MODEL
GM SERIES
TRACTOR

JOHN DEERE

OPERATORS MANUAL

MODEL GM SERIES
TRACTOR

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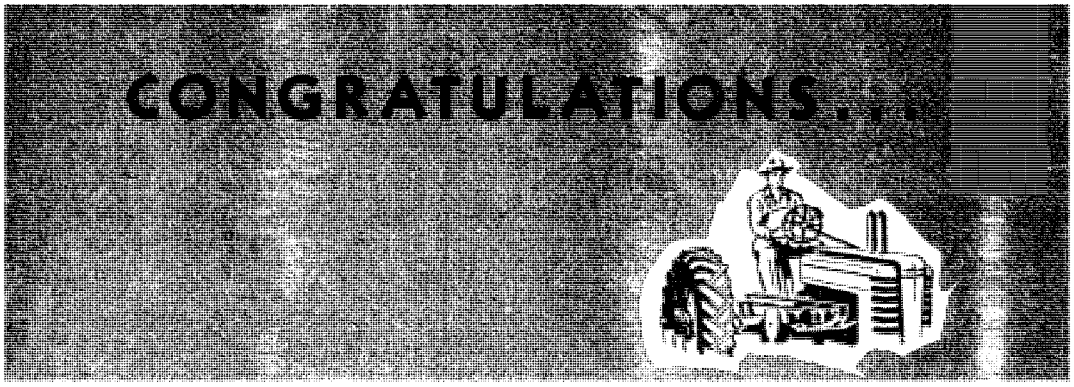


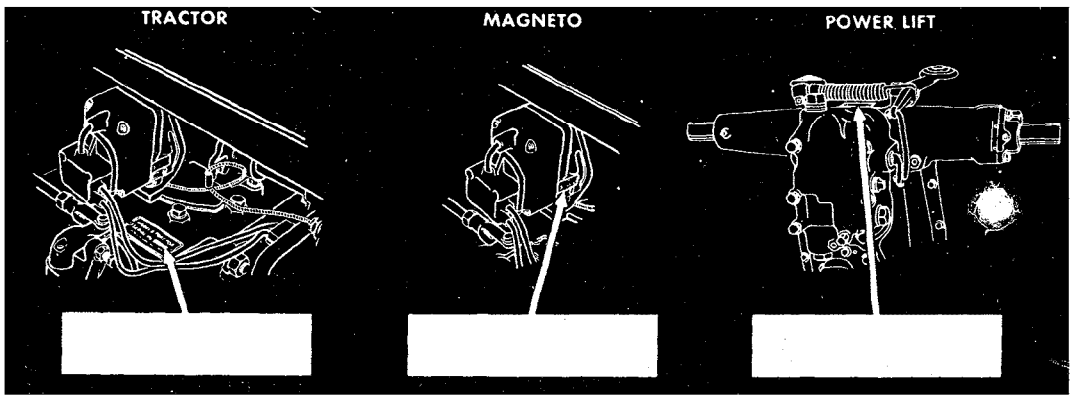
WE welcome you to our ever-growing family of John Deere tractor owners. We are confident that the dependable and economical performance of your new tractor will prove that you made a wise choice.

Back of your tractor is an organization that has been building farm equipment for more than one hundred years. The plant in which your tractor was built is the largest single tractor plant in the world. In this modern factory, equipped with the finest precision machinery, fine materials, high-grade workmanship, thorough inspection, and complete testing are combined to give you the best in dependable tractor performance and economical tractor operation.

The way you operate your tractor and the care you give it have much to do with the service and satisfaction you will get from it. This manual has been carefully prepared and profusely illustrated to show you what to do and when to do it. It has been written by the best engineers in the John Deere tractor factory. Make it your guide. Study it carefully. Refer to it often. Only by following the suggestions it contains can you hope to get the most from your investment.

If you find that you need information not covered in this manual, or if your tractor requires special servicing, which it will periodically, take advantage of the facilities offered by your John Deere dealer. He has trained mechanics, who are kept informed on the best methods of John Deere tractor servicing and can give you prompt, "know-how" service in the field or in his shop.

When in need of parts, go to your John Deere dealer. Be sure to give him the serial number of your tractor. The illustrations, below, will show you where to find the serial numbers of your tractor, magneto, and power lift. Obtain these serial numbers from your tractor—NOW—and insert them in the spaces provided in the illustrations below. Also, be sure they are written on the special identification card which is included with the manual. Put it in your billfold for ready reference.



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Hello dear friend!
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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; Inspect shutter control.
- ☑ Air cleaner (oil level.)
- ☑ Crankcase (oil level.)
- ☑ Transmission oil level.
- ☑ Steering housing oil level.
- ☑ Power lift oil level.
- ☑ Oil crankcase breather core.
- ☑ Grease tractor.
- ☑ Rear wheel brakes.
- ☑ Clutch operation.
- ☑ Spark plug gaps.
- ☑ Carburetor setting (may require adjusting later according to fuel burned). (See Instructions in Manual.)
- ☑ Engine speed and oil pressure.
- ☑ Inspect Rubber Hose connections.

If Equipped with Starter or Light Equipment

- ☑ Install new battery; (check water level;) Grease terminal posts.
- ☑ Check charging rate.
- ☑ Check starting motor for operation.
- ☑ Serial numbers entered in owner's register.

The above inspection made by John Doe

Date 11/16/44 Dealer Good Bumm Impl. Co.

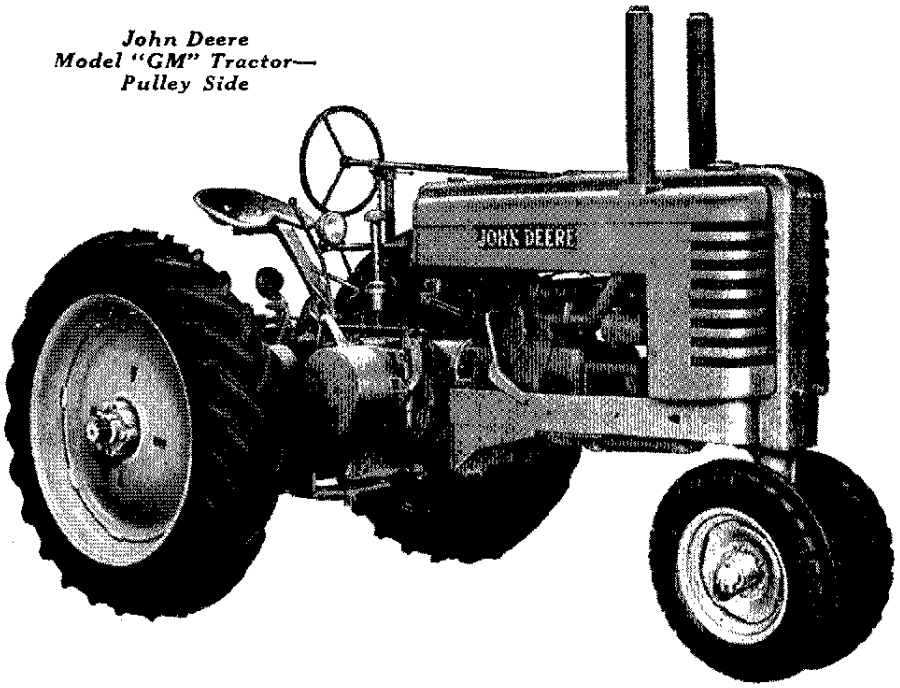
HANG THIS BOOK IN A HANDY PLACE

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 it. For complete starting information, see page 14.

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, Open Throttle, Changing Oil.
- ☐ Method of Starting and Stopping Engine.
- ☐ Lubrication—Engine, Transmission, Power Lift, Grease Fittings, Air Cleaner and Oil Gauge.
- ☐ Cooling System—Adding Water, Shutter Control, Cleaning.
- ☐ Fuel System—Fuel, Fuel Control, Sediment Bowl and Trap, Carburetor Adjustment.
- ☐ Crankcase Breather and Ventilator.
- ☐ Tires—Inflation, Inspection, Wheel Weights.
- ☐ Drawbar—Adjustment; pull from no other place.
- ☐ Magneto Care—Terminals Tight, Cleaning, Oiling, Adjusting Points.
- ☐ Rear Wheel Brakes—Adjustment.
- ☐ Clutch—Adjustment, Pulley Brake.
- ☐ Front Wheels—Cleaning, Adjustment and Spacing.
- ☐ Power Lift—Drop Control, Operation.
- ☐ Starter and Lights—Starting, Charging Rate, Changing Fuse, Battery Care.
- ☐ Tightening Bolts and Nuts—Caution on Governor Cover Cap Screws.
- ☐ 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 "GM" Tractor—
Pulley Side



SPECIFICATIONS

CAPACITY:

3-14" plow bottoms or a 4-bottom bedder under normal conditions.

Maximum Belt Horsepower 35.91

Maximum Drawbar Horsepower . . 27.63

Maximum Pull 4085 lbs. at 2.37 M.P.H. (The above listed horsepower ratings are taken from "G" Nebraska tractor test No. 295. "GM" tractor not officially tested.)

SPEEDS:

Forward: 2-1/2, 3-1/2, 4-1/2, 6-1/2, 8-3/4, and 12-1/2 M.P.H. on 12-38—6-ply tires.

Reverse . . . . . 3-1/4 M.P.H.

ENGINE:

Engine . . . Two-cylinder cast in block—valves in head.

Engine Speed . . . . . 975 R.P.M. (Load).

Bore and Stroke . . . . . 6-1/8" x 7".

Displacement . . . . . 413 cubic inches.

Compression Ratio . . . . . 4.20 to 1.

Carburetor . . . . . Natural-draft type.

Magneto . . . . High-tension with automatic impulse.

Spark Plugs . . . 18mm. Champion No. 8 Com. C. or Edison Z-19. Spark plug gap .030".

Lubrication . . . Full force-feed pressure system; with Purolator oil filter element. Total oil capacity—11 U. S. quarts.

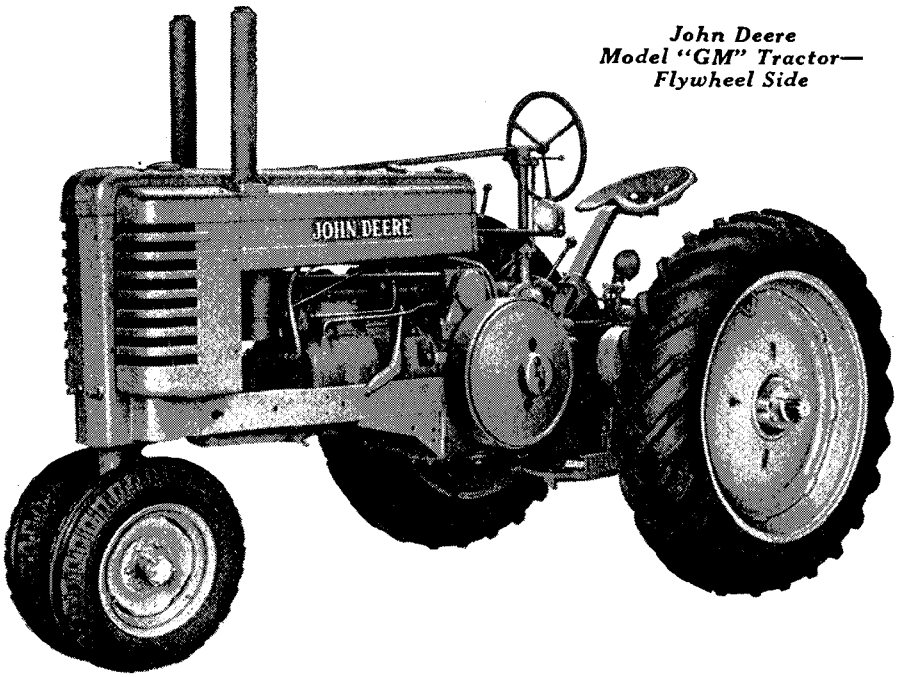
Cooling System . . . . Thermo-siphon system with a water capacity of 12-7/8 U. S. gallons.

Air Cleaner . . . Oil-wash type.

Fuel System . . . Gravity-feed fuel system. Gasoline tank capacity—1-1/2 U. S. gallons. Fuel tank capacity—17 U. S. gallons.

Clutch . . . Hand operated four 10" dry disks, locking in and out.

Belt Pulley . . . . Diameter 12-3/4"; width 8-1/2"; 975 R.P.M.; Belt Speed 3270 F.P.M.



John Deere
Model "GM" Tractor—
Flywheel Side

AND DATA . . . .

TRANSMISSION:

Speeds . . . Six forward and one in reverse.

Gears . . . Selective type straight spur cut gears, forged, cut and heat treated.

Bearings . . . Shafts operate on 7 Hyatt Rollers, 4 Timken-tapered, and 4 New Departure ball bearings. Oil capacity 7 U. S. gallons.

REAR AXLES:

3-1/4" diameter. Mounted on 4 Timken-tapered roller bearings.

REAR WHEELS:

12-38—6-ply tires, mounted on cast wheels, recommended for average field conditions. Steel spoke wheels with lugs available as special equipment. Diameter 51-1/2". Face 7". (Furnished with 4 speeds only.)

REAR WHEEL BRAKES:

Two automotive type internal expanding rear wheel brakes.

FRONT WHEELS:

6:00 x 16" 4-ply rubber tires. Mounted on 4 Timken-tapered roller bearings. Steel spoke wheels with guide bands available as special equipment. Diameter 24". Face 5".

DIMENSIONS:

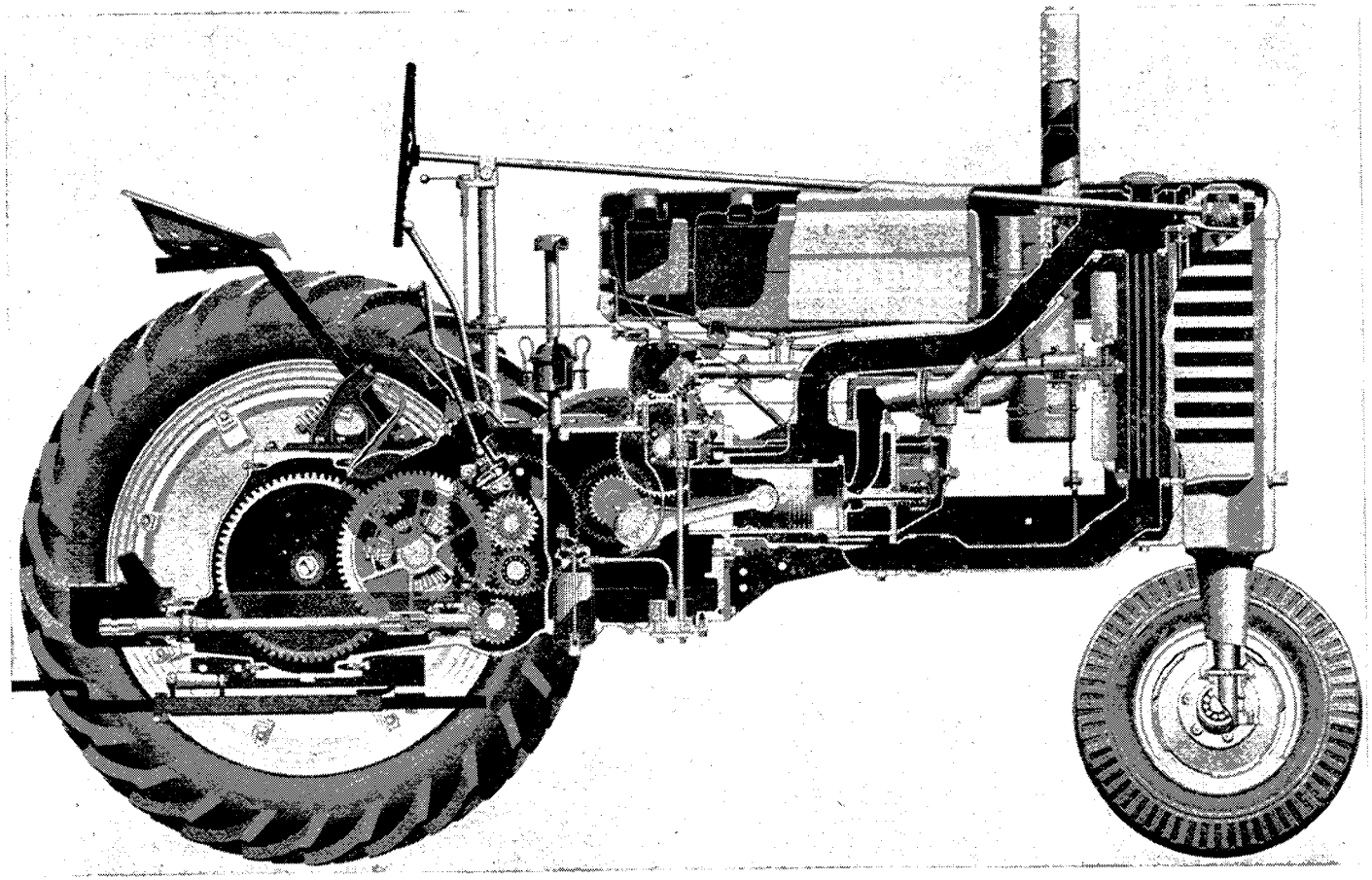
On regular 12-38 pneumatic tires. Wheel base 91"; over-all height 86-7/8"; height to radiator cap 65-7/8"; over-all length 137-7/16"; width 84"; rear wheel tread adjustable from 60" to 84"; clearance 26-1/2"; turning radius 8' 6". Drawbar conforms with A.S.A.E. standards.

POWER TAKE-OFF:

Shaft diameter 1-3/4"; R.P.M. 532; splined end is 19-3/4" above ground, 1-9/16" to right of center line of tractor and 14" ahead of hitch. Conforms with A.S.A.E. standards.

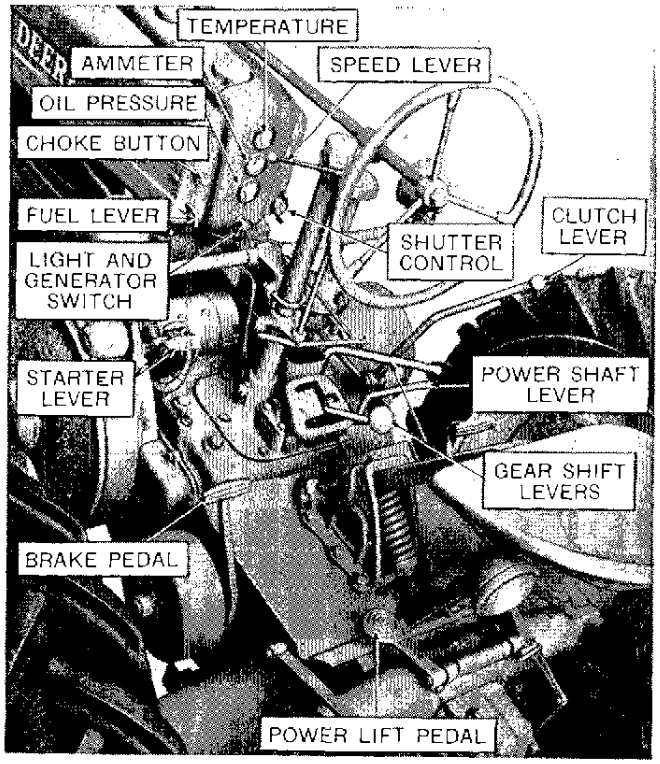
SHIPPING WEIGHT:

4619 lbs. on steel wheels. 5138 lbs. on 12-38 6-ply pneumatic tires. Weight of power lift, 216 lbs.



Cross-Sectional View of John Deere Model "[illegible]" Tractor

CONTROLS



Controls of John Deere Model "GM" Tractor

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 are readily accessible. Clutch lever, throttle, fuel control and radiator shutter control 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.

SEAT

The large, bucket-type seat is high up and well forward. You are generally out of the dust where you have a clear, unobstructed view of your work.

The seat (and seat standard) ride on a coil spring that can be tightened or loosened to conform with the operator's weight for improved riding comfort. When working on rough ground or for heavy operators, more compression should be applied to the coil spring.

Whether you are tall or short, the seat can be adjusted backward or forward to a comfortable position by means of seat attaching bolt located directly under the seat.

Seat

Seat Adjusting Assembly (Special).

If you like to sit on a level seat, even though the tractor is tipped at an angle, such as in plowing, secure an AA3036R Seat Adjusting Assembly from your John Deere dealer. This assembly, when attached, also allows the seat to be rotated to face in any direction.

STEERING

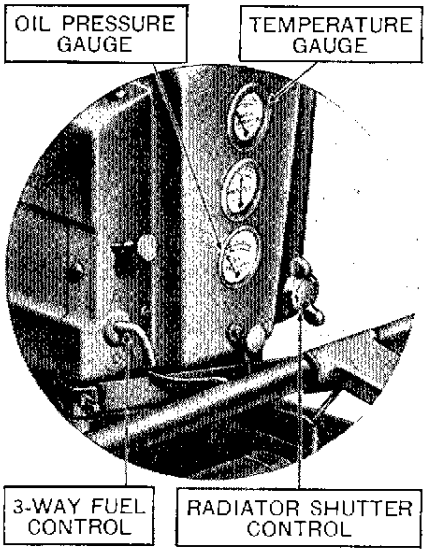
Steering Wheel

Due to the high, centered seat location, tapered fuel tank, and narrow, streamlined design, you can easily see what you are doing at either side. This design, coupled with a steering mechanism built to eliminate entirely objectionable wobble, backlash, or whipping of the steering wheel, even in the roughest going, permits you to work in freedom and comfort.

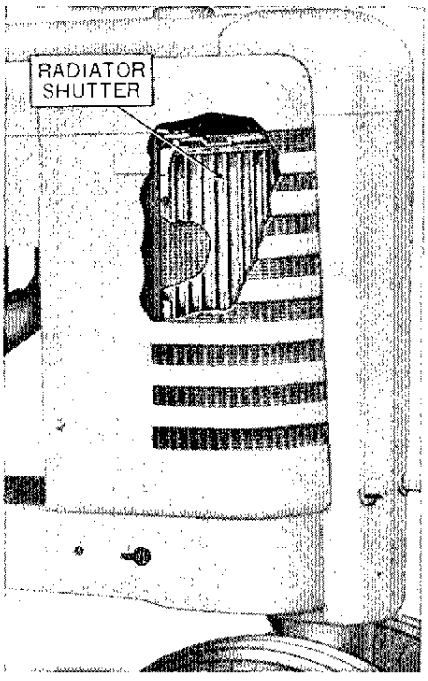
Smooth, responsive steering can be maintained throughout the life of your tractor by means of the adjustments provided for this purpose.

Adjustments can be quickly and easily made by your John Deere dealer's serviceman.

SHUTTER AND FUEL CONTROL WITH HEAT AND OIL GAUGE



Gauges and Controls



Radiator Shutter

The temperature of the tractor is effectively controlled from the driver's seat by means of a manually-operated radiator shutter.

The engine temperature gauge is located in plain sight of the operator and indicates when to adjust the shutter.

For best operation, the engine should always be operated up to its proper temperature, which is 190°F. registered on heat indicator. This results in greater all-around economy, better lubrication and more power.

A convenient, three-way fuel control lever, located on the instrument panel, enables the operator to switch from gasoline to low-cost fuel or to shut off the fuel supply entirely without leaving his position at the wheel.

Also located on the instrument panel is the oil pressure gauge. This gauge does not in any way tell the amount or condition of the oil in the crankcase. It only indicates whether the oil pump is working. The indicator hand of the gauge should rest between the letters "M" and "H" when the engine is running fast idle. If pressure is not registered on the oil gauge when the engine is started, stop the engine immediately.

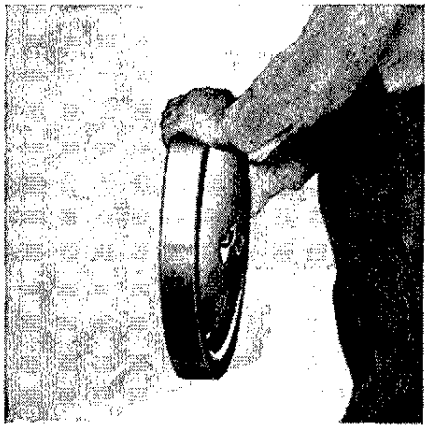
CHOKE

When starting the engine, set choke in full choke position. (On tractors equipped with electric starters, choking is accomplished by a button, mounted on the instrument panel.) On tractors not equipped

with electric starters, choke lever is on the carburetor.

Over-choking or excessive use of the choke will flood the engine, causing hard starting.

ENGINE CRANKING

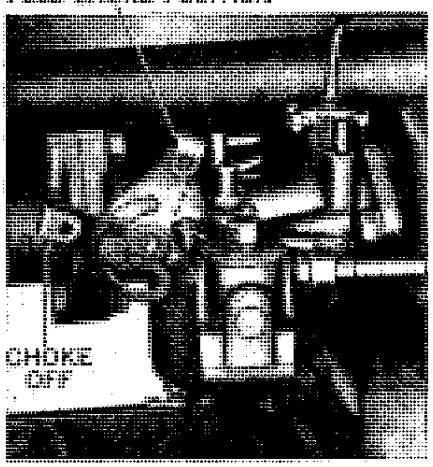


Hand Cranking

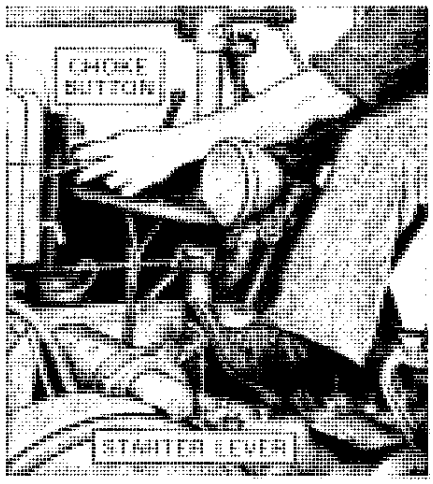
Hand Cranking: The flywheel method of starting is simple, safe, and easy. You simply grasp the flywheel and roll it forward slowly.

All controls are within easy reach.

Electric Starting: To start the tractor, pull choke, and step on starter lever.



Choke



Electric Starting

The starting motor is geared into the flywheel which is protected by a guard.

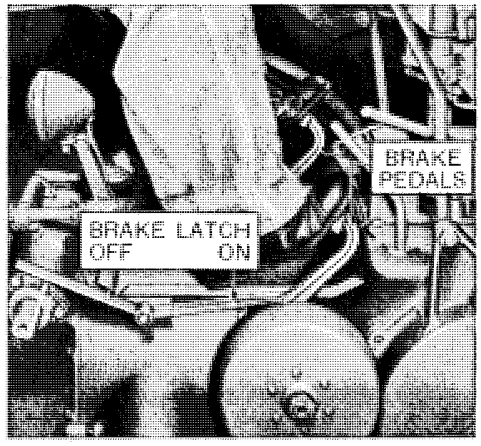
For additional information on starting, see section "Starting the New Tractor", page 14.

BRAKES

Individually foot-operated differential brakes makes possible short turns to right or left at the row ends.

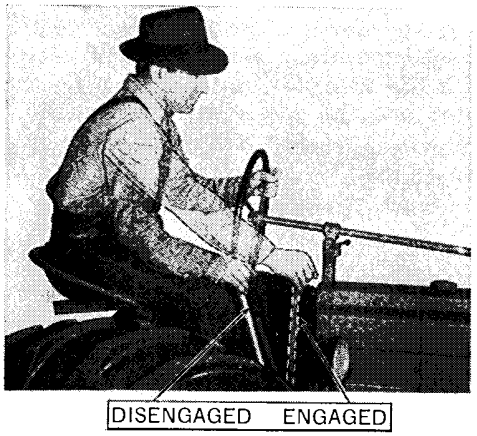
If the brakes are pressed simultaneously with both feet, they assure you safer stopping at high transport speeds.

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



Brake Operation

CLUTCH LEVER



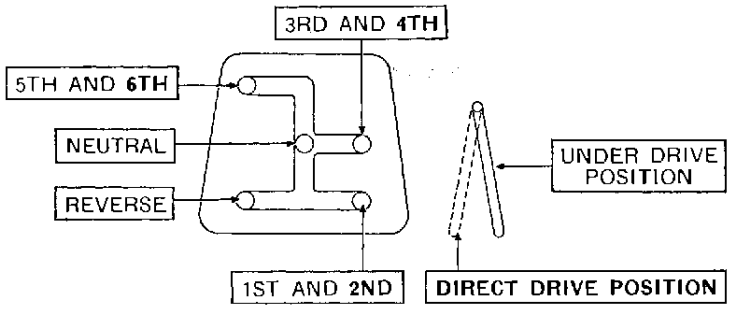
Clutch Lever

The power required in putting the tractor in motion is gradually and smoothly applied to the drive system by slowly pushing the clutch lever forward. As the tractor picks up speed, give the lever a quick forward thrust until the clutch snaps into engagement.

By pulling back on the clutch lever, the clutch is released and the engine disconnected from the transmission. The pulley brake, which is a part of the clutch lever, stops the pulley from rotating, permitting easy shifting of the transmission gears.

When the engine is running and the tractor is not moving, the life of the clutch parts and pulley bearings can be prolonged by shifting the gear shift lever into neutral and engaging the clutch. This allows the pulley and crankshaft to turn as one unit, reducing frictional wear, and lengthening the life of clutch parts.

GEAR SHIFT LEVER



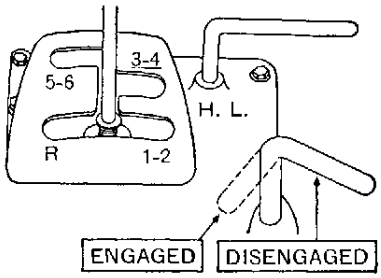
Gear Shift and Overdrive Lever Positions

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

If gears do not shift freely, move clutch lever forward until pulley turns slowly. This allows gear teeth to line up for shifting.

Avoid clashing of gears. This causes unnecessary wear and possible breakage.

POWER SHAFT



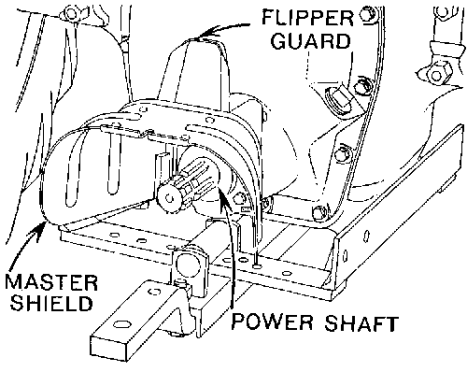
Power Shaft Shift Lever in Engaged Position

The power shaft is started and stopped with the clutch lever and can be operated whether the tractor is moving or not. To put the power shaft into operation, first move the power shaft shift lever to the engaged position, with gears in mesh. With the engine running, engage the clutch and the power shaft will operate.

Whenever the use of the power shaft is not required, disengage the power shaft shift lever.

The power shaft master safety shield is provided for the safety of the operator. This master shield should be removed only when necessary to mount some integral equipment where the power shaft is used. Replace the master shield immediately upon removal of the equipment.

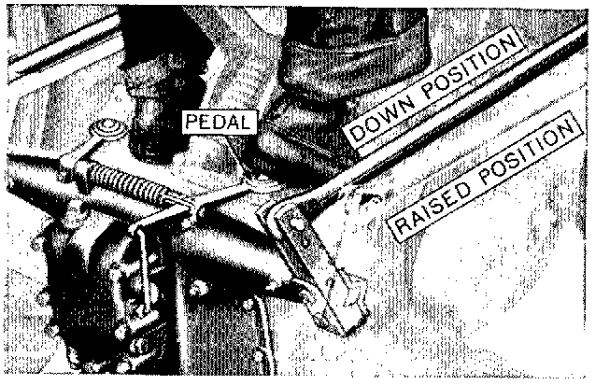
The power shaft flipper guard should **never** be removed from the tractor. Do not operate the tractor with the end of the power shaft exposed. If the flipper guard is damaged, repair or replace it immediately.



Power Shaft Flipper Guard and Master Shield

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

POWER LIFT



Power Lift Positions

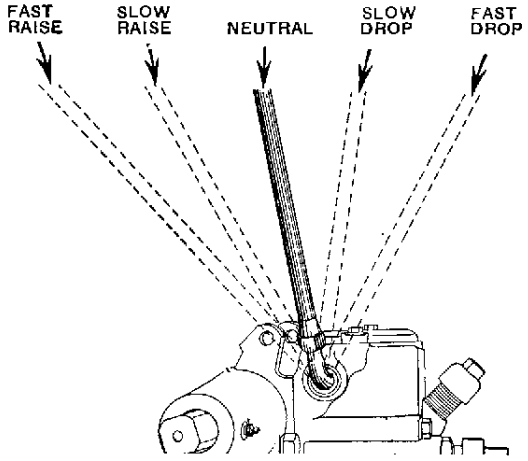
The hydraulic power lift is simple and positive in action and provides a cushioned drop for all equipment. To put the power lift into operation, first move the power shaft shift lever to the engaged position. With the engine running and the clutch engaged, the power lift is now ready to function. To operate the power lift, step down on either pedal with the heel of either foot.

Equipment can be raised or lowered while the tractor is in motion or standing still.

POWER CONTROL

The power control system can be used for rock-shaft operation or with remote cylinder and the operation of the power control lever is the same for both.

To operate the power control move control lever to one of five positions: 1—neutral, 2—slow raise, 3—fast raise, 4—slow drop, and 5—fast drop.



Power Control Lever

1. The neutral position of the lever is slightly forward of vertical.

2. To decrease depth of the implement or to raise it slowly move the lever forward approximately one-half of its travel. The lever must be held in this position until the desired adjustment is reached.

3. To raise implement fast, move lever forward to its farthest position (not necessary to hold). The lever will return to neutral position automatically on completion of lifting stroke.

4. To increase depth of the implement or to drop it slowly, move the lever to the rear approximately one-half of its travel. The lever must be held in this position until the desired adjustment is reached.

5. To drop implement fast, move the lever to the rear as far as possible. The lever will remain in this position until used again in rock-shaft operation. With remote cylinder the control lever returns automatically to neutral upon completion of the lowering cycle.

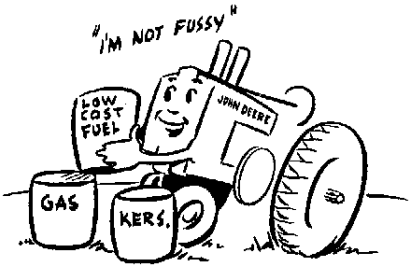
STARTING THE NEW TRACTOR

FUELS

Now that you are familiar with the controls your next consideration before starting your tractor is the type of fuel you are going to use.

This John Deere tractor engine is designed to operate on gasoline, distillate, tractor fuel or kerosene, and no difficulty will be experienced with these fuels if the simple operating directions are followed.

Distillates and other low-octane, lower-cost fuels are manufactured to a variety of specifications; therefore, the tractor owner should investigate available fuels to determine which will give the most satisfactory results under the prevailing operating conditions, making sure that the directions are followed for adjusting carburetor and maintaining temperature.



In all communities where these low-octane fuels are available, they are generally used in John Deere tractors because these tractors will burn them successfully without any detrimental effect to the working parts of the tractor and at a saving in fuel costs.

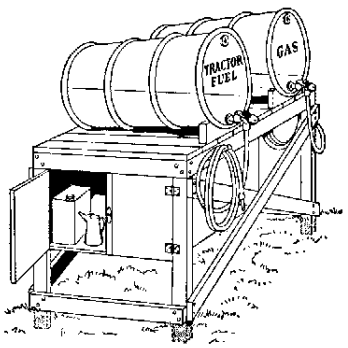
FUEL STORAGE

Fuel should be stored in a convenient place outside of buildings. If fuel drums are used, they should be located in a shady spot to prevent undue evaporation.

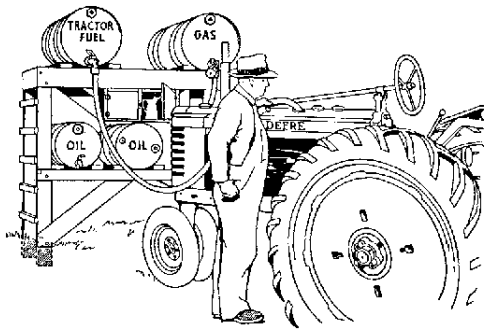
A rack for holding fuel and oil drums is simple to make and saves time and labor in refueling and lubricating the tractor, truck, or family car.

These racks are built of two by fours, a few boards, and a handful of nails. Bolts are recommended instead of nails for the main framework.

Illustration at right shows a single-deck rack with a dust-proof cabinet in one end to store grease, oil funnel, measuring can, etc.



Single-Deck Fuel Storage Rack



Double-Deck Fuel Storage Rack

Illustration at left shows a double-deck rack which contains the gas and fuel on top with the lower deck holding the oil, with a dust-proof cabinet for grease and containers.

The tractor fuel and gasoline drums should be tilted slightly towards the rear so that any metal that might flake from the inside of the drum or any other sediment will settle to the rear and will not get out of the drum through the spigot. The hose nozzle should be capped when not in use so that no dust can get in. Be sure the drum vent plug is screwed in tight after using it. By cutting out the bottoms of two drums and welding them together, the capacity of each fuel storage tank will be doubled.

For stability, the uprights should be set several inches in the ground, as shown in illustration.

RUN-IN PERIOD FOR THE NEW TRACTOR

Before your new tractor was shipped from the factory, all bearings and friction surfaces were correctly and tightly fitted, and the crankcase contained a special "breaking-in" oil.

To be sure that all bearing surfaces will be properly lubricated, operate it on a part load for the first 20 hours of operation with the "breaking-in" oil in the crankcase, then drain out the "breaking-in" oil and refill with new oil in accordance with recommendations on page 22.

Keep engine temperature up to 190°F. because engine temperature is very important during the "breaking-in" period.

BEFORE STARTING THE ENGINE

SAFETY FIRST

Be sure gear shift lever is in neutral before starting engine.

Never refuel tractor while engine is running or extremely hot. Do not smoke or use an oil lantern when working around inflammable fuels, especially when refueling the tractor.

Before attempting to start or operate the tractor, familiarize yourself with the tractor and its various controls. Also check the following:

1. Check radiator water level, and, if necessary, add water up to bottom of baffle. (Use soft water or rain water if possible.) During freezing weather—where water has been drained to prevent freezing, **do not**

Suggest:

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first, and then click the above link

to download the complete manual.

Thank you so much for reading

start the engine before drain plug has been installed in bottom of cylinder head and radiator filled with water. (Capacity of cooling system, 12-7/8 U. S. gallons.)

2. Check amount of fuel in front tank. Always use clean fuel of the type recommended for your tractor. See "Fuel", page 14. (Capacity of fuel tank, 17 U. S. gallons.)

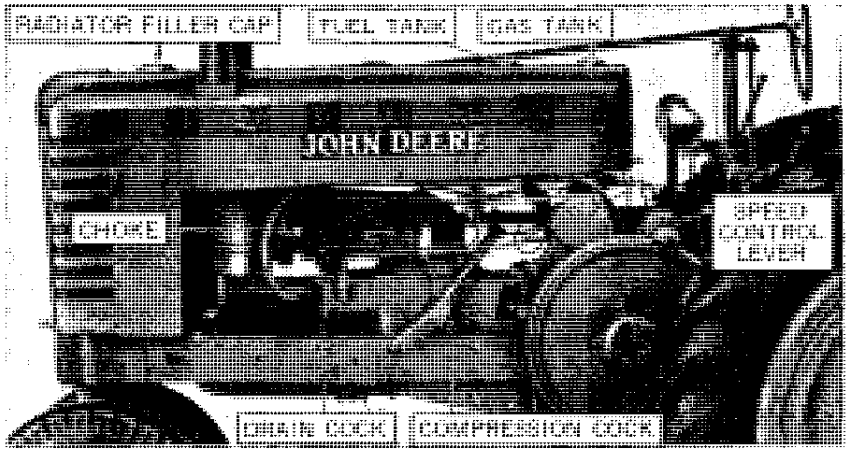
Gasoline in the small rear tank is used for starting and warming up the engine. Fill with clean gasoline. (Capacity, 1-1/2 U. S. gallons.)

3. Check oil in the air cleaner for quality, weight, and amount. See recommendations on pages 22 and 24.

4. Check crankcase oil level. If necessary, add a good grade of 10-W oil until oil runs out at the oil level cock. Note this oil must be drained after 20-hour "breaking-in" period and refilled with the weight of oil recommended in chart on page 22.

5. Check air pressure in pneumatic tires before moving the tractor. Inflate to correct pressure according to inflation chart, page 46. Tire inflation should be checked at least every two weeks.

TO START THE ENGINE



Controls Used in Starting Tractor

1. Close the radiator shutter, set the gear shift lever in neutral and pull the clutch lever back into the disengaged position.

2. Advance speed control lever halfway.

3. If the engine had been burning low-cost fuel when it was stopped, drain the carburetor.

4. If the carburetor adjustments have been changed, adjust load and idle needle according to instructions, page 32.

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