MODEL 80
DIESEL TRACTOR

JOHN DEERE

OPERATORS MANUAL

MODEL 80
DIESEL TRACTOR

OMR2046 L5 English

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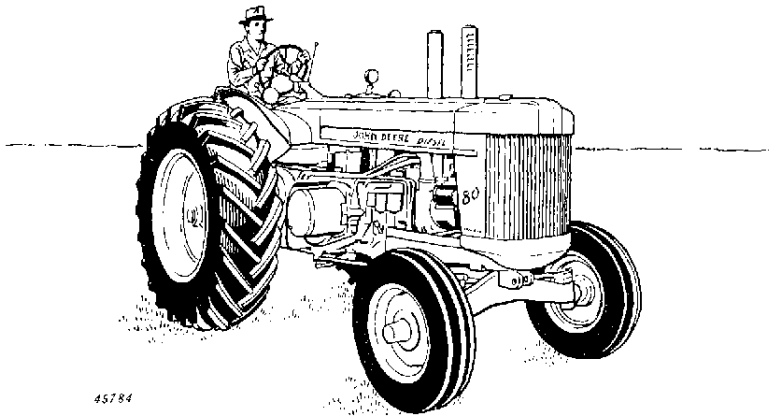


TO THE PURCHASER

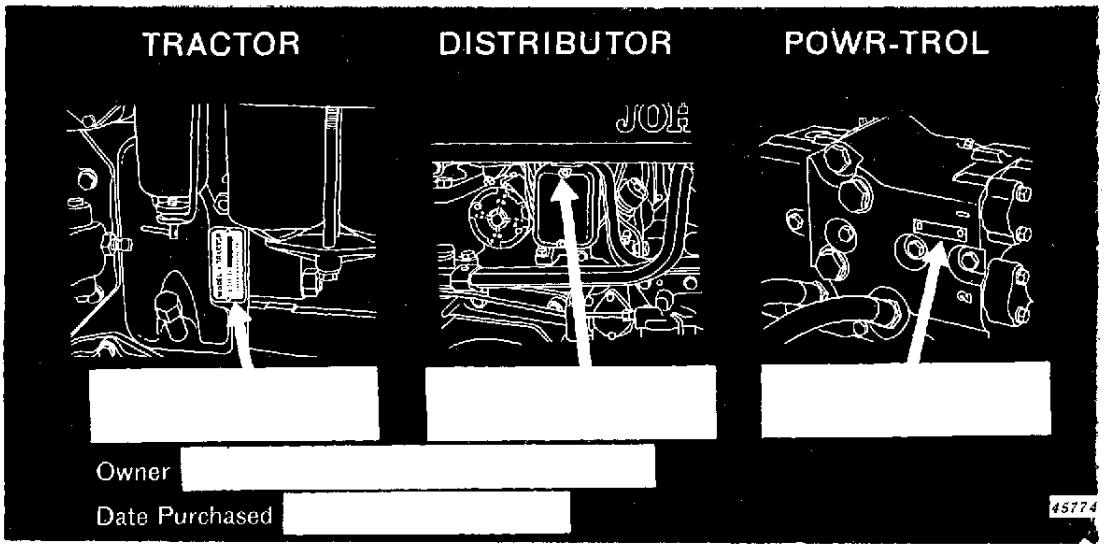
We welcome you to our ever-growing family of John Deere Tractor owners. We are confident that the dependable and economical performance of the John Deere Model "80" Diesel Tractor will prove that you made a wise choice.

The purpose of this manual is to acquaint you with your new tractor. The manual explains how to operate and service your tractor, and how to maintain its high operating efficiency. Instructions are given clearly with the intention of making these operations as easy as possible.

Keep this manual in a convenient place for quick and easy reference. Use it as a guide whenever questions arise. You have purchased a dependable, sturdy tractor, but only by operating and caring for it properly can you expect to receive the service and long life for which it was designed.

If in the future you need new parts to replace those that may be worn, insist on genuine John Deere parts. They are exact duplicates of the originals, made from the same patterns and of the same high-quality materials.

When in need of parts, give your John Deere dealer the serial number of your tractor, distributor, or Powr-Trol, depending on the parts you need. The illustration below shows you where to find these serial numbers. Obtain them from your tractor—**NOW**—and insert them in the spaces provided in the illustrations below.



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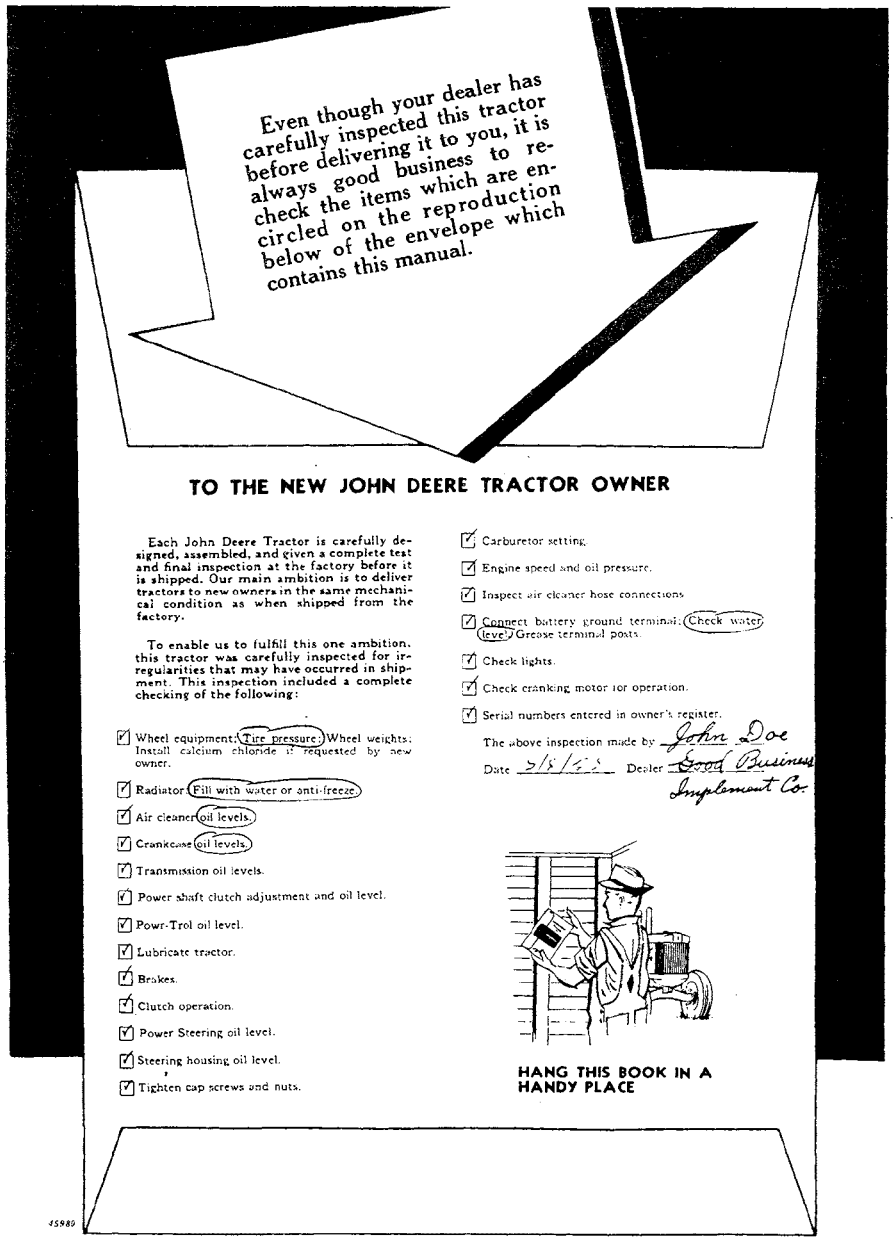


Even though your dealer has carefully inspected this tractor before delivering it to you, it is always good business to recheck the items which are encircled on the reproduction below of the envelope which contains this manual.

TO THE NEW JOHN DEERE TRACTOR OWNER

Each John Deere Tractor is carefully designed, assembled, and given a complete test and final inspection at the factory before it is shipped. Our main ambition is to deliver tractors to new owners in the same mechanical condition as when shipped from the factory.

To enable us to fulfill this one ambition, this tractor was carefully inspected for irregularities that may have occurred in shipment. This inspection included a complete checking of the following:

- ☑ Wheel equipment; (Tire pressure;) Wheel weights; Install calcium chloride if requested by new owner.
- ☑ Radiator (Fill with water or anti-freeze.)
- ☑ Air cleaner (oil levels.)
- ☑ Crankcase (oil levels.)
- ☑ Transmission oil levels.
- ☑ Power shaft clutch adjustment and oil level.
- ☑ Powr-Trol oil level.
- ☑ Lubricate tractor.
- ☑ Brakes.
- ☑ Clutch operation.
- ☑ Power Steering oil level.
- ☑ Steering housing oil level.
- ☑ Tighten cap screws and nuts.
- ☑ Carburetor setting.
- ☑ Engine speed and oil pressure.
- ☑ Inspect air cleaner hose connections.
- ☑ Connect battery ground terminal; (Check water level;) Grease terminal posts.
- ☑ Check lights.
- ☑ Check cranking motor for operation.
- ☑ Serial numbers entered in owner's register.

The above inspection made by John Doe

Date 2/5/52 Dealer Good Business Implement Co.

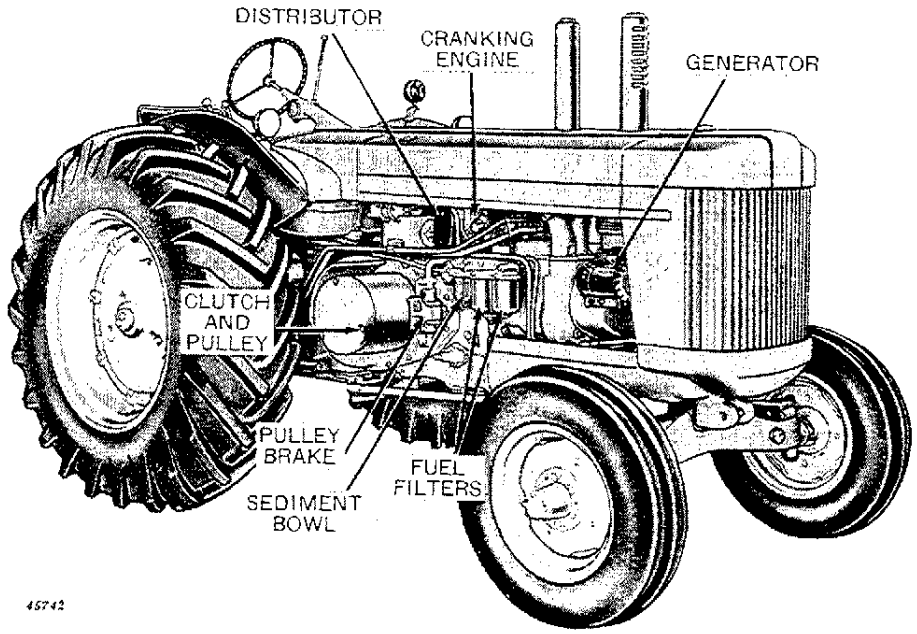
HANG THIS BOOK IN A HANDY PLACE

45989

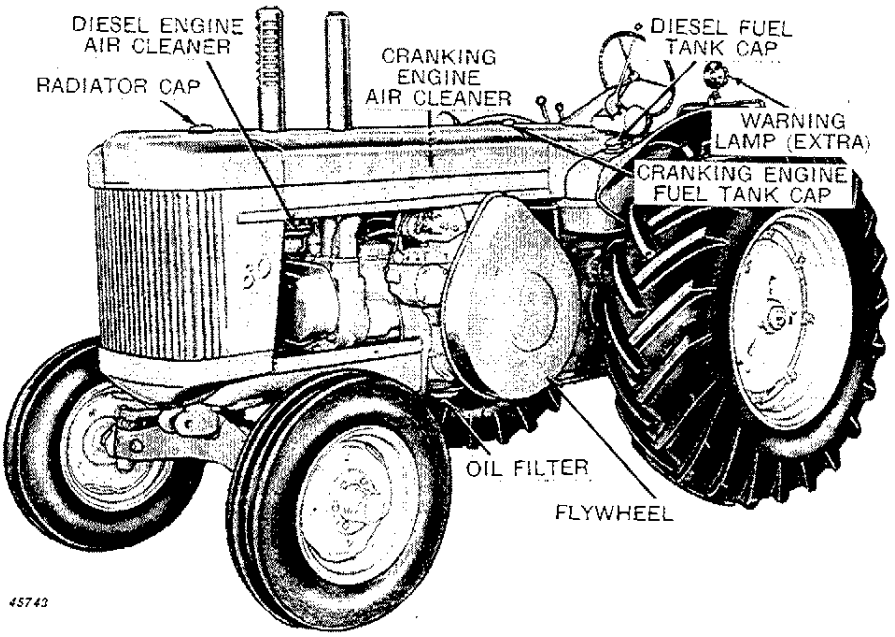
We suggest this rechecking especially during freezing weather or when a period of time has elapsed between delivery and when you are ready to operate the tractor. For complete starting information, see Page 19.

We, your John Deere dealer, are mighty proud to add your name to our list of John Deere Tractor owners. Because we are interested in having you obtain from this new tractor all the comfort and long life that are built into it, we are pleased to discuss the following important maintenance operations:

- ☐ Controls.
- ☐ Breaking-in Period—Part Load, Full Load, Changing Oil.
- ☐ Method of Starting and Stopping Engines.
- ☐ Brakes—Adjustment.
- ☐ Power Shaft Clutch Operation.
- ☐ Powr-Trol—Operation, Drop Control.
- ☐ Safety in Operation—Selecting Proper Speed, Power Shaft.
- ☐ Lubrication—Engines, Transmission, Powr-Trol, Power Shaft Clutch, Grease Fittings, Air Cleaners, and Oil Gauge.
- ☐ Crankcase Ventilators.
- ☐ Tightening Cap Screws and Nuts.
- ☐ Fuel System—Fuel, Fuel Control, Sediment Bowl and Fuel Filters, Carburetor Adjustment.
- ☐ Cooling System—Adding Water, Thermostat, Cleaning.
- ☐ Distributor—Terminals Tight, Cleaning, Adjusting Points.
- ☐ Clutch—Adjustment, Pulley Brake.
- ☐ Front Wheels—Cleaning, Adjustment, and Spacing.
- ☐ Drawbar—Adjustment; pull from no other place.
- ☐ Tires—Inflation, Inspection, Wheel Weights.
- ☐ Cranking Motor and Lights—Starting, Charging Rate, Battery Care.
- ☐ Battery Registration.
- ☐ Keeping the Tractor Clean.
- ☐ Have Farmer Operate the Tractor.
- ☐ Appointment for After-Sales Service—not later than two weeks after delivery.



John Deere Model "80" Diesel Tractor—Flywheel Side



John Deere Model "80" Diesel Tractor—Pulley Side

SPECIFICATIONS AND DATA . . .

PERFORMANCE:

Capacity for Work:

Five 14-inch plow bottoms or an equivalent load in most soil conditions.

***Maximum Horsepower:**

Belt. . . . . .
Drawbar. . . . . .

CAPACITIES (U.S. MEASUREMENTS):

Fuel Tank	32-1/2 Gals.
Gasoline Tank	1 Qt.
Crankcase (Diesel)	3-1/2 Gals.
Transmission (Diesel)	3-1/4 Gals.
Crankcase (Cranking Engine)	1 Qt.
Transmission (Cranking Engine)	1/2 Pt.
Powr-Trol	2-1/2 Gals.
Power Shaft Clutch	3-3/4 Qts.
Remote Cylinder (each)	1-3/4 Qt.
Cooling System	8-3/4 Gals.
Power Steering Reservoir	5-1/2 Qts.

SPEEDS:

Gear	15-34 Tires
1st Regular	2-1/3 mph
1st Optional	1-3/4 mph
2nd	3-1/2 mph
3rd	4-1/2 mph
4th	5-1/3 mph
5th	6-3/4 mph
6th	12-1/4 mph
Reverse	2-2/3 mph

DIESEL ENGINE:

Type	Two-cylinder, cast-in-block, valves-in-head.
Bore and Stroke	6-1/8″ x 8″
Compression Ratio	16 to 1
Displacement	471-1/2 cu. in.
Engine Speeds:	
Load	1125 rpm
Idle	1250 rpm

CRANKING ENGINE:

Type	Four-cylinder V-type, valves-in-head.
Bore and Stroke	2″ x 1-1/2″
Displacement	18.85 cu. in.
Engine Speeds:	
Load	5500 rpm
Slow Idle	4000 rpm
Fast Idle	6000 rpm

**Not tested at Nebraska*

LUBRICATION SYSTEM:

Type. . . . . Force-feed pressure system with full-flow oil filter.

FUEL SYSTEM:

Type. . . . . Gravity to sediment bowl. Transfer pump through filters.
Air Cleaners. . . . . Oil-wash type.

COOLING SYSTEM:

Type. . . . Pressure system. Centrifugal pump with temperature controlled by automotive-type thermostat.

IGNITION SYSTEM (CRANKING ENGINE):

Type	Battery-distributor
Distributor Point Gap	.020″
Spark Plugs:	
Size	14 mm.
Spark Plug Gap	.025″

ELECTRICAL SYSTEM:

Battery Voltage	6 Volts
Generator Regulation	Voltage Regulator
Battery	Group 1

CLUTCH:

Type. . . . Hand-operated, eight 9-1/4″ dry disks.

BELT PULLEY:

Diameter	12-7/32″
Width	9″
Belt Speed	at 1125 rpm—3600 fpm at 1000 rpm—3200 fpm (ASAE-SAE Standard)

TRANSMISSION:

Type. . . . . Six forward speeds and one in reverse. (1-3/4 mph 1st speed available as optional equipment.)
Gears. . . . . Selective type, straight spur cut gears, forged and heat-treated.
Bearings. . Shafts operate on six tapered roller bearings.

REAR WHEEL BRAKES:

Type. . . . . Automotive-type, internal expanding.

(Continued on next page)

POWER TAKE-OFF SHAFT:

Shaft diameter	1-3/8″
Shaft rpm	536
Splined end ahead of hitch	14″
Splined shaft above ground	26-1/2″

POWR-TROL:

Type.....Direct engine-driven with dual function remote cylinder control valve.

REAR AXLES:

Diameter	3-1/4″
Bearings	Four tapered roller bearings.

FRONT WHEELS AND TIRES:

Bearings	Four tapered roller bearings.
Tires	7.50 x 18 4-ply regular, 7.50 x 18 6-ply available.

REAR WHEELS AND TIRES:

15-34 6-ply on cast disk wheels (recommended for average field conditions). 14-34 6-ply, 18-26 8-ply, and 15-34 or 18-26 cane and rice available.

TREAD ADJUSTMENTS:

Front	56-1/2″ and 63″
Rear	64-1/2 or 68-1/2 with 14-34 and 15-34 tires; 67-1/4 or 75-1/4 with 18-26 tires.

DIMENSIONS:

Wheel Base	85-1/4″
Over-All Height	81″
Height to top of steering wheel	80-3/4″
Over-All Length	142-3/4″
Turning Radius	15′ 6″

*Shipping weight with power shaft, Powr-Trol, and power steering (approx.)	8000 lbs.

Weights are for tractors dry and with wheel equipment as shown under "Front Wheels" and "Rear Wheels."

(In the interest of progress, we reserve the right to change design without notice.)

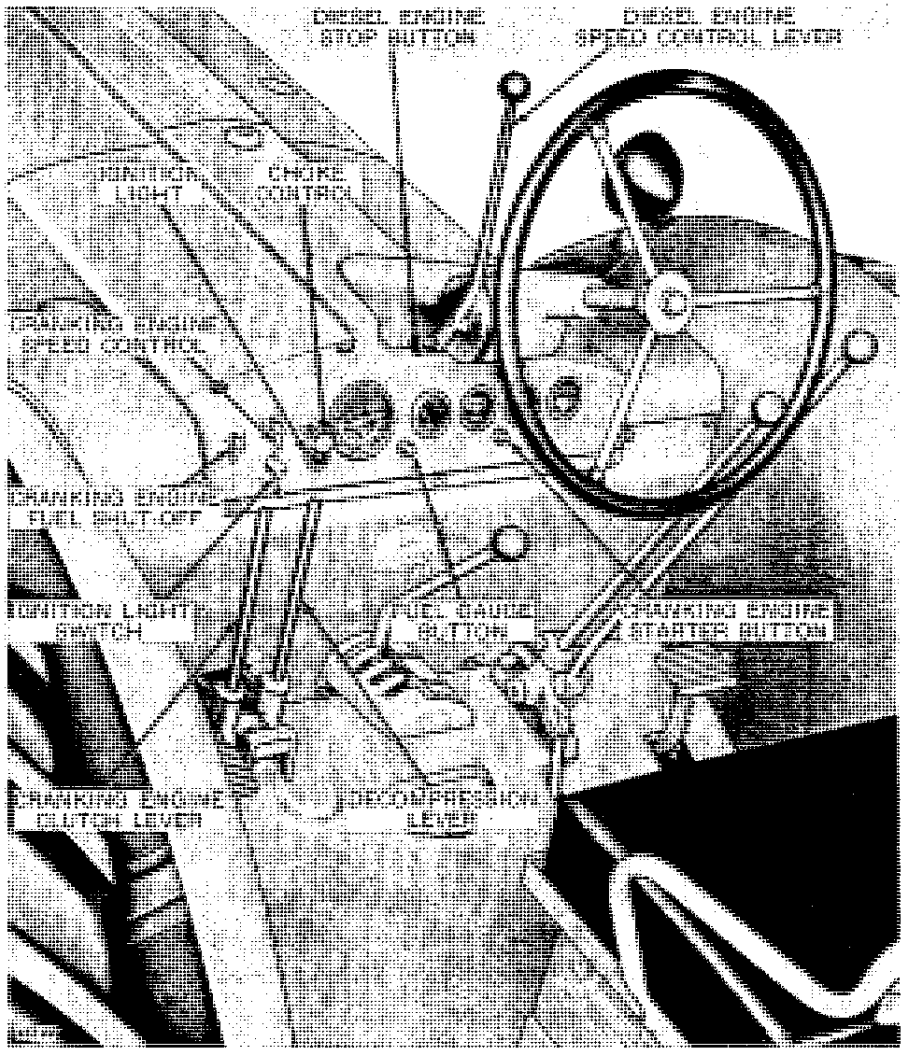
CONTROLS

THE quality of work and the amount of work you do with your tractor not only depends upon the use of proper equipment, but also upon the ease and convenience of tractor operation. If you are in an uncomfortable position, if you have to fight the steering wheel, or if you can't see what you are doing, you are definitely handicapped.

Your John Deere Tractor is as convenient to handle as your automobile. All controls and levers are reached easily from the operator's seat. Under your feet are the convenient brakes and a large, comfortable platform on which you can stand if you so desire.

Familiarize yourself with all the controls provided for safe and easy operation of your new tractor. Regardless of your previous tractor experience, study this section covering controls carefully before you operate your tractor.

• STARTING CONTROLS •



Starting Controls

IGNITION AND LIGHT SWITCH.

The cranking engine ignition on your tractor is controlled by a combination ignition-light switch located on the instrument panel. Turning the switch to the "I" position turns on the ignition. At the same time the red light to the right of the switch comes on. The red light indicates that the ignition is on and reminds the operator to turn the ignition switch off after cranking engine has stopped.

Your tractor is equipped with lights which are designed to provide maximum use and convenience for both night work in the field and night travel on the highway. The combination rear lamp has a bright white light for illuminating drawn implements and a red light for highway travel.

All lights are controlled by the combination ignition-light switch. The switch has five positions as follows:

"OFF"—Both ignition and lights off
"I" —Ignition only
"L" —Bright front lights and white rear light
"B" —Bright front lights and red rear light
"D" —Dim front lights and red rear light

CRANKING ENGINE FUEL SHUT-OFF VALVE.

The cranking engine fuel system is provided with a fuel shut-off valve to stop the cranking engine and prevent flow of fuel when the engine is not running. The valve is operated by a shut-off lever on the instrument panel. Turning the shut-off lever two or three turns counter-clockwise opens the valve.

CRANKING ENGINE CHOKE BUTTON.

Pulling the choke control button out provides a rich mixture for starting. Push choke knob in for normal operation.

CRANKING ENGINE SPEED CONTROL.

The cranking engine speed control has two positions: "Start" when turned counter-clockwise, and "Run" when turned clockwise.

STARTER BUTTON.

The starter button is used to actuate the cranking motor for starting the cranking engine.

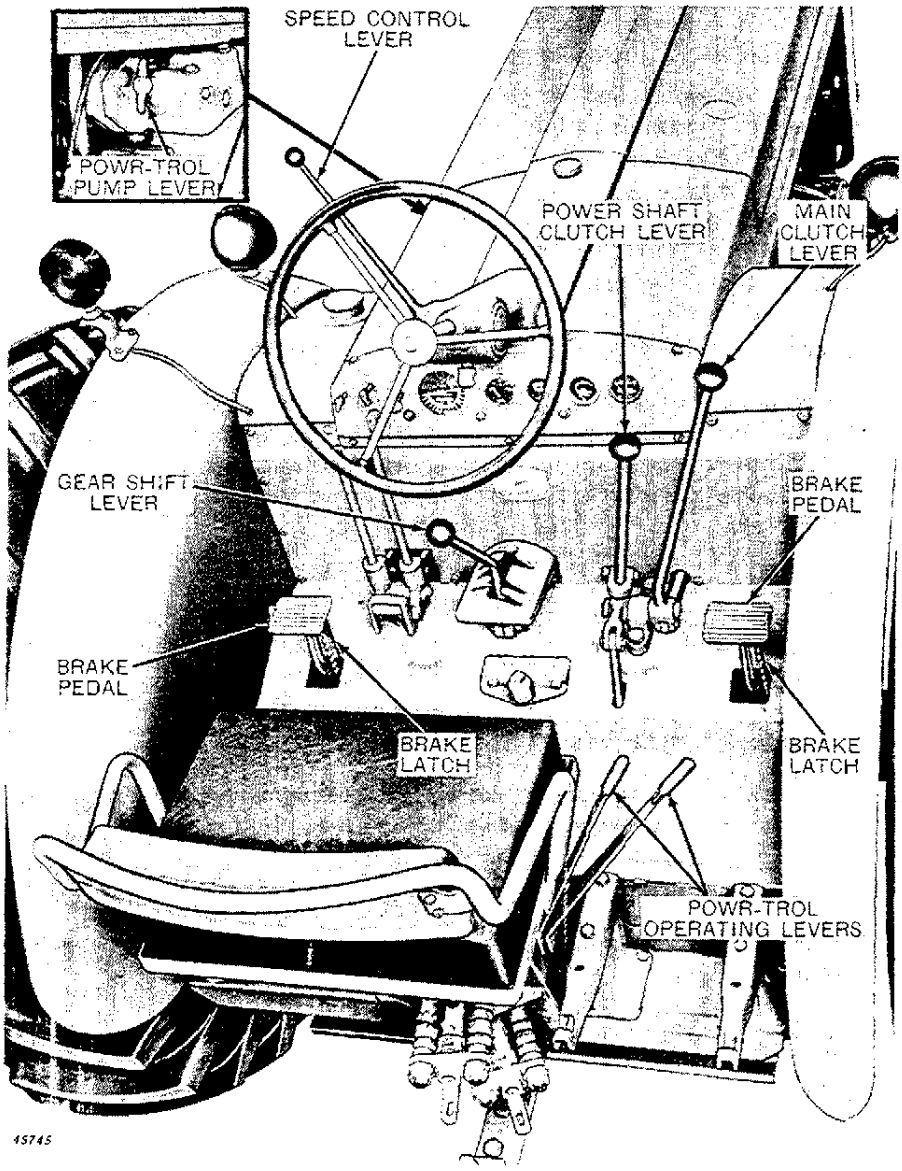
DECOMPRESSION LEVER.

Pulling the decompression lever to the rear relieves compression in the diesel engine for starting purposes.

CRANKING ENGINE CLUTCH LEVER.

The cranking engine clutch lever has two functions. During the first half of its travel as it is pulled to the rear it engages the cranking engine transmission pinion with the diesel engine flywheel. During the remainder of the lever travel the cranking engine clutch is engaged.

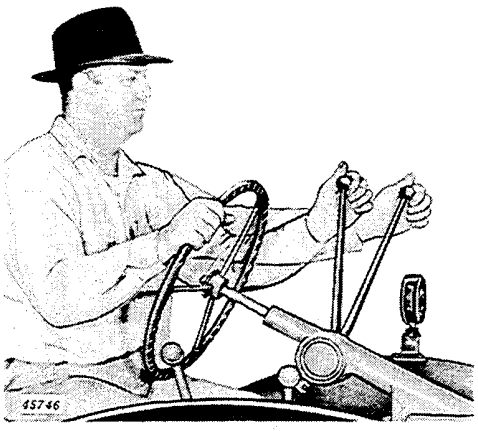
• OPERATING CONTROLS •



Operating Controls

SPEED CONTROL LEVER.

The lever mounted on the left-hand side of the steering support regulates the speed of the diesel engine. Pushing it forward increases the speed and pulling it back decreases the speed. *NOTE: It is good practice to operate the engine whenever possible with speed control lever in forward position.*



Speed Control Lever and Stop Button

SPEED CONTROL LEVER STOP BUTTON.

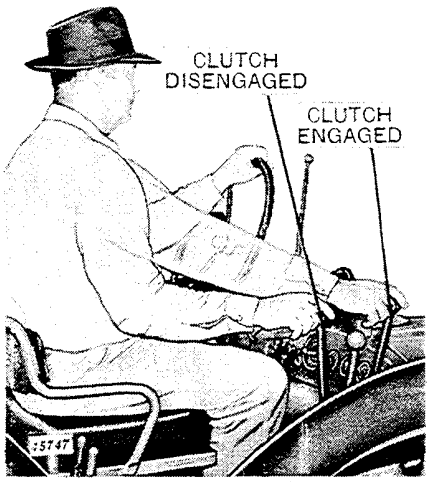
The diesel engine speed control lever stop button, located on the left-hand side of the speed control lever, enables the operator to slow the diesel engine quickly to idle speed without danger of the engine stopping. When the stop button is pulled out, it allows the diesel engine speed control lever to be moved to the "stop" position which cuts off delivery of fuel to the engine by the injection pumps causing the engine to stop.

CLUTCH LEVER AND PULLEY BRAKE.

Power required to put the tractor in motion is gradually and smoothly applied to the drive system by slowly pushing the clutch lever forward. When the tractor picks up speed, a quick forward thrust on the lever snaps the clutch into engagement.

By pulling back on the clutch lever, the clutch is released and engine disconnected from the transmission.

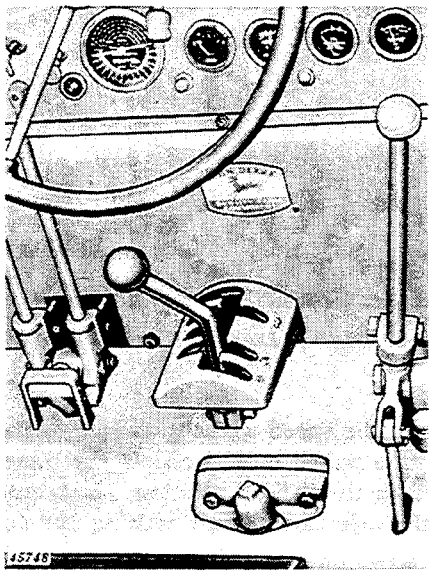
The pulley brake, which is applied when the clutch lever is pulled back to disengage the clutch, stops the pulley from rotating, permitting easy shifting of the transmission gears. *NOTE: Do not use pulley brake to stop tractor.*



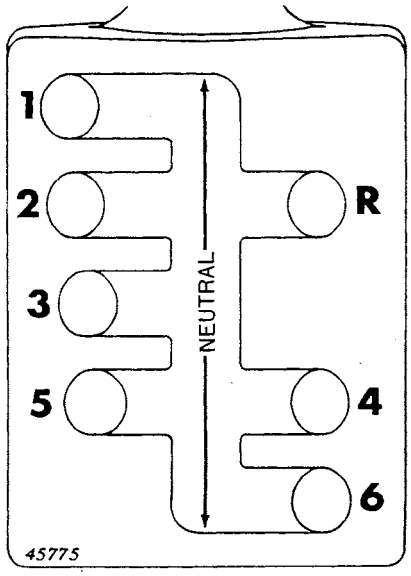
Clutch Lever

GEAR SHIFT LEVER.

This lever is used to select any one of the six forward speeds or reverse speed. Familiarize yourself with the shifting diagram before attempting to operate the tractor.



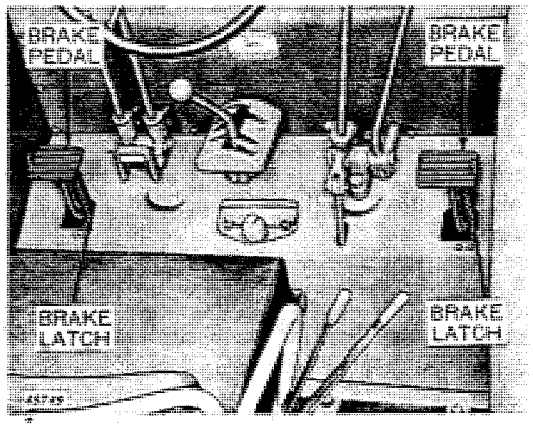
Gear Shift Lever



Gear Shift Quadrant

BRAKES.

Individually foot-operated brakes assist in making short turns to the right or left.



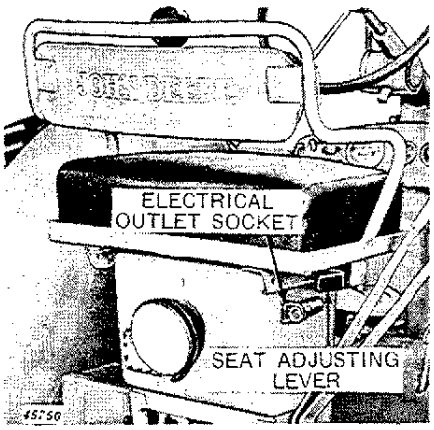
Brake Pedals and Latches

To assure safe stopping at high transport speeds, apply the brakes evenly to avoid drawing the tractor to one side.

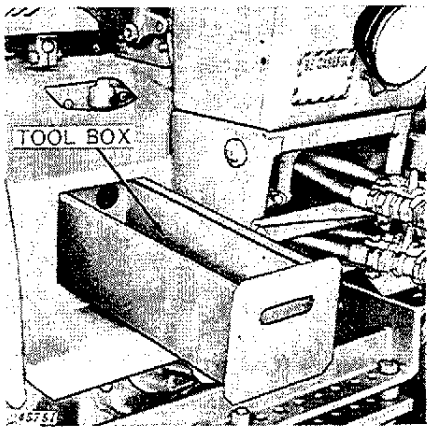
A brake latch on each pedal can be used for locking each brake when you are doing belt work or when it is necessary to hold the tractor on a hill or incline. The brakes are locked by tipping the pedal forward to engage the latch. The brakes are released by pressing on the heel of the pedal.

SEAT, BATTERY COMPARTMENT AND TOOL BOX.

The large roomy seat adds much to operator comfort and materially lessens fatigue. An adjusting lever, located on the right-hand side of the seat, makes it possible to move the seat forward or backward to suit the convenience of the operator.



Seat and Electrical Outlet



Tool Box

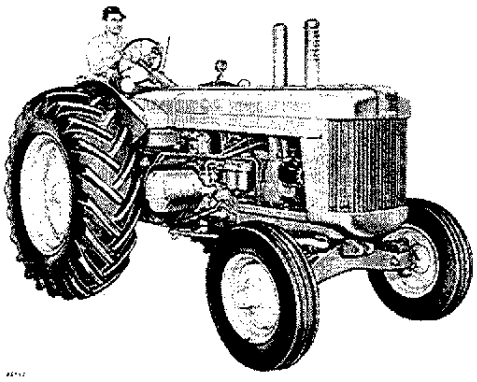
The battery is located in a compartment under the seat where it is readily accessible for periodic service.

The tool box is conveniently located to provide space for storing tools.

ELECTRICAL OUTLET SOCKET.

An electrical outlet socket is located on the right-hand side of the battery compartment. This socket is provided for attaching a battery charger, trouble light or lights on trailing implements.

STEERING MECHANISM.



Steering a Model "80" Diesel Tractor

The seat location and hood design permit easy view of work on either side or to the rear. This design, coupled with a steering mechanism built to eliminate objectionable wandering, backlash or whipping of the steering wheel permits you to work in freedom and comfort.

If your tractor is equipped with exclusive John Deere Power Steering you will be able to steer without effort in the roughest going. Even such adverse conditions as deep sand or heavy front-end-mounted equipment will not affect the ease with which you turn the steering wheel.

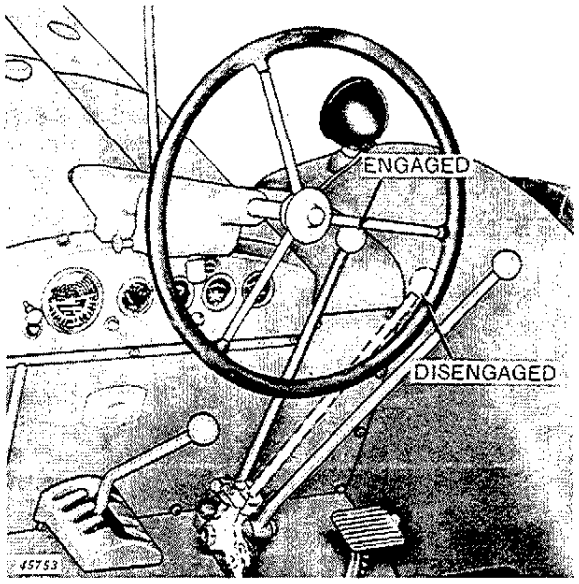
POWER SHAFT CLUTCH LEVER.

The power shaft clutch makes it easy to use the power shaft without the necessity of shifting gears.

Pushing the lever forward engages the clutch. Pulling the lever back disengages the clutch and applies a partial brake to the power shaft.

Power shaft safety shields are provided with power shaft driven equipment for the safety of the operator. These shields should always be used when this type of equipment is being operated.

Make it a standing rule never to dismount from the tractor without first disengaging the power shaft clutch.



Power Shaft Clutch Lever

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If the above button click is invalid.

Please download this document

first, and then click the above link

to download the complete manual.

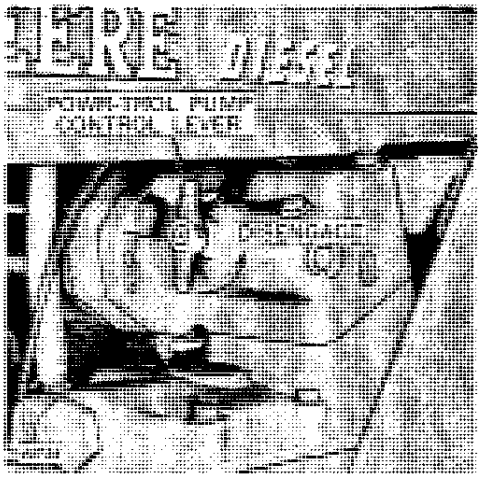
Thank you so much for reading

POWR-TROL PUMP CONTROL LEVER.

The Powr-Trol pump is engaged by a control lever located on the pump housing.

CAUTION: Do not engage the Powr-Trol pump while the engine is running. Read operating instructions on page 41.

The Powr-Trol sliding shifter collar is spring loaded. To engage the Powr-Trol pump turn control lever to engaged position ("on" at top), then start the diesel engine. The pump can be disengaged while the diesel engine is running at slow idle.



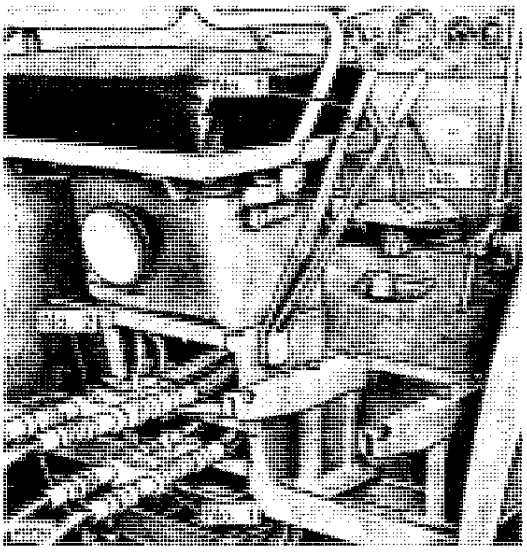
Powr-Trol Pump Lever

POWR-TROL OPERATING LEVERS.

Provisions are made for the use of two separate cylinders with the Powr-Trol system.

The levers at the side of the seat operate the cylinders. When the system is equipped with only one cylinder the inner of the two operating levers (No. 1) is used to operate the cylinder attached to the lower (No. 1) breakaway coupling.

When two cylinders are used the outer lever (No. 2) is used to operate the second cylinder attached to the upper (No. 2) breakaway coupling. Both levers can be used simultaneously to operate both cylinders at the same time. Each lever has five operating positions; neutral, slow raise, fast raise, slow drop and fast drop. Implements are raised by pushing the lever forward and dropped by pushing the lever to the rear. For further information, see page 41.



Powr-Trol Operating Levers