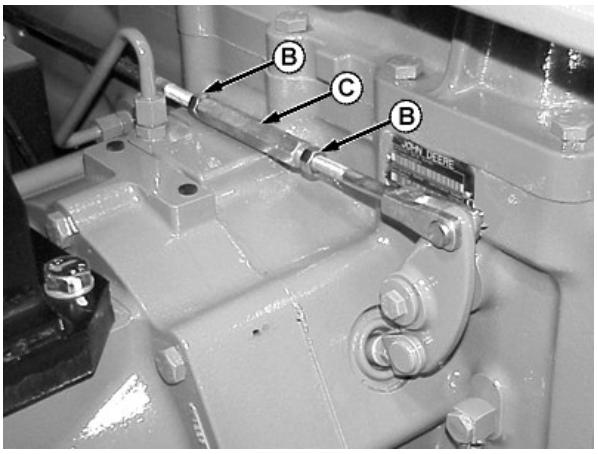
Brake Pedal—Free Travel. . . . . 70 ±3 mm (2.75 ±0.12 in.)

4. Adjust each brake pedal separately. Each side of tractor has an adjustment rod with turnbuckle and jam nuts. To adjust linkage, on each side of turnbuckle (C).
   a. Loosen jam nuts (B).
   b. Rotate turnbuckle (C) as needed to increase or decrease tension on adjustment rod in order to obtain free travel specification.
   c. Tighten jam nuts.
5. Repeat on opposite side.

A—Brake Pedal Travel
B—Jam Nuts
C—Turnbuckle



P9095—UN—28SEP00



P11553—UN—26JUL02

Left-Hand Side Shown

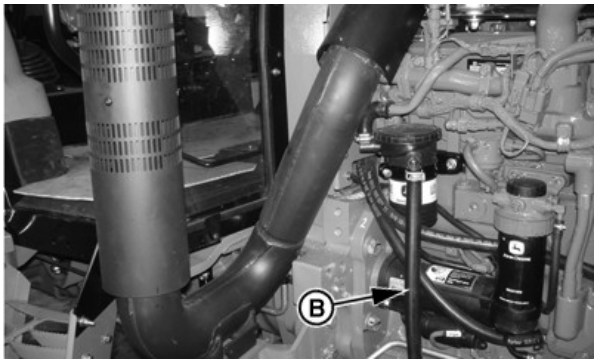
NS43404,00004E0-19-13FEB08-1/1

Clean Engine Crankcase Vent Tube

Service Interval—1000 Hours

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.

1. Locate crankcase vent port on top right-hand side of engine.
2. Remove crankcase vent tube (B) from open crankcase ventilation filter.
3. Wash in solvent or blow clean with compressed air. Inspect tube for damage, replace if necessary.
4. Install vent tube. Make sure vent tube is not kinked or pinched.



Left-Hand Side Shown

B—Crankcase Vent Tube

SD74272,0000138-19-30MAY12-1/1

Check Engine Idle Speeds

Service Interval—500 Hours

Slow (turtle) idle speed is attained with hand throttle all the way down.

Fast (rabbit) idle speed is attained with hand throttle all the way up.

NOTE: Hand throttle position will directly relate with label on right-hand side of instrument panel.

If idle speeds are not correct, see your John Deere dealer.

6105D, 6115D, 6130D and 6140D — Specification

Slow Idle—Speed	900 ± 10rpm
Fast Idle—Speed	2300 ± 10 rpm

SP21231,00002CE-19-14JUN12-1/1

Engine Valve Adjustment

Service Interval—3000 Hours / Three Years

Have your John Deere dealer check and adjust engine valve clearance.

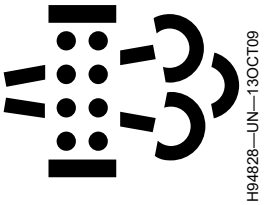
NS43404,00004E4-19-14JUN12-1/1

Cleaning the Exhaust Filter Aftertreatment

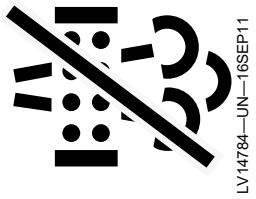
The exhaust filter will require maintenance periodically. Some of the maintenance will be transparent to the operator. During continuous heavy loads and other conditions, the engine may create enough heat to naturally remove accumulated soot in the exhaust filter. When the exhaust filter has accumulated higher levels of soot, the display panel may request (depending on predefined user settings) an exhaust filter cleaning. During this request, the equipment is required to be located or moved to a suitable location with adequate ventilation.

To the right are symbols which may be seen on the operator interface.

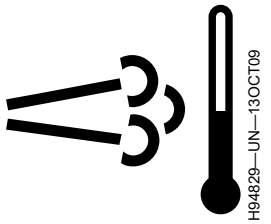
IMPORTANT: The area above and surrounding the engine during a manual exhaust filter cleaning should be free of any flammable objects as temperatures can reach as high as 550 °C (1022 °F).



Exhaust Filter Cleaning is Needed



Exhaust Filter Cleaning is Disabled



Emission System Temperature is High or Exhaust Filter Cleaning is Underway

SP21231,00002A3-19-30MAY12-1/1

Diesel Particulate Filter Maintenance and Service

The Exhaust Filter includes the Diesel Oxidation Catalyst and Diesel Particulate Filter (DPF). The DPF is designed to retain residual ash, which is a noncombustible result of additives used in crankcase lubrication oils and the fuel. The DPF provides many hours of maintenance free operation. At some point the DPF will require professional service to remove the accumulated ash. The exact number of hours of operation before service is required will vary depending upon the engine's power category, duty cycle and operating conditions, engine oil ash content, and fuel quality. Adhering to John Deere's recommended oil and fuel specifications will maximize the hours of operation before professional DPF service is required.

As the engine owner, you are responsible for performing the required maintenance described in your Operator's manual. The exhaust filter's dash lamp indicator or the diagnostic codes will indicate when the DPF needs ash removal service. The ash removal service interval for engines below 175 hp/130kW will be at least 3,000 hours while engines at or above 175 hp/130 kW will be at least 4,500 hours.

The removal of DPF ash must be done by removing the DPF from the machine and placing it into specialized equipment. Do not remove ash by using water or other chemicals. Removing ash by these methods may damage the material securing the DPF in its canister, resulting in the loosening of the DPF element in the canister and subjecting it to damage from vibration.

Failure to follow the approved ash removal methods may violate U.S. federal, state and local hazardous waste laws, along with damage to the DPF resulting in potential denial of the Diesel Exhaust Filter emissions warranty. It is strongly recommended you take the DPF to an authorized John Deere service location or other qualified service provider for servicing.

SP21231,00002A4-19-18JUN12-1/1

Exhaust Filter / Diesel Particulate Filter Ash Handling and Disposal

CAUTION: Under federal, state, and/or local laws or regulations, Diesel Particulate Filter ash may be classified as a hazardous waste. Hazardous wastes must be disposed of in accordance with all applicable federal, state and local laws or regulations governing hazardous waste disposal. Only a qualified service provider should remove ash from the DPF. Personal protective equipment and clothing, maintained in a sanitary and reliable condition, should be used when handling and cleaning a DPF. See your John Deere dealer or qualified service provider for assistance.

SP21231,00002A5-19-30MAY12-1/1

Exhaust Filter Disposal

CAUTION: Proper management of an Exhaust Filter that has reached the end of its useful life is required, since the ash or catalyst material in the device may be classified as hazardous waste under federal, state, and/or local laws or regulations. Used Exhaust Filters, which include the Diesel Particulate Filter, may be exchanged at any John Deere dealer or qualified service provider.

SP21231,00002A6-19-30MAY12-1/1

Tighten Hose Clamps

Service Interval—500 Hours

IMPORTANT: Do not overtighten clamps causing washers to be over compressed.

Check the following system hose clamps. Tighten as necessary.

Specification	
Hose Clamps—Torque	5 N·m (44 lb-in.)

- Engine Air Induction System
- Engine Cooling System
- Hydraulic System
- Fuel System

NS43404,00004E6-19-13FEB08-1/1

Inspect Tractor for Loose Hardware

Service Interval—Weekly / 50 Hours

Specification	
Front Ballast Weight Retaining Bolts—Torque	230 N·m (170 lb-ft)
Adjustable Front Axle-to-Knee Bolts—Torque	480 N·m (350 lb-ft)
Adjustable Front Axle Disk-to-Flange Bolts—Torque	175 N·m (130 lb-ft)
Rear Axle Rim-to-Disk Bolts (Steel Disk) —Torque	245 N·m (180 lb-ft)
Rear Axle Disk-to-Flange Bolts (Steel Disk) —Torque	175 N·m (130 lb-ft)
Multi-Position Rear Wheels Rim-to-Disk Bolts (Steel Disk)—Torque	245 N·m (180 lb-ft)
Multi-Position Rear Wheels Disk-to-Flange Bolts (Steel Disk)—Torque	175 N·m (130 lb-ft)
Front Axle Bolts—Torque	480 N·m (350 lb-ft)
ROPS Mounting Bolts—Torque	610 N·m (450 lb-ft)
Cab Mounting Bolts—Torque	220 N·m (162 lb-ft)

NS43404,00004E7-19-24MAR08-1/1

Check Neutral Start System—PowrReverser™ Transmission (If Equipped)

Service Interval—250 Hours

Transmission Control

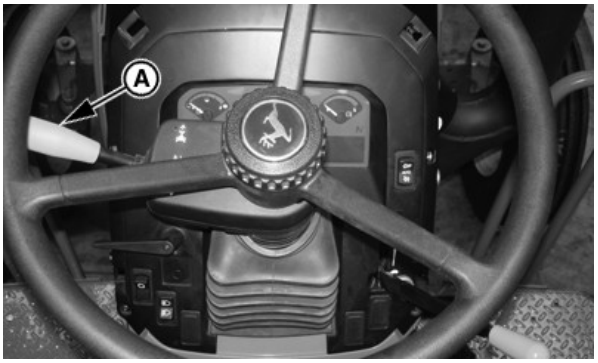
1. Make sure everyone is clear of tractor.
2. Fully depress clutch and brake pedals.
3. Move PowrReverser lever (A) to FORWARD or REVERSE position.
4. Start engine. If engine starts in either of these positions, neutral start system should be repaired. See your John Deere dealer **immediately**.

Engine should start with lever in NEUTRAL position only.

PTOSwitch

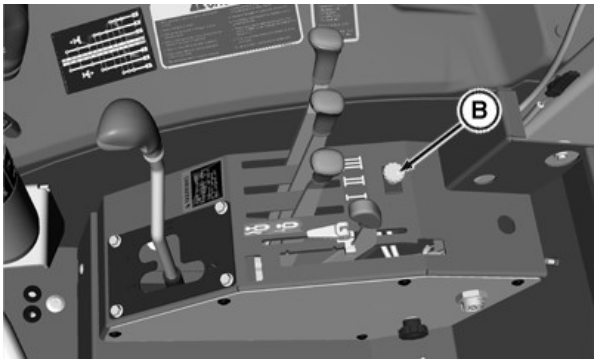
1. Fully depress clutch and brake pedals.
2. Pull PTO lever (B) upward to ENGAGED position.
3. Start engine. If engine starts in this position, neutral start system should be repaired. See your John Deere dealer **immediately**.

Engine should start with lever in DISENGAGED position only.



PY15259—UN—30MAY12

PowrReverser Lever Shown



PY15258—UN—14AUG12

OOS Shown

A—PowrReverser Lever **B—PTO Control Switch**

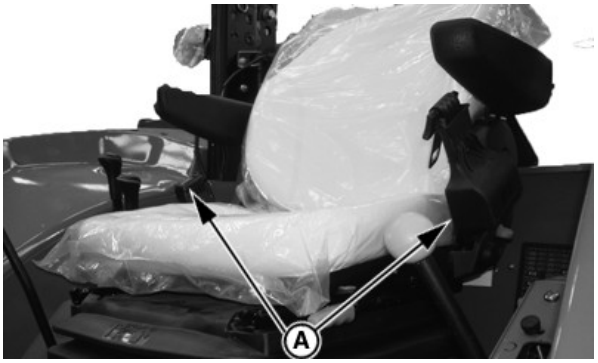
SD74272,0000139-19-04JUL12-1/1

Inspect Seat Belt

Service Interval—Annually

CAUTION: If the seat belt system, including the mounting hardware, buckle, belt or retractor show any sign of damage such as cuts, fraying, extreme or unusual wear, discoloration or abrasion, the entire seat belt system should be replaced immediately. Replace the belt system only with replacement parts approved for your machine.

Inspect seat belts (A) and mounting hardware. If seat belts need to be replaced, see your John Deere dealer.



PY15262—UN—30MAY12

A—Seat Belt

SD74272,000013B-19-30MAY12-1/1

Adjust Hand Throttle Friction

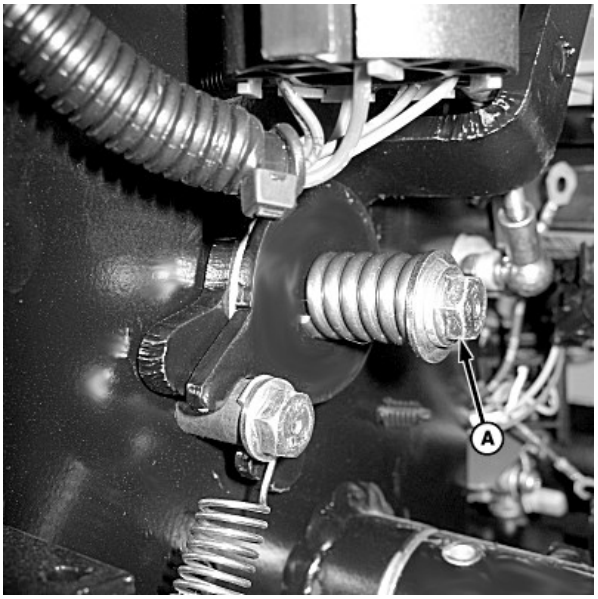
Adjust spring tension by loosening or tightening cap screw and lock nut (A) until throttle lever movement is smooth throughout range of travel with only slight drag.

Adjust throttle friction cap screw until specified amount of resistance is measured at throttle lever knob.

Specification

Throttle Friction Cap Screw—Resistance. . . . . 49 N (11 lb-force)

A—Cap Screw and Lock Nut



Under Dashboard

NS43404,00004EC-19-24MAR08-1/1

Inspect Tires

Service Interval—Weekly/50 Hours

- Check tires daily for damage or noticeably low pressure.
- Have any cuts or breaks repaired as soon as possible.
- Protect tires from exposure to sunlight, petroleum products and chemicals.
- Drive carefully. Try to avoid rocks and sharp objects.

IMPORTANT: Minimum pressures may be used only for light loads and only if tractor has no added weight. If you install ballast or mounted implements, or if you pull heavy loads, increase pressure.

- Check tires with an accurate gauge having 10 kPa (0.1 bar) (1 psi) graduations. If tires contain liquid ballast, use a special air-water gauge and measure with valve stem positioned toward bottom.

Refer to TIRE INFLATION PRESSURE CHART in Wheels, Tires and Treads section.

NS43404,00004ED-19-13FEB08-1/1

Tubeless Tire Repair

Certain sizes of tires are tubeless. Small tubeless tire punctures can be temporarily repaired without dismounting tire, avoiding down time during busy season. (See your John Deere dealer or tire service store for repair kits and instructions.)

IMPORTANT: A permanent, inside-out repair should be made as soon as possible to prevent tire damage.

MX,SEIP,NN-19-18MAR92-1/1

Clean Cab Air Filters

Service Interval—250 Hours*
** Interval can vary according to operating conditions*

Recirculation Filters (Inside Cab)

CAUTION: The air quality system air filters are not designed to filter out harmful chemicals. Follow the instructions in the implement operator's manual and those given by the chemical manufacturer when using agricultural chemicals.

NOTE: There are filters on BOTH sides of cab. Left-hand side is shown.

Continued on next page

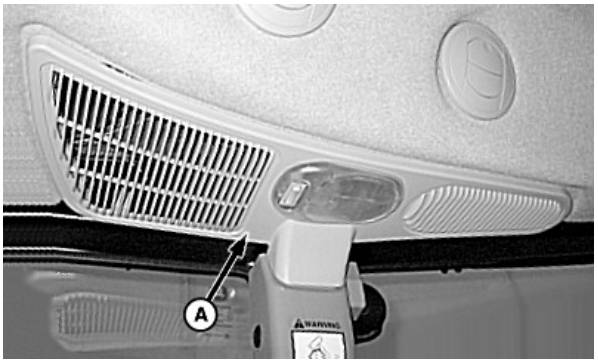
OU1092A,00001F6-19-17APR08-1/3

1. Pry off cover (A). (Pull down along window.)
2. Remove wing screw (B), retainer (C) and filter (D).
3. Inspect filter for holes or damage. Inspect rubber seal for cracks or wear. Replace as necessary.

NOTE: Do not clean filter with water or compressed air. Cleaning the filter is not recommended and should be replaced as needed.

4. Replace filter when it becomes dirty. It may require replacing filter more often in dusty conditions.
5. Install filter with rubber seal toward retainer (C).
6. Install retainer, wing screw and cover.
7. Repeat procedure on opposite side.

A—Cover
B—Wing Screw
C—Filter Retainer
D—Filter



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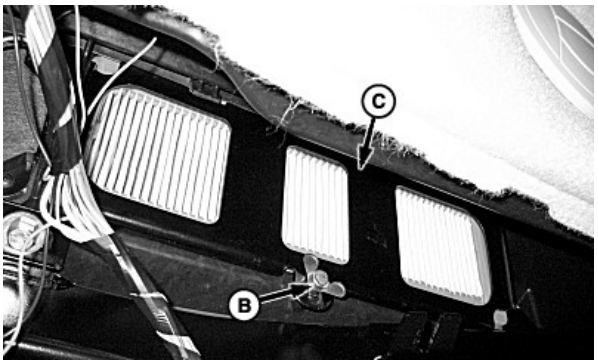

P14488—UN—30OCT07

P14490—UN—30OCT07

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OU1092A,00001F6-19-17APR08-2/3

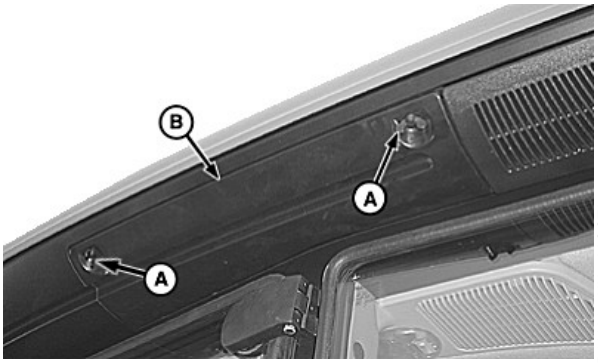
Fresh Air Filters (Outside Cab)

1. Remove two wing screws (A) and cover (B).
2. Remove wing screws (C), retainer (D) and filter (E).
3. Inspect filter for holes or damage. Inspect rubber seal for cracks or wear. Replace as necessary.

NOTE: Do not clean filter with water or compressed air. Cleaning the filter is not recommended and should be replaced as needed.

4. Replace filter when it becomes dirty. It may require replacing filter more often in dusty conditions.
5. Install filter with rubber seal toward cab.
6. Install retainer and wing screws.
7. Install cover and wing screws.
8. Repeat procedure on opposite side.

A—Wing Screws
B—Filter Cover
C—Wing Screws
D—Filter Retainer
E—Filter



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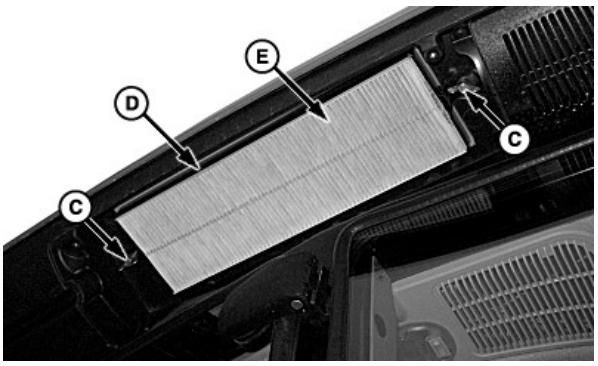
Under Roof, Above Cab Door



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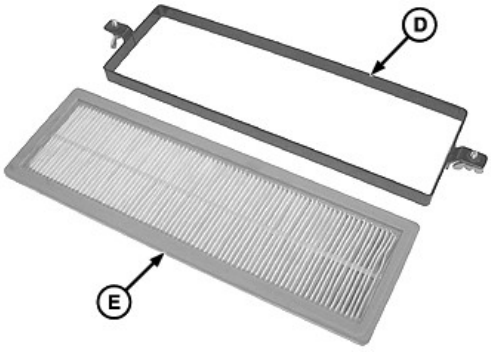


P14492—UN—30OCT07

OU1092A,00001F6-19-17APR08-3/3

Service Air Conditioner (Cab)

CAUTION: Refrigerant under pressure. Improper servicing may cause refrigerant to penetrate eyes and skin or cause burns.

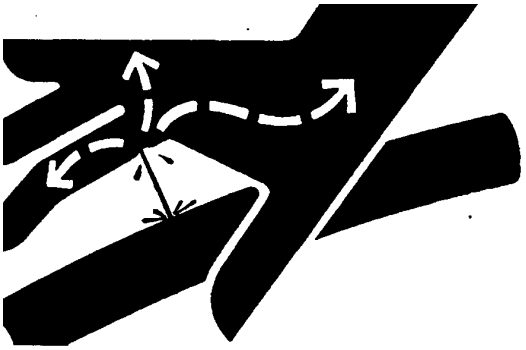
IMPORTANT: R134a refrigerant must be used. This requires special equipment and procedures. See your John Deere dealer.

NOTE: Some oil seepage from compressor shaft seal is normal.

Check the following if air conditioner will not cool, or if cooling is intermittent:

- If air conditioner clutch slips after tractor has been in storage, compressor may be stuck. Stop engine and turn key switch to OFF position. Remove cap screws and clutch cover (A). Rotate clutch hub back and forth to free compressor.

A—Clutch Cover



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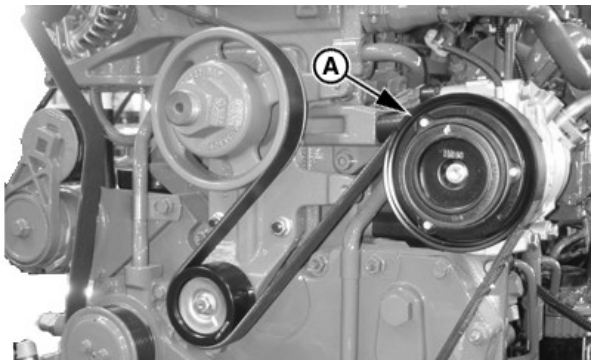
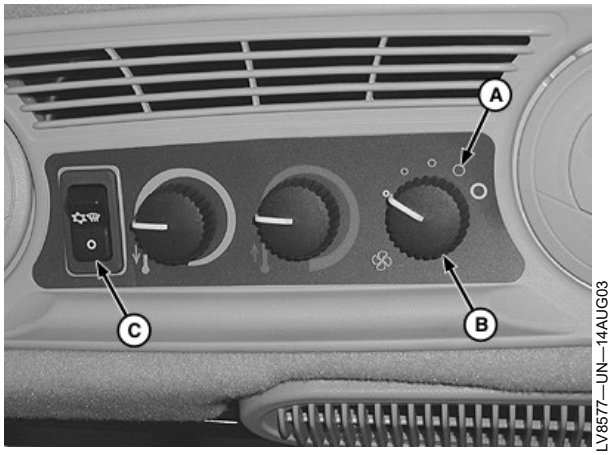


PY15260—UN—30MAY12

SD74272,000013A-19-30MAY12-1/2

- Run engine at 2000 rpm. Push top half of A/C and defrost switch (C) and set blower control knob (B) to HIGH position (A). If air flow is not cool, system may be low on refrigerant. See your John Deere dealer.
- If cooling is intermittent, clean front grille, side vents, radiator and condenser . If problem is not solved, see your John Deere dealer.
- Inspect operator enclosure (cab) filters for restriction. (See CLEAN CAB AIR FILTERS in this section). If problem persists, see your John Deere dealer.

A—High Position
B—Blower Control Knob
C—A/C and Defrost Switch



LV8577—UN—14AUG03

SD74272,000013A-19-30MAY12-2/2

Cleaning Engine Compartment

Clean as necessary, especially around potential hot spots such as turbocharger, exhaust manifold and muffler.

IMPORTANT: DO NOT use steam cleaner or high pressure washer in area of fan drive. High pressure could force dirt past seals in drive hub.

Never steam clean or pour cold water on an injection pump that is operating or hot. Pump could seize.

OUMX005,000293D-19-13FEB08-1/1

ROPS Maintenance or Replacement (OOS)

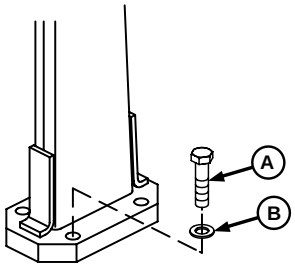
Service Interval—250 Hours

CAUTION: Make certain all parts are installed correctly if 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.

Check torque values on all ROPS mounting hardware.

Specification	
ROPS Mounting Bolts—Torque	610 N·m (450 lb-ft)



P10072—UN—05FEB01

A—Mounting Bolt (8 used) **B—Flat Washer (8 used)**

NOTE: When installation of equipment on a machine requires loosening or removing Roll Over Protective Structure (ROPS), mounting bolts (A) with washers (B) should be tightened to specification upon re-installation.

NS43404,00004E9-19-13FEB08-1/1

Keep Cab Protection System Installed Properly

Service Interval—250 Hours

CAUTION: Make certain all parts are installed correctly if cab protection system is loosened or removed for any reason. Tighten mounting cap screws to specification.

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

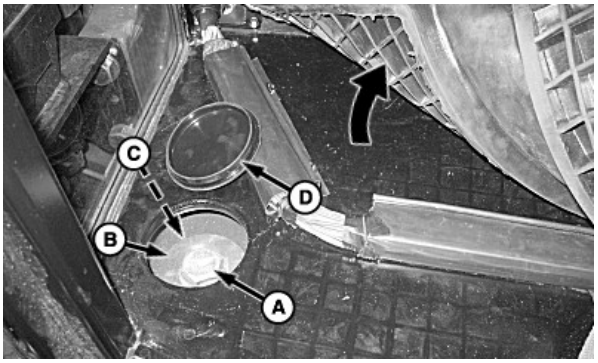
When installation of equipment on a machine necessitates loosening or removing cab protection system, mounting cap screws should be tightened to specification

Lift up rubber floor mat and pry out plugs (D) to access FRONT mounting hardware.

Check front and rear mounting hardware (A—C) for proper torque.

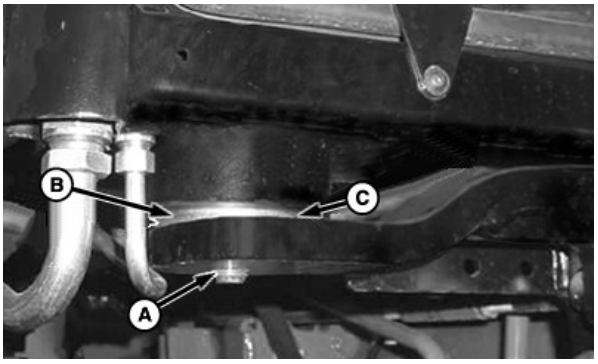
Specification	
Cab Protection System Mounting Cap Screws—Torque	220 N·m (162 lb-ft)

A—Cap Screw
B—Washer
C—Isolator
D—Plug



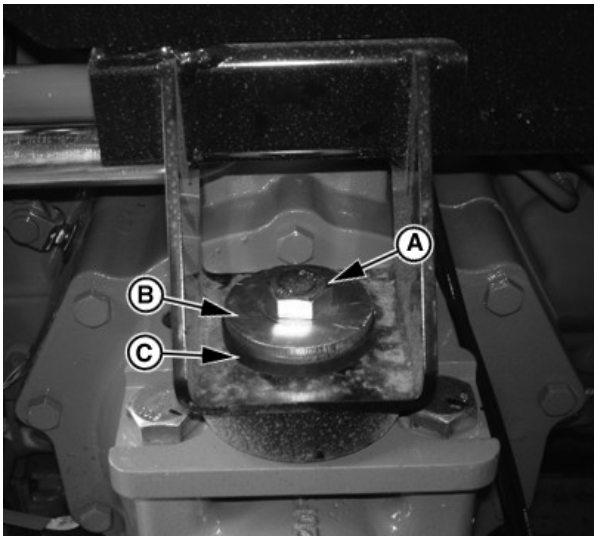
P14496—UN—30OCT07

Front Cab Mount (Left-Hand Side)



P14497—UN—30OCT07

Front Cab Mount (Right-Hand Side)



PY15261—UN—02JUN12

Rear Cab Mount (Left-Hand Side)

SD74272,000013C-19-30MAY12-1/1

Use Correct Lubricant

IMPORTANT: Use only lubricants meeting specifications outlined in Fuels, Lubricants and Coolant section when performing tractor service.

OUO6070,0000072CONV1-19-12OCT00-1/1

Check Engine Oil Level

IMPORTANT: Tractor engine comes from the factory, filled with John Deere Diesel Engine Break-In Plus™ Oil. (See Fuel, Lubricants, and Coolant Section 85 for oil specifications.)

NOTE: Make sure to insert dipstick all the way in to check oil level.

1. Park tractor on level ground and shut off engine. Remove key.
2. Remove engine oil filler cap/dipstick (A). Oil level should be between two marks on dipstick.
3. If level is low, add oil through oil filler hole until even with upper mark. DO NOT overfill. Use seasonal viscosity grade oil. (See Diesel Engine Oil in Section 85 Fuel, Lubricants, and Coolant.)

IMPORTANT: Do not operate engine with oil level below low mark on dipstick.

PY15544—UN—04JUL12

A—Engine Oil Filler Cap/ Dipstick

Break-In Plus is a trademark of Deere & Company

SV86979,0000051-19-04JUL12-1/1

Change Engine Oil and Filter

SERVICE INTERVAL

Initial — 100 Hours

Regular — 250 Hours*

Regular — 500 Hours**

* 250 hours when using any lubricant other than plus 50 - II.

** 500 hours when using John Deere plus 50 - II lubricant and filter.

Continued on next page

SV86979,0000052-19-04JUL12-1/2

IMPORTANT: New engines are filled, at the factory, with John Deere Break-In Plus™ Engine Oil. (See section 85 Fuel, Lubricants, and Coolant for oil specifications.)

If the engine has too much operating time at idle, constant speeds, and/or light load usage, or make-up oil is required during the first 100-hour period, a longer break-in period may be needed without changing Break-In Plus oil until 500 hours.

If diesel fuel has a high sulfur content, refer to Diesel Engine Oil in section 85 Fuel, Lubricants, and Coolant.

1. Operate engine to warm oil.
2. Park tractor on level ground and SHUT OFF engine. Remove key.
3. Remove oil drain plug (A) and drain oil.
4. Open hood.
5. Remove engine oil filter (B).

NOTE: Make sure old filter gasket is completely removed from housing before installing new filter.

6. Apply a film of oil on new oil filter gasket and install new filter. Hand-tighten plus 1/2 turn.
7. Install drain plug (A).
8. Add oil to filler (C). (See Diesel Engine Oil in section 85 Fuel, Lubricants and Coolant.)

Specification

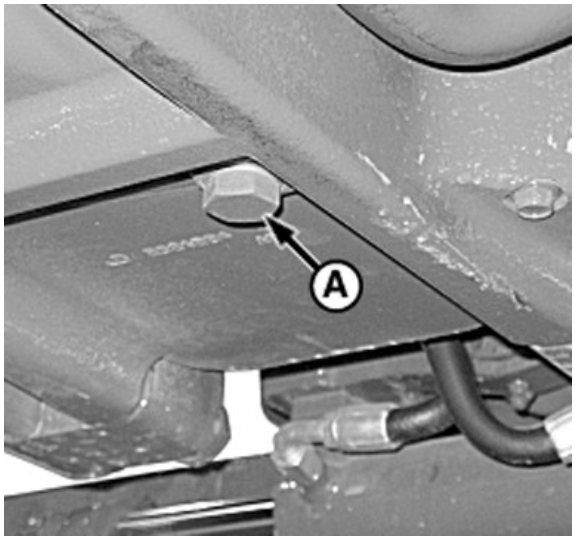
Engine Crankcase Oil—Capacity. . . . . 15 L (3.9 U.S.gal)

9. Start engine and inspect drain plug (A) and filter (B) for leaks..
10. Stop engine and remove key.

NOTE: If oil leaks in excess see your John Deere dealer.

12. Recheck oil level, add if necessary.
13. Lower hood.

A—Drain Plug
B—Engine Oil Filter
C—Engine Oil Filler Cap/Dipstic



PY15547—UN—04JUL12

PY15545—UN—04JUL12

PY15546—UN—04JUL12

Break-In Plus is a trademark of Deere & Company

SV86979,0000052-19-04JUL12-2/2

Check Transmission-Hydraulic Oil Level

Service Interval—Daily / 10 Hours

IMPORTANT: Routine checks will help prevent downtime. The operator can aid in preventive maintenance by documenting all leak and malfunction problems. Since the transmission operates in oil, it is very important to keep oil clean and at correct level at all times.

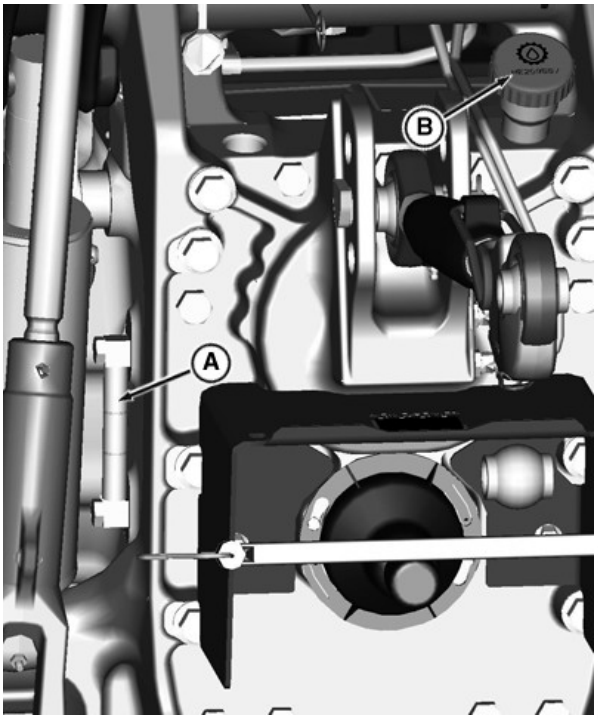
NOTE: Oil temperature should be approximately 45° C (113° F). Sight glass observations will be significantly higher with hotter oil temperatures and lower with colder oil.

1. Operate engine at approximately 1000 rpm for at least one minute.
2. Move rockshaft lever full forward to lower hitch all the way down.
3. Stop engine and wait an additional three minutes before checking oil level.
4. Check level at sight glass (A). Oil level should be between upper and lower lines on sight glass.

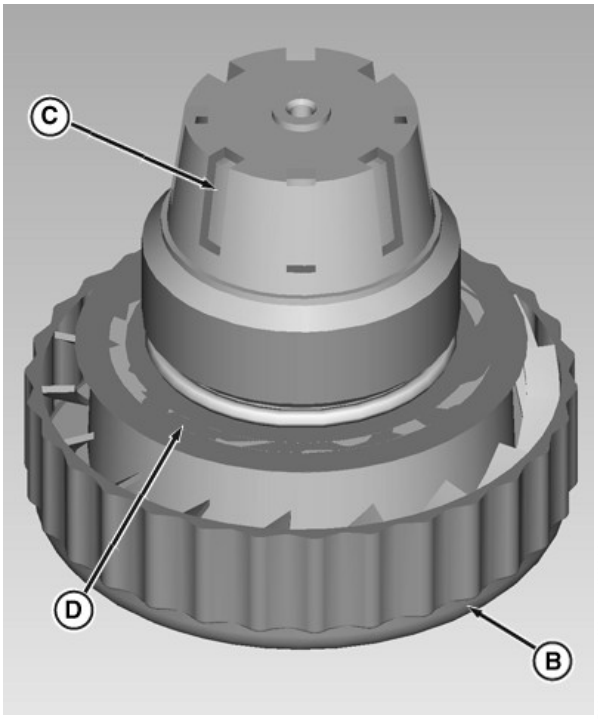
IMPORTANT: Oil level above the top mark on sight glass can result in power loss and heat generation during transport.

5. If oil level is below the lower mark, remove filler cap (B) and add oil.
6. Inspect and thoroughly clean all filler cap vents (C).
7. Inspect rubber seal (D) for cracks or other imperfections. Replace if necessary.
8. Install filler cap.

A—Sight Glass
B—Filler Cap
C—Vents
D—Rubber Seal



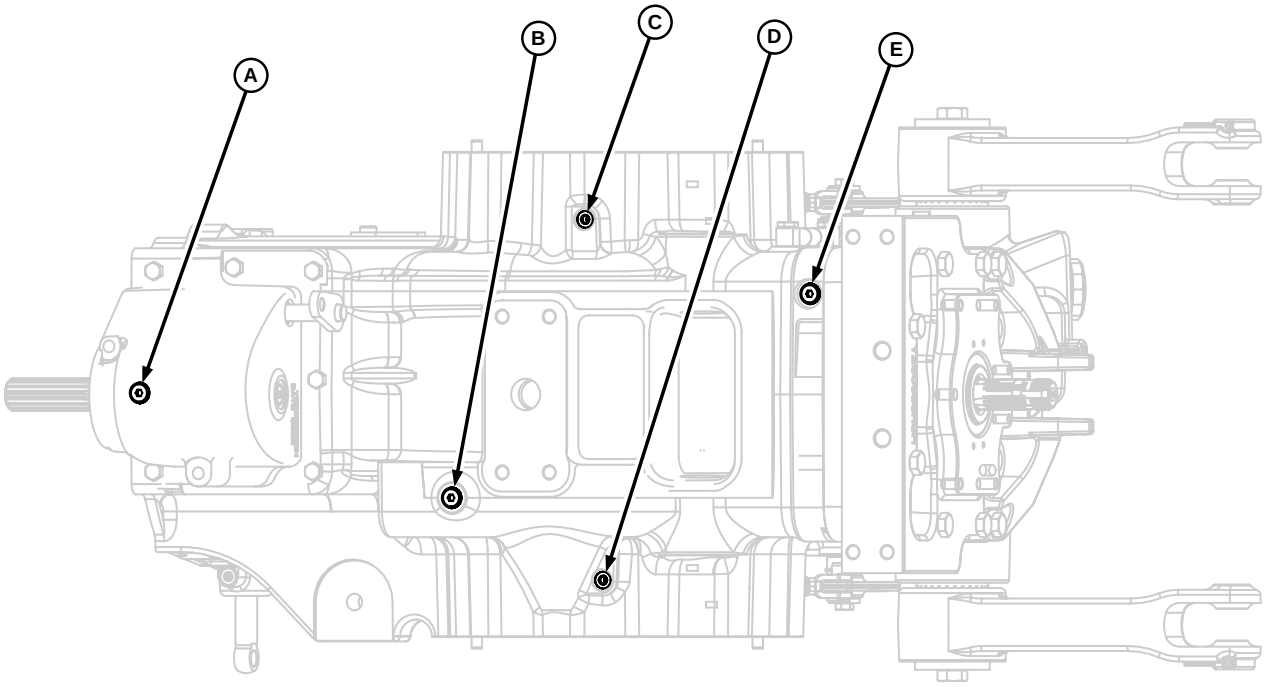
PY15521—UN—22JUN12



PY15516—UN—21JUN12

SD74272,000013E-19-22JUN12-1/1

Change Transmission-Hydraulic Oil



View From Below

A—MFWD Axle Drop Gear Box Drain Plug (If Equipped)
B—Transmission Main Case Drain Plug
C—Left-Side Final Drive Drain Plug
D—Right-Side Final Drive Drain Plug
E—PTO Case Drain Plug

Service Interval—1000 Hours

1. Move rockshaft lever full forward to lower hitch all the way down.
2. Remove drain plugs (A—E).
3. Replace transmission-hydraulic oil filter. (See procedure in this section.)

NOTE: Always dispose of used oil in accordance with applicable laws and regulations.

4. Install all plugs.

Continued on next page

SD74272,000013F-19-22JUN12-1/2

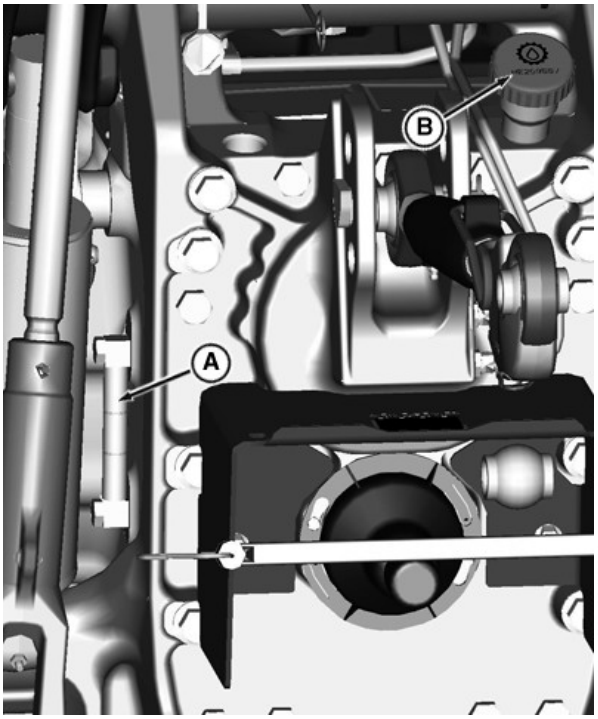
IMPORTANT: Do not overfill transmission. This will cause overheating and result in transmission damage.

5. Remove cap (B) and fill system with oil as specified in Fuels, Lubricants and Coolant section.

Specification	
Transmission-Hydraulic Oil—Capacity	58 L (15.3 gal)

6. Check oil level at sight glass (A) after filling.
7. Install filler cap.
8. Start engine and operate for five minutes.
9. Shut off engine and check oil level. Add oil if necessary.

A—Sight Glass **B—Filler Cap**



PY15521—UN—22JUN12

SD74272,000013F-19-22JUN12-2/2

Replace Transmission-Hydraulic Oil Filter

Service Interval
Initial—100 Hours
Regular—500 Hours

NOTE: Replace hydraulic filter housing and filter as a complete assembly.

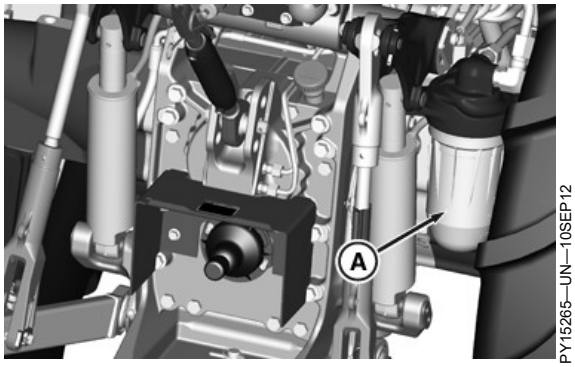
1. Remove filter housing assembly (A) and filter seal (B).
2. Discard filter housing assembly (A) and O-ring seal (B).
3. Inspect new filter assembly and seal for any possible damage.
4. Apply hydraulic oil to new filter O-ring seal (B) and install on filter assembly.
5. Install new filter assembly and tighten to specification.

Specification

Hydraulic Oil Filter—Torque. . . . . 24 N·m (212 lb-in)

6. Run engine for five minutes.
7. Shut off engine and check oil level. Add hydraulic as required. (See CHECK TRANSMISSION-HYDRAULIC OIL LEVEL in this section.)

A—Filter Housing Assembly **B—Filter O-Ring Seal**



PY15265—UN—10SEP12

P15271—UN—07APR08

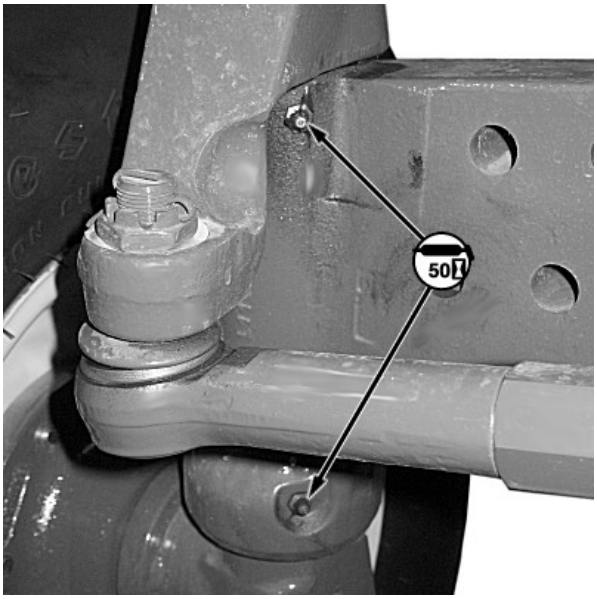
SD74272,0000140-19-01JUN12-1/1

Lubricate Steering Linkage

Service Interval—Weekly / 50 Hours*
** Daily / 10 Hours if operated in extremely wet or muddy conditions*

2WD Axle

Apply several shots of grease to steering spindle fittings, on both left and right-hand sides.



P14506—UN—16FEB08

Left-Hand Side Shown

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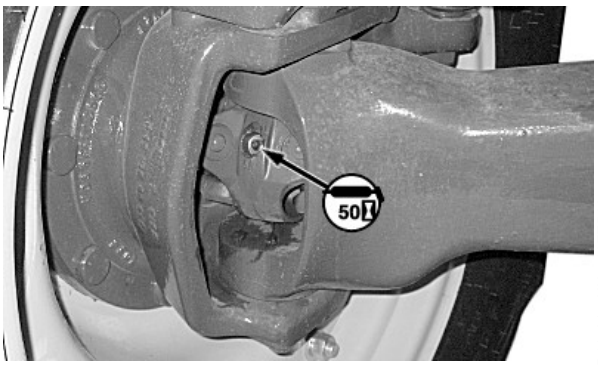
NS43404,00004F7-19-26MAR08-1/2

MFWD Axle

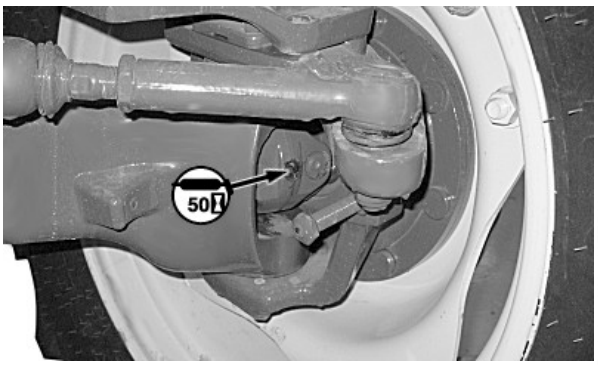
Service Interval—Weekly / 50 Hours*
** Daily / 10 Hours if operated in extremely wet or muddy conditions*

Turn steering wheel full left or right to access lube fittings.

- Left-hand turn
  - Front fitting on left-hand side
  - Rear fitting on right-hand side
- Right-hand turn
  - Rear fitting on left-hand side
  - Front fitting on right-hand side



Right-Hand Side—Front

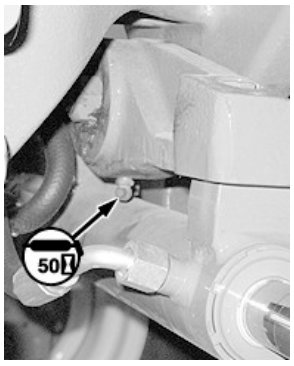


Right-Hand Side—Rear

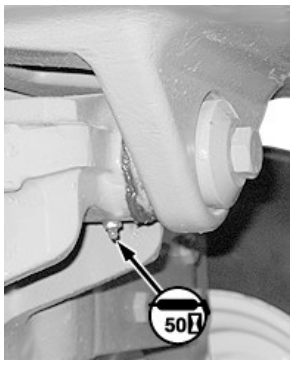
NS43404,00004F7-19-26MAR08-2/2

Lubricate Front Axle Pivot Pins

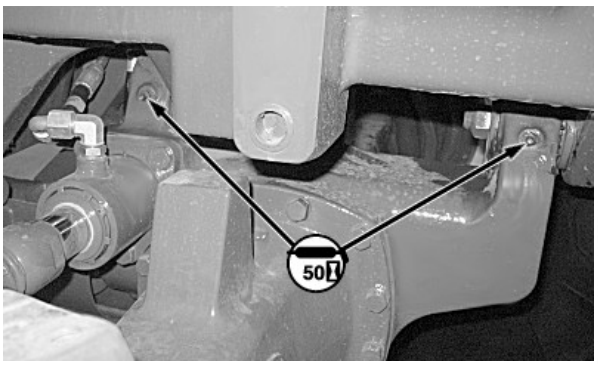
Service Interval—Weekly / 50 Hours*
** Daily / 10 Hours if operated in extremely wet or muddy conditions*



2WD Axle—Rear



2WD Axle—Front

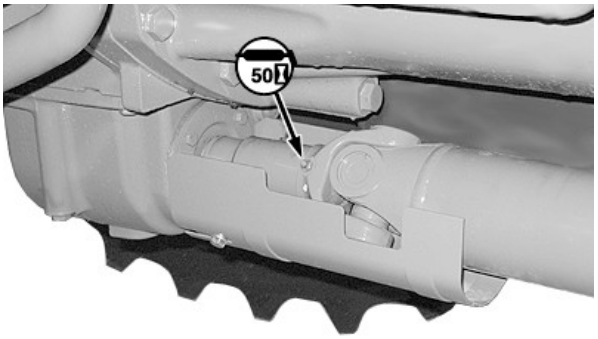


MFWD Axle (Right-Hand Side)

NS43404,00004F8-19-16FEB08-1/1

Lubricate MFWD Axle Shaft

Service Interval—Weekly / 50 Hours*
** Daily / 10 Hours if operated in extremely wet or muddy conditions*

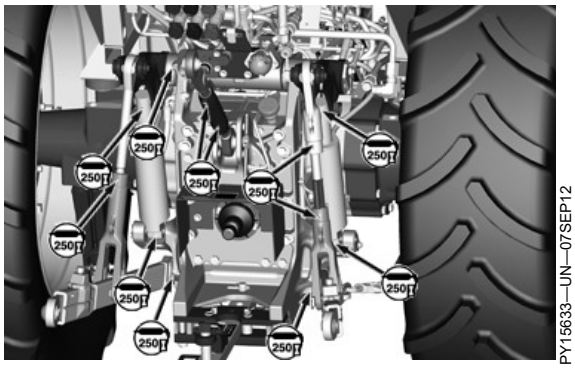


P14510—UN—16FEB08

NS43404,00004F9-19-16FEB08-1/1

Lubricate Hitch Components

Service Interval—250 Hours



PY15633—UN—07SEP12

SD74272,0000141-19-07SEP12-1/1

Check MFWD Axle Wheel Hub Oil Level

Service Interval—250 Hours

1. Park tractor on level surface.
2. Turn wheel hubs until the words OIL LEVEL are horizontal.
3. Remove plug (A). Oil level should be just below plug hole.
4. If low, add oil through same hole. John Deere Standard JDM J20C oil is recommended. (See MFWD AXLE AND WHEEL HUB OIL in Fuels, Lubricants and Coolant section.)
5. Apply pipe sealant with TEFLON®, or equivalent, to threads of plug.
6. Install plug and tighten to specifications.

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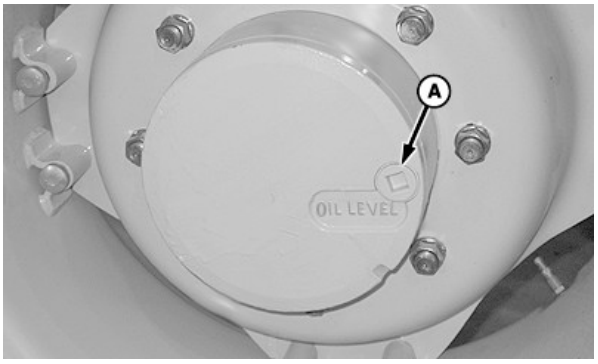

P14513—UN—16FEB08

A—Plug

Specification

Plug-to-Hub—Torque. . . . . 150 N·m (110 lb-ft)

7. Repeat procedure on opposite wheel hub.

NS43404,00004FC-19-16FEB08-1/1

Change MFWD Axle Wheel Hub Oil

Service Interval
Initial—100 Hours
Regular—1000 Hours

NOTE: Approximate wheel hub oil level is 0.8 L (0.85 qts).

1. Park tractor on level surface.
2. Rotate wheel until drain/fill port plug (A) is at bottom of hub.
3. Remove plug and drain oil.
4. After oil has drained, rotate wheel until drain/fill port is positioned horizontally.
5. Add oil until level is just below edge of hole. John Deere Standard JDM J20C oil is recommended. (See MFWD AXLE AND WHEEL HUB OIL in Fuels, Lubricants and Coolant section.)
6. Apply pipe sealant with TEFLON®, or equivalent, to threads of plug.
7. Install plug and tighten to specifications.

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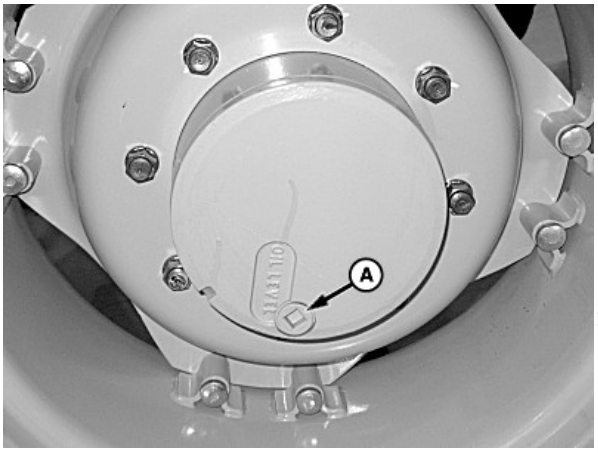

P14517—UN—30OCT07

A—Drain/Fill Port Plug

Specification

Plug-to-Hub—Torque. . . . . 150 N·m (110 lb-ft)

8. Repeat procedure on opposite wheel hub.

NS43404,0000502-19-16FEB08-1/1

Check MFWD Axle Housing Oil Level

Service Interval—250 Hours

1. Park tractor on level surface.
2. Remove plug (A). Oil level should be approximately 12 mm (1/2 in.) below edge of plug hole.
3. If low, add oil through same hole. John Deere Standard JDM J20C oil is recommended. (See MFWD AXLE AND WHEEL HUB OIL in Fuels, Lubricants and Coolant section.)
4. Apply pipe sealant with TEFLON®, or equivalent, to threads of plug.
5. Install plug and tighten to specifications.

Specification

Plug-to-Axle Housing—Torque. . . . . 150 N·m (110 lb-ft)

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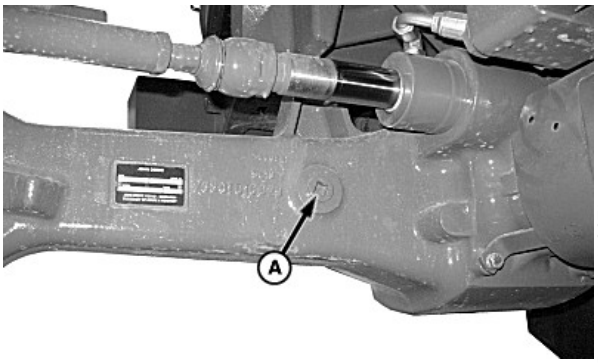

P14512—UN—30OCT07

A—Plug

NS43404,00004FB-19-16FEB08-1/1

Change MFWD Axle Housing Oil

Service Interval
Initial—100 Hours
Regular—1000 Hours

NOTE: Approximate wheel hub oil level is 5.0 L (5.3 qts).

1. Park tractor on level surface.
2. Remove plugs (A and B).
3. After oil has drained, apply pipe sealant with TEFLON®, or equivalent, to threads of plug (B).
4. Install plug and tighten to specifications.
5. Add oil until approximately 12 mm (1/2 in.) below edge of plug port (A). John Deere Standard JDM J20C oil is recommended. (See MFWD AXLE AND WHEEL HUB OIL in Fuels, Lubricants and Coolant section.)
6. Install plug and tighten to specifications.

Specification	
Plugs-to-Axle Housing—Torque	150 N·m (110 lb-ft)

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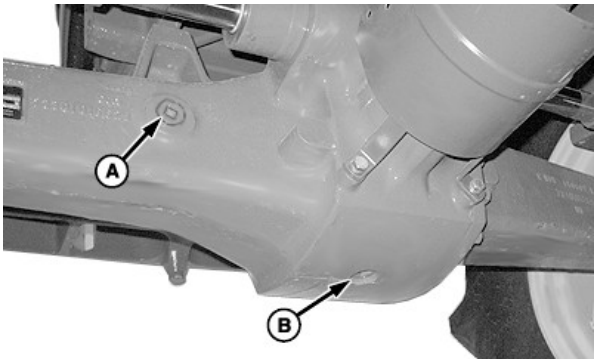


P14516—UN—16FEB08

A—Inspection/Fill Plug **B—Drain Plug**

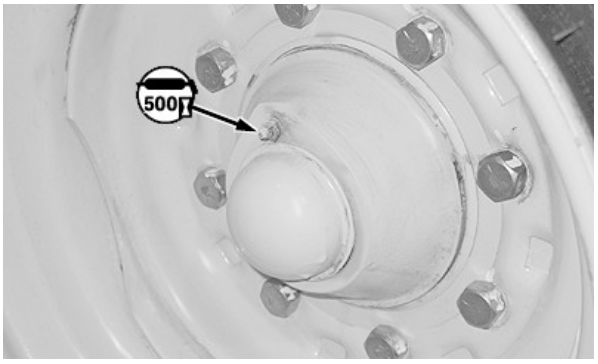
IMPORTANT: To avoid damage to internal axle components, check oil level after 30 minutes.

7. After approximately 30 minutes of operation, recheck oil level. (See procedure in this section.)

NS43404,0000501-19-16FEB08-1/1

Lubricate Front Wheel Bearings (2WD Axle)

Service Interval—500 Hours



P14514—UN—16FEB08

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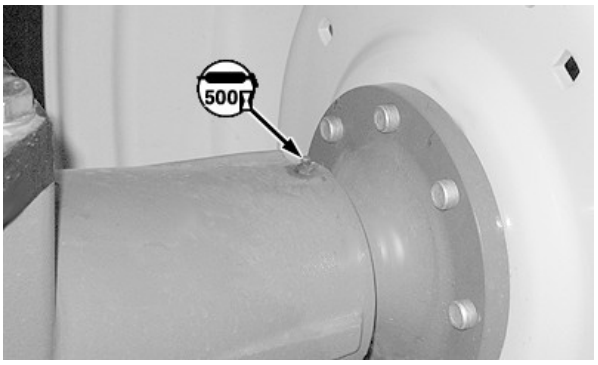
Lubricate Rear Axle Bearings

Service Interval—500 Hours*
** Weekly / 50 Hours if operated in extremely wet or muddy conditions*



P14534—UN—16FEB08

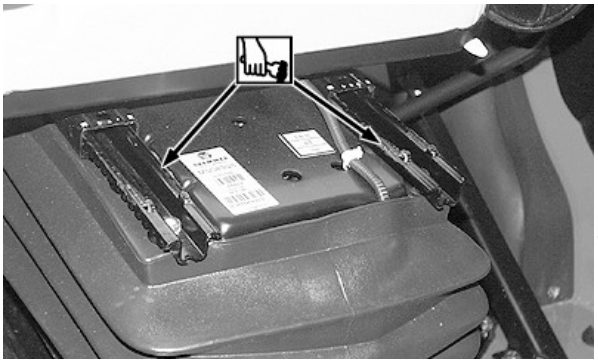
Right-Hand Side Shown

NS43404,00004FE-19-16FEB08-1/1

Lubricate Operator's Seat Slide Rails (OOS)

NOTE: This procedure is only necessary after pressure washing.

Move seat full forward and apply multipurpose grease to slide rails.

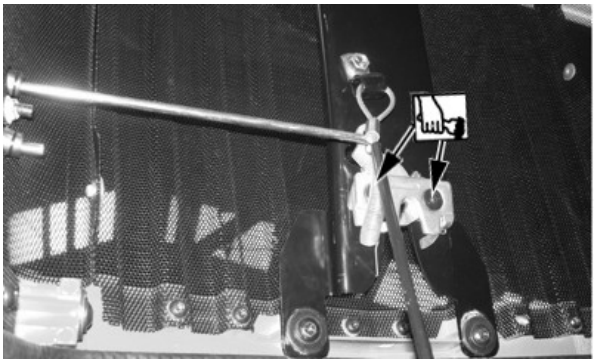


LV9636—UN—14SEP04

NS43404,0000560-19-16FEB08-1/1

Lubricate Hood Latch

NOTE: This procedure is only necessary after pressure washing.



PY15268—UN—01JUN12

SD74272,0000142-19-01JUN12-1/1

Clean Grille Screens, Radiator, Oil Cooler, Radiator Screen (If Equipped) and A/C Condenser (Cab)

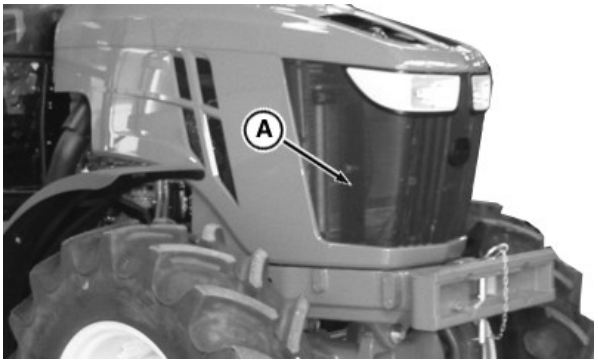
1. Whenever trash builds up on front grille (A), stop engine and brush clean.

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.

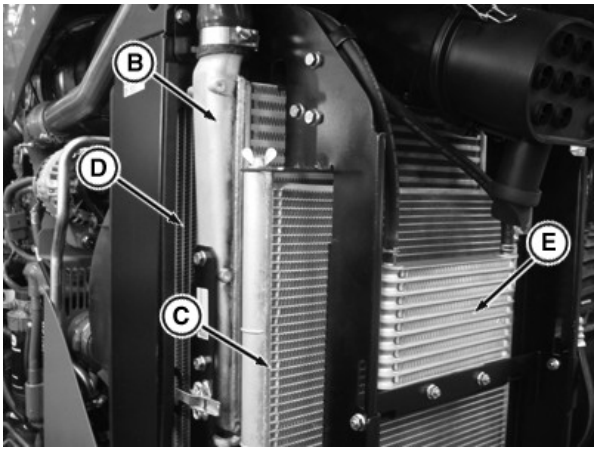
2. Raise hood and see if trash has built up on charge air cooler (B), oil cooler (E) (if equipped), radiator (D) or A/C condenser (C) (cab). If so, remove it using a brush or compressed air.

3. If a more thorough cleaning is required the air charge cooler can be tilted away from the radiator for easier access.

A—Grille
B—Charge Air Cooler
C—A/C Condenser (Cab)
D—Radiator
E—Oil Cooler



Grille



Radiator with Swing Out

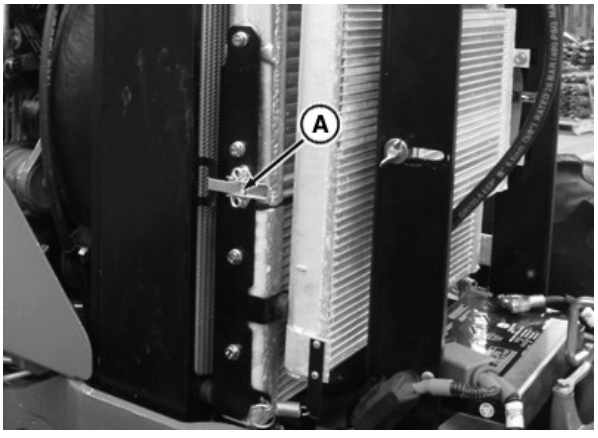
SD74272,0000312-19-16AUG12-1/2

4. Release latches (A) located at each side of the radiator and tilt air charge cooler away from radiator to gain access.

5. Straighten any bent fins.

6. Secure latches.

A—Release Latch



SD74272,0000312-19-16AUG12-2/2

Check Coolant Level

Service Interval—Daily / 10 Hours

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

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

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.

TS281—UN—15APR13

PY15274—UN—01JUN12

1. Raise hood.

NOTE: Coolant level should be checked when engine is COOL.

2. Check level in coolant reservoir BEFORE starting tractor.
3. If engine is COOL and level is below **MIN COLD** mark, remove cap and add coolant to reservoir to bring level between **MIN** and **MAX COLD** mark.
4. Install cap and lower hood.

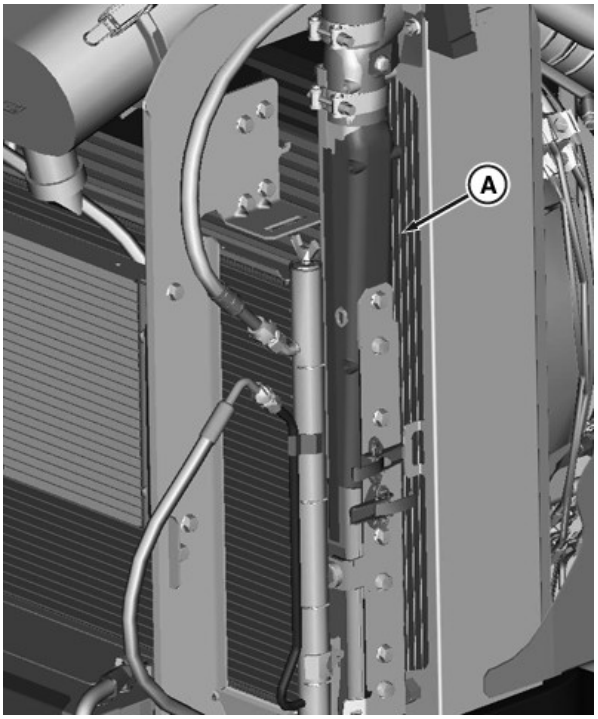
SD74272,0000144-19-16AUG12-1/1

Check Cooling System for Leaks

Service Interval—500 Hours

1. Check around base of radiator (A) for pinholes, cracks or any sign of coolant leakage.
2. Inspect coolant reservoir (B) for holes, cracks or any sign of coolant leakage.
3. Inspect area around thermostat housing (C) for cracks, or any sign of coolant leakage.

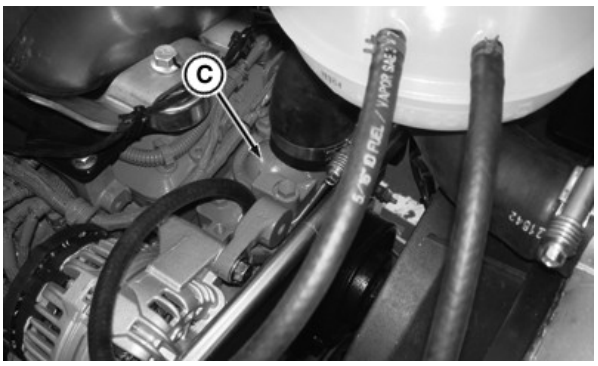
A—Radiator
B—Coolant Reservoir
C—Thermostat Housing



PY15520—UN—22JUN12

Radiator

PY15277—UN—01JUN12



PY15278—UN—16AUG12

Left-Hand Side of Engine

SD74272,0000145-19-22JUN12-1/1

Flush Cooling System and Replace Thermostat

Service Interval —2000 Hours / 2 Years*

**** 5000 hours / 5 Years** if John Deere COOL-GARD is used.*

Have your John Deere dealer drain old coolant, flush the entire system, install new thermostat and fill with clean antifreeze solution.

NS43404,0000507-19-21FEB08-1/1

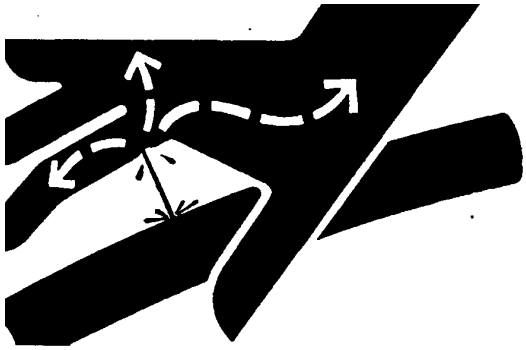
Do Not Modify Fuel System

CAUTION: Escaping fluid under pressure can penetrate the skin, causing serious injury. Avoid the hazard by relieving system pressure before disconnecting pressurized lines. 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.

IMPORTANT: Use only Fuel outlined in "Fuels, Lubricants and Coolant" section.

Modification or alteration of the injection pump, the injection pump timing, or the fuel injectors in ways not recommended by the manufacturer will terminate the warranty obligation to the purchaser. (See warranty information inside front cover.)



X9811—UN—23AUG88

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

NS43404,0000549-19-21FEB08-1/1

Drain Water and Sediment From Fuel Filters

Service Interval—Daily / 10 Hours

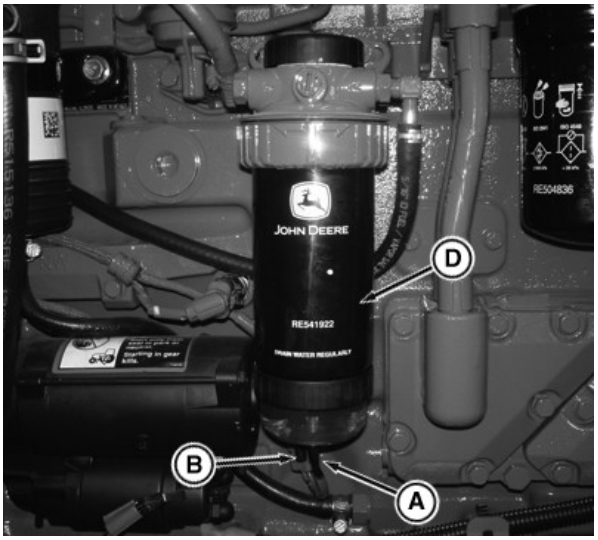
Continued on next page

SD74272,0000147-19-16AUG12-1/2

NOTE: When loader is installed, servicing of fuel filter will be easier if fuel filter relocation kit is used.

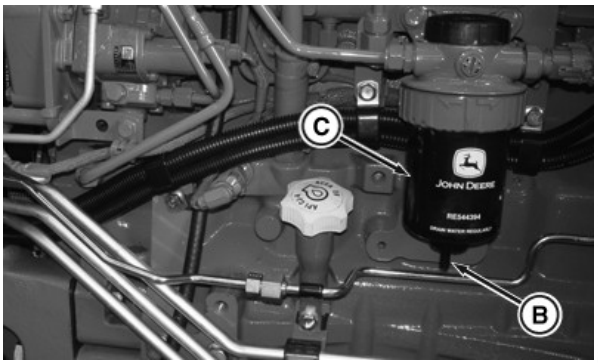
1. Disconnect wiring harness (A).
2. Connect a small hoses to end of drains (B).
3. Place a suitable container under drains.
4. Open fuel filter drains (B) to drain moisture and sediment from filters (C and D).
5. Tighten drains when fuel runs clear.
6. Remove drain hoses and connect wiring harness.

A—Wiring Harness
B—Drains
C—Final Fuel Filter
D—Primary Fuel Filter



PY15279—UN—01JUN12

Right-Hand Side Of Engine



PY15280—UN—01JUN12

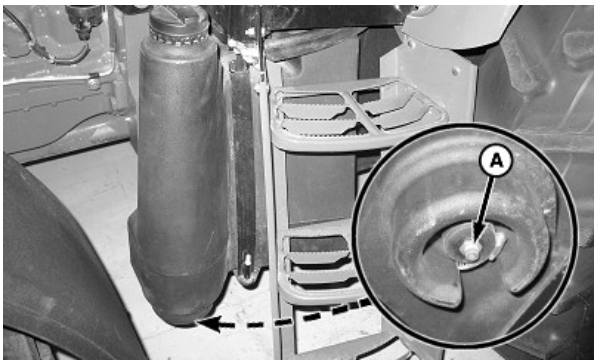
Left- Hand Side of Engine

SD74272,0000147-19-16AUG12-2/2

Drain Water and Sediment From Fuel Tank

Service Interval—250 Hours

1. Remove filler cap.
2. Place suitable container under drain plug (A).
3. Loosen drain plug to drain moisture and sediment from fuel tank.
4. Tighten drain plug when fuel runs clear.
5. Inspect and thoroughly clean all filler cap vents.
6. Inspect rubber seal for cracks or other imperfections. Replace if necessary
7. Install filler cap.



P14564—UN—01NOV07

A—Fuel Tank Drain Plug

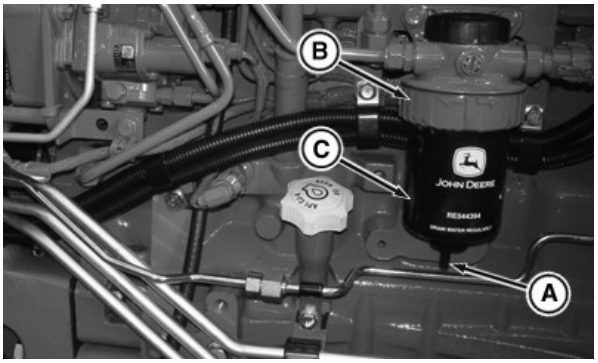
NS43404,0000564-19-21FEB08-1/1

Replace Prefilter / Water Separator

Service Interval—500 Hours

NOTE: When loader is installed, servicing of fuel filter will be easier if fuel filter relocation kit is used.

1. Connect a drain line to drain port (A) and place a suitable container under drain.
2. Loosen drain and drain fuel from filter.
3. Loosen retaining ring (B) and fuel filter (C) and filter seal.
4. Discard old filter. Inspect filter seal for cracks, breaks or other signs of leaking. Replace as necessary.
5. Install new filter and seal. Tighten retaining ring until it snaps into place. Do not overtighten.
6. Bleed fuel system. (See procedure in this section.)



PY15281—UN—02JUN12

A—Drain Port
B—Retaining Ring
C—Fuel Filter

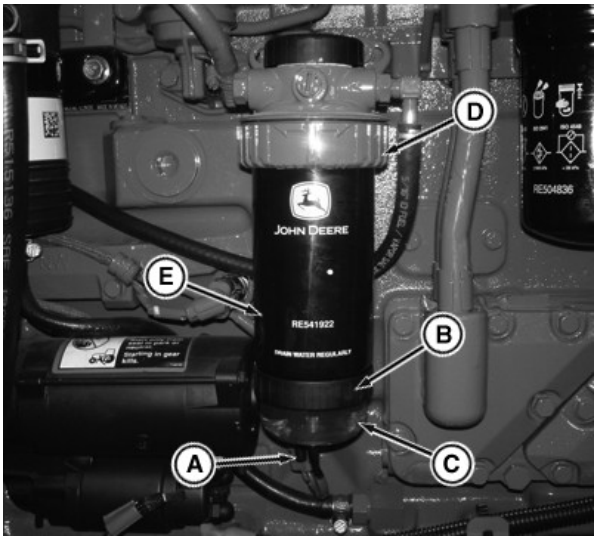
SD74272,0000148-19-02JUN12-1/1

Replace Primary Fuel Filter / Water Separator

Service Interval—500 Hours

NOTE: When loader is installed, servicing of fuel filter will be easier if fuel filter relocation kit is used.

1. Connect a drain line to drain port (A) and place a suitable container under drain.
2. Loosen drain and drain fuel from filter.
3. Loosen bottom retaining ring (B). Remove water separator bowl (C). Disconnect wiring harness.
4. Loosen top retaining ring (D) and remove primary fuel filter (E) and filter seal.
5. Discard old filter. Inspect filter seal for cracks, breaks or other signs of leaking. Replace as necessary.
6. Clean and dry water separator bowl (C).
7. Install water separator bowl on new primary fuel filter. Tighten retaining ring (B) until it snaps into place. Do not overtighten.
8. Install new primary fuel filter and filter seal to machine. Tighten retaining ring (D) until it snaps into place. Do not overtighten.



PY15282—UN—02JUN12

A—Drain Port
B—Bottom Retaining Ring
C—Water Separator Bowl
D—Top Retaining Ring
E—Primary Fuel Filter

9. Connect wiring harness.
10. Bleed fuel system. (See procedure in this section.)

SD74272,0000149-19-02JUN12-1/1

Bleed Fuel System

IMPORTANT: Any time the fuel system has been opened up for service (lines disconnected or filters removed), it will be necessary to bleed air from the system.

NOTE: A second person will be needed for the following procedure.

The fuel system can be bled at two locations:
- Final Fuel Filter
- Fuel Injection Pump

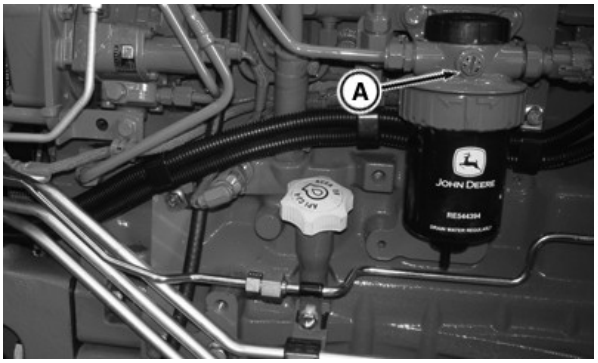
Continued on next page

SD74272,000014A-19-16AUG12-1/3

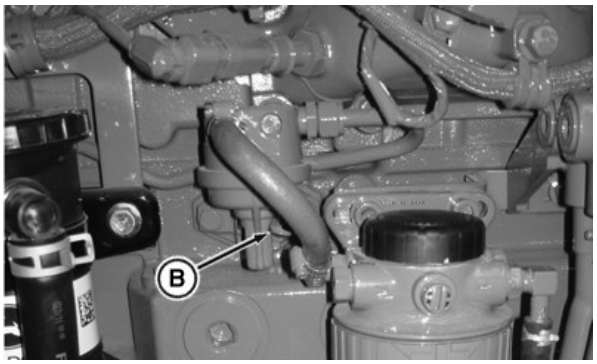
Final Fuel Filter

1. Open bleed vent screw (A).
2. Have a second person pump hand primer (B) on fuel transfer pump.
3. When no air bubbles are seen close vent screw.
4. Pump the hand primer until resistance is felt.
5. Repeat until no air bubbles flow from vent screw. Then tighten bleed screw (A).

A—Bleed Vent Screw **B—Hand Primer**



PY15283—UN—02JUN12



PY15284—UN—02JUN12

SD74272,000014A-19-16AUG12-2/3

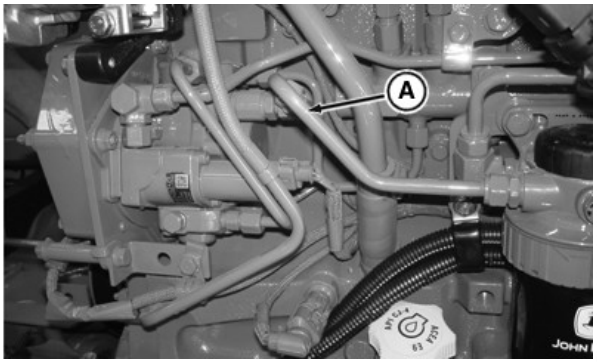
Fuel Injection Pump

1. Loosen fuel return line (A) at fuel injection pump.
2. Have a second person pump hand primer (B) on fuel transfer pump.
3. When no air bubbles are seen tighten fuel return line.
4. Pump the hand primer until resistance is felt.
5. Repeat until no air bubbles flow from fuel return line. Then tighten fuel return line (A).

Specification

Fuel Return Line—Torque	27 N·m (20 lb-ft)

A—Fuel Return Line **B—Hand Primer**



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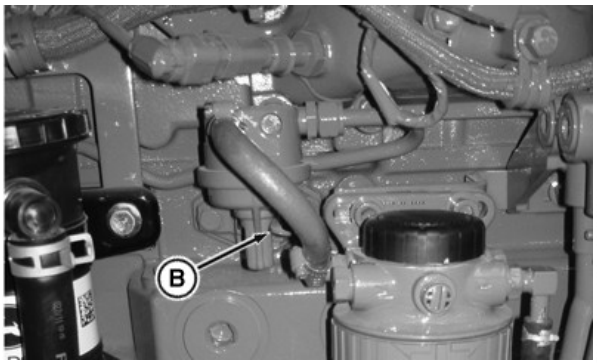


PY15284—UN—02JUN12

SD74272,000014A-19-16AUG12-3/3

Electrical Service Precautions

CAUTION: Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive. When using a booster battery, follow instructions in Operating the Engine section.

To avoid shocks and burns, disconnect negative (-) cable (B) before servicing any part of the electrical system.

Keep battery cover (not shown) and all electrical shields in place.

TS204—UN—15APR13

A—Positive (+) Battery Cable **B—Negative (—) Battery Cable**

PY15286—UN—02JUN12

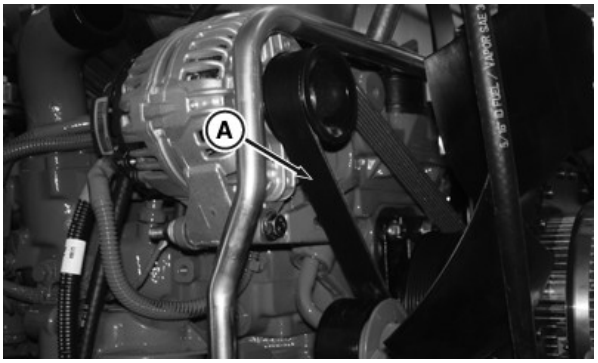
SD74272,000014B-19-02JUN12-1/1

Inspect Alternator/Fan Belt Tensioner

NOTE: Pulley and spring tensioner are not serviceable.

1. Remove belt (A). (See procedure in this section.)

A—Belt



PY15151—UN—29MAY12

Continued on next page

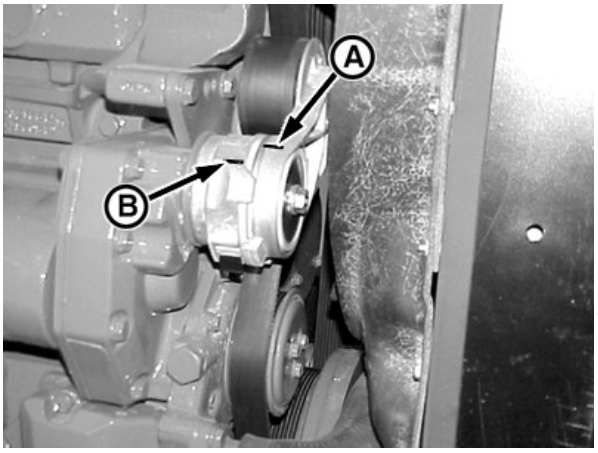
SP21231,0000294-19-01JUN12-1/3

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

2. Put a mark (A) on swing arm of tensioner as shown.
3. Measure 21 mm (0.83 in.) from (A) and put a mark (B) on tensioner mounting base.

A—Swing Arm Mark

B—Tensioner Mounting Base Mark



P12694—UN—25NOV03

SP21231,0000294-19-01JUN12-2/3

4. Rotate the swing arm using a torque wrench until marks (A and B) are aligned.
5. Record torque wrench measurement and compare with specification. Replace belt tensioner assembly if recorded measurement is below specification.

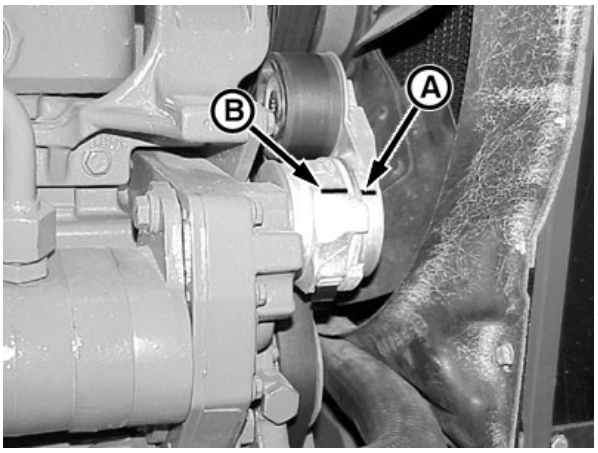
Specification

Swing Arm Spring Tension—Torque. . . . . 18—22 N·m (159—195 lb-in.)

6. Install belt. (See procedure in this section.)

A—Swing Arm Mark

B—Tensioner Mounting Base Mark



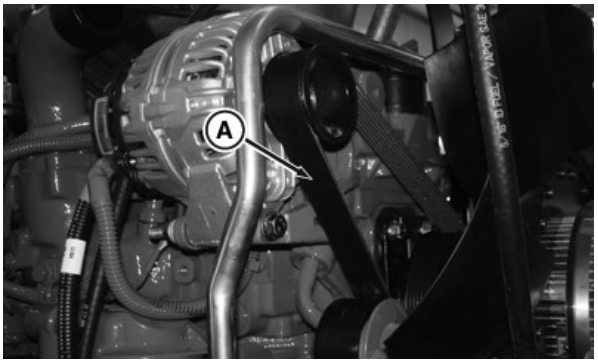
P12695—UN—25NOV03

SP21231,0000294-19-01JUN12-3/3

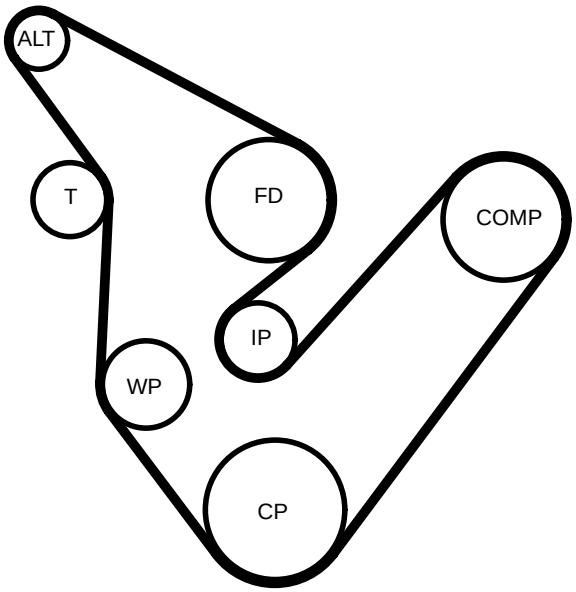
Replace Alternator/Fan Belt

1. Raise hood.
2. Release tension on belt using a 1/2 in. drive long-handle breaker bar. Remove belt (A) from alternator pulley over fan.
3. Install new belt in reverse order of removal.

A—Belt
ALT—Alternator
COMP—Compressor (Air Conditioning System)
CP—Crankshaft Pulley
FD—Fan Drive Pulley
IP—Idler Pulley
T—Tensioner Idler
WD—Water Pump

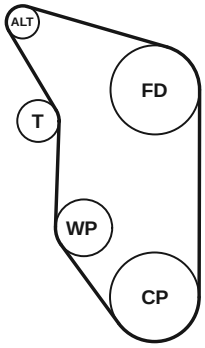


PY15151—UN—29MAY12



PY15548—UN—05JUL12

Cab Belt Diagram



P9719—UN—27SEP00

OOS Belt Diagram

SP21231,0000295-19-04JUL12-1/1

Charge Battery

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. Make last connection and disconnection at a point away from battery.

1. With charger off, attach positive battery charger lead to positive (+) battery terminal (A). Attach negative charger lead to tractor frame, away from the battery.
2. Follow the instructions provided by the charger.
3. To disconnect battery charger, turn charger off. Remove negative charger lead first, then positive lead.

TS204—UN—15APR13

PY15286—UN—02JUN12

A—Positive (+) Battery Terminal

B—Negative (-) Battery Terminal

SD74272,000014C-19-02JUN12-1/1

Clean Battery

Service Interval—50 Hours / Weekly

1. Stop engine. (See procedure in Operating the Engine section.)
2. Remove battery cover. (See ACCESS BATTERY in this section.)
3. Wipe battery with a damp cloth. Clean and tighten connections, if needed.
4. Install cover and lower hood.

NS43404,0000514-19-21FEB08-1/1

Check Battery Condition

Service Interval—50 Hours / Weekly

CAUTION: 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 it last.

TS204—UN—15APR13

1. Use a battery hydrometer to check specific gravity of electrolyte in each cell. Charge battery if reading is below 1.215. Replace battery if difference between cells is more than 0.050 or if battery will not charge above 1.225.
2. Always correct specific gravity reading for electrolyte temperature variation. Add 0.004 to the reading obtained in step one for every 10 °F above 80 °F (add 0.007 to the reading for every 10° above 27 °C). Subtract at same rate if electrolyte temperature is below 80 °F (27 °C). Correct specific gravity of a fully charged battery is 1.265 to 1.280.
3. A battery is considered fully charged when three consecutive hydrometer readings, taken at hourly intervals, show no rise in specific gravity.

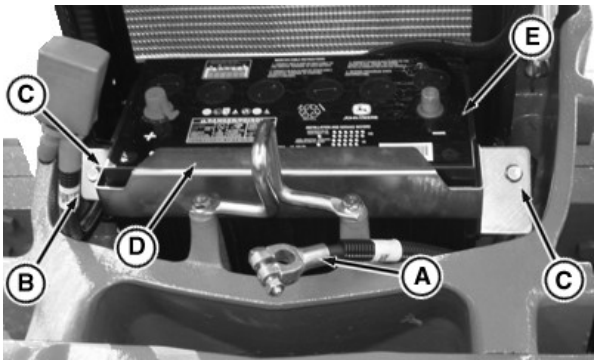
NS43404,0000515-19-21FEB08-1/1

Remove Battery

CAUTION: To avoid sparks, disconnect negative cable (A) first and connect it last.

1. Raise hood.
2. Disconnect negative (—) battery cable (A).
3. Disconnect positive (+) battery cable (B).
4. Remove nuts (C) and bracket (D).
5. Remove battery (E) from machine.

A—Negative Terminal (—)
B—Positive Terminal (+)
C—Nuts
D—Bracket
E—Battery



PY15287—UN—02JUN12

SD74272,000014D-19-16AUG12-1/1

Battery Replacement Specifications

When replacing battery, use John Deere battery or equivalent. See your John Deere dealer.

Specification	
995 CCA Battery (6115D, 6130D—Volts	12 Volts
BCI Group	31 H
Cold Cranking Amps at -17.8 °C (0 °F)	925

NS43404,0000517-19-26MAY09-1/1

Service Battery

1. Keep battery clean by wiping with a damp cloth. Keep terminals (A and B) clean and tight. To remove any corrosion, wash terminals with a solution of four parts water to one part baking soda.

CAUTION: To avoid sparks, disconnect negative (ground) cable first and connect it last.

2. Keep battery fully charged, especially during cold weather. If a battery charger is connected, attach positive cable to the positive (+) battery terminal (A). Connect the negative (-) battery charger cable to a good ground on tractor frame.
3. Coat terminals with a small amount of grease.

PY15286—UN—02JUN12

A—Positive (+) Battery Terminal

B—Negative (—) Battery Terminal

SD74272,000014E-19-02JUN12-1/1

Access Fuses and Relays

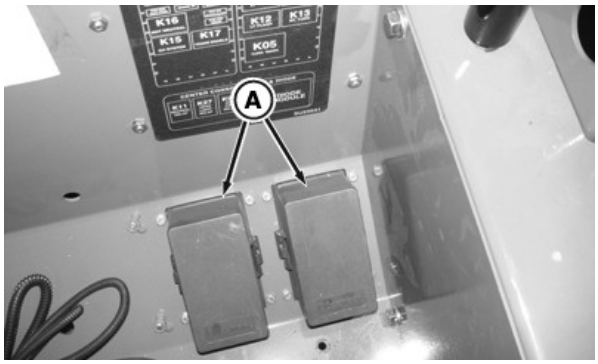
To remove fuse box cover:
- **OOS** — Pinch tabs and pull off cover (A).
- **Cab** — Pry off cover (B).

Fuse Rating	Color
5 Amp	Orange
10 Amp	Red
15 Amp	Blue
20 Amp	Yellow
30 Amp	Green

IMPORTANT: Do not replace original fuse with higher rated fuse or machine damage may occur.

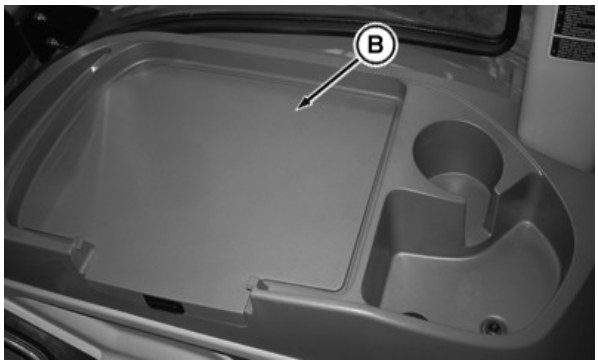
If original size fuse will not carry electrical load and continues to blow contact your John Deere dealer.

A—Fuse Box Cover (OOS) **B—Fuse Box Cover (Cab)**



PY14636—UN—02JUN12

OOS Fuse Box Location

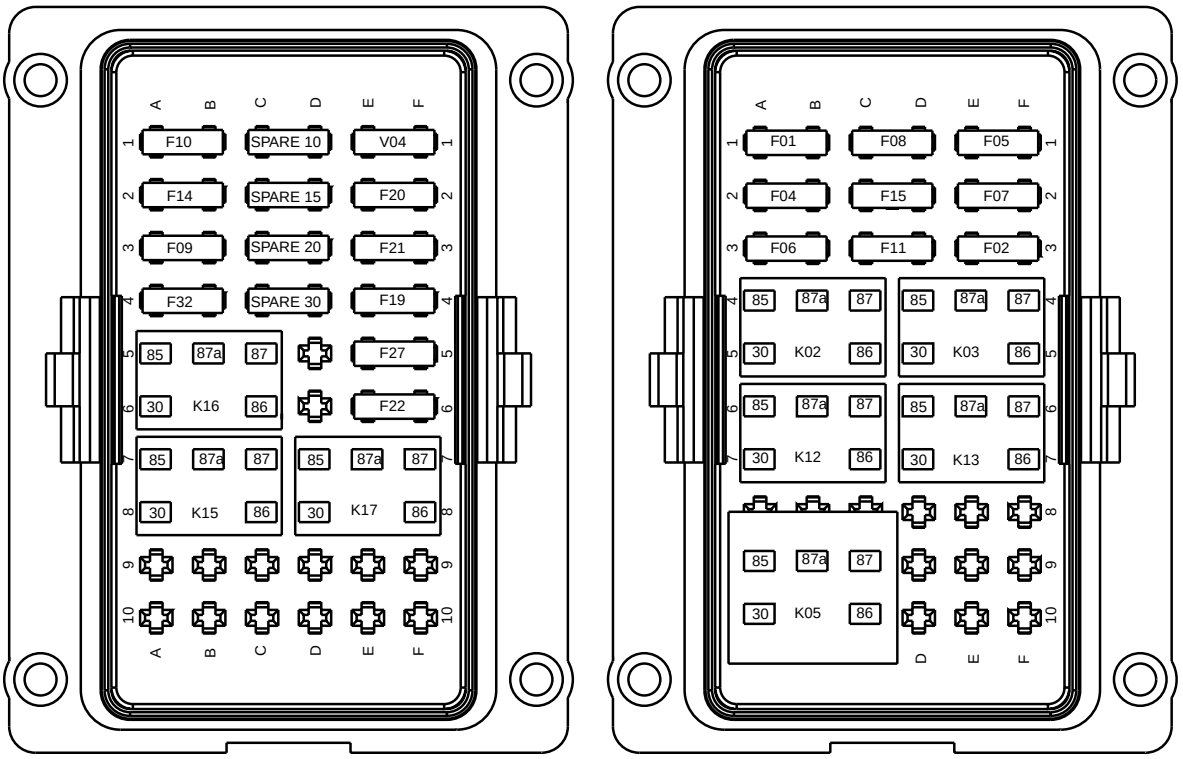


PY15288—UN—02JUN12

Cab Fuse Box Location

SD74272,000014F-19-02JUN12-1/1

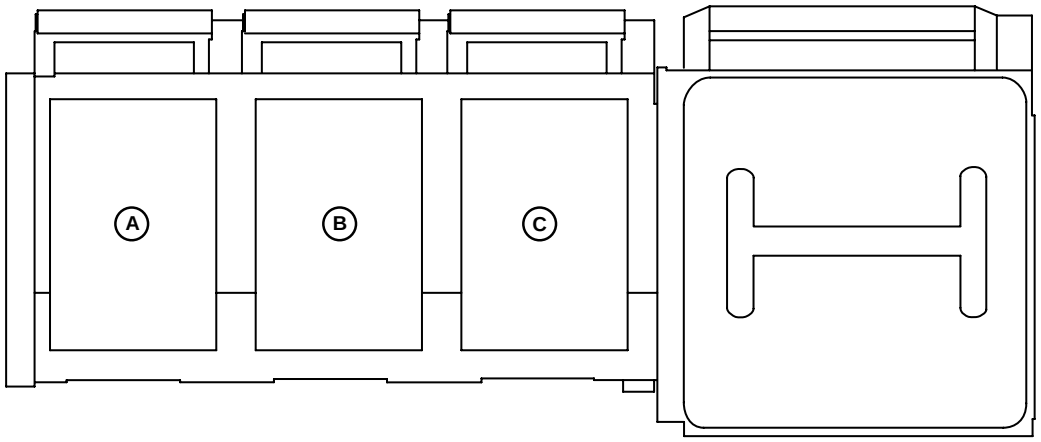
Load Center Fuses and Relays-OOS (PowrReverser™ Transmission)



F10—Trailer Power Fuse, 30 Amp
F14—Work Lamp Fuse, 30 Amp
F09—Brake Light Fuse, 15 Amp
F32—Electronic Control Unit/ Service Advisor Fuse, 30 Amp
SPARE 10—Spare Fuse, 10 Amp
SPARE 15—Spare Fuse, 15 Amp
SPARE 20—Spare Fuse, 20 Amp
SPARE 30—Spare Fuse, 30 Amp
V04—Diode
F20—Sensor Excitation Fuse, 10 Amp
F21—Electrohydraulic System Power Fuse, 10 Amp
F19—Electrohydraulic System Power Fuse, 10 Amp
F27—Backup Alarm Fuse, 5 Amp
F22—Horn Fuse, 10 Amp
K16—Not Neutral Relay
K15—Electrohydraulic System Relay
K17—Transmission Enable Relay
F01—Key Switch Fuse, 30 Amp
F04—Light Switch Fuse, 20 Amp
F06—Battery Switch Fuse, 30 Amp
F08—Instrument Cluster Fuse, 10 Amp
F15—Tail Light Fuse, 10 Amp
F11—Battery Unswitch Fuse, 30 Amp
F05—High/Low Beam Fuse, 15 Amp
F07—Turn Signal Light Switch Fuse, 10 Amp
F02—Turn/Warning Light Fuse, 30 Amp
K02—Left Turn Relay
K12—Left Flash Relay
K03—Right Turn Relay
K13—Right Flash Relay
K05—Turn/Warning Light Relay

PX07220,0001665-19-05JUL12-1/1

Load Center Fuses and Relays-OOS—Behind Instrument Panel



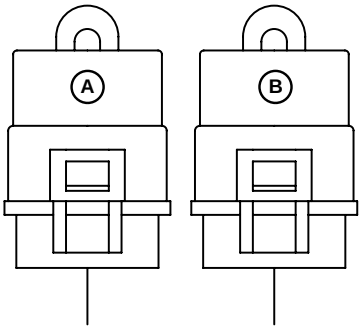
P14913—UN—29NOV07

A—Neutral Relay (K11)
B—Headlights Relay (K27)
C—Accessory Controller Relay (K07)

PX07220,0001667-19-04JUL12-1/1

Load Center Fuses and Relays-OOS—Behind Panel at Left Rear Corner of Operators Station

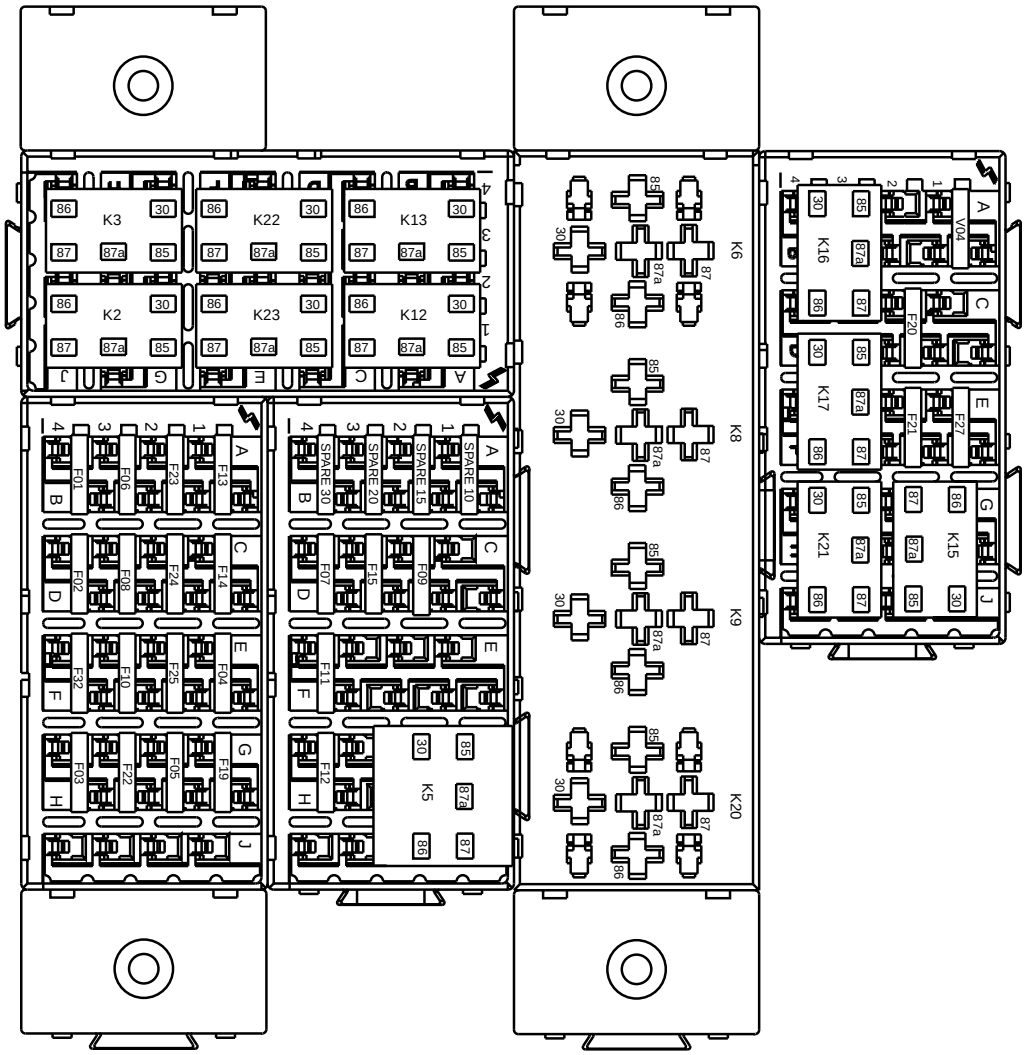
A—7-Pin Outlet Relay (K06)
B—Rear Work Light Relay (K08)



P15390—UN—04APR08

OU1092A,00001F0-19-10APR08-1/1

Load Center Fuses and Relays—Cab (PowrReverser™ Transmission)

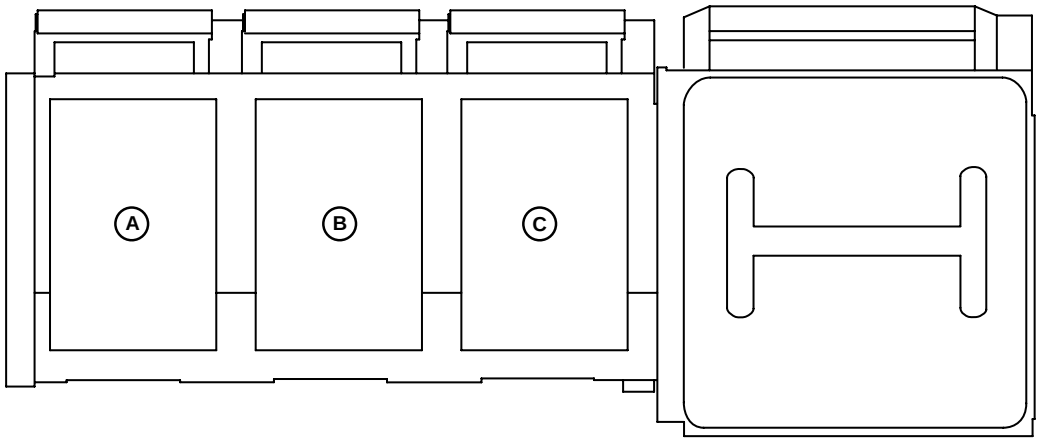


PY15552—UN—05JUL12

K03—Right Turn Relay
K02—Left Turn Relay
K22—Left Blower Relay
K23—Right Blower Relay
K13—Right Flash Relay
K12—Left Flash Relay
SPARE 10—Spare Fuse, 10 Amp
SPARE 15—Spare Fuse, 15 Amp
SPARE 20—Spare Fuse, 20 Amp
SPARE 30—Spare Fuse, 30 Amp
F09—Brake Light Fuse, 15 Amp
F15—Tail Light Fuse, 15 Amp
F07—Turn Signal Light Switch Fuse, 10 Amp
F11—Battery Unswitch Fuse, 30 Amp
F12—Radio Fuse, 10 Amp
K05—Turn/Warning Light Relay
F13—Rear Work Lights Fuse, 30 Amp
F23—HVAC and Right Blower Fuse, 30 Amp
F06—Battery Switch Fuse, 30 Amp
F01—Key Switch Fuse, 30 Amp
F14—Front Work Lights Fuse , 30 Amp
F24—Front Wiper Fuse, 20 Amp
F08—Instrument Cluster Fuse, 10 Amp
F02—Warning Lights and Turn Lights Fuse, 30 Amp
F04—Light Switch Fuse, 20 Amp
F25—Left Blower, 20 Amp
F10—Trailer Auxiliary Power Fuse, 30 Amp
F32—Electronic Control Unit/ Service Advisor Fuse, 30 Amp
F19—Electrohydraulic System Power Fuse, 10 Amp
F05—Low Beam Headlights Fuse, 15 Amp
F22—Seat/Horn Fuse, 10 Amp
F03—Dome Light Fuse, 10 Amp
K06—Trailer Power Relay
K08—Rear Work Light Relay
K09—Front Work Lights Relay
K20—HVAC Relay
F20—Sensor Excitation Fuse, 10 Amp
F27—Backup Alarm Fuse, 5 Amp
F21—Electrohydraulic System Power Fuse, 10 Amp
K16—Not Neutral Relay
K17—Transmission Enable Relay
K15—Electrohydraulic System Relay
K21—Wiper Relay
V04—Diode

PX07220,0001663-19-05JUL12-1/1

Load Center Fuses and Relays—Cab—Behind Instrument Panel



P14913—UN—29NOV07

A—Accessory Controller Relay (K07)
B—Headlights Relay (K27)
C—Neutral Relay (K11)

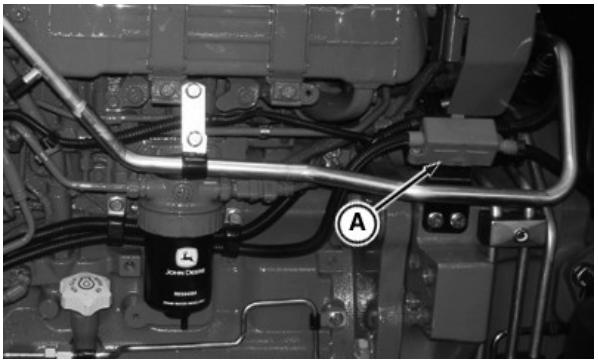
PX07220,0001664-19-04JUL12-1/1

Fusible Link Location

Electrical circuits are protected by a fusible link.

Raise hood. Fusible link junction block (A) is located on right-hand side of engine.

A—Fusible Link Junction Block (F26)



PY15289—UN—02JUN12

SD74272,0000150-19-02JUN12-1/1

Starter Wiring Connections

CAUTION: To avoid shocks and burns, disconnect negative (-) cable before servicing any part of the electrical system.

Make all connections before reconnecting ground cable.

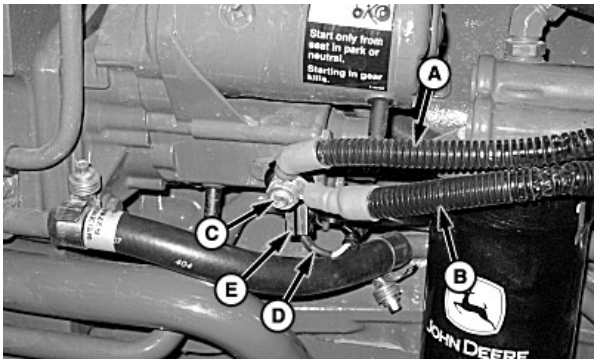
Continued on next page

NS43404,000054C-19-05NOV07-1/2

Cable (A) from fusible link and positive battery cable (B) are connected to large terminal (C).

To remove small wire (D) open tab and loosen screw on small terminal (E). To reinstall small wire reinsert wire, tighten screw and close tab.

A—Cable From Fusible Link
B—Positive Battery Cable
C—Large Terminal
D—Small Wire
E—Small Terminal



P14575—UN—05NOV07

Right Hand Side

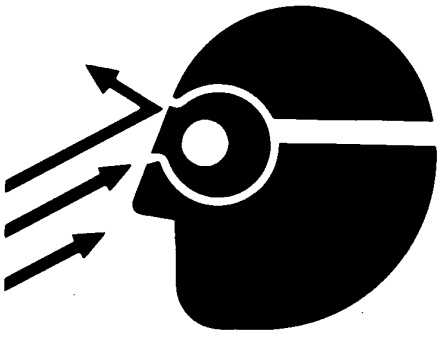
NS43404,000054C-19-05NOV07-2/2

Handle Halogen Light Bulbs Safely

CAUTION: Halogen bulbs (A) contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:

- **Handle bulb by its base. Keep bulb oil free; wear gloves to avoid touching glass.**
- **Turn off light switch and allow bulbs to cool before changing. Leave switch off until bulb change is done.**
- **Wear eye protection.**
- **Do not drop or scratch bulb. Keep away moisture.**
- **Place used bulb in the new bulb's carton and dispose of properly. Keep out of reach of children.**

A—Halogen Bulb



TS266—UN—23AUG88

H39474—UN—30JUN00

OUO1011,0005396-19-16AUG10-1/1

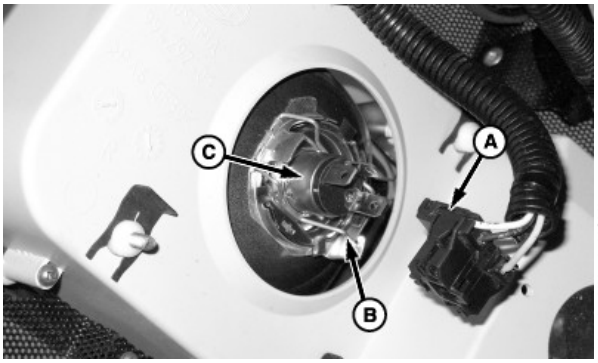
Replace Headlight Element

CAUTION: To guard against personal injury, wear protective eyeglasses and clothing when handling bulb. Turn power off when installing and before removing bulb. Dispose of bulb with care.

Allow bulb to cool before removing.

Read and follow all bulb manufacturer's installation instructions.

1. Raise hood.
2. Remove connector (A).
3. Remove retaining clip (B).
4. Remove and discard old bulb (C).
5. Insert new bulb and close retaining clip.
6. Reattach connector (A) to new bulb and close hood.



P14574—UN—05NOV07

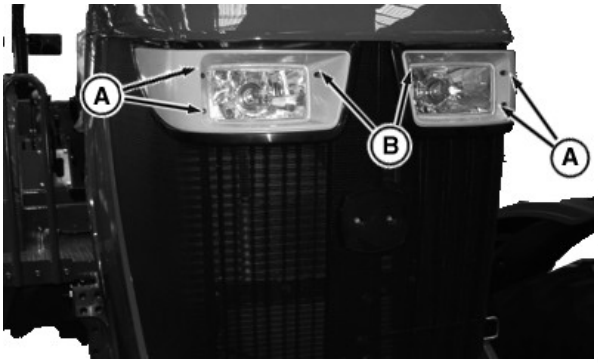
A—Connector
B—Clip
C—Bulb

NS43404,000054D-19-20NOV07-1/1

Adjust Headlights

IMPORTANT: Apply penetrating spray lubricant to the threads of top and bottom adjusting screws before starting procedure. If this is not done, it will be quite hard to turn adjusting screws in either direction.

- To raise light beam, turn top adjusting screws (A) counterclockwise.
- To lower light beam, turn top adjusting screws (A) clockwise.
- To turn light beam inward, turn bottom adjusting screw (B) counterclockwise.
- To turn light beam outward, turn bottom adjusting screw (B) clockwise.



PY15290—UN—02JUN12

A—Top Adjusting Screws
B—Bottom Adjusting Screws

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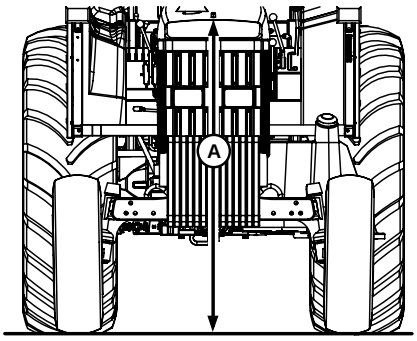
SD74272,0000151-19-02JUN12-1/2

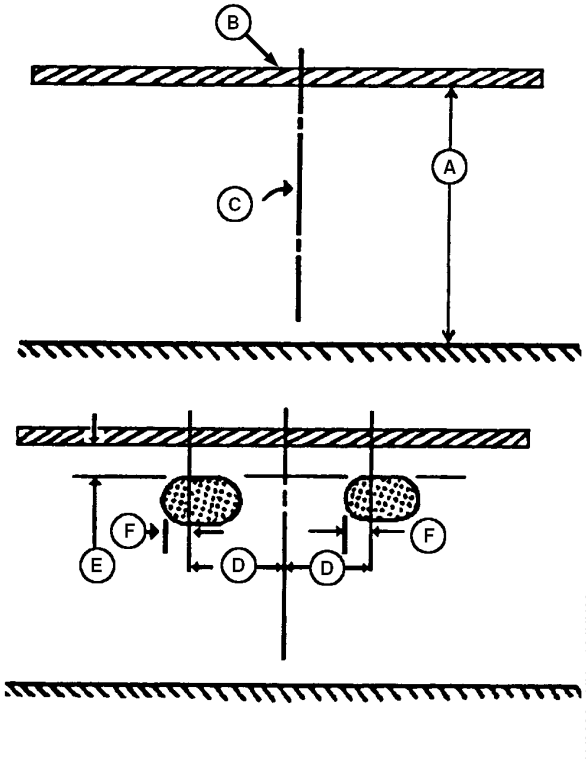
Aim Headlights

1. Park tractor on level ground, with lights 8 m (25 ft) from a wall.
2. Measure from top of hood to the ground (A). Place a strip of masking tape (B) on the wall at the same height.
3. Place a piece of tape, folded in the middle to make a point, on the top front center of the hood.
4. Using the hood tape as a guide, sight across steering wheel and hood to locate tractor centerline. Mark tractor centerline (C) on wall.
5. From tractor centerline (C), mark a point 130 mm (5 in.) out in each direction (D). This mark locates a point directly in front of each headlight center.
6. Turn light switch to road lights position, then set headlight dimmer switch to low beam.
7. Locate small zone of bright light projected by each lamp. Cover other lamps if necessary. Top of zone (E) should be 130 mm (5 in.) below the tape. Left edge of zone (F) should be 130 mm (5 in.) left of lamp location marked (D).
8. Adjust as necessary.

A—Hood-to-Ground Distance
B—Masking Tape
C—Tractor Centerline
D—Center of Headlight
E—Top of Zone
F—Left Edge of Zone



P9136—UN—22SEP00



LV3020—UN—10JUN99

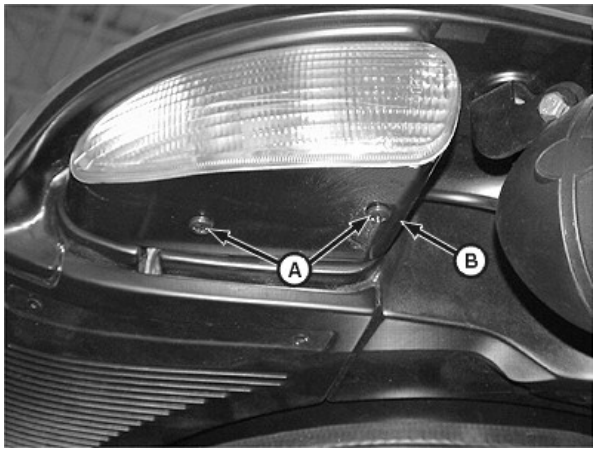
SD74272,0000151-19-02JUN12-2/2

Replace Roof Hazard Light Bulb—Cab

NOTE: Procedure is the same for all warning lights on machine.

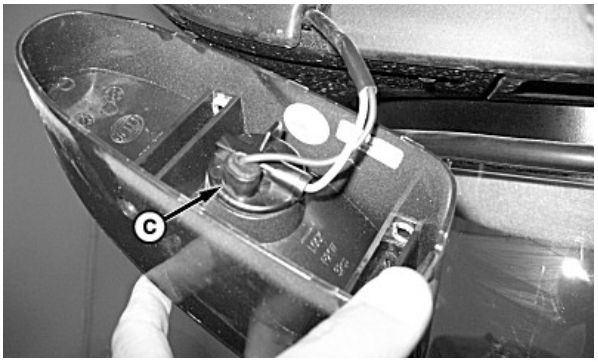
1. Remove socket head screws (A) and lens (B).
2. Twist and pull to remove bulb socket (C) from lens.
3. Gently push and turn bulb (D) to remove.
4. Install new bulb.
5. Reinstall bulb sockets to lens.
6. Inspect rubber seal for cracks that may cause leaks. Replace if necessary.
7. Reinstall lens (B) with previously removed socket head screws (A).

A—Socket Head Screws
B—Lens
C—Bulb Socket
D—Bulb



LV5559—UN—29NOV00

Left Rear Shown



P14710—UN—05NOV07

P14711—UN—05NOV07

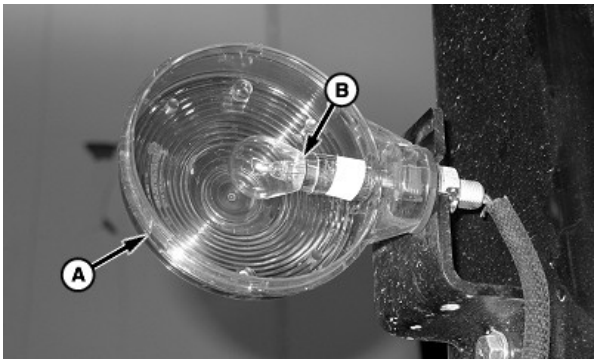
NS43404,0000566-19-17APR08-1/1

Replace Hazard Light Bulb—OOS

NOTE: Procedure is the same for both sides of machine.

1. Pry off half of lens (A) to reveal bulb (B).
2. Gently turn bulb counterclockwise to remove.
3. Insert new bulb and turn clockwise until it sets in.
4. Snap on previously removed lens.
5. Repeat procedure of right hand side if necessary.

A—Lens **B—Bulb**



P14561—UN—05NOV07

Left Side Shown

NS43404,000054E-19-17APR08-1/1

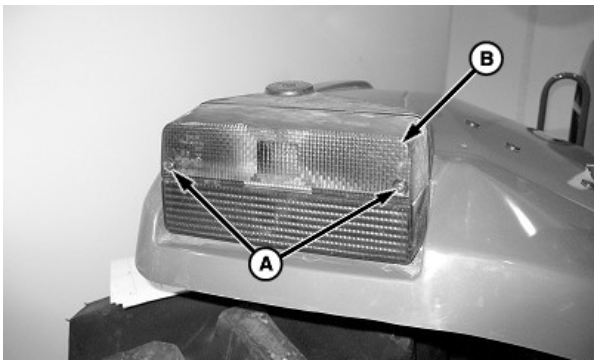
Replace Tail and Turn Light Bulbs

OOS

NOTE: Procedure is the same for both sides of machine.

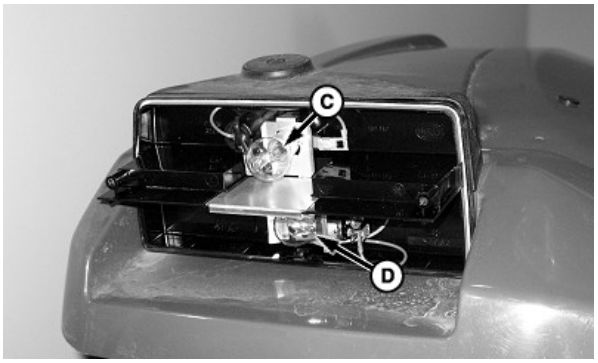
1. Remove screws (A) and lens (B).
2. Gently push and turn bulb (C) and (D) to remove.
3. Gently push and turn new bulb to install.
4. Reinstall cover (B) with previously removed screws (A).

A—Screws
B—Lens
C—Turn Signal Bulb
D—Tail Light Bulb



P14706—UN—05NOV07

Left Rear Shown



P14707—UN—05NOV07

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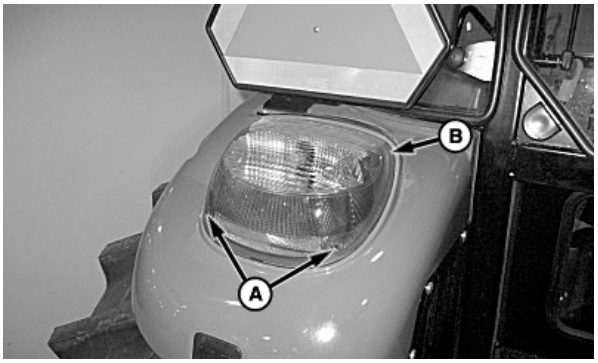
NS43404,0000524-19-15FEB17-1/2

Cab

NOTE: Procedure is the same for both sides of machine.

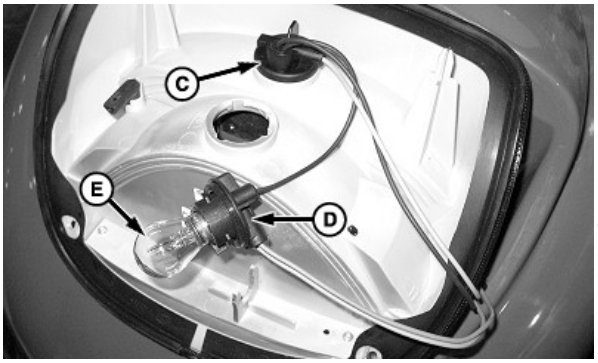
1. Remove screws (A) and cover (B).
2. Twist and pull to remove sockets (C) and (D) from lens.
3. Gently push and turn bulb (E) to remove.
4. Install new bulb.
5. Reinstall sockets to lens.
6. Inspect rubber seal for cracks that may cause leaks. Replace if necessary.
7. Reinstall lens (B) with previously removed screws (A).

A—Screws
B—Lens
C—Turn Signal Socket
D—Tail Light Socket
E—Bulb



P14708—UN—05NOV07

Left Rear Shown



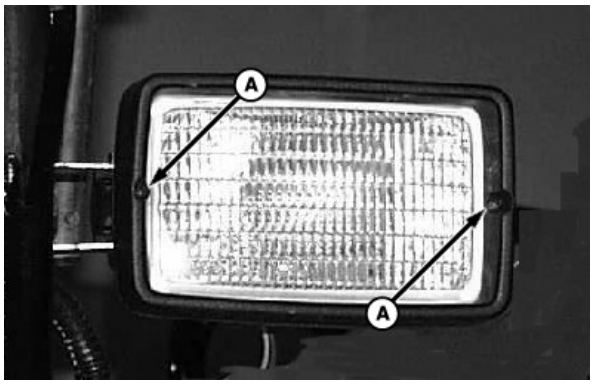
P14709—UN—05NOV07

NS43404,0000524-19-15FEB17-2/2

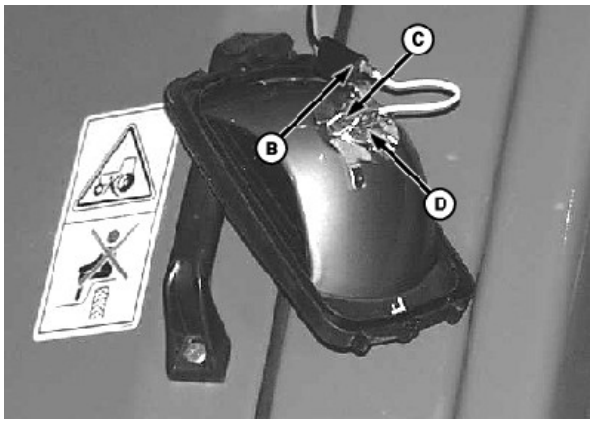
Replace Floodlight Element—OOS

1. Remove screws (A) and bezel.
2. Disconnect connector (B).
3. Release clip (C) across bottom of light fixture.
4. Grasp bulb base (D) and pull it straight out. Properly dispose of old bulb.
5. Slide new bulb assembly into fixture housing and reapply clip (C).
6. Inspect rubber seal for cracks that may cause leaks. Replace if necessary.
7. Connect bezel to connector (B).
8. Reinstall bezel and screws.

A—Screw
B—Connector
C—Clip
D—Bulb



P10222—UN—21SEP01



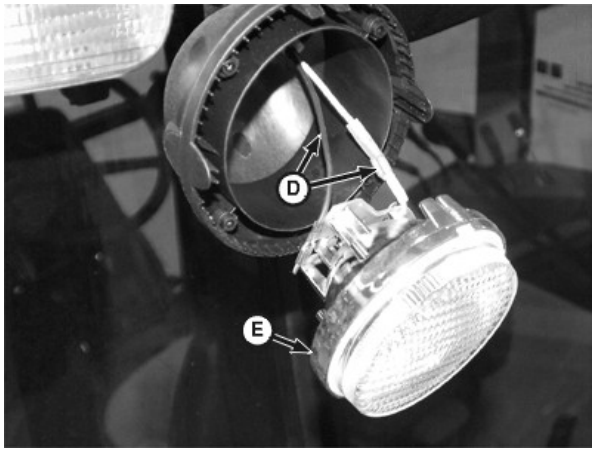
P10221—UN—21SEP01

NS43404,000054B-19-15APR08-1/1

Replace Floodlight Element—Cab

1. Pry off cover (A).
2. Remove screws (B), retaining ring (C) and floodlight bezel (E) from housing.
3. Disconnect connectors (D).
4. Release clip. Remove and discard old bulb.
5. Inspect rubber seal for cracks that may cause leaks. Replace if necessary.
6. Slide new bulb into floodlight bezel (E) and reapply clip.
7. Connect bezel to connector.
8. Reinstall bezel, screws, and cover.

A—Cover
B—Screw (4 used)
C—Retaining Ring
D—Wiring Connector
E—Floodlight Bezel

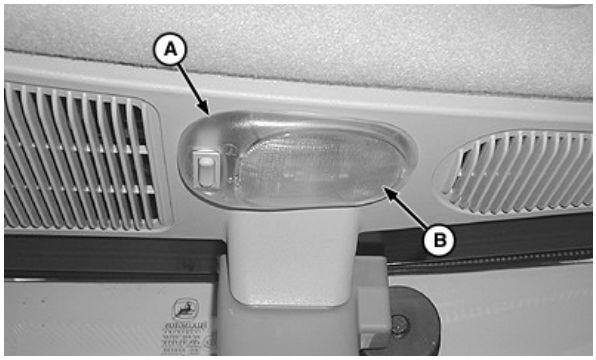


NS43404,0000567-19-15APR08-1/1

Replace Dome Light Bulb—Cab

1. Remove dome light cover (B) from dome light housing (A) using a screwdriver.
2. Pull dome light bulb (C) from socket. Replace dome light bulb.
3. Install dome light cover to dome light housing.

A—Dome Light Housing
B—Dome Light Cover
C—Dome Light Bulb



LV8588—UN—14AUG03

LV8587—UN—14AUG03

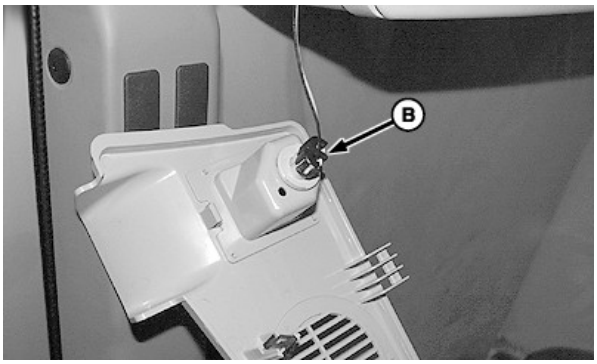
NS43404,0000527-19-17APR08-1/1

Replacing Controls Illumination Light Bulb (Cab)

1. Pry off panel (A).
2. Rotate light bulb retainer (B) counterclockwise approximately 1/4 turn and remove.
3. Pull out light bulb.
4. Install new bulb in reverse order of removal.

A—Panel
B—Light Bulb Retainer

LV9515—UN—07AUG04



LV9598—UN—07AUG04

OUMX005,0001960-19-31JUL04-1/1

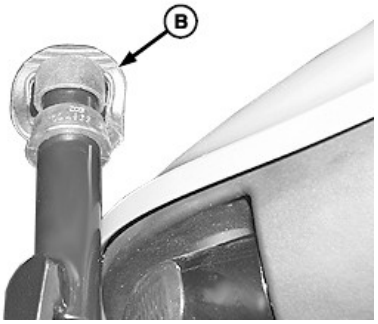
Replacing Rotary Beacon Light Bulb (If Equipped)

CAUTION: Halogen bulbs contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. (See HANDLING HALOGEN LIGHT BULBS SAFELY in this section.)

1. Loosen wing nut (A) and remove rotary beacon light assembly.
2. Install rubber cap (B).

A—Wing Nut
B—Rubber Cap

LV9693—UN—19AUG04

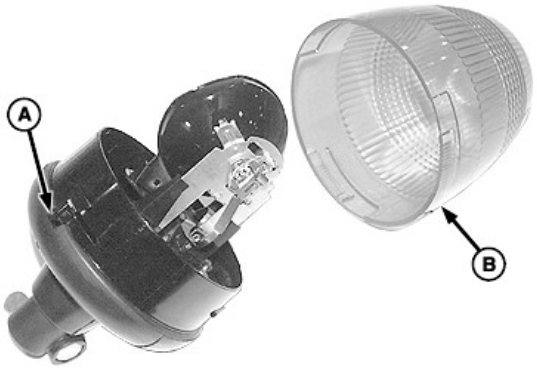


LV9694—UN—19AUG04

OUMX005,00019A1-19-19AUG04-1/2

3. Depress tab (A) and rotate lens (B) counterclockwise to remove.
4. Pull tab (C) away from bulb.
5. Unlatch retaining spring (D) and remove light bulb (E).
6. Install new bulb in reverse order of removal.

A—Tab
B—Lens
C—Tab
D—Retaining Spring
E—Bulb



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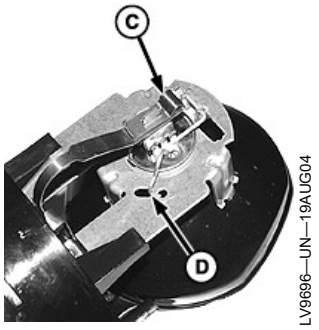

LV9696—UN—19AUG04

LV9697—UN—19AUG04

OUMX005,00019A1-19-19AUG04-2/2

Engine Troubleshooting

Symptom	Problem	Solution
Engine cranks but will not start	Incorrect starting procedure.	Review starting procedure.
	No fuel.	Check fuel tank.
	Exhaust restricted.	Check and correct exhaust restriction.
	Fuel filter plugged or full of water.	Replace fuel filter or drain water from filter.
	Injection pump not getting fuel or air in fuel system.	Check fuel flow at supply pump or bleed fuel system.
	Faulty injection pump or nozzles.	Consult authorized diesel repair station for repair or replacement.
Engine hard to start or will not start	Improper starting procedure	Review starting procedure
	No fuel	Check fuel tank
	Air in fuel tank	Bleed fuel tank
	Fuel pump hand primer left raised	Push primer down
	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 filters	Replace filter elements
	Dirty or faulty injectors	Have John Deere dealer check injectors
Engine knocks	Insufficient oil	Add oil
	Incorrect injection pump timing	See your John Deere dealer
	Low coolant temperature	See your John Deere dealer
	Engine overheating	See “Engine Overheats”
Engine runs irregularly or stalls frequently	Low coolant temperature	See your John Deere dealer
	Clogged fuel filters	Replace filter elements
	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

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SP21231,00002B1-19-01JUN12-1/3

Symptom	Problem	Solution
Below normal engine temperature	Defective temperature gauge or sender	Check gauge and sender
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 filters	Replace filter elements
	Improper type of fuel	Use proper fuel
	Overheated engine	See “Engine Overheats”
	Below normal engine temperature	See your John Deere dealer
	Improper valve clearance	See your John Deere dealer
	Dirty or faulty injectors	Have John Deere dealer check injectors
	Incorrect injection pump timing	See your John Deere dealer
	Turbocharger not functioning	See your John Deere dealer
	Restricted fuel line	See your John Deere dealer
	Restricted return line	See your John Deere dealer
	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
Engine emits black or gray 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
	Defective turbocharger	See your John Deere dealer
	Incorrect engine timing	See your John Deere dealer
Engine emits white smoke	Improper type fuel	Use proper fuel

Continued on next page

Symptom	Problem	Solution
	Engine out of time	See your John Deere dealer
	Defective thermostat	Replace thermostat
	Defective injection nozzles	See your John Deere dealer
	Turbocharger not functioning	See your John Deere dealer
	Cold start advance or light load advance not functioning	See your John Deere dealer
	Cold engine	Bring engine to operating temperature
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 and hoses for loose connection or leaks
	Faulty reservoir cap	Replace cap
	Loose or defective fan belt	Replace belt
	Cooling system needs flushing	Flush cooling system
	Defective thermostat	See your John Deere dealer
	Defective temperature gauge or sender	See your John Deere dealer
High fuel consumption	Improper type of fuel	Use proper fuel type
	Incorrect grade of fuel	Use correct grade of 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
	Incorrect engine timing	See your John Deere dealer
	Implement improperly adjusted	See implement operator's manual
	Low engine temperature	See your John Deere dealer
	Excessive ballast	Adjust ballast to load
	Restricted air intake system	Check system
	Plugged crankcase vent tube	Clean vent tube
	Defective turbocharger	See your John Deere dealer

SP21231,00002B1-19-01JUN12-3/3

Electrical System Troubleshooting

Symptom	Problem	Solution
Battery will not charge	Loose or corroded connections	Clean and tighten connections
	Sulfated or worn-out battery	Check electrolyte level and specific gravity
	Loose or defective alternator/fan belt	Replace belt
Charging system indicator glows with engine running	Low engine speed	Increase speed
	Defective battery	Check electrolyte level and specific gravity
	Defective alternator	See your John Deere dealer
	Slipping alternator/fan belt	Replace belt
Starter inoperative	Shift lever or power reverse lever in gear	Move shift lever or power reverse lever to neutral
	PTO lever in engaged position	Move PTO lever to disengaged position
	Low battery output	See your John Deere dealer
	Blown fuse	Replace fuse
Starter cranks slowly	Low battery output	Check electrolyte level and specific gravity
	Crankcase oil too heavy	Use proper viscosity oil
	Loose or corroded connections	Clean and tighten battery connection
Light system does not function; rest of electrical system functions	Blown fuse	Replace fuse
Entire electrical system does not function	Fusible link blown	See your John Deere dealer
	Faulty battery connections	Clean and tighten connections
	Sulfated or worn-out battery	Check electrolyte level and specific gravity
	Blown fuse	Replace fuse
Relay(s) sticking or nonfunctional; repeated failures	Failed diode(s)	See your John Deere dealer

NS43404,000052D-19-23JAN08-1/1

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
	Dirty or clogged oil cooler	Clean or flush oil cooler
Low transmission oil pressure	Low oil supply	Fill system with correct oil
	Clogged transmission/hydraulic oil filter	Replace filter
	Failed pressure relief valve	Check valve, replace if necessary
Transmission stuck in neutral or it is hard to shift any gear	Speed shift linkage stuck or rusty	Clean or lubricate the speed shift lever linkages
	Interlock cable misadjusted	Adjust interlock cable per technical repair manual

AG, OUO6070,-19-23JAN08-1/1

Rockshaft and 3-Point Hitch Troubleshooting

Symptom	Problem	Solution
Insufficient transport clearance	Center link too long	Adjust center link
	Lift links too long	Adjust lift links
	Implement not level	Level implement
	Implement not properly adjusted	See implement operator's manual
	Sway chains adjusted too short	Lengthen sway chains
Hitch drops slowly	Rockshaft rate-of-drop control not properly set	Adjust rate-of-drop control knob
Hitch fails to lift or lifts slowly	Excessive load on hitch	Reduce load
	Low oil level	Fill system with proper oil
	Hydraulic oil too cold	Allow oil to warm
	Transmission/hydraulic oil filter clogged	Replace filter
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 limit stop
	Improper setting of draft control lever	See Rockshaft and 3-Point Hitch section
Insufficient or no hitch response to draft load	Draft control knob in “Min” position	Pull knob upward
	Lift links too short	Adjust lift links
	Lack of penetration	See implement operator's manual
	Rate-of-drop too slow	Adjust rate-of-drop control knob
Hitch too responsive	Improper draft sensing adjustment	Push knob down
Hitch drops too fast	Rate-of-drop set too fast	Adjust rate-of-drop control knob

OUO6070,00000A9-19-23JAN08-1/1

Brakes Troubleshooting

Symptom	Problem	Solution
No solid pedal feel	Pedals adjusted incorrectly	See your John Deere dealer
Excessive pedal travel	Pedals adjusted incorrectly	See your John Deere dealer
Brakes drag during transport	Brakes out of adjustment	See your John Deere dealer

OUO6070,00000A8-19-23JAN08-1/1

Hydraulic System Troubleshooting

Symptom	Problem	Solution
Entire hydraulic system fails to function	Low oil supply	Fill system with correct oil
	Clogged transmission/hydraulic filter	Replace filter
	High-pressure internal leak	See your John Deere dealer
Hydraulic 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
	Dirty or clogged oil cooler	Clean or flush oil cooler

AG, OUO6070-19-23JAN08-1/1

Deluxe Selective Control Valve Troubleshooting (If Equipped)

Symptom	Problem	Solution
Flow control knob will not turn	Dirt build-up.	Clean dirt from flow control knob and shaft.
Remote cylinder rate-of-travel too fast or too slow	Incorrect flow control adjustment.	Adjust flow control.
Detent does not hold SCV lever or releases too soon	Detent selector in wrong position.	Turn selector to correct position.
	Pressure restriction with some implements.	Reduce oil flow by changing flow control setting.
	Flow control or detent setting incorrect.	Adjust flow control and/or detent setting.
SCV lever does not release	Detent selector not in automatic detent position.	Turn selector to correct position.
	Built-in pressure leakage with some implements.	Increase oil flow by changing flow control setting.
	Flow control or detent setting incorrect.	Adjust flow control and/or detent setting.

OUMX005,0001AB9-19-29SEP04-1/1

Remote Hydraulic Cylinder 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.
	Hoses not completely installed.	Attach hoses correctly.
	Incorrect remote cylinder size.	Use correct size cylinder.

OUMX005,0001ABA-19-29SEP04-1/1

Heater and A/C System (Cab) Troubleshooting

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.
Blower operates only in purge position	One of two fuses blown.	Replace fuse.
	Blown blower resistance assembly.	See your John Deere dealer.
Heater does not work	Low coolant level.	Check coolant level; add if necessary.
	Faulty thermostat.	See your John Deere dealer.
	Heater control valve not functioning properly.	See your John Deere dealer.
	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.	Replace belt if necessary.
	Blown fuse.	Replace fuse.
	Defective switch.	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
	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.	See your John Deere dealer.
Water leaking or dripping from evaporator core compartment	Loose hose clamp.	Tighten clamp.
	A/C drip pan dirty.	Clean evaporator pan and outlet with compressed air.
	A/C drain tubes plugged.	Clean drain tubes.
Strange odors inside operator's cab	Dirty air filters.	Clean filters.

Continued on next page

NS43404,000052E-19-23JAN08-1/3

Symptom	Problem	Solution
	Evaporator condenser pan dirty.	Clean pan and outlet with compressed air.
	Drain tubes plugged.	Clean drain tubes.
	Tobacco smoke and tar on evaporator exterior.	Clean filters.
Partial frosting and sweating of lines combined with poor cooling	Compressor belt slipping.	Replace belt.
	Loss of refrigerant.	Check system for leaks. See your John Deere dealer.
	Restricted or clogged liquid line.	See your John Deere dealer.
	Expansion valve malfunctioning.	See your John Deere dealer.
Ice flecks 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.	Replace belt.
	Compressor clutch not engaging.	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.	See your John Deere dealer.
	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.

Continued on next page

Symptom	Problem	Solution
Hissing noise at expansion valve	Loss of refrigerant.	Check system for leaks. See your John Deere dealer.
	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.

NS43404,000052E-19-23JAN08-3/3

Wiper(s), Floodlights, Dome Light and Radio (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).	See your John Deere dealer.
	Defective motor(s).	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
Floodlights do not work	Blown fuse.	Replace fuse.
	Defective switch.	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
Dome light does not work	Blown fuse.	Replace fuse.
	Defective bulb or switch.	Replace bulb or see your John Deere dealer.
	Defective door switch(es).	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
Radio does not work	Blown fuse.	Replace fuse.

NS43404,000052F-19-23JAN08-1/1

Place Tractor in Long-Term Storage

IMPORTANT: If the tractor will not be used for several months, the following recommendations for storage and removal from storage will minimize corrosion and deterioration.

NOTE: Use Engine Storage Kit available from your John Deere dealer.

Perform the following steps for long-term tractor storage:

1. Service engine air cleaner. (See SERVICE ENGINE AIR INTAKE AND PRE-CLEANER in General Maintenance and Inspection section.)
2. If coolant in tractor is more than two years old, flush cooling system. (See DRAIN, FLUSH AND REFILL COOLING SYSTEM in Maintenance—Cooling System section). Add 50% antifreeze water mixture. Test coolant for adequate cold weather protection.
3. Change engine oil and filter (See procedure in Lubrication section).

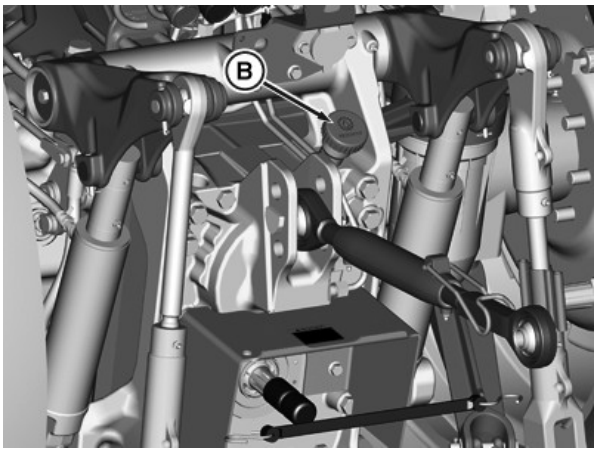
SK35149,0000540-19-04JUL12-1/4

4. Drain fuel tank. Remove fuel tank fill cap (A) and add 4 L (1 gal) of fuel. Then add 0.4 L (12 oz) of corrosion inhibitor. Install cap.
5. Remove transmission/hydraulic oil fill cap (B) and add 0.25 L (1 pt) of corrosion inhibitor. Install cap.
6. Depress clutch and start engine. Run engine until it reaches operating temperature. Raise and lower rockshaft several times. Shut off engine.
7. Remove fuel tank fill cap and add 0.5 L (16 oz) inhibitor. Install cap.
8. Remove engine oil fill cap (C) and add 0.5 L (16 oz) inhibitor. Install cap.

A—Fuel Tank Fill Cap
B—Transmission/Hydraulic Oil Fill Cap
C—Engine Oil Fill Cap

PY14624—UN—02JUN12

Left-Hand Side of Tractor



PY15549—UN—04JUL12

Rear of Tractor

PY14626—UN—02JUN12

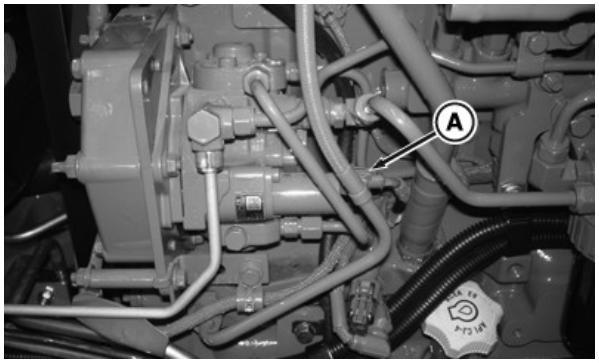
Left-Hand Side of Engine

Continued on next page

SK35149,0000540-19-04JUL12-2/4

9. Disconnect fuel shut-off solenoid wiring leads/connectors (A). (This will prevent engine from starting while cranking.)
10. Remove air intake hose at manifold. Pour 0.1 L (3 oz) inhibitor into manifold and replace hose. Pull hand throttle back to slow idle position. Crank engine only a few revolutions.
11. Remove alternator/fan belt after it has cooled.
12. Remove and clean battery. Store in a cool, dry place. Keep it charged.[1]
13. Tie or block clutch pedal in the disengaged position.
14. Coat exposed metal surfaces such as adjustable front axles, if extended, with grease or a corrosion inhibitor.

[1] Disconnect battery ground cable for short-term storage periods (20 to 90 days).

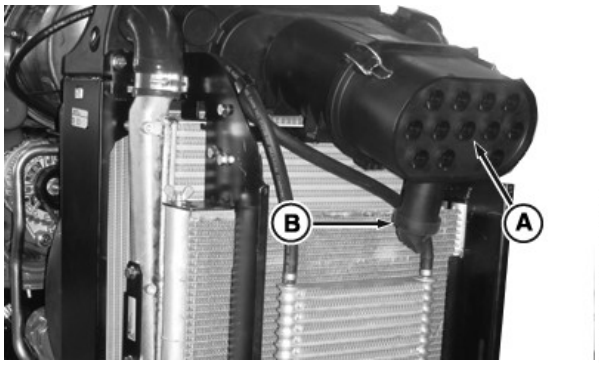


PY14627—UN—02JUN12

A—Fuel Shut-off Solenoid Wiring Leads/Connectors

SK35149,0000540-19-04JUL12-3/4

15. Use tape to seal engine air cleaner inlet (A), dust unloader valve (B), exhaust pipe, crankcase fill cap, fuel fill cap, coolant recovery tank, and transmission/hydraulic system fill cap.
16. Cover dash with opaque material to prevent gauges from fading.
17. Raise tires off ground. Protect from heat and sunlight.
18. Thoroughly clean tractor. Touch up any painted surfaces that are scratched or chipped.
19. If tractor must be stored outside, cover it with a waterproof material.
20. **Cab:** Rotate A/C compressor pulley (C) several turns once a month to prevent seizure of compressor.



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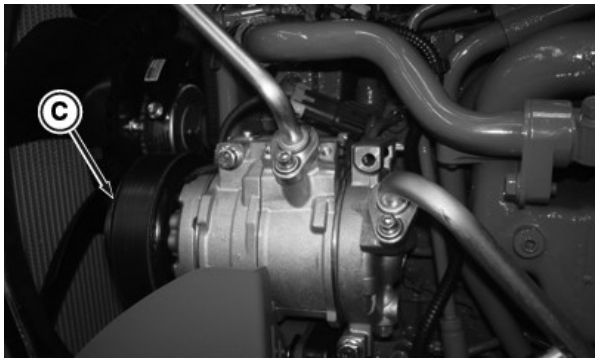


PY14629—UN—02JUN12

A—Air Cleaner Inlet
B—Dust Unloader Valve
C—A/C Compressor Pulley (Cab)

SK35149,0000540-19-04JUL12-4/4

Remove Tractor From Storage

Perform the following steps to remove tractor from storage:

1. Check tire inflation pressure. (See Wheels, Tires and Treads section.) Lower tires to ground.
2. Remove all coverings.
3. Unseal all openings sealed during storage.
4. Install battery.
5. Remove ties or block which secured clutch pedal down.

IMPORTANT: Cab tractor: If air conditioning compressor is seized, engine operation with compressor clutch engaged will damage belt or compressor.

6. **Cab:** Check that A/C compressor pulley moves freely and is not seized.
7. Install alternator/fan belt.
8. Check levels of engine oil, transmission/hydraulic oil and engine coolant. Add fluids as needed.
9. Drain a small amount of fuel from fuel tank to purge any moisture condensation that has collected.
10. Fill fuel tank.
11. Perform all appropriate services listed in Maintenance and Service Intervals section, as dictated by elapsed storage period.
12. Check instruments and indicators by turning key switch to RUN position.

SK35149,0000541-19-04JUL12-1/2

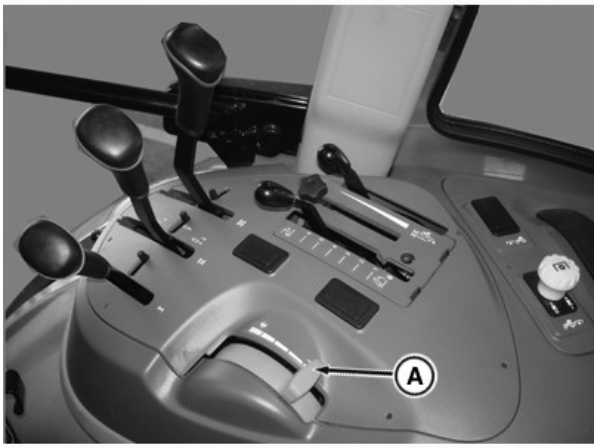
IMPORTANT: Do not operate starter more than 20 seconds at a time, and wait at least two minutes for starter to cool before trying again.

13. Make sure gear shift lever and PowrReverser™ lever (if equipped) is in neutral (“N”) and PTO control lever is in disengaged position. Pull hand throttle (A) all the way back, depress clutch pedal and crank engine until oil pressure rises. Turn key switch to OFF position.
14. Connect fuel shut-off solenoid wiring leads/connectors.
15. Depress clutch pedal and start engine. Operate engine at slow idle for several minutes. Warm up carefully and check all systems before placing tractor under load.

A—Hand Throttle Lever

PY14630—UN—01JUN12

OOS only



PY15551—UN—04JUL12

Cab Only

SK35149,0000541-19-04JUL12-2/2

Paint Finish Care

Washing tractor regularly will preserve the finish. Wash tractor in indirect sunlight. All cleaning agents should be flushed promptly and not allowed to dry on the paint surface.

IMPORTANT: Do not use hot water, strong soaps or chemical detergents. Use liquid hand, dish or car washing (non detergent) soaps. Cleaning agents containing acid or abrasives should not be used.

Waxing tractor occasionally may be necessary to remove residue from paint finish. Do not use waxes containing abrasive compounds.

Inspect paint surface, during washing or waxing, for chips and scratches. Repaint any areas where paint has been removed. Paint materials are available from your John Deere dealer.

AG,RX15494,1914-19-06SEP99-1/1

General Specifications

NOTE: Specifications and design subject to change without notice.

Tractor Model	6105D	6115D	6130D	6140D
ENGINE				
Engine Model	4045H	4045H	4045H	4045H
EPA Tier Level	John DeerePowerTech™ PWX[a](B20 Diesel Compatible)	John DeerePowerTech™ PWX[a](B20 Diesel Compatible)	John DeerePowerTech™ PVX[a](B20 Diesel Compatible)	John DeerePowerTech™ PVX[a](B20 Diesel Compatible)
Type	Diesel, in-line, 4-cylinder, wet-sleeve cylinder liners with 4 valves-in-head			
Rated Engine power hp (hp ISO) at 2200 engine rpm (97/68EC)[b]	78 kW (105 hp)	86 kW (115 hp)	97 kW (130 hp)	104 kW (140 hp)
Max Engine power hp (hp ISO) at 1900 engine rpm (97/68EC)[b]	N/A	N/A	N/A	N/A
Engine Peak Torque (at 1600 rpm)	423 N-m (312 lb.-ft)	477 N-m (352 lb.-ft)	533 N-m (393 lb.-ft)	574 N-m (423 lb.-ft)
Aspiration	Wastegate turbocharger with air-to-air aftercooling and cooled exhaust gas recirculation		Single variable geometry turbocharger with air-to-air aftercooling and cooled exhaust gas recirculation	
Rated PTO power (hp SAE) at engine speed (2100 rpm)	65 kW (87 hp)	71 kW (95 hp)	78 kW (105 hp)	86 kW (115 hp)
Constant Power Range (rpm)	1800 - 2200 rpm			
Engine Torque Rise	30%			
Engine Power Bulge	0%			
Rated Engine Speed	2200 rpm			
Cylinders	4			
Bore	106 mm (4.17 in.)			
Stroke	127 mm (5.0 in.)			
Displacement	4.5 L (275 cu in.)			
Compression	19.0:1			
Firing Order	1-3-4-2			
Intake Valve Clearance	0.36 mm (0.014 in.)			
Exhaust Valve Clearance	0.46 mm (0.018 in.)			
Slow Idle (rpm)	900 ± 10 (isochronous)			
Fast Idle (rpm)	2300 ± 10			
Lubrication	Full-pressure, full-flow filtration with bypass			
Intelligent Power Management	N/A			
FUEL AND AIR SYSTEM				
Fuel Injection Type	Electronically controlled, high-pressure common rail with mechanical fuel transfer pump (manual priming)			
Filter system	Two Stage with water separator and service indicator light			
Filter, primary	10 micron replaceable cartridge with water indication sensor and drain			
Filter, secondary	2 micron spin-on element			
Injection Pump	Denso			
Governor	Electronic			
Air Cleaner	Dry Type with Safety Element			
Filter, oil	Replaceable cartridge style oil filter			
Filter, engine air	Dual stage with aspiration			
ELECTRICAL SYSTEM—12-VOLT, NEGATIVE GROUND				
Battery Model	925 CCA			
Cold Cranking Amps	925			
Reserve Capacity (minutes)	180			
Battery BCI Group Size	31			
Alternator/Battery	90 amps /12 V			

Continued on next page

SV86979,000014F-19-11SEP12-1/3

Tractor Model	6105D	6115D	6130D	6140D
7-Pin Connector	In Base			
TRANSMISSION				
PowrReverser™ (PRT)	In Base			
Gears Forward	9			
Gears Reverse	WITH PowrReverser: 9			
Speed Ranges	3			
Hydraulic Actuated Multi-Disk Wet Master Clutch	N/A			
Hydraulic Actuated Multi-Disk Wet Master Clutch—PowrReverser Option	In Base			
FRONT AXLE				
2WD – tread range 60.4 to 80.4 in. (1533 to 2043 mm)	Optional	Optional	N/A	N/A
MFWD - tread range 59.7 to 79.4 in. (1516 to 2016 mm)	Standard			
Differential Lock (2WD)	N/A			
Differential Lock (MFWD)	Limited Slip			
REAR AXLE				
Final Drives	Inboard planetary			
Flange	Standard			
Rear Wheel Equipment	N/A			
Differential Lock	Full-Locking Mechanical			
BRAKES	Mechanically Actuated, Wet Disk			
POWER TAKE-OFF (PTO)				
Control	Independent			
Activation	Electro Hydraulic			
Size	35 mm (13/8 in.)			
540/1000 rpm Switchable, Rear	In Base			
1-3/8 in., 540/1000 reversible shaft	In Base			
PTO Speed at Engine RPM	540 PTO at 2085 Engine rpm /1000 PTO at 2067 Engine rpm			
PTO Torque Rise	30%			
PTO Power Bulge	0%			
HYDRAULIC SYSTEM				
Type	Open Center, Gear Driven			
Pump General Specification	External Gear Pump			
Implement Pump	In Base			
Steering Pump	In Base			
Transmission Pump	In Base			
Implement Pump Capacity (2200 rpm)	75.7 L/min (20.0 gpm)			
Implement Pump Flow at Idle Speed (900 rpm)	31 L/min (8.2 gpm)			
Maximum Pressure	19,500 kPa (2828 psi)			
Power Steering	Hydrostatic			
Steering Pump Capacity (2200 rpm)	29.9 L/min (7.9 gpm)			
Transmission Pump Capacity (2200 rpm)	29.9 L/min (7.9 gpm)			
Standard lift capacity 610 mm behind the hitch point	2500 kg (5511 lb)			
Main pump, axial piston (displacement)	36.5 cc			
Heavy duty lift capacity 610 mm behind the hitch point	3318 kg (7314 lb)			
Rated flow (at 90% Advertised Efficiency)	20 US gpm / 75.7 lpm			
Take out oil capacity	5.8 US gal. / 22 L.			
SELECTIVE CONTROL VALVE (SCV)				
Two Mechanical SCV	In Base			
Three Mechanical SCV	Optional			
THREE-POINT HITCH				
Fixed Draft Links	In Base			
Telescopic Draft Links	Optional			

Continued on next page

Tractor Model	6105D	6115D	6130D	6140D
Category 2 (5500 lb (2500 kg) Standard Lift at 610 mm behind hitch point)	Standard			
Category 2 (7300 lb (3318 kg) Heavy Duty Lift at 610 mm behind hitch point)	Optional			
Draft Sensing	Optional			
Drawbar				
Category 2 1000 kg (2205 lb.) - 1250 kg (2756 lb.) Maximum Vertical Load dependent on drawbar position	Standard			
Cat 2 1200 kg (2645 lb.) - 1900 kg (4189 lb.) Maximum Vertical Load dependent on drawbar position	Optional			
DRAIN AND REFILL CAPACITIES				
Fuel Tank	158 L (41.7 gal)			
Cooling System	17.7 L (4.7 US gal)		18.7 L (4.9 US gal)	
Crankcase, including filter	15 L (4 US gal)			
Transmission Case	58 L (15.3 US gal)			
MFWD Axle Housing	5 L (1.3 US gal)			
Wheel Hub Without Brakes	0.8 L (0.2 US gal)			
Wheel Hub With Brakes	N/A			
OPERATOR SEAT				
OOS				
Vinyl Seat, Mechanical Suspension with Operator Presence Switch	In Base			
Cab				
Fabric Seat, Mechanical Suspension, Adjustable with Operator Presence Switch	In Base			
Fabric Seat, Air Suspension, Adjustable with Operator Presence Switch	Optional			
ADDITIONAL EQUIPMENT OPTIONS				
Mechanical Hand Throttle (OOS)	In Base			
Electronic Hand Throttle (Cab)	In Base			
Foot Throttle	In Base			
Engine Block Heater	Optional			
Front Fenders (MFWD only)	Optional			
STEERING COLUMN				
Hydrostatic Power	Hydrostatic, Flow Metering System			
Fixed (OOS)	In Base			
Fixed (Cab)	N/A			
Tilt/Telescoping (OOS)	Optional			
Tilt/Telescoping (Cab)	In Base			

[a] Tier 4 Emission certified (Power Tech) engines can be identified by letter “R” within the engine serial number. Example is PE4045RXXXXXX

[b] 97/68/EC power refers to average (50% MOE) net brake power measured and corrected for ambient conditions according to the EC emissions directive. It is equivelent to internal Deere Standard RES10080, and SAE Standards J1349, J1995.

PowerTech is a trademark of Deere & Company

SV86979,000014F-19-11SEP12-3/3

Overall Dimensions and Weights

NOTE: Specifications and design subject to change without notice.

All dimensions are of a machine equipped with in base tires.

Tractor Model	6105D	6115D	6130D	6140D
DIMENSIONS				
Wheelbase—2WD	2456 mm (96.8 in.)		N/A	
Wheelbase—MFWD	2450 mm (96.5 in.)			
Overall Length—2WD	4280 mm (168.5 in.)	4280 mm (168.5 in.)	N/A	N/A
Overall Length—MFWD	4216 mm (166 in.)	4216 mm (166 in.)	4216 mm (166 in.)	4216 mm (166 in.)
Overall Width Flange-to-Flange	2451 mm (96.5 in.)	2451 mm (96.5 in.)	2451 mm (96.5 in.)	2451 mm (96.5 in.)
Overall Height (top of exhaust)	2794 mm (110 in.)	2794 mm (110 in.)	2794 mm (110 in.)	2794 mm (110 in.)
Ground-to-Cab Top	2756 mm (108 in.)	2756 mm (108 in.)	2756 mm (108 in.)	2756 mm (108 in.)
Rear Axle Centerline-to-Cab Top	1976 mm (77.8 in.)	1976 mm (77.8 in.)	1976 mm (77.8 in.)	1976 mm (77.8 in.)
GROUND CLEARANCE				
Front Axle				
2WD (10.00-16 tires)	597 mm (23.5 in.)	597 mm (23.5 in.)	N/A	N/A
MFWD Front Differential	457 mm (18 in.)	457 mm (18 in.)	457 mm (18 in.)	457 mm (18 in.)
MFWD Output Gearbox	495 mm (19.5 in.)	495 mm (19.5 in.)	495 mm (19.5 in.)	495 mm (19.5 in.)
Rear Axle Housing				
Front Tires 340/85 R24 Rear Tires 460/85 R34	390 mm (15.4 in.)	390 mm (15.4 in.)	390 mm (15.4 in.)	390 mm (15.4 in.)
Front Tires 380/85 R24 Rear Tires 460/85 R38	422 mm (16.6 in.)	422 mm (16.6 in.)	422 mm (16.6 in.)	422 mm (16.6 in.)
Front Tires 12.4-24 Rear Tires 12.4-42	392 mm (15.4 in.)	392 mm (15.4 in.)	392 mm (15.4 in.)	392 mm (15.4 in.)
Front Tires 13.6-24 Rear Tires 16.9-38	392 mm (15.4 in.)	392 mm (15.4 in.)	392 mm (15.4 in.)	392 mm (15.4 in.)
Front Tires 14.9-24 Rear Tires 18.4-38	415 mm (16.3 in.)	415 mm (16.3 in.)	415 mm (16.3 in.)	415 mm (16.3 in.)
Drawbar				
Front Tires 340/85 R24 Rear Tires 460/85 R34	417 mm (16.4 in.)	417 mm (16.4 in.)	417 mm (16.4 in.)	417 mm (16.4 in.)
Front Tires 380/85 R24 Rear Tires 460/85 R38	485 mm (19.1 in.)	485 mm (19.1 in.)	485 mm (19.1 in.)	485 mm (19.1 in.)
Front Tires 12.4-24 Rear Tires 12.4-42	415 mm (16.3 in.)	415 mm (16.3 in.)	415 mm (16.3 in.)	415 mm (16.3 in.)
Front Tires 13.6-24 Rear Tires 16.9-38	467 mm (18.4 in.)	467 mm (18.4 in.)	467 mm (18.4 in.)	467 mm (18.4 in.)
Front Tires 14.9-24 Rear Tires 18.4-38	508 mm (20.0 in.)	508 mm (20.0 in.)	508 mm (20.0 in.)	508 mm (20.0 in.)
SHIPPING WEIGHT				
OOS				
2WD	3591 kg (7916 lb)		—	—
MFWD	4,150 kg (9,150 lb)			
Cab				
2WD	3700 kg (8200 lb)		—	—
MFWD	4,535 kg (10,000 lb)			
BALLAST				
Max Ballast Level	6520 kg (14374 lb)			
Max Payload Capacity	8000 kg (17636 lb)			
ADDITIONAL BALLAST				
Front Weight Support	84 kg (185 lb)			
Front Weights, 47 kg (104 lb) each, Maximum Number	18	18	18	18
Rear Weights, 55 kg (121.3 lb)	8	8	8	8

Continued on next page

PX07220,0001668-19-11SEP12-1/2

% Front Weight (MFWD/Cab)	34%			
% Rear Weight (MFWD/Cab)	66%			
Roll-Over Protective Structure (ROPS) (OOS)				
Foldable	In Base	In Base	In Base	In Base
Fixed	Optional	Optional	Optional	Optional
TIRE SIZES				
2WD Front				
10.00-16	In Base	In Base	N/A	N/A
2WD Rear				
16.9-38	Optional	Optional	N/A	N/A
18.4-34	In Base	In Base	N/A	N/A
18.4-38	Optional	Optional	N/A	N/A
MFWD Front				
13.6-24	In Base	In Base	In Base	In Base
14.9-24	Optional	Optional	Optional	Optional
MFWD Rear				
16.9-38	N/A	N/A	N/A	N/A
18.4-34	In Base	In Base	In Base	In Base
18.4-38	Optional	Optional	Optional	Optional

PX07220,0001668-19-11SEP12-2/2

Turning Radius—MFWD Axle

NOTE: All measurements are with 8-position wheels and without using brakes.

		Tread						
Tire Size		**A N/A**	**B 1520 mm (59.8 in.)**	**C 1630 mm (64.2 in.)**	**D 1744 mm (68.7 in.)**	**E 1854 mm (73.0 in.)**	**F 1923 mm (75.7 in.)**	**G 2033 mm (80.0 in.)**
Without Front Fenders								
13.6-24 (340/85 R24, 460/85 R34)	MFWD OFF	N/A	3575 mm (140.8 in.)	2986 mm (117.6 in.)	2829 mm (111.4 in.)	2777 mm (109.3 in.)	2744 mm (108.0 in.)	2761 mm (108.7 in.)
13.6-24 (340/85 R24, 460/85 R34)	MFWD ON	N/A	3912 mm (154.0 in.)	3340 mm (131.5 in.)	3226 mm (127.0 in.)	3182 mm (125.3 in.)	3199 mm (126.0 in.)	3078 mm (121.2 in.)
With Fenders								
13.6-24 (340/85 R24, 460/85 R34)	MFWD OFF	N/A	5015 mm (197.5 in.)	4468 mm (175.9 in.)	3786 mm (149.1 in.)	3755 mm (147.8 in.)	3725 mm (146.7 in.)	3408 mm (134.2 in.)
13.6-24 (340/85 R24, 460/85 R34)	MFWD ON	N/A	5396 mm (212.4 in.)	4854 mm (191.1 in.)	4146 mm (163.2 in.)	4103 mm (161.5 in.)	4077 mm (160.5 in.)	3695 mm (145.5 in.)

		Tread						
Tire Size		**A N/A**	**B 1515 mm (59.6 in.)**	**C 1629 mm (64.1 in.)**	**D 1722 mm (67.8 in.)**	**E 1854 mm (73.0 in.)**	**F 1936 mm (76.2 in.)**	**G 2036 mm (80.2 in.)**
Without Front Fenders								
14.9-24 (380/85 R24, 460/85 R38)	MFWD OFF	N/A	4149 mm (163.4 in.)	3363 mm (132.4 in.)	3265 mm (128.6 in.)	2866 mm (112.8 in.)	2836 mm (111.7 in.)	2778 mm (109.4 in.)
14.9-24 (380/85 R24, 460/85 R38)	MFWD ON	N/A	4510 mm (177.6 in.)	3732 mm (146.9 in.)	3415 mm (134.4 in.)	3237 mm (127.5 in.)	3215 mm (126.6 in.)	3170 mm (124.8 in.)
With Fenders								
14.9-24 (380/85 R24, 460/85 R38)	MFWD OFF	N/A	5068 mm (199.5 in.)	4498 mm (177.1 in.)	3555 mm (140.0 in.)	3505 mm (138.0 in.)	3469 mm (136.6 in.)	3489 mm (137.4 in.)
14.9-24 (380/85 R24, 460/85 R38)	MFWD ON	N/A	5381 mm (211.8 in.)	4836 mm (190.4 in.)	3927 mm (154.6 in.)	3879 mm (152.7 in.)	3826 mm (150.6 in.)	3727 mm (146.7 in.)

		Tread						
Tire Size		**A 1539 mm (60.6 in.)**	**B 1635 mm (64.4 in.)**	**C 1738 mm (68.4 in.)**	**D 1624 mm (63.9 in.)**	**E 1736 mm (68.3 in.)**	**F 1834 mm (72.2 in.)**	**G 1940 mm (76.4 in.)**
Without Front Fenders								
12.4-24, 12.4-42	MFWD OFF	2984 mm (117.5 in.)	2894 mm (113.9 in.)	2839 mm (111.8 in.)	2891 mm (113.8 in.)	2850 mm (112.2 in.)	2809 mm (110.6 in.)	2762 mm (108.8 in.)
12.4-24, 12.4-42	MFWD ON	3297 mm (129.8 in.)	3203 mm (126.1 in.)	3144 mm (123.8 in.)	3209 mm (126.3 in.)	3156 mm (124.2 in.)	3090 mm (121.7 in.)	3052 mm (120.2 in.)
With Fenders								
12.4-24, 12.4-42	MFWD OFF	4283 mm (168.6 in.)	3687 mm (145.2 in.)	3576 mm (140.8 in.)	3597 mm (141.6 in.)	3593 mm (141.4 in.)	3526 mm (138.8 in.)	3588 mm (141.3 in.)
12.4-24, 12.4-42	MFWD ON	4514 mm (177.7 in.)	3955 mm (155.7 in.)	3829 mm (150.7 in.)	3849 mm (151.5 in.)	3850 mm (151.6 in.)	3773 mm (148.5 in.)	3822 mm (150.5 in.)

PX07220,000165E-19-25JUN12-1/1

Turning Radius—2WD Axle

Tread: 1635 mm (64.4 in.)	
Front Tire Size: 10.00-16, 6PR F2	
Brakes Applied: 2134 mm (7 ft)	No Brakes: 2896 mm (9.50 ft)

SP21231,0000291-19-29MAY12-1/1

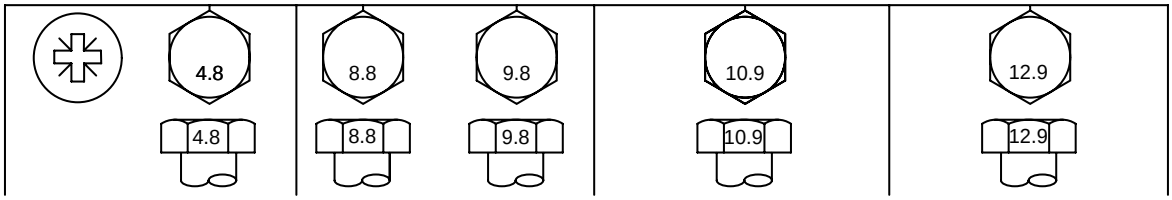
Ground Speeds—PowrReverser™ Transmission (PRT)

18.4-34 Rear Tires				
PowrReverser Lever	**Range**	**Gear**	**km/h**	**mph**
F1	A	1	3.0	1.8
F2	A	2	4.1	2.5
F3	A	3	5.3	3.3
F4	B	1	7.0	4.3
F5	B	2	9.6	5.9
F6	B	3	12.4	7.7
F7	C	1	16.7	10.4
F8	C	2	23.1	14.3
F9	C	3	29.7	18.5
R1	A	1	3.1	1.9
R2	A	2	4.2	2.6
R3	A	3	5.4	3.3
R4	B	1	7.2	4.5
R5	B	2	9.9	6.2
R6	B	3	12.8	7.9
R7	C	1	17.3	10.7
R8	C	2	23.9	14.8
R9	C	3	30.7	18.2

18.4-38 Rear Tires				
PowrReverser Lever	**Range**	**Gear**	**km/h**	**mph**
F1	A	1	3.2	1.9
F2	A	2	4.4	2.7
F3	A	3	5.6	3.5
F4	B	1	7.4	4.6
F5	B	2	10.3	6.4
F6	B	3	13.2	8.2
F7	C	1	17.8	11.0
F8	C	2	24.6	15.3
F9	C	3	31.6	19.6
R1	A	1	3.3	2.0
R2	A	2	4.5	2.8
R3	A	3	5.8	3.6
R4	B	1	7.7	4.8
R5	B	2	10.6	6.6
R6	B	3	13.6	8.4
R7	C	1	18.4	11.4
R8	C	2	25.4	15.8
R9	C	3	32.7	20.3

SP21231,0000293-19-04JUL12-1/1

Metric Bolt and Screw Torque Values



TS1742—UN—31MAY18

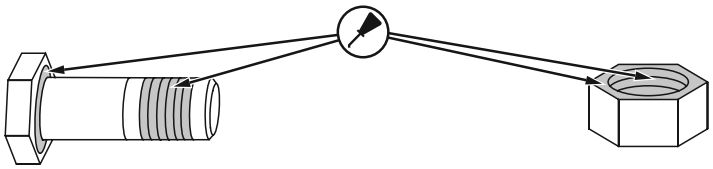
Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
M6	3.6	31.9	3.9	34.5	6.7	59.3	7.3	64.6	9.8	86.7	10.8	95.6	11.5	102	12.6	112
									N·m	lb·ft	N·m	lb·ft	N·m	lb·ft	N·m	lb·ft
M8	8.6	76.1	9.4	83.2	16.2	143	17.6	156	23.8	17.6	25.9	19.1	27.8	20.5	30.3	22.3
			N·m	lb·ft	N·m	lb·ft	N·m	lb·ft								
M10	16.9	150	18.4	13.6	31.9	23.5	34.7	25.6	46.8	34.5	51	37.6	55	40.6	60	44.3
	N·m	lb·ft														
M12	—	—	—	—	55	40.6	61	45	81	59.7	89	65.6	95	70.1	105	77.4
M14	—	—	—	—	87	64.2	96	70.8	128	94.4	141	104	150	111	165	122
M16	—	—	—	—	135	99.6	149	110	198	146	219	162	232	171	257	190
M18	—	—	—	—	193	142	214	158	275	203	304	224	322	245	356	263
M20	—	—	—	—	272	201	301	222	387	285	428	316	453	334	501	370
M22	—	—	—	—	365	263	405	299	520	384	576	425	608	448	674	497
M24	—	—	—	—	468	345	518	382	666	491	738	544	780	575	864	637
M27	—	—	—	—	683	504	758	559	973	718	1080	797	1139	840	1263	932
M30	—	—	—	—	932	687	1029	759	1327	979	1466	1081	1553	1145	1715	1265
M33	—	—	—	—	1258	928	1398	1031	1788	1319	1986	1465	2092	1543	2324	1714
M36	—	—	—	—	1617	1193	1789	1319	2303	1699	2548	1879	2695	1988	2982	2199

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench.
DO NOT use these values if a different torque value or tightening procedure is given for a specific application.
For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

TS1741—UN—22MAY18

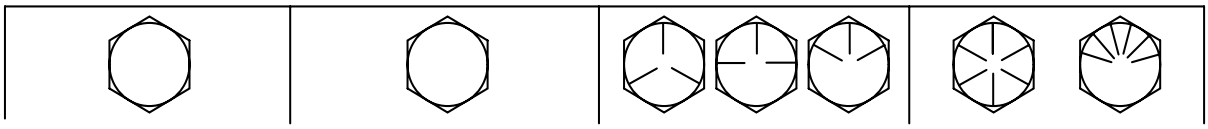


[a] Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[b] Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ2-19-09MAY22-1/1

Unified Inch Bolt and Screw Torque Values

TS1671—UN—01MAY03



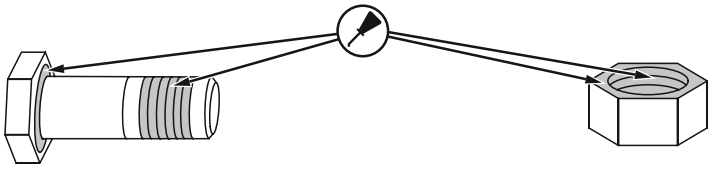
Bolt or Screw Size	SAE Grade 1[a]				SAE Grade 2[b]				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
1/4	3.1	27.3	3.2	28.4	5.1	45.5	5.3	47.3	7.9	70.2	8.3	73.1	11.2	99.2	11.6	103
													N·m	lb·ft	N·m	lb·ft
5/16	6.1	54.1	6.5	57.7	10.2	90.2	10.9	96.2	15.7	139	16.8	149	22.2	16.4	23.7	17.5
									N·m	lb·ft	N·m	lb·ft				
3/8	10.5	93.6	11.5	102	17.6	156	19.2	170	27.3	20.1	29.7	21.9	38.5	28.4	41.9	30.9
					N·m	lb·ft	N·m	lb·ft								
7/16	16.7	148	18.4	163	27.8	20.5	30.6	22.6	43	31.7	47.3	34.9	60.6	44.7	66.8	49.3
	N·m	lb·ft	N·m	lb·ft												
1/2	25.9	19.1	28.2	20.8	43.1	31.8	47	34.7	66.6	49.1	72.8	53.7	94	69.3	103	75.8
9/16	36.7	27.1	40.5	29.9	61.1	45.1	67.5	49.8	94.6	69.8	104	77	134	98.5	148	109
5/8	51	37.6	55.9	41.2	85	62.7	93.1	68.7	131	96.9	144	106	186	137	203	150
3/4	89.5	66	98	72.3	149	110	164	121	230	170	252	186	325	240	357	263
7/8	144	106	157	116	144	106	157	116	370	273	405	299	522	385	572	422
1	216	159	236	174	216	159	236	174	556	410	609	449	785	579	860	634
1-1/8	305	225	335	247	305	225	335	247	685	505	751	554	1110	819	1218	898
1-1/4	427	315	469	346	427	315	469	346	957	706	1051	775	1552	1145	1703	1256
1-3/8	564	416	618	456	564	416	618	456	1264	932	1386	1022	2050	1512	2248	1658
1-1/2	743	548	815	601	743	548	815	601	1665	1228	1826	1347	2699	1991	2962	2185

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench.
DO NOT use these values if a different torque value or tightening procedure is given for a specific application.
For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

TS1741—UN—22MAY18



[a] Grade 1 applies for hex cap screws over 6 in (152 mm) long, and for all other types of bolts and screws of any length.
[b] Grade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.
[c] Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[d] Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ1-19-09MAY22-1/1

Limited Battery Warranty

NOTE: Applicable in North America only. For complete machine warranty, reference a copy of the John Deere warranty statement. Contact your John Deere dealer to obtain a copy.

To Secure Warranty Service

The purchaser must request warranty service from a John Deere dealer authorized to sell John Deere batteries, and present the battery to the dealer with the top cover plate codes intact.

Replacement

Any new battery which becomes unserviceable (not merely discharged) due to defects in material or workmanship will be eligible for warranty consideration.

This Warranty Does Not Cover

Breakage of the container, cover, or terminals.

Depreciation or damage caused by lack of reasonable and necessary maintenance or by improper maintenance.

Transportation, mailing, or service call charges for warranty service.

Limitation of Implied Warranties and Purchaser's Remedies

To the extent permitted by law, neither John Deere nor any company affiliated with it makes any warranties, representations or promises as to the quality, performance or freedom from defect of the products covered by this warranty. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT APPLICABLE, SHALL BE LIMITED IN DURATION TO THE APPLICABLE ADJUSTMENT PERIOD SET FORTH HERE. THE PURCHASER'S ONLY REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON JOHN DEERE BATTERIES ARE THOSE SET FORTH HERE. IN NO EVENT WILL THE DEALER, JOHN DEERE OR ANY COMPANY AFFILIATED WITH JOHN DEERE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. (Note: Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages. So these limitations and exclusions may not apply to you.) This warranty gives you specific legal rights, and you may also have some rights which vary from state to state.

No Dealer Warranty

The selling dealer makes no warranty of it's own and the dealer has no authority to make any representation or promise on behalf of John Deere, or to modify the terms or limitations of this warranty in any way.

DX,BATWAR,NA-19-06AUG21-1/1

CARB Non-road Emissions Control Warranty Statement—Compression Ignition
Emissions Control Warranty Statement 2022 through 2024

DXLOGOV1—UN—28APR09

JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the “Emission Control Information” label located on the engine. If the engine is operated in the United States or Canada and the engine label states: “This engine complies with US EPA regulations for nonroad and stationary diesel engines”, or “This engine complies with US EPA regulations for stationary emergency diesel engines”, refer to the “U.S. and Canada Emission Control Warranty Statement.” If the engine is operated in California, and the engine label states: “This engine complies with US EPA and California regulations for nonroad/off-road diesel engines” also refer to the “California Emissions Control Warranty Statement.”

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2022 through 2024 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State’s stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB. John Deere warrants that this engine is free from defects in materials and workmanship which would cause the failure of emissions warrantied parts to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. This applies to all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Continued on next page

DX,EMISSIONS,CARB-19-15DEC23-1/6

Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

Fuel Metering system

- Fuel injection system

Exhaust Gas Recirculation

- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

Emission control labels

Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

SCR systems and urea containers/dispensing systems

Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator’s Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner’s failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission_CI_CARB (14Apr20)

Continued on next page

DX,EMISSIONS,CARB-19-15DEC23-2/6

Emissions Control Warranty Statement 2022 through 2024

DXLOGOV1 —UN—28APR09

JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and California regulations for nonroad/off-road diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2022 through 2024 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB. John Deere warrants that this engine is free from defects in materials and workmanship which would cause the failure of emissions warrantied parts to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. This applies to all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

RG32758—UN—19AUG20

Continued on next page

DX,EMISSIONS,CARB-19-15DEC23-3/6

JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

Fuel Metering system

- Fuel injection system

Exhaust Gas Recirculation

- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

Emission control labels

Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

SCR systems and urea containers/dispensing systems

Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

RG32759—UN—19AUG20

Emission_CI_CARB (14Apr20)

Emissions Control Warranty Statement 2025 through 2027

DXLOGOV1—UN—28APR09

JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the “Emission Control Information” label located on the engine. If the engine is operated in the United States or Canada and the engine label states: “This engine complies with US EPA regulations for nonroad and stationary diesel engines”, or “This engine complies with US EPA regulations for stationary emergency diesel engines”, refer to the “U.S. and Canada Emission Control Warranty Statement.” If the engine is operated in California, and the engine label states: “This engine complies with US EPA and California regulations for nonroad/off-road diesel engines” also refer to the “California Emissions Control Warranty Statement.”

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

Continued on next page

DX,EMISSIONS,CARB-19-15DEC23-4/6

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty in 2025 through 2027 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts and labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

Fuel Metering system

- Fuel injection system

Exhaust Gas Recirculation

- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

Emission control labels

Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

SCR systems and urea containers/dispensing systems

Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

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DX,EMISSIONS,CARB-19-15DEC23-5/6

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the “Emission Control Information” label located on the engine. If the engine is operated in the United States or Canada and the engine label states: “This engine complies with US EPA regulations for nonroad and stationary diesel engines”, or “This engine complies with US EPA regulations for stationary emergency diesel engines”, refer to the “U.S. and Canada Emission Control Warranty Statement.” If the engine is operated in California, and the engine label states: “This engine complies with US EPA and California regulations for nonroad/off-road diesel engines” also refer to the “California Emissions Control Warranty Statement.”

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty in 2025 through 2027 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State’s stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

RG595770—UN—07DEC23

JOHN DEERE’S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts and labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

- Air Induction System
  - Intake manifold
  - Turbocharger
  - Charge air cooler
- Fuel Metering System
  - Fuel injection system
- Exhaust Gas Recirculation
  - EGR valve
- Catalyst or Thermal Reactor Systems
  - Catalytic converter
  - Exhaust manifold
- Emission control labels
- Particulate Controls
  - Any device used to capture particulate emissions
  - Any device used in the regeneration of the capturing system
  - Enclosures and manifolding
  - Smoke Puff Limiters
- Positive Crankcase Ventilation (PCV) System
  - PCV valve
  - Oil filler cap
- Advanced Oxides of Nitrogen (NOx Controls)
  - NOx absorbers and catalysts
- SCR systems and urea containers / dispensing systems
- Miscellaneous Items used in Above Systems
  - Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER’S WARRANTY RESPONSIBILIT IES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator’s Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner’s failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

RG595771—UN—07DEC23

DX,EMISSIONS,CARB-19-15DEC23-6/6

EPA Non-road Emissions Control Warranty Statement—Compression Ignition

DXLOGOV1—UN—28APR09

JOHN DEERE

U.S. AND CANADA EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emissions Control Information" label located on the engine. If the engine is operated in the United States or Canada and the Emissions Control information label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine conforms to US EPA nonroad compression-ignition regulations", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines", or "This engine conforms to US EPA and California nonroad compression-ignition emission regulations", also refer to the "California Emission Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

JOHN DEERE'S WARRANTY RESPONSIBILITY

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emission-control system was designed, built and equipped so as to conform at the time of the sale with Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable US EPA regulations for a period of five years from the date the engine is placed into service or 3,000 hours of operation, whichever first occurs.

Where a warrantable condition exists, John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to you, including expenses related to diagnosing and repairing or replacing emission-related parts. Warranty coverage is subject to the limitations and exclusions set forth herein. Emission-related components include engine parts developed to control emissions related to the following:

Air-Induction System
Fuel System
Ignition System
Exhaust Gas Recirculation Systems
Aftertreatment Devices
Crankcase Ventilation Valves
Sensors
Engine Electronic Control Units

EMISSION WARRANTY EXCLUSIONS

John Deere may deny warranty claims for malfunctions or failures caused by:

- Non-performance of maintenance requirements listed in the Operator's Manual
- The use of the engine/equipment in a manner for which it was not designed
- Abuse, neglect, improper maintenance or unapproved modifications or alterations
- Accidents for which it does not have responsibility or by acts of God

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel can harm the emissions control system of the engine/equipment and is not approved for use.

To the extent permitted by law John Deere is not liable for damage to other engine components caused by a failure of an emission-related part, unless otherwise covered by standard warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. WHERE PERMITTED BY LAW, NEITHER JOHN DEERE NOR ANY AUTHORIZED JOHN DEERE ENGINE DISTRIBUTOR, DEALER, OR REPAIR FACILITY OR ANY COMPANY AFFILIATED WITH JOHN DEERE WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Emission_CI_EPA (18Dec09)

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DX,EMISSIONS,EPA-19-12DEC12-1/2

JOHN DEERE

U.S. AND CANADA EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emissions Control Information" label located on the engine. If the engine is operated in the United States or Canada and the Emissions Control information label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine conforms to US EPA nonroad compression-ignition regulations", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines", or "This engine conforms to US EPA and California nonroad compression-ignition emission regulations", also refer to the "California Emission Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

JOHN DEERE'S WARRANTY RESPONSIBILITY

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emission-control system was designed, built and equipped so as to conform at the time of the sale with Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable US EPA regulations for a period of five years from the date the engine is placed into service or 3,000 hours of operation, whichever first occurs.

Where a warrantable condition exists, John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to you, including expenses related to diagnosing and repairing or replacing emission-related parts. Warranty coverage is subject to the limitations and exclusions set forth herein. Emission- related components include engine parts developed to control emissions related to the following:

Air-Induction System
Fuel System
Ignition System
Exhaust Gas Recirculation Systems
Aftertreatment Devices
Crankcase Ventilation Valves
Sensors
Engine Electronic Control Units

EMISSION WARRANTY EXCLUSIONS

John Deere may deny warranty claims for malfunctions or failures caused by:

- Non-performance of maintenance requirements listed in the Operator's Manual
- The use of the engine/equipment in a manner for which it was not designed
- Abuse, neglect, improper maintenance or unapproved modifications or alterations
- Accidents for which it does not have responsibility or by acts of God

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel can harm the emissions control system of the engine/equipment and is not approved for use.

To the extent permitted by law John Deere is not liable for damage to other engine components caused by a failure of an emission-related part, unless otherwise covered by standard warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. WHERE PERMITTED BY LAW, NEITHER JOHN DEERE NOR ANY AUTHORIZED JOHN DEERE ENGINE DISTRIBUTOR, DEALER, OR REPAIR FACILITY OR ANY COMPANY AFFILIATED WITH JOHN DEERE WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Emission_CI_EPA (18Dec09)

TS1721—UN—15JUL13

DX,EMISSIONS,EPA-19-12DEC12-2/2

Identification Numbers

Each tractor has the identification plates/labels shown. The letters and numbers on the plates/labels identify a component or assembly. ALL these characters are needed when ordering parts or identifying a tractor or component for any John Deere product support program. They are also needed for law enforcement to trace your tractor if it is ever stolen. ACCURATELY record these characters in the spaces provided.

NS43404,000053A-19-22JAN08-1/1

Product Identification Number

Product identification number (PIN) plate is located on the right-hand side of front support.

Record serial number below.

Tractor Serial Number _____

PY15152—UN—30MAY12

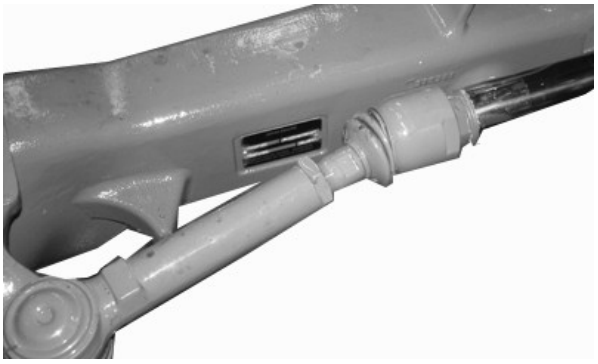
SP21231,00002A1-19-30MAY12-1/1

MFWD Axle Serial Number (If Equipped)

Serial number plate is located on rear side of left-hand axle housing.

Record serial number below.

MFWD Axle Serial Number _____



PY15193—UN—01JUN12

SP21231,00002C6-19-02JUN12-1/1

Engine Serial Number

Serial number plate is located on the right-hand side of the engine block.

Record serial number below.

Engine Serial Number _____

PY15194—UN—01JUN12

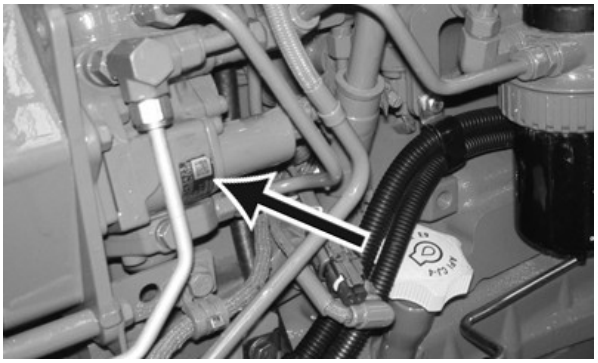
SP21231,00002C7-19-02JUN12-1/1

Fuel Injection Pump Serial Number

Serial number plate (A) is located on the side of pump.

Record serial number below.

Fuel Injection Pump Serial Number _____



PY15196—UN—02JUN12

SP21231,00002C8-19-02JUN12-1/1

Transaxle Serial Number

Transaxle (drive train) serial number plate is located at the rear of the machine, behind left-hand brake linkage.

Record serial number below.

Transaxle Serial Number _____

P14827—UN—09NOV07

NS43404,0000553-19-24JAN08-1/1

Cab Serial Number

Serial number is located on rear left-hand post.

Record serial number below.

Cab Serial Number _____

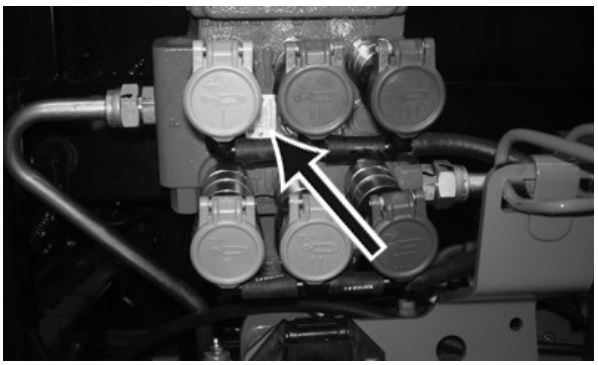
P12688—UN—24NOV03

NS43404,0000554-19-24JAN08-1/1

Selective Control Valve (SCV) Serial Number

Record serial number below.

SCV Serial Number _____



PY15195—UN—02JUN12

SP21231,00002C9-19-02JUN12-1/1

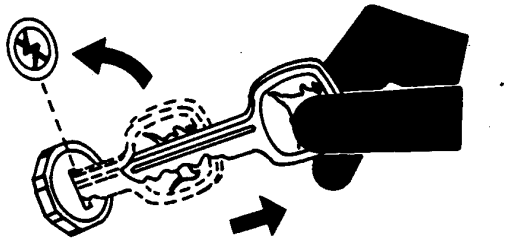
Keep Proof of Ownership

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
   - Mark your machine with your own numbering system
   - Take color photographs from several angles of each machine

SV86979,0000053-19-04JUL12-1/1

Keep Machines Secure

1. Install vandal-proof devices.
2. When machine is in storage:
   - Lower equipment to the ground
   - Set wheels to widest position to make loading more difficult
   - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.



TS230—UN—24MAY89

DX,SECURE2-19-18NOV03-1/1

Lubrication and Maintenance Records

Daily / 10 Hour Service Record

- Check engine oil level
- Check coolant level
- Drain water from fuel filters
- Clean air filter dust unloading valve.
- Check transmission-hydraulic system oil level
- Lubricate steering linkage [1]
- Lubricate front axle pivot pins [1]

Hours					Hours				
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Hours					Hours				
Date					Date				

[1] *Only necessary in extremely wet or muddy conditions*

OUMX005,0002938-19-16AUG12-1/1

Weekly / 50 Hour Service Record

- Clean and check battery
- Inspect all tires
- Lubricate front axle pivot pins
- Lubricate steering linkage
- Lubricate rear axle bearings [1]
- Lubricate MFWD axle shaft
- Inspect tractor for loose hardware
- Check and adjust clutch pedal free travel

Hours					Hours				
Date					Date				
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Hours					Hours				
Date					Date				

[1] *Only necessary in extremely wet or muddy conditions*

NS43404,0000540-19-11FEB08-1/1

First 100 Hour Service Record

☐ Replace transmission-hydraulic oil filter
☐ Change engine oil and filter
☐ Change MFWD axle and wheel hub oil

Date: ____________________

Hours: ____________________

OUMX005,0002939-19-12NOV08-1/1

250 Hour Service Record

- Inspect engine air intake filters
- Check oil level in MFWD axle and wheel hubs
- Inspect alternator/fan belt
- Lubricate 3-point hitch
- Inspect and clean fuel tank vent
- Drain water from fuel tank
- Check neutral start system
- Check and adjust brake pedal free travel
- Inspect ROPS/Cab mounting hardware
- Clean cab air filters
- Change engine oil and filter [1]

Hours					Hours				
Date					Date				
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[1] *When using any lubricant other than TorqGARD or PLUS 50, service interval is 250 hours.*

OUMX005,0002905-19-14FEB08-1/1

500 Hour Service Record

- Change engine oil and filter [1]
- Replace fuel filters
- Replace transmission-hydraulic oil filter
- Lubricate front wheel bearings (2WD axle)
- Check and tighten all hoses and hose clamps
- Check cooling system for leaks
- Lubricate rear axle bearings
- Check engine idle speed
- Inspect air intake hose, turbo air cooler pipes and hose clamps
- Clean cab air filters

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[1] *When using John Deere TorqGARD or PLUS 50 lubricant and filter, service interval is 500 hours*

OUMX005,0002906-19-14FEB08-1/1

1000 Hour Service Record

- Change transmission-hydraulic oil and filter
- Change MFWD axle and wheel hub oil
- Clean engine crankcase vent tube

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NS43404,0000541-19-11FEB08-1/1

Annual Service Record

- Change engine oil and filter
- Replace engine air intake filters
- Inspect seat belt

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NS43404,0000542-19-11FEB08-1/1

1500 Hour Service Record

- Service Exhaust Filter

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SP21231,00002D4-19-04JUN12-1/1

2000 Hour / Two Year Service Record

- Drain, flush and refill engine cooling system[1]
- Adjust engine valve clearance (See your John Deere dealer)

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[1] *Can be extended to 5000 hours or 5 years if John Deere COOL-GARD is used.*

NS43404,0000543-19-11FEB08-1/1

5000 Hour / Five Year Service Record

- Drain, flush and refill engine cooling system[1]
- Test or replace thermostat
- Replace crankshaft vibration damper (See your John Deere dealer)

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[1] *If John Deere COOL-GARD is used.*

OUMX005,000293A-19-12FEB08-1/1

As Required Service Record

- Adjust hand throttle friction
- Inspect engine air cleaner elements
- Check engine air intake system
- Clean front grille, side screens, radiator, condenser (cab) and oil, fuel or air coolers (if equipped)
- Bleed fuel system (See your John Deere dealer)
- Clean and check battery
- Charge battery
- Lubricate operator seat slide rails
- Lubricate hood latch
- Replace bulbs; floodlights, headlights, tail/turn lights and warning lights
- Adjust headlights

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NS43404,0000544-19-17JUN09-1/1

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John Deere Service Literature Available

Technical Information

Technical information can be purchased from John Deere. Publications are available in print or CD-ROM format.

Orders can be made using one of the following:

- John Deere Technical Information Store: **www.JohnDeere.com/TechInfoStore**
- Call 1-800-522-7448
- Contact your John Deere dealer

Available information includes:

DX,SERVLIT-19-07DEC16-1/5

PARTS CATALOGS list service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.

TS189—UN—17JAN89

DX,SERVLIT-19-07DEC16-2/5

OPERATOR'S MANUALS providing safety, operating, maintenance, and service information.

TS191—UN—02DEC88

DX,SERVLIT-19-07DEC16-3/5

TECHNICAL MANUALS outlining service information for your machine. Included are specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, are available in a separate component technical manual.

TS224—UN—17JAN89

Continued on next page

DX,SERVLIT-19-07DEC16-4/5

EDUCATIONAL CURRICULUM including five comprehensive series of books detailing basic information regardless of manufacturer:

- Agricultural Primer series covers technology in farming and ranching.
- Farm Business Management series examines “real-world” problems and offers practical solutions in the areas of marketing, financing, equipment selection, and compliance.
- Fundamentals of Services manuals show you how to repair and maintain off-road equipment.
- Fundamentals of Machine Operation manuals explain machine capacities and adjustments, how to improve machine performance, and how to eliminate unnecessary field operations.
- Fundamentals of Compact Equipment manuals provide instruction in servicing and maintaining equipment up to 40 PTO horsepower.

TS1663—UN—10OCT97

DX,SERVLIT-19-07DEC16-5/5

John Deere Service Keeps You On The Job

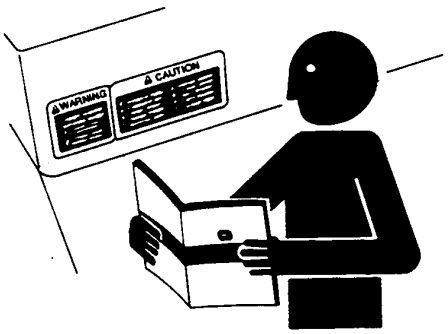
John Deere Is At Your Service

CUSTOMER SATISFACTION is important to John Deere.

Our dealers strive to provide you with prompt, efficient parts and service:

–Maintenance and service parts to support your equipment.

–Trained service technicians and the necessary diagnostic and repair tools to service your equipment.



TS201—UN—15APR13

CUSTOMER SATISFACTION PROBLEM RESOLUTION PROCESS

Your John Deere dealer is dedicated to supporting your equipment and resolving any problem you may experience.

1. When contacting your dealer, be prepared with the following information:

–Machine model and product identification number

–Date of purchase

–Nature of problem

2. Discuss problem with dealer service manager.

3. If unable to resolve, explain problem to dealership manager and request assistance.

4. If you have a persistent problem your dealership is unable to resolve, ask your dealer to contact John Deere for assistance. Or contact the Ag Customer Assistance Center at 1-866-99DEERE (866-993-3373) or e-mail us at www.deere.com/en_US/ag/contactus/.

DX,IBC,2-19-02APR02-1/1