

JOHN DEERE JD644-B LOADERS



OPERATORS MANUAL JOHN DEERE JD644-B LOADERS

OMT68749 K9 English

JOHN DEERE DUBUQUE WORKS
OMT68749 K9

LITHO IN THE U.S.A. (REVISED)
ENGLISH





To the Operator

! This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

To keep your loader running efficiently, read the instructions in this operator's manual.

Read the Contents to learn where each section is, whether it is operation, lubrication, or service. Use the Alphabetical Index for fast reference.

Note that throughout this manual, directions left-hand and right-hand are determined by facing in the direction of loader forward travel.

Record your loader serial numbers in the spaces provided on page 62. Your dealer needs this information when you order parts.

The warranty on this loader appears on your copy of the purchase order which you received from your dealer when you purchased the loader.

Your operator's manual contains metric equivalents which follow immediately after the U.S. customary units of measure.





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Safety Rules

! Reports on accidents show that careless use of machinery causes a high percentage of accidents. You can avoid many accidents by observing the safety rules on these pages. Study these rules carefully and enforce them on the job.

Only the operator should be on the loader when it is running.

Clothing worn by the operator should be relatively tight and belted. Loose jackets, shirts, sleeves, or other items of clothing should not be permitted because of the danger of catching them in moving parts.

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

Never attempt to start or operate the loader except from the operator's station.

Walk completely around the loader, making sure everyone and everything is clear before starting to work.

Watch bucket direction at all times. Keep your eyes on load and face or look in the direction the machine is traveling.

Do not use the steering wheel as a handhold when getting on and off the loader.

Do not allow anyone to ride in the bucket or on the outside of the machine, or hitch a ride in any other manner.

Never drive too close to the edge of a ditch or excavation.

Increase the power gradually when pulling a heavy load or when driving out of a ditch or excavation.

Always keep loader in gear when going down steep hills or grades.

The clutch control knob should always be in the engaged position.

Drive slowly over rough ground or on hillsides. Reduce speed before turning or applying brakes.

Keep loading areas as level as possible.

Never lower a loaded bucket with the control lever in the float position.

Never lift the bucket over the ground crew. Never swing the bucket over a truck cab.

Never transport a load with bucket fully raised. The nearer to the ground the bucket is held, the better the stability, especially on slopes or when turning the machine. For travel, keep the bucket about 15 inches (381 mm) off the ground and tipped back to afford maximum visibility.

Watch for overhead wires. Never touch wires with any part of the loader.

When driving, use accessory lights and devices for adequate warning to operators of other vehicles. In this regard check local governmental regulations. Lights and devices may be obtained from your John Deere dealer.

Stay clear of hinged area if engine is running or steering wheel is being moved. Even with engine off, moving steering wheel on accumulator-equipped machines may cause rapid pivot of wheels and frames.

Follow recommendations on page 17 whenever it becomes necessary to tow the loader.

Do not use the loader as a battering ram.

Do not oil, grease, or adjust the loader while it is in motion.

Never leave the machine unattended with the engine running.

Do not leave the engine running while making adjustments or repairs unless specifically recommended.

Before getting off the loader, lock the range selector in the neutral position and apply the parking brake.

Lower the bucket to the ground when the loader is unattended.

Park the loader on level ground or across the slope.

Do not allow anyone to work under a raised bucket unless it is properly supported.

Connect lock bar to both frames when working around the frame pivot area.

Do not operate the engine in a closed garage or shed.

Do not operate a loader with an unsafe condition. If one is noticed, tag the steering wheel so that other operators will also know it.

Keep hands, floors, and controls free from water, grease, and mud to insure non-slip control.

Daily remove all trash accumulation from engine and operator's compartments.

Turn the radiator cap slowly to relieve pressure before removing it. Add coolant only when the engine is idling or stopped.

Use caution in handling any type of fuel. Never refuel when the engine is hot or running. Do not smoke while filling the fuel tank or servicing the fuel system.

Before using booster batteries, read instructions on page 8. If a battery needs recharging, avoid sparks by turning off the charger before connecting or disconnecting the charger.

Mount a fire extinguisher on the loader. Be sure that the extinguisher is properly maintained and be familiar with its proper use.

Provide a first-aid kit for use in case of an accident. Use the proper antiseptics on scratches, cuts, and other injuries immediately.

Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and that lines, pipes and hoses are not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

Always disconnect the battery ground strap before making adjustments on the engine, or electrical equipment and before welding on any part of the unit. This will prevent dangerous sparks which create a fire hazard and may cause harm or damage. Disconnecting the battery also prevents accidental operation of the starter or engine.

When driving connecting pins in or out, use care to guard against injury from particles that may chip off the pin or object used in striking the pin. Protect eyes with safety glasses.

Failure to follow proper procedure when mounting a tire on a wheel or rim can produce an explosion which may result in serious bodily injury. DO NOT attempt to

mount a tire unless you have the proper equipment and experience to perform the job safely. Have it done by your John Deere dealer or a qualified tire repair service.

Detailed tire mounting instructions, including necessary safety precautions, are contained in John Deere Fundamentals of Service (FOS) Manual 55B, Tires and Tracks, available from your John Deere dealer.

Be sure all tire rim parts are correctly assembled and interlocking before inflating tires. Use an inflation cage, safety cables, or some other device during inflation.

FIRE PREVENTION MAINTENANCE

Fire prevention is a primary responsibility of the owner and operator. You are the only ones that can make sure machines are cleaned daily and that preventive maintenance programs include inspection, repair and replacement of worn components.

Following is a list of fire prevention maintenance guidelines that, if followed, will reduce fire hazards you may encounter with your machine.

Service the machine so that an operator will be on hand during the critical period of possible fire ignition from heat buildup after engine shutdown.

Check daily for properly charged extinguishers. Maintain charged fire extinguishers. Once extinguisher is operated, no matter for how long, it must be recharged.

Direct extinguisher nozzle at base of flame.

Remove trash from engine compartment daily. Clean around exhaust manifold and turbocharger.

Clean bottom guards (belly pans) under engine and also sides of engine block.

Make sure all engine guards and screens are kept in place during operation to reduce entry of trash.

Remove trash from remaining bottom guards, around drive lines, and parking brake disks daily.

Clean radiator area as frequently as necessary to maintain cooling efficiency.

Check fuel and hydraulic oil lines daily for leaks. Tighten loose fittings and replace faulty lines promptly to prevent collection of flammable fuel and oil in the machine.

Clean battery terminals and remove debris and dirt from top of battery every week.

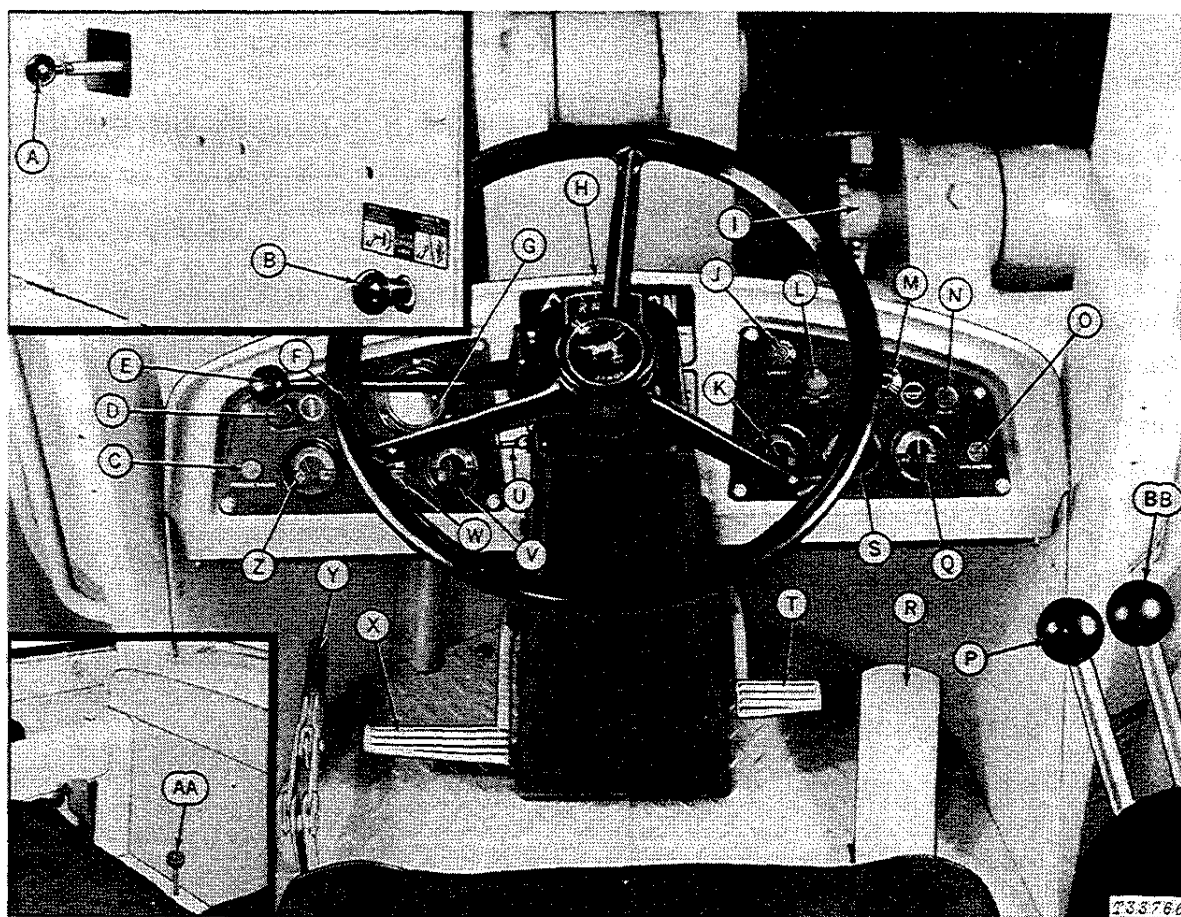
Check parking brake adjustment weekly, as overheated brakes can be a fire hazard.

Check wiring regularly. Repair or replace worn or frayed insulation.



Controls and Instruments

First become familiar with the location and purpose of all controls and instruments. Study this section carefully.



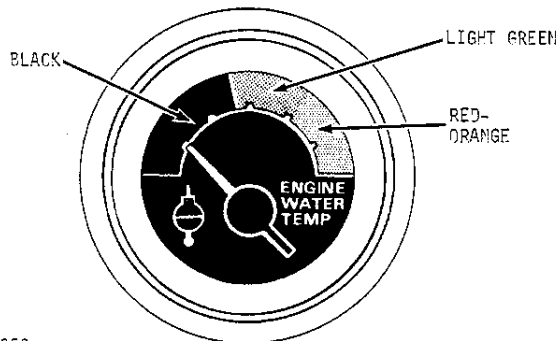
A—Seat Adjustment Lever
 B—Clutch Control Lever
 C—Parking Brake Light
 D—Starter Button
 E—Shift Lever
 F—Key Switch
 G—Hour Meter
 H—Range Indicator
 I—Boom Height Control Cam
 J—Cigar Lighter

K—Engine Water Temperature Gauge
 L—Starting Aid Button
 M—Light Control Button
 N—Horn Button
 O—Hydraulic Filter Indicator Light
 P—Boom-Bucket Control Lever
 Q—Engine Oil Pressure Gauge
 R—Throttle
 S—Voltmeter
 T—Right Brake Pedal

U—Turn Signal and Warning Light Switch
 V—Fuel Gauge
 W—Transmission Oil Pressure Gauge
 X—Left Brake Pedal
 Y—Parking Brake
 Z—Transmission Oil Temperature Gauge
 AA—Axle Disconnect Lever
 BB—Attachment Control Lever

GAUGES AND INDICATORS

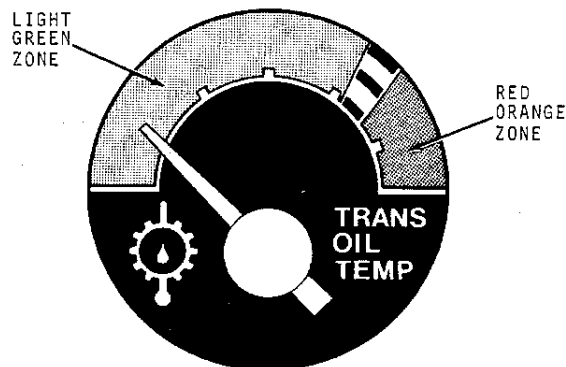
When operating loader, check engine coolant temperature gauge, the transmission temperature gauge, the transmission oil pressure gauge, the voltmeter and the engine oil pressure gauge.



T50859

Engine Coolant Temperature Gauge

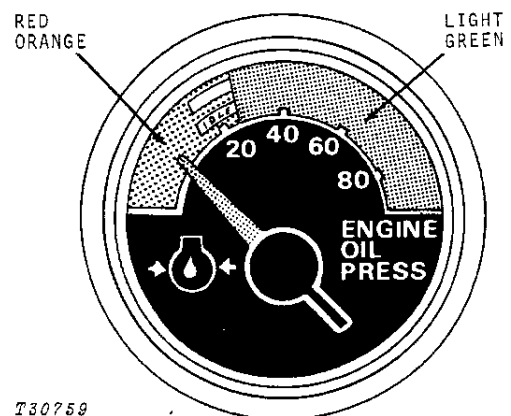
Normal operating temperature is indicated by green zone on dial. If indicator hand enters red-orange zone on dial, stop engine and determine cause.



T34530N

Transmission Oil Temperature Gauge

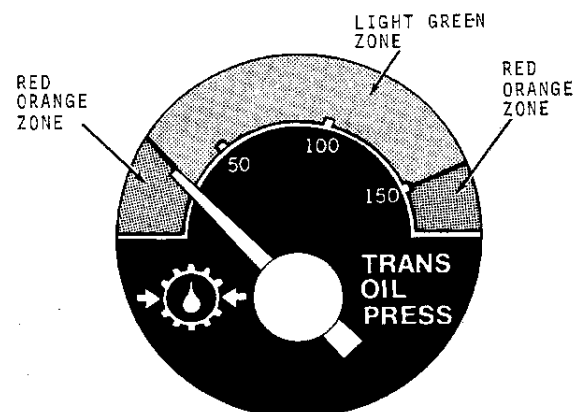
Normal operating range is in light green zone. If indicator hand enters the red-orange zone, operate in a lower gear. If hand remains in red-orange zone, check transmission oil level.



T30759

Engine Oil Pressure Gauge

Normal operating pressure is in light green zone on dial. If indicator hand goes into red-orange zone, stop the loader and check engine oil level. If oil level is not low, check for restrictions in oil lines or incorrect viscosity oil.

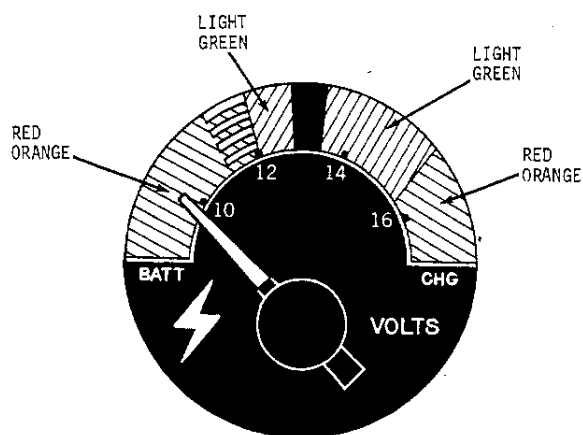


T34531N

Transmission Oil Pressure Gauge

Normal operating pressure is indicated by light green zone on dial. If hand is in either red-orange zone, stop loader and determine cause for low or excess pressure.

6 Controls and Instruments



Voltmeter

When key switch is on and engine is off indicator should be in lower left green zone. If indicator is not in this zone, troubleshoot electrical system.

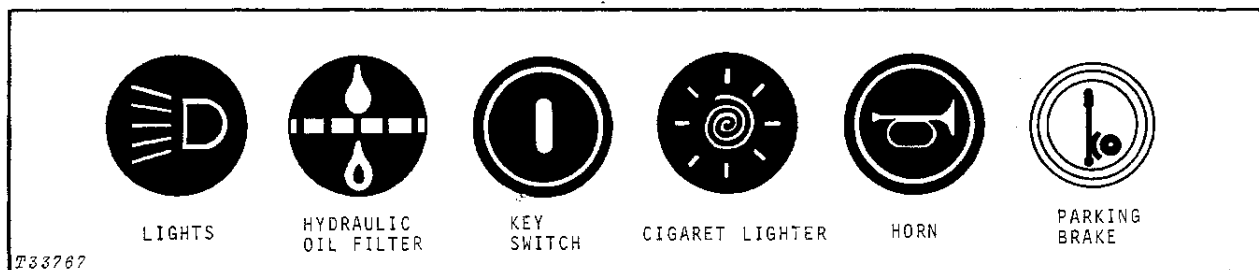
When engine is running the indicator should move to and stay in right green zone. If indicator hand moves out of this "operating zone", troubleshoot electrical system.

Reservoir Return Filter Indicator Light

Whenever filter indicator light glows during loader operations, replace reservoir return filter.

NOTE: During initial operation with cold hydraulic oil, the indicator light may glow. However light should go out after oil warms up.

WORLD-WIDE SYMBOLS FOR OTHER CONTROLS





Operation

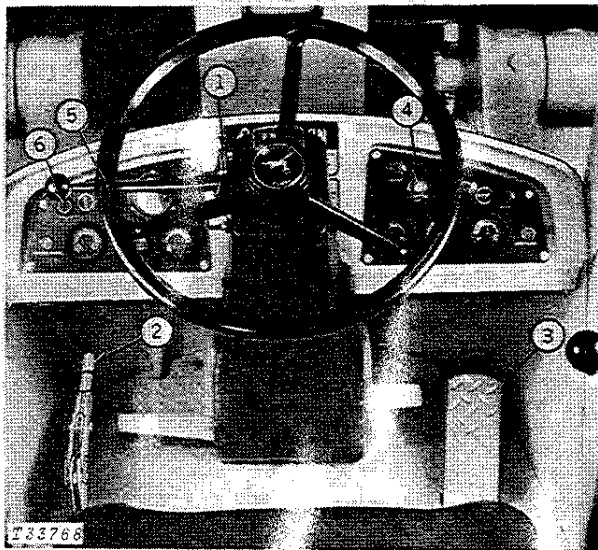
PRE-STARTING INSPECTION

Perform following checks before starting the engine for first time each day:

- (1) Check engine crankcase oil level.
- (2) Check transmission oil level.
- (3) Check radiator coolant level.
- (4) Inspect air cleaner; service if necessary.
- (5) Check fuel filter for sediment.

IMPORTANT: Immediately after starting loader and before moving loader, check steering and brake systems. If either one is not working, do not move the unit until problem is corrected.

STARTING THE ENGINE



Engine Starting Controls



CAUTION: Do not start engine unless you are in the operator's seat.

1. Lock transmission shift lever in neutral.
2. Keep parking brake applied.
3. Depress throttle approximately half way.
4. Use cold weather starting aids as necessary.
5. Turn key switch clockwise to "start" position.
6. Push starter button. (Do not crank engine for more than 20 seconds at a time. Wait two minutes between cranking periods.)

If starter button is released before engine starts, wait until starter stops turning before pushing button again.

As soon as engine starts, release starter button. Adjust engine speed to approximately half throttle.

7. Observe all gauges. If they indicate abnormal operation, stop the engine and determine the cause.

COLD WEATHER STARTING AID

Starting Fluid Adapter

CAUTION: Cold weather starting fluid is highly flammable.

The cold weather starting aid is electrically activated by a button on the right-hand control panel.

IMPORTANT: To avoid engine damage, crank engine with starter one or two revolutions before depressing starting fluid button. Depress starting fluid button only while the engine is cold and cranking.

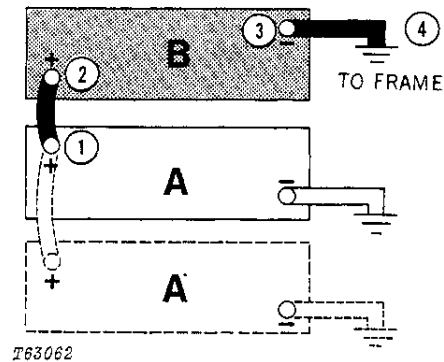
Push starting aid button to inject atomized starting fluid directly into the engine air intake system. Apply in short shots and avoid excessive usage.

NOTE: Cold weather starting fluid will be injected continually into the engine whenever the button is depressed. The loader must be in neutral before the fluid will be injected into the engine.

The cold weather starting aid container and bracket are located inside the left-hand engine side shield.

IMPORTANT: Keep starting aid can in place.

BOOSTER BATTERY



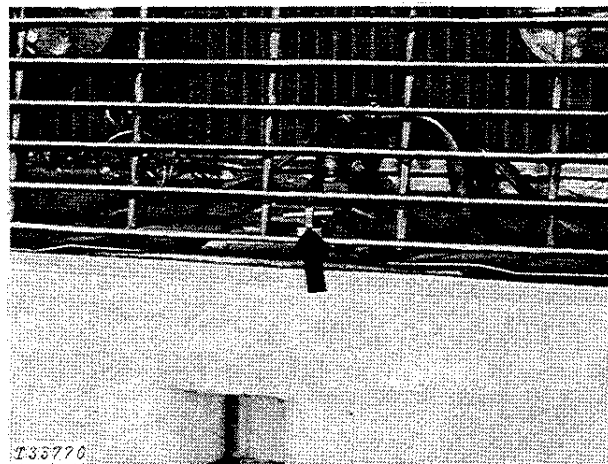
A—Loader Batteries (2-12V) B—Booster Battery (12V)

Connect booster battery in sequence shown above. Make last connection (4) to frame.

IMPORTANT: The loader batteries are **NEGATIVE**-grounded. Do not use the positive cable to ground the batteries.

CAUTION: Gas given off by batteries is explosive. To void injury or battery damage, avoid sparks near the batteries.

HYDRAULIC PUMP SHUT-OFF SCREW



Increase engine cranking speed by shutting off the engine-mounted hydraulic pump. Turn the shut-off screw in until resistance is felt. Turn screw in one more turn.

After the engine is running, back the shut-off screw all the way out.

ENGINE COOLANT HEATER (Optional)

A 1000-watt engine coolant heater can be installed on your loader.

NOTE: Use for at least 10 hours before starting.

CAUTION: To prevent accidental electrical shocks, always use a grounded cord.

WARM-UP PERIOD

Warm up engine by operating at half-throttle for five minutes. Do not race or idle engine during warm-up period.

Operate the engine under a lighter load and lower speeds than normal for the first 30 minutes.

Check gauges and indicator lights frequently.

ENGINE SPEEDS

Working speeds range from 3/4 to full throttle.

ENGINE IDLING

Avoid unnecessary engine idling.

ENGINE BREAK-IN

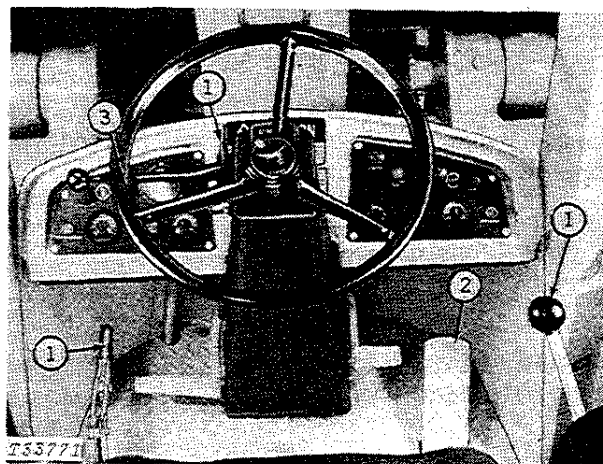
If coolant temperature rises into red-orange zone on gauge, operate in a lower gear or lockup to reduce load on engine.

Avoid prolonged periods of engine idling.

During break-in, add John Deere TORQ-GARD SUPREME® 10W-20 engine oil or an equivalent if needed.

CAUTION: Before starting engine, be sure there is plenty of ventilation. Do not operate engine in a closed building.

PARKING THE LOADER



1. Lock shift lever in "Neutral." Apply parking brake. Lower bucket to ground.

2. Run engine at half speed for 2 minutes, then run at slow idle.

3. Turn ignition key off.

CAUTION: Before dismounting from loader, discharge power steering oil accumulator by turning steering wheel in both directions several times.



Suggest:

If the above button click is invalid.

Please download this document first, and then click the above link to download the complete manual.

Thank you so much for reading

DRIVING THE LOADER

ROLL-OVER PROTECTIVE STRUCTURE AND SEAT BELT

A roll-over protective structure with seat belt and canopy is standard equipment for loader. A cab that fits on protective structure is also available.

CAUTION: Use seat belt at all times when operating loader.

CHECKING TIRES

Before driving loader, inspect all tires for proper inflation as follows:

Tire Size	Type	Ply Rating	Pressure	
			Minimum	Normal
17.5 x 25	L-2	12	50 psi (3 bar)	60 psi (4 bar)
20.5 x 25	L-2, L-3	12	40 psi (3 bar)	50 psi (3 bar)
20.5 x 25	L-3	16	50 psi (3 bar)	60 psi (4 bar)

CAUTION: Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion. DO NOT attempt to mount a tire unless you have proper equipment and experience.

IMPORTANT: All tires must be inflated to the same pressure.

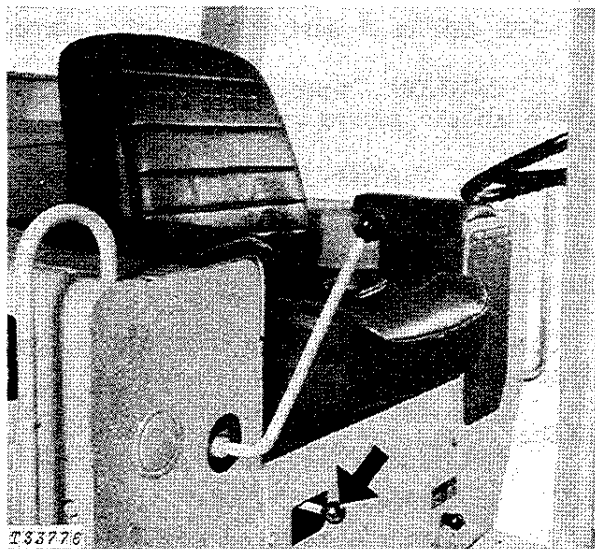
Tires must be properly inflated to obtain maximum tire life. Underinflated or overinflated tires cause tire deterioration, slippage, and failure.

When working with loose material, inflate tires to minimum air pressure. When hard digging is necessary, inflate tires to normal pressure to prevent front tires from buckling.

REVERSE WARNING ALARM

When shift lever is put in reverse, a warning alarm will sound at intervals. Alarm will stop sounding when shift lever is put in a forward gear or neutral.

ADJUSTING SEAT



Seat Adjustment Lever

Disengage the seat latch to move the seat forward or backward. Slide the seat to desired position. Release seat latch lever.

SELECTING GROUND SPEEDS

There are two forward speed ranges and one reverse speed range.

NOTE: Travel speeds shown are based on 17.5-25 tires and zero slippage. Speeds listed are maximum speeds. They may vary, depending on load and torque converter operation.

Ground Speeds in Miles Per Hour (km/h)

Range	Speeds
Low (L)	0-7.7 mph (0-12 km/h)
High (H)	0-25 mph (0-40.2 km/h)
Reverse (R)	0-10 mph (0-16.1 km/h)

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