6020, 6120, 6220, 6320, 6420 and 6420S Tractors

(Serial No. - 398790)

OPERATOR'S MANUAL

6020, 6120, 6220, 6320, 6420 and 6420S Tractors

(Serial No. - 398790)

OMAL152760 Issue C3 (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 Werke Mannheim
(This manual replaces OMAL152760 G2)
European Version
Printed in U.S.A.

Introduction

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

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

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

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

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

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

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

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

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

LX,IFC 002144 –19–01SEP93–1/1

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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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Identification Views

LX1024748 –UN–06DEC00

LX1024749 –UN–13JUN01

OU12401,00101C7 –19–26NOV00–1/1

Safety

Recognize Safety Information

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

Follow recommended precautions and safe operating practices.

T81389 –UN–07DEC88

DX,ALERT –19–29SEP98–1/1

Understand Signal Words

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

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

TS187 –19–30SEP88

DX,SIGNAL –19–03MAR93–1/1

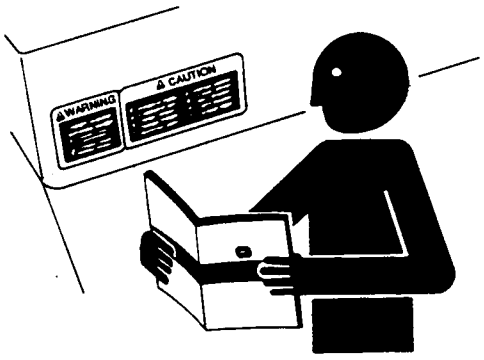
Follow Safety Instructions

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

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

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

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



TS201 –UN–23AUG88

DX,READ –19–03MAR93–1/1

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

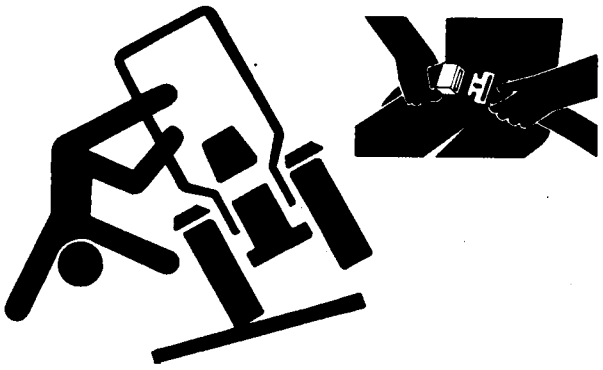
Use Seat Belt Properly

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

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

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

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



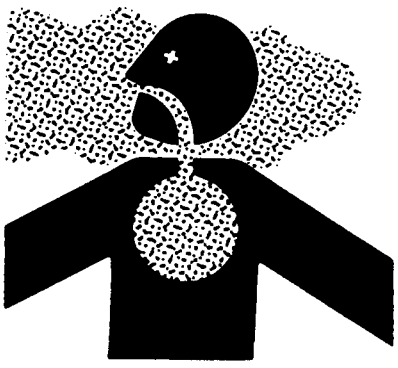
TS205 –UN–23AUG88

DX,ROPS1 –19–07JUL99–1/1

Work In Ventilated Area

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

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



TS220 –UN–23AUG88

DX,AIR –19–17FEB99–1/1

Driving the Tractor Safely

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

Operate tractor only when all guards are fitted and in their correct position.

Before moving away, always check immediate vicinity of machine (e.g. for children). Ensure adequate visibility.

Always adapt your ground speed to meet the ground conditions. Avoid making sharp turns when driving up or down slopes or when driving across the slope. Do not attempt to turn the machine with the differential lock engaged. When driving down slopes, never depress the clutch and change gear!

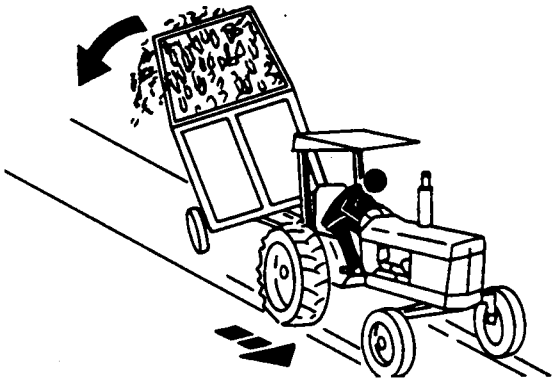
Attach implements and trailers to the tractor only using the prescribed drawbars or hitches. Attach trailers and implements correctly. Always ensure that trailers and implements cannot roll away.

When making turns with towed or mounted implements, always take into consideration the width and inertia of the implement.

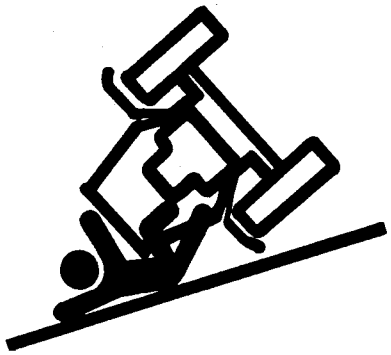
Reduce your ground speed when driving the tractor on slopes or over uneven ground and before making sharp turns. Before descending a steep hill, shift to a lower gear. Never coast downhill!

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

Front-wheel drive greatly increases traction. This means that the tractor can be driven on steeper slopes, increasing the possibility of a tip over. Driving forward out of a ditch or up a steep slope could cause tractor to tip over to the rear. Therefore reverse out of these situations whenever possible. Never drive near the edge of a gully or steep embankment — it might cave in!



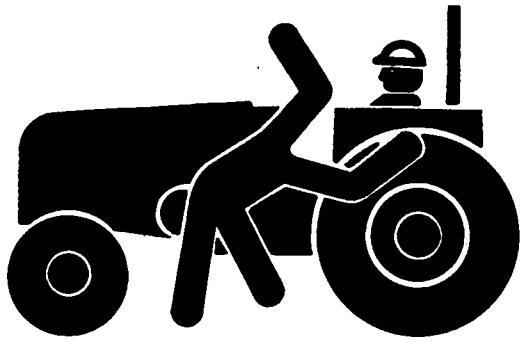
TS216 –UN–23AUG88



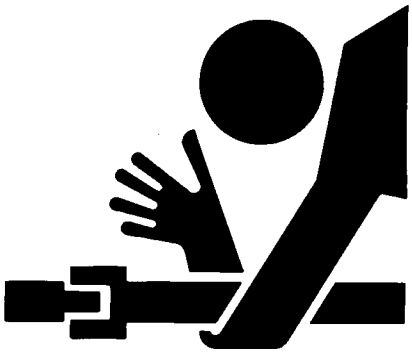
RW13093 –UN–07DEC88

LX,DRIVE –19–01JUN92–1/1

Operating the Tractor Safely



TS213 –UN–23AUG88



TS276 –UN–23AUG88

Careless use of the tractor can result in unnecessary accidents. Be alert to hazards of tractor operation. Understand causes of accidents and take every precaution to avoid them. Most common accidents are caused from:

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

Avoid accidents by taking the following precautions:

Put transmission in PARK before dismounting. Leaving transmission in gear with engine stopped will NOT prevent the tractor from moving.

Be sure everyone is clear of tractor and attached equipment before starting engine.

Never try to get on or off a moving tractor.

When tractor is left unattended, place in PARK, lower implements to the ground, stop the engine, and remove the key.

Never go near an operating PTO or an operating implement.

Always fasten your seat belt in a ROPS equipped tractor.

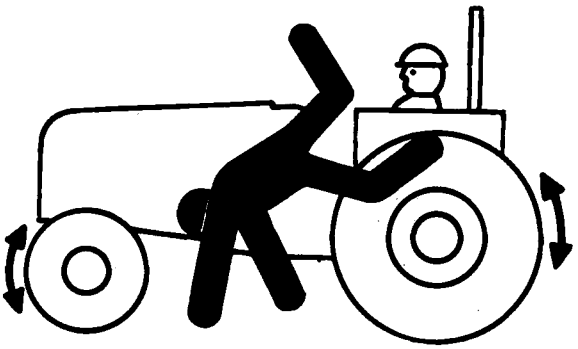
RX,HAZARD,S –19–20DEC95–1/1

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 the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

On machines equipped with a passenger seat, one rider is permitted.



TS290 –UN–23AUG88

LX,OMITF 002146 –19–01FEB92–1/1

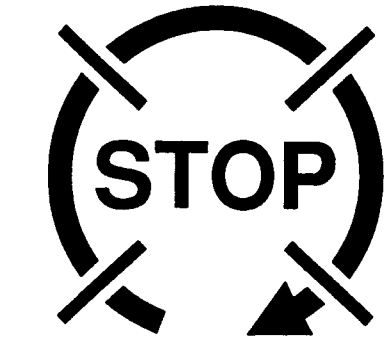
Parking and Leaving the Tractor

Lower mounted implement(s) or equipment to the ground before leaving the tractor.

When leaving the tractor and/or implements, shut off engine, engage range and gear shift levers as well as handbrake and parking lock, remove main switch key and lock the operator's cab (if equipped). Put chock blocks in position.

Never leave tractor unattended while the engine is still running.

Never leave the operator's platform/cab when driving.



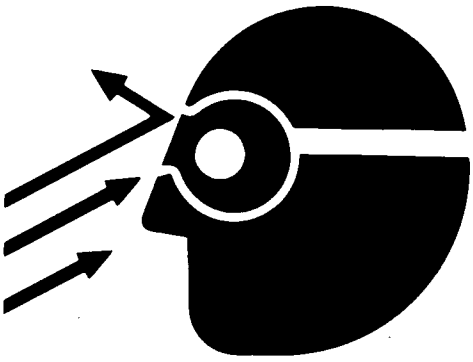
LX002 510

LX002510 –UN–17JAN95

LX,PARK –19–07DEC96–1/1

Avoid Eye Contact With Radar

Radar ground speed sensor emits a very low intensity microwave signal. It will not cause any ill effects during normal use. Although intensity is low, DO NOT look directly into face of sensor while in operation, to avoid any possible eye damage.



TS266 –UN–23AUG88

RX,SAFTY,RADAR1 –19–21SEP92–1/1

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.

TS202 –UN–23AUG88

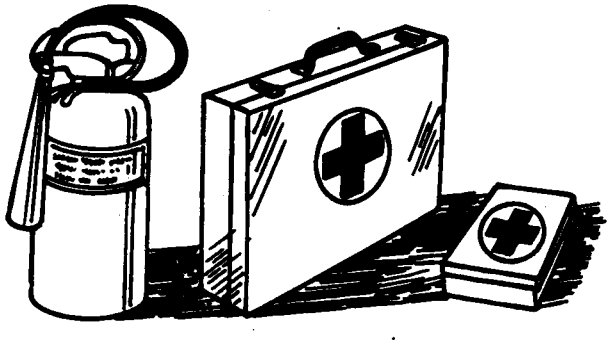
DX,FIRE1 –19–03MAR93–1/1

Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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



TS291 –UN–23AUG88

DX,FIRE2 –19–03MAR93–1/1

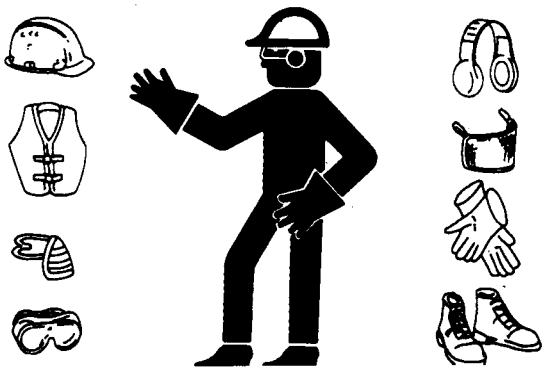
Wear Protective Clothing

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

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

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

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



TS206 –UN–23AUG88

DX,WEAR –19–10SEP90–1/1

Avoid Contact with Pesticides

This enclosed cab does not protect against inhaling harmful pesticides. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

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

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

TS220 –UN–23AUG88

TS272 –UN–23AUG88

DX,CABS –19–03MAR93–1/1

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.

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

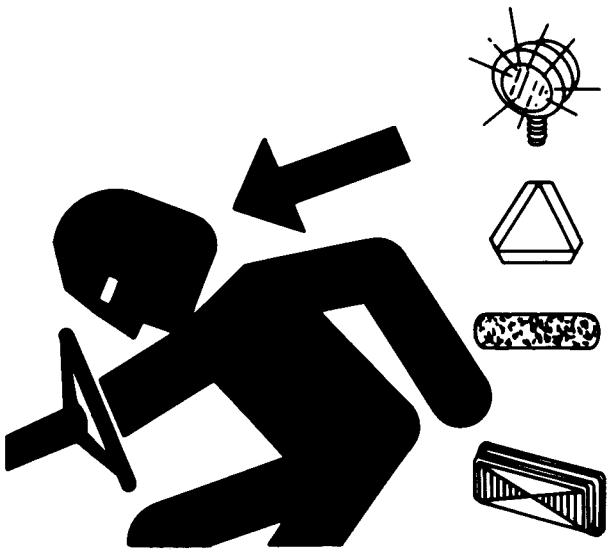
TS1644 –UN–22AUG95

DX,PTO –19–12SEP95–1/1

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.



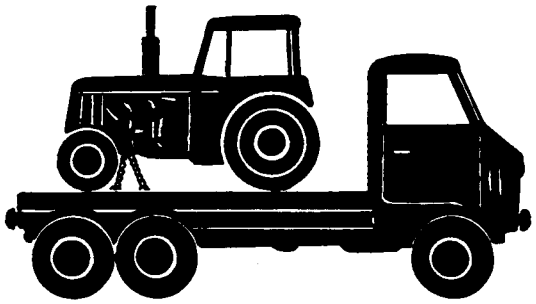
TS951 –UN–12APR90

DX,FLASH –19–07JUL99–1/1

Safely Transporting the Tractor

A disabled tractor is best transported on a flatbed carrier. Use chains to secure the tractor to the carrier.

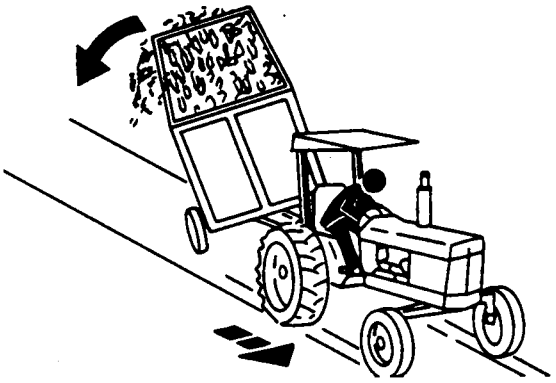
Never tow the tractor at a speed greater than 10 km/h (6 mph). An operator must steer and brake the tractor under tow.



RW13090 –UN–07DEC88

OU12401,0000543 –19–01DEC00–1/1

Tow Loads Safely



TS216 –UN–23AUG88

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 travel more 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 travel more than 50 km/h (31 mph) and do not tow loads more than 4.5 times the tractor weight.

Ensure 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.

AG,OU12401,139 –19–17MAR00–1/1

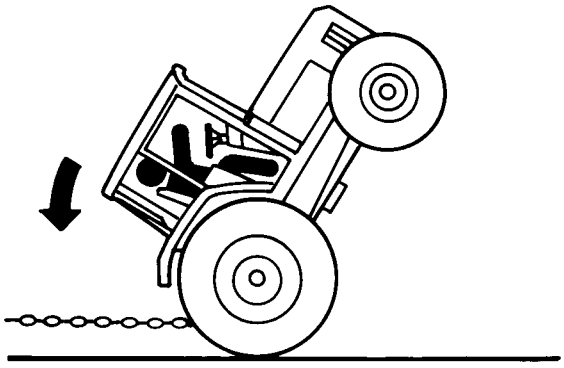
Freeing a Mired Machine

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

Practice Safe Maintenance

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

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

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

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

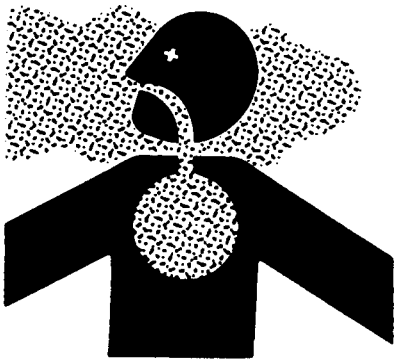
On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

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

TS218 –UN–23AUG88

DX,SERV –19–17FEB99–1/1

Remove Paint Before Welding or Heating



TS220 –UN–23AUG88

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 76 mm (3 in.) from area to be affected by heating.
- 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 all work in an area that is ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.

DX,PAINT –19–22OCT99–1/1

Avoid Heating Near Pressurized Fluid Lines

TS953 –UN–15MAY90

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

DX,TORCH –19–03MAR93–1/1

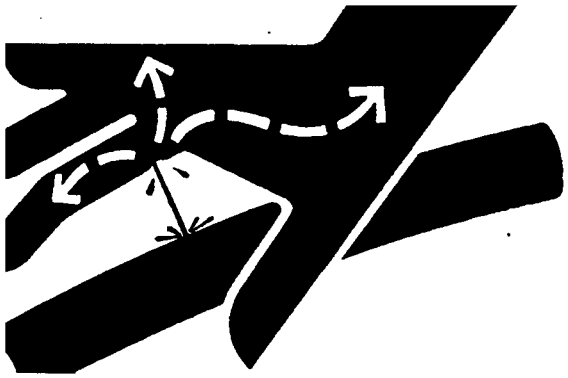
Avoid High-Pressure Fluids

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

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

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

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



X9811 –UN–23AUG88

DX,FLUID –19–03MAR93–1/1

Store Attachments Safely

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

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

TS219 –UN–23AUG88

DX,STORE –19–03MAR93–1/1

Service 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 relieve pressure before removing completely.

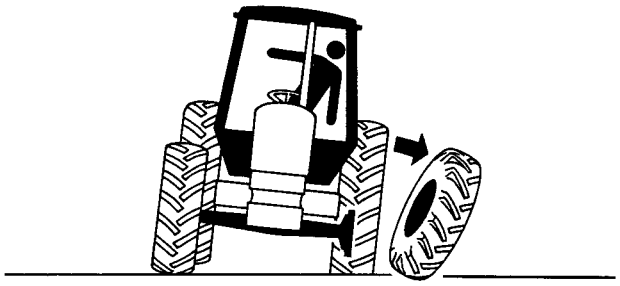
Add coolant only when the engine is shut off.

TS281 –UN–23AUG88

OU12401,000052E –19–01NOV00–1/1

Retighten Wheel Nuts

Retighten machine wheel nuts at the intervals specified in section “Break-In Period” and “Service”.



LX,WHEEL1 –19–01MAY91–1/1

Prevent Acid Burns

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

Avoid the hazard by:

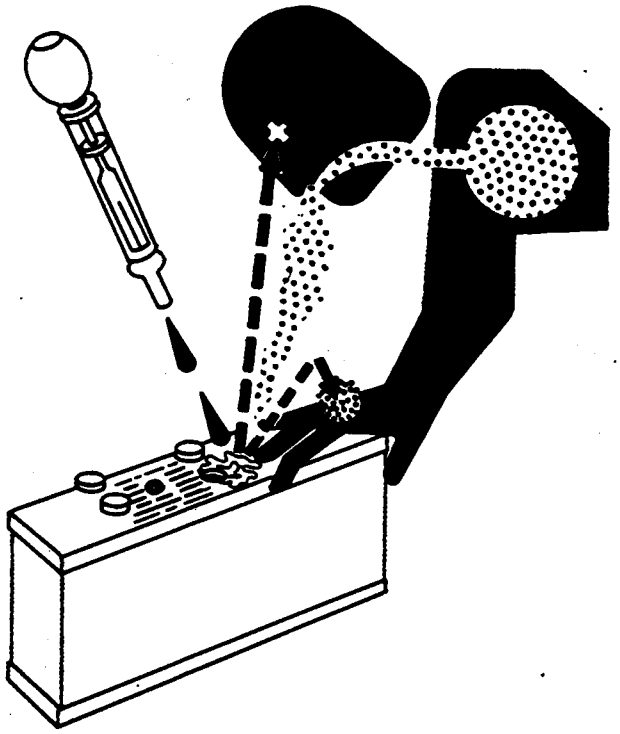
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

If you spill acid on yourself:

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

If acid is swallowed:

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



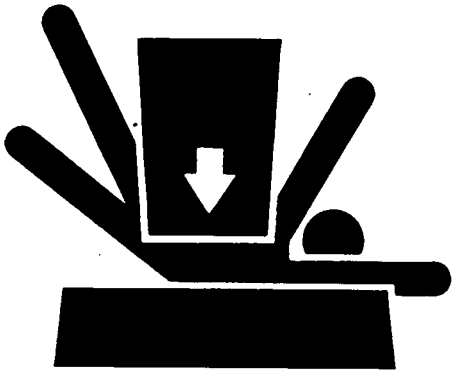
DX,POISON –19–21APR93–1/1

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.

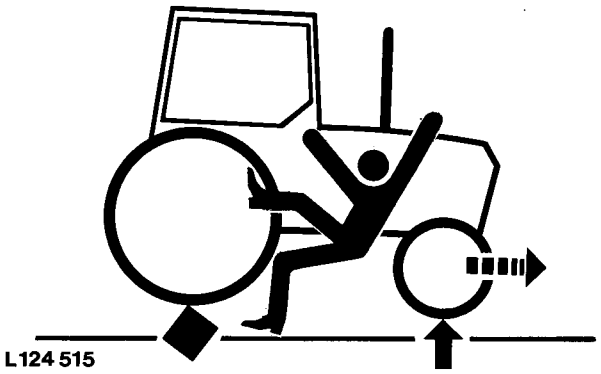


TS229 –UN–23AUG88

DX,LOWER –19–24FEB00–1/1

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

LX,MFWD2 –19–01MAY91–1/1

Service Tires Safely

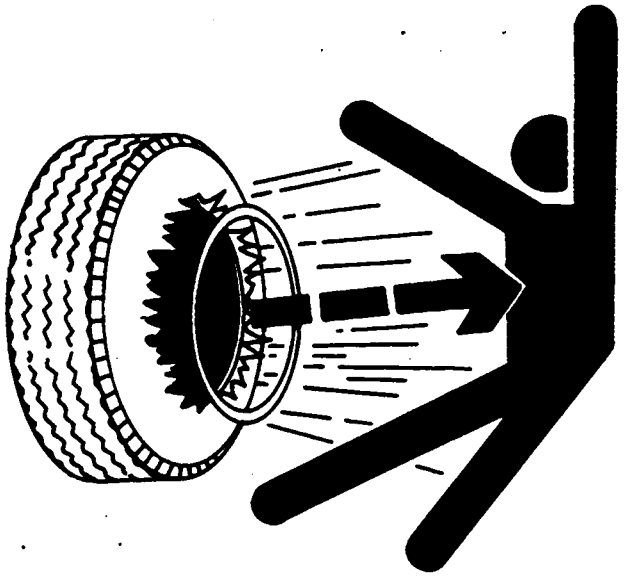
Explosive separation of a tire and rim parts can cause serious injury or death.

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–23AUG88

DX,RIM –19–24AUG90–1/1

Dispose of Waste Properly

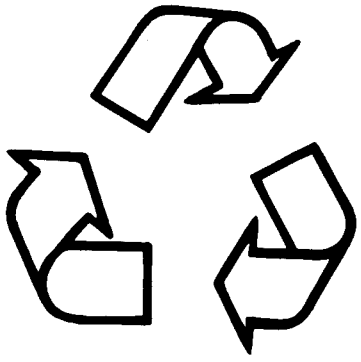
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

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

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

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

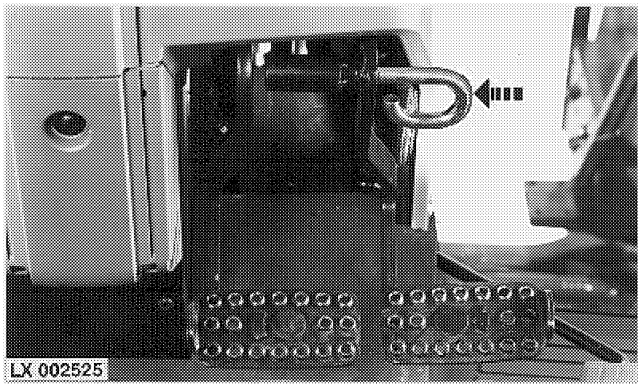
Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



TS1133 –UN–26NOV90

DX,DRAIN –19–03MAR93–1/1

Special Features on Tractors with AutoPowr Drive Unit



The brake pedals now also control the automatic clutch function. Partially depressing **both** of the brake pedals allows the tractor to “creep” - this makes it easier to back up to an implement, for example. Fully depressing the two brake pedals stops the tractor with powerflow still at the transmission. There is no need to press the clutch pedal. In consequence, watch out for the following points (they affect safety!):

- Full torque remains available even at very slow speeds. In certain conditions, even obstacles will not bring the tractor to a standstill.
- Once the brakes are released, the tractor automatically accelerates up to the speed currently commanded by the hand throttle or accelerator pedal.
- If only **one** of the brake pedals is depressed (to assist with steering), the tractor will **not** come to a standstill (unless it idling).
- If you go back to a tractor with a conventional transmission again, remember that the transmission is **not** disconnected when the brake pedals are depressed. Also, park lock **cannot** be selected on such tractors while the tractor is still in motion.

NOTE: When engaging park lock on bumpy terrain, remember to actuate the brake pedals as well.

IMPORTANT: The speed control lever makes it possible to demand a drastic reduction in speed in a very short time. For safety reasons (e.g. preventing trailers from jack-knifing), the AutoPowr drive unit reduces its speed at a more moderate rate. Always use the brake pedals to decelerate quickly.

AG,OU12401,359 –19–01MAY01–1/1

Safety Decals

Pictorial Safety Signs

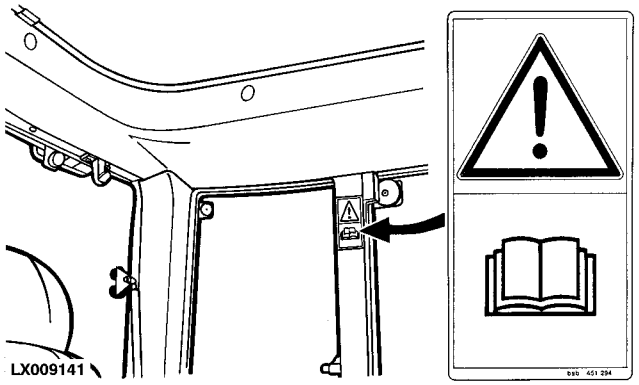
At several important places of this machine safety signs are affixed intended to signify potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety signs, their placement on the machine and a brief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

TS231 –19–07OCT88

LX,LABEL 002079 –19–02MAY92–1/1

Operator's Manual

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

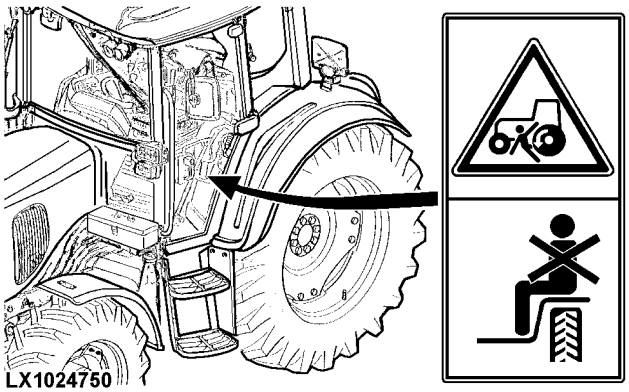


LX009141 –UN–04JAN95

LX,OLABEL003052 –19–01OCT94–1/1

Riders

Riders are permitted on a properly installed passenger seat only, and must not restrict the operator's view.

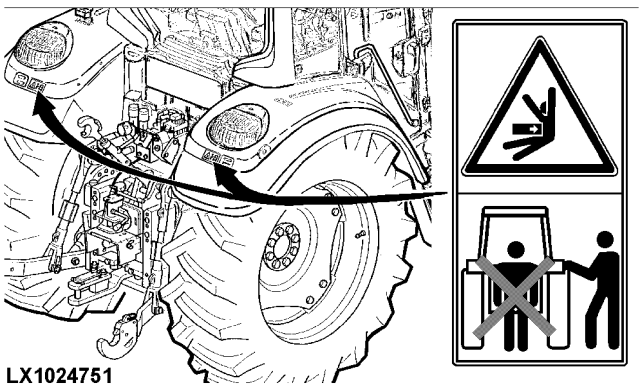


LX1024750 –UN–09MAR01

OU12401,00101C8 –19–26NOV00–1/1

Rockshaft Remote Control

Stay clear of three-point hitch lift range when operating the rockshaft.

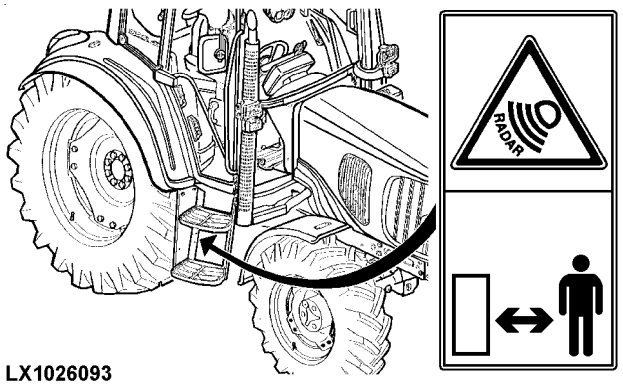


LX1024751 –UN–09MAR01

OU12401,00101C9 –19–26NOV00–1/1

Radar Sensor

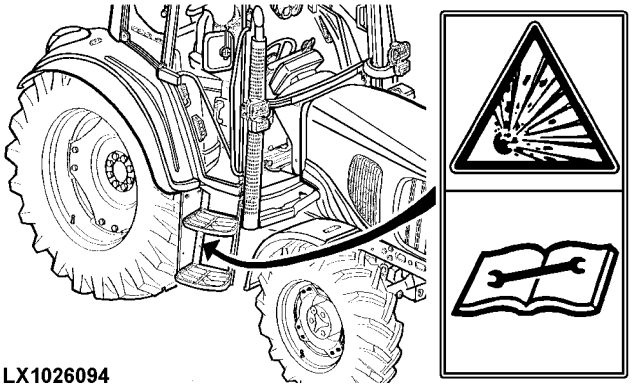
To avoid possible eye damage do not look directly into sensor face.



OU12401,00005BE –19–26FEB01–1/1

Compressed Air Tank for Trailer Brake

The compressed air tank is under pressure. Have the tank removed and repaired by your John Deere dealer only. The dealer must follow the instructions in the Technical Manual.



OU12401,00005BF –19–26FEB01–1/1

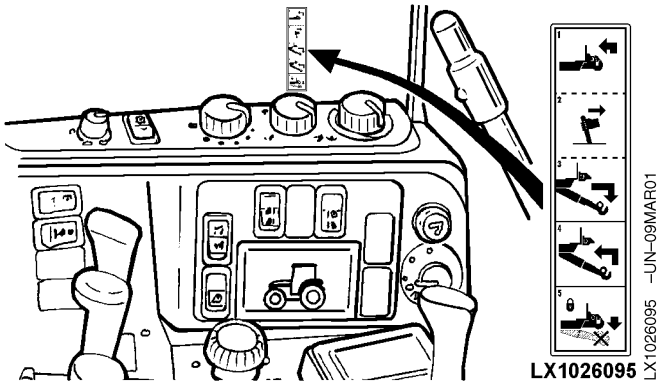
Pick-Up Hitch

Raise draft links to engage hitch hook in trailer towing eye, then continue to raise the hitch fully.

Retract hitch hook fully by means of selective control valve until it is **completely locked** (the control lever moves to its home position).

Lower the draft links.

Check that the hitch is completely locked. It will **not lower** when the draft links are lowered and **not extend** when the selective control valve is operated.



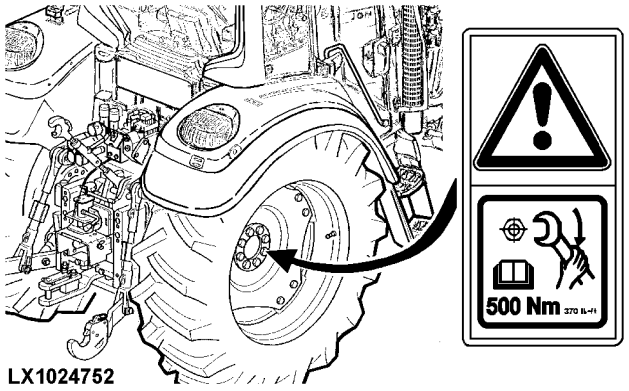
CAUTION: Before driving away, make sure the hitch is fully raised and locked in both horizontal and vertical positions.

NEVER put your hand in the opening of the pick-up while the pick-up is lowered!

OU12401,00005C0 –19–26FEB01–1/1

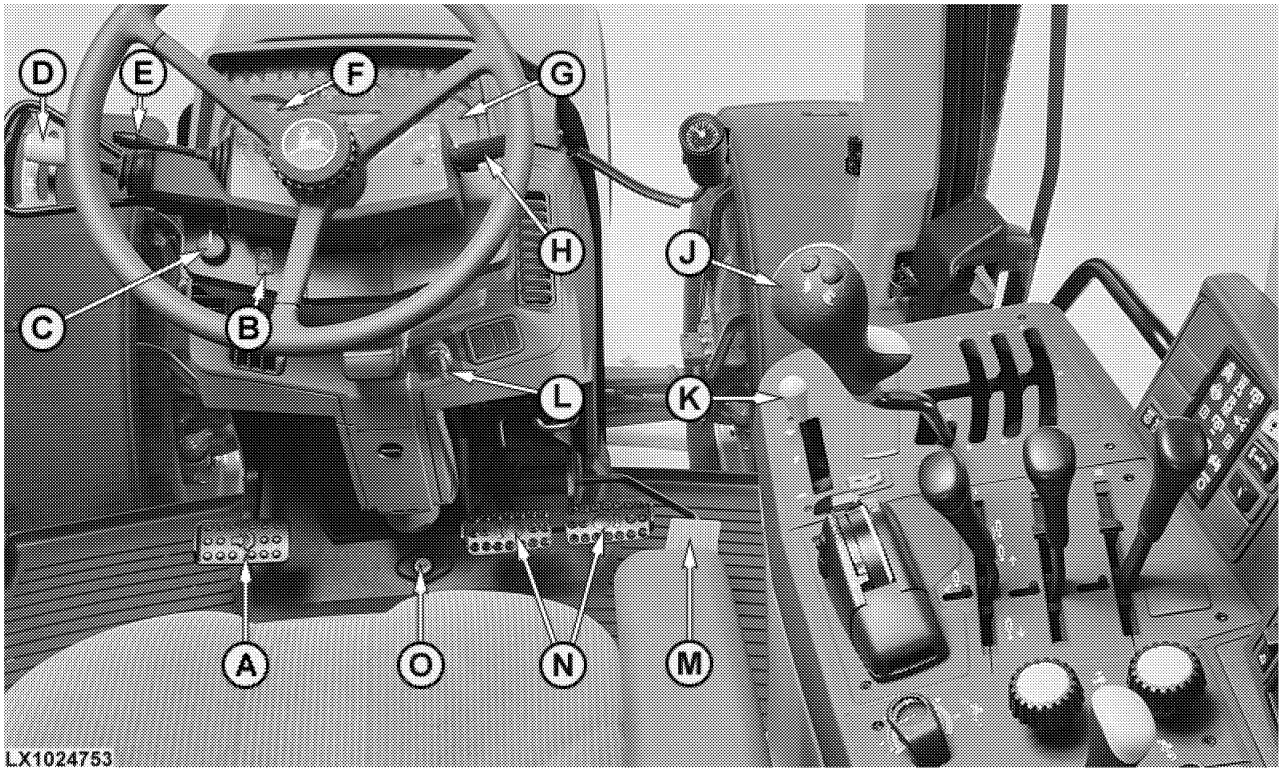
Keep Wheel Retaining Bolts Tight

Retighten the wheel retaining bolts regularly to the torque values prescribed for them. See “Break-In Period” or “Service/Every 250 Hours”.

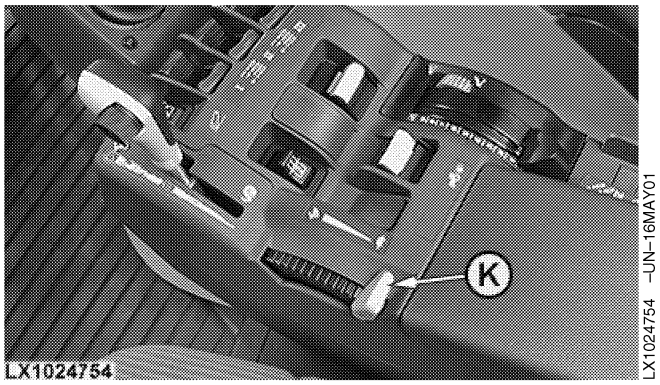


OU12401,00101CA –19–26NOV00–1/1

Vehicle Controls



A—Clutch pedal
B—Hazard warning switch
C—Light switch
D—Reverse drive lever
E—Turn signal lever
F—Speedometer, km/h
G—Tachometer, rpm
H—Windshield wiper switch
J—Range shift lever
K—Hand throttle
L—Main switch
M—Accelerator pedal
N—Brake pedals
O—Differential lock

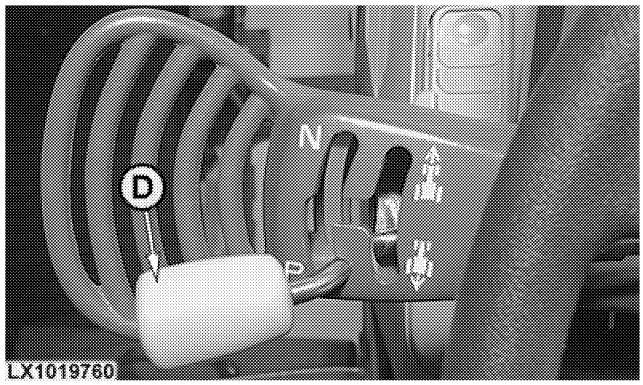


Premium Plus cab

Continued on next page

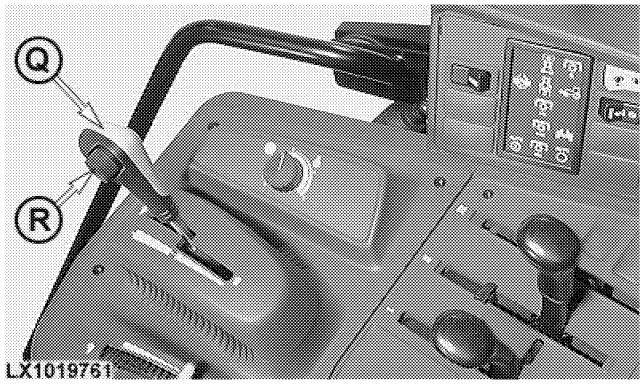
AutoPowr transmission

D—Reverse drive lever
Q—Speed control lever
R—Speed wheel (for setting maximum speed)



LX1019760 –UN–04AUG00

Reverse drive lever (AutoPowr transmission)



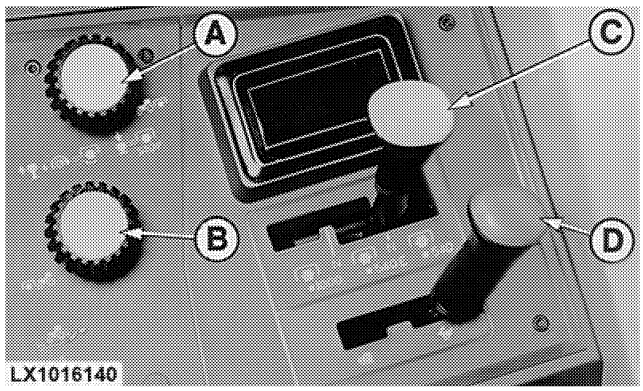
LX1019761 –UN–04OCT00

Speed control lever (AutoPowr transmission)

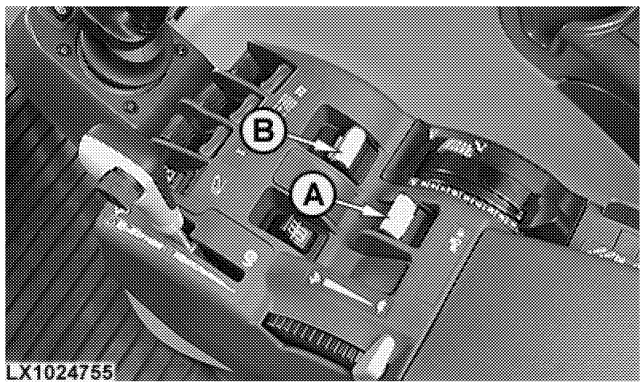
OU12401,00101CB –19–26NOV00–2/2

PTO and Creeper Controls

A—Rear PTO switch
B—Front PTO switch
C—Rear PTO speed control lever
D—Creeper speed control lever



LX1016140 –UN–20OCT97



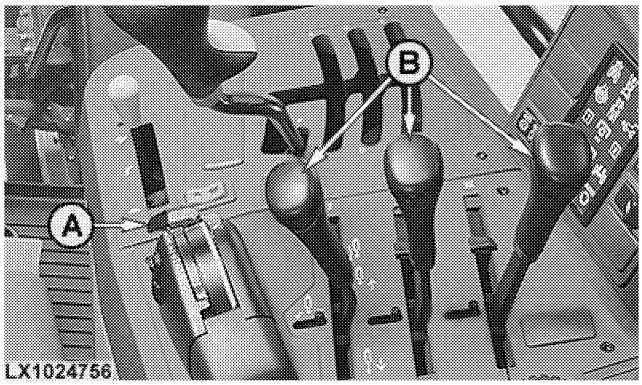
LX1024755 –UN–01AUG01

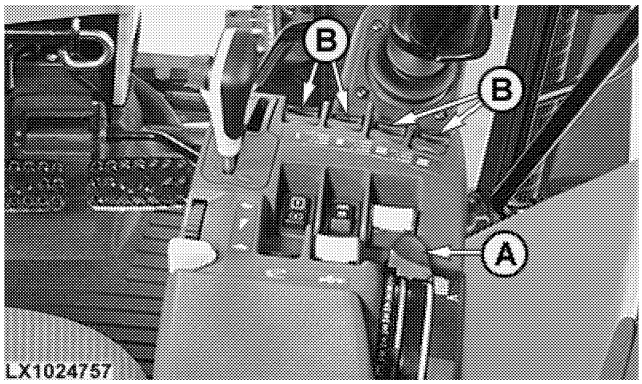
Premium Plus cab

OU12401,00101CC –19–26NOV00–1/1

Attachment Controls

A—Three-point hitch control unit
B—Levers for selective control valves



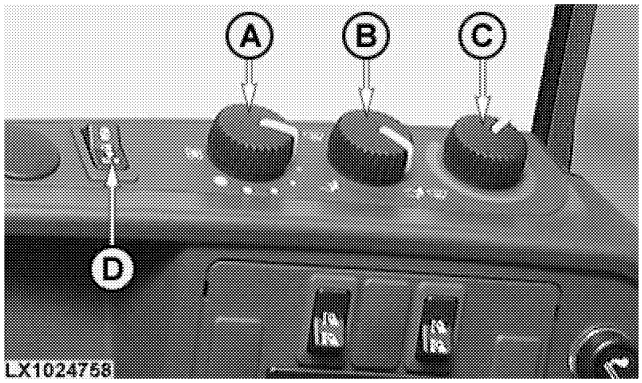


Premium Plus cab

OU12401,00101CD –19–26NOV00–1/1

Heater and Air-Conditioning Controls

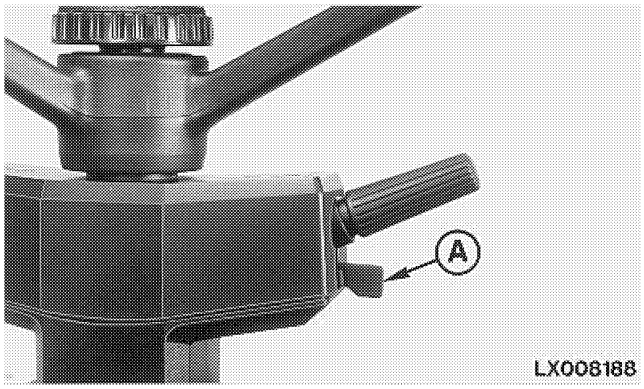
A—Blower switch
B—Airflow regulator
C—Heater and air-conditioning regulator
D—Air-conditioning switch



OU12401,00101CE –19–26NOV00–1/1

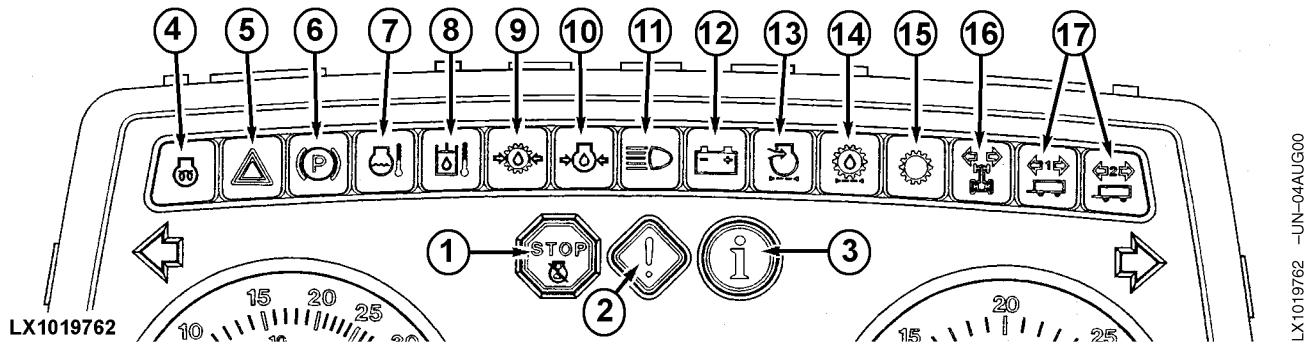
Operating the Digital Display

A—Roll-mode switch



LX,OBED 005603 –19–02MAR94–1/1

Indicator Lights



1-The red “STOP” light flashes when a serious malfunction occurs (indicator lights 7, 8, 9 or 10 come on). Switch off the engine IMMEDIATELY and determine the cause.

2-The yellow “CAUTION” light flashes when indicator lights 7, 8, 12, 13 or 14 come on, and when the handbrake is applied with the engine running and a gear engaged or the reverse drive lever set to any position other than neutral.

3-This light flashes when there is a fault in an electrical component associated with the hydraulic system or transmission. See your John Deere dealer.

4-On tractors with Bosch VP44 injection pump, this light comes on when the main (key) switch is turned one position to the right. Wait till the light goes out before starting the engine.

On other tractors, this light remains on while the electrical starting aid is actuated.

5-This flashing warning light comes on when the hazard warning lights are selected.

6-The handbrake indicator light glows when handbrake is applied and engine is running. In addition, an acoustic warning signal may be installed.

7-This light glows when coolant temperature is too high.

8-This warning light glows when transmission/hydraulic oil temperature is too high.

9-If this warning light glows, transmission/hydraulic oil pressure is too low. See your John Deere dealer.

10-If engine oil pressure warning light glows with engine running, shut off engine and check the level of engine oil.

11-The full beam indicator light will glow whenever the headlights are switched on at full beam.

12-If alternator indicator light glows with engine running, this indicates a defect at alternator. Check alternator cables. If necessary, have alternator checked by your John Deere dealer.

13-If air cleaner indicator light glows with engine running, the air cleaner element must be cleaned or replaced.

14-This light glows when the transmission oil filter is clogged or the oil temperature is too low.

15-This light glows when there is a fault in the following transmissions: PowrQuad Plus, AutoQuad II or AutoPowr.

16-The flashing indicator light for tractor starts flashing when turn-signal or hazard warning lights are switched on.

Continued on next page

17-The flashing indicator lights for trailer start flashing when turn-signal or hazard warning lights are switched on.

Bulb test: As the engine is started, all the lights should glow for approx. 1 second. If this is not the case, a defective bulb or blown fuse may be the cause. Check and replace parts as necessary.

The indicator lights should go out as soon as the engine is running.

OU12401,00101CF –19–01MAY01–2/2

Additional Indicator Lights

Light (A) flashes to indicate a fault in the cab suspension. Drive with extra care!

Light (B) comes on when rear PTO preselector switch is selected.

Light (C) comes on when the front PTO is engaged.

Light (D) comes on when the differential lock is engaged.

Light (E) comes on when front wheel drive is selected.

Light (F) comes on when the rear PTO is engaged.

Light (G) comes on when program 1 of HMS II is selected.

Light (H) comes on when program 2 of HMS II is selected.

Lights (J) indicate the selected PTO speed. Number and order of lights may vary according to tractor model.

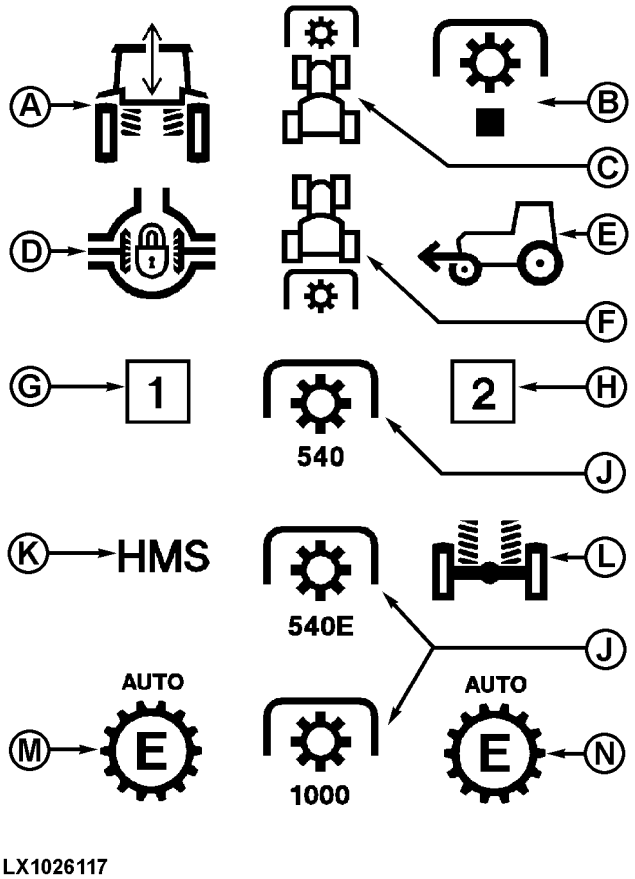
Light (K) comes on when HMS II is selected.

Light (L) flashes to indicate a fault in the front-axle level control. Drive with extra care!

Light (M) comes on when cruise control is selected (Eco mode).

Light (N) comes on when cruise control is selected.

NOTE: If the PTO is already engaged when the engine is started, the PTO will not operate. The PTO must be disengaged and then re-engaged before it will start to turn.



LX1026117

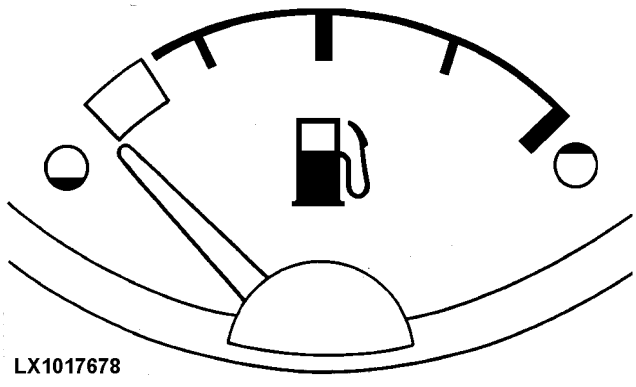
LX1026117 –UN–07MAY01

OU12401,00005D3 –19–18APR01–1/1

Fuel Gauge

The fuel gauge shows the amount of fuel in the tank, from “full” to “empty” (end of red sector). When the indicator needle enters the red sector, there are still approx. 35 liters (9.2 U.S. gal.) remaining in the tank.

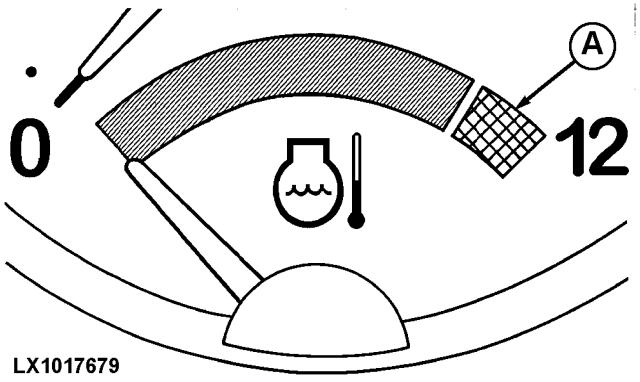
NOTE: Never run the tank completely dry, otherwise you will have to bleed the fuel system.



LX,OMBED 011255 –19–01SEP97–1/1

Coolant Temperature Gauge

Should the coolant gauge needle move into the red zone (A), the engine is overheating. Immediately reduce load or shift to a lower gear. Should the needle remain in the red zone, shut off engine and determine cause of overheating (coolant level low, dirty radiator or dirty radiator screen).



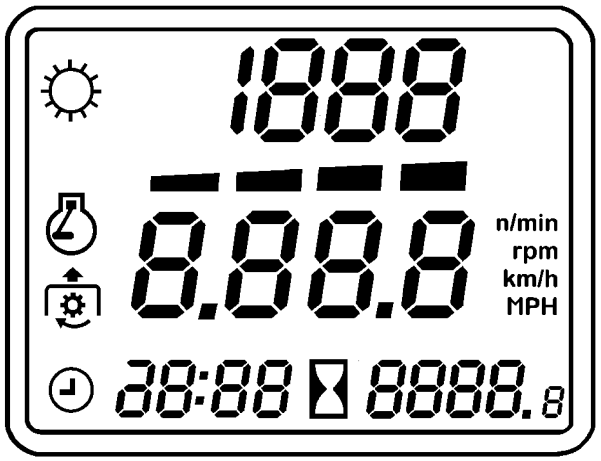
LX,OMBED 011256 –19–01SEP97–1/1

Digital Display

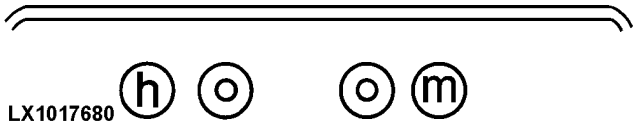
The digital display shows travel speed, engine speed and PTO speed; it also indicates the time of day (clock) and hours of operation. On tractors with PowrQuad Plus or AutoQuad II transmissions, it also indicates which gear is selected.

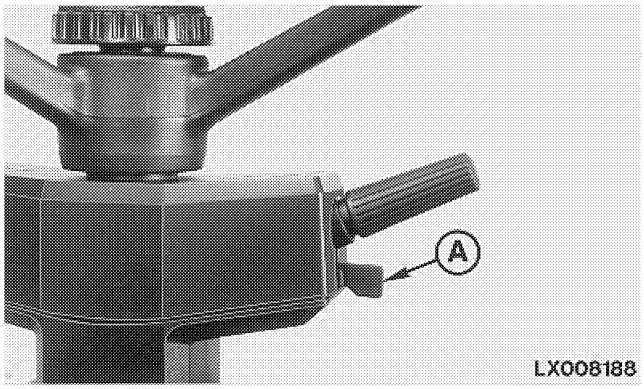
After the ignition is switched on, it shows the operating hours, before changing to display the travel speed once the tractor is moving.

Roll-mode switch (A) changes the display from one mode to the next.



LX1017680 –UN–01OCT97





LX008188 –UN–10AUG94

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AG,OU12401,178 –19–01DEC00–1/8

Travel Speed Display

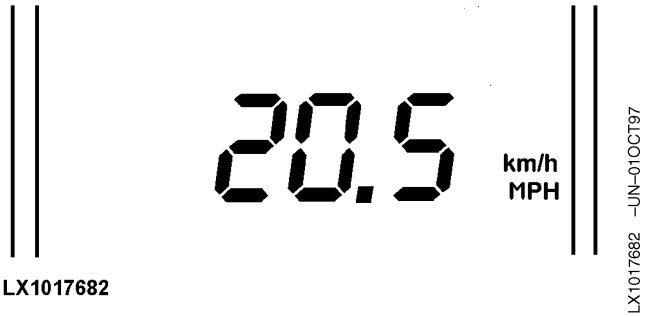
Travel speed is indicated either as “km/h” or “MPH”.

NOTE: On tractors without creeper transmission, the display changes to 0 as soon as travel speed drops below 0.5 km/h (0.3 mph).

On tractors with creeper transmission, the display changes to 990 m/h (0.600 mph) as soon as travel speed drops below 1 km/h (0.6 mph).

NOTE: If, on level terrain, the display on a tractor with a 50 km/h (31 mph) transmission shows a speed in excess of 50.5 km/h (31.4 mph), consult your John Deere dealer.

If the tractor drives and the display shows 0.0 km/h (0.0 mph), consult your John Deere dealer.



LX1017682

LX1017682 –UN–01OCT97

AG,OU12401,178 –19–01DEC00–2/8

Engine Speed Display

The engine symbol appears and engine speed is displayed.

LX1019356

LX1019356 –UN–21APR98

Continued on next page

AG,OU12401,178 –19–01DEC00–3/8

PTO Speed Display

The PTO symbol appears. An arrow indicates "front PTO" (if equipped). PTO speed is displayed.

NOTE: With the engine running, if PTO speed exceeds 620 rpm, it is displayed intermittently (flashing) regardless of the display selected. This warns of the possible danger if a 540 rpm PTO is being used. On tractors with Dual Gauge Plus II, code 140 is also displayed. The "CAUTION" light also flashes. Actuating the roll-mode switch again causes the flashing display to stop. The display stops flashing automatically whenever PTO speed drops below 590 rpm.

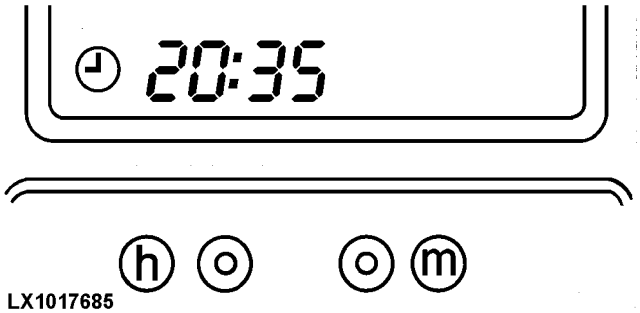
LX1019357

LX1019357 –UN–21APR98

AG,OU12401,178 –19–01DEC00–4/8

Time Display (Clock)

The clock symbol appears and the time of day is displayed. Can be reset using the two keys below the display.



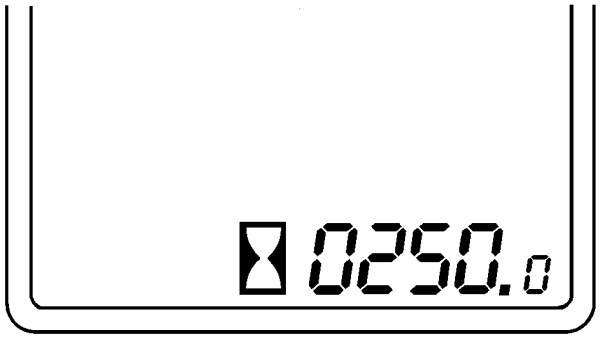
LX1017685

LX1017685 –UN–01OCT97

AG,OU12401,178 –19–01DEC00–5/8

Operating Hours Display

When the ignition is switched on, the display shows the number of hours operated by the engine.



LX1017686

LX1017686 –UN–01OCT97

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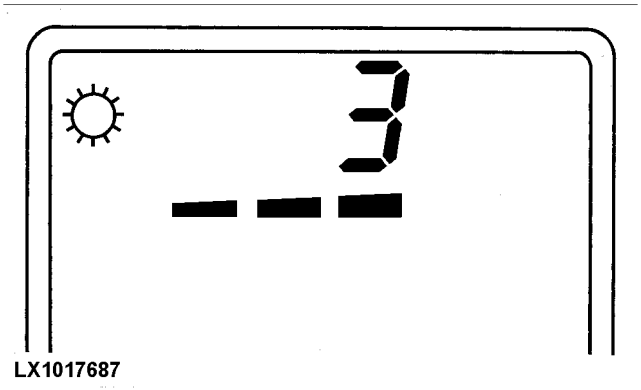
AG,OU12401,178 –19–01DEC00–6/8

Gear Selection Display (Tractors with PowrQuad Plus or AutoQuad II Transmission)

The transmission symbol appears; the gear that is currently selected is displayed.

On tractors with Dual Gauge Plus II, the direction of travel is also displayed. On tractors with AutoQuad transmission, the word “AUTO” appears as soon as this function is selected.

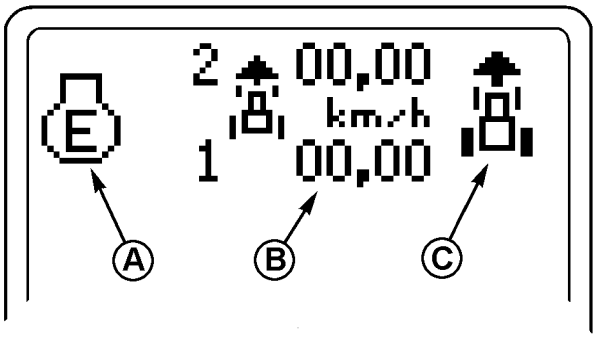


LX1017687

Continued on next page

AG,OU12401,178 –19–01DEC00–7/8

Display on Tractors with AutoPowr



LX1019763

LX1019763 –UN–01SEP00

If the automatic mode is selected, area (A) will show the following:

- If Load Control is selected and engine load is controlled, the transmission icon appears together with the letter “A”.
- If Eco mode is selected and engine speed is reduced electronically, an engine icon appears together with the letter “E”.

The selected top speeds in the forward and reverse speed ranges are shown in area (B). The selected direction of travel is shown by the tractor icon and an arrow (C).

If the reverse drive lever is placed in the corner Park position, area (C) will show the following:

- While the tractor is still moving, the display alternates between the direction of travel arrow and the letter “P”.
- When the tractor is stopped, “P” is displayed.

If the reverse drive lever is placed in the center Park position, area (C) will show the following:

- While the tractor is still moving, the letter “N” is displayed.
- When the tractor is stopped, the tractor icon and both direction arrows are displayed. After a brief interval, the letter “P” is displayed.

If the tractor is in “Power Zero” (reverse drive lever is held between the two directions of travel), both direction arrows and the tractor icon are displayed. Additionally, the current speed ranges are displayed (1 and 2).

If the reverse drive lever is moved to the neutral position, the letter “N” is displayed.

If the reverse drive lever is in the center Park position or in neutral, area (B) alternates between the set top speeds for forward and reverse.

If the reverse drive lever is in the position for forward or reverse travel, the relevant top speed is displayed (either forward speed or reverse speed).

AG,OU12401,178 –19–01DEC00–8/8

Performance Monitor

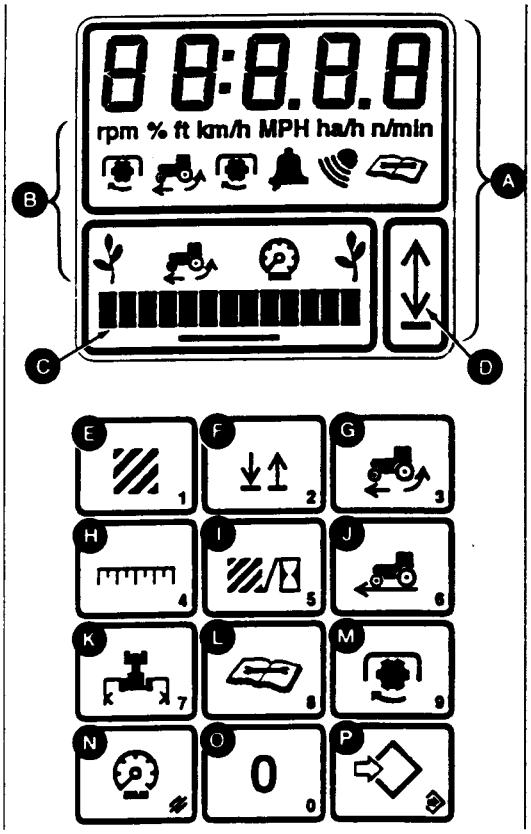
NOTE: Ignition switch must be in the "ON" position to operate performance monitor.

Performance monitor displays information related to various speeds, area, distance, time and alarm data.

Bargraph (C) displays wheel slip and monitor backlight intensity.

Area, wheel slip, slip alarm, width, implement indicator, distance, backlight brightness and service can be adjusted or preset.

A radar sensor is required for an accurate calculation of wheel slip, area covered, distance or speed. Without a radar sensor, values are estimates based on wheel speed.



RW21903 –UN–15MAR93

A—Display field
B—Indicators
C—Bargraph display
D—Implement status arrow
E—Area
F—Implement
G—% slip
H—Distance
I—Area/H
J—Speed
K—Width
L—Service
M—PTO speed (rpm)
N—Backlight/cancel
O—Zero
P—Set/save

LX,OMPM 017541 –19–01SEP99–1/1

Data Entry Mode

Press a switch from the touch pad (A), to preset or change values for:

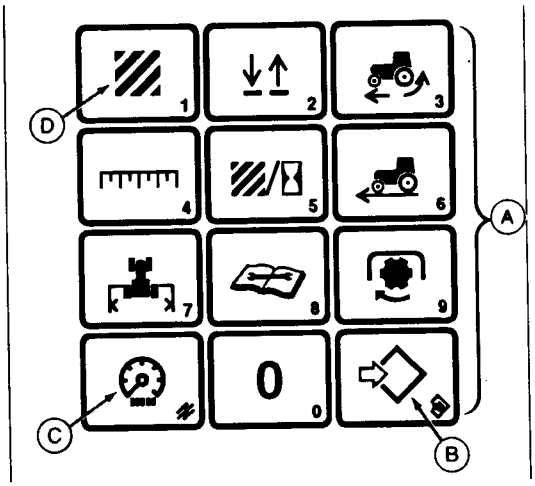
AREA, % SLIP ALARM, DISTANCE, IMPLEMENT WIDTH, IMPLEMENT SELECTOR, TIME SINCE LAST SERVICE, SERVICE INTERVAL, BACKLIGHT BRIGHTNESS.

Press **(B)** to change the numeric value. Display field will flash.

Input a numeric value using touch pad, then press **(B)** to save.

NOTE: Touch switches have a numeral located on the lower right-hand portion of the switch for data entry.

Press **(C)** to restore previous value before pressing (B).



RW21904 –UN–15MAR93

A—Touch Pad
B—Set/Save
C—Cancel
D—Area Switch

LX005369 –19–01MAR00–1/1

Operating Touch Pad Switches

NOTE: Calculations for AREA and AREA/H are based on implement width and ground speed. Use a radar sensor for the most accurate values.

AREA (1)

Press **AREA** to display accumulated area in acres or hectares. The implement arrow must be in the down position to accumulate area.

Hold **ZERO** to clear accumulated area.

DISTANCE (4)

Press **DISTANCE** to display distance accumulated in meters or feet.

Distance is accumulated with the implement indicator in the down position.

Measurement is cleared when the ignition is turned off.

AREA/H (5)

Press **AREA/H** to display the current measurement for area coverage per hour.

Implement indicator must be in the down position.

WIDTH (7)

Press **WIDTH** to display measurement for implement width.

Press **SET** to change implement width.

Input implement width and press **SAVE**.

PTO RPM (9)

Press **PTO RPM** to display rear PTO speed.

Press switch again to display optional front PTO speed.

Front or rear PTO symbols will appear on display field.

ZERO (0)

Pressing **“0”** for four seconds will reset a numeric value to zero (0).

LX005370 –19–01OCT93–1/1

Operation and Calibration

IMPLEMENT (2)

Press the **IMPLEMENT** switch to change implement indicator (C) to the “up” or “down” position.

When the implement indicator arrow points down, all measurement functions are engaged.

Implement Selector Calibration

Procedure coordinates the position of the indicator arrow (C) to the position of the hitch or implement switch.

Hold **IMPLEMENT** switch four seconds to change the function code (B).

Display will show “IP:” and a function code (3,7, or 32). This number indicates which device is in control of the implement arrow (C).

“3” hitch position sensor (raise limit setting).

“7” implement switch on touch pad.

“32” first downward movement automatically selects which external device will control the implement indicator arrow (implement switch or the hitch position sensor.). The “A” in the display (IP:A) represents this auto-seek mode.

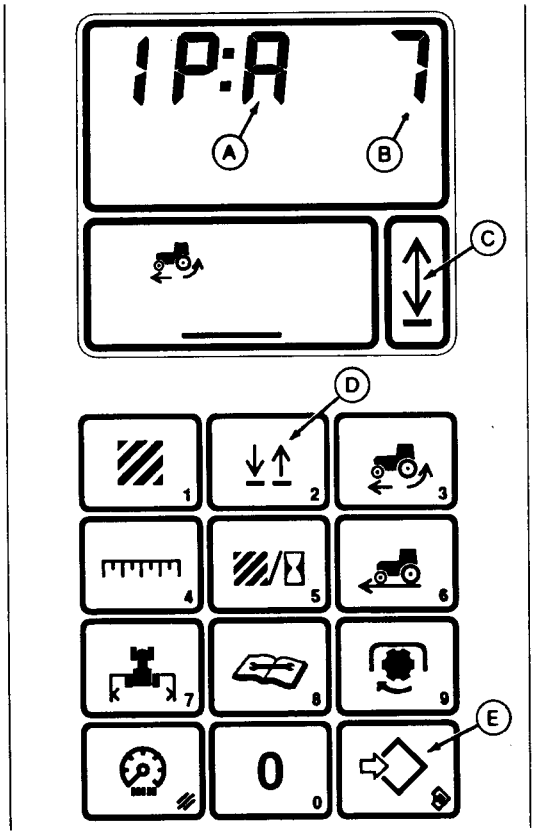
NOTE: It may be necessary to press implement switch (D) to change indicator arrow (C).

If the implement switch (D) does not control the indicator arrow, “7” has not been selected as a function code.

For applications which use the hitch sensor or implement switch exclusively, use “3” or “7”.

A “0” or any other number other than the above will completely shut off the “implement” function.

Press **SET** (E). Input 3,7, or 32 using touch pad, then press **SAVE** (E).



RW21905 –UN–15MAR93

A—Auto-seek
B—Function Code
C—Implement Indicator
D—Implement Switch
E—Set/Save

LX005371 –19–01OCT93–1/1

Wheel Slip (3)

Radar must be operational to provide true ground speed. If true ground speed is not available, "---" will be displayed.

Press **%SLIP** switch (A). Bargraph and numeric display will show current wheel slip.

Press switch again to display the wheel slip alarm setting. An alarm symbol will be displayed.

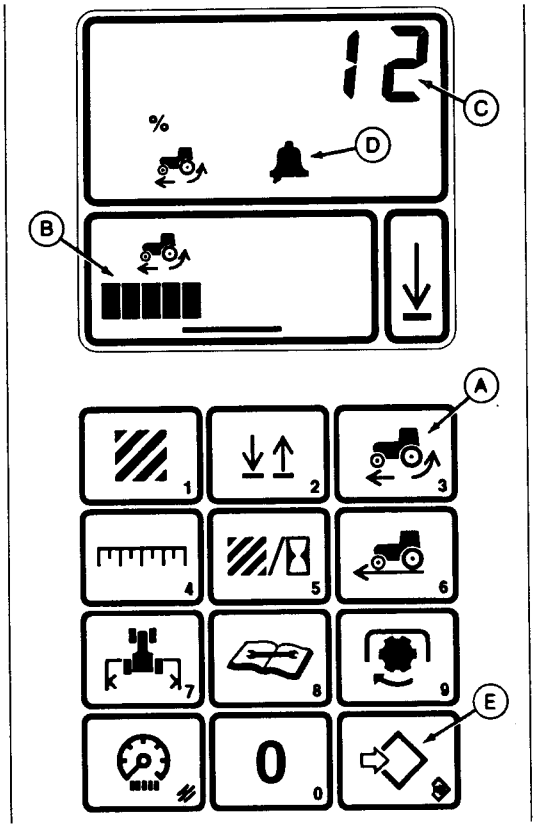
NOTE: Illustration shows current wheel slip (B) is 10%, with an alarm setting at 12% (C). The alarm symbol (D) indicates this alarm set mode.

Bargraph flashes when wheel slip exceeds alarm limit. Each bar on the bargraph represents 2% wheel slip.

Press (E), to change alarm value.

Input alarm setting using touch pad, then press (E).

NOTE: Entering "0" as an alarm value will shut off alarm.



RW21906 –UN–15MAR93

A—% Slip Switch
B—Bargraph
C—Numeric Display
D—Wheel Slip Alarm
E—Set/Save Switch

LX005372 –19–01OCT93–1/1

Vehicle Speed (6)

Press **SPEED** switch (E) to display actual ground speed (A) with radar. The tractor *must* be in motion. The radar symbol (B) will be displayed.

Press switch again to display wheel speed (A).

Press switch again to toggle between these modes.

NOTE: True ground speed may be different than wheel speed. If tractor is not equipped with radar, only wheel speed will be displayed.

Radar Calibration (after new rear tires have been installed):

Mark a 122 meter (400 ft) straight-line course (start and finish lines).

Rear PTO must be switched off

Press **DISTANCE** switch (D) and **SPEED** switch (E) four seconds. Display field will show "---" and the "ft" and "m" symbols will flash. The "implement" arrow should be pointing up.

NOTE: SPEED and DISTANCE switches must be pressed at the same time for correct calibration.

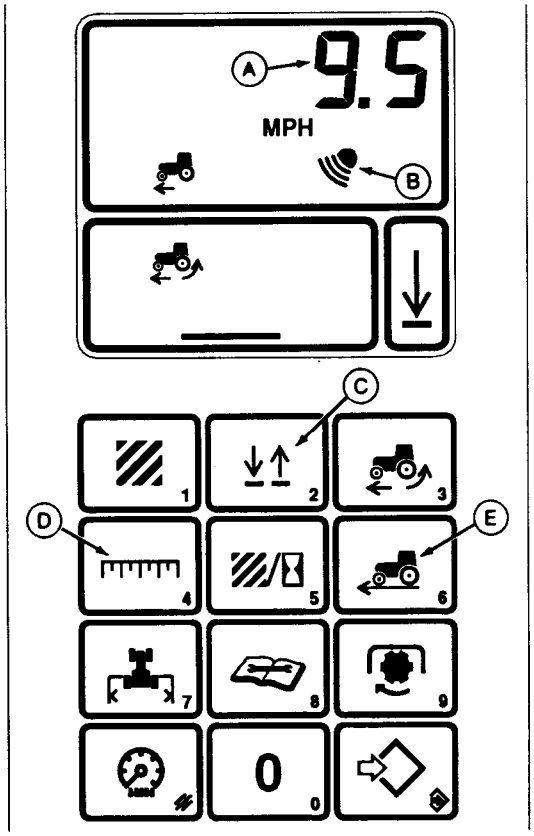
Drive the tractor at a speed of approximately 3.2 km/h (2 mph). As the tractor crosses the start-line, press the **IMPLEMENT** switch (C), to point the indicator arrow to the down position.

Press the **IMPLEMENT** switch (C) as you cross the finish-line to change the arrow to the up position.

Display will alternate between "122 m and 400 ft" when calibration is successful.

NOTE: "Err" will flash on display if calibration was not performed correctly. Previous calibration value will stay in memory.

Press "SPEED" switch to display vehicle speed or another display.



RW21907 –UN–15MAR93

A—Ground or Wheel Speed
B—Radar Symbol
C—Implement Switch
D—Distance Switch
E—Speed Switch

LX005373 –19–02OCT93–1/1

Service (8)

Press the **SERVICE** switch (A) to display hours accumulated since the last service.

The alarm symbol will flash and an acoustic signal will sound when the service interval is reached.

NOTE: The service time is set at 250 hours.

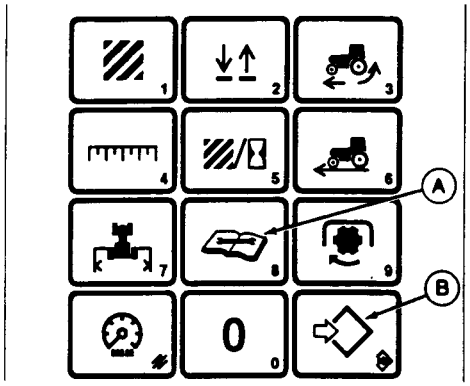
Press (B) to change operating hours. Input the desired value (0,0—9999.9 hours) and press switch (B) to save.

NOTE: Pressing any switch on the touch pad will shut off the alarm until the tractor is started again.

The alarm feature can be shut off by storing a "0" in the service interval data. The monitor will start counting hours beginning at zero.

Press switch (A) again to display programmed service intervals. An alarm symbol will be displayed.

Press (B) to change a service interval. Input desired service hours (0—999 hrs), and press (B) to save.



RW21908 –UN–15MAR93

LX,RX7000E,PM,7 –19–01SEP00–1/1

Backlight Brightness

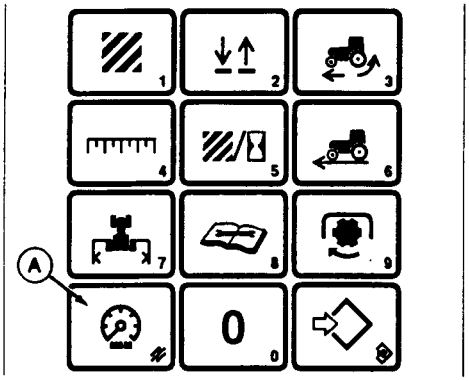
The "DIM" switch (A) can adjust the **backlight** intensity of the performance monitor.

Press (A) to display system backlight intensity for displays in the cab.

Press **DIM** switch again to display backlight setting of the performance monitor. A *bell* symbol will be displayed.

NOTE: Backlight intensity will remain at maximum brightness with headlights in the OFF position.

Headlight switch must be in the "ON" position to make adjustments.



RW21909 –UN–15MAR93

LX005375 –19–01OCT93–1/1

Adjusting Backlight—*Performance Monitor*

Press **DIM** switch (D) twice. The numeric display will show the backlight setting of the performance monitor (A). A bell symbol (B) will be displayed.

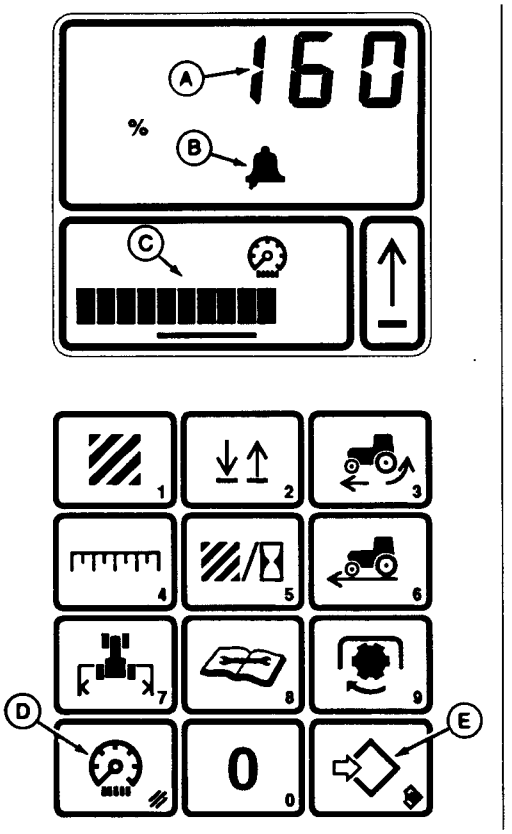
NOTE: System backlight intensity remains displayed on the bargraph (C).

Press (E) to “set” and input a numeric value (0—255).

Backlight intensity can be adjusted brighter (100—255) or dimmer (0—100) than instrument panel display.

Press (E) to “save”.

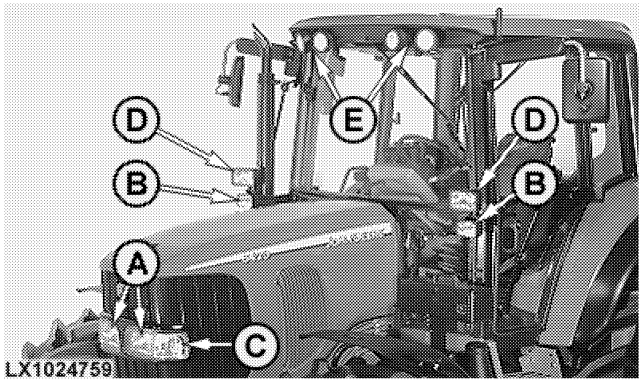
Hold **“0”** (ZERO) to turn “ON” or “OFF” the performance monitor backlight.



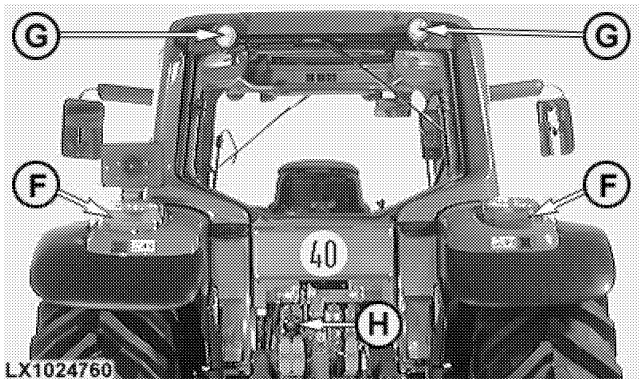
LX,OMPM 013416 –19–01SEP97–1/1

Lights

A—Headlights
B—Turn signal and clearance lights
C—Front corner work lights[1]
D—Cab frame work lights[1]
E—Front roof work lights[1]
F—Tail, brake and turn signal lights
G—Rear roof work light(s)[1]
H—Socket for trailer lighting



LX1024759 –UN–13JUN01



LX1024760 –UN–13JUN01

[1] *If equipped*

OU12401,00101D0 –19–26NOV00–1/1

Xenon Worklights

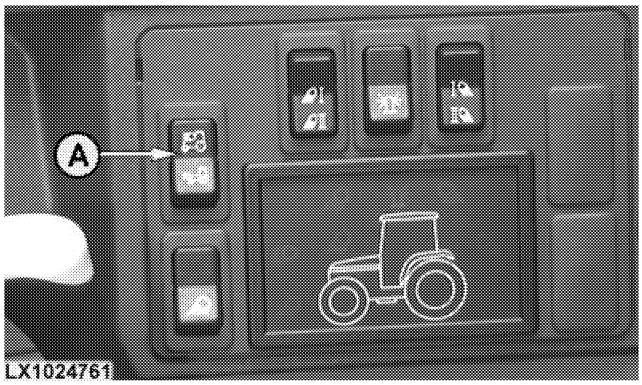
The tractor may be equipped with high-performance xenon worklights.

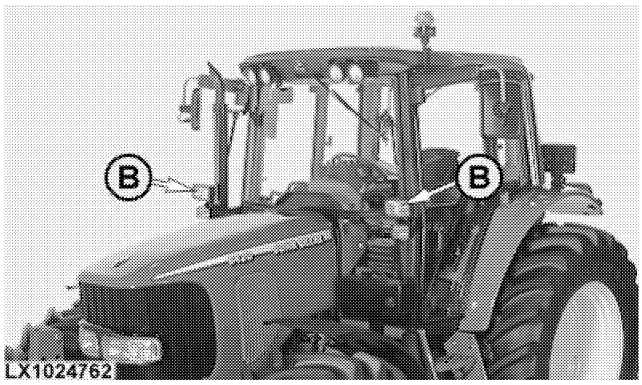
CAUTION: High tension. Risk of injury. Changing bulbs on xenon lights and work on the ballast unit must be performed ONLY by your John Deere sales partner or in a professional workshop.

OU12401,0000902 –19–01MAY01–1/1

H4 Farm Headlights

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





OU12401,00101D1 –19–26NOV00–1/1

Light Switch

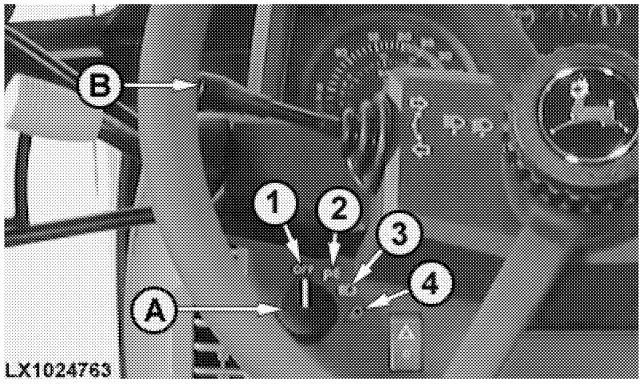
Light switch (A) can be set to the following positions:

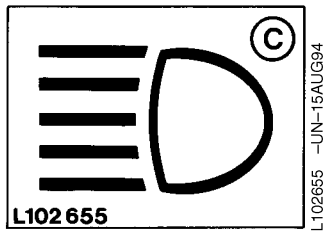
- 1 = Light switch in "off" position
- 2 = Parking lights "on"
- 3 = Headlights "on"
- 4 = Headlights and worklights "on"

Switch headlights to “full beam” or “low beam” position by means of switch (B).

- Switch down = Full beam
- Switch in center = Low beam
- Switch up = Headlight flasher

Indicator light (C) will glow when headlight switch is in "full beam" position.

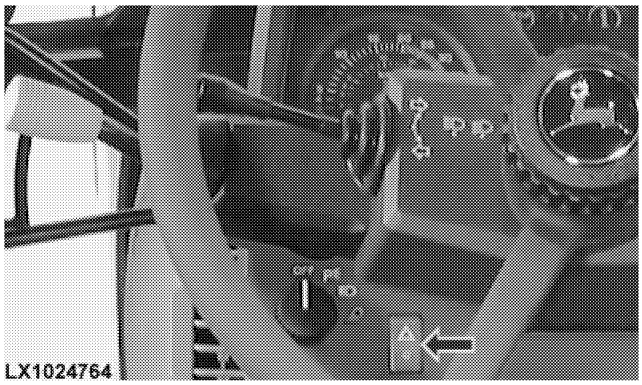




OU12401,00101D2 –19–26NOV00–1/1

Operating the Hazard Warning Light Switch

If any trouble is encountered on the machine when driving on public roads, switch on the hazard warning lights.

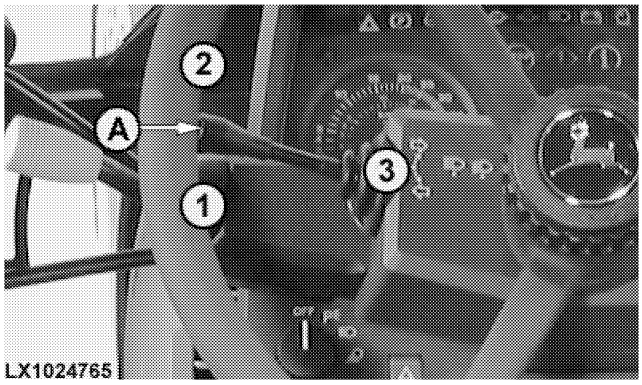


OU12401,00101D3 –19–26NOV00–1/1

Switch for Turn Signal Lights and Horn

Positions of stalk switch (A):

- 1 = Turn signal, left-hand turn
- 2 = Turn signal, right-hand turn
- 3 = Horn (push towards steering column)



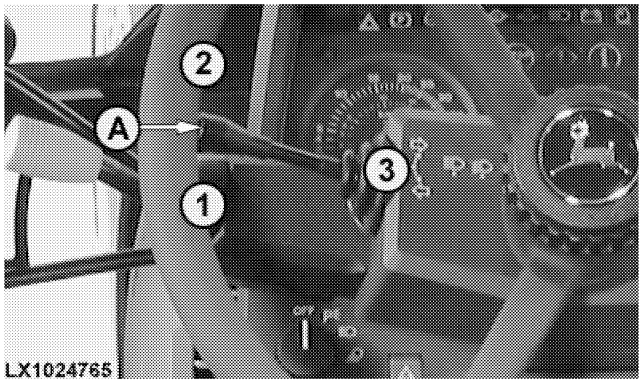
OU12401,00101D4 –19–26NOV00–1/2

SELF-CANCELLING INDICATOR (if equipped):

Push stalk switch to left or right and return it immediately to middle:

Left or right turn signal continues to flash in relation to time and tractor speed; it switches itself off automatically.

To cancel the indicator before it switches itself off automatically, push the stalk switch once again in the desired direction of turn, and then return it to the middle.

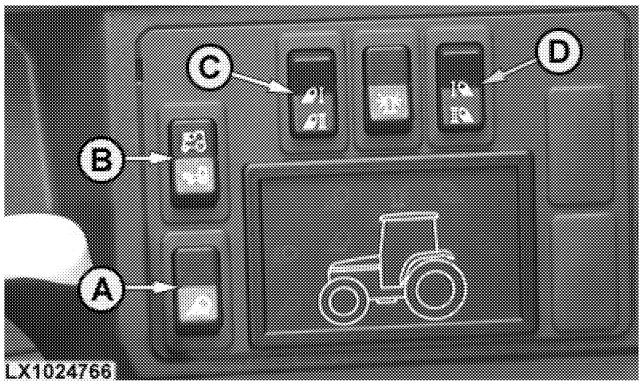


OU12401,00101D4 –19–26NOV00–2/2

Worklight Switches

The worklights can be switched on and off using the switches shown here. The main light switch must first be set to position 4.

A—Front corner worklights
B—Cab frame worklights
C—Front roof worklights
D—Rear roof worklight(s)



LX1024766 –UN–06DEC00

OU12401,00101D5 –19–01MAY01–1/1

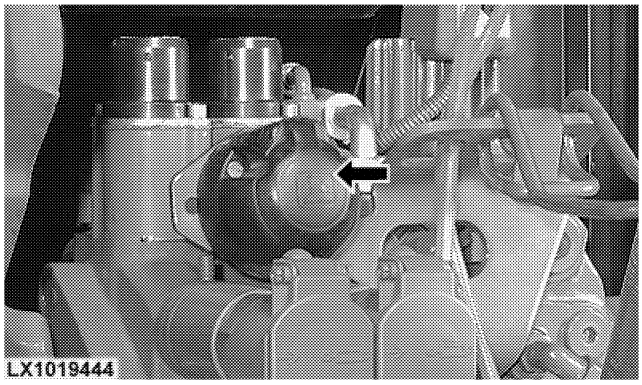
Seven-Terminal Trailer Socket

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

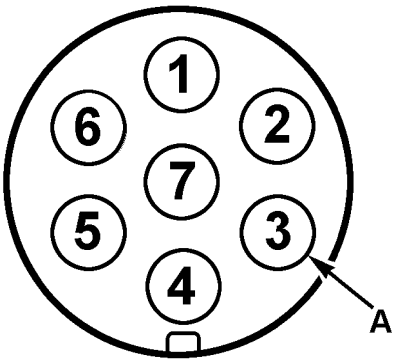
NOTE: Suitable plugs can be obtained from your John Deere dealer.

Terminal (A) is the ground connection.

Connection	Function	Wire color
1	L.h. turn signal	Dark green
2	—	—
3	Ground	Black
4	R.h. turn signal	Purple
5	R.h. tail light	Gray
6	Brake lights	Pale blue
7	L.h. tail light	Gray



LX1019444 –UN–17SEP99



LX1019770

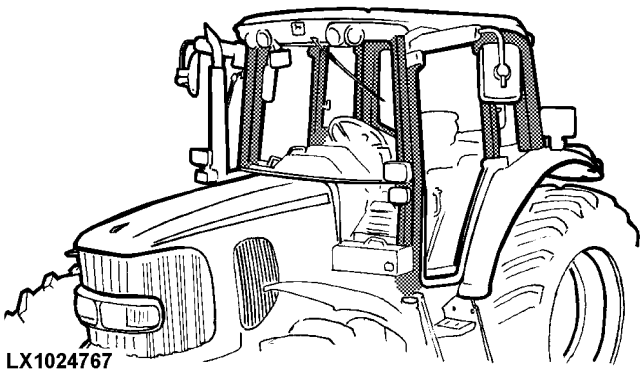
LX1019770 –UN–17NOV00

AG,OU12401,371 –19–01SEP00–1/1

Roll-Over Protective Structure

CAUTION: A roll-over protective structure (ROPS) is incorporated into each operator's cab. On this construction do not under any circumstances modify structural members by welding on additional parts, drilling holes, cutting or grinding etc. Disregarding this instruction will affect the rigidity of the ROPS.

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



OU12401,00101D6 –19–26NOV00–1/1

Seat Belt

CAUTION: When driving, always wear the seat belt (if equipped).

OU12401,00101D7 –19–26NOV00–1/1

Avoid Contact with Pesticides

CAUTION: This enclosed cab does not protect against inhaling harmful pesticides.

1. When operating in an environment where harmful pesticides are present, wear a long-sleeved shirt, long-legged pants, shoes, and socks.

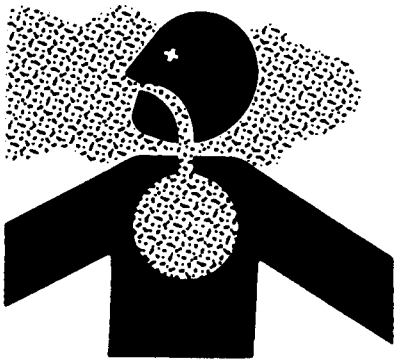
2. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

3. Wear personal protective equipment as required by the pesticide use instructions when leaving the enclosed cab:

   - into a treated area,
   - to work with contaminated application equipment such as nozzles which must be cleaned, changed, or redirected.
   - to become involved with mixing and loading activities.

4. Before re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.

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



TS220 –UN–23AUG88

TS272 –UN–23AUG88

DX,CABS1 –19–03MAR93–1/1

Clean Vehicle of Hazardous Pesticides

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

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

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

DX,CABS2 –19–03MAR93–1/1

Super Comfort Seat

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

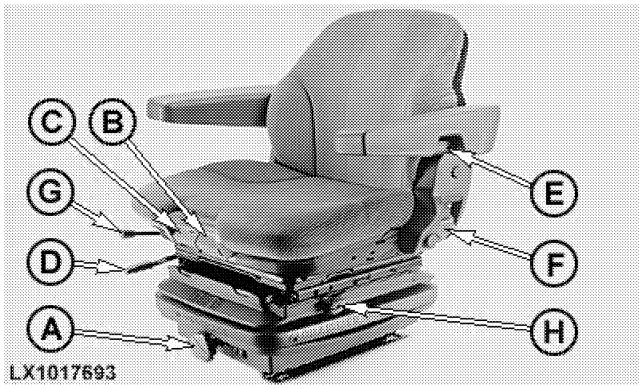
IMPORTANT: Before turning the seat, always switch off the engine. This prevents the tractor or implements from moving if any of the controls are accidentally moved.

If the seat is equipped with a swivel (optional equipment), this is operated by means of lever (G) as follows:

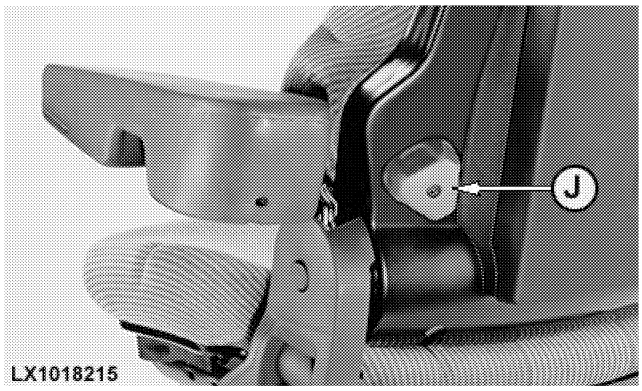
Lift the lever up. The seat turns 200° to the left and 20° to the right. The seat locks at 10° intervals.

As a further option, the seat may be equipped with the same type of swivel described at "Air Comfort Seat".

To lower the armrest through 30°, press the armrest tilt adjuster (E) into the armrest.



LX1017693 –UN–24OCT97



LX1018215 –UN–24OCT97

A—Crank for adjusting seat to suit operator's weight
B—Lever for seat tilt adjustment[1]
C—Lever for adjusting the cushion position[1]
D—Horizontal adjustment
E—Armrest tilt adjustment
F—Backrest tilt adjustment
G—Lever for swivel movement[1]
H—Lever for fore/aft spring[1]
J—Lumbar support adjustment

[1]If equipped

LX,OMKAB 011272 –19–01SEP99–1/1

Air Comfort Seat

1. **Adjust weight**

   After starting the engine, release lever (E) briefly to bring the seat to its central position.

2. **Adjust height**

   To adjust the height, pull lever (E) upward or push it down.

3. **Adjust spring setting**

   The seat's spring setting can be varied from soft to hard by means of lever (F).

   - Lever (F) forward - soft
   - Lever (F) backward - hard

4. **Adjust fore/aft spring**

   - Lever (D) forward - Fore/aft suspension
   - Lever (D) backward - No fore/aft suspension

5. **Adjust lateral spring**

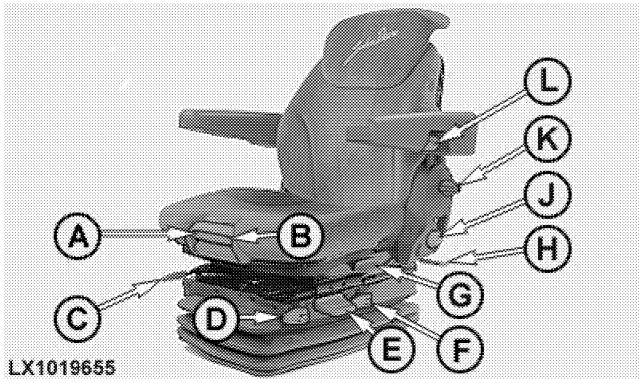
   - Lever (H) forward - lateral suspension
   - Lever (H) backward - no lateral suspension

IMPORTANT: Before turning the seat, always switch off the engine. This prevents the tractor or implements from moving if any of the controls are accidentally moved.

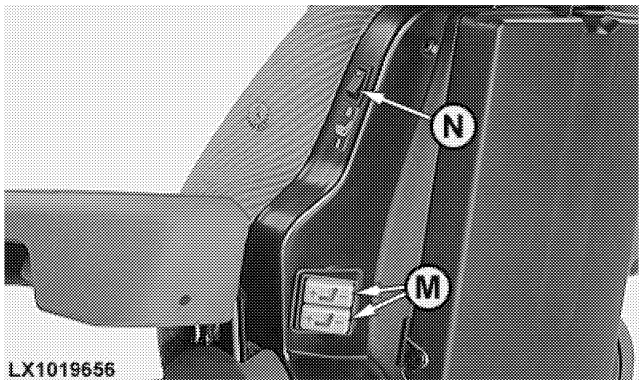
The seat swivel is operated by means of lever (G) as follows:

Lift the lever up. The seat turns 15° to the left and right. The seat locks at 7.5° intervals.

To lower the armrest through 30°, press the armrest tilt adjuster (L) into the armrest. Knob (K) allows the height of the armrests to be adjusted to any of 5 positions.



LX1019655 –UN–17SEP99



LX1019656 –UN–17SEP99

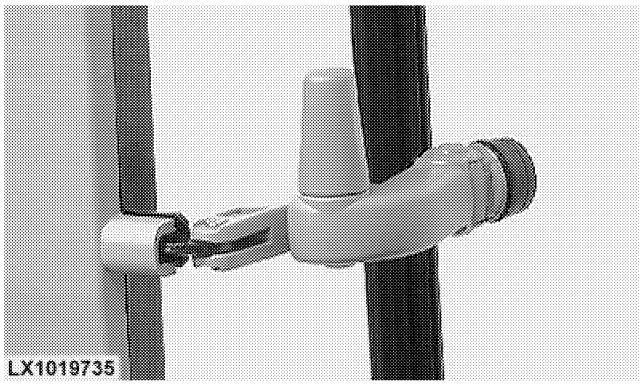
A—Lever for adjusting the cushion position[1]
B—Lever for seat tilt adjustment[1]
C—Horizontal adjustment
D—Lever for fore/aft spring
E—Height adjustment
F—Spring setting adjustment
G—Lever for swivel movement
H—Lever for lateral suspension
J—Backrest tilt
K—Armrest height adjustment
L—Armrest tilt adjustment
M—Pneumatic lumbar support adjustment
N—Seat heater switch[1]

[1]If equipped

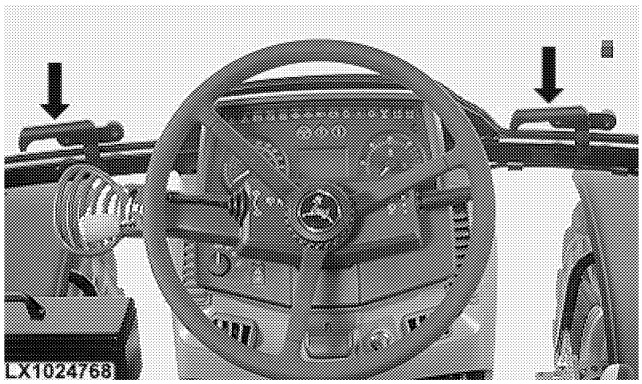
LX,OMKAB 020556 –19–01MAR00–1/1

Opening Windows

The windshield[1], side and rear windows can all be opened for better ventilation.



LX1019735 –UN–08FEB00



LX1024768 –UN–06DEC00

[1]*Opening windshield is optional equipment.*

OU12401,00101D8 –19–26NOV00–1/1

Windshield Wiper and Washer System

Windshield wiper switch (A) has two or three positions:

- 1 = Intermittent wipe (optional)
- 2 = Slow wipe
- 3 = Fast wipe

The windshield washer system is operated by means of switch (A) (push towards steering column).

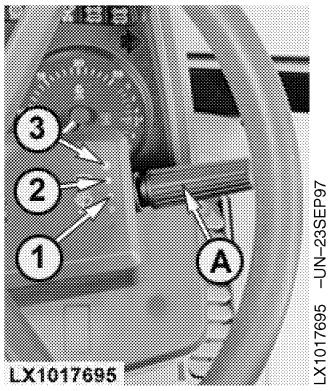
Rear window wiper switch (B) has two positions:

- 1 = Slow wipe
- 2 = Fast wipe

The rear window washer system is operated by means of switch (B) (push the switch).

Add a suitable anti-freeze solution to water in reservoir (C) if temperature is liable to drop below freezing point.

A—Switch for windshield wiper
B—Switch for rear window wiper
C—Reservoir for washer system



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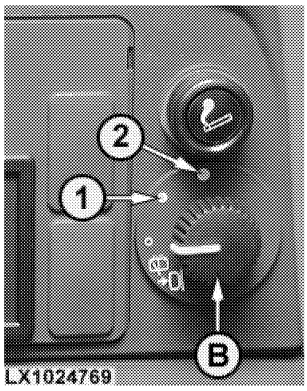
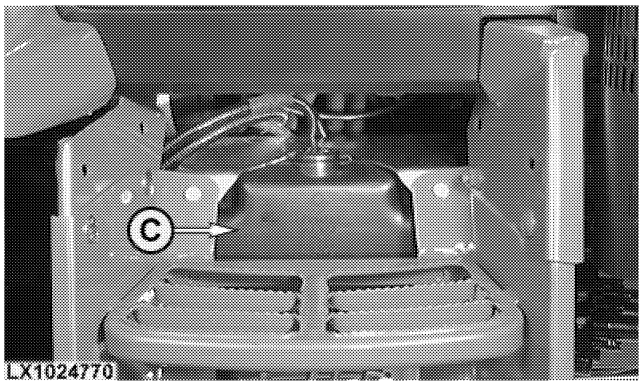


LX1024769 –UN–06DEC00



LX1024770 –UN–06DEC00

OU12401,00101D9 –19–26NOV00–1/1

Blower and Air Louvers

The four blower speeds are controlled by a switch (A). The general direction of the airflow can be altered by means of switch (B).

De-icing or de-misting the windshield

Set the heater to maximum heat output. Set switch (B) to symbol (D) and turn switch (A) (blower) to position 4.

If the airflow is to be directed **at the operator**, set switch (B) to symbol (E). Turn on the blower at switch (A). The direction and force of the airflow can be further adjusted at louvers (C).

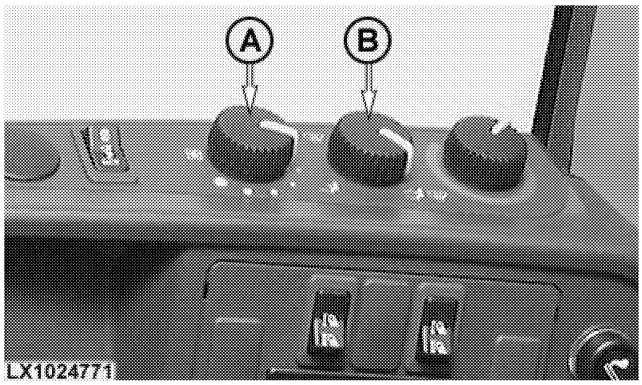
If the airflow is to be directed **evenly around the cab**, set switch (B) to symbol (F). Turn on the blower at switch (A).

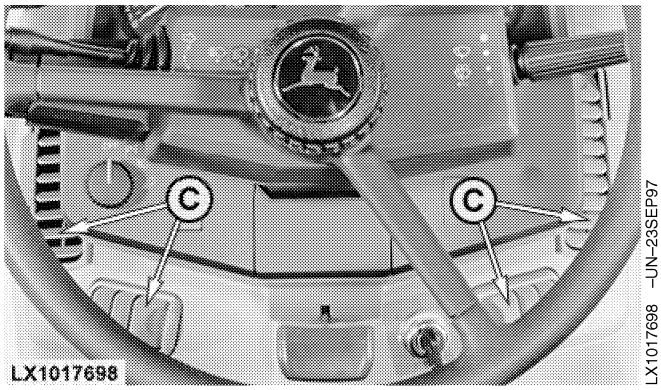
If the airflow is to be directed **into the footwell**, set switch (B) to symbol (G). Turn on the blower at switch (A).

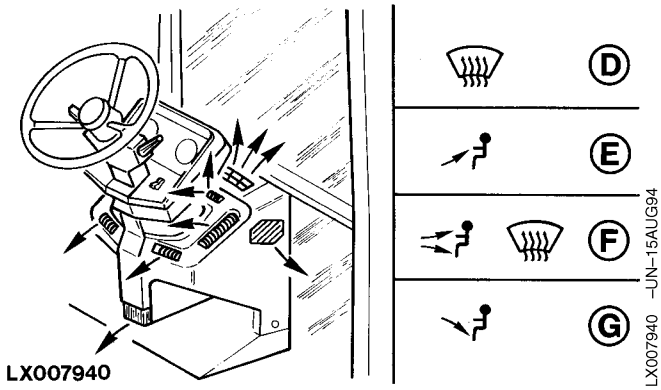
Direction of airflow

Positions of switch (B):

- Symbol (D) = air flows to windshield
- Symbol (E) = air flows to operator
- Symbol (F) = air flows to windows, operator and footwell
- Symbol (G) = air flows to footwell



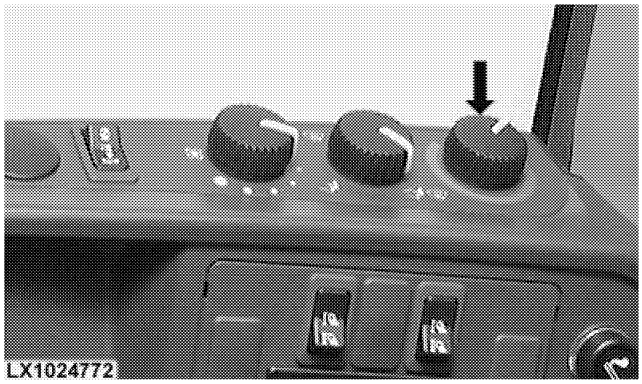




OU12401,00101DA –19–26NOV00–1/1

Heater

Heating is infinitely variable by means of the heater switch. To increase heating effect, turn switch clockwise. Set blower and louvers to the desired position.



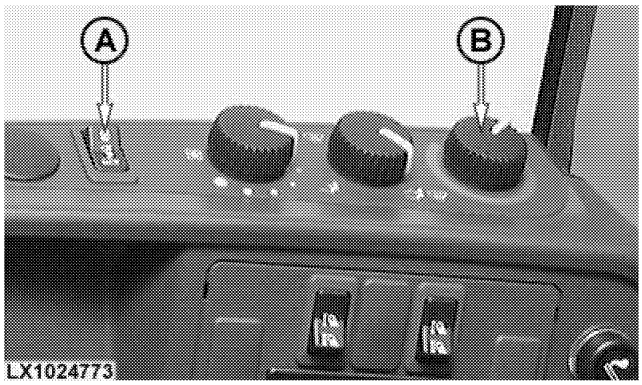
OU12401,00101DB –19–26NOV00–1/1

Air-Conditioning System

Switch on air conditioning system at switch (A). Regulate the cooling effect at control (B). The cooling effect is increased by turning the knob further counterclockwise. Set blower and louvers to the desired position.

IMPORTANT: To maintain a consistently high performance, the air-conditioning system should be switched on for two or three minutes once every month, regardless of weather conditions or season (with engine at low idle). Control (B) should be set for maximum cooling effect.

At ambient temperatures below 4° C (39° F), the cab should first be heated (using the heating system) so that the temperature inside the cab is as high as possible.



OU12401,00101DC –19–26NOV00–1/1

Tips On Using the Air-Conditioning System

Preventing the windows from misting up

NOTE: First check that the condensation drain is not blocked.

During the day:

Do not blow cold air at the windshield (do not use window mode while running the air-conditioning system at "max. cool") setting.

If you feel too cool with the air-conditioning system at its "max. cool" setting:

- Keep the blower running
- Turn the temperature control to a "less cool" position
- Leave the air-conditioning system on

If you still feel too cold:

- Keep the blower running
- Turn the temp. control to a "warm" setting (in the red zone)
- Leave the air-conditioning system on
- If windows mist up, slowly turn the temperature control to a "cooler" position until the windows start to clear

Before you stop the tractor:

- Keep the blower running
- Switch off the air-conditioning system
- Turn the temp. control to a "warm" setting or leave it if it already is at "warm"
- Keep the blower running for a couple of minutes to dry out the evaporator core

In the morning (air-conditioning system was in use the day before)

During the first start-up period

- Set air-flow to "footwell" - NOT to "window"!
- Run the blower
- Turn the temp. control to "max. heating output" (in the red zone)
- If you are not actually driving the tractor, it may help to open the cab door or cab window

As soon as hot, dry air comes out the louvers:

- Set air-flow to "window" - this will dehumidify the windows

When the windows are clear:

- Set air-flow and temperature to a comfortable setting

If ambient humidity is high or there is moisture inside the cab

- Turn the air-conditioning system on (at rocker switch), while keeping the temp. control set to "warm"

LX,OMKAB 017527 –19–01OCT98–1/1

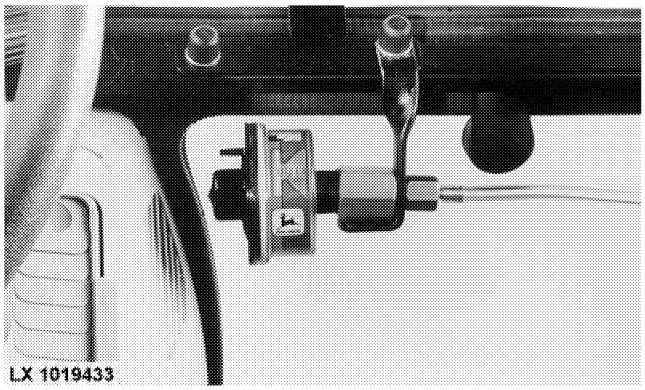
ULTRA-GARD™ XL Cab Air Filter

CAUTION: Do not apply pesticides if the cab pressure indicator is in the red zone.

Prolonged exposure to pesticides may cause serious injury or even death.

Allow only trained, certified applicators to apply pesticides.

Replace filter after 500 hours of operation or once a year, whichever occurs first. Use only John Deere ULTRA-GARD™ XL Pesticide Cab Air Filters for both fresh air and recirculated air.

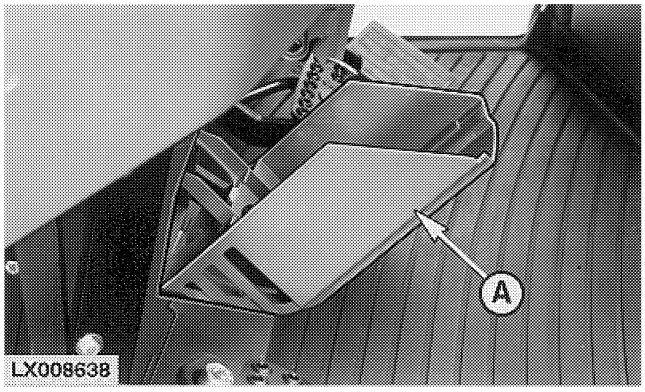


ULTRA-GARD is a trademark of Deere & Company.

LX,OMKAB 017538 –19–01OCT98–1/1

Cooling a Drink Can

Open flap (A) and insert drink can. Set heater to "cool" and switch on blower. Airflow must be directed to the footwell.

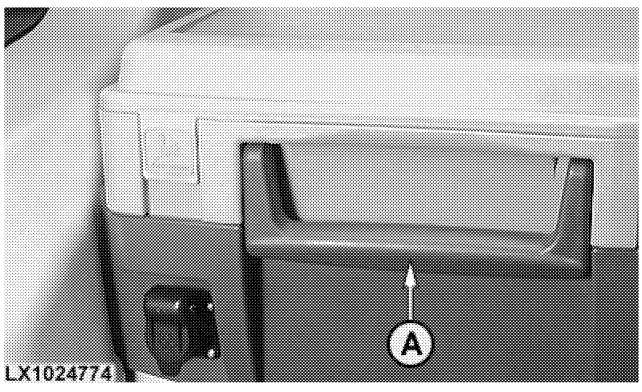


LX,OKAB 006332 –19–01JUL94–1/1

Storage Rack

The tractor may be equipped with a storage rack for a portable "Field Office". The "Field Office" briefcase can be secured to the storage rack when the tractor is in motion. Press the handle (A) down until it clicks into the rack.

For safety reasons, never drive the tractor with the briefcase open. The contents of the briefcase should not exceed a weight of 10 kg (22 lb).

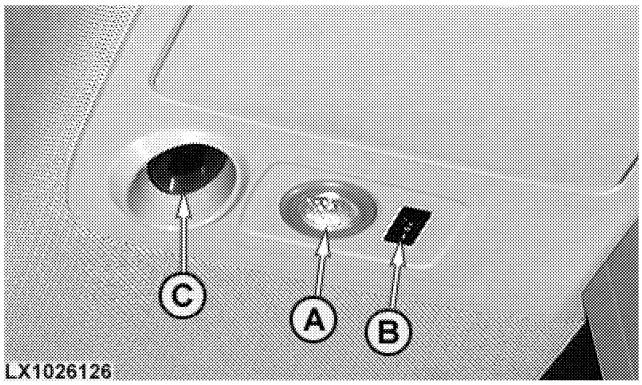


OU12401,00101DD –19–26NOV00–1/1

Dome Light

Dome light (A) remains on all the time switch (B) is set to position 1. With the switch at position 2, it comes on whenever the door is opened. It is switched off in position 0.

Light (C) illuminates the transmission control levers when the parking lights or headlights are switched on.

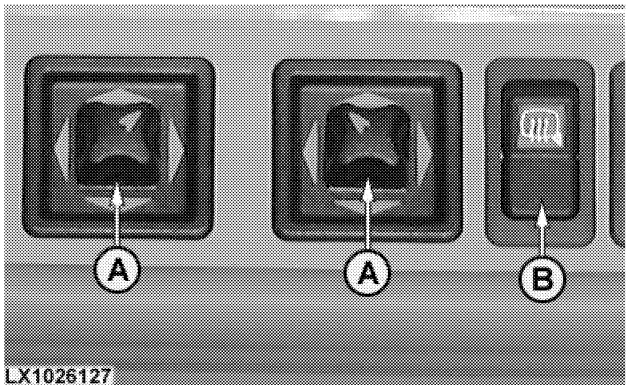


OU12401,0000903 –19–01MAY01–1/1

Rear-View Mirror Control Switch (If Equipped)

Switches (A) control the mirror.

Switch (B) is for the mirror heater.



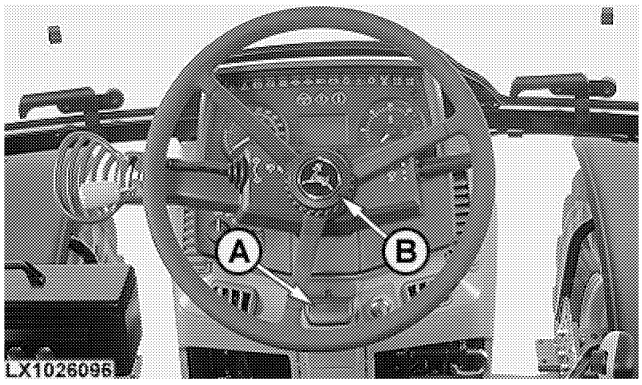
OU12401,0000904 –19–15MAY01–1/1

Adjusting the Steering Wheel

To adjust steering wheel, pull lever (A) upward, move steering wheel to desired angle and release the lever.

If only the lever is pulled, the steering wheel will rise to its highest position.

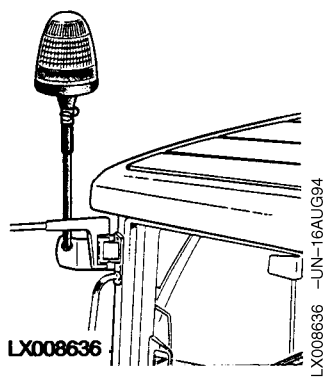
To adjust steering wheel height, unfasten ring (B). Retighten the ring once the adjustment is completed.

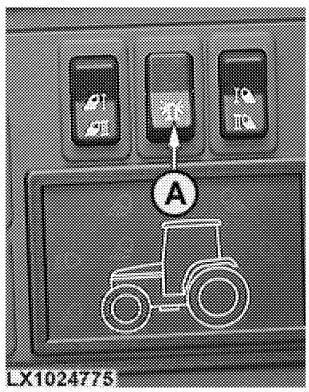


OU12401,00005C1 –19–26FEB01–1/1

Beacon Light

The beacon light (not authorized in all countries) should be used when driving extremely slowly and when tractor width is excessive. Switch it on at switch (A).





OU12401,00101DE –19–26NOV00–1/1

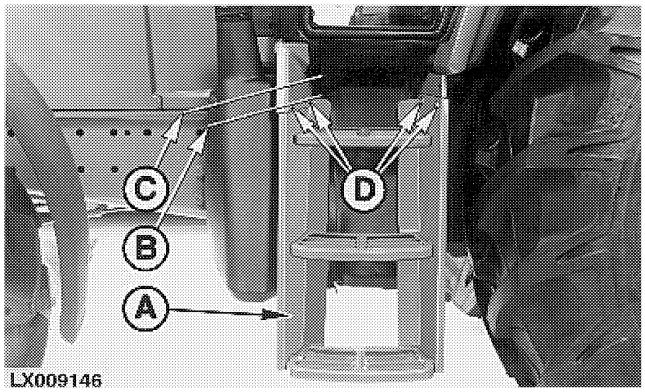
Adjusting the Height of Access Step

If necessary, the access step can be adjusted.

Take out screws (D). Move access step to desired position. Install screws (D).

NOTE: If the rear tires have an index radius of 770 mm (30.3 in.) or over, the access step must be set at the bottom position (B).

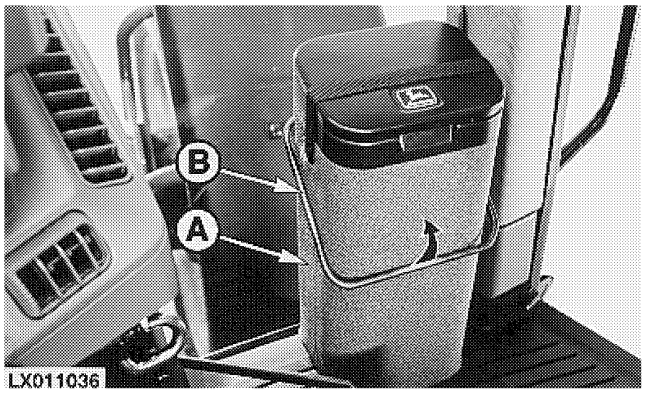
A—Access step
B—Bottom position
C—Top position
D—Screws



AG,OU12401,181 –19–06APR00–1/1

Cool Box

The cool box (A) can be used for food storage. To fill or clean the cool box, fold up handle (B) and take cool box out.



LX,OKAB 006351 –19–01JUL95–1/1

Installing the Monitor

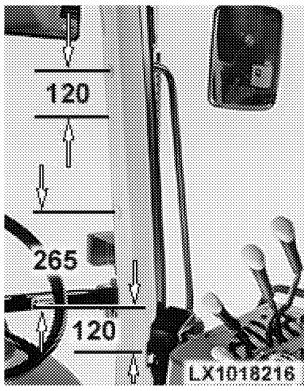
Attaching the performance monitor and controls

There are several possible locations for attaching monitors and controls in the cab:

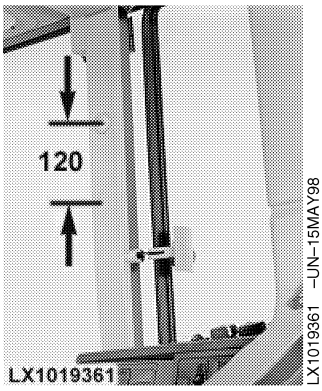
- On the front right post.
- On the center posts.
- On the rear posts.

NOTE: Gap between holes at attaching points is 120 mm (4.72 in.); thread is M10.

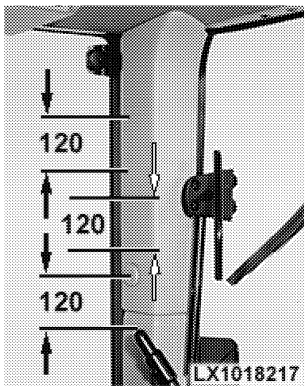
Take off the relevant trim and turn it over. The positions where holes may be made are already marked.



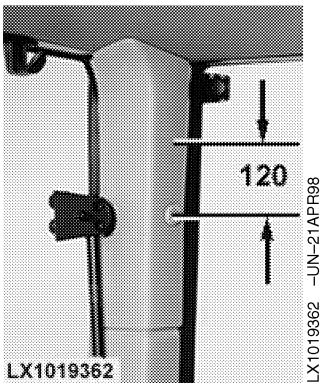
LX1018216 –UN–24OCT97



LX1019361 –UN–15MAY98



LX1018217 –UN–24OCT97



LX1019362 –UN–21APR98

LX,OMKAB 011282 –19–01MAY98–1/1

Power Outlet Sockets

Signal Socket and 3-Terminal Power Outlet Socket

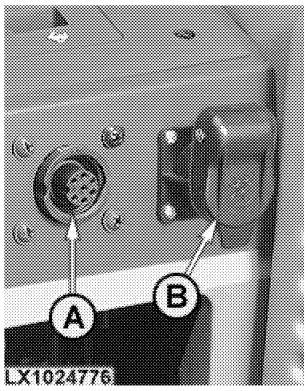
7-terminal signal socket (A) is protected by a 30-amp fuse.

Terminal	Wire color	Description
1	Red	Speed determined by radar
2	Brown	Speed of wheels
3	Orange	Rear PTO speed
4	—	—
5	—	—
6	Blue	Power supply
7	Black	Ground

Terminals 15/80 and 82 of 3-terminal power outlet socket (B) are protected by a 30-amp fuse. Terminal 31 is ground.

3-terminal power outlet socket (B) and signal socket (A) are used to connect electrical equipment. Turn key in main switch clockwise or counterclockwise to provide power to the 3-terminal power outlet socket (B) and signal socket (A).

NOTE: A conversion kit is available from your John Deere dealer for equipment that requires a constant power supply even when the ignition is off.



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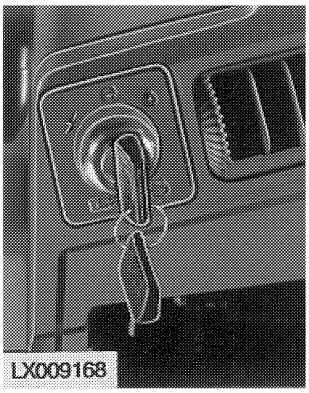
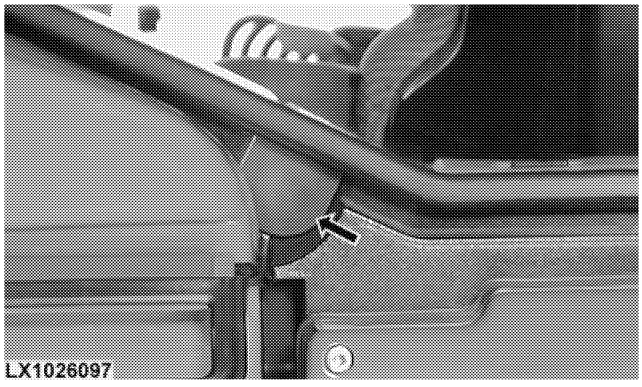


LX009168 –UN–03JAN95

OU12401,00101DF –19–26NOV00–1/2

Routing the Cables

The rear window of the cab is provided with two openings, allowing the cables to be routed. Open the window and take out the rubber stoppers. Cut the rubber stoppers at the incisions provided to enable the cables to be routed. Connect the plugs, insert the rubber stoppers and close the window.



LX1026097 –UN–09MAR01

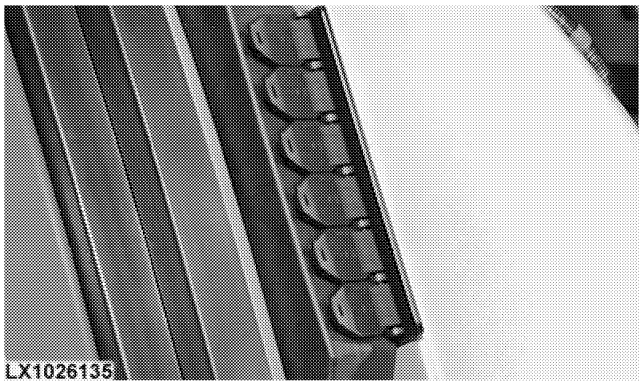
OU12401,00101DF –19–26NOV00–2/2

Multiple Power-Outlet Socket Strip

A strip of extra sockets may be fitted to the front of the switch console. The sockets are protected by a single 30-amp fuse.

Turning the key in the main (key) switch left or right will provide the multiple power-outlet socket strip with power.

NOTE: A conversion kit is available from your John Deere dealer for equipment that requires a constant power supply even when the ignition is off.

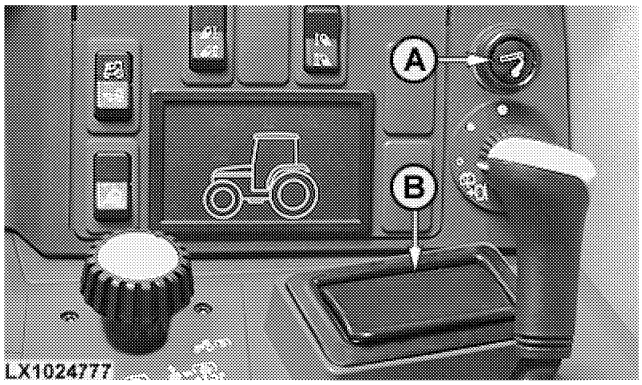


OU12401,0000919 –19–01MAY01–1/1

Cigarette Lighter and Ashtray

Open and press down the ashtray to take it out.

A—Cigarette lighter
B—Ashtray



OU12401,00101E0 –19–26NOV00–1/1

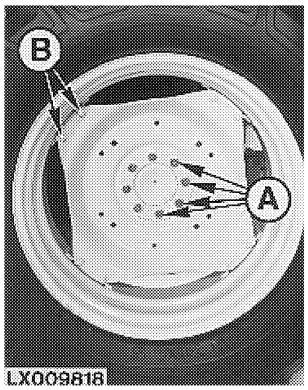
Break-In Period

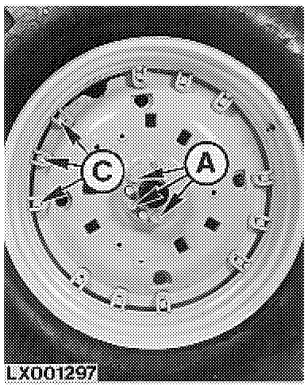
After the First 4 and 8 Hours of Operation

Tighten Rear Wheel Retaining Bolts/Nuts

(Torques vary depending on tractor equipment)

A—500 N•m (370 lb-ft)
B—310 N•m (230 lb-ft)
C—230 N•m (170 lb-ft)



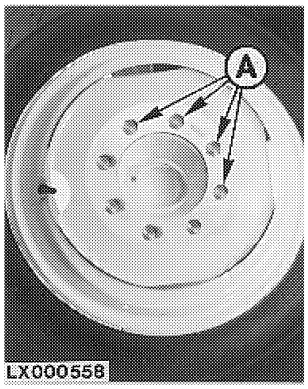


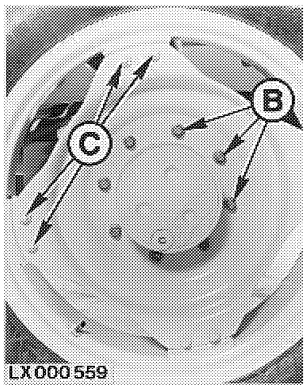
AG,OU12401,184 –19–01MAY01–1/3

Tighten Front Wheel Retaining Bolts/Nuts

(Torques vary depending on tractor equipment)

A—250 N•m (185 lb-ft)
B—300 N•m (220 lb-ft)
C—Screws of class 8.8: 250 N•m (185 lb-ft)
—Screws of class 10.9: 310 N•m (230 lb-ft)

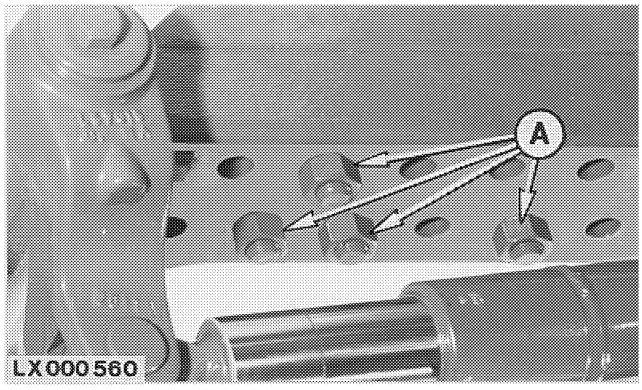




AG,OU12401,184 –19–01MAY01–2/3

Adjustable Front Axle

Tighten attaching screws (A) to 400 N•m (300 lb-ft).



AG,OU12401,184 –19–01MAY01–3/3

Within the First 100 Hours of Operation

Wheel Retaining Bolts

Check torque of wheel retaining bolts frequently.

Engine

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

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

- Check oil level in engine frequently.

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

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

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

- API specification CE
- ACEA specification E1

IMPORTANT: During the first 100 hours, under NO circumstances use John Deere PLUS-50 oil or any oil that meets the following: API CH-4, API CG4, API CF4, ACEA E3 or ACEA E2. These oils do not satisfy the requirements for breaking in the engine.

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

LX,OMEIN 013412 –19–01MAY01–1/1

After First 100 Hours of Operation

Change engine oil. See “Service/Every 500 Hours”.

Renew engine oil filter element. See “Service/Every 500 Hours”.

Tighten retaining bolts on pick-up hitch. See “Service/Every 250 Hours”.

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

Change transmission/hydraulic oil filter(s). See “Service/Every 500 Hours” on tractors with AutoPowr or “Service/Every 750 Hours” on other tractors.

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

OU12401,0000910 –19–01MAY01–1/2

Check Cab Mounting Torques

Check all cab attaching screws for tightness.

Specified torques are as follows:

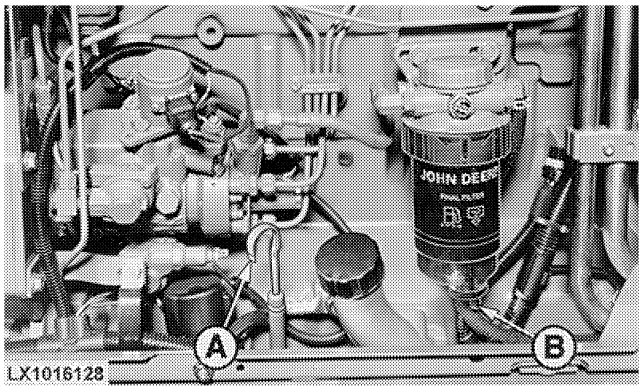
- Front attaching screws: 220 N•m (160 lb-ft)
- Rear attaching screws: 200 N•m (140 lb-ft)

OU12401,0000910 –19–01MAY01–2/2

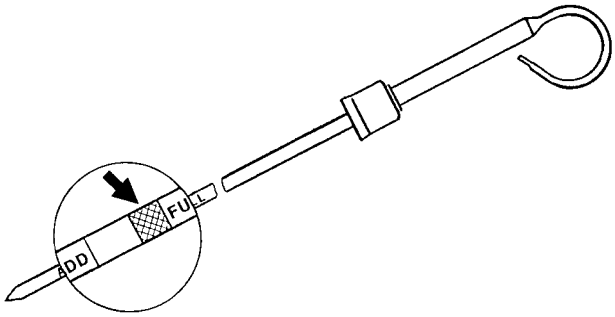
Prestarting Checks

Engine oil level should be at the “XXX” marks on dipstick (A). Do not start engine if oil level is below the “ADD” mark on the dipstick.

Drain water and sediment deposits from fuel filter at drain screw (B).



LX1016128 –UN–20OCT97



FD000047

FD000047 –UN–13MAR96

If the tractor is used to power external hydraulic equipment, check the level of the transmission/hydraulic oil every day.

This check is described in “Service - Every 250 Hours”.

If operating the tractor in extremely wet and muddy conditions, apply extra lubrication as follows:

- Lubricate front axle and FWD drive shaft.
- Lubricate rear axle.
- Lubricate three-point hitch.
- Lubricate the pick-up hitch (if equipped).

These jobs are described in “Service - Every 250 Hours” and “Service - Every 500 Hours”.

AG,OU12401,186 –19–07APR00–1/1

Starting the Engine With a Slave Battery

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

LX,OMOT 000166 –19–01FEB94–1/1

Starting the Engine

CAUTION: Never operate the engine in a closed building. Danger of asphyxiation!

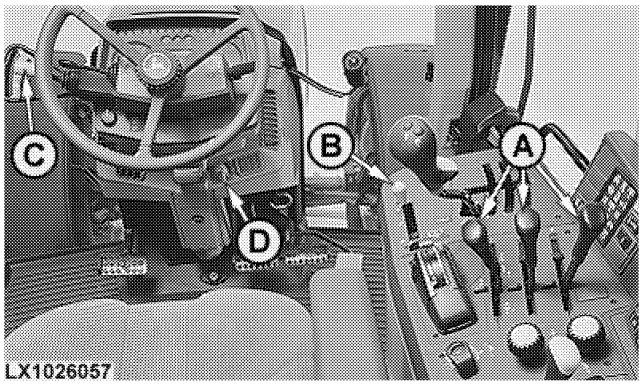
1. Set selective control valve levers (A) to neutral position.
2. Move hand throttle lever (B) to a medium speed setting (first third of lever travel).
3. Set reverse drive lever (C) to neutral position (or to positions N or P in the case of tractors with AutoPowr transmission).
4. On 6420S tractors and tractors with AutoPowr, turn key in main switch (D) one position to the right. Wait until light (E) goes out.
5. Turn key in main switch (D) clockwise to end position. Release key as soon as engine starts.

Do not operate starting motor for more than 30 seconds at a time. Turn key in main switch to "zero". Wait at least one minute before attempting to start again.

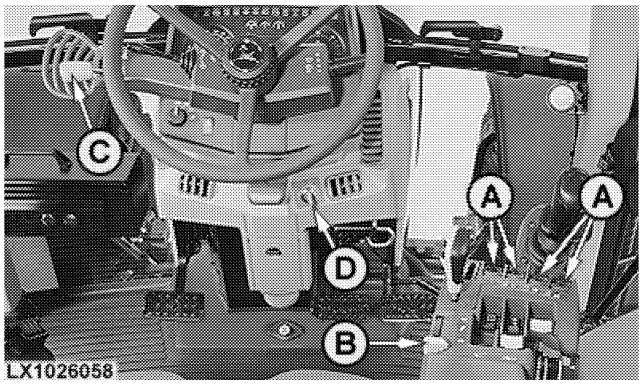
Do not adjust hand throttle lever. Run engine for a few minutes. At temperatures below 0° C (32° F), extend warm-up period accordingly.

NOTE: On tractors with electronic injection pump, the engine runs at a higher idle setting (1050 rpm) until coolant temperature rises to 20°C (68°F).

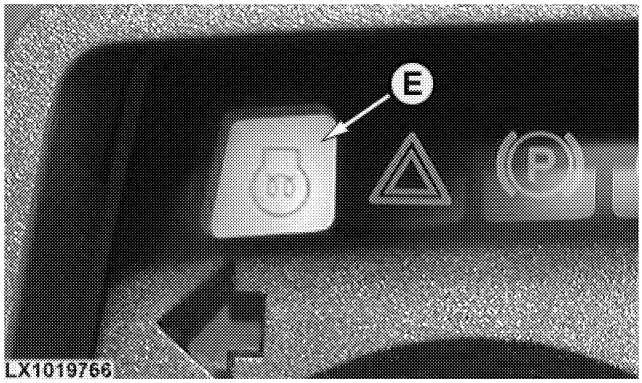
A—Selective control valve levers
B—Hand throttle lever
C—Reverse drive lever
D—Main switch
E—Glow-plug indicator light



LX1026057 –UN–01AUG01



LX1026058 –UN–06DEC00

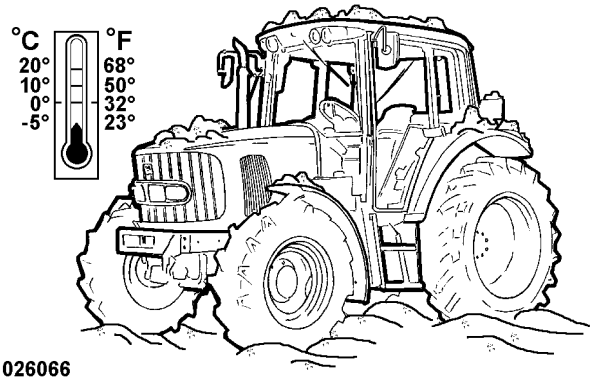


LX1019766 –UN–10OCT00

OU12401,00005E0 –19–01MAY01–1/1

Cold-Weather Starting Aids

Depending on tractor equipment, various cold-weather starting aids are available to assist in starting the engine at temperatures below 0°C (32°F).



LX1026066

LX1026066 –UN–10MAY01

OU12401,0000581 –19–02DEC00–1/1

Electrical Starting Aid

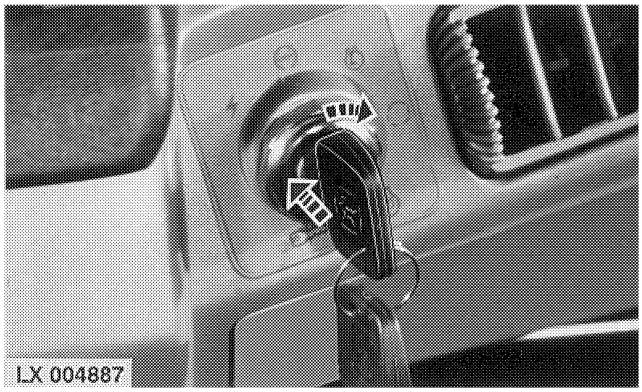
CAUTION: Never use Ether starting fluid when starting the engine with an electrical starting aid.

Proceed as described under points 1 to 3, “Starting the Engine”.

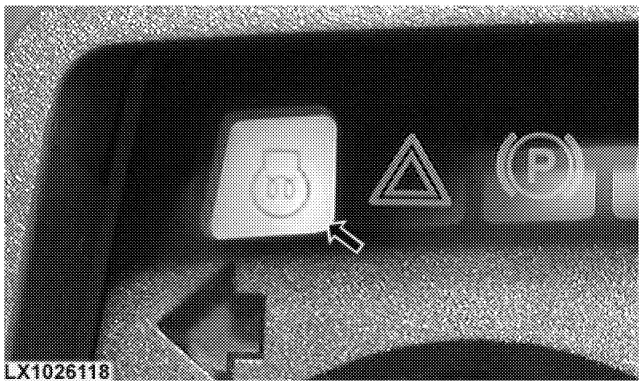
Turn the key one position clockwise to the ON position. Press the key into the main switch to activate the heating element. The light comes on, but does **not** go out automatically. Wait for between 20 and 25 seconds, then let the key return to its normal position and immediately turn it clockwise as far as it will go. Never start the engine with the key pressed in (i.e. with heating element switched on).

IMPORTANT: If the engine fails to catch, do not operate the starter for more than 30 seconds at a time. However, if the engine is gaining speed slowly, keep operating the starter until the engine picks up enough speed to run at low idle. If engine does not start, turn the key to the "OFF" position and wait at least one minute for the starting motor to cool before trying again.

Do not adjust hand throttle lever. Run engine for a few minutes. At temperatures below 0° C (32° F), extend warm-up period accordingly.



LX004887 –UN–11AUG94



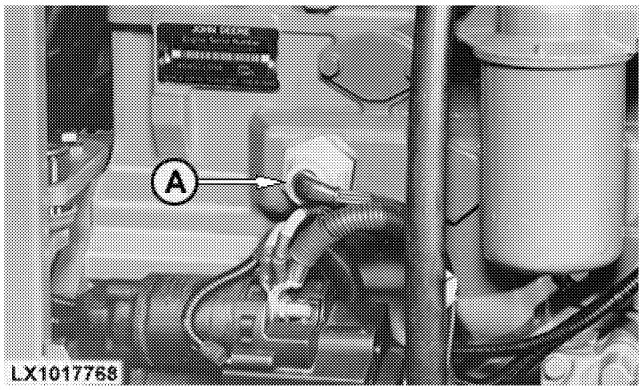
LX1026118 –UN–26APR01

OU12401,00005E1 –19–01MAY01–1/1

Coolant Heater

Connect plug of coolant heater (A) to a 220-volt power source.

At an ambient temperature of -15°C (5°F), the heating process takes approx. 2 hours. Extend the heating period if the ambient temperature is lower.



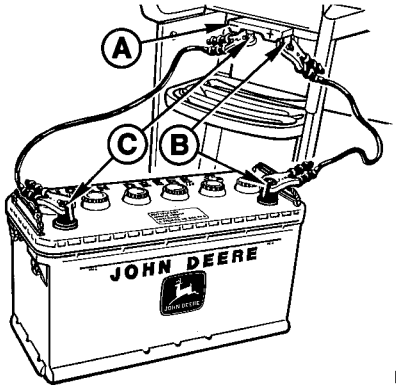
LX1017768 –UN–24OCT97

AG,OU12401,188 –19–07APR00–1/1

Starting with a Booster Battery

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

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



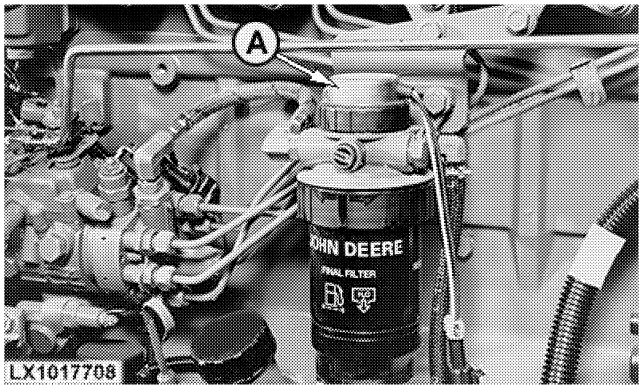
LX000399 –UN–26JUL94

The tractor is equipped with connections to allow an additional 12-volt battery to be brought into the circuit. Lift up cover (A), and connect positive poles (B) before connecting negative poles (C).

OU12401,00005E9 –19–01MAY01–1/1

Fuel Preheater

Fuel preheater (A) switches on and off automatically in relation to the ambient temperature.



LX1017708 –UN–09OCT97

LX,OMMOT 011287 –19–01SEP97–1/1

Engine Warm-Up Period

Tractors With Electronic Injection Pump

The engine runs at a higher idle speed (1050 rpm) until coolant temperature rises to 20°C (68°F).

Tractors With Mechanical Injection Pump

To warm up the engine, run with hand throttle halfway open until operating temperature has been obtained.

For Both Types of Engine

Do not operate the tractor under full load until the engine has reached its operating temperature.

LX,OMOT 000175 –19–01OCT98–1/1

Engines with Turbocharger

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

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

LX,OMMOT 013413 –19–01SEP97–1/1

Special Features of the 6420S Tractor

Increased engine power for certain applications:

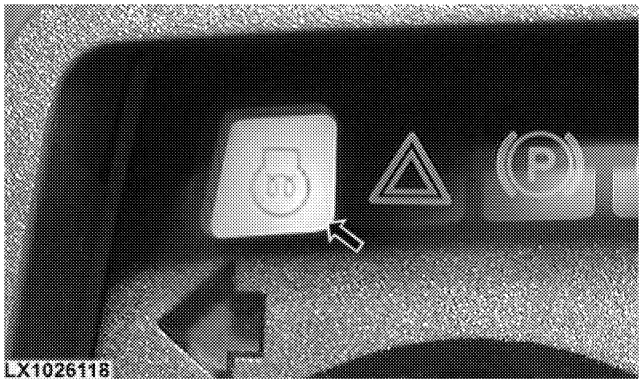
a) Transport work
Engine power is increased automatically from 81 to 88 kW (110 to 120 hp) when ground speed exceeds 15 km/h (9.3 mph).

b) PTO operation
When using PTO-driven implements, engine power is increased automatically to 88 kW (120 hp) when ground speed exceeds 2 km/h (1.2 mph).

NOTE: If the u.j. shaft between the tractor and the implement is not at a slight angle, there may be a delay before engine power is increased, even although the PTO is switched on and a speed of 2 km/h (1.2 mph) is exceeded.

OU12401,00005DF –19–27APR01–1/1

Special Features on Tractors with Bosch VP44 Injection Pump



LX1026118 –UN–26APR01

Engine protection:

Malfunctions in the fuel system and engine are indicated by the light (see arrow) flashing and by the red STOP light, yellow CAUTION light and blue INFO light coming on.

To protect the engine and prevent damage, there is an engine protection program that functions as follows whenever a serious malfunction occurs:

Malfunction	Light	Effect
Fuel temperature too high	Caution	Engine power is reduced to 25%
Fuel temperature too high	Stop	Engine power is reduced to less than 25%
Engine oil pressure too low	Caution	Engine power is reduced to 80%
Engine oil pressure too low	Stop	Engine power is reduced to 40%
Fuel filter clogged	Stop	Engine speed is reduced to 1200 rpm
Coolant too hot	Info	Engine power is reduced to 80%
Coolant too hot	Stop	Engine power is reduced to 60%
Other malfunctions	Caution	Engine power is reduced to 50%

OU12401,0000528 –19–01MAY01–1/1

Towing the Tractor

IMPORTANT: Never tow the tractor to start the engine!

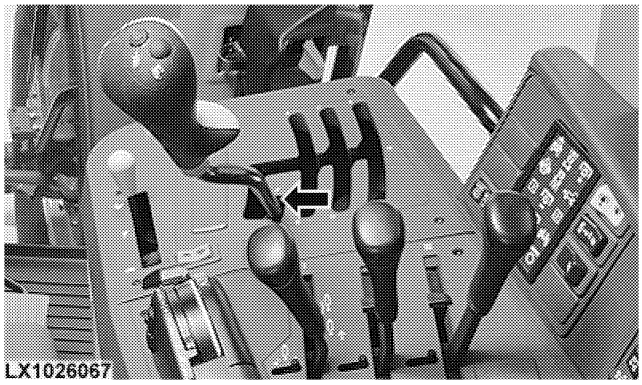
A disabled tractor is best transported on a flatbed carrier. Comply with the instructions in the “Transport” section.

LX,OMOT 004928 –19–01SEP99–1/1

Parking the Tractor (Tractors Without AutoPowr)

Engage parking lock and apply handbrake when parking or operating the tractor from a stationary position.

IMPORTANT: Engage parking lock only when the tractor is stationary.



LX1026067 –UN–01AUG01

OU12401,00005E7 –19–01AUG01–1/1

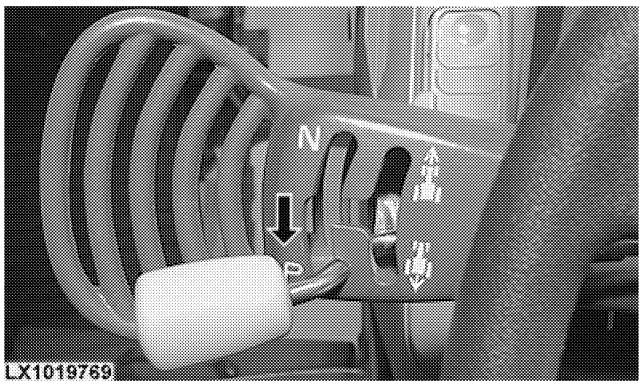
Parking the Tractor (Tractors With AutoPowr)

Engage parking lock and apply handbrake when parking or operating the tractor from a stationary position.

NOTE: In extremely cold temperatures, it may take up to 20 seconds for the park lock to engage.

When engaging park lock on bumpy terrain, remember to actuate the brake pedals as well.

An acoustic alarm warns the operator if he vacates his seat with the park lock not engaged.



LX1019769 –UN–15SEP00

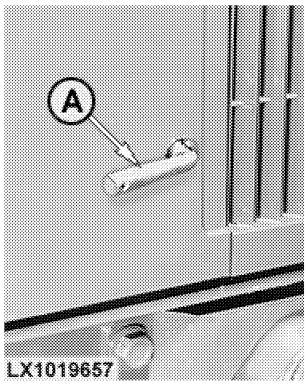
AG,OU12401,370 –19–18AUG00–1/1

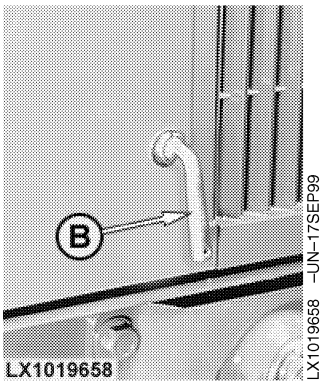
Battery Cut-Off Switch (If Equipped)

This switch allows the battery to be cut off from the tractor's electrical system.

CAUTION: Never switch off the power at the battery cut-off switch while the engine is running! This may damage the tractor's electronics, and the voltage peaks that will occur at the alternator may be dangerous.

A—Switch on
B—Switch off (grip may be removed)





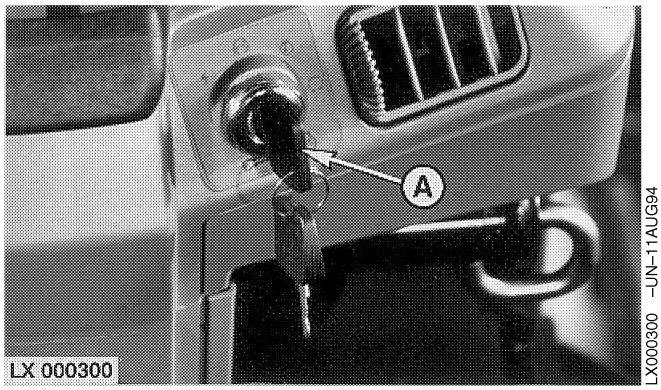
LX,OMMOT 017478 –19–01SEP99–1/1

Stopping the Engine

CAUTION: Before leaving the tractor, lower equipment to the ground and remove key from main switch.

Stop tractor. Engage parking lock and apply handbrake.

Run engine for one to two minutes at slow idle. Turn main switch (A) to "off" position.

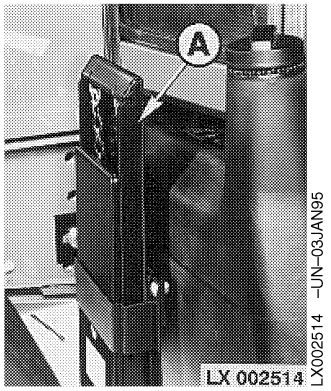


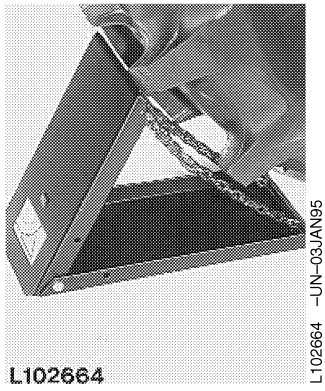
LX,OMOT 000178 –19–01FEB97–1/1

Chock Block

When parking the tractor on sloping ground, proceed as follows:

1. Press chock block (A) together.
2. Pull chock block out of holder.
3. Place chock block in front of or behind rear wheel.





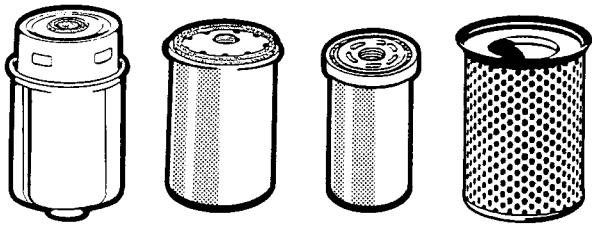
LX,OMOT 000179 –19–01JUN92–1/1

Reduce Fuel Consumption

Service Correctly

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

Use only John Deere filters!



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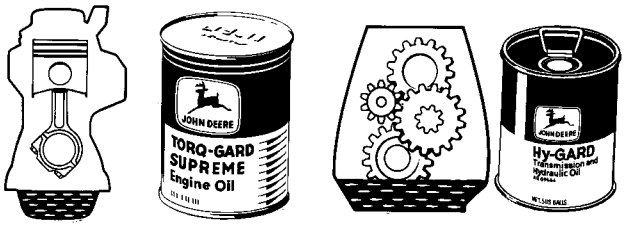
AG,OU12401,189 –19–01MAY01–1/7

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

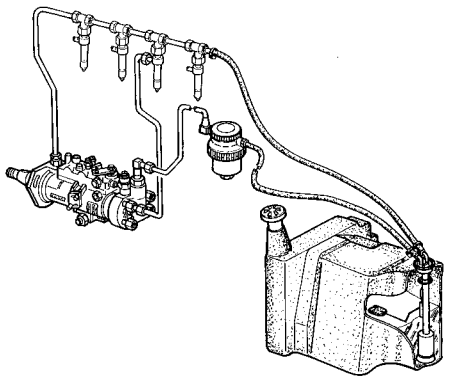


L103 642

L103642 –UN–15AUG94

AG,OU12401,189 –19–01MAY01–2/7

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

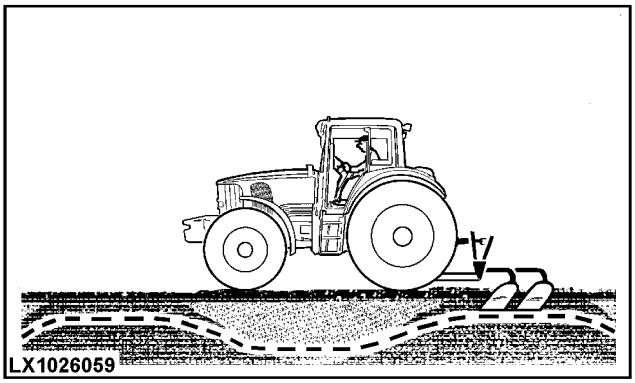


LX000347

LX000347 –UN–15AUG94

AG,OU12401,189 –19–01MAY01–3/7

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



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LX1026059 –UN–18MAY01

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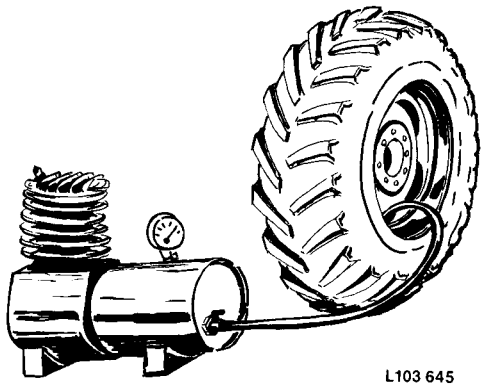
AG,OU12401,189 –19–01MAY01–4/7

Drive with Correct Tire Pressures

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



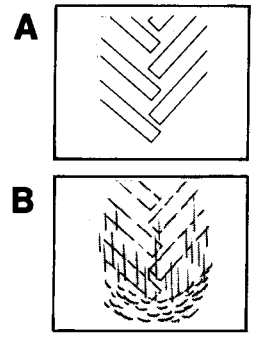
L103645 –UN–15AUG94

AG,OU12401,189 –19–01MAY01–5/7

Choose Correct Ballast

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

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



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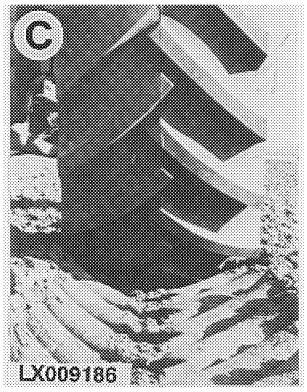
LX009185 –UN–01SEP94



LX009186 –UN–01SEP94

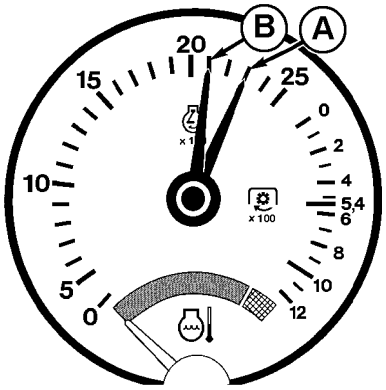
AG,OU12401,189 –19–01MAY01–6/7

Select Correct Gear

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

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

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



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LX1017710 –UN–01OCT97

AG,OU12401,189 –19–01MAY01–7/7

Select Correct Ground Travel Speed

Number of gears on tractors with:

POWRQUAD™ Plus transmission (40 km/h):

- 24 forward gears, 24 reverse gears

PowrQuad Plus transmission (50 km/h):

- 24 forward gears, 24 reverse gears

NOTE: With the PowrQuad Plus transmission, depending on equipment and legal requirements, there may in certain circumstances be only 16 or 12 reverse gears.

The tractor may be equipped with an additional creeper transmission, offering a further 12 gears.

Gears should be selected so as to avoid permanent overloading of the engine. Ground travel speeds with engine running at rated speed are shown on the following pages.

Should you wish to determine ground speed travel at other engine speeds, then proceed as follows:

$$\frac{\text{Desired engine speed}}{2300\ \text{rpm}} = \text{Conversion factor}$$

The conversion factor multiplied by the ground speed shown in the following table gives the ground travel speed at the desired engine speed.

Example:

Ground travel speed at 2300 rpm according to following table: 8.1 km/h; desired speed: 1400 rpm

$$\frac{1400\ \text{rpm}}{2300\ \text{rpm}} = 0.61$$

8.1 km/h x 0.61 = 4.9 km/h

Should you wish to determine engine speed at a desired ground travel speed, proceed as follows:

$$\frac{\text{Desired ground travel speed}}{\text{Desired ground travel speed in table}} = \text{Factor}$$

The conversion factor multiplied by the rated speed gives you the desired engine rpm.

Example:

$$\frac{5.0\ \text{km/h}}{8.1\ \text{km/h}} = 0.61$$

2300 rpm x 0.61 = 1400 rpm

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AG,OU12401,190 –19–01MAY01–1/1

Travel Speeds, PowrQuad Plus Transmission (24/24*)

40 km/h (25 mph); rated engine speed 2300 rpm; 18.4-38 tires

Range	Gear	km/h	mph
A	1	1.6	1.0
	2	1.9	1.2
	3	2.3	1.4
	4	2.8	1.7
B	1	3.8	2.4
	2	4.6	2.9
	3	5.6	3.5
	4	6.8	4.2
C	1	6.3	3.9
	2	7.6	4.7
	3	9.1	5.7
	4	11.1	6.9
D	1	10.3	6.4
	2	12.4	7.7
	3	14.9	9.3
	4	18.2	11.3
E	1	16.7	10.4
	2	20.2	12.6
	3	24.1	15.0
	4	29.6	18.4
F	1	22.6	14.0
	2	27.2	16.9
	3	32.6	20.3
	4	39.9	24.8
A	R1	1.6	1.0
	R2	1.9	1.2
	R3	2.3	1.4
	R4	2.8	1.7
B	R1	3.8	2.4
	R2	4.6	2.9
	R3	5.6	3.5
	R4	6.8	4.2
C	R1	6.3	3.9
	R2	7.6	4.7
	R3	9.1	5.7
	R4	11.1	6.9
D	R1	10.3	6.4
	R2	12.4	7.7
	R3	14.9	9.3
	R4	18.2	11.3
E*	R1	16.7	10.4
	R2	20.2	12.6
	R3	24.1	15.0
	R4	29.6	18.4
F*	R1	22.6	14.0
	R2	27.2	16.9
	R3	32.6	20.3

Additional gears with creeper transmission

Range	Gear	km/h	mph
A	1	0.16	0.10
	2	0.19	0.12
	3	0.23	0.14
	4	0.28	0.17
B	1	0.39	0.24
	2	0.47	0.29
	3	0.56	0.35
	4	0.68	0.42
C	1	0.63	0.39
	2	0.76	0.47
	3	0.91	0.57
	4	1.11	0.69
A	R1	0.16	0.10
	R2	0.19	0.12
	R3	0.23	0.14
	R4	0.28	0.17
B	R1	0.39	0.24
	R2	0.47	0.29
	R3	0.56	0.35
	R4	0.68	0.42
C	R1	0.63	0.39
	R2	0.76	0.47
	R3	0.91	0.57
	R4	1.11	0.69

Continued on next page

40 km/h (25 mph); rated engine speed 2300 rpm; 18.4-38 tires

Range	Gear	km/h	mph
	R4	39.9	24.8

Additional gears with creeper transmission

Range	Gear	km/h	mph

* Depending on equipment and legal requirements, either 16 or 24 reverse gears may be available.

Other tires (supplied by factory):

16.9-34	2.8% slower	520/70-34	6.0% slower
18.4-34	6.0% slower	480/70-38	3.0% slower
13.6-38	3.5% slower	540/65-38	3.0% slower
14.9-38	0.3% slower	520/70-38	same
16.9-38	3.0% slower	600/65-38	same
480/70-34	2.8% slower		

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

AG,OU12401,199 –19–01MAY01–2/2

Travel Speeds, PowrQuad Plus Transmission (24/24*)

50 km/h (31 mph); rated engine speed 2300 rpm; 18.4-38 tires (50 km/h; 31 mph are achieved at less than 2300 rpm)

Range	Gear	km/h	mph
A	1	1.9	1.2
	2	2.3	1.4
	3	2.7	1.7
	4	3.4	2.1
B	1	4.6	2.9
	2	5.6	3.5
	3	6.7	4.2
	4	8.2	5.1
C	1	7.6	4.7
	2	9.1	5.7
	3	10.9	6.8
	4	13.4	8.3
D	1	12.4	7.7
	2	15.0	9.3
	3	17.9	11.1
	4	21.9	13.6
E	1	20.2	12.6
	2	24.3	15,1
	3	29.1	18.1
	4	35.7	22.2
F	1	29.0	18.0
	2	34.9	21.7
	3	41.8	26.0
	4	50.0	31.1
A	R1	1.9	1.2
	R2	2.3	1.4
	R3	2.7	1.7
	R4	3.4	2.1
B	R1	4.6	2.9
	R2	5.6	3.5
	R3	6.7	4.2
	R4	8.2	5.1
C	R1	7.6	4.7
	R2	9.1	5.7
	R3	10.9	6.8
	R4	13.4	8.3
D	R1	12.4	7.7
	R2	15.0	9.3
	R3	17.9	11.1
	R4	21.9	13.6
E*	R1	20.2	12.6
	R2	24.3	15.1
	R3	29.1	18.1
	R4	35.7	22.2
F*	R1	29.0	18.0
	R2	34.9	21.7
	R3	41.8	26.0

Additional gears with creeper transmission

Range	Gear	km/h	mph
A	1	0.19	0.12
	2	0.23	0.14
	3	0.28	0.17
	4	0.34	0.21
B	1	0.47	0.29
	2	0.56	0.35
	3	0.67	0.42
	4	0.82	0.51
C	1	0.76	0.47
	2	0.92	0.57
	3	1.10	0.68
	4	1.34	0.83
A	R1	0.19	0.12
	R2	0.23	0.14
	R3	0.28	0.17
	R4	0.34	0.21
B	R1	0.47	0.29
	R2	0.56	0.35
	R3	0.67	0.42
	R4	0.82	0.51
C	R1	0.76	0.47
	R2	0.92	0.57
	R3	1.10	0.68
	R4	1.34	0.83

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50 km/h (31 mph); rated engine speed 2300 rpm; 18.4-38 tires
(50 km/h; 31 mph are achieved at less than 2300 rpm)

Range	Gear	km/h	mph
	R4	50.0	31.1

Additional gears with creeper transmission

Range	Gear	km/h	mph

* Depending on equipment and legal requirements, either 16 or 24 reverse gears may be available.

Other tires (supplied by factory):

18.4-34	6.2% slower	480/70-38	3.1% slower
14.9-38	6.7% slower	540/65-38	3.1% slower
16.9-38	3.1% slower	520/70-38	same
520/70-34	6.2% slower	600/65-38	same

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

AG,OU12401,200 –19–01MAY01–2/2

Shifting the PowrQuad Plus Transmission

Gears are shifted by means of shift lever (A), gear shift switches (B) and reverse drive lever (C). Slightly lift the reverse drive lever (C) to move it out of the neutral position.

NOTE: Once the engine has started, wait for 5 seconds before moving the reverse drive lever out of neutral position.

The clutch pedal must be depressed to change the ranges. There is no need to depress the clutch pedal to shift gear or to change the direction of travel. When changing ranges, an automatic function ensures that the gear selected matches the travel speed.

CAUTION: If the reverse drive lever is actuated when the engine is running and a range is selected, the tractor will start to move.

IMPORTANT: Engage parking lock only when the tractor is stationary.

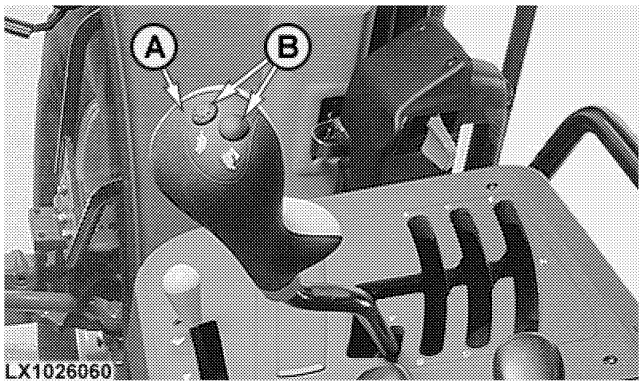
Optimum Gear-Shifting for Driving under Load (Transport):

1. Select a range suitable for driving away under load.
2. Engage the first gear.
3. Drive away and change up through the ranges until the top range is reached.
4. Change up through the gears.

Cold-Weather Operation

If the oil is cold (0°C, 32°F), it may affect how the reverse drive lever operates. At temperatures below -10° C (14° F), it may take longer to change the direction of travel.

In certain circumstances, the reverse drive lever may have to be actuated several times before the tractor starts to move. When the oil has had time to warm up, operation becomes normal again.



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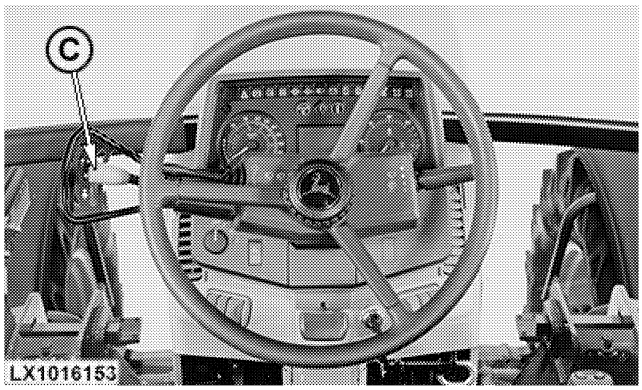

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A—Range shift lever
B—Gear shift switches
C—Reverse drive lever

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"Come-Home" Mode

If a malfunction results in the reverse drive lever not remaining in the forward or reverse drive position, hold the lever physically in position to determine whether the tractor moves or not. If it does move, hold the lever in position and drive to the nearest workshop.

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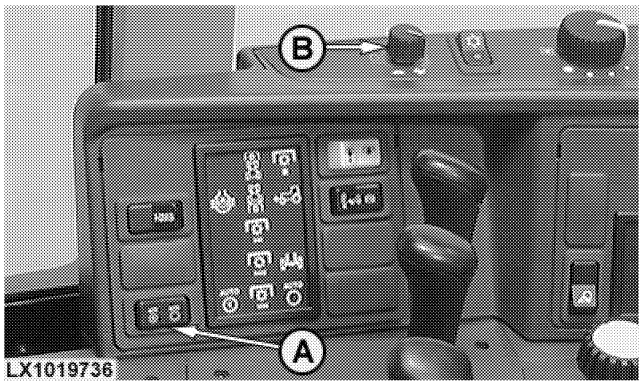
Shifting the AutoQuad II Transmission



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This transmission is shifted in the same way as the PowrQuad Plus (see above). However, it has two further functions: “Cruise Control” and “Shifting with the Foot Throttle”.

These functions can be switched on and off at switch (A). The desired engine speed is selected using potentiometer (B).

Cruise Control

Regardless of engine torque, engine speed is held constant at a preset value.

Shifting with the Foot Throttle

The gears in each range are shifted up or down in relation to the position of the foot throttle as soon as engine speed reaches a maximum or minimum value.

Power mode: The gears shift up when the foot throttle is pressed more than 85% of its travel and the engine is at rated speed minus 20 rpm.
The gears shift down when the foot throttle is pressed more than 55% of its travel and engine speed is between 1100 and 1700 rpm.
The gears shift down when the foot throttle is pressed less than 55% of its travel and engine speed is less than 1100 rpm.

Eco mode: The gears shift up when the foot throttle is pressed more than 85% of its travel and engine speed is 1900 rpm.
The gears shift down when the foot throttle is pressed more than 55% of its travel and engine speed is between 1100 and 1410 rpm.
The gears shift down when the foot throttle is pressed less than 55% of its travel and engine speed is less than 1100 rpm.

NOTE: “Eco mode” is suitable for light work in the field and for driving on roads when the load being pulled is not heavy.

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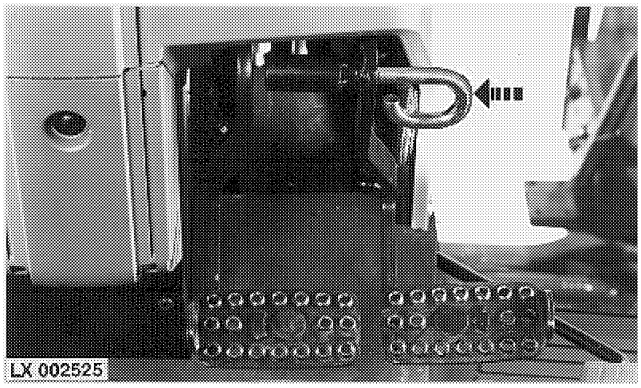
Special Features on Tractors with AutoPowr Drive Unit



The brake pedals now also control the automatic clutch function. Partially depressing **both** of the brake pedals allows the tractor to “creep” - this makes it easier to back up to an implement, for example. Fully depressing the two brake pedals stops the tractor with powerflow still at the transmission. There is no need to press the clutch pedal. In consequence, watch out for the following points (they affect safety!):

- Full torque remains available even at very slow speeds. In certain conditions, even obstacles will not bring the tractor to a standstill.
- Once the brakes are released, the tractor automatically accelerates up to the speed currently commanded by the hand throttle or accelerator pedal.
- If only **one** of the brake pedals is depressed (to assist with steering), the tractor will **not** come to a standstill (unless it idling).
- If you go back to a tractor with a conventional transmission again, remember that the transmission is **not** disconnected when the brake pedals are depressed. Also, park lock **cannot** be selected on such tractors while the tractor is still in motion.

NOTE: When engaging park lock on bumpy terrain, remember to actuate the brake pedals as well.

IMPORTANT: The speed control lever makes it possible to demand a drastic reduction in speed in a very short time. For safety reasons (e.g. preventing trailers from jack-knifing), the AutoPowr drive unit reduces its speed at a more moderate rate. Always use the brake pedals to decelerate quickly.

AG,OU12401,359 –19–01MAY01–1/1

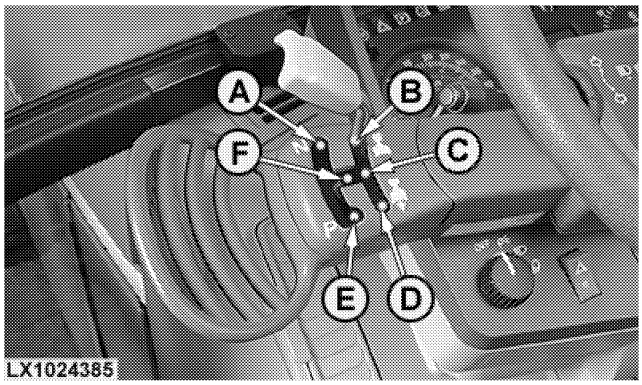
AutoPowr Operation

Reverse Drive Lever

To drive the tractor, move the lever to Forward (B) or Reverse (D). If the lever is moved from Forward or Reverse back to the center park position (F), the tractor will continue to roll and the transmission goes to its “Power Zero” mode. Ten seconds after the tractor stops rolling, the park lock will automatically engage. If the lever is moved from Forward or Reverse directly to the corner park position (E), the tractor will brake to a stop using the transmission. The park lock will then engage. On bumpy terrain, remember to actuate the brake pedals as well.

If the lever is moved from Forward or Reverse to the “Power Zero” position (C), the tractor will continue to roll but it will **not** be braked by the transmission. When the tractor is stationary, powerflow remains at the transmission. To obtain “Power Zero”, you must hold the lever firmly in this position. If the lever is released from the “Power Zero” position, it will automatically go to the center park position (F).

When the tractor is stopped, move the lever back to the corner park position. If you move it to neutral (A), the direction clutches are opened and there will be no powerflow in the transmission. The tractor may roll away.



A—Neutral position
B—Forward position
C—“Power Zero” position
D—Reverse position
E—Corner park position
F—Center park position

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OU12401,00101BD –19–01MAY01–1/12

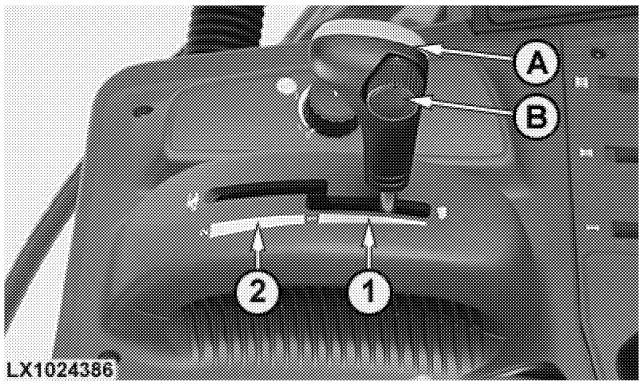
Speed Control Lever

Travel speed is regulated using the speed control lever. Two speed ranges are available.

Speed range 1 allows a maximum forward speed of 20 km/h (12.4 mph). Speed range 2 allows a forward travel speed to be set equal to the maximum tractor speed (40 km/h or 50 km/h; 25 mph or 31 mph). The maximum speed in range 1 is always the minimum speed in range 2. In other words, there is no change is speed when ranges are changed.

The maximum speed in a speed range is adjusted using speed wheel (B). For this, the engine must be running and the reverse drive lever must be in one of the following positions:

- Neutral position “N”:
  The digital display alternates between the forward and reverse speed ranges. The speed setting can be changed in both ranges, in other words **the ratio between forward and reverse speed can be changed**.
  In range 1, reverse speeds can be set to a maximum of 30% higher and 70% lower than forward speeds. In range 2, the possible forward-to-reverse speed ratios are 1:1 up to 22 km/h (14 mph). After that, they increase to 50:30 or 40:30.
- Center park position:
  The digital display alternates between the forward and reverse speed ranges. Depending on what is currently displayed, you can change either the forward speed or the reverse speed. In this case, the set forward-to-reverse speed ratio remains in force.
- Position for forward or reverse travel:
  The digital display shows the relevant speed range. Forward and reverse speeds can be changed. In this case, the set forward-to-reverse speed ratio remains in force.



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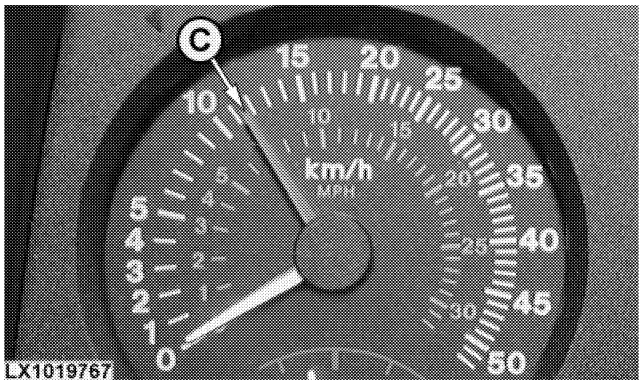

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A—Speed control lever
B—Speed wheel (for setting maximum speed)
1—Speed range 1
2—Speed range 2
C—Display of maximum speed setting

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The maximum speed setting of a range is reached with the engine at full throttle and the speed control lever at the end of its travel in the speed range. If the accelerator pedal is not at the end of its travel, the tractor will move at a corresponding speed (not proportional). If the speed control lever is not at the end of its travel in a speed range, the tractor will similarly operate at a corresponding speed as indicated by the red needle (C).

Speed wheel (B) does not have a stop and can be “infinitely” adjusted. It makes a change in relation to the previous setting. If the maximum speed setting is changed with wheel (B) while the tractor is moving, the change is always based on the last setting. Turning the wheel will directly increase or decrease the last maximum speed setting.

Creeper Mode

If a forward travel speed below 2 km/h (1.24 mph) is used in speed range 1, the tractor will automatically shift to creeper mode. The possible minimum travel speed is 0.05 km/h (0.03 mph).

In speed range 2, the maximum speed in creeper mode is 2.5 times greater than in range 1. In both speed ranges, the maximum speed in creeper mode is 2.5 times greater than the minimum speed. For example, if a maximum speed of 0.50 km/h (0.33 mph) is set in range 1, the minimum speed is 0.20 km/h (0.12 mph).

At speeds below 0.6 km/h (0.37 mph), changing engine speed does not have any effect on travel speed.

The following occurs if the speed-adjusting wheel is used to increase travel speed while the tractor is in motion in range 2 with creeper mode selected:

- If the speed selected is below 10 km/h (6.2 mph), the transmission remains in creeper mode. This means the originally set values will apply on changing back to range 1. Speed range 1 will flash on the digital display.
- Creeper mode also remains in effect on returning to range 1 if the 10 km/h (6.2 mph) speed is temporarily exceeded and then reduced to under 10 km/h (6.2 mph).

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- Creeper mode will be exited if the 10 km/h (6.2 mph) speed is exceeded and range 1 is re-engaged. Forward speed range 1 will be automatically adjusted (to 2 km/h; 1.24 mph).

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AutoPowr Selector

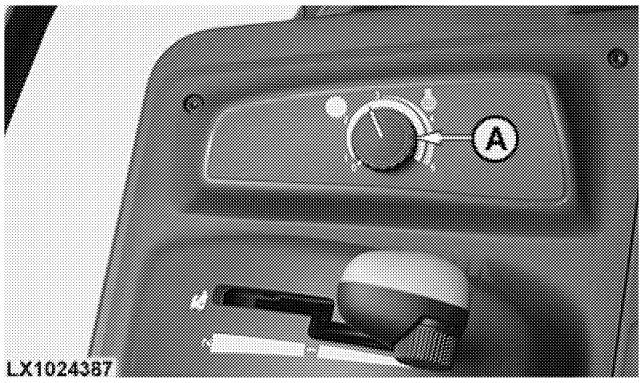
AutoPowr selector (A) controls the extent to which the transmission is controlled automatically.

In position 0 (manual), the only automatic intervention is to prevent stalling. In position 1, transmission control is minimally influenced by the electronic system. In position 5, transmission control is most influenced by the electronic system. The extent of transmission automation progressively increases in positions 1 to 3, between 3 and 5 there is additional automation of engine control.

Engine load control is set in positions 1 to 3. In positions from greater than 3 to 5 (Eco mode), the engine turns only as fast as needed. This results in fuel savings and noise reduction. If the operator sets a specific engine speed in eco mode and the electronic control system recognizes that this speed is not necessary, engine speed will be automatically reduced to a level adequate for tractor operation. Travel speed remains constant, however. Eco mode is not suited for lifting operations (where engine speed determines hydraulic pump output) and PTO operation (where engine speed directly determines PTO speed).

In eco mode, you can override the set engine speed by operating the accelerator pedal hand throttle at the same time.

Position 0 — Manual control of transmission
Position 1 — Approx. 30% engine load control before transmission intervenes, i.e. the transmission ratio changes.
Position 2 — Approx. 18% engine load control before transmission intervenes.
Position 3 — Approx. 5% engine load control before transmission intervenes.
Positions greater than 3 — Approx. 12% engine load control before transmission intervenes. Engine speed can be reduced electronically by 200 rpm in the partial load range.
Position 4 — Approx. 12% engine load control before transmission intervenes. Engine speed can be reduced electronically by 650 rpm in the partial load range.



A—AutoPowr selector

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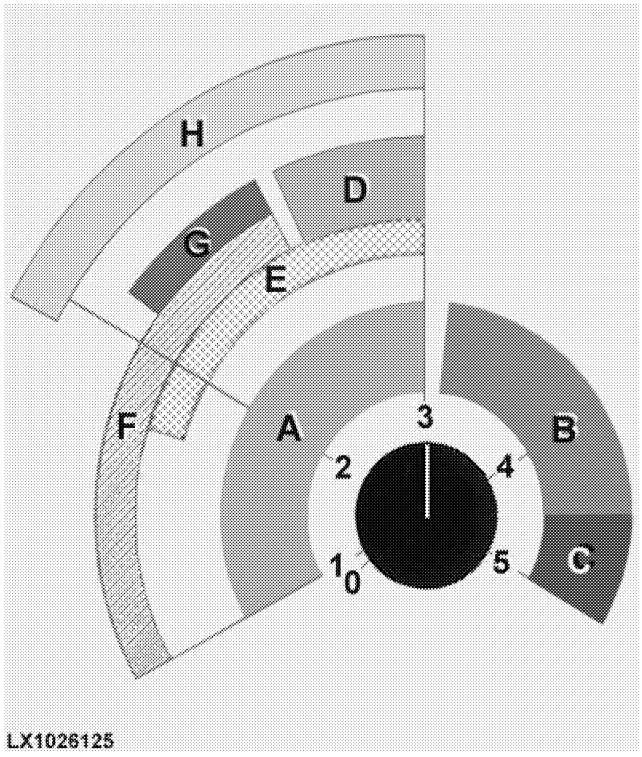
Position 5 — Approx. 12% engine load control before transmission intervenes. Engine speed can be reduced electronically to a speed not lower than 1200 rpm in the partial load range.

OU12401,00101BD –19–01MAY01–6/12

The following list shows which automation settings are suitable for various types of tasks.

Sector A — PTO operation
Sector B — Towing operations with hydraulic power requirements
Sector C — Any towing operation (field or road) without any hydraulic power requirement (since hydraulic power is not sufficient at an engine speed of 1200 rpm)
Sector D — PTO operation, with precise PTO speeds (for example, when using a manure spreader)
Sector E — Operation of balers
Sector F — Tillage
Sector G — Operation of mowers
Sector H — Other operations requiring hydraulic power (e.g. use of front loaders)



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The following may be regarded as basic settings:

Position 1-2 — Work in which the engine's flywheel mass (PTO operation) and vehicle inertia (earth-moving) are adequate to meet transient peaks in the power requirements (caused by the implement or task in hand).
Position 2.5 — Operations where engine speed is important.
Position 5 — Operations where engine speed is irrelevant.

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OU12401,00101BD –19–01MAY01–7/12

Summary of different types of work

Process	Position of AutoPowr selector	Comments
Crop protection, liquid fertilizer	1	At this setting, the transmission behaves like a conventional tractor with stepped gears. As engine speed drops due to increased load, travel speed also falls away. The simultaneous reduction in PTO speed causes the output of pesticide to be brought down in step with travel speed. Adjust and operate pesticide equipment in accordance with the manufacturer's guidelines and the instructions provided by the pesticide/fertilizer producer. The less the engine is subjected to load control (e.g. 5 %), the greater the danger of excessive amounts of pesticide being metered as a result of the stepless change in the transmission ratio as load increases while engine and PTO speeds remain constant. The user must be aware of these relationships. The user may select other settings between 1 and 3, but he must take into account the technical aspects of the pesticide machine (metering, electronic regulation). The user must ensure that the pesticide is metered correctly.
Fertilizing (spreader for mineral-based fertilizers; manure spreader, liquid fertilizer)	3	A constant width of spray can be achieved only if the PTO speed remains constant. If metering is not achieved on the basis of distance travelled, preselect a travel speed that can be sustained over the entire field. If the spreader functions independently of engine speed (e.g. a hydraulically-driven spreader), a different engine load control setting may be selected, provided the user makes sure that the material being sprayed is metered and distributed correctly.
Balers (large, round and high-pressure)	2-3	Select travel speed and engine load control so that the engine can cope with differences in terrain and windrow width, and overcome brief load peaks with the help of rising engine torque and the inertia of the driveline. On the other hand, PTO speed must be kept high enough for the machine to work properly. The operator may vary travel speed infinitely at any time as he pleases, without changing the engine speed, and thus adapt his speed to the requirements.
Mowers, mowers with conditioners, self-loading wagons	2-3	Same as for balers.
Turning, making and spreading windrows	1-3	Select a setting appropriate to your requirements. Make sure that the work is done properly.
PTO-driven tillage equipment (rotary harrow, rotary cultivator, tined rotor, also in combination with seed drills and spacing seeders)	2-3	Drive in a manner appropriate to the terrain, soil conditions and desired results. To achieve the desired crumb structure, there should not be too great an imbalance between PTO speed and travel speed.
Mechanical drills (metered via a wheel on the ground, with no PTO-assisted tillage)	greater than 3-5	Select a setting greater than 3 for economical driving.
Pneumatic drills and spacing seeders (without tillage)	2-3	PTO speed must be sufficiently high for pneumatic distribution of the seeds.

Continued on next page

Summary of different types of work

Process	Position of AutoPowr selector	Comments
Transport, driving on roads, towed tillage implements (plow, seedbed combination implements etc.)	greater than 3-5	Select a setting greater than 3 for economical driving.
Front loaders and hydraulically driven machines (silage cutters, feed mixers etc.)	2-4	Select any setting suitable for the work in hand (light or heavy loads on front loader). To achieve the desired machine speed, the hydraulic system must be able to provide sufficient oil.

IMPORTANT: When applying pesticides and fertilizers, always comply with the guidelines provided by the machine manufacturer and the pesticide/fertilizer producers, and with the relevant legal requirements.

OU12401,00101BD –19–01MAY01–9/12

Cruise Control

Maximum engine speed can be limited for PTO operation by means of cruise control (A). Move the hand throttle lever to full throttle, set the cruise control to position 1 - 3 as required, then reduce engine speed by turning cruise control (A).

In the lowest setting, engine speed is limited to 1100 rpm. In the highest setting, the engine can run at maximum speed. Individual engine speed limits can be set between these two positions.

If no PTO operation is taking place, cruise control (A) should be in the “Off” position.

Travel speed remains constant regardless of any engine speed limitation.

A—Cruise control

Continued on next page

OU12401,00101BD –19–01MAY01–10/12

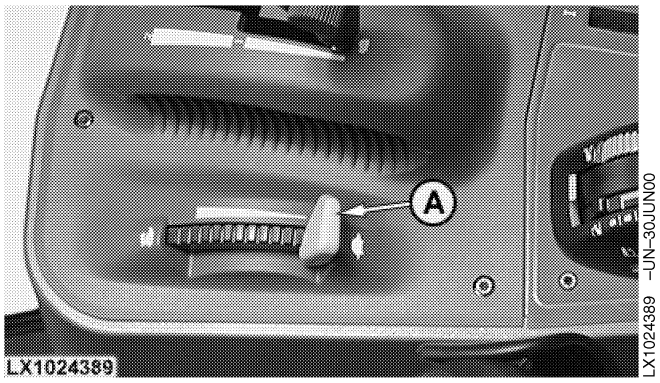
Accelerator Pedal and Hand Throttle

The stronger signal is always used for transmission control.

If the accelerator pedal or hand throttle are moved to command a higher engine speed, engine speed increases. In Eco mode, once the set travel speed is reached, engine speed is reduced again (load controlled).

If the reverse drive lever is in Forward or Reverse, the tractor can be accelerated to the set speed using the accelerator pedal or hand throttle. The immediate travel speed is directly dependent on the setting of the accelerator pedal or hand throttle. Engine speed is only indirectly determined by the position of the accelerator pedal.

Thus when using the accelerator pedal or hand throttle, the values set with the AutoPowr selector and cruise control are always taken into consideration. Therefore, the value set using the cruise control cannot be exceeded even at full throttle. In Eco mode, the engine turns only as fast as needed, even if the operator applies full throttle.



A—Hand throttle

Continued on next page

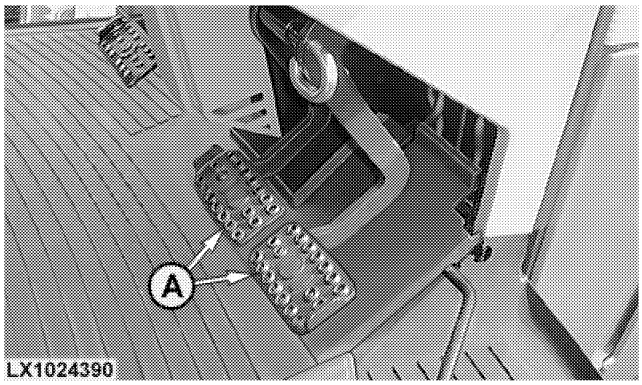
OU12401,00101BD –19–01MAY01–11/12

Brake Pedals

If when driving the tractor **both** brake pedals are depressed, the tractor's speed will be reduced until it stops. Thanks to the automatic clutch function, there is no need to depress the clutch pedal when braking.

When the brakes are released again, the tractor automatically accelerates up to the speed currently commanded by the hand throttle or accelerator pedal.

The higher the engine speed, the greater is the force required at the brake pedals to stop the tractor.



A—Brake pedals

Clutch Pedal

The clutch pedal normally does not need to be depressed to stop the tractor. If the clutch pedal is depressed, the corresponding clutch signal has priority over other commands.

OU12401,00101BD –19–01MAY01–12/12

AutoPowr Come-Home Mode

In the event of a transmission malfunction, the tractor can still be operated at a maximum speed of 9 km/h (5.6 mph).

To do this, stop the engine, remove relay K201 (fuse box 2) and re-install it at a position 90° from its original position. The wording "Come Home" must be uppermost.

The clutch pedal must then be used to start, stop and operate the reverse drive lever. Note the information on the digital display.

AG,OU12401,364 –19–07AUG00–1/1

Towing an AutoPowr-Equipped Tractor

If the tractor must be towed and the park lock cannot be released, follow the instructions in the “Manual Park Lock Release” procedure in the “Transport” section.

AG,OU12401,356 –19–01SEP00–1/1

Engaging Creeper Transmission

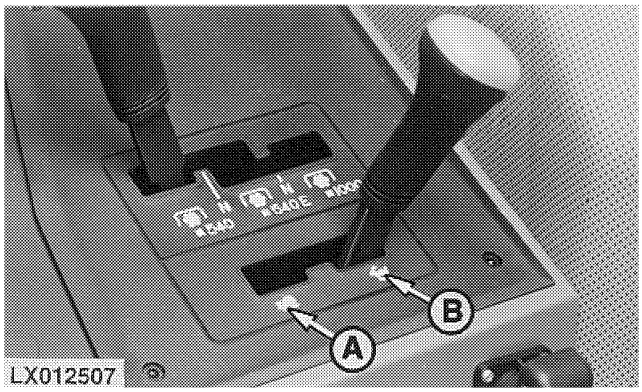
To engage or disengage creeper transmission, depress the clutch pedal.

Select creeper as follows:

1. Select range.
2. Engage creeper.

Never engage creeper transmission with engine speed higher than 1000 rpm.

IMPORTANT: Do not use creeper transmission when working with implements that penetrate the soil and require a high power input.



A—Creeper speed
B—High speed

AG,OU12401,202 –19–07APR00–1/1

Engaging Front Wheel Drive

Front wheel drive can be engaged and disengaged in all gears (forward and reverse), on-the-go and under load without using the clutch.

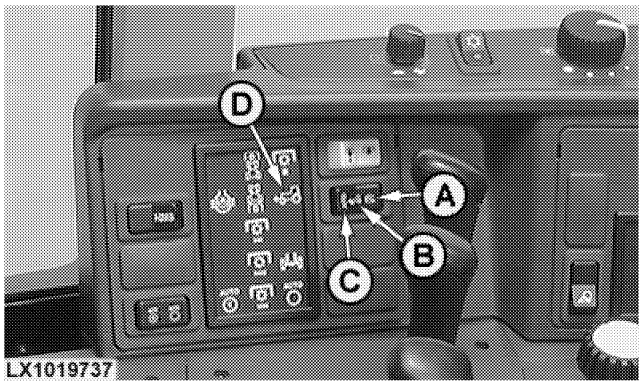
NOTE: Disengage front wheel drive before driving at high speed on public roads.

With Headland Management System HMS (If Equipped)

Besides the “on” and “off” functions, this system also has an automatic position. When “automatic” is selected, front wheel drive switches itself off automatically whenever tractor speed exceeds 23 km/h (14.3 mph).

When tractor speed drops below 21 km/h (13 mph), front wheel drive switches itself on automatically again.

NOTE: When the brakes are applied, front wheel drive cuts in automatically regardless of the position selected at the front wheel drive switch. The FWD indicator light is supposed to come on.



A—Front wheel drive disengaged
B—Front wheel drive engaged
C—Automatic position
D—Indicator light comes on when FWD is engaged

LX,OMFAH 011301 –19–01MAR00–1/1

Tractors With TLS Front Axle

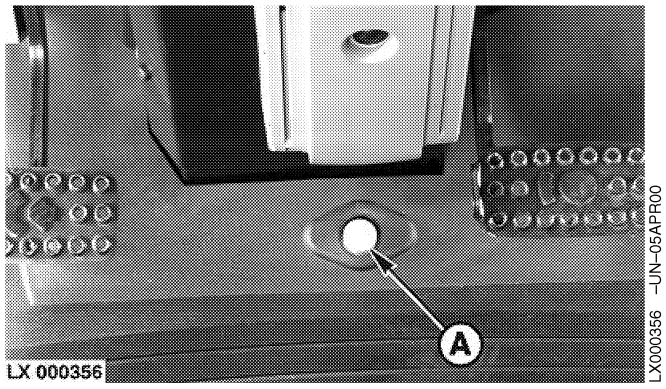
The suspended front axle operates fully-automatically whenever the tractor’s speed exceeds 1.5 km/h (0.9 mph).

The suspended front axle does not react to changes in load (e.g. caused by adding or removing an implement) until the tractor is actually moving.

If a fault occurs in the control system, the warning light comes on. The tractor can still be driven, but take extra care at high speeds!

LX,OMFAH 016040 –19–01MAR00–1/1

Engaging Differential Lock



CAUTION: Do not attempt to turn the tractor with the differential lock engaged.

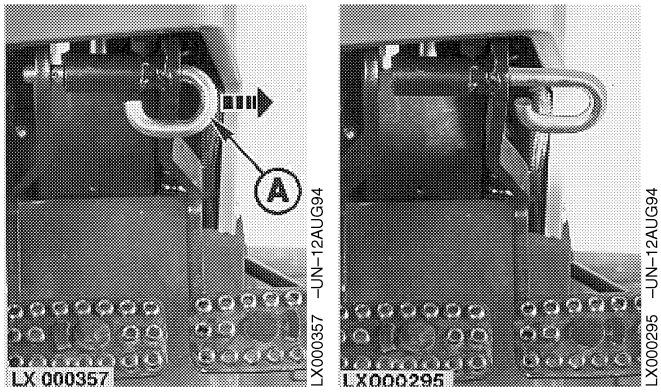
If wheel slip varies greatly between rear wheels, engage differential lock by means of button (A). Do not press the button if the difference in wheel rotation speeds is very high. Press one of the brake pedals to disengage the differential lock.

If tractor speed exceeds 12 km/h (7.5 mph) with the differential lock engaged, the differential lock switches itself off automatically.

When tractor speed drops below 12 km/h (7.5 mph) again, actuation of the differential lock must be carried out manually by the driver.

LX,OMFAH 013383 –19–01SEP97–1/1

Hydraulic Foot Brakes



IMPORTANT: Brake pedals must be coupled together by means of pedal coupler (A) when driving on public roads.

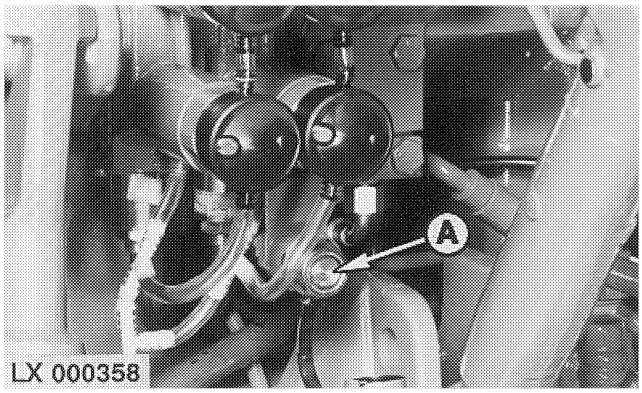
For field operation, pull pedal coupler (A) outward. The brake pedals can now be operated individually. In this case only the l.h. or r.h. rear wheel is braked. Use brake to assist steering at low tractor speeds only.

When stopping the tractor, press down on both pedals at the same time.

When braking, front-wheel drive engages automatically. However, the FWD indicator light does not come on.

LX,OFAH 000196 –19–01MAR00–1/1

Hydraulic Trailer Brakes



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

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

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

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

Make sure that the pressure hose is connected.

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

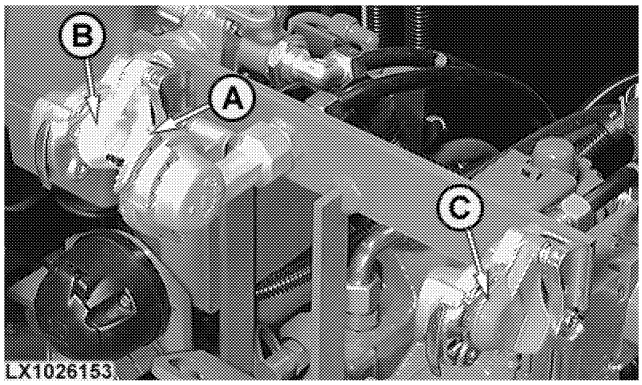
Check the hydraulic trailer brake regularly to make sure that it is functioning correctly.

AG,OU12401,158 –19–23MAR00–1/1

Air Brakes on Trailer

The air brakes are a combined single- and dual-line system. Trailers with single-line brakes may be connected at connection (A). Trailers with dual-line brakes may be connected at connections (B) and (C).

Ensure that the connections are clean before joining the compressed air hoses. Seal the connections with the dust caps whenever the hoses are disconnected.



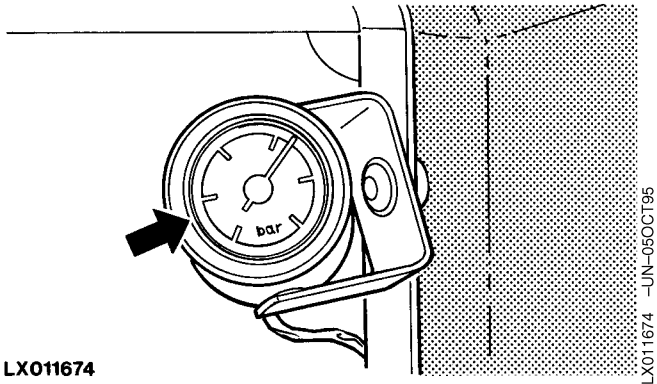
CAUTION: The single-line trailer brake may be used at speeds up to 25 km/h only.

When travelling with the tractor, keep within the legal speed limit.

IMPORTANT: With a trailer connected, do not drive away unless the air pressure gauge is indicating at least 500 kPa (5 bar; 73 psi).

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

- **Make sure that the pressure hoses are connected.**
- **When driving downhill, select the same gear you would for driving uphill.**
- **Check the air brake on the trailer regularly to make sure that it is functioning correctly.**



A—Black (single-line brake)
B—Yellow (dual-line brake)
C—Red (dual-line brake, supply)

OU12401,0000937 –19–01MAY01–1/1

Rockshaft Control

The rockshaft is controlled by means of hitch control lever (A) and raise/lower switch (B). The lift height can be limited by means of the height-limit control (C).

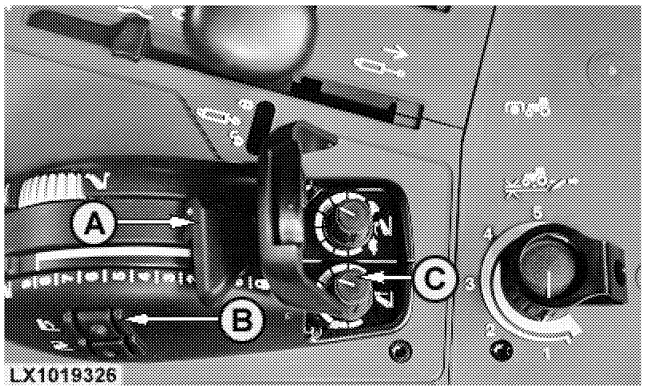
To make the rockshaft ready for operation, start the engine and either:

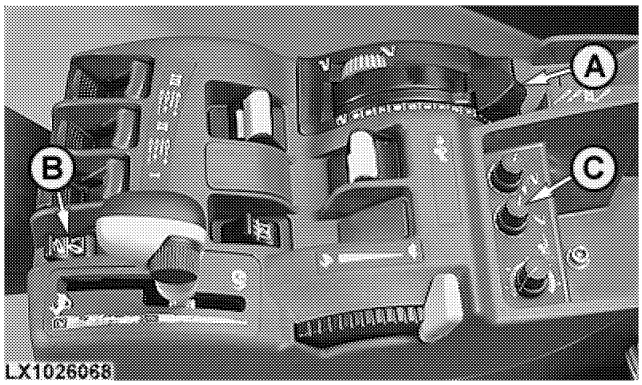
- move control lever (A) to the position that corresponds to the position of draft links,
- move hitch control (A) to one of the end positions, or
- actuate raise/lower switch (B).

Pull control (A) towards “0” - raise implement
Push control (A) towards “9” - lower implement

The implement can be raised and lowered independently of control lever (A) by means of raise/lower switch (B). This is of assistance when **turning at the end of a field**, for example. If the upper part of the raise/lower switch is pressed, the implement is raised as high as the setting at height-limit control (C). If the lower part of the raise/lower switch is pressed, the implement is lowered as far as the setting at control lever (A).

To obtain working depth more quickly in compact soil at the end of the field, keep raise/lower switch (B) pressed. As long as raise/lower switch[curren](B) is pressed, the adjusted draft force is not active (override function). If raise/lower switch (B) is released, the implement returns to the previous settings. (This "quick lower" function will only work if the implement is lowered from its transport position.)

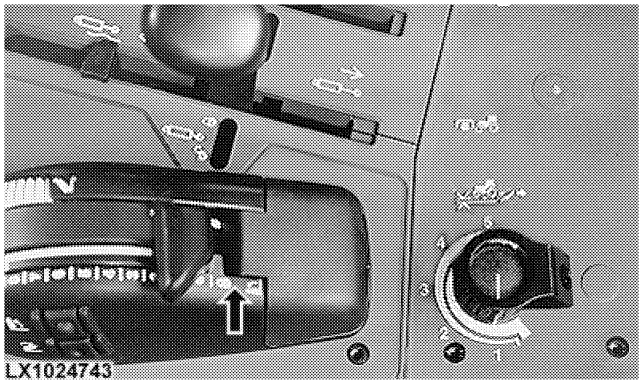




A—Hitch control lever
B—Raise/lower switch
C—Height limit control

OU12401,0000583 –19–02DEC00–1/2

Pull control lever as far as it will go (beyond “0”) - rockshaft is locked.



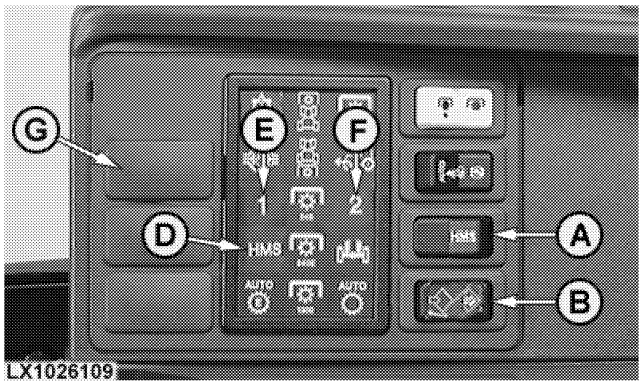
OU12401,0000583 –19–02DEC00–2/2

Operation and Function of Headland Management System HMS II (If Equipped)

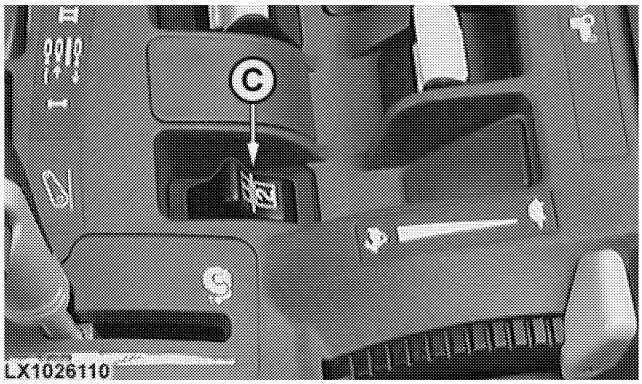
HMS II makes it possible to record and save sequences of functions that occur repeatedly and to call them up as programs as and when they are required. Two such programs can be stored at any one time. Each of them can include up to 20 functions. The programs remain in the memory until they are cancelled, even if the electrical current is switched off.

Recordings may be made of the functions of the following tractor sub-assemblies: differential lock, rockshaft, rear PTO, front PTO, front-wheel drive and selective control valves.

The distance the tractor moves between functions is also stored. The recording is therefore not dependent on the tractor's speed.



LX1026109 –UN–16MAY01



LX1026110 –UN–16MAY01

A—HMS II on/off switch
B—Record/save switch
C—Program switch
D—HMS II indicator light
E—Program 1 indicator light
F—Program 2 indicator light
G—Location of program switch on tractors without Command Arm

Basic Controls

On/off switch (A):

When this switch is actuated, it beeps.

- If this switch is actuated while the HMS II mode is on, it turns the HMS II mode off.
- Actuating this switch does not activate the HMS II mode unless program switch (C) is in its neutral position.
- If this switch is actuated while a program is being recorded, the recording of the program is interrupted and the program does not get stored in the memory.
- If this switch is actuated while a program is being performed, the program stops.

Record/save switch (B):

When this switch is actuated, it beeps.

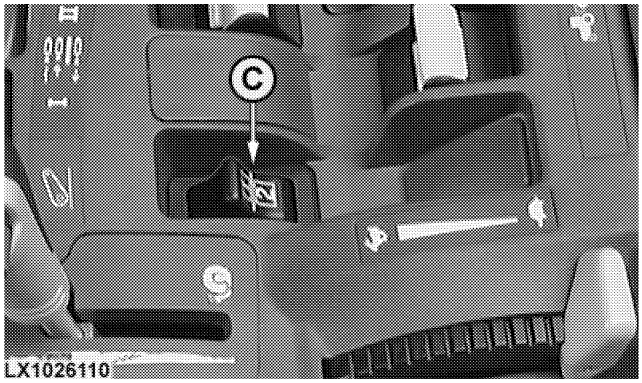
- If this switch is actuated while the HMS II mode is off, it has no effect.
- If this switch is actuated while the HMS II mode is on, it starts to record a program.

Continued on next page

- If this switch is actuated while a program is being recorded, the relevant program (1 or 2) is stored in the memory.

OU12401,00005CF –19–01MAY01–2/8

Program Switch (C):



LX1026110 –UN–16MAY01

- If this switch is actuated while the HMS II mode is off, it has no effect.
- If this switch is actuated while the HMS II mode is on, the relevant program (1 or 2) will start.
- If this switch is actuated while a program is being recorded, the following functions are allocated to the relevant program.

Functions that can be recorded

Differential lock:

Its “on”/“off” status is recorded.

Front wheel drive:

Its “brake assist (off)”, “on” and “Auto” status are recorded.

NOTE: If HMS II is to perform a program that includes a front-wheel drive function, the FWD switch must be either in the “on” position or the “Auto” position. If HMS II switches FWD off, the FWD indicator light will flash “slowly” (on briefly, off for longer) until HMS II switches FWD on again or until the FWD switch is moved to its “off” position. In the event of HMS II being switched off during the period of slow flashing, the FWD indicator light changes to “rapid” flashing (on/off for the same length of time) until the FWD switch is moved to its “off” position.

Rear PTO:

Its “on”/“off” status is recorded.

Continued on next page

OU12401,00005CF –19–01MAY01–3/8

NOTE: If HMS II is to perform a program that includes a PTO function, the PTO switch must be in its “on” position. If HMS II switches the PTO off, the PTO indicator light will flash “slowly” (on briefly, off for longer) until HMS II switches the PTO on again or until the PTO switch is moved to its “off” position. In the event of HMS II being switched off during the period of slow flashing, the PTO indicator light changes to “rapid” flashing (on/off for the same length of time) until the PTO switch is moved to its “off” position.

Front PTO:

Its “on”/“off” status is recorded.

NOTE: If HMS II is to perform a program that includes a PTO function, the PTO switch must be in its “on” position. If HMS II switches the PTO off, the PTO indicator light will flash “slowly” (on briefly, off for longer) until HMS II switches the PTO on again or until the PTO switch is moved to its “off” position. In the event of HMS II being switched off during the period of slow flashing, the PTO indicator light changes to “rapid” flashing (on/off for the same length of time) until the PTO switch is moved to its “off” position.

Rockshaft:

The “raise” and “lower” functions are recorded.

NOTE: If HMS II is to perform a program that includes a rockshaft function, the rockshaft control switch must be in its neutral position.

Selective control valves:

The “extend”, “retract”, “float” and “neutral” functions are recorded (on tractors with Command Arm only).

NOTE: If HMS II is to perform a program that includes an SCV function, the control lever of the relevant SCV must be in its neutral position.

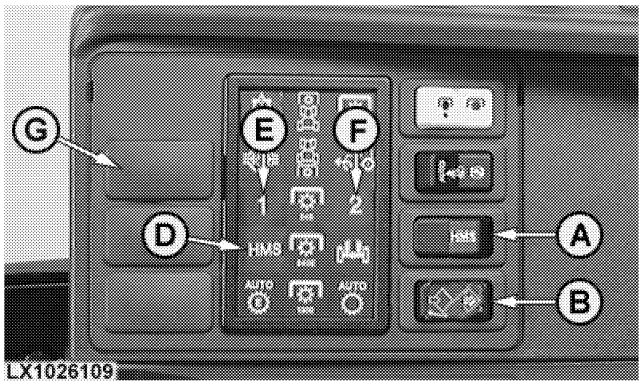
Continued on next page

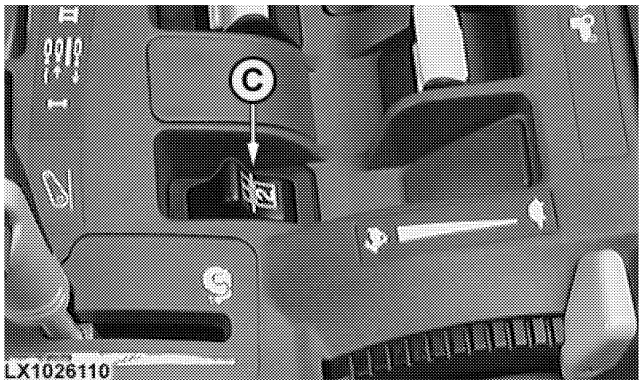
Recording a Program

NOTE: To enable programs to be recorded, the tractor must be driven at a speed of at least 0.5 km/h (0.31 mph). Recording may be interrupted if the tractor's speed momentarily drops below 0.5 km/h (0.31 mph). If this interruption lasts more than 60 seconds, the recording will be abandoned.

The "front PTO on", "rear PTO on" and "lower rockshaft" functions may be recorded only if the tractor is moving forward.

1. Pressing on/off switch (A) makes HMS II indicator light (D) come on.
2. Pressing record/save switch (B) makes light (D) flash and a beep can be heard every 2 seconds.
3. Set program switch (C) to "1" or "2". Program indicator lights (E) or (F) will flash.
4. Perform the desired functions with the tractor.
5. When finished, press record/save switch (B) again. The sequence of functions has been recorded and is now stored as a program. The program indicator light goes out; the HMS II indicator light remains on continuously (no flashing).





A—HMS II on/off switch
B—Record/save switch
C—Program switch
D—HMS II indicator light
E—Program 1 indicator light
F—Program 2 indicator light
G—Location of program switch on tractors without Command Arm

Stopping a Recording

The following actions have the effect of stopping a recording before it is completed:

1. Actuating the HMS II on/off switch.
2. Not selecting a program within 60 seconds.
3. Not performing a function within 60 seconds.
4. Not actuating the record/save save switch within 60 seconds of performing the first function.
5. Switching on a PTO when the transmission is not in a forward gear.

Continued on next page

6. Lowering the rockshaft when the transmission is not in a forward gear.

7. No operator on the seat and the tractor not moving for more than 5 seconds.

8. A fault being detected at the program switch.

Displaying the Stored Programs

When HMS II is selected, all the functions included in the two programs are displayed one after the other, each appearing for 2 seconds.

This display will reappear if the operator vacates his seat for more than 30 seconds while HMS II is active.

Dot matrix display	LCD screen	Meaning
Text "SEQUENCE I"	SE-1	Program 1
Text "SEQUENCE II"	SE-2	Program 2
Differential lock symbol	dLon	Differential lock on
Differential lock symbol scored through	dLoF	Differential lock off
FWD symbol	Fdon	FWD on
FWD symbol scored through	FdoF	FWD off
Rear PTO symbol	Pton	Rear PTO on
Rear PTO symbol scored through	PtoF	Rear PTO off
Front PTO symbol	FPto	Front PTO on
Front PTO symbol scored through	FPoF	Front PTO off
Rockshaft symbol + "up" arrow	HUP	Rockshaft rises
Rockshaft symbol + "down" arrow	Hdn	Rockshaft lowers
"Up" arrow + oil pressure symbol + figure	EtdX	SCV X (1-4) extends
"Down" arrow + oil pressure symbol + figure	rEtX	SCV X (1-4) retracts
~ + oil pressure symbol + figure	FLtX	SCV X (1-4) in float
Oil pressure symbol + figure scored through	CAnX	SCV X (1-4) in neutral
End	End	Program completed

Performing the Stored Programs

NOTE: To enable the prerecorded programs to be performed, the tractor must be driven at a speed of at least 0.5 km/h (0.31 mph).

1. Pressing the on/off switch makes the HMS II indicator light come on.

Continued on next page

2. To select the desired program, set the program switch to “1” or “2”. The program indicator light comes on. This light goes out once the program has been completed.

Faults in the Functions

If a fault occurs in a function that is included in the program, then the following applies:

- If the fault occurred **before** the program was started, the entire program will not run.
- If the fault occurs **during** the course of the program, then the function in question will be ignored. The other functions are performed in their normal sequence.

Manual Intervention While a Program is Running

If one of the stored functions is activated manually while the program is running, this function will be ignored for the rest of the program. The function will **not** be deleted from the program. The other functions are performed in their normal sequence.

Stopping a Program While it is Still Running

The following actions have the effect of stopping a program while it is still running:

1. Selecting the other program at the program switch.
2. Pressing the on/off switch.
3. Pressing the record/save switch.
4. It taking longer than 60 seconds for the program to be completed.
5. The requirement to switch on a PTO when the transmission is not in a forward gear.

Continued on next page

6. The requirement to lower the rockshaft when the transmission is not in a forward gear.

7. The operator leaving his seat and the tractor not moving for more than 5 seconds.

8. The rockshaft or a selective control valve not performing the desired function.

9. A fault being detected at the program switch.

If a program is stopped while it is running and functions have already been performed, then HMS II reacts as follows:

- The differential lock is disengaged.
- The status of the FWD remains unchanged.
- All the PTOs are switched off.
- Rockshaft movement is stopped.
- The flow of oil to the SCVs is stopped.

Cancelling the Stored Programs

1. Pressing the on/off switch makes the HMS II indicator light come on.

2. Pressing the record/save switch makes the HMS II light flash and a beep can be heard every 2 seconds.

3. To select the program that is to be cancelled, set the program switch to “1” or “2”. The program indicator light starts to flash.

4. Do not perform **any** functions with the tractor.

5. When finished, press the record/save switch again. The selected program is now cancelled. The program indicator light goes out; the HMS II indicator light remains on continuously (no flashing).

Rockshaft Remote Control

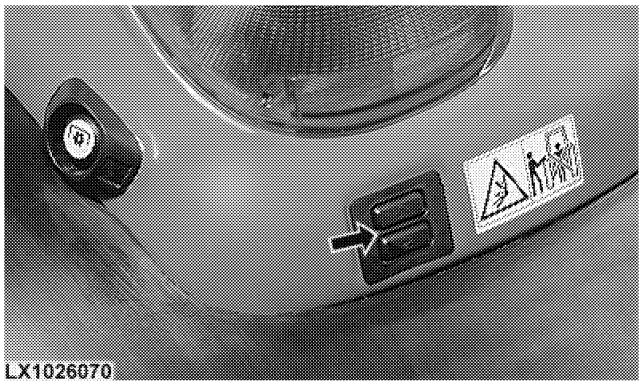
This switch allows the rockshaft to be operated at a distance from the operator's position. For safety reasons, the rockshaft rises and drops at a slower rate, and the height and depth values are ignored.

Push upper switch - Raise implement

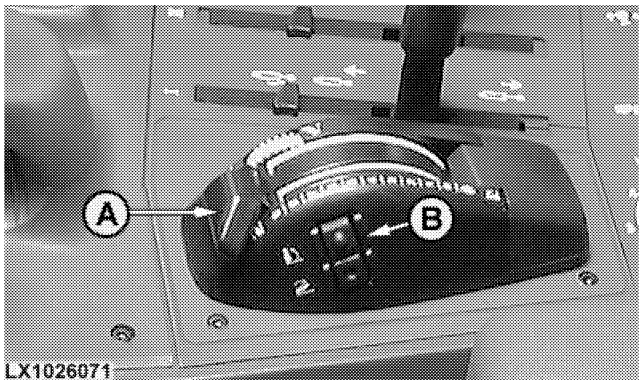
Push lower switch - Lower implement

NOTE: Once the remote control has been activated, the rockshaft is prevented from moving accidentally. To make the rockshaft ready for operation again, either:

- *move hitch control (A) to the position that corresponds to the position of the draft links,*
- *move hitch control (A) to one of the end positions, or*
- *actuate raise/lower switch (B).*



LX1026070 –UN–16MAY01

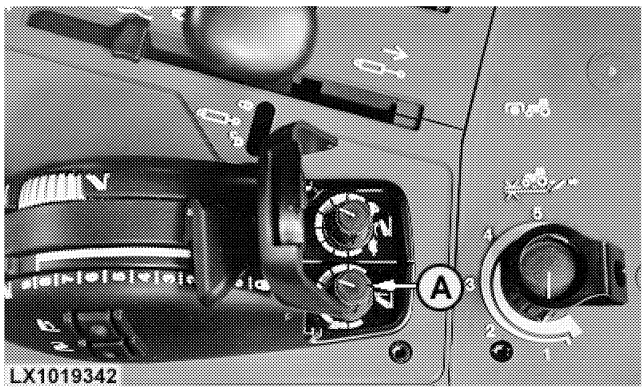


LX1026071 –UN–07DEC00

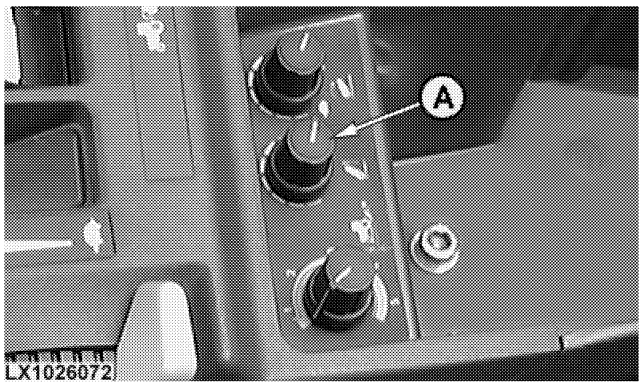
OU12401,0000586 –19–06DEC00–1/1

Height Adjustment

The height to which implement is raised can be limited at height-limit control (A) to any desired value between minimum height (turn counter-clockwise) and maximum height (turn clockwise).



LX1019342 –UN–07APR98



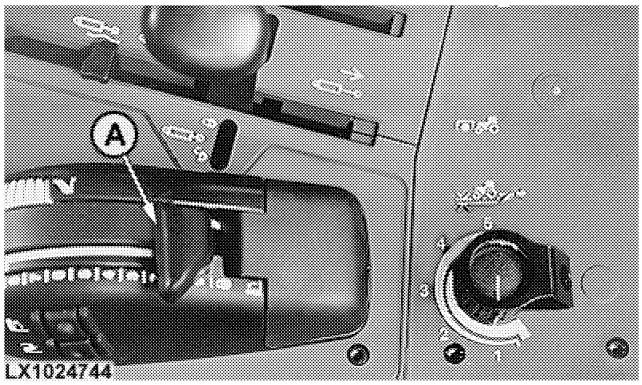
LX1026072 –UN–16MAY01

OU12401,0000587 –19–07DEC00–1/1

Transporting Mounted Implements

Raise mounted implement fully by pulling hitch control lever (A) as far as it will go to the rear (beyond “0”).

For a towed implement, push the hitch control lever as far as it will go to the front (to setting “9”).



OU12401,000052C –19–01DEC00–1/1

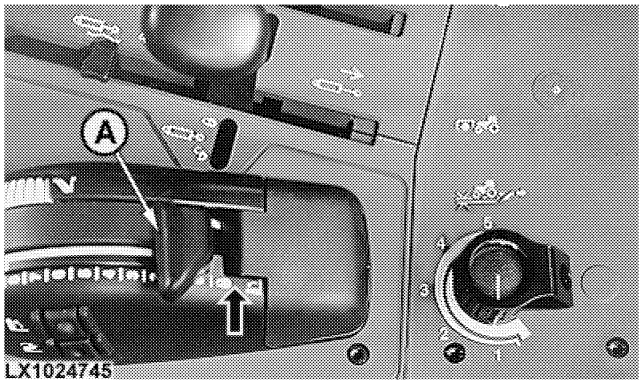
Hitch Dampening

The tractor is equipped with a hitch dampening function that prevents the tractor from "pitching" when it is travelling with a raised implement.

To activate the dampening function, first move hitch control lever (A) (with the engine running) to the position that corresponds to the position of the draft links. Then pull it as far as it will go to the rear (beyond “0”) to the transport position (see arrow). The rate-of-drop control must NOT be in the left-hand end position.

To switch off the dampening function, push the hitch control lever forward from the transport position to a position beyond “0” (in the "drop" direction).

NOTE: Using the remote control and switching off the engine both have the effect of switching off the hitch dampening function.

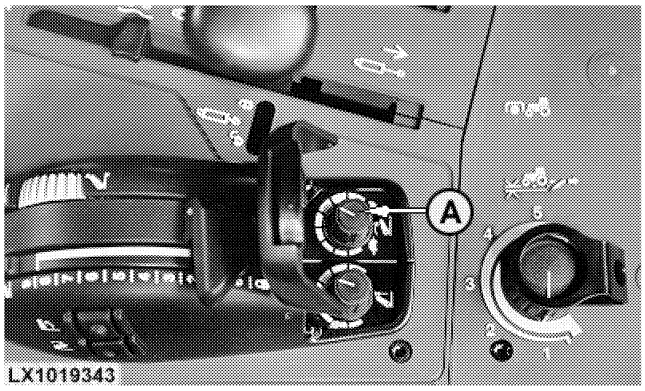


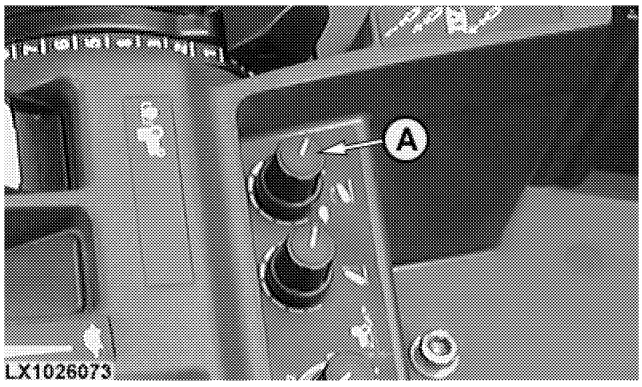
OU12401,000052D –19–01DEC00–1/1

Adjusting Rate of Implement Drop

The rate at which the rockshaft and mounted implement will drop is controlled by turning control (A).

The rate-of-drop varies with the setting of control (A) and the weight of the mounted implement. The heavier the implement, the faster the rate-of-drop. The lighter the implement, the slower the rate-of-drop.



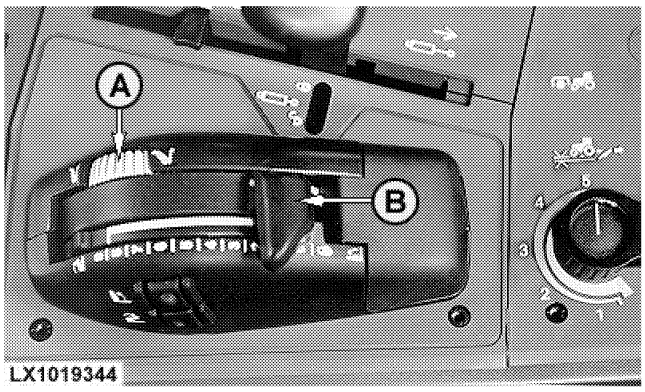


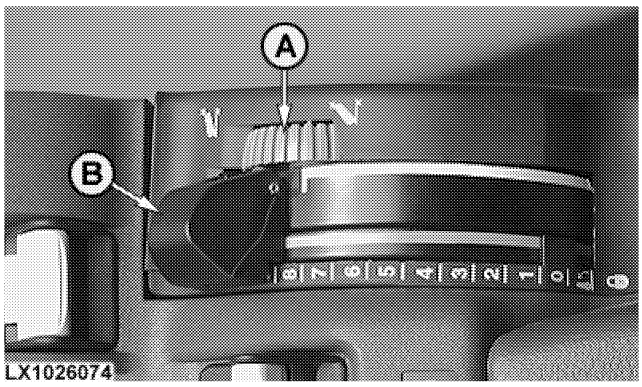
OU12401,0000588 –19–07DEC00–1/1

Depth Adjustment

Push down hitch control stop (A) and set the desired working depth.

After lifting the implement, the same working depth will be selected the next time the implement is lowered. This depth is indicated by resistance at hitch control lever (B).



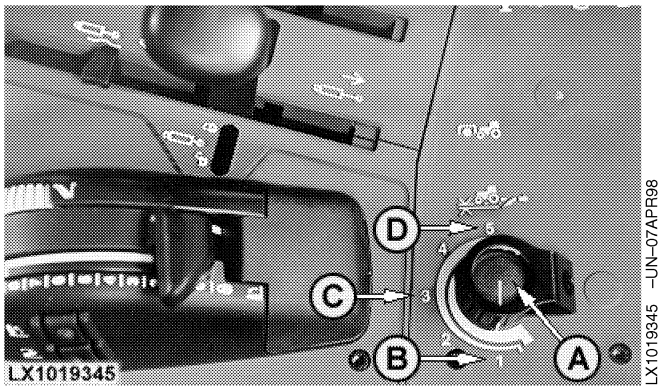


OU12401,0000589 –19–07DEC00–1/1

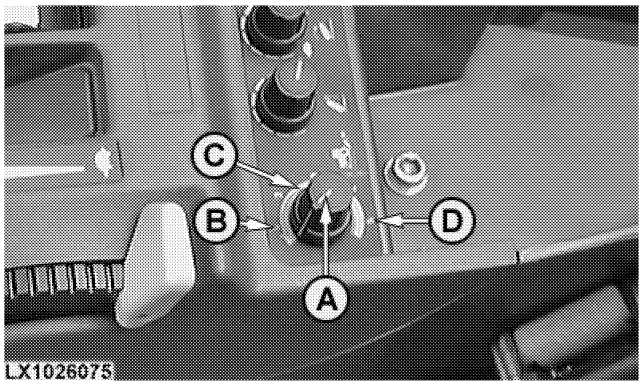
Load/Depth Adjustment

CAUTION: Before connecting implements to the three-point hitch, load/depth control (A) must be moved to position “1” (depth control) to prevent unintentional raising or lowering of the rockshaft.

A—Load/depth control
B—1=Depth control
C—2-4=Mixed control
D—5=Load control



LX1019345 –UN–07APR98

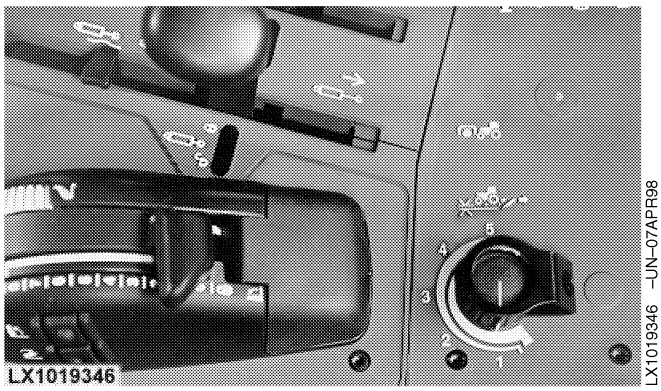


LX1026075 –UN–16MAY01

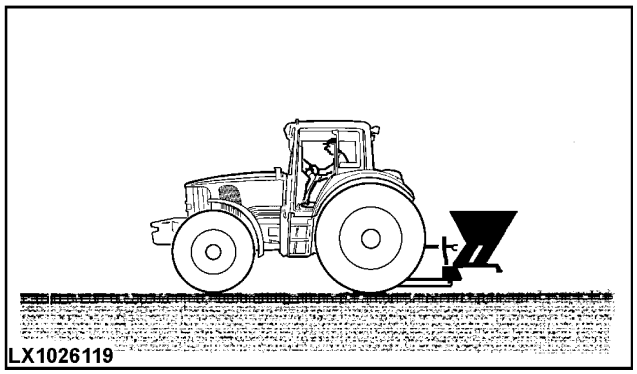
OU12401,000058A –19–07DEC00–1/1

1 Depth Control

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



LX1019346 –UN–07APR98

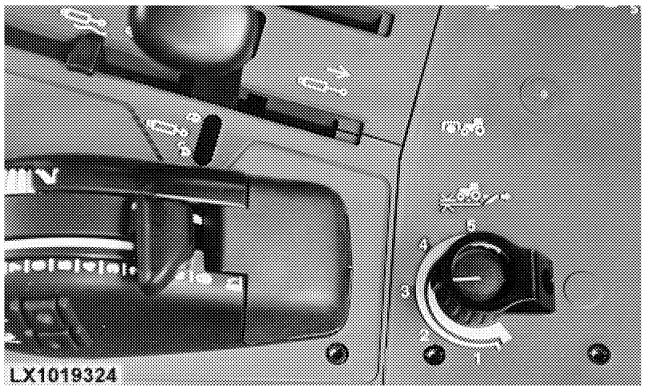


LX1026119 –UN–10MAY01

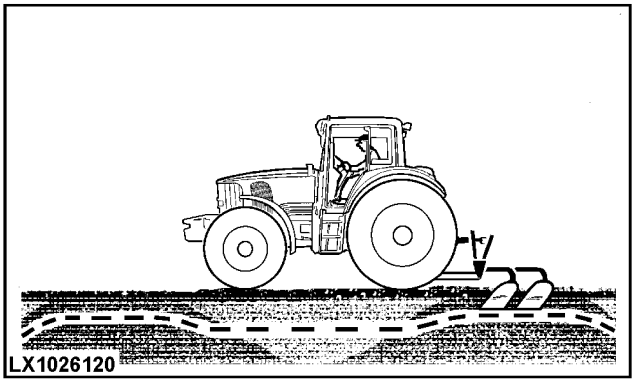
OU12401,00005E3 –19–28APR01–1/1

2-4 Mixed Control

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



LX1019324 –UN–07APR98

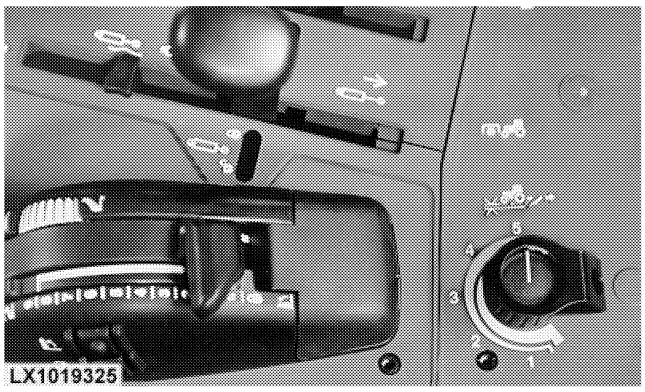


LX1026120 –UN–10MAY01

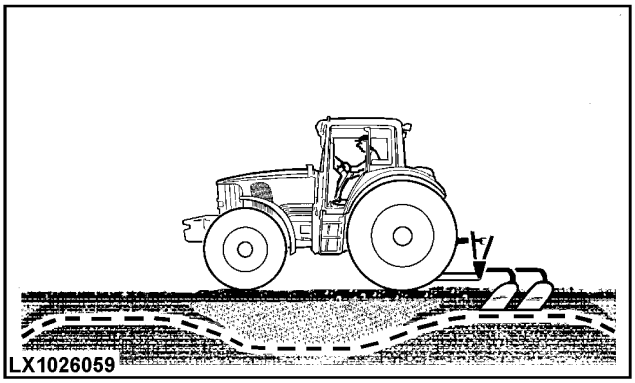
OU12401,00005E4 –19–28APR01–1/1

5 Load Control

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



LX1019325 –UN–07APR98

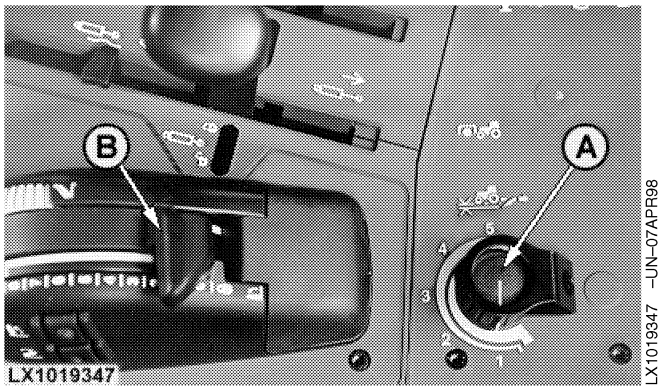


LX1026059 –UN–18MAY01

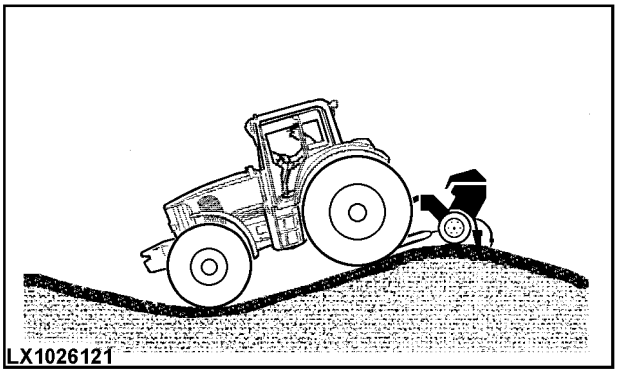
OU12401,00005E5 –19–28APR01–1/1

Float Position

In "Float" position (for rockshaft-controlled implements with gauge wheel), implement can move freely up and down to follow ground contours independently of the tractor. To obtain a "floating" action, set load/depth control (A) to “1” and move hitch control lever (B) as far as it will go to the front.



LX1019347 –UN–07APR98



LX1026121 –UN–10MAY01

OU12401,00005E6 –19–28APR01–1/1

Direct Actuation

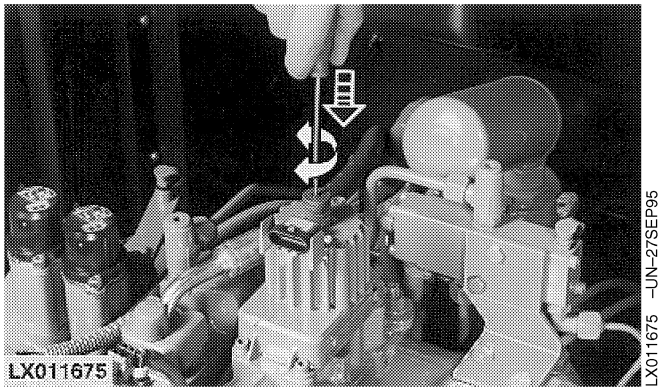
In the event of an electrical failure, the rockshaft can be actuated as follows:

Pull out cable.

Run the engine. Take off the protective cap.

From the operator’s seat, press down the screw with a screwdriver until it engages in the detent, and then turn to the right until the three-point hitch rises.

See your John Deere dealer.



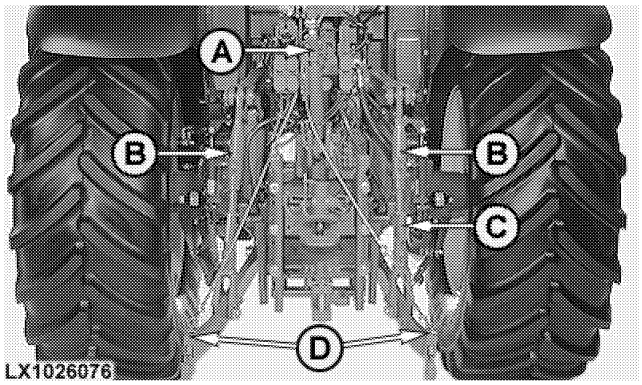
LX011675 –UN–27SEP95

AG,OU12401,203 –19–01DEC00–1/1

Three-Point Hitch

Tractors may be equipped with flat steel draft links, telescopic draft links or quick-coupling (hook-type) draft links.

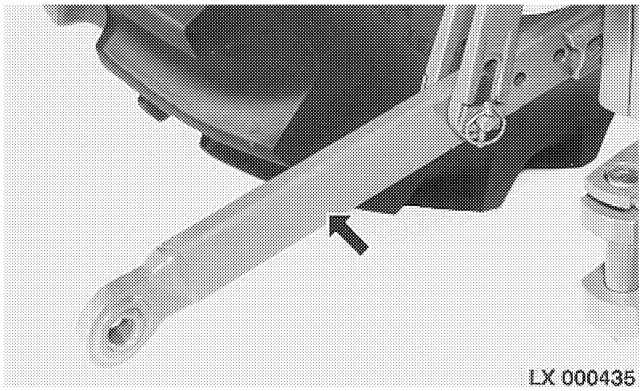
A—Center link
B—Lift links
C—Crank for adjusting lift links
D—Draft links



OU12401,0000802 –19–26APR01–1/1

Flat Steel Draft Links

These draft links can be used for Category II implements.



AG,OU12401,205 –19–07APR00–1/1

Telescopic Draft Links

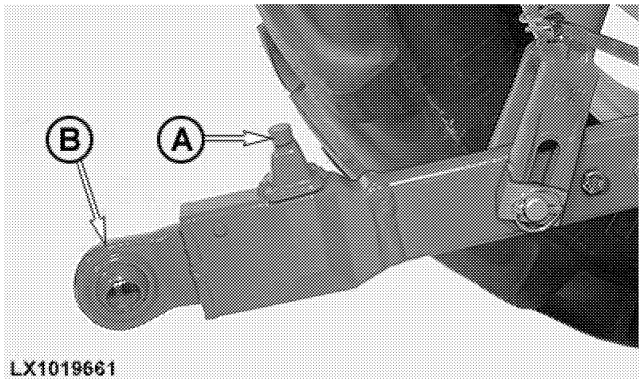
Telescopic draft links are intended for Category II and Category IIIN implements.

To facilitate hitching of implements, extend the draft links to the rear.

1. Lift lock pin (A).

2. Pull telescopic draft links (B) to the rear.

After attaching and securing implements to draft links, reverse the tractor until the lock pins snap into place.



AG,OU12401,206 –19–07APR00–1/1

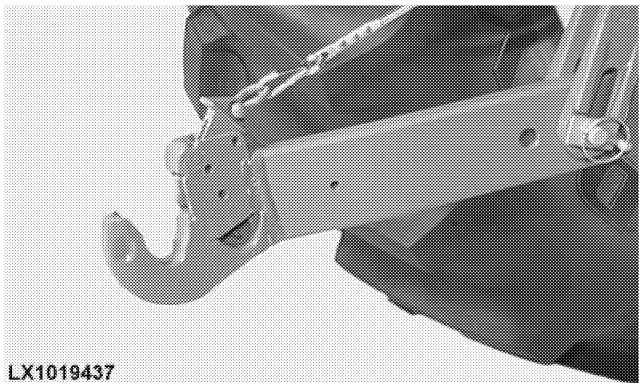
Quick-Coupling (Hook-Type) Draft Links

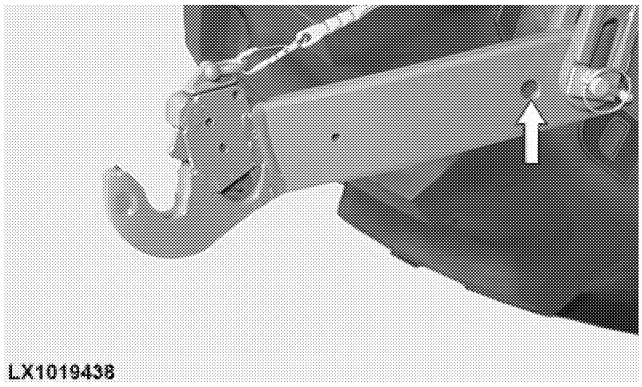
These draft links are intended for Category II and Category IIIN implements. Implements can be attached to and removed from the draft links without the driver having to leave his seat.

To open the links, simply pull the cable.

To close the links, simply release the cable.

NOTE: On very heavy, compact implements, the lift links can be attached at the rear hole in the draft links. The reduces the lifting height, but maximizes the lifting force.



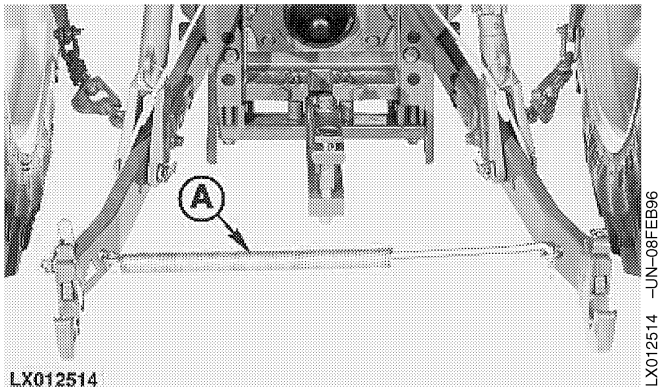


OU12401,0000804 –19–26APR01–1/3

Attaching Implement

1. Adjust draft links to the dimension for Category II implements by means of adjusting rod (A) (if equipped).
2. With draft links lowered, reverse tractor until the coupler hooks are below the implement hitch pins.
3. Slowly raise draft links until pins are engaged in coupler hooks and locked into position.
4. Adjust center link to required length and attach to top attaching point of implement mast.

IMPORTANT: Make absolutely certain that implement is correctly locked to coupler hooks.

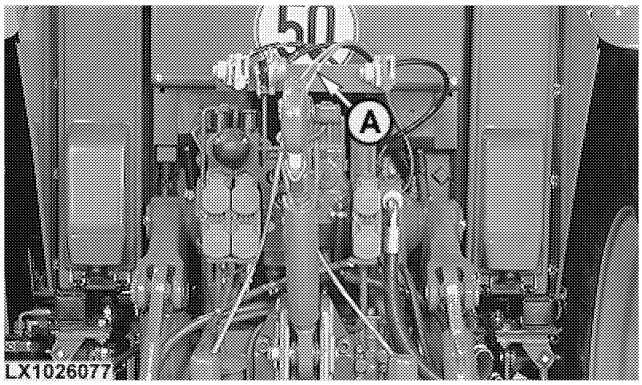


Continued on next page

OU12401,0000804 –19–26APR01–2/3

Removing Implement

1. Lower implement to the ground.
2. Disconnect center link from implement and secure by means of transport hook.
3. Pull release cable (A) and lower draft links until coupler hooks are clear of implement hitch pins.
4. Drive tractor forward away from implement.



OU12401,0000804 –19–26APR01–3/3

Attaching Three-Point Hitch Mounted And Drawn Implements

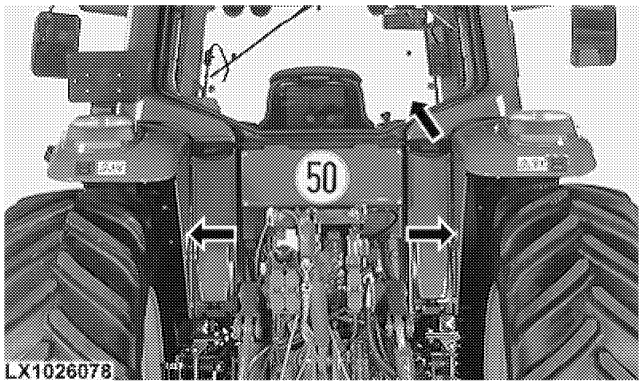
Be sure not to damage exposed parts of cab (see arrows) when attaching three-point hitch mounted or drawn implements.

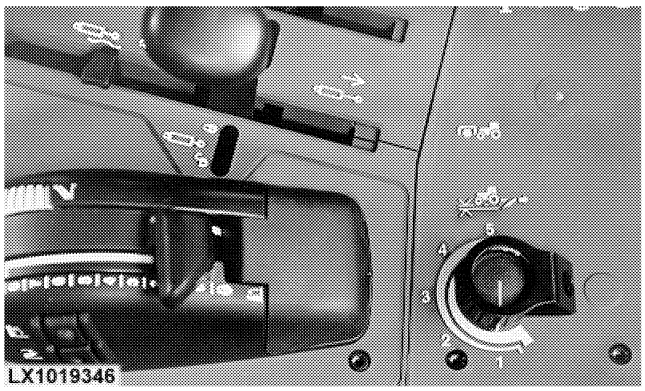
CAUTION: Do not stand between tractor and implement unless parking lock and handbrake are both applied firmly.

IMPORTANT: When attaching three-point hitch mounted or drawn implements for the first time, conduct a trial to ensure that implement will not damage cab in any position. With hitch-mounted implements, pay attention to the highest lift position; with drawn implements, be careful when turning sharply.

If a swinging drawbar is installed, set it in the front, short position. The swinging drawbar can also be swung to the right or left and secured there.

When attaching an implement, first make sure that the rockshaft load/depth control is set to “1” (depth control).





OU12401,000058D –19–07DEC00–1/1

Leveling the Implement

To level implement from side-to-side, adjust the right-hand lift link. Adjust center link to level fore-and-aft.

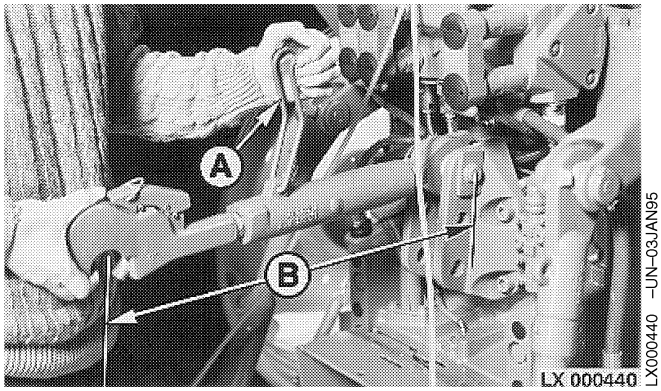
AG,OU12401,209 –19–07APR00–1/1

Center Link Adjustment

Length of center link can be adjusted by means of adjusting handle (A). Lift up adjusting handle and turn it until the required length is achieved.

Length (B) must be between 530 mm (20.9 in.) and 725 mm (28.5 in.).

Do not deviate from the specified dimensions. After adjusting, push handle down again over center link. Insert attaching pin through implement mast and center link, and secure.



LX000440 –UN–03JAN95

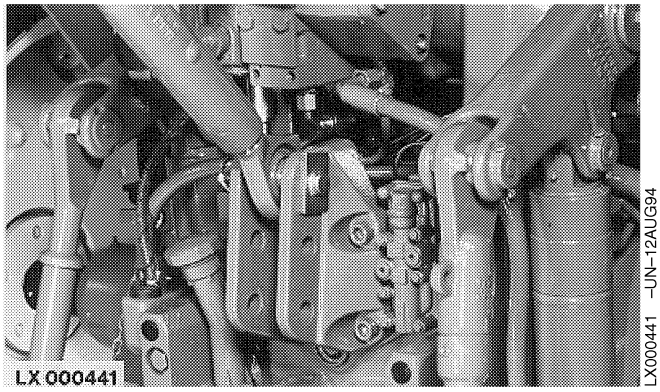
AG,OU12401,210 –19–07APR00–1/1

Center Link Positions

The center link can be attached to the tractor in any one of three different positions.

The lowest position provides the greatest lifting height and less lifting force and should be used when working with a plow.

The highest position provides the maximum lifting force and less lifting height and can be used when working with machines such as direct drills.



LX000441 –UN–12AUG94

LX,OREG 000327 –19–01DEC95–1/1

Lift Links

A greater transport clearance is obtained by shortening the links. Extra working depth is obtained by lengthening the links.

To level implement from side-to-side, adjust one link. Use handle (A) to adjust the link. After adjustment is completed, secure handle (A).

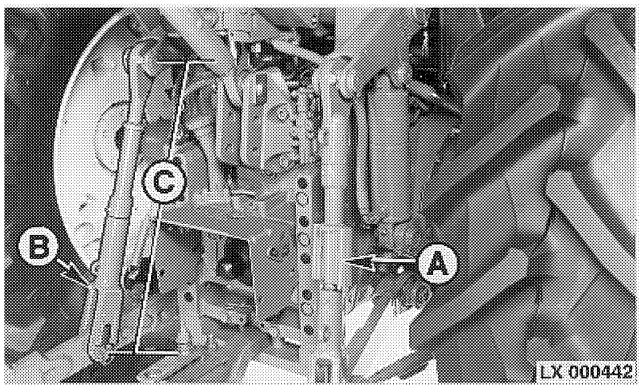
To adjust left-hand lift link:

- If the link is equipped with an adjusting handle, proceed in the same way as for the right link.
- If the link is not equipped with an adjusting handle, remove it from draft link and screw yoke end (B) of lift link in or out.

Length of links (C) must be kept within the following limits:

- Minimum length 705 mm (27.8 in.)
- Maximum length 865 mm (34.1 in.)

NOTE: The lift link dimensions quoted above are with lift links locked in draft links (no vertical float).



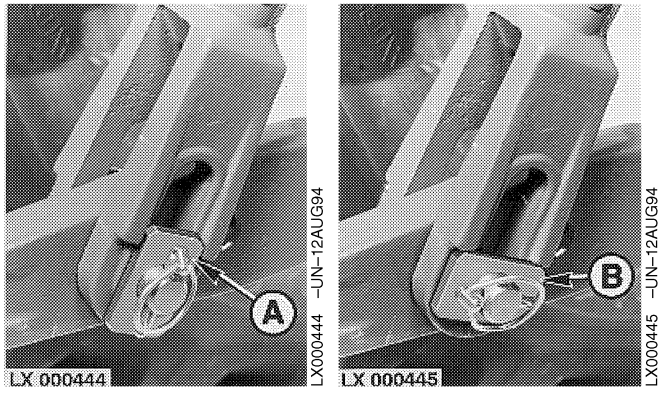
A—Adjusting handle
B—Yoke end
C—Length of links

AG,OU12401,211 –19–07APR00–1/1

Adjusting for Vertical Float

Depending on the position of the steel plate, draft links can be adjusted to allow for vertical float or to lock out float.

A—Vertical float
B—No float



LX,OREG 000329 –19–01OCT90–1/1

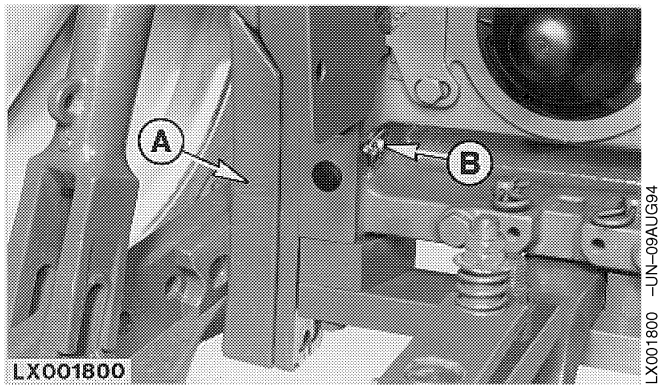
Sway Blocks (If Equipped)

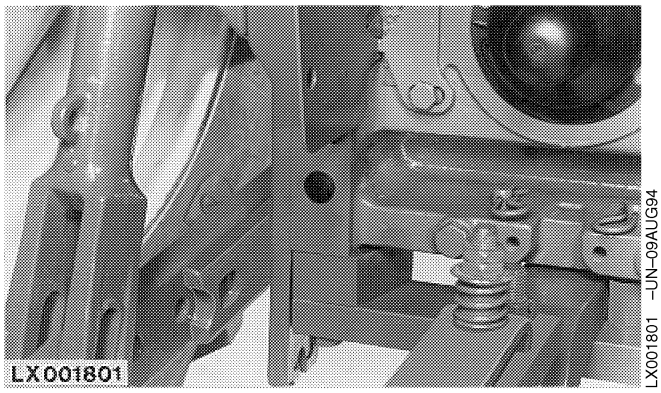
Sway blocks (A) are used to limit sideways motion of draft links during operation and transport.

Sway blocks must be fitted when working with attachments which are intended to follow exactly the line of the tractor.

If the attachments (plow, disk harrow etc.) require sideways motion in the operating position, remove quick-lock pins (B) and take off the sway blocks.

With sway blocks removed, draft links will sway in operating position. However, sway is locked out in transport position.

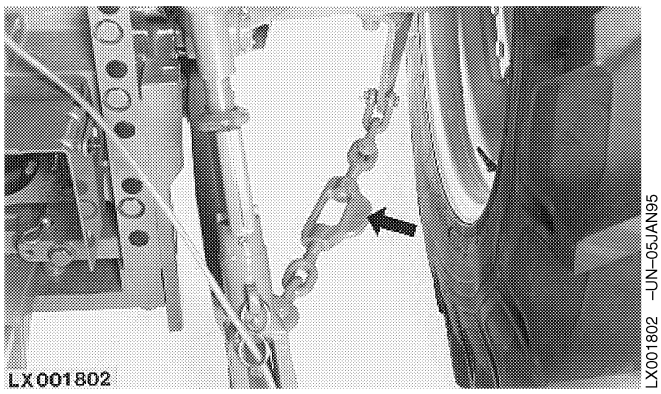




AG,OU12401,212 –19–07APR00–1/1

Stabilizer Chain (If Equipped)

Draft links can be stabilized using this chain. No tools are required.

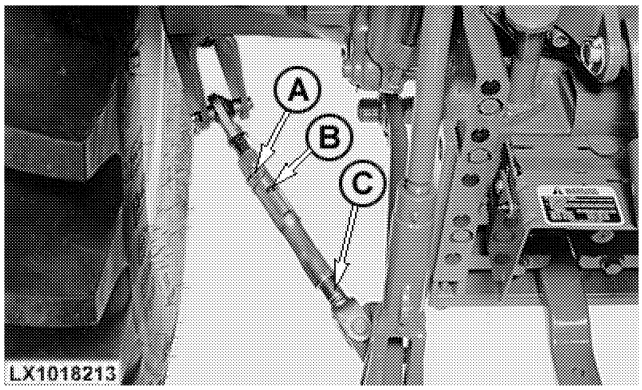


LX,OSTAB 002232 –19–01SEP95–1/1

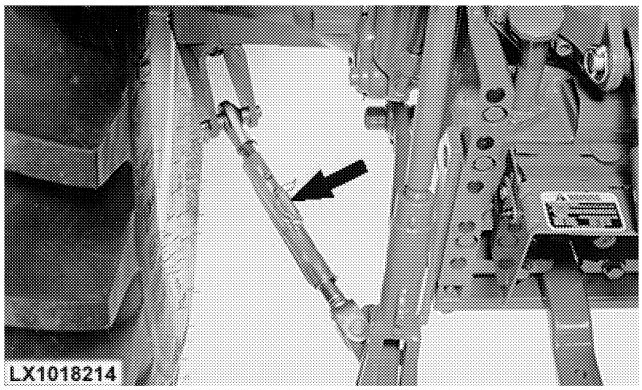
Stabilizer Bar

The bar can be adjusted to suit any category by means of pin (A) and/or threaded rod (B). Alternative bolt position (C) also alters the category. The different categories are marked on the threaded rod by grooves.

If pin (A) is not required (it must be removed to allow the draft links to sway), it can be stored in the tubular retainer.



LX1018213 –UN–24OCT97



LX1018214 –UN–24OCT97

LX,OMREG 011309 –19–20SEP97–1/1

Stabilizing System (If Equipped)

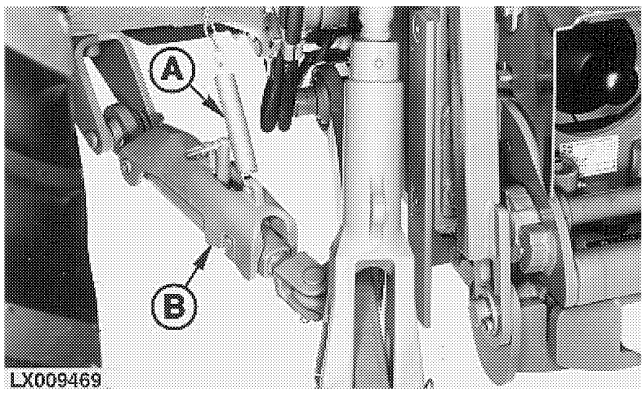
The stabilizing system is operated by means of chain (A) and flap cover (B). If flap cover (B) is raised, the draft links have lateral play, otherwise they are locked.

Chain (A) short:

Draft links are locked in raised position (rigid setting), in lowered position they have lateral play.

Chain (A) long:

Draft links are locked in all positions.



LX009469 –UN–02JAN95

LX,OREGEL000331 –19–01SEP95–1/1

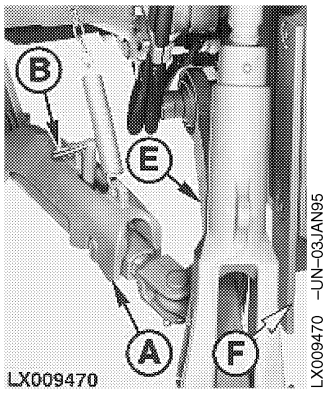
Adjusting Spreading Dimension

Drive tractor to the center of the implement. Remove ring (B) and lift up flap cover (A). Use lever (H) to adjust the spreading dimension.

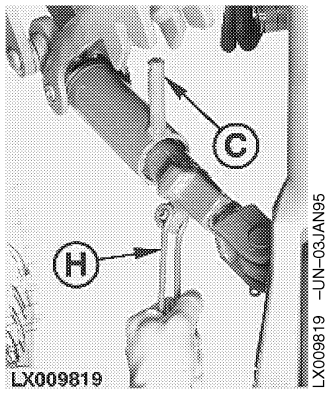
Groove (G) indicates the spreading dimension for Category II and must be aligned with the edge (see arrow). Then locate lever (H) on pin (C), put down flap cover (A) and secure with ring (B). Finally, adjust spacer (D).

IMPORTANT: The spreading dimension must be large enough to prevent draft links (E) from interfering with sway blocks (F), as this may result in mechanical damage.

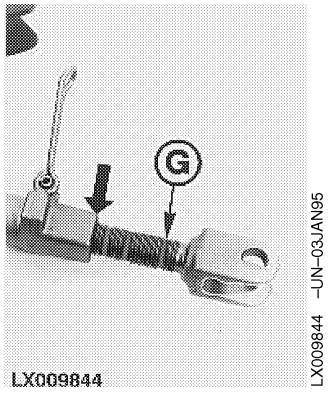
A—Flap cover
B—Ring
C—Pin
D—Spacer
E—Draft link
F—Sway block
G—Groove for Category II
H—Lever



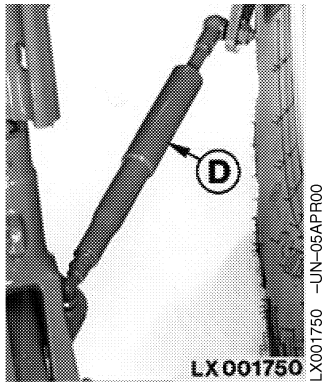
LX009470 –UN–03JAN95



LX009819 –UN–03JAN95



LX009844 –UN–03JAN95



LX001750 –UN–05APR00

AG,OU12401,213 –19–07APR00–1/1

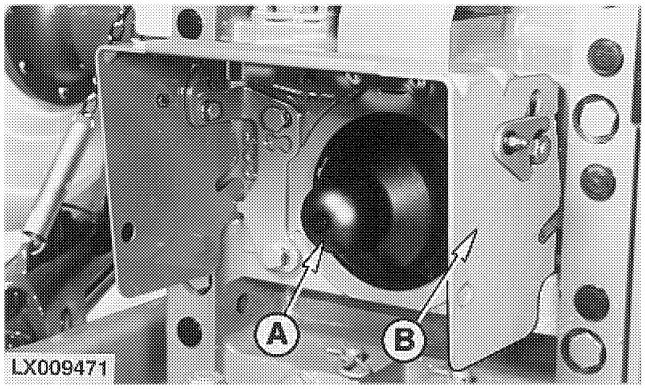
Power Take-Off

PTO Guard

CAUTION: Remove PTO cap (A) only when the PTO is to be used.

As soon as PTO-driven implement is removed, re-install cap over PTO stub shaft.

Master shield (B) may be folded up when attaching certain implements to the PTO, but it must be reinstalled as soon as the implement is installed.



CAUTION: Never operate PTO unless the master shield is in the position shown.

LX,OZAP 000351 –19–07DEC96–1/1

PTO Options

IMPORTANT: Implements may be driven at 540 rpm only if their power input never exceeds 70 kW (95 hp).

The tractor may be equipped with one of the following PTO versions:

- PTO for 540 rpm
- Reversible PTO for 540/1000 rpm
- Shiftable PTO for 540/1000 rpm
- Shiftable PTO for 540/540E/1000 rpm

In addition, a 1000 rpm front PTO can be installed.

AG,OU12401,214 –19–07APR00–1/1

PTO Speeds

PTO standard speeds are achieved at the following engine speeds:

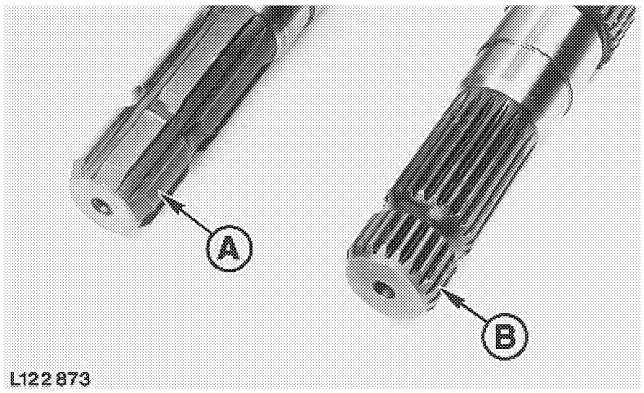
- 540 rpm rear PTO ..... 2124 rpm
- 540 rpm rear PTO (reversible of shiftable) ..... 2143 rpm
- 540E rpm rear PTO ..... 1684 rpm
- 1000 rpm rear PTO ..... 2208 rpm
- 1000 rpm front PTO with 6 splines ..... 2185 rpm
- 1000 rpm front PTO with 21 splines ..... 2185 rpm

AG,OU12401,215 –19–07APR00–1/1

Front PTO

CAUTION: Both front PTO versions operate at a rated speed of 1000 rpm. This applies to the clockwise rotating PTO with 6 splines (A) as well as to the counterclockwise rotating PTO with 21 splines (B).

NOTE: Direction of rotation of front PTO is seen in relation to the tractor's direction of forward travel.



L122873 –UN–02JAN95

LX,OZAP 000514 –19–01FEB92–1/1

Operating Power Take-Offs

CAUTION: Always disengage the PTO when not in use.

CAUTION: High-inertia implements do not come to a standstill the moment the PTO control lever is shifted to the disengaged position. Do NOT approach the implement while it is "coasting down". Do not work on the implement until it has stopped.

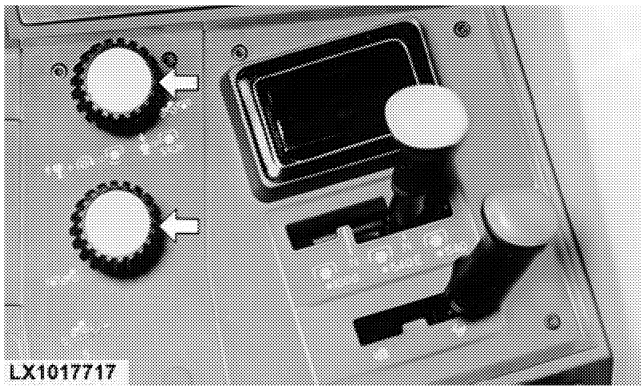
The PTOs can be engaged and disengaged on the move without declutching, even under load. When a PTO is engaged, the relevant light (A) and/or (B) comes on.

Tractors with Premium cab:
To switch on the PTO, lift up the switch button and turn it to the right. To switch off the PTO, press the button down.

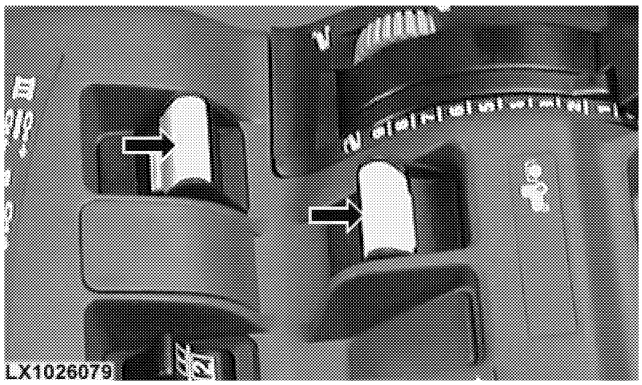
Tractors with Premium Plus cab:
To switch on the PTO, press the lever down and then forward. To switch off the PTO, pull the lever back.

NOTE: If the engine is switched off and then restarted while the PTO is running, the PTO will not operate. Even so, lights (A) and (B) continue to shine and flash. Switch off PTO and then restart.

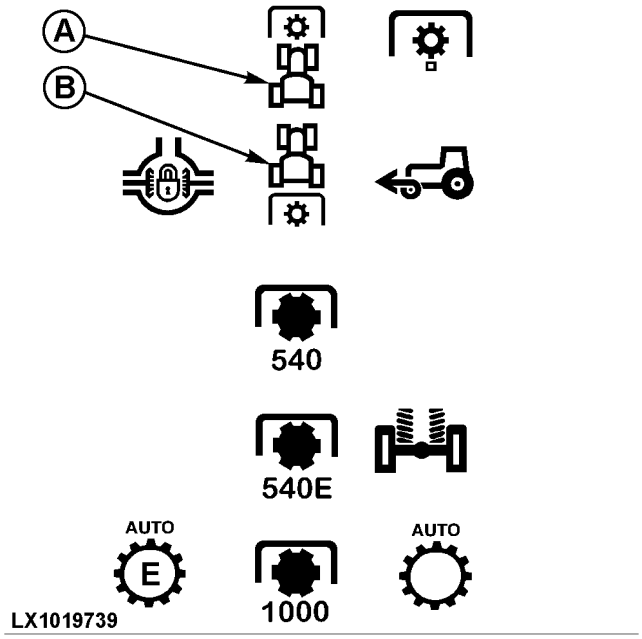
On tractors with AutoPowr, an acoustic alarm warns the operator if he vacates his seat while the PTO is still running.



Operating a PTO (Premium cab)



Operating a PTO (Premium Plus cab)

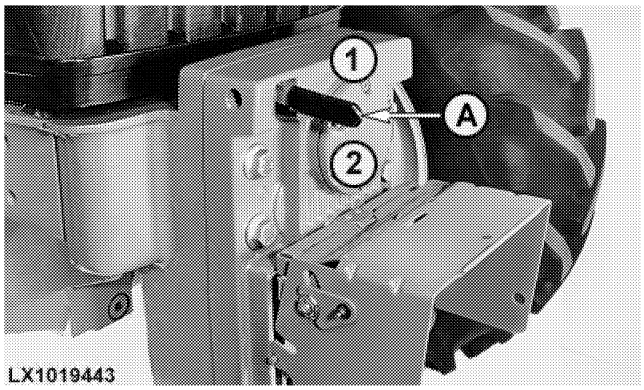


Continued on next page

If the front PTO is not required for a lengthy period, the PTO gear can be disengaged by means of lever (A).

IMPORTANT: Engage PTO gear only when the engine is shut off.

A—Selector lever
1—Disengaged
2—Engaged



LX1019443 –UN–12MAY99

OU12401,0000593 –19–07DEC00–2/2

Operating the PTO by Remote Control

The rear PTO can be engaged and disengaged as described above regardless of whether a tractor is equipped with HMS.

If the rear PTO is to be operated from outside the cab, **first** press preselector switch (A). Indicator lights (C) and (D) come on. Then switch on rear PTO at switch (B). The PTO does not start at this stage; a discontinuous whistle signal is heard; the hazard warning lights flash. To switch on rear PTO from outside the cab, proceed as follows:

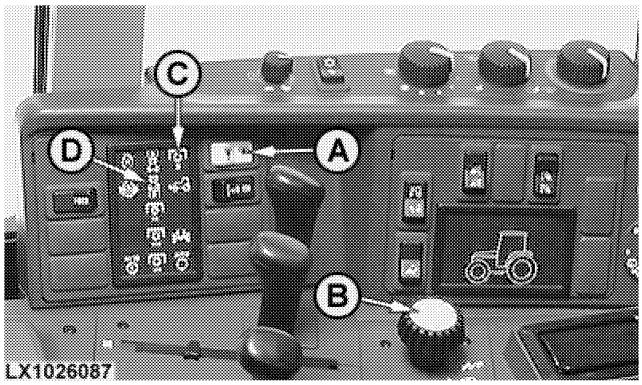
Press remote-control switch (E) on the fender. Rear PTO slowly starts up. Hazard warning lights go out. Rear turn signal light remains on (see arrow).

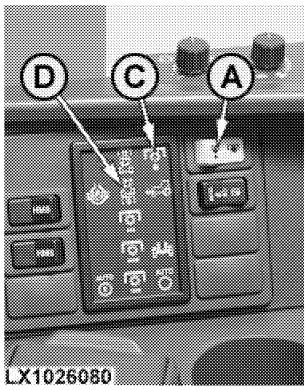
Release remote-control switch (E) within 4 seconds. Rear PTO coasts down. The whistle signal sounds discontinuously and the hazard warning lights flash.

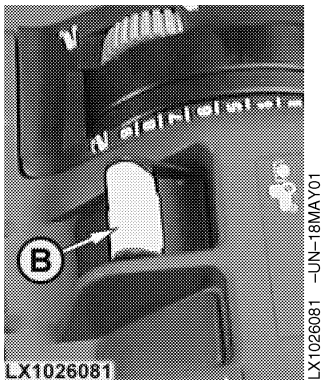
If the rear PTO is to be operated for a lengthy period, press remote-control switch (E) for at least 4 seconds until the continuous light at rear turn signal (see arrow) goes out.

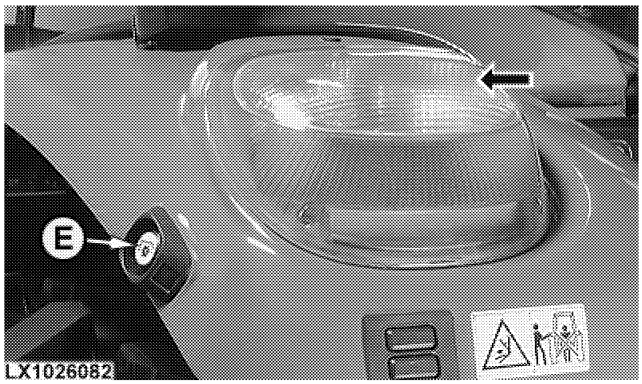
To switch off the rear PTO, actuate remote-control switch (E) -- the whistle signal sounds intermittently and the hazard warning lights flash -- or press the rear PTO switch (B) in the cab.

NOTE: If the rear PTO is switched on in the cab, the rear PTO may be switched off at remote-control switch (E), but it cannot be switched on again without re-entering the cab.









A—Preselector switch
B—Rear PTO switch
C—Preselector indicator
D—Rear PTO indicator
E—Remote-control switch

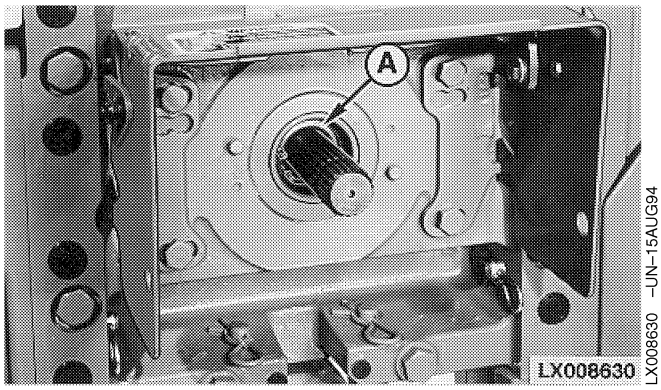
OU12401,0000594 –19–01MAY01–1/1

Reversing Rear PTO Shafts

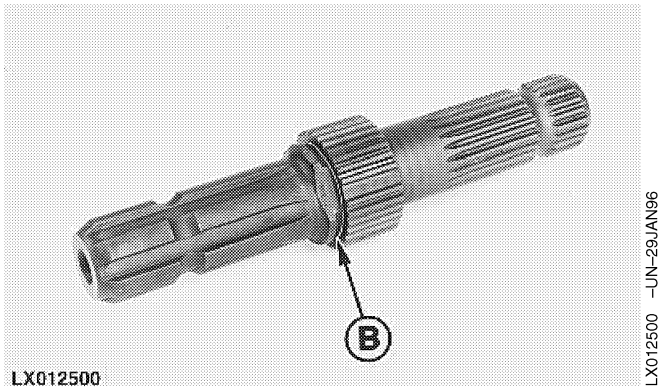
One end of the 540 rpm stub shaft has 6 splines for operating at 540 rpm, and the other end has 21 splines for operating at 1000 rpm. Clean stub shaft thoroughly before installing.

1. Remove snap ring (A) and pull out stub shaft.
2. Clean stub shaft thoroughly and coat it with grease. The groove (B) facilitates installation of snap ring.
3. Insert stub shaft in PTO housing until snap ring (A) fits into the groove.
4. Install snap ring (A).

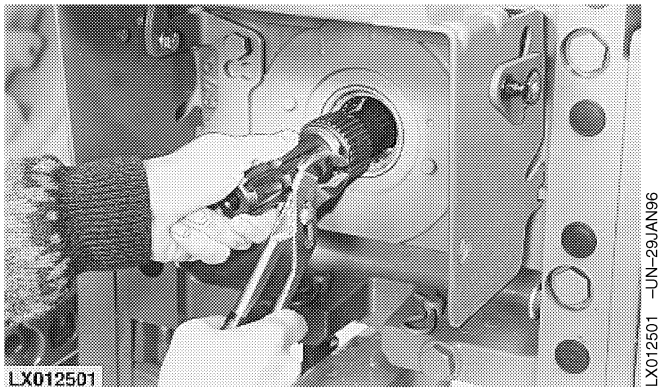
NOTE: A flattened area on the stub shaft facilitates removal and installation of snap ring.



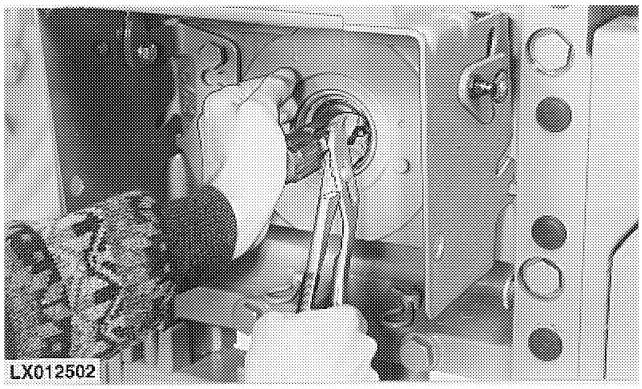
LX008630 –UN–15AUG94



LX012500 –UN–29JAN96



LX012501 –UN–29JAN96



LX012502 –UN–29JAN96

LX,OZAPF 008927 –19–01DEC95–1/1

Changing Speed of Shiftable Rear PTO

CAUTION: Before engaging the PTO, make sure that selected PTO speed is correct for the implement attached. Incorrect speed can result in serious damage to the implement.

AVOID ACCIDENTS!

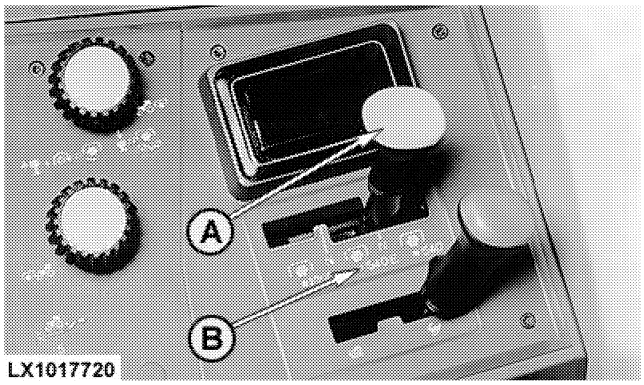
The PTO with shiftable speed change is engaged and disengaged as described under “Operating Power Take-Offs”. The PTO must be disengaged before changing speed.

PTO speed is selected by means of lever (A) as shown on decal (B). With the lever in the position(s) “N”, the PTO shaft can be turned by hand to facilitate drive shaft connection.

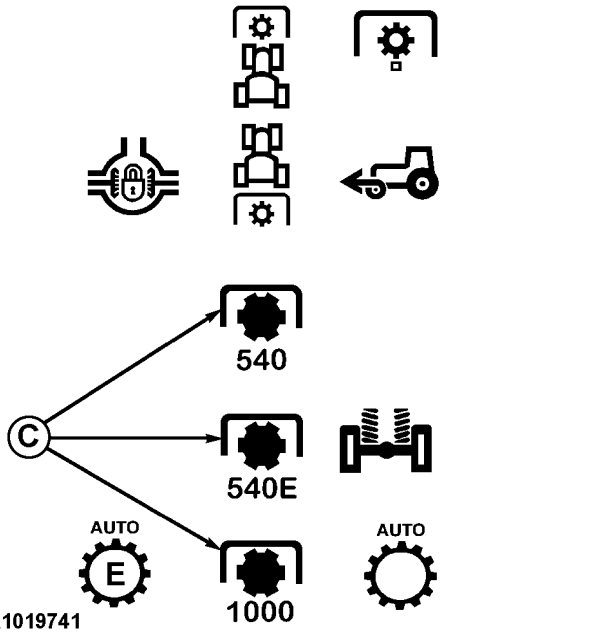
CAUTION: The engine must be shut off when an implement is being connected.

The selected PTO speed is indicated by lights (C).

NOTE: Depending on tractor model, the shift pattern (shown on decal) as well as the arrangement of the lights can vary.



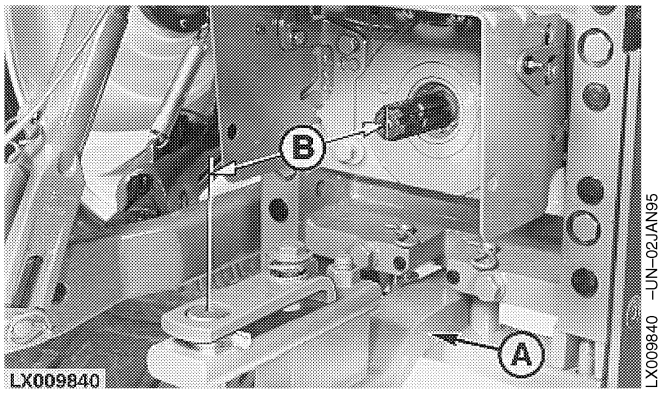
LX1017720 –UN–23SEP97



LX1019741 –UN–08FEB00

LX,OMZAP 011316 –19–01MAR00–1/1

Attaching PTO-Driven Equipment



CAUTION: Shut off engine and disengage PTO before attaching PTO-driven equipment.

CAUTION: High-inertia implements do not come to a standstill the moment the PTO control lever is shifted to the disengaged position. Do NOT approach the implement while it is "coasting down". Do not work on the implement until it has stopped.

CAUTION: Before attempting to clean, adjust or lubricate a PTO-driven machine, the three-point hitch or u.j. shaft, always make sure the PTO is switched off and stopped, the tractor engine is shut off and the ignition key is removed.

1. Align swinging drawbar (A) parallel to PTO shaft and lock it in position.
2. Distance (B) from end of PTO shaft to hole in drawbar end should be 350 mm (13.8 in.) for the 540 rpm PTO and 400 mm (15.7 in.) for the 1000 rpm PTO.

If PTO splines are not aligned with the grooves in the u.j. shaft, keep the engine shut off and move the PTO control lever to a position marked "N". Then turn the PTO shaft manually to the correct position.

AG,OU12401,216 –19–07APR00–1/1

Ballast

Selecting Ballast

CAUTION: When determining front and rear axle ballast, ensure that permissible axle loads and the maximum permissible machine weight are not exceeded (see Specifications).

Comply with local regulations regarding installation and maximum permissible number of weights.

CAUTION: Use suitable lifting tackle/hoists when handling weights.

Safety and performance of your tractor depend on correct ballasting of front axle (front weights, pick-up weight) and rear axle (wheel weights, filling tires with liquid ballast, pick-up weight).

AG,OU12401,142 –19–18MAR00–1/1

Ballasting Rear Wheels

Rear wheel ballast should be chosen so as to give 10 to 15% wheel slippage when operating. Field tests have shown that maximum horsepower available at the drawbar occurs in this range.

Rear wheel ballast should never be such that the engine cannot be fully loaded 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), there is too much ballast on the rear wheels.

Too little ballast leads to:

- Excessive wheel spin and thereby loss of power
- Increased tire wear
- High fuel consumption

Too much ballast leads to:

- Increased load and thereby loss of power
- Overloading of tires and gearbox
- Soil compaction
- High fuel consumption

NOTE: Do not use more than 3 weights on each rear wheel. Comply with the legal limits on tractor width.

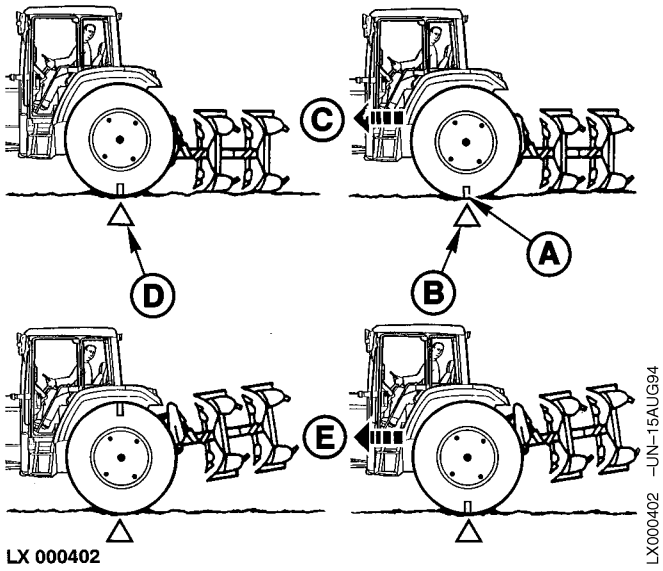
AG,OU12401,160 –19–23MAR00–1/1

Measuring Rear Wheel Slip

1. Mark tire (A).
2. Mark starting point on the ground (B).
3. Drive tractor forward with implement lowered until ten revolutions of the rear wheel have been made (C).
4. Again place a marker on the ground (D).
5. Now raise implement and again drive between the two markers on the ground. Note number of revolutions made between the two markers (E).

   The number of revolutions gives the following percentage of wheel slip:

   - 10.0 revolutions = 0% wheel spin
   - 9.5 revolutions = 5% wheel spin
   - 9.0 revolutions = 10% wheel spin
   - 8.5 revolutions = 15% wheel spin
   - 8.0 revolutions = 20% wheel spin
   - 7.5 revolutions = 25% wheel spin
   - 7.0 revolutions = 30% wheel spin



LX 000402

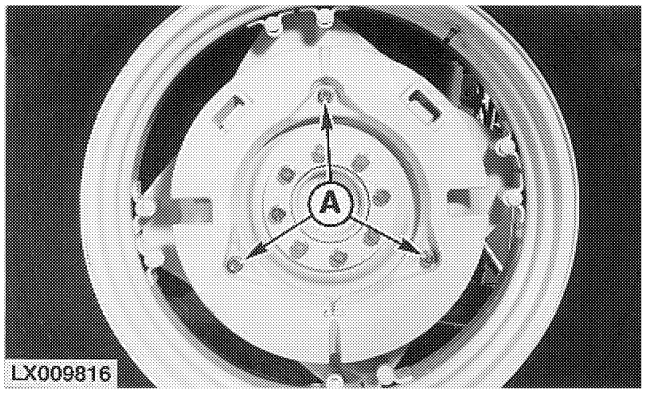
LX,OSPU 000247 –19–01APR92–1/1

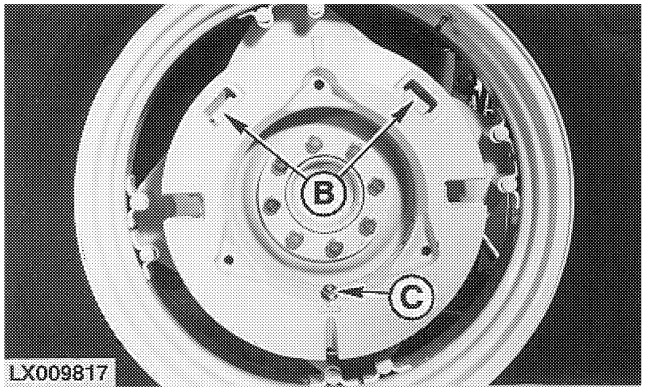
Installing Weights on Flanged Axle

CAUTION: When installing and removing quick-catch weights, always position wheels so that retainer jaws are at the top. This prevents weights from falling when cap screw is removed.

Attach first weight to wheel disk using three cap screws (A).

When installing further weights, position wheel so that retainer jaws (B) are at the top. Hang weight in retainer jaws and secure with a cap screw (C) at the bottom.





LX,OSPU 000248 –19–01JAN95–1/1

Installing Weights on Rack-and-Pinion Axle

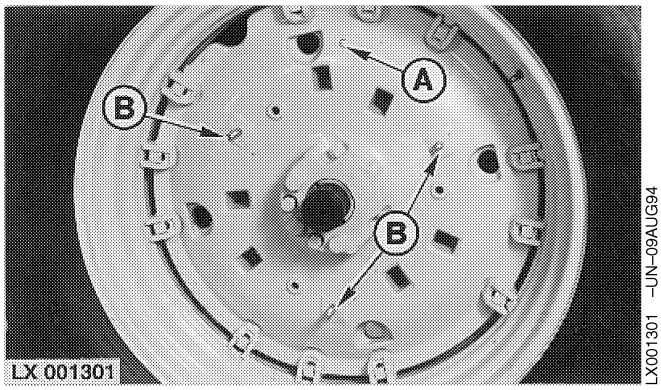
Position the wheel so that rim mark (A) is at the top. Insert special screws (B) from inside of rim and drive them outward.

NOTE: If you want to install more than one weight, drive the three special screws through the square countersunk bores in the first weight (from the inside, and before you install it). Install the second weight with its notch separated from the notch on the first weight by 180°. Install the third weight turned the same way as the first weight.

Install weight so that notch (C) on weight is aligned with mark (A). Tighten special screws (B) securely.

NOTE: Screws (D) shown in illustration are for the second weight.

A—Rim mark
B—Special screws
C—Notch
D—Screws for next weight



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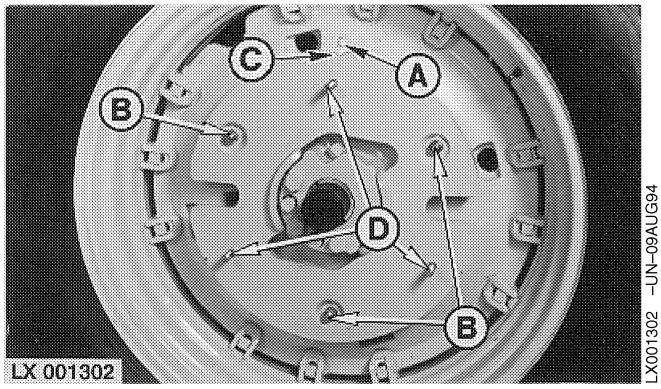


LX001302 –UN–09AUG94

AG,OU12401,217 –19–07APR00–1/1

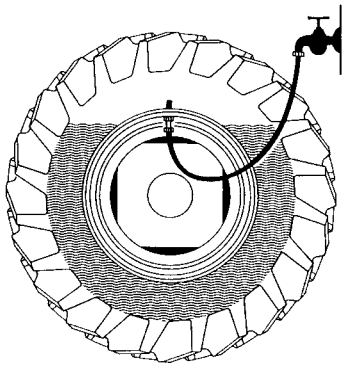
Filling Tires With Liquid Ballast

To fill a tire, jack up the wheel and turn it so that the tire valve is at the top. Remove the valve insert and screw water valve onto valve stem. While the water is entering, air escapes through lateral bore in water valve. Stop filling tire when water drains from vent hole of valve. Filling a tire takes 15 to 30 minutes, depending on tire size. Then screw in air valve and pump up tire to the normal inflation pressure. The quantity of liquid ballast required varies depending on tire size and type. If in doubt, consult your John Deere dealer or tire manufacturer.

If low temperatures are expected, an anti-freeze solution should be used. Tire manufacturers recommend a mixture of water and calcium chloride.

The anti-freeze solution may be sucked from an elevated tank. To speed up the filling operation, a pump may be used (flush pump with clear water afterwards). To provide protection down to -25°C (-13°F), dissolve 34 kg (75 lb) of calcium chloride in 86 liters (22.7 U.S. gal.) of water to obtain 100 liters (26.4 U.S. gal.) of anti-freeze solution. This solution produces an increase in weight of 120 kg (269 lb). Add calcium chloride to the water - not vice versa. Do not fill radiator with this anti-freeze solution.

NOTE: On tractors with 50 km/h (31 mph) transmissions, filling tires with liquid ballast is NOT recommended.



LX009450

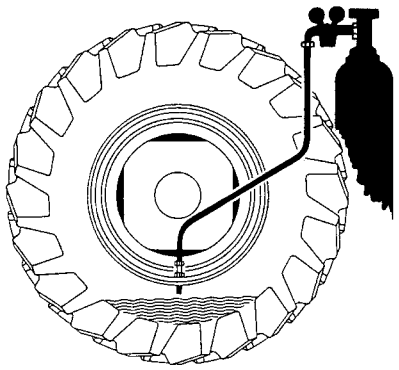
LX009450 –UN–03JAN95

LX,OSPU 000250 –19–01MAR00–1/1

Draining the Tires

Jack up wheel. Remove air valve and allow water to drain out.

To clear the remainder of the water from the tire, insert the drain tube with the hose extension and pump air into the tire. The air pressure will push the remaining water out of the tire.



LX009451

LX009451 –UN–03JAN95

LX,OSPU 000251 –19–01OCT94–1/1

Pre-Assembling the Pick-Up Weight

CAUTION: When performing the work described below, comply with the safety instructions.

CAUTION: Equipment used to raise and transport the weight must be capable of bearing at least 900 kg (2000 lb).

CAUTION: Use approved lifting equipment only.

CAUTION: Observe safety rules. Do not stand under suspended loads.

NOTE: To facilitate the transport of the weight, it is a good idea to pre-assemble it on a pallet. Make sure the bearing weight of the pallet is sufficient.

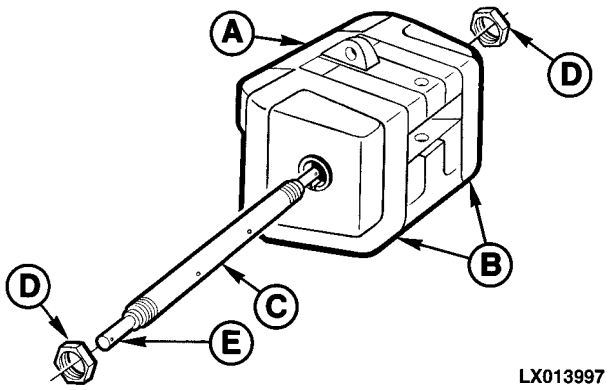
MHM611,6A –19–01MAR00–1/5

Use a hoist to lower the center weight (A) onto a level surface.

Arrange the side weights (B) alongside the center weight and install bearing shaft (C).

Tighten nuts (D) to 300 N•m (220 lb-ft).

If attaching to a three-point hitch, adjust pins (E) to their maximum lengths.

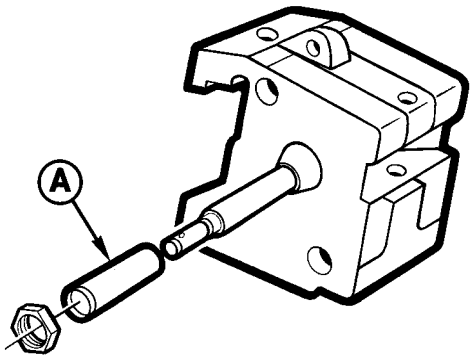


LX013997 LX013997 –UN–02APR96

MHM611,6A –19–01MAR00–2/5

If attaching the center weight only, install a spacer bushing (A) at each end of the bearing shaft.

Tighten the nuts to 300 N•m (220 lb-ft).



LX013999 LX013999 –UN–02APR96

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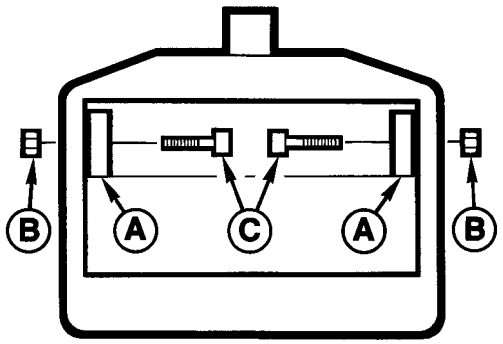
MHM611,6A –19–01MAR00–3/5

When attaching to a 80 kg (175 lb) basic weight, install a spacer (A) at both inner sides.

When attaching to a 110 kg (240 lb) basic weight, spacers are not needed.

Insert the hex. socket screws (C) from the inner side and install nuts (B).



LX012554

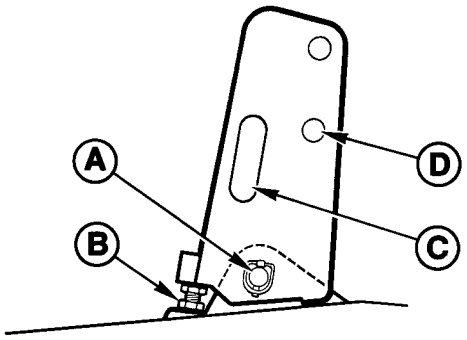
LX012554 –UN–27JUN96

MHM611,6A –19–01MAR00–4/5

If attaching to the three-point hitch, install the center link bracket. Install and secure pin (A). Adjust the depth to which screw (B) is screwed into the center link bracket until the screw is in contact with the pick-up weight, and then counter-lock the screw.

The center link bracket has a recess (C) where the spacers can be stored when not in use.

When the center link bracket is not in use, it can be folded over and secured to the weight by means of hole (D).

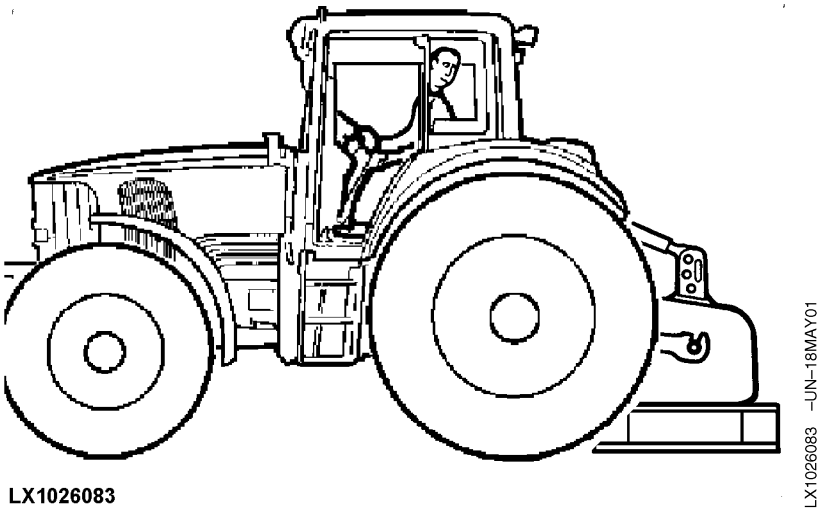


LX014001

LX014001 –UN–02APR96

MHM611,6A –19–01MAR00–5/5

Attaching to Three-Point Hitch (Rear-End Attachment)



LX1026083

Remove the adjusting rod and eye-bolts.

Put the swinging drawbar to its shortest position and swing it to the side.

Remove the height-adjustable trailer hitch (hitch only).

Install the center link bracket on the pick-up weight.

Reverse the tractor to the pick-up weight and procede as for any other implement.

NOTE: On tractors with extra-large tires, it may be necessary to adjust the lift links to their maximum length.

CAUTION: Make sure that the hooks on the draft links are closed properly.

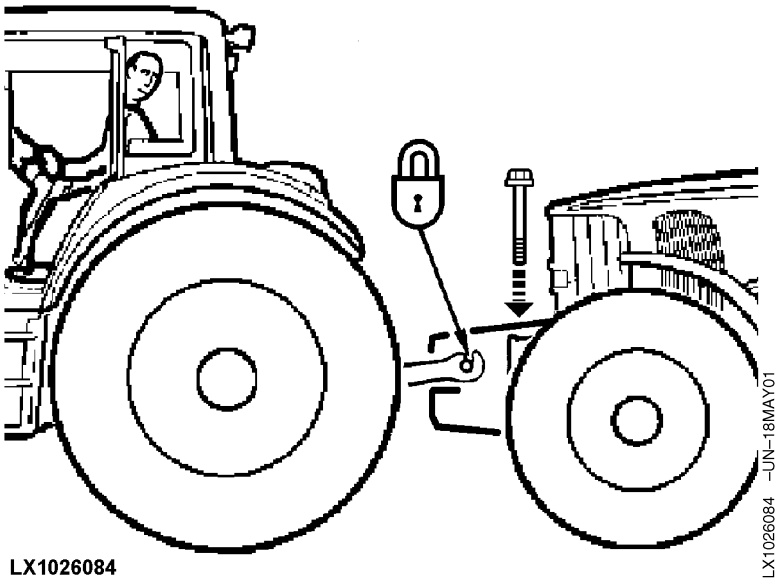
CAUTION: Install all retaining pins.

CAUTION: Steering may be adversely affected unless there is sufficient weight at the front end of the tractor (e.g. a front loader).

IMPORTANT: Remember to engage the center link.

OU12401,0000595 –19–09DEC00–1/1

Attaching to Basic Weight



LX1026084

Suspend the pick-up weight from the draft links of any suitable tractor, and back up the tractor in front of the tractor to which the pick-up weight is to be attached.

NOTE: Once the pick-up weight has been attached, it is no longer possible to use the conventional additional front weights.

Lower the pick-up weight onto the basic weight. Notice how the weight engages.

Do NOT disengage the weight from the draft links of the supporting tractor at this stage. First insert and tighten the retaining screw, and refer to the following description.

CAUTION: Make sure no-one is standing in the danger zone.

CAUTION: On the tractor that is to receive the pick-up weight, apply the handbrake and engage the parking lock.

CAUTION: Select "depth control" for the rockshaft of the support tractor.

CAUTION: Make sure that the hooks on the draft links are engaged properly.

IMPORTANT: Front-end installation is authorized only for tractors with FWD!

IMPORTANT: Comply with permissible axle loads and tire and wheel rim bearing capacities. See Operator's Manual and manufacturer's notes.

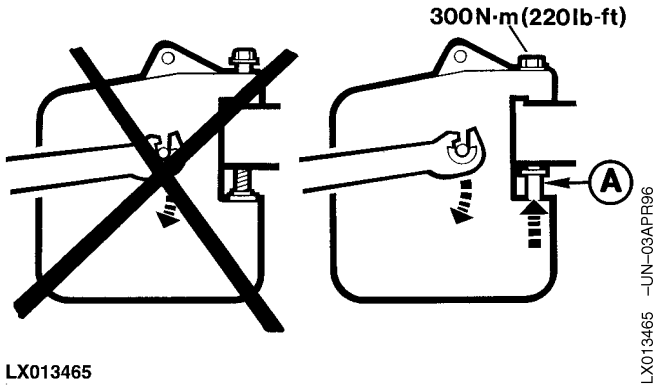
IMPORTANT: When attaching, do NOT use the center link.

Continued on next page

CAUTION: Keep the pick-up weight suspended until the retaining screw has been screwed in fully and is seated tightly. Also make sure that retaining nut (A) is in contact with the basic weight.

Tighten the screw to 300 N•m (220 lb-ft).

Now disengage the draft links and screw in the weight receiving pin as far as it will go.



OU12401,00005EA –19–01MAY01–2/3

The pick-up weight may be attached using a crane or suitable hoist. Suspend the weight by the cast eyelet.

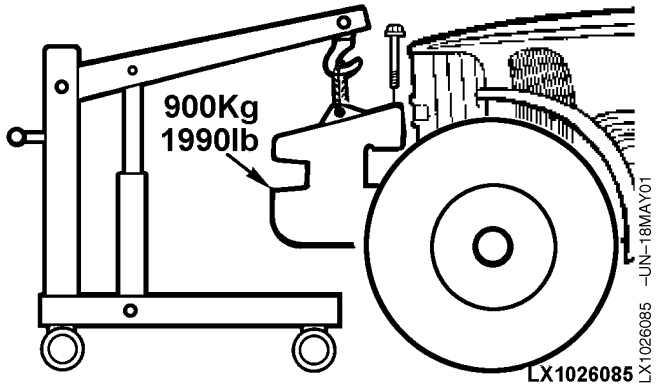
Once the weight is located on the basic weight, install the retaining screw. Do not disengage the hoist until the screw is installed.

Tighten the retaining screw to 300 N•m (220 lb-ft).

CAUTION: Keep the pick-up weight suspended until the retaining screw has been screwed in fully and the retaining nut is in contact with the basic weight.

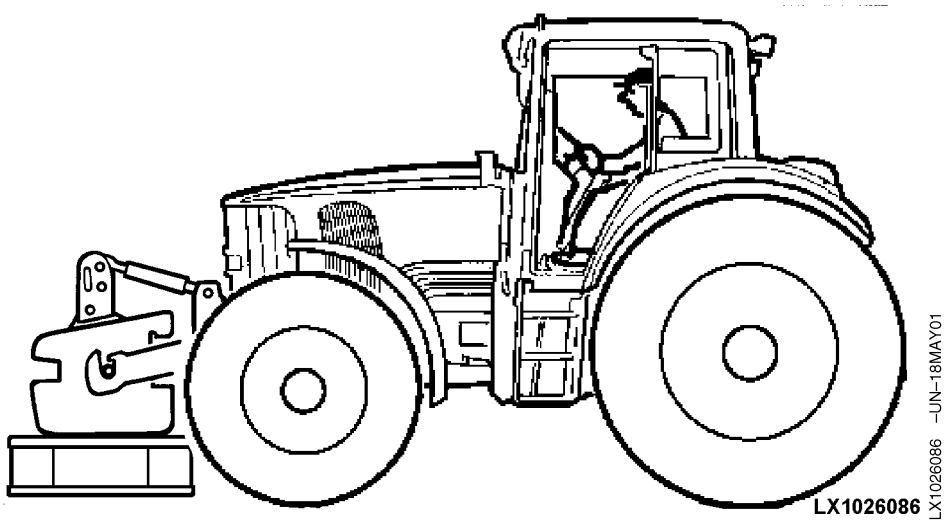
CAUTION: When using commercially available lifting equipment, make sure that its bearing capacity is sufficient.

CAUTION: Use approved lifting equipment only.



OU12401,00005EA –19–01MAY01–3/3

Attaching to Three-Point Hitch (Front-End Attachment)



NOTE: On tractors with extra-large tires, it may be necessary to place the pick-up weight a little higher (e.g. on a pallet).

Install the center link bracket on the pick-up weight.

Procede as for any other implement.

IMPORTANT: Remember to engage the center link.

CAUTION: Make sure that the hooks on the draft links are closed properly.

CAUTION: Install all retaining pins.

OU12401,0000597 –19–09DEC00–1/1

With Weight in Three-Point Hitch

NOTE: Keep the three-point hitch raised when driving. This maximizes ground clearance.

CAUTION: When the tractor is parked, always lower the pick-up weight to the ground.

IMPORTANT: Always make sure the tractor is balanced/ballasted properly.

IMPORTANT: Never use the hitch jaw in the front of the pick-up weight for towing loads.

MHM611,12 –19–01MAR00–1/1

Installing Front Weights

The following combinations of basic weight (A) and additional weights (B) may be installed on the tractor:

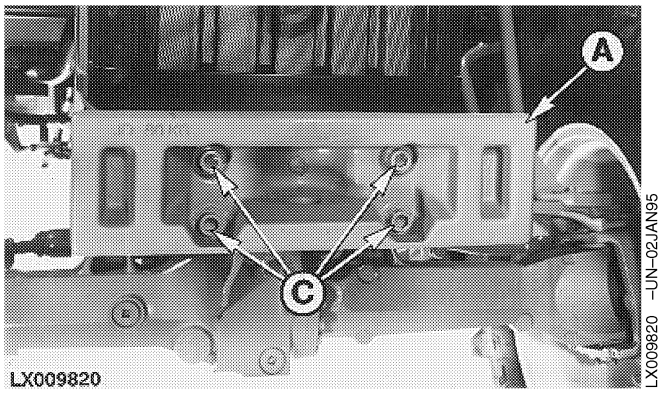
Tractors	Basic weight (A)			
	75 kg (165 lb)	80 kg 175 lb	110 kg 242 lb	Quantity of additional weights
6010	x	x	—	10
6110	x	x	—	10
6210	x	x	—	12
6310	x	x	—	14
6410	x	—	—	14
6410	—	x	—	16
6410	—	—	x	18

IMPORTANT: Tighten attaching screws (C) on basic weight (A) to 570 N•m (420 lb-ft) and screws (E) of additional weights (B) to 230 N•m (170 lb-ft).

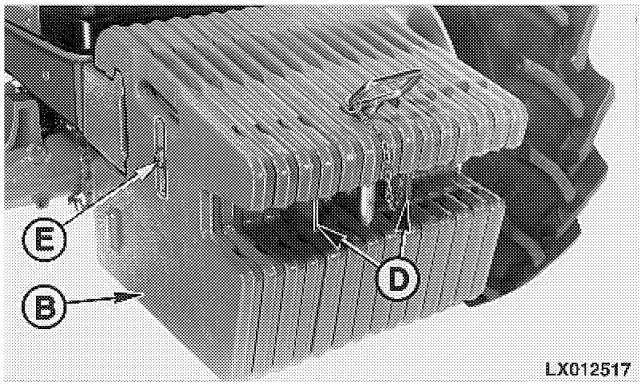
Each additional weight weighs 50 kg (110 lb). Every increase in weight of 10 kg (22 lb) increases the front axle load by approx. 12 kg (26.5 lb).

IMPORTANT: When installing six or more front weights, they must be installed to form a jaw (D).

The jaw hitch should be used for shunting and towing on metalled road surfaces only.



LX009820 –UN–02JAN95



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AG,OU12401,219 –19–07APR00–1/1

Wheel Tread, Tires

Adjustable Front Axle (Tractors Without Front Wheel Drive)

The front axle can be adjusted at each end in increments of 51 mm (2 in.). Maximum wheel tread is obtained by reversing the front wheels.

If front wheels are removed to adjust tread, tighten front wheel bolts to 250 N•m (185 lb-ft) once the wheels are replaced.

IMPORTANT: After the first 4 and 8 hours of operation, retighten all front wheel bolts. Check tightness of these bolts frequently during the next 100 hours of operation.

NOTE: Wheel tread on tractors equipped with a front loader must not exceed 1.80 m (71 in.).

IMPORTANT: To avoid excessive stress on axle bolts, do not separate axle halves beyond the specified limits.

NOTE: On tractors with axle extension, tread width increases by up to 542 mm (21.3 in.).

Tires	Wheels disk inward	Wheel disk outward
7.50-18 7.50-20	1491 - 2001 mm 58.7 - 78.8 in.	1531 - 2041 mm 60.3 - 80.4 in.
10.00-16	1487 - 1997 mm 58.5 - 78.6 in.	1533 - 2043 mm 60.4 - 80.4 in.
11L-15	1493 - 2003 mm 58.8 - 78.9 in.	1533 - 2043 mm 60.4 - 80.4 in.
11L-16	—	1538 - 2048 mm 60.4 - 80.6 in.

AG,OU12401,287 –19–01MAY01–1/1

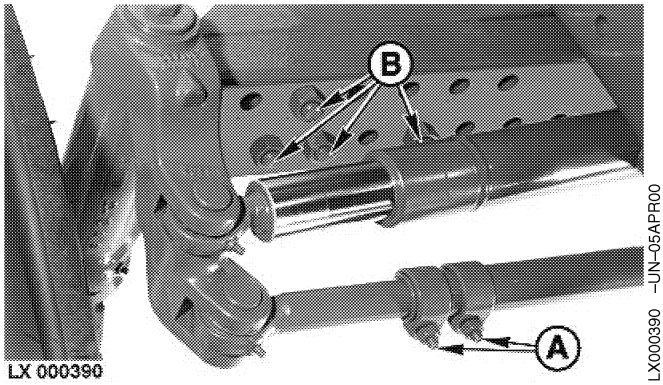
Adjusting Front Wheel Tread

Block up front end of tractor. Do not place jack under engine oil pan!

Remove tie-rod clamp bolts (A) and axle bolts (B). Reposition axle ends to the desired front wheel tread. Re-insert axle bolts and tighten to 400 N•m (295 lb-ft).

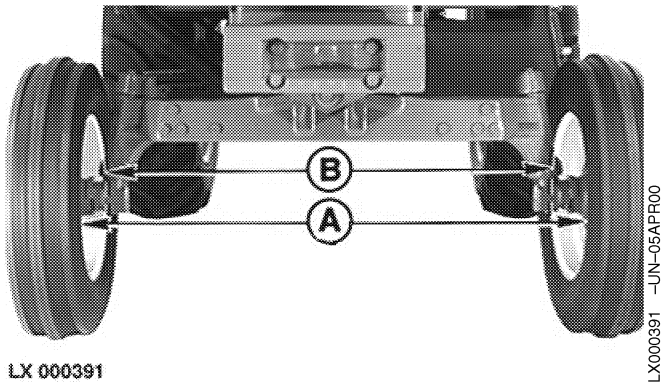
Adjust tie-rods to front wheel tread, re-insert clamp bolts and tighten to 50 N•m (35 lb-ft).

Check toe-in, and adjust if necessary.



AG,OU12401,288 –19–10APR00–1/1

Checking Front Wheel Toe-In



LX 000391

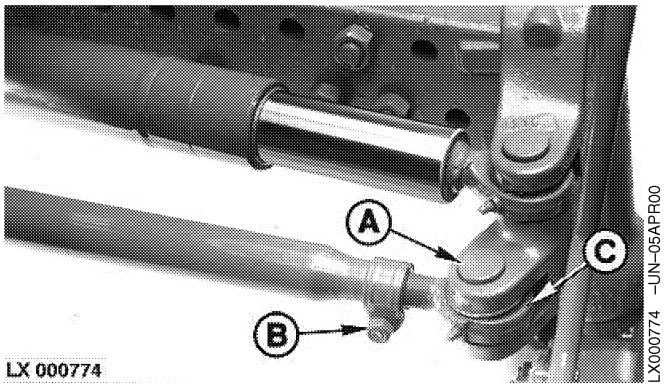
At hub height, measure front and rear of front wheels from rim flange to rim flange.

1. Measure dimension (A).
2. Turn the front wheels through 1/2 turn.
3. At the same point as dimension (A) was previously measured, measure dimension (B).

Dimension (A) must be 3 to 9 mm (0.12 to 0.35 in.) less than dimension (B) at the rear.

AG,OU12401,289 –19–10APR00–1/1

Adjusting Front Wheel Toe-In



LX 000774

Take out collar pin (A) and remove tie rod. Slacken clamping screw (B) and turn tie rod end (C) in or out.

After adjustment is completed, tighten clamping screw to between 45 and 55 N•m (33 and 40 lb-ft). Secure tie rod to steering knuckle.

IMPORTANT: The grease fitting must be in the position shown in the picture.

AG,OU12401,290 –19–10APR00–1/1

Changing Wheels Safely

Remove a wheel on level ground only. The other wheels must be secured by means of chock blocks to prevent tractor runaway.

AG,OU12401,291 –19–10APR00–1/1

Front Wheel Tread Adjustment (Tractors With Front Wheel Drive)

The tractor can be equipped with reversible or adjustable wheel rims.

AG,OU12401,292 –19–10APR00–1/1

New Tire Designations

The previous designations for tire width are being increasingly replaced by new ones. There is not enough space in any of the tables to show all the old designations and their replacements.

Previous designation	New designation
12.4-24	320/85-24
13.6-24	340/85-24
14.9-24	380/85-24
16.9-24	420/85-24
12.4-28	320/85-28
13.6-28	340/85-28
14.9-28	380/85-28
16.9-30	420/85-30
16.9-34	420/85-34
18.4-34	460/85-34
16.9-38	420/85-38
18.4-38	460/85-38

AG,OU12401,286 –19–01MAY01–1/1

Front Wheel Tread Adjustment with Reversible Wheel Rims

Front wheel tread can be adjusted by reversing the entire wheels.

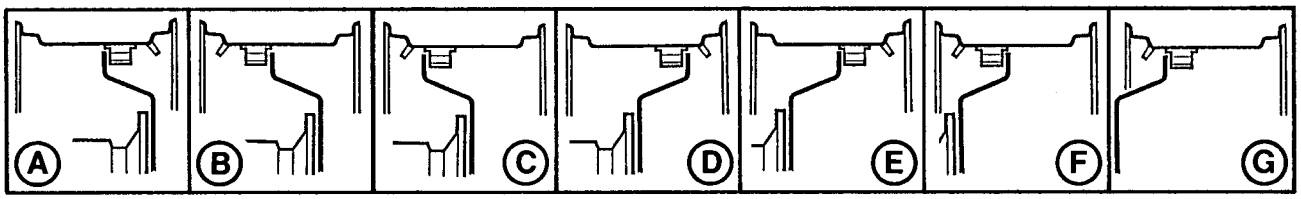
Change the wheels from one side to the other, and make sure the arrows on the side walls of the tires are still pointing forward.

NOTE: Wheel tread on tractors equipped with a front loader must not exceed 1.80 m (71 in.).

Tires	A	B
10.5/80-18	1590 mm (62.6 in.)	1760 mm (69.3 in.)
380/70-24	1620 mm (63.8 in.)	1715 mm (67.5 in.)
12.4-28	1516 mm (59.7 in.)	2016 mm (79.4 in.)

AG,OU12401,293 –19–01MAY01–1/1

Adjusting Front Wheel Tread with Adjustable Rims (8-position)



LX012555

LX012555 –UN–27JUN96

Front wheel tread can be adjusted by replacing or reversing the wheel rims.

IMPORTANT: Nuts must be installed on outside of wheel.

In addition the complete wheel can be reversed and installed on the opposite side of the tractor. Change the wheels from one side to the other, and make sure the arrows on the side walls of the tires are still pointing forward.

NOTE: Wheel tread on tractors equipped with a front loader must not exceed 1.80 m (71 in.).

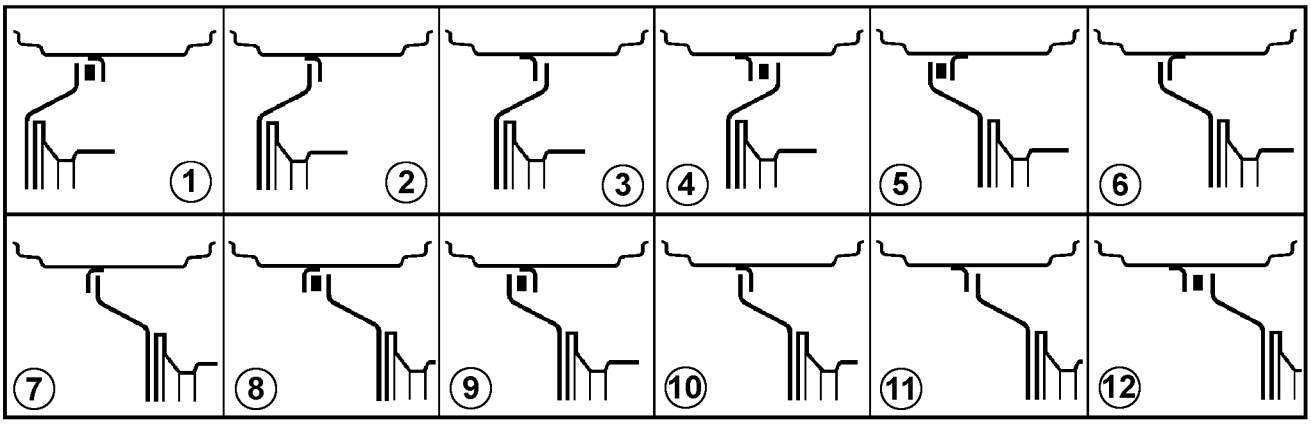
Position of Rims and Wheel Disks

	Tires	B	C	D	E	F	G
Narrow-track axle			1245 mm (49.0 in.)	1345 mm (53.0 in.)	1445 mm (56.9 in.)	1545 mm (60.8 in.)	
	12.4-24		x	x	x	x	
	12.4-28		x	x	x	x	
Standard axle		1516 mm (59.7 in.)	1616 mm (63.6 in.)	1720 mm (67.7 in.)	1820 mm (71.7 in.)	1916 mm (75.4 in.)	2016 mm (79.4 in.)
	14.9-24	—	x	x	x	x	x
	16.9-24	—	x	x	x	x	x
	380/70-24	—	x	x	x	x	x
	420/70-24	—	x	x	x	x	x
	480/65-24	—	—	x	x	x	x
	480/70-24	—	—	x	x	x	x
	540/65-24	—	—	—	x	x	x
	13.6-28	—	x	x	x	x	x
	14.9-28	—	—	x	x	x	x
	380/70-28	—	x	x	x	x	x
	420/70-28	—	—	x	x	x	x
	480/65-28	—	—	x	x	x	x
	all other	x	x	x	x	x	x

NOTE: Your John Deere dealer can supply you with 60 mm (2.36 in.) spacers. Spacers allow the tread widths listed here to be extended by 120 mm (4.72 in.). With certain tire sizes and spacers, position A (see drawing) may be achieved.

AG,OU12401,294 –19–01MAY01–1/1

Adjusting Front Wheel Tread with Adjustable Rims (16-position)



LX1019751

LX1019751 –UN–31MAR00

Front wheel tread can be adjusted by replacing or reversing the wheel rims. Additional tread widths can be achieved by using spacers.

IMPORTANT: Nuts must be installed on outside of wheel.

In addition the complete wheel can be reversed and installed on the opposite side of the tractor. Change the wheels from one side to the other, and make sure the arrows on the side walls of the tires are still pointing forward.

NOTE: Wheel tread on tractors equipped with a front loader must not exceed 1.80 m (71 in.).

	Positions of Rims, Wheel Disks and Spacers											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
mm	1522	1552	1584	1614	1718	1748	1782	1812	1922	1952	1984	2014
(in.)	(59.9)	(61.1)	(62.4)	(63.5)	(67.6)	(68.8)	(70.2)	(71.3)	(75.7)	(76.9)	(78.1)	(79.3)
Tires:												
14.9-24	—	—	—	x	x	x	x	x	x	x	x	x
16.9-24	—	—	—	x	x	x	x	x	x	x	x	x
380/70-24	—	—	—	x	x	x	x	x	x	x	x	x
420/70-24	—	—	—	x	x	x	x	x	x	x	x	x
480/65-24	—	—	—	—	x	x	x	x	x	x	x	x
480/70-24	—	—	—	—	x	x	x	x	x	x	x	x
540/65-24	—	—	—	—	—	—	—	x	x	x	x	x
14.9-28	—	—	—	x	x	x	x	x	x	x	x	x
380/70-28	—	—	—	x	x	x	x	x	x	x	x	x
420/70-28	—	—	—	—	x	x	x	x	x	x	x	x
480/65-28	—	—	—	—	x	x	x	x	x	x	x	x
all other	x	x	x	x	x	x	x	x	x	x	x	x

AG,OU12401,295 –19–01MAY01–1/1

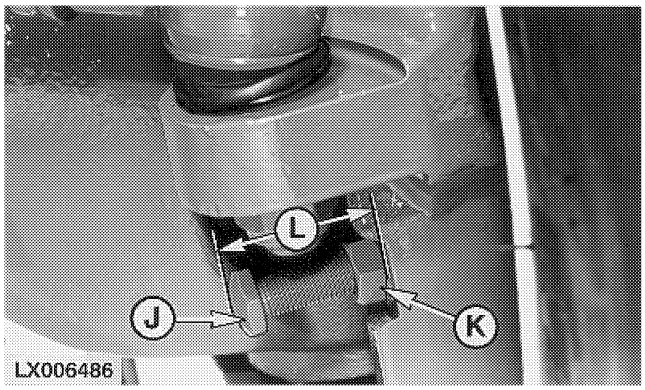
Limiting Front Wheel Steering Angle

With certain tread widths, the front wheel steering angle must be limited to less than 50° (see table).

Adjust dimension (L) to one of the values shown in the table.

NOTE: Steering angle must be the same on both sides.

Tighten locknut (K) to 200 N•m (150 lb-ft).



J—Steering angle adjusting screw
K—Locknut
L—Adjusting dimension

Position of Rims and Wheel Disks (see "Adjusting Front Wheel Tread")

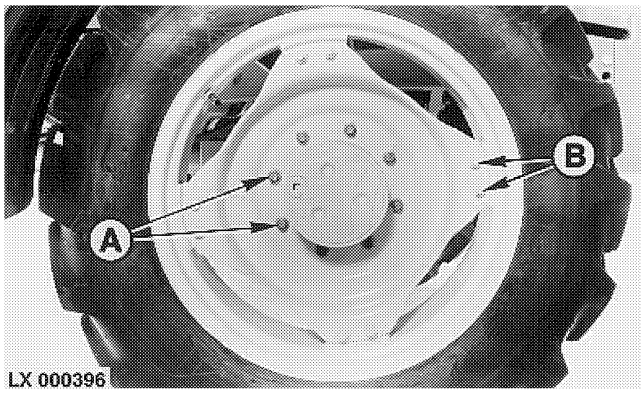
	8-position rims 16-position rims	A		B 1		C 4		D 5		E 8		F 9		G 12	
		Dim.L		Dim.L		Dim.L		Dim.L		Dim.L		Dim.L		Dim.L	
	Tires	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
Reversible wheels	10.5/80-18	22	0.9	22	0.9										
	380/70-24	50	2.0	22	0.9										
	12.4-28	62	2.4	22	0.9										
Narrow-track axle	12.4-24					88	3.5	76	3.0	52	2.0	40	1.6		
	12.4-28					88	3.5	76	3.0	52	2.0	40	1.6		
Adjustable wheels	12.4-24	—	—	62	2.4	52	2.0	36	1.4	22	0.9	22	0.9	22	0.9
	13.6-24	—	—	73	2.9	64	2.5	50	2.0	36	1.4	22	0.9	22	0.9
	14.9-24	—	—	—	—	71	2.8	62	2.4	48	1.9	38	1.5	24	0.9
	16.9-24	—	—	—	—	78	3.0	71	2.8	55	2.2	45	1.8	34	1.3
	380/70-24	—	—	—	—	64	2.5	55	2.2	41	1.6	29	1.1	22	0.9
	420/70-24	—	—	—	—	73	2.9	59	2.3	48	1.9	34	1.3	24	0.9
	480/65-24	—	—	—	—	—	—	75	3.0	66	2.6	52	2.0	41	1.6
	480/70-24	—	—	—	—	—	—	78	3.1	73	2.9	59	2.3	48	1.9
	540/65-24	—	—	—	—	—	—	—	—	80	3.1	66	2.6	57	2.2
	11.2-28	—	—	64	2.5	48	1.9	34	1.3	22	0.9	22	0.9	22	0.9
	12.4-28	—	—	71	2.8	64	2.5	50	2.0	34	1.3	24	0.9	22	0.9
	13.6-28	—	—	—	—	73	2.9	59	2.3	48	1.9	36	1.4	27	1.1
	14.9-28	—	—	—	—	—	—	68	2.7	55	2.2	45	1.8	34	1.3
	380/70-28	—	—	—	—	73	2.9	64	2.5	52	2.0	41	1.6	27	1.1
	420/70-28	—	—	—	—	—	—	66	2.6	57	2.2	45	1.8	36	1.4
	480/65-28	—	—	—	—	—	—	78	3.1	73	2.9	59	2.3	48	1.9

AG,OU12401,296 –19–01MAY01–1/1

Tighten Front Wheel Attaching Nuts

After adjusting front wheel tread, tighten front wheel attaching nuts (A) to 300 N•m (220 lb-ft). For wheels with adjustable rims, tighten wheel attaching nuts (B) to 250 N•m (185 lb-ft).

IMPORTANT: After the first 4 and 8 hours of operation, retighten all front wheel attaching nuts. Check tightness of these nuts frequently during the next 100 hours of operation.



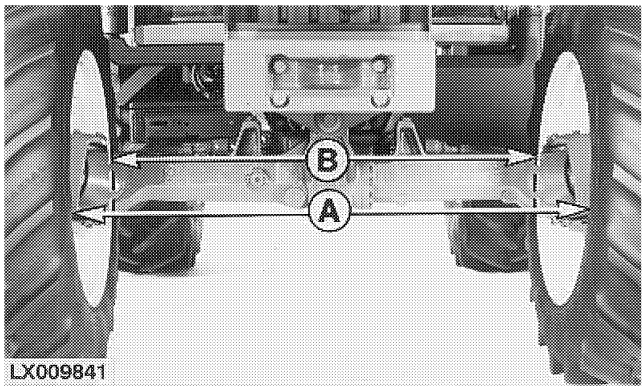
AG,OU12401,297 –19–10APR00–1/1

Checking Front Wheel Toe-In

At hub height, measure front and rear of front wheels from rim flange to rim flange.

1. Measure dimension (A).
2. Turn the front wheels through 1/2 turn.
3. Measure dimension (B) at the same point where dimension (A) was previously measured.

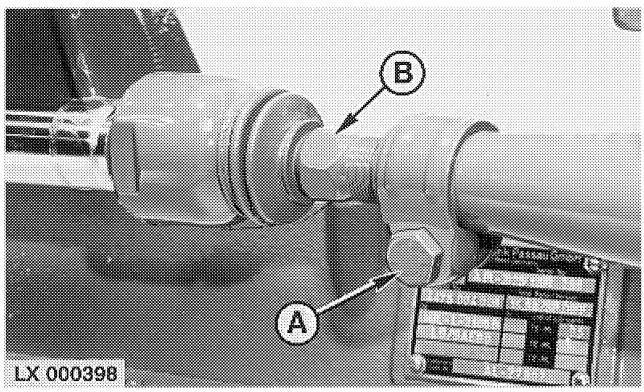
Dimension (A) must not differ from dimension (B) by more than 1.5 mm (0.06 in.).



AG,OU12401,298 –19–10APR00–1/1

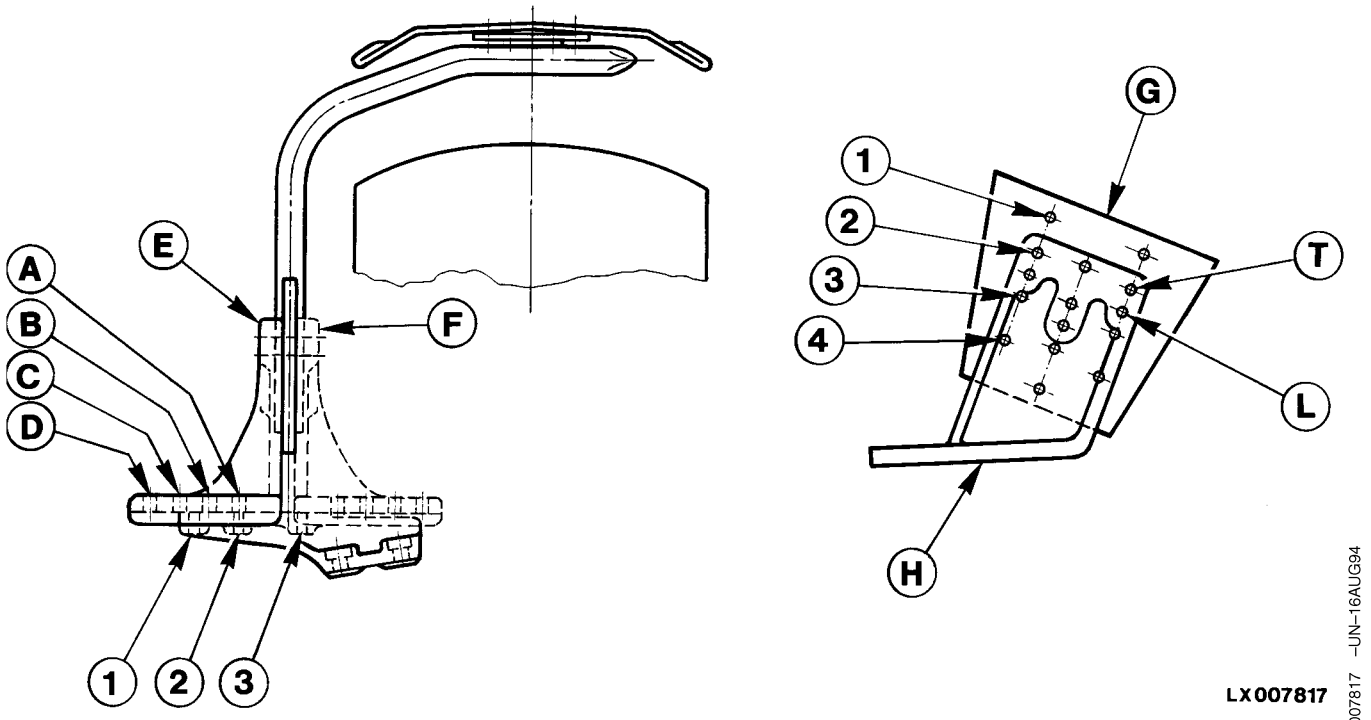
Adjusting Front Wheel Toe-In

Slacken clamping screw (A) and turn threaded rod (B) in or out. After adjustment is completed, tighten clamping screw to 50 N•m (35 lb-ft).



AG,OU12401,299 –19–10APR00–1/1

Adjusting the Fender



LX007817 –UN–16AUG94

Right front wheel shown

The fender must be installed at the correct position to suit the size of the tire and the tread width. Select the appropriate tires and tread width, and determine the suitable positions from the table (see “Fender Positions”, this Section).

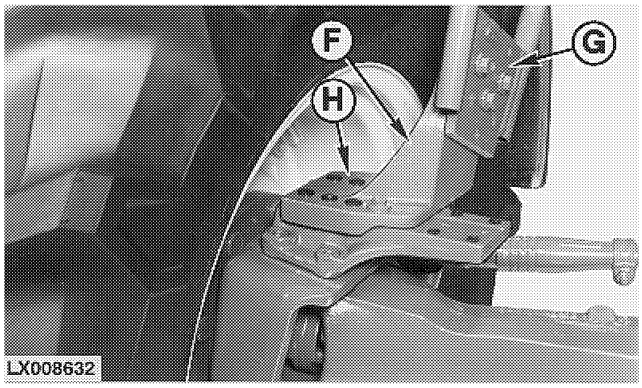
Explanation of Positions:

D-3-Indicates which holes (1, 2, or 3 and A, B, C or D) are bolted together.

IN-Indicates whether the bracket is fitted facing IN or OUT. When reversing the bracket position, it is necessary to install the bracket from the left-hand side of the tractor on the right-hand side and vice versa.

L/2-Shows whether the upper (T) or lower (L) holes in the bracket are used, and which holes (1, 2, 3 or 4) are used in the fender.

Fender width-This line indicates the position of the fender on the front-wheel drive axle, e.g. D-3 IN.



LX008632 –UN–01SEP94

E—Bracket facing OUT
F—Bracket facing IN
G—Fender
H—Bracket

Continued on next page

Fender height-This line indicates the height of the fender, e.g. L/2.

Fender breadth-Indicates appropriate breadth of fender e.g. 400 ;mm (15.7 in.) for tires used.

For table showing fender positions, see next page.

For table of tread widths (position of rims and wheel disks), see relevant pages.

LX,OMSPU 011322 –19–01SEP97–2/2

Fender Positions

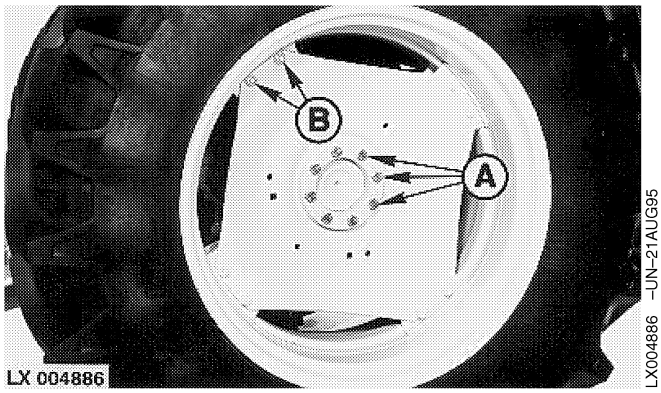
		Position of Rims and Wheel Disks						
Tires	**8-position rims**	**A**	**B**	**C**	**D**	**E**	**F**	**G**
Fender breadth	**16-position rims**		**1**	**4**	**5**	**8**	**9**	**12**
	Reversible wheels							
10.5/80-18	Fender width	B-3 IN	B-2 OUT					
310mm (12.2in.)	Fender height	B/1	B/1					
380/70-24		C-3 IN	A-3 OUT					
400mm (15.7in.)		T/2	T/2					
12.4-28		C-3 IN	D-3 OUT					
355mm (14.0in.)		T/3	T/3					
	Adjustable wheels							
12.4-24	Fender width	—	A-2 IN	B-3 IN	B-1 OUT	D-1 OUT	D-2 OUT	C-3 OUT
355mm (14.0in.)	Fender height	—	T/2	T/2	T/2	T/2	T/2	T/2
13.6-24		—	A-2 IN	B-3 IN	B-1 OUT	B-2 OUT	D-2 OUT	C-3 OUT
400mm (15.7in.)		—	B/3	B/3	B/3	B/3	B/3	B/3
14.9-24		—	—	B-3 IN	A-3 OUT	C-1 OUT	A-3 OUT	C-3 OUT
400mm (15.7in.)		—	—	B/4	B/4	B/4	B/4	B/4
16.9-24		—	—	A-2 IN	B-3 OUT	A-2 OUT	D-1 OUT	D-2 OUT
470mm (18.5in.)		—	—	B/3	B/3	B/3	B/3	B/3
380/70-24		—	—	B-3 IN	A-3 OUT	C-1 OUT	A-3 OUT	C-3 OUT
400mm (15.7in.)		—	—	B/3	B/3	B/3	B/3	B/3
420/70-24		—	—	C-3 IN	A-3 OUT	A-2 OUT	C-2 OUT	B-3 OUT
470mm (18.5in.)		—	—	B/2	B/2	B/2	B/2	B/2
480/65-24		—	—	—	B-3 OUT	A-3 OUT	C-1 OUT	A-3 OUT
520mm (20.5in.)		—	—	—	B/2	B/2	B/2	B/2
480/70-24		—	—	—	B-3 OUT	A-3 OUT	C-1 OUT	A-3 OUT
520mm (20.5in.)		—	—	—	B/2	B/2	B/2	B/2
540/65-24		—	—	—	—	B-3 OUT	B-1 OUT	B-2 OUT
520mm (20.5in.)		—	—	—	—	B/3	B/3	B/3
11.2-28		—	C-3 IN	A-3 IN	C-1 OUT	A-3 OUT	B-3 OUT	D-3 OUT
355mm (14.0in.)		—	B/3	B/3	B/3	B/3	B/3	B/3
12.4-28		—	C-3 IN	B-3 IN	B-1 OUT	D-1 OUT	D-2 OUT	C-3 OUT
355mm (14.0in.)		—	B/4	B/4	B/4	B/4	B/4	B/4
13.6-28		—	—	B-3 IN	B-1 OUT	B-2 OUT	D-2 OUT	C-3 OUT
400mm (15.7in.)		—	—	T/4	T/4	T/4	T/4	T/4
14.9-28		—	—	—	B-3 OUT	B-1 OUT	B-2 OUT	D-2 OUT
400mm (15.7in.)		—	—	—	T/3	T/3	T/3	T/3
380/70-28		—	—	B-3 IN	A-3 OUT	C-1 OUT	A-3 OUT	C-3 OUT
400mm (15.7in.)		—	—	T/4	T/4	T/4	T/4	T/4
420/70-28		—	—	—	A-3 OUT	A-2 OUT	C-2 OUT	B-3 OUT
470mm (18.5in.)		—	—	—	T/3	T/3	T/3	T/3
480/65-28		—	—	—	B-3 OUT	A-3 OUT	C-1 OUT	A-3 OUT
520mm (20.5in.)		—	—	—	B/3	B/3	B/3	B/3

AG,OU12401,300 –19–01MAY01–1/1

Rear Wheel Tread Adjustment with Flanged Axle (8-Position)

IMPORTANT: The distance between the side wall of the tire and the fender must not be less than 50 mm (1.97 in.).

The distance between the running surface (edge) of the tire and the fender must not be less than 60 mm (2.36 in.).



A—500 N•m (370 lb-ft)
B—310 N•m (230 lb-ft)

Rear wheel tread can be adjusted by re-positioning or reversing the rims or by reversing the wheel disks.

When reversing wheels, they must be changed from one side to the other and turned over so that the arrow on the side wall still points in the direction of forward rotation.

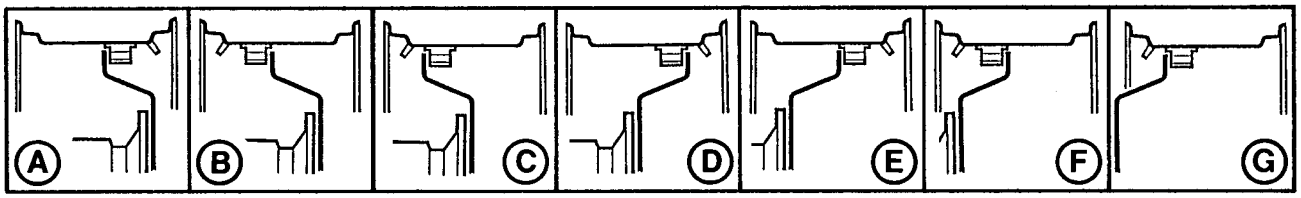
After adjustment has been completed tighten wheel retaining bolts to specified torque (see Section “Break-In Period”).

The relationship of the rear wheel disk and rim in obtaining the different tread settings is shown in the following drawings. A study of these drawings before attempting to change tread setting will save time and unnecessary labor.

IMPORTANT: After adjusting wheel tread, retighten all wheel attaching nuts after 4 and 8 hours of operation. Check tightness of these nuts frequently during the next 100 hours of operation.

AG,OU12401,168 –19–28MAR00–1/1

Position of Rims and Wheel Disks



LX012555

For tread widths, see the following table.

AG,OU12401,171 –19–28MAR00–1/1

Tread Widths

Tires	Rear Wheel Tread Adjustment with Flanged Axle (16-Position)				
	C 1512 mm (59.5 in.)	D 1612 mm (63.5 in.)	E 1712 mm (67.4 in.)	F 1812 mm (71.3 in.)	G 1912 mm (75.3 in.)
13.6-38	x	x	x	x	x
14.9-38	x	x	x	x	x
16.9-30	—	x	x	x	x
16.9-34	—	x	x	x	x
16.9-38	—	x	x	x	x
18.4-34	—	x	x	x	x
18.4-38	—	x	x	x	x
480/70-34	—	x	x	x	x
480/70-38	—	x	x	x	x
520/70-34	—	—	x	x	x
520/70-38	—	—	x	x	x
540/65-38	—	—	x	x	x
600/65-38	—	—	—	x	x

NOTE: Your John Deere dealer can supply you with size 30 mm (1.2 in.), 44 mm (1.73 in.) and 111 mm (4.37 in.) spacers. These make other tread widths possible. With certain tire sizes and spacers, positions A and B (see drawing) may be achieved.

AG,OU12401,301 –19–01MAY01–1/1

Rear Wheel Tread Adjustment with Flanged Axle (16-Position)

IMPORTANT: The distance between the side wall of the tire and the fender must not be less than 50 mm (1.97 in.).

The distance between the running surface (edge) of the tire and the fender must not be less than 60 mm (2.36 in.).

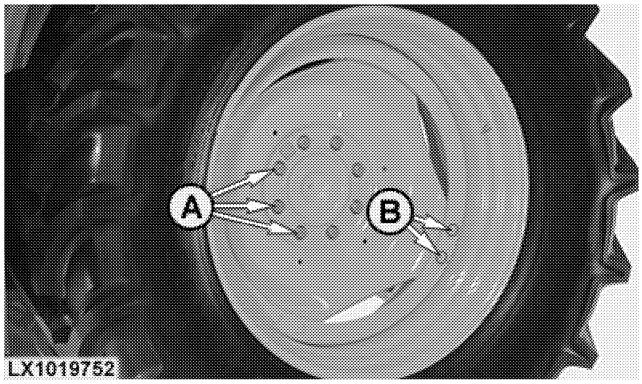
Rear wheel tread can be adjusted by re-positioning or reversing the rims or by reversing the wheel disks. Additional tread widths can be achieved by using spacers.

When reversing wheels, they must be changed from one side to the other and turned over so that the arrow on the side wall still points in the direction of forward rotation.

After adjustment has been completed tighten wheel retaining bolts to specified torque (see Section “Break-In Period”).

The relationship of the rear wheel disk and rim in obtaining the different tread settings is shown in the following drawings. A study of these drawings before attempting to change tread setting will save time and unnecessary labor.

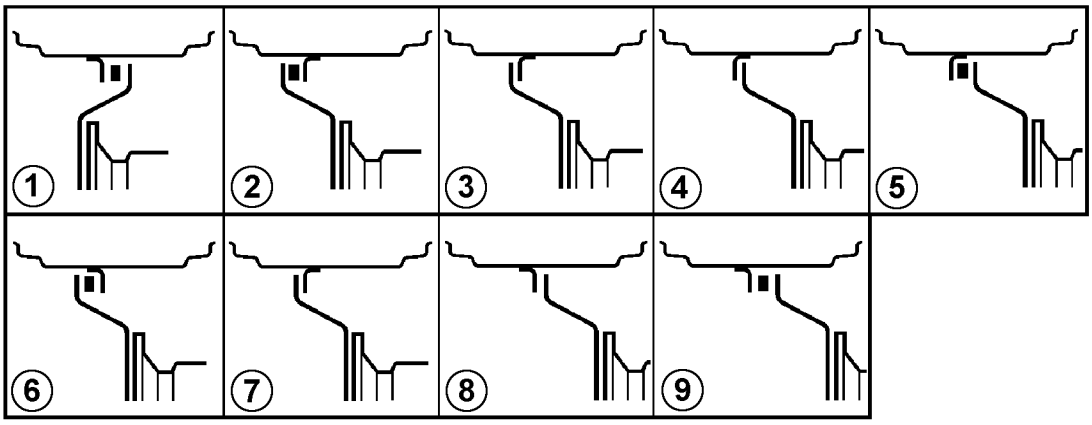
IMPORTANT: After adjusting wheel tread, retighten all wheel attaching nuts after 4 and 8 hours of operation. Check tightness of these nuts frequently during the next 100 hours of operation.



A—500 N•m (370 lb-ft)
B—310 N•m (230 lb-ft)

AG,OU12401,173 –19–28MAR00–1/1

Position of Rims and Wheel Disks



LX1019753

LX1019753 –UN–31MAR00

For tread widths, see the following table.

AG,OU12401,174 –19–28MAR00–1/1

Tread Widths

	Positions of Rims, Wheel Disks and Spacers (see previous drawing)								
	1	2	3	4	5	6	7	8	9
mm	1516	1612	1642	1682	1712	1816	1846	1878	1916
(in.)	59.7	(63.5)	(63.9)	(66.2)	(67.4)	(71.5)	(72.7)	(73.9)	(75.4)
Tires									
16.9-30	—	x	x	x	x	x	x	x	x
18.4-30	—	x	x	x	x	x	x	x	x
16.9-34	—	x	x	x	x	x	x	x	x
18.4-34	—	x	x	x	x	x	x	x	x
480/70-34	—	x	x	x	x	x	x	x	x
520/70-34	—	—	—	—	x	x	x	x	x
13.6-38	x	x	x	x	x	x	x	x	x
14.9-38	x	x	x	x	x	x	x	x	x
16.9-38		x	x	x	x	x	x	x	x
18.4-38		x	x	x	x	x	x	x	x
480/70-38	—	x	x	x	x	x	x	x	x
520/70-38	—	—	—	x	x	x	x	x	x
540/65-38		—	—	x	x	x	x	x	x
600/65-38		—	—	—	—	x	x	x	x

NOTE: In certain countries, overall vehicle width for driving on public roads must not exceed 2.55 m (100 in.).

AG,OU12401,303 –19–01MAY01–1/1

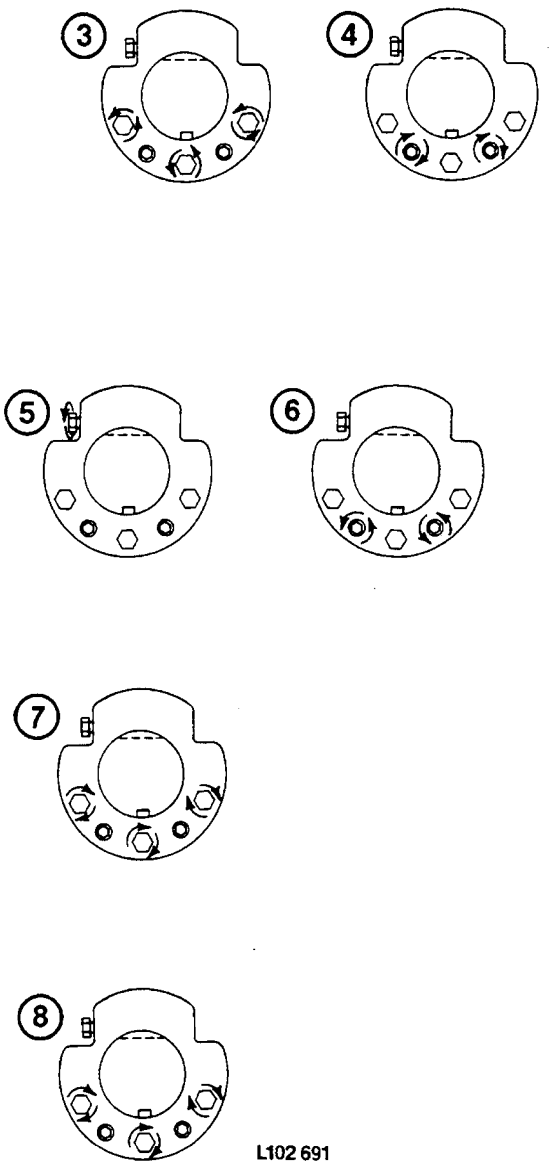
Adjusting Wheel Tread With Rack-And-Pinion Axle

NOTE: Adjustment of wheels is only possible when not more than two weights are attached to each wheel.

1. Clean the axle with a wire brush.
2. Jack up tractor and turn rear wheel so that rack on axle faces upward.
3. Loosen the attaching bolts completely.
4. Tighten the jack screws until the screw heads are flush against the face of the wheel hub.

NOTE: If the sleeve does not break loose at once, also loosen the three special screws on inboard side of wheel. If sleeve still does not break loose, strike end of axle several times with a heavy hammer. Evenly retighten jack screws. It helps to soak the sleeves in penetrating oil.

5. Turn adjusting screw in or out until desired position is reached.
6. Back jack screws all the way out against stop, but do not use force.
7. Lubricate threads and retighten attaching bolts alternately to 400 N•m (300 lb-ft). Retighten bolts several times until all three stay tightened to specified torque. When the attaching bolts are tightened to specified torque, the jack screws should be free to turn. If this is not the case, loosen jack screws and retighten attaching bolts to specified torque.
8. After completing wheel tread adjustment, make sure that tires and wheel ballast weights do not rub against the tractor. Then drive tractor approx. 50 m (160 ft.), stop the tractor and retighten attaching bolts to 400 N•m (300 lb-ft). The bolts must be retightened to torque after 4 hours, after 8 hours and several times within the next 100 hours. See "Break-In Period".



L102 691

L102691 –UN–13APR00

Continued on next page

AG,OU12401,304 –19–10APR00–1/3

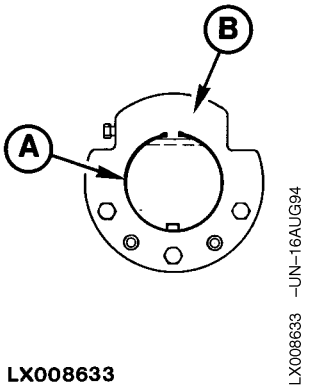
IMPORTANT: The distance between the side wall of the tire and the fender must not be less than 50 mm (1.97 in.). The distance between the running surface (edge) of the tire and the fender must not be less than 60 mm (2.36 in.).

AG,OU12401,304 –19–10APR00–2/3

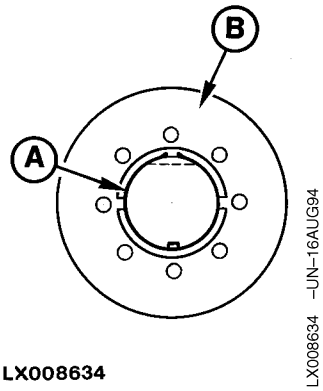
Turn wheel hub (pinion inside)

For loosening, adjusting and tightening wheel hub, see previous page.

1. To facilitate assembly, remove rear wheel.
2. Remove snap ring (A). Turn adjusting screw so that wheel hub (B) is at maximum width. Remove wheel hub (B).
3. Put wheel on axle at desired position. Turn wheel hub (B) around and install it.
4. Install wheel and snap ring (A). For further assembly, see previous page.



LX008633

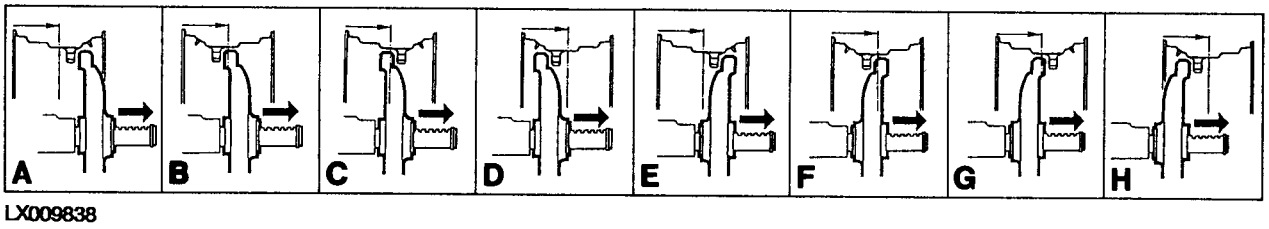


LX008634

IMPORTANT: The distance between the side wall of the tire and the fender must not be less than 50 mm (1.97 in.). The distance between the running surface (edge) of the tire and the fender must not be less than 60 mm (2.36 in.).

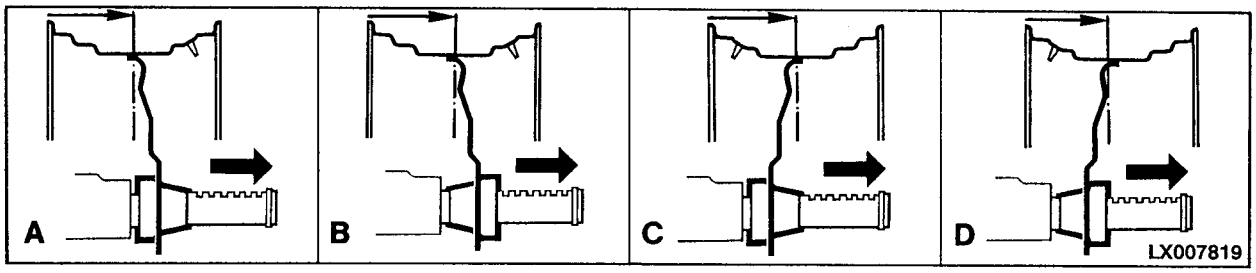
AG,OU12401,304 –19–10APR00–3/3

Positions of Rims and Wheel Disks with Rack-and-Pinion Axle



LX009838 –UN–03JAN95

Cast wheels



LX007819 –UN–03JAN95

Steel wheels

NOTE: Use the drawings to determine the appropriate position of rims and wheel disks. Positions vary depending on type used.

With 13.6-38 and 14.9-38 cast wheels, the valve is on the opposite side.

Only positions A, B, G and H are possible with 30 in. wheels.

AG,OU12401,305 –19–10APR00–1/1

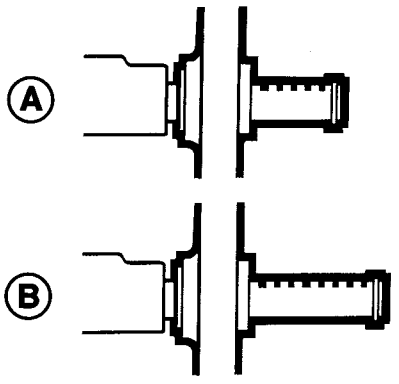
Tread Widths with Standard Rack-and-Pinion Axle

Wheels	Tires	Position	Tread widths	Position	Tread widths
Cast wheels	13.6-38	A	1473-1746 mm (58.0-68.7 in.)	E	1624-2024 mm (63.9-79.7 in.)
		B	1510-1950 mm (59.4-76.8 in.)	F	1828-2228 mm (72.0-87.7 in.)
		C	1506-1946 mm (59.3-76.6 in.)	G	1824-2224 mm (71.8-87.6 in.)
		D	1710-2150 mm (67.3-84.6 in.)	H	2028-2428 mm (79.8-95.6 in.)
	16.9-30	A	1563-1744 mm (61.5-68.7 in.)	G	1826-2226 mm (61.5-87.6 in.)
		B	1563-1948 mm (61.5-76.7 in.)	H	2030-2430 mm (62.4-95.7 in.)
	16.9-34	A	1563-1907 mm (61.5-75.1 in.)	E	1563-1862 mm (61.5-73.3 in.)
		B	1671-2111 mm (65.8-83.1 in.)	F	1666-2066 mm (65.6-81.3 in.)
		C	1668-2108 mm (65.7-83.0 in.)	G	1663-2063 mm (65.5-81.2 in.)
		D	1872-2312 mm (73.7-91.0 in.)	H	1867-2267 mm (73.5-89.3 in.)
	16.9-38	A	1563-1746 mm (61.5-68.7 in.)	E	1624-2024 mm (63.9-79.7 in.)
		B	1563-1950 mm (61.5-76.8 in.)	F	1828-2228 mm (72.0-87.7 in.)
		C	1563-1946 mm (61.5-76.6 in.)	G	1824-2224 mm (71.8-87.6 in.)
		D	1710-2150 mm (67.3-84.6 in.)	H	2028-2428 mm (79.8-95.6 in.)
	18.4-30	A	1604-1744 mm (63.1-68.7 in.)	G	1826-2226 mm (63.1-87.6 in.)
		B	1604-1948 mm (63.1-76.7 in.)	H	2030-2430 mm (63.1-95.7 in.)
	18.4-34	A	1604-1907 mm (63.1-75.1 in.)	E	1604-1862 mm (63.1-73.3 in.)
		B	1671-2111 mm (65.8-83.1 in.)	F	1666-2066 mm (65.6-81.3 in.)
		C	1668-2108 mm (65.7-83.0 in.)	G	1663-2063 mm (65.5-81.2 in.)
		D	1872-2312 mm (73.7-91.0 in.)	H	1867-2267 mm (73.5-89.3 in.)
	18.4-38	A	1604-1746 mm (63.1-68.7 in.)	E	1624-2024 mm (63.9-79.7 in.)
		B	1604-1950 mm (63.1-76.8 in.)	F	1828-2228 mm (72.0-87.7 in.)
		C	1604-1946 mm (63.1-76.6 in.)	G	1824-2224 mm (71.8-87.6 in.)
		D	1710-2150 mm (67.3-84.6 in.)	H	2028-2428 mm (79.8-95.6 in.)
Steel wheels	16.9-38	A	1563-1946 mm (61.5-76.6 in.)	C	1764-2204 mm (69.4-86.8 in.)
		B	1596-1996 mm (62.8-78.6 in.)	D	1854-2254 mm (73.0-88.7 in.)
	18.4-38	A	1604-1946 mm (63.1-76.6 in.)	C	1764-2204 mm (69.4-86.8 in.)
		B	1604-1996 mm (63.1-78.6 in.)	D	1854-2254 mm (73.0-88.7 in.)

AG,OU12401,306 –19–01MAY01–1/2

On the long rack-and-pinion axle, the maximum tread widths quoted above increase by 286 mm (11.3 in.).

A—Short rack-and-pinion axle (29 teeth)
B—Long rack-and-pinion axle (42 teeth)



LX007820

LX007820 –UN–15AUG94

AG,OU12401,306 –19–01MAY01–2/2

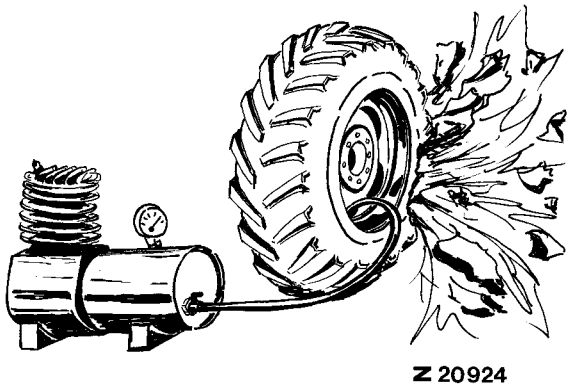
Tire Pressures

Long life and satisfactory performance of the tires depend on proper tire inflation. Under-inflation of tires leads to rapid wear. Over-inflated tires reduce traction and increase wheel slippage.

Since correct tire pressures depend not only on working conditions and load but also on tractor model, tire size and manufacturer, we recommend that you approach your John Deere dealer or tire company for advice.

AG,OU12401,170 –19–28MAR00–1/1

Mounting Tires


Z 20924

Z20924 –UN–15AUG94

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do NOT attempt to mount a tire unless you have the proper equipment and experience to perform the job safely. Have it done by your John Deere dealer or a qualified tire repair service.

When seating tire beads on rims, never exceed maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead and reinflate.

Detailed agricultural tire mounting instructions, including the necessary safety precautions, are available from your local tire manufacturer agents.

Tractors with 50 km/h (31 mph) transmission

To improve ride comfort on tractors with 50 km/h (31 mph) transmissions, comply with the following when installing tires on the rear wheels:

Align the white mark on the tire with the "B" mark on the edge of the rim.

If the tires you want to install do not have a white mark, proceed as follows:

1. Install the tires.
2. Test drive the tractor. If the wheels give a bumpy ride, move the tires 90° round the rims.
3. Test drive the tractor. If the wheels still give a bumpy ride, move the tires through a further 90°.

AG,OU12401,140 –19–17MAR00–1/1

Tire Combinations (up to 40 km/h; 25 mph)

The size ratio of the front wheels to the rear ones is precisely determined in order to produce a positive front wheel lead of between 1.5 and 4%. Positive front wheel lead should never be less than 1% and never greater than 7%, otherwise the tires will become deformed or suffer undue wear. To ascertain the correct ratio when changing tires, proceed as follows:

Ascertain tractor data:

1. Gear pair on differential. The gear pair is displayed on the transmission type plate. The following pairs are possible:

   - 47/10
   - 53/10
   - 53/9

2. Transmission ratio of front axle. This figure is displayed on the front axle type plate. The following ratios are possible:

   - 13.13
   - 15.89

3. Transmission ratio of gear pair for FWD axle (output). This figure is displayed on the transmission type plate. The following ratios are possible:

   - 1.692 = gear pair F
   - 1.725 = gear pair G
   - 1.760 = gear pair H
   - 1.795 = gear pair I
   - 1.833 = gear pair J
   - 1.870 = gear pair K
   - 1.907 = gear pair L
   - 1.943 = gear pair M
   - 1.990 = gear pair N
   - 2.028 = gear pair O

Ascertain tire data:

This information must be ascertained from the tire manufacturer's manual.

1. Select tires with suitable load-bearing capability.

2. Select tires appropriate to the tractor's top speed.

3. From the manual, ascertain the rolling circumference of the tire desired for the rear wheel.

4. From the manual, ascertain the rolling circumference of the tire desired for the front wheel.

Ascertain the following data:

1. The difference in rolling circumferences between the front and rear tires must be between 945 mm (37.2 in.) and 1618 mm (63.7 in.).

2. Check that the index radius (to ISO Standard 4251) of the rear wheel lies within the relevant range (see also tables in "Specifications"):

   - not more than 665 mm (26.2 in.) with 47/10 differential, e.g. 14.9R30
   - not more than 745 mm (29.3 in.) with 53/10 differential, e.g. 15.5R38 or 16.9R34
   - not more than 820 mm (32.3 in.) with 53/9 differential, e.g. 18.4R38

3. Calculate the rolling circumference ratio of the rear tire to the front tire.

4. Using the data on the differential gear pair and the front axle transmission ratio, ascertain which of the following tables applies (see “Gear-Pair Tables”).

In the line (F - O) with the gear pair that applies to the tractor, find the value that corresponds to the calculated rolling circumference ratio.

The column gives the front wheel lead that may be achieved with the tire combination.

If the calculated ratio does not lie within the range of values stated, either select a different tire combination or change the gear pair for the front wheel drive axle.

Continued on next page

IMPORTANT: The largest front tires on 6020, 6120 and 6220 tractors must not exceed an index radius of 610 mm (24.0 in.). The largest front tires on 6320, 6420 and 6420S tractors must not exceed an index radius of 620 mm (24.4 in.).

If a new pair of tires is selected for a tractor with cab, the basic informator (BIF), the Basic Control Unit (BCU) and ground speed sensor (radar) must be recalibrated. See your John Deere dealer.

Example

The intention is to fit a tractor with 18.4-34 / 14.9-24 tires, made by a certain manufacturer.

The differential gear pair is 53/9.

The transmission ratio of the front axle is 15.89.

The transmission ratio of the gear pair for the front wheel drive axle is 1.943 (= gear pair M).

According to the tire manufacturer's manual, the desired tires have the following rolling circumferences:

- 18.4-34 = 5003 mm (197 in.)
- 14.9-24 = 3795 mm (149.4 in.).

The difference between the rolling circumferences is 1208 mm (47.5 in.), i.e. within the acceptable range.

The index radius (to ISO standard) of the rear tire is 770 mm (30.3 in.). The tire is therefore compatible with the differential.

The ratio of rolling circumferences is:

$$\frac{\text{5003 mm (197 in.)}}{\text{3795 mm (149.4 in.)}} = 1.318$$

In this example, the correct table is table 4 (53/9 differential and 15.89 transmission ratio at front axle). The line for gear pair M includes the figure 1.322, which is sufficiently close to the calculated value of 1.318. The front wheel lead of the desired tire combination is therefore 2%.

AG,OU12401,307 –19–01MAY01–2/2

Gear-Pair Tables

Table 1

Differential: 47/10
Transmission ratio at front axle: 13.13

Front wheel lead:		**1 %**	**2 %**	**3 %**	**4 %**	**5 %**	**6 %**	**7%**
Gear pair for front-wheel drive:	F	1.482	1.467	1.453	1.439	1.425	1.412	1.399
	G	1.453	1.439	1.425	1.412	1.398	1.385	1.372
	H	1.425	1.411	1.397	1.383	1.370	1.357	1.345
	I	1.397	1.383	1.370	1.356	1.344	1.331	1.318
	J	1.368	1.354	1.341	1.328	1.316	1.303	1.291
	K	1.341	1.328	1.315	1.302	1.290	1.277	1.266
	L	1.315	1.302	1.289	1.277	1.265	1.253	1.241
	M	1.290	1.278	1.265	1.253	1.241	1.229	1.218
	N	1.260	1.248	1.235	1.224	1.212	1.200	1.189
	O	1.236	1.224	1.212	1.201	1.189	1.178	1.167

Table 2

Differential: 53/10
Transmission ratio at front axle: 13.13

Front wheel lead:		**1 %**	**2 %**	**3 %**	**4 %**	**5 %**	**6 %**	**7%**
Gear pair for front-wheel drive:	F	1.671	1.655	1.638	1.623	1.607	1.592	1.577
	G	1.639	1.623	1.607	1.592	1.577	1.562	1.547
	H	1.606	1.591	1.575	1.560	1.545	1.531	1.516
	I	1.575	1.560	1.544	1.530	1.515	1.501	1.487
	J	1.542	1.527	1.512	1.498	1.484	1.470	1.456
	K	1.512	1.497	1.483	1.468	1.454	1.441	1.427
	L	1.483	1.468	1.454	1.440	1.426	1.413	1.399
	M	1.455	1.441	1.427	1.413	1.400	1.386	1.373
	N	1.421	1.407	1.393	1.380	1.367	1.354	1.341
	O	1.394	1.380	1.367	1.354	1.341	1.328	1.316

Table 3

Differential: 53/10
Transmission ratio at front axle: 15.89

Front wheel lead:		**1 %**	**2 %**	**3 %**	**4 %**	**5 %**	**6 %**	**7%**
Gear pair for front-wheel drive:	F	1.380	1.367	1.353	1.340	1.328	1.315	1.303
	G	1.354	1.341	1.327	1.315	1.302	1.290	1.278
	H	1.327	1.314	1.301	1.289	1.276	1.264	1.252
	I	1.301	1.288	1.276	1.263	1.251	1.240	1.228
	J	1.274	1.262	1.249	1.237	1.225	1.214	1.203
	K	1.249	1.237	1.225	1.213	1.201	1.190	1.179
	L	1.225	1.213	1.201	1.189	1.178	1.167	1.156
	M	1.202	1.190	1.179	1.167	1.156	1.145	1.134
	N	1.173	1.162	1.151	1.140	1.129	1.118	1.108
	O	1.152	1.140	1.129	1.118	1.108	1.097	1.087

Continued on next page

Table 4

Differential: 53/9
Transmission ratio at front axle: 15.89

Front wheel lead:		**1 %**	**2 %**	**3 %**	**4 %**	**5 %**	**6 %**	**7%**
Gear pair for front-wheel drive:	F	1.534	1.519	1.504	1.489	1.475	1.461	1.448
	G	1.504	1.489	1.475	1.461	1.447	1.433	1.420
	H	1.474	1.460	1.446	1.432	1.418	1.405	1.392
	I	1.446	1.431	1.417	1.404	1.390	1.377	1.364
	J	1.416	1.402	1.388	1.375	1.362	1.349	1.336
	K	1.388	1.374	1.361	1.348	1.335	1.322	1.310
	L	1.361	1.347	1.334	1.321	1.309	1.296	1.284
	M	1.335	1.322	1.310	1.297	1.285	1.272	1.261
	N	1.304	1.291	1.279	1.266	1.254	1.242	1.231
	O	1.279	1.267	1.255	1.243	1.231	1.219	1.208

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Tire Combinations (up to 50 km/h; 31 mph)

IMPORTANT: Possible tire combinations for tractors with 50 km/h (31 mph) transmissions are divided into two groups (see table below). When selecting tires for tire change, stay within the original group.

Group A

520/70R38	Continental	AC70T	420/70R24	Continental	AC70T
			420/70R28	Continental	AC70T
520/70R38	Pirelli	TM700	420/70R24	Pirelli	TM700
			480/70R24	Pirelli	TM700
			380/70R28	Pirelli	TM700
			420/70R28	Pirelli	TM700
600/65R38	Continental	AC65	540/65R24	Continental	AC65
			480/65R28	Continental	AC65
600/65R38	Pirelli	TM800	540/65R24	Pirelli	TM800
			480/65R28	Pirelli	TM800

Group B

18.4R38	Michelin	XM25P	14.9R24	Michelin	XM25P
			16.9R24	Michelin	XM25P
			13.6R28	Michelin	XM25P
			14.9R28	Michelin	XM25P
18.4R38	Michelin	XM27	14.9R24	Michelin	XM27
			16.9R24	Michelin	XM27
460/85R38	Kleber	Traker	380/85R24	Kleber	Traker
			420/85R24	Kleber	Traker
			340/85R28	Kleber	Traker
			380/85R28	Kleber	Traker
520/70R38	Continental	AC70G	420/70R24	Continental	AC70G
520/70R38	Kleber	Super 9L	420/70R24	Kleber	Super 8L
			480/70R24	Kleber	Super 8L
			380/70R28	Kleber	Super 8L
			420/70R28	Kleber	Super 8L
600/65R38	Kleber	Super 11L	540/65R24	Kleber	Super 11L
			480/65R28	Kleber	Super 11L
600/65R38	Michelin	XM108	540/65R24	Michelin	XM108
			480/65R28	Michelin	XM108

The size ratio of the front wheels to the rear ones is precisely determined in order to produce a positive front wheel lead of between 1.5 and 4 %. Positive front wheel lead should never be less than 1 % and never greater than 7 %, otherwise the tires will become deformed or suffer undue wear. To ascertain the correct ratio when changing tires, proceed as follows:

Ascertain tractor data:

Transmission ratio of gear pair for FWD axle. This information is displayed on the transmission type plate. The following ratios are possible:

- 1.446 = gear pair F
- 1.465 = gear pair G
- 1.497 = gear pair H
- 1.532 = gear pair I
- 1.564 = gear pair J

Continued on next page

- 1.597 = gear pair K

Ascertain tire data:

This information must be ascertained from the tire manufacturer's manual.

1. Select tires with suitable load-bearing capability.
2. Select tires appropriate to the tractor's top speed.
3. From the manual, ascertain the rolling circumference of the tire desired for the rear wheel.
4. From the manual, ascertain the rolling circumference of the tire desired for the front wheel.

Ascertain the following data:

1. The difference in rolling circumferences between the front and rear tires must be between 945 mm (37.2 in.) and 1618 mm (63.7 in.).
2. Calculate the rolling circumference ratio of the rear tire to the front tire.

Go to line (F -K) in the table below (see "Gear-Pair Table") that applies to the gear pair on your tractor and find the value that corresponds to the calculated rolling circumference ratio. The column gives the front wheel lead that may be achieved with the tire combination. If the calculated ratio does not lie within the range of values stated, either select a different tire combination or change the gear pair for the front wheel drive axle.

IMPORTANT: The largest front tires on 6020, 6120 and 6220 tractors must not exceed an index radius of 610 mm (24.0 in.). The largest front tires on 6320, 6420 and 6420S tractors must not exceed an index radius of 620 mm (24.4 in.).

If a new pair of tires is selected for a tractor with cab, the basic informator (BIF), the Basic Control Unit (BCU) and ground speed sensor (radar) must be recalibrated. See your John Deere dealer.

Example

The intention is to fit a tractor with 18.4-38 / 14.9-24 tires, made by a certain manufacturer.

The differential gear pair is 47/10.

The transmission ratio of the front axle is 15.89.

The transmission ratio of the gear pair at the front wheel drive axle is 1.497 (= gear pair H).

According to the tire manufacturer's manual, the desired tires have the following rolling circumferences:

- 18.4-38 = 5203 mm (205 in.)
- 14.9-24 = 3795 mm (149.4 in.).

The difference between the rolling circumferences is 1408 mm (55.4 in.), i.e. within the acceptable range.

The ratio of rolling circumferences is:

$$\frac{\text{5203 mm (205 in.)}}{\text{3795 mm (149.4 in.)}} = 1.371$$

In the table below, the line with gear pair H includes the figure 1.369, which is sufficiently close to the calculated value of 1.371. The front wheel lead of the desired tire combination is therefore 2%.

AG,OU12401,309 –19–01MAY01–2/2

Gear-Pair Table

Differential gear pair: 47/10
Transmission ratio at front axle: 15.89

Pos. front wheel lead:		**1 %**	**2 %**	**3 %**	**4 %**	**5 %**	**6 %**	**7%**
Gear pair for front-wheel drive:	F	1.432	1.418	1.404	1.390	1.377	1.364	1.351
	G	1.413	1.399	1.386	1.372	1.359	1.346	1.334
	H	1.383	1.369	1.356	1.343	1.330	1.318	1.305
	I	1.351	1.338	1.325	1.312	1.300	1.288	1.276
	J	1.324	1.311	1.298	1.285	1.273	1.261	1.249
	K	1.296	1.284	1.271	1.259	1.247	1.235	1.224

AG,OU12401,310 –19–01MAY01–1/1

Selective Control Valves

The tractor can be equipped with one of three different types of selective control valve: 100 Series, 200 Series or 300 Series.

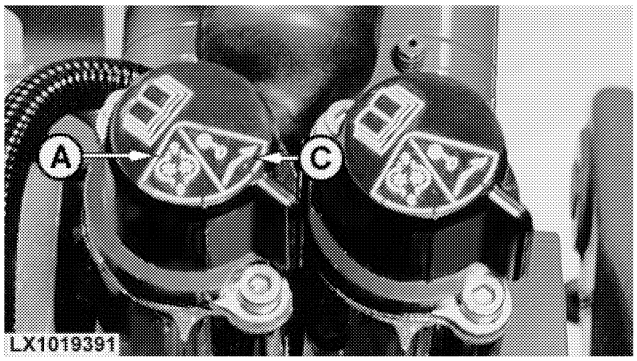
100 Series control valves provide the functions “Raise” and “Lower” plus one “Float Position”.

Besides these functions, 200 Series control valves provide a lock function (A) which holds the control lever in the “Raise” or “Lower” position until it is moved manually.

300 Series control valves also have an additional lock function (B), which holds the control lever in the “Raise” or “Lower” position until the pressure in the oil circuit has reached a predetermined value (e.g. when the remote control cylinder has reached its end position).

Neither locking function is activated in position (C). The control lever returns to “neutral” as soon as it is released.

If an implement (e.g. an hydraulic cylinder) is connected, pressure connection (e.g. extending cylinder) has to be connected to the **lower coupler** on **200 Series**. On **300 Series**, pressure connection (e.g. extending cylinder) can be connected to **upper or lower coupler**. With these selective control valves, a valve prevents loss of pressure by leakage (e.g. retracting cylinder) if the engine is shut off. 100 Series selective control valves do NOT possess such a valve.



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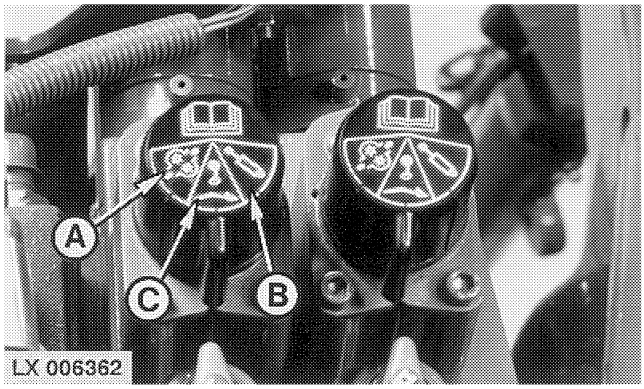

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LX,OZUS 004602 –19–01MAR00–1/1

Adjustment of Pressure Limit at Selective Control Valves (300 Series)

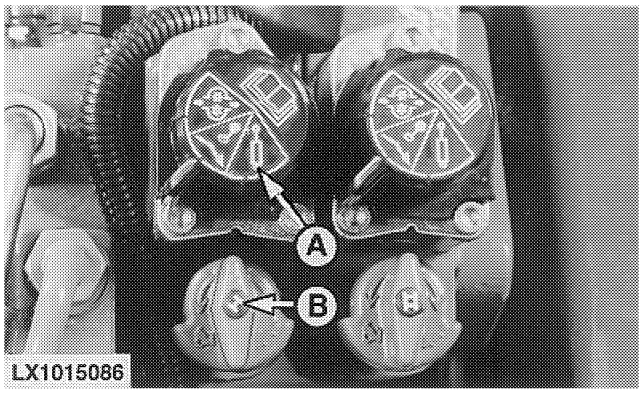
NOTE: All selective control valves are factory adjusted to 18000 kPa (180 bar; 2610 psi).

If the selective control valve in lock function switches off too early (control lever goes to neutral too early), or if it switches off too late or not at all (lever moves to neutral too late or not at all), proceed as follows:

1. Disconnect hydraulic hoses at the connectors (if equipped).
2. Engage the locking function (A) and move flow control valve (B) to the mid-position.
3. Take out the plug and insert a screwdriver.
4. Start the engine and turn the screw clockwise as far as it will go.
5. Move SCV control lever to the “raise” or “lower” position (the control lever remains in the “raise” or “lower” position).
6. Turn the screw counter-clockwise until the control lever jumps into neutral.
7. Slacken off the screw by turning it half a turn counter-clockwise.

NOTE: One full turn changes the pressure by approx. 4600 kPa (46 bar; 670 psi).

8. Take out the screwdriver and re-install the plug.



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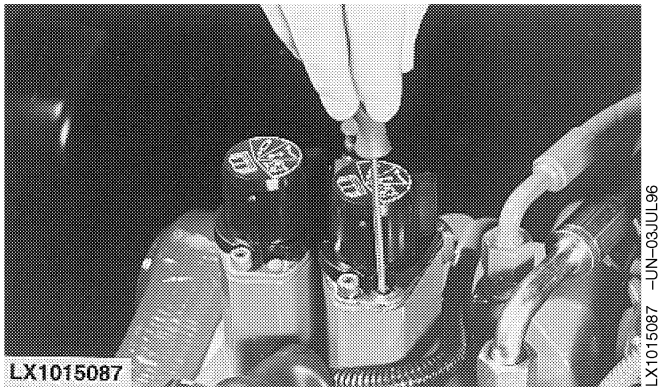


LX1015087 –UN–03JUL96

LX,OEQUIP006333 –19–01JUN96–1/1

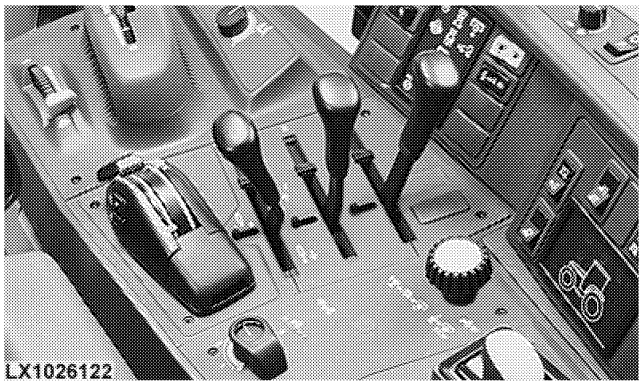
Levers for Mechanical Selective Control Valves

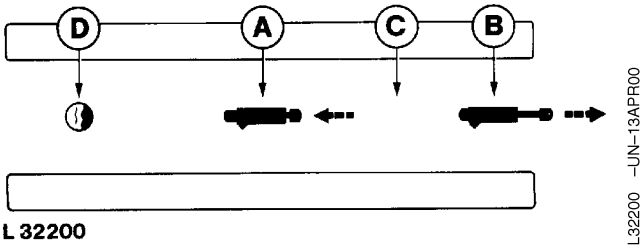
The control lever has four settings.

The remote cylinder retracts when the lever is moved to the "Retract" position.
The remote cylinder extends when the lever is moved to the "Extend" position.
The remote cylinder is held in place when the lever is in "Neutral".
When the lever is in the "Float" position (i.e. piston moves freely inside remote cylinder), the mounted implement follows the ground contours.

NOTE: If additional external valves are used, move the control lever to neutral when shutting off each hydraulic function.

CAUTION: With 100 Series selective control valves, the "extend" and "retract" functions have a mechanical detent. When starting the engine, make sure that the control lever is in "neutral".





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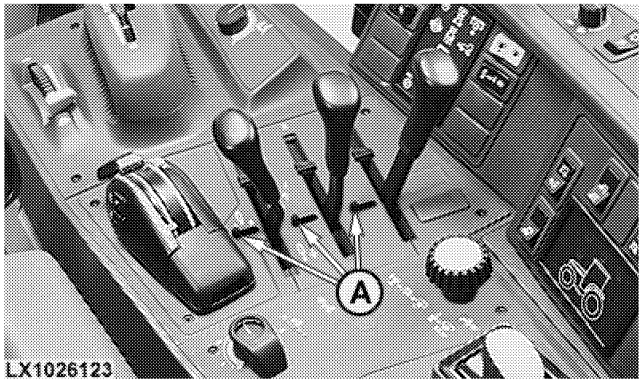
A—Retract
B—Extend
C—Neutral position
D—Float position

OU12401,00005D2 –19–01MAY01–1/2

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

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



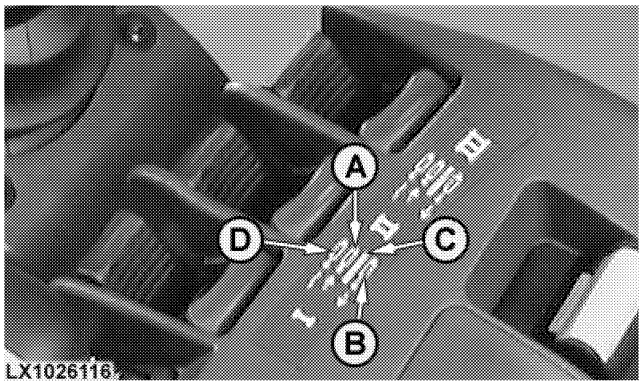
OU12401,00005D2 –19–01MAY01–2/2

Levers for Electronic Selective Control Valves

The control lever has four settings.

The remote cylinder retracts when the lever is moved to the "Retract" position.
The remote cylinder extends when the lever is moved to the "Extend" position.
The remote cylinder is held in place when the lever is in "Neutral".
When the lever is in the "Float" position (i.e. piston moves freely inside remote cylinder), the mounted implement follows the ground contours. To obtain this position, move the lever as far as it will go in "retract", press it inward (into the armrest) and then press it further down.

NOTE: If additional external valves are used, move the control lever to neutral when shutting off each hydraulic function.



A—Retract
B—Extend
C—Neutral position (between "retract" and "extend")
D—Float position

OU12401,00005D1 –19–01MAY01–1/1

Additional Functions of the Electronic Selective Control Valves

Switch (A) permits all four SCVs to be locked at the same time (transport lock). The SCVs all go to neutral.

Function adjustment wheel (B) permits each of the four SCVs to be set individually to the following:

- Extend limit
- Retract limit
- Shut-off time

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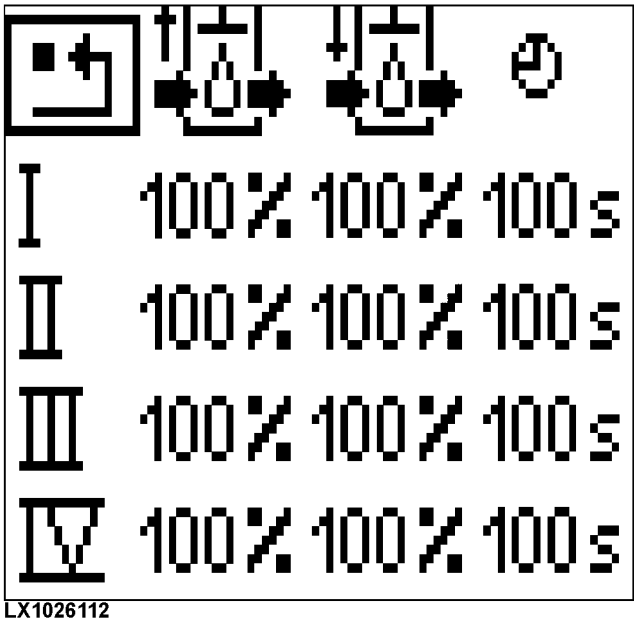
OU12401,00005D0 –19–01MAY01–1/5

Display of value setting

Press the adjustment wheel or turn it one position. On the dot-matrix display, the summary of values appears with the “cursor” in the top left corner (on the “carriage return” symbol).

The display goes off if the adjustment wheel is pressed while the “cursor” is on the “carriage return” symbol or if no change is made at the adjustment wheel within 10 seconds.



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Summary of values

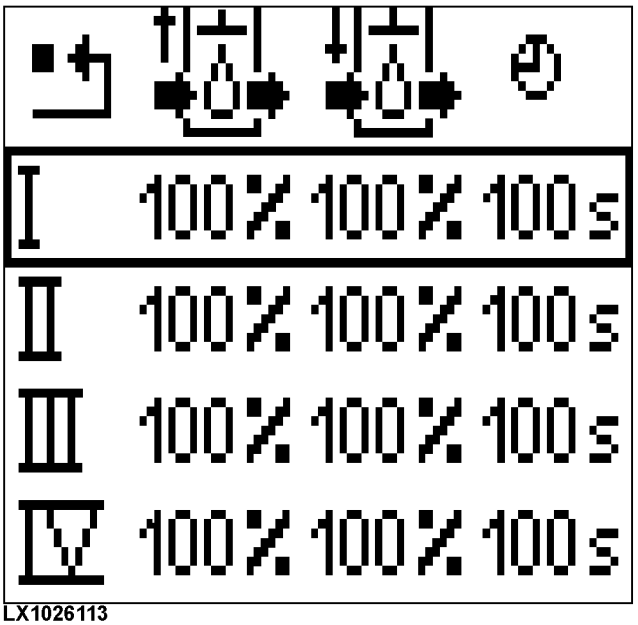
OU12401,00005D0 –19–01MAY01–2/5

Selecting an SCV

If the adjustment wheel is turned clockwise, the “cursor” moves progressively downward. When it reaches the bottom of the list, the ”cursor” will jump back to the beginning if you turn the wheel further.

If the adjustment wheel is turned counter-clockwise, the “cursor” moves in the opposite direction.

If the adjustment wheel is pressed while the “cursor” is at positions I - IV, the adjustment status of the relevant SCV appears on the display.



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SCV I selected

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OU12401,00005D0 –19–01MAY01–3/5

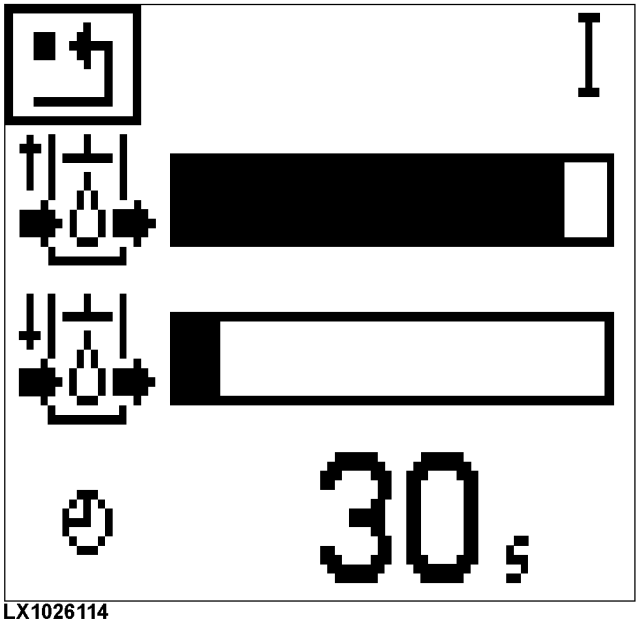
Setting the Values for an SCV

Turn the adjusting wheel until the “cursor” is at value you want to change, then press the adjusting wheel.

Turning the adjusting wheel clockwise will increase the value up to its maximum. Turning the adjusting wheel counter-clockwise will decrease the value down to its minimum. When you reach the desired value, press the adjusting wheel. The value will be stored.

The values for the extend and retract limits can be set in increments of 10%. 10% is the minimum, and 100% the maximum.

The values for the shut-off time can be set in variable increments between 0 and infinity. Infinity means: **no** automatic shut-off.



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Adjustment status, SCV I

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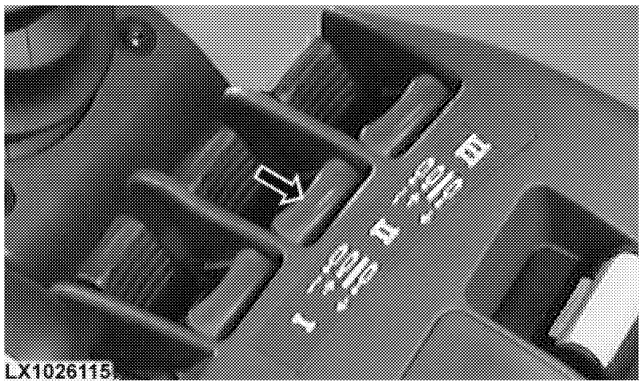
Automatic Shut-Off



Provided the transport lock is not active and a valid shut-off time is set for the SCV, the following applies:

If the SCV control lever (see arrow) is in the maximum extend or retract position and then moved past the point of resistance (a definite "click" can be perceived), the relevant remote cylinder will be brought to its set limit position and held there until the set shut-off time elapses. Then the remote cylinder is moved to its neutral position.

This procedure is aborted if:

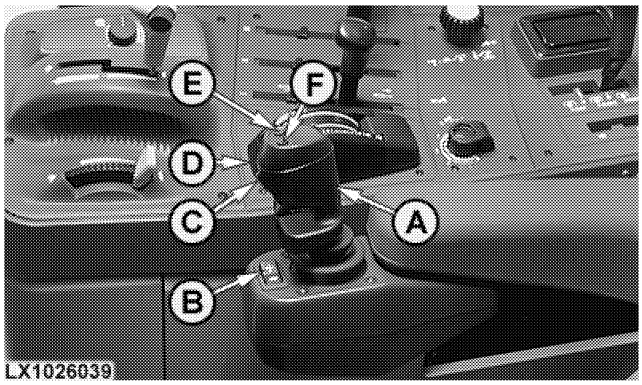
- the SCV control lever is not returned to its neutral position within on second
- the SCV control lever is moved out of its neutral position before the shut-off period has elapsed
- the SCV control lever is moved in the opposite direction

In all of these above-mentioned cases, the SCV will react according to the movements of the SCV control lever.

To re-activate the automatic shut-off, bring the SCV control lever back from beyond the point of resistance and then pass the point of resistance again.

OU12401,00005D0 –19–01MAY01–5/5

Multi-Function Lever (Electrical)



A—Multi-function lever
B—Transport lock switch
C—Rocker switch, 3rd function
D—Interlock switch actuator
E—Switch, 4th function
F—Switch, 5th function

Multi-function lever (A) permits two SCVs to be operated at the same time.

Switch (B) locks the lever.

Switches (C), (E) and (F) enable other functions to be carried out.

Interlock switch actuator (D) prevents accidental actuation of the multi-function lever. The lever can operate only when the actuator is open (the operator's hand must hold it open). If the lever is not used for longer than one minute, the hydraulic functions are locked out. To overcome this lock-out, take your hand out of the actuator for a moment.

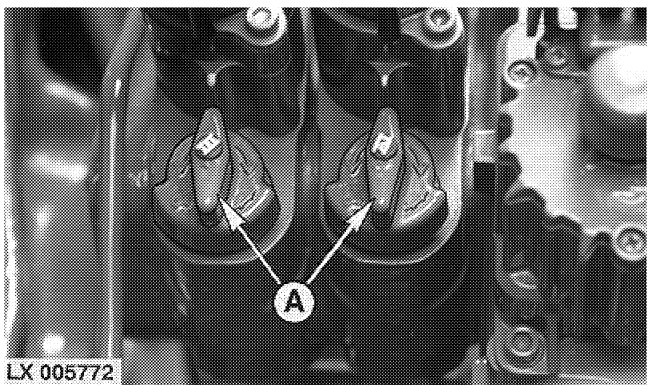
Pulling lever (A) back makes the front loader rise. Pushing the lever forward until perceptible resistance is reached makes the front loader go down. If the lever is pushed forward beyond the resistance, it engages in a detent and the front loader is in its float position.

Moving the lever to the left makes the loader bucket tip up. Moving the lever to the right makes the loader bucket tip down.

If the lever is moved to the right beyond the resistance twice in quick succession and held there, the loader bucket will vibrate.

LX,OMZUS 017531 –19–01MAY01–1/1

Rate of Cylinder Operation



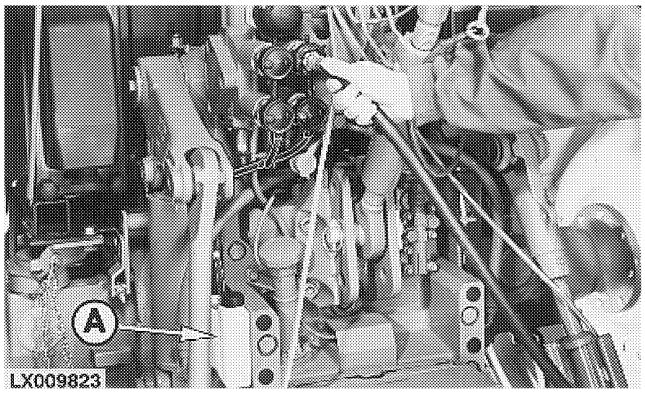
The lowering and raising speed can be adjusted at load control valves (A).

IMPORTANT: Full extension and retraction of a remote cylinder should require at least 1.5 seconds. Faster speeds may cause damage.

LX,OZUS 004296 –19–01AUG93–1/1

Couplers

CAUTION: The hydraulic system has a maximum stand-by pressure of 20000 kPa (200 bar; 2900 psi). For your own protection and to assure proper functioning of the system, use only genuine John Deere parts.



LX009823 –UN–02JAN95

Couplers allow hydraulic hoses to be uncoupled without loss of oil, even under pressure.

Furthermore, DeLuxe couplers allow hydraulic hoses to be coupled as well as uncoupled without loss of oil, even under pressure. If a malfunction or accident causes the hose to break loose from the coupler, the oil flow through the coupler is stopped immediately.

To connect the hose union, press it firmly into the coupler. In the case of standard couplers, the corresponding SCV control lever must be moved to neutral.

NOTE: When the control lever is pushed forward (or to the right in the case of the multi-function lever), the pressure is applied to the upper coupler.

To disconnect the hose, give it a firm pull.

Oil which escapes from the couplers when hoses are connected or removed flows via lines (A) to an oil reservoir. Drain oil reservoir if it becomes overfull. Do NOT re-use leak-off oil.

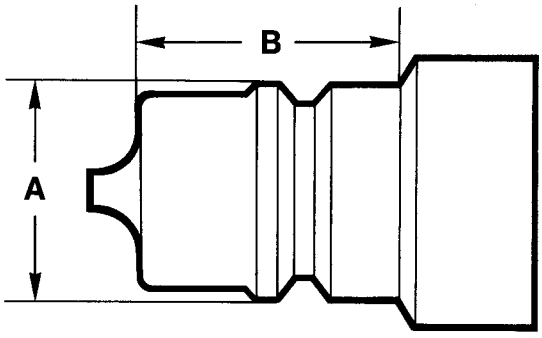
AG,OU12401,220 –19–07APR00–1/1

Hose Unions

The hose unions used must comply with ISO standards.

Dimension (A) must be between 23.66 and 23.74 mm (0.931 and 0.934 in.).

Dimension (B) must be at least 24 mm (0.945 in.).



LX006613 –UN–15AUG94

LX 006613

LX,OZUSAT004842 –19–02AUG93–1/1

Maximum Permissible Oil Withdrawal

To operate large hydraulic cylinders such as those used on tipping trailers, 10 liters (2.6 U.S. gal.) of oil may be drawn from the transmission case through the connecting lines. If an additional oil reservoir is equipped, a further 10 liters (2.6 U.S. gal.) of oil may be withdrawn.

This figure applies when the oil in the transmission case is at the minimum mark on the dipstick. If the oil is up to the maximum mark, a further 5 liters (1.3 U.S. gal.) may be withdrawn.

Never perform heavy jobs such as towing, operating a PTO or driving fast when withdrawal results in the oil level dropping below the minimum mark.

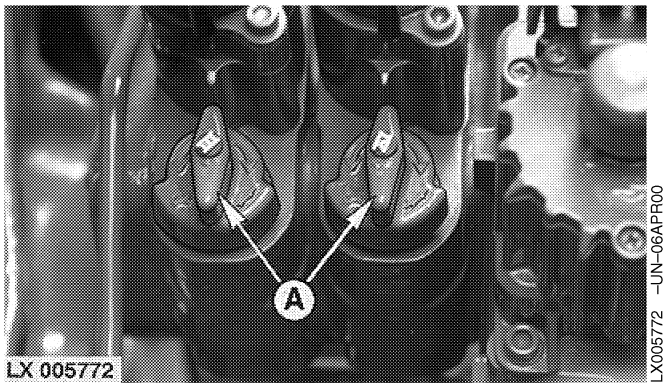
If required, a further 10 liters (2.6 U.S. gal.) may be added to the transmission case; this increases the amount that may be withdrawn accordingly.

During oil withdrawal, the tractor should not be inclined in any direction by more than 18°. If the tractor is inclined by more than 18°, only a correspondingly lower quantity of oil may be withdrawn.

For refilling, use only John Deere HY-GARD® Transmission and Hydraulic Oil or its equivalent.

LX,OZUS 000336 –19–01OCT94–1/1

Oil Withdrawal With Hydraulic Motor



If hydraulic motors are to be operated, then it is recommended to have 300 Series selective control valves.

IMPORTANT: Never regulate the flow rate by means of an external valve. Always use load control valves (A).

Maximum obtainable oil flow of transmission/hydraulic oil is dependent on the couplers and the size of the hydraulic pump installed on the tractor.

- On the 23 cm^3 (1.4 cu.in.) pump, the flow rate is 54 l/min (14.3 gpm).
- On the 25 cm^3 (1.5 cu.in.) pump, the flow rate is 60 l/min (15.9 gpm).
- On the 27 cm^3 (1.6 cu.in.) pump, the flow rate is 63 l/min (16.6 gpm).
- When the 40 cm^3 (2.5 cu.in.) pump is used in conjunction with 200 Series selective control valves, a flow rate of 96 l/min (25.4 gpm) can be achieved.

Stop the engine. Move the corresponding SCV control lever to the “float” position. Connect the hydraulic hose from the hydraulic motor.

NOTE: When the control lever is pushed forward (or to the right in the case of the multi-function lever), the pressure is applied to the upper coupler.

Start the engine. Move the control lever to “lower”. To switch off the hydraulic motor, move the control lever to the “float” position. Shut off the engine and take out the hydraulic hose.

IMPORTANT: Do not move the control lever to the “neutral” position, as this may result in back-pressure causing damage to the hydraulic motor and hoses.

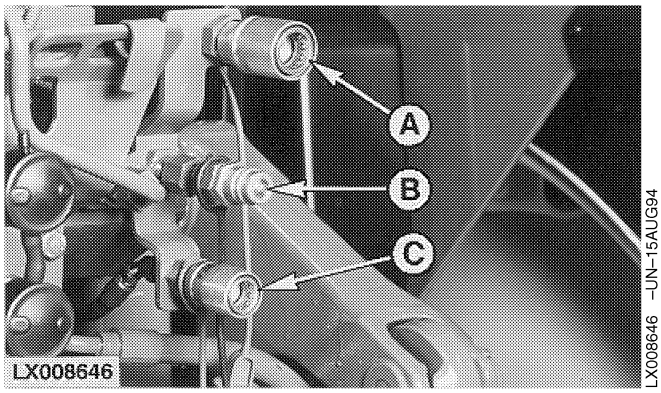
LX,OZUS 004297 –19–01MAR00–1/1

Power Beyond Couplers

On implements which have a Load Sense connection of their own, the Power Beyond couplers should be used.

When the couplers are not in use, use the protective dust caps.

A—Pressure connection
B—Return connection
C—Load Sense connection



AG,OU12401,221 –19–07APR00–1/1

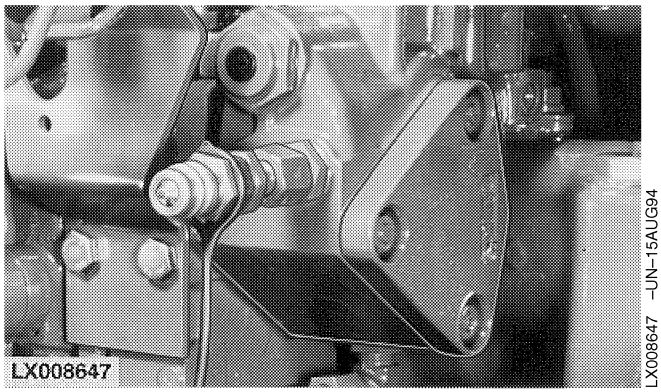
Pressure-Free Return Circuit

This connection ensures a pressure-free oil return.

Examples of implements which cannot withstand high pressure in the return line:

- Hydraulic motors which have a pressurized oil return. Failure of the motor housing or shaft seals may result if the return line is pressurized.
- Remote hydraulic valves located on the implement may allow unexpected movement of cylinders if the return port is pressurized.

When the pressure-free return circuit is not in use, use the protective dust cap.

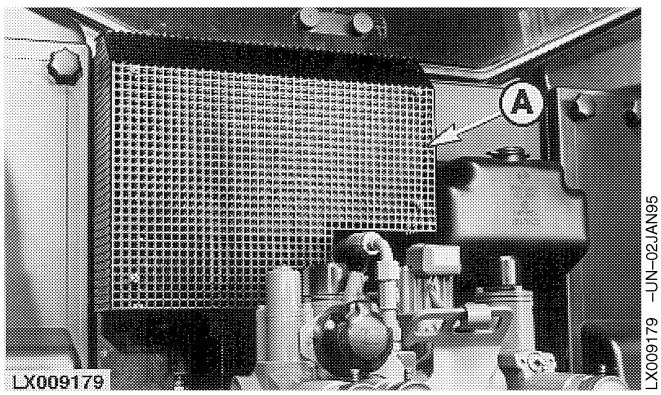


AG,OU12401,222 –19–07APR00–1/1

Additional Oil Reservoir

The additional oil reservoir (A) has a capacity of 10 liters (2.6 US.gal.).

Additional oil reservoir (A) may be used with large tipping trailers, and in other applications which require a larger amount of oil to operate large hydraulic cylinders.



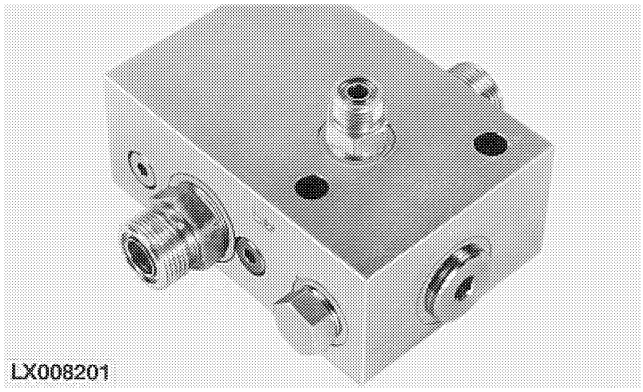
AG,OU12401,223 –19–07APR00–1/1

Power Beyond Application Valve

The Power Beyond application valve may be attached either to the tractor or to a towed implement.

It is used to connect an implement with either an open-center or closed-center hydraulic system to the tractor, without losing the Load Sense system.

IMPORTANT: The Power Beyond application valve must be set to suit the implement's hydraulic system (be it open-center or closed-center) by your John Deere dealer.



LX008201 –UN–02JAN95

LX,OZUS 007260 –19–01OCT94–1/1

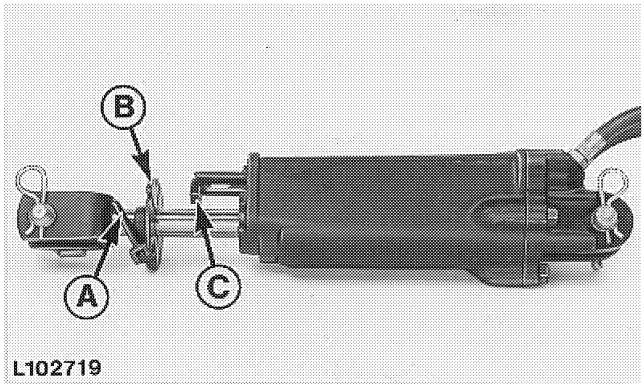
Remote Hydraulic Cylinder

The total retract stroke may be varied from 0 to 203 mm (0-8 in.) by means of the adjustable stop.

NOTE: Turn adjustable stop so that stop rod arm does not come into contact with stop lever.

After the adjustable stop comes into contact with the stop rod arm, a further 38 mm (1.5 in.) of slow travel is gained if remote cylinder control lever is held in "retract" position.

A—Stop lever
B—Adjustable stop
C—Stop rod arm



L102719 –UN–12AUG94

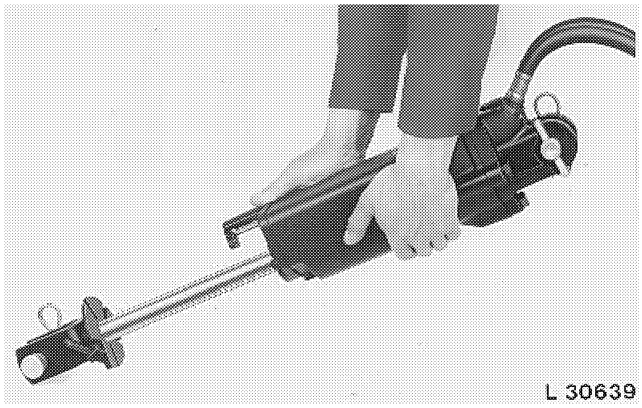
LX,OZUS 000338 –19–01OCT90–1/1

Bleeding the Cylinder

1. Connect remote hydraulic cylinder to couplers.
2. Start engine.
3. Hold the remote hydraulic cylinder with the piston pointing down (see illustration).
4. With the cylinder in this position, move the SCV control lever backward and forward seven or eight times.

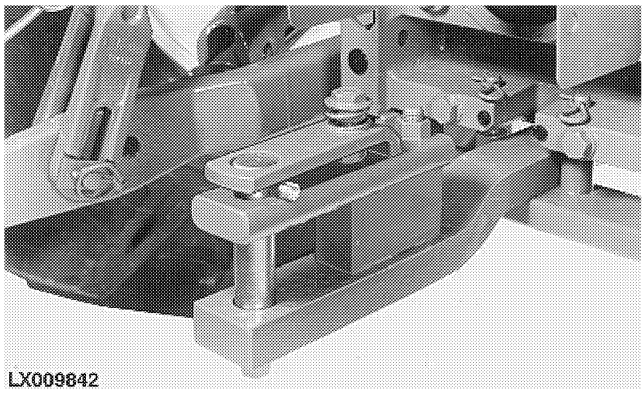
When bleeding the remote cylinder, also check for leaks.

IMPORTANT: If the implement has a locking device to hold it raised during transport, be sure to disengage the lock before operating the cylinder. See your implement operator's manual.



AG,OU12401,143 –19–20MAR00–1/1

Swinging Drawbar



The swinging drawbar is used to pull drawn equipment of all types, particularly PTO-driven implements.

The drawbar hitch is located so as to increase the rear axle load and at the same time slightly reduce load on the front axle.

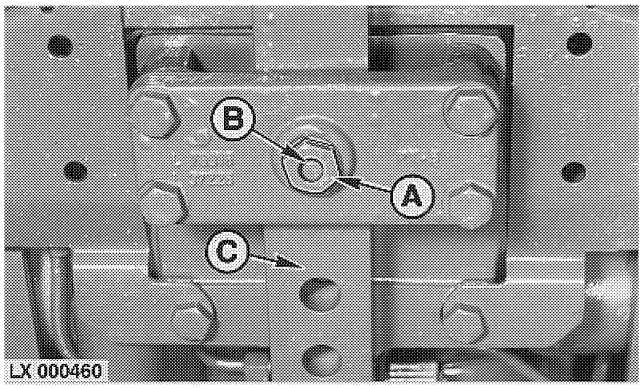
Besides having a variable swinging range, the drawbar can also be adjusted lengthwise.

Maximum permissible drawbar loads are stated in the “Specifications” section.

NOTE: Towing on public roads with the swinging drawbar set to one side is not permitted!

AG,OU12401,163 –19–23MAR00–1/1

Lengthwise Adjustment of Drawbar



The swinging drawbar can be adjusted to four different positions:

250 mm (9.8 in.), 350 mm (13.8 in.), 400 mm (15.7 in.) and 550 mm (21.7 in.).

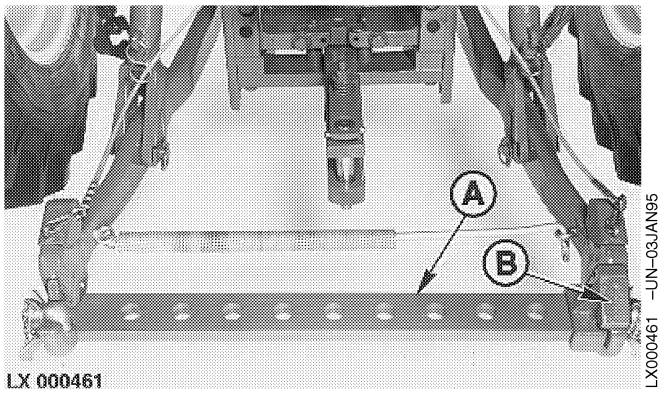
These lengths determine the distance from the end of the PTO shaft to the attachment point of the swinging drawbar.

1. Remove hex. stopper (A).
2. Remove locking pin (B).
3. Shift drawbar (C) to desired position and reinstall locking pin.
4. Tighten hex. stopper (A) to 250 N•m (185 lb-ft).

AG,OU12401,224 –19–07APR00–1/1

Tool Bar for 3-Point Hitch

Tool bar (A) is suitable for attaching lightweight category II implements. It may be secured to the draft links by means of clamps (B) either rigidly or so that it is free to turn.

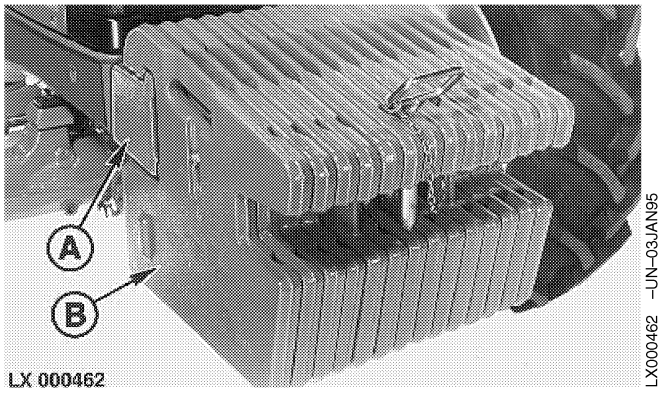


LX,OZUS 000342 –19–01OCT90–1/1

Front Jaw Hitch

A jaw hitch is integrated into basic weight (A) and the additional ballast weights (B).

IMPORTANT: The jaw hitch should be used for shunting and towing on metalled road surfaces only.



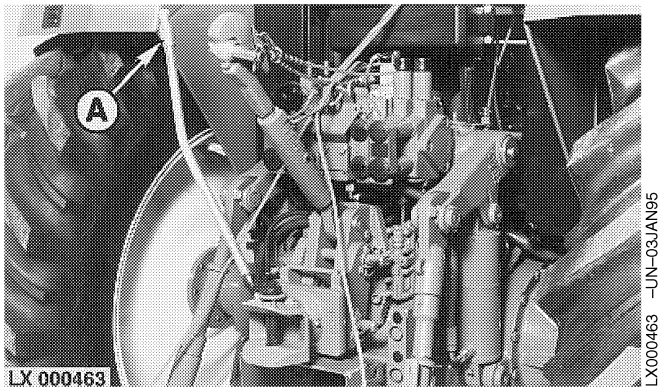
LX,OMZUS 013407 –19–01SEP97–1/1

Swinging Trailer Hitch

Trailer hitch pin (A) can be removed from the operator's seat.

IMPORTANT: Use trailer hitches with a towing eye diameter of 40 mm (1-37/64 in.) only.

Maximum permissible drawbar loads are stated in the "Specifications" section.



AG,OU12401,225 –19–07APR00–1/1

Height Adjustable Trailer Hitch

The tractor can be equipped with four different hitch versions (1-4) which are operated in different ways.

The height of all hitches can be adjusted using lever (A).

On hitch (1) the hitch pin is operated using handle (B).

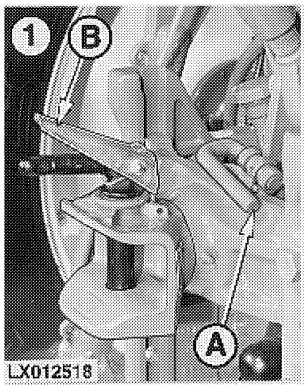
Hitches (2-4) can be opened by means of lever (C).

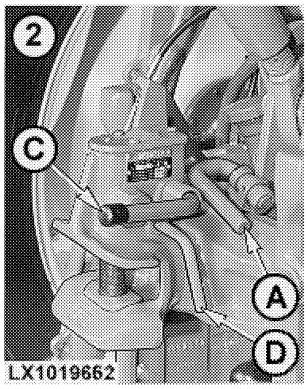
Hitches (2-4) are closed when the trailer towing eye enters the hitch. Hitch (2) can also be closed by means of lever (D). Hitches (3-4) can also be closed by means of lever (C).

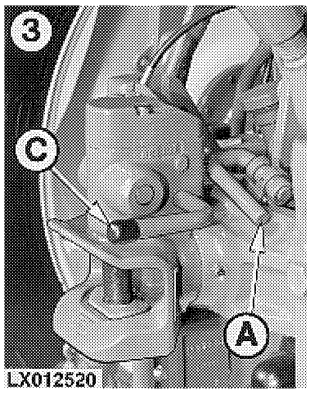
IMPORTANT: Use only trailer hitches with a towing eye diameter of 40 mm ($1^{37}/_{64}$ in.).

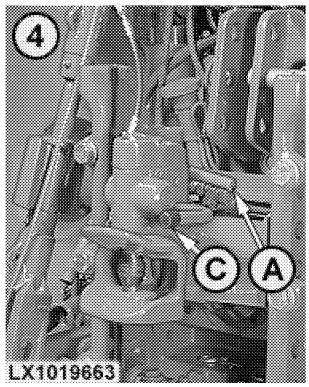
Maximum permissible drawbar loads are stated in the “Specifications” section.

A—Height adjustment lever
B—Hitch pin handle
C—Operating lever
D—Closing lever





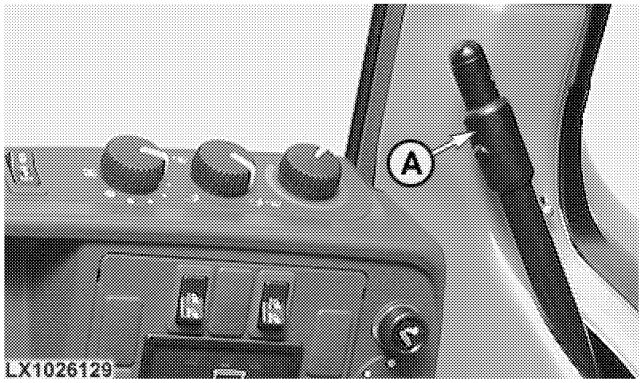




LX,OMZUS 020579 –19–01SEP99–1/1

Remote Control (If Equipped)

The height-adjustable trailer hitch can be opened from the operator’s seat via lever (A).



OU12401,0000913 –19–01MAY01–1/1

Pick-Up Hitch

This type of hitch can be operated via the rockshaft and one selective control valve.

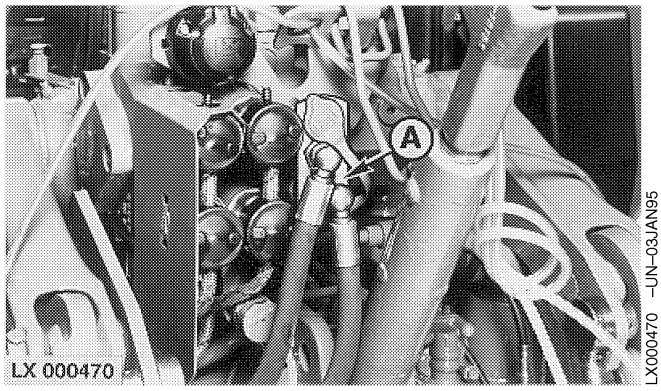
1. Take hydraulic hoses out of holder (A) and connect them to one of the quick-couplers.
2. Raise draft links to maximum height and use SCV to retract the hitch hook fully.
3. Pull the release lever (B) and hold it until the hitch hook has moved from the stored position (lever remains in "open" position).
4. Extend the hitch hook fully by actuating the selective control valve.
5. Lower draft links/hitch hook to desired height.
6. Raise draft links to engage hitch hook in trailer towing eye, then continue to raise the hitch fully.
7. Retract the hitch hook fully by means of selective control valve until it is **fully locked** (lever (B) returns to its starting position).
8. Lower the draft links.
9. Check that the hitch is completely locked. It will **not lower** when the draft links are lowered and **not extend** when the selective control valve is operated.

CAUTION: Before driving away, make sure the hitch is fully raised and locked in both horizontal and vertical positions.

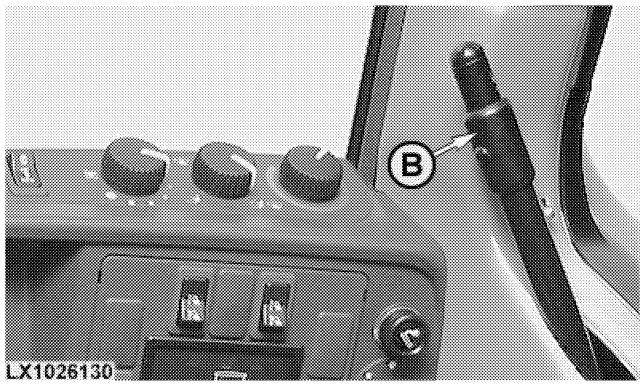
With the hitch lowered, NEVER reach into the receiver opening (see arrow). Risk of injury!

Maximum permissible drawbar loads are stated in the “Specifications” section.

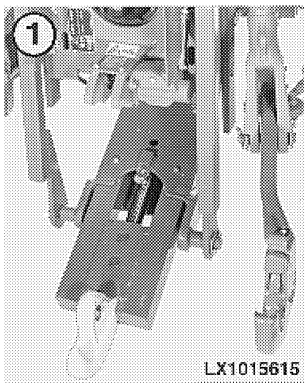
1—Hitch in position for attaching trailer
2—Hitch in stored position



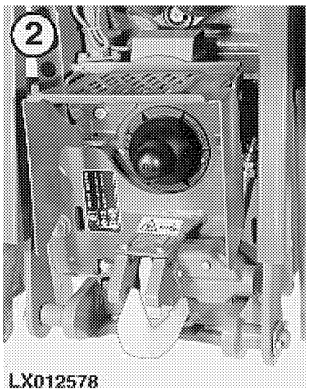
LX000470 –UN–03JAN95



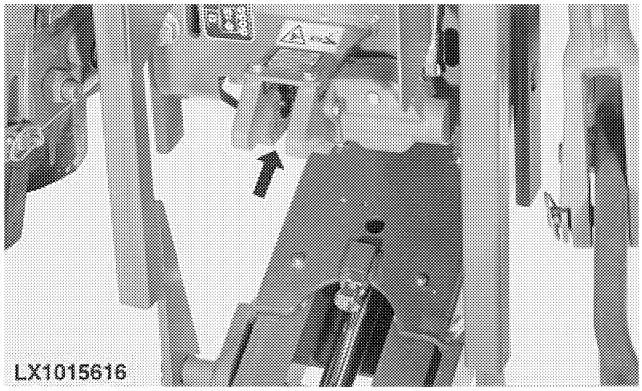
LX1026130 –UN–21MAY01



LX1015615 –UN–11DEC96



LX012578 –UN–03SEP96



LX1015616 –UN–11DEC96

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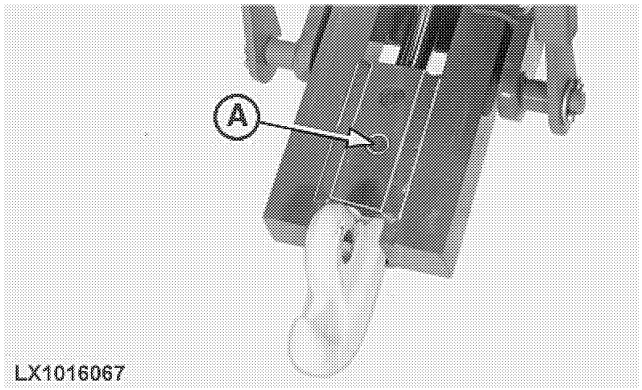
Hook of pick-up hitch can be replaced by a drawbar without the use of tools. Lift out pin (A).

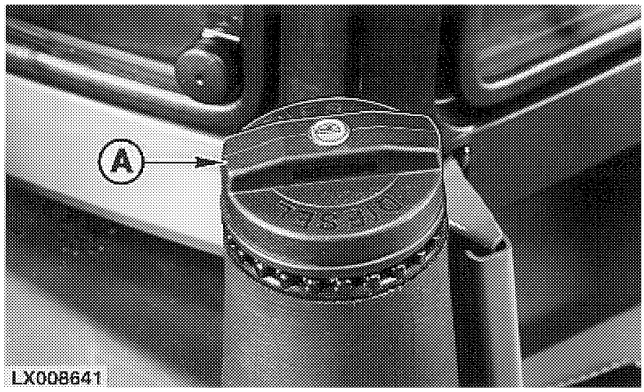
The part not required can be stored in a holder on the side-frame.



AG,OU12401,226 –19–01MAY01–2/2

Lockable Tank Filler Cap

The tractor can be equipped with a lockable tank filler cap (A).



LX,OZUS 006337 –19–01JUN94–1/1

Transporting the Tractor

A disabled tractor is best transported on a flatbed carrier.

LX,TRANSP000332 –19–01SEP92–1/1

Towing the Tractor

CAUTION: Never tow the tractor at a speed greater than 10 km/h (6 mph).

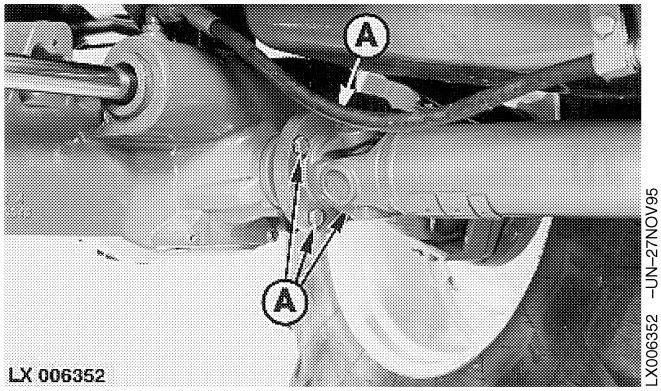
Shift both range and reverse drive levers to neutral position.

Make sure that the oil level in the transmission is between the marks on the dipstick. If the tractor is to be towed with the front wheels raised, observe the following points:

- Never raise the wheels more than 30 cm (12 in.).
- For every 15 cm (6 in.) that the front wheels are raised, add 4 liter (1 U.S. gal.) of transmission/hydraulic oil to the transmission.
- When towing is completed, drain off the excess oil.

IMPORTANT: If the engine is running, switch off front-wheel drive. If the engine is not running, disconnect universal-jointed drive shaft by taking out screws (A). This prevents excessive wear on the tires.

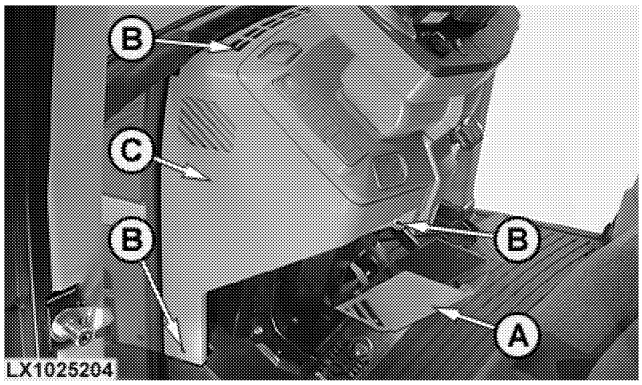
IMPORTANT: The jaw hitch at the front weights may be used for towing on metalled roads only.



LX006352 –UN–27NOV95

OU12401,0000555 –19–01DEC00–1/1

Manual Park Lock Release (Tractors with AutoPowr)



CAUTION: Perform the manual park lock release procedure only when the tractor needs to be towed and the park lock cannot be released normally.

CAUTION: The reverse drive lever must be in the corner Park position “P” in order to manually release the park lock.

CAUTION: The tractor must never be operated (even for short test drives) when the park lock is manually released.

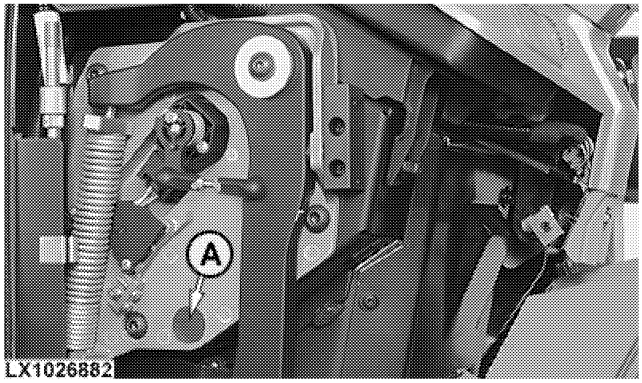
CAUTION: The tractor can roll away when the park lock is disengaged. Secure the tractor so that it cannot roll either forwards or backwards.

CAUTION: After towing, the manual park lock release cable must be reconnected.

1. Fold back the cup holder (B).
2. Remove mounting screws (B) and take out trim (C).

AG,OU12401,367 –19–01MAY01–1/7

3. Take plug (A) out of the threaded bore.



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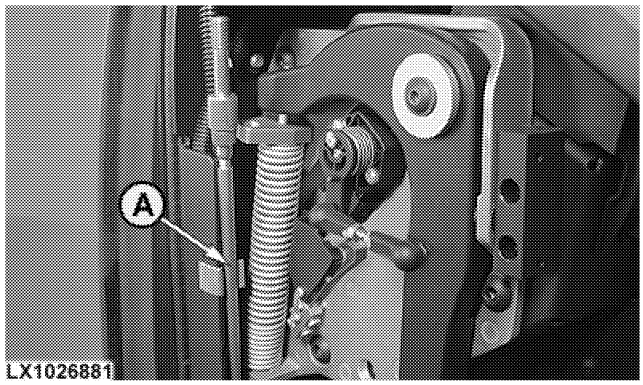
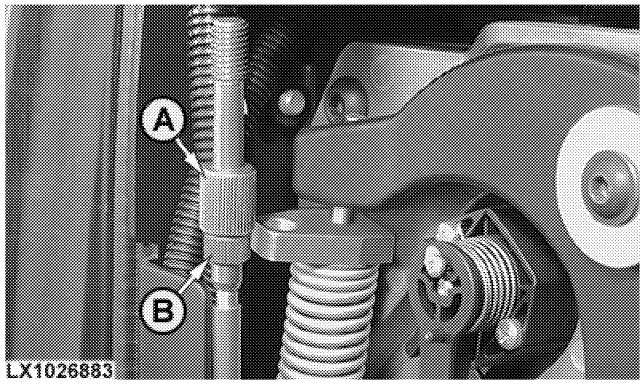
AG,OU12401,367 –19–01MAY01–2/7

4. Disconnect bowden cable (A) from the clamp.



AG,OU12401,367 –19–01MAY01–3/7

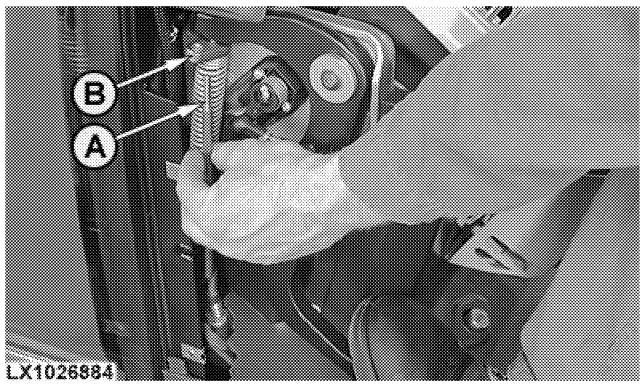
5. Unscrew threaded stud (A) and knurled nut (B).

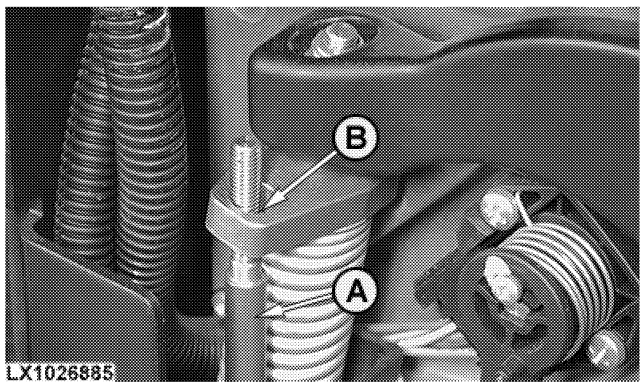


AG,OU12401,367 –19–01MAY01–4/7

6. Slightly depress the clutch pedal.

7. Thread the bowden cable (A) through the eye (B) on the clutch pedal or adapter.





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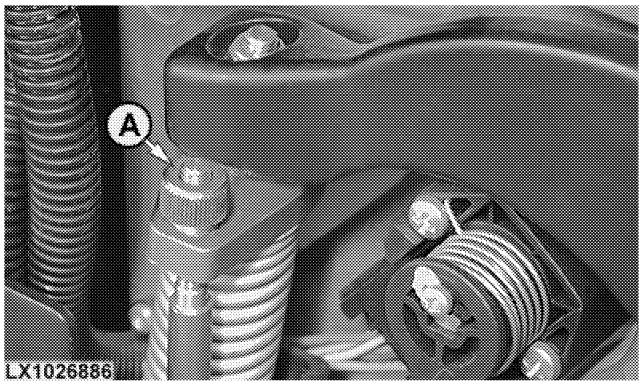
AG,OU12401,367 –19–01MAY01–5/7

8. Adjusting cable with knurled nut (A) until all slack is removed. Knurled section must be uppermost.

IMPORTANT: The cable must be tight in order to assure complete release of the park lock.

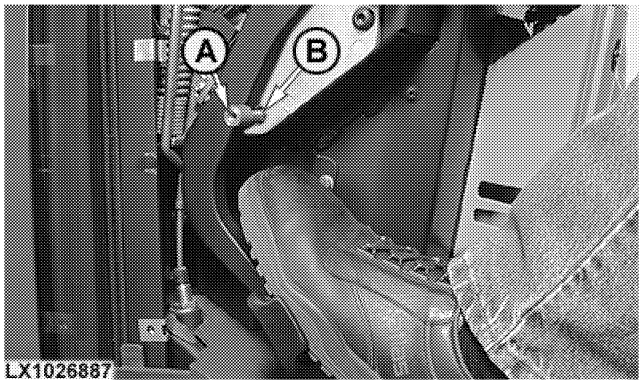


AG,OU12401,367 –19–01MAY01–6/7

9. Fully depress clutch pedal.

IMPORTANT: If the clutch pedal cannot be depressed to the stop and the threaded stud cannot be adjusted further, unscrew the knurled nut until the clutch pedal can be depressed against its stop.

10. Screw threaded stud (A) into opening (B) in order to secure the clutch in this position and maintain the park lock in the released position.

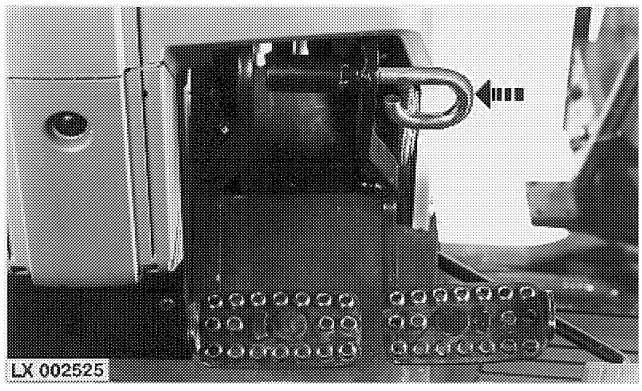


AG,OU12401,367 –19–01MAY01–7/7

Driving on Public Roads

Check that the lights are working properly before driving on public roads.

Use the coupler to lock the brake pedals together.



LX,TRANSP003033 –19–01MAY92–1/1

Fuel, Lubricants, Hydraulic Oil and Coolant

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.

In all cases, the fuel shall meet the following properties:

Cetane number of 40 minimum. Cetane number greater than 50 is preferred, especially for temperatures below -20°C (-4°F) or elevations above 1500 m (5000 ft).

Cold Filter Plugging Point (CFPP) below the expected low temperature OR **Cloud Point** at least 5°C (9°F) below the expected low temperature.

Fuel lubricity should pass a minimum of 3100 gram load level as measured by the BOCLE scuffing test.

Sulfur content:

- Sulfur content should not exceed 0.5%. Sulfur content less than 0.05% is preferred.
- If diesel fuel with sulfur content greater than 0.5% sulfur content is used, reduce the service interval for engine oil and filter by 50%.
- DO NOT use diesel fuel with sulfur content greater than 1.0%

Bio-diesel fuels to DIN 51606 or an equivalent standard (RME) etc. should be used only after consultation with your John Deere dealer.

NOTE: If the injection pump has been adapted for bio-diesel fuel (RME), the tractor can be used in temperatures as low as -10°C. If the tractor is operated frequently at temperatures of around -10°C or lower and the fuel used is either bio-diesel or normal diesel, the engine oil level should be checked every day before the engine is started. If the oil level is 10 mm higher than the max. level, a change of oil is required. Oil change intervals should be reduced when operating in low temperatures under the conditions described above.

Do NOT mix used engine oil or any other type of lubricant with diesel fuel.

LX,FUEL1 –19–01DEC00–1/1

Handling and Storing Diesel Fuel

CAUTION: Handle fuel carefully. Do not fill the fuel tank when engine is running.

DO NOT smoke while you fill the fuel tank or service the fuel system.

Fill the fuel tank at the end of each day's operation to prevent condensation and freezing during cold weather.

IMPORTANT: The fuel tank is vented through the filler cap. If a new filler cap is required, always replace it with an original vented cap.

When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel and prevent water condensation. Contact your fuel supplier for recommendations.

DX,FUEL4 –19–18MAR96–1/1

Diesel Engine Break-In Oil

New engines are filled at the factory with John Deere ENGINE BREAK-IN OIL. During the break-in period, add John Deere ENGINE BREAK-IN OIL as needed to maintain the specified oil level.

Change the oil and filter after the first 100 hours of operation of a new or rebuilt engine.

After engine overhaul, fill the engine with John Deere ENGINE BREAK-IN OIL.

If John Deere ENGINE BREAK-IN OIL is not available, use a diesel engine oil meeting one of the following during the first 100 hours of operation:

- API Service Classification CE
- ACEA Specification E1

After the break-in period, use John Deere PLUS-50® or other diesel engine oil as recommended in this manual.

IMPORTANT: Do not use PLUS-50 oil or engine oils meeting API CH-4, API CG4, API CF4, ACEA E3, or ACEA E2 performance levels during the first 100 hours of operation of a new or rebuilt engine. These oils will not allow the engine to break-in properly.

PLUS-50 is a registered trademark of Deere & Company.

DX,ENOIL4 –19–24JAN00–1/1

Diesel Engine Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oil is preferred:

John Deere PLUS-50®

The following oil is also recommended:

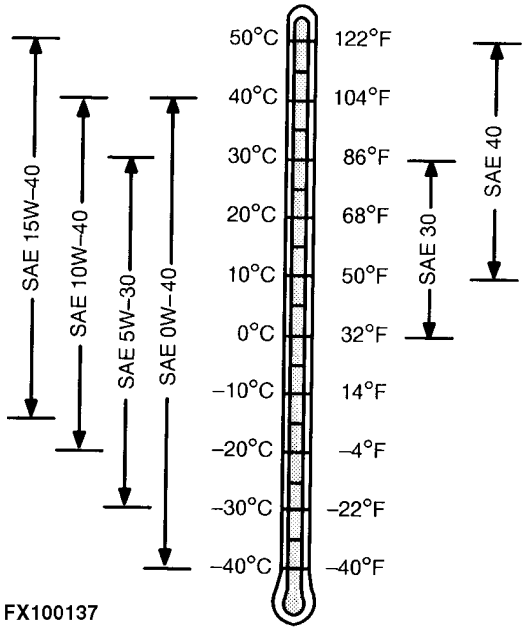
John Deere TORQ-GARD SUPREME®

Other oils may be used if they meet one or more of the following:

- API Service Classification CG-4
- API Service Classification CF-4
- ACEA Specification E3
- ACEA Specification E2

Multi-viscosity diesel engine oils are preferred.

If diesel fuel with sulfur content greater than 0.5% is used, reduce the service interval by 50%.



FX100137 –UN–25SEP97

PLUS-50 is a registered trademark of Deere & Company
TORQ-GARD SUPREME is a registered trademark of Deere & Company

LX,ENOIL –19–01MAY01–1/1

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 HY-GARD® with low viscosity

Other oils may be used if they meet one or more of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

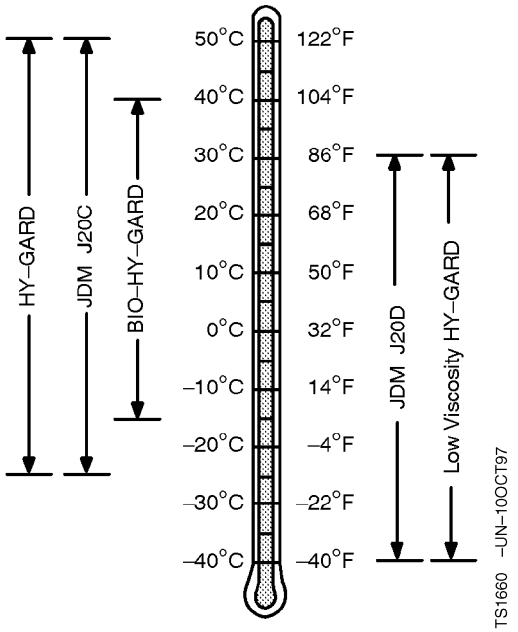
Use John Deere oil BIO-HY-GARD®[1] when a biodegradable fluid is required.

IMPORTANT: On tractors with AutoPowr:

Do NOT use HY-GARD with low viscosity.

Do NOT use BIO-HY-GARD.

Other types of oil used must meet John Deere Standard JDM J20C.



HY-GARD is a registered trademark of Deere & Company.
BIO-HY-GARD is a registered trademark of Deere & Company.

[1]BIO-HY-GARD meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. BIO-HY-GARD should not be mixed with mineral oils because this reduces the biodegradability and makes proper oil recycling impossible.

LX,ANTI –19–01DEC00–1/1

Front Wheel Drive Axle Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oil is preferred:

John Deere HY-GARD®

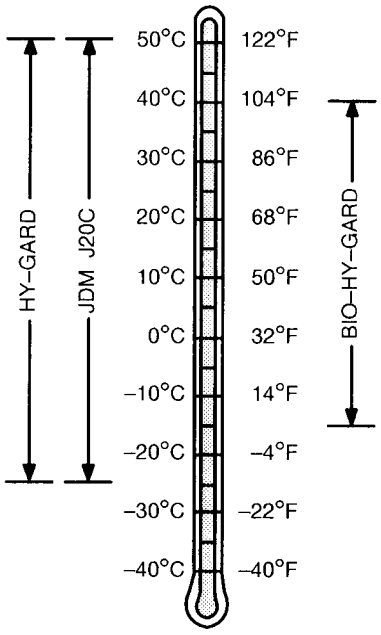
Other oils may be used if they meet the following:

John Deere Standard JDM J20C

Use the following oil when a biodegradable fluid is required:

John Deere BIO-HY-GARD™[1]

NOTE: In axles with brake DO NOT use BIO-HY-GARD oil.



FX100118 –UN–17JUN96

HY-GARD is a trademark of Deere & Company.
BIO-HY-GARD is a trademark of Deere & Company.

[1]BIO-HY-GARD meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. BIO-HY-GARD should not be mixed with mineral oils because this reduces the biodegradability and makes proper oil recycling impossible.

AG,OU12401,115 –19–08FEB00–1/1

Grease

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

The following greases are preferred:

- John Deere SD POLYUREA GREASE

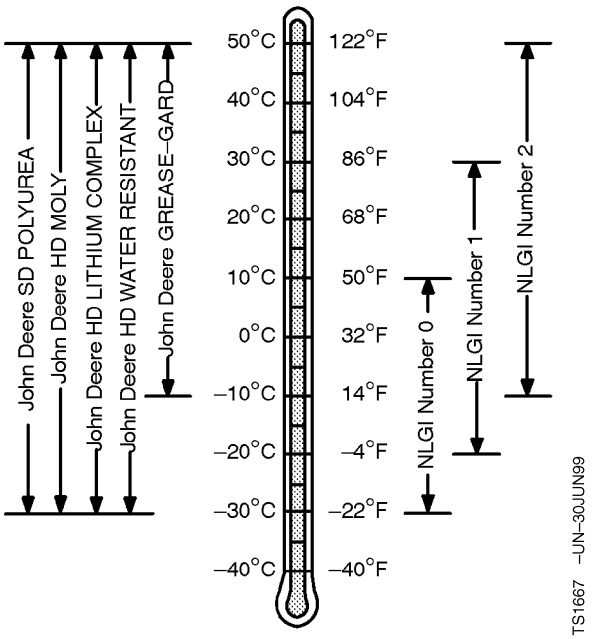
The following greases are also recommended:

- John Deere HD MOLY GREASE
- John Deere HD LITHIUM COMPLEX GREASE
- John Deere HD WATER RESISTANT GREASE
- John Deere GREASE-GARD

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB

IMPORTANT: Some types of grease thickener are not compatible with others. Consult your grease supplier before mixing different types of grease.



DX,GREA1 –19–24JAN00–1/1

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

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Whenever possible, 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 –19–18MAR96–1/1

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

Diesel Engine Coolant

The engine cooling system is filled to provide year-round protection against corrosion and cylinder liner pitting, and winter freeze protection to -37°C (-34°F).

John Deere COOL-GARD is preferred for service.

If John Deere COOL-GARD is not available, use a low silicate ethylene glycol base coolant concentrate in a 50% mixture of concentrate with quality water.

The coolant concentrate shall be of a quality that provides cavitation protection to cast iron and aluminum parts in the cooling system. John Deere COOL-GARD meets this requirement.

A 50% mixture of ethylene glycol engine coolant in water provides freeze protection to -37°C (-34°F). If protection at lower temperatures is required, consult your John Deere dealer for recommendations.

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

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Coolant Drain Intervals

Drain the factory fill engine coolant, flush the cooling system, and refill with new coolant after the first 3 years or 3000 hours of operation. Subsequent drain intervals are determined by the coolant used for service. At each interval, drain the coolant, flush the cooling system, and refill with new coolant.

When John Deere COOL-GARD is used, the coolant drain interval is 3 years or 3000 hours of operation.

If COOL-GARD is not used, the drain interval is reduced to 2 years or 2000 hours of operation.

DX,COOL8 –19–12FEB99–1/1

Operating in Warm Temperature Climates

John Deere engines are designed to operate using glycol base engine coolants.

Always use a recommended glycol base engine coolant, even when operating in geographical areas where freeze protection is not required.

IMPORTANT: Water may be used as coolant *in emergency situations only.*

Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation will occur when water is used as the coolant, even when coolant conditioners are added.

Drain cooling system and refill with recommended glycol base engine coolant as soon as possible.

DX,COOL6 –19–18MAR96–1/1

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 both conventional and synthetic oils.

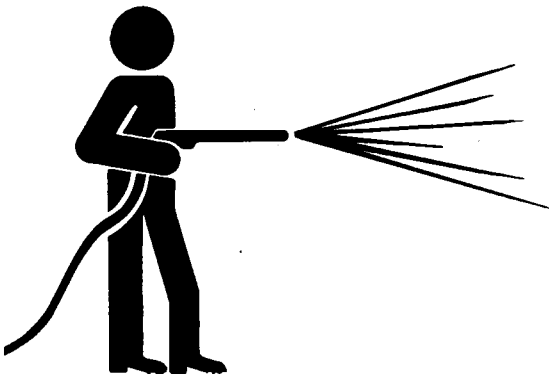
Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER –19–15JUN00–1/1

Lubrication and Periodic Service

Using High-Pressure Washers

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.



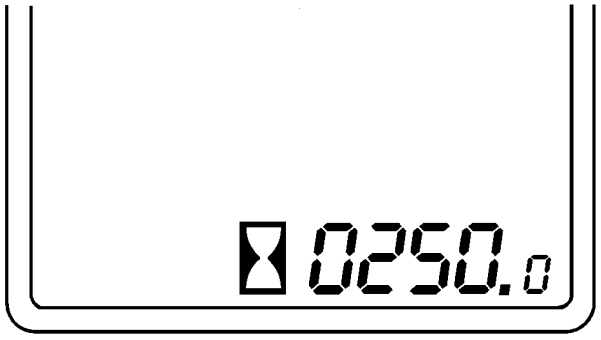
T6642EJ –UN–18OCT88

FX,CLEAN –19–06FEB95–1/1

Lubrication and Periodic Service

CAUTION: Do not lubricate or adjust the tractor while the engine is running unless recommended to do so.

The intervals at which the various parts should be checked, lubricated, serviced or adjusted are based on the actual hours of operation as shown on the hour meter. The meter operates whenever the engine is running and shows the accumulated hours of engine operation.



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LX1017686 –UN–01OCT97

Every 250 hours, an acoustic warning signal goes off as the engine starts (for five consecutive engine starts). This reminds the operator that service work is due.

Always check to make sure that the hour meter is serviceable.

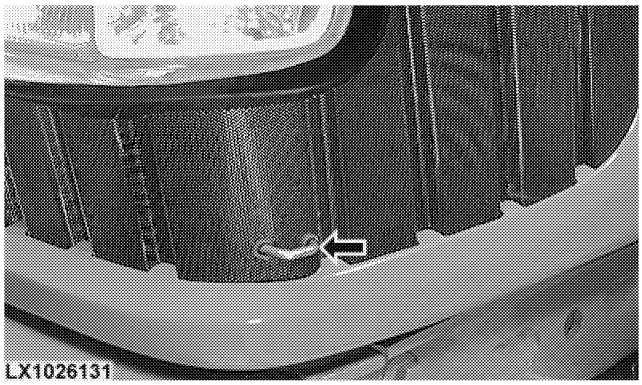
The lubrication and periodic service intervals are for normal working conditions. These intervals should be shortened when operating under adverse conditions.

IMPORTANT: After servicing, cleaning or repairing your tractor, reinstall any safety guards or shields before operating the tractor again.

LX,OMSCH 013329 –19–01SEP97–1/1

Opening the Hood

Pull catch (A) and lift the hood up.



OU12401,0000915 –19–01MAY01–1/1

Access to Battery

The battery is located in front of the radiator. To gain access, open the hood.

OU12401,0000916 –19–01MAY01–1/1

Access to Fuses

The fuses are located behind the operator's seat.

OU12401,0000917 –19–01MAY01–1/1

Important Instructions Regarding Alternator

NOTE: The alternator is equipped with overvoltage protection.

If engine is to be run for a short time without battery (using a slave battery for starting), do not run engine at a speed above 1000 rpm. Switch on an additional consumer (lights) while engine is running.

With the battery removed and when starting by means of a slave battery, insulate the battery end of the disconnected starter cable in order to avoid damage to the alternator and regulator.

Slave battery cables must be connected only to the poles provided for this purpose.

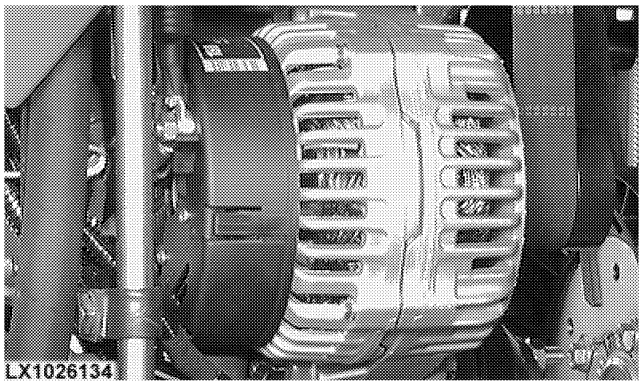
With the engine running, do not short-circuit or ground the alternator and regulator even momentarily.

Connect battery and charger with the correct polarity. If they are improperly connected (“+” and “-”), the rectifier diodes will be destroyed immediately.

Before carrying out any electrical welding jobs on the tractor, disconnect both cables at alternator.

Connect ground terminal of welding apparatus directly to the part being welded.

Before carrying out repairs on electrical system, disconnect battery ground strap. This will avoid the danger of a short circuit.



LX1026134 –UN–21MAY01

OU12401,0000918 –19–01MAY01–1/1

Daily or Every 10 Hours

Description	Service	Lubricant
Engine	Check oil level.	Engine oil
Fuel filter	Drain water and sediment.	
Compressed air system	Check; drain water from tank.	
Lights	Check lights are functioning properly.	
Front axle and front wheels	Lubricate (only necessary when operating in extremely wet and muddy conditions).	Multipurpose grease
Rear axle	Lubricate (only necessary when operating in extremely wet and muddy conditions).	Multipurpose grease
Three-point hitch	Lubricate (only necessary when operating in extremely wet and muddy conditions).	Multipurpose grease
Pick-up hitch	Lubricate (only necessary when operating in extremely wet and muddy conditions, or if the pick-up hitch is used frequently).	Multipurpose grease
Transmission and hydraulic system	Check oil level (only necessary if the tractor is driving external hydraulic equipment).	

OU12401,000091A –19–01MAY01–1/1

After the First 100 Hours

Description	Service	Lubricant
Engine	Drain and refill with fresh oil (see "Service - Every 500 Hours").	Engine oil
Engine oil filter	Replace filter element. Replace with a John Deere element (see "Service - Every 250 Hours").	
Pick-up hitch	Tighten attaching bolts; check hitch functions correctly (see "Service - Every 250 Hours").	
Air intake hoses	Check connections for leaks (see "Service - Every 500 Hours").	
Transmission/hydraulic oil filter	Replace filter elements (see “Service - Every 500 Hours” on tractors with AutoPowr or “Service - Every 750 Hours” on other tractors).	
Front axle	Drain and refill with fresh oil (see "Service - Every 1500 Hours").	John Deere HY-GARD®

HY-GARD is a trademark of Deere & Company.

OU12401,000091B –19–01MAY01–1/1

Every 250 Hours

Description	Service	Lubricant
Transmission and hydraulic system	Check oil level.	
Battery	Check level of electrolyte	
Front axle and front wheels	Lubricate.	Multipurpose grease
Front-wheel drive	Lubricate front axle and drive shaft. Check oil level in axle housing and final drives.	Multipurpose grease
Three-point hitch	Lubricate.	Multipurpose grease
Wagon hitch	Lubricate; check hitch functions correctly.	Multipurpose grease
Pick-up hitch	Lubricate; tighten attaching bolts; check hitch functions correctly.	Multipurpose grease
Neutral start circuit	Check circuit functions correctly.	
Wheel retaining bolts	Tighten to prescribed torque.	

OU12401,000091C –19–01MAY01–1/1

Every 500 Hours

(In addition carry out 10 hour and 250 hour services)

Description	Service	Lubricant
Engine	Drain and refill with fresh oil.	Engine oil
Engine crankcase filter	Replace filter element. Replace with a John Deere element.	
Transmission/hydraulic oil filter *	Replace filter element.	
Fuel filter	Replace filter element.	
Fuel tank	Drain residue.	
Rear axle bearings	Lubricate.	Multipurpose grease
Air intake hoses	Check connections for leaks.	
ULTRA-GARD™ cab air filter	Replace inserts (see "Service / As Required").	
Engine	Check ground connection.	

* Tractors with AutoPowr only

ULTRA-GARD is a trademark of Deere & Company.

OU12401,000091D –19–01MAY01–1/1

Every 750 Hours

(In addition carry out 10 and 250 hour services)

Description	Service	Lubricant
Transmission/hydraulic oil filter *	Replace filter elements.	
Front PTO	Change filter.	
FWD final drives	Drain and refill with fresh oil (axles with brakes only).	John Deere HY-GARD
Engine speeds	Check engine speeds (have speeds adjusted by your John Deere dealer).	

* Tractors NOT equipped with AutoPowr

OU12401,000091E –19–01MAY01–1/1

Once Every Year

Description	Service	Lubricant
Seat belt	Check seat belt and seat belt attachment for signs of wear.	

OU12401,0000533 –19–17NOV00–1/1

Every 1000 Hours

(In addition carry out 10, 250, and 500 hour services)

Description	Service	Lubricant
Transmission and hydraulic system *	Drain and refill with fresh oil.	John Deere HY-GARD
Cab suspension	Have accumulators checked by your John Deere dealer.	

* Tractors with AutoPowr only

OU12401,0000549 –19–01MAY01–1/1

Every 1500 Hours or Every Two Years

(In addition carry out 10, 250, 500 and 750 hour services)

Description	Service	Lubricant
Front axle (tractors with FWD)	Drain and refill with fresh oil.	John Deere HY-GARD
Transmission and hydraulic system *	Drain and refill with fresh oil, and clean intake screen.	John Deere HY-GARD
Engine air cleaner and cab air filters	Replace air cleaner and cab air filters (see “Service / As Required”).	
Front PTO	Drain and refill with fresh oil, and change the filter.	John Deere HY-GARD

* Tractors NOT equipped with AutoPowr

OU12401,000091F –19–01MAY01–1/1

Every 2000 Hours

(In addition carry out 10, 250, 500 and 1000 hour services)

Description	Service	Lubricant
Valves	Have valve tappet clearances checked by your John Deere dealer.	

OU12401,0000920 –19–01MAY01–1/1

Every 3000 Hours or Every 3 Years

(In addition carry out 10, 250, 500, 750 and 1500 hour services)

Description	Service	Lubricant
Cooling system *	Drain, flush and refill. Check thermostat.	
TLS front axle	Have accumulators checked by your John Deere dealer.	

* If John Deere COOL-GARD is not used, the drain interval is reduced to 2 years or 2000 hours of operation.

OU12401,0000921 –19–01MAY01–1/1

As Required

Description	Service	Lubricant
Cab air filters	Clean out dust deposits.	
Air cleaner and cab air filters	Clean.	
Radiator	Clean.	
Air-conditioning system	Check refrigerant level. Check that it functions properly.	
Fuel system	Check fuel filter; bleed system.	
Brakes	Bleed footbrakes and adjust handbrake.	
Tires	Check tire pressure.	
Lubrication points	Lubricate, if tractor has been washed with high-pressure water.	Multipurpose grease
Battery	Check concentration of electrolyte.	
Fuses	Replace.	
Front wheel bearings (tractors without FWD)	Have bearings cleaned, lubricated and adjusted by your John Deere dealer.	
Injection nozzles and pump	Have these checked by your John Deere dealer.	

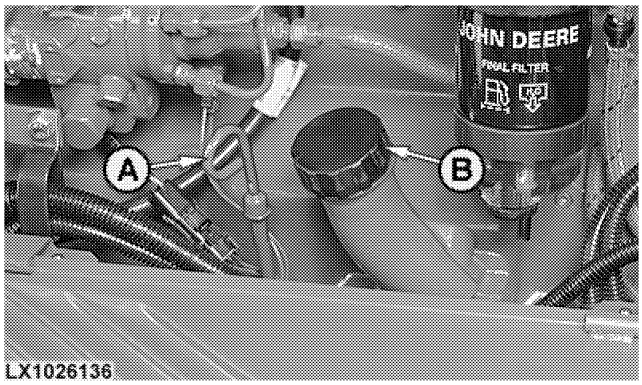
OU12401,0000922 –19–18MAY01–1/1

Checking the Engine Oil Level

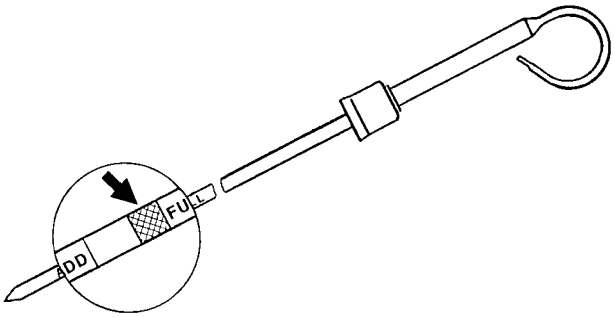
If oil level is at or below the “Add” mark on the dipstick, add sufficient oil to bring the level up to the top “XXX” mark.

Do not start engine if oil level is below the “Add” mark on the dipstick.

A—Dipstick
B—Oil filler cap



LX1026136 –UN–21MAY01



FD000047

FD000047 –UN–13MAR96

OU12401,0000923 –19–01MAY01–1/1

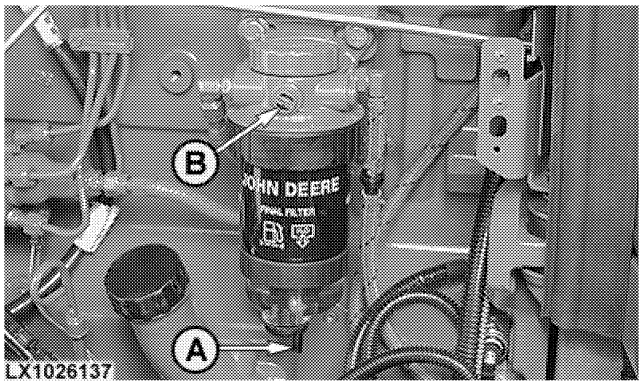
Checking the Fuel Filter

Should water or sediment deposits have settled in filter, proceed as follows:

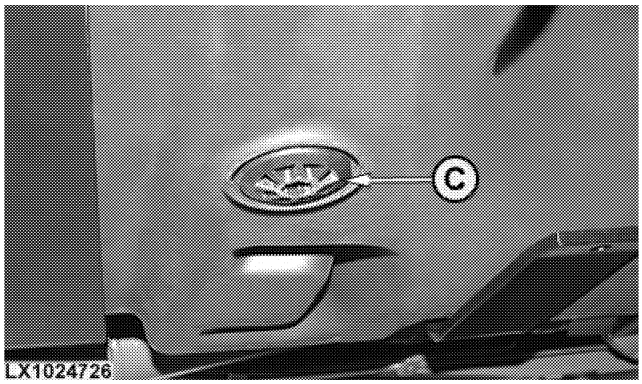
1. Loosen drain screw (A) and vent screw (B).
2. Retighten both screws as soon as water and sediment deposits have drained out.
3. Turn key in main switch to the right as far as the first switch position so that the fuel transfer pump is operating. Keep the pump running for approx. 20 seconds.

If water was present in fuel filter, then use a 1/2-inch square-section key to slacken off the drain screw (C) under the fuel tank by one turn. After draining off any water deposits, retighten drain screws until they are hand-tight.

A—Drain screw
B—Vent screw
C—Drain screw (fuel tank)



LX1026137 –UN–21MAY01

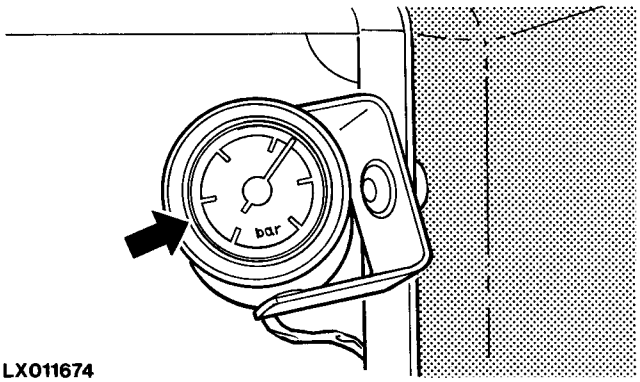


LX1024726 –UN–06NOV00

OU12401,0000924 –19–01MAY01–1/1

Checking and Draining the Compressed Air Trailer Brake System

With the engine shut off and the pressure in the tank at 800 kPa (8 bar; 116 psi), no drop in pressure should be registered over a period of three minutes. If a drop in pressure is detected, see your John Deere dealer.



LX011674

LX011674 –UN–05OCT95

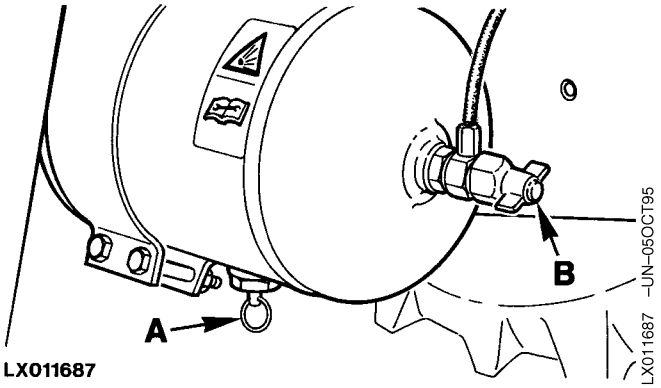
Continued on next page

LX,OWART 004854 –19–01MAR00–1/2

Pull ring (A) to drain water from the air tank.

The air tank is also equipped with a connection (B) for inflating tires.

CAUTION: The full pressure of the air tank 800 kPa (8 bar; 116 psi) is present at the tire inflation connection. Do NOT over-inflate the tires!



LX011687

LX,OWART 004854 –19–01MAR00–2/2

Checking on Lights

Check that the lights are operating correctly, especially before driving on public roads.

Comply with all legal regulations.

LX,LICHT 002082 –19–01FEB92–1/1

Other Service Jobs

If the tractor is used to power external hydraulic equipment, check the level of the transmission/hydraulic oil.

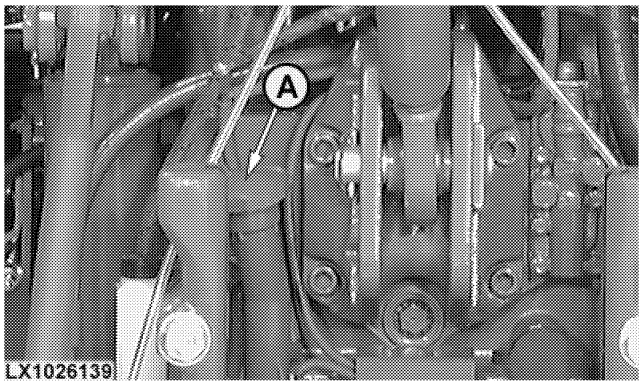
If operating the tractor in extremely wet and muddy conditions, lubricate the following:

- Front axle and front wheel drive shaft
- Rear axle
- Three-point hitch
- Pick-up hitch. The hitch will also need lubricating if it is used frequently.

These jobs are described in “Service - Every 250 Hours” and “Service - Every 500 Hours”.

LX,OWART 004023 –19–01SEP99–1/1

Checking Transmission/Hydraulic System Oil Level



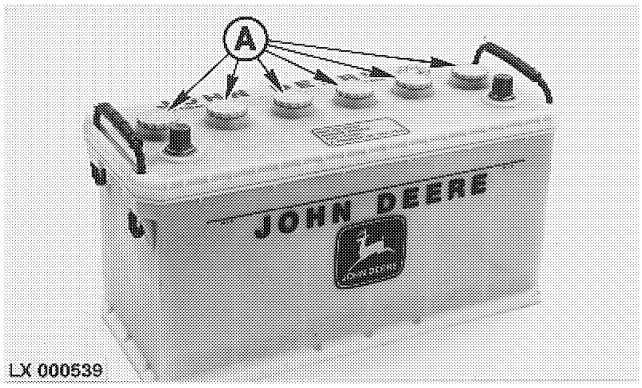
IMPORTANT: Check oil level when oil is cold, if possible in the morning after the tractor has been standing overnight.

1. Park tractor so that it is level.
2. Apply handbrake (transmission in neutral).
3. Lower draft links and front-mounted implements.
4. Unscrew dipstick (A), pull it out and wipe it clean.
5. Screw in dipstick fully, pull it out again and check the oil level.

Oil level should be between the marks on the dipstick. If it is not, top up with oil at the oil filler neck.

OU12401,0000926 –19–01MAY01–1/1

Checking Electrolyte Level Of Battery



Remove filler caps (A). Level of electrolyte should be above the mark. Top up with distilled water only.

Check that the vent holes in the battery caps are open at all times. If terminal connectors are corroded, remove corrosion with a stiff bristle brush and then coat the terminals with an acid-free grease.

AG,OU12401,241 –19–08APR00–1/1

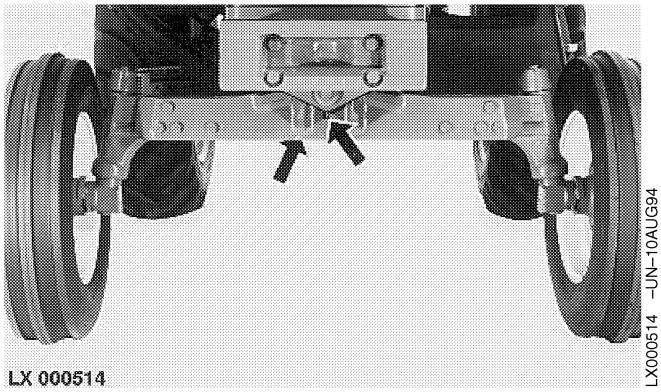
Lubricating Front Axle and Front Wheels

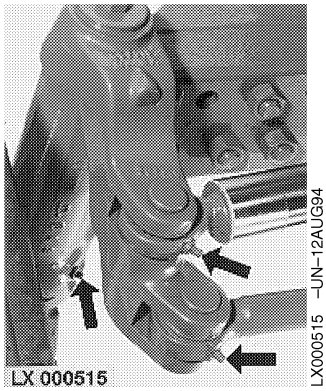
Tractors without front-wheel drive

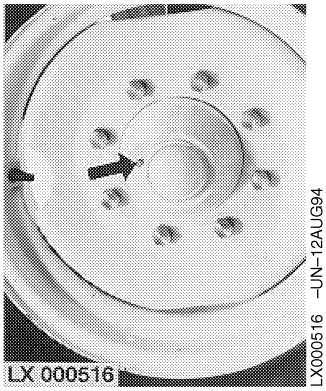
IMPORTANT: Carry out this service after every ten hours of operation when working under very wet and muddy conditions.

Lubricate front axle and front wheel grease fittings (these differ depending on tractor equipment) using John Deere multipurpose grease.

IMPORTANT: Thoroughly clean all grease fittings prior to greasing. Replace damaged grease fittings immediately.







AG,OU12401,242 –19–08APR00–1/1

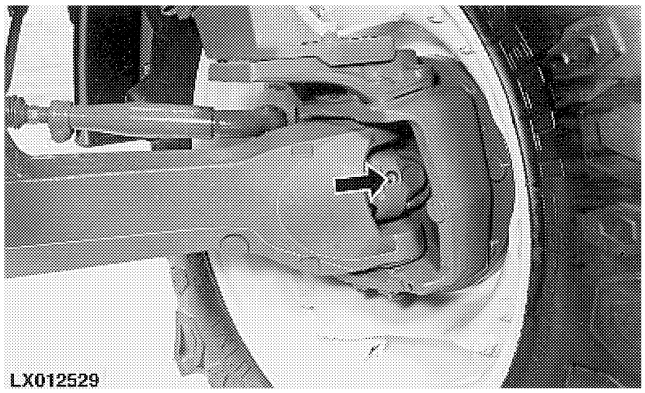
Lubricating Front Axle and Front Wheels

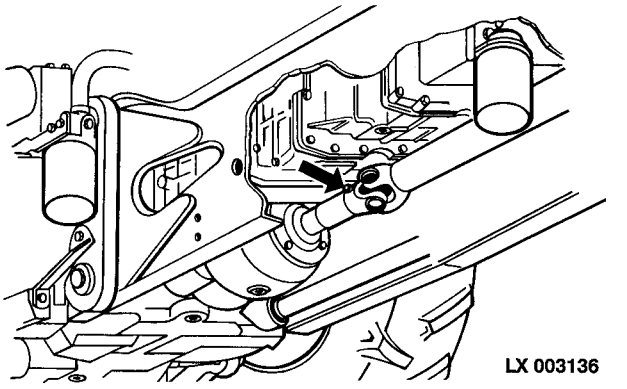
Tractors with front-wheel drive

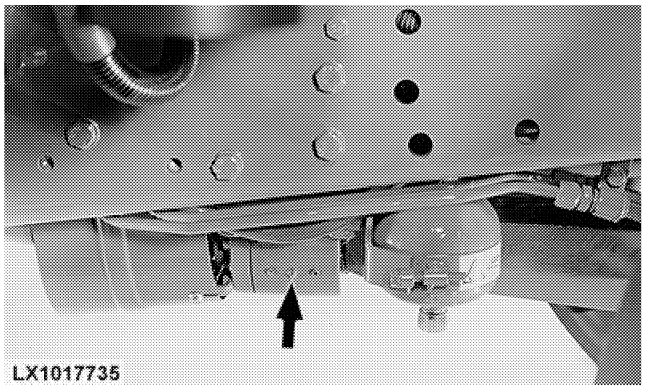
IMPORTANT: Carry out this service after every ten hours of operation when working under very wet and muddy conditions.

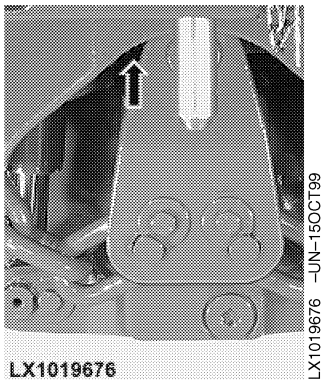
Lubricate front axle and front wheel grease fittings (these differ depending on tractor equipment) using John Deere multipurpose grease.

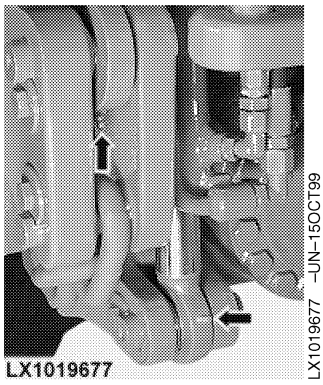
IMPORTANT: Thoroughly clean all grease fittings prior to greasing. Replace damaged grease fittings immediately.









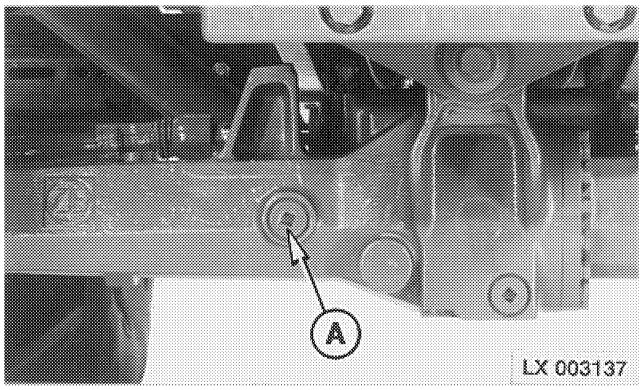


AG,OU12401,243 –19–08APR00–1/1

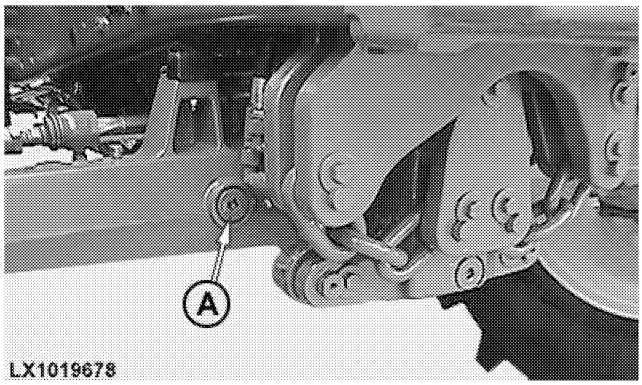
Checking Oil Level in MFWD Axle Housing

Remove level plug (A). Oil should be level with plug bore. If necessary, top up with oil. Tighten level plug to 150 N•m (110 lb-ft). Always use a transmission oil listed in the "Fuel, Lubricants, Hydraulic Oil and Coolant" section.

NOTE: The position of the level plugs varies depending on axle type.



LX003137 –UN–03JAN95



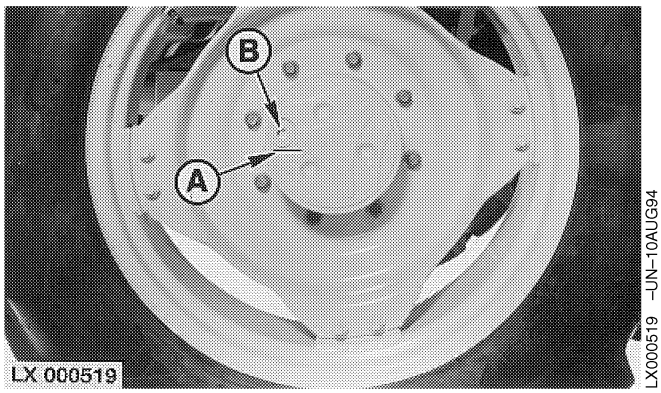
LX1019678 –UN–15OCT99

AG,OU12401,244 –19–08APR00–1/1

Checking Oil Level in MFWD Final Drives

1. Turn wheel until "OIL LEVEL" mark (A) is in level position.
2. Remove level plug (B). Oil should be level with plug bore.
3. If necessary, top up axle at this point. Tighten level plug to 150 N•m (110 lb-ft.). Always use a transmission oil listed in the "Fuel, Lubricants, Hydraulic Oil and Coolant" section.

NOTE: Replace oil in axle housing and final drives after the first 100 hours of operation. Then replace after every 1500 hours of operation or once every 2 years, whichever occurs first.



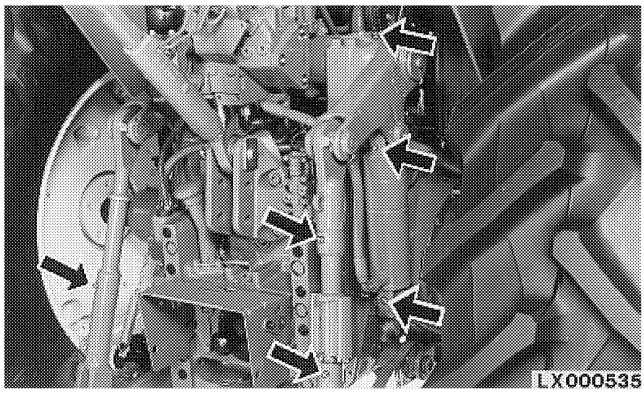
LX000519 –UN–10AUG94

LX,OACH 000412 –19–01SEP92–1/1

Lubricating the Three-Point Hitch

Lubricate grease fittings with several strokes of grease gun. Use John Deere multipurpose grease.

NOTE: The grease fittings on the second lift cylinder and second lift link are not visible in this illustration.



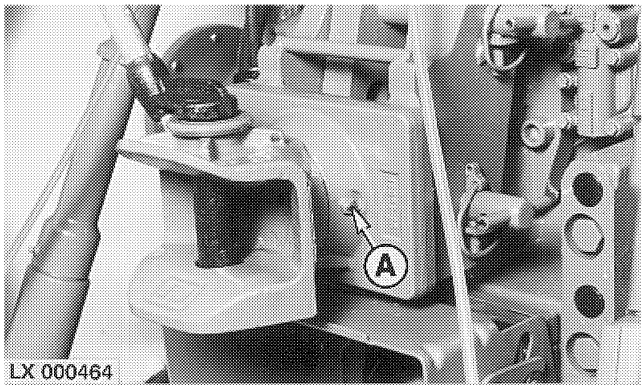
AG,OU12401,245 –19–08APR00–1/1

Lubricate Hitch Jaw

Lubricate hitch jaw periodically at grease fitting (A).

To make sure that hitch jaw bearing is thoroughly greased, turn jaw 180° when greasing.

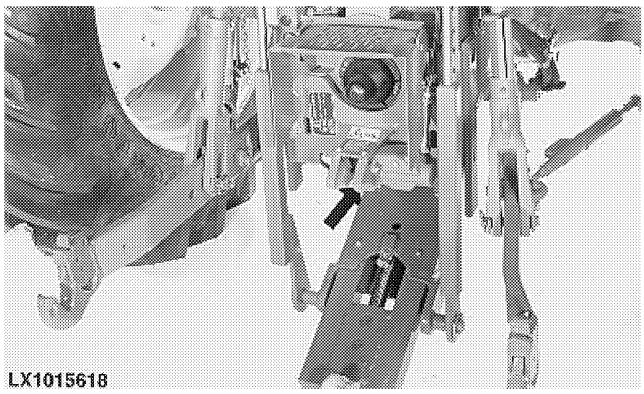
Check that hitch jaw functions correctly.



LX,OZUS 000345 –19–01APR92–1/1

Lubricating the Pick-Up Hitch

Lubricate grease fittings with several strokes of grease gun. Use John Deere multipurpose grease.



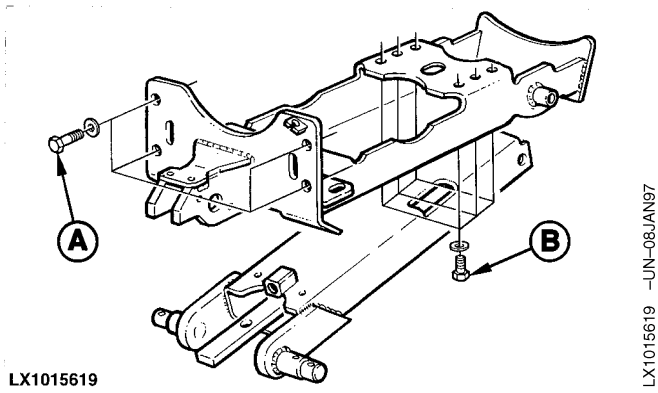
LX,OMWAR 013349 –19–01SEP97–1/1

Pick-Up Hitch

Check torques of attaching bolts.

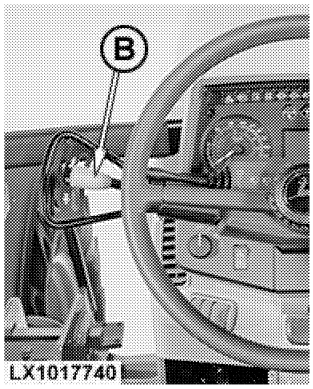
Tighten cap screws (A) to 450 N•m (330 lb-ft).

Tighten cap screws (B) to 265 N•m (190 lb-ft).

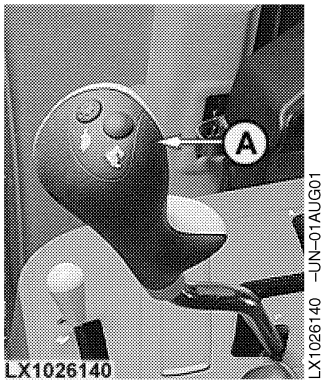


LX,OMWAR 013350 –19–01SEP97–1/1

Checking the Neutral Start Circuit



LX1017740 –UN–23SEP97



LX1026140 –UN–01AUG01

Tractors with PowrQuad Plus/AutoQuad II transmissions:

1. Move range shift lever (A) and reverse drive lever (B) to neutral.
2. Start the engine and wait 6-7 seconds.
3. Move the reverse drive lever to "forward" or "reverse", and release it there.

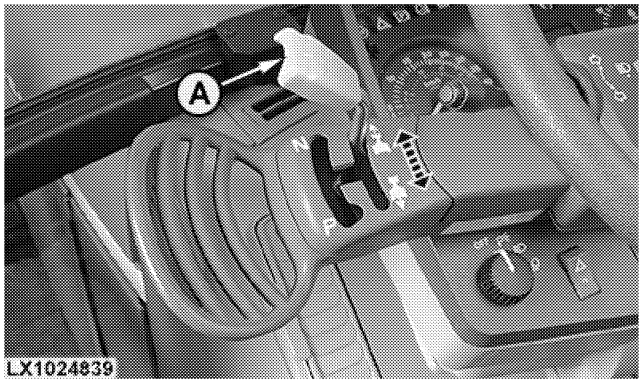
If the reverse drive lever remains in the selected position without being held there manually, the neutral start circuit is operating correctly. If the reverse drive lever moves INSTANTLY by itself from "forward" or "reverse" to neutral without being moved by hand, then the neutral start circuit must be repaired by your John Deere dealer without delay.

Repeat the test in the other direction of travel.

OU12401,0000927 –19–01MAY01–1/2

Tractors with AutoPowr

1. Move reverse drive lever (A) to "forward" or "reverse".
2. Turn key in main switch as far as it will go to the right. The starter motor must NOT turn over. If it does, see your John Deere dealer immediately.
3. Repeat the test in the other direction of travel.



LX1024839 –UN–15JUN00

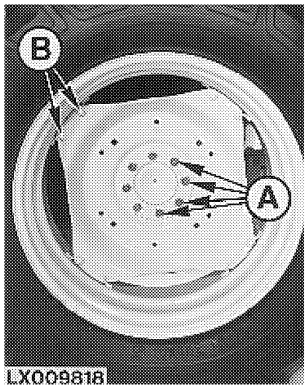
OU12401,0000927 –19–01MAY01–2/2

Wheel Retaining Bolts

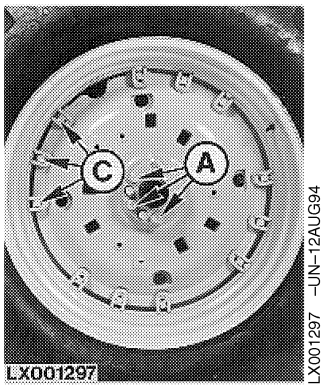
Tighten Rear Wheel Retaining Bolts/Nuts

(Torques vary depending on tractor equipment)

A—500 N•m (370 lb-ft)
B—310 N•m (230 lb-ft)
C—230 N•m (170 lb-ft)



LX009818 –UN–03JAN95



LX001297 –UN–12AUG94

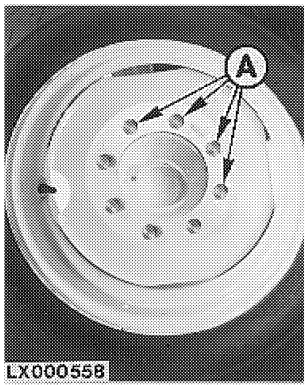
Continued on next page

OU12401,0000928 –19–01MAY01–1/2

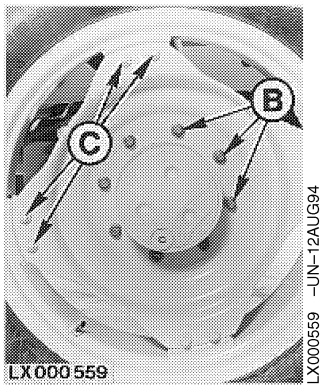
Tighten Front Wheel Retaining Bolts/Nuts

(Torques vary depending on tractor equipment)

A—250 N•m (185 lb-ft)
B—300 N•m (220 lb-ft)
C—Screws of class 8.8: 250 N•m (185 lb-ft)
—Screws of class 10.9: 310 N•m (230 lb-ft)



LX000558 –UN–12AUG94



LX000559 –UN–12AUG94

OU12401,0000928 –19–01MAY01–2/2

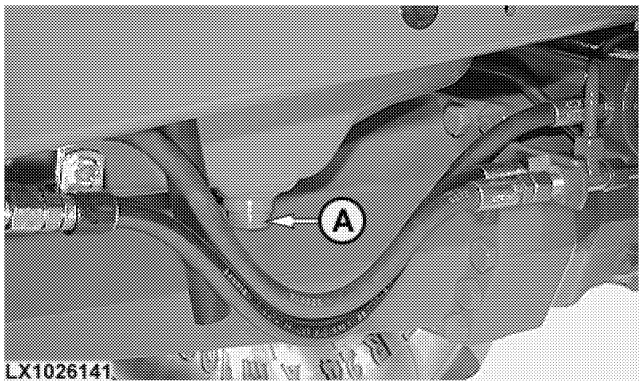
Changing Engine Oil

Drain oil with engine shut off, but with engine oil still warm.

1. Remove drain screw (A).
2. While crankcase is draining, replace filter element.
3. Re-install drain screw and tighten to 50 N•m (37 lb-ft) (use new seal ring).
4. Fill crankcase with fresh oil of proper viscosity at filler neck (B). See section “Fuel, Lubricants, Hydraulic Oil and Coolant”. With filter, capacity is approx. 16 liters (4.2 U.S. gal.).
5. Run engine for a short time and check for leaks at filter base and drain screw.
6. Stop the engine.
7. Wait 15 minutes then recheck oil level. Oil should be up to the “XXX” marks on the dipstick. If necessary, top up with oil.

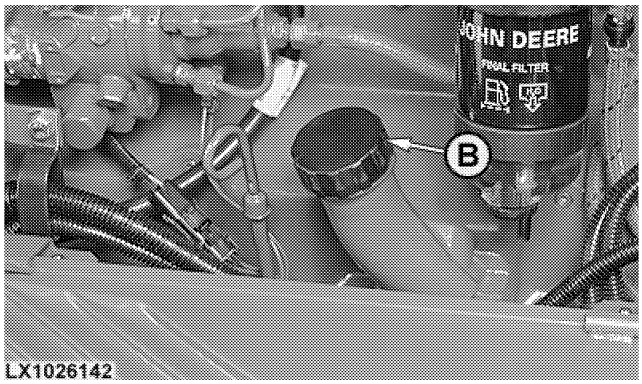
IMPORTANT: Change oil whenever a seasonal change in temperature makes oil of a different viscosity necessary.

NOTE: Carry out first oil change after first 100 hours of operation.



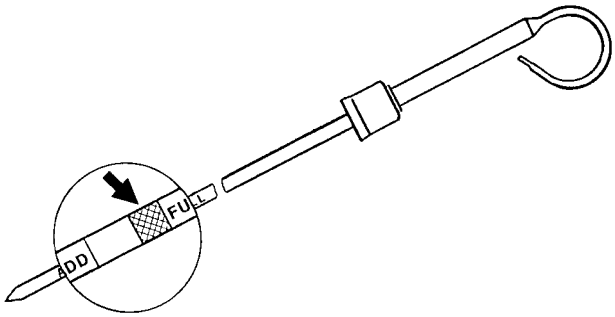
LX1026141

LX1026141 –UN–21MAY01



LX1026142

LX1026142 –UN–21MAY01



FD000047

FD000047 –UN–13MAR96

OU12401,0000929 –19–01MAY01–1/1

Changing the Engine Crankcase Filter Element

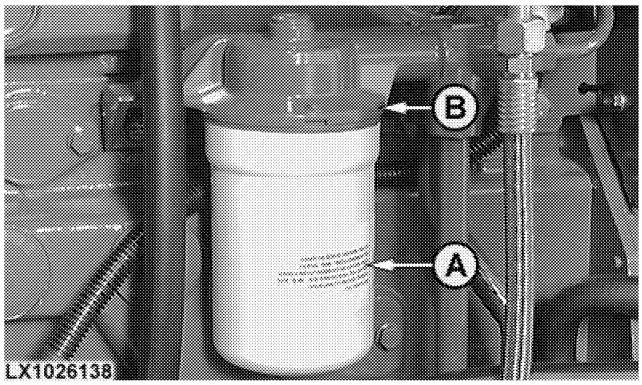
Remove filter element (A) and clean mounting surface (B).

Apply a thin film of oil to sealing ring of new filter. Tighten new filter element until sealing ring touches mounting surface and then turn a further 3/4 to 1-1/4 turns. Do not overtighten!

Start engine and check base of filter for leaks.

Shut off engine and check oil level.

NOTE: Carry out first oil filter change after first 100 hours of operation.



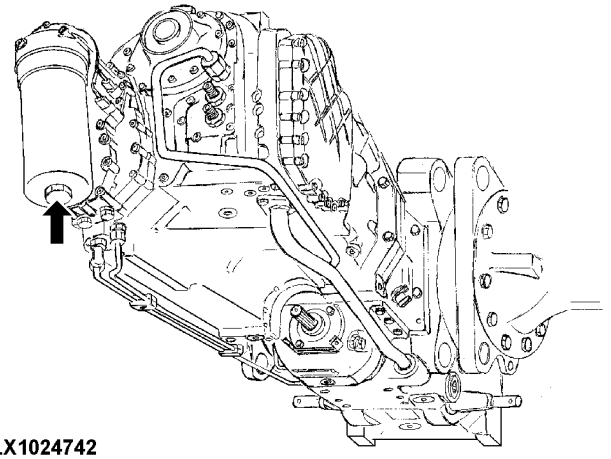
OU12401,0000925 –19–01MAY01–1/1

Replacing Transmission/Hydraulic System Filter Element (Tractors with AutoPowr)

NOTE: Replace transmission/hydraulic system filter elements after the first 100 hours of operation. Then replace after the first 500 hours of operation, and regularly every 500 hours thereafter.

1. Unscrew filter element.
2. Coat sealing rings of new filter element with grease and screw in filter element.

Use original John Deere filter elements only!

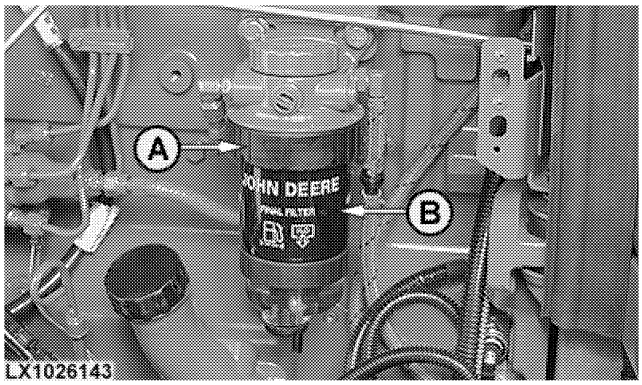


OU12401,000054B –19–01DEC00–1/1

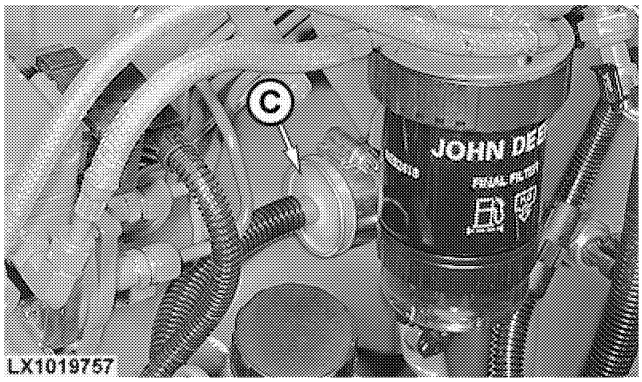
Changing the Fuel Filter

1. Unfasten filter retaining ring (A) and remove filter (B). Seal old filter with cover of the new one.
2. Remove water trap and install it on new filter.
3. On tractors with Bosch VP44 injection pump, also replace second filter (C).
4. Attach new filter. The marks on the filter must be aligned with those on the housing.
5. Tighten retaining ring (A) until it clicks into place.
6. Turn key in main switch to the right as far as the first switch position so that the fuel transfer pump is operating. Keep the pump running for approx. 20 seconds.

A—Filter retaining ring
B—Filter
C—Second filter (tractors with Bosch VP44 injection pump only)



LX1026143 –UN–21MAY01



LX1019757 –UN–11MAY00

OU12401,000092A –19–01MAY01–1/1

Servicing the Fuel Tank

Use a 1/2-inch square-section key to slacken off the drain screw by one turn. Drain water and contaminants. Re-insert drain screw and tighten by hand.

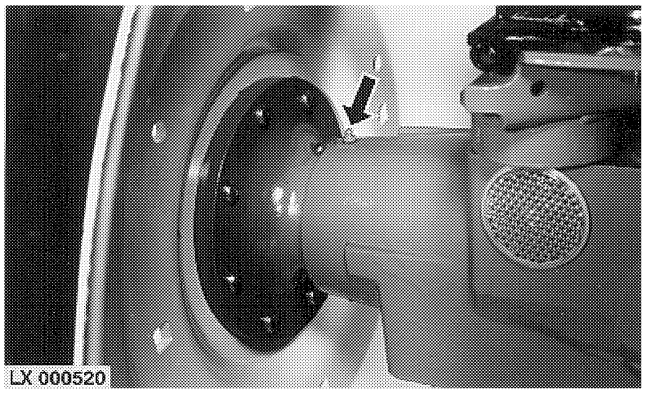
LX1024725 –UN–06NOV00

OU12401,0000504 –19–03NOV00–1/1

Lubricating Rear Axle Bearings

IMPORTANT: Carry out this service after every ten hours of operation when working under very wet and muddy conditions.

Lubricate both bearings with six to eight strokes of John Deere multipurpose grease.



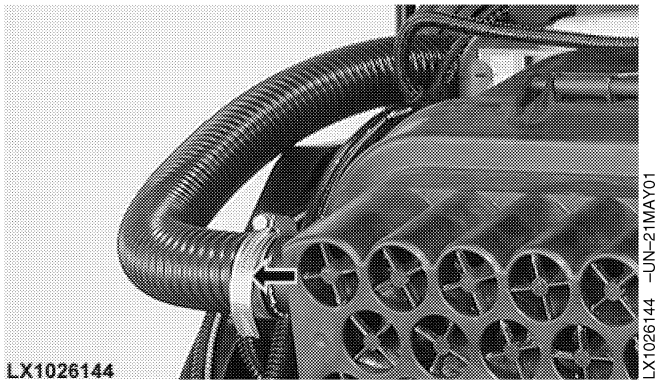
LX,OACH 000413 –19–01MAY92–1/1

Air Intake Hoses

The hoses vary depending on engine type.

Check hoses and tighten clamps.

Leaking or damaged hoses are the cause of dirt entering the engine.

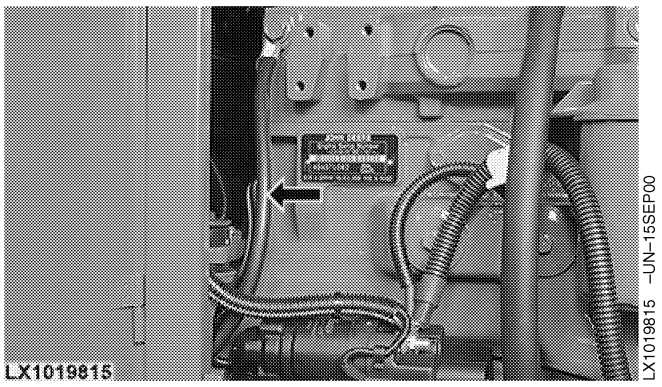


OU12401,000092B –19–01MAY01–1/1

Checking Engine Ground Connection

Check the ground cable for signs of wear or damage. Check that the attaching screws are tight.

Replace the ground cable if it is damaged.



AG,OU12401,10126 –19–31AUG00–1/1

Service / Every 750 Hours

Check Engine Speeds

Warm up engine and use the rev counter to check engine speeds. The following guidelines apply:

Fuel injection pump	Slow idle	Fast idle
Mechanical pump	875-925 rpm	2480-2510 rpm
Electronic pump	845-855 rpm	2455-2465 rpm

Have adjustments carried out by your John Deere dealer.

OU12401,000092C –19–01MAY01–1/1

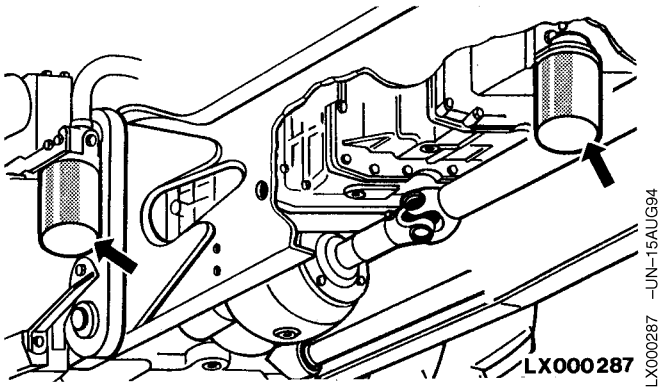
Replacing Transmission/Hydraulic System Filter Elements (Tractors NOT Equipped with AutoPowr)

NOTE: Replace transmission/hydraulic system filter elements after the first 100 hours of operation. Then replace after the first 750 hours of operation, and regularly every 750 hours thereafter.

1. Unscrew filter elements.
2. Coat sealing rings of new filter elements with grease and screw in filter elements.

Use original John Deere filter elements only!

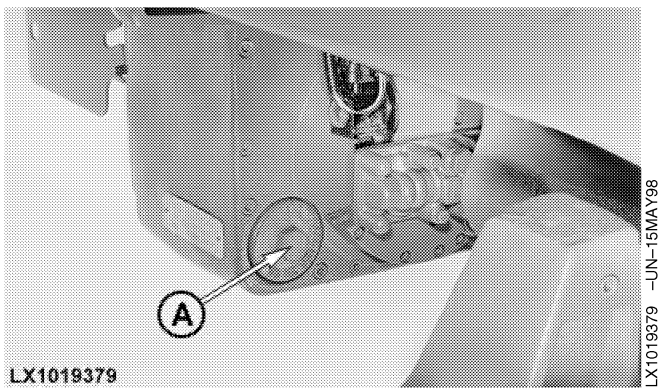
IMPORTANT: Always replace both filters at the same time. Never change one only.



OU12401,00101C2 –19–01DEC00–1/1

Changing the Filter on the Front PTO (If Equipped)

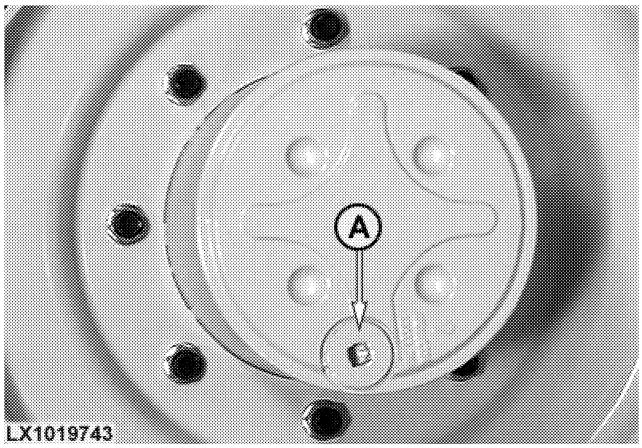
Unscrew plug (A). Remove filter and put in a new one. Screw in the plug again.



LX,OMWAR 017457 –19–01MAY98–1/1

Changing Oil in Final Drives (Front-Wheel Drive Axle with Brake)

Replace oil in the final drives after the first 100 hours of operation. Then replace after every 750 hours of operation. Always use a transmission oil listed in the “Fuel, Lubricants, Hydraulic Oil and Coolant” section.



CAUTION: If final drives are hot, oil is under pressure. Remove drain screw slowly.

1. Turn wheel until drain screw (A) is at the bottom. Remove drain screw and drain oil into a suitable container.

2. Turn the wheel through 90° so that the “Ölstand” mark is at the bottom (see “Service - Every 250 Hours”), and add oil at the hole for the screw plug. Oil should be level with plug bore.

3. Re-install drain screw and tighten to 150 N•m (110 lb-ft).

Capacity: 1.5 liters (0.4 U.S.gal.).

AG,OU12401,252 –19–08APR00–1/1

Checking Seat Belt

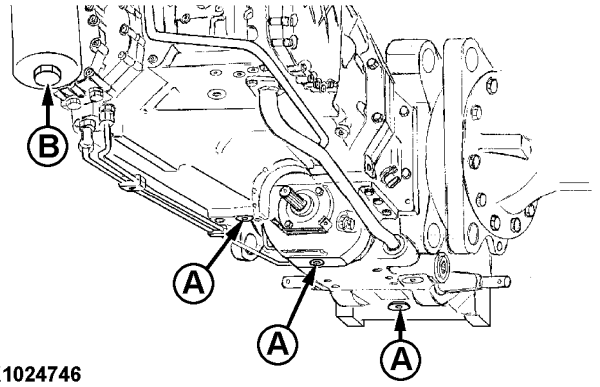
Replace entire seat belt if mounting hardware, buckle, belt or retractor show signs of damage.

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.

LX,OMWART020394 –19–01JUL99–1/1

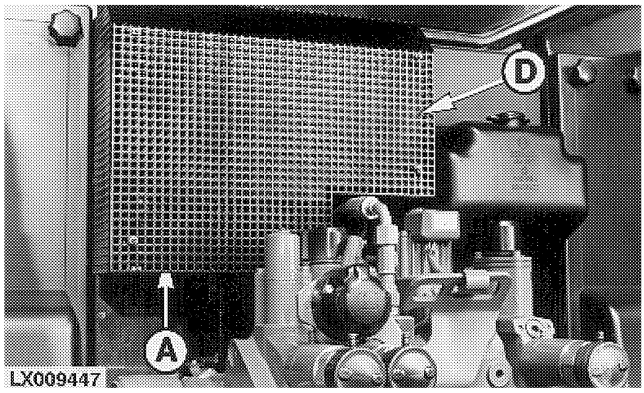
Changing Transmission/Hydraulic Oil (Tractors with AutoPowr)

1. Start engine and operate several hydraulic functions to heat up oil.
2. Park tractor so that it is level. Lower draft links and front-mounted implements.
3. Stop the engine and remove the key.
4. Apply handbrake (transmission in “P”).
5. Remove drain screws (A).
6. Replace transmission/hydraulic oil filter element (B).
7. Add transmission/hydraulic oil to the transmission case.
8. Before refilling with fresh oil, replace seals and tighten drain screws to 50 N•m (35 lb-ft).



LX1024746

LX1024746 –UN–24JAN01



LX009447 –UN–02JAN95

A—Drain screws
B—Transmission/hydraulic oil filter
D—Additional oil reservoir

Capacities

AutoPowr	60 liters (15.9 U.S. gal.)
Extra for front-wheel drive	3 liters (0.8 U.S.gal.)
Extra for TLS axle	3 liters (0.8 U.S.gal.)
Extra for additional oil reservoir	10 liters (2.6 U.S. gal.)

Run engine briefly and operate hydraulic functions. Shut off the engine.

Wait for between 10 and 15 minutes before checking the oil level. It should be between the marks on the dipstick. If not, correct oil level.

OU12401,000092E –19–01MAY01–1/1

Changing Oil in Front-Wheel Drive Axle

Replace oil in axle housing and final drives after the first 100 hours of operation. Then replace after every 1500 hours of operation or once every two years, whichever occurs first. Always use a transmission oil listed in the “Fuel, Lubricants, Hydraulic Oil and Coolant” section.

Always drain oil while it is still warm, i.e. immediately after a prolonged period of operation.

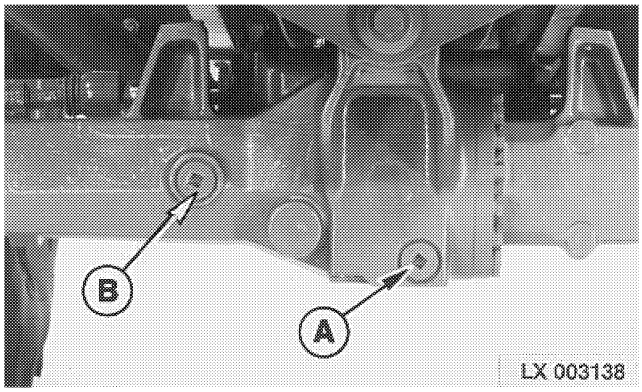
LX,OACH 000414 –19–01MAR94–1/1

Changing Oil In Front-Wheel Drive Axle Housing

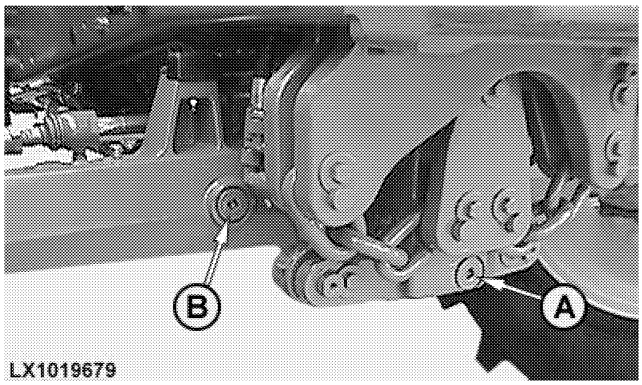
1. Remove drain screw (A) and drain oil into a suitable container.
2. Re-install drain screw and tighten to 150 N•m (110 lb-ft).
3. Remove oil level/filler plug (B). Fill with fresh oil. The oil level must be up to lip of filler neck. Re-install plug.

For capacities, see “Specifications”.

NOTE: Location of screws varies depending on axle type.



LX003138 –UN–03JAN95



LX1019679 –UN–15OCT99

AG,OU12401,253 –19–08APR00–1/1

Changing Oil In Front-Wheel Drive Final Drives

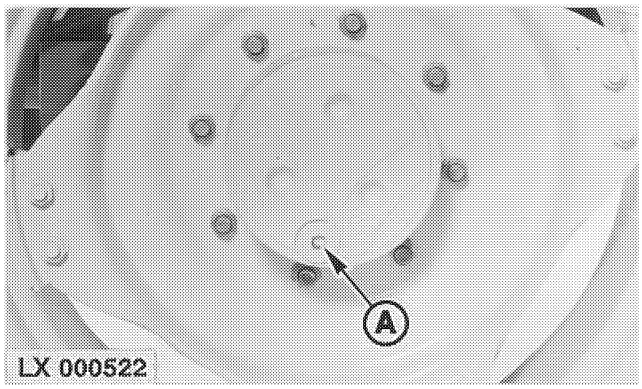
CAUTION: On axles with brake: If final drives are hot, oil is under pressure. Remove drain screws slowly.

1. Turn wheel until drain screw (A) is at the bottom. Remove drain screw and drain oil into a suitable container.

2. Turn the wheel through 90° so that the “Ölstand” mark is at the bottom (see “Service - Every 250 Hours”), and add oil at the hole for the screw plug. Oil should be level with plug bore.

3. Reinstall drain screw and tighten to 150 N•m (110 lb-ft).

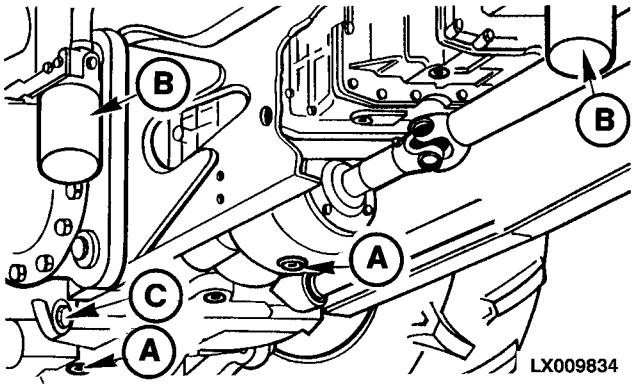
For capacities, see “Specifications”.



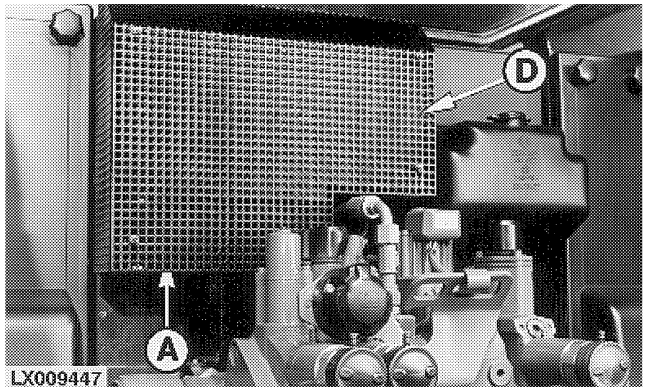
AG,OU12401,254 –19–08APR00–1/1

Changing Transmission/Hydraulic Oil (Tractors NOT Equipped with AutoPowr)

1. Start engine and operate several hydraulic functions to heat up oil.
2. Park tractor so that it is level. Lower draft links and front-mounted implements.
3. Stop the engine and remove the key.
4. Apply handbrake (transmission in neutral).
5. Remove drain screws (A).
6. Replace transmission/hydraulic oil filter elements (B).
7. Remove screw plug (C), pull out intake screen and wash in fuel.
8. Before refilling with fresh oil, reinstall intake screen, replace seals and tighten drain screws to 50 N•m (35 lb-ft).
9. Add transmission/hydraulic oil to the transmission case.



LX009834 –UN–03JAN95



LX009447 –UN–02JAN95

A—Drain screws
B—Transmission/hydraulic oil filters
C—Screw plug
D—Additional oil reservoir

Capacities:

PowrQuad Plus transmission	50 liters (13.2 U.S.gal.)
AutoQuad II transmission	50 liters (13.2 U.S.gal.)
Extra for creeper transmission	1 liter (0.3 U.S.gal.)
Extra for front-wheel drive	3 liters (0.8 U.S.gal.)
Extra for TLS axle	3 liters (0.8 U.S.gal.)
Extra for additional oil reservoir	10 liters (2.6 U.S.gal.)

Run engine briefly and operate hydraulic functions. Shut off engine and wait 5 minutes.

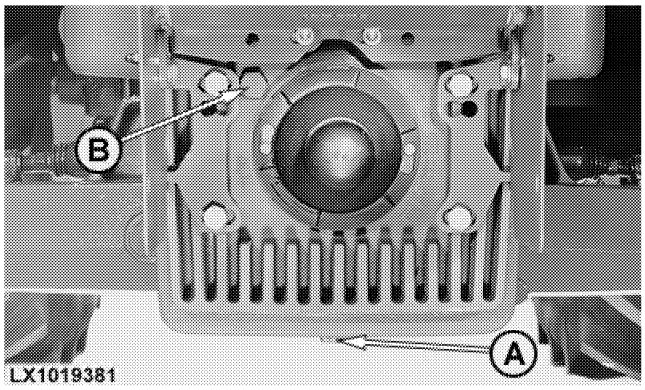
Check oil level. It should be between the marks on the dipstick. If not, correct oil level.

OU12401,000092F –19–01MAY01–1/1

Changing the Oil at the Front PTO (If Equipped)

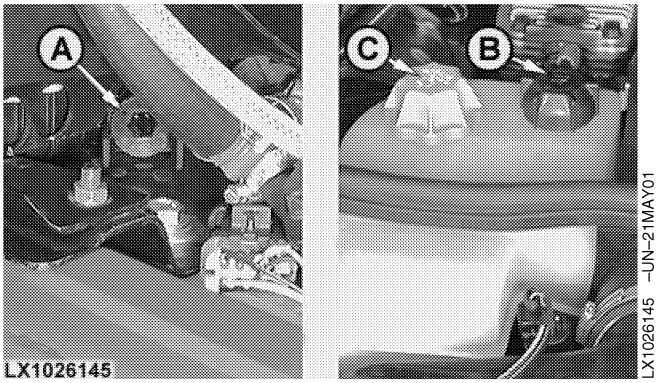
Unscrew plugs (A) and (B) and drain the oil.

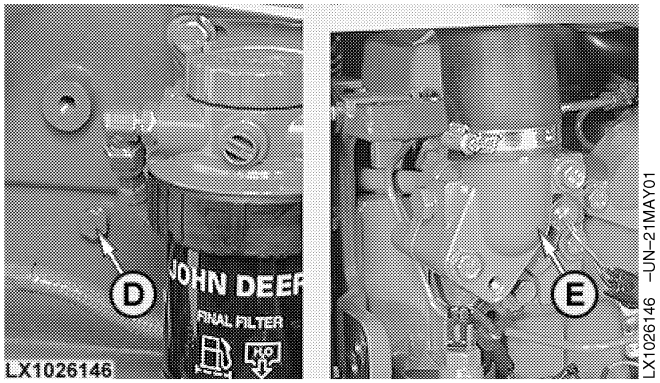
Screw in plug (A) again. Add 3.5 liters (0.9 U.S.gal.) of transmission/hydraulic oil to the PTO housing. Screw in plug (B) again.



AG,OU12401,256 –19–08APR00–1/1

Changing Coolant





CAUTION: Remove caps only when coolant temperature is below boiling point. First loosen the black cap (B) to relieve pressure, then remove the green cap (C) completely.

NOTE: If COOL-GARD is not used, the drain interval is reduced to 2 years or 2000 hours of operation.

1. Place a container under the drains to trap the coolant as it emerges.
2. Turn heater switch fully to the right.
3. Open the hood and open radiator drain cock (A) from the left-hand side of the tractor.
4. Remove expansion tank filler cap (C).
5. Remove drain screw (D) from the engine block.

As soon as system is empty, close radiator drain cock (A), screw in drain screw (D) and fill the system with clean water.

Run engine again until it reaches operating temperature. Shut off engine and drain cooling system.

Close drain cock/screws again and fill the system with clean water.

IMPORTANT: Never pour cold water or coolant into the hot engine. Always use warm water or wait until engine has cooled down.

Again run engine until it has reached operating temperature. Shut off engine and drain system again.

Take off thermostat housing (E) and clean the sealing surface. Apply sealant to a new gasket. Re-install gasket and thermostat housing. Tighten the screws to 48 N•m (35 lb-ft).

Close drain cock/screws again, and this time fill the system with the specified coolant (see section “Fuel, Lubricants, Hydraulic Oil and Coolant”).

Engine type	Capacities
- without intercooler	13.5 liters (3.6 U.S.gal)
- with intercooler (engine designation includes an “H”)	24.0 liters (6.3 U.S.gal)

Run the engine until it reaches operating temperature. This will allow the thermostat to open, ensuring that coolant is circulated throughout the entire cooling system.

Recheck coolant level. It should be between the “min” and “max” marks on the expansion tank.

For efficient cooling, the radiator screen must be kept clean. Remove any dust or oil and carefully straighten any bent fins.

OU12401,0000930 –19–01MAY01–1/1

Service / As Required

Cab Air Filter, Clean out Dust Deposits

If the tractor is operated in very dusty conditions, pull the cover down from time to time to clean out the dust deposits.

OU12401,0000931 –19–01MAY01–1/1

Air Cleaner

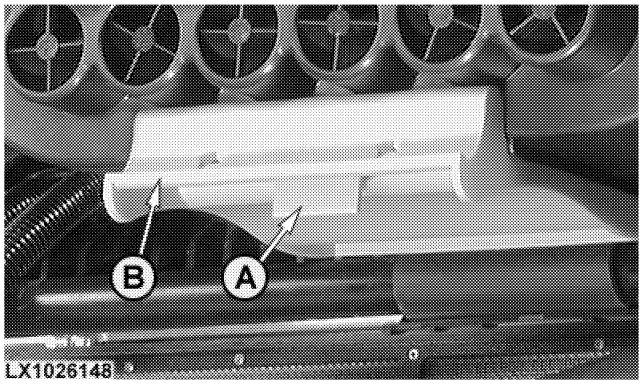
If the air cleaner indicator lamp glows during operation, remove and clean the primary filter element.

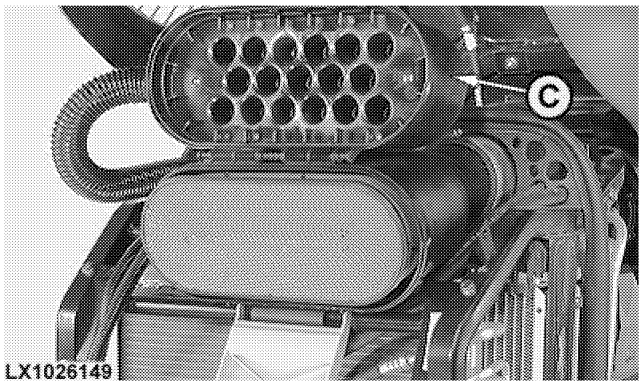
The service interval may be extended briefly, e.g. until the next suitable opportunity. Provided the cleaner is serviced properly, this will not adversely affect its performance.

The primary element can be cleaned up to five times. Thereafter, or at the latest after 1500 hours of operation (or 2 years), it must be replaced.

Open the hood, pull lug (A) forward and swing catch (B) down. Fold cover (C) up. Pull the primary filter element out of the cleaner housing.

IMPORTANT: Never run the engine without the primary filter element!





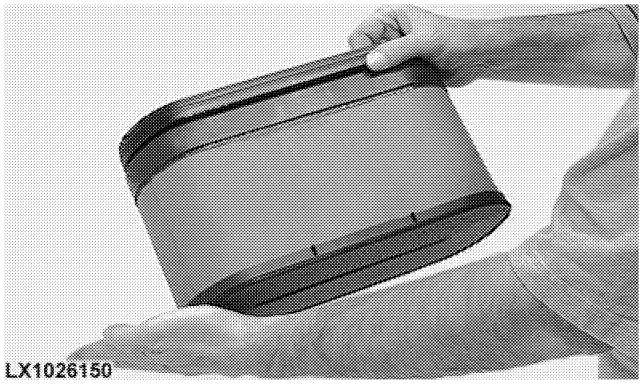
OU12401,0000932 –19–01MAY01–1/1

Cleaning the Primary Filter Element

When the element must be serviced in the field, tap it on the palm of your hand as a temporary measure.

IMPORTANT: The guide ring must not be damaged or deformed.

When you return to your service area, clean the filter element thoroughly, or replace it with a new one.

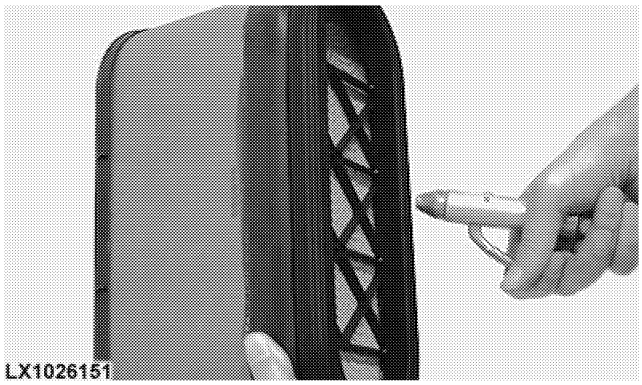


OU12401,0000933 –19–01MAY01–1/1

Cleaning a Dusty Element

If tapping element does not remove dust, blow out dust with compressed air (not exceeding 600 kPa; 6 bar; 90 psi) by inserting nozzle inside the element and blowing from the inside of the filter to the outside.

Replace element if air cleaner indicator light continues glowing after the element has been cleaned.

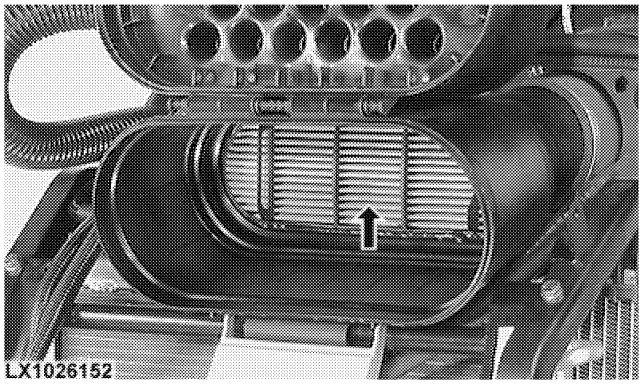


OU12401,0000934 –19–01MAY01–1/1

Secondary (Safety) Element

This filter must be changed if it becomes damaged and at every fifth service of the air cleaner primary element. Change it at the latest after 1500 hours of operation.

IMPORTANT: Always replace secondary (safety) filter element, do not attempt to clean it.



OU12401,0000935 –19–01MAY01–1/1

Installation

With the rubber seal first (arrows on decal pointing into the filter housing), slide a serviced or new primary filter element as far as it will go into the filter housing. Fold down the cover and let the catch click into place.

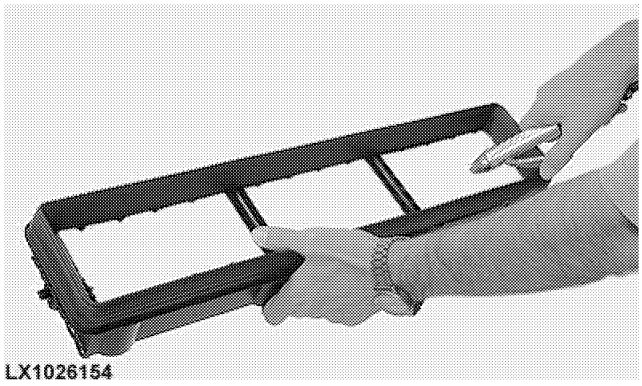
IMPORTANT: Never close the hood or start the engine unless the filter is locked securely.

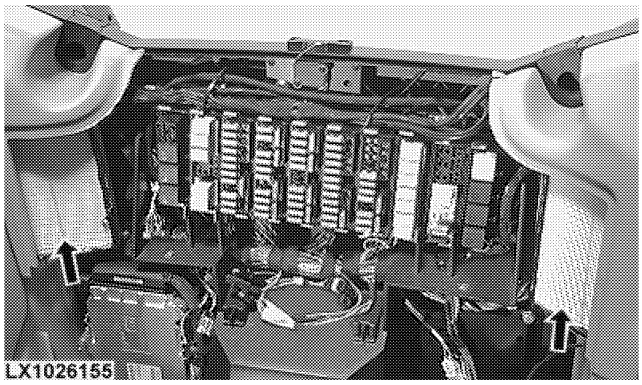
OU12401,0000936 –19–01MAY01–1/1

Cleaning the Cab Air Filters

Every time the primary filter is serviced, also remove the two cab air filters and the recirculated air filters, and clean them with compressed air directed from the clean side.

Replace cab air filters together with engine primary air filter element.





OU12401,0000938 –19–01MAY01–1/1

Cleaning the ULTRA-GARD™ XL Cab Air Filter

CAUTION: Use the relevant equipment to protect yourself as recommended on the pesticide label. This also applies when cleaning, checking or replacing the filter.

When servicing this air filter, it is essential to comply with the following instructions and the safety regulations. Clean the filter every time the primary filter is serviced, if not more often. Whichever occurs first, replace filters:

- after not more than 500 hours of operation, or
- within one year of installation, or
- every time they become clogged or can no longer be cleaned adequately.

Every time you change a filter, record the date and machine hours on the decal on the window, to show when the next service is due.

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LX,OMWAR 017536 –19–01OCT98–1/1

Safety Regulations

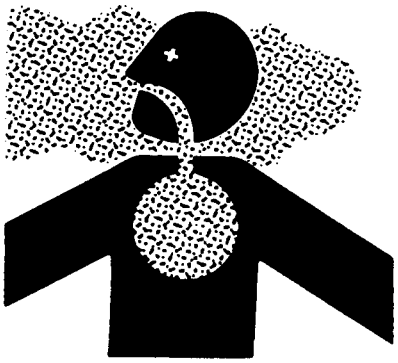
CAUTION: Prolonged exposure to pesticides may cause serious injury or even death.

CAUTION: Do not apply pesticides if the cab pressure indicator is in the red zone.

CAUTION: Allow only trained, certified applicators to apply pesticides.

CAUTION: Replace filter at recommended intervals. Use only John Deere ULTRA-GARD™ XL Pesticide Cab Air Filters for both fresh air and recirculated air.

CAUTION: For proper disposal of used filters, follow local regulations for disposal of empty pesticide bags.



TS220 –UN–23AUG88

TS272 –UN–23AUG88

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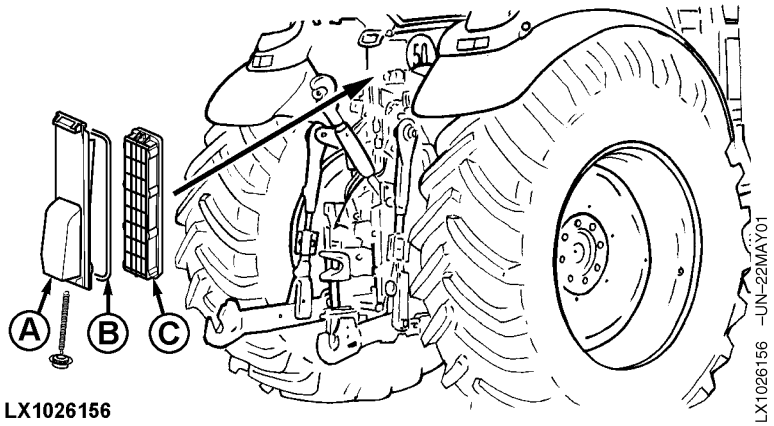
LX,OMWAR 017537 –19–01OCT98–1/1

Replacing the Fresh Air Filters



LX1026156

CAUTION: Prolonged exposure to pesticides may cause serious injury or even death.

CAUTION: Use the relevant equipment to protect yourself as recommended on the pesticide label. This also applies when cleaning, checking or replacing the filters.

CAUTION: Do not apply pesticides if the cab pressure indicator is in the red zone.

NOTE: In dusty conditions, this job should be done at more frequent intervals.

1. Remove cover (A). Check seal (B) for signs of damage, and replace if necessary. Take out the existing fresh air filters (C).

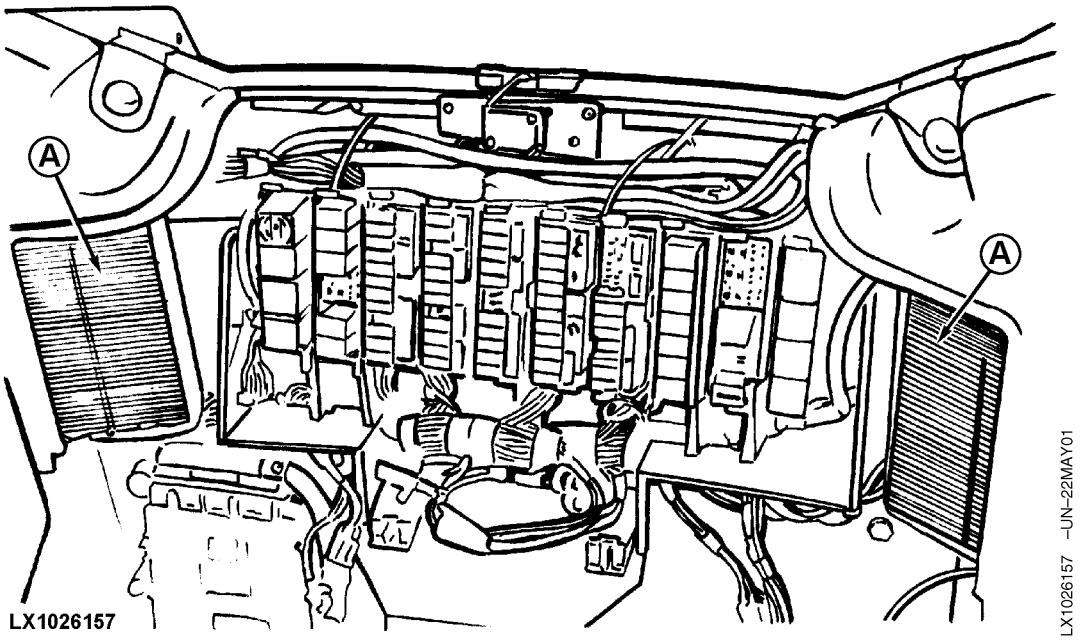
2. Carefully inspect the air ducts for any indication of fresh air leakage. Everything downstream from the cab air filter should be reasonably clean. If you find any accumulation of dirt on the “clean air” side, identify and correct the cause of leakage. The evaporator housing is exposed to outside air. If dust has collected in the air ducts, remove the seat and evaporator housing cover. At the points where the heater and refrigerant lines enter the housing, check that the seals are in good condition. Also check for possible leaks in the air passages that lead from the evaporator housing to the cowl.

3. Check the condition of the seals at the windows and doors. Also inspect the seals at the controls and the hydraulic and electric lines. Sealing is important to maintain adequate cab pressure, which is necessary to prevent pesticides from leaking into the cab.

4. Install the new recirculated air filters.

OU12401,0000939 –19–01MAY01–1/1

Replacing the Recirculated Air Filter



CAUTION: Prolonged exposure to pesticides may cause serious injury or even death.

CAUTION: Do not apply pesticides if the cab pressure indicator is in the red zone.

NOTE: In dusty conditions, this job should be done at more frequent intervals.

Remove the cover at the rear of the cab. Take out the existing recirculated air filters (A).

Install the new recirculated air filters.

OU12401,000093A –19–01MAY01–1/1

Apply Service Decal

CAUTION: Prolonged exposure to pesticides may cause serious injury or even death, so use the recommended protective equipment.

Apply the service decal to one of the windows in the vicinity of the cab pressure indicator. The service decal must always be clearly visible.

Record the date and machine hours on the service decal when filters are replaced. Perform service work in accordance with the instructions on the service decal.

MHM709,5 –19–01AUG98–1/1

Cleaning and Checking the ULTRA-GARD™ XL FILTER

CAUTION: Prolonged exposure to pesticides may cause serious injury or even death, so use the recommended protective equipment.

CAUTION: Use the relevant equipment to protect yourself as recommended on the pesticide label. This also applies when cleaning, checking or replacing the filter.

CAUTION: Do not apply pesticides if the cab pressure indicator is in the red zone.

IMPORTANT: Avoid damage to filters. Do NOT clean the filters by using compressed air or hitting them against another object.

NOTE: Replace the filter only with a John Deere ULTRA-GARD™ XL Pesticide Cab Air Filter.

1. On **fresh and recirculated air filters**, shake the dust out of the filter pleats. If shaking does not clean the filters adequately, replace the filters.

2. After cleaning, inspect the filters for damage. Make sure that the filter seal is in good condition. Replace filters if any holes or damage are detected.

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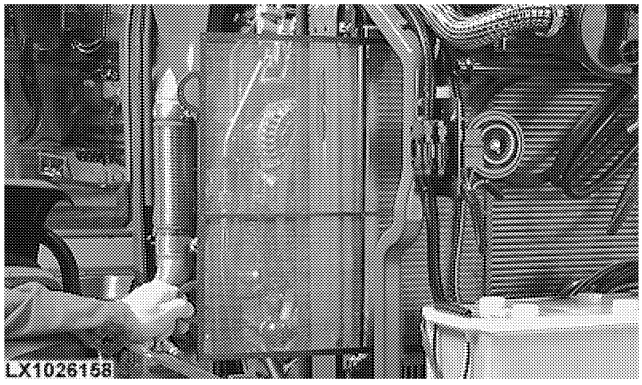
MHM709,6 –19–01AUG98–1/1

Keep Radiator Screen Clean

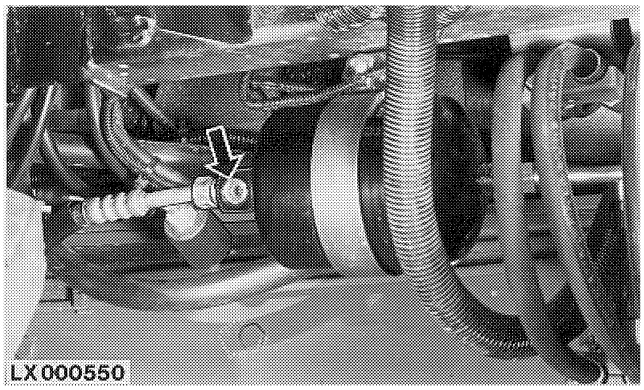
For efficient cooling, the radiator screen must be kept clean.

Pull the screen (if equipped) out to the side. Remove any dust or oil and carefully straighten any bent fins.



OU12401,000093B –19–01MAY01–1/1

Air Conditioning System Not Cooling Correctly



If air conditioner is not cooling correctly, check refrigerant as follows:

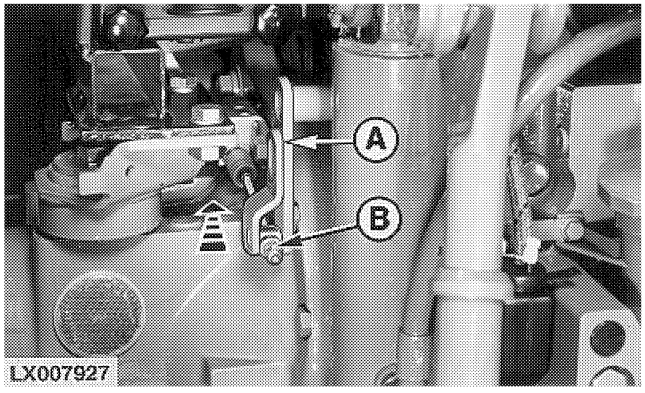
Run engine at approx. 2000 rpm. Switch blower and air conditioner to “maximum” operating position. Observe sight glass in drier (in front of right-hand rear wheel). If bubbles do not disappear within a few minutes of switching on the air conditioning system, the system may be low on refrigerant. See your John Deere dealer, who will fill up the system.

The radiator screen must be kept clean. See “Keep Radiator Screen Clean”.

IMPORTANT: R134a refrigerant must not be allowed to escape into the atmosphere. Do not disconnect line connections and have service and repair work on the air conditioning system carried out by your John Deere dealer only. Your John Deere dealer has the special handling and recycling equipment required to do this.

LX,OKLI 000443 –19–01JAN95–1/1

Adjusting the Handbrake



A—Handbrake lever
B—Hex. nuts

On tractors equipped with air brakes, this adjustment must be performed by your John Deere dealer.

1. Before adjusting handbrake, set brake lever in the lowest notch of segment.

2. Slacken off hex. nuts (B) and push handbrake lever (A) forward. Tighten hex. nut until it is in contact, then secure with the second hex. nut.

NOTE: When the handbrake is correctly adjusted, it must be possible to pull the lever into the 4th notch using a force of 100 to 150 N (22 to 34 lb).

AG,OU12401,263 –19–08APR00–1/1

Bleeding the Brakes

CAUTION: Always follow the steps described here precisely. This is the only way of assuring the tractor brakes have been correctly bled.

NOTE: To avoid oil foaming while bleeding, the procedure should not be started after fast driving, working with hydraulic implements or carrying out hydraulic tests. After such operation the tractor should be allowed to stand for one hour to allow the oil to lose any accumulated foam.

Bleeding points:

- Without trailer brake:
  a. Left rear brake
  b. Right rear brake

- With hydraulic trailer brake:
  a. Left rear brake
  b. Trailer brake valve

- With air brake system:
  a. Trailer control valve, rear bleed screw
  b. Trailer control valve, front bleed screw

- With air brake system and FWD with brake:
  a. Left front brake
  b. Right front brake
  c. Trailer control valve, bleed screw
  d. Left rear brake

- With hydraulic trailer brake and FWD with brake:
  a. Left front brake
  b. Right front brake
  c. Left rear brake
  d. Trailer brake valve

Continued on next page

Bleeding procedure:

1. With the engine running, turn the steering wheel slowly and evenly two or three times from left full lock to right full lock and back again. This fills the brake valve housing via the steering valve return line. Shut off the engine.

2. As shown in the relevant illustration, slide two transparent bleed tubes over the appropriate bleed screws. Place the other ends of the two bleed tubes in the oil filler neck.

3. Open the bleed screws by half a turn.

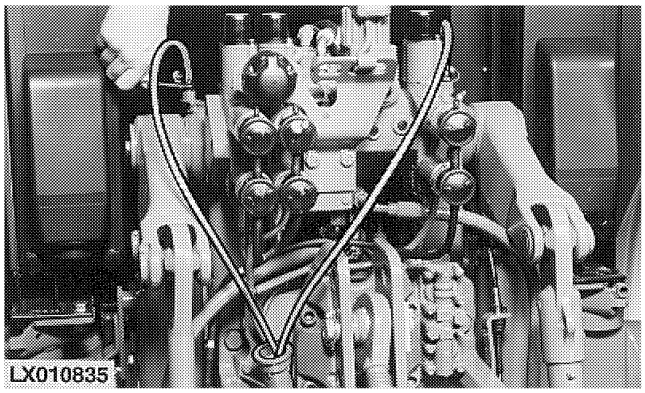
4. Start the engine.

5. Brake pedals must be coupled together. Apply gentle pressure to the brake pedals and hold them in this position until the fluid escaping from the bleed screws is free of air bubbles.

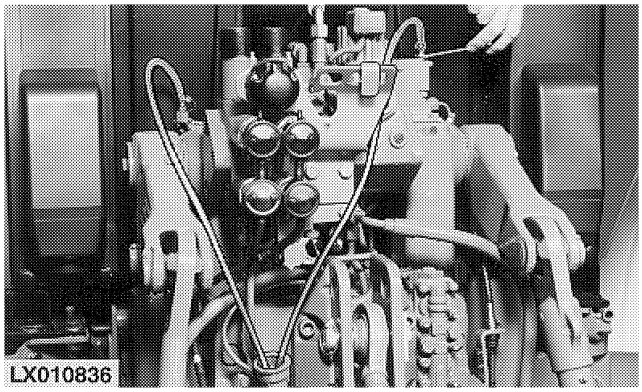
6. Then depress the pedals briefly and release. Repeat this a few times. This should flush out any air bubbles left in the fluid.

7. If necessary, repeat step 5.

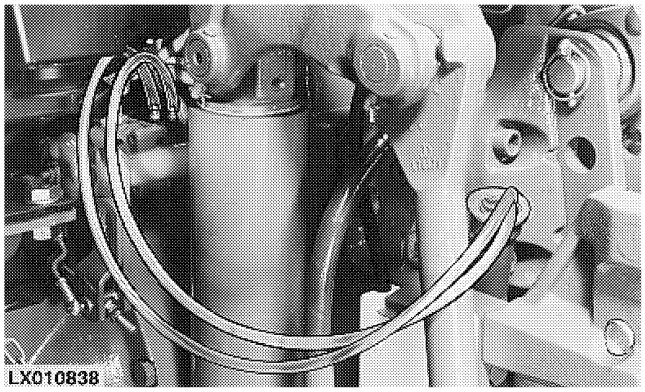
8. Hold the pedals in the depressed position and close the bleed screws.



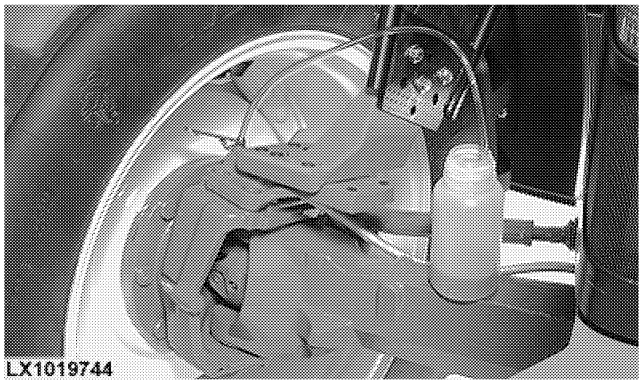
Without trailer brake



With hydraulic trailer brake



With air brake system



With FWD with brake

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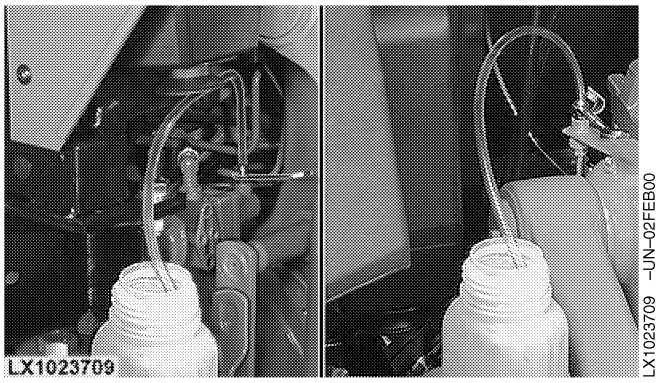
9. Shut off the engine and actuate the brake pedals several times each (separately!) with the engine shut off. This bleeds the last of the air out of the brake valve. There must be perceptible (increasing) resistance before each pedal reaches its limit of travel.

IMPORTANT: If pedal does sink noticeably after resistance has been reached, leaks in the brake system may be the cause.



With FWD with brake

OU12401,000093C –19–01MAY01–3/3

Checking the Fuel Filter

Should water or sediment deposits have settled in filter, proceed as follows:

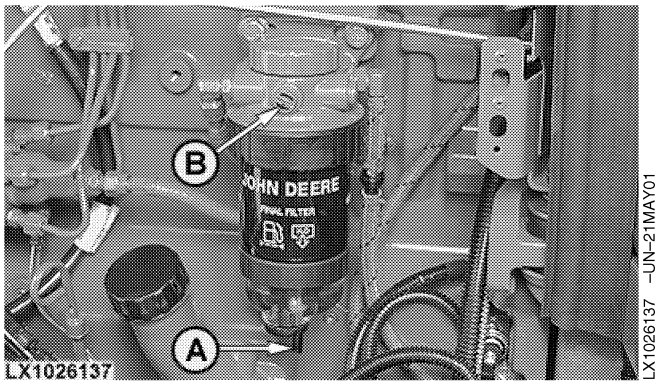
1. Loosen drain screw (A) and vent screw (B).

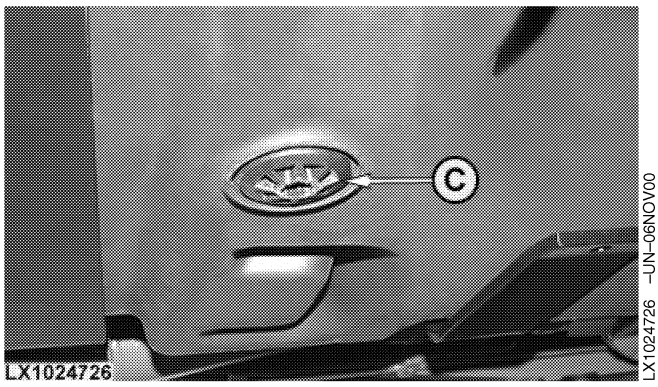
2. Retighten both screws as soon as water and sediment deposits have drained out.

3. Turn key in main switch to the right as far as the first switch position so that the fuel transfer pump is operating. Keep the pump running for approx. 20 seconds.

If water was present in fuel filter, then use a 1/2-inch square-section key to slacken off the drain screw (C) under the fuel tank by one turn. After draining off any water deposits, retighten drain screws until they are hand-tight.

A—Drain screw
B—Vent screw
C—Drain screw (fuel tank)





OU12401,0000924 –19–01MAY01–1/1

Bleeding the Fuel System (Tractors NOT Equipped with Bosch VP44 Injection Pump)

The fuel system must be bled whenever the fuel tank has been run dry.

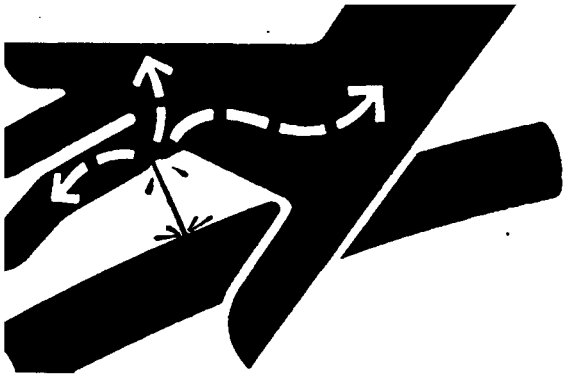
Turn key in main switch to the right as far as the first switch position so that the fuel transfer pump is operating. Keep the pump running for approx. 20 seconds.

AG,OU12401,346 –19–17JUL00–1/1

Bleeding the Fuel System (Tractors Equipped with Bosch VP44 Injection Pump)

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 to a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



X9811 –UN–23AUG88

High-pressure fluids

Whenever the fuel system has been opened up for service (lines disconnected or filters removed), it will be necessary to bleed air from the system.

This fuel system can only be bled by the electronic transfer pump or at the injection nozzles. Bleeding should not be performed at any location on the Bosch VP44 injection pump.

Continued on next page

OU12401,000093D –19–01MAY01–1/3

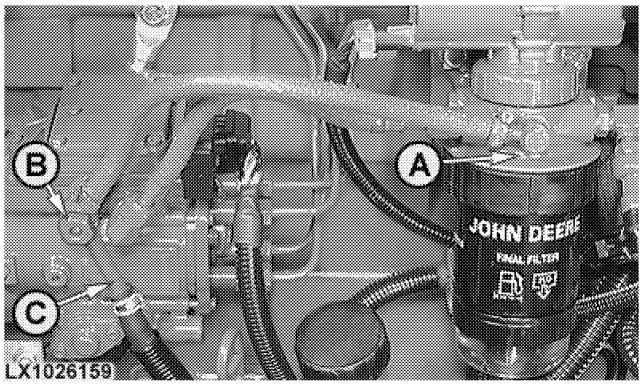
Bleed Using Electronic Transfer Pump

The bleed is automatically performed by a small orifice (A) inside the filter base connected to the overflow valve (B) on injection pump. This system allows air to escape continually through the fuel return line (C) when ignition is ON.

1. Turn key in main switch to the right as far as the first switch position so that the fuel transfer pump is operating.

2. Allow 40 seconds for electronic transfer pump to complete priming.

3. If additional system bleeding is required, bleed the circuit by loosening fuel line connections at injection nozzles. See the next procedure, "Bleed Fuel System at Fuel Injection Nozzles".



LX1026159 –UN–21MAY01

A—Bleed orifice in filter base
B—Overflow valve
C—Fuel return line

Continued on next page

Bleed Fuel System at Fuel Injection Nozzles

1. Place throttle lever in half-throttle position.

   On engines equipped with electronic fuel shut-off solenoid, energize solenoid.

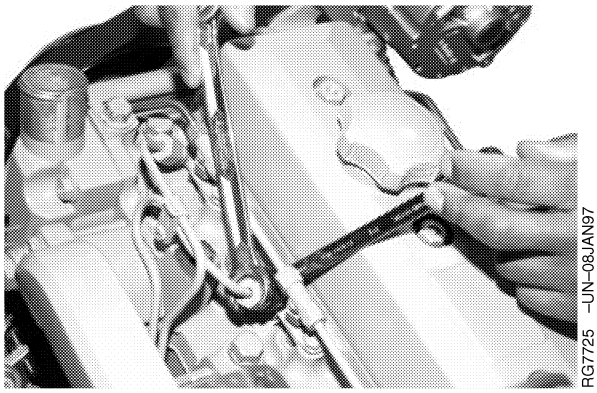
IMPORTANT: Always use a backup wrench when loosening or tightening fuel lines at nozzles and/or injection pump to avoid damage.

2. Using two open-end wrenches, loosen two fuel line connections at injection nozzles.

3. Crank engine over with starting motor for 15 seconds (but do not start engine) until fuel free from bubbles flows out of loosened connection. Retighten connection to specifications.

Specification	
Fuel injection lines—Torque	27 N•m (20 lb-ft)

4. Repeat procedure for remaining injection nozzles (if necessary) until all air has been removed from fuel system.



Fuel injection line

OU12401,000093D –19–01MAY01–3/3

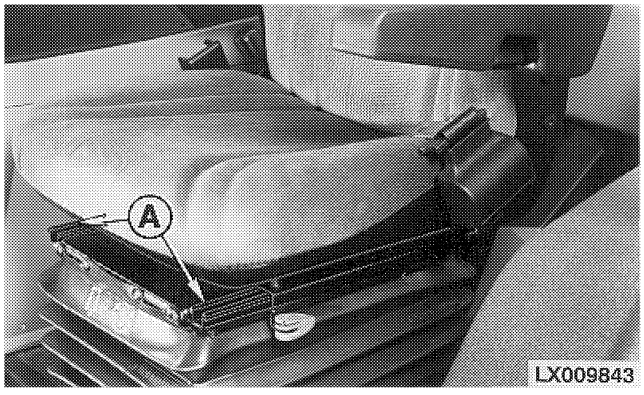
Lubricate All Lubricating Points

If the tractor has been washed with high-pressure water, lubricate all lubricating points.

LX,OWART 002327 –19–01APR92–1/1

Operator's Seat

Lubricate slide rails (A) with John Deere multipurpose grease.



LX,OVER 000424 –19–01JAN95–1/1

Prevent Battery Explosions

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

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

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

TS204 –UN–23AUG88

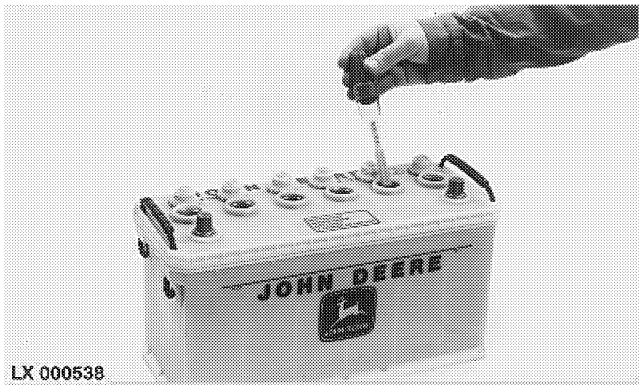
DX,SPARKS –19–03MAR93–1/1

Battery - Checking Specific Gravity

Check the specific gravity of the electrolyte using an accurate hydrometer.

A fully charged battery should have a specific gravity reading of 1.28. Recharge battery if reading drops below 1.20.

NOTE: A full battery charge in tropical areas is 1.23.



LX000538 –UN–10AUG94

AG,OU12401,268 –19–08APR00–1/1

Starter Motor

If the starter motor fails to operate after the starter switch has been operated, the complete starter system must be thoroughly checked. Check specific gravity of battery with an hydrometer and make sure that none of the cables are broken or worn through and that none of the cable connections are loose or corroded.

If the above checks fail to improve the operation of the starter motor, see your John Deere dealer.

OU12401,000093E –19–01MAY01–1/1

Fuses

The two main fuses are located under the engine hood, where they are secured to the hood frame just above the battery.

The fuses for the heating element and the electrical starting aid are on the right side of the engine block.

F13–80-amp battery circuit (main power supply)

F14–80-amp battery circuit (main power supply)

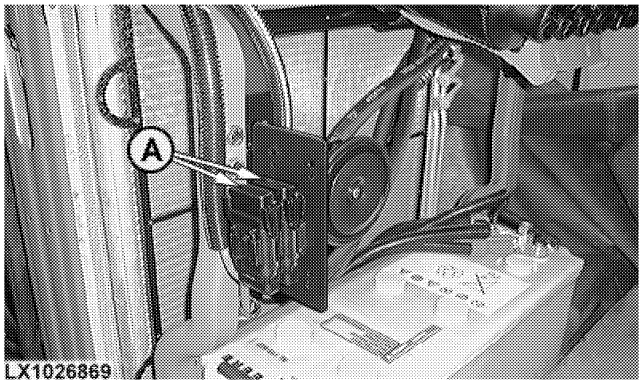
OU12401,00009A2 –19–01NOV01–1/5

Replacing the main fuses

IMPORTANT: To prevent unnecessary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

1. Open the hood.
2. Take covers (A) off the two fuses.
3. Replace the fuses.

A—Fuse covers



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OU12401,00009A2 –19–01NOV01–2/5

Replacing the electronic starting aid fuse

The fuses for the heating element and the electrical starting aid are on the right side of the engine block.

IMPORTANT: To prevent unnecessary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

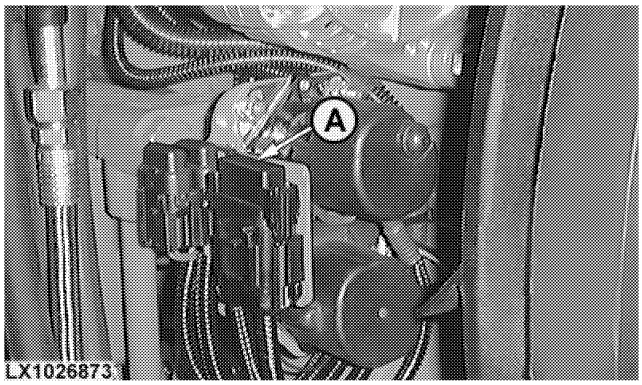
F09—70-amp heating element in electrical starting aid

CAUTION: Disconnect the battery ground cable (-).

Open the hood.

Take cover (A) off the fuse.

Replace the fuse.



A—Cover

OU12401,00009A2 –19–01NOV01–3/5

Replacing the indicator light fuse (electronic starting aid)

The fuse for the electrical starting aid indicator light is on the right side of the engine block.

IMPORTANT: To prevent unnecessary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

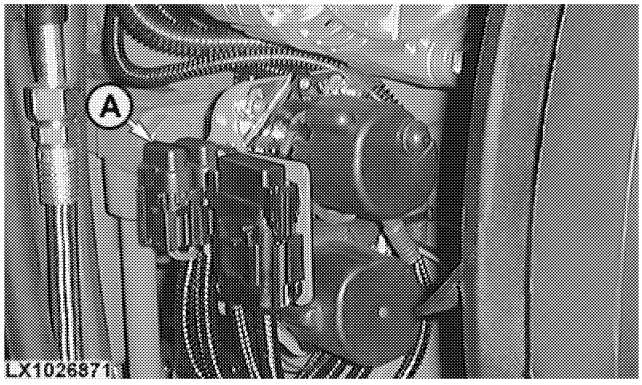
F11—10-amp indicator light in electrical starting aid

CAUTION: Disconnect the battery ground cable (-).

Open the hood.

Take cover (A) off the fuse.

Replace the fuse.



A—Cover (fuse F11)

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OU12401,00009A2 –19–01NOV01–4/5

Replacing the injection pump fuse

The injection pump fuse is located on the right side of the engine block.

IMPORTANT: To prevent unnecessary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

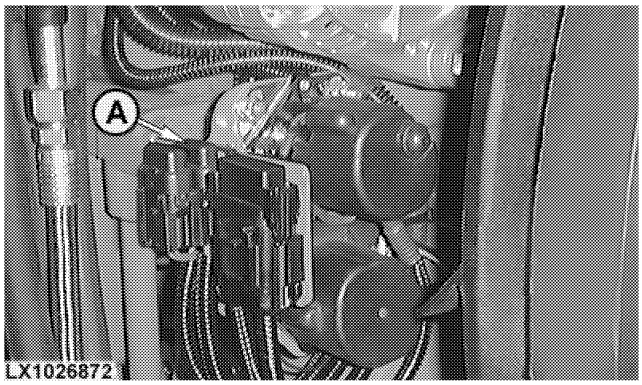
F10—20-amp injection pump

CAUTION: Disconnect the battery ground cable (-).

Open the hood.

Take cover (A) off the fuse.

Replace the fuse.



A—Cover (fuse F10)

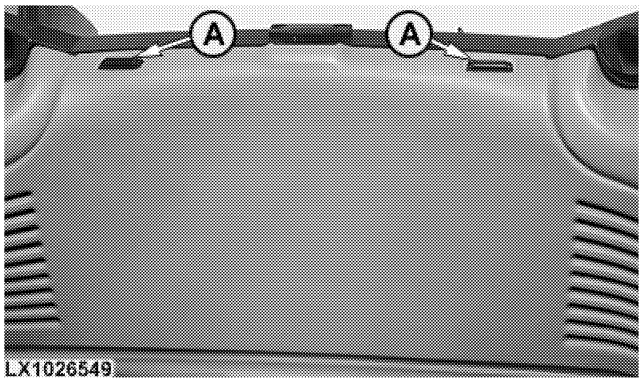
OU12401,00009A2 –19–01NOV01–5/5

Fuse and Relay Boxes on Tractors with Operator's Cab but without AutoPowr

Fuse and relay boxes

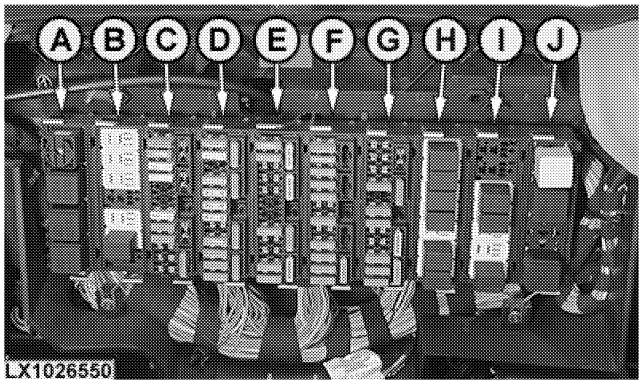
The fuse and relay boxes are located behind the operator's seat just below the rear window.

Press down latches (A) and lift off the trim panel.



OU12401,00009A3 –19–02NOV01–1/12

A—Relay box K01
B—Relay box K02
C—Fuse box F03
D—Fuse box F04
E—Fuse box F05
F—Fuse box F06
G—Fuse box F07
H—Relay box K08
I—Relay box K09
J—Relay box K10



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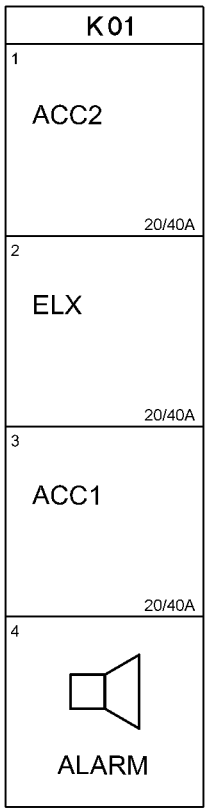
OU12401,00009A3 –19–02NOV01–2/12

Relays (relay box K01)

K01/1 — Relay for accessories
K01/2 — Relay for power supply to electronics
K01/3 — Relay for accessories
K01/4 — Acoustic alarm



LX1027989 –UN–15NOV01

LX1027989

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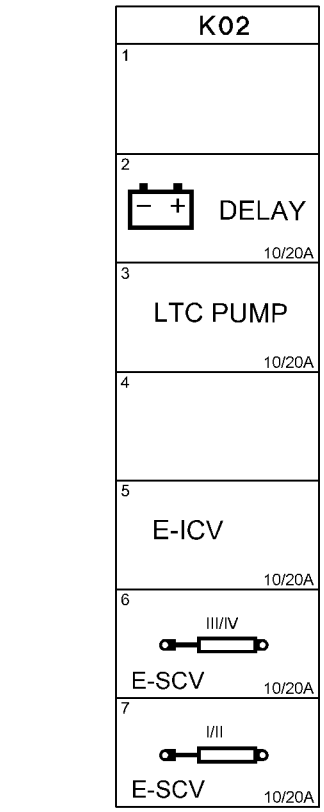
OU12401,00009A3 –19–02NOV01–3/12

Relays (relay box K02)

K02/1 — Not used
K02/2 — Alternator relay
K02/3 — Relay for LTC coolant pump
K02/4 — Not used
K02/5 — Relay for power supply to E-ICV
K02/6 — Relay for power supply to E-SCV 3, E-SCV 4
K02/7 — Relay for power supply to E-SCV 1, E-SCV 2



LX1027990

LX1027990 –UN–15NOV01

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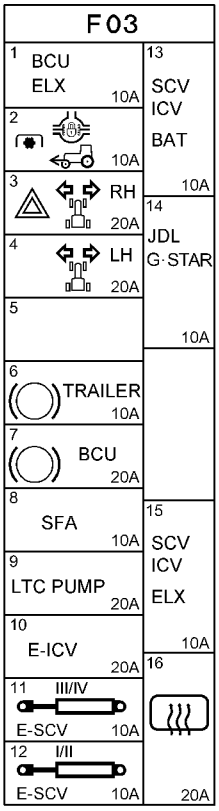
OU12401,00009A3 –19–02NOV01–4/12

Fuses (fuse box F03)

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F03/01 — 10-amp Basic Control Unit (BCU) (power supply)
F03/02 — 10-amp Basic Control Unit (BCU) (PTO, front-wheel drive, differential lock, HMS II, handbrake, wheel-speed sending unit, radar)
F03/03 — 20-amp right-hand turn signal, hazard warning lights
F03/04 — 20-amp left-hand turn signal
F03/05 — Not used
F03/06 — 10-amp brake lights
F03/07 — 20-amp brake switch
F03/08 — 10-amp controller for suspended front axle (SFA) (battery voltage)
F03/09 — 20-amp LTC coolant pump
F03/10 — 20-amp power supply to E-ICV
F03/11 — 10-amp power supply to E-SCV 3, E-SCV 4
F03/12 — 10-amp power supply to E-SCV 1, E-SCV 2
F03/13 — 10-amp E-SCV/E-ICV controller (SIC) (battery voltage)
F03/14 — 10-amp JDLink, GreenStar
F03/15 — 10-amp E-SCV/E-ICV controller (SIC) (power supply)
F03/16 — 20-amp heated rear window



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LX1027991 –UN–15NOV01

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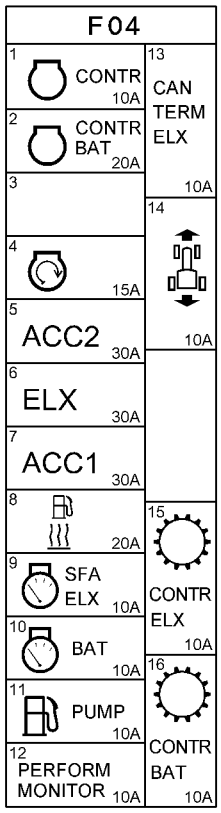
Fuses (fuse box F04)

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F04/01 — 10-amp Engine Control Unit (ECU) (power supply)
F04/02 — 20-amp Engine Control Unit (ECU) (battery voltage)
F04/03 — Not used
F04/04 — 15-amp main switch (BAT)
F04/05 — 30-amp accessories
F04/06 — 30-amp power supply for electronics
F04/07 — 30-amp accessories
F04/08 — 20-amp fuel preheater
F04/09 — 10-amp basic informator, controller for suspended front axle (SFA) (power supply)
F04/10 — 10-amp basic informator (battery voltage)
F04/11 — 10-amp fuel transfer pump, injection pump shut-off valve
F04/12 — 10-amp performance monitor (PRF)
F04/13 — 10-amp CAN BUS terminator, service plug
F04/14 — 10-amp electrical reverser control
F04/15 — 10-amp Electronic PowrQuad Controller (EPC) (power supply)
F04/16 — 10-amp Electronic PowrQuad Controller (EPC) (battery voltage)



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LX1027992 –UN–15NOV01

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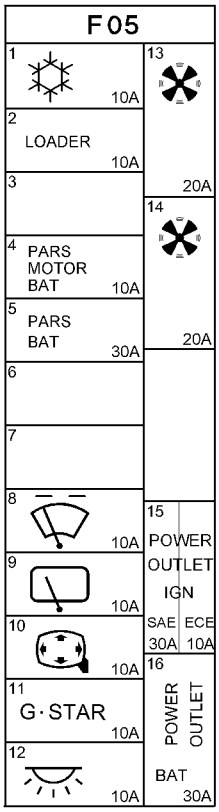
OU12401,00009A3 –19–02NOV01–6/12

Fuses (fuse box F05)

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F05/01 — 10-amp air-conditioning system
F05/02 — 10-amp 2-pin plug for front loader
F05/03 — Not used
F05/04 — Not used
F05/05 — Not used
F05/06 — Not used
F05/07 — Not used
F05/08 — 10-amp windshield wiper and washer
F05/09 — 10-amp rear window wiper and washer
F05/10 — 10-amp electrical rear-view mirror
F05/11 — 10-amp GreenStar, Tractor Equipment Controller (TEC) (power supply)
F05/12 — 10-amp dome light, radio (battery voltage)
F05/13 — 20-amp blower
F05/14 — 20-amp blower
F05/15 — 10-amp 3-terminal socket, socket strip (power supply)
F05/16 — 30-amp 3-terminal socket, socket strip (battery voltage)



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LX1027993 –UN–15NOV01

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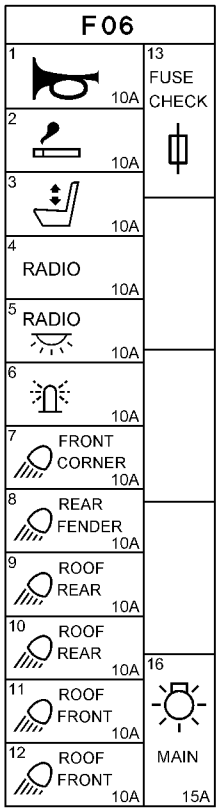
OU12401,00009A3 –19–02NOV01–7/12

Fuses (fuse box F06)

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F06/01 — 10-amp horn
F06/02 — 10-amp cigarette lighter
F06/03 — 10-amp operator's seat
F06/04 — 10-amp radio (power supply)
F06/05 — 10-amp shift console light, radio lighting
F06/06 — 10-amp beacon light
F06/07 — 10-amp front-corner worklights
F06/08 — 10-amp worklights on fender
F06/09 — 10-amp inner worklight on rear of cab roof
F06/10 — 10-amp outer worklight on rear of cab roof
F06/11 — 10-amp inner worklight on front of cab roof
F06/12 — 10-amp outer worklight on front of cab roof
F06/13 — Fuse tester
F06/14 — Not used
F06/15 — Not used
F06/16 — 15-amp light switch (terminal B)



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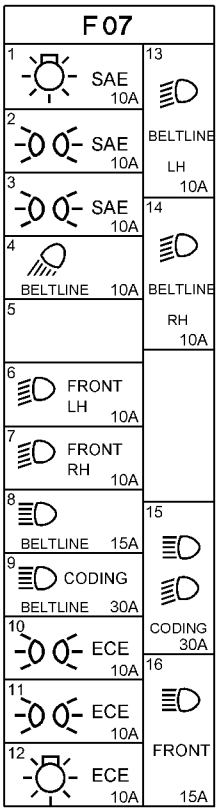
OU12401,00009A3 –19–02NOV01–8/12

Fuses (fuse box F07)

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F07/01 — Not used
F07/02 — Not used
F07/03 — Not used
F07/04 — 10-amp worklights on cab frame
F07/05 — Not used
F07/06 — 10-amp dipped-beam headlight, left
F07/07 — 10-amp dipped-beam headlight, right
F07/08 — 15-amp full-beam
F07/09 — 30-amp lights on cab frame
F07/10 — 10-amp r.h. tail light, l.h. clearance light, license plate light
F07/11 — 10-amp l.h. tail light, r.h. clearance light
F07/12 — 10-amp headlights
F07/13 — 10-amp dipped-beam, left (lights on cab frame)
F07/14 — 10-amp dipped-beam, right (lights on cab frame)
F07/15 — 30-amp headlights
F07/16 — 15-amp full-beam headlights



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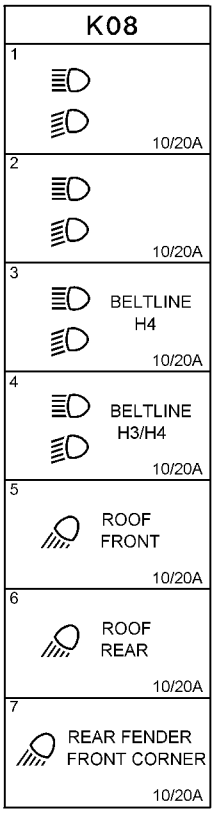
Relays (relay box K08)

K08/1 — Relay for full-beam headlights
K08/2 — Relay for dipped-beam headlights
K08/3 — Relay for lights on cab frame
K08/4 — Relay for headlights and worklights on cab frame
K08/5 — Relay for worklights on front of cab roof
K08/6 — Relay for worklights on rear of cab roof
K08/7 — Relay for worklights on front corners and fenders



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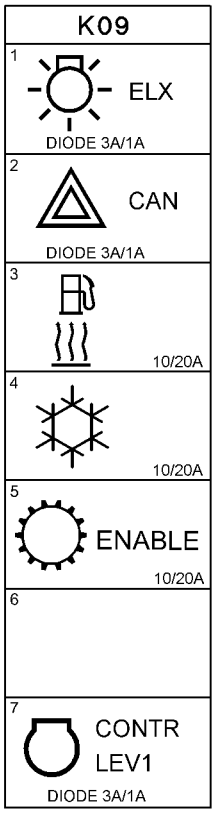
Relays (relay box K09)

K09/1 — 3-amp lighting diode
K09/1 — 1-amp diode for power supply to electronics
K09/2 — 3-amp CAN-BUS diode
K09/2 — 1-amp CAN-BUS diode
K09/3 — Relay for fuel preheater
K09/4 — Relay for air-conditioning system
K09/5 — Transmission enable relay
K09/6 — Not used
K09/7 — 3-amp diode (not connected)
K09/7 — 1-amp diode for electronic engine control (ECU, Level 1)



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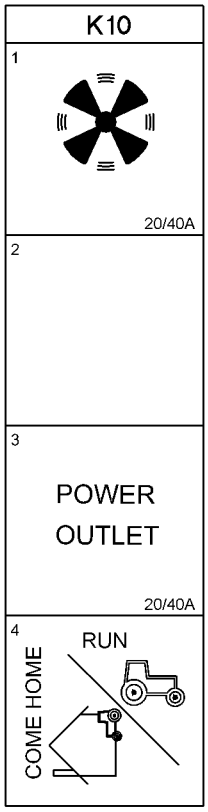
Relays (relay box K10)

K10/1 — Relay for blower
K10/2 — Not used
K10/3 — Relay for 3-terminal socket, power outlet strip
K10/4 — Plug for “come home” mode



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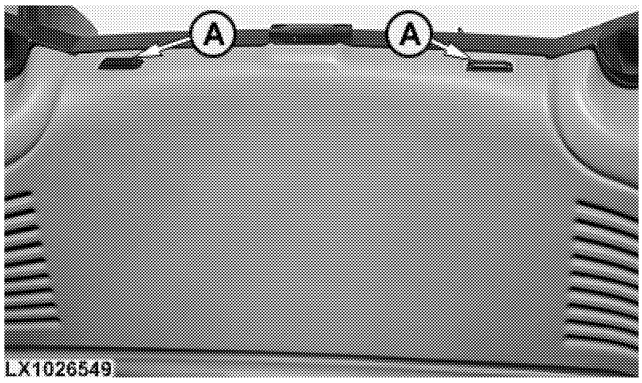
OU12401,00009A3 –19–02NOV01–12/12

Fuse and Relay Boxes on Tractors with Operator's Cab and AutoPowr

Fuse and relay boxes on tractors with AutoPowr/IVT transmission

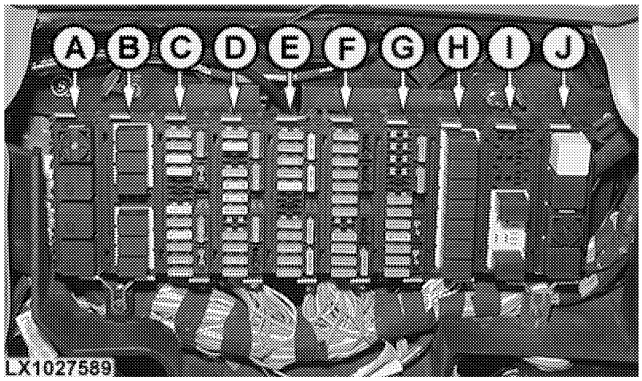
The fuse and relay boxes are located behind the operator's seat just below the rear window.

Press down latches (A) and lift off the trim panel.



OU12401,00009A4 –19–02NOV01–1/12

A—Relay box K01
B—Relay box K02
C—Fuse box F03
D—Fuse box F04
E—Fuse box F05
F—Fuse box F06
G—Fuse box F07
H—Relay box K08
I—Relay box K09
J—Relay box K10



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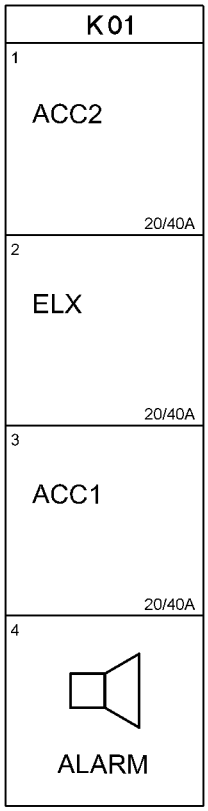
OU12401,00009A4 –19–02NOV01–2/12

Relays (relay box K01) on tractors with AutoPowr/IVT transmission

K01/1 — Relay for accessories
K01/2 — Relay for power supply to electronics
K01/3 — Relay for accessories
K01/4 — Acoustic alarm



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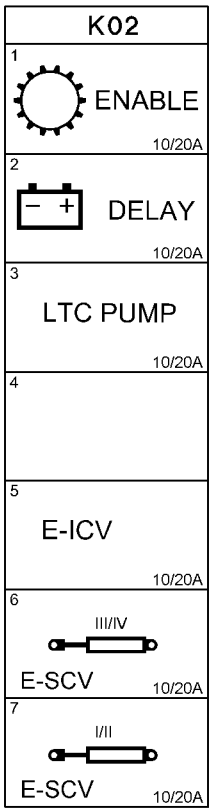
OU12401,00009A4 –19–02NOV01–3/12

Relays (relay box K02) on tractors with AutoPowr/IVT transmission

K02/1 — Enable relay
K02/2 — Alternator relay
K02/3 — Relay for LTC coolant pump
K02/4 — Not used
K02/5 — Relay for power supply to E-ICV
K02/6 — Relay for power supply to E-SCV 3, E-SCV 4
K02/7 — Relay for power supply to E-SCV 1, E-SCV 2



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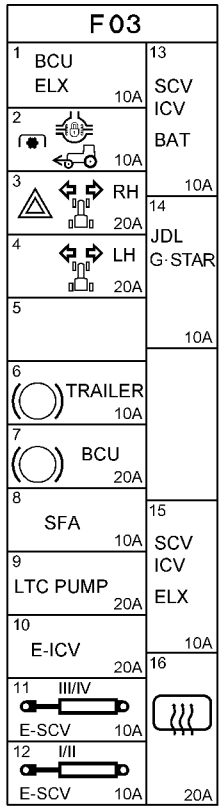
Fuses (fuse box F03) on tractors with AutoPowr/IVT transmission

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F03/01 — 10-amp Basic Control Unit (BCU) (power supply)
F03/02 — 10-amp Basic Control Unit (BCU) (PTO, front-wheel drive, differential lock, HMS II, handbrake, wheel-speed sending unit, radar)
F03/03 — 20-amp right-hand turn signal, hazard warning lights
F03/04 — 20-amp left-hand turn signal
F03/05 — Not used
F03/06 — 10-amp brake lights
F03/07 — 20-amp brake switch
F03/08 — 10-amp controller for suspended front axle (SFA) (battery voltage)
F03/09 — 20-amp LTC coolant pump
F03/10 — 20-amp power supply to E-ICV
F03/11 — 10-amp power supply to E-SCV 3, E-SCV 4
F03/12 — 10-amp power supply to E-SCV 1, E-SCV 2
F03/13 — 10-amp E-SCV/E-ICV controller (SIC) (battery voltage)
F03/14 — 10-amp JDLink, GreenStar
F03/15 — 10-amp E-SCV/E-ICV controller (SIC) (power supply)
F03/16 — 20-amp heated rear window



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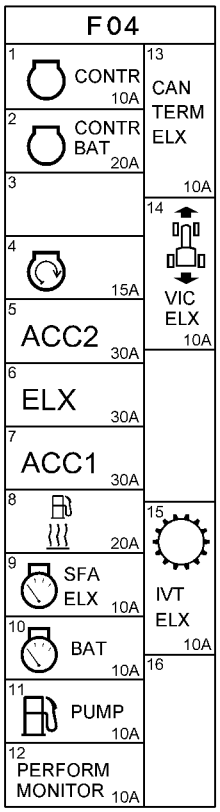
OU12401,00009A4 –19–02NOV01–5/12

Fuses (fuse box F04) on tractors with AutoPowr/IVT transmission

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F04/01 — 10-amp Engine Control Unit (ECU) (power supply)
F04/02 — 20-amp Engine Control Unit (ECU) (battery voltage)
F04/03 — Not used
F04/04 — 15-amp main switch (BAT)
F04/05 — 30-amp accessories
F04/06 — 30-amp power supply for electronics
F04/07 — 30-amp accessories
F04/08 — 20-amp fuel preheater
F04/09 — 10-amp basic informator, controller for suspended front axle (SFA) (power supply)
F04/10 — 10-amp basic informator (battery voltage)
F04/11 — 10-amp fuel transfer pump
F04/12 — 10-amp performance monitor (PRF)
F04/13 — 10-amp CAN BUS terminator, service plug
F04/14 — 10-amp User Interface Controller (UIC) (power supply)
F04/15 — 10-amp Transmission Control Unit (TCU) (power supply)
F04/16 — Not used



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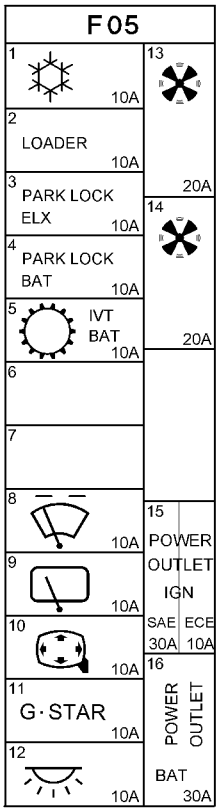
OU12401,00009A4 –19–02NOV01–6/12

Fuses (fuse box F05) on tractors with AutoPowr/IVT transmission

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F05/01 — 10-amp air-conditioning system
F05/02 — 10-amp 2-pin plug for front loader
F05/03 — 10-amp Park Lock Controller (PLC) (power supply)
F05/04 — 10-amp Park Lock Controller (PLC) (battery voltage)
F05/05 — 10-amp Transmission Control Unit (TCU) (battery voltage)
F05/06 — Not used
F05/07 — Not used
F05/08 — 10-amp windshield wiper and washer
F05/09 — 10-amp rear window wiper and washer
F05/10 — 10-amp electrical rear-view mirror
F05/11 — 10-amp GreenStar, Tractor Equipment Controller (TEC) (power supply)
F05/12 — 10-amp dome light, radio (battery voltage)
F05/13 — 20-amp blower
F05/14 — 20-amp blower
F05/15 — 10-amp 3-terminal socket, socket strip (power supply)
F05/16 — 30-amp 3-terminal socket, socket strip (battery voltage)



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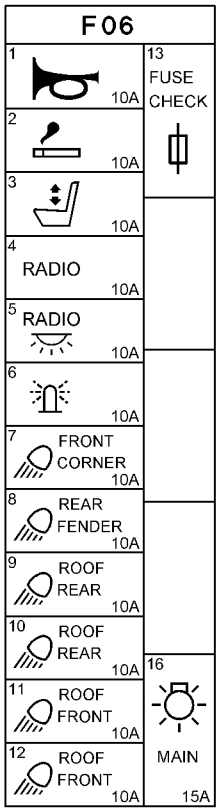
OU12401,00009A4 –19–02NOV01–7/12

Fuses (fuse box F06) on tractors with AutoPowr/IVT transmission

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F06/01 — 10-amp horn
F06/02 — 10-amp cigarette lighter
F06/03 — 10-amp operator's seat
F06/04 — 10-amp radio (power supply)
F06/05 — 10-amp shift console light, radio lighting
F06/06 — 10-amp beacon light
F06/07 — 10-amp front-corner worklights
F06/08 — 10-amp worklights on fender
F06/09 — 10-amp inner worklight on rear of cab roof
F06/10 — 10-amp outer worklight on rear of cab roof
F06/11 — 10-amp inner worklight on front of cab roof
F06/12 — 10-amp outer worklight on front of cab roof
F06/13 — Fuse tester
F06/14 — Not used
F06/15 — Not used
F06/16 — 15-amp light switch (terminal B)



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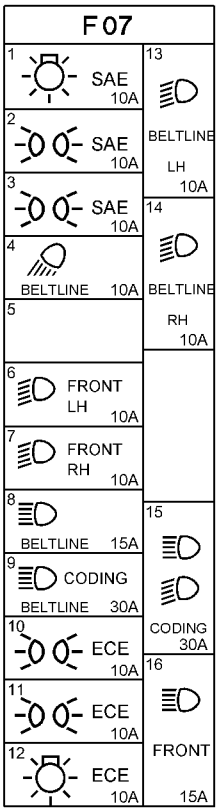
OU12401,00009A4 –19–02NOV01–8/12

Fuses (fuse box F07) on tractors with AutoPowr/IVT transmission

IMPORTANT: To prevent unnecesary damage to the electrical system, never use a fuse with a higher rating than the one already installed.

F07/01 — Not used
F07/02 — Not used
F07/03 — Not used
F07/04 — 10-amp worklights on cab frame
F07/05 — Not used
F07/06 — 10-amp dipped-beam headlight, left
F07/07 — 10-amp dipped-beam headlight, right
F07/08 — 15-amp full-beam
F07/09 — 30-amp lights on cab frame
F07/10 — 10-amp r.h. tail light, l.h. clearance light, license plate light
F07/11 — 10-amp l.h. tail light, r.h. clearance light
F07/12 — 10-amp headlights
F07/13 — 10-amp dipped-beam, left (lights on cab frame)
F07/14 — 10-amp dipped-beam, right (lights on cab frame)
F07/15 — 30-amp headlights
F07/16 — 15-amp full-beam headlights



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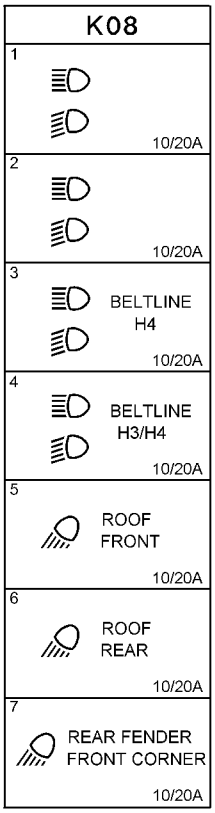
OU12401,00009A4 –19–02NOV01–9/12

Relays (relay box K08) on tractors with AutoPowr/IVT transmission

K08/1 — Relay for full-beam headlights
K08/2 — Relay for dipped-beam headlights
K08/3 — Relay for lights on cab frame
K08/4 — Relay for headlights and worklights on cab frame
K08/5 — Relay for worklights on front of cab roof
K08/6 — Relay for worklights on rear of cab roof
K08/7 — Relay for worklights on front corners and fenders



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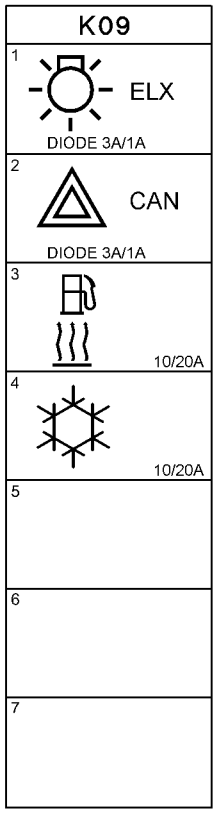
OU12401,00009A4 –19–02NOV01–10/12

Relays (relay box K09) on tractors with AutoPowr/IVT transmission

K09/1 — 3-amp lighting diode
K09/1 — 1-amp diode for power supply to electronics
K09/2 — 3-amp CAN-BUS diode
K09/2 — 1-amp CAN-BUS diode
K09/3 — Relay for fuel preheater
K09/4 — Relay for air-conditioning system
K09/5 — Not used
K09/6 — Not used
K09/7 — Not used



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LX1028002 –UN–15NOV01

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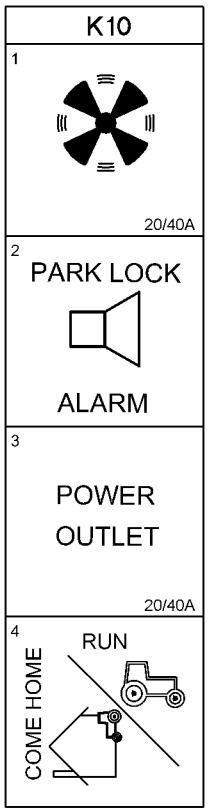
Relays (relay box K10) on tractors with AutoPowr/IVT transmission

K10/1 — Relay for blower
K10/2 — Acoustic alarm for park lock
K10/3 — Relay for 3-terminal socket, power outlet strip
K10/4 — Plug for “come home” mode



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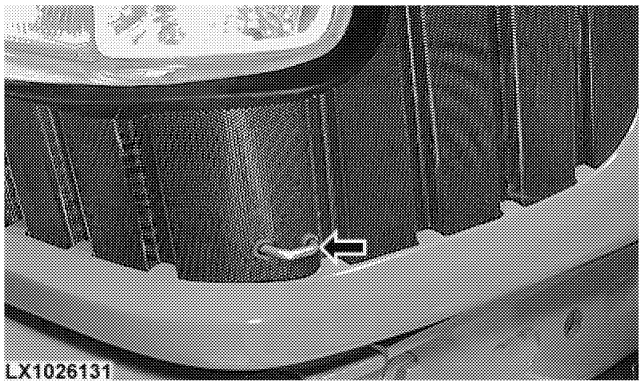
Replacing the Drive Belt

Pull the catch and lift the hood up.



OU12401,0000940 –19–01MAY01–1/5

Relieve Drive Belt Tension

CAUTION: Disconnect the battery ground cable (-).

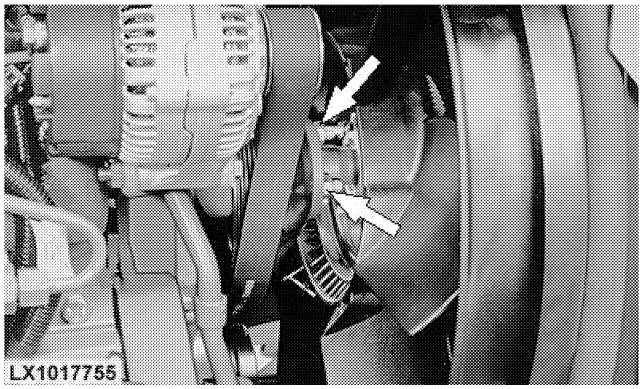
Slacken off the four hex. nuts and push the fan forward.

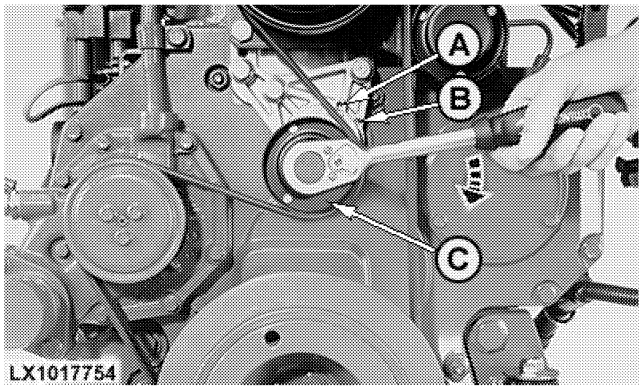
Use a 15 mm (19/32 in.) wrench to turn the cap screw in the idler roll clockwise (see arrow) until the two holes (A) and (B) are aligned.

Insert a metal pin with a dia. of 5 mm (0.2 in.) into the two aligned holes.

Before tensioning, turn the idle roll a little to relieve the pressure on the metal pin, and then take out the metal pin. The drive belt tensioner returns to its tensioning position automatically.

A—Hole (cam)
B—Hole (base plate)
C—Idler roll

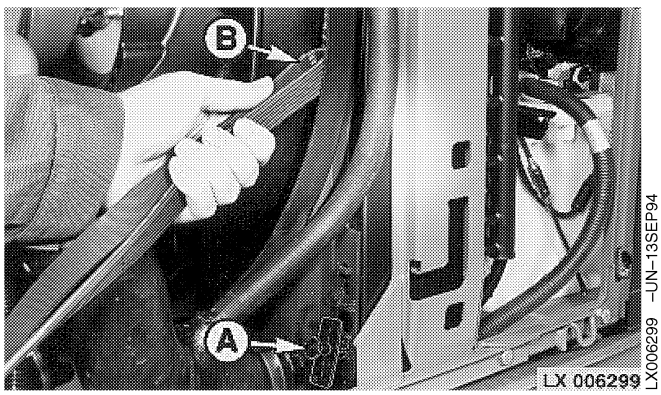




OU12401,0000940 –19–01MAY01–2/5

Remove old drive belt from pulleys, and cut.

Remove the three expanding plugs (A) of the shroud. Place a loop of the new drive belt (B) between fan and shroud.



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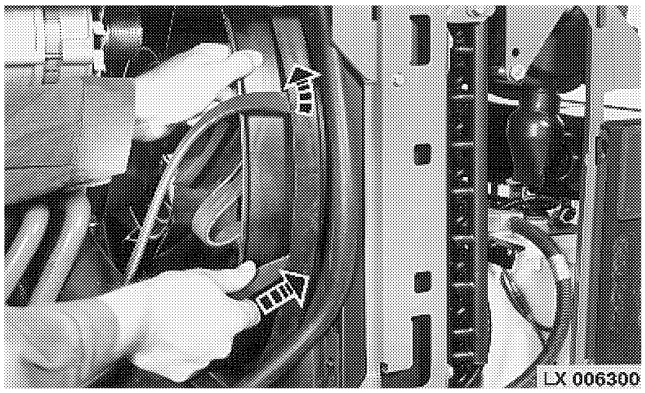
OU12401,0000940 –19–01MAY01–3/5

Turn fan while at the same time placing the drive belt around the fan.



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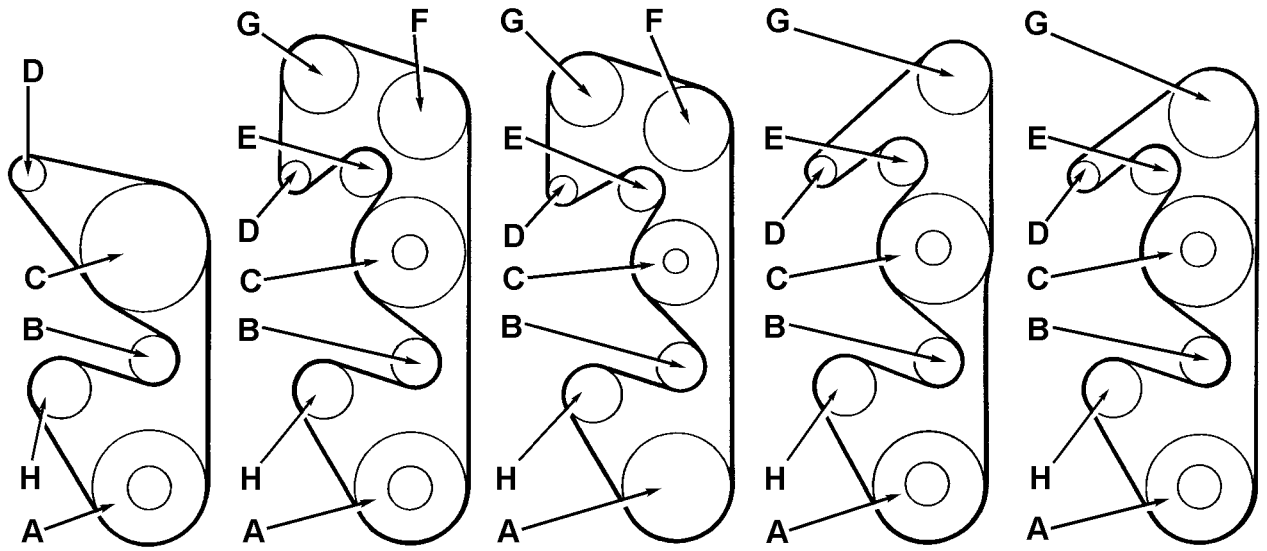

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A—Crankshaft
B—Idler roll
C—Fan
D—Alternator
E—Deflection roll
F—Compressor (air pressure)
G—Compressor (air conditioning system)
H—Coolant pump

Installing a New Drive Belt

Slacken drive belt tensioner and install new drive belt correctly.

For further assembly, see "Removing Drive Belt".

OU12401,0000940 –19–01MAY01–5/5

Hydraulic System

Symptom	Problem	Solution
Hydraulic system fails to function	Not enough oil in the system	Top up to mark on dipstick.
	Clogged hydraulic filters	Replace hydraulic filters.
	Dirt in hydraulic pump	Check filter for clogging.
Hydraulic oil overheats	Oil cooler air passages clogged	Clean oil cooler.
	Dirt in hydraulic pump	Check filter for clogging.
Hitch fails to lift load	Excessive load on hitch	Adjust auxiliary springs on implement or reduce load.
Hitch drops too slowly	Rate-of-drop regulator not adjusted properly	Adjust rate of drop.
No hitch response to draft load	System regulator in Height or Load-and-Depth Control position	Place system regulator in Load Control position.
Hitch too active	System regulator in Load Control position	Place system regulator in Load-and-Depth position.
Direction of remote cylinder travel is reversed	Hoses connected incorrectly	Connect hoses correctly.
Remote cylinder will not lift load	Excessive load	Adjust auxiliary springs on implement or reduce load.
	Hoses on quick-coupler not correctly attached	Attach hoses to quick-coupler correctly.
	Air in remote cylinder	Bleed cylinder.
Remote cylinder travels too fast or too slowly	Rate-of-lift is adjusted incorrectly	Adjust rate of lift.

LX,OTRO 000447 –19–01OCT94–1/1

Engine

Symptom	Problem	Solution
Engine hard to start or will not start	No fuel	Fill tank with proper fuel.
	Air in the fuel system	Bleed air from fuel system.
	Low ambient air temperature	Use cold weather starting aids.
	Clogged fuel filter	Replace filter element.
	Crankcase oil too heavy	Use oil of proper viscosity.
Engine knocks	Insufficient oil in engine	Add more oil.
	Fuel injection pump incorrectly timed	See your dealer.
Engine overheats	Low coolant level	Fill radiator to proper level. Check cooling system for leaks.
	Loose or defective fan belt	Adjust or replace fan belt.
	Cooling system needs flushing	Drain, flush and refill cooling system.
	Dirty oil cooler or grille screens	Clean oil cooler and screens.
	Defective thermostat	Remove and check thermostat.
Engine oil pressure too low	Low engine oil level	Add more engine oil.
High oil consumption	Oil of too low viscosity	Drain and refill with oil of correct viscosity.
	Oil leaks	Check for leaks in lines and around gaskets.
High fuel consumption	Wrong type of fuel	Use a suitable fuel grade.
	Incorrect valve clearance	See your dealer.
	Fuel injection nozzles dirty or damaged	See your dealer.
	Engine incorrectly timed	See your dealer.
	Clogged or dirty air cleaner	Service air cleaner.

Continued on next page

Symptom	Problem	Solution
Engine emits black or gray exhaust smoke	Unsuitable fuel grade	Use a suitable fuel grade.
	Clogged air cleaner	Service air cleaner.
	Defective muffler	Replace muffler.
	Fuel injection nozzles dirty or damaged	See your dealer.
Engine emits white smoke	Unsuitable fuel grade	Use a suitable fuel grade.
	Cold engine	Run engine until normal operating temperature is reached.
	Defective thermostat	Replace thermostat.
	Engine incorrectly timed	See your dealer.

LX,OTRO 000448 –19–01JUL94–2/2

Electrical System

Symptom	Problem	Solution
Battery will not charge	Loose or corroded connections	Clean and tighten battery connections.
	Fault in alternator	See your John Deere dealer
	Sulfated battery	Check specific gravity and electrolyte level of battery.
	Loose or defective alternator belt	Adjust belt tension or replace belt.
Starter inoperative	Loose or corroded connections	Clean and tighten loose connections.
	Low battery output	Check and recharge battery.
	Blown fuse	Put in a new fuse.
	Defect in starting motor	See your John Deere dealer.
Starter cranks slowly	Low battery output	Check and recharge battery.
	Crankcase oil too heavy	Drain crankcase and add correct oil.
	Loose or corroded connections	Clean and tighten loose connections.
	Defect in starting motor	See your John Deere dealer.

LX,OMTRO 013415 –19–01SEP97–1/1

Diagnostic Trouble Codes

What the Diagnostic Trouble Codes Mean

The tractor's electrical circuits are monitored by a number of different control units. If a functional fault occurs, a diagnostic trouble code will be generated and stored in the memory. A large proportion of these codes appear before the operator automatically on his digital display.

In addition, functional faults are indicated on the dashboard by the red STOP light, the yellow CAUTION light and the blue INFO light.

Unless the displayed message is self-explanatory (e.g. "transmission oil filter dirty"), you should get in touch with your John Deere dealer and discuss with him how best to proceed.

On the following pages you can read how to make all the diagnostic trouble codes appear on the display, even the ones that do not appear automatically. The meanings of the diagnostic trouble codes are arranged according to the control unit.

OU12401,00005DE –19–27APR01–1/1

Displaying the Diagnostic Trouble Codes

Diagnostic trouble codes are called up and displayed in different ways depending on how the tractor is equipped. The following methods are possible:

- Display on the digital display
  - – Dual Gauge II
  - – Dual Gauge Plus II
- Display on the performance monitor

Continued on next page

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Display on the digital display

Operation:

Turn the main switch to “ON”, wait at least 4 seconds and then press roll-mode switch (A) and hold it down until “diA” appears on the Dual Gauge II display or “Diagnostic Mode” appears on the Dual Gauge Plus II display.

Moving the turn signal lever (B) up (1=right turn signal) increments the control units, addresses or information (values) at an address location.

To decrement the control units, addresses or information (values) at an address location, move turn signal lever (B) down (2=left turn signal).

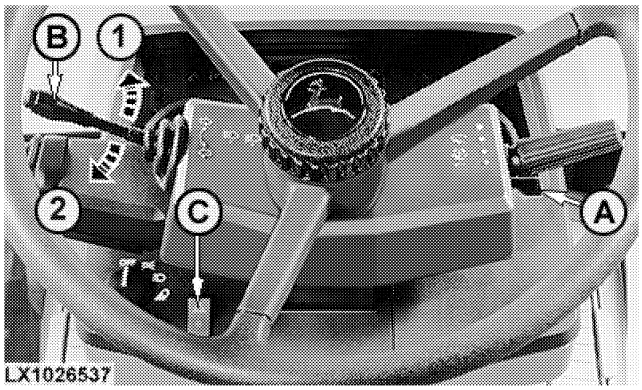
Each action will show the next control unit (move the hazard flasher switch to on/off position to access the address mode). The next higher or lower address or the next information (value) is displayed by actuating the turn signals.

If the turn signal lever is left in a position (1 or 2) for a turn signal, the addresses will increment or decrement in groups of 10.

To confirm or move to the next information (value) at an address, briefly pull turn signal lever (B) toward the steering wheel (flash-to-pass position) for less than 2 seconds.

To input data or cancel a process, activate the flash-to-pass function by pulling turn signal lever (B) toward the steering wheel for at least 2 seconds.

The hazard flasher switch (C) is used to clear or store diagnostic trouble codes.



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A—Roll-mode switch
B—Turn signal lever
C—Hazard flasher switch
1—Right turn signal
2—Left turn signal

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Dual Gauge II

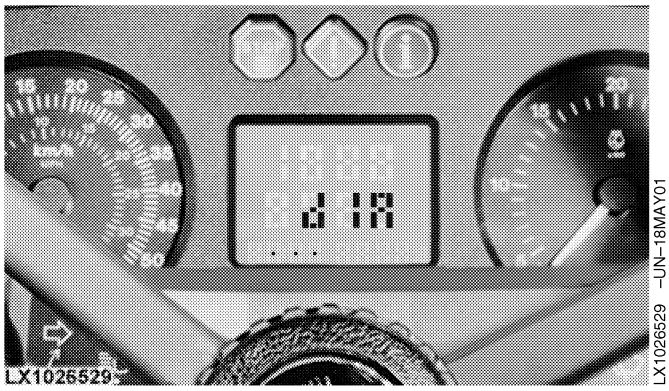
The digital display shows "diA" first. The display changes when a control unit is selected and confirmed.

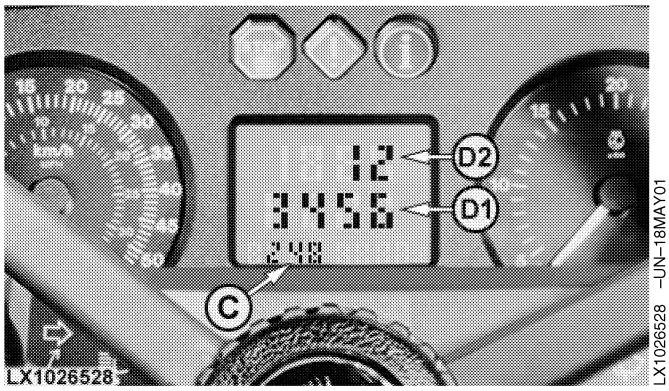
The left end of the bottom line (C) on the digital display indicates the address.

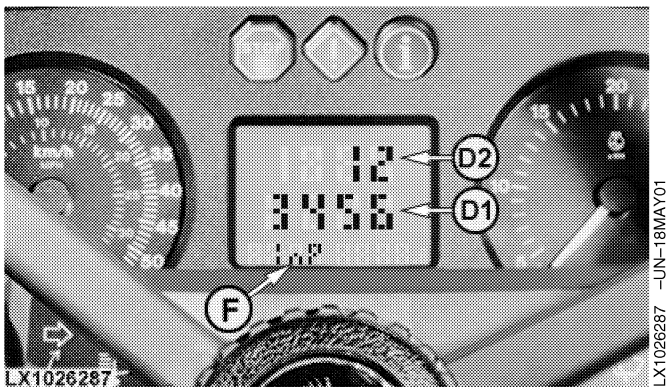
If the address is an input one, the display alternates between the address and “InP” (F).

Information is shown in the middle line (D1). If four figures are not enough, the four figures in the top row (D2) may be used as well.

C—Address
D1—Information (display positions 1 - 4)
D2—Information (display positions 5 - 8)
F—Input address or calibratable address







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Dual Gauge Plus II

Dual Gauge Plus II first shows "Diagnostic Mode". The display changes when a control unit is selected and confirmed.

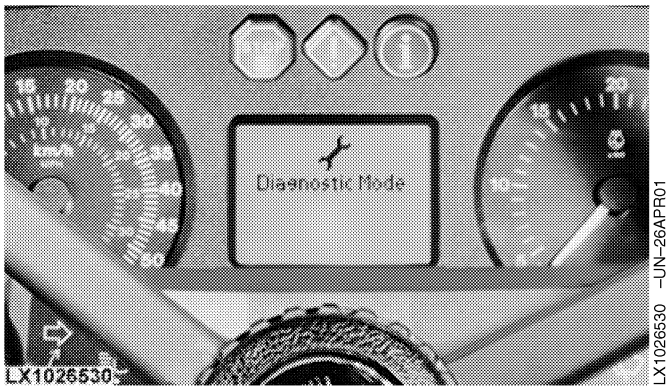
The control units (Device) are shown on the top line (E) of the digital display.

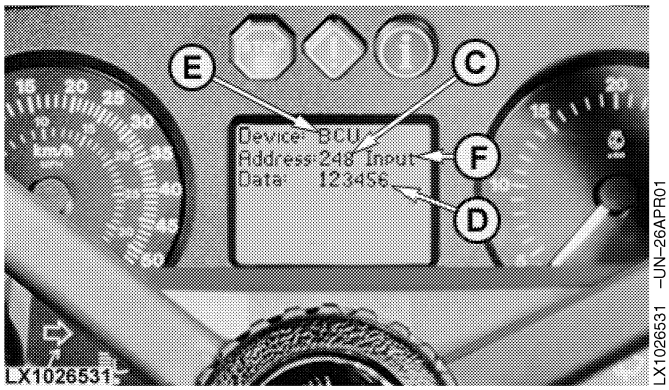
Addresses are shown on the middle line (C).

If the address is an input one, the word "Input" (F) appears after the address.

Information (Data) is shown on the bottom line (D).

C—Address
D—Information
E—Control unit
F—Input address or calibratable address





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Display on the performance monitor

Operation

Move the main switch to the “ON” position, wait for at least 4 seconds and then press the “Service” button (A) until “diA” appears on the display.

Pressing the "2" button (B) increments the control units or addresses.

The "0" button (C) is used to decrement the control units or the addresses.

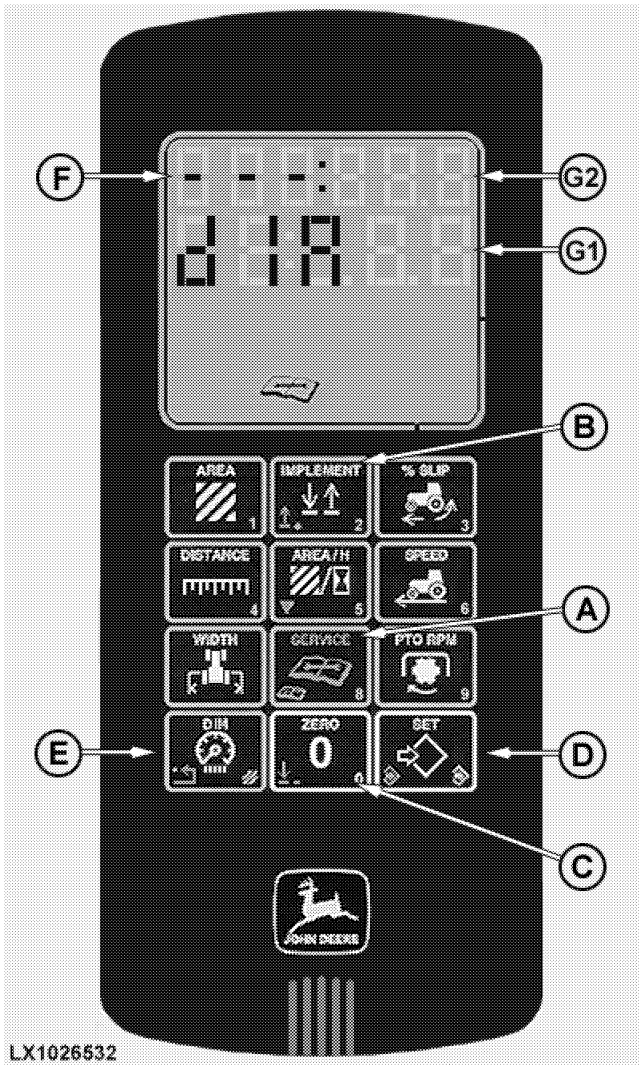
Pressing the “2” button or “0” button for longer than 2 seconds causes the addresses to increment or decrement in groups of 10.

Press the "Store" button (D) to confirm, enter or store data.

Information (values) are keyed in at the numbered buttons (numbers at bottom right corner of button).

The “Clear” button (E) is used to clear a diagnostic trouble code or cancel a process.

A—“Service” button
B—"2" button (up)
C—"0" button (down)
D—"Store" button
E—"Clear" button
F—Address
G1—Information (display positions 1 - 5)
G2—Information (display positions 6 - 8)



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Display

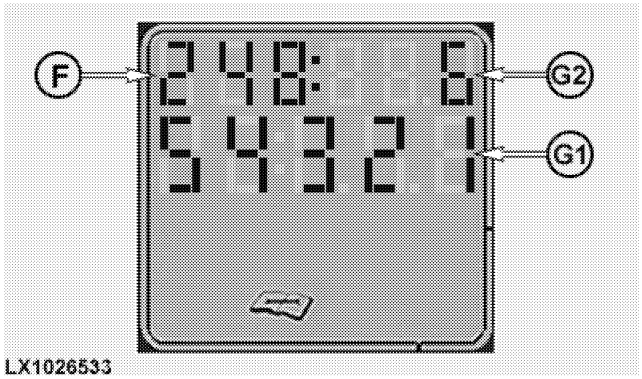
The top row on the display is divided by a colon.

Address (F) is shown by three figures on the left of the top row.

If the address is an input one, the display alternates between the address and “InP” (H).

Information (G1) is shown on the bottom line. If five figures are not enough, the three figures on the right of top row (G2) may be used as well.

F—Address
G1—Information (display positions 1 - 5)
G2—Information (display positions 6 - 8)
H—Input address or calibratable address



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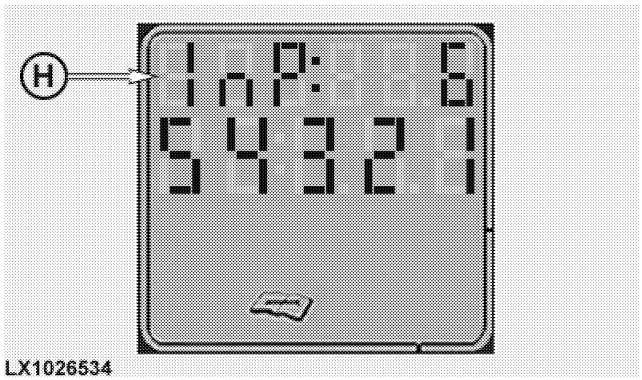

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Call up all the codes of all the control units

Desired step	Digital display	Performance monitor	Display	Next step
1. Entering the program mode	Main switch “ON”, wait for at least 4 seconds, press and hold down the roll-mode switch	Main switch “ON”, wait for at least 4 seconds, press the “Service” button and hold it down for a while	diA	Go to 2
2. Calling up the ALL mode	Move the turn signal lever up or down	Press the “2” button or the “0” button	ALL	Go to 3
3. Entering the ALL mode	Pull the turn signal lever briefly towards the steering wheel (flash-to-pass)	Press the “Input” button	000:ALL	Go to 4
4. Checking the control units	Move the turn signal lever up or down	Press the “2” button or the “0” button	The first control unit appears on the display. Examples: BCU:nonE BCU:CodE	 Go to 5 Go to 6
5. nonE (no diagnostic trouble codes are stored)	Move the turn signal lever up or down	Press the “2” button or the “0” button	The next control unit appears on the display	Go to 3 or “Calling up and confirming a control unit” or “Exiting program mode”
6. CodE (diagnostic trouble codes are stored)	Pull the turn signal lever briefly towards the steering wheel (flash-to-pass)	Press the “Input” button	The first diagnostic trouble code appears on the display	Go to 7 or 8 or “Exiting program mode”
7.	Move the turn signal lever up	Press “2” button	The next diagnostic trouble code appears on the display. “CLr?” appears at the end of the list	Go to 7 or 8 or “Exiting program mode”
8. Clearing the diagnostic trouble codes (when “CLr?” appears on the display)	Switch the hazard flasher switch on and off	Press the “Input” button	donE	Go to 4 or “Calling up and confirming a control unit” or “Exiting program mode”

Continued on next page

Calling up and confirming a control unit

Desired step	Digital display	Performance monitor	Display	Next step
1. Entering the program mode	Main switch “ON”, wait for at least 4 seconds, press and hold down the roll-mode switch	Main switch “ON”, wait for at least 4 seconds, press the “Service” button and hold it down for a while	diA	Go to 2
2. Calling up a control unit	Keep pushing the turn signal lever up until the desired control unit appears on the display	Keep pressing the ”2” button until the desired control unit appears on the display	For example: - - -: BCU.01	Go to 3
3. Confirming the control unit	Pull the turn signal lever briefly towards the steering wheel (flash-to-pass)	Press the “Input” button	For example: 000:BCU.01	Go to 4 or “Calling up diagnostic trouble codes of a single control unit” or “Calling up addresses” or “Exiting program mode”
4. Changing between a number of different control units	Pull the turn signal lever towards the steering wheel (flash-to-pass) for at least 2 seconds	Press the “Clear” button	For example: - - -: BCU.01	Go to 2

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Calling up diagnostic trouble codes of a single control unit

Desired step	Digital display	Performance monitor	Display	Next step
1. Entering the program mode	Main switch “ON”, wait for at least 4 seconds, press and hold down the roll-mode switch	Main switch “ON”, wait for at least 4 seconds, press the “Service” button and hold it down for a while	diA	Go to 2
2. Calling up diagnostic trouble codes	Move the turn signal lever up	Press “2” button	For example: BCU:nonE BCU:CodE	 Go to 3 Go to 4
3. nonE (no diagnostic trouble codes are stored)	Move the turn signal lever up	Press “2” button		Go to “Calling up addresses”
4. CodE (diagnostic trouble codes are stored)	Pull the turn signal lever briefly towards the steering wheel (flash-to-pass)	Press the “Input” button	The first diagnostic trouble code appears on the display	Go to 5 or 6 or “Exiting program mode”
5.	Move the turn signal lever up	Press “2” button	The next diagnostic trouble code appears on the display. “CLr?” appears at the end of the list	Go to 5 or 6 or “Exiting program mode”
6. Clearing the diagnostic trouble codes (when “CLr?” appears on the display)	Switch the hazard flasher switch on and off	Press the “Input” button	donE	Go to “Calling up addresses” or “Exiting program mode”

Calling up addresses

Desired step	Digital display	Performance monitor	Display	Next step
1. Entering the program mode	Main switch “ON”, wait for at least 4 seconds, press and hold down the roll-mode switch	Main switch “ON”, wait for at least 4 seconds, press the “Service” button and hold it down for a while	diA	Go to 2
2. Calling up addresses	Move the turn signal lever up or down	Press the “2” button or the “0” button	The addresses appear on the display	Go to “Exiting program mode”

Continued on next page

Exiting program mode

Desired step	Digital display	Performance monitor	Display	Next step
1. Aborting program mode	Pull the turn signal lever towards the steering wheel (flash-to-pass) for at least 2 seconds	Press the “Clear” button		
2. Exiting program mode	Turn main switch off	Turn main switch off		

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Diagnostic Trouble Codes on Engine Control Unit (ECU)

Light	Diagnostic trouble code	Description
yellow	ECU 000028.03	Cruise control potentiometer, shorted circuit
yellow	ECU 000028.04	Cruise control potentiometer, grounded or open circuit
blue	ECU 000029.03	Hand throttle potentiometer, shorted circuit
blue	ECU 000029.04	Hand throttle potentiometer, grounded or open circuit
blue	ECU 000091.03	Accelerator pedal potentiometer, shorted circuit
blue	ECU 000091.04	Accelerator pedal potentiometer, grounded or open circuit
red	ECU 000094.01	Fuel pressure very low
blue	ECU 000094.03	Fuel pressure sender, shorted circuit
blue	ECU 000094.04	Fuel pressure sender, grounded or open circuit
blue	ECU 000094.18	Fuel pressure too low
red	ECU 000100.01	Engine oil pressure is very low
blue	ECU 000100.03	Engine oil pressure sender, shorted circuit
blue	ECU 000100.04	Engine oil pressure sender, grounded or open circuit
yellow	ECU 000100.18	Engine oil pressure is low
red	ECU 000110.00	Coolant temperature is very high
blue	ECU 000110.03	Coolant temperature sender, shorted circuit
blue	ECU 000110.04	Coolant temperature sender, grounded or open circuit
blue	ECU 000110.16	Coolant temperature is high
red	ECU 000174.00	Fuel temperature is very high
blue	ECU 000174.15	Fuel temperature is high
yellow	ECU 000174.16	Fuel temperature is slightly high
blue	ECU 000174.31	Fuel temperature sender defective
-	ECU 000189.00	Engine speed derate
-	ECU 000190.00	Engine racing excessively
yellow	ECU 000190.02	Engine speed sender, signal distorted
-	ECU 000190.16	Engine racing slightly
blue	ECU 000627.04	Unswitched power supply is missing at ECU
red	ECU 000629.13	Control unit is connected to the wrong harness connector
red	ECU 000629.19	Data sent by injection pump control unit is not complete
blue	ECU 000632.02	Fuel shut-off fault
blue	ECU 000632.05	Fuel shut-off not functioning
blue	ECU 000636.02	Camshaft speed sender, signal distorted
blue	ECU 000636.08	Camshaft speed sender, signal is missing
blue	ECU 000636.10	Camshaft speed sender, signal is faulty
yellow	ECU 000637.02	Crankshaft speed sender, signal distorted
yellow	ECU 000637.08	Crankshaft speed sender, signal is missing
yellow	ECU 000637.10	Crankshaft speed sender, signal is faulty
blue	ECU 000729.03	Electrical starting aid relay, shorted circuit
blue	ECU 000729.05	Electrical starting aid relay, open circuit
yellow	ECU 000810.02	Transmission output speed sender, signal distorted
yellow	ECU 000898.09	User interface controller is not transmitting any data
blue	ECU 000931.02	Actuating solenoid on injection pump, instable current regulation
blue	ECU 000931.03	Pump control voltage, shorted circuit
blue	ECU 000931.04	Pump control voltage, grounded or open circuit
yellow	ECU 000931.15	Actuating solenoid on injection pump, excessively high current regulation
blue	ECU 000931.31	Actuating solenoids on injection pump, no current regulation possible
blue	ECU 001041.02	Faulty engine start signal
blue	ECU 001041.03	Engine start signal, shorted circuit
blue	ECU 001069.02	Control unit, incorrect input value
red	ECU 001076.02	Defective injection pump

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Light	Diagnostic trouble code	Description
blue	ECU 001077.07	Fuel injection attempted but not commanded
blue	ECU 001077.11	Injection pump supply voltage is out of specification
red	ECU 001077.12	Injection pump internal fault
red	ECU 001077.19	Data transmitted by engine control unit is incomplete (crankshaft speed)
yellow	ECU 001077.31	Injection pump initiates engine protection
yellow	ECU 001078.07	Crankshaft speed slightly below the lower threshold
blue	ECU 001078.11	Set-up problem between injection pump control unit and engine control unit
yellow	ECU 001078.31	Crankshaft speed out of specification by a wide margin
blue	ECU 001079.03	5-volt power supply 1, shorted circuit
blue	ECU 001079.04	5-volt power supply 1, grounded or open circuit
blue	ECU 001080.03	5-volt power supply 2, shorted circuit
blue	ECU 001080.04	5-volt power supply 2, grounded or open circuit
blue	ECU 001485.02	Fault in relay for power supply to the injection pump
-	ECU 001569.31	Fuel derate
yellow	ECU 002000.13	Set-up error in BCU

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Diagnostic Trouble Codes on Transmission Control Unit (TCU)

Light	Diagnostic trouble code	Description
yellow	TCU 304019.05	Fault at clutch pedal sensor
yellow	TCU 304020.02	Faulty transmission enable signal
blue	TCU 304024.04	Transmission oil temperature sender, short to ground
yellow	TCU 304032.03	Clutch pedal switch, shorted circuit
yellow	TCU 304033.03	Transmission enable signal, shorted circuit
blue	TCU 304040.03	Transmission oil temperature sender, shorted or open circuit
yellow	TCU 304048.04	Transmission input speed sender, grounded circuit
yellow	TCU 304049.04	Transmission output speed sender, grounded circuit at channel 1
blue	TCU 304050.04	Hydrostatic speed sender, grounded circuit at channel 1
yellow	TCU 304051.04	Transmission output speed sender, grounded circuit at channel 2
yellow	TCU 304052.04	Hydrostatic speed sender, grounded circuit at channel 2
yellow	TCU 304056.03	Transmission input speed sender, shorted or open circuit
yellow	TCU 304057.03	Transmission output speed sender, shorted or open circuit at channel 1
yellow	TCU 304058.03	Hydrostatic speed sender, shorted or open circuit at channel 1
yellow	TCU 304059.03	Transmission output speed sender, shorted or open circuit at channel 2
yellow	TCU 304060.03	Hydrostatic speed sender, shorted or open circuit at channel 2
yellow	TCU 304064.02	Implausible drop in speed at transmission input speed sender
blue	TCU 304069.02	Implausible drop in speed at the PLC's transmission output speed sender
blue	TCU 304070.10	Transmission output speed sender of PLC is defective
yellow	TCU 304072.11	Transmission input speed and engine speed do not match
blue	TCU 304073.08	Transmission output speed sender, speed in channel 1 lower than in channel 2
blue	TCU 304074.08	Hydrostatic speed sender, speed in channel 1 lower than in channel 2
blue	TCU 304075.08	Transmission output speed sender, speed in channel 2 lower than in channel 1
blue	TCU 304076.08	Hydrostatic speed sender, speed in channel 2 lower than in channel 1
yellow	TCU 304077.07	Transmission input speed, hydrostatic speed and transmission output speed do not match
yellow	TCU 304079.07	Amperage at proportional solenoids of hydrostatic unit does not match the registered speed
blue	TCU 304080.02	Fault in warning light circuit
yellow	TCU 304081.05	C1 solenoid valve, open circuit
yellow	TCU 304082.05	C2 solenoid valve, open circuit
yellow	TCU 304083.05	C3 solenoid valve, open circuit
yellow	TCU 304084.05	C4 solenoid valve, open circuit
yellow	TCU 304085.05	BG solenoid valve, open circuit
yellow	TCU 304086.05	Park lock solenoid valve, open circuit
yellow	TCU 304088.05	Proportional solenoid Y1 (hydrostatic control valve), open circuit
yellow	TCU 304089.05	Proportional solenoid Y2 (hydrostatic control valve), open circuit
yellow	TCU 304090.05	Proportional valve for forward clutch (CF), open circuit
yellow	TCU 304091.05	Proportional valve for reverse clutch (CR), open circuit
yellow	TCU 304097.04	C1 solenoid valve, grounded circuit
yellow	TCU 304098.04	C2 solenoid valve, grounded circuit
yellow	TCU 304099.04	C3 solenoid valve, grounded circuit
yellow	TCU 304100.04	C4 solenoid valve, grounded circuit
yellow	TCU 304101.04	BG solenoid valve, grounded circuit
yellow	TCU 304102.04	Park lock solenoid valve, grounded circuit
yellow	TCU 304104.04	Proportional solenoid Y1 (hydrostatic control valve), shorted to ground
yellow	TCU 304105.04	Proportional solenoid Y2 (hydrostatic control valve), shorted to ground
yellow	TCU 304106.04	Proportional valve for forward clutch (CF), shorted to ground
yellow	TCU 304107.04	Proportional valve for reverse clutch (CR), shorted to ground
yellow	TCU 304113.03	C1 solenoid valve, shorted circuit
yellow	TCU 304114.03	C2 solenoid valve, shorted circuit
yellow	TCU 304115.03	C3 solenoid valve, shorted circuit

Continued on next page

Light	Diagnostic trouble code	Description
yellow	TCU 304116.03	C4 solenoid valve, shorted circuit
yellow	TCU 304117.03	BG solenoid valve, shorted circuit
yellow	TCU 304118.03	Park lock solenoid valve, shorted circuit
yellow	TCU 304120.03	Proportional solenoid Y1 (hydrostatic control valve), shorted circuit
yellow	TCU 304121.03	Proportional solenoid Y2 (hydrostatic control valve), shorted circuit
yellow	TCU 304122.03	Proportional valve for forward clutch (CF), shorted circuit
yellow	TCU 304123.03	Proportional valve for reverse clutch (CR), shorted circuit
yellow	TCU 304128.00	System voltage too high
yellow	TCU 304129.01	System voltage too low
yellow	TCU 304132.02	Fault in the internal transmission power supply (VPS)
yellow	TCU 304136.02	Control unit, incorrect software version
blue	TCU 304137.02	Control unit internal fault
yellow	TCU 304138.02	Control unit internal fault
yellow	TCU 304139.11	Control unit is connected to the wrong harness connector
yellow	TCU 304140.12	Control unit, incorrect input value
yellow	TCU 304146.11	Transmission output speed does not match transmission output speed at PLC
blue	TCU 304147.11	Park lock solenoid valve of PLC is defective
yellow	TCU 304149.12	Park lock engaged during power zero
yellow	TCU 304151.11	Transmission output speed does not match transmission output speed at PLC (CAN BUS value)
red	TCU 304152.00	Transmission oil temperature very high
blue	TCU 304153.13	Control unit not calibrated
yellow	TCU 304154.00	INFORMATION FOR OPERATOR: Transmission input speed too high
yellow	TCU 304155.00	INFORMATION FOR OPERATOR: Transmission output speed too high
blue	TCU 304160.09	Engine control unit is not transmitting any data
blue	TCU 304161.09	User interface controller is not transmitting any data
blue	TCU 304166.09	Park lock control unit is not transmitting any data
yellow	TCU 304176.00	Transmission oil filter is dirty
red	TCU 304177.01	Transmission oil pressure too low
blue	TCU 304178.07	Filter by-pass valve (cold-weather starting) is closed by mistake
blue	TCU 304179.07	Filter by-pass valve (cold-weather starting) is opened by mistake
blue	TCU 304196.19	Data transmitted by engine control unit is incomplete (engine speed)
blue	TCU 304200.19	Data transmitted by user interface controller is incomplete (desired acceleration)
blue	TCU 304202.19	Data transmitted by user interface controller is incomplete (clutch torque)
blue	TCU 304204.19	Data transmitted by user interface controller is incomplete (desired transmission ratio)
yellow	TCU 304206.19	Data transmitted by user interface controller is incomplete (park lock condition)
yellow	TCU 304208.19	Data transmitted by user interface controller is incomplete (direction of travel)
blue	TCU 304212.19	Data transmitted by user interface controller is incomplete (clutch pedal sensor)
blue	TCU 304216.19	Data transmitted by user interface controller is incomplete (park lock activation)
blue	TCU 304228.19	Data transmitted by park lock control unit is incomplete (transmission output speed)
blue	TCU 304230.19	Data transmitted by park lock control unit is incomplete (park lock pressure sender)
blue	TCU 304232.19	Data transmitted by park lock control unit is incomplete (transmission output speed)
blue	TCU 304234.19	Data transmitted by park lock control unit is incomplete (state of transmission output speed sender)
blue	TCU 304236.19	Data transmitted by park lock control unit is incomplete (park lock solenoid valve Y15-2)
blue	TCU 304240.19	Data transmitted by user interface controller is incomplete (status of "come-home" mode)
blue	TCU 304241.19	Data transmitted by user interface controller is incomplete (desired acceleration during a change of direction)
blue	TCU 304243.19	Data transmitted by user interface controller is incomplete (transmission shift monitor)
blue	TCU 304244.19	Data transmitted by user interface controller is incomplete (change of direction of travel)

Diagnostic Trouble Codes on Electronic PowrQuad Controller (EPC)

Light	Diagnostic trouble code	Description
blue	EPC 000629.12	Control unit internal fault
blue	EPC 000639.12	Control unit internal fault
blue	EPC 000639.13	29-BIT CAN BUS, high error rate
blue	EPC 000639.19	29-BIT CAN BUS, very high error rate
yellow	EPC 306014.02	Clutch pedal potentiometer, voltages at channel 1 and channel 2 not in the correct ratio
blue	EPC 306015.03	Clutch pedal potentiometer, voltage at channel 1 too high
blue	EPC 306016.04	Clutch pedal potentiometer, voltage at channel 1 too low
blue	EPC 306020.31	Control unit, incorrect input value
blue	EPC 306025.31	Transmission enable relay, grounded or open circuit
blue	EPC 306026.31	Reverse drive lever holding coil, grounded or open circuit
blue	EPC 306027.31	Reverse solenoid valve, grounded or open circuit
blue	EPC 306028.31	Forward solenoid valve, grounded or open circuit
yellow	EPC 306031.31	Clutch is slipping
blue	EPC 306033.14	Enable proportional solenoid valve, grounded or open circuit
blue	EPC 306034.31	Enable proportional solenoid valve is opened by mistake
blue	EPC 306035.31	Enable proportional solenoid valve is closed by mistake
blue	EPC 306039.31	Park lock switch signal and signal from forward or reverse switch are active simultaneously
blue	EPC 306040.31	Not-neutral switch has been closed by mistake
blue	EPC 306041.31	Forward and reverse switches are both closed at the same time
blue	EPC 306042.31	Forward switch closed, but not-neutral switch open
blue	EPC 306043.31	Reverse switch closed, but not-neutral switch open
blue	EPC 306045.31	Faulty transmission enable signal
blue	EPC 306048.04	System voltage too low
blue	EPC 306050.03	Enable pressure is available when it should not be
blue	EPC 306051.04	No enable pressure available
blue	EPC 306053.31	Clutch pedal potentiometer is faulty
blue	EPC 306054.31	Clutch pedal switch is opened by mistake
yellow	EPC 306055.31	"Come home" mode is activated
blue	EPC 306056.31	Forward or reverse switch is activated during starting process
blue	EPC 306057.14	Faulty transmission enable signal
yellow	EPC 306058.14	Travel speed is registered during calibration
blue	EPC 306059.31	Excessively high transmission speed during calibration
blue	EPC 306060.31	ECU or BCU is/are not sending any data (engine speed)
blue	EPC 306061.31	Transmission speed too low
blue	EPC 306063.14	Control unit internal fault
blue	EPC 306065.14	Control unit internal fault
blue	EPC 306070.03	Switch for up- and downshift, shorted circuit
blue	EPC 306071.03	Power/ECO mode switch, shorted circuit
blue	EPC 306102.31	Indicator light for ECO mode function, fault in electrical circuit
blue	EPC 306103.31	Indicator light for power mode function, fault in electrical circuit
yellow	EPC 306106.31	Control unit internal fault
blue	EPC 306111.31	K1 solenoid valve, fault in electrical circuit
blue	EPC 306112.31	K2 solenoid valve, fault in electrical circuit
blue	EPC 306113.31	K3 solenoid valve, fault in electrical circuit
blue	EPC 306120.09	BCU is not transmitting any data (transmission output speed)
blue	EPC 306121.09	ECU or BCU is/are not sending any data (engine speed)
blue	EPC 306122.09	Engine control unit is not transmitting any data (hand throttle or accelerator pedal)
yellow	EPC 306240.31	Control unit is connected to the wrong harness connector

Diagnostic Trouble Codes on User Interface Controller (UIC)

Light	Diagnostic trouble code	Description
blue	UIC 305005.02	Control unit internal fault
blue	UIC 305006.02	Control unit internal fault
blue	UIC 305008.31	INFORMATION FOR OPERATOR: Anti-jack-knife control activated
blue	UIC 305009.04	Defective solenoid valve in anti-jack-knife control
yellow	UIC 305010.07	Fault at brake pedal sensor
yellow	UIC 305011.11	FWD speed and transmission output speed do not match
yellow	UIC 305012.00	INFORMATION FOR OPERATOR: Engine speed too high
yellow	UIC 305015.11	Park lock does not engage
yellow	UIC 305016.11	UIC detects travel speed even although the park lock is engaged
blue	UIC 305021.04	Cruise control potentiometer, signal voltage too low
blue	UIC 305022.03	Cruise control potentiometer, signal voltage too high
blue	UIC 305027.04	AutoPowr selector, signal voltage too low
blue	UIC 305028.03	AutoPowr selector, signal voltage too high
blue	UIC 305029.02	Operator presence (seat) switch, faulty signal
blue	UIC 305030.12	Accelerator pedal potentiometer, voltages at channel 1 and channel 2 not in the correct ratio
blue	UIC 305032.04	Accelerator pedal potentiometer, voltage at channel 1 too low
blue	UIC 305033.03	Accelerator pedal potentiometer, voltage at channel 1 too high
blue	UIC 305035.12	Hand throttle potentiometer, voltages at channel 1 and channel 2 not in the correct ratio
blue	UIC 305037.04	Hand throttle potentiometer, voltage at channel 1 too low
blue	UIC 305038.03	Hand throttle potentiometer, voltage at channel 1 too high
blue	UIC 305039.11	Fault at clutch pedal sensor
yellow	UIC 305044.04	Left brake signal potentiometer, voltage too low
yellow	UIC 305045.03	Left brake signal potentiometer, voltage too high
yellow	UIC 305046.04	Right brake pedal potentiometer, voltage too low
yellow	UIC 305047.03	Right brake pedal potentiometer, voltage too high
blue	UIC 305050.12	Speed wheel, output signals do not match
blue	UIC 305051.09	Engine control unit is not transmitting any data (engine temperature)
blue	UIC 305052.09	Engine control unit is not transmitting any data (engine load/maximum injection rate)
blue	UIC 305053.09	Engine control unit is not transmitting any data (engine speed)
blue	UIC 305054.09	Transmission control unit is not transmitting any data (transmission oil temperature)
blue	UIC 305055.09	Engine control unit is not transmitting any data (engine load/current injection rate)
blue	UIC 305056.09	Engine control unit is not transmitting any data (engine speed)
blue	UIC 305057.01	INFORMATION FOR OPERATOR: Transmission warm-up routine is active
blue	UIC 305058.01	INFORMATION FOR OPERATOR: Transmission warm-up routine cannot be activated, park lock should be engaged
blue	UIC 305059.09	BCU is not transmitting any data (status of FWD)
blue	UIC 305062.31	Tractor in "come home" mode - INFORMATION FOR OPERATOR: release the clutch pedal
blue	UIC 305063.31	Tractor in "come home" mode - INFORMATION FOR OPERATOR: move reverse drive lever to neutral or park position
blue	UIC 305064.31	Tractor in "come home" mode - INFORMATION FOR OPERATOR: depress the clutch pedal fully
blue	UIC 305065.31	Tractor in "come home" mode - INFORMATION FOR OPERATOR: select direction of travel
blue	UIC 305066.31	Tractor in "come home" mode - INFORMATION FOR OPERATOR: press the clutch pedal to stop
blue	UIC 305067.31	Tractor in "come home" mode - INFORMATION FOR OPERATOR: restart
blue	UIC 305070.19	Transmission control unit is transmitting incomplete data (transmission output speed)
yellow	UIC 305129.12	Potentiometer of speed control lever, voltages at channel 1 and channel 2 not in the correct ratio
yellow	UIC 305131.04	Potentiometer of speed control lever, voltage at channel 1 too low
yellow	UIC 305132.03	Potentiometer of speed control lever, voltage at channel 1 too high
yellow	UIC 305135.02	Neutral switch and a park lock switch are actuated simultaneously for too long a period
yellow	UIC 305136.02	Reverse drive lever, faulty signals

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Light	Diagnostic trouble code	Description
yellow	UIC 305137.02	Power-zero switch, move switch and either the forward or reverse switch are activated simultaneously for too long a period
yellow	UIC 305138.11	Park lock cannot be disengaged
blue	UIC 305139.02	Travel speed is preselected without there being a valid signal indicating operator presence
yellow	UIC 305140.02	Power zero is preselected without there being a valid signal indicating operator presence
yellow	UIC 305141.12	Clutch pedal potentiometer, voltages at channel 1 and channel 2 not in the correct ratio
yellow	UIC 305142.04	Clutch pedal potentiometer, voltage at channel 1 too low
yellow	UIC 305143.03	Clutch pedal potentiometer, voltage at channel 1 too high
yellow	UIC 305144.02	Switches on reverse drive lever are actuated simultaneously
yellow	UIC 305145.02	No switch signal from reverse drive lever
yellow	UIC 305146.02	Move switch or power zero switch has been opened by mistake
yellow	UIC 305147.02	Forward and reverse switches are both actuated at the same time
yellow	UIC 305148.02	Forward switch or reverse switch has been opened by mistake
yellow	UIC 305149.02	Fault at neutral switch or power zero switch
yellow	UIC 305150.02	Fault at park lock switch
yellow	UIC 305151.02	Fault at neutral switch
yellow	UIC 305152.02	Fault at move switch
yellow	UIC 305153.02	Fault at reverse switch
yellow	UIC 305154.02	Fault at forward switch
yellow	UIC 305155.02	Forward or reverse switch is actuated simultaneously with the park lock switch
yellow	UIC 305157.02	Switch for set speed 2 is opened by mistake
yellow	UIC 305158.02	Switch for set speed 2 is actuated by mistake
yellow	UIC 305160.02	Faulty power supply to reverse drive lever
yellow	UIC 305170.19	Transmission control unit and park lock controller are transmitting incomplete data (transmission output speed)
blue	UIC 305179.02	5-volt power supply is faulty
blue	UIC 305180.04	5-volt power supply is too low
blue	UIC 305184.01	INFORMATION FOR OPERATOR: Engine has stopped - reverse drive lever still in position for a direction of travel
blue	UIC 305185.01	Fault at transmission
yellow	UIC 305189.02	Fault in circuit of transmission enable relay
yellow	UIC 305190.09	Transmission control unit is not transmitting any data
blue	UIC 305207.02	INFORMATION FOR OPERATOR: Tractor start-up with reverse drive lever not in neutral or corner park
blue	UIC 305208.02	Internal transmission power supply (VPS), shorted circuit
blue	UIC 305209.02	INFORMATION FOR OPERATOR: Reverse drive lever is in the position for forward or reverse travel during start-up procedure
yellow	UIC 305230.02	Control unit internal fault
yellow	UIC 305240.11	Control unit is connected to the wrong harness connector
yellow	UIC 305250.12	Control unit, incorrect input value

Diagnostic Trouble Codes on Basic Informator (BIF)

Light	Diagnostic trouble code	Description
blue	BIF 000096.03	Fuel gauge sender, shorted or open circuit
blue	BIF 000096.04	Fuel gauge sender, short to ground
blue	BIF 000096.17	Fuel level is low
blue	BIF 000100.00	Engine oil pressure is low
blue	BIF 000107.16	Engine air cleaner clogged
yellow	BIF 000110.00	Coolant temperature is very high
blue	BIF 000110.03	Coolant temperature sender, shorted or open circuit
blue	BIF 000110.04	Coolant temperature sender, short to ground
blue	BIF 000110.16	Coolant temperature is high
blue	BIF 000126.15	Transmission/hydraulic oil filter is dirty
blue	BIF 000126.16	Transmission/hydraulic oil filter clogged
blue	BIF 000127.00	Transmission oil pressure low
blue	BIF 000167.16	D+ voltage is high (engine running)
blue	BIF 000167.17	D+ voltage too low (engine speed over 1500 rpm)
blue	BIF 000167.18	D+ voltage too low (engine speed up to 1500 rpm)
blue	BIF 000168.16	System voltage too high (engine running)
yellow	BIF 000168.17	System voltage too low (engine speed over 1500 rpm)
blue	BIF 000168.18	System voltage too low (engine speed up to 1500 rpm)
blue	BIF 000177.00	Transmission oil temperature very high
blue	BIF 000177.03	Transmission oil temperature sender, shorted or open circuit
blue	BIF 000177.04	Transmission oil temperature sender, short to ground
blue	BIF 000177.16	Transmission oil temperature is high
blue	BIF 000186.16	Warning, rear PTO speed
blue	BIF 000190.02	No signal from engine speed sender
blue	BIF 000628.02	Control unit internal fault
blue	BIF 000639.02	29-BIT CAN BUS, open circuit

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Diagnostic Trouble Codes on E-ICV and E-SCV Controller (SIC)

Light	Diagnostic trouble code	Description
blue	SIC 000629.12	Control unit internal fault
blue	SIC 000639.12	Control unit internal fault
blue	SIC 000639.13	29-BIT CAN BUS, high error rate
blue	SIC 000639.19	29-BIT CAN BUS, very high error rate
blue	SIC 334001.19	ECU or BIF is/are not sending any data (engine speed)
blue	SIC 334002.19	BCU is not transmitting any data (engine operating hours)
blue	SIC 334003.19	Transmission control unit or BIF is/are not sending any data (hydraulic oil temperature)
blue	SIC 334027.14	Control unit is calibrated incorrectly
blue	SIC 334028.14	Control unit not calibrated
blue	SIC 334051.14	E-ICV no.1, potentiometer or switch at multifunction lever is faulty
blue	SIC 334052.14	E-ICV no.2, potentiometer or switch at multifunction lever is faulty
blue	SIC 334053.14	E-ICV no.3, potentiometer or switch at multifunction lever is faulty
blue	SIC 334054.14	E-SCV no.1, potentiometer or switch at control lever is faulty
blue	SIC 334055.14	E-SCV no.2, potentiometer or switch at control lever is faulty
blue	SIC 334056.14	E-SCV no.3, potentiometer or switch at control lever is faulty
blue	SIC 334057.14	E-SCV no.4, potentiometer or switch at control lever is faulty
blue	SIC 334059.31	5-volt power supply is faulty
blue	SIC 334060.14	E-ICV, transport lock switch is faulty
blue	SIC 334061.14	E-ICV, safety switch is faulty
blue	SIC 334062.14	E-SCV, transport lock switch is faulty
blue	SIC 334106.31	Control unit internal fault
blue	SIC 334136.18	E-ICV no.1-stepper motor, supply voltage too low
blue	SIC 334137.01	E-ICV no.1-stepper motor, supply voltage very low
blue	SIC 334138.00	E-ICV no.1-stepper motor, supply voltage too high
blue	SIC 334139.14	E-ICV no.1-stepper motor, no connection to control unit
blue	SIC 334140.14	E-ICV no.1-stepper motor, coil temperature too low
blue	SIC 334141.14	E-ICV no.1-stepper motor, coil temperature too high
blue	SIC 334144.18	E-ICV no.2-stepper motor, supply voltage too low
blue	SIC 334145.01	E-ICV no.2-stepper motor, supply voltage very low
blue	SIC 334146.00	E-ICV no.2-stepper motor, supply voltage too high
blue	SIC 334147.14	E-ICV no.2-stepper motor, no connection to control unit
blue	SIC 334148.14	E-ICV no.2-stepper motor, coil temperature too low
blue	SIC 334149.14	E-ICV no.2-stepper motor, coil temperature too high
blue	SIC 334152.18	E-ICV no.3-stepper motor, supply voltage too low
blue	SIC 334153.01	E-ICV no.3-stepper motor, supply voltage very low
blue	SIC 334154.00	E-ICV no.3-stepper motor, supply voltage too high
blue	SIC 334155.14	E-ICV no.3-stepper motor, no connection to control unit
blue	SIC 334156.14	E-ICV no.3-stepper motor, coil temperature too low
blue	SIC 334157.14	E-ICV no.3-stepper motor, coil temperature too high
blue	SIC 334160.18	E-SCV no.1-stepper motor, supply voltage too low
blue	SIC 334161.01	E-SCV no.1-stepper motor, supply voltage very low
blue	SIC 334162.00	E-SCV no.1-stepper motor, supply voltage too high
blue	SIC 334163.14	E-SCV no.1-stepper motor, no connection to control unit
blue	SIC 334164.14	E-SCV no.1-stepper motor, coil temperature too low
blue	SIC 334165.14	E-SCV no.1-stepper motor, coil temperature too high
blue	SIC 334168.18	E-SCV no.2-stepper motor, supply voltage too low
blue	SIC 334168.18	E-SCV no.3-stepper motor, supply voltage too low
blue	SIC 334169.01	E-SCV no.2-stepper motor, supply voltage very low
blue	SIC 334169.01	E-SCV no.3-stepper motor, supply voltage very low
blue	SIC 334170.00	E-SCV no.2-stepper motor, supply voltage too high

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Light	Diagnostic trouble code	Description
blue	SIC 334170.00	E-SCV no.3-stepper motor, supply voltage too high
blue	SIC 334171.14	E-SCV no.2-stepper motor, no connection to control unit
blue	SIC 334171.14	E-SCV no.3-stepper motor, no connection to control unit
blue	SIC 334172.14	E-SCV no.2-stepper motor, coil temperature too low
blue	SIC 334172.14	E-SCV no.3-stepper motor, coil temperature too low
blue	SIC 334173.14	E-SCV no.2-stepper motor, coil temperature too high
blue	SIC 334173.14	E-SCV no.3-stepper motor, coil temperature too high
blue	SIC 334184.18	E-SCV no.4-stepper motor, supply voltage too low
blue	SIC 334185.01	E-SCV no.4-stepper motor, supply voltage very low
blue	SIC 334186.00	E-SCV no.4-stepper motor, supply voltage too high
blue	SIC 334187.14	E-SCV no.4-stepper motor, no connection to control unit
blue	SIC 334188.14	E-SCV no.4-stepper motor, coil temperature too low
blue	SIC 334189.14	E-SCV no.4-stepper motor, coil temperature too high
blue	SIC 334201.14	E-ICV no.1, stepper motor does not start
blue	SIC 334202.14	E-ICV no.2, stepper motor does not start
blue	SIC 334203.14	E-ICV no.3, stepper motor does not start
blue	SIC 334204.14	E-SCV no.1, stepper motor does not start
blue	SIC 334205.14	E-SCV no.2, stepper motor does not start
blue	SIC 334206.14	E-SCV no.3, stepper motor does not start
blue	SIC 334207.14	E-SCV no.4, stepper motor does not start
blue	SIC 334219.14	11-BIT CAN BUS is defective
blue	SIC 334221.14	E-ICV no.1, stepper motor does not respond to command from control unit
blue	SIC 334222.14	E-ICV no.2, stepper motor does not respond to command from control unit
blue	SIC 334223.14	E-ICV no.3, stepper motor does not respond to command from control unit
blue	SIC 334224.14	E-SCV no.1, stepper motor does not respond to command from control unit
blue	SIC 334225.14	E-SCV no.2, stepper motor does not respond to command from control unit
blue	SIC 334226.14	E-SCV no.3, stepper motor does not respond to command from control unit
blue	SIC 334227.14	E-SCV no.4, stepper motor does not respond to command from control unit
blue	SIC 334240.14	Control unit is connected to the wrong harness connector

Diagnostic Trouble Codes on Basic Control Unit / Hitch Control Unit (BCU)

Light	Diagnostic trouble code	Description
blue	BCU 000070.31	Handbrake problem
blue	BCU 000084.02	Transmission output speed sender, fault in electrical circuit
yellow	BCU 000168.16	System voltage too high (engine running)
yellow	BCU 000168.17	System voltage too low (engine speed over 1500 rpm)
yellow	BCU 000168.18	System voltage too low (engine speed up to 1500 rpm)
blue	BCU 000186.02	Rear PTO speed sender, fault in electrical circuit
blue	BCU 000186.17	Rear PTO speed is not being registered
blue	BCU 000190.02	Engine speed sender, fault in electrical circuit
blue	BCU 000629.12	Control unit internal fault
blue	BCU 000639.12	Control unit internal fault
blue	BCU 000639.13	29-BIT CAN BUS, high error rate
blue	BCU 000639.19	29-BIT CAN BUS, very high error rate
blue	BCU 000746.31	Differential lock solenoid valve, fault in electrical circuit
blue	BCU 000980.07	Rear PTO, switch fault
blue	BCU 001676.31	Relay for LTC coolant pump, fault in electrical circuit
blue	BCU 001882.02	Front PTO speed sender, fault in electrical circuit
blue	BCU 001882.17	Front PTO speed is not being registered
blue	BCU 001893.07	Front PTO, switch fault
blue	BCU 299780.07	Turn signal switch, malfunction
blue	BCU 302073.31	Rear PTO solenoid valve, fault in electrical circuit
blue	BCU 302080.31	Differential lock, switch fault
blue	BCU 302085.31	FWD, switch fault
blue	BCU 302086.31	FWD clutch solenoid valve, fault in electrical circuit
blue	BCU 302106.31	Control unit internal fault
blue	BCU 302120.31	Front PTO solenoid valve, fault in electrical circuit
blue	BCU 302121.31	Transmission enable relay, fault in electrical circuit
blue	BCU 302122.31	Solenoid valve for air brakes, fault in electrical circuit
blue	BCU 302123.31	Switch signal from forward or reverse travel does not match the signal from the not-neutral switch
blue	BCU 302124.31	Alternator relay, fault in electrical circuit
blue	BCU 302131.31	Fault in turn signal circuit
blue	BCU 302132.31	Hazard warning flashers, 30-amp fuse F102 is blown
blue	BCU 302133.31	Rear PTO preselection, switch fault
blue	BCU 302134.31	HMS program switch is faulty
blue	BCU 302135.31	Remote control of rear PTO, fault at l.h. switch
blue	BCU 302136.31	Remote control of rear PTO, fault at r.h. switch
blue	BCU 302240.31	Control unit is connected to the wrong harness connector
blue	BCU 303027.31	Hitch control unit, calibration not successful
blue	BCU 303028.31	Hitch control unit not calibrated
blue	BCU 303037.03	5-volt power supply is too high
blue	BCU 303037.04	5-volt power supply is too low
blue	BCU 303041.02	Coil 1 of stepper motor, open circuit
blue	BCU 303042.02	Coil 2 of stepper motor, open circuit
blue	BCU 303043.02	Coil 1 of stepper motor, fault in electrical circuit
blue	BCU 303044.02	Coil 2 of stepper motor, fault in electrical circuit
blue	BCU 303049.03	Rocker switch for quick withdrawal, signal voltage too high
blue	BCU 303049.04	Rocker switch for quick withdrawal, signal voltage too low
blue	BCU 303051.03	Left draft sensor, signal voltage too high
blue	BCU 303051.04	Left draft sensor, signal voltage too low
blue	BCU 303052.03	Right draft sensor, signal voltage too high
blue	BCU 303052.04	Right draft sensor, signal voltage too low

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Light	Diagnostic trouble code	Description
blue	BCU 303053.03	Sensitivity potentiometer, signal voltage too high
blue	BCU 303053.04	Sensitivity potentiometer, signal voltage too low
blue	BCU 303054.03	Depth setting potentiometer, signal voltage too high
blue	BCU 303054.04	Depth setting potentiometer, signal voltage too low
blue	BCU 303055.03	Position sensor, signal voltage too high
blue	BCU 303055.04	Position sensor, signal voltage too low
blue	BCU 303056.03	Lift limit potentiometer, signal voltage too high
blue	BCU 303056.04	Lift limit potentiometer, signal voltage too low
blue	BCU 303057.03	Rate-of-drop potentiometer, signal voltage too high
blue	BCU 303057.04	Rate-of-drop potentiometer, signal voltage too low
blue	BCU 303058.02	Remote control switch, faulty signal
blue	BCU 303060.02	Stepper motor, deadband step is out of specification
blue	BCU 303251.02	Left draft sensor, distorted signal during calibration
blue	BCU 303251.03	Left draft sensor, signal voltage too high during calibration
blue	BCU 303251.04	Left draft sensor, signal voltage too low during calibration
blue	BCU 303252.02	Right draft sensor, distorted signal during calibration
blue	BCU 303252.03	Right draft sensor, signal voltage too high during calibration
blue	BCU 303252.04	Right draft sensor, signal voltage too low during calibration
blue	BCU 303255.03	Position sensor, signal voltage too high during calibration
blue	BCU 303255.04	Position sensor, signal voltage too low during calibration
blue	BCU 303260.16	Stepper motor, deadband step (raising) is above the permitted upper threshold during calibration
blue	BCU 303260.18	Stepper motor, deadband step (raising) is below the permitted lower threshold during calibration
blue	BCU 303261.16	Stepper motor, deadband step (lowering) is above the permitted upper threshold during calibration
blue	BCU 303261.18	Stepper motor, deadband step (lowering) is below the permitted lower threshold during calibration

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Diagnostic Trouble Codes on Control Unit for Suspended Front Axle with TLS and Suspended Cab (SFA)

Light	Diagnostic trouble code	Description
blue	SFA 000629.12	Control unit internal fault
blue	SFA 000639.12	Control unit internal fault
blue	SFA 000639.13	29-BIT CAN BUS, high error rate
blue	SFA 000639.19	29-BIT CAN BUS, very high error rate
yellow	SFA 324025.13	SFA control unit is calibrated incorrectly
yellow	SFA 324026.13	SFA control unit is not calibrated for suspended front axle
yellow	SFA 324027.13	Cab suspension control unit is calibrated incorrectly
yellow	SFA 324028.13	Cab suspension control unit is not calibrated
yellow	SFA 324040.04	Solenoid Y42, short to ground
yellow	SFA 324041.05	Solenoid Y42, shorted or open circuit
yellow	SFA 324042.04	Solenoid Y43, short to ground
yellow	SFA 324043.05	Solenoid Y43, shorted or open circuit
yellow	SFA 324044.04	Solenoid Y10, short to ground
yellow	SFA 324045.05	Solenoid Y10, shorted or open circuit
yellow	SFA 324046.04	Solenoid Y11, short to ground
yellow	SFA 324047.05	Solenoid Y11, shorted or open circuit
yellow	SFA 324048.31	"Up" is commanded by the cab suspension control unit, but the cab moves down
yellow	SFA 324049.31	"Down" is commanded by the cab suspension control unit, but the cab moves up
yellow	SFA 324050.31	"Up" is commanded by the SFA control unit, but the axle moves down
yellow	SFA 324051.31	"Down" is commanded by the SFA control unit, but the axle moves up
yellow	SFA 324052.31	Engine speed too low (after engine is started)
yellow	SFA 324053.31	Engine speed too low (during operation)
yellow	SFA 324060.31	No axle movement during calibration, despite it being commanded
yellow	SFA 324061.31	No axle movement during operation, despite it being commanded
yellow	SFA 324062.31	No axle movement during driving, despite it being commanded
yellow	SFA 324063.31	No cab movement during calibration, despite it being commanded
yellow	SFA 324064.31	No cab movement during operation, despite it being commanded
yellow	SFA 324065.31	No cab movement during driving, despite it being commanded
yellow	SFA 324066.03	Power supply to TLS position sensor, shorted circuit
yellow	SFA 324067.04	Power supply to TLS position sensor, grounded or open circuit
yellow	SFA 324068.13	TLS position sensor, signal voltage too low during "down" movement
yellow	SFA 324069.13	TLS position sensor, signal voltage too high (lowered fully)
yellow	SFA 324070.13	TLS position sensor, signal voltage too high during "up" movement
yellow	SFA 324071.13	TLS position sensor, signal voltage too low (raised fully)
yellow	SFA 324072.13	TLS position sensor, signal voltage is not within specification when centered
yellow	SFA 324073.03	Power supply to cab position sensor, shorted circuit
yellow	SFA 324074.04	Power supply to cab position sensor, grounded or open circuit
yellow	SFA 324075.13	Cab position sensor, signal voltage too low during "down" movement
yellow	SFA 324076.13	Cab position sensor, signal voltage too high (lowered fully)
yellow	SFA 324077.13	Cab position sensor, signal voltage too high during "up" movement
yellow	SFA 324078.13	Cab position sensor, signal voltage too low (raised fully)
yellow	SFA 324079.13	Cab position sensor, signal voltage is not within specification when centered
yellow	SFA 324080.02	ECU or BCU is/are not sending any data (engine speed)
yellow	SFA 324081.02	BCU is not transmitting any data (travel speed)
yellow	SFA 324082.02	ECU or BCU is/are not sending any data while tractor is moving (engine speed)
yellow	SFA 324106.31	Control unit internal fault
yellow	SFA 324240.31	Control unit is connected to the wrong harness connector

Diagnostic Trouble Codes on Park Lock Controller (PLC)

Light	Diagnostic trouble code	Description
blue	PLC 000629.12	Control unit internal fault
blue	PLC 000639.12	Control unit internal fault
blue	PLC 000639.13	29-BIT CAN BUS, high error rate
blue	PLC 000639.19	29-BIT CAN BUS, very high error rate
yellow	PLC 328010.31	Transmission output speed sender, grounded circuit.
yellow	PLC 328012.31	Transmission output speed sender, open or shorted circuit
yellow	PLC 328016.31	Parking lock pressure sender, shorted circuit
yellow	PLC 328017.31	Park lock pressure sender, grounded or open circuit
yellow	PLC 328020.31	Park lock solenoid valve, grounded or shorted circuit
yellow	PLC 328021.31	Park lock solenoid valve, open circuit
blue	PLC 328030.31	Data sent by transmission control unit is not complete
yellow	PLC 328050.31	Park lock alarm, open or shorted circuit at supply line
yellow	PLC 328051.31	Park lock alarm, shorted circuit
yellow	PLC 328061.31	Signals received from reverse drive lever do not match the CAN BUS command from the TCU
yellow	PLC 328101.31	Power supply to park lock pressure sender, grounded circuit
yellow	PLC 328102.31	Power supply to park lock pressure sender, shorted circuit
yellow	PLC 328106.31	Control unit internal fault
yellow	PLC 328240.31	Control unit is connected to the wrong harness connector
blue	PLC328040.31	System voltage too low

OU12401,00005DC –19–27APR01–1/1

Diagnostic Trouble Codes on Performance Monitor (PrF)

Light	Diagnostic trouble code	Description
blue	PrF 000629.12	Control unit internal fault
blue	PrF 000639.12	Control unit internal fault
blue	PrF 000639.13	29-BIT CAN BUS, high error rate
blue	PrF 000639.19	29-BIT CAN BUS, very high error rate
blue	PrF 100177.19	Key fault

OU12401,0000905 –19–27APR01–1/1

Storage

Storage for a Long Period

Drain, flush and refill the cooling system with fresh coolant. For proper composition of coolant see section “Fuel, Lubricants, Hydraulic Oil and Coolant”.

Do not store tractor with crankcase or transmission filled with dirty oil. Drain oil, replace filter element and fill with fresh oil. Drain the oil while it is still hot.

Operate engine for a few minutes before adding rust inhibitor.

To protect the engine, use AR41785 rust inhibitor, which is available from your John Deere dealer. The kit provided under this order no. includes one can of rust inhibitor, masking tape and protective caps to cover all engine openings.

Proceed as follows:

1. Add 480 cm^3 (29 in^3) of rust inhibitor to the engine oil.

2. Fill the fuel tank. Start engine and operate all hydraulic functions several times. Shut off engine.

3. Prepare 15 cm^3 (0.9 in^3) of rust inhibitor for each cylinder. Remove plug from intake manifold or starting fluid connecting pipe, and inject rust inhibitor into the aperture. Disconnect the electric cable at the injection pump and insulate the end of it. Crank the engine several times with the starter to spread the rust inhibitor around.

Do not start engine after rust inhibitor has been added.

IMPORTANT: Rust inhibitor agents evaporate very easily. For this reason, seal all openings after adding inhibitor. Keep the inhibitor container closed at all times.

Remove and clean the battery and add distilled water if necessary. Charge the battery and store it in a cool, dry place where it will not freeze. Keep battery fully charged while in storage. Seal all openings such as the vent tube and exhaust outlet.

Wash the exterior and painted surfaces of the tractor using clear, cold water. Wipe dry with a soft cloth.

Replace worn or broken parts, or get them repaired. Touch up any damaged paintwork.

Store the tractor in a dry, protected place. If the tractor is stored outside, cover it with a waterproof tarpaulin.

Block up the tractor so that tires do not touch the ground. Protect tires from heat and sunlight.

AG,OU12401,271 –19–01MAY01–1/1

Removing Tractor From Storage

Remove all protective coverings. Check tire inflation and remove blocks.

Install battery and connect cable and ground straps (negative terminals grounded).

Check transmission and hydraulic oil level.

See that fuel tank is filled.

Check coolant level in radiator.

Check crankcase oil level.

Carry out 750-hour check.

CAUTION: Never operate the engine in a closed building. Danger of asphyxiation!

Turn the engine over with the starter for several seconds so that engine oil pressure builds up. Then connect the cable to the fuel injection pump and start the engine.

LX,OKON 000446 –19–01MAY92–1/1

Specifications

Engine

Engine types	Standard injection pump	Bosch VP44 injection pump
- 6020 tractor	4045DL070	
- 6120 tractor	4045TL070	
- 6220 tractor	4045TL071	
- 6320 tractor	4045HL072	4045HLA70
- 6420 tractor	4045HL070	4045HLA72
- 6420S tractor		4045HLA73
Engine power according to ECE-R24 at rated engine speed		
- 6020 tractor	55 kW (75 hp)	
- 6120 tractor	59 kW (80 hp)	
- 6220 tractor	66 kW (90 hp)	
- 6320 tractor	74 kW (100 hp)	
- 6420 tractor	81 kW (110 hp)	
- 6420S tractor	88 kW (120 hp)	
Max. torque		
- 6020 tractor at 1500 rpm	305 N•m (225 lb-ft)	
- 6120 tractor at 1500 rpm	325 N•m (240 lb-ft)	
- 6220 tractor at 1500 rpm	365 N•m (269 lb-ft)	
- 6320 tractor at 1500 rpm	410 N•m (303 lb-ft)	
- 6420 tractor at 1500 rpm	425 N•m (314 lb-ft)	
- 6420S tractor at 1500 rpm	425 N•m (314 lb-ft)	
Number of cylinders	4	
Bore	106.5 mm (4.19 in.)	
Stroke	127.0 mm (5.00 in.)	
Displacement	4530 cm^3 (276 in^3)	
Firing order	1-3-4-2	
Intake valve clearance	0.35 mm (0.014 in.)	
Exhaust valve clearance	0.45 mm (0.018 in.)	
Slow idle		
- mechanical injection pump	875 to 925 rpm	
- electronic injection pump	845 to 855 rpm	
Fast idle		
- mechanical injection pump	2480 to 2510 rpm	
- electronic injection pump	2455 to 2465 rpm	
Rated engine speed	2300 rpm	
Working speed range	1500 to 2300 rpm	
Engine speed for PTO operation		
- 540 rpm rear PTO	2124 rpm	
- 540 rpm rear PTO (reversible or shiftable)	2143 rpm	
- 540E rpm rear PTO	1684 rpm	
- 1000 rpm rear PTO	2208 rpm	
- 1000 rpm front PTO with 6 splines (clockwise rotating)	2185 rpm	
- 1000 rpm front PTO with 21 splines (counterclockwise rotating)	2185 rpm	

OU12401,0000942 –19–01MAY01–1/1

Transmission

PowrQuad Plus transmission	planetary gears, hydraulically actuated
Gear selections	24 forward gears, 12, 16 or 24 reverse gears
Actuation of reverse drive lever	mechanical/hydraulic or electrical/hydraulic, under load, without operating the clutch
Clutch	electrical/hydraulic
AutoPowr transmission	infinitely variable mechanical/hydraulic transmission
Speed ranges	0.05 - 40 km/h (0.03 - 25 mph) or 0.05 - 50 km/h (0.03 - 31 mph)
Change of direction of travel	electrical, under load, without operating clutch

OU12401,0000944 –19–01MAY01–1/1

Hydraulic System

The tractors may be fitted with one of the following hydraulic pumps:

25 cm^3 (1.5 in^3) or 40 cm^3 (2.5 in^3) pumps:	closed-center system with Load-Sensing control
Pump type	axial piston pump
System pressure	
- min. (stand-by)	3000 kPa (30 bar; 435 psi)
- max:	20000 kPa (200 bar; 2900 psi)
23 cm^3 (1.4 in^3) or 27 cm^3 (1.6 in^3) pumps:	Load-Sensing system with fixed-displacement pump
Pump type	gear-type pump
System pressure	
- min. (stand-by)	1500 kPa (15 bar; 220 psi)
- max:	20000 kPa (200 bar; 2900 psi)
Steering system	hydrostatic

AG,OU12401,276 –19–09APR00–1/1

Loads and Weights

Maximum permissible static vertical load	
- on swinging drawbar (transport, 250 mm; 9.8 in.)	
tractors without front-wheel drive	1400 kg (3085 lb)
tractors with front-wheel drive	1600 kg (3525 lb)
- on swinging drawbar (operating pos.)	
extended 250 mm (9.8 in.)	2250 kg (4960 lb)
extended 350 mm (13.8 in.)	1400 kg (3085 lb)
extended 400 mm (15.7 in.)	1200 kg (2645 lb)
extended 550 mm (21.7 in.)	800 kg (1765 lb)
- on trailer hitch	
pin diameter 30 mm (1.2 in.)	1600 kg (3525 lb)
pin diameter 38 mm (1.5 in)	1000 kg (2205 lb)
- on hook of pick-up hitch	3000 kg (6615 lb)
Maximum permissible front axle load (without FWD)	
- normal operation	2050 kg (4520 lb)
- with front loader (no weight at 3-point hitch)	5000 kg (11025 lb)*
- with front loader (600 kg; 1322 lb at 3-point hitch)	5300 kg (11685 lb)*
- with front-end attachments	3200 kg (7055 lb)**
Maximum permissible front axle load (with FWD)	
- 6020, 6120 and 6220 tractors	3000 kg (6610 lb)
- 6320, 6420 and 6420S tractors (axle without brake)	3500 kg (7715 lb)
- 6320, 6420 and 6420S tractors (axle with brake)	3800 kg (8375 lb)
- with front loader (no weight at 3-point hitch)	5200 kg (11465 lb)*
- with front-end attachments	3600 kg (7935 lb)**
- with front loader (600 kg; 1322 lb at 3-point hitch)	5500 kg (12125 lb)*
Maximum permissible rear axle load	
- 6020, 6120 and 6220 tractors	5600 kg (12345 lb)
- 6320, 6420 and 6420S tractors	6500 kg (14325 lb)
Maximum permissible total weight	
- 6020, 6120 and 6220 tractors	7000 kg (15430 lb)
- 6320, 6420 and 6420S tractors	8000 kg (17635 lb)

* Maximum travel speed 8 km/h (5 mph), max. tread width 1.80 m (71 in.)
** Maximum travel speed 20 km/h (12.4 mph), max. tread width 1.80 m (71 in.)

NOTE: Traffic regulations in certain countries may restrict the permissible axle loads and total weight to figures lower than those quoted above.

OU12401,0000945 –19–01MAY01–1/1

Electrical System

Battery	12 V, 110 Ah or 12 V, 154 Ah
Alternator with overvoltage protection	14 V, 55 A; 14 V, 90 A or 14 V, 115 A
Starter motor	12 V, 3.0 kW (4.0 hp)
Battery terminal grounded	negative

AG,OU12401,278 –19–09APR00–1/1

Capacities

Fuel tank	116 l (30.6 U.S.gal.), 160 l (42.3 U.S.gal.) 165 l (43.6 U.S.gal.) or 185 l (48.9 U.S.gal.)
Cooling system	
- Engines without intercooler	13.5 l (3.6 U.S.gal.)
- Engines with intercooler (engine designation includes an “H”)	24.0 l (6.3 U.S.gal)
Crankcase with filter	16 l (4.2 U.S.gal.)
Transmission/hydraulic system	
- PowrQuad transmission with 24/24* gears	50 l (13.2 U.S.gal.)
- AutoQuad II transmission with 24/24* gears	50 l (13.2 U.S.gal.)
- AutoPowr transmission	60 l (15.9 U.S.gal.)
- extra with creeper transmission	1 l (0.3 U.S.gal.)
- extra with front-wheel drive	3 l (0.8 U.S.gal.)
- extra with TLS axle	3 l (0.8 U.S.gal.)
APL/AS 2025 front-wheel drive axle w/o TLS	
- Axle housing	5.0 l (1.3 U.S.gal.)
- Final drive housing	0.8 l (0.2 U.S.gal.)
APL/AS 2025 front-wheel drive axle with TLS	
- Axle housing	6.0 l (1.6 U.S.gal.)
- Final drive housing	0.8 l (0.2 U.S.gal.)
APL/AS 2035 front-wheel drive axle with TLS and brake	
- Axle housing	6.0 l (1.6 U.S.gal.)
- Final drive housing	1.0 l (0.3 U.S.gal.)
AS 2035 front-wheel drive axle (narrow track)	
- Axle housing	3.6 l (1.0 U.S.gal.)
- Final drive housing	0.8 l (0.2 U.S.gal.)

* Depending on version and legal requirements, either 16 or 24 reverse gears may be available.

OU12401,0000946 –19–01MAY01–1/1

Sound Level

Max. sound level at operator's ear is 75 dB(A).

Measurement method in accordance with Directive 77/311 EEC, Annex II with cab closed.

AG,OU12401,280 –19–09APR00–1/1

Load Capacity of Tires, Front Axle Load

IMPORTANT: Comply with limits on front axle load (see "Weights").

Depending on the make of tire, permissible front axle loads may be limited to figures below those quoted here. Permissible loads are indicated by the weight-and-speed index. For details, ask your John Deere dealer or the tire manufacturer's agent.

NOTE: Max. travel speed with front loader is 8 km/h (5 mph). Max. front tread width with front loader is 1.80 m (71 in.).

On leaving the factory, tractors may be equipped with the following tires (for FWD):

Tires	Index radius
12.4-24	540 mm (21.3 in.)
13.6-24	560 mm (22.0 in.)
14.9-24	590 mm (23.2 in.)
16.9-24	620 mm (24.4 in.)
11.2-28	565 mm (22.2 in.)
12.4-28	590 mm (23.2 in.)
13.6-28	610 mm (24.0 in.)
14.9-28	640 mm (25.2 in.)
320/85-24	540 mm (21.3 in.)
340/85-24	560 mm (22.0 in.)
380/70-24	560 mm (22.0 in.)
380/85-24	590 mm (23.2 in.)
420/70-24	590 mm (23.2 in.)
420/85.24	620 mm (24.4 in.)
480/65-24	590 mm (23.2 in.)
480/70-24	620 mm (24.4 in.)
540/65-24	620 mm (24.4 in.)
320/85-28	590 mm (23.2 in.)
340/85-28	610 mm (24.0 in.)
380/70-28	610 mm (24.0 in.)
380/85-28	640 mm (25.2 in.)
420/70-28	640 mm (25.2 in.)
480/65-28	640 mm (25.2 in.)
13.6-38	772 mm (30.4 in.)

AG,OU12401,281 –19–09APR00–1/1

Load Capacity of Tires, Rear Axle Load

IMPORTANT: Comply with maximum rear axle load (see “Weights”).

Depending on the make of tire, permissible rear axle loads may be limited to figures below those quoted here. Permissible loads are indicated by the weight-and-speed index. For details, ask your John Deere dealer or the tire manufacturer’s agent.

On leaving the factory, tractors may be equipped with the following tires:

Tires	Index radius
16.9-30	695 mm (27.4 in.)
18.4-30	720 mm (28.3 in.)
16.9-34	745 mm (29.3 in.)
18.4-34	770 mm (30.3 in.)
13.6-38	740 mm (29.1 in.)
14.9-38	765 mm (30.1 in.)
16.9-38	795 mm (31.3 in.)
18.4-38	820 mm (32.3 in.)
13.6-46	874 mm (34.4 in.)
420/85-30	695 mm (27.4 in.)
420/85-34	745 mm (29.3 in.)
460/65-34	770 mm (30.3 in.)
480/70-34	745 mm (29.3 in.)
520/70-34	770 mm (30.3 in.)
420/85-38	795 mm (31.3 in.)
460/85-38	820 mm (32.3 in.)
480/70-38	795 mm (31.3 in.)
520/70-38	820 mm (32.3 in.)
540/65-38	795 mm (31.3 in.)
600/65-38	820 mm (32.3 in.)

AG,OU12401,282 –19–01MAY01–1/1

Load Capacity of Tires With Front Loader

Load capacity with front loader is obtained by multiplying the load capacity of the tire by a percentage. The resulting load capacity varies from tire manufacturer to tire manufacturer.

To obtain precise figures, see the tire manual provided by the tire manufacturer.

Permissible load capacity expressed as a percentage, at top speed

Top speed		Without FWD PR[a] tires	With FWD PR[a] tires	With FWD A6[a] tires	With FWD A8[b] tires	With FWD D[c] tires
km/h	mph	%	%	%	%	%
8	5.0	150	140	150	150	150
15	9.0	—	—	134	134	140
20	12.5	135	120	123	123	129
25	15.5	115	107	111	111	116
30	18.5	100	100	100	107	112
35	21.5	—	—	95	103	108
40	25.0	—	—	90	100	105
45	28.0	—	—	—	96	100
50	31.0	—	—	—	91	100

[a]Tires up to 30 km/h (18.5 mph)
[b]Tires up to 40 km/h (25 mph)
[c]Tires up to 65 km/h (40 mph)

NOTE: Max. travel speed with front loader is 8 km/h (5 mph). Max. front tread width with front loader is 1.80 m (71 in.).

A 300 kg (661 lb) higher load is possible with a front loader provided a weight of 600 kg (1322 lb) is attached at the three-point hitch.

AG,OU12401,152 –19–23MAR00–1/1

Declaration of Conformity

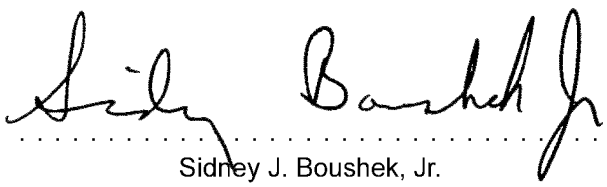
CE

John Deere Werke Mannheim
Windeckstr. 90
D-68163 Mannheim

The Tractor
Models.....6020, 6120, 6220, 6320, 6420 and 6420S

comply with the EU provision:
89/336/EEC ..... EMC Directive

Mannheim, 1st May 2001



Sidney J. Boushek, Jr.
Manager Product Engineering

LX1019759 –UN–19MAY00

OU12401,0000947 –19–01MAY01–1/1

Safety Note Regarding the Subsequent Installation of Electrical and Electronic Appliances and/or Components

The machine is equipped with electronic components whose function may be influenced by electromagnetic radiation from other appliances. Such influences may be hazardous, so take the following safety instructions into account:

No tampering with the tractor's on-board electrical system is permitted. Subsequent installation of electrical/electronic appliances in the machine must make use of the sockets and connectors provided for this purpose. In every case, the user must verify whether the installation affects the electronics or other components. This applies particularly to:

- Implement control units/monitors
- Performance monitors
- Audio/video systems, communications systems

In particular, subsequently installed electrical/electronic components must comply with the relevant edition of EMC Directive 89/336/EEC, and be CE marked.

If mobile communication systems (e.g. radio communication, telephone) are to be installed subsequently, the following extra requirements must be met:

- Only devices with an approval complying with the valid national regulation (i.e. BZT approval in Germany) shall be installed;
- The device shall be installed securely;
- Portable or mobile devices may be operated in the vehicle only if connected to a fixed outside antenna;
- Transmitters shall be installed separately from the vehicle's electronics;
- The antenna must be installed in a professional manner, with a good ground connection between the antenna and the vehicle ground.

Wiring, installation and maximum permissible current supply must be as stated in the installation instructions of the machine manufacturer.

LX,OMTRAK,EMV –19–09DEC96–1/1

Serial Numbers

Type Plates

The illustrations below show some of the type plates used on the tractor. The letters and numbers on the plates must be quoted when making warranty claims or ordering spare parts.

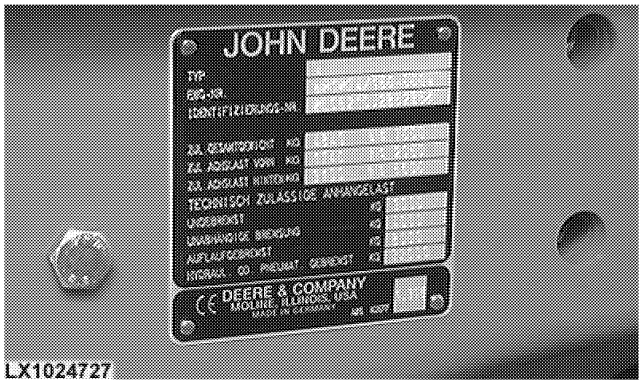
NOTE: Copy the letters and figures in the boxes provided.

LX,OSER 000455 –19–01MAR94–1/1

Product Identification Number

The plate bearing the product identification number is located on the right-hand side of the main frame.

*														*



LX1024727 –UN–06NOV00

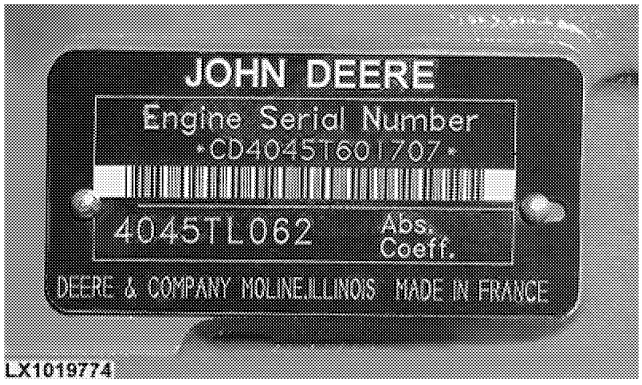
OU12401,0000948 –19–22MAY01–1/1

Engine Serial Number

The engine serial number plate is located on the right-hand side of engine block.

NOTE: Besides the engine serial number, the plate shows the engine type as well. When ordering spare parts for the engine, please quote all the numbers and letters on this type plate.

*														*



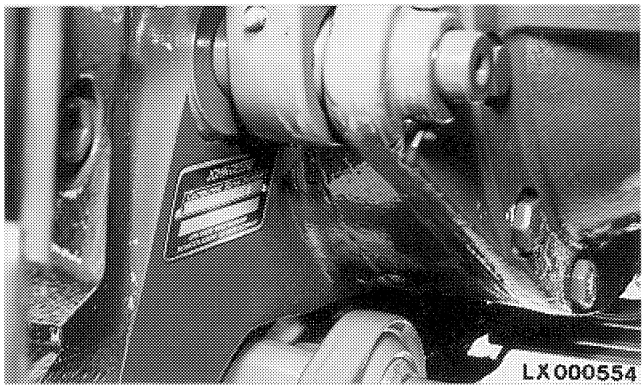
LX1019774 –UN–15SEP00

OU12401,00101C6 –19–19NOV00–1/1

Transmission Serial Number

The transmission serial number plate is located on the right-hand side of differential housing. It provides details of the gear pair in the differential (e.g. 53/10) and the transmission ratio of the front-wheel drive axle (e.g. 1,712). This information will be required if the type of tires is to be changed.

*													*

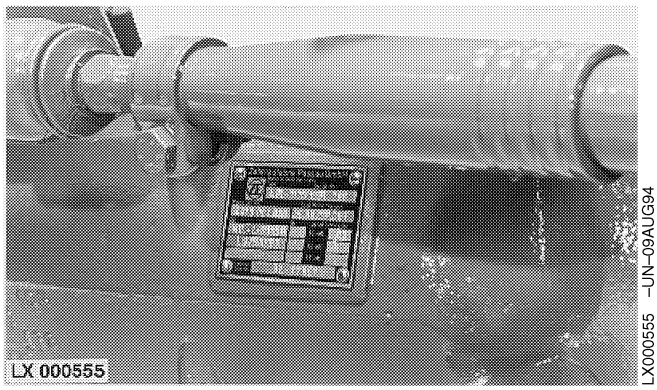


AG,OU12401,285 –19–09APR00–1/1

FWD Axle Serial Number

The plate bearing the FWD axle serial number is located on the r.h. end of the axle, at the rear. Information provided on it includes the transmission ratio of the front axle. This information will be required if the type of tires used at the front is to be changed.

*														*



AG,OU12401,155 –19–23MAR00–1/1

Index

John Deere Service Keeps You On The Job

John Deere Parts

We help minimize downtime by putting genuine John Deere parts in your hands in a hurry.

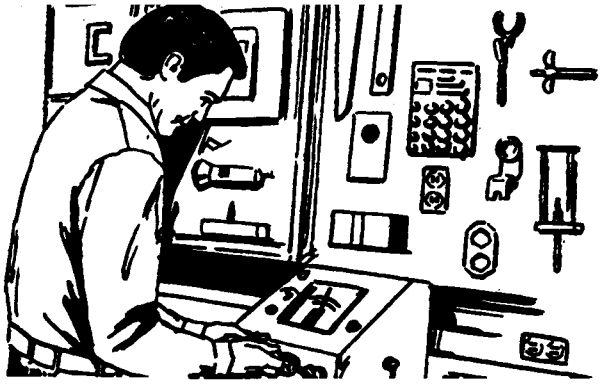
That's why we maintain a large and varied inventory—to stay a jump ahead of your needs.

TS100 –UN–23AUG88

DX,IBC,A –19–04JUN90–1/1

The Right Tools

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.



TS101 –UN–23AUG88

DX,IBC,B –19–04JUN90–1/1

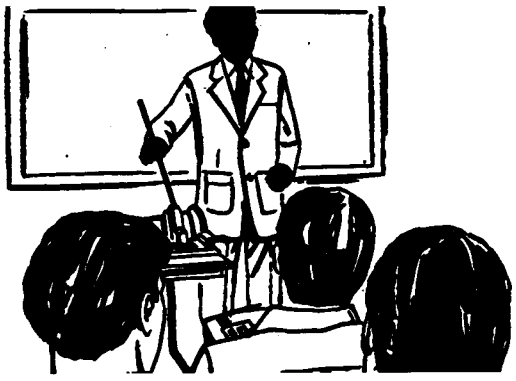
Well-Trained Technicians

School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result?

Experience you can count on!



TS102 –UN–23AUG88

DX,IBC,C –19–04JUN90–1/1

Prompt Service

Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances: see us, depend on us.

JOHN DEERE SERVICE SUPERIORITY: We'll be around when you need us.

TS103 –UN–23AUG88

DX,IBC,D –19–04JUN90–1/1