830 SERIES DIESEL TRACTORS WITH ELECTRIC STARTING (SERIAL NO. 8300000-)

JOHN DEERE

OPERATORS MANUAL

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OMR20820 (01SEP59) English

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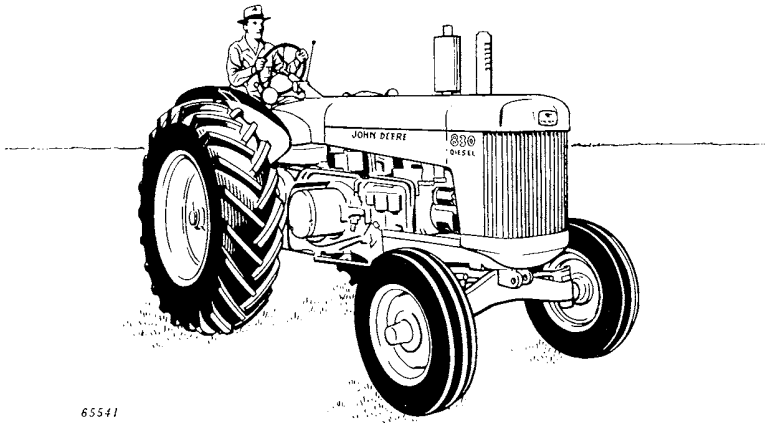

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TO THE PURCHASER

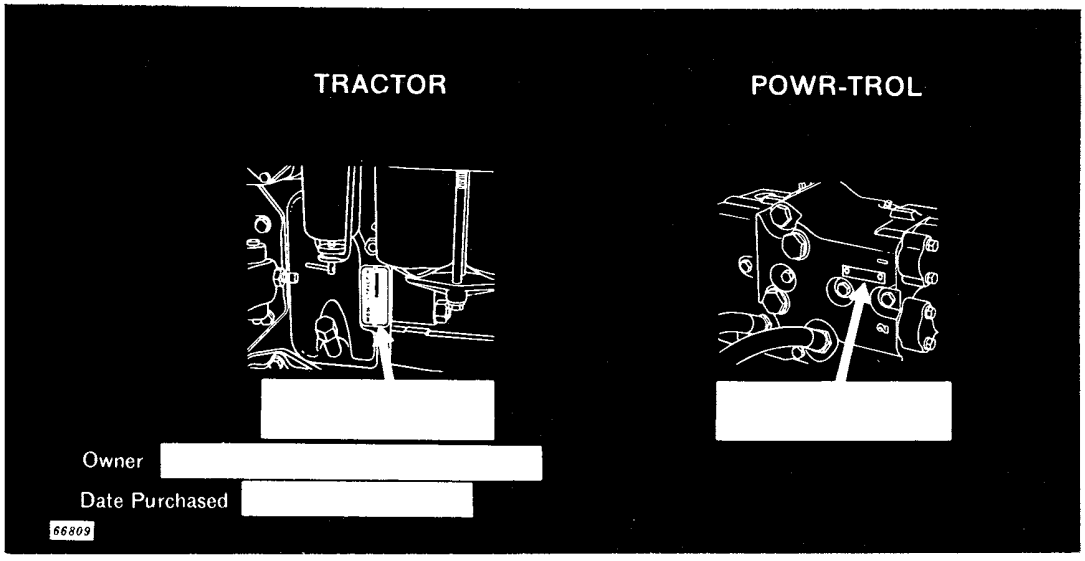
We welcome you to our ever-growing family of John Deere Tractor owners. We are confident that the dependable and economical performance of your John Deere "830" Diesel Tractor will prove that you made a wise choice.

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 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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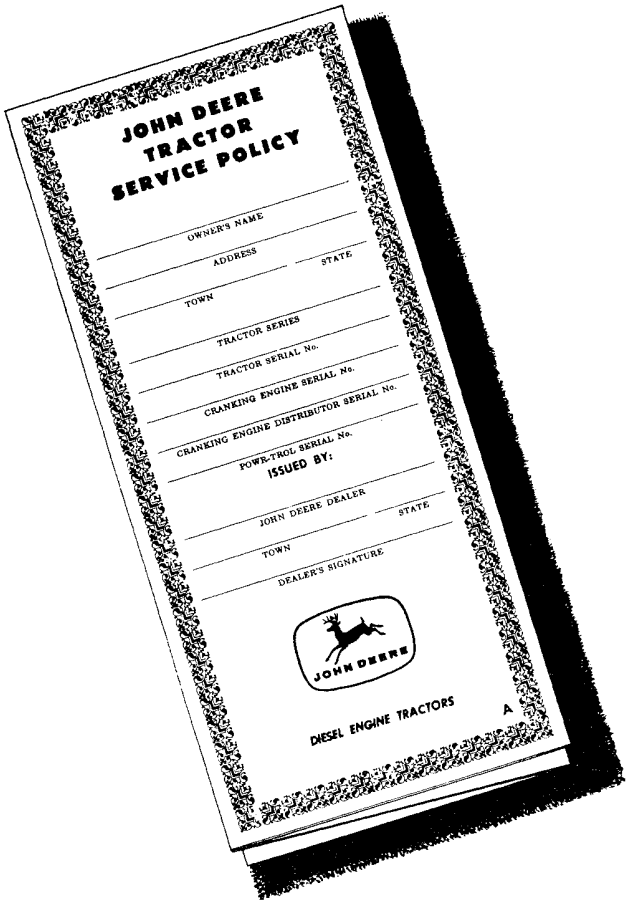
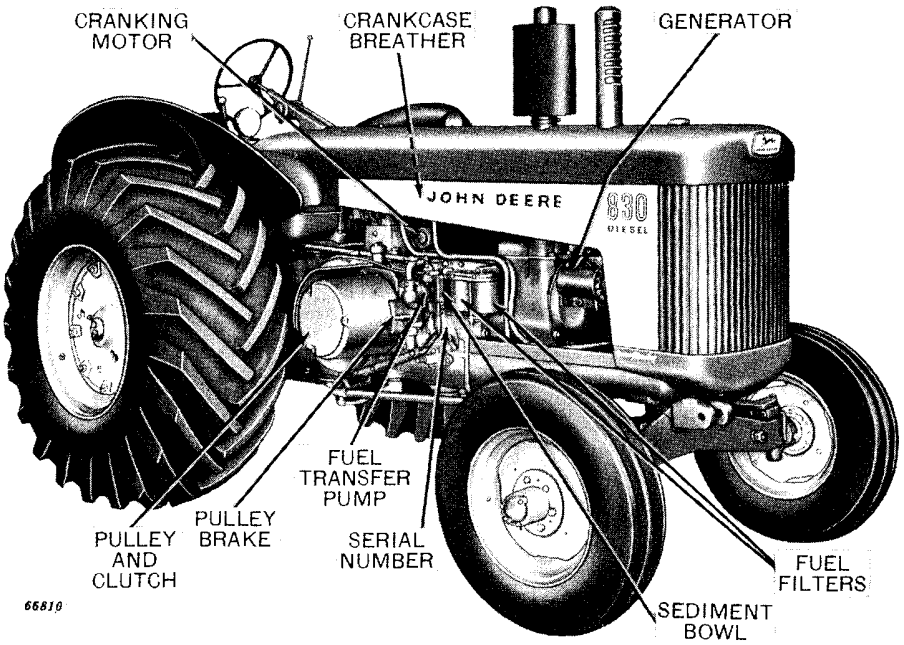
John Deere Tractor Service Policy



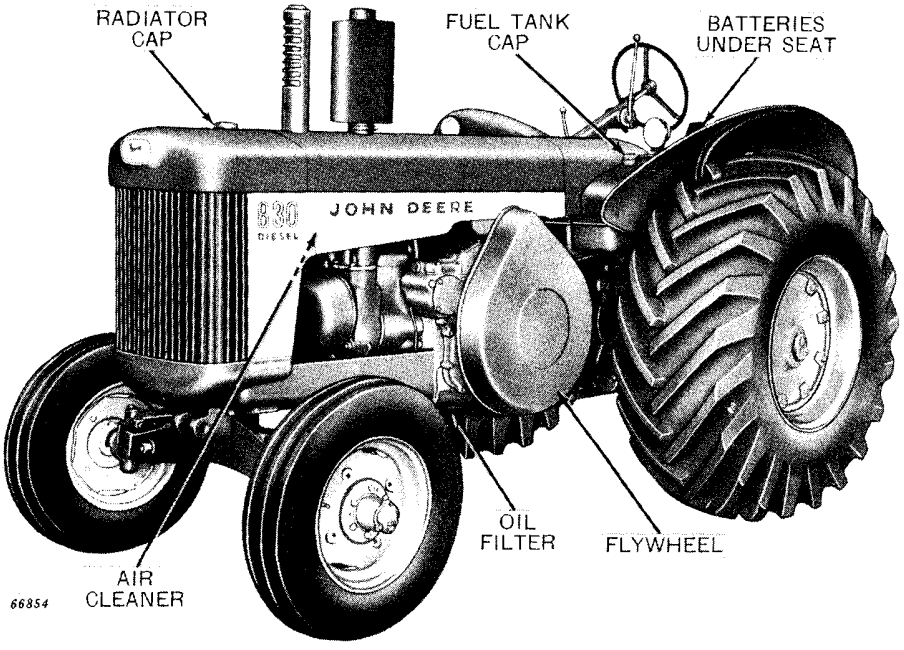
When your new tractor was delivered the John Deere dealer presented to you a copy of the Tractor Service Policy illustrated above. This policy certifies that your new John Deere Tractor was properly inspected and prepared for delivery by the dealer before he released it to you.

Present the policy to the dealer whenever any services which it authorizes are required. Keep the policy in a safe place for ready reference at all times.

This is Your New John Deere Tractor



John Deere "830" Series Diesel Tractor with Electric Starting—Pulley Side
(Serial No. 8300000-)



John Deere "830" Series Diesel Tractor with Electric Starting—Flywheel Side
(Serial No. 8300000-)

SPECIFICATIONS

PERFORMANCE:

Capacity for Work:

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

***Maximum Horsepower:**

Belt	75.60
Drawbar	69.66

CAPACITIES (U. S. MEASUREMENTS):

Fuel Tank	32-1/2 Gals.
Crankcase	3-1/2 Gals.
Transmission	3-1/4 Gals.
Powr-Trol	3 Gals.
Powershaft Clutch	3-3/4 Qts.
Remote Cylinder (Each)	1-3/4 Qts.
Cooling System	7-1/2 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

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
Fast Idle	1270 rpm
Slow Idle	750 rpm

LUBRICATION SYSTEM:

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

FUEL SYSTEM:

Type..... Gravity to sediment bowl. Transfer pump through filters.

Air Cleaner..... Oil-wash type.

COOLING SYSTEM:

Type..... Pressure system. Centrifugal pump with temperature controlled by heavy-duty thermostat.

ELECTRICAL SYSTEM:

Battery Voltage	24 Volts
Generator Regulation	Current-Voltage Regulator
Batteries	Four 6-Volt, Group I-H, in Series
Lights and Accessories	12 Volts
Electric Cranking Motor	24 Volts
Generator	24 Volts

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.

**Sea level (calculated); maximum h.p. based on 60° F. and 29.92 in. Hg. (Nebraska Test No. 632).*

SPECIFICATIONS

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 either single function or 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, and 8.25 x 20, 10-ply, available.

REAR WHEELS AND TIRES:

14-34 6-ply on cast disk wheels, 15-34 6-ply, 18-26 8-ply, 18-26 8-ply low profile, 15-34 or 18-26 cane and rice, and 18.00-26 10-ply grader available.

TREAD ADJUSTMENTS:

Front..... 56-1/2″ and 63″
Rear:

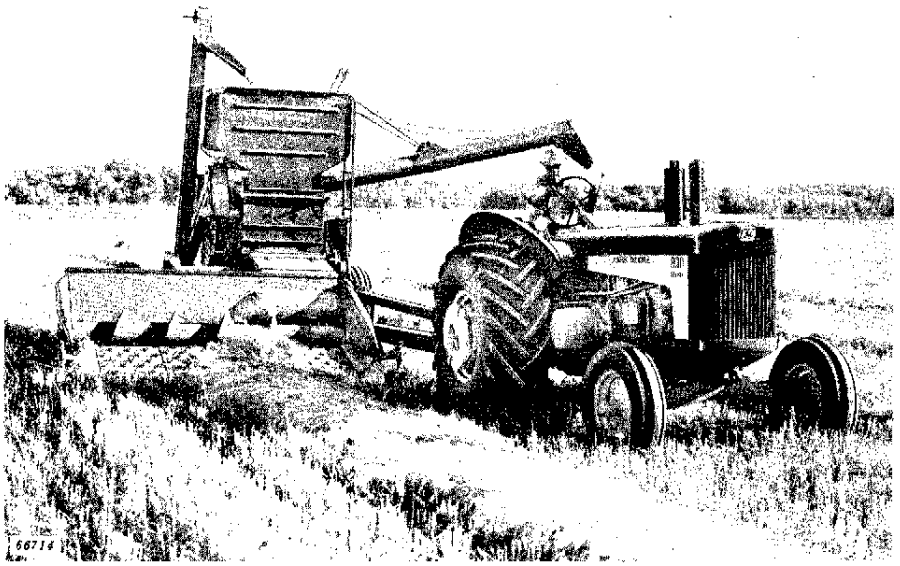
14-34 or 15-34 on 14″ Rims	15-34 on 16″ Rims	18-26 or 18.00-26 on 16″ Rims	18-26 or 18.00-26 on 20″ Rims
64-1/2″ or 68-1/2″	62-1/2″ or 70-1/2″	67-1/4″ or 75-1/4″	67-1/4″ or 83-1/4″

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."*

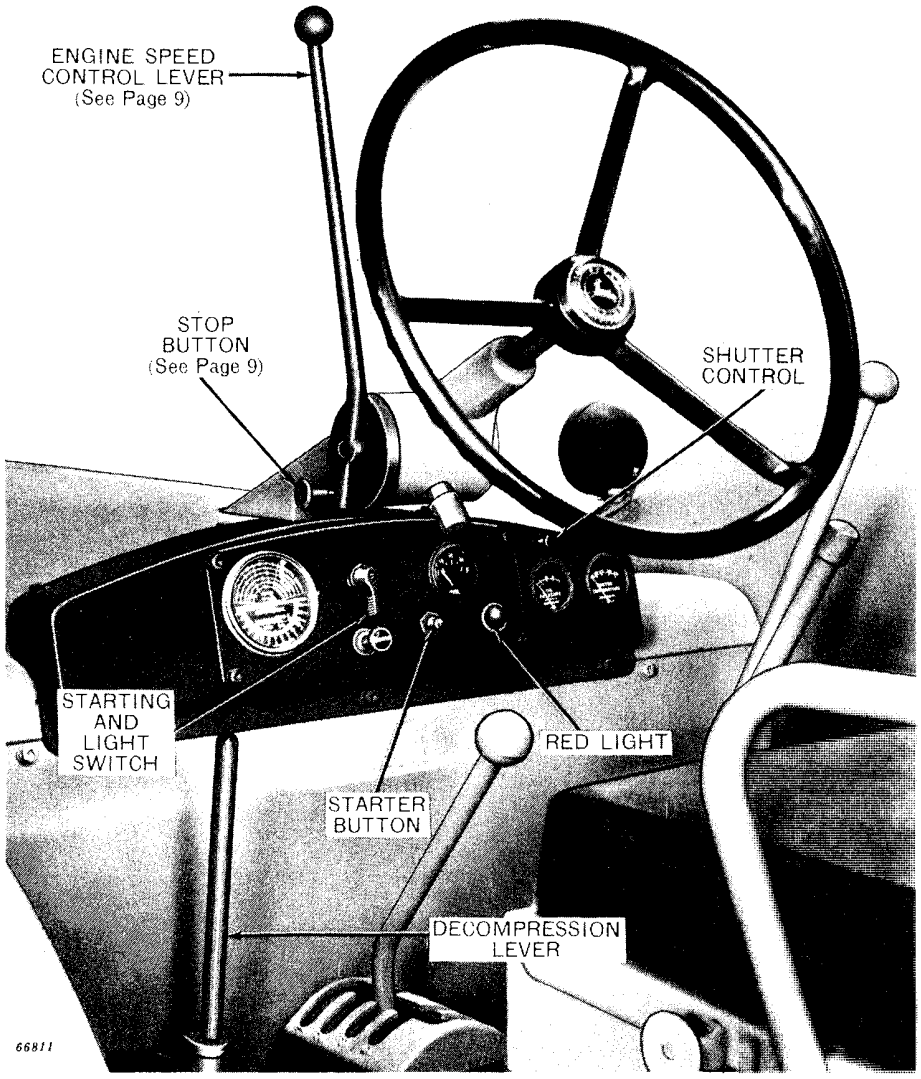
(Specifications and design subject to change without notice.)



CONTROLS

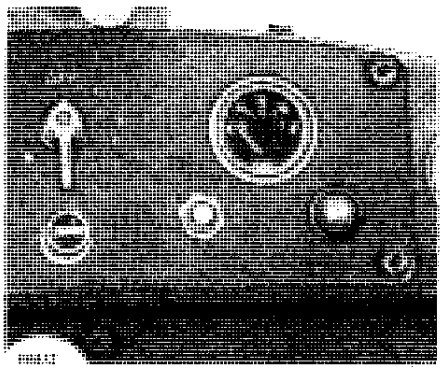
Familiarize yourself with all the controls provided for safe and easy operation of your new tractor. Regardless of your previous tractor experience, study this section covering controls carefully before you operate your tractor.

• STARTING CONTROLS •



Starting Controls

STARTING AND LIGHT SWITCH.



Starting and Light Switch and Red "Generator" Light

A combination starting. and light switch is located on the instrument panel. The switch controls the electrical circuit to the starter button as well as to the lights and electrical accessories.

The lights on your tractor provide maximum use and convenience both for 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, as well as the starting circuit, are controlled by the combination starting and light switch. The switch has five positions as follows:

"OFF"—Starter button inactive and lights off.

"I" —Starting, Red "Generator" light "ON."

"L" —Bright front lights and white rear light.

"B" —Bright front lights and red rear light.

"D" - Dim front lights and red rear light.

RED GENERATOR LIGHT.

When the combination starting and light-switch is turned on the red light to the right of the switch will glow. As soon as the engine starts and the generator begins to charge the batteries, the red light goes out and will stay out as long as the batteries are being charged. If the generator fails to operate properly the red light will come on as a warning to the operator.

When the engine is stopped the red light will glow to remind the operator to turn off the switch.

Once the engine is started, it will continue to operate even though the starting and light switch is turned off. **However, during tractor operation the switch should be allowed to remain on;** otherwise neither the red light nor the fuel gauge will function.

STARTER BUTTON.

Pushing the starter button activates the cranking motor which cranks the engine. The starter button will not operate until the starting and light switch is turned on.

DECOMPRESSION LEVER.

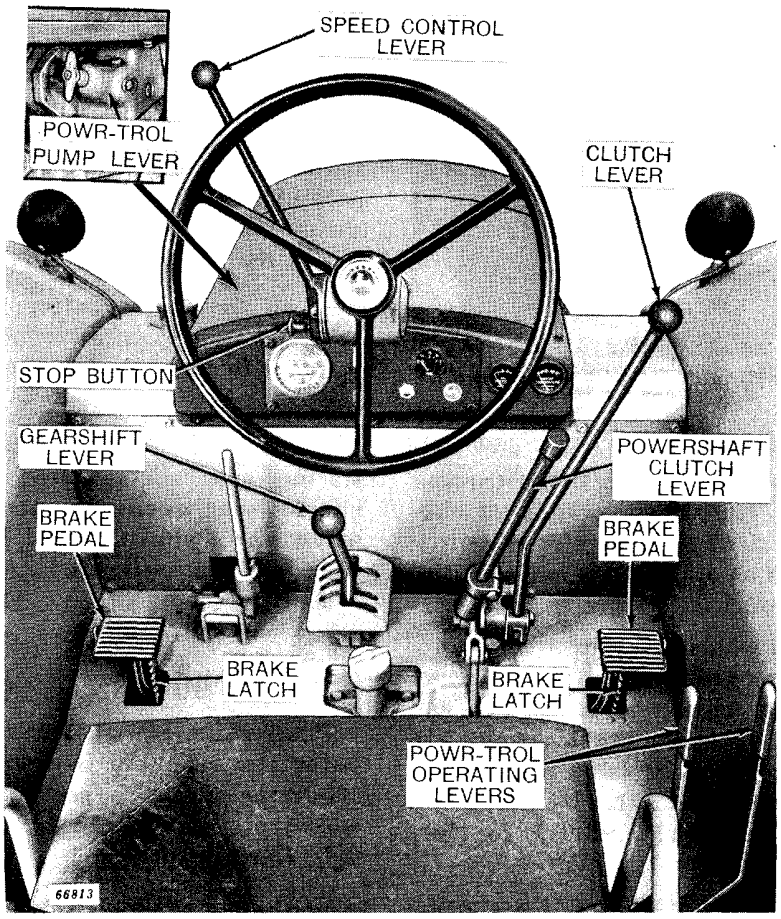
Pulling the decompression lever to the rear relieves compression in the engine for starting purposes.

SHUTTER CONTROL (ATTACHMENT).

A shutter may be purchased as special equipment. It shortens the engine warm-up periods and maintains proper idling temperature.

A convenient control button adjusts the shutter opening.

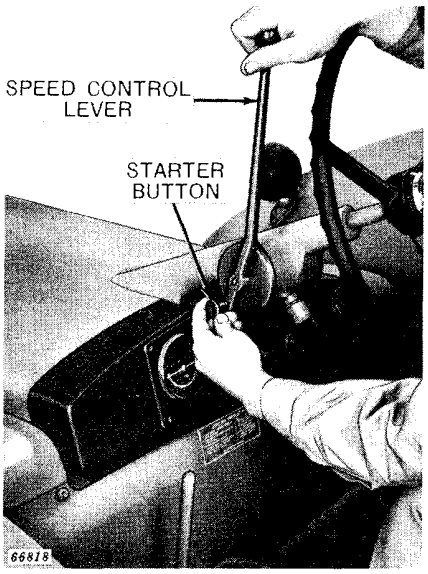
• OPERATING CONTROLS •



Operating Controls

SPEED CONTROL LEVER.

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



Speed Control Lever and Stop Button

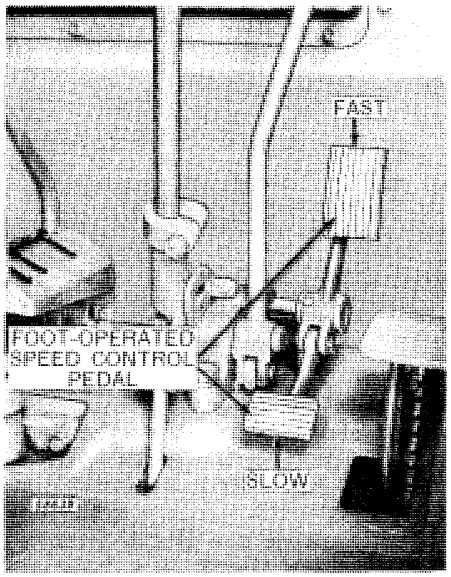
FOOT-OPERATED SPEED CONTROL PEDAL (ATTACHMENT).

This pedal, which is optional equipment, is used to speed up or slow down the tractor without using the hand-operated speed control lever. This pedal is especially handy when operating over rough areas, in and out of ditches and levees or when the tractor is used with some special equipment.

The pedal operates independently of the speed control lever.

Pressing down on the lower section of the pedal slows the engine. When pedal contacts the platform the engine is operating at slow idle speed.

Pushing ahead on the top section of the pedal speeds up the engine. When pushed forward as far as possible the engine is operating at fast idle.



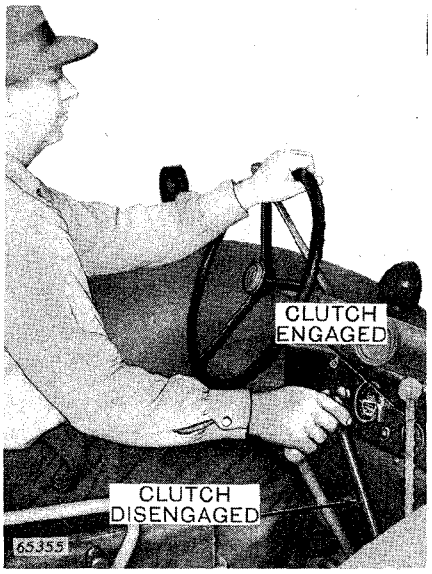
Foot-Operated Speed Control Pedal

ENGINE STOP BUTTON.

The engine is stopped by pulling the speed control lever all the way to the rear. This cuts off delivery of fuel to the engine by the injection pumps.

The engine stop button, located on the left side of the speed control lever, permits the operator to slow the engine quickly to idle speed without danger of the engine stopping. When the stop button is pulled out, the speed control lever can then be moved all the way to the rear to stop the engine.

CLUTCH LEVER.



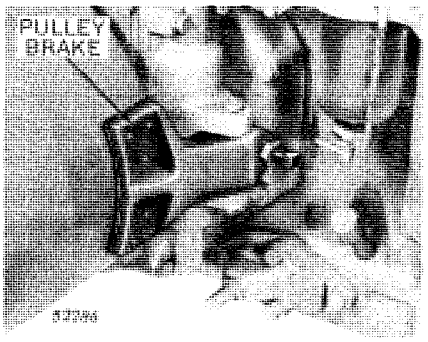
Clutch Lever

Power is applied gradually and smoothly by slowly pushing the clutch lever forward. When the tractor picks up speed, a quick forward thrust on the lever locks the clutch into engagement.

Pull back on the clutch lever to disengage the clutch.

PULLEY BRAKE.

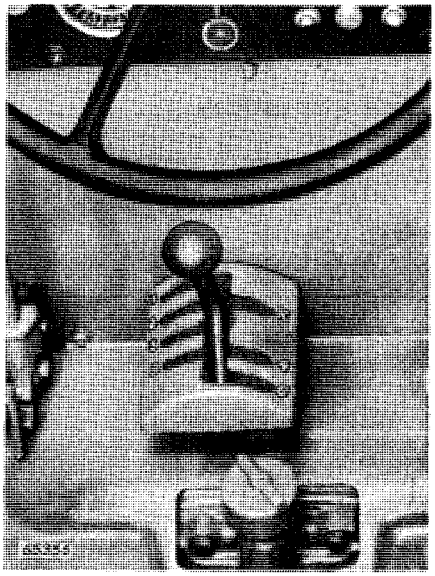
The pulley brake, which is applied when the clutch lever is pulled back, stops the pulley from rotating, permitting easy shifting of the transmission gears. *NOTE: Do not use pulley brake to stop tractor.*



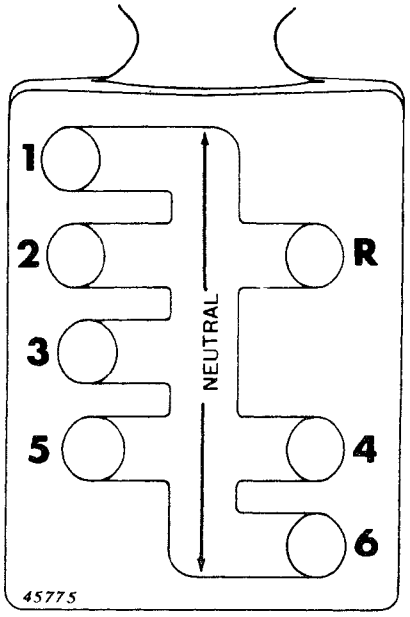
Pulley Brake

GEARSHIFT 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.



Gearshift Lever

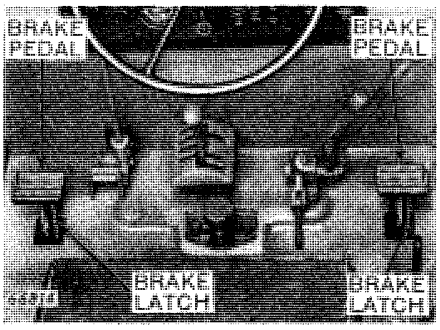


Gearshift Quadrant

BRAKES.

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

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



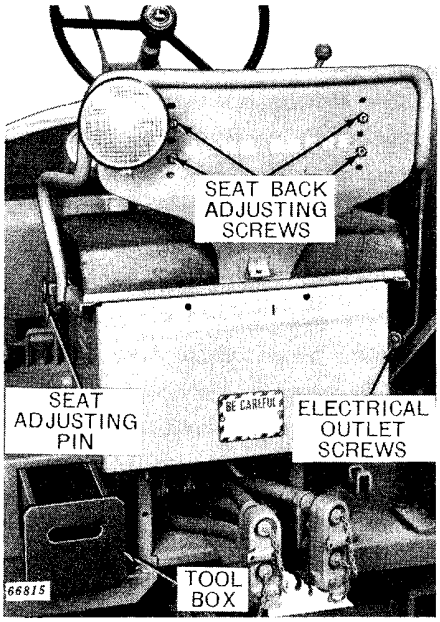
Brake Pedals and Latches

A brake latch on each pedal can be used for locking each brake when doing belt work or when holding 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.

STANDARD SEAT.

The roomy seat increases operator comfort and lessens fatigue. There is an adjustment on the left-hand side for moving the seat forward or backward to suit the convenience of the operator.

The back of the seat can be adjusted up or down by means of attaching screws.



Standard Seat, Adjusting Lever, Stop Pin and Tool Box

BATTERY COMPARTMENT.

The batteries are located in a compartment under the seat where they are readily accessible for periodic service.

ELECTRICAL OUTLET SOCKET.

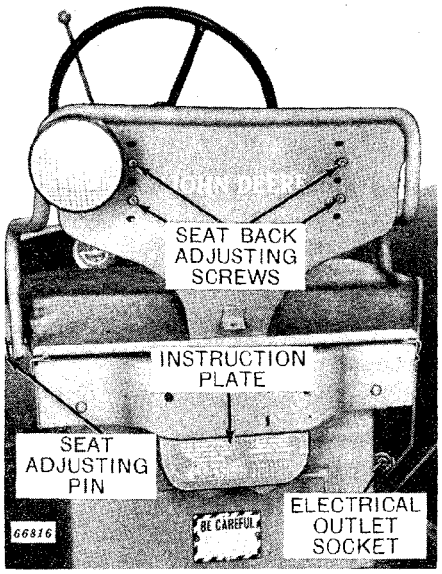
A convenient electrical outlet socket is located on the right-hand side of the battery compartment.

TOOL BOX.

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

SPECIAL FLOAT-RIDE SEAT.

A special float-ride seat having rubber torsion springs and a shock absorber is available as optional equipment. This seat has the same forward and backward adjustment and seat back adjustment as the regular seat. In addition, the tension on the rubber torsion springs can be adjusted to suit each rider. Adjustment is made by turning the handle located at the back of the seat. An instruction plate above the handle tells how to make the adjustment.



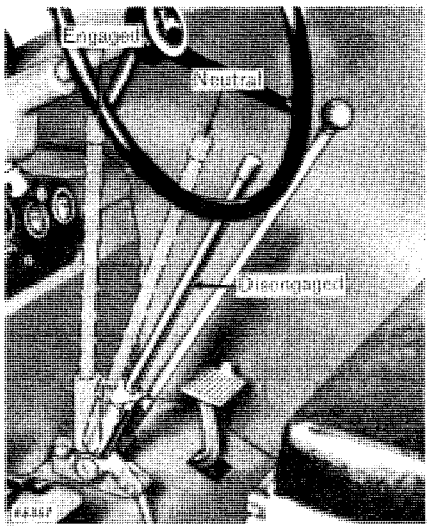
Float-Ride Seat

CAUTION: Do not adjust the rubber torsion springs while an operator is on the seat.

POWERSHAFT CLUTCH LEVER.

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

Pushing the lever forward engages the clutch. Pulling the lever back disengages the clutch and applies a brake to keep the shaft from turning when not in use. For further information see page 28.



Powershaft Clutch Lever

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

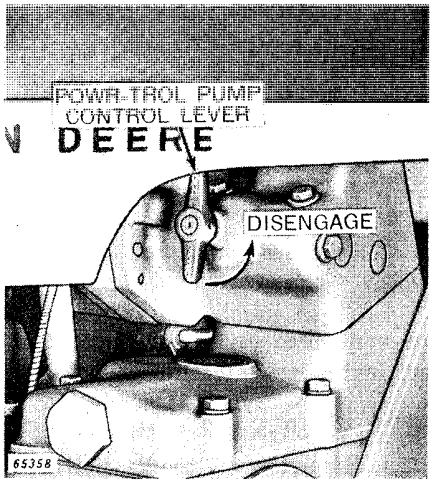
Make it a standing rule never to dismount from the tractor without first disengaging the powershaft clutch.

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 29.

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 engine. The pump can be disengaged while the engine is running at slow idle.

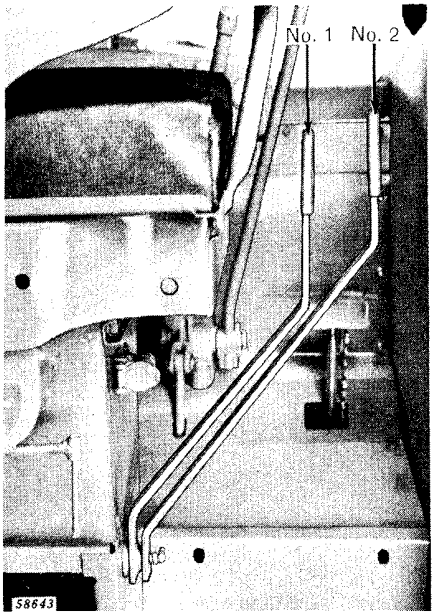


Powr-Trol Pump Control Lever

POWR-TROL OPERATING LEVERS.

Either single control valve or dual control valve Powr-Trol systems are used. One remote cylinder is used with the single control valve and either one or two cylinders with the dual control valve.

The levers at the right-hand side of the seat operate the cylinders. On tractor equipped with the single control valve there is only one lever.

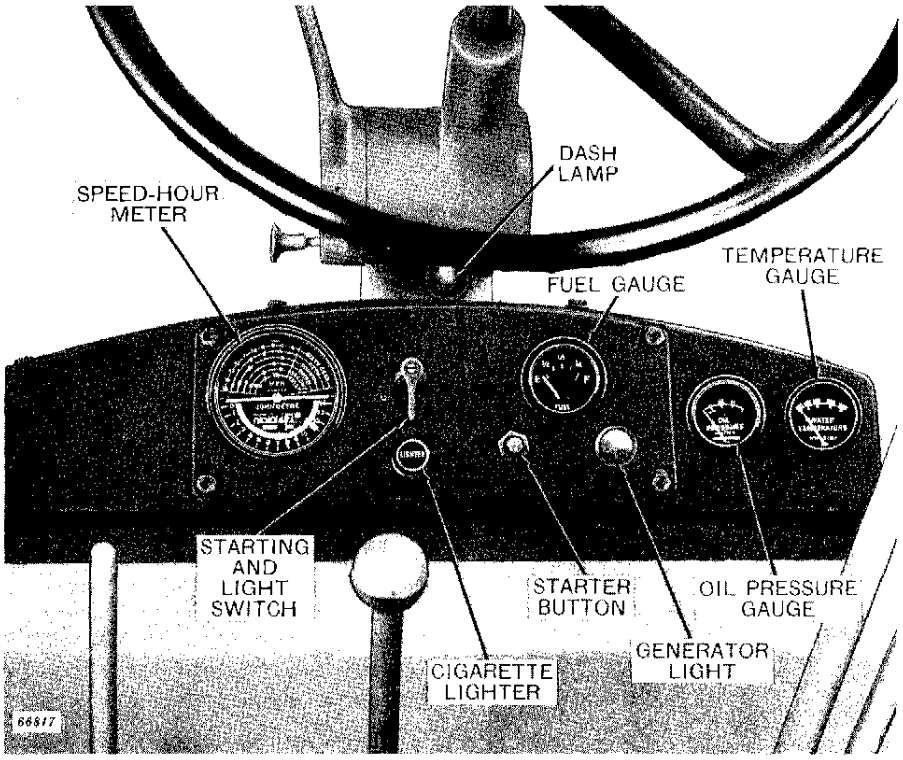


Powr-Trol Operating Levers

There are two levers if the tractor has a dual valve system. The inner of the two operating levers (No. 1) operates the cylinder attached to the left-hand (No. 1) breakaway coupling.

When two cylinders are used the outer lever (No. 2) is used to operate the second cylinder attached to the right-hand (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 moving the lever forward and dropped by moving the lever to the rear. For further information, see page 29.

• INSTRUMENT PANEL •



Instrument Panel

OIL PRESSURE GAUGE.

The oil pressure gauge indicates whether or not the engine oil pump is working. The indicator hand on the gauge should rest between the letters "M" and "H" when the engine is hot and operating at fast idle.

If gauge does not indicate pressure, stop engine immediately.

TEMPERATURE GAUGE.

The temperature gauge indicates the temperature of the coolant in the cooling system. Engine temperatures are controlled by a thermostat in each cylinder water outlet pipe.

FUEL GAUGE (12-VOLT).

The electric fuel gauge indicates the amount of fuel in the fuel tank. The fuel gauge does not register unless the starting and light switch is turned "on."

DASH LAMP (12-VOLT).

A small lamp is provided on the steering post for illumination at night. It is turned on by the starting and light switch when the main lights are turned on.

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

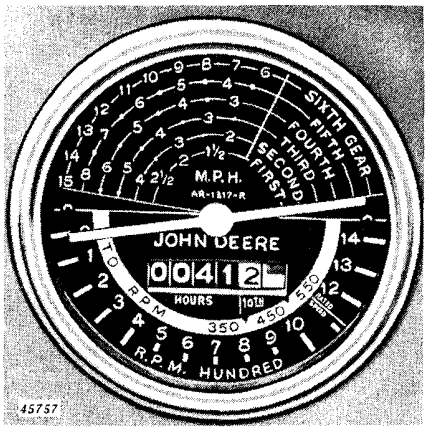
CIGARETTE LIGHTER (12-VOLT).

A cigarette lighter (special attachment) is provided for your convenience on the instrument panel. The cigarette lighter will not operate until the starting and light switch is turned on.

SPEED-HOUR METER.

The speed-hour meter can be used to determine the following:

		Shown on
(1)	Ground Travel Speed in All Gears	Top Half of Dial
(2)	Power Take-Off Shaft Speed (rpm)	White Section of Lower Dial
(3)	Engine Speed (rpm)	Bottom Portion of Lower Dial
(4)	Accumulated Hours of Service	Center Portion of Lower Dial



Speed-Hour Meter Dial