

# 70 GENERAL- PURPOSE AND STANDARD DIESEL TRACTORS



JOHN DEERE

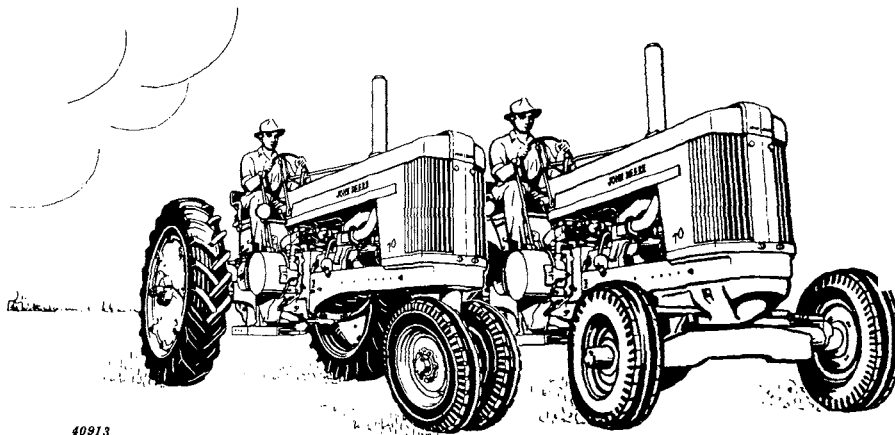
## OPERATORS MANUAL 70 GENERAL- PURPOSE AND STANDARD DIESEL TRACTORS

OMR2032 I6 English

**OMR2032 I6**

LITHO IN THE U.S.A.  
ENGLISH





40913

## 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 "70" 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.

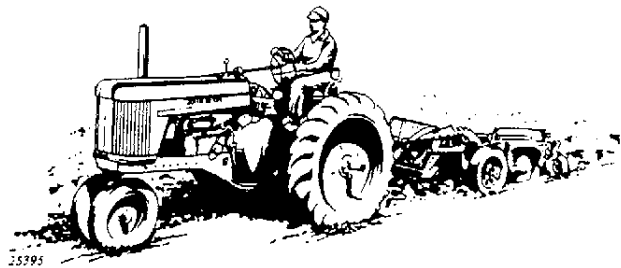
When in need of parts, give your John Deere dealer the serial number of your tractor, distributor, or Powr-Trol, depending on the parts you need. The illustration below shows you where to find these serial numbers. Obtain them from your tractor—**NOW**—and insert them in the spaces provided in the illustrations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

TRACTOR	DISTRIBUTOR	POWR-TROL
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"><input type="text"/></div> <div style="width: 30%;"><input type="text"/></div> <div style="width: 30%;"><input type="text"/></div> </div>		
Owner <input style="width: 100%;" type="text"/>		
Date Purchased <input style="width: 100%;" type="text"/>		

40914

## • TABLE OF CONTENTS •

	<i>Page</i>
SPECIFICATIONS AND DATA.....	5
CONTROLS AND INSTRUMENTS.....	7
OPERATING INSTRUCTIONS.....	21
SAFETY SUGGESTIONS.....	58
LUBRICATION AND PERIODIC SERVICES.....	61
SERVICE THAT WILL KEEP YOUR TRACTOR IN TIP-TOP SHAPE.....	85
SERVICE REMINDERS.....	113
TRACTOR DIFFICULTIES.....	114
STORING THE TRACTOR.....	121
INDEX.....	122



**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**

Even though your dealer has carefully inspected this tractor before delivering it to you, it is always good business to re-check 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 housing oil level.
- Powr-Trol oil level.
- Lubricate tractor.
- Brakes.
- Clutch operation.
- Spark plug gaps.
- Steering housing oil level.
- Tighten cap screws and nuts.

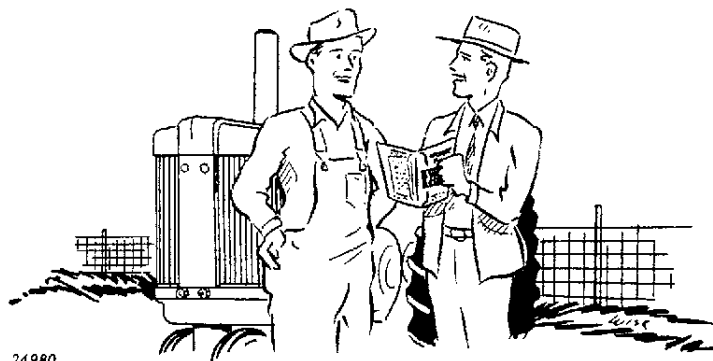
- Carburetor setting.
- Engine speed and oil pressure.
- Inspect air cleaner hose connections.
- Connect battery ground terminal; (Check water level) Grease terminal posts.
- Check lights.
- Check cranking motor for operation.
- Serial numbers entered in owner's register.

The above inspection made by John Doe  
Date 5/8/55 Dealer Good Business Implement Co.



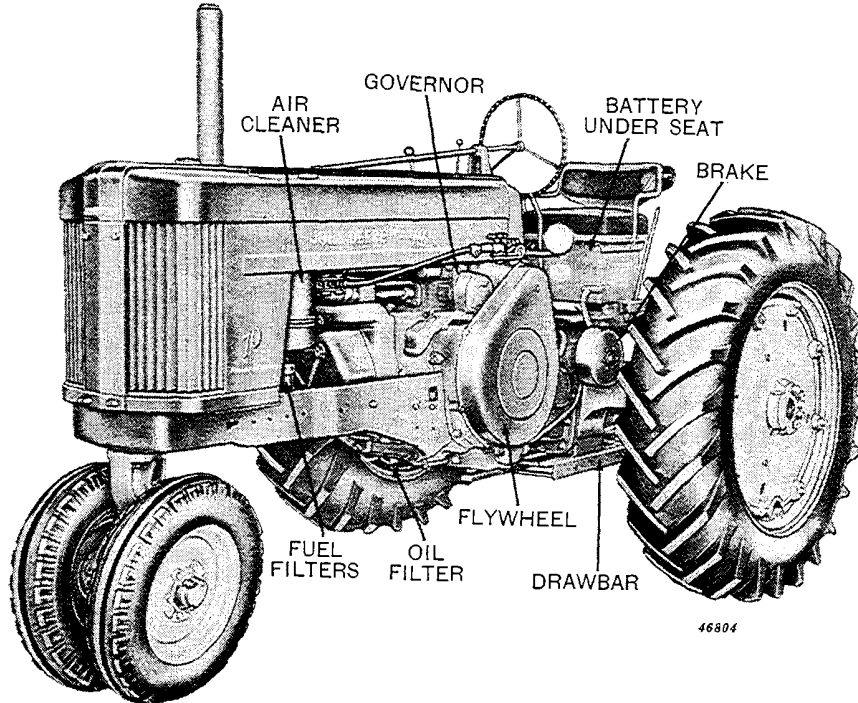
HANG THIS BOOK IN A  
HANDY PLACE

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 21.

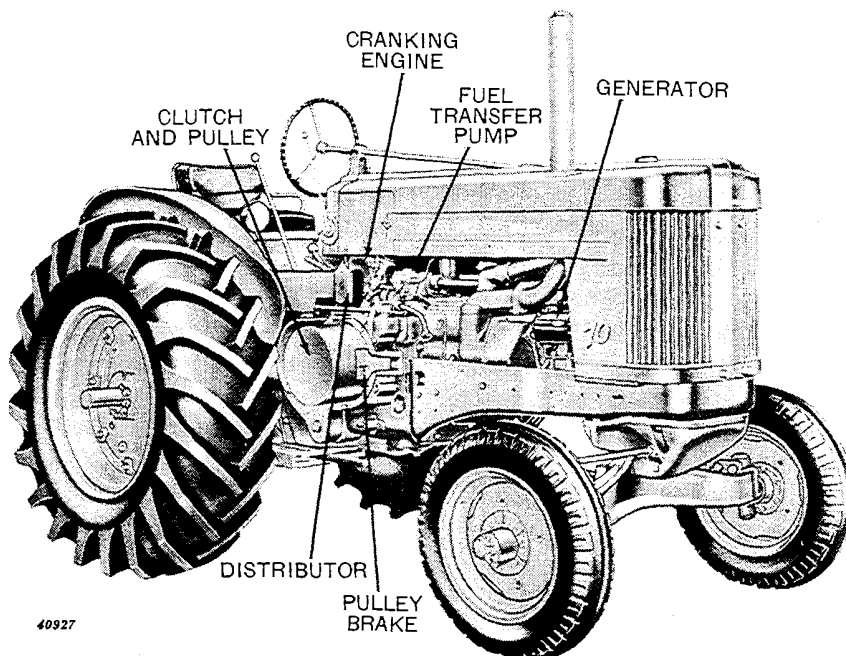


We, your John Deere dealer, are mighty proud to add your name to our list of John Deere Tractor owners. Because we are interested in having you obtain from this new tractor all the comfort and long life that are built into it, we are pleased to discuss the following important maintenance operations:

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



*John Deere Model "70" Diesel General-Purpose Tractor—Flywheel Side*



*John Deere Model "70" Diesel Standard Tractor—Pulley Side*

# SPECIFICATIONS AND DATA . . .

## PERFORMANCE:

### Capacity for Work:

Four 14-inch plow bottoms in most soil conditions, five in many soils; four-row bedder and other big-capacity tools.

### \*Maximum Horsepower:

Belt..... 51.49  
Drawbar..... 45.66

## CAPACITIES (U. S. MEASUREMENTS):

Fuel Tank..... 20 Gals.  
Gasoline Tank..... 1 Qt.  
Crankcase (Diesel)..... 12 Qt.  
Transmission (Diesel)..... 7-1/2 Gals.  
Crankcase (Cranking Engine)..... 1 Qt.  
Transmission (Cranking Engine)..... 1/2 Pt.  
Powr-Trol..... 1-1/3 Gals.  
Power Shaft Clutch..... 2-1/4 Qts.  
Remote Cylinder..... 1 Qt.  
Cooling System..... 7 Gals.  
First Reduction Gear Cover..... 1-1/2 Qts.  
Power Steering Reservoir..... 5 Qts.

## SPEEDS:

Gear	12-38 Tires	15-30 Tires
1	2-1/2 mph	2-1/2 mph
2	3-1/2 mph	3-1/2 mph
3	4-1/2 mph	4-1/2 mph
4	6-1/2 mph	6-1/4 mph
5	8-3/4 mph	8-1/2 mph
6	12-1/2 mph	12 mph
Reverse	3-1/4 mph	3-1/4 mph

## DIESEL ENGINE:

Type..... Two-cylinder, cast-in-block, valves-in-head.

### Engine Speeds:

Load..... 1125 rpm  
Idle..... 1250 rpm  
Bore and Stroke... 6-1/8" x 6-3/8"  
Displacement..... 376 cu. in.  
Compression Ratio..... 16 to 1

## CRANKING ENGINE:

Type..... 4-cylinder V-type, valves-in-head.

### Engine Speeds:

Load..... 5500 rpm  
Slow Idle..... 4000 rpm  
Fast Idle..... 6000 rpm  
Bore and Stroke..... 2" x 1-1/2"  
Displacement..... 18.85 cu. in.

\*Maximum h.p. corrected to 60° F. and 29.92 in. hg. (Nebraska Test No. 528)

## LUBRICATION SYSTEM:

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

## FUEL SYSTEM:

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

## COOLING SYSTEM:

Type..... Pressure system. Centrifugal pump with engine temperature controlled by heavy-duty 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, 10-inch dry disks.

## BELT PULLEY:

Diameter..... 12-7/8"  
Width..... 7-3/8"  
Rpm (Load)..... 1125  
Belt Speed..... 3790 fpm

## TRANSMISSION:

Type..... Six forward speeds and one in reverse.  
Gears..... Selective-type, straight spur-cut gears, forged and heat-treated.  
Bearings.. Shafts operate on five roller bearings, six tapered roller bearings, and four ball bearings\*

## REAR WHEEL BRAKES:

Type..... Two automotive-type internal-expanding brakes.

(Continued on next page)

**POWER TAKE-OFF SHAFT:**

Shaft diameter.....	1-3/8"
Shaft rpm.....	532
Splined end ahead of hitch....	14"
Splined shaft above ground:	

**Transmission-Driven:**

General-Purpose.....	22-7/8"
Standard.....	22"

**Direct Engine-Driven:**

General-Purpose.....	25-3/4"
Standard.....	25"

**REAR AXLES:**

Diameter.....	3-1/8"
Bearings.....	Four tapered roller bearings.
Types Available..	Regular, long, and extra long.

**FRONT WHEELS AND TIRES:****General-Purpose:***Double and Adjustable Type:*

Reversible for added clearance.	
Bearings.....	Four tapered roller bearings.
Tires.....	6.00 x 16", 6-ply 6.00 x 16", 4-ply also available.

*Single Type:*

Bearings.....	Two tapered roller bearings.
Tires.....	7.50 x 16", 10-ply

**Standard:**

Bearings.....	Four tapered roller bearings.
Tires.....	7.50 x 18", 4-ply 6.50 x 18", 4-ply also available.

**REAR WHEELS AND TIRES:****General-Purpose:***Regular and Long Rear Axle:*

12-38, 6-ply tires on cast disk wheels (recommended for average field conditions). 13-38, 6-ply tires also available.

**Standard:***Regular and Long Rear Axle:*

15-30, 6-ply tires on cast disk wheels (recommended for average field conditions). 14-30, 6-ply and 18-26, 8-ply tires also available.

**TREAD ADJUSTMENTS:****General-Purpose:***Adjustable Front Axle:*

Tubular Type.....	56"-80"
Box Type.....	48"-80"

*Rear Wheels:*

Regular axles, regular wheels.....	60"-88"
Long axles, regular wheels.....	66-1/2"- 97-1/2"
Long axles, offset wheels	60"-104"
Extra long axles, regular wheels.....	66-1/2"- 105-1/4"
Extra long axles, offset wheels.....	60"-112"

**Standard:**

Fixed front wheels.....	55-1/2"
Adjustable front wheels	52"-68"
Rear wheels.....	62"-80"

**DIMENSIONS:**

	General-Purpose			Standard
	Double Front Wheel	Single Front Wheel	Adjustable Tread Front Axle	
Wheel-Base.....	91"	91-1/4"	97-3/8"	82"
Over-All Height.....	88-1/16"	89-3/16"	89-5/16"	87-3/4"
Over-All Length.....	136-1/4"	137-1/2"	142-5/8"	129-7/8"
Height to Top of Steering Wheel.....	81"	82-1/4"	81"	80-7/8"
Width Over Axles.....	86-5/8"	86-5/8"	86-5/8"	86-5/8"
Clearance.....	25-5/16"	27-5/16"	Front 24-3/16" Rear 26-1/16"	Front 13" Rear 25-1/4"
Turning Radius.....	9' 6"	9' 6"	14' 9"	14'
*Shipping Weight.....	6520 lbs.	6430 lbs.	6830 lbs.	7375 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.)

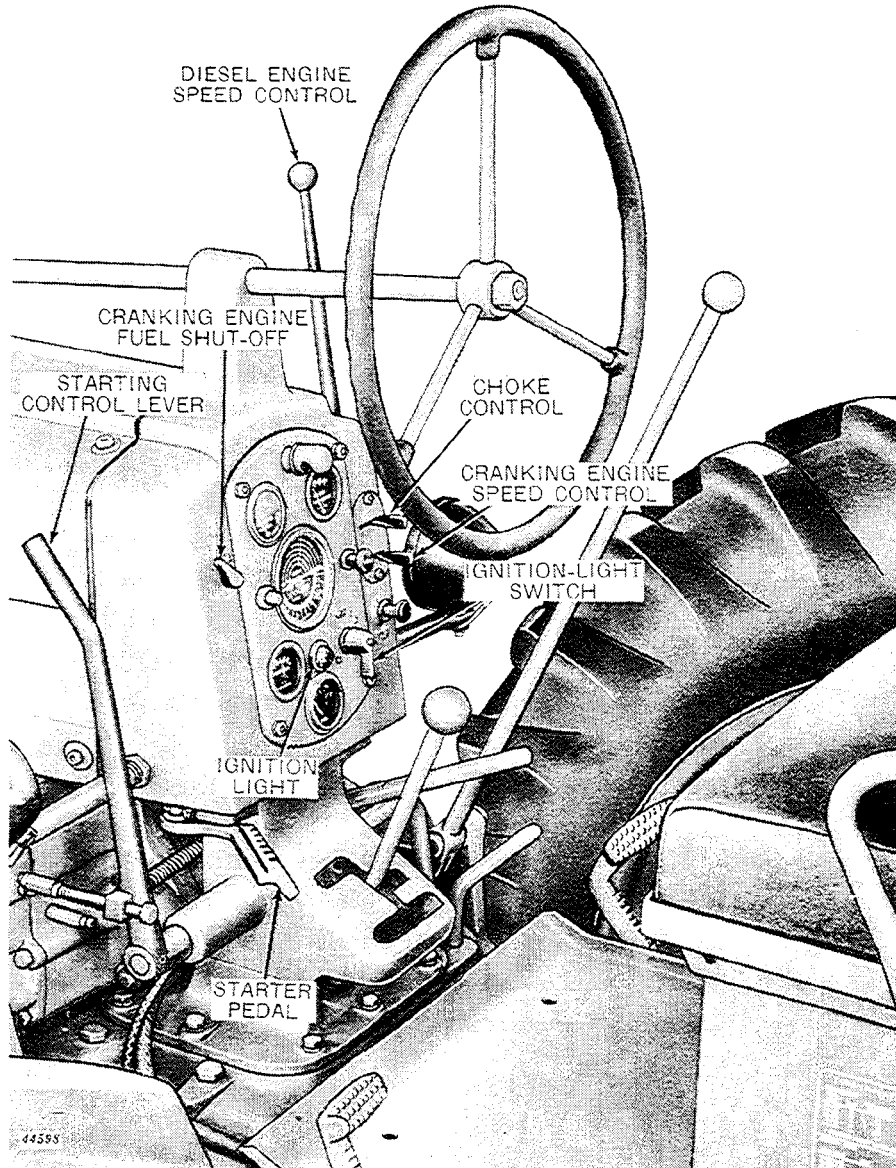
## CONTROLS

**T**HE 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*

### CRANKING ENGINE 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 left of the switch comes on. The red light indicates that the ignition is on and reminds the operator to stop the cranking engine after the Diesel engine is running.

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 prevent flow of fuel when the engine is not running. The valve is operated by a shut-off on the instrument panel. Turning the shut-off two or three turns counter-clockwise opens the valve.

### CRANKING ENGINE CHOKE LEVER.

Moving the choke lever to the left provides a rich mixture for starting. When released the lever returns to the off position.

### CRANKING ENGINE THROTTLE LEVER.

The cranking engine throttle lever has two positions: "Start," to the right, and "run," to the left.

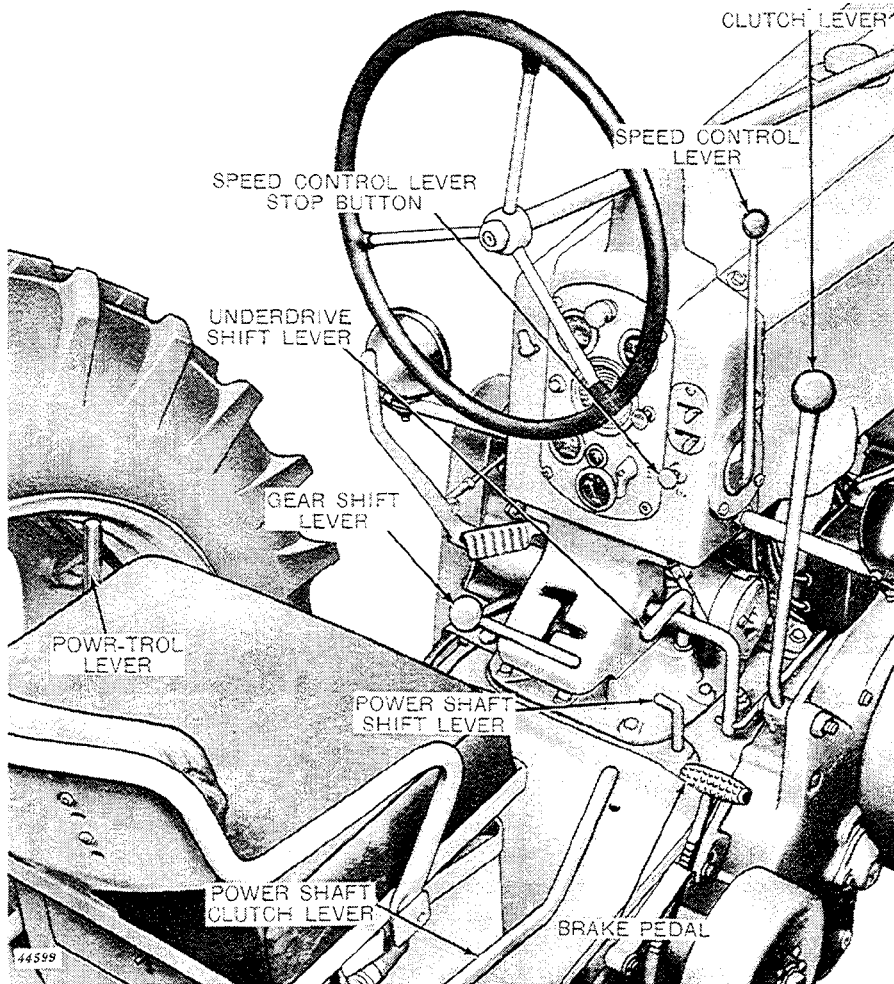
### STARTING CONTROL LEVER.

On some tractors a single lever, located to the left of the instrument panel, is used to start the cranking engine, decompress the diesel engine, connect the cranking engine to the diesel engine, engage the cranking engine clutch, and motor the diesel engine.

### STARTER PEDAL.

On some tractors a starter pedal is used to operate the electric motor which starts the cranking engine.

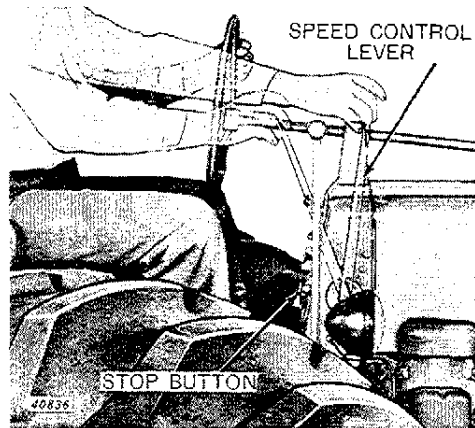
• OPERATING CONTROLS •



*Operating Controls*

### SPEED CONTROL LEVER.

The lever mounted on the right-hand side of the hood 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.

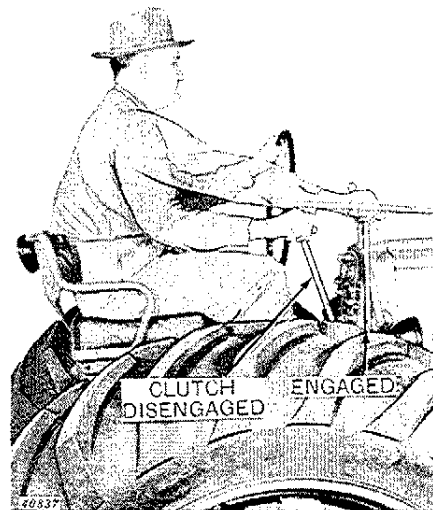
The diesel engine speed control lever stop button enables the operator to slow the diesel engine quickly to idle speed without danger of the engine stopping. When the stop button is pulled out, it allows the diesel engine speed control lever to be moved to the "stop" position which cuts off delivery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

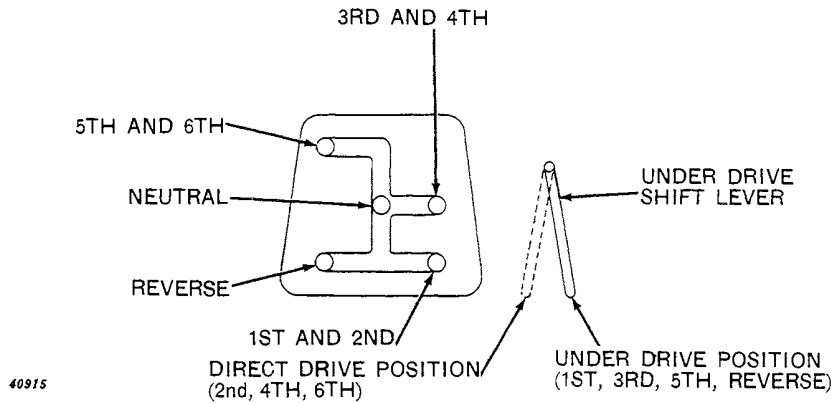


*Clutch Lever*

*NOTE: Do not use pulley brake to stop tractor.*

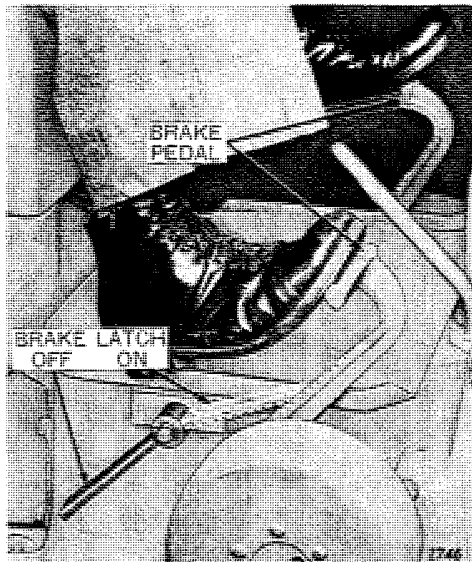
### GEAR SHIFT LEVERS.

Familiarize yourself with the shifting diagrams before you attempt to operate the tractor.



#### *Gear Shift and Underdrive Lever Positions*

When the underdrive shift lever is moved to the right, first, third, fifth and reverse speeds are obtained by moving the gear shift lever to the proper position as shown on the chart above. When the underdrive shift lever is moved to the left, second, fourth, and sixth speeds are obtained by moving the gear shift lever to the proper position.



*Brake Pedals and Latches on  
General-Purpose Tractors*

### BRAKES.

Individually foot-operated brakes make possible short turns to right or left.

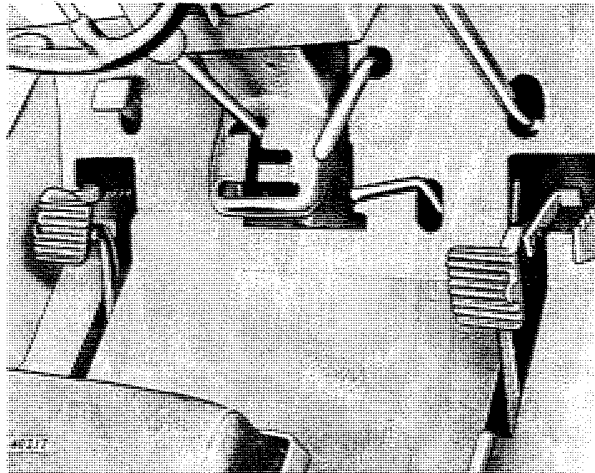
To assure safe stopping at high transport speeds, apply the brakes evenly to avoid drawing the tractor to one side.

A brake latch is conveniently located for locking each brake when doing belt work or when holding the tractor on a hill or incline.

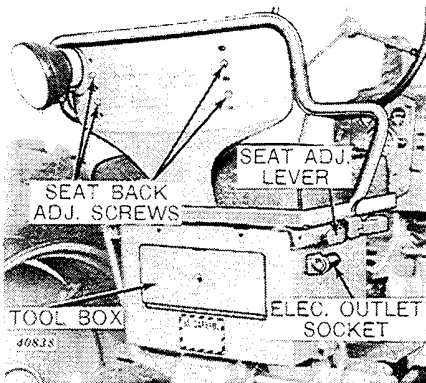
On standard tractors, the brakes are locked by tipping the top of the pedal forward to engage the latch. The brakes are released by pressing on the heel of the pedals.

#### SEAT, BATTERY COMPARTMENT AND TOOL BOX.

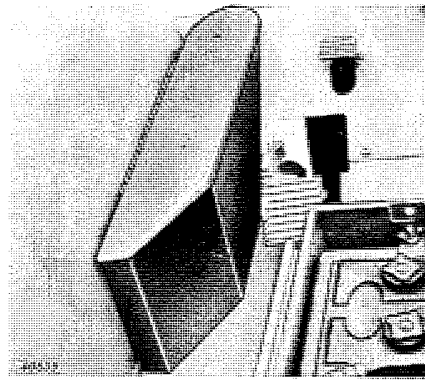
The large, roomy seat adds much to operator comfort and materially lessens fatigue. An adjusting lever and lock pin, located on the right-hand side of the seat, make it possible to move the seat forward and backward to suit the convenience of the operator.



*Brake Pedals and Latches on Standard Tractors*



*Seat, Battery Compartment, and Tool Box*



*Auxiliary Tool Box on Standard Tractor*

The back of the seat can be adjusted for height by removing the attaching screws shown in the illustration and raising or lowering the back to suit the operator.

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

A tool box is conveniently located to provide space for storing tools. A door or lid prevents loss of articles stored in the tool box.

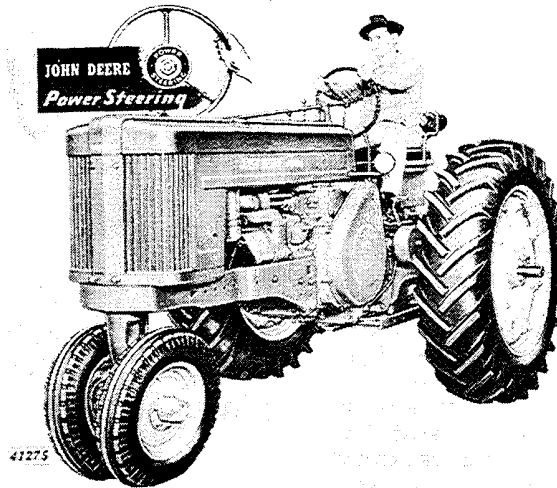
### ELECTRICAL OUTLET SOCKET.

An electrical outlet socket is located on the right-hand side of the battery compartment (see illustration on Page 13). This socket is provided for you to attach your battery charger, trouble light or lights on your trailing implements.

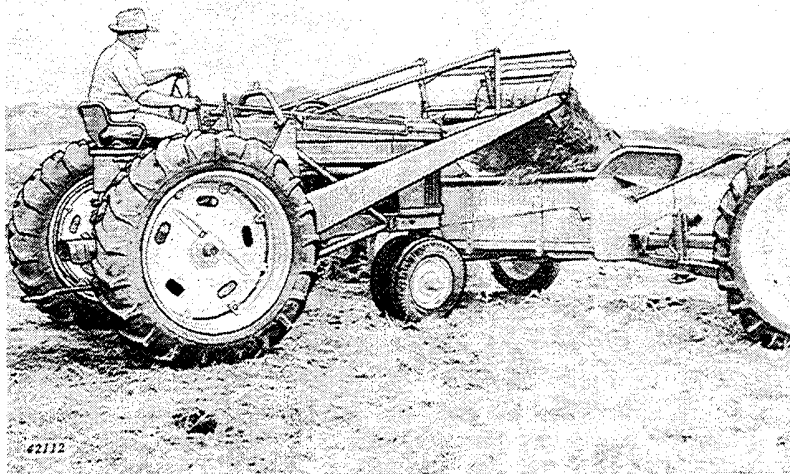
### STEERING MECHANISM.

The seat location and streamlined hood design permit easy view of work on either side or at 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.



*Steering a Model "70" Diesel Tractor*





**Suggest:**

**If the above button click is invalid.**

**Please download this document**

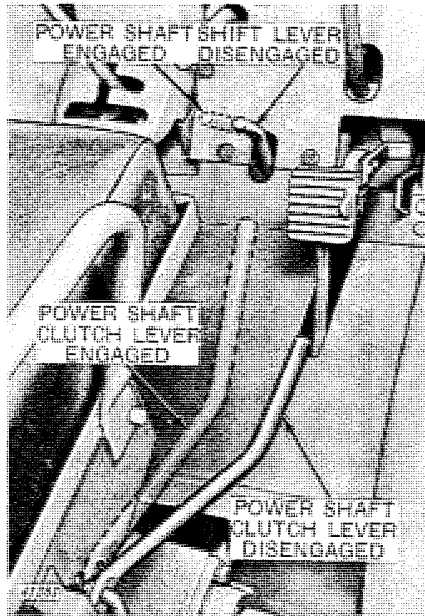
**first, and then click the above link**

**to download the complete manual.**

**Thank you so much for reading**

### POWER SHAFT SHIFT LEVER.

Your new tractor may be equipped with either a transmission-driven power shaft, or an engine-driven (constant-running) power shaft which runs independently of the tractor transmission. In either case the power shaft is engaged by the power shaft shift lever located to the right of the gear shift lever. Move the lever to the left to engage the power shaft and to the right to disengage the shaft. **CAUTION: Do not engage the power shaft shift lever while the engine is running. Before engaging the lever, read the operating instructions on page 47.**



*Power Shaft Shift Lever  
and Clutch Lever  
(Standard Tractor Illustrated)*

### POWER SHAFT CLUTCH LEVER.

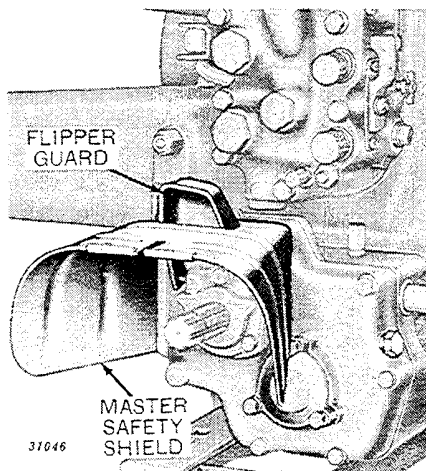
A power shaft clutch is provided on tractors equipped with an engine-driven power shaft. The clutch makes it easy and convenient to use the power shaft without the necessity of shifting gears. Pulling up the clutch lever engages the clutch; pushing the lever down disengages the clutch and applies a partial brake to power shaft. Additional downward pressure on the lever brings in added brake action and effects a faster stopping of the power shaft.

### POWER SHAFT MASTER SAFETY SHIELD.

A master safety shield is mounted over the power shaft to provide for the safety of the operator. This master shield should be removed only when it is necessary to mount integral equipment where the power shaft is used. *Replace the master shield immediately upon removal of the equipment.*

### POWER SHAFT FLIPPER GUARD.

The power shaft flipper guard should never be removed from the tractor. Do not operate the tractor with the end of the power shaft



*Power Shaft Master Safety  
Shield and Flipper Guard*

**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**