



JD500 TRACTORS



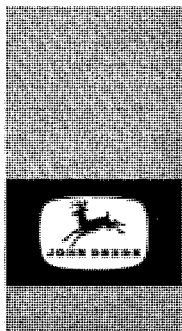
OPERATORS MANUAL JD500 TRACTORS

OMR34408 F4 English

JOHN DEERE WATERLOO WORKS
OMR34408 F4

LITHO IN THE U.S.A.
ENGLISH





TO THE PURCHASER

Your new John Deere JD500 Tractor is an entirely new concept of power. Built to the traditionally high standards of John Deere, this versatile tractor meets today's exacting requirements.

Outstanding ease of operation, the ability to match engine power and speed to the job, operating comfort, hydraulic power when and where you need it, simplicity of lubrication and service, modern styling, and economical, dependable service are all features of this great tractor.

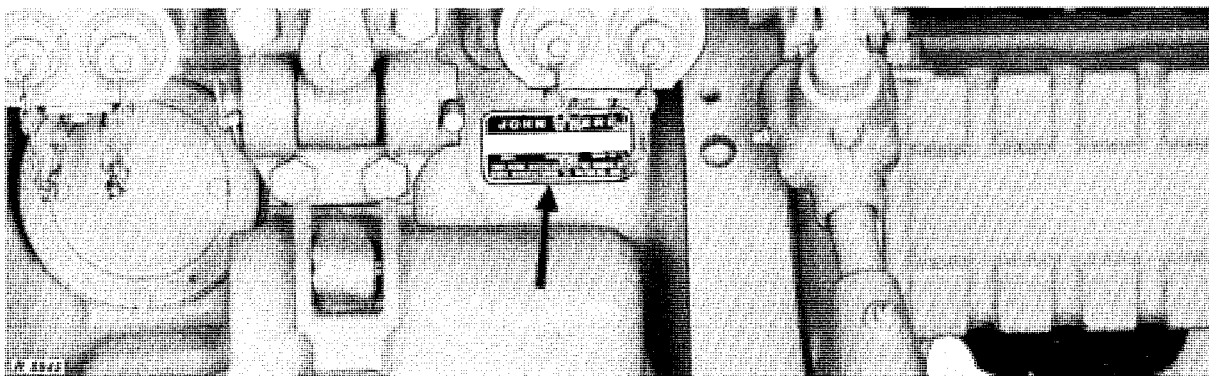
At the time the tractor was delivered, the John Deere dealer discussed with you its safe operation and proper care. However, before putting the tractor to work, read this manual. It contains complete instructions for operating the tractor, caring for it, and taking advantage of its many time- and labor-saving features. After reading this manual, keep it in a convenient place together with the tractor parts list and any equipment operator's manual and parts list that are used with the tractor. This will assure you quick and easy reference if questions arise concerning operation, lubrication, or service.

References to the right or left side of the tractor are as viewed from behind the tractor.

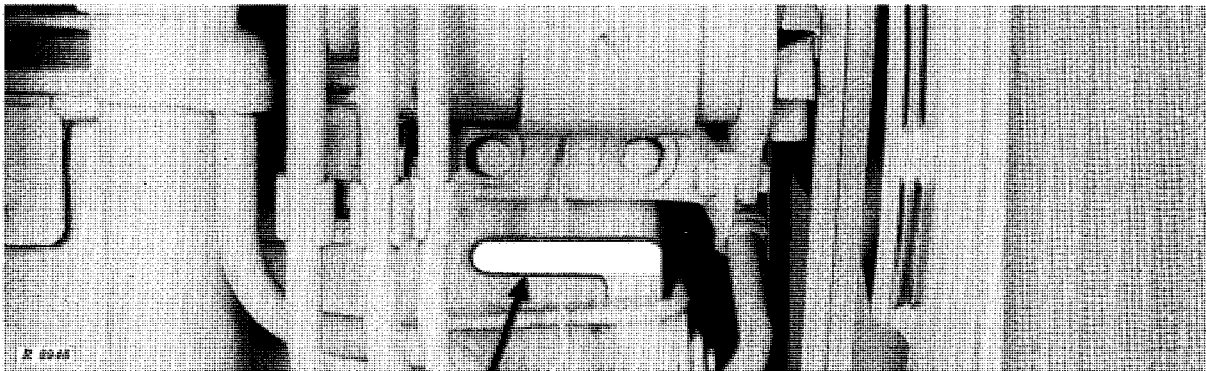
The service policy which you received with your tractor certifies that the tractor was properly inspected and prepared for delivery by your John Deere dealer. Keep this policy in a safe place and present it to the dealer whenever services which it authorizes are required.

Your John Deere dealer wants to help you get the most value from your tractor. His skilled servicemen can handle every job efficiently. These men are trained in modern service methods; they have all necessary tools and equipment. If new parts are needed, only genuine John Deere parts will be installed. These parts are exact duplicates of the originals, made from the same patterns and of the same high-quality materials.

When in need of new parts, be prepared to furnish your dealer with the engine serial number, the tractor chassis serial number, and the tractor series number. For ready reference, locate and record the serial numbers in the spaces provided in the following illustrations.



Record Tractor Chassis Serial Number

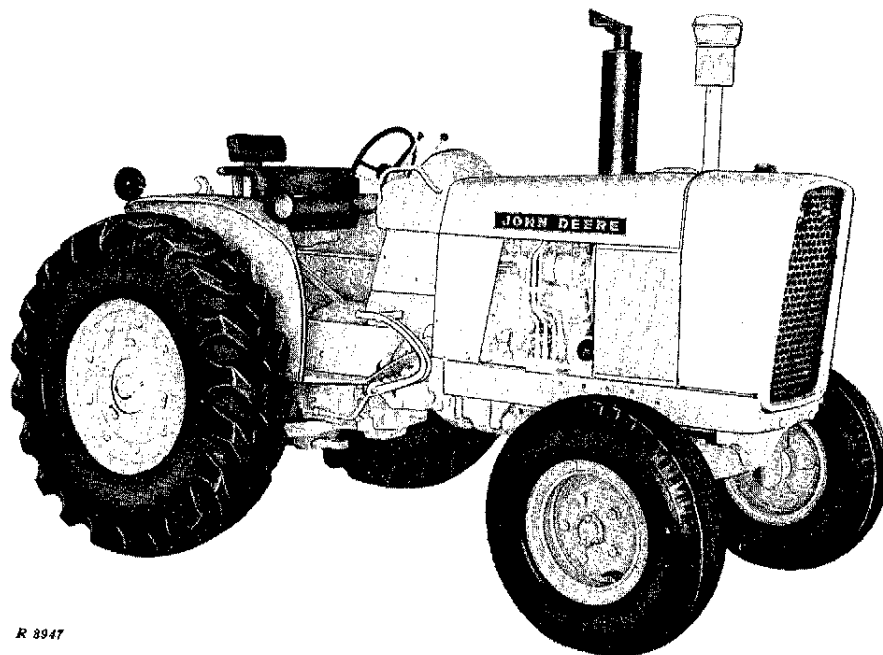


Record Engine Serial Number



SPECIFICATIONS

HORSEPOWER (at 2500 rpm)		<u>Diesel</u>	<u>Gasoline</u>
Observed net engine flywheel		80.0 h.p.	77.7 h.p.
ENGINE:			
Type	4-cylinder, in-line, valve-in-head		
Engine speeds:			
Idle for engine shutoff		420 rpm	
Normal slow idle	600 rpm	650 rpm	
Working speeds	1500 to 2500 rpm	1500 to 2500 rpm	
Bore and stroke	4-1/4 in. x 4-3/4 in.	4-1/4 in. x 4 in.	
Displacement	270 cu. in.	227 cu. in.	
Compression ratio	16.5 to 1	7.5 to 1	
Firing order	1-3-4-2	1-3-4-2	
Intake valve clearance	0.018 in.	0.015 in.	
Exhaust valve clearance	0.018 in.	0.028 in.	
Injection pump timing	TDC		
Distributor timing		20 degrees BTDC at 2200 rpm	
Distributor point gap		0.022 in.	
Spark plug gap		0.025 in.	
ELECTRICAL SYSTEM:			
Starter, generator voltage	24 volts	12 volts	
Lights, accessory voltage	12 volts	12 volts	
12-volt battery, 78-plate, 75 ampere-hour	Two (connected in series)	One	



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John Deere JD500 Tractor with Diesel Engine and Power Shift Transmission

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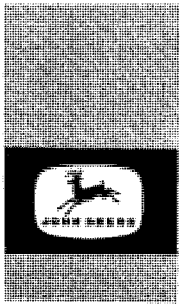
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Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

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COOLING SYSTEM:

Type Pressurized with centrifugal pump

Engine temperature control . . . Heavy-duty thermostat

LUBRICATION SYSTEM: Force-feed pressurized type with full-flow oil filter

CAPACITIES (Tractor Only):

Cooling system 19 U.S. qts.

Fuel tank 25 U.S. gals.

Crankcase Dry system—9 U.S. qts.
At service intervals—8 U.S. qts.

Transmission-hydraulic system:

Collar Shift Dry system—11-1/2 U.S. gals.
At service intervals— 8 U.S. gals.

Power Shift Dry system—14-1/2 U.S. gals.
At service intervals—11 U.S. gals.

Air cleaner Diesel—4 U.S. pts.
Gasoline—2-1/4 U.S. pts.

Belt pulley 2-1/2 U.S. pts.

COLLAR SHIFT TRANSMISSION:

Type Collar Shift, constant mesh

Gear selections 8 forward and 2 reverse

Shifting 4 stations, right- or left-hand shifting in each station

POWER SHIFT TRANSMISSION:

Type Planetary gears, hydraulically actuated wet disk clutches and brakes

Gear selections 8 forward and 4 reverse

Shifting Hydraulic powershifting controlled by right-hand speed selector and by left-hand reverser lever

GROUND SPEEDS See page 11

POWER TAKE-OFF:

Type Independent PTO with front and rear power take-off. Stub shafts used for rear PTO conversion on dual speed PTO

Speed (2100 engine rpm) Front—1000 rpm

Dual speed rear—540 or 1000 rpm

Single speed rear—1000 rpm

HYDRAULIC SYSTEM:

Type Closed center, constant pressure. Includes power steering, power brakes and equipment control

Maximum pressure 2250 psi

BRAKES: Hydraulically power actuated, disk-type, operating in oil

FRONT TIRES

Size 7.50-16, 8-ply

REAR TIRES

Size 14.9-28, 8-ply

(Additional size tires available for special requirements.)

FRONT WHEEL TREAD 56 in.

REAR WHEEL TREAD 64 and 74 in.

DIMENSIONS:

Wheel base 82 in.

Over-all length 126-1/2 in.

Over-all height 83-1/8 in.

Height to steering wheel 65 in.

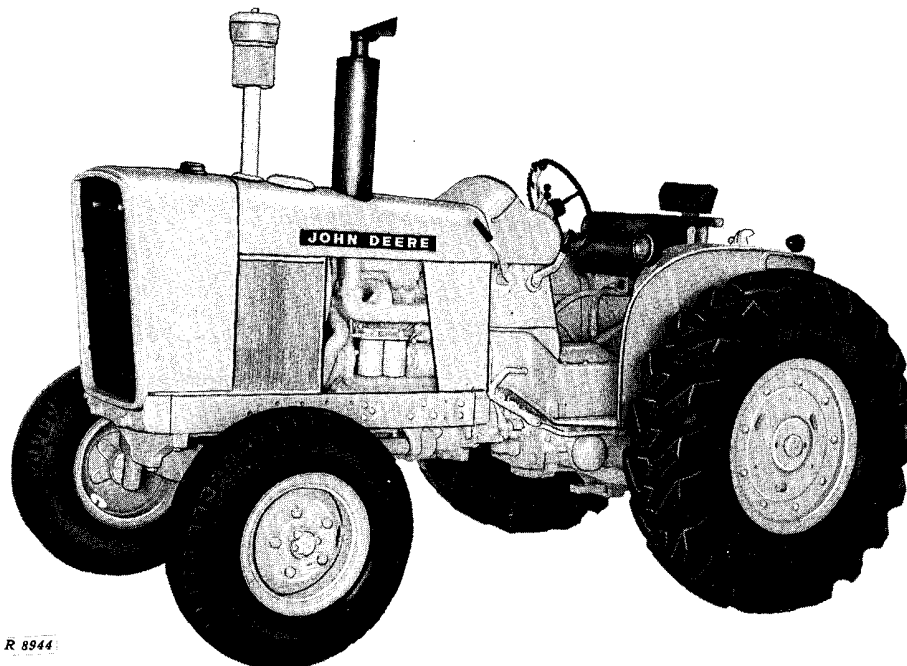
Width 78-7/8 in.

Turning radius 147 in.

SHIPPING WEIGHT (Collar Shift Tractors equipped for average service, less fuel and ballast. Add 328 pounds if tractor has Power Shift transmission): Diesel—6945 lbs.

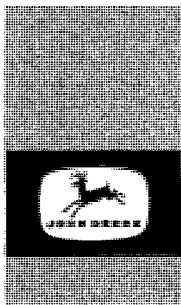
Gasoline—6805 lbs.

(Specifications and design subject to change without notice.)



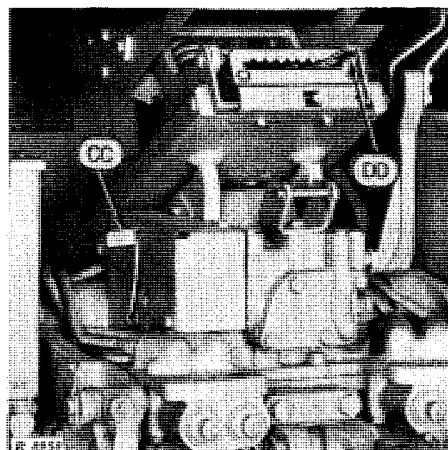
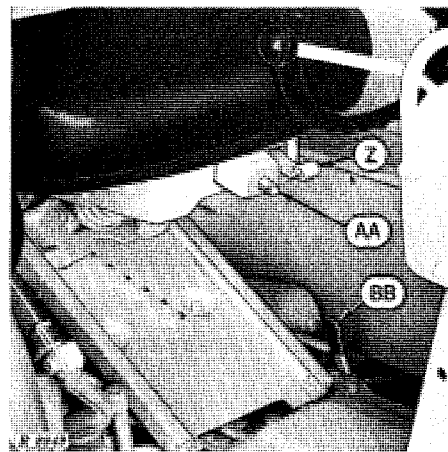
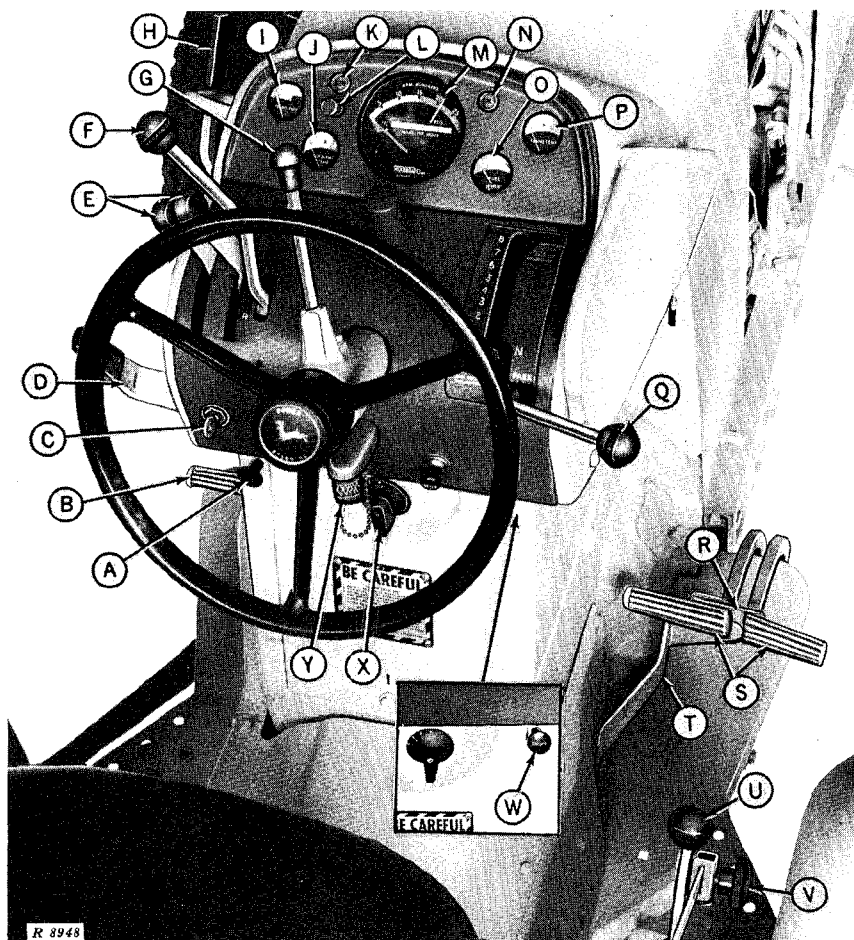
R 8944

John Deere JD500 Tractor with Diesel Engine and Power Shift Transmission



CONTROLS AND INSTRUMENTS

For safe and efficient operation, first become familiar with the location and purpose of all controls and instruments. Study the next few pages carefully, regardless of your previous experience.



Tractor with Diesel Engine and Power Shift Transmission

- | | |
|---|--|
| A - Latch Knob (Power Shift Tractors, page 7) | P - Transmission Oil Temperature Gauge (Power Shift Tractors, page 12) |
| B - Inching Pedal (Power Shift Tractors, page 11) | Q - Speed Selector (Power Shift Tractors, page 11) |
| C - Key Switch (pages 5, 6, and 9) | Shift Lever (Collar Shift Tractors, page 13) |
| D - Power Take-Off Clutch Lever (page 29) | R - Brake Coupler Bar (page 15) |
| E - Remote Cylinder Operating Levers (page 19) | S - Brake Pedals (page 15) |
| F - Reverser Lever (pages 12 and 13) | T - Foot Throttle (page 8) |
| G - Hand Throttle (page 8) | U - Rockshaft Control Lever (page 22) |
| H - Engine Disconnect Lever (Power Shift Tractors, page 7) | V - Rockshaft Control Lever Depth Stop (page 22) |
| I - Transmission Oil Pressure Gauge (Power Shift Tractors, page 12) | W - Engine Choke Knob (Gasoline Tractors, page 6) |
| J - Coolant Temperature Gauge | X - Light Switch (page 17) |
| K - Generator Indicator Light (pages 5 and 6) | Y - Ether Starting Fluid Adapter (Diesel Tractors, page 6) |
| L - Speed Indicator Knob (page 11) | Z - Seat Latch Handle (page 10) |
| M - Speed-Hour Meter (pages 11 and 38) | AA - Seat Weight Adjusting Screw (page 10) |
| N - Oil Pressure Indicator Light (pages 5 and 6) | BB - Tow Lever (Power Shift Tractors, page 14) |
| O - Fuel Gauge | CC - Rockshaft Selector Lever (page 23) |
| | DD - Seat Position Selector Lever (page 10) |



OPERATION

Complete instructions for safe and efficient operation are given on the following pages. By following these directions carefully, you can be sure that you are taking full advantage of the time and labor-saving features built into all John Deere equipment.

OPERATING THE ENGINE

PRESTARTING CHECKS

Perform the following checks and services before starting the engine for the first time each day. For detailed instructions, see pages 41, 42, and 49.

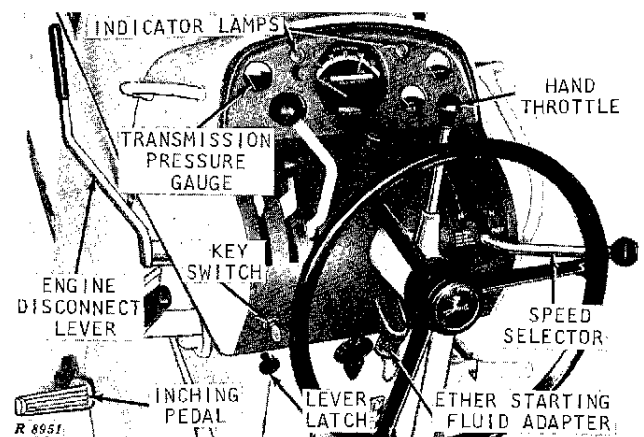
1. Check the engine crankcase oil level.
2. Check the radiator coolant level.
3. Change the air cleaner oil when the dirt level exceeds 3/8 inch.
4. Check the fuel pump sediment bowl. See page 49. If the tractor has a precleaner, check the collector bowl.
5. Lubricate the front axle pivot pins, steering knuckle pins, steering bell crank, tie rod ends, and steering cylinder end fittings.
6. Grease the front wheel bearings if the tractor has been operated in extremely wet or muddy conditions.
7. Make sure the fuel shut-off valve on the bottom of the fuel tank is open.

STARTING THE DIESEL ENGINE

NOTE: If the prevailing temperature is 40° F. or lower, it may be necessary to use a cold weather starting aid to start the engine - see page 6. Do not tow a Power Shift tractor to start the engine.

Perform the Prestaring Checks above.

1. See that the shift lever or the speed selector is in the "PARK" position. Depress the clutch pedal or the inching pedal.
2. Place the hand throttle in the 1200 rpm position, approximately one-third of its travel to the right from the slow idle position.
3. Turn the key switch clockwise to the first position. Both indicator lights should glow. If either lamp fails to glow, turn off the key switch and determine the cause.
4. Turn the key switch all the way to the right to crank the engine. Do not hold the switch



Diesel Starting Controls

in this position for more than 30 seconds at a time. To do so may overheat the starter. If the engine does not start the first time, wait for a minute or two before trying again. If it does not start after four such attempts, refer to "Trouble Shooting" - page 66.

If the key switch is released before the engine starts, wait until the starter stops before turning the switch again. This will prevent possible damage to the starter.

On Collar Shift transmission tractors the shift lever must be in neutral, or on Power Shift transmission tractors the inching pedal must be depressed while the speed selector is in neutral or PARK position before the starter will operate.

5. After the engine starts, the generator and oil pressure indicator lights should go out. If either light continues to glow when the engine is running faster than 800 rpm, stop the engine and determine the cause. Leave the key switch in the on position so that the indicator lights will function.

On tractors with Power Shift transmission, check to see that the transmission oil pressure gauge indicates oil pressure. Operating the engine when gauge shows insufficient pressure may damage the tractor. See pages 7 and 12.

STARTING THE GASOLINE ENGINE

Perform the Prestarting Checks on page 5.

1. See that the shift lever or the speed selector is in "PARK" position. Depress the clutch pedal or the inching pedal.

2. PLACE THE HAND THROTTLE IN THE 650 RPM POSITION, all the way to the left with the knob in.

3. When the prevailing temperature is below 60 degrees Fahrenheit and the engine is cold, pull out on the engine choke knob.

NOTE: At extremely low temperatures it may be necessary to use a cold weather starting aid (see next column). Do not tow a Power Shift tractor to start the engine.

4. Turn the key switch clockwise to the first position. The generator and oil pressure indicator lights should glow. If either light fails to glow, turn the key switch off and determine the cause.

5. Turn the key switch all the way to the right to start the engine. Do not hold the key switch in start position for more than 30 seconds at a time. To do so may overheat the starter. If the engine does not start the first time, pull the hand throttle to the right SLIGHTLY and wait a minute or two before trying again. If it does not start after four such attempts, refer to "Trouble Shooting" (page 66).

If the key switch is released before the engine starts, wait until the starter stops before turning the switch again. This will prevent possible damage to the starter.

On Collar Shift tractors, the shift lever must be in neutral, or on Power Shift tractors, the inching pedal must be depressed while the speed selector is in neutral or PARK position before the starter will operate.

6. As soon as the engine starts, push the choke knob in. During cold weather, it may be necessary to leave the choke partially on for the first few minutes.

7. As the engine begins to run, check to see that the oil pressure and generator indicator lights go out. If either light continues to glow when the engine is running faster than 700 rpm, stop the engine and determine the cause.

On tractors with Power Shift transmission, check to see that the transmission oil pressure gauge indicates oil pressure. Operating the engine when gauge shows insufficient pressure may damage the tractor. See pages 7 and 12.

COLD WEATHER STARTING AIDS

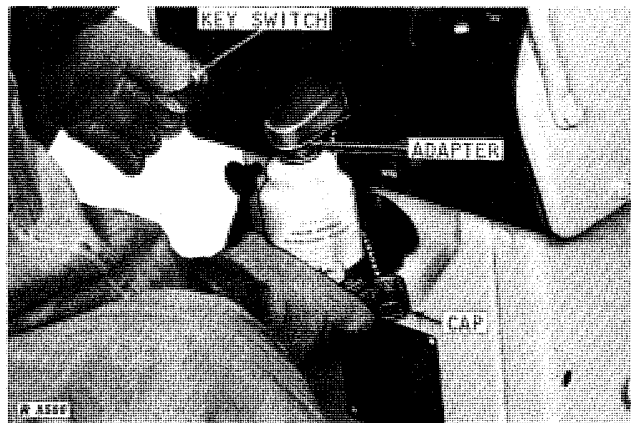
For cold weather starting, the diesel tractor is equipped with an ether starting fluid adapter. The Power Shift transmission tractor is equipped with an engine disconnect lever. Other starting aids are available from your John Deere dealer.

These aids are effective at low temperatures, only when the engine is otherwise operating satisfactorily. They will not correct such deficiencies as low battery charge, crankcase oil of heavy viscosity, and high electrical resistance which may prevent the engine from starting.

ETHER STARTING FLUID ADAPTER (Diesel Tractors)

The diesel tractor is equipped with this adapter which is used to inject atomized starting fluid into the engine air intake system. Pressurized cans of starting fluid are available from your John Deere dealer.

To use the can of starting fluid, remove the safety cap and plastic spray button from the can. Remove the cap from the adapter and position the can under the adapter.



Injecting Starting Fluid

To inject starting fluid, push up on the can.

CAUTION: To avoid damage, turn engine with starter one or two revolutions before injecting starting fluid. Inject starting fluid only while the engine is turning.

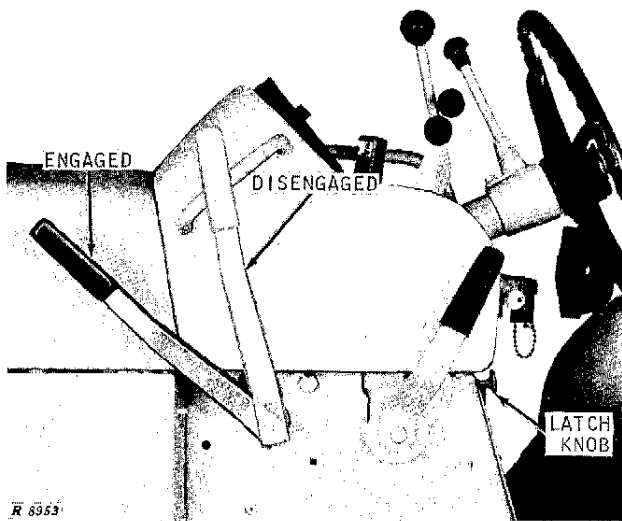
Relax pressure on the can between "shots" of starting fluid. Stop injecting fluid after the engine starts. If the engine begins to die during the first few minutes of operation, inject another "shot" of fluid. When the engine is operating satisfactorily, remove the can from the adapter and replace the safety cap on the can.

Be sure to install the cap on the adapter when it is not in use. This will prevent dust from being drawn into the engine.

Store starting fluid cans where they will not be subject to extreme cold or warm temperatures. For best results, store fluid at room temperature.

CAUTION: Ether starting fluid is highly flammable.

ENGINE DISCONNECT LEVER (Power Shift Tractors)



Engine Disconnect Lever

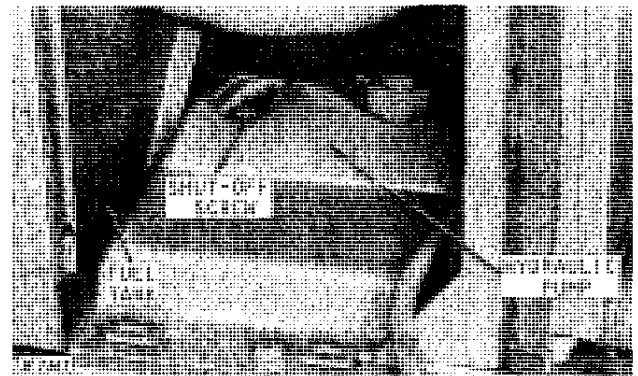
During cold weather, the starter speed on Power Shift tractors may be increased by disengaging the engine disconnect lever so that the transmission will not turn. To do so, pull the lever rearward until it is latched in the disengaged position.

IMMEDIATELY after starting the engine, engage the lever by pulling it slightly rearward while pulling out on the latch knob. Hold the knob out and allow the lever to move forward to the engaged position. Release the latch knob. The transmission oil pressure gauge should indicate oil pressure (pages 5 and 12).

CAUTION: Operating the engine with the engine disconnect lever disengaged will damage the tractor. Be sure to engage it as soon as the engine starts.

SHUTTING OFF HYDRAULIC PUMP

If the tractor has a hydraulic pump shut-off screw (available from your John Deere dealer), the starter speed may be increased during cold weather by shutting off the hydraulic pump so it will not build up pressure. To do so, turn the shut-off screw in (clockwise) one turn with a screwdriver. Then turn the screw in by hand until resistance is felt. Turn the screw in one more turn.

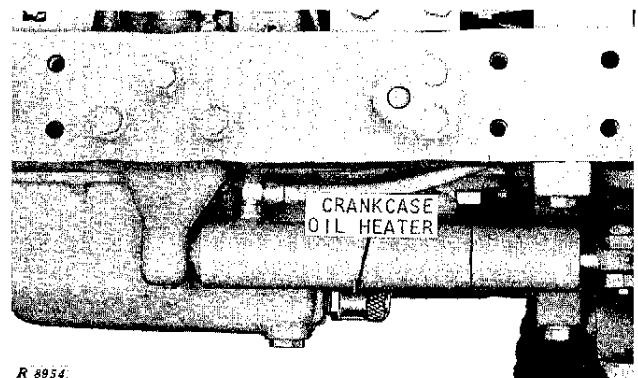


Hydraulic Pump Shut-Off Screw

After the engine has started, use a screwdriver to back the shut-off screw all the way out (turn the screw counter-clockwise). The pump will now build up pressure.

NOTE: Oil will leak past the shut-off screw if it is not backed all the way out against the internal stop.

CRANKCASE OIL HEATER



R 8954

Crankcase Oil Heater

To facilitate cold weather starting, a 240-watt, 115-volt electrical crankcase oil heater may be installed in the engine oil pan. To remove the electrical connector from the heater, press the release lever in the connector.

8 Operation - Engine

ADDITIONAL BATTERIES

Starting the engine in cold weather can be made easier by connecting an additional 12-volt battery or batteries in parallel with the 12-volt battery or batteries on the tractor.

Use jumper cables to connect the positive (+) terminals of the booster batteries to the positive (+) terminals of the tractor batteries and the negative (-) terminals of the booster batteries to the negative (-) terminals of the tractor batteries. See your John Deere dealer for tractor-mounted booster batteries.

BATTERY WARMER

This warmer is used to warm the battery, permitting it to furnish electrical current to the starter efficiently in cold weather.

Place the battery warmer under the battery in the battery compartment and plug the cord from the warmer into any convenient 115-volt electrical source. If it was necessary to disconnect the battery, be sure to connect the battery cables properly (page 58).

TRACTOR WARM-UP PERIOD

Always be sure the tractor is warmed up properly before operating under a full load.

A good way to do this is first to idle the engine at about 1500 rpm for 5 minutes and then operate it at about 1900 rpm for another 5 minutes.

It is good practice to operate the tractor for the first 30 minutes in a lower gear than is normally required for the load. This gives the oil a chance to circulate freely and prevents undue wear on engine or transmission parts.

ENGINE IDLING

Avoid unnecessary engine idling. Prolonged engine idling may cause the engine coolant temperature to fall below its normal range. This in turn causes crankcase oil dilution, due to incomplete fuel combustion, and permits formation of gummy deposits on valves, pistons, and piston rings. It also promotes rapid accumulation of engine sludge and unburned fuel in the exhaust system.

When the tractor is to remain idle for a considerable length of time, stop the engine.

ENGINE SPEEDS

The tractor engine is designed to operate at working speeds ranging from 1500 to 2500 rpm. The engine can be operated at any speed in the working range to meet various operating conditions. Operate the engine at 2100 rpm to obtain the SAE rated PTO speeds.

Normal slow idle is approximately 600 rpm. On a gasoline tractor, a 420 rpm idle speed is provided for engine shut-off.

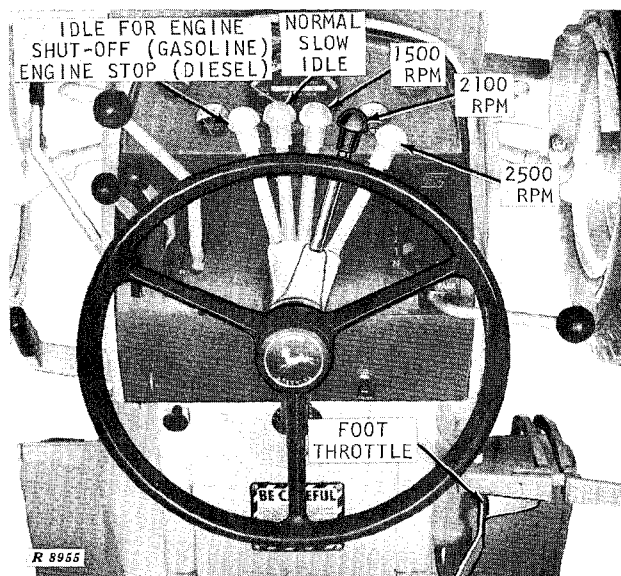
To check engine speeds, see page 46.

USING HAND THROTTLE

Use the hand throttle to select slow idle or any of the variable governed speeds from 1500 to 2500 rpm.

Push the throttle to the left as far as it will go to obtain a slow idle speed of approximately 600 rpm. To obtain 420 rpm idle speed for engine shut-off on gasoline tractors, pull out on the knob on the hand throttle and push the throttle to the left as far as it will go. To obtain 2100 rpm load speed, pull the lever to the right to the first stop. Placing the lever halfway between slow idle and 2100 rpm gives the 1500 rpm speed. Engine speeds between 1500 and 2100 rpm may be selected by moving the lever between these two positions.

To obtain working speeds above 2100 rpm, pull out on the knob at the end of the hand throttle. With the knob pulled out, pull the throttle to the right as far as it will go. This is the 2500 rpm load speed position. Engine speeds between 2100 and 2500 rpm may be selected by moving the lever between these two positions.



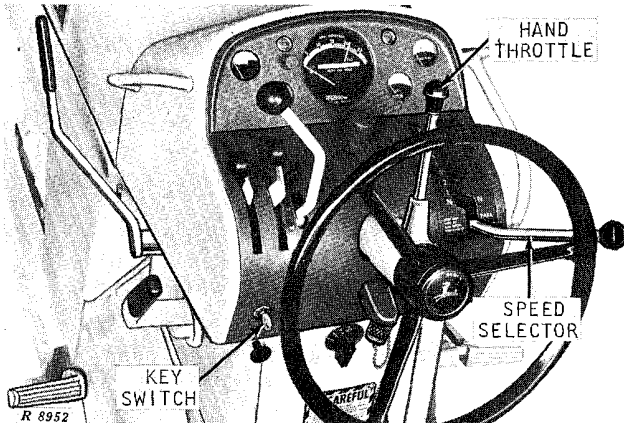
Range of Hand Throttle Positions

USING FOOT THROTTLE

The foot throttle is used to raise engine speed above the speed selected by the hand throttle. When the foot throttle is pushed all the way downward, the engine operates at the 2500 rpm load speed.

STOPPING THE ENGINE

Place the shift lever or speed selector in "PARK" and allow the engine to idle a few minutes. Sudden stopping of a hot engine may allow some parts to overheat momentarily and cause possible damage.



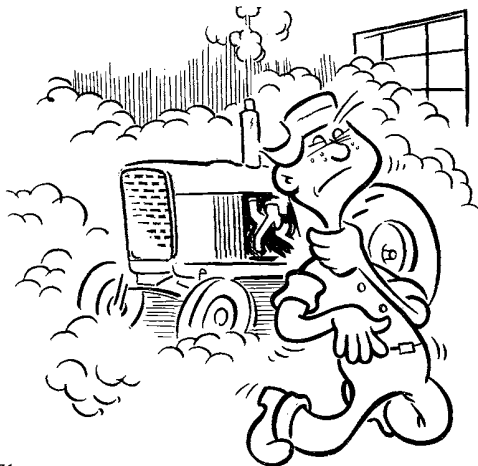
Stopping Controls

DIESEL ENGINES

Pull out on the hand throttle knob and push the throttle all the way to the left into the engine stop position. Turn the key switch off.

GASOLINE ENGINES

Pull out on the hand throttle knob and push the throttle all the way to the left into the idle for



R 3771

CAUTION: Before starting the tractor engine be sure there is plenty of ventilation. Never operate the tractor in a shed or garage.

engine shut-off position. Stop the engine by turning the key switch off.

ALL ENGINES

After stopping the engine, remove the key from the switch to prevent tampering and unauthorized operation. Removing the key also prevents battery discharge in the event that the switch was accidentally left in the on or the accessory position (counter-clockwise from off).

BREAKING IN THE ENGINE

NOTE: If the coolant temperature rises above the "N" range operate in a lower gear to reduce the load on the engine.

DIESEL ENGINES

With the following exceptions, the diesel engine is ready for normal operation. During the first 20 hours, it is not recommended to use the foot throttle or to place the hand throttle in speeds above the 2100 rpm load speed position (page 8). To facilitate break-in, avoid prolonged periods of engine idling, particularly for the first 100 hours of service.

When the sulphur content of the diesel fuel used does not exceed 0.5%, change the engine oil and engine oil filter after the first 100 hours of service (pages 36 and 43).

NOTE: When the sulphur content of the diesel fuel exceeds 0.5%, change the engine oil and oil filter after the first 20 hours of operation.

GASOLINE ENGINES

During the first 20 hours of service, operate the gasoline engine at half load with the hand throttle in the 2100 rpm load speed position (page 8). At half load, the engine speed will be approximately 2250 rpm. During the break-in period, it is not recommended to use the foot throttle or to place the hand throttle in speeds above the 2100 rpm load speed position.

After 20 hours, drain the special break-in oil, replace the engine oil filter, and fill the crankcase with the proper oil (page 36). The gasoline engine is then ready for normal operation.

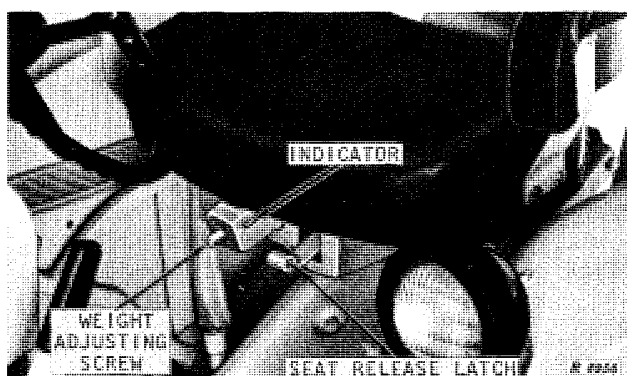
OPERATING THE TRACTOR

SEAT

The deluxe, foam-padded suspension seat contains a steel compression spring and shock absorber to provide "Float-Ride" comfort. The semi-circular lower backrest and flexibly mounted upper backrest add to the operator's comfort and safety.

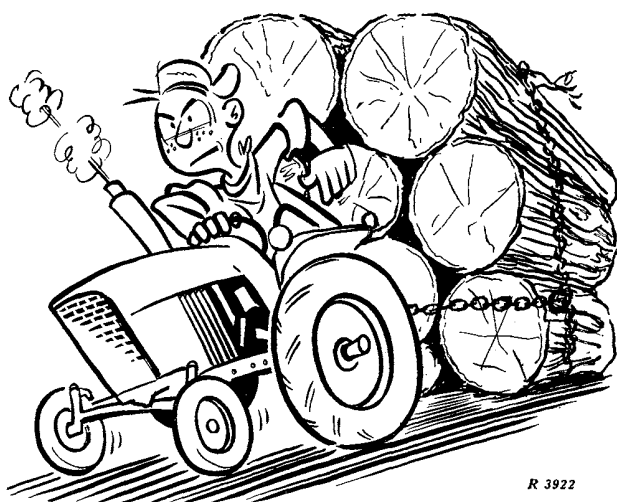
Use only warm water and mild soap to clean the seat cushions. NEVER USE SOLVENTS.

MOVING SEAT TO UPPER REAR POSITION



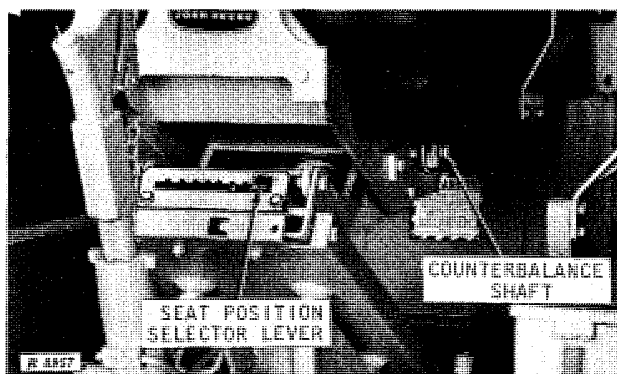
Seat Release Latch and Weight Adjusting Screw

To move the seat up and back, stand up and lift the seat release latch. The seat will move automatically to the upper rear position. Sit down to return the seat to the normal, preset operating position.



An Overloaded Tractor Will Have a Short Service Life

ADJUSTING FOR HEIGHT OF OPERATOR



Seat Position Selector Lever and Counterbalance Shaft

The normal operating position of the seat can be suited to the height of the individual operator. To make this adjustment, first move the seat to the upper, rear position. Then shift the seat position selector lever between "short" and "tall" until the pedals and levers can be operated comfortably when you are seated. The seat will always return to this position when you sit down after having moved the seat up and to the rear for standing.

ADJUSTING FOR WEIGHT OF OPERATOR

You can adjust the tension of the steel compression spring to conform to your weight. This results in the proper amount of comfort and enables the seat to "float" when traveling over rough ground. To make this adjustment, turn the weight-adjusting screw clockwise or counter-clockwise until the indicator conforms to your weight.

ADJUSTING COUNTERBALANCE SPRING

If the seat does not move fully to the rear when unlatched, adjust the counterbalance spring as follows. Move the seat to the upper rear position. Insert a screwdriver in the slot in the counterbalance shaft, push in to unlatch the shaft, and turn the shaft counter-clockwise. Align the latch in the end of the shaft with one of the pairs of slots in the side of the seat support and pull the screwdriver outward to latch the shaft.

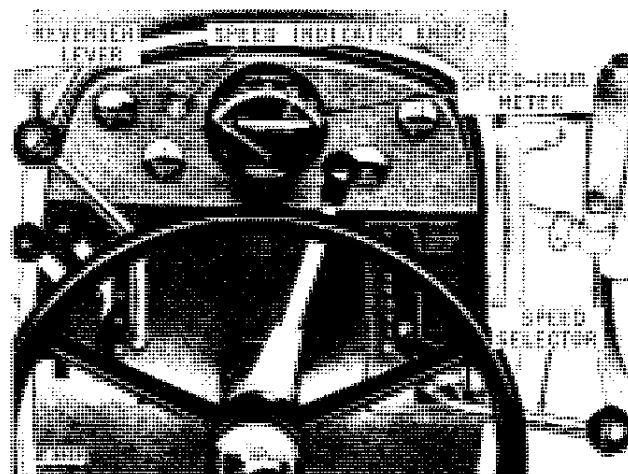
SELECTING GROUND SPEED

Both transmissions provide eight forward speeds for each of the throttle positions that may be used. The Collar Shift transmission has two reverse speeds, and the Power Shift transmission has four. These combinations enable the operator to balance speed and power for maximum economy and allow him flexibility to meet varying working conditions. For example, at a given ground speed the operator may choose to work in a low gear at high engine speed for maximum reserve power or in a higher gear at a lower engine speed for maximum fuel economy.

Examples of the ground speeds at which the tractor will travel are shown below. Engine working speeds may be varied between 1500 rpm and 2500 rpm. Tractor ground speeds shown in the chart are only for engine speeds of 1500, 2100, and 2500 rpm.

Turn the speed indicator knob on the instrument panel until the gear selected shows on the speed indicator. The speed-hour meter needle will now indicate the tractor ground speed in miles per hour.

Avoid overloading the tractor. When this occurs, operate in a lower gear. Overloading causes undue strain on parts, eventually resulting in poor operation and unnecessary repair expense.



Speed Indicator Knob and Speed Selector

POWER SHIFT TRANSMISSION

SHIFTING

The Power Shift transmission can be shifted "on the go" or when the tractor is stopped by moving the speed selector or the reverser lever to the desired position. It is not necessary to use the inching pedal when starting out or when shifting.

To move the tractor forward, push the reverser lever into the forward position and move the speed selector to the desired gear. Progressive shifting (one gear at a time) will result in smoother speed change.

TRACTOR GROUND SPEEDS IN MILES PER HOUR

NOTE: The ground speeds shown in this chart are for a tractor equipped with 16.9-28 rear tires with a loaded radius of 24.9 inches.

Gear	1500 rpm		*2100 rpm		2500 rpm	
	Collar Shift	Power Shift	Collar Shift	Power Shift	Collar Shift	Power Shift
1st	1.0	1.0	1.5	1.4	1.7	1.6
2nd	1.6	1.4	2.3	1.9	2.7	2.3
3rd	2.1	2.1	3.0	3.0	3.6	3.6
4th	2.7	2.8	3.8	3.9	4.6	4.6
5th	3.3	3.6	4.7	5.0	5.6	6.0
6th	4.5	4.6	6.3	6.5	7.5	7.7
7th	5.6	6.1	7.9	8.6	9.4	10.2
8th	9.2	10.2	12.9	14.3	15.3	17.0
1st reverse	2.1	1.1	2.9	1.6	....	....
2nd reverse	3.2	1.6	4.6	2.3	....	....
3rd reverse	...	2.5	....	3.5	....	....
4th reverse	...	3.2	....	4.5	....	....

**2100 engine rpm gives the SAE rated 540 or 1000 rpm PTO speed. Some PTO-driven equipment is operated at other speeds. See the equipment operator's manual for detailed instructions.*

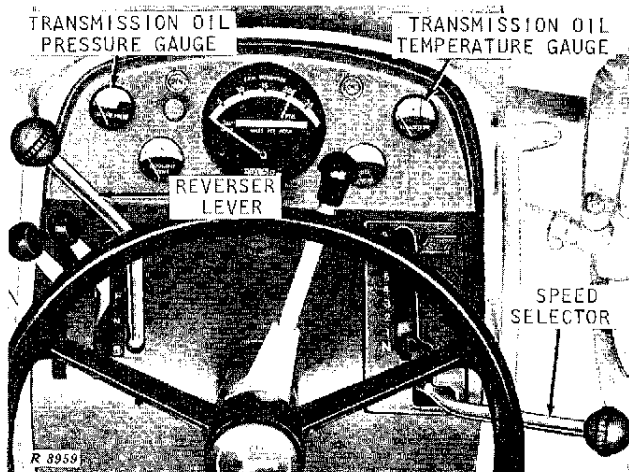
12 Operation - Tractor

To reverse the tractor when operating in one of the first four gears, pull the reverser lever rearward to the reverse "R" position. When the speed selector is in 5th gear or higher, the reverser lever can not be put in the reverse position.

Reduce engine speed prior to making sudden extreme speed changes. A hand rail beside the speed selector may be used as an aid to shifting when traveling over rough ground.

Use the inching pedal when making emergency stops, when hitching to equipment, or whenever slower clutch engagement is required.

OPERATION



Transmission Instruments

When operating a tractor with a Power Shift transmission check the transmission oil pressure gauge and the transmission oil temperature gauge for satisfactory transmission operation.

If the indicator hand on the temperature gauge goes into the red zone, stop the tractor and clean all dirt and trash from the grille screens and the transmission-hydraulic oil cooler core. See page 56. Also check for proper transmission-hydraulic oil level. If necessary fill the system to the proper level. See page 43. If this does not

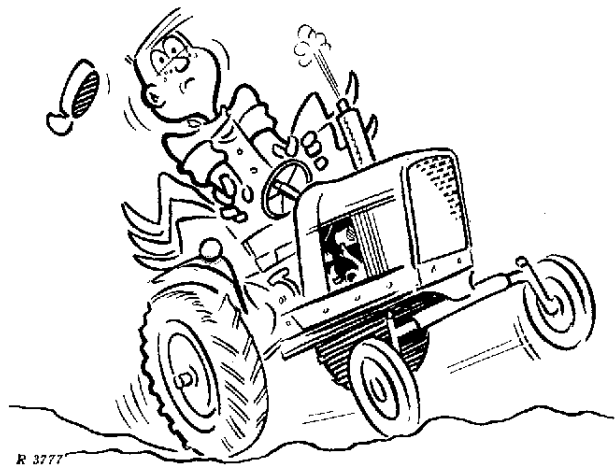
correct the difficulty, call your John Deere dealer. Do not operate the tractor when the temperature indicator hand is in the red zone.

When operating the engine at 2200 rpm, the indicator hand on the transmission oil pressure gauge should be to the right of the minimum transmission pressure line.

The minimum, safe transmission oil pressure will decrease in proportion to engine speed below 2200 rpm. If the pressure is questionable, check it by momentarily running the engine at 2200 rpm.

If the gauge indicates low oil pressure, stop the tractor and check the transmission oil level (see page 43). If the oil level is in the "SAFE" range, the transmission-hydraulic system filters may be clogged and need replacing. See page 45. If this does not correct the difficulty, call your John Deere dealer.

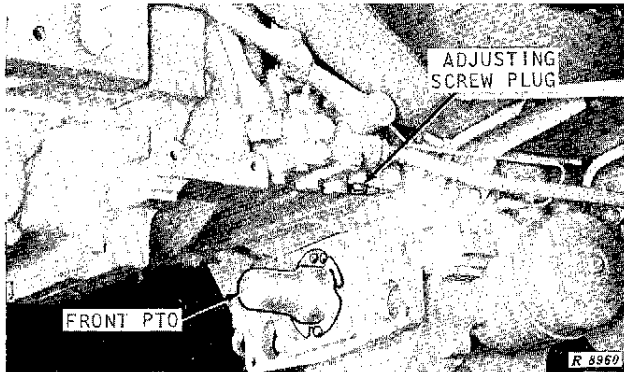
CAUTION: Do not operate the tractor when the transmission oil temperature is too high or the oil pressure is too low.



CAUTION: Fast driving causes many accidents. Couple the brake pedals together and always drive at a safe speed.

SHIFT ADJUSTMENT

The transmission speed-of-shift may be adjusted for a rapid shift or for a slow, smoother shift. When pulling a heavy load, rapid shifts are desirable to prevent the tractor from stopping while shifting. When pulling a light load, adjust for a slow smooth shift.



Speed-of-Shift Adjusting Screw Plug

To adjust the speed-of-shift, stop the engine and remove the adjusting screw plug at the bottom of the valve housing on the left-hand side of the tractor. With a screwdriver, turn the adjusting screw in (clockwise) to slow down the shifting. To speed up the shifting turn the adjusting screw out. Turn the adjusting screw one-half turn at a time until the desired speed-of-shift is obtained.

Install the adjusting screw plug to prevent oil leakage.

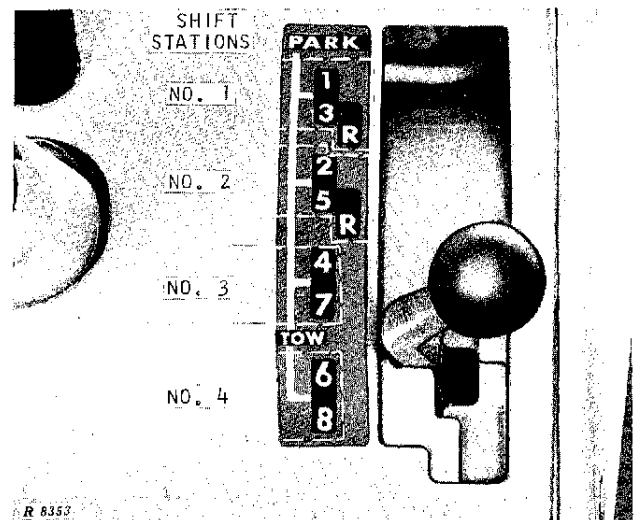
COLLAR SHIFT TRANSMISSION

SHIFTING BETWEEN STATIONS

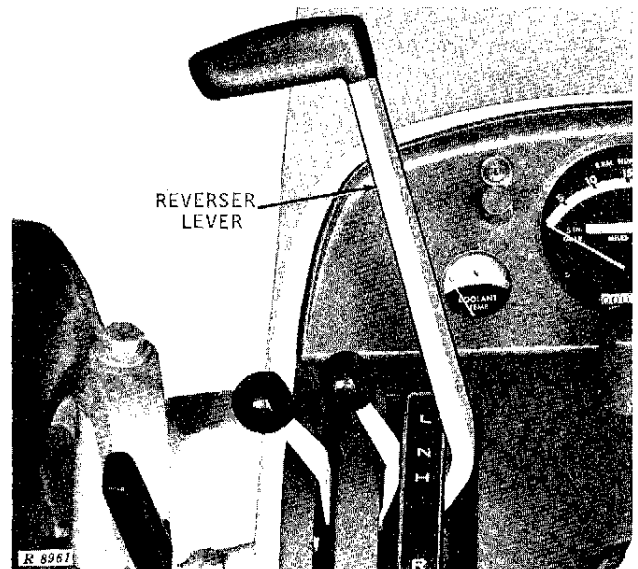
The shift quadrant has four shift stations. Stations No. 1 and 2 have two forward speeds and one reverse speed. Stations No. 3 and 4 have two forward speeds only.

With the tractor stopped and the clutch pedal depressed, move the shift lever to a neutral position at the left side of the quadrant. Then move the shift lever to the station that has the desired speed. Move the lever to the right and into the speed desired.

Gradually release the clutch pedal to take up the load smoothly.



Collar Shift Transmission Shift Lever in TOW Position



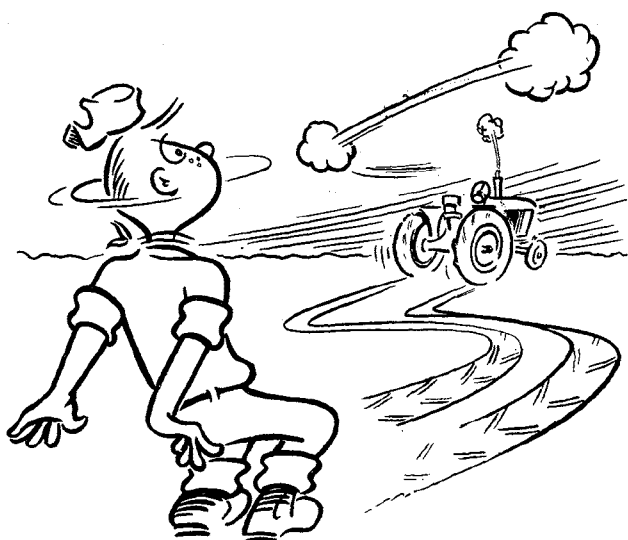
Reverser Lever in Neutral

SHIFTING WITHIN STATIONS

With the clutch pedal depressed and the tractor stopped, the transmission can be shifted with either the reverser lever or the shift lever from one forward speed to the other forward speed within the same station (1st and 3rd, 2nd and 5th, 4th and 7th, or 6th and 8th).

In stations No. 1 and 2, you can also shift from the highest forward speed to the reverse speed within the same station.

Gradually release the clutch pedal to engage the clutch.



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CAUTION: Whenever the tractor is stopped, place the shift lever or speed selector in the "PARK" position BEFORE DISMOUNTING. Never dismount from the tractor when it is in motion.

PARKING THE TRACTOR

CAUTION: Be sure the tractor is stopped before placing the shift lever or speed selector in the "PARK" position.

COLLAR SHIFT TRACTORS

On Collar Shift tractors, move the shift lever to a neutral position at the left side of the quadrant. Then push the shift lever all the way forward into "PARK."

To shift from "PARK," move the shift lever rearward to the station desired. When the tractor is parked on a steep incline, it may be necessary to do the following to relieve the load on the transmission park lock. Depress the clutch pedal and pull the shift lever rearward against spring pressure into the No. 1 shift station. Then shift into a forward or reverse gear that will move the tractor UP THE INCLINE. VERY SLOWLY engage the clutch and the transmission will shift out of "PARK."

POWER SHIFT TRACTORS

On Power Shift tractors, move the speed selector rearward and to the right into the "PARK" position shown in the illustration on page 12.

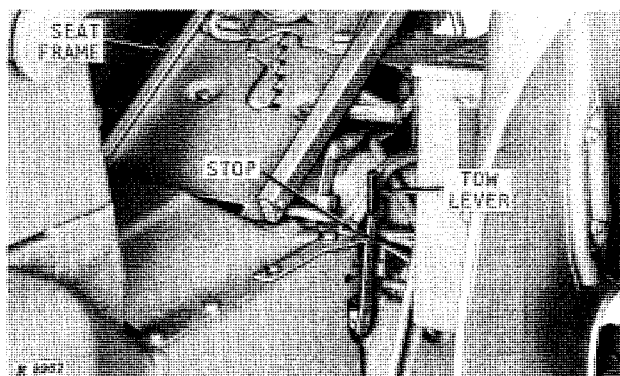
Shifting from "PARK" to neutral releases the park locking action.

TOWING THE TRACTOR

CAUTION: Never tow the tractor at high speeds. Always attach a tow bar or chain to the tractor frame. When possible, run the engine to maintain hydraulic pressure for power operation of steering and brakes.

POWER SHIFT TRACTORS

When towing the tractor with a Power Shift transmission, move the tow lever forward around the stop until it locks in the "TOW" position. Place the speed selector in the neutral "N" position.



Tow Lever on Power Shift Tractor

When moving the lever out of the "TOW" position to operate the tractor, place the speed selector in "PARK" and move the tow lever rearward, around the stop until the lever locks in the rearward position. It may be necessary to move the tractor slightly when shifting to "PARK." If tow lever will not move all the way rearward, start the engine while applying pressure rearward to the lever.

CAUTION: To prevent transmission damage, always place the tow lever in "TOW" position when towing Power Shift tractors. Do not tow the tractor to start the engine.

COLLAR SHIFT TRACTORS

The shift quadrant for the Collar Shift transmission has a "TOW" position. Whenever the Collar Shift tractor is to be towed, move the shift lever to this position.



Suggest:

If the above button click is invalid.

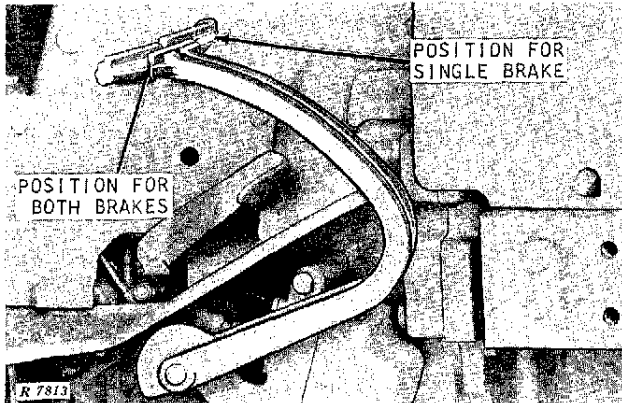
Please download this document first, and then click the above link to download the complete manual.

Thank you so much for reading

POWER STEERING AND BRAKES

The tractor is equipped with full hydraulic power steering and power brakes so that a minimum of effort will operate the tractor.

To assist in making sharp turns, apply the brakes individually or, to stop the tractor, apply both brakes simultaneously. When traveling at high speeds, couple the pedals together as shown and use a light pressure on the pedals.



Brake Pedals Coupled Together

TIRES

TIRE INFLATION CHART

FRONT TIRES			
Tire Size	Ply	Inflation Pressure	
		With Towed or Rear-Mounted Equipment	With Front-Mounted Equipment
7.50-16	6	28 lbs.	32 lbs.
7.50-16*	8	40 lbs.	75 lbs.
8.25-16*	10	40 lbs.	80 lbs.

*Truck type

REAR TIRES			
Tire Size	Ply	Inflation Pressure	
		With Little or No Added Ballast	With Max. Ballast or Heavy Rear-Mounted Equipment
14.9-28	8	20 lbs.	24 lbs.
16.9-28	6	16 lbs.	16 lbs.
16.9-28	8	16 lbs.	22 lbs.
14.00-24	8	20 lbs.	25 lbs.

Properly inflated tires are important to the operation of your tractor. The amount of air pressure to be carried in the front and rear tires depends upon the equipment used with the tractor and the amount of ballast employed.

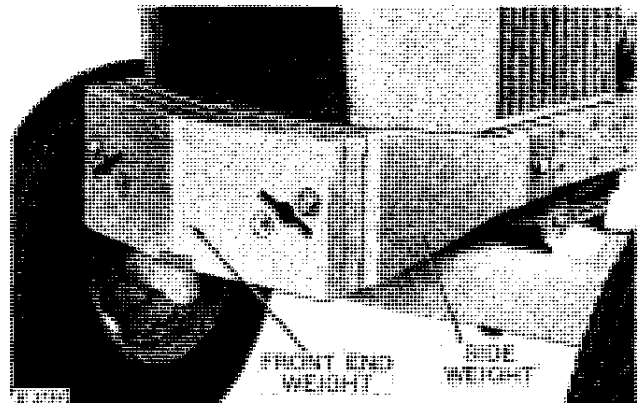
Keep the tires inflated according to the recommendations shown in the chart. Under-inflated tires break and wear out rapidly. Over-inflated tires reduce traction and increase wheel slippage.

BALLAST

The performance of your tractor can be improved under certain conditions by adding or reducing the ballast at the rear end or at the front end.

FRONT END AND SIDE WEIGHTS

When operating with heavy rear-mounted equipment or when operating on hilly terrain, install front end and side weights for adequate steering control and stability.



Front End and Side Weight Installed

Two side weights, and up to eight front end weights may be added. Each of the weights, available from your John Deere dealer, weighs 85 pounds.

The side weights are installed first. The front end weights stack on the front portions of the two side weights. Rotate each weight 180 degrees with respect to the preceding weight to line up the mounting holes.

Front end ballast cannot always maintain the required stability if the tractor is driven too fast over rough ground with heavy rear-mounted tools in the raised position. Play safe and drive slowly under these conditions.

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