5010-I Tractor (Prior to Serial No. 8000)

JOHN DEERE

OPERATORS MANUAL

5010-I Tractor (Prior to Serial No. 8000)

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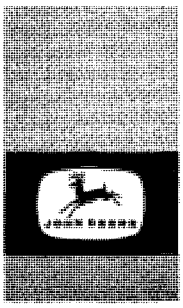


TO THE PURCHASER

Your new John Deere 5010-I 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.

CONTENTS

PARTS AND SERVICE

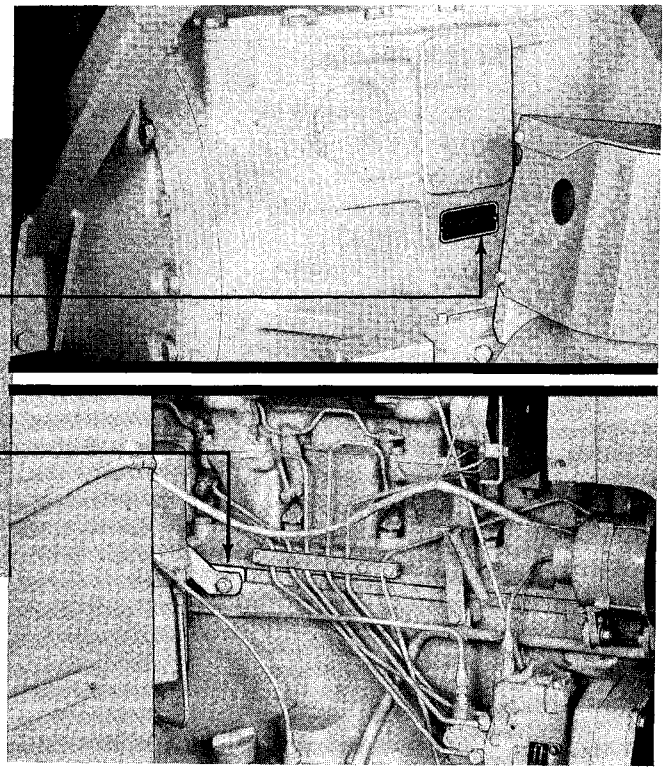
Your John Deere dealer wants to help you get the most value from your tractor. His skilled servicemen can handle every job efficiently. These men are trained in modern service methods; they have all necessary tools and equipment. If new parts are needed, only genuine John Deere parts will be installed. 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 tractor series number and the serial numbers shown in the illustrations below. For ready reference, record the numbers in the spaces provided.

FILL IN THESE SPACES

CHASSIS SERIAL NUMBER

ENGINE SERIAL NUMBER



SPECIFICATIONS

HORSEPOWER (Maximum observed at 2200 engine rpm):

Flywheel	127.01
PTO*	121.12
Drawbar*	108.91

ENGINE

Type	6-cylinder, in-line, valve-in-head, 4-stroke-cycle
Engine speeds:	
Slow idle	600 rpm
Working range	1500 to 2200 rpm
Bore and stroke	4-3/4 x 5 in.
Displacement	531 cu. in.
Compression ratio	16 to 1
Firing order	1-5-3-6-2-4
Valve clearance .....intake	0.015 in.
exhaust	0.022 in.
Injection pump timing	TDC

COOLING SYSTEM

Type	Pressurized with centrifugal pump
Engine temperature control	2 thermostats

**Nebraska Test No. 828*

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

FUEL SYSTEM

Type	Direct injection
Injection pump	Inlet metering distributing-type
Air cleaner	Dry type

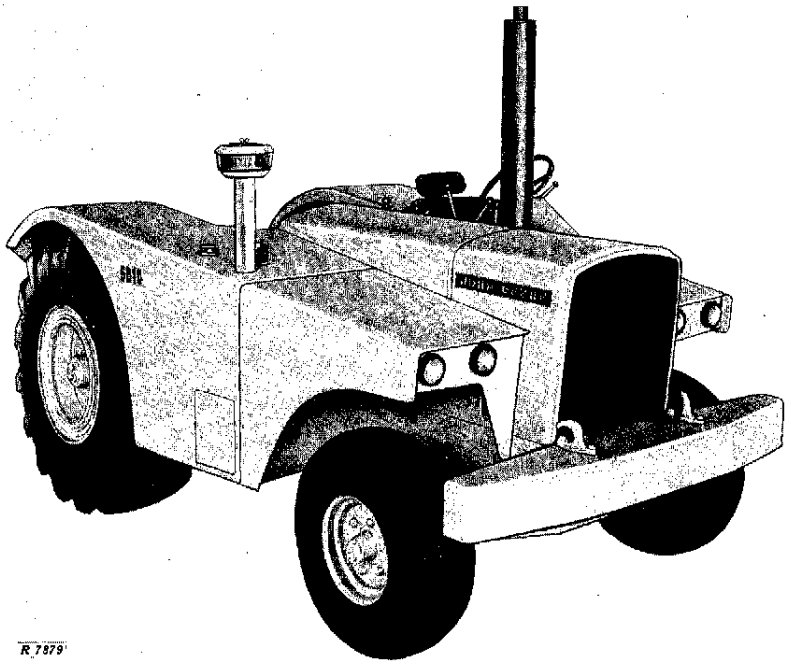
ELECTRICAL SYSTEM

Charging system	24-volt with self-rectifying alternator and transistorized regulator
Starter, lights, alternator voltage	24-volt
Accessory voltage	12-volt
Batteries	Four 6-volt, 51 plate, 115 ampere-hour, tractor-type, connected in series

CLUTCH: Two 11-in. dry plates, hydraulic assist, foot-operated

TRANSMISSION

Type	Syncro-range, constant mesh
Gear selections	8 forward and 3 reverse



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John Deere 5010-I Tractor

GROUND SPEEDS (Calculated at 1900 engine rpm with 18.00-25 tires)

1st	2.2 mph
2nd	3.5 mph
3rd	4.6 mph
4th	6.0 mph
5th	7.4 mph
6th	9.7 mph
7th	12.6 mph
8th	20.6 mph
3rd Rev.	4.5 mph
5th Rev.	7.2 mph
7th Rev.	12.3 mph

Maximum transport speed 26.1 mph at 2400 engine rpm (fast idle speed).

CAPACITIES

Fuel tank	49 U.S. gals.
Crankcase:	
When lubrication system is dry	13-1/2 U.S. qts.
At service intervals	12 U.S. qts.
Hydraulic system:	
When system is dry	17 U.S. gals.
At service intervals	16 U.S. gals.
Cooling system	40 U.S. qts.

POWER TAKE-OFF . Independent, constant running, with mechanical disconnect. Vertical or 1000 rpm horizontal PTO shaft.

PTO CLUTCH . . . . . Hand-operated, wet multiple-disk, hydraulically actuated

HYDRAULIC SYSTEM

Type . . . Closed center, constant pressure; includes power steering, power brakes, equipment control, and transmission-differential lubrication

Maximum pressure . . . . . 2250 psi

BRAKES:

Tractor . . . Foot-operated, wet-disk type, hydraulically actuated.

Scraper . . . . Hand-operated power brakes

TIRES (additional sizes available for special requirements)

Front	11.00-16, 12 ply
Rear	18.00-25, 12 ply

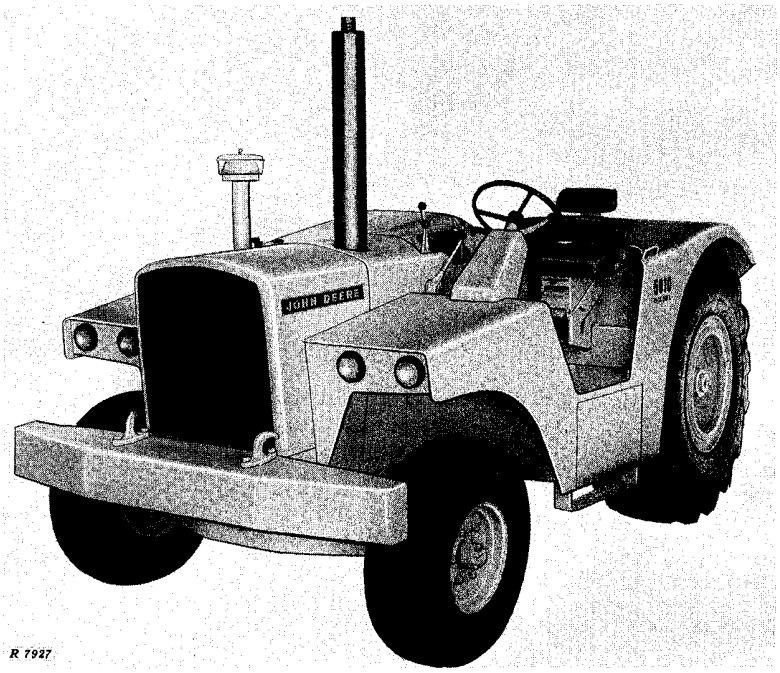
DIMENSIONS

Wheel base	96 in.
Over-all length	157-1/8 in.
Over-all height	105-1/4 in.
Over-all width	95-3/4 in.
Front wheel tread	69 in.
Rear wheel tread	72 in.
Turning radius	145-1/2 in.

SHIPPING WEIGHT

(less fuel and ballast) . . . . . 13,030 lbs.

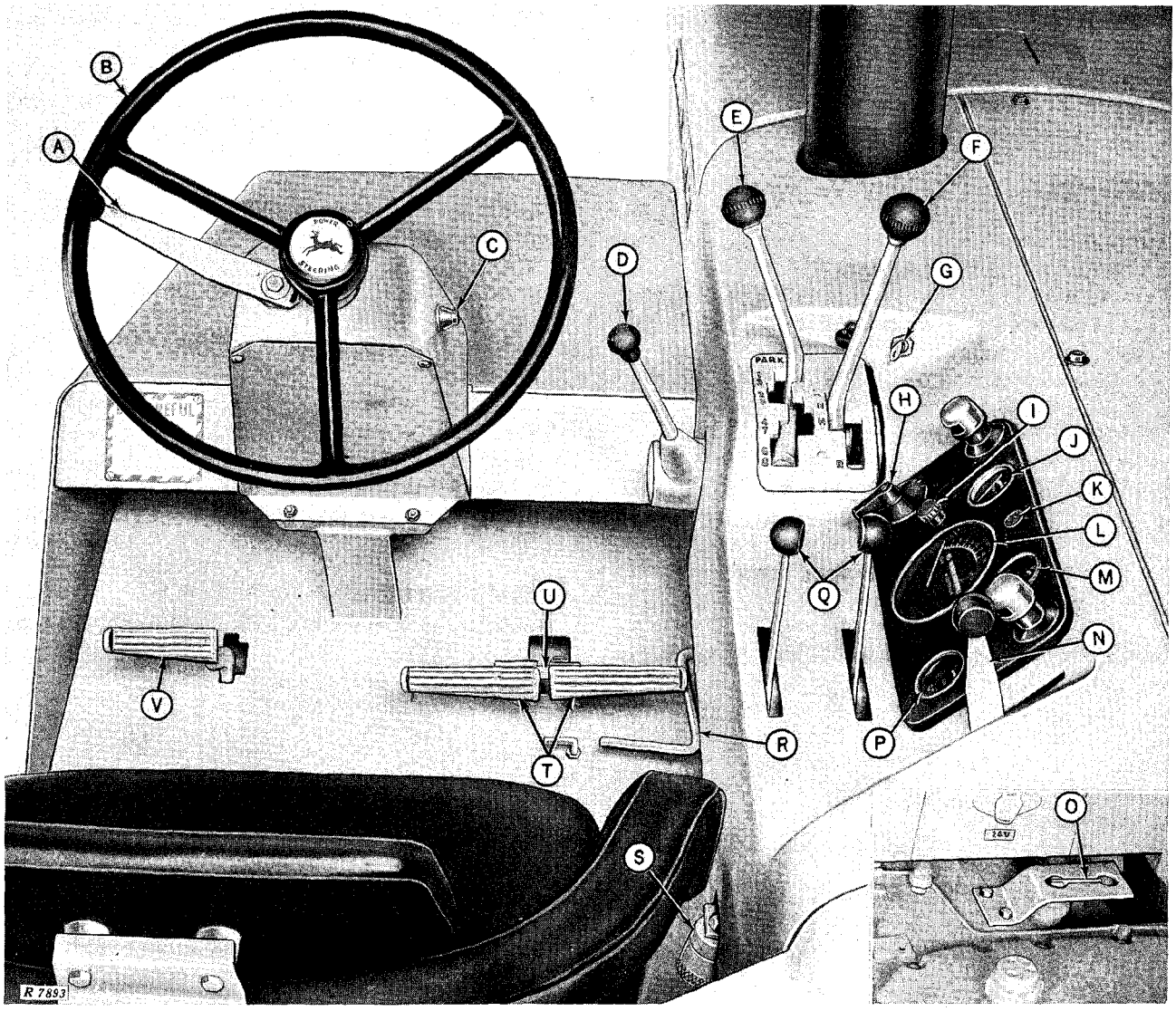
Specifications and design subject to change without notice.



John Deere 5010-I Tractor

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.



A – Scraper Brake Lever (page 12)
B – Steering Wheel
C – Horn Button
D – Hand Throttle (page 7)
E – Range Selector Lever (page 11)
F – Hi-Lo Shift Lever (page 11)
G – Key Switch (page 5)
H – Light Switch (page 13)
I – Speed-Meter Knob (page 10)
J – Coolant Temperature Gauge
K – Oil Pressure Indicator Light (page 5)
L – Speed-Meter (page 10)
M – Ammeter (page 5)
N – PTO Clutch Operating Lever (page 15)
O – PTO Drive Disconnect Lever (page 15)
P – Fuel Gauge
Q – Equipment Operating Levers (page 14)
R – Foot Throttle (page 7)
S – Cold Weather Starting Fluid Adapter (page 6)
T – Brake Pedals (page 12)
U – Brake Coupler Bar (page 12)
V – Clutch Pedal (page 11)

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

(1) Perform the following checks and services before starting the engine for the first time each day. For detailed instructions, see page 27.

(a) Check the engine crankcase oil level.

(b) Check the radiator coolant level.

(c) If the engine is protected from dust and dirt by a pre-cleaner, check the collector bowl.

(d) Check the fuel pump sediment bowl.

(e) Lubricate the front axle pivot pins, steering knuckle pins, steering bell crank, tie rod ends, and steering cylinder end fittings.

STARTING THE ENGINE

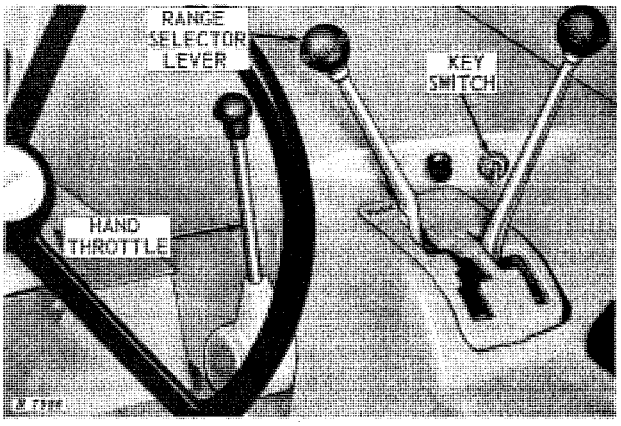
NOTE: If the prevailing temperature is 40° F. or lower, it may be necessary to use a cold weather starting aid to start the engine - see pages 6 and 7.

(2) Make sure that the fuel shut-off valve at the bottom of the fuel tank is open - see page 32.

(3) See that the range selector lever is in the "PARK" position. Depress the clutch pedal to decrease drag on the engine.

(4) Set the hand throttle approximately one-half of its travel forward.

(5) Turn the key switch clockwise to the first position. The oil pressure indicator light should glow. If the light fails to glow, turn the key switch off and determine the cause.



Starting Controls

(6) Turn the key switch all the way to the right to crank the engine. Do not hold the switch 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 46.

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.

(7) After the engine starts, the oil pressure indicator light should go out and the ammeter should indicate that the alternator is charging. If the light continues to glow or the ammeter indicates battery discharge when the engine is running, stop the engine and determine the cause.

COLD WEATHER STARTING AIDS

For cold weather starting, the engine is equipped with an ether starting fluid adapter. Other starting aids are available from your John Deere dealer.

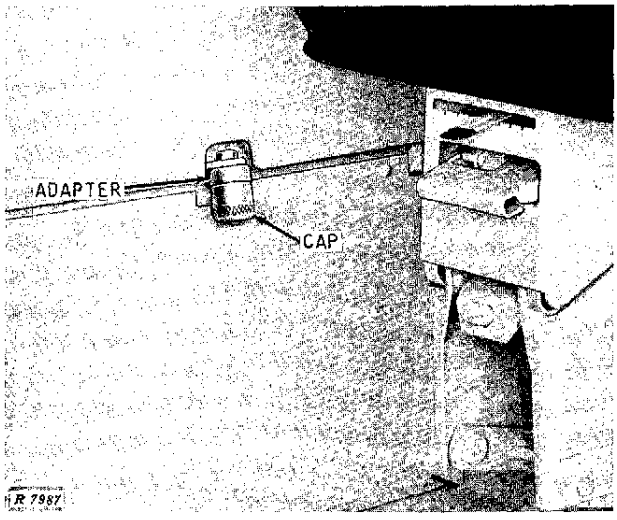
These aids are effective at low temperatures, only when the engine is otherwise operating satisfactorily. They will not correct such deficiencies as low battery charge, crankcase oil of heavy viscosity, and high electrical resistance which may prevent the engine from starting.

Use the correct diesel fuel. See the chart on page 20.

STARTING FLUID ADAPTER

This adapter 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.



Starting Fluid Adapter

To inject starting fluid, push up on the can.

CAUTION: To avoid damage, turn the engine with the starter 1 or 2 revolutions before injecting starting fluid and inject starting fluid only while the engine is turning.

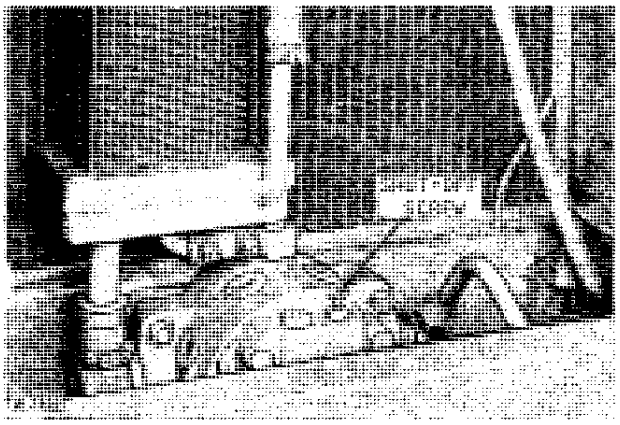
Relax pressure on the can between "shots" of starting fluid. Stop injecting the fluid after the engine starts. If the engine begins to die during the first few seconds of operation, inject another "shot" of starting fluid. When the engine is operating satisfactorily, remove the can from the adapter and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

SHUTTING OFF HYDRAULIC PUMP

During cold weather the starter speed may be increased by shutting off the hydraulic pump so it will not build up pressure. To do so, remove the grille and turn the shut-off screw in (clockwise) one turn with a screwdriver. Then turn the screw in by hand until resistance is felt and then turn the screw in one turn more.



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.

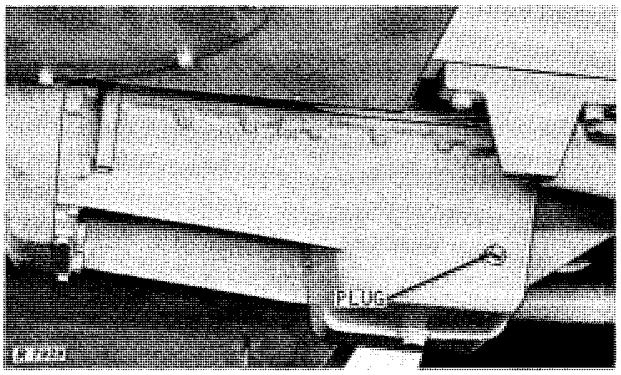
NOTE: Oil will leak past the shut-off screw if it is not backed all the way out against the internal stop.

ADDITIONAL BATTERIES

Starting the engine in cold weather can be made easier by connecting additional batteries in parallel with the 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. Be sure booster batteries are connected properly.

CRANKCASE OIL HEATER



Location for Crankcase Oil Heater

To facilitate cold weather starting, a 240-watt, 115-volt electrical crankcase oil heater can be installed in the engine oil pan. To use the heater, remove the cap, connect the cord to the heater and connect to any 115-volt electrical source.

To remove the electrical connector from the heater, press release lever in the connector.

WARM-UP PERIOD

Always be sure the engine 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 for the first 30 minutes in a lower gear than is normally required for the load. This gives the engine 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.

If no work is to be done for a considerable length of time, stop the engine rather than to let it idle.

ENGINE SPEEDS

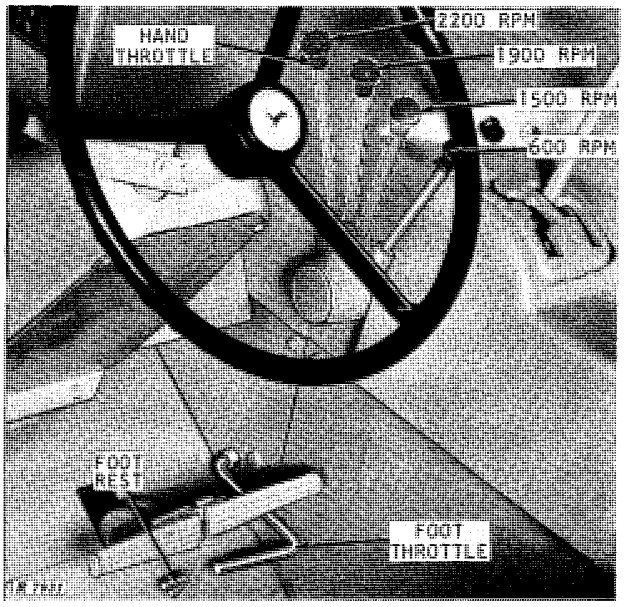
The engine is designed to operate at working speeds ranging from 1500 to 2200 rpm. The engine can be operated at any speed in this range to meet various operating conditions. Slow idle speed is approximately 600 rpm. To check engine idle speeds, see page 30.

USING HAND THROTTLE

The hand throttle may be used to select slow idle or any of the engine working speeds from 1500 to 2200 rpm. Moving the throttle forward increases engine speed.

To obtain the 1900 engine rpm load speed, move the throttle forward to the stop with the knob in. To obtain speeds above the 1900 rpm load speed, pull out the knob at the end of the hand throttle and move the throttle forward.

To obtain the slow idle speed of approximately 600 rpm, move the throttle to the rear as far as it will go.



Hand Throttle and Foot Throttle

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 2200 rpm load speed.

An adjustable foot rest is provided to assist foot throttle operation. Adjust the foot rest by loosening the lock nut, screwing the rest in or out, and tightening the lock nut. Be sure that the foot rest is pointing away from the foot throttle as shown in the illustration on page 7.

STOPPING THE ENGINE

Place the shift lever 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.

With the hand throttle in the 600 rpm position, turn the key switch off. This stops fuel injection. After a few revolutions the engine will stop.

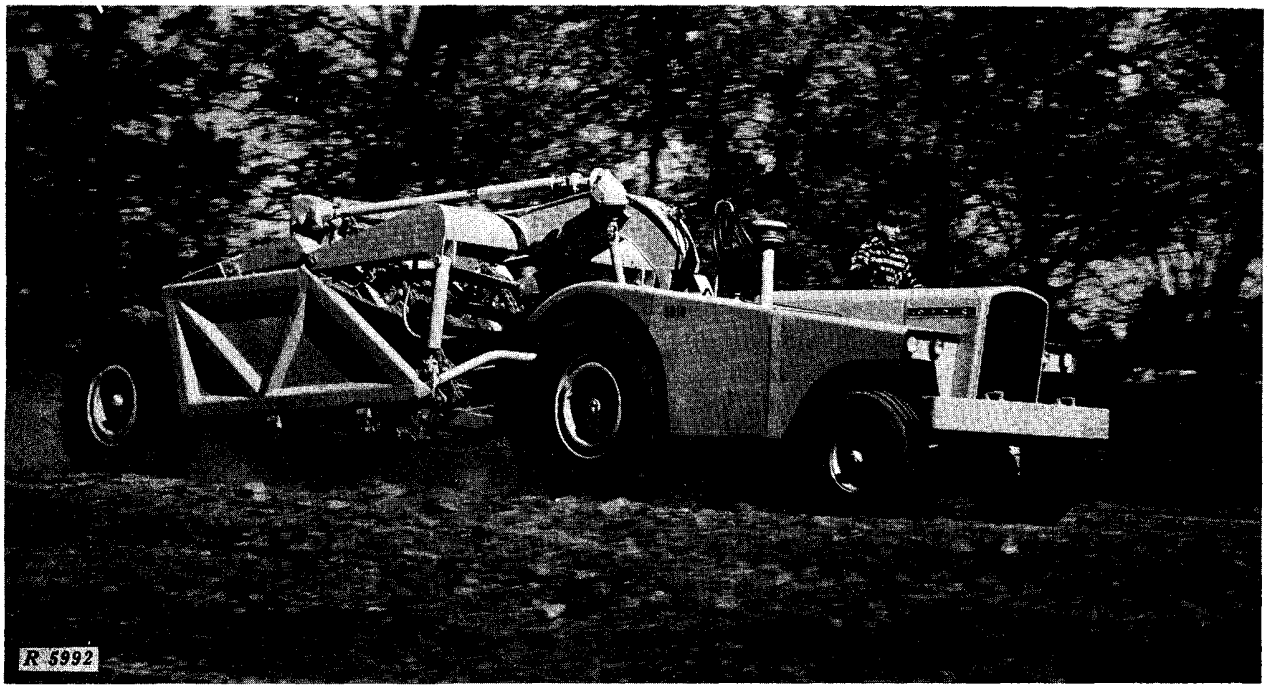
After stopping the engine, remove the key from the switch to prevent tampering and unauthorized operation. Removing the key also prevents battery discharge in the event that the switch was accidentally left in the "ON" position.

BREAKING IN THE ENGINE

To break-in the engine properly, operate the engine at half load with the hand throttle in the 1900 rpm position during the first 20 hours of service. With the throttle in this position, the speed meter will show an engine speed of approximately 2050 rpm at half load.

Maximum engine speed is limited to 2150 rpm fast idle speed during the break-in period. After 20 hours, have your John Deere dealer reset the engine speeds. Also, drain the special breaking-in oil from the engine crankcase and replace the engine oil filter. Fill the crankcase with the proper oil (page 21). The engine is then ready for normal operation.

NOTE: If the water temperature rises above the "N" range, shift to a lower gear to reduce the load.



John Deere 5010 Scraper

DRIVING

SEAT

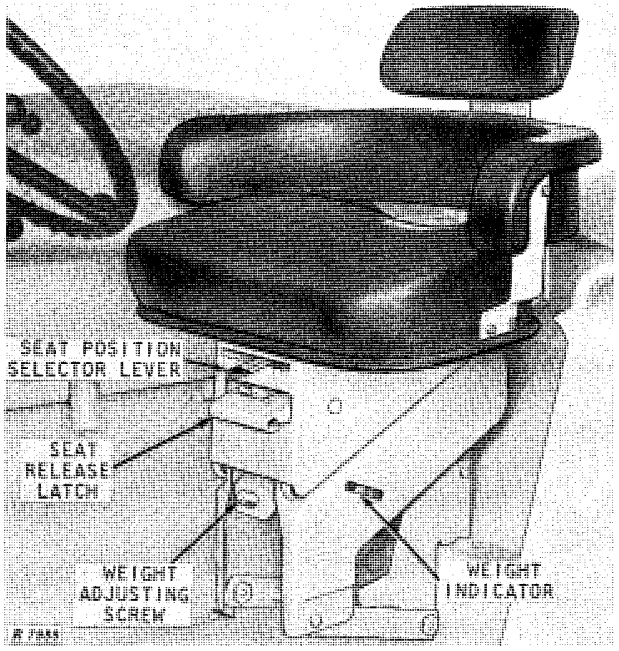
The deluxe, foam-padded suspension seat is equipped with a steel compression spring and shock absorber to provide "Float-Ride" comfort. The semi-circular lower backrest and flexibly mounted upper backrest add to the operator's comfort and safety.

MOVING SEAT TO UPPER REAR POSITION

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.

ADJUSTING FOR HEIGHT OF OPERATOR

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.



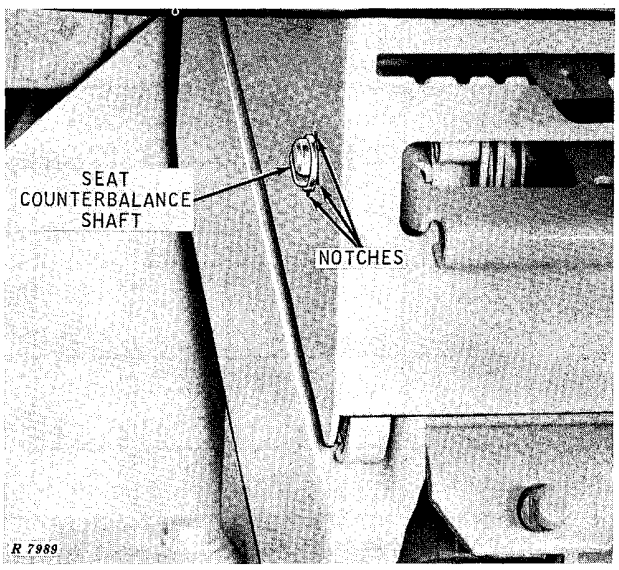
Seat Controls

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 on the left-hand side of the seat 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.



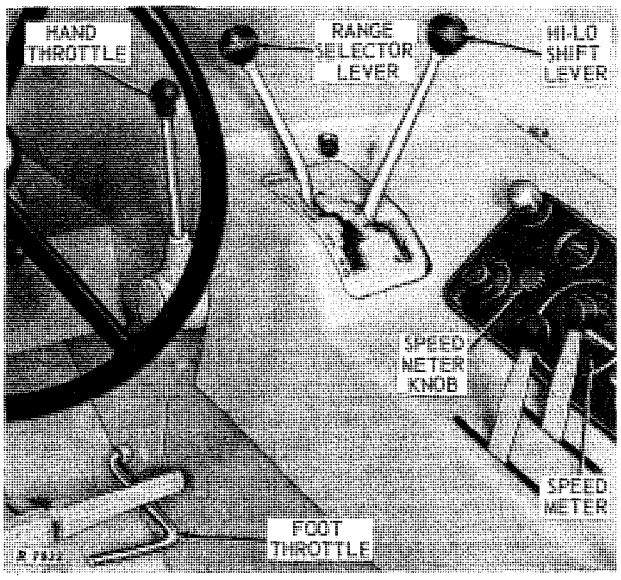
Seat Counterbalance Shaft

SELECTING GROUND SPEEDS

The transmission has four shift ranges. Three of the ranges have low, high, and reverse gears. The fourth range has low and high gears only. In this way, eight forward gears and three reverse gears are provided, which, together with the engine speeds that may be selected, give the operator flexibility to meet varying work conditions. For example, for a given ground speed the operator may choose to work in a low gear at a high engine speed or a higher gear at a lower engine speed.

Examples of ground speed in each of the ranges and gears are shown in the chart below. Engine working speeds may be varied between 1500 rpm and 2200 rpm. When the speed-meter knob on the instrument panel is turned to show the selected gear, the speed-meter hand will indicate the correct ground speed.

Shifting is accomplished by means of two levers located to the left and forward of the instrument panel. The left-hand lever is the range selector lever and is used to shift from one range to another. The desired gear within a range is selected by means of the Hi-Lo shift lever, located to the right of the range selector lever. The Hi-Lo shift lever has four positions: "L" (low), "N" (neutral), "H" (high), and "R" (reverse). When the lever is in the "L" position the transmission is in the lower gear of the range. When the lever is in the "H" position, the transmission is in the higher gear of the range. When the lever is in "R" position, the transmission is in reverse.



Shift Levers and Speed-Meter Knob

GROUND SPEEDS

NOTE: The ground speeds shown below are obtained with 18.00-25 rear tires with a loaded radius of 28.7 inches.

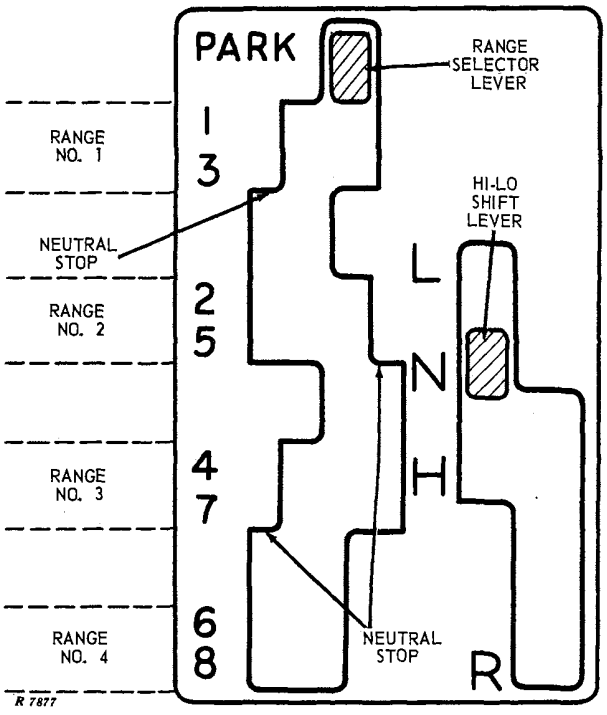
Range No.	Gear	Hi-Lo Shift Lever Position	Engine Working Range		
			1500 Rpm	*1900 Rpm	2200 Rpm
1	1	L	1.7 mph	2.2 mph	2.5 mph
	3	H	3.7 mph	4.6 mph	5.4 mph
	Rev.	R	3.6 mph	4.5 mph	5.2 mph
2	2	L	2.8 mph	3.5 mph	4.1 mph
	5	H	5.9 mph	7.4 mph	8.6 mph
	Rev.	R	5.7 mph	7.2 mph	8.4 mph
3	4	L	4.7 mph	6.0 mph	6.9 mph
	7	H	10.0 mph	12.6 mph	14.6 mph
	Rev.	R	9.7 mph	12.3 mph	14.2 mph
4	6	L	7.7 mph	9.7 mph	11.3 mph
	8	H	16.2 mph	20.6 mph	23.8 mph

**Operate the engine at 1900 rpm to obtain 1000 rpm at the PTO shaft.*

SHIFTING THE HI-LO SHIFT LEVER

The Hi-Lo shift lever may be shifted "on the go" or when the tractor is stopped merely by depressing the clutch pedal while moving the lever to the desired position. To avoid personal injury or damage to the tractor, reverse directions only when traveling at a slow ground speed.

CAUTION: Do not shift from high to low when the engine speed, in high, is above 1500 rpm. To do so may overspeed the engine when the clutch is engaged.



Shift Quadrants

SHIFTING THE RANGE SELECTOR LEVER

When the Hi-Lo shift lever is in low, the range selector lever is used to select 1st, 2nd, 4th, or 6th gear. When the Hi-Lo shift lever is in high, the gears will be 3rd, 5th, 7th, and 8th. With the Hi-Lo shift lever in reverse, the reverse speeds are 3rd, 5th, and 7th. 8th reverse is not available. Usually the shift between ranges is made while the tractor is stopped. However, the shift may be made while the tractor is "on the go" by double-clutching; that is, by momentarily engaging the clutch while the range selector lever is in neutral, and raising or lowering engine speed to match the speed of the next gear.

To downshift (for example from 7th to 5th), set the engine speed at approximately 1200 to 1500 rpm and depress the clutch pedal. Without letting up on the foot throttle, move the range selector lever forward to the neutral stop, rapidly engage and disengage the clutch, move the lever sideways from the neutral stop and forward to the new gear, and engage the clutch.

CAUTION: Do not overspeed the engine when the clutch is engaged after downshifting. To prevent overspeeding, avoid downshifting when the engine speed is 1500 rpm or higher.

To upshift (for example from 5th to 7th) with an engine speed of about 2200 rpm, disengage the clutch, release the foot throttle, and move the range selector lever sideways and rearward to the neutral position. Momentarily engage the clutch until the engine speed has decreased to approximately 1200 rpm. Then disengage the clutch, shift to the new range, and engage the clutch.

With a little practice, double-clutch shifting can be done with no gear clash.

CAUTION: Avoid forcing the range selector lever when the gears are mismatched. Unnecessary damage caused by clashing gears will shorten the life of the transmission.

AVOID OVERLOADING. If the speed-meter indicator hand drops below the engine speed established by the position of the throttle, shift to a lower gear. Overloading causes undue strain on parts, eventually resulting in poor operation and unnecessary repair expense.

PARKING

When parking or performing stationary work on an incline, move the high-low shift lever into neutral and shift the range selector lever into "PARK" position.

Be sure to stop completely before placing the range selector lever in "PARK" position.

TOWING THE TRACTOR

When towing the tractor, place both shift levers in neutral and have an operator steer the tractor. To aid steering and transmission lubrication, run the engine if possible. If the engine cannot be run, add an extra 9 gallons of John Deere Type 303 Special-Purpose Oil or its equivalent to the transmission to insure adequate lubrication. Before placing the tractor back into service, drain the transmission oil to its proper level.

CAUTION: Never tow at high speed. Attach a tow bar or chain to the hooks on the front bumper only.

POWER STEERING

Full hydraulic steering makes it possible to steer with a minimum of effort.

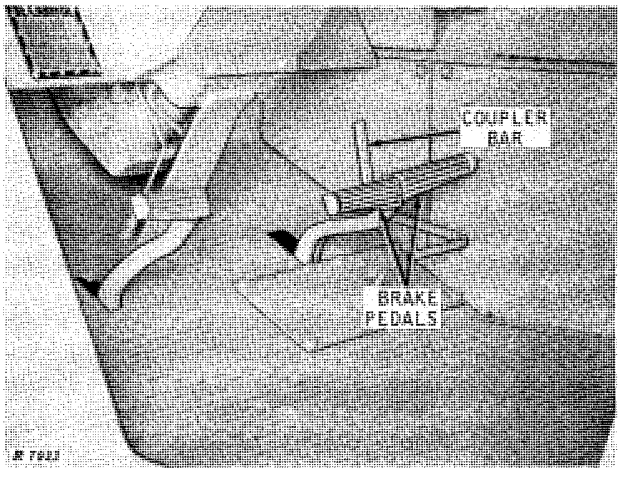
POWER BRAKES

Full hydraulic power brakes permit effortless stops. The brake system is equipped with an accumulator which provides for several brake applications after the engine is stopped.

TRACTOR BRAKES

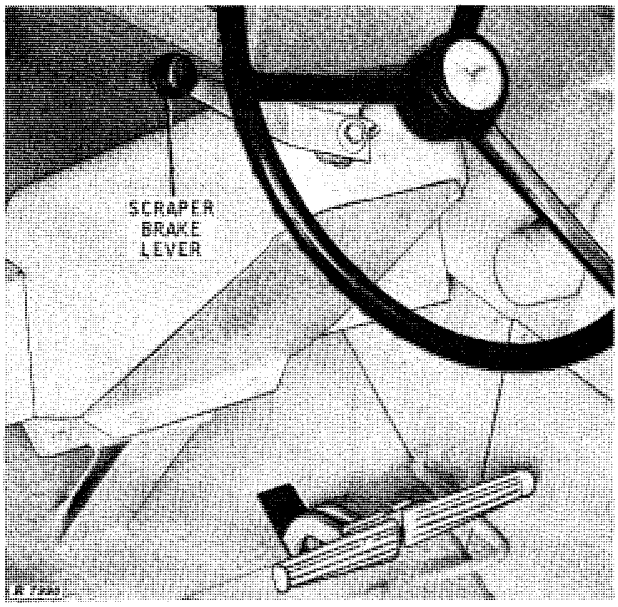
CAUTION: If a tractor-scraper unit is being operated, read the instructions for using the scraper brakes (next column) before using the tractor brakes.

To assist in making sharp turns or for preventing one wheel from spinning, apply the tractor brakes individually. To slow or stop the tractor when it is not connected to a scraper, apply both brakes simultaneously. Use a light pressure on the pedals. Couple the brake pedals together at all times except when single brakes are required.



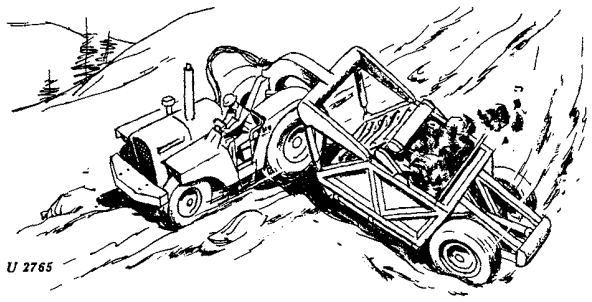
Tractor Brake Pedals and Coupler Bar

SCRAPER BRAKES



Scraper Brake Lever

The hydraulic brakes on the rear wheels of the scraper are used to slow or stop the tractor-scraper unit. To apply the scraper brakes, pull downward on the scraper brake lever. When hand pressure is removed, the lever will return to the released position.



CAUTION: Normally, use the scraper brake to slow or stop the tractor-scraper unit. For more brakes, gradually apply BOTH tractor brakes AFTER fully applying the the scraper brakes. NEVER USE TRACTOR BRAKES ALONE. To do so may cause the unit to jackknife or upset.

LIGHTS

The lights are designed to give the maximum amount of safety and convenience when operating at night or during other periods of low visibility.

HEADLIGHTS

Dual sealed-beam headlights are mounted in the front of each fender. The two inner lights throw strong beams ahead. The outer flood lights illuminate the ground at both sides as well as ahead.

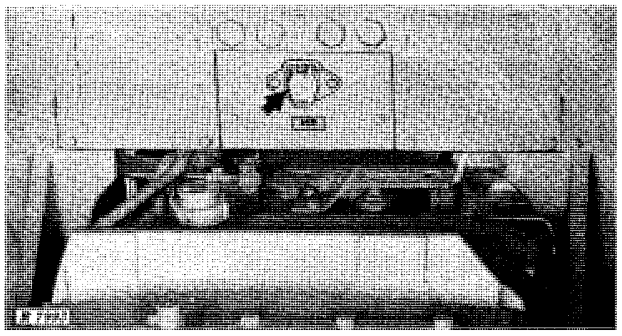
REAR LIGHTS

The combination red-white taillight is mounted on the left-hand rear fender. It illuminates equipment at the rear or glows red for night highway travel. A rear flood light is mounted on the right-hand rear fender.

DASH LAMPS

The dash lamps illuminate the instrument panel.

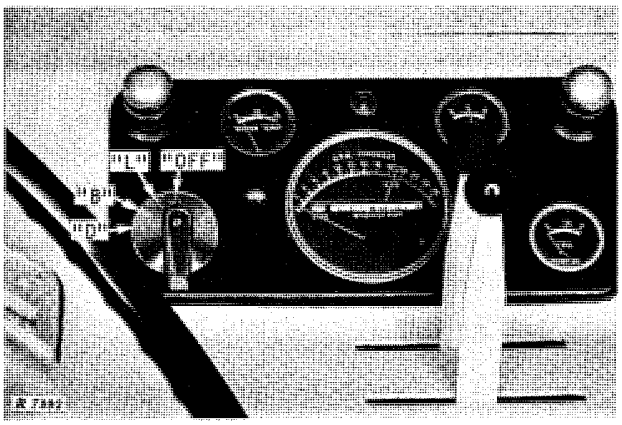
ELECTRICAL OUTLET SOCKET



Electrical Outlet Socket

This socket, a source of 24-volt, DC electrical power, is used for plugging in lights mounted on the equipment. The lights connected to the electrical outlet socket are controlled by the light switch.

LIGHT SWITCH



Light Switch

When the key switch is turned clockwise to the "ON" position, the light switch will turn on all mounted lights. The switch has four positions:

"OFF" - To turn off all lights.
"L" - To turn on all four headlights, two white rear lights, and all equipment-mounted lights connected to the outlet socket.
"B" - To turn on all four headlights, red tractor taillight, and red equipment-mounted taillights connected to the outlet socket.
"D" - To dim the headlights by turning off the inner headlights. The outer headlights, the red tractor taillights, and the red equipment-mounted taillights connected to the outlet socket are turned on.

DRIVING AT NIGHT

Always dim the headlights when meeting a vehicle at night by turning the light switch to "D."

HIGHWAY DRIVING

CAUTION: When transporting or driving on a road or highway at night or during the day, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check local government regulations. Various safety lights and devices are available at your John Deere dealer's.

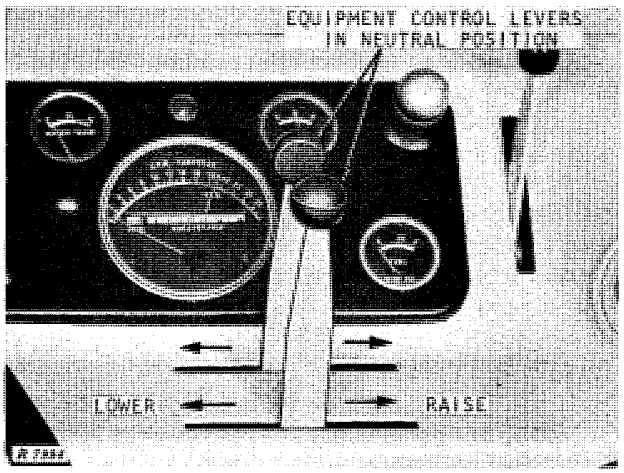
EQUIPMENT CONTROL SYSTEM

The equipment control system provides a quick and easy method of controlling the operation of various equipment. This system may include two hydraulic equipment control valves for scraper control or for operation of remote hydraulic cylinders, a vertical power take-off to operate the scraper elevator, or a horizontal power take-off to operate other powershaft-driven equipment.

EQUIPMENT CONTROL VALVES

Pressure oil from the main hydraulic pump is directed by the equipment control valves, located under the dash, through the oil pipe connector block at the rear of the engine compartment, to the cylinder hoses connected to the scraper or other equipment. The valves are operated by levers on the dash.

USING EQUIPMENT CONTROL VALVE LEVERS



Equipment Control Levers

The two equipment control levers on the dash beside the operator are used to control hydraulic cylinders on attached equipment. Moving the levers rearward usually raises the equipment and moving the levers forward lowers the equipment.

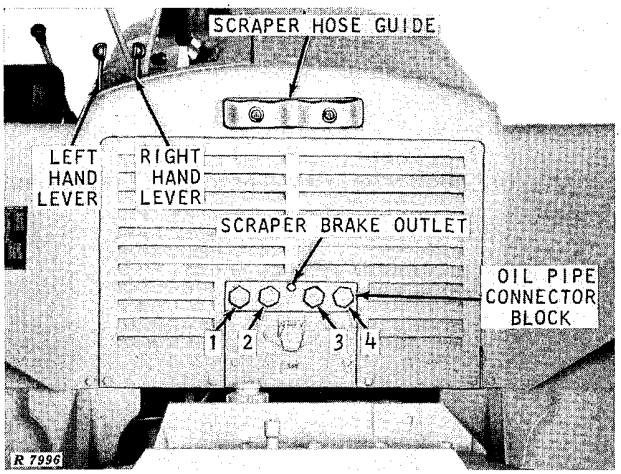
When the left-hand lever is moved forward from neutral, it must be held forward until the desired adjustment is obtained. When the left-hand lever is moved rearward or when the right-hand lever is moved forward or rearward, the lever will remain in that position until it is moved to the neutral (center) position.

See the equipment operator's manual for equipment operating instructions.

CONNECTING HOSES

Whenever the hydraulic hoses have been disconnected, it is important that they be properly connected. Improperly connected hoses may cause the equipment to work backward resulting in a safety hazard. Before disconnecting the hoses, identify all the hoses and the connections.

Connect the remote cylinder or equipment cylinder hoses so that the equipment will be raised when the equipment control lever is pulled rearward.



Oil Pipe Connector Block

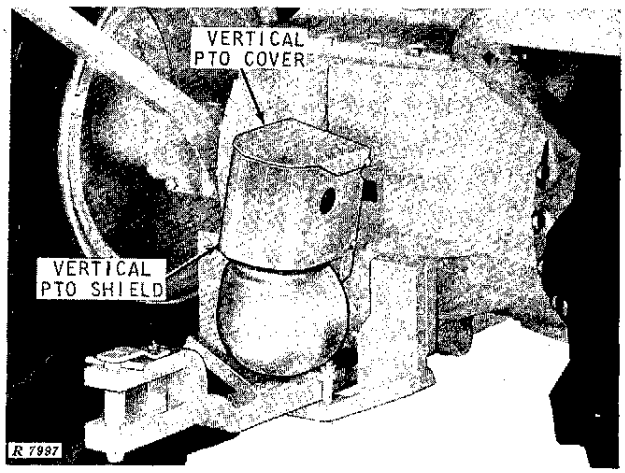
When the left-hand equipment control lever is pulled rearward, pressure oil is directed to the second hole from the left (2) in the oil pipe connector block at the rear of the engine compartment. Return oil from the cylinder is connected to the left-hand hole (1).

When the right hand equipment control lever is pulled rearward, pressure oil is directed to the right-hand hole (4) in the oil pipe connector block. Return oil from the cylinder is connected to the second hole from the right (3).

BLEEDING HYDRAULIC CYLINDERS

After connecting the hoses, operate the hydraulic cylinders through their full stroke several times to bleed the air from the system.

POWER TAKE-OFF



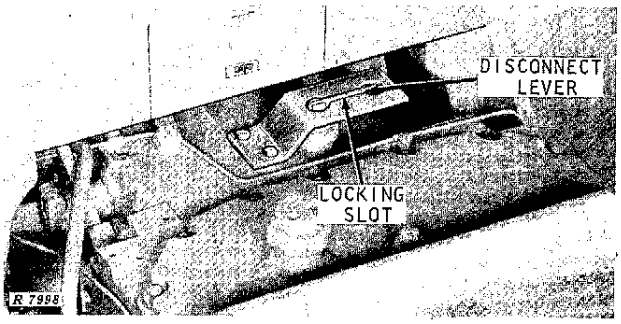
Vertical Power Take-Off

Either a vertical power take-off shaft or a horizontal power take-off shaft is available.

The vertical PTO shaft speed is 1128 rpm at 2200 engine rpm. The horizontal PTO shaft speed is 1000 rpm at 1900 engine rpm. *NOTE: Consult the equipment operator's manual for correct horizontal PTO-driven equipment speed.*

The PTO supplies continuous power as long as the engine is running, the PTO clutch is engaged, and the PTO drive is connected.

PTO DRIVE DISCONNECT



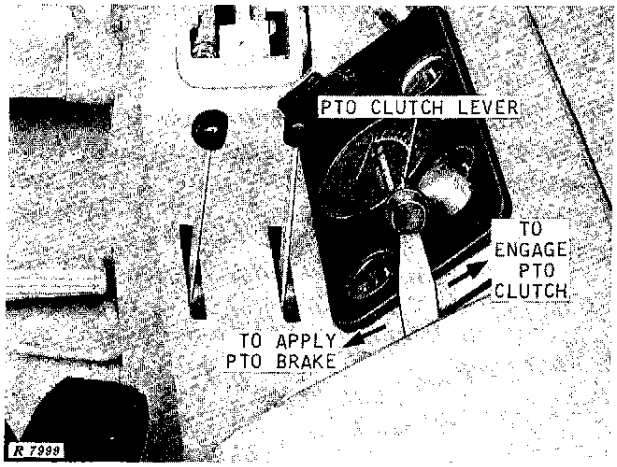
PTO Drive Disconnect Lever

When the PTO is not being used, disconnect the PTO drive by turning the disconnect lever. The PTO drive is connected when the lever is in the locked position and the beveled edge of the lever is up.

To disconnect the drive with the engine stopped or slowly idling, lift the lever and rotate it 180 degrees. Drop the lever back into the locking slot. To connect the PTO drive, stop the engine, lift the lever, and rotate it 180 degrees. If difficulty is encountered while rotating the lever, momentarily use the starter to turn the engines while maintaining pressure on the lever.

CAUTION: DO NOT CONNECT PTO drive when the engine is running. Always disconnect the power take-off drive when the PTO is not being used.

PTO CLUTCH LEVER



PTO Clutch Lever

The PTO clutch is controlled by the PTO clutch lever. Moving the lever all the way to the right engages the PTO clutch to operate the PTO. Moving the lever all the way to the left disengages the PTO clutch and applies the PTO shaft brake. The PTO clutch lever must be in the fully engaged position or in the brake position.

NOTE: The PTO brake is intended to stop only the PTO shaft, not the attached PTO equipment.

ATTACHING PTO-DRIVEN EQUIPMENT TO VERTICAL PTO

Lift the vertical PTO cover and slip the drive universal on the PTO shaft. Turn the shaft until the locking bolt hole lines up with the holes in the vertical PTO shield. Install the locking bolt. Be sure all PTO shields are in place.

CAUTION: The vertical PTO shield must always be in place. Always stop the engine and disengage the PTO clutch before attempting to clean out or adjust a PTO-driven machine.

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

ATTACHING PTO-DRIVEN EQUIPMENT TO HORIZONTAL PTO

When the horizontal power take-off is to be used adjust the drawbar so the equipment hitch pin hole is 16 inches behind the end of the power-shaft with the offset in the drawbar down. Possible damage to the universal joints can be avoided by proper drawbar adjustment.

To remove the PTO master shield when connecting PTO equipment, push forward on the master-shield retaining pin and lift the master shield from the tractor. Remove the PTO guard by twisting it counter-clockwise and store it on the guard retainer. Twist the guard clockwise to lock it in place.

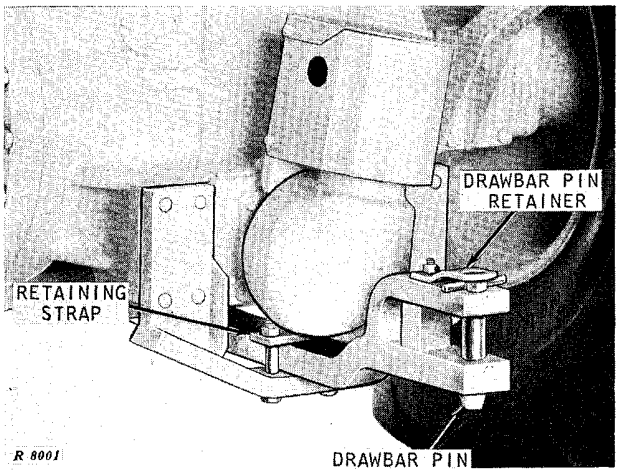
CAUTION: Remove the master shield only when necessary. If it is necessary to operate the tractor without the master shield BE SURE the PTO guard is in place covering the PTO shaft. Always remove the guard from the retainer and install it on the PTO when the PTO is not being used.

The PTO shaft may be turned by hand to align the splines when attaching equipment. After PTO is connected, install bolt to lock equipment shaft to PTO shaft.

To obtain 1000 rpm at the PTO shaft, operate the engine at 1900 rpm (PTO mark on speedmeter).

CAUTION: ALWAYS STOP the engine and disengage the PTO clutch before attempting to attach PTO equipment drive, to clean out, or to adjust a PTO-driven machine.

DRAWBAR ASSEMBLY



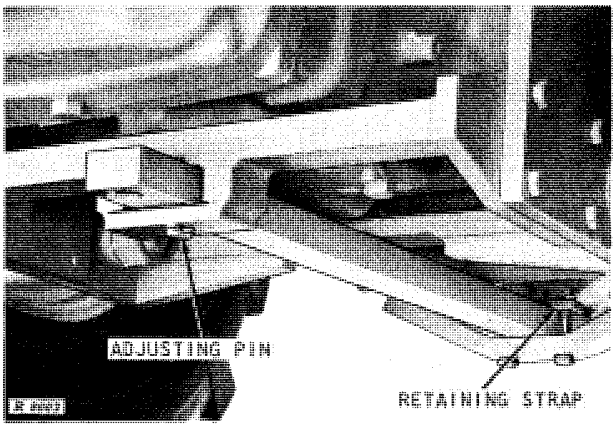
Drawbar in Short High Position

The drawbar is used to pull drawn equipment. The drawbar adjustments and the adjustments on the drawn equipment enable the operator to obtain the correct line of draft which is essential to obtaining the full amount of drawbar pull and the minimum amount of rear wheel slippage without raising the front wheels.

To remove the drawbar pin, loosen the drawbar pin retainer.

To make lengthwise adjustments, loosen the drawbar retaining strap, place the drawbar adjusting pin in the other hole, and tighten the drawbar retaining strap.

Adjust the hitch point vertically by turning the drawbar over. Move the drawbar pin retainer from the bottom to the top of the drawbar.



Drawbar Adjusting Pin