Recognize Safety Information

T81389—UN—28JUN13

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

Follow recommended precautions and safe operating practices.

DX,ALERT-19-29SEP98

Understand Signal Words

⚠ DANGER

⚠ WARNING

⚠ CAUTION

TS187—19—30SEP88

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

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

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

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

DX,SIGNAL-19-05OCT16

Follow Safety Instructions

TS201—UN—15APR13

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

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

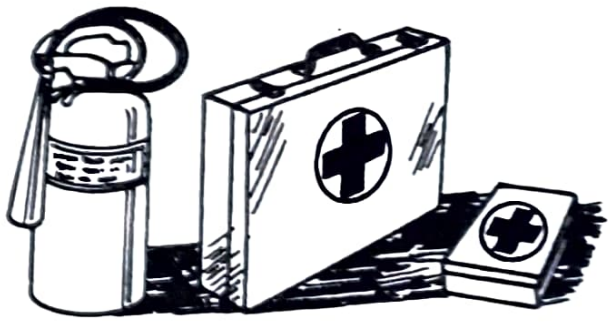
Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

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

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

DX,READ-19-15JUN09

Prepare for Emergencies



TS291—UN—15APR13

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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

DX,FIRE2-19-03MAR93

Wear Protective Clothing

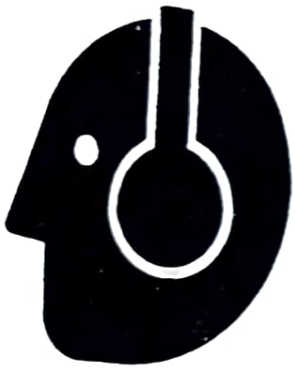
TS206—UN—15APR13

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

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

DX,WEAR2-19-03MAR93

Protect Against Noise



TS207—UN—23AUG88

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

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

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

DX,NOISE-19-03OCT17

Handle Fuel Safely—Avoid Fires

TS202—UN—23AUG88

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

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

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

Use only an approved fuel container for transporting flammable liquids.

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

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

DX,FIRE1-19-12OCT11

Handle Starting Fluid Safely

TS1356—UN—18MAR92

Starting fluid is highly flammable.

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

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

Do not incinerate or puncture a starting fluid container.

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

DX,FIRE3-19-14MAR14

Fire Prevention

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

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

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

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

In Case of Fire

TS227—UN—15APR13

CAUTION: Avoid personal injury.

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

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

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

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

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

DX,FIRE4-19-22AUG13

Avoid Static Electricity Risk When Refueling

RG22142—UN—17MAR14

RG21990—UN—21AUG13

The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

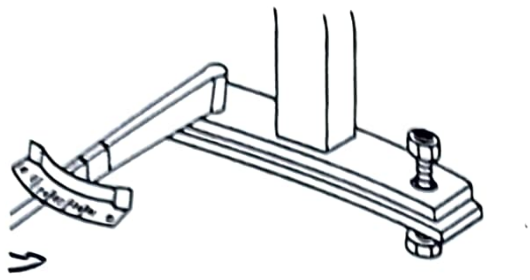
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure that the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

DX,FUEL,STATIC,ELEC-19-12JUL13

Keep ROPS Installed Properly



TS212—UN—23AUG88

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

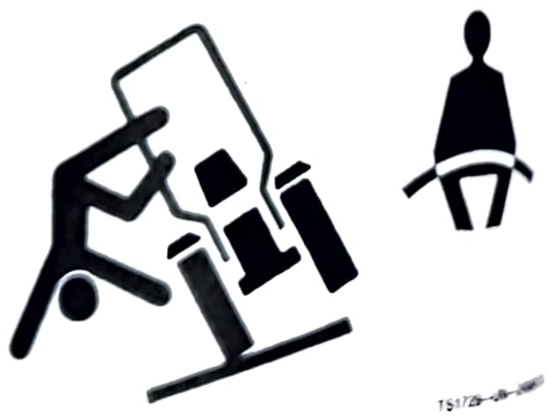
The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.

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

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

DX,ROPS3-19-12OCT11

Use Foldable ROPS and Seat Belt Properly



TS1729—UN—

Avoid crushing injury or death during rollover.

- If this machine is equipped with a foldable rollover protective structure (ROPS), keep the ROPS in the fully extended and locked position. USE a seat belt when you operate with a ROPS in the fully extended position.
  - Hold the latch and pull the seat belt across the body.
  - Insert the latch into the buckle. Listen for a click.
  - Tug on the seat belt to make sure that the belt is securely fastened.

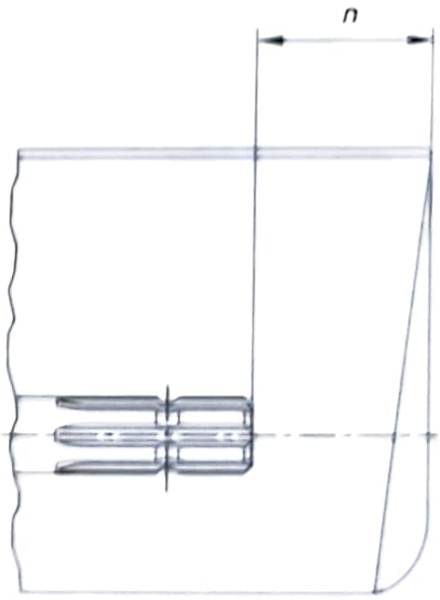
- Snug the seat belt across the hips.

- If this machine is operated with the ROPS folded (for example, to enter a low building), drive with extreme caution. DO NOT USE a seat belt with the ROPS folded.
- Return the ROPS to the raised, fully extended position as soon as the machine is operated under normal conditions.

DX,FOLDROPS,19,ZZAUG13

Stay Clear of Rotating Drivelines

TS1644 -UN-- /ZZAUG95



TS5219 -UN- /ZAPR15

Entanglement in rotating driveline can cause serious injury or death.

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

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

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

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

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

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

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

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

PTO Type	Diameter	Splines	n ± 5 mm (0.20 in.)
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)
4	57.5 mm (2.264 in.)	22	100 mm (4.00 in.)

Use Steps and Handholds Correctly

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

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease

or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

DX,WW,MOUNT-19-12OCT11

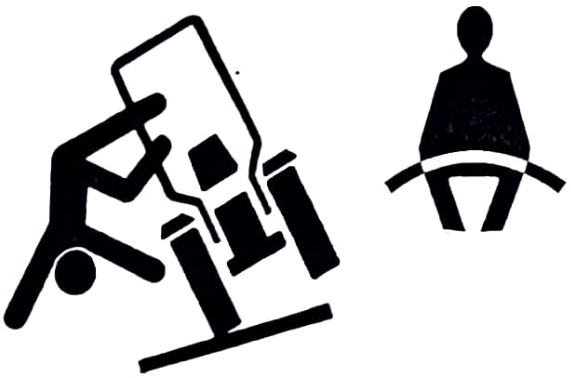
Read Operator's Manuals for ISOBUS Controllers

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

NOTE: ISOBUS refers to the ISO Standard 11783

DX,WW,ISOBUS-19-15JUL15

Use Seat Belt Properly



TS1729—UN—24MAY13

Avoid crushing injury or death during rollover.

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

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

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

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

DX,ROPS1-19-22AUG13

Operating the Tractor Safely

TS290—UN—23AUG88

TS276—UN—23AUG88

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

- Use your tractor only for jobs it was designed to perform, for example, pushing, pulling, towing, actuating, and carrying a variety of interchangeable equipment designed to conduct agricultural work.
- This tractor is not intended to be used as a recreational vehicle.
- Read this operator's manual before operating the tractor and follow operating and safety instructions in the manual and on the tractor.
- Follow operation and ballasting instructions found in the operator's manual for your implements/ attachments, such as front loaders
- Follow the instructions outlined in the operator's manual of any mounted or trailed machinery or trailer. Do not operate a combination of tractor-machine or tractor-trailer unless all instructions have been followed.
- Make sure that everyone is clear of machine, attached equipment, and work area before starting engine or operation.

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- Stay clear of the three-point linkage and pick-up hitch (if equipped) when controlling them.
- Keep hands, feet, and clothing away from power-driven parts.

Driving Concerns

- Never get on or off a moving tractor.
- Complete any required training prior to operating vehicle.
- Keep all children and nonessential personnel off tractors and all equipment.
- Never ride on a tractor unless seated on a John Deere approved seat with seat belt.
- Keep all shields/guards in place.
- Use appropriate visual and audible signals when operating on public roads.
- Move to side of road before stopping.
- Reduce speed when turning, applying individual brakes, or operating around hazards on rough ground or steep slopes.
- Stability degrades when attached implements are at high position.
- Couple brake pedals together for road travel.
- Pump brakes when stopping on slippery surfaces.
- Regularly clean fenders and fender valances (mud flaps) if installed. Remove dirt before driving on public roadways.

Towing Loads

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

Parking and Leaving the Tractor

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

Common Accidents

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

The most common accidents involving tractors:

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

DX,WW,TRACTOR-19-28FEB17

Avoid Backover Accidents

PC10857XW—UN—15APR13

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

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

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

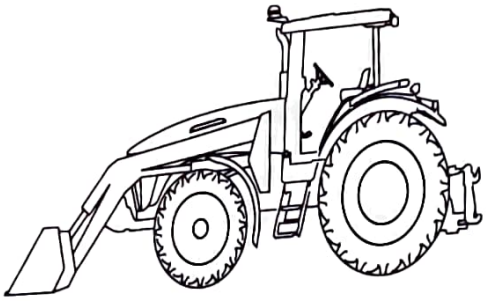
Limited Use in Forestry Operation

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

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

DX,WW,FORESTRY-19-12OCT11

Operating the Loader Tractor Safely



TS1692—UN—09NOV09

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

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

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

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

Do not use loader as a work platform.

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

Lower loader to ground before leaving operators station.

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

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

DX,WW,LOADER-19-18SEP12

Keep Riders Off Machine

TS290—UN—23AUG88

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

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

DX,RIDER-19-03MAR93

Instructional Seat

TS1730—UN—24MAY13

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

DX,SEAT,NA-19-22AUG13

Use Safety Lights and Devices

TS951—UN—12APR90

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

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

DX,FLASH-19-07JUL99

Use a Safety Chain

TS217—UN—23AUG88

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

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

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

DX,CHAIN-19-03MAR93

Transport Towed Equipment at Safe Speeds

TS1686—UN—27SEP06

Do not exceed the maximum transport speed. This towing unit may be capable of operating at transport speeds that exceed the maximum allowable transport speed for towed implements.

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

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

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

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

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

Implements with brakes:

- If the manufacturer does not specify a maximum

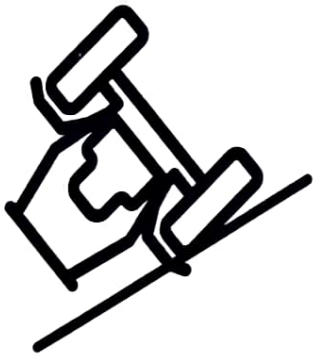
transport speed, do not tow at speeds greater than 40 km/h (25 mph).

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

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

DX,TOW1-19-28FEB17

Use Caution on Slopes, Uneven Terrain, and Rough Ground



RXA0103437—UN—01JUL09

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

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

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

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

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

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

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

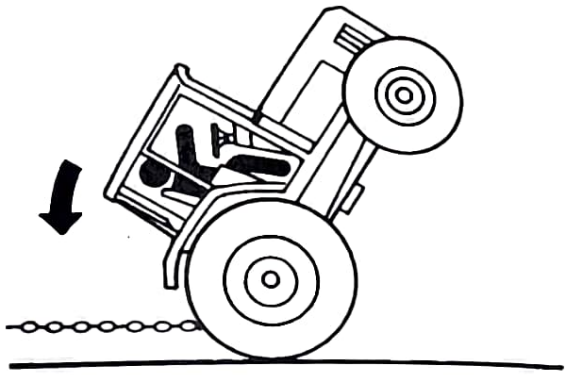
Choose a low ground speed so you will not have to stop or shift while on a slope.

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

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

DX,WW,SLOPE-19-28FEB17

Freeing a Mired Machine



TS1645—UN—15SEP95

TS263—UN—23AUG88

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.

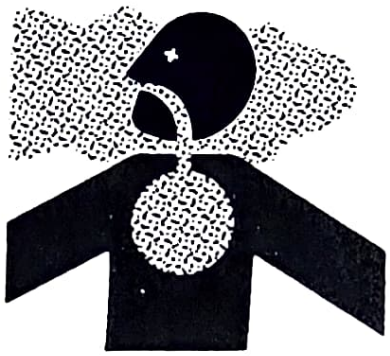
If necessary to tow with another unit, use a tow bar or a long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load

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.

DX,MIRED-19-07JUL99

Avoid Contact with Agricultural Chemicals



TS220—UN—15APR13

TS272—UN—23AUG88

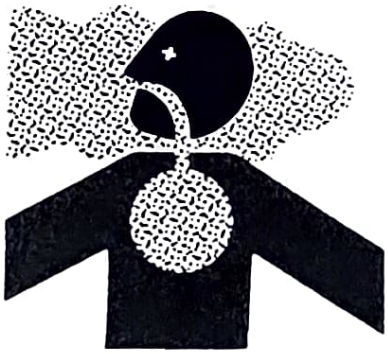
This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

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

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

DX,CABS-19-25MAR09

Handle Agricultural Chemicals Safely



TS220—UN—15APR13

A34471—UN—11OCT88

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

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

Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:
  - Chemicals labeled **'Danger'**: Most toxic. Generally require use of goggles, respirator, gloves, and skin protection.
  - Chemicals labeled **'Warning'**: Less toxic. Generally require use of goggles, gloves, and skin protections.
  - Chemicals labeled **'Caution'**: Least toxic. Generally require use of gloves and skin protection.
- Avoid inhaling vapor, aerosol or dust.
- Always have soap, water, and towel available when working with chemicals. If chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.
- Wash hands and face after using chemicals and before eating, drinking, smoking, or urination.
- Do not smoke or eat while applying chemicals.

- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers used for food or drink.
- Store chemicals in a secure, locked area away from human or livestock food. Keep children away.
- Always dispose of containers properly. Triple rinse empty containers and puncture or crush containers and dispose of properly.

DX,WW,CHEM01-19-24AUG10

Handling Batteries Safely

TS204—UN—15APR13

TS203—UN—23AUG88

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

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

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

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

Avoid hazards by:

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

If acid is spilled on skin or in eyes:

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

If acid is swallowed:

1. Do not induce vomiting.

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

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

DX,WW,BATTERIES-19-02DEC10

Avoid Heating Near Pressurized Fluid Lines

TS953—UN—15MAY90

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

DX,TORCH-19-10DEC04

Remove Paint Before Welding or Heating

TS220—UN—15APR13

Avoid potentially toxic fumes and dust.

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

Remove paint before heating:

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

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

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

Dispose of paint and solvent properly.

DX,PAINT-19-24JUL02

Handle Electronic Components and Brackets Safely

TS249—UN—23AUG88

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

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

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

DX,WW,RECEIVER-19-24AUG10

Practice Safe Maintenance

TS218—UN—23AUG88

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

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

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

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

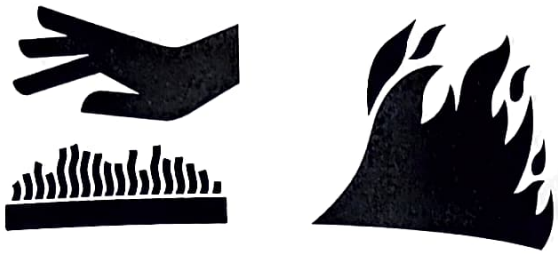
On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

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

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

DX,SERV-19-28FEB17

Avoid Hot Exhaust



RG17488—UN—21AUG09

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

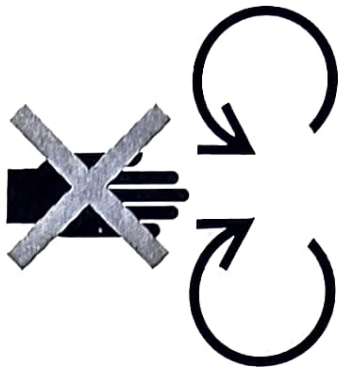
Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.

DX,EXHAUST-19-20AUG09

Clean Exhaust Filter Safely

TS227—UN—15APR13

TS271—UN—23AUG88



TS1693—UN—09DEC09

TS1695—UN—07DEC09

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

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

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

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

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

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

Avoid contact with these components until cooled to safe temperatures.

If service procedure requires engine to be running:

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

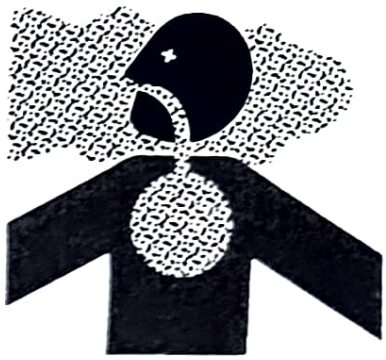
Keep hands, feet, and clothing away from power-driven parts.

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

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

DX,EXHAUST,FILTER-19-12JAN11

Work In Ventilated Area



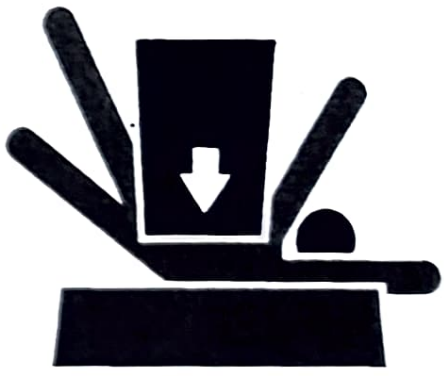
TS220—UN—15APR13

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.

DX,AIR-19-17FEB99

Support Machine Properly



TS229—UN—23AUG88

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

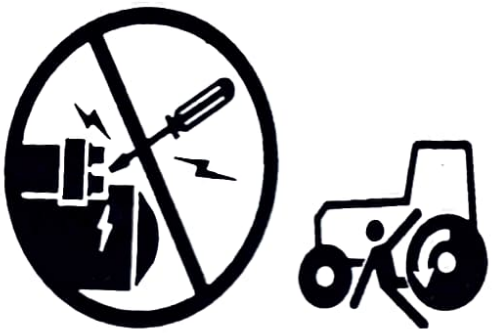
Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load

Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

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

DX,LOWER-19-24FEB00

Prevent Machine Runaway



TS177—UN—11JAN89

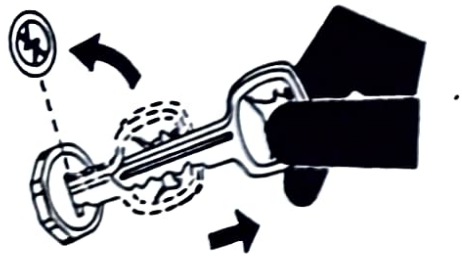
Avoid possible injury or death from machinery runaway.

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.

DX,BYPAS1-19-29SEP98

Park Machine Safely



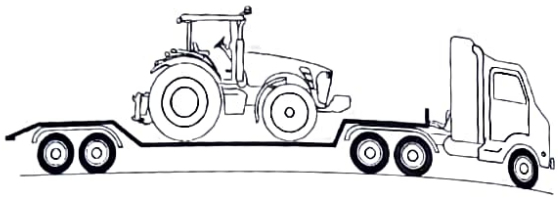
TSZ30—UN—24MAY89

Before working on the machine:

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

DX,PARK-19-04JUN90

Transport Tractor Safely



RXA0103709—UN—01JUL09

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

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

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

DX,WW,TRANSPORT-19-19AUG09

Service Cooling System Safely

TS281—UN—15APR13

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

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

DX,WW,COOLING-19-19AUG09

Service Accumulator Systems Safely

TS281—UN—15APR13

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

Relieve pressure from the pressurized system before removing accumulator.

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

Accumulators cannot be repaired.

DX,WW,ACCLA2-19-22AUG03

Service Tires Safely

RXA0103438—UN—11JUN09

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.

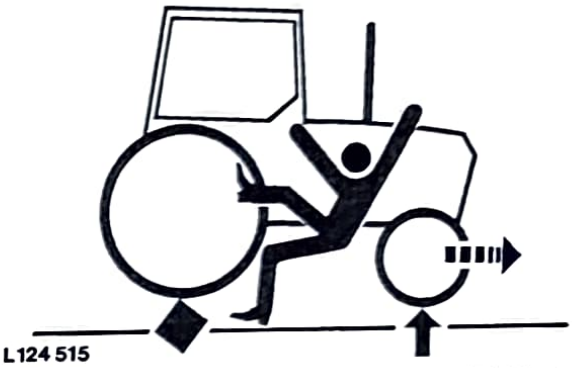
When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

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

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

DX,WW,RIMS-19-28FEB17

Service Front-Wheel Drive Tractor Safely



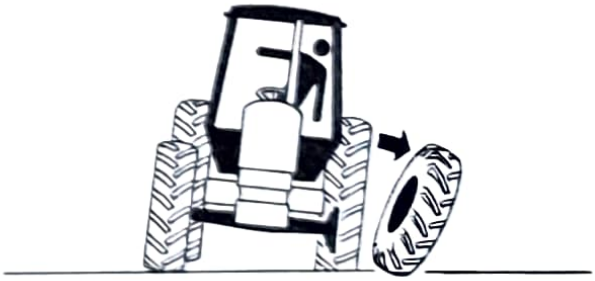
L124 515

L124515—UN—06AUG94

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.

DX,WW,MFWD-19-19AUG09

Tightening Wheel Retaining Bolts/Nuts



L124 516

L124516—UN—03JAN95

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

DX,WW,WHEEL-19-13OCT11

Avoid High-Pressure Fluids

X9811—UN—23AUG88

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

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

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

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

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

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

[illegible]

Do Not Open High-Pressure Fuel System

[illegible]

high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system.

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

DX,WW,HPCR1-19-07JAN03

Store Attachments Safely

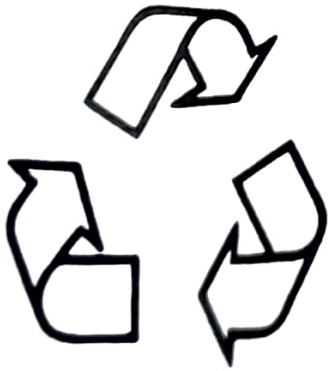
TS219—UN—23AUG88

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.

DX,STORE-19-03MAR93

Decommissioning — Proper Recycling and Disposal of Fluids and Components



TS1133—UN—15APR03

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

- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses during the removal or handling of objects and materials.
- Follow manufacturer's specialized components
- Release stored energy by lowering suspended machine elements, relieving spring [illegible] disconnecting

the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.

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

DX,DRAIN-19-01JUN15

Replace Safety Signs

TS201—UN—15APR13

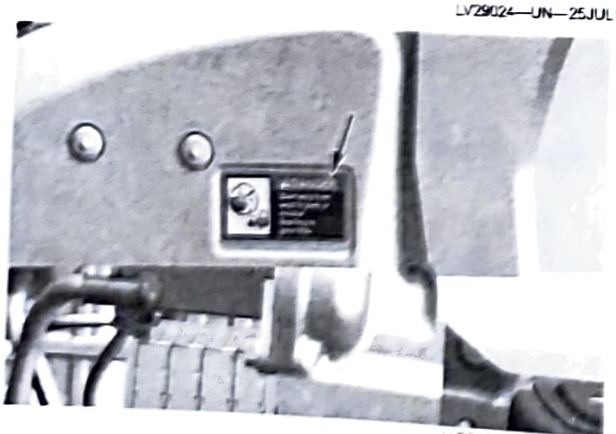
Replace missing or damaged safety signs. Use this operator's manual for correct safety sign placement.

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

DX,SIGNS-19-18AUG09

DANGER

LV29024—UN—25JUL17



Starter—Open Operator Station

Start only from seat in park or neutral.

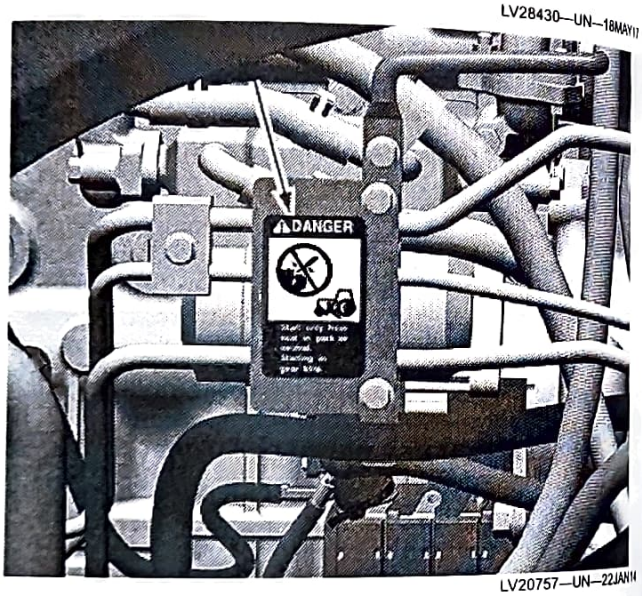
Starting in gear kills.

UP00731,00003CD-19-19DEC17

DANGER

DANGER

LV28430—UN—18MAY17



LV20757—UN—22JAN14

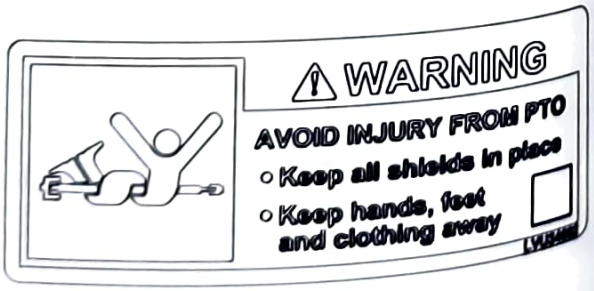
Starter—Cab

Start only from seat in park or neutral.

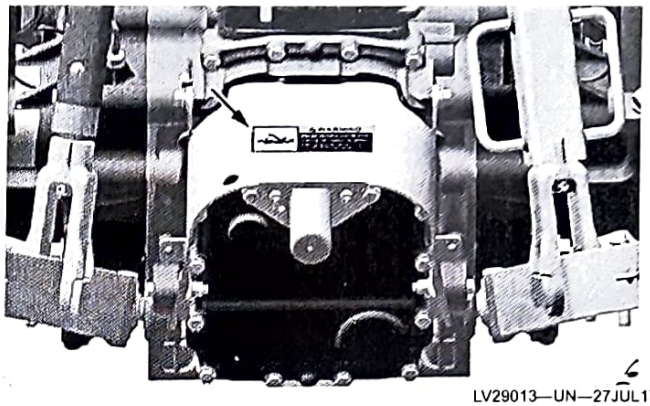
Starting in gear kills.

UP00731,00003CD-19-19DEC17

WARNING



LV28429—UN—18MAY17



LV29013—UN—27JUL17

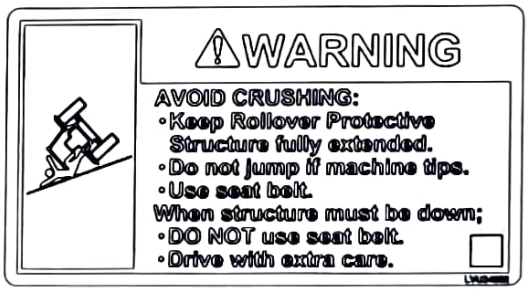
PTO

AVOID INJURY FROM PTO

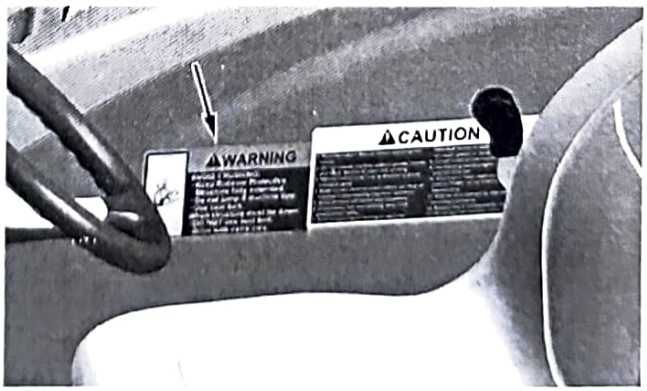
- **Keep all shields in place**
- **Keep hands, feet and clothing away**

UP00731,00003CE-19-19DEC17

WARNING



LV29029—UN—25JUL17



LV29100—UN—03AUG17

Right-Hand Fender - Folding ROPS Tractors

AVOID CRUSHING:

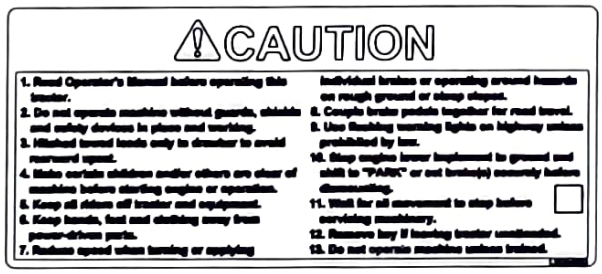
- **Keep Rollover Protective Structure fully extended.**
- **Do not jump if machine tips.**
- **Use seat belt.**

When structure must be down:

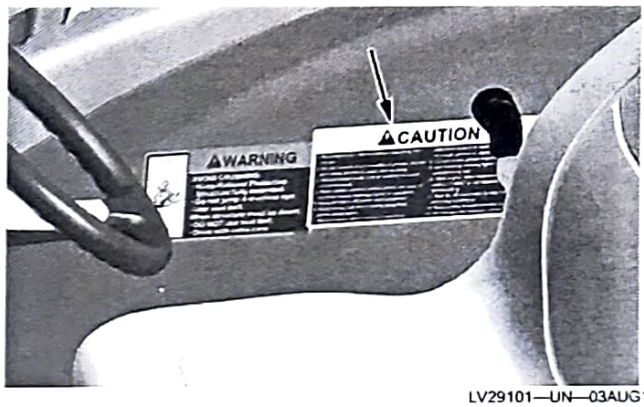
- **DO NOT use seat belt.**
- **Drive with extra care.**

UP00731,00003C6-19-19DEC17

CAUTION



LV29030—UN—25JUL17



LV29101—UN—03AUG17

Right-Hand Fender—Folding ROPS Tractors

1. **Read Operator's Manual before operating this tractor.**
2. **Do not operate machine without guards, shields and safety devices in place and working.**
3. **Hitch towed loads only to drawbar to avoid rearward upset.**
4. **Make certain children and/or others are clear of machine before starting engine or operation.**
5. **Keep all riders off tractor and equipment.**
6. **Keep hands, feet and clothing away from power-driven parts.**
7. **Reduce speed when turning or applying individual brakes or operating around hazards on rough ground or steep slopes.**
8. **Couple brake pedals together for road travel.**
9. **Use flashing warning lights on highway unless prohibited by law.**
10. **Stop engine, lower implement to ground and shift to "PARK" or set brake(s) securely before dismounting.**

11. Wait for all movement to stop before servicing machinery.
12. Remove key if leaving tractor unattended.
13. Do not operate machine unless trained.

UP00731,00003C8-19-19DEC17

WARNING

LV28431—UN—18MAY17

LV16506—UN—31JUL13

Top of ROPS - Folding ROPS Tractors

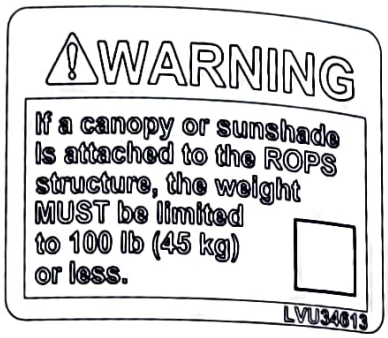
AVOID AMPUTATION

Hands or fingers may be pinched between folded ROPS and rear implements.

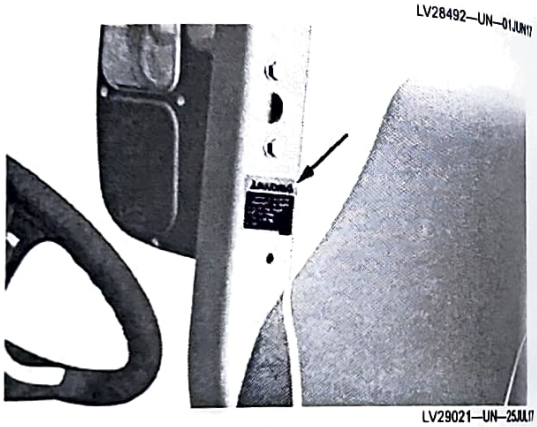
Do not place hands or fingers near foldable ROPS when implements are raised.

UP00731,00003C9-19-19DEC17

WARNING



LV28492—UN—01JUN17



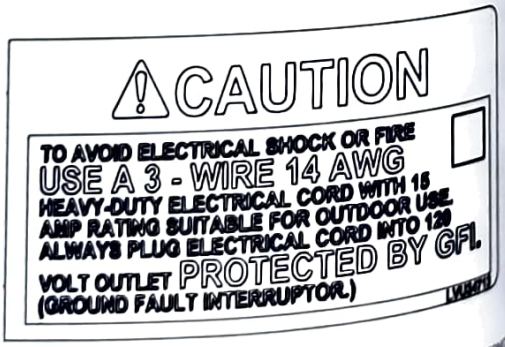
LV29021—UN—25JUL17

Right Side of ROPS

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

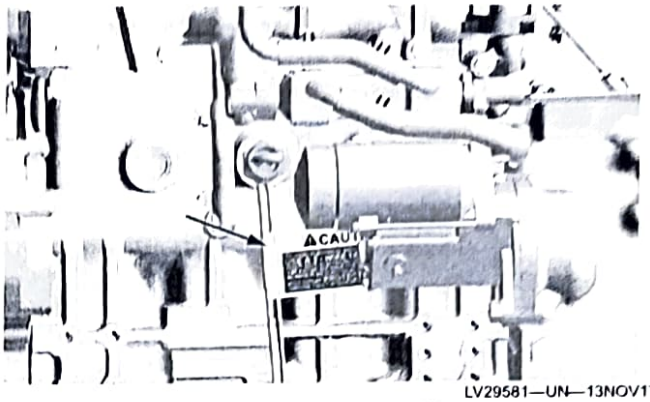
UP00731,00003CA-19-19DEC17

CAUTION



LV29578—UN—

Engine Coolant Heater



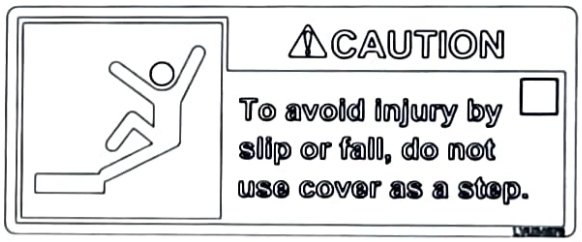
LV29581—UN—13NOV17

Engine Right-Hand Side

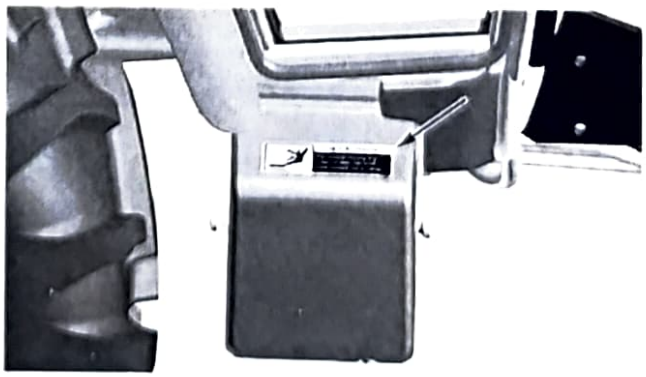
TO AVOID ELECTRICAL SHOCK OR FIRE USE A 3-WIRE 14 AWG HEAVY-DUTY ELECTRICAL CORD WITH 15 AMP RATING SUITABLE FOR OUTDOOR USE. ALWAYS PLUG ELECTRICAL CORD INTO 120 VOLT OUTLET PROTECTED BY GFI (GROUND FAULT INTERRUPTER.)

UP00731,00004B9-19-19DEC17

CAUTION



LV29571—UN—18OCT17



LV29462—UN—18OCT17

Battery Cover—Cab Tractor

CAUTION

To avoid injury by slip or fall, do not use cover as a step.

UP00731,00004A0-19-19DEC17

WARNING

LV29028—UN—25JUL17

LV29027—UN—25JUL17

Cab Tractor

AVOID CRUSHING

Do not jump if machine tips

USE SEAT BELT

UP00731,00003CC-19-19DEC17

CAUTION—Cab Tractors

LV29031—UN—27JUL17

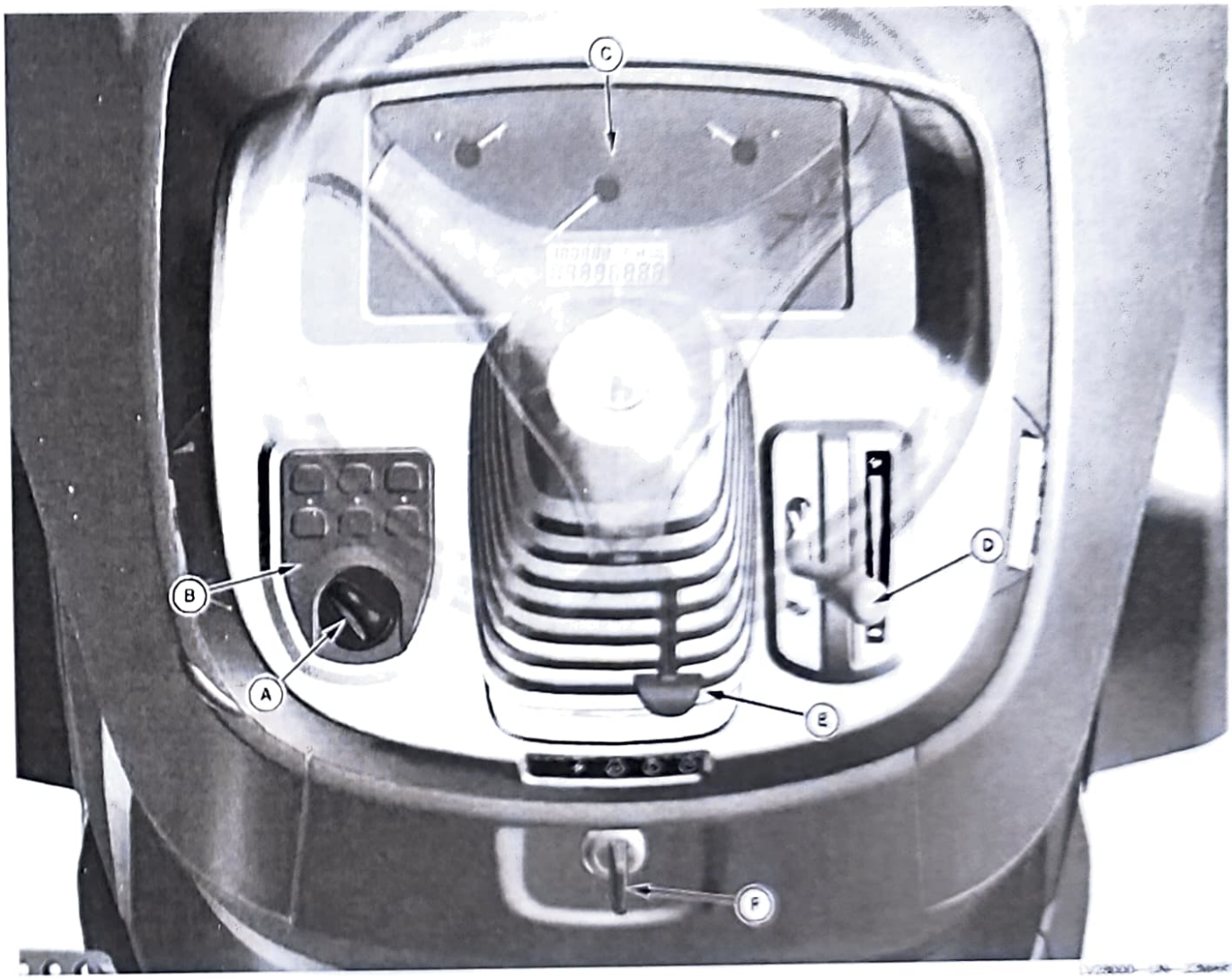
LV29028—UN—25JUL17

Left-Hand Door Post

1. Read Operator's Manual before operating this tractor.
2. Do not operate machine without guards, shields and safety devices in place and working.
3. Hitch towed loads only to drawbar to avoid rearward upset.
4. Make certain children and/or others are clear of machine before starting engine or operation.
5. Keep all riders off tractor and equipment.
6. Keep hands, feet, and clothing away from power-driven components.
7. Reduce speed when turning or applying individual brakes or operating around hazards on rough ground or steep slopes.
8. Couple brake pedals together for road travel.
9. Use flashing warning lights on highway unless prohibited by law.
10. Stop engine, lower implement to ground and shift to "PARK" or set brake(s) securely before dismounting.
11. Wait for all movement to stop before servicing machinery.
12. Remove key if leaving tractor unattended.
13. Do not operate machine unless trained.

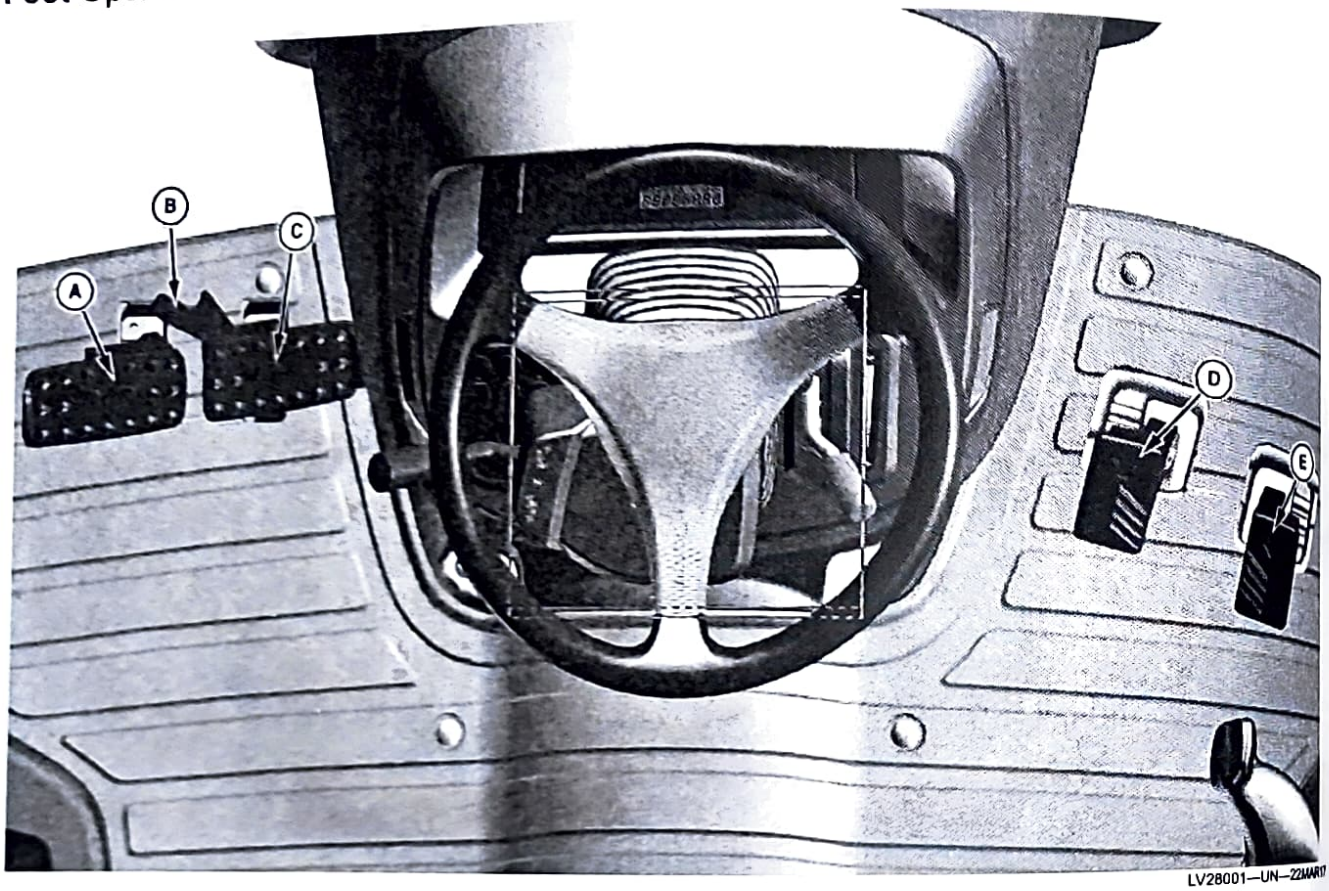
UP00731,0000308-19-

Front Console Controls



A—Headlight/Worklight Switch
B—Dash Panel Module
C—Instrument Cluster
D—Throttle Lever
E—Tilt Steering Control Lever
F—Key Switch

Foot Operated Controls

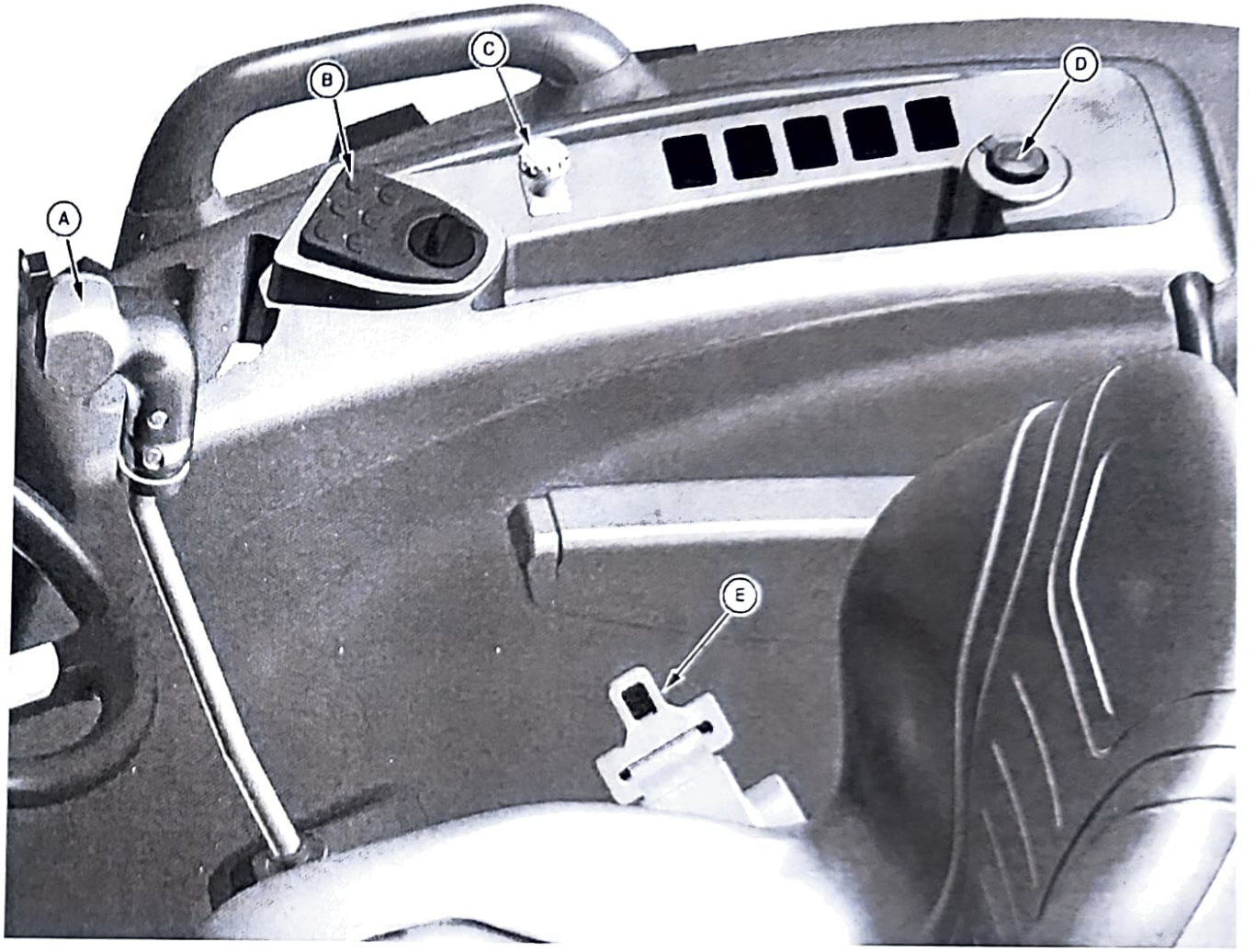


LV28001—UN—22MAR17

A—Left Brake Pedal
B—Brake Pedal Lock Tab
C—Right Brake Pedal
D—Forward Travel Pedal
E—Reverse Travel Pedal

UP00731,000027F-19-09AUG17

Right-Hand Console Controls

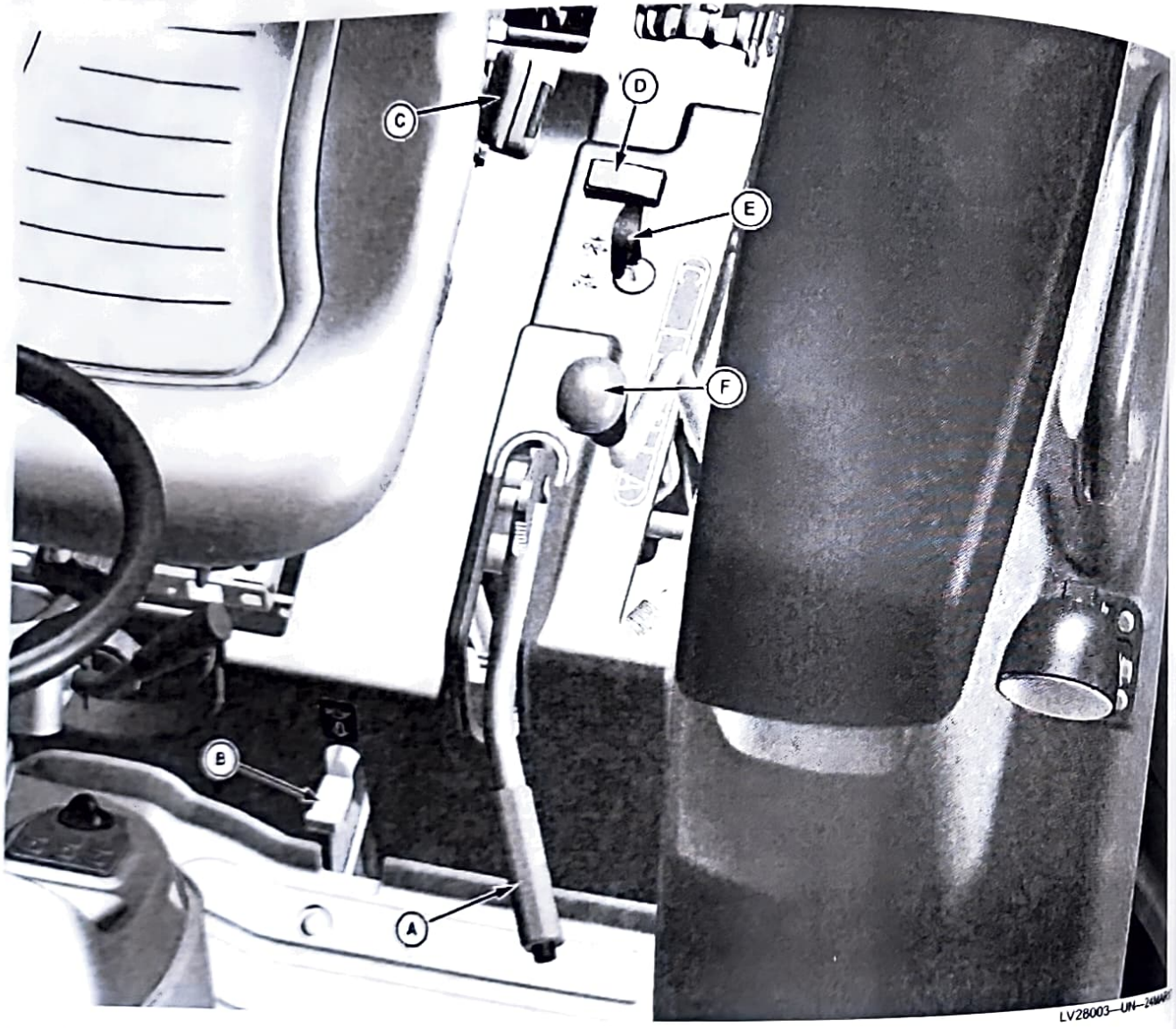


LV25002—UN—22MAR17

A—Selective Control Lever
B—Cruise Control Module
C—PTO Engagement Switch
D—110V Outlet
E—Seat Belt

UP00731,0000280-19-21MAR17

Left-Hand Console Controls

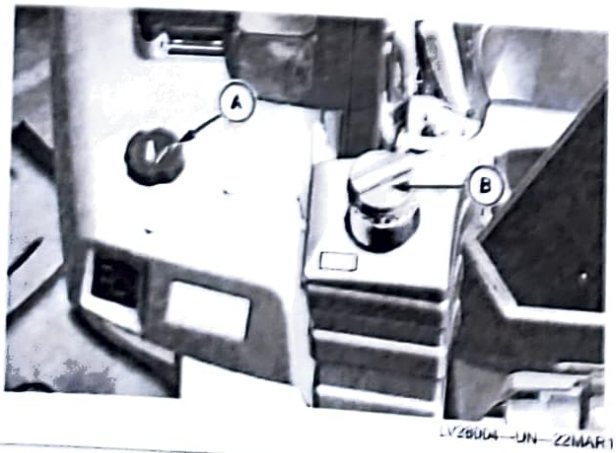


LV28003—UN—24MAR17

A—Hand Brake
B—Differential Lock Pedal
C—Seat Belt
D—Hitch Assist
E—MFWD Control Lever
F—Range Shift Lever

UP00731,0000281-19-22MAR17

Fender Controls

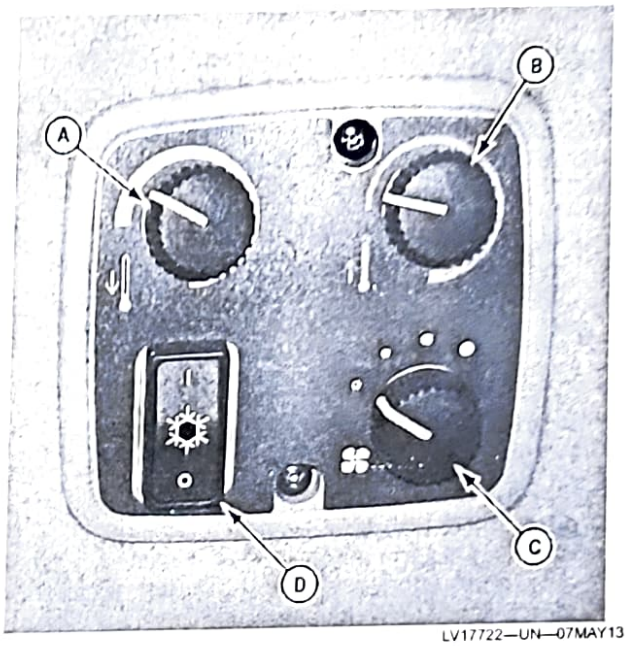


LV28004—UN—22MAR17

A—Auxiliary Rockshaft Control
B—Fuel Cap

UP00731,0000284-19-22MAR17

HVAC Controls

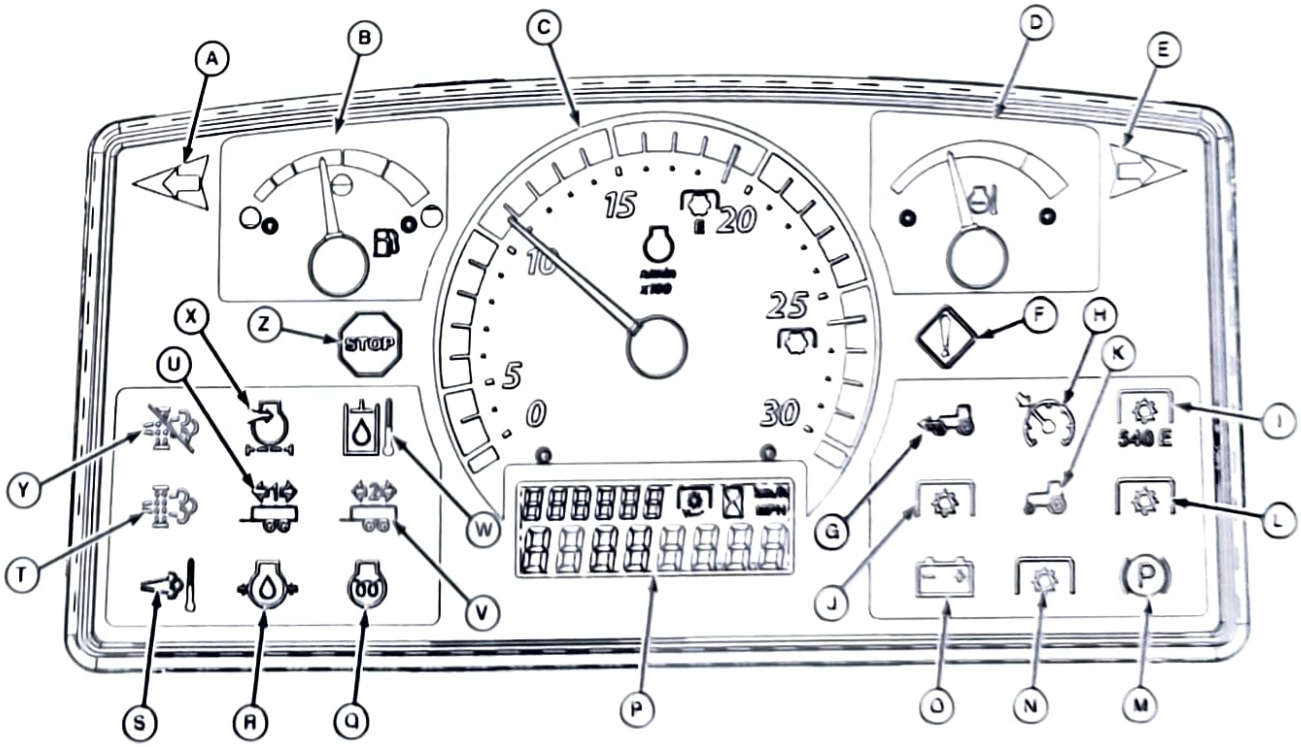


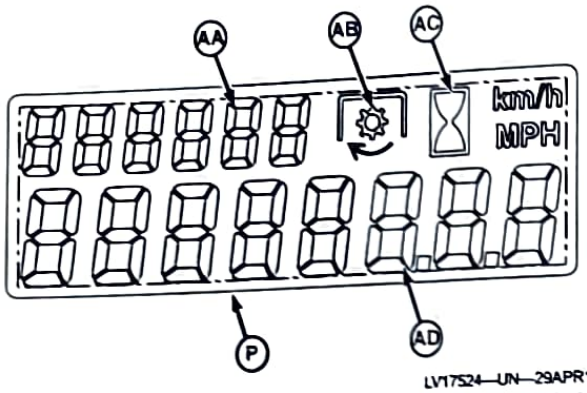
LV17722—UN—07MAY13

A—Air Conditioner Temperature Control Knob
B—Heater Temperature Control Knob
C—Blower Speed Knob
D—On/Off Switch

KN5Z281 10049FD-19-14NOV13

Instrument Panel





LV17524—UN—29APR13

A—Left Turn Signal/Warning Flasher Indicator Light—Flashes when left turn signal switch is depressed or when hazard light switch is depressed.

B—Fuel Gauge—Shows the amount of fuel in the fuel tank (R models only).

C—Tachometer—Shows engine speed in 100s. Example: If indicator is pointing at 20, engine speed is 2000 rpm.

Engine Idle — Specification

Low Idle—Speed	950 ± 25 rpm
Rated—Speed	2600 rpm
High Idle—Speed	2750 ± 50 rpm

D—Engine Coolant Temperature Gauge—Indicates temperature of cooling system. If gauge needle reaches red range, engine is overheating and engine will derate.

If engine is overheated, remove load on machine immediately. Reduce engine to idle speed and allow engine to cool. Check coolant level in overflow bottle and check for air flow blockage to radiator. If coolant level is correct and needle stays in red range after cleaning grille, stop engine.

E—Right Turn Signal/Warning Flasher Indicator Light—Flashes when right turn signal switch is depressed or when hazard light switch is depressed.

F—Service Alert Indicator—Illuminates when a malfunction occurs (review error message in information display). If necessary, have John Deere dealer diagnose machine.

G—Front Wheel Drive Indicator—Illuminates when MFWD is engaged (R models only).

H—Cruise Control Light—Illuminates when cruise control is engaged (if equipped).

I—Rear 540E PTO—Illuminates when the PTO is in the 540E mode and the rear PTO is on (R models only).

J—Front PTO Indicator Light—Illuminates when Front PTO is engaged (if equipped).

K—PTO Indicator Light—Illuminates when PTO is engaged.

L—Rear PTO Indicator Light—Illuminates when rear PTO is engaged.

M—Park Brake Light—Illuminates when ignition key is in the run position and park brake is locked.

N—Not Used

O—Alternator/Battery Charging Light—Illuminates when ignition key is in the run position and engine is not running. If light turns on while engine is running, alternator is not charging battery. Move engine speed control lever to full throttle position. Stop engine if light remains on.

P—Information Display—Displays speedometer (4R models only), hour meter, PTO hour, PTO speed, regen information and diagnostic trouble codes (if active).

Q—Engine Glow Plug Indicator Light—Illuminates when ignition key is in the ON position and engine glow plugs are being energized. Glow plugs are energized whenever starter is engaged.

R—Engine Oil Pressure Light—Illuminates when key switch is in the run position and the engine is not running. If this light turns on while engine is running, engine oil pressure is too low. Stop engine.

S—High Exhaust Temperature Indicator—Illuminates when an active DPF filter cleaning is being performed.

T—Exhaust Filter Cleaning Indicator—Illuminates when soot levels in the filter are high and exhaust filter cleaning is needed.

U—Trailer 1 Indicator—Starts flashing when trailer turn signal or hazard warning lights are switched on (if equipped).

V—Trailer 2 Indicator—Starts flashing when trailer turn signal or hazard warning lights are switched on (if equipped).

W—Hydraulic Oil Temperature Light—Not Used

X—Engine Air Cleaner Restriction Indicator—Illuminates when air cleaner element is clogged (clean or replace element). If necessary, have John Deere dealer diagnose machine (R models only).

Y—Not Used

Z—Stop Indicator—Illuminates when a serious malfunction occurs. SHUT OFF engine IMMEDIATELY and determine cause (review error message in information display). If necessary, have John Deere dealer diagnose machine.

AA—Machine Information Display—When in diagnostic mode, display shows name of control unit that is experiencing fault.

AB—PTO Icon—Illuminates when PTO is operating and PTO speed is displayed in the vehicle information display.

AC—Hour Meter Icon—Illuminates and flashes when engine hours are accumulating and displays on the information display.

AD—Machine Information Display—Shows machine

wheel speed (R models only), engine hours, PTO speed, and diagnostic information.

Adjusting Instrument Panel Backlighting

NOTE: Backlight illumination is 100% when the headlights are off. Backlight adjustment is used when the headlights are on.

1. Press and hold the display mode switch for approximately 4 seconds.
2. The display mode screen should read "rELEAS", then "NIGHT".
3. Press the display mode switch again to accept.
4. Press the left arrow switch to toggle to the second digit on the instrument panel.
5. Press the right arrow to toggle to desired illumination.

NOTE: The range for illumination is from 1—100.

6. Press the left arrow switch to toggle to the third digit on the instrument panel.
7. Press the right arrow to toggle to desired illumination.
8. Press the display mode switch again to exit.

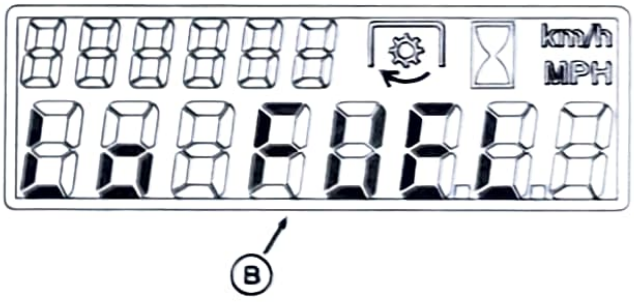
UP00731,0000285-19-17AUG17

Information Display and Display Mode Switch

Normal Operation

LV25014—UN—22APR16

Left-Hand Switch Module



LV28719—UN—05JUL17

Information Display Screen

A—Display Mode Switch
B—Information Display Screen

Press Display Mode Switch (A) to navigate through or select information in the Information Display (B)

Information display screen (B) shows normal operational information in the following order:

Display Mode Switch Screen Navigation		
Engine Hours		
→	Vehicle Hours	
	→	PTO Hours

	⇒ Soot Level	
		⇒ Hours since last Regen

IMPORTANT: Machine damage will occur if a machine operation continues after STOP indicator is displayed. Shut off engine immediately and call your John Deere dealer for assistance before machine operation continues.

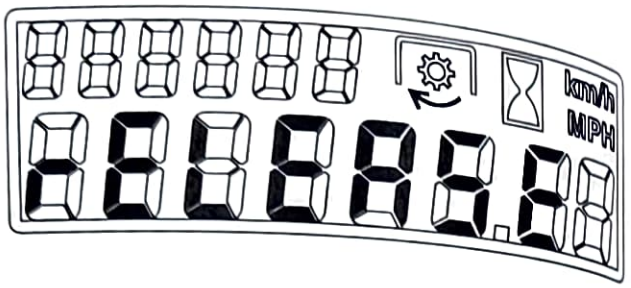
Stop, service alert, information messages, and diagnostics are also provided on the information display screen. This information will override normal operation. Press display mode switch (A) to acknowledge this information and return to the normal operational information.

For additional information on codes, icon descriptions, messaging, and diagnostics, see the On Board Diagnostic Display section.

Programming Mode (If equipped)

Programming of the machine and can be performed with the display mode switch.

Left-Hand Switch Module



Release Message LV29132—UN—10AUG17

A—Display Mode Switch
B—Release Message

To enter programming mode, press and hold the Display Mode Switch (A) until Release (B) appears on the display screen.

Programming mode shows programmable feature screens in the following order:

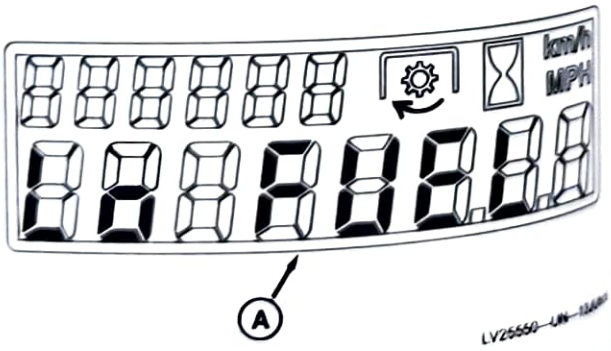
Programming Mode Screen Navigation		
Dimmer Mode		
⇒	LCD Backlight Mode	
	⇒	LCD Contrast Mode

For more information on Instrument Cluster Display dimming, LCD Backlight and contrast settings, see Electrical and Lighting Operation section.

CM74493,0000011-19-10AUG17

Information Display

The information display screen (A) displays speedometer, hour meter, PTO hour, PTO speed, soot levels, regen information, operational status, warning messages, and fault information.



LV25550—UN—

A—Information Display Screen

①	SHIFt to NEut	㉓	EnG InE SPEEd H IGh
②	Pto Hr	㉔	Ecu rEGEn InH Ib ItEd
③	H itch on	㉕	PuLL Co IL FAuLt
④	H itch oFF	㉖	HoLd Co IL FAuLt
⑤	E-SPd	㉗	StArt Co IL FAuLt
⑥	A-rAnGE	㉘	E-SPd to 1500
⑦	r IGht buLb Error	㉙	EnG InE run
⑧	LEFt buLb Error	㉚	PtO Co IL FAuLt
⑨	EnG Hr	㉛	r Io On
⑩	Gnd SP	㉜	Lo FUEL
⑪	UEh Hr	㉝	both PEdALS dEPrESSEd
⑫	FPEdAL	㉞	Out oF SEAt
⑬	rPEdAL	㉟	no SPEEd
⑭	throtL	㊱	SHIFt to nEutrAL
⑮	F-CO IL	㊲	H i SPEEd
⑯	r-CO IL	㊳	Lo O iL PrESS
⑰	donE	㊴	O iL PrESS d iSconn
⑱	Soot	㊵	EnG inE OuEr HEAt
⑲	HrS S incE LASt rEGEn	㊶	rEcouEry rEGEn Prohib it
⑳	Shut Pto OFF	㊷	StAt ionAry rEGEn rEQu IrEd
㉑	SH IFt PbrAHE ON	㊸	PrHEAt Co iL FAuLt
㉒	EnG InE CoLd		

1—Shift to neutral—Will display if attempting to start the tractor in gear. Will display if tractor is in gear during a parked exhaust filter cleaning.

2—PTO hours—Displays PTO hours.

3—Hitch on—Will display when hitch assist is engaged.

4—Hitch off—Will display when hitch assist is disengaged.

5—Engine speed—Will display when engine speed is too high, decrease RPM.

6—A-Range—Will display if tractor is not in A-range when hitch assist is engaged.

7—Right bulb error—Will display when there is a fault with right turn signal bulb or circuit.

8—Left bulb error—Will display when there is a fault with left turn signal bulb or circuit.

9—Engine hours—Displays engine hours.

10—Ground speed—Displays ground speed.

11—Vehicle hours—Displays vehicle hours.

12—Forward pedal—See a John Deere dealer.

13—Reverse pedal—See a John Deere dealer.

14—Throttle—See a John Deere dealer.

15—Forward coil—See a John Deere dealer.

16—Reverse coil—See a John Deere dealer.

17—Done—See a John Deere dealer.

18—Soot—Displays diesel particulate filter soot level.

19—Hours since last regeneration—Displays hours since last exhaust filter cleaning.

20—Shut PTO off—Displays if PTO is engaged during a parked exhaust filter cleaning or hitch assist is engaged.

21—Shift park brake on—Displays if park brake is not engaged during a parked exhaust filter cleaning or hitch assist is engaged.

22—Engine cold—Will display when engine temperature needs to be higher before performing a parked exhaust filter cleaning.

23—Engine speed high—Will display when engine speed needs to be lower before performing a parked exhaust filter cleaning.

24—ECU regeneration inhibited—Will display when exhaust filter cleaning can not be performed, see a John Deere dealer.

25—Pull coil fault—Will display when there is an error with the fuel shut off circuit, see a John Deere dealer.

26—Hold coil fault—Will display when there is an error with the fuel shut off circuit, see a John Deere dealer.

27—Start coil fault—Will display when there is an error with the starter relay circuit, see a John Deere dealer.

28—Engine speed to 1500—Will display during a parked exhaust filter cleaning. Adjust engine RPM to 1500 for optimal filter cleaning.

29—Engine is running—Displays when attempting to start the engine when engine is running.

30—PTO coil fault—Will display when there is a PTO solenoid circuit fault, see a John Deere dealer.

31—RIO on—This will display when RIO switch is enabled while mid-PTO is engaged.

32—Low Fuel—Will display when fuel level is below 1/8 of a tank.

33—Both pedals depressed—Displays when both reverse and forward HST pedals are being pressed at the same time.

34—Out of seat—Displays when tractor is engaged in forward or reverse while operator is out of seat.

35—No speed—Displays when the tractor is engaged in forward or reverse and no ground speed detected.

36—Shift to neutral—Will display if attempting to start the tractor in gear. Will display if tractor is in gear during a parked exhaust filter cleaning.

37—High speed—Displays when ground speed exceeds limit for shuttle shifting.

38—Low oil pressure—Displays when low engine oil pressure is detected.

39—Oil pressure disconnected—Displays when oil pressure signal is not detected. See a John Deere dealer.

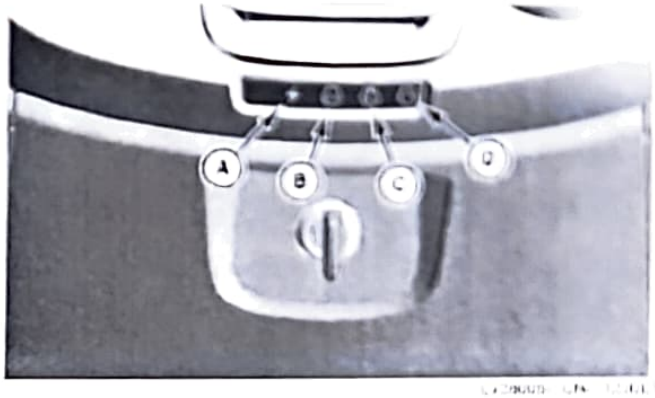
40—Engine over heat—Displays when engine temperature is too high. Wait for engine to cool before operating tractor.

41—Successful regeneration is prohibited—Displays when parked exhaust filter cleaning is prohibited. See a John Deere dealer.

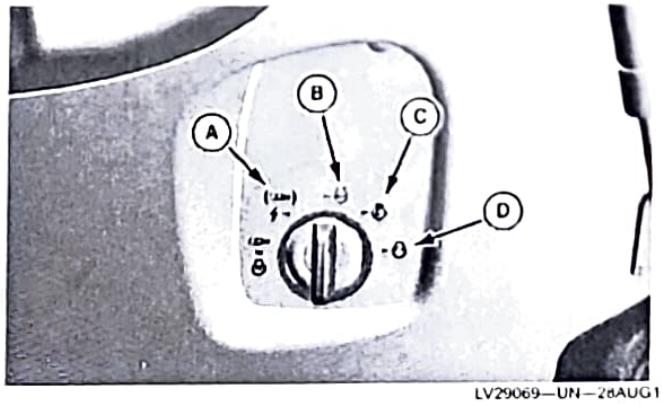
42—Successful regeneration required—Displays when parked exhaust filter cleaning is required.

43—Thermistor open fault—Displays when there is an error with the cold starting relay circuit, see a John Deere dealer.

Use Key Switch



Open Operator Station Key Switch



LV29069—UN—28AUG17

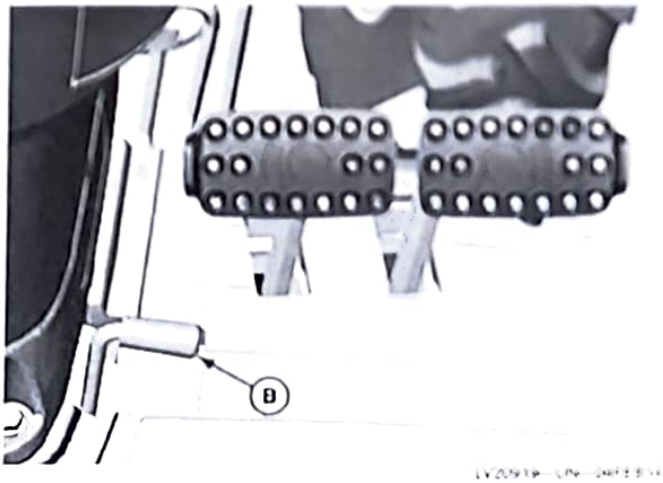
Cab Key Switch

A—Acc Position
B—Stop Position
C—Run Position
D—Start Position

- A—With key in the acc position (A), accessories can be used. Be careful not to accidentally move key to this position. Battery could be drained.
- With key in the off position (B), all switched power is off and the engine should not run.
- Turn key to the run position (C), and the engine oil pressure light and battery charge light will illuminate and activate glow plugs.
- Turn key to the start position (D) to start engine. Release the key after the engine has started. It will automatically return to the run position. Engine will continue to run and engine oil pressure light and battery charge light will turn off.

UP00731,0000287-19-19JAN18

Using Throttle



A—Hand Throttle
B—Foot Throttle

Hand Throttle

Use hand throttle to change engine speeds. Use hand throttle in conjunction with tachometer to set engine speeds.

- **Increase Engine Speed**—Push hand throttle (A) toward front of machine.
- **Decrease Engine Speed**—Pull hand throttle (A) toward rear of machine.

Engine Tachometer Speeds — Specification

Low Idle—Speed	950 rpm
Rated—Speed	2600 rpm
High Idle	2750 ± 50 rpm

Foot Throttle (PowrReverser Only)

Use the foot throttle to temporarily override and increase the hand throttle lever setting when the machine operation requires repeated engine speed change, such as when operating a loader.

1. Set the hand throttle lever at middle operating rpm.

23—Engine speed high—Will display when engine speed needs to be lower before performing a parked exhaust filter cleaning.

24—ECU regeneration inhibited—Will display when exhaust filter cleaning can not be performed, see a John Deere dealer.

25—Pull coil fault—Will display when there is an error with the fuel shut off circuit, see a John Deere dealer.

26—Hold coil fault—Will display when there is an error with the fuel shut off circuit, see a John Deere dealer.

27—Start coil fault—Will display when there is an error with the starter relay circuit, see a John Deere dealer.

28—Engine speed to 1500—Will display during a parked exhaust filter cleaning. Adjust engine RPM to 1500 for optimal filter cleaning.

29—Engine is running—Displays when attempting to start the engine when engine is running.

30—PTO coil fault—Will display when there is a PTO solenoid circuit fault, see a John Deere dealer.

31—RIO on—This will display when RIO switch is enabled while mid-PTO is engaged.

32—Low Fuel—Will display when fuel level is below 1/8 of a tank.

33—Both pedals depressed—Displays when both reverse and forward HST pedals are being pressed at the same time.

34—Out of seat—Displays when tractor is engaged in forward or reverse while operator is out of seat.

35—No speed—Displays when the tractor is engaged in forward or reverse and no ground speed detected.

36—Shift to neutral—Will display if attempting to start the tractor in gear. Will display if tractor is in gear during a parked exhaust filter cleaning.

37—High speed—Displays when ground speed exceeds limit for shuttle shifting.

38—Low oil pressure—Displays when low engine oil pressure is detected.

39—Oil pressure disconnected—Displays when oil pressure signal is not detected. See a John Deere dealer.

40—Engine over heat—Displays when engine temperature is too high. Wait for engine to cool before operating tractor.

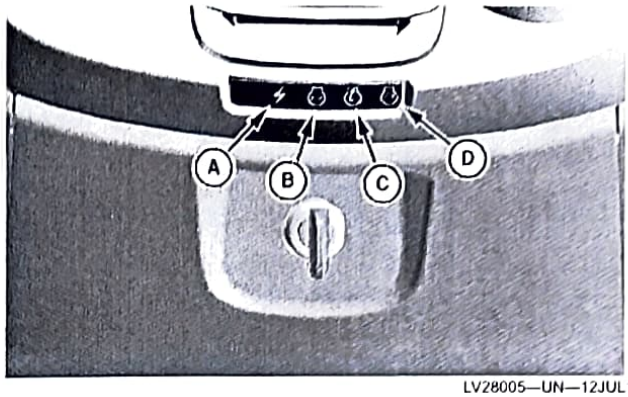
41—Recovery regenertion is prohibited—Displays when parked exhaust filter cleaning is prohibited. See a John Deere dealer.

42—Stationary regeneration required—Displays when parked exhaust filter cleaning is required.

43—Pre-heat coil fault—Displays when there is an error with the cold starting relay circuit, see a John Deere dealer.

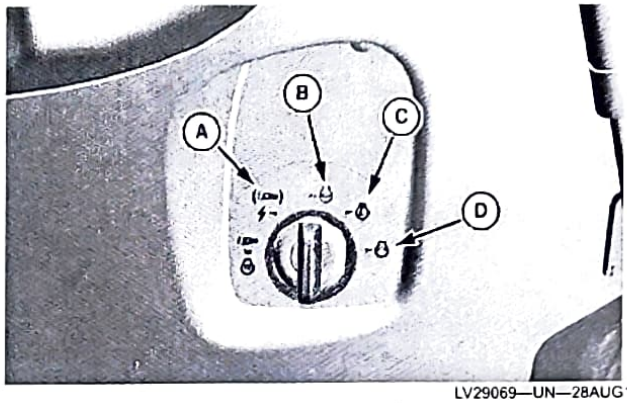
CM74493,0000010-19-23JUN11

Use Key Switch



LV28005—UN—12JUL17

Open Operator Station Key Switch



LV29069—UN—28AUG17

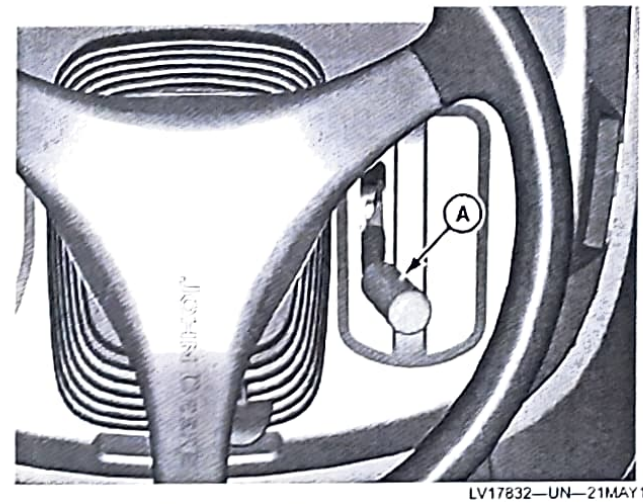
Cab Key Switch

A—Acc Position
B—Stop Position
C—Run Position
D—Start Position

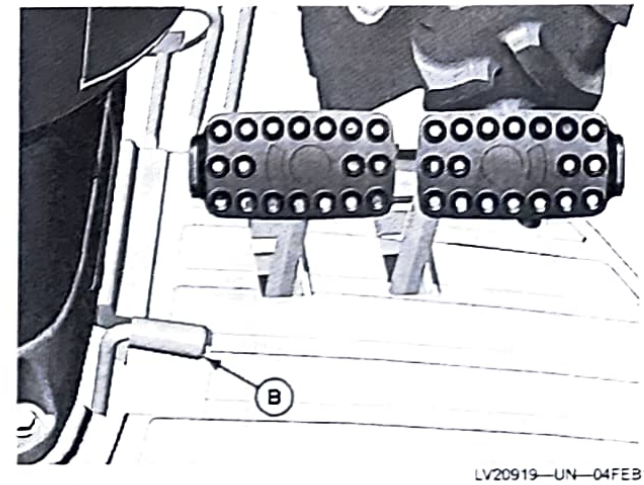
- A—With key in the acc position (A), accessories can be used. Be careful not to accidentally move key to this position. Battery could be drained.
- With key in the off position (B), all switched power is off and the engine should not run.
- Turn key to the run position (C), and the engine oil pressure light and battery charge light will illuminate and activate glow plugs.
- Turn key to the start position (D) to start engine. Release the key after the engine has started. It will automatically return to the run position. Engine will continue to run and engine oil pressure light and battery charge light will turn off.

UP00731,0000287-19-19JAN18

Using Throttle



LV17832—UN—21MAY13



LV20919—UN—04FEB14

A—Hand Throttle
B—Foot Throttle

Hand Throttle

Use hand throttle to change engine speeds. Use hand throttle in conjunction with tachometer to set engine speeds.

- **Increase Engine Speed**—Push hand throttle (A) toward front of machine.
- **Decrease Engine Speed**—Pull hand throttle (A) toward rear of machine.

Engine Tachometer Speeds — Specification

Low Idle—Speed	950 rpm
Rated—Speed	2600 rpm
High Idle	2750 ± 50 rpm

Foot Throttle (PowrReverser Only)

Use the foot throttle to temporarily override and increase the hand throttle lever setting when the machine operation requires repeated engine speed change, such as when operating a loader.

1. Set the hand throttle lever at middle operating rpm.

2. Depress the foot throttle (B) to increase rpm and machine speed.
3. Release the foot throttle to return engine speed to the previously set hand throttle lever position.

KN52281,1004BA8-19-31JAN14

Using eThrottle—If Equipped

A—eThrottle Switch

LV17696—UN—03MAY13

CAUTION: Avoid injury! When eThrottle is engaged, speed increases as travel pedals are depressed.

Using eThrottle enables the operator to increase or decrease the speed of the tractor by using the forward and reverse travel pedals.

NOTE: Using eThrottle is not recommended during PTO applications. With eThrottle engaged, constant PTO RPM cannot be maintained, which will result in reduced performance of implement.

Press eThrottle switch (A) to engage.

Press again to disengage.

KN52281,1004850-19-25JUN14

Starting the Engine—Hydrostatic Transmission

NOTE: If attempting to restart the engine after a sta wait at least 2 seconds before restarting.

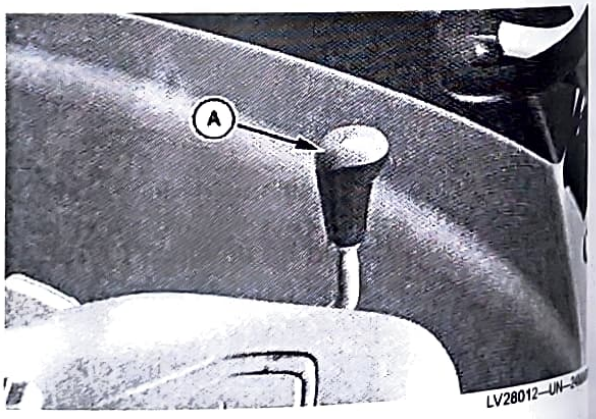
CAUTION: Avoid injury! Engine exhaust fume contain carbon monoxide and can cause serious illness or death.

- **Move the machine to an outside area befo running the engine.**
- **Do not run an engine in an enclosed area without adequate ventilation.**
- **Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes o of the area.**
- **Allow fresh outside air into the work area t clear out the exhaust fumes.**

NOTE: It is recommended to install optional engine block heater, hydraulic oil heater, and battery heating pad if operating machine in temperature below —18°C (0°F).

If temperature is below 0°C (32°F), follow the co weather starting steps in this section.

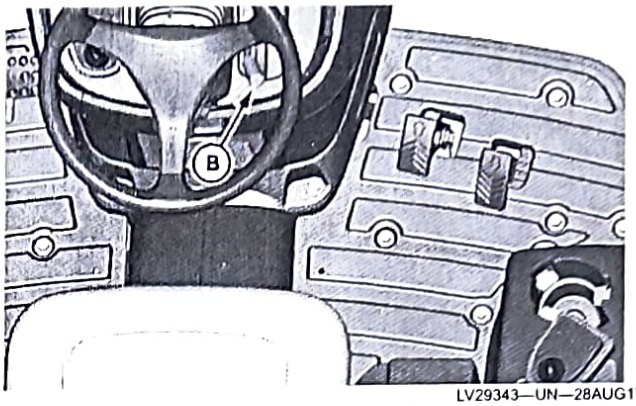
1. Apply park brake.



A—Transmission Range Shift Lever

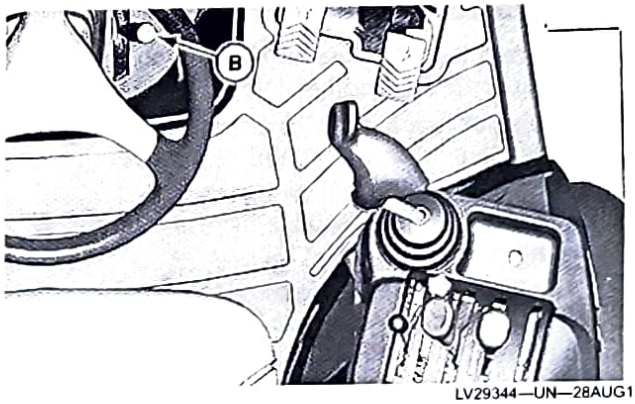
LV28012—UN—

2. Move the transmission range shift lever (A) to the (neutral) position.



LV29343—UN—28AUG17

Open Operator Station



LV29344—UN—28AUG17

Cab

B— Hand Throttle

3. Make sure PTO switch is in the off position.
4. Remove foot from forward and reverse travel pedals.

⚠ CAUTION: Avoid injury! Check to be sure that area is clear of any bystanders before lowering implements to the ground.

5. Lower any rear-mounted implement to the ground by pushing the rockshaft control lever forward.
6. Lower any front-mounted implement to the ground using the SCV lever (if equipped).
7. Set hand throttle (B) to the 1/2—3/4 fast position.
8. Turn key switch to the run position.
9. Check instrument panel indicator lights:
   - Alternator/battery charging light illuminates.
   - Engine oil pressure light illuminates.

IMPORTANT: Avoid damage! Glow plugs and air heater are operational during cranking. Using ether or starter fluid during cranking will cause damage to engine.

10. Turn key switch to the start position to start engine. Release the key after the engine has started.
11. Check indicator lights:
    - Engine oil pressure light goes out within 5 seconds.

    NOTE: If indicator light does not go out after 10 seconds, set engine speed at full throttle.

    - Alternator charging light should go out within 10 seconds.
    - If indicator lights stay on longer than the given time interval, stop engine and check for cause.
12. Set hand throttle to the 1/2 fast position for 1 minute without load.

Cold Weather Starting

⚠ CAUTION: Avoid injury! Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

Move the machine to an outside area before running the engine.

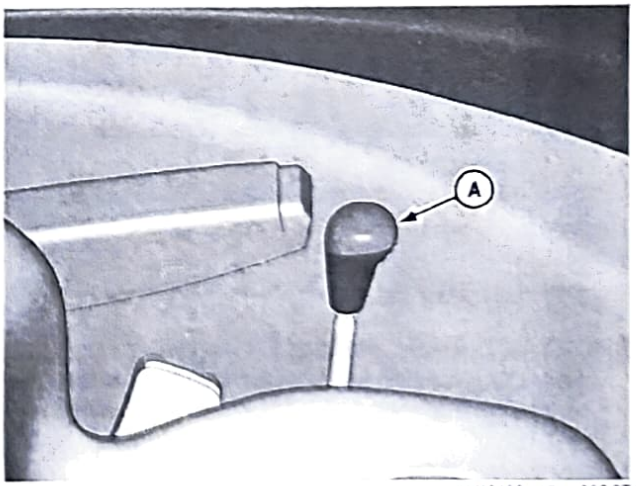
Do not run an engine in an enclosed area without adequate ventilation.

• Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.

•Allow fresh outside air into the work area to clear out the exhaust fumes.

NOTE: It is recommended to install optional engine block heater, hydraulic oil heater, and battery heating pad if operating machine in temperatures below —18°C (0°F).

If temperature is below 0°C (32°F), follow the cold weather starting steps in this section.



LV15496—UN—25OCT13

A—Transmission Range Shift Lever

1. Apply park brake.
2. Move the transmission range shift lever (A) to the N (neutral) position.

3. Turn key switch to the run position.
4. When glow plug icon light turns off, turn key to the start position.

IMPORTANT: Avoid damage! Starter may be damaged if starter is operated for more than 20 seconds at a time.

Wait 2 minutes before trying again if engine does not start.

5. Release key when engine starts.
6. Check instrument panel indicator lights:
   - Engine oil pressure light will go out within 5 seconds.
   - Alternator/battery charging light will go out within 10 seconds.
7. If indicator light remains on after 10 seconds, set engine speed to full throttle. If indicator light continues to stay on, stop the engine and check for cause.

IMPORTANT: Avoid damage! In cold weather, run engine several minutes to allow engine oil and transmission oil to warm.

NOTE: It is normal for the engine to be louder and for blue-white exhaust smoke to be present during engine warm-up. The amount of exhaust smoke depends on air temperature.

8. Warm the engine:
   - In warm weather, set hand throttle to the 1/2 fast position for 1 minute without load.
   - In cold weather, set hand throttle to the 1/2 fast position for 5 minutes without load.

Idling Engine

NOTE: Allowing engine to idle for long periods of time wastes fuel and cause carbon buildup.

1. Adjust hand throttle to set engine at low idle.
2. Apply park brake.

Starting a Stalled Engine

IMPORTANT: Avoid damage! If engine stalls while operating under load, start engine immediately to prevent abnormal heat buildup in engine.

1. Disengage PTO.
2. Remove foot from forward and reverse travel pedals.
3. Move transmission range shift lever to the N (neutral) position.
4. Start engine. Continue with normal operation, or set engine at low idle for 2 minutes before stopping engine.

UP00731,0000288-19-28AUG17

Starting the Engine—PowrReverser Transmission

NOTE: If attempting to restart the engine after a stall, wait at least 2 seconds before restarting.

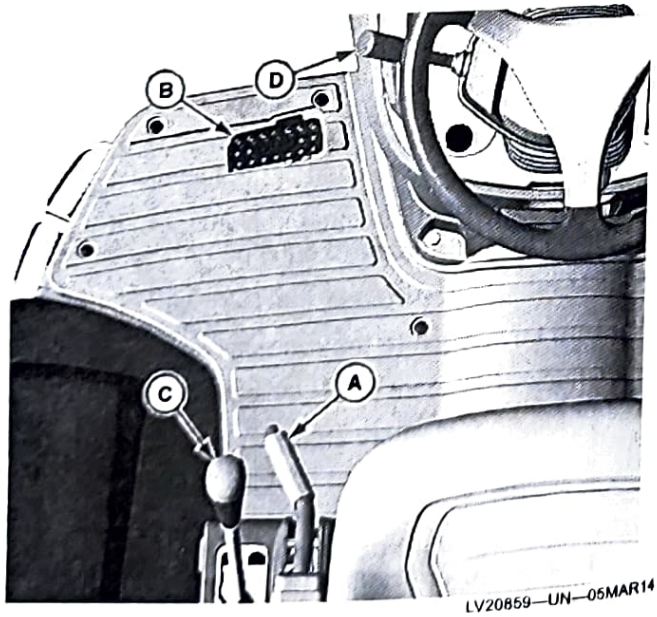
CAUTION: Avoid injury! Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

- **Move the machine to an outside area before running the engine.**
- **Do not run an engine in an enclosed area without adequate ventilation.**
- **Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.**
- **Allow fresh outside air into the work area to clear out the exhaust fumes.**

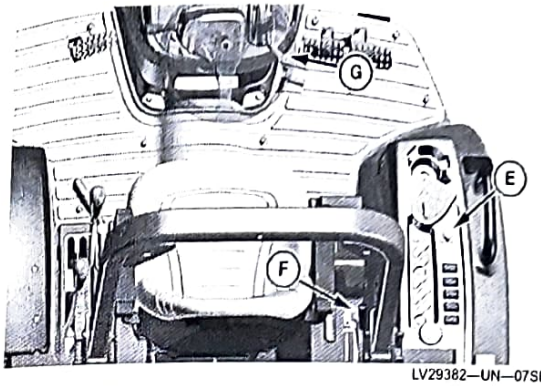
NOTE: It is recommended to install optional engine block heater, hydraulic oil heater, and battery heating pad if operating machine in temperatures below —18°C (0°F).

If temperature is below 0°C (32°F), follow the cold weather starting steps in this section.

1. Apply park brake (A).



LV20859—UN—05MAR14



LV29382—UN—07SEP17

A—Park Brake
B—Clutch Pedal
C—Transmission Gear Shift Lever
D—Reverser Lever
E—PTO Switch
F—Rockshaft Control Lever
G—Hand Throttle

2. Depress clutch pedal (B) completely and move the transmission gear shift lever (C) and reverser lever (D) to the N (neutral) position.
3. Make sure PTO switch (E) is in the off position.

CAUTION: Avoid injury! Check to be sure that area is clear of any bystanders before lowering implements to the ground.

4. Lower any rear-mounted implement to the ground by pushing the rockshaft control lever (F) forward.
5. Lower any front-mounted implement to the ground using the SCV lever.
6. Set hand throttle (G) to the 1/2—3/4 fast position.
7. Turn key switch to the run position.
8. Check instrument panel indicator lights:
   - Alternator/battery charging light illuminates.
   - Engine oil pressure light illuminates.

IMPORTANT: Avoid damage! Glow plugs and air heater are operational during cranking. Using ether or starter fluid during cranking will cause damage to engine.

9. Turn key switch to the start position to start engine. Release the key after the engine has started.
10. Check indicator lights:
    - Engine oil pressure light goes out within 5 seconds.

    NOTE: If indicator light does not go out after 10 seconds, set engine speed at full throttle.

    - Alternator charging light goes out within 10 seconds.
    - If indicator lights stay on longer than the given time interval, stop engine and check for cause.
11. Set hand throttle to the 1/2 fast position for 1 minute without load.

Cold Weather Starting

CAUTION: Avoid injury! Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

Move the machine to an outside area before running the engine.

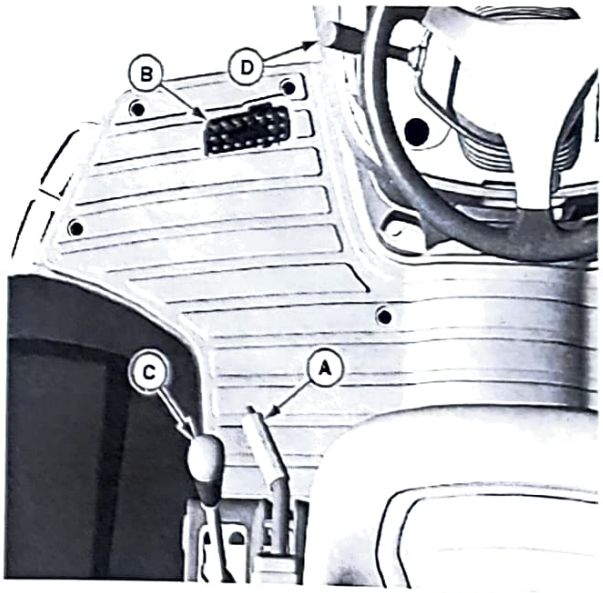
Do not run an engine in an enclosed area without adequate ventilation.

• Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.

•Allow fresh outside air into the work area to clear out the exhaust fumes.

NOTE: It is recommended to install optional engine block heater, hydraulic oil heater, and battery heating pad if operating machine in temperatures below —18°C (0°F).

If temperature is below 0°C (32°F), follow the cold weather starting steps in this section.



LV20859—UN—05MAR14

A—Park Brake
B—Clutch Pedal
C—Transmission Gear Shift Lever
D—Reverser Lever

1. Apply park brake (A).
2. Depress clutch pedal (B) and move the transmission gear shift lever (C) and reverser lever (D) to the N (neutral) position.
3. Turn key switch to the run position.

4. When glow plug icon light turns off, turn key to the start position.

IMPORTANT: Avoid damage! Starter damage can occur if starter is operated for more than 20 seconds at a time.

Wait 2 minutes before trying again if engine does not start.

5. Release key when engine starts.
6. Check instrument panel indicator lights:
   - Engine oil pressure light goes out within 5 seconds.
   - Alternator/battery charging light goes out within 10 seconds.
7. If indicator light remains on after 10 seconds, set engine speed to full throttle. If indicator light continues to stay on, stop the engine and check for cause.

IMPORTANT: Avoid damage! In cold weather, run engine several minutes to allow engine oil and transmission oil to warm.

NOTE: It is normal for the engine to be louder and for blue-white exhaust smoke to be present during engine warm-up. The amount of exhaust smoke depends on air temperature.

8. Warm the engine.
   - In warm weather, set hand throttle to the 1/2 fast position for 1 minute without load.
   - In cold weather, set hand throttle to the 1/2 fast position for 5 minutes without load.

Idling Engine

NOTE: Allowing engine to idle for long periods of time wastes fuel and cause carbon buildup.

1. Adjust hand throttle to set engine at low idle.
2. Apply park brake.

Starting a Stalled Engine

IMPORTANT: Avoid damage! If engine stalls while operating under load, start engine immediately to prevent abnormal heat buildup in engine.

1. Disengage PTO.
2. Apply park brake (A).
3. Depress clutch pedal (B) and move transmission gear shift lever (C) and reverser lever (D) to the N (neutral) position.
4. Start engine.
5. Release park brake and continue with normal operation, or set engine at low idle for 2 minutes before stopping engine.

UP00731,0000289-19-07SEP17

Stopping Machine

Normal Stopping

1. Position machine on a firm, level surface.
2. Stop machine motion:
   - PRT—Depress clutch pedal completely and depress both brake pedals.
   - HST—Remove foot smoothly from forward or reverse travel pedal to stop motion.
3. Depress clutch pedal completely (PowrReverser™only) and move the transmission gear shift lever and reverser lever to the N (neutral) position.
4. Push PTO switch to the off position.

CAUTION: Avoid injury! Check to be sure that area is clear of any bystanders before lowering implements to the ground.

5. Lower any implements to the ground.

IMPORTANT: Avoid damage! Do not stop engine immediately after hard or extended operation. Keep engine running at low idle for about 2 minutes to prevent heat buildup.

6. Adjust hand throttle rearward to set engine speed at low idle speed. Allow engine to idle for 2 minutes.

CAUTION: Avoid injury! Always lock park brake and move transmission range shift lever to a position other than N (neutral) before leaving machine unattended.

7. Apply park brake.
8. Turn key switch to the stop position.
9. Remove key.
10. Wait for the engine and all moving parts to stop before leaving the operator station.

Emergency Stopping

PowrReverser Transmission

1. Depress clutch pedal all the way down and depress both brake pedals.
2. Turn key switch to the off position. Do not release clutch pedal until all moving parts have stopped.
3. If possible, lock the park brake.

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Hydrostatic Transmission

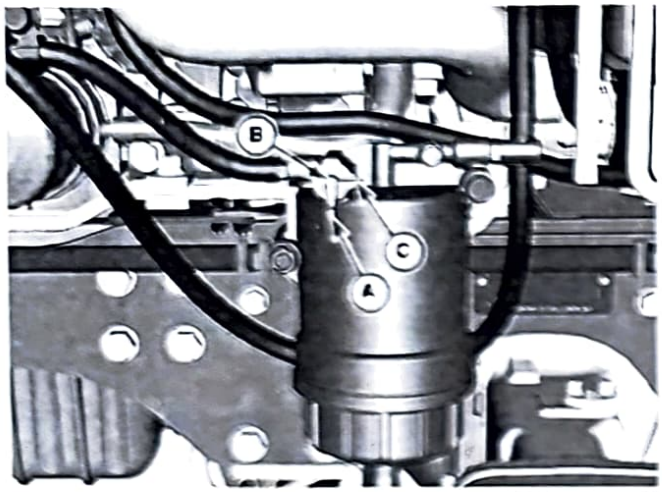
1. Remove foot from forward or reverse travel pedal.
2. Depress brake pedal.
3. Turn key switch to the stop position. Do not release brake pedal until all moving parts have stopped.
4. Apply park brake.

KN52281,1004BFB-19-06FEB14

Using Fuel Shutoff Valve

CAUTION: Avoid injury! Close fuel shutoff valve when performing any type of engine service, during transport of the machine, and during storage.

Locate fuel shutoff valve on the right side of machine on fuel sediment filter.



A—Fuel Shutoff Valve Lever
B—Vertical Position
C—Horizontal Position

Open or close fuel shutoff valve lever (A) as required.

- **Open Valve**: Rotate valve lever pointer to the vertical position (B).
- **Close Valve**: Rotate valve lever pointer to the horizontal position (C).

Filling Fuel Tank

CAUTION: Avoid injury! Fuel vapors are explosive and flammable.

- **Shut engine off before filling fuel tank.**
- **Allow engine to cool before refueling.**
- **Do not smoke while handling fuel.**
- **Keep fuel away from flames or sparks.**
- **Fill fuel tank outdoors or in well ventilated area.**
- **Clean up spilled fuel immediately.**
- **Use clean approved non-metal container to prevent static electric discharge.**

IMPORTANT: Avoid damage! Dirt and water in fuel can cause engine damage.

- **Clean dirt and debris from the fuel tank opening.**
- **Use clean, fresh, stabilized fuel.**
- **Fill the fuel tank at the end of each day's operation to keep condensation out of the fuel tank.**
- **Use a non-metallic funnel with a plastic mesh strainer when filling the fuel tank or container.**

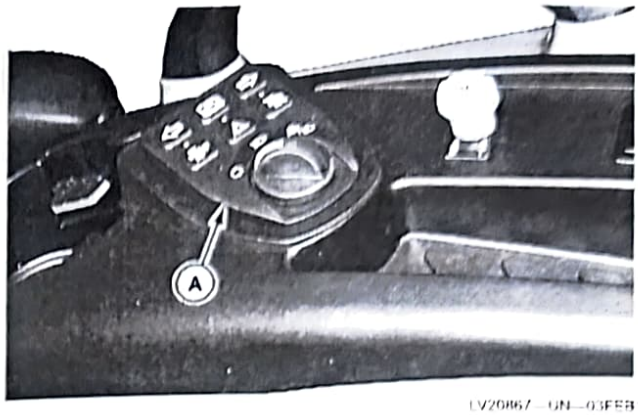
Fill fuel tank at the end of each day's operation to prevent condensation and freezing during cold weather.

1. Park machine safely.
2. Allow engine to cool.
3. Remove any trash from area around fuel tank cap.
4. Remove fuel tank cap slowly to allow any pressure built up in tank to escape.
5. Fill fuel tank only to bottom of filler neck. Do not overfill.
6. Install fuel tank cap.

KN52281,10049C6-19-19JUN17

Exhaust Filter System Overview

Hydrostatic Transmission Control Module



LV20867—UN—03FEB14

PowrReverser Transmission Control Module

LV17595—UN—21MAY13

A—Control Module
B—Parked Cleaning Switch
C—Disable Cleaning Switch

Your machine is equipped with an emission compliant engine, which cleans and filters the engine exhaust. Please read the Exhaust Filter Cleaning sections to understand when and where operator interaction is required.

IMPORTANT: Under normal machine operation, the system is in automatic mode and requires minimal operator interaction.

IMPORTANT: Soot builds up during times when engine exhaust gas temperature is lower (lower engine speed, lower engine load). Performing extended operations at either low engine speed (below 1500 rpm) or low engine load (such as backhoe work) could result in needing a parked exhaust cleaning. Periodically monitor the machine display during these operations to determine if parked exhaust cleaning is required.

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

- Avoid unnecessary idling.
- Use proper engine oil. (See the Service Engine section for recommendations.)
- Use only ultra low sulfur fuel. (See the Service Miscellaneous section for recommendations.)

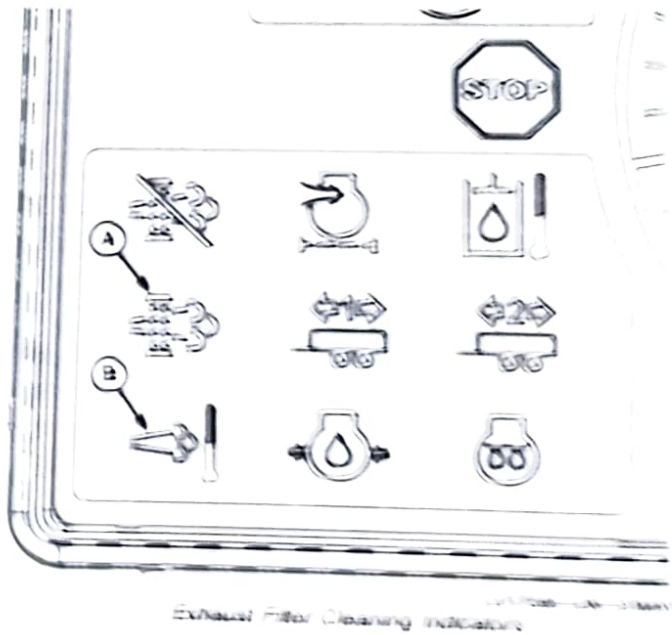
Under normal machine operation, the system is in automatic mode.

Use the control module (A) to select parked cleaning switch (B), or disable cleaning switch (C).

IMPORTANT: When machine use is not suited for higher temperatures created by exhaust filter cleaning, use the disable switch (C). Be sure to deactivate the disable switch as soon as possible to avoid unnecessary soot buildup in exhaust filter.

Remember to select disable switch (C) when temporarily connected to an indoor ducted exhaust system during vehicle diagnostic and repair activities.

Exhaust Filter Indicators



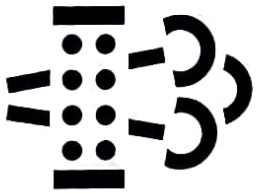
Exhaust Filter Cleaning Indicators

A—Exhaust Filter Cleaning Indicator
B—High Exhaust Temperature Indicator

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

High Exhaust Temperature Indicator (B)—Indicates that temperature in the exhaust filter is high enough to conduct cleaning or that exhaust filter cleaning is taking place.

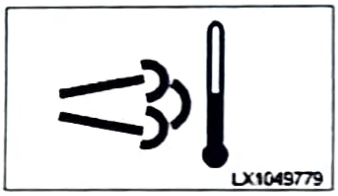
Operator Information



H94828—UN—13OCT09

1. **Exhaust Filter Cleaning Indicator**

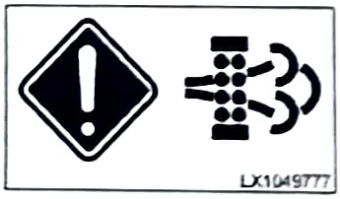
Description	Recommended Procedure
High level of soot at exhaust filter; the exhaust filter requires cleaning. *NOTE: If no cleaning is carried out, engine power is reduced.*	Exhaust filter cleaning with tractor parked may be carried out; see **Parked Exhaust Filter Cleaning**.



LX1049779—UN—22JUL10

2. **High Exhaust Temperature Indicator**

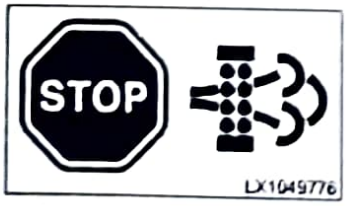
Description	Recommended Procedure
Exhaust filter cleaning is taking place. Exhaust temperatures are high.	Do not interrupt automatic exhaust filter cleaning unless absolutely necessary.



LX1049777—UN—22JUL10

3. **Parked Exhaust Filter Cleaning Required**

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



LX1049776—UN—22JUL10

4. **Service Exhaust Filter Cleaning Required**

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

KN52281,1004C0F-19-07FEB14

Use Lights and Turn Signals

- A—Press button to activate or deactivate left turn signal.
- B—Press button to activate or deactivate right turn signal.
- C—Press button to activate or deactivate warning lights.
- D—Turn light switch counter clockwise to turn off lights.
- E—Turn light switch to the center to activate lights.
- F—Turn light switch clockwise to activate lights and work lights.

LV22244—UN—23JUN14
KN52281,10047E1-19-24JUN14

Use Display Mode Switch

LV22250—UN—23JUN14

A—Display Mode Switch

The display mode switch (A) can be used to scroll through hour meter and active error codes display on all machines. The display information changes automatically as long as the display mode switch is pressed in the current cycle.

By intermittently pressing the display mode switch you can scroll through the functions in the following order.

1. Engine hour meter
2. Ground speed on all models, excluding PRT tractors
3. Vehicle hour
4. PTO hour
5. Soot percentage
6. Hour since last regeneration

Adjust Backlighting

1. Press and hold the display mode switch for approximately 5 seconds to enter command mode
2. The display shows "rELEAS", then "NIGHT".
3. Press the display mode switch again to accept.
4. To toggle between the digits on the instrument panel, press the left turn signal.
5. To toggle to the desired illumination, press the right turn signal. The range for illumination is 1—100

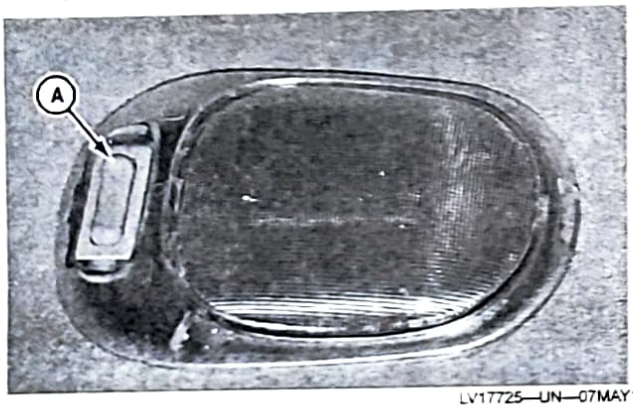
6. Press the display mode switch again to exit command mode.

Adjust Ground Speed Unit

1. Press and hold the display mode switch for approximately 5 seconds to enter command mode.
2. The display shows "rELEAS", then "UNITS".
3. Press the display mode switch again to accept.
4. Use the left or right turn signal to toggle between "km/h" and "mph".
5. Press the display mode switch again to exit command mode.

UP00731,00003F9-19-08SEP17

Using Dome Light—Cab



LV17725—UN—07MAY13

A—Dome Light Switch

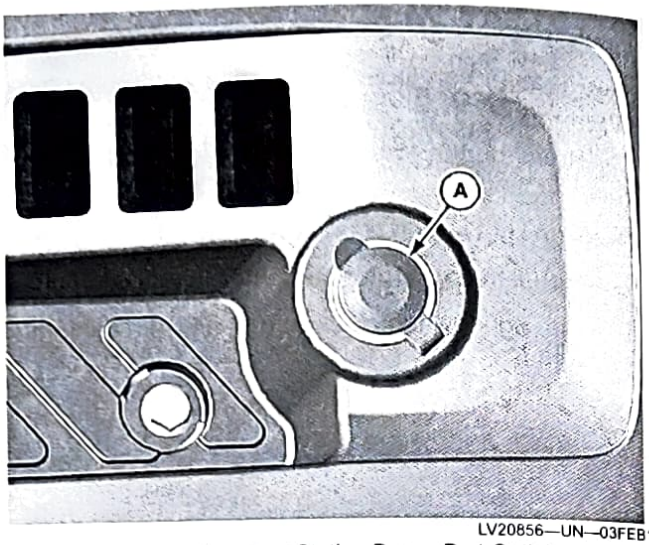
IMPORTANT: Before exiting cab, turn dome light to OFF or DOOR position to avoid causing battery to lose its charge.

Dome light switch (A) has three positions:

- Left Position: Light on with door open or closed.
- Right Position: Light on with door open and light off with door closed.
- Center Position: Light off with door open or closed.

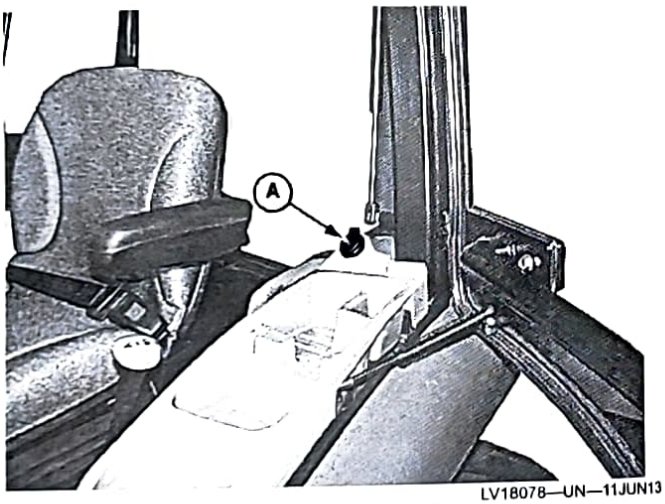
KN52281,1004854-19-29JUL13

Using Power Port Outlet



LV20856—UN—03FEB14

Open Operator Station Power Port Outlet



LV18078—UN—11JUN13

Cab Power Port Outlet

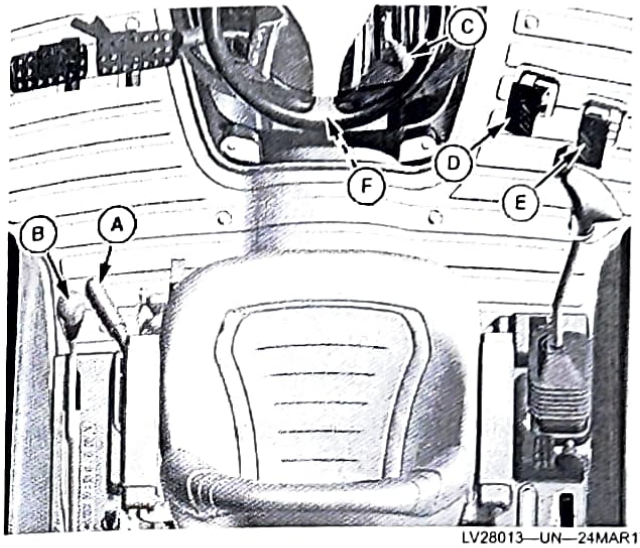
A—Power Port Outlet

The 12-volt power port electrical outlet (A) is used when connecting auxiliary equipment.

NOTE: 10A Maximum current.

KN52281,1004C85-19-13MAR14

Drive Machine—Hydrostatic Transmission



LV28013—UN—24MAR17

A— Park Brake Lever
B— Transmission Range Shift Lever
C— Hand Throttle
D— Forward Travel Pedal
E— Reverse Travel Pedal
F— Key Switch

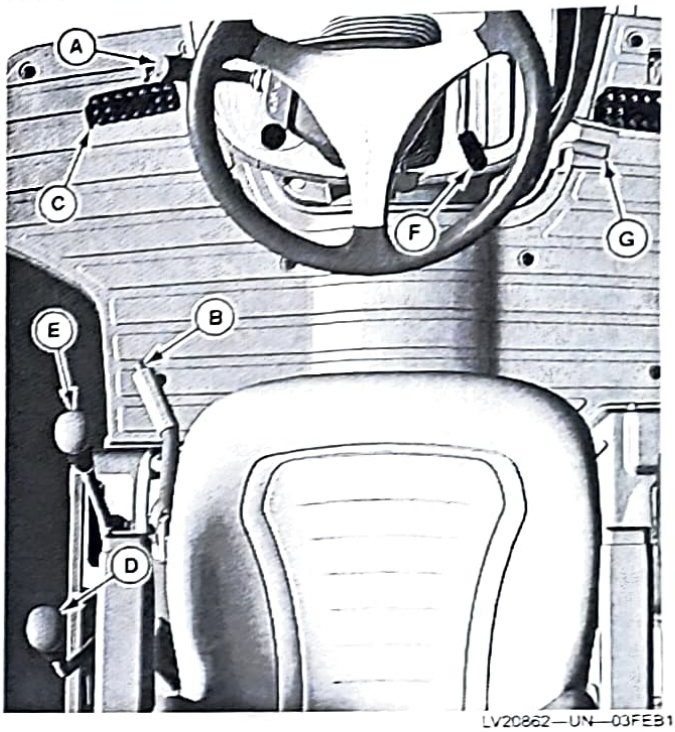
CAUTION: Avoid injury! Always check area around the machine for bystanders and obstacles before operating the machine.

IMPORTANT: Avoid damage! To prevent transmission damage, stop machine motion completely before shifting the range shift lever.

1. Start machine engine.
2. Unlock park brake lever (A).
3. Choose A, B, or C speed range on the range shift lever (B) to match work application.
4. Move hand throttle (C) to desired operating speed.
5. Slowly depress forward travel pedal (D) to move forward. Slowly depress reverse travel pedal (E) to move in reverse.
6. Release travel pedal to stop machine and change speed range.
7. Fully stop machine motion before turning key switch (F) to the stop position.

UP00731,000028B-19-14AUG17

Driving Machine—PowrReverser Transmission



LV20862—UN—03FEB14

A—Reverser Lever
B—Park Brake Lever
C—Clutch Pedal
D—Transmission Range Shift Lever
E—Transmission Gear Shift Lever
F—Hand Throttle
G—Foot Throttle

CAUTION: Avoid injury! Always check area around machine for bystanders and obstacles before operating the machine.

IMPORTANT: Avoid damage! To prevent transmission damage, stop machine motion completely before shifting the transmission range shift lever.

1. Start machine engine.
2. Move reverser lever (A) to N (neutral) position.
3. Unlock park brake lever (B).
4. Depress clutch pedal (C).
5. Choose A, B, or C speed range on transmission range shift lever (D) to match work application.
6. Move the transmission gear shift lever (E) to the desired gear position.
7. Move the reverser lever to the forward or reverse position.
8. Release clutch pedal gradually to take up load smoothly.
9. Continue to shift gears while moving under normal loads:

- Depress clutch pedal and shift to next gear.
- Release clutch pedal gradually to take up load smoothly.

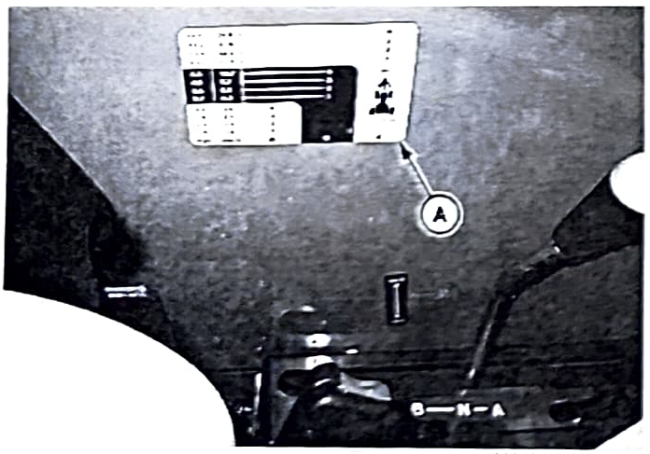
10. Adjust throttle speed:
    - To maintain a constant operating speed, adjust the engine speed with the hand throttle (F).
    - To repeatedly increase and decrease engine speed, leave the hand throttle set at the middle position and use the foot throttle (G) to change engine speed.

CAUTION: Avoid injury! Always check area around machine for bystanders and obstacles before repositioning machine or changing machine direction.

11. To change travel direction:
    - Clutch use is not required.
    - Move the reverser lever to the forward or reverse position.

NOTE: Shuttle Shifting is not permitted at higher speeds. Transmission will default to neutral until a lower ground speed is reached.

Travel Speeds



LV20920—UN—04FEB14

A—Travel Speed Label

The travel speed label (A) located on the left fender can be used to determine your travel speed.

If the tire size on your machine is within the range indicated on the label, and you are traveling with the engine speed at the rpm indicated on the label, the approximate travel speed for each range and/or gear is shown.

UP00731,00002BC-19-23MAY17

Transmission Operation

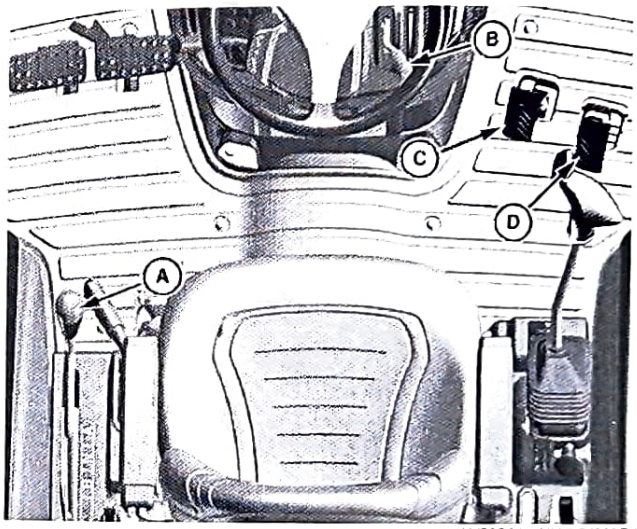
Operating Hydrostatic Transmission

IMPORTANT: Avoid damage! Select the proper speed range and gear for the job:

- **Never overload engine by lugging machine at low idle speeds.**
- **Raise engine speed to match expected loads. If a slight increase in engine rpm occurs simultaneously with moving hand throttle (B) forward, engine is not overloaded.**

1. The transmission range shift lever (A) provides three speed ranges and is used in conjunction with the forward travel pedal (C) and reverse travel pedal (D).

NOTE: Stop machine to change speed range.



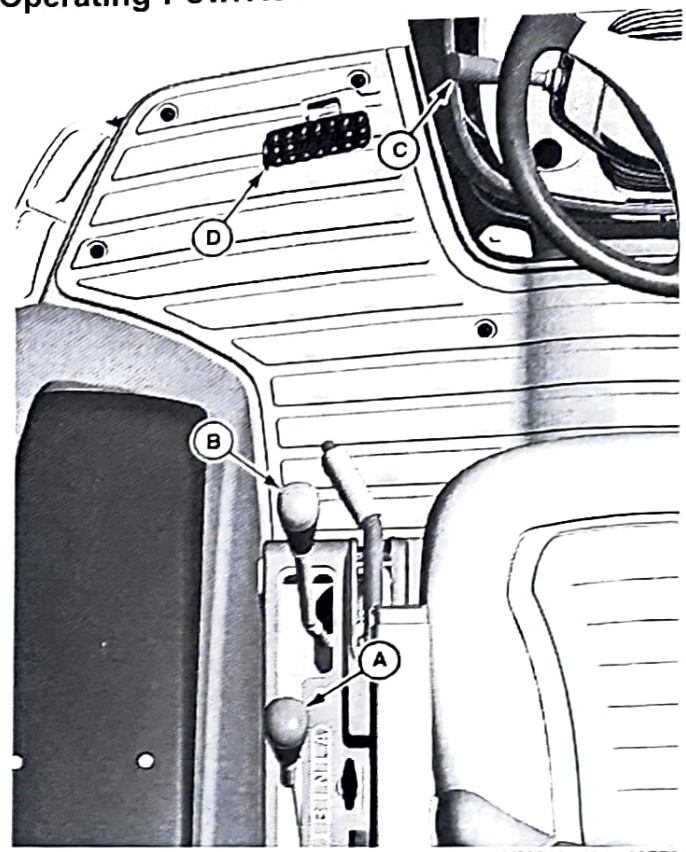
LV28014—UN—24MAR17

Open Operator Station

A—Transmission Range Shift Lever
B—Hand Throttle
C—Forward Travel Pedal
D—Reverse Travel Pedal

2. Choose a speed range to match work application.
   - A—Low speed operations such as tilling hard soil, mowing long grass, and heavy hauling. Machine speed is decreased, but machine power is increased.
   - N—Neutral position.
   - B—Operations including moderate tilling, hauling, and grass mowing.
   - C—High speed operations such as transport and light mowing.

Operating PowrReverser Transmission



LV20861—UN—03FEB14

A—Transmission Range Shift Lever
B—Transmission Gear Shift Lever
C—Reverser Lever
D—Clutch Pedal

The transmission range shift lever (A) provides three speed ranges. The transmission gear shift lever (B) provides four gear positions. The reverser lever (C) controls travel direction.

Use all three levers in different combinations to achieve 12 forward and 12 reverse speeds.

Machine motion must stop and the clutch pedal (D) must be depressed before changing ranges. Gears may be changed while machine is in motion if clutch pedal is depressed.

IMPORTANT: Avoid damage! Select the proper speed range and gear for the job.

1. Choose a speed range to match work application:
   - A—Low speed operations such as tilling hard soil, mowing long grass, and heavy hauling. Machine speed is decreased, but machine power is increased.
   - B—Operations including moderate tilling, hauling, and grass mowing.
   - C—High speed operations such as transport and light mowing.

2. Choose a gear that matches the immediate power/speed requirements.
   - 1st Gear—High power, low speed operations
   - 2nd Gear—Medium power, moderate speed operations
   - 3rd Gear—Low power, moderate speed operations
   - 4th Gear—Low power, high speed operations

Use PowrReverser Shuttle Control—If Equipped

A—PowrReverser Shuttle Control

PowrReverser™ shuttle control switch (A) adjusts load take-up and acceleration when making directional changes. Will not reverse lever during repetitive cycle work such as loader operation.

- In full left (counterclockwise) position (as shown), load take-up and acceleration ramp-up are slowest in response.
- When operating with high load and bellcrank turn control knob clockwise to increase acceleration ramp-up and load take-up responses.

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

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Using Cruise Control—If Equipped

R—Series Cruise Control

⚠ CAUTION: Avoid injury! Use cruise control only in large, open areas. Shut off before turning or when in areas with many obstacles.

NOTE: The cruise control is only operational when the machine is traveling forward.

Engaging Cruise Control

A—Cruise Control SET/- Switch
B—Cruise Control Activation Switch
C—Cruise Control RES/+ Switch

1. Depress forward travel pedal until desired travel speed is reached.
2. Press cruise control activation switch (B).
3. Press cruise control SET/- switch (A).
4. Release forward travel pedal.
5. To increase travel speed or to resume travel speed, press cruise control RES/+ switch (C).
6. To decrease travel speed press cruise control SET/- switch (A).

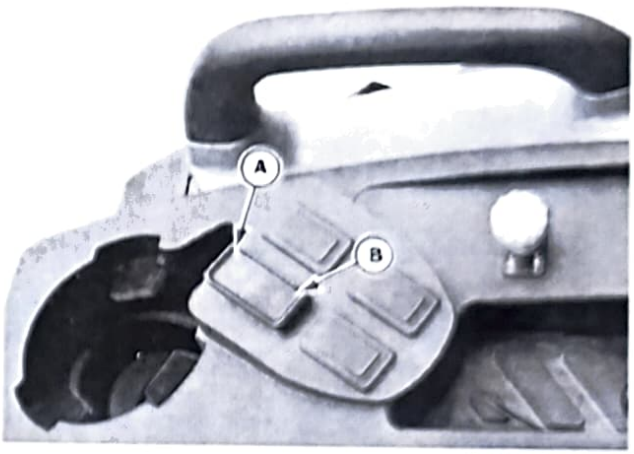
Disengaging Cruise Control

NOTE: The machine will stop if cruise control is disengaged while the machine is in motion. To maintain forward motion, depress the forward travel pedal before disengaging cruise control.

One of the following actions will disengage the cruise control:

- Press cruise control activation switch (B).
- Press the brake pedal.
- Press reverse pedal.
- Enable SpeedMatch.

M—Series Cruise Control



A—Top of Cruise Control Switch
B—Bottom of Cruise Control Switch

⚠ CAUTION: Avoid injury! Use cruise control only in large, open areas. Shut off before turning or when in areas with many obstacles.

NOTE: The cruise control is only operational when the machine is traveling forward.

Engaging Cruise Control

1. Depress forward travel pedal until desired travel speed is reached.
2. Fully depress top of cruise control switch (A) to engage cruise control.
3. Release forward travel pedal.
4. To adjust travel speed, disengage cruise control and engage cruise control again at a different speed.

Disengaging Cruise Control

NOTE: The machine will stop if cruise control is disengaged while the machine is in motion. To maintain forward motion, depress the forward travel pedal before disengaging cruise control.

One of the following actions will disengage the cruise control:

- Fully depress bottom of cruise control switch (B).
- Depress the brake pedal.
- Press reverse pedal.

Instrument panel cruise control indicator light should go out when the cruise control is disengaged.

Using LoadMatch—(4044M, 4052M, 4066M)

LoadMatch™ enables the operator to prevent the engine from stalling during heavy load applications such as operating with a loader.

Engaging LoadMatch

1. Determine if a heavy load application will be performed.
2. Turn key switch on.

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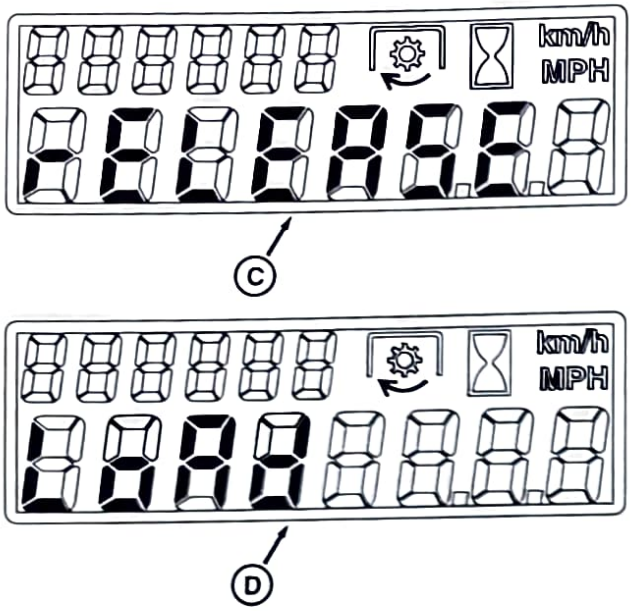
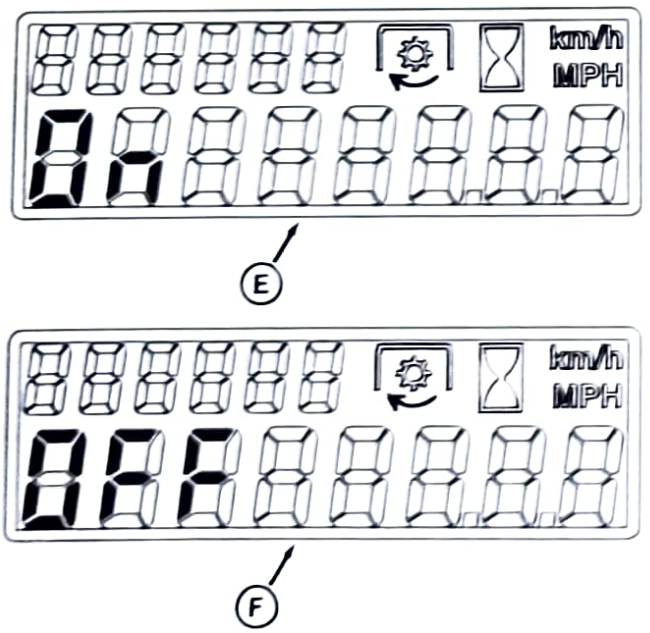


LV25109—UN—05MAY16

A—Display Mode Switch
B—Right Turn Switch
C—Release
D—Load

3. No error codes should be displayed. If any errors are displayed, activate the display mode switch (A) to acknowledge the error.
4. Press and hold the display mode switch until the display reads release (C).
5. Press and hold the right turn switch (B) until the display reads load (D).
6. Press the display mode switch to select.



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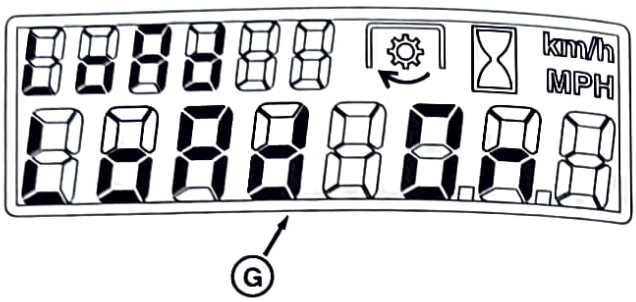

LV25111—UN—05MAY16

E—On
F—Off
G—Load / Load On

7. Press the right turn switch to turn LoadMatch on (E) and off (F).
8. When the desired setting is displayed, activate the display mode switch to store the setting.
9. The display will read load / load on (G).

UP00731,000013F-19-05JUL16

Using LoadMatch—(4044R, 4052R, 4066R)

LV17697—UN—03MAY13

A—LoadMatch Switch

LoadMatch™ enables the operator to prevent the

LoadMatch is a trademark of Deere & Company

engine from stalling during heavy load applications such as operating with a loader.

Engaging LoadMatch

1. Determine if a heavy load application will be performed.
2. Press LoadMatch switch (A).

Disengaging LoadMatch

Press LoadMatch switch.

UP00731,0000139-19-05JUL16

Using SpeedMatch—If Equipped

LV17698—UN—19JUL13

A—SpeedMatch Switch
B—RES/+ Switch
C—SET/- Switch

SpeedMatch™ enables the operator to set the desired maximum travel speed for the machine. Full forward or reverse pedal travel distance can be used to control machine travel speed between stop and the desired maximum travel speed.

Engaging SpeedMatch

1. Depress forward travel pedal until desired maximum travel speed is reached.
2. Press SpeedMatch switch (A) to activate SpeedMatch.
3. Press Set/- switch (C) to set SpeedMatch.
4. Release forward travel pedal. Completely depress forward travel pedal to achieve desired maximum speed.

Adjusting Maximum Travel Speed

- Fully depress RES/+ switch (B) repeatedly to increase speed by increments.
- Fully depress SET/- switch (C) repeatedly to decrease speed by increments.

Disengaging

Press SpeedMatch switch to disengage.

KN52281,1004852-19-03APR14

Using MotionMatch—(4044M, 4052M, 4066M)

MotionMatch™ enables the operator to adjust machine acceleration and deceleration rates. Shorter starting and stopping distances can be set for applications requiring rapid changes in direction, such as operating with a loader. Longer starting and stopping distances can be set to avoid turf damage in other applications. .

1. Turn key switch on.

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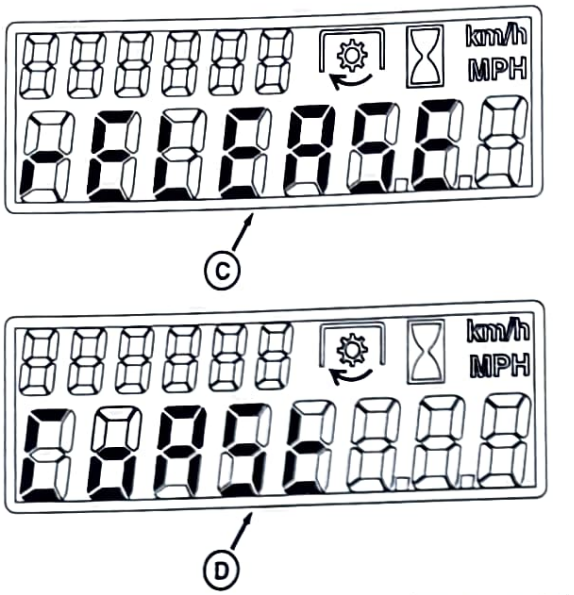
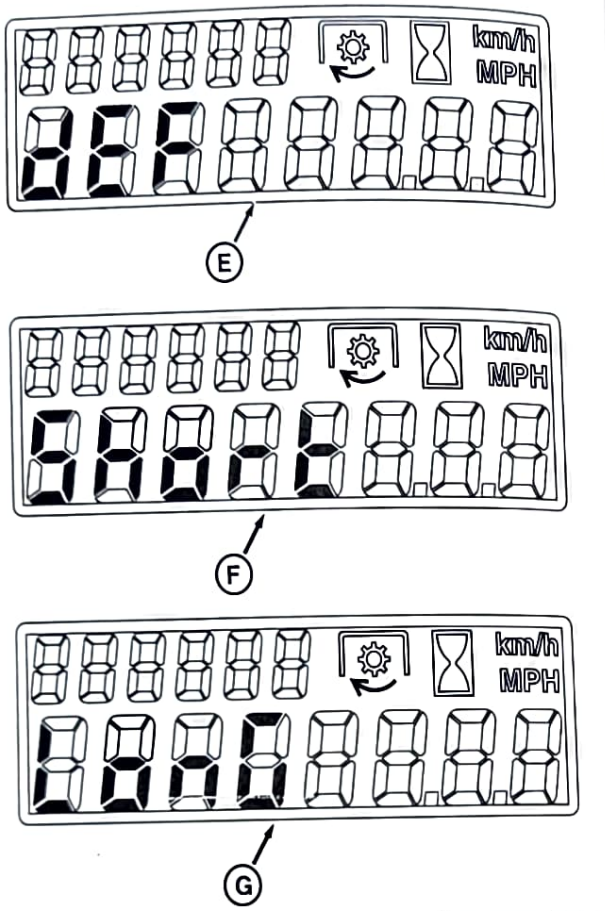
MotionMatch is a trademark of Deere & Company



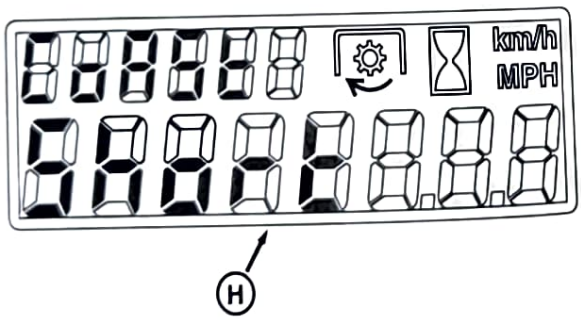
LV25112—UN—05MAY16

A—Display Mode Switch
B—Right Turn Switch
C—Release
D—Coast

2. No error codes should be displayed. If any errors are displayed, activate the display mode switch (A) to acknowledge the error.
3. Press and hold the display mode switch until the display reads release (C).
4. Press and hold the right turn switch (B) until the display reads coast (D).
5. Press the display mode switch to select.



LV25113—UN—05MAY16



LV25114—UN—06MAY16

E—Default
F—Short
G—Long
H—Coast / Short

6. Press the right turn switch to change the desired setting between default (E) short (F) and long (G).
   a. A MotionMatch setting of short is the shortest rolling (starting/stopping) distance.
   b. A MotionMatch setting of long is the longest rolling (starting/stopping) distance
7. When the desired setting is displayed, activate the display mode switch to store the setting.

8. The runtime menu will have a new item of coast / short (H).

UP00731,0000140-19-05JUL16

Using MotionMatch—(4044R, 4052R, 4066R)

LV17699—UN—03MAY13

A—MotionMatch Switch
B—Longer Distance Icon
C—Shorter Distance Icon

MotionMatch™ enables the operator to adjust machine acceleration and deceleration rates. Shorter starting and stopping distances can be set for applications requiring rapid changes in direction, such as operating with a loader. Longer starting and stopping distances can be set to avoid turf damage in other applications.

- Turn MotionMatch switch (A) toward the longer distance icon (B) for longer acceleration and deceleration distances.
- Turn MotionMatch switch (A) toward the shorter distance icon (C) for shorter acceleration and deceleration distances.

UP00731,000013A-19-05JUL16

MotionMatch is a trademark of Deere & Company

Using Mechanical Front Wheel Drive (MFWD)

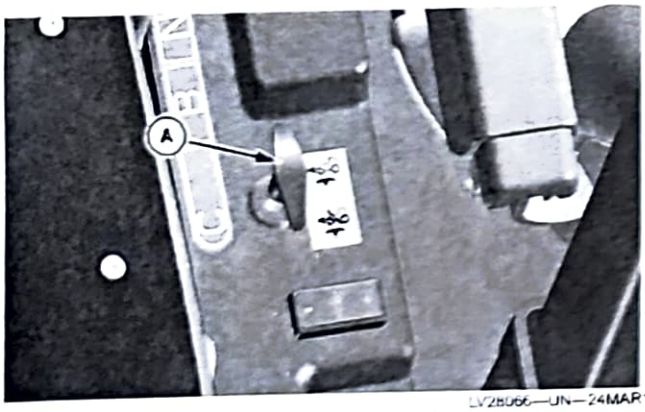
Mechanical front wheel drive (MFWD) enables the powertrain to drive both front and rear axles for improved traction on difficult ground conditions and provides four-wheel braking. MFWD can be engaged and disengaged on-the-go with light loads and on low traction surfaces.

CAUTION: Avoid injury! Use extra caution when driving on slopes. To increase traction and provide four-wheel braking, engage mechanical front wheel drive (MFWD) when driving on slopes. Be aware that MFWD can improve access to dangerously sloped terrain, thereby increasing the possibility of rollover.

To improve braking on sloped, icy, wet, or graveled surfaces, engage the MFWD. Add ballast to the tractor and travel at a reduced speed to avoid skidding and loss of steering control.

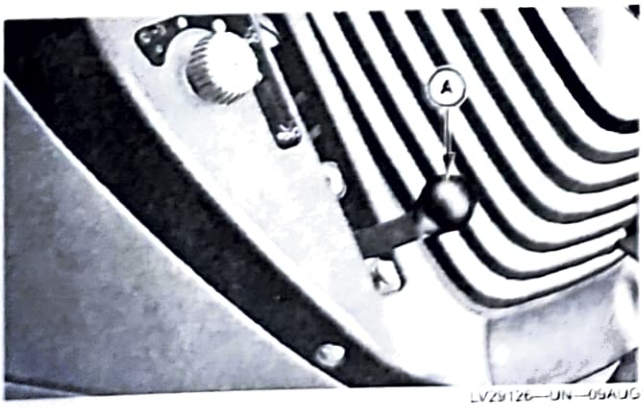
IMPORTANT: Avoid damage! Always disengage MFWD when driving on a paved surface.

Put the transmission levers in neutral to move the machine when the engine is not running.



LV25066—UN—24MAR17

Open Operator Station MFWD Lever



LV29126—UN—09AUG17

Cab MFWD Lever

A—MFWD Lever

NOTE: It may be necessary to reduce engine load to disengage front wheel drive.

- OOS—Pull up on MFWD lever (A) to engage. Push down MFWD lever to disengage.
- Cab—Push up on MFWD lever (A) to engage. Pull down MFWD lever to disengage.

Tips for Operating MFWD

- Maintain front tire pressure at maximum allowable level to ensure proper tire performance in all field conditions.
- Engage MFWD to provide four-wheel braking.
- Disengage MFWD when driving machine to or from work site to increase front tire life.

UP00731,00003E0-19-09AUG17

Using Differential Lock (Traction Assist)

CAUTION: Avoid injury! Driving at high speeds with the traction assist engaged may result in loss of steering control. Do not engage traction assist or turn with the traction assist engaged while operating machine at high speeds or on slopes.

The differential lock is used to provide better traction when rear wheels start to slip. Engaging differential lock will lock right and left rear axles together and cause both rear wheels to turn at equal speeds for maximum traction.

IMPORTANT: Avoid damage! Using the traction assist function improperly can damage the transaxle:

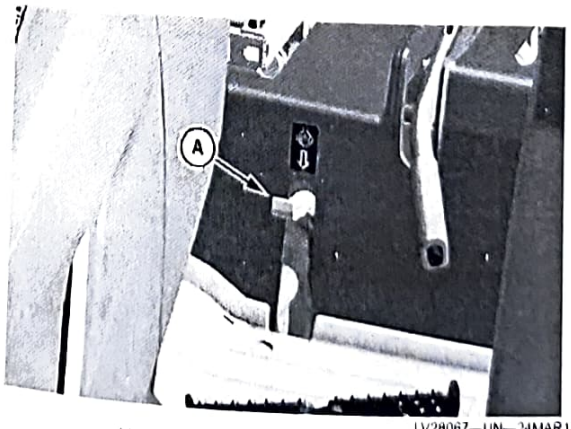
- **Reduce speed and allow drive wheels to rotate at same speed before engaging or disengaging traction assist.**
- **Disengage traction assist when driving on dry asphalt or concrete.**
- **Use traction assist only when necessary for improved ground engagement.**

NOTE: Turning radius is increased when the differential lock is engaged.

Engaging Differential Lock

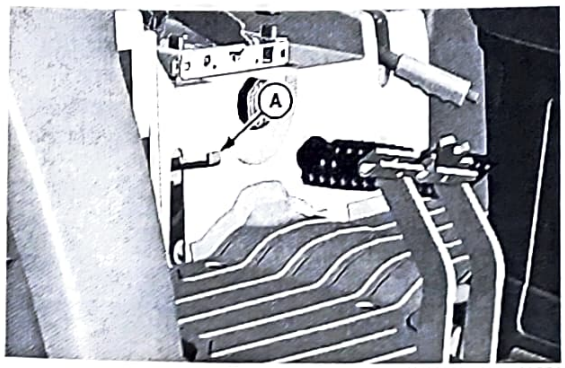
1. Stop or slow machine movement.

NOTE: Differential lock will remain engaged as long as rear wheel slippage occurs. If tires slip and regain traction repeatedly, hold down pedal with foot so differential lock remains engaged.



LV28067—UN—24MAR17

Hydrostatic Transmission Differential Lock



LV20863—UN—03FEB14

PowrReverser Transmission Differential Lock

A—Differential Lock Lever

2. Depress differential lock lever (A) to engage differential lock.

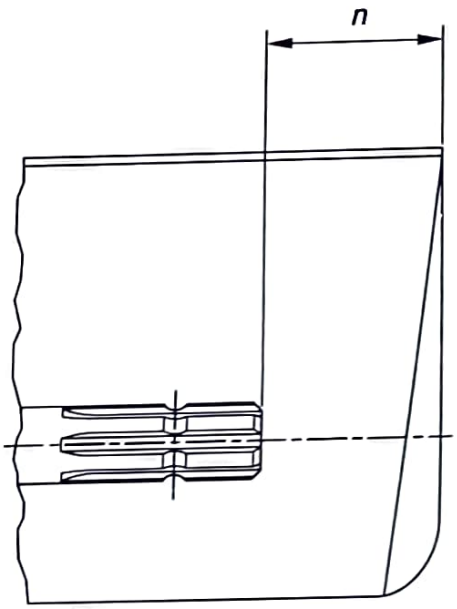
Disengaging Differential Lock

Rear wheel slippage will keep differential lock engaged. Lock will automatically disengage when traction equalizes.

UP00731,0000299-19-24MAR17

Stay Clear of Rotating Drivelines

TS1644—UN—22AUG95



H96219—UN—29APR10

Entanglement in rotating driveline can cause serious injury or death.

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

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

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

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

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

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

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

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

PTO Type	Diameter	Splines	n ± 5 mm (0.20 in.)
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)
4	57.5 mm (2.264 in.)	22	100 mm (4.00 in.)

DX,PTO-19-28FEB17

Using the Power Take-Off (PTO) Safely

LVAL38277—UN—21AUG12

⚠ CAUTION: Avoid injury! Stay clear of rotating drivelines:

- **Entanglement in rotating driveline can cause serious injury or death.**
- **Keep hands, feet and clothing away.**
- **Make sure that all shields are installed and used properly.**
- **Stop the engine and be sure PTO driveline is stopped before getting near it.**

KN52281,1004C02-19-07FEB14

Using Rear PTO Switch

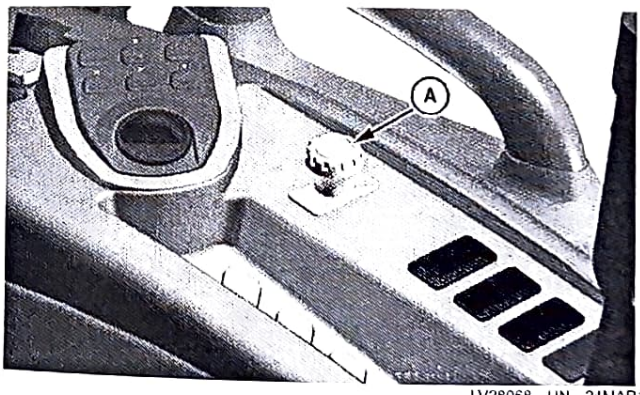
IMPORTANT: Use rear mounted equipment rated for 540 rpm. Do not operate rear PTO over 540 rpm mark on tachometer.

Using Rear PTO Switch (Operator on Seat)

1. Sit on operator,s seat.
2. Stop machine motion and:
   - PowrReverser™ Transmission—Move the reverser lever to neutral position, push in clutch and place transmission gearshift lever in neutral.
   - Hydrostatic Transmission—Remove foot from forward and reverse travel pedals.
3. Lock the park brake.
4. Move the transmission range shift lever to the N (neutral) position.

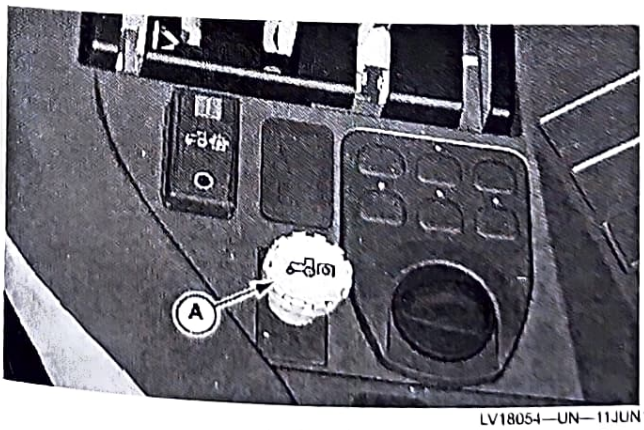
NOTE: The tractor will not start if the rear PTO knob is pulled to the on position. If the operator leaves the seat with the engine running and the PTO engaged, the safety interlock system stops the engine and all implements.

5. Start the engine.
6. Set engine speed to 1500 rpm or less.



LV28068—UN—24MAR17

Open Operator Station PTO Switch



LV18054—UN—11JUN13

Cab PTO switch

A—PTO Switch

7. Pull the PTO switch (A) up to the on position.

NOTE: The instrument panel PTO engaged light illuminates when the PTO is engaged.

8. Adjust the hand throttle forward to the desired speed for the implement used.

Using Rear PTO Switch (Operator off Seat)

1. Sit on operator's seat.
2. Move transmission to neutral position:
   - PowrReverser Transmission—Depress clutch pedal completely and move the transmission gear and range shift levers to the N (neutral) position. Move the reverser lever to the N (neutral) position.
   - Hydrostatic Transmission—Move the transmission range shift lever to the N (neutral) position.
3. Lock the park brake.
4. Push the PTO switch down to the off position.

NOTE: The tractor will not start if the rear PTO knob is pulled to the on position.

5. Start the engine and adjust speed to 1500 rpm.
6. Get off the operator seat.
7. Pull the PTO switch to the on position.

NOTE: The instrument panel PTO engaged light illuminates when the rear PTO is engaged.

8. Adjust the hand throttle forward to the desired speed for the implement used.

NOTE: The PTO marker on the tachometer indicates engine speed for a standard 540 PTO.

Disengaging the PTO Switch

1. Adjust engine rpm to low idle.
2. Push PTO switch down to the off position.

UP00731,000029A-19-24MAR17

Using the Two Speed Rear PTO—If Equipped

The Economy PTO Position should only be used with attachments that do not require full PTO power.

540 Economy Position

Operating in 540 Economy position will help conserve fuel and reduce operating noise.

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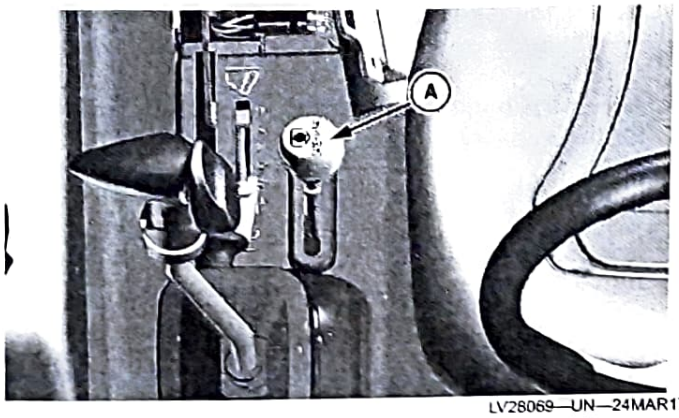
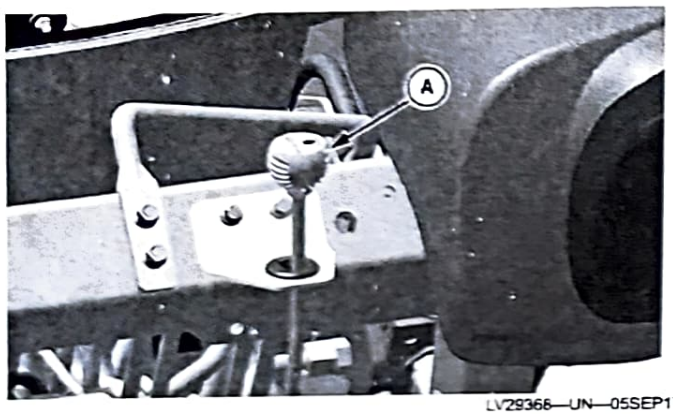


LV28069—UN—24MAR17

Open Operator Station



LV29368—UN—05SEP17

Cab Tractor

1. Move the two speed rear PTO control lever to 540E position.
2. Adjust hand throttle lever until tachometer indicator is between 1700 and 1750 rpm.

   The rear PTO will operate at 540 rpm.

540 Position

1. Move the two speed rear PTO control lever to 540 position.
2. Adjust hand throttle lever until tachometer indicator points to the 540 marker.

   The rear PTO will operate at 540 rpm and the tachometer should indicate engine speed to be 2400 rpm.

Neutral Position

NOTE: *When power and independent control is needed for front and mid-mounted implements only, move the two speed rear PTO control lever to the neutral position.*

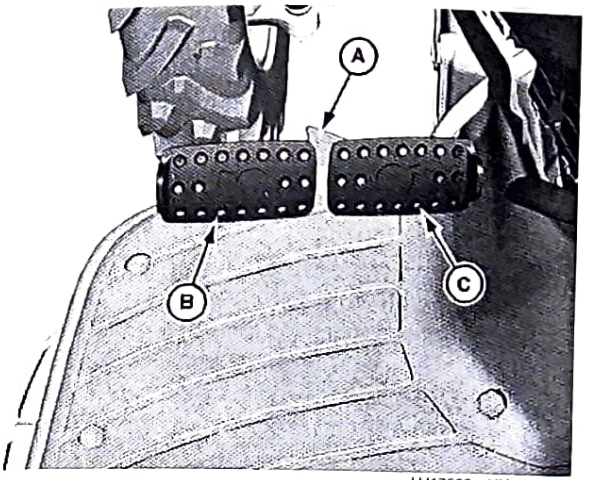
- Move the two speed rear PTO control lever to center position.
- When lever is moved to center position, the rear PTO will not rotate.

Use Brake Pedals

Using Brake Pedals as Driving Brake

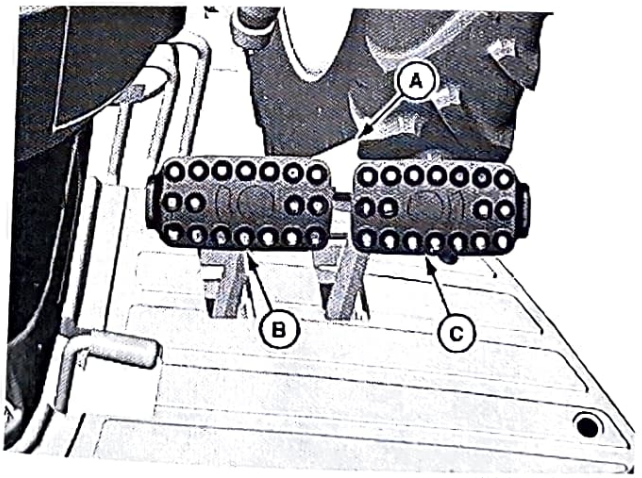
CAUTION: Avoid injury! Using unlocked brakes to stop the machine at high speeds may cause accidental turning or tipping.

- **Lock pedals together when not using the turn brakes or for road travel or transport.**
- **Slow down before making a turn.**



LV17509—UN—19APR13

Hydrostatic Transmission Brake Pedals



LV20857—UN—03FEB14

PowrReverser

A—Brake Pedal Lock
B—Left Turn Brake Pedal
C—Right Turn Brake Pedal

1. Rotate brake pedal lock (A).
   - HST—Counterclockwise until it locks into the left turn brake pedal (B).
   - PRT—Clockwise until it locks into the right turn brake pedal (C).
2. Depress either brake pedal to slow or stop the machine.
   - With latch down, brakes should stop machine in a straight line.

Using Brake Pedals to Assist in Turning

IMPORTANT: Avoid damage! Do not apply turn brakes while an implement is engaged with the ground. Damage to the 3-point hitch and implement may occur.

NOTE: Turn brake pedals can be used to make tighter turns and may reduce unnecessary backing.

Rotate brake pedal lock (A).

- HST—Clockwise until it stops against right turn brake pedal (C).
- PRT—Counterclockwise until it stops against left turn brake pedal (B).

The brake pedals will now function independently.

- To make a tighter left turn, depress left turn brake pedal (B) while turning to the left.
- To make a tighter right turn, depress right turn brake pedal (C) while turning to the right.

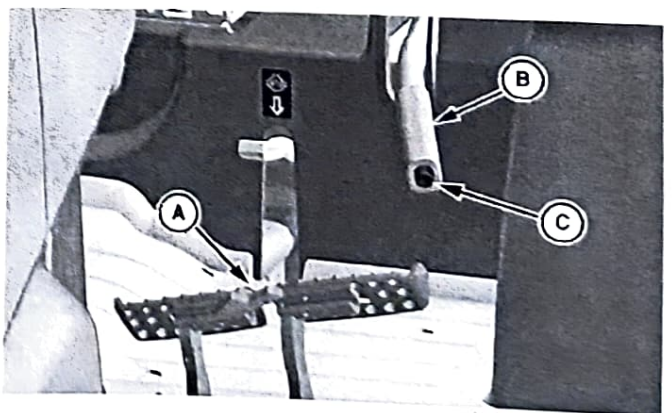
KN52281,1004BF6-19-27MAR17

Use Park Brake

Locking Park Brake

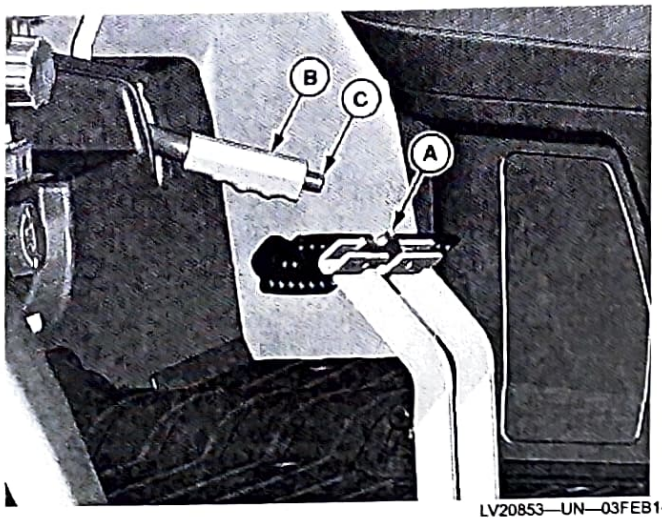
CAUTION: Avoid injury! Always lock park brake and move transmission range shift lever to a position other than N (neutral) before leaving machine unattended. Transmission will not prevent machine motion without the park brake locked.

1. Lock both brake pedals together using brake pedal lock (A).



LV28070—UN—27MAR17

Hydrostatic Transmission Park Brake



LV20853—UN—03FEB14

PowrReverser

A—Brake Pedal Lock
B—Park Brake Lever
C—Park Brake Release Button

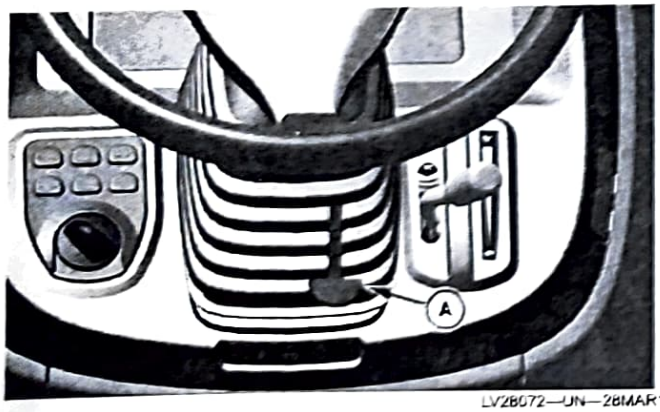
2. Pull park brake lever (B) up to the locked position. The park brake light should illuminate if the key switch is turned on.
3. Remove foot from brake pedals.

Unlocking Park Brake

1. Press down on brake pedals with foot.
2. Push park brake release button (C), and lower park brake lever (B) to the unlocked position. Park brake light should be off.
3. Remove foot from brake pedals.

UP00731,000029D-19-27MAR17

Adjusting Tilt Steering Wheel—If Equipped



LV28072—UN—28MAR17

A—Tilt Steering Control Lever

CAUTION: Avoid injury! Do not attempt to adjust the steering wheel while the machine is moving. The operator can lose control of the machine.

- **Stop the machine before adjusting the steering wheel.**
- **Lock the steering wheel in position before driving the machine.**

1. Stop machine.
2. Pull tilt steering control lever (A) up to release steering wheel.
3. Adjust steering wheel to desired position.
4. Release tilt steering control lever to lock steering wheel in position.

UP00731,00002A3-19-30MAR17

Warm Hydraulic System Oil

Hydraulic system is slow to function when the tractor is started in cold weather. The reason is because cold oil does not flow easily through the filter screen or the hydraulic system filter. Steering will also be slow until system warms up. Hydraulic system functions normally after the oil warms up.

1. Start the machine and idle at low idle.
2. Turn and hold steering wheel in full left or right turn.

IMPORTANT: To prevent damage to the hydraulic pump or relief valve, do not exceed 2 to 3 minutes of warm-up time.

UP00731,000021B-19-19JAN17

Hydraulics Information

For hydraulic operation of components, see specific component section. For example, operating the selective control valves (SCV) will be in the Selective Control Valve Operation section.

UP00731,00002DC-19-16AUG16

Operate Attachments

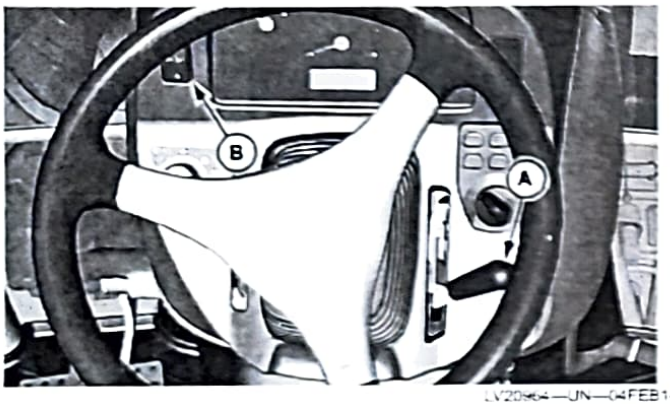
When operating attachments, check full range of three point hitch travel each time a new attachment or implement is mounted. Watch for hoses and attachment parts throughout the three point hitch travel range. Adjust the depth stop as needed. Some attachments with short driveshafts require an upstop, see your John Deere Dealer. The driveshaft can be damaged if attachments are operated at too high of an angle.

RD47322,0000B0C-19-14MAR17

Using Hitch Assist—If Equipped

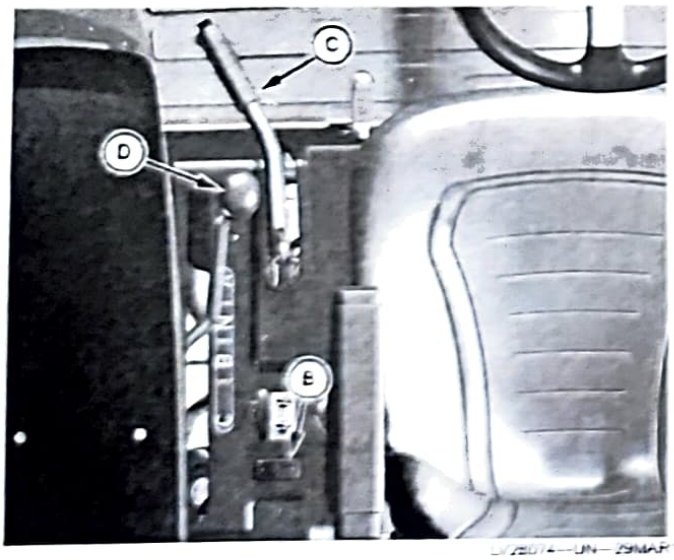
Activating Hitch Assist

NOTE: PTO must be off.



LV20864—UN—04FEB14

Cab



LV20874—UN—25MAR17

Open Operator Station

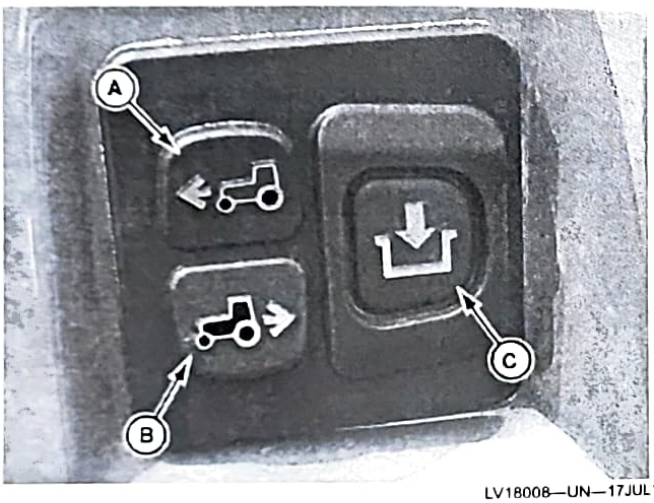
A—Hand Throttle
B—Hitch Assist Switch
C—Park Brake
D—Transmission Range Shift Lever

1. Sit on operator's seat with the engine running.
2. Hand throttle (A) must be at low idle.
3. Fully engage park brake (C); when fully engaged, park brake light on the instrument panel starts to blink.
4. Transmission range shift lever (D) must be in the "A" range.
5. Engage hitch assist switch (B). Warning lights begins to flash when feature is active.

NOTE: If any of the interlock conditions are not met, the instrument control panel displays which interlock needs attention.

6. When the operator gets out of the seat, five audible beeps signaling that hitch assist is engaged sound and the warning lights flash at low frequency.

Operating Hitch Assist



LV18008—UN—17JUL13

A—Forward Switch
B—Reverse Switch
C—Hitch Engagement Switch

Press forward switch (A) or reverse switch (B) while holding the hitch engagement switch (C).

Disabling Hitch Switch

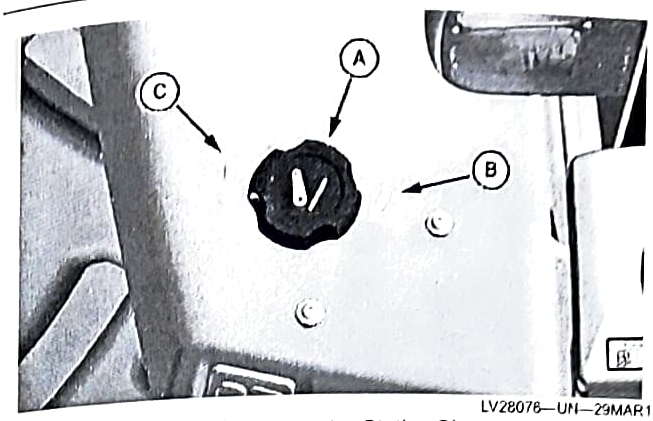
The rear controls can be disabled in three different ways:

- Sitting on the seat.
- Turning off the hitch assist switch.
- Any change in interlock state.

NOTE: To resume normal operation, hitch assist switch in the operator station must be turned off.

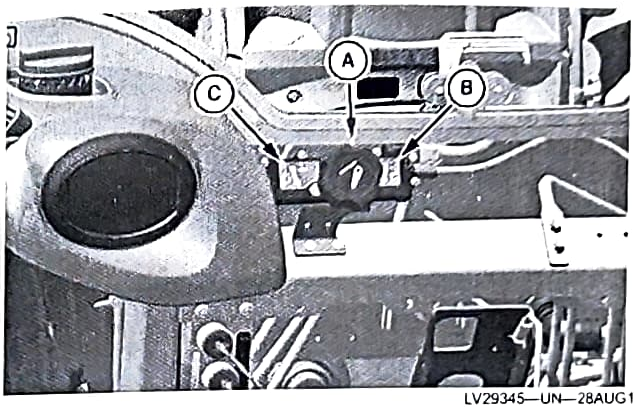
Using Auxiliary Rockshaft Control Knob

NOTE: Rockshaft control knob is used for raising or lowering rockshaft to attach equipment when using the hitch assist.



LV28076—UN—29MAR17

Open Operator Station Shown



LV29345—UN—28AUG17

A—Auxiliary Rockshaft Control Knob
B—Lower Rockshaft
C—Raise Rockshaft

- Turn rockshaft control knob (A) clockwise to lower rockshaft (B).
- Turn rockshaft control knob (A) counterclockwise to raise rockshaft (C).

UP00731,00002A4-19-28AUG17

Using Drawbar Hitch—If Equipped

CAUTION: Avoid injury! Use only the drawbar that was provided with the machine (if equipped) or the optional drawbar available from your John Deere dealer. Do not install or use any other type of drawbar.

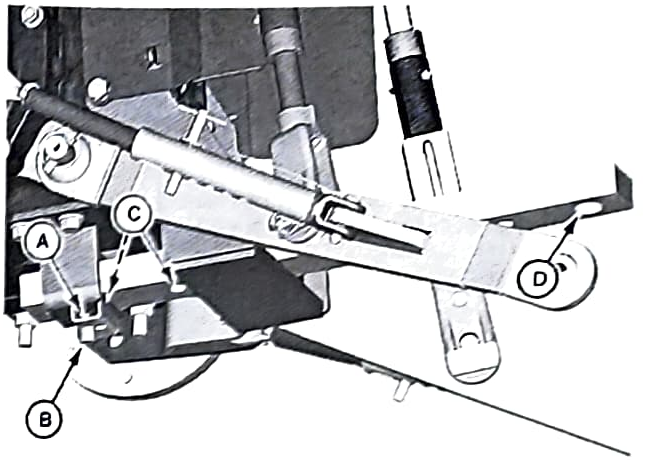
To avoid rearward upset, all towed loads must be attached to the drawbar, not just to the center link or draft arms.

IMPORTANT: Avoid damage! Maximum static vertical load on drawbar must not exceed maximum recommendations. Drive slowly with heavy loads.

Maximum Drawbar Loads

Certain heavy equipment such as a loaded single-axle trailer can place excessive strain on the drawbar. Strain is greatly increased by speed and rough ground. Do not exceed the following maximum static vertical loads on drawbar, see Specifications section.

Adjusting Drawbar Length



LV21252—UN—26FEB14

A—Quick-Lock Pin
B—Drilled Pin
C—Operating Positions
D—Storage Position

IMPORTANT: Avoid damage! For drawn PTO-driven implements, the drawbar must be in the operating position.

The drawbar is equipped with two adjusting holes for changing drawbar length and one hole for storage.

1. Remove quick-lock pin (A) and drilled pin (B).
2. Adjust drawbar to one of two operating positions (C) or to storage position (D).
3. Install drilled pin (B) up from bottom of machine. Secure with quick-lock pin (A).

Towing Loads

CAUTION: Avoid injury! Stopping distance increases with speed and weight of towed load, and on slopes. Towed loads, with or without brakes, that are too heavy for the machine or are towed too fast can cause loss of control. Consider the weight of the equipment and its load.

Ensure that load does not exceed recommended weight. The machine must be heavy and powerful enough with adequate braking power for the towed load. Use additional caution and reduce speed when towing loads under adverse surface conditions, when turning, and on inclines.

1 Hitch the towed load only to the drawbar. Lock the drawbar and pin in place.

2. Install a safety chain to the machine drawbar support and to the towed load. Provide only enough slack to permit turning.
3. Before descending a hill, shift to a gear low enough to control machine without having to use the brake pedal.

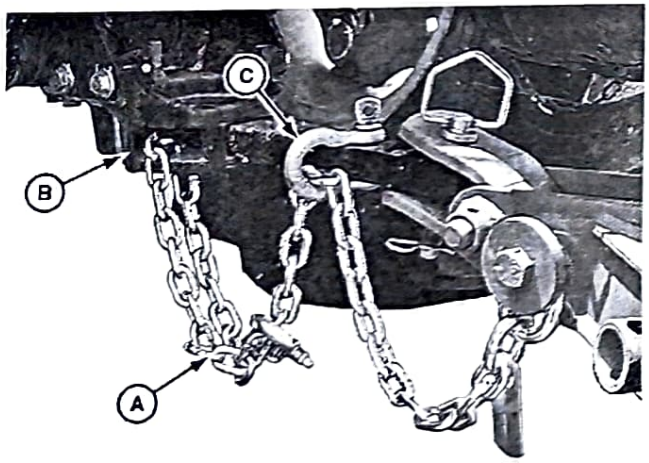
Using Safety Chain

CAUTION: Avoid injury! Hitch towed loads only to the drawbar to avoid rearward upset. Do not use the safety chain for towing loads.

IMPORTANT: Avoid damage! Secure the towed load to the drawbar. The safety chain is designed to help control the towed load in case of separation from the drawbar.

Use a chain with a strength rating greater than the gross weight of the towed load.

Replace or repair the safety chain if one or more links or fittings are broken, stretched, or damaged.



LV17806—UN—15MAY13

A—Safety Chain
B—Drawbar Support
C—Attaching Points

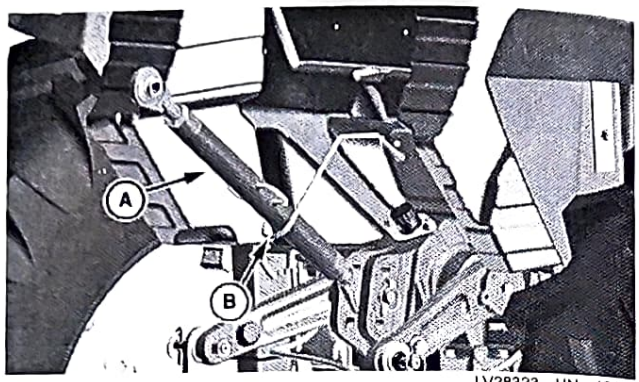
1. Attach safety chain (A) to drawbar support (B) and to towed load. Provide only enough slack to permit turning.
2. Install additional attaching points (C) for chain on drawbar to reduce slack in chain when necessary.
3. Remove safety chain and store when not in use.

UP00731,0000013-19-11OCT16

Use 3-Point Hitch

NOTE: The 3-point hitch on your machine is classified as a category I hitch.

Center Link Storage Position

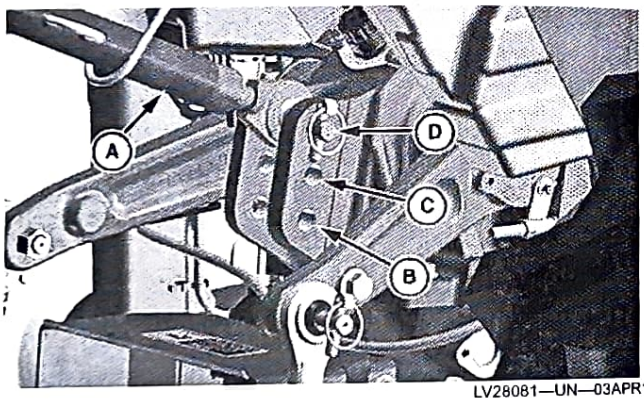


LV28323—UN—12JUL17

A—Center Link
B—Storage Hook

Place center link (A) in storage hook (B) when hitch is not in use.

Position Center Link



LV28081—UN—03APR17

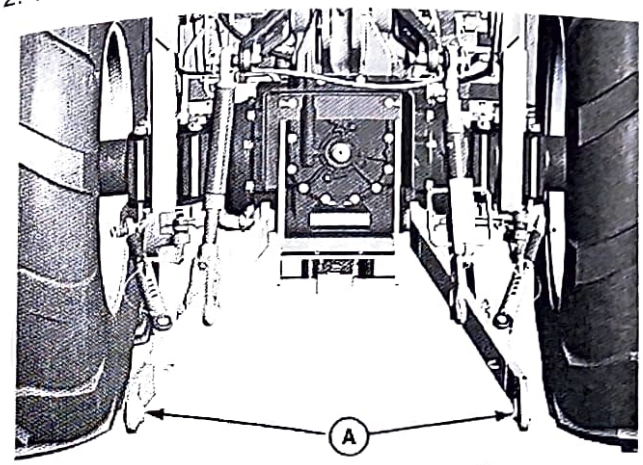
A—Center Link
B—Bottom Hole
C—Middle Hole
D—Top Hole

- **For light and medium draft loads:** Install center link (A) in bottom hole (B) of mounting bracket. Example of a light or medium draft load implement is a landscape rake. A category I implement tilts forward while rising in this position.
- **For medium and heavy draft loads:** Install center link in middle hole (C) of mounting bracket. Example of a medium or heavy draft load implement is a tiller or box blade. A category I implement tilts forward slightly while rising in this position.
- **For very heavy draft loads:** Install center link in top hole (D) of mounting bracket. Example of a very heavy draft load implement is a plow or ripper. A category I implement rises, but angle remains constant.

Use the Draft Links

CAUTION: Avoid injury! Look down and behind before and while backing. Clear area of all bystanders before backing machine.

1. Slowly back machine into position to align draft links with implement lift brackets.
2. Park machine safely.

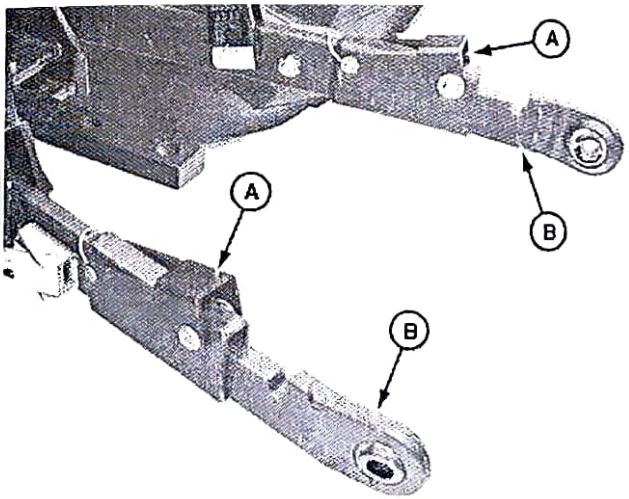


LV20866—UN—03FEB14

A—Draft Links

3. Connect draft links (A) to the implement.
4. Secure implement with quick lock pins.

Telescoping Draft Link (Optional)



LV18421—UN—19JUL13

A—Locking Lever
B—Link

CAUTION: Avoid injury! Fingers and hands can be pinched or crushed. Be aware of potential pinch points and keep hands away.

IMPORTANT: Avoid damage! Telescoping draft link locking levers must be in locked position before operating the machine, or link damage could occur.

NOTE: Machines equipped with optional telescoping draft links can be connected two different ways.

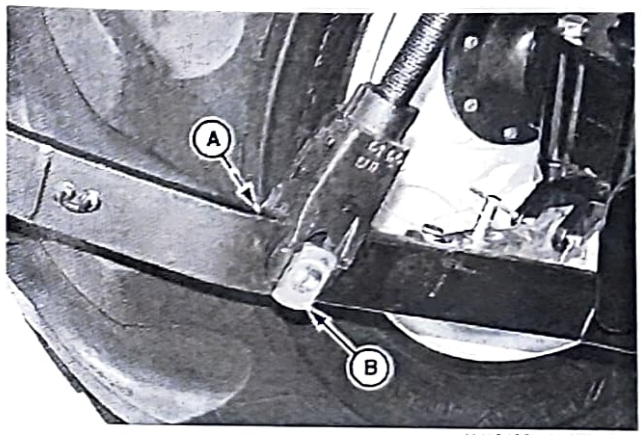
Option 1

1. Slowly back machine into position to align draft links with implement lift brackets.
2. Park machine safely.
3. Raise locking lever (A) and pull link (B) to extend as needed.
4. Connect draft links to the implement.

Option 2

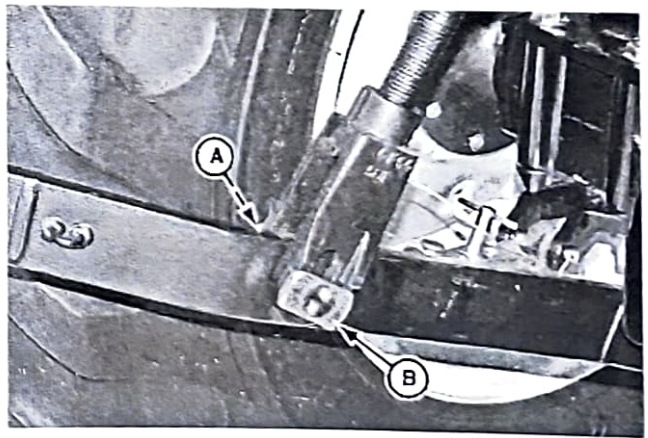
1. Sit on operator's seat and start engine.
2. Back machine until each lock lever snaps and secures each draft link in the locked position.

Adjust Draft Links to Float Position



LV18422—UN—19JUL13

Float Position



LV18423—UN—19JUL13

Rigid Position

A—Spring Locking Pin
B—Stop Pin

Adjusting 3-point hitch stops to the float position will allow both draft links to rise slightly as the implement follows ground contour.

Adjust stops to the float position for 3-point hitch implement such as a cultivator or mower. These implements have ground gauging skids or wheels, which may otherwise cause the implement to twist relative to the machine.

1. Park machine safely.
2. Remove spring locking pin (A) and rotate stop pin (B) 90 degrees to position shown.

Adjusting Draft Links to Rigid Position

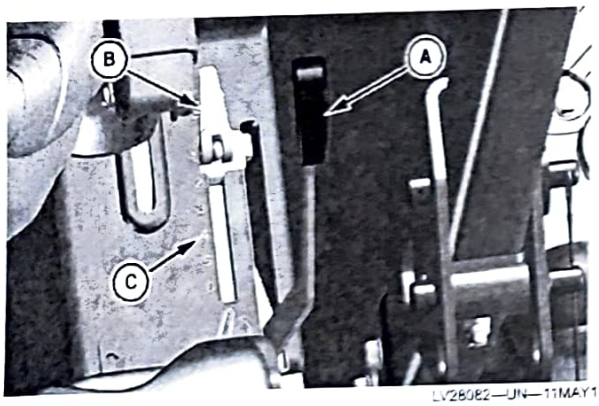
Adjusting 3-point hitch stops to the rigid position will restrict movement of the draft links as the implement follows ground contour.

Adjust stops to the rigid position for 3-point hitch implements such as plows and ground engaging implements that should not twist relative to the machine.

1. Park machine safely.
2. Remove spring locking pin (A) and rotate stop pin (B) 90 degrees to position shown.

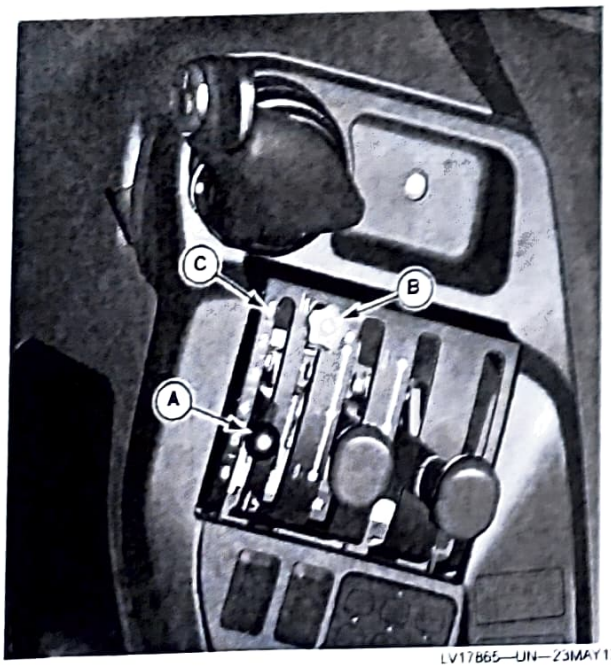
UP00731,00002A5-19-19JUN17

Use Rockshaft Control Lever



LV28082—UN—11MAY17

Open Operator Station Rockshaft Control Lever



LV17865—UN—23MAY13

Cab Rockshaft Control Lever

A—Rockshaft Control Lever
B—Rockshaft Depth Stop
C—Rockshaft Position Identifiers

Use rockshaft control lever (A) to raise and lower equipment attached to 3-point hitch.

The six rockshaft position identifiers (C) do not signify specific operating depths. When rockshaft control lever is moved forward, draft arms lower closer to the ground.

Lower Implement: Push rockshaft control lever forward.

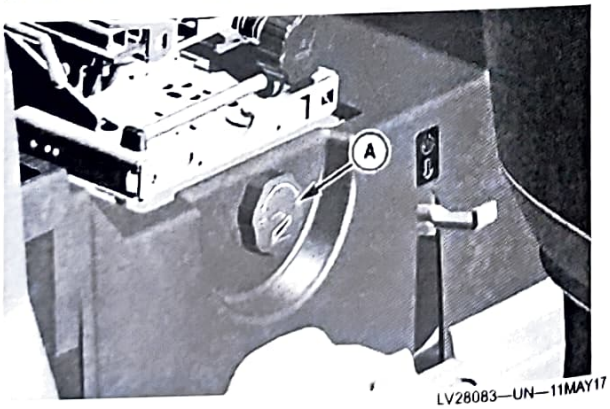
Raise Implement: Pull rockshaft control lever rearward.

The rockshaft depth stop (B) can be adjusted to maintain a particular implement operating depth. To use the depth stop knob:

1. Operate implement for a few minutes to determine the desired operating depth.
2. Loosen the depth stop knob.
3. Move knob against rockshaft control lever.
4. Tighten knob to keep the depth stop in position. Implement will operate in same position each time rockshaft control lever is pushed against the depth stop.

UP00731,00002FB-19-11MAY17

Use Rate-of-Drop



LV28083—UN—11MAY17

HST Shown; PRT Similar

A—Rate-of-Drop/Lock Valve Knob

⚠ CAUTION: Avoid injury! Excessive rate-of-drop may cause injury or damage. Fully lowering implement takes at least 2 seconds.

The rate-of-drop/lock valve controls the rate of rockshaft drop when rockshaft control lever is operated. This valve provides direct rate-of-drop control for 3-point hitch mounted implements. the valve can be used to hydraulically lock rockshaft from lowering (3-point hitch) in a desired position. The tractor can be operated with

rate-of-drop/lock valve closed. The rockshaft can be raised with the rate-of-drop/lock valve closed.

Increase Rate-of-Drop: Rotate rate-of-drop/lock valve knob (A) counterclockwise to make drop faster.

Decrease Rate-of-Drop: Rotate rate-of-drop/lock valve knob (A) clockwise to make drop slower.

CAUTION: Avoid injury! Do not use the rate-of-drop/lock valve knob for holding an attachment in raised position for service work. Loss of hydraulic pressure could result in sudden drop of attachment. Lower attachment onto blocks or remove from machine before servicing.

Lock 3-Point Hitch: Rotate rate-of-drop/lock valve knob (A) clockwise until tight.

Unlock 3-Point Hitch: Rotate rate-of-drop/lock valve knob (A) counterclockwise.

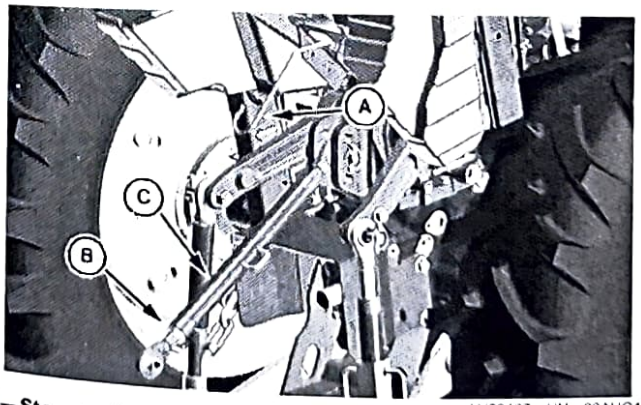
UP00731,00002FC-19-11MAY17

Level Hitch

Level Implement Front-to-Rear

1. Park machine safely.

NOTE: When the 3-point hitch is not being used, return center link to storage hook (A).



LV29107—UN—08AUG17

A—Storage Hook
B—Lock Nut
C—Center Link Body

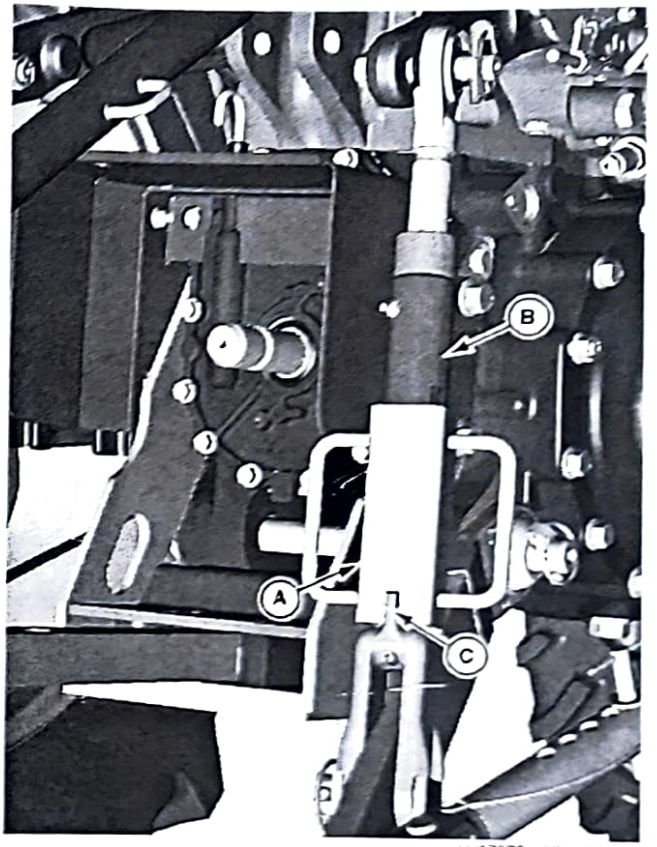
2. Lower implement to ground to relieve pressure on center link.
3. Loosen lock nut (B).

IMPORTANT: Avoid damage! Do not turn center link body past the stops, or threads may be damaged.

4. Rotate center link body (C) to lengthen or shorten the center link until implement is level from front to rear.
5. Tighten lock nut (B).

Level Implement Side-to-Side

Use turnbuckle collar (A) on the right adjustable lift link (B) to level a 3-point hitch implement side-to-side.



LV17873—UN—23MAY13

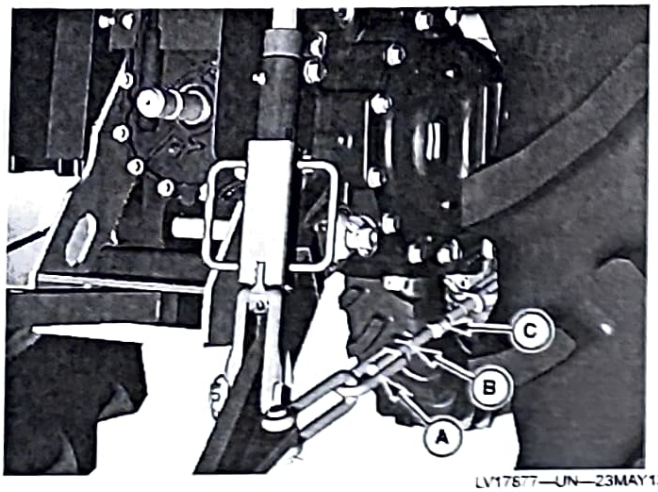
A—Turnbuckle Collar
B—Lift Link
C—Turnbuckle Collar Lock

1. Park machine safely.
2. Lower any rear-mounted implement to the ground.
3. Slide up and rotate turnbuckle collar (A) to raise or lower draft link until 3-point hitch mounted implement is level from side to side.
4. Slide down and line up the slot in turnbuckle collar (A) with turnbuckle collar lock (C) to secure position.

UP00731,00002FD-19-07AUG17

Adjust Hitch Side Sway

Adjust Implement Side-to-Side Sway Chains



LV17577—UN—23MAY13

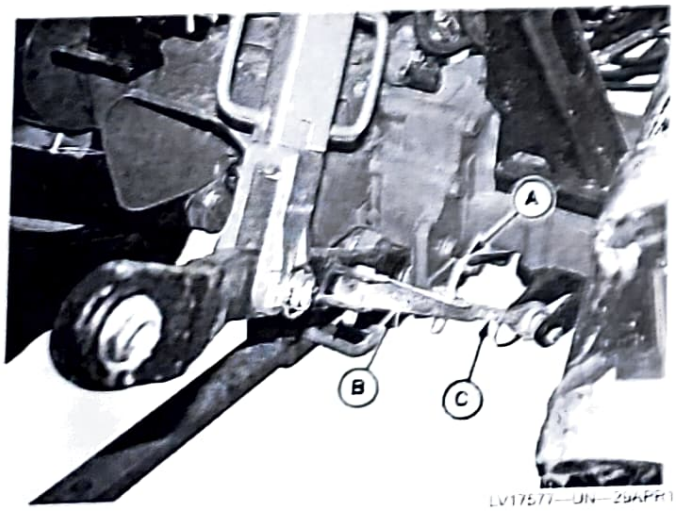
A—Sway Link
B—Lock Nut
C—Sway Link Adjusting Rod

NOTE: Check implement operator's manual procedure for adjusting sway links. When sway links have been properly adjusted, side sway of implement is controlled by position of links. A small amount of sway, 13—25 mm (1/2—1 in.), is needed for many implements.

Use left and right sway links (A) to adjust 3-point hitch implement side-to-side sway.

1. Park machine safely.
2. Lower any rear-mounted implement to the ground.
3. Loosen lock nut (B).
4. Rotate sway link adjusting rod (C) to adjust 3-point hitch implement side-to-side sway.
5. Tighten lock nut (B).

Adjust Implement Side-to-Side Sway Bars



LV17577—UN—28APR13

A—Locking Pin
B—Sway Link Adjusting Shaft
C—Sway Link

NOTE: Check implement operator's manual procedure for adjusting sway links. When sway links have been properly adjusted, side sway of implement is controlled by position of links. A small amount of sway, 13—25 mm (1/2—1 in.), is needed for many implements.

Use left and right sway links (C) to adjust 3-point hitch implement side-to-side sway.

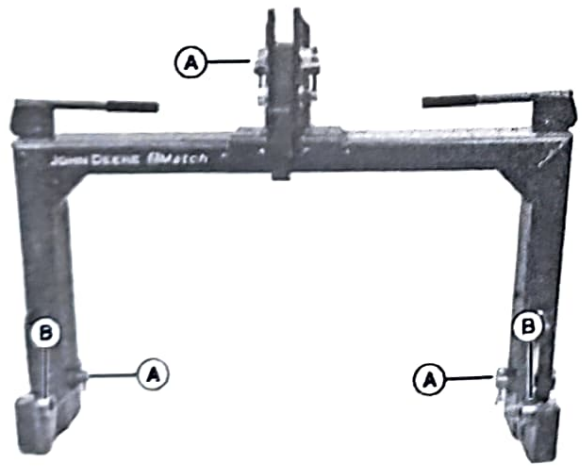
1. Park machine safely.
2. Lower any rear-mounted implement to the ground.
3. Remove locking pin (A).
4. Slide stabilizer sway link adjusting shaft (B) to adjust 3-point hitch implement side-to-side sway.
5. Replace locking pin (A).

UP00731,00002FE-19-19JUN17

Using Optional iMatch Quick-Attach Hitch System

The optional iMatch™ quick-attach hitch fits all Category I implements designed to the ASAE Category I standard for quick-attach hitches.

Installing iMatch Quick-Attach Hitch

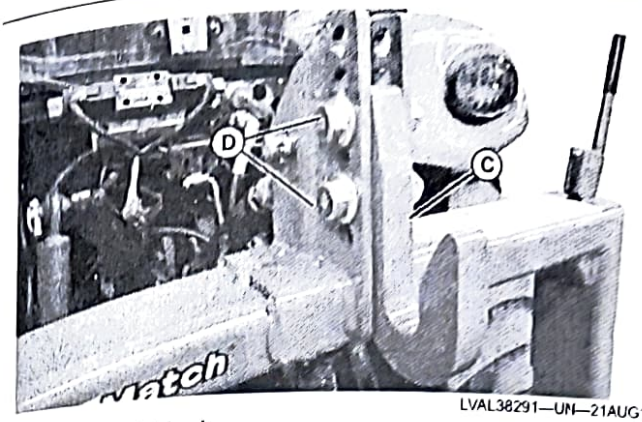


LVAL38290—UN—21AUG12

A—Drilled Pin (3 used)
B—Bushing (2 used)

1. Remove three drilled pins (A) and two bushings (B) from iMatch quick-attach hitch.
2. Use machine rockshaft control lever to fully lower 3-point hitch draft links.
3. Park machine safely.

iMatch is a trademark of Deere & Company



LVAL38291—UN—21AUG12

C—Center Link Hook
D—Nuts and Bolts

4. Center link hook (C) is set from the factory at standard height to accommodate most implements. Adjust center link hook, if necessary.
   - Remove nuts and bolts (D).
   - Raise or lower center link hook as required.
   - Install nuts and bolts. Tighten bolts to specification before use of iMatch assembly.

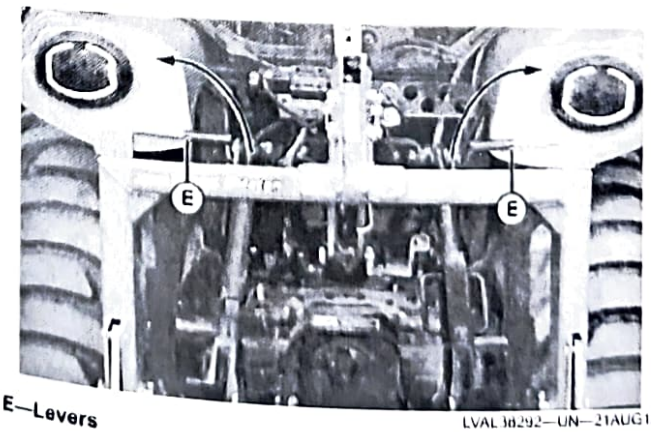
Specification

iMatch Bolt—Torque. . . . . 245—318 N·m (180.7—234.5 lb.-ft.)

5. Position iMatch quick-attach hitch near draft links and adjust 3-point hitch sway links to align draft links with quick-attach hitch.
6. Install iMatch quick-attach hitch on draft links using drilled pins.
7. Install 3-point hitch center link on iMatch quick-attach hitch using center link quick-lock pin and drilled pin.

Connecting Implement

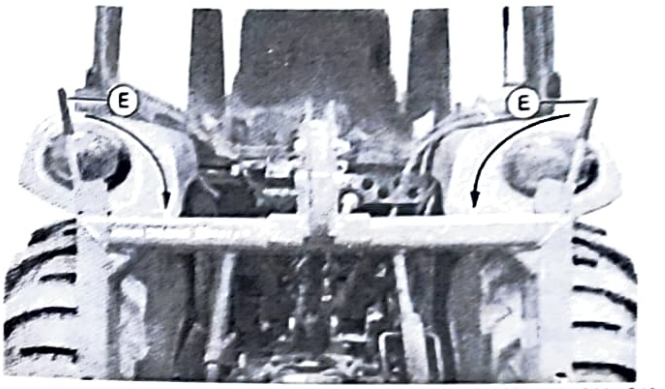
1. Install two bushings included with iMatch quick-attach hitch on drilled pins in implement draft link lift brackets.



E—Levers

LVAL38292—UN—21AUG12

2. Move levers (E) on iMatch quick-attach hitch to unlocked position.
3. Back machine into position and align iMatch quick-attach hitch with implement lift brackets.
4. Use rockshaft control lever to position iMatch quick-attach hitch under lift brackets and lift implement from ground.



LVAL38293—UN—21AUG12

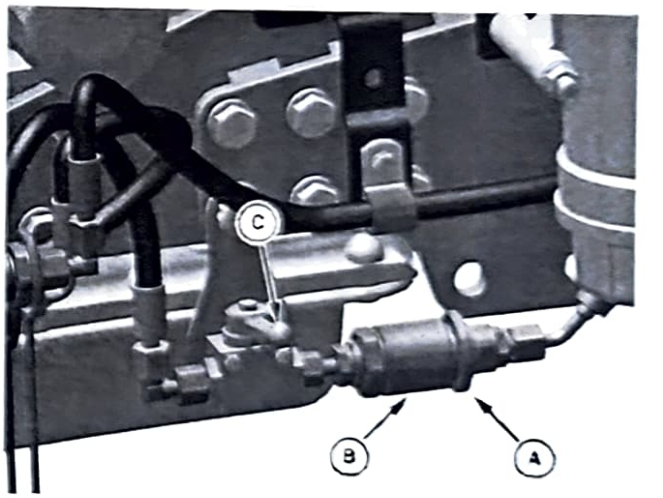
E—Levers

5. Fully raise implement. Move levers (E) on iMatch quick-attach hitch to locked position.

KN5Z231,1004865-19-19JUN17

Using Front 3-Point Hitch—If Equipped

Using Rate of Drop Adjustment



LV23871—UN—24MAR15

A—Jam Nut
B—Valve Body
C—Valve

To adjust the rate of drop, release jam nut (A). Turn valve body (B) clockwise or counter clockwise to adjust the rate of drop. Tighten jam nut (A) to lock the valve body position.

Using Transport Lock Position

To place hitch in transport lock position, fully raise hitch and rotate valve (C) to the lock position.

Raising and Lowering Hitch

1. Check to be sure that hitch is not in transport lock position.

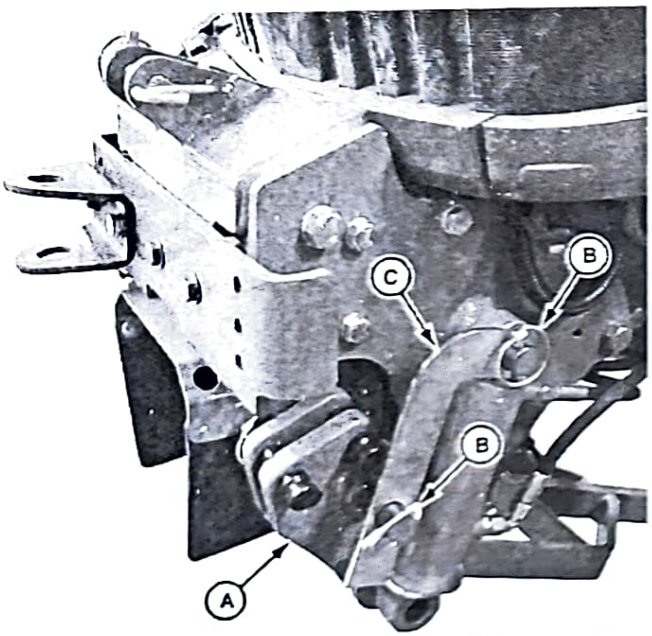
2. Review instructions on using hydraulic dual selective control valve (SVC) and dual selective control valve lock lever included in your tractor operator's manual.
3. Move tractor dual SCV lever:
   - To raise hitch, move lever rearward.
   - To lower the hitch, move the leaver forward.

Using Front Hitch Storage Position

The front hitch may remain installed on the tractor when not in use.

To change front hitch to storage position:

1. Raise hitch to highest lift position.
2. Move ball valve to transport locked position.
3. Remove A-frame if installed.



LV19396—UN—18OCT13

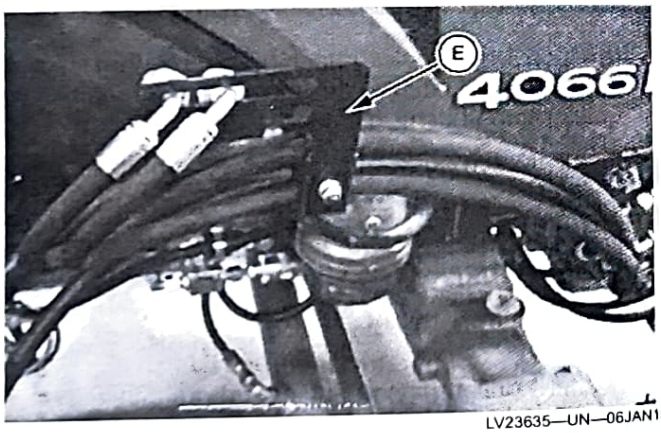
A—Lift Frame
B—Spring Clips
C—Brackets

4. Remove lift arms from lift frame (A) and center link from tractor, set aside for future use.
5. Remove left and right cylinder retaining spring clips (B) from lift frame cylinder pins and hitch frame cylinder pins.
6. Rotate lift frame (A) upward and secure with left and right hitch storage brackets (C).
7. Replace left and right cylinder spring clips (B).

LV23636—UN—20NOV15

D—Storage Bracket

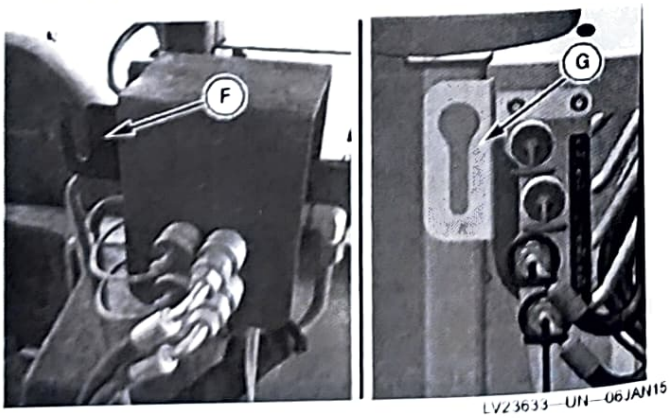
8. Disconnect front hitch cylinder hydraulic hoses from tractor and place in storage bracket (D).



LV23635—UN—06JAN15

E—Storage Bracket

9. If mid connect front coupler kit is installed, use storage bracket (E).



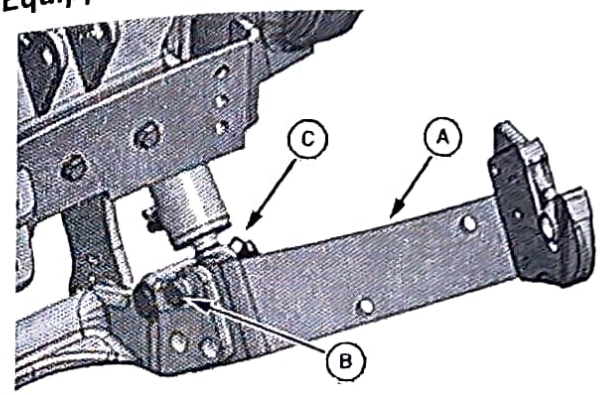
LV23633—UN—06JAN15

F—Storage bracket for open station tractors
G—Storage bracket for cab tractors

10. If rear connect front coupler kit is installed, use storage bracket (F) for open station tractors and storage bracket (G) for cab tractors .

UP00731,00002F1-19-04MAR15

Using Front Hitch Lift Arms—Category 1—If Equipped

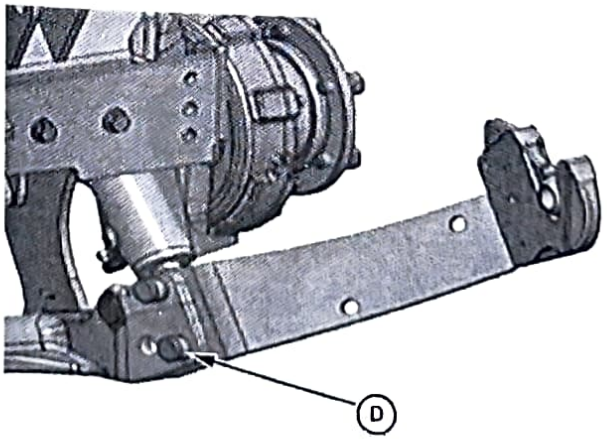


LV23644—UN—07JAN15

A—Lift Arm
B—Lift Arm Pin
C—Locking Pin

1. Place lift arm (A) into lift frame fork. Insert upper lift arm pin (B) through fork and lift arm, secure with locking pin (C).
2. Category 1 lift arms may be installed in fixed position or float position.

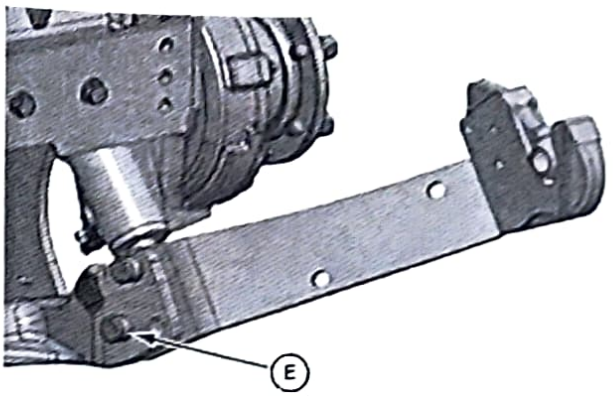
   NOTE: If torsion tube is to be installed, arms must be installed in fixed position, not float position.



D—Lift Arm Pin

LV23645—UN—07JAN15

   a. Category 1 lift arms: To install lift arms into float position, insert second lift arm pin (D) into forward lower hole.



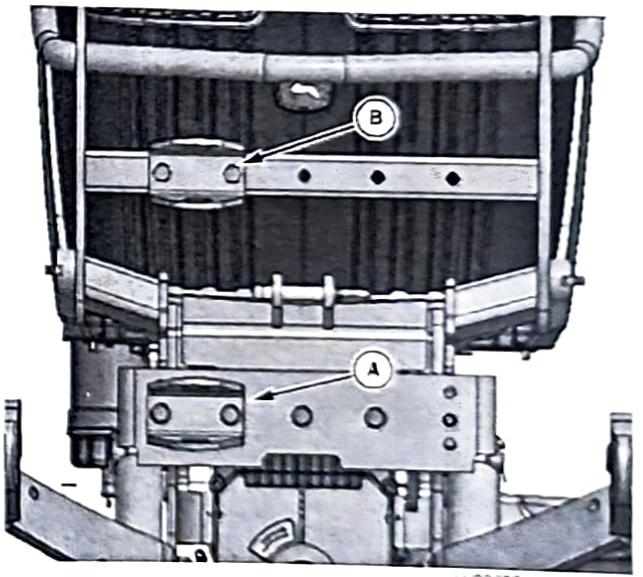
LV23646—UN—07JAN15

E—Lift Arm Pin

   b. Category 1 lift arms:To install lift arms into fixed position, insert second lift arm pin (E) into rearward lower hole.

UP00731,00002F3-19-04MAR15

Using Loader with Front Hitch—If Equipped



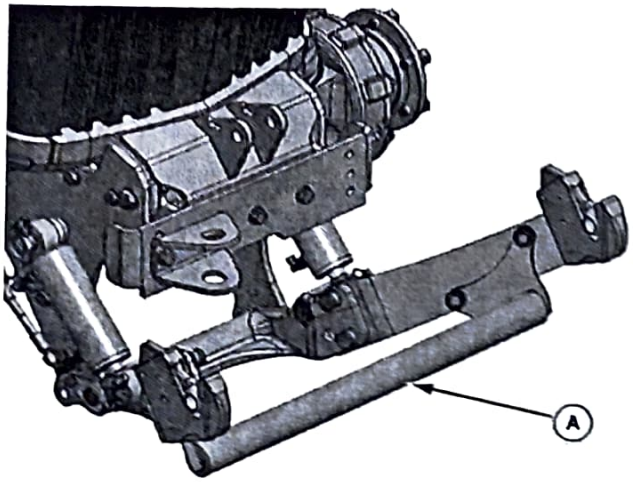
LV23632—UN—08JAN15

A—Tractor Frame
B—Hood Guard

1. Place hitch in storage position, see Storing section.
2. Relocate tow hook from tractor frame (A) to hood guard (B).
3. Attach loader per loader operation instruction.

UP00731,00002C5-19-08JAN15

Using Torsion Tube—Category 1—If Equipped



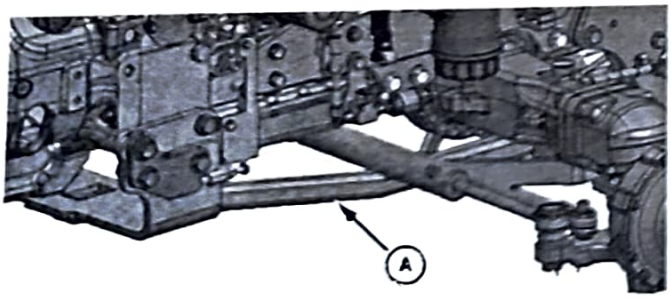
LV23650—UN—07JAN15

A—Torsion Tube

For heavy push applications, use of torsion tube (A) is recommended. If torsion tube is installed, lift arms must be in fixed position. To use lift arms in float position, torsion tube must be removed.

UP00731,00002F5-19-04MAR15

Using Heavy Duty Push Bar—Category 1—If Equipped



LV23651—UN—07JAN15

A—Push Bar

For heavy push application, use of push bar (A) is recommended.

UP00731,00002F6-19-04MAR15

Selective Control Valve Operation

Avoid High-Pressure Fluids

X9811—UN—23AUG88

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

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

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

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

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

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

DX,FLUID-19-12OCT11

Connecting Implement Hydraulic Hoses

⚠ CAUTION: Avoid injury! Escaping fluid under high pressure can penetrate the skin and cause serious injury. Avoid the hazard by relieving pressure before connecting 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. In the United States and Canada only, this information may be obtained by calling 1-800-822-8262.**

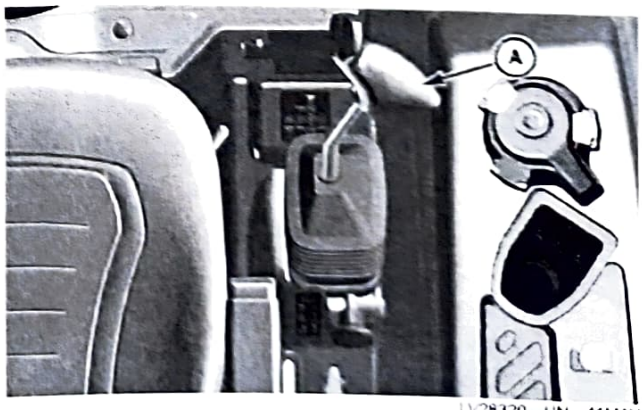
1. Park machine safely.
2. Relieve hydraulic pressure:
   - Move dual selective control valve (SCV) lever rearward-to-forward and side-to-side several times.
   - Move third SCV lever rearward-to-forward several times if equipped.
   - With key switch on, activate the third SCV upper and lower switches several times (if equipped).
3. See your implement operator's manual for specific instructions on connecting hydraulic hoses to couplers. Install hose ends in couplers with matching colors.
   - Colors for the couplers are shown on the label installed on the machine near the couplers.
4. See your implement operator's manual for specific instructions on operating SCV controls.

IMPORTANT: Avoid damage! To prevent contamination of female quick couplers, color-coded hose ends should be installed in the couplers when not being used.

KN52281,1004867-19-19JUN17

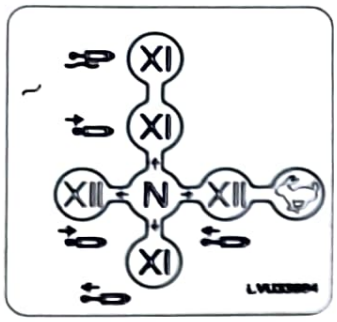
Using Dual Selective Control Valve Lever—If Equipped

⚠ CAUTION: Avoid injury! Overheated hydraulic oil can cause personal injury and component malfunctions. To prevent hydraulic oil from overheating, DO NOT hold multi-function control lever in operating position for an extended period of time.



LV28320—UN—11MAY17

Open Operator Station Shown. Cab is Similar



LV2832H—UN—11M4Y17

Control Valve Label

A—Dual Selective Control Valve (SCV) Lever

Dual selective control valve (SCV) lever (A) controls any hydraulically driven device connected to mid selective control valve (SCV), most commonly a loader.

The label installed on the machine next to the dual selective control valve (SCV) lever shows the different lever positions.

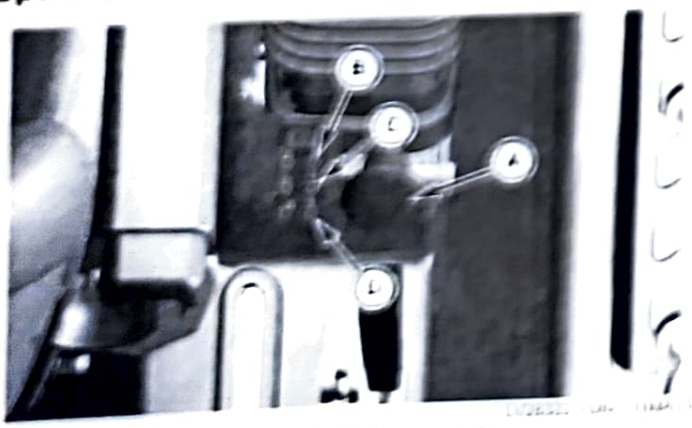
Lever positions numbered 1—4 on the label match hydraulic line couplers numbered 1—4 on the label installed on the machine near the couplers. Moving the lever to position 1 will supply fluid to coupler 1 and return fluid through coupler 2 and so forth.

Lever Position	Function
Forward	Boom Lower
Back	Boom Raise
Left	Bucket Roll (Curl)
Right	Bucket Tilt (Dump)

Move the lever to the full right or "regen" position for faster loader bucket dumping.

Move the lever to the full forward or "float" position to allow the bucket to follow the contour of the ground. The lever may be left in the "float" position.

Selective Control Valve (SCV) Lever Lock—Open Operator Station



A—Selective Control Valve (SCV) Lever Lock

B—0 Position
C—1 Position
D—2 Position

⚠ CAUTION: To prevent loader movement, engage selective control valve (SCV) lever lock (A) before dismounting tractor. Selective control valve lever must be in center (neutral) position for lock to engage.

Selective control valve (SCV) lever lock does not lock out switch-operated third-function hydraulics, which are active anytime the key is ON.

Selective control valve (SCV) lever lock (A) allows the operator to control the type of dual SCV lever movement needed for a particular operation or situation. Operation of the SCV lever lock is indicated on SCV lever lock label.

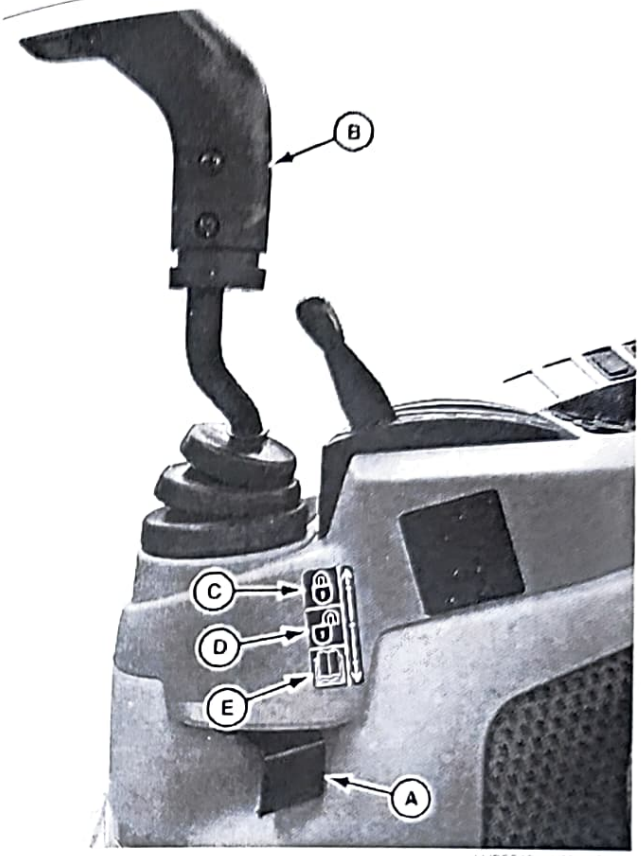
- To prohibit movement of SCV lever in all directions, move SCV lever lock in to the 0 position (B). Operation of the SCV is totally locked.

- To prohibit engagement of the REGEN (regeneration) function of the SCV, pull lever lock to the middle or 1 position (C). This will lock out the loader bucket function. REGEN can cannot be used for hydraulic motors, and it will always cause a cylinder to extend regardless of connections. REGEN is intended to increase bucket dump speed and eliminate cavitation in bucket cylinders.

- To allow movement of SCV lever in all directions, move SCV lever lock to the 2 position (D). Operation of the SCV is totally unlocked.

Selective Control Valve (SCV) Lever Lock—Cab

Selective control valve (SCV) lever lock (A) allows the operator to control the type of dual SCV lever movement needed for a particular operation or situation.



LV25543—UN—03JUN16

A—SCV Lever Lock
B—SCV Lever
C—In Position
D—Center Position
E—Out Position

• To prohibit movement of dual SCV lever in all directions, make sure SCV lever (B) is in center position, and press the SCV lever lock (A) to the in position (C). Operation of the dual SCV is totally locked.

• To allow movement of dual SCV lever in all directions, move SCV lever lock to the center position (D). Operation of the dual SCV is totally unlocked.

To prohibit engagement of the REGEN (regeneration) function of the SCV, pull lever lock to the full out position (E). This will lock out the loader bucket function. REGEN cannot be used for hydraulic motors, and it will always cause a cylinder to extend regardless of connections. REGEN is intended to increase bucket dump speed and eliminate cavitation in bucket cylinders.

NOTE: After extended use, the dual SCV lever may require cable adjustment to lock out.

UP00731,0000304-19-11MAY17

Using 3rd Selective Control Valve (SCV) Outlet—If Equipped

CAUTION: Avoid injury! Escaping fluid under high pressure can penetrate the skin and cause serious injury. Avoid the hazard by relieving pressure before connecting 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.

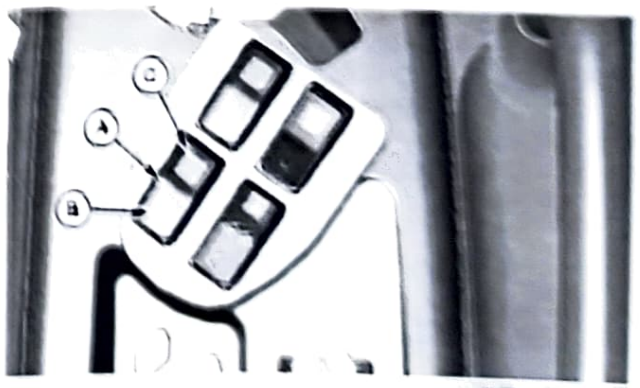
• If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical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

NOTE: Some continuous flow attachments can elevate tractor oil temperature. Make sure to refer to the operator's manual of the attachment and supply the device the proper flow rate. In the event that the tractor hydraulic system overheats, the valve will disengage, and the light will remain lit. Operate the tractor for 10 minutes at mid engine speed to cool it down, identify the cause of the overheating, and resume work.

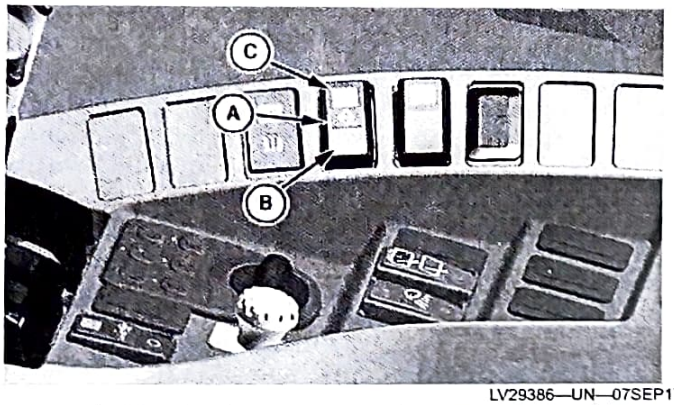
This machine model series can be equipped with an optional 3rd selective control valve (SCV) outlet kit to operate hydraulically driven implements from one set of outlets at the mid-mount position or the rear-mount position.

The machine-mounted hydraulic outlets are female quick couplers.

Using 3rd Selective Control Valve (SCV) Continuous Flow Switch



3rd SCV Continuous Flow Switch shown in center (neutral) position



LV29386—UN—07SEP17

3rd SCV Continuous Flow Switch (Cab Shown; OOS Similar)

A—Continuous Flow Switch
B—Off
C—Enable/Activate

NOTE: Continuous flow will not be available to the rear outlets on machines equipped with the third selective control valve and the diverter option.

• **Continuous Flow Switch (A):** This switch will supply continuous flow to a hydraulic device.

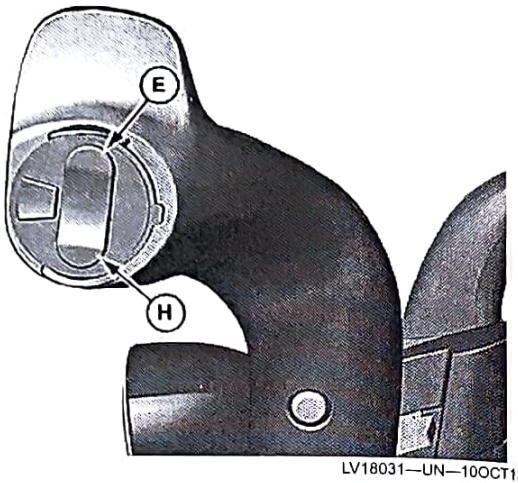
• **Off (B):** Place switch in this position to deactivate continuous flow from the 3rd SCV outlet or depress the bottom of control switch.

NOTE: The green light in the switch will illuminate if continuous flow is activated.

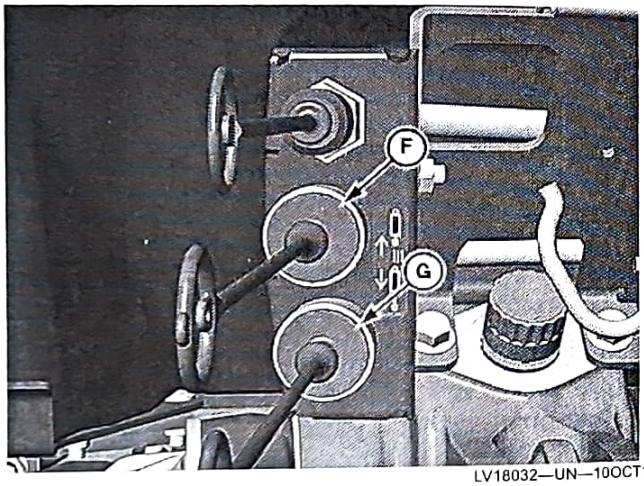
• **Enable/Activate (C):** This is a momentary position that will activate the 3rd SCV continuous flow circuit. When the switch is depressed and released, it will return to the center on position. Turning the key switch off will deactivate the continuous flow circuit. When the key switch is turned on, the 3rd SCV continuous flow circuit will not activate until after the operator presses and releases the switch in the momentary enable (C) position.

Using 3rd Selective Control Valve (SCV) Outlet Control

The 3rd (SCV) outlet may be operated in a momentary condition to operate attachments such as extending or retracting a hydraulic cylinder. The attachment will receive full hydraulic flow in direct response to the use of the control switch.

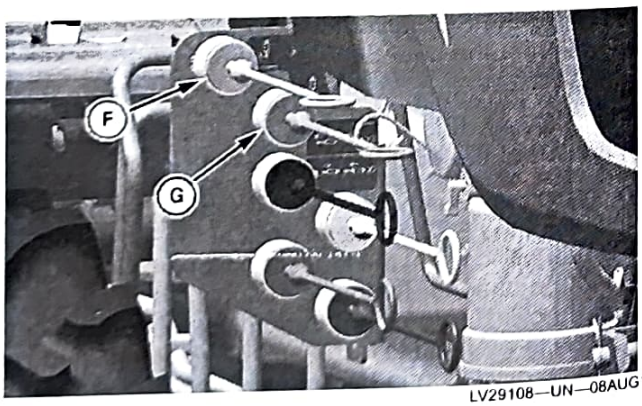


LV18031—UN—10OCT13



LV18032—UN—10OCT13

Rear Outlet



LV29108—UN—08AUG17

Mid Outlet

E—3rd SCV Control Switch
F—Upper Outlet
G—Lower Outlet
H—Bottom of SCV Control Switch

1. Depress the top of the 3rd (SCV) control switch (E) to allow flow from the circuit out the upper outlet (F) and return to the machine through the lower outlet (G).
2. Depress the bottom of the 3rd (SCV) control switch (H) to allow flow from the circuit out the lower outlet

(G) and return to the machine through the upper outlet (F).

IMPORTANT: Avoid damage! To prevent contamination of female quick couplers, color-coded hose ends should be installed in the couplers when not being used.

UP00731,0000305-19-12OCT17

Using Power Beyond Outlet—If Equipped

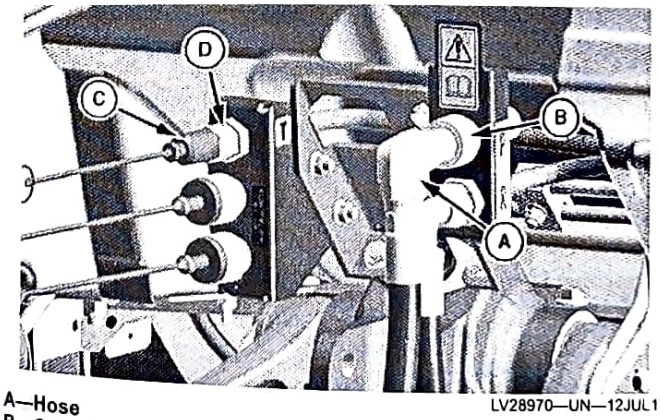
IMPORTANT: Avoid damage! Return oil from all circuits must return to either of two tank ports at the rear of the rockshaft manifold.

Routing return oil directly to sump will result in machine damage.

Do not return oil to the fill port or any other location.

Power beyond is designed for applications where continuous high volume hydraulic oil flow is needed.

Connecting to Power Beyond



LV28970—UN—12JUL17

A—Hose
B—Coupler
C—Outlet Cover
D—Power Beyond Coupler

1. Shut off engine.
2. Remove hose (A) from coupler (B).
3. Remove outlet cover (C) and place hose (A) into cover.
4. Attach implement pressure hose to power beyond coupler (B).
5. Attach implement return hose to coupler (D).

NOTE: When not in use, plug hose end into coupler for storage.

Parts for this attachment are available from your John Deere dealer.

UP00731,0000306-19-09AUG17

Using IV and V Rear Outlet Selective Control Valve (SCV)—If Equipped

CAUTION: Avoid injury! Escaping fluid under high pressure can penetrate the skin and cause serious injury. Avoid the hazard by relieving pressure before connecting 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.

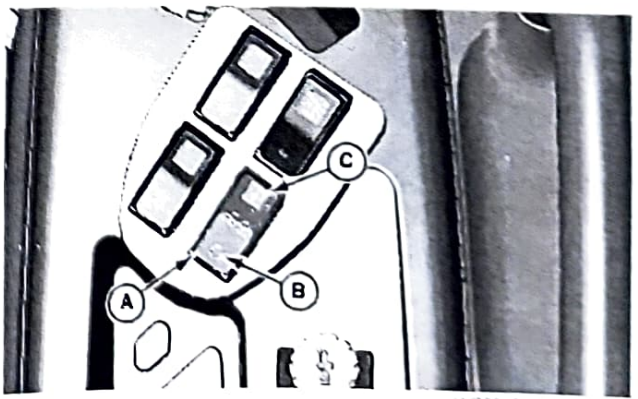
• If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical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

This machine model series can be equipped with an optional IV and V rear outlet selective control valve (SCV) and outlets to operate hydraulically driven implements.

The machine-mounted hydraulic outlets are female quick couplers.

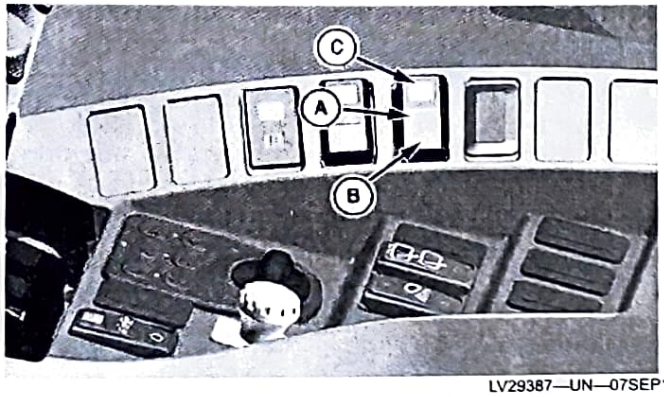
NOTE: Some continuous flow attachments can elevate tractor oil temperature. Make sure to refer to the operator's manual of the attachment and supply the device the proper flow rate. In the event that the tractor hydraulic system overheats, the valve will disengage, and the light will remain lit. Operate the tractor for 10 minutes at mid engine speed to cool it down, identify the cause of the overheating, and resume work.

Open Operator Station



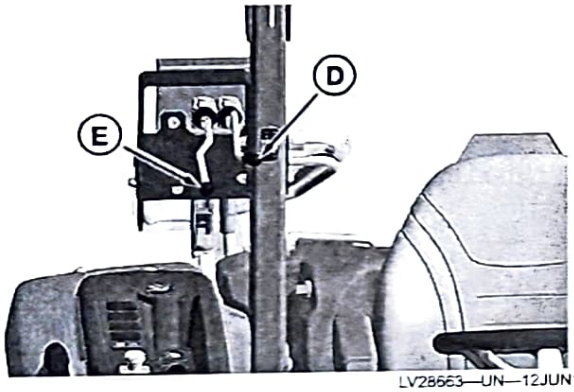
LV20945—UN—04FEB14

Selective Control Switch M Series Tractor Shown (HST only)

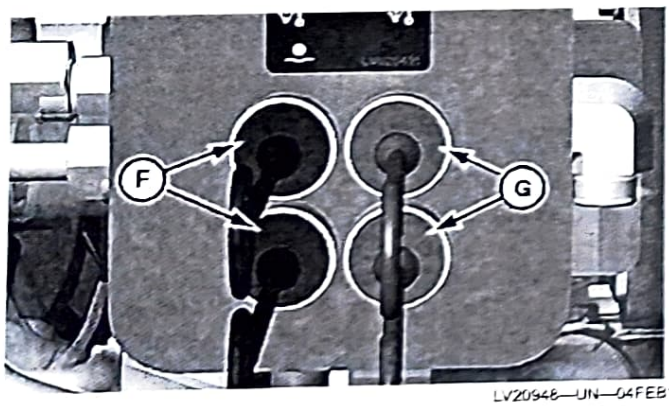


LV29387—UN—07SEP17

Selective Control Switch—Cab Tractor Shown



LV28663—UN—12JUN17



LV20948—UN—04FEB14

A—Switch
B—Position
C—Position
D—Control Lever
E—Control Lever
F—Right-Side Outlets
G—Left-Side Outlets

The IV and V rear outlet selective control valve is mechanically operated using the control levers (D and E) on the right side of the machine.

- Lever (D) controls the flow to the right-side outlets (F).
- Lever (E) controls the flow to the left-side outlets (G).

Float Position

Float position allows implement to move up and down freely while traveling over rough ground.

- To engage float position, push control lever (D) down.
- To disengage float position, manually return control lever to neutral position.

Using the Rear V Selective Control Valve Continuously

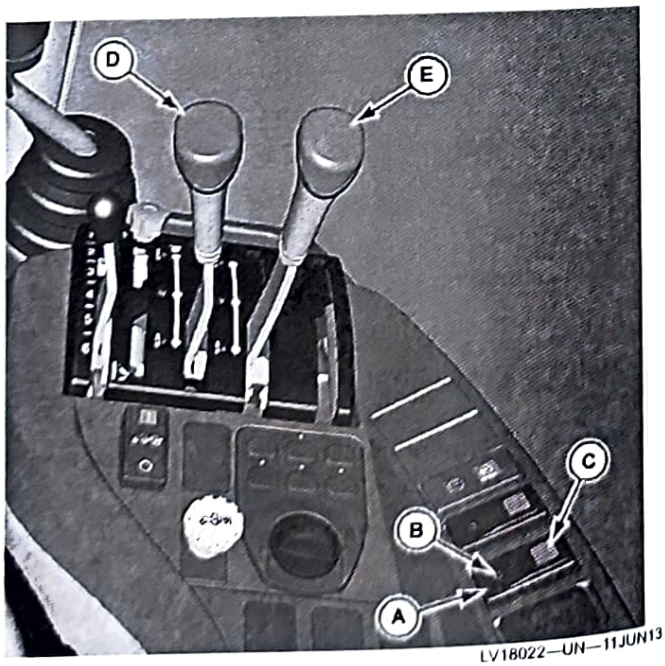
1. On selective control switch (A) press position (C) while raising control lever (E) to the upper stop position. Switch light indicator will be on to indicate switch enabled.
2. Release control lever (E).
3. To deactivate, press position (B) and slowly lower rear outlet lever.

See your implement operator's manual for implement functions which correspond to quick couplers used.

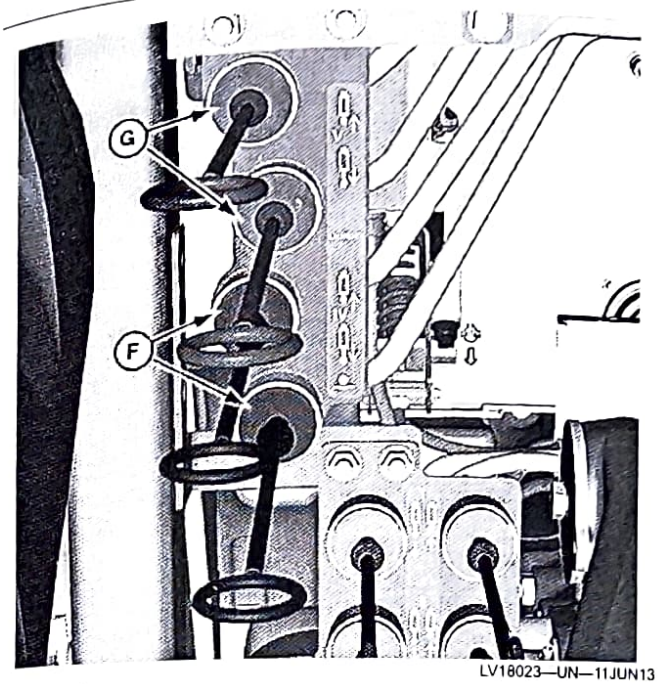
IMPORTANT: Avoid damage! To prevent contamination of female quick couplers, color-coded hose ends should be installed in the couplers when not being used.

Some continuous flow attachments can elevate tractor oil temperature. Make sure to refer to the operator's manual of the attachment and supply the device the proper flow rate. In the event that the tractor hydraulic system overheats, the valve will disengage, and the light will remain lit. Operate the tractor for 10 minutes at mid engine speed to cool down, identify the cause of the overheating, and resume work.

Cab



LV18022—UN—11JUN13



LV18023—UN—11JUN13

A—Switch
B—Position
C—Position
D—Control Lever
E—Control Lever
F—Lower Outlets
G—Upper Outlets

The IV and V rear outlet selective control valve is mechanically operated using the control levers (D and E) on the right side of the machine.

- Lever (D) controls the flow to the lower outlets (F).
- Pull back on control lever (D) for detented position used for "float" operations.
- Lever (E) controls the flow to the upper outlets (G).

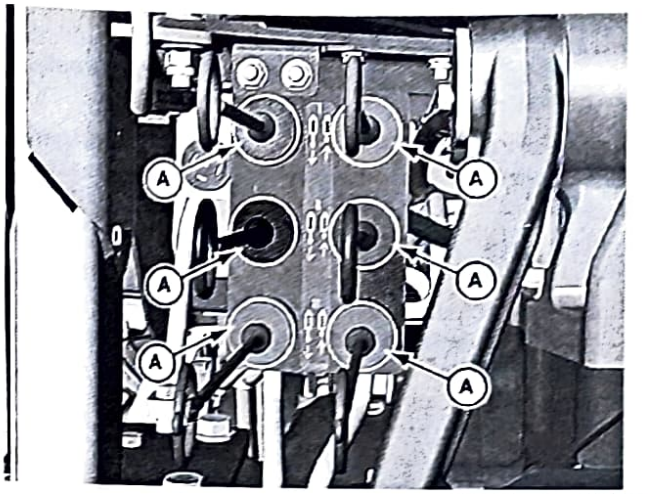
IMPORTANT: Avoid damage! To prevent contamination of female quick couplers, color-coded hose ends should be installed in the couplers when not being used.

Using the Rear Selective Control Valve Continuously

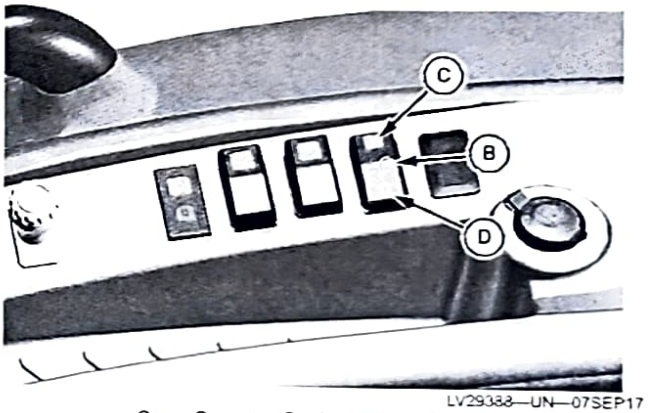
1. On selective control switch (A) press position (C) while pulling control lever (E) rearward to the rear stop position. Switch light indicator will be on to indicate switch enabled.
2. Release control lever (E).
3. To deactivate press position (B) and slowly release rear outlet lever.

UP00731,0000307-19-07SEP17

Using Diverter I, II, and III Rear Outlets—If Equipped

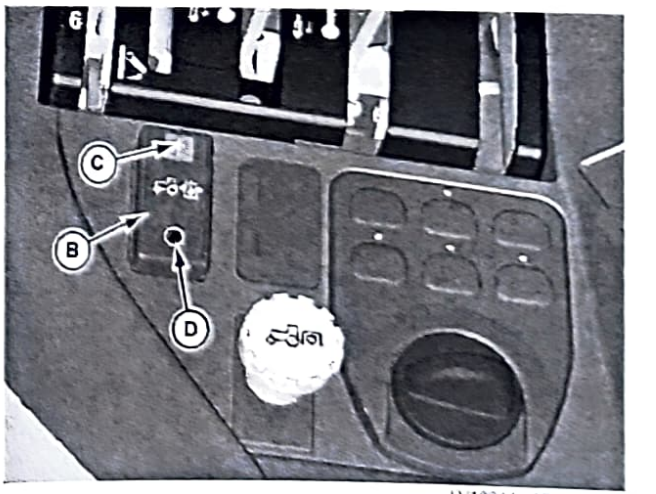


LV18042—UN—11JUN13



LV29388—UN—07SEP17

Open Operator Station Diverter Switch



LV18044—UN—11JUN13

Cab Diverter Switch

A—Hydraulic Outlets
B—Activation Switch
C—Indicator Light
D—Bottom of the Activation Switch

CAUTION: Avoid injury! Escaping fluid under high pressure can penetrate the skin and cause serious injury. Avoid the hazard by relieving pressure before connecting 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. In the United States and Canada only, this information may be obtained by calling 1-800-822-8262.

NOTE: Continuous flow will not be available to the rear outlets on machines equipped with the third selective control valve and the diverter option.

This machine model series can be equipped with an optional diverter I, II, and III rear outlet kit to operate hydraulically driven implements with the SCV lever.

The machine-mounted hydraulic outlets (A) are female quick couplers.

NOTE: If the key switch is moved to the off position, the dual SCV lever will default to operating the mid SCV outlets. The key switch must be moved to the run position and the diverter system re-activated to operate the diverter I, II, and III rear outlets.

1. Press the top of the diverter I, II, and III rear outlet activation switch (B) to activate the I, II, and III rear outlets. The switch indicator light (C) will go on.
2. Use the SCV lever to operate attachments connected to the diverter I, II, and III rear outlets.
3. Press the bottom of the activation switch (D) to disable the rear outlets. The switch indicator light will go off and the mid SCV outlets will be activated.

Relieving Pressure

To relieve pressure in the rear outlets

1. Place implement on ground.
2. Engine running and diverter engaged.
3. Press and hold diverter switch at location C throughout the next three steps.
   - Shut off engine.
   - Actuate mid SCV lever in front/back and left/right directions to relieve pressure, then put key switch back to run position.
   - Actuate 3rd SCV upper and lower switches to relieve pressure.

NOTE: This provides 20-30 seconds after engine shut down during which the pressure in the rear couplers can be relieved.

UP00731,0000308-19-12OCT17

Tire Combinations

In order to achieve maximum drawbar pull, maintain proper steering ability, and reduce tire wear and fuel consumption, comply with the correct tire combinations.

For all other information on tires, see "Wheels and Tires Maintenance".

Tire Combinations	
Front	8.00-16 10PR
Rear	13.6-28 6PR
Front	280/70R16
Rear	380/70R28
Front	260/70D 16.5
Rear	420/85D24
Front	27x10.50-15
Rear	44x18.00-20 4PR
Front	250/75R16
Rear	360/80R28
Front	27x12LL-15
Rear	22.5LL-16.1 6PR

UP00731,00004C0-19-05DEC17

Ballast

Selecting Ballast

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

Comply with local regulations regarding installation and maximum permissible number of weights. In order to maintain steerability, at least 20% of unladen mass must be on the front axle. Unladen mass is the mass of the tractor without special equipment, attachments, trailer, or ballast, but with hydraulic oil and lubricants, a full fuel tank, and an operator weighing 75 kg.

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

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

UP00731,0000195-19-01APR14

Ballast Machine

CAUTION: Avoid injury! Ballasted machine becomes unstable when attachment is raised. Always drive slowly over uneven ground and when turning with raised attachment.

IMPORTANT: Avoid damage! Do not overload tires. Do not exceed maximum inflation pressure or maximum load capacity of tire.

IMPORTANT: Avoid damage! Remove ballast from the machine when no longer needed.

- Add weight to the machine front end if needed for stability. Heavy pulling and heavy rear mounted implements tend to lift front wheels. To maintain steering control and prevent tip over ensure that enough ballast has been added. Remove weight when it is no longer needed.
- See tire maximum inflation pressure and maximum load capacities in the Specifications section.
- Verify maximum tire inflation pressure and maximum load information if embossed into the tire side wall.

Implement Codes

Use the following tables to determine the number of front weights to use with John Deere implements. Implement code data can be found in the ballasting section of the implement operator's manual.

Match the implement code from the implement manual with the codes for your machine and type of hitch. If the code falls between two numbers in the table, use the next higher number for the number of front weights to use with that implement.

These codes are for ideal conditions. Actual field conditions can require additional ballast. Some John Deere implements require using a certain number of front weights rather than giving implement codes.

NOTE: Maximum allowable ballasted weight is 4000 kg (8820 lb.)

Open Operator Station Tractors

Implement Code	Minimum number of 19 kg (42 lb) weights	Minimum number of 19 kg (42 lb) weights when usingi-Match™	Minimum number of 32 kg (70 lb) weights	Minimum number of 32 kg (70 lb) weights when usingi-Match™
35	0	0	0	0
40	1	2	1	1
45	3	4	2	2
50	4	6	3	3
55	6	8	4	5
60	8	9	5	6
65	10	11	6	7
70	11	Not Recommended	7	8
75	Not Recommended	Not Recommended	8	9
80	Not Recommended	Not Recommended	9	10
85	Not Recommended	Not Recommended	10	11
90	Not Recommended	Not Recommended	11	12
95	Not Recommended	Not Recommended	12	Not Recommended
100	Not Recommended	Not Recommended	Not Recommended	Not Recommended

iMatch is a trademark of Deere & Company
iMatch is a trademark of Deere & Company

Cab Tractors

Implement Code	Minimum number of 19 kg (42 lb) weights	Minimum number of 19 kg (42 lb) weights when usingi-Match™	Minimum number of 32 kg (70 lb) weights	Minimum number of 32 kg (70 lb) weights when usingi-Match™
10	0	0	0	0
15	0	0	0	0
20	0	0	0	0
25	0	0	0	0
30	0	0	0	0
35	0	0	0	0
40	0	0	0	0
45	1	2	1	1
50	2	4	2	2
55	4	6	3	3
60	6	7	4	5
65	8	9	5	6
70	9	11	6	7
75	11	No Recommended	7	8
80	No Recommended	No Recommended	8	12
85			No Recommended	No Recommended

iMatch is a trademark of Deere & Company
iMatch is a trademark of Deere & Company

Tire Capacities

IMPORTANT: Avoid damage! Do not overload tires. Do not exceed tire maximum inflation pressure or maximum load capacity.

If necessary ballast exceeds tire load capacity, reduce load or install other tires.

Recommended operating pressures for Golf tires are 6 psi rear and 8 psi front. Operate at reduced loads. If MFWD is engaged with tires at maximum air pressure, front axle damage may result.

See tire maximum inflation pressure and maximum load capacities in the Specifications section.

Verify maximum tire inflation pressure and maximum load information if embossed into the tire side wall.

UP00731,00005AA-19-02JUL18

Use Optional Rear Cast Iron Wheel Weights

CAUTION: Avoid injury! Machine component or attachment is heavy. Use a safe lifting device or get an assistant to help lift, install, or remove component or attachment.

NOTE: Avoid damage! Do not overload tires. Do not exceed tire maximum inflation pressure or maximum load capacity.

1. Mount rear wheels in the wide position for improved stability.
2. Fasten weight to each rear wheel using a safe lifting device. A total of three weights per wheel may be used. See your implement operator's manual for installation and number of weights to use.

   Rear wheel weights are available from your John Deere Dealer.

SK35149,0001163-19-29JAN18

Use Optional Rear Ballast Box

CAUTION: Avoid injury! To improve front loader-machine stability, use of the ballast box is recommended. Use ballast as recommended in the loader operator's manual.

The rear ballast box is used for carrying ballast on the 3-point hitch. Approximate weight of different materials is given in the implement operator's manual.

SK35149,0001164-19-20JUL17

Use Liquid Weight in Tires

CAUTION: Avoid injury! Installing liquid ballast requires special equipment and training. Injury will occur from the exploding tire. Have the job done by your John Deere dealer or a tire service store.

IMPORTANT: Avoid Damage! Cover rim completely with solution to avoid corrosion, but never more than 90 percent full. More solution would leave too little air space to absorb shocks. Damage to tire could occur.

NOTE: Use of alcohol as ballast is not recommended. Calcium chloride solution is heavier and more economical.

A solution of water and calcium chloride provides safe economical ballast, and prevents freezing. If used properly, it will not damage tires, tubes, or rims.

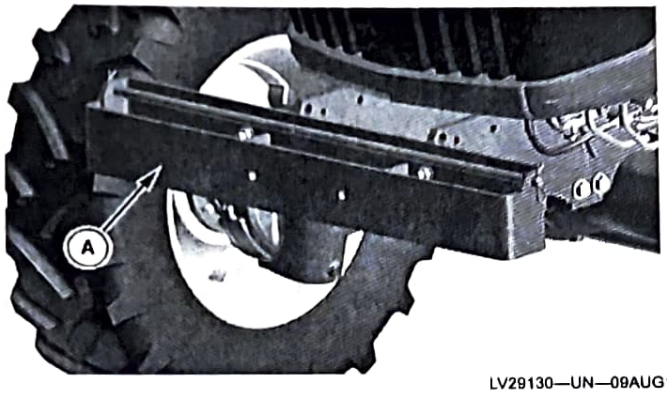
A mixture of 0.4 kg of calcium chloride per liter of water (3.5 lb per gallon), does not freeze solid above -45°C (-50°F).

Fill tubeless tires at least to the valve stem level (minimum 75% full). Less solution would expose part of rim, possibly causing corrosion.

Tube-type tires may be filled to any level below 90%.

SK35149,0001165-19-20JUL17

Use Optional Front Weights



LV29130—UN—09AUG17

A—Front Weight Bracket

IMPORTANT: Avoid Damage! Do not install weights on front bumper plate. Damage to the front grille can occur. Use optional bolt-on weight bracket for front weights.

Quik-Tatch™ weights and attaching hardware are available at your John Deere dealer. Each weight is 19 kg (42 lb.) or 32 kg (70 lb.).

An optional front weight bracket extension kit (A) is available at your John Deere dealer. This optional front weight bracket extension kit holds up to ten Quik-Tatch weights.

UP00731,0000596-19-12JUN18

Quik-Tatch is a trademark of Deere & Company

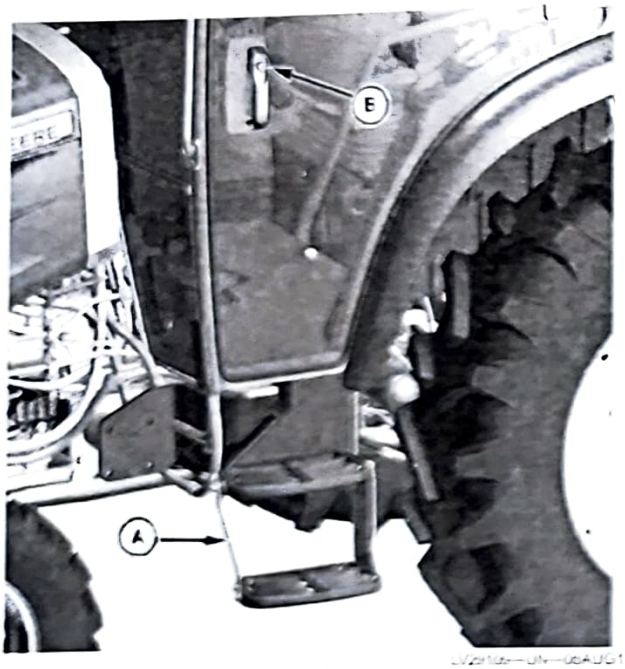
Additional Equipment Operation

To operate attachments or implements, refer to relevant Operator's Manual.

UP00731,0000206-19-26MAY17

Entering and Exiting Machine

Open Operator Station



Cab Tractor

A—Step
B—Handle

Using Step

Step (A) is located on the left side of machine. Use step for entering and exiting the operator station.

Using Left Side Door (Tractor with Cab)

To enter cab, press button on handle (B) and open door. Close door until door locks in closed position.

To exit cab, push lever on inside of door handle and open door.

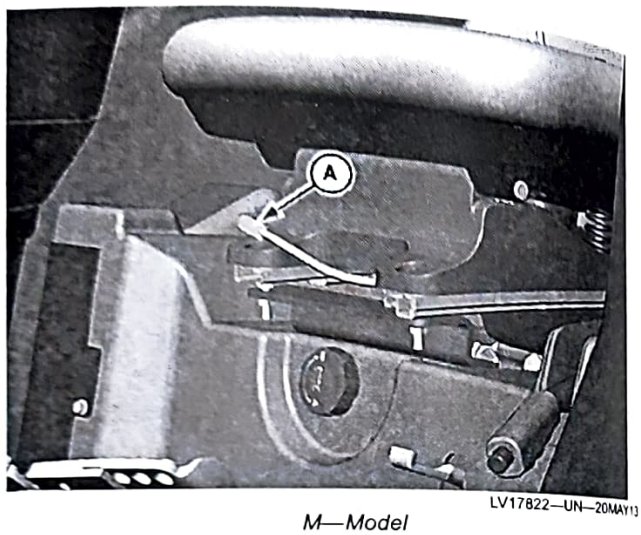
Emergency Exit

In an emergency situation, open glass panel on right side of cab to exit.

Adjusting Seat

CAUTION: To avoid accidents, adjust seat before driving.

M—Model Open Station



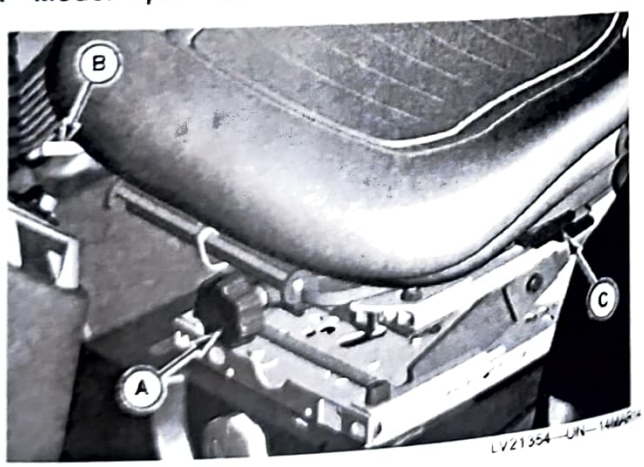
M—Model

A— Adjustment Lever

Adjust to each operator's personal preference.

Forward or Backward: Slide adjustment lever (A) to the left to move seat to desired position.

R—Model Open Station



R—Model

A—Weight Adjustment Knob
B— Adjustment Lever
C—Swivel Control Lever

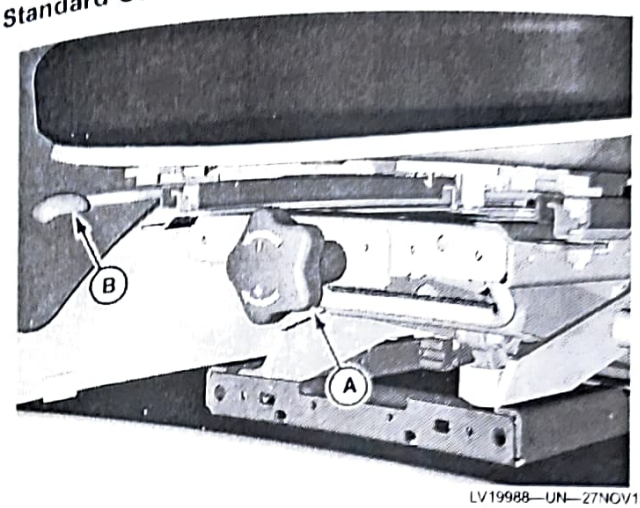
Adjust to each operator's personal preference, there are three available seat adjustments:

Weight: While seated, turn weight adjustment knob (A) to adjust seat travel.

Forward or Backward: Pull adjustment lever (B) forward to move seat to desired position.

Swivel: Lift swivel control lever (C) up to turn seat.

Standard Seat Adjustment—Cab



LV19988—UN—27NOV13

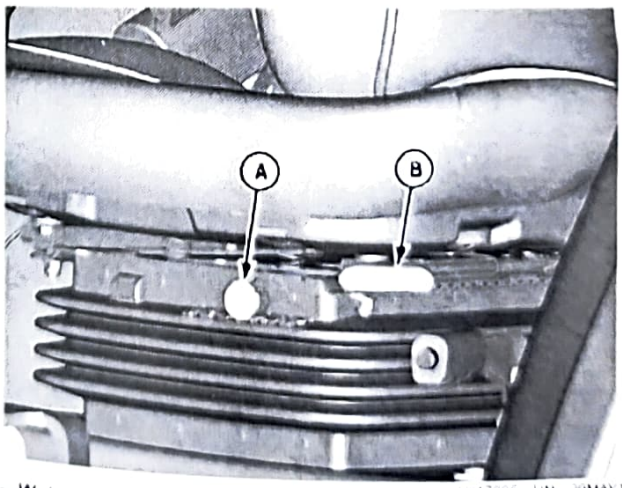
A—Weight Adjustment Knob
B— Adjustment Lever

Adjust to each operator's personal preference; there are two available seat adjustments:

Weight: Turn knob (A) clockwise or counterclockwise to reach desired suspension travel for operator weight. Adjust so seat does not bottom out when properly adjusted.

Forward or Backward: Lift adjustment lever (B) to move seat to desired position.

Deluxe Seat Adjustment—Cab



LV17825—UN—20MAY13

A—Weight Adjustment Knob
B— Adjustment Lever

Adjust to each operator's personal preference, there are two available seat adjustments:

Weight: While seated with the engine running, pull weight adjustment knob (A) out to increase air pressure. Push adjustment knob in to decrease air pressure. Release knob to lock in position.

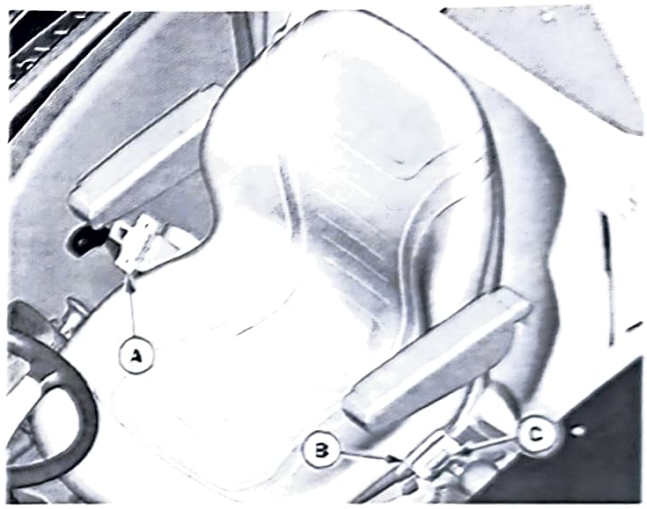
Forward or Backward: Lift adjustment lever (B) up to move seat to desired position.

KNEZ281,1004848-19-12JUN17

Using Seat Belt

CAUTION: Avoid injury! Always wear seat belt when operating machine with non-folding roll-over protective structure (ROPS). Do not jump from machine if machine tips.

Fasten Seat Belt



A—Seat Belt
B—Latch
C—Button

1. Extend self-retracting seat belt (A) and insert into latch (B) on opposite side of seat. Seat belt is self-retracting and will automatically adjust to fit operator.

Release Belt

1. Press red button (C) on latch (B) to release seat belt end.

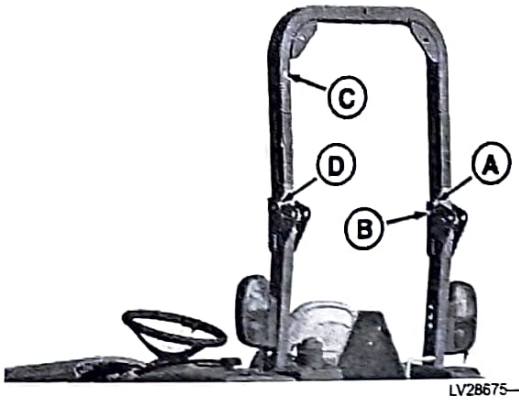
Raising and Lowering Roll-Over Protective Structure (ROPS)

CAUTION: Avoid injury! Always wear seat belt when operating machine with folding roll-over protective structure (ROPS) in upright position. Do not jump from machine if machine tips.

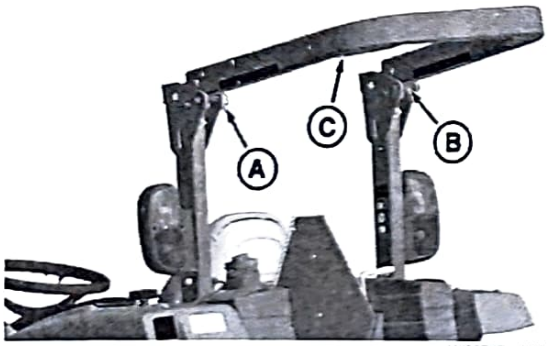
If ROPS must be folded to operate in a low clearance area, do not use seat belt. Raise ROPS and use seat belt as soon as conditions permit.

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

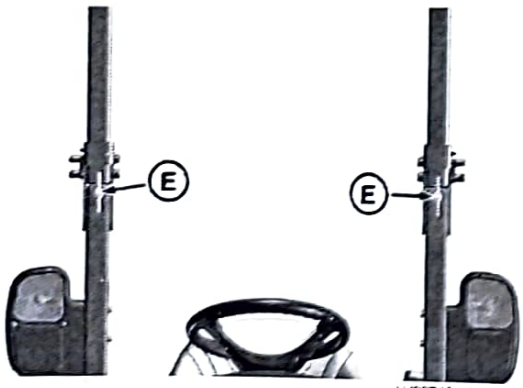
NOTE: When removing drilled pin (B) from the ROPS be careful not to loose ROPS pin isolator(D).



LV28675—UN—14JUN17



LV28717—UN—14JUN17



LV28716—UN—14JUN17

A—Spring Locking Pin
B—Drilled Pin
C—ROPS Crossbar
D—ROPS Pin Isolator
E—Adjustment Screw

Lowering ROPS Crossbar

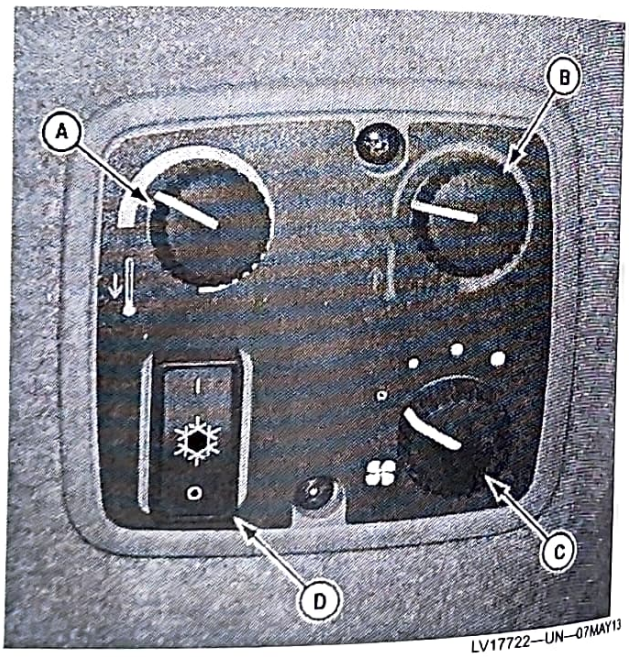
1. Loosen the adjustment screw (E) on each side of the ROPS
2. Remove spring locking pin (A) and drilled pin (B) on each side of the ROPS.
3. Install drilled pins (B) and spring locking pins (A) on each side of the ROPS in the rear hole.
4. Carefully lower ROPS crossbar (C) onto drilled pins (B).

Raising ROPS Crossbar

1. Carefully raise ROPS crossbar (C) to the operating position.
2. Align crossbar bracket holes with support bracket holes on each side of the ROPS.
3. Remove spring locking pins (A) and drilled pins (B) on each side of the ROPS.
4. Install drilled pins (B) and spring locking pins (A) to lock crossbar (C) in the raised position.
5. Retighten the adjustment screw (E) on each side of the ROPS

CM74493,000000D-19-14JUN17

HVAC Temperature Control—Cab



LV17722—UN—07MAY13

A—Air Conditioner Temperature Control Knob
B—Heater Temperature Control Knob
C—Blower Speed Knob
D—ON/Off Switch

Push top half of ON/Off switch (D) to turn air conditioning ON, and push bottom half to turn it OFF.

Turn air conditioner temperature control knob (A) to adjust air conditioner temperature.

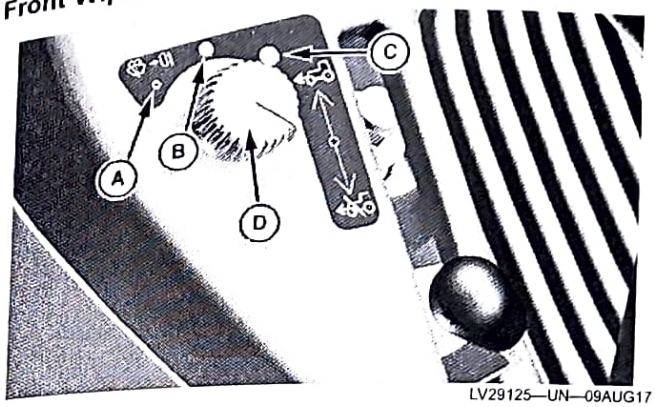
Turn heater temperature control knob (B) to adjust heater temperature.

Turn blower speed knob (C) to adjust blower speed.

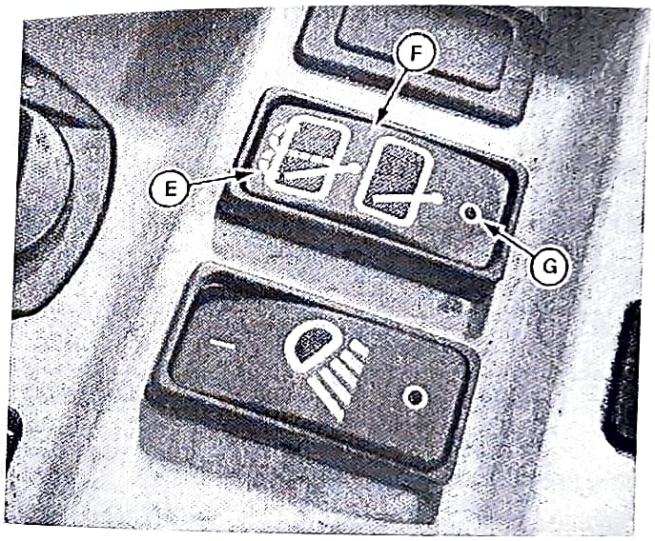
KN52281,1004855-19-18NOV13

Using Windshield Wiper and Washer—Cab

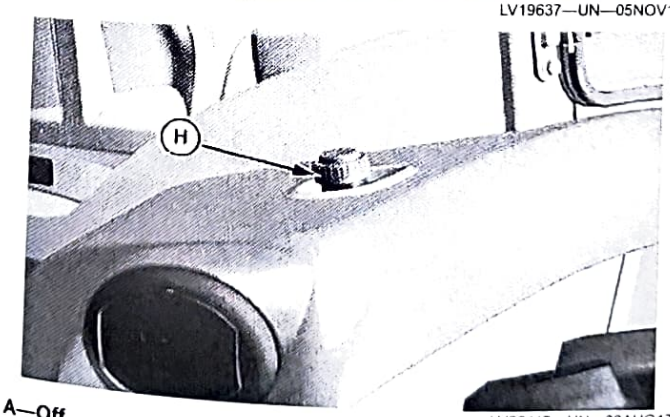
Front Wiper



LV29125—UN—09AUG17



LV19637—UN—05NOV13



LV29117—UN—09AUG17

A—Off
B—Slow
C—Fast
D—Wiper Switch Knob
E—Wash
F—On
G—Off
H—Reservoir

NOTE: The front wiper will return to the park position when it is switched off.

The front wiper switch has three positions:

- OFF (A)
- SLOW (B)
- FAST (C)

Depress the wiper switch knob (D) to activate the front washer:

Rear Wiper (Optional)

NOTE: The rear wiper will stop in any position when it is switched off.

The rear wiper switch has three positions.

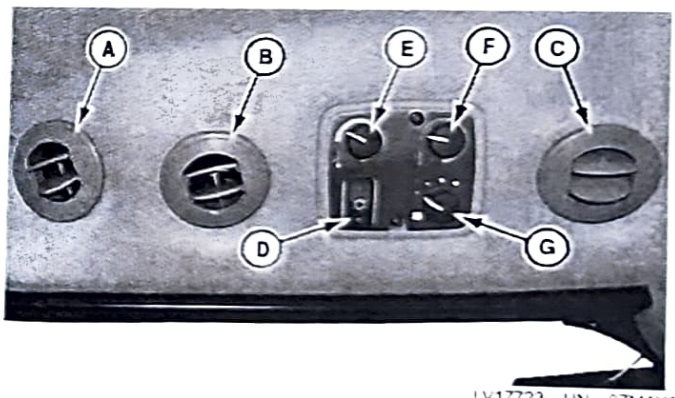
- WASH (E)—Hold top of switch down to activate washer.
- ON (F)
- OFF (G)

Filling Washer Fluid Reservoir

Washer fluid reservoir (H) is located at rear of machine. Fill reservoir with non-freezing windshield washer fluid.

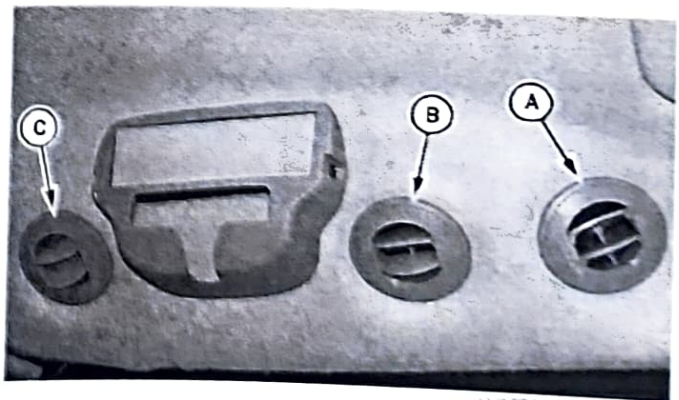
UP00731,00003DF-19-09AUG17

Defrost Windshield and Side Glass—Cab



LV17723—UN—07MAY13

Right Side



Left Side

A—Front Vents
B—Middle Vents
C—Rear Vents

D—On/Off Switch
E—Air Conditioner Temperature Control Knob
F—Heater Temperature Control Knob
G—Blower Speed Knob

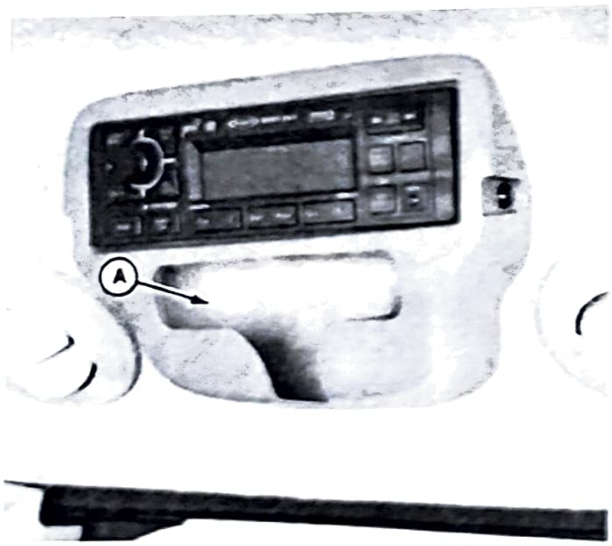
1. Aim two front vents (A) toward windshield.
2. Aim middle vent (B) toward side window.

NOTE: Closing middle and rear vents (C) helps clear windshield faster.

3. Press top half of On/Off Switch (D) and turn air conditioner temperature control knob (E) to full counterclockwise position.
4. Turn heater temperature control knob (F) clockwise to obtain desired temperature.
5. Adjust blower speed knob (G) to desired speed.

KN52281,1004856-19-18NOV13

Using Radio—Cab



LV21361—UN—14MAR14

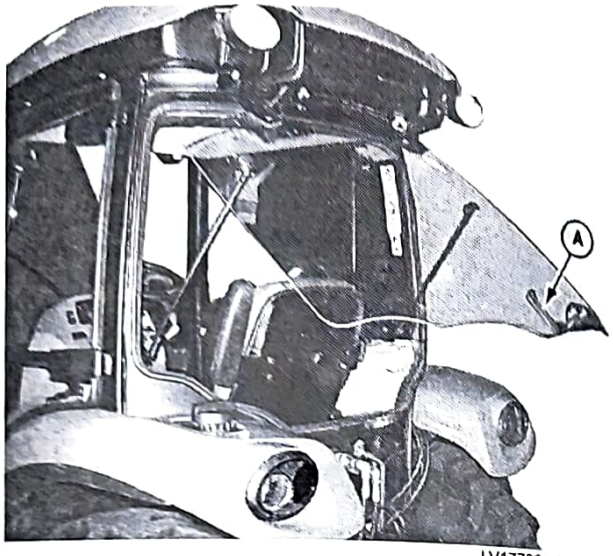
Radio Shown May Be Different

A—Tray

The radio is mounted in the headliner of the cab. A tray (A) is provided in the radio bezel that is used for storage of an iPod® or other mobile digital device (not provided). Refer to the operator's manual supplied by the radio manufacturer for operating instructions.

KN52281,1004BFF-19-17MAR14

Using Rear Window—Cab



LV17730—UN—09MAY13

A—Latch

Opening and Closing Rear Window

IMPORTANT: Avoid damage! Check to be sure 3-point hitch arms and attached rear implements are out of the way before opening the rear window.

Release latch (A) on inside of rear window and push window out to open. Pull window in to close and secure latch.

Emergency Exit

Exit through rear window if cab doors are blocked in an emergency.

KN52281,1004857-19-29JUL13

Using Toolbox—If Equipped

LV26073—UN—28MAR13

A—Toolbox Latch

Turn toolbox latch (A) clockwise to open.

DPD00731,0000029E-19-28MAR13

Transport Machine on Trailer

CAUTION: Avoid injury! Use extra care when loading or unloading the machine into a trailer or truck.

Close fuel shutoff valve, if the machine is equipped.

IMPORTANT: Avoid damage! Transporting a machine on a trailer at high speeds can result in hood raising and possibly coming off machine if not secured.

- **Position machine on trailer so hood or engine cover opens from rear of trailer to prevent wind from blowing hood or cover open.**
- **Secure hood with existing machine locks or latches.**
- **If no locks or latches exist, secure hood with tie-down straps.**

NOTE: Use a heavy-duty trailer to transport the machine.

1. Drive or back machine onto trailer so hood or engine cover opens from rear of trailer.
2. Lower any implements to the trailer deck.
3. Lock the park brake.
4. Stop the engine.
5. Remove the key.
6. Close the fuel shutoff valve.
7. Remove or cover up the slow moving vehicle (SMV) sign.
8. Fasten machine to trailer with heavy-duty straps, chains, or cables. Both front and rear straps must be directed down and outward from machine. Trailer must have signs and lights as required by law.

KN52281,1003ECB-19-29NOV16

Transporting Machine

Driving Machine Safely on Roads

CAUTION: Avoid injury! Use caution when operating machine at transport speeds. Reduce speeds if towed load weighs more than machine. Consult towed equipment operator's manual for recommended transport speeds.

Use additional caution when transporting towed loads under adverse surface conditions, especially when turning, and on inclined surfaces.

Use of warning lights and turn signals is recommended when traveling on public roads unless prohibited by state or local regulations. An implement safety lighting kit is available from your John Deere dealer.

Observe the following precautions when operating the machine on a road:

- Make sure SMV (slow moving vehicle) emblem and warning lights are clean and visible. If towed or rear-mounted equipment obstructs these safety devices, install SMV emblem and warning lights on equipment.
- Turn on flashing warning lights and headlights, except if prohibited by law.
- Drive slowly enough to maintain safe control at all times. Slow down for hillsides, rough ground, and sharp turns, especially when transporting heavy, rear-mounted implements.
- Adjust tread width position of rear wheels to provide maximum stability.
- If equipped, disengage the MFWD to reduce tire wear.
- Never coast machine downhill.

KN52281,10048C1-19-04MAR14

Pushing or Towing Machine

CAUTION: Avoid injury! Never tow machine faster than 16 km/h (10 mph). If possible, have someone operate steering and brakes of towed tractor.

IMPORTANT: Avoid damage! Push or tow machine for short distances only.

1. Push the PTO switch to the off position.
2. Disengage the differential lock.
3. Disengage park brake.
4. Move transmission to neutral position.
   - PRT—Depress clutch pedal completely and move the transmission gear and range shift levers to the N (neutral) position. Move the reverser lever to the N (neutral) position.
   - HST—Move the range shift lever to the N (neutral) position.
5. Disengage the MFWD

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