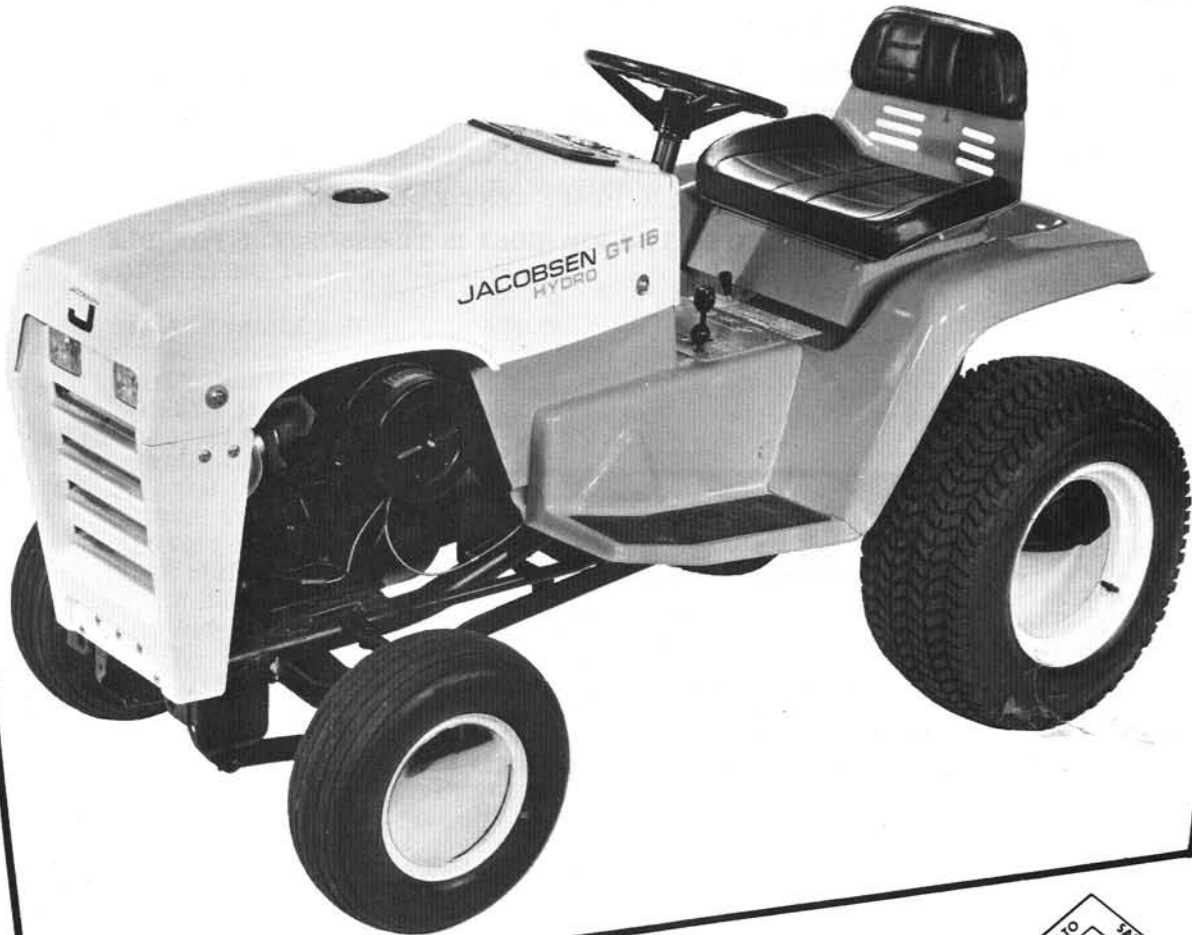


OWNER'S MANUAL

with SET UP INSTRUCTIONS

for **JACOBSEN**[®] GT SERIES TRACTORS

NO. 53330 HYDRO GT 16
SERIAL NO. 1601 AND UP



JACOBSEN MANUFACTURING COMPANY
A Member Company of Allegheny Ludlum Industries
RACINE, WISCONSIN 53403

Part No. 353391

FOREWORD

THIS MANUAL PROVIDES SUGGESTED OPERATING TECHNIQUES TO HELP YOU OBTAIN EFFICIENT AND DEPENDABLE USE FROM YOUR NEW TRACTOR. THIS MANUAL ALSO CONTAINS GENERAL INFORMATION, SPECIFICATIONS, SAFETY SUGGESTIONS, MAINTENANCE, AND SET-UP INFORMATION.

A WIDE VARIETY OF ACCESSORIES ARE AVAILABLE FOR USE WITH YOUR NEW TRACTOR. THESE ACCESSORIES WILL ADD PLEASURE TO YOUR OPERATING TIME. YOUR TRACTOR EQUIPMENT DEALER WILL HELP YOU DETERMINE WHICH ACCESSORIES WILL BE MOST USEFUL IN YOUR PARTICULAR SITUATION.

READ THIS MANUAL CAREFULLY BEFORE OPERATING YOUR TRACTOR. KEEP IT HANDY FOR FUTURE REFERENCE. IF, AT ANY TIME, YOU HAVE ANY QUESTIONS ABOUT YOUR TRACTOR, REMEMBER YOUR TRACTOR-EQUIPMENT DEALER IS BEST QUALIFIED TO HELP YOU. HE HAS FACTORY-TRAINED SERVICE TECHNICIANS, REPLACEMENT PARTS, AND THE CORRECT TOOLS AND EQUIPMENT TO DO THE JOB RIGHT IN THE SHORTEST POSSIBLE TIME.



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DEFINITIONS OF DIRECTIONS

Reference to "right" and "left" side of mower is from operator's position when seated in normal

operating position. Reference to "forward" and "rearward" is likewise from operator's position.

GENERAL INFORMATION

POWER PLANT

Your tractor is powered by a single cylinder, 4-cycle engine that uses "regular" gasoline. **DO NOT MIX OIL WITH GASOLINE FOR THIS ENGINE!** Engine speed is controlled by means of a throttle lever conveniently mounted on the dash.

GASOLINE

The engine manufacturer recommends use of non-leaded gasoline of 90 octane rating or higher.

A separate Engine Manual, prepared by the engine manufacturer is supplied with your tractor. Study the manual carefully until you are familiar with the care maintenance, operation, adjustment and repair of your tractor engine. Proper attention to the engine manufacturer's directions will assure maximum service life of the engine and highest operating efficiency.

DRIVE TRAIN

Hydrostatic Transmission

Power from the engine is transmitted to the rear wheels through a drive shaft, hydrostatic transmission and differential. The hydrostatic transmission has no gears, and it provides an infinite selection of speeds with constant power to the rear wheels.

The transmission is coupled to an automatic-type limited slip differential that allows the tractor to be maneuvered without unnecessary wear to the rear tires and provides maximum traction.

BRAKE PEDAL (See Fig. 1)

The brake is operated by a foot pedal, conveniently located above the right foot rest. When the pedal is pushed down firmly, the brake is applied to stop tractor motion.

NOTE

The speed range lever will have to be placed in "NEUTRAL" to engage the safety start switch on tractor, in order to start the engine by turning the key switch clockwise. PTO switch must be "OFF".

STARTING SWITCH AND KEYS (See Fig. 5)

Two keys are supplied with each tractor, taped to the starting switch. To start engine, insert key in switch, turn clockwise to "ON" position and release when engine starts. Do not hold key in "ON" position for more than 30 seconds at a time. Key should be removed when tractor is not in use to prevent unauthorized operation.

REMOVING THE HOOD

First remove the four fastening screws completely from the hood. Move to front of tractor and face the hood. Grasp it with each hand at about the middle of the curved portion. Lift up and work the hood up and clear of the steering wheel area and toward you. Be careful not to harm the ammeter.

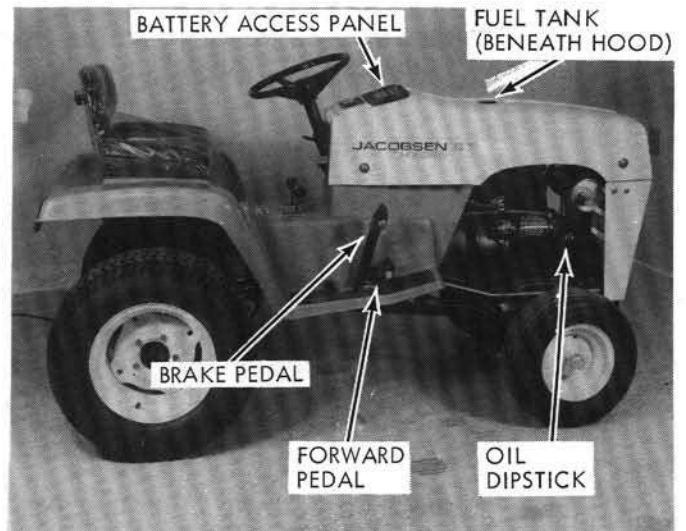


Figure 2.

SEAT AND TOOL COMPARTMENT

The seat hinges forward as shown in Figure 2 to provide access to the tool compartment.

SINGLE POINT IMPLEMENT HITCH (See Fig. 3)

A fixed hitch is supplied as standard equipment for the towing of implements.

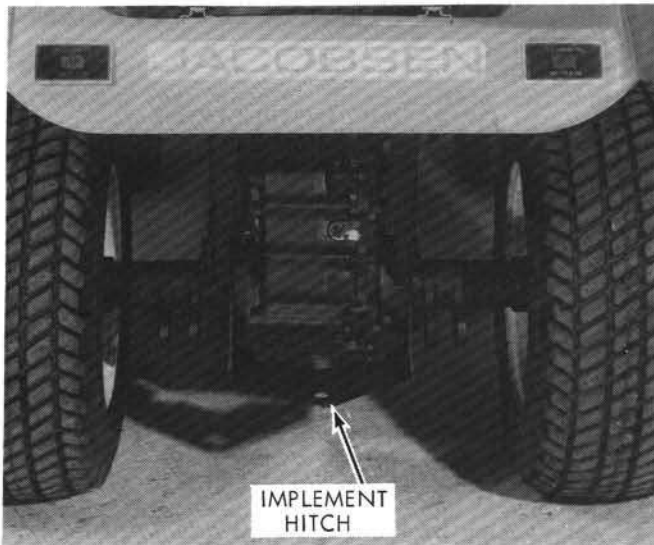


Figure 3.

HYDRAULIC LIFT (See Fig. 4)

THE Hydraulic Lift is used to raise and to lower attachments used with the tractor. It can only be used with the engine running. Operate by pulling backward to raise, and pushing forward to lower. When the lever is released it will automatically return to the "LOCK" position.

CAUTION

The Hydraulic Lift will do only what you control it to do. Keep hands and feet away from lift at all times when engine is running.

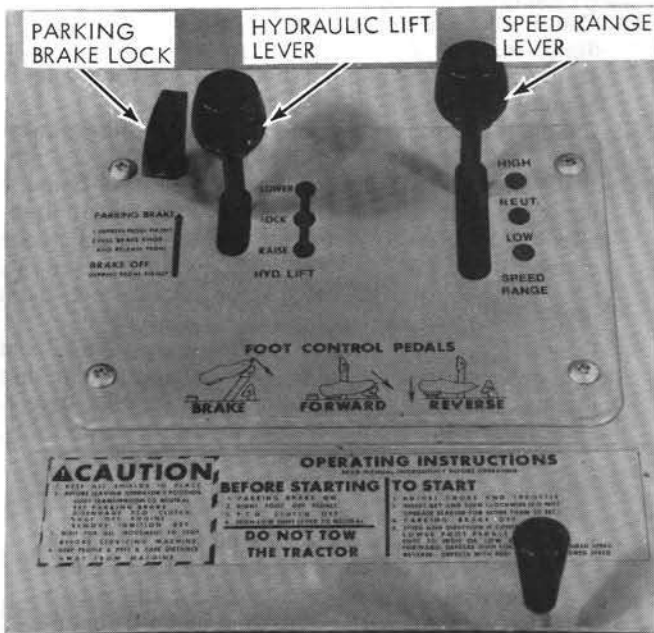


Figure 4.

PARKING BRAKE

A parking brake is provided to prevent movement of the tractor whether the engine is running or stopped. To set the brake, fully depress the brake pedal and pull up on parking brake knob to engage the brake lock (See Fig. 4). The brake is automatically released by depressing the brake pedal.

CHOKE CONTROL (See Fig. 5)

Located on lower left side of instrument panel. When starting a cold engine, turn choke switch to "ON" position. After the engine starts turn choke to "OFF" position.

THROTTLE LEVER (See Fig. 5)

Located on upper left side of instrument panel. The area of lever travel between the "SLOW", "MEDIUM", and "FAST" positions controls the flow rate of air and fuel mixture to the engine and this regulates engine speed. When the lever is moved upward toward the "FAST" position, the engine speed increases, and when it is pulled downward toward the "SLOW" position, the engine speed decreases.

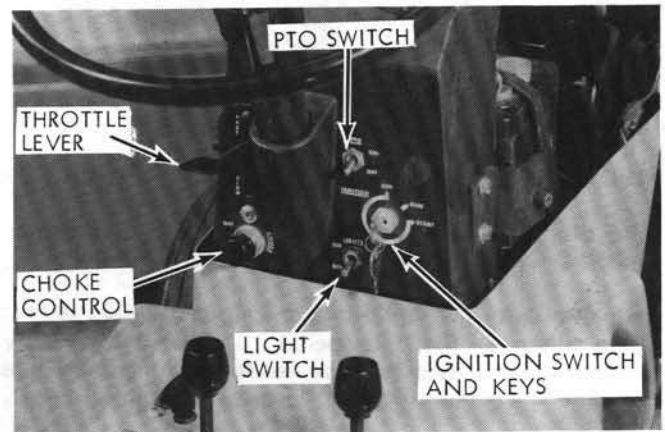


Figure 5.

AMMETER

The ammeter is located immediately to the left of the steering wheel. It indicates the rate of battery charge or discharge. When possible, maintain sufficient engine speed so the ammeter indicates a charging rate to prevent unnecessary drain on the battery.

HOUR METER

Located at top of dash panel. Indicates number of hours tractor has been operated. It can be used to keep track of maintenance intervals and amount of time required to perform various tasks, etc.

LIGHT SWITCH (See Fig. 5)

A toggle switch is located on the lower right side of the instrument panel on those tractors equipped with head and tail lights.

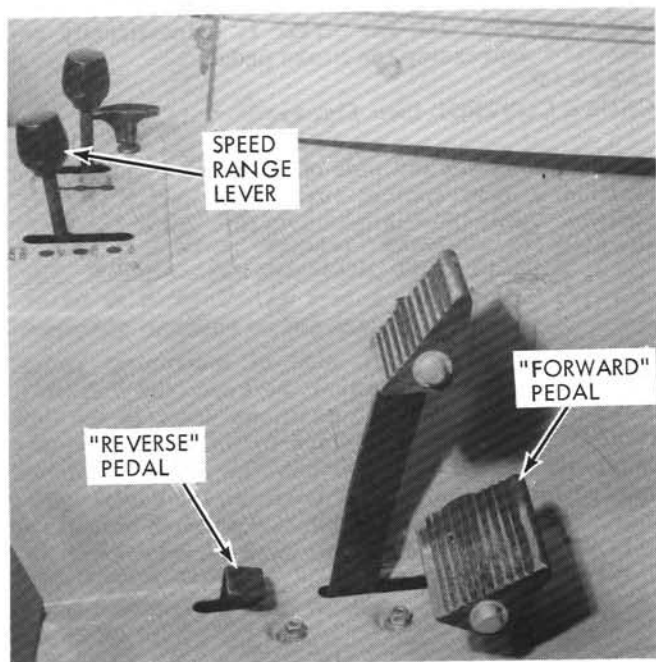


Figure 6.

HYDROSTATIC TRANSMISSION CONTROL LEVER

The direction and speed of the tractor is determined by the position of the foot control pedals (See Fig. 6).

Select either the "HIGH" or the "LOW" speed range. Then depress the foot pedal to start the tractor moving. For reversing the direction of travel, use the heel of your foot to depress the small pedal.

TIRES

Your tractor is shipped from the factory with all tires mounted.

NOTE

Rear tires are overinflated at the factory for shipping purposes. Before operation, check rear tires for proper air pressure. See "Tire Maintenance" for tire pressure.

Tires mounted on your tractor are as follows:

Front Tires - Wide Base (set of two)
Size 16 x 6.50 - 8 Pneumatic

Rear Tires - Wide Base (set of two)
Size 23 x 10.50 - 12 Pneumatic

Wide base tires have a larger area of the tread in effective contact with the ground at all times, thus providing added traction, and have considerably less tendency to mark turf or sink into such surfaces as

loose soil, soft sand, etc. They also provide a soft and smooth ride on rough terrain.

OPERATING INSTRUCTIONS

OPERATING SAFETY INSTRUCTIONS

Before getting off tractor, or permitting anyone to work on machine or implement, perform the following:

1. Make sure PTO switch is in "OFF" position.
2. Depress brake pedal and put speed range lever in "NEUTRAL".
3. Turn key to "OFF" and remove key.
4. Set parking brake and release brake pedal.
5. Allow adequate time for all moving parts to stop.

PREPARING TRACTOR FOR OPERATION

The operating speed and throttle setting will be determined by the implement being used as well as individual conditions encountered in the work being performed. The Operator's Manual supplied with each implement should be consulted for detailed operating instructions.

It is important to become thoroughly familiar with the handling characteristics of your tractor and with the instructions contained in this manual BEFORE attempting to use your tractor for the various operations which it can perform. Drive the tractor without operating an implement until you become familiar with its controls.

1. Check the engine crankcase oil level, using the dipstick. (See Fig. 1). If oil is required, add oil of proper grade as instructed in Engine Owner's Manual.
2. Check the fuel supply and fill tank if necessary. Open the fuel shut-off valve. (See Fig. 7).
3. Make a general inspection of the items beneath the hood and around the tractor. Check for loose hardware, frayed wires, oil or fuel leaks, loose connections, etc. In case such conditions are detected, take appropriate steps to correct them before starting engine.
4. Check tires for proper inflation pressure and general condition. Refer to the section in this manual on Tire Maintenance, for correct pressure for tires.

NOTE

It is necessary that tires be inflated to the same pressure on both sides of the tractor. Otherwise attachments such as the rotary lawn mower will be pitched and will operate unevenly.

5. If an implement is to be used, check it for proper installation, securely tightened fasteners and good operating condition. Refer to the Implement Manual for operating and maintenance instructions.

WEIGHT FOR ADDED TRACTION

Wheel weights are available as accessories for both front and rear wheels. These weights will increase the drawbar pull. The weight added by these accessories is as follows:

Front Wheel Weights: 20 pounds each

Rear Wheel Weights: 53 pounds each

Whether used on the front or rear of the tractor, wheel weights should be used in pairs, that is, one on each side. Operation with weight on one side only will cause uneven tire wear and will cant or tip the tractor which can result in improper operation of certain implements.

Liquid fill can be used in the tires as an alternate or in addition to the wheel weights. The tires and tubes are equipped with a special inflation valve so they can be filled three-quarters full of liquid to provide additional weight. If the anticipated temperatures are above freezing, clean water can be used. For temperatures below freezing, a calcium chloride solution should be used. After the tires have been three-quarters filled with liquid, compressed air is used to inflate them to the pressures recommended under "Tire Maintenance".

When checking inflation pressure of liquid filled tires, turn the wheel so that valve stem is at the top to avoid getting fluid into the tire gauge.

IMPORTANT

If calcium chloride solution is used in the wide base (tubeless) rear tires over an extended period of time, it is recommended that inner tubes be used. Such tubes can be obtained from most well stocked tire stores.

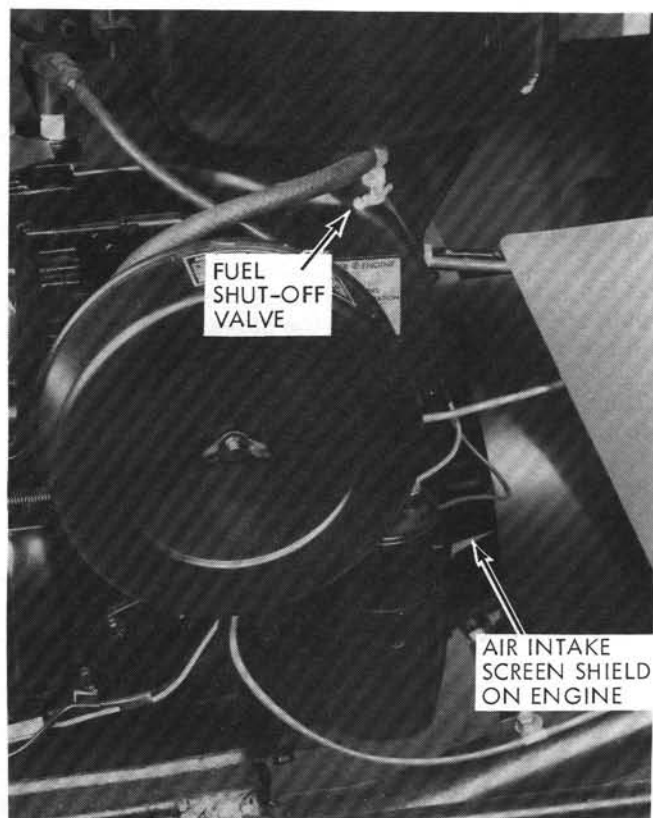


Figure 7.

STARTING AND STOPPING ENGINE

To Start Engine

1. Check oil, see "Maintenance and Lubrication", Daily Inspection.
2. Check fuel supply and shutoff valve, as previously directed.
3. Put speed range lever in "NEUTRAL".

NOTE

Always place speed range lever in "NEUTRAL" position for starting to close "START" circuit.

4. Put PTO switch in "OFF" position.
5. Depress Clutch-brake pedal.
6. Put choke control in "ON" position.
7. Insert ignition key and turn it clockwise as far as possible until engine starts. DO NOT OPERATE STARTER FOR MORE THAN 30 SECONDS AT A TIME. If the engine does not start within this time, turn the key to "OFF" position and wait for a minute or two before trying again.
8. After the engine starts, move choke control to "OFF".

To Stop Engine

Turn the ignition key to "OFF" position. Set the parking brake, Turn PTO switch to "OFF". Leave the gear shift lever in neutral position. Remove the ignition key if the tractor is to be left unattended. Turn off the fuel shutoff valve if the tractor will not be operated for an extended period.

OPERATING HYDROSTATIC TRANSMISSION

Proper engine power is necessary for optimum tractor and implement operation. With a conventional transmission, the correct gear ratio and throttle setting is selected for the load and operating conditions encountered. Maximum pulling force is obtained in the low range ratio with the engine operating at full throttle.

In the case of the hydrostatic transmission, maximum pulling force will occur at the slowest ground speeds, in low range and full throttle.

Thus, for any one throttle setting, depressing the foot control pedal reduces the tractor pulling force and increases tractor speed; a condition comparable to operating a conventional transmission tractor in a high gear ratio.

With the speed range lever in the "NEUTRAL" position and the PTO clutch switch in the "OFF" position, start and operate the tractor as follows:

NOTE

When the tractor is new or the oil in the transmission is cold, the tractor may tend to "creep" slightly when the speed range lever is in "NEUTRAL". Therefore, we recommend that when the tractor is brought to a stop, before the operator dismounts from it, he should apply the parking brake or shut off the engine.

1. Start the tractor engine and advance the throttle slightly.
2. Select the speed range desired and move the lever accordingly.
3. Advance the throttle setting to the desired rpm for the operation to be performed, and slowly depress the pedal.
4. IMPORTANT - The correct tractor forward speed is a composite setting, involving both the throttle lever and the foot control pedal. However, for any one throttle setting, depress the foot pedal until the correct tractor speed is obtained.
 - a. If the tractor operates too slowly and the engine appears to be racing, apply more pressure to the foot pedal.
 - b. If the tractor engine appears to be slowing down or "lugging", i.e., laboring under the tractor load, decrease the pressure on the foot pedal. This will increase the power to the rear wheels.

NOTE

Try to increase or decrease pressure on the foot pedal smoothly. Fast, jerky movements will cause unnecessary strain and wear on parts.

Stopping and Shuttling the Tractor

Release pressure on the foot pedal and the tractor will slow to a stop.

WARNING

Bring the tractor to a complete stop before changing direction. Do not move your foot rapidly from the forward to the reverse pedal, or from the reverse to the forward pedal.

NOTE

In case of an emergency, the forward motion of the tractor can be stopped by depressing the clutch-brake pedal.

Parking the Tractor

Bring the tractor to a stop by releasing pressure on the foot pedal. Move speed range control to "NEUTRAL". Turn PTO switch to "OFF". Depress the brake pedal and lock the parking brake securely. Stop the engine and remove the ignition key.

OPERATING THE ELECTRIC POWER TAKE-OFF CLUTCH

Various implements are available for use with your tractor. Certain of these implements are designed to be powered by the engine through V-belts, and are controlled by the PTO switch.

The power take-off clutch is disengaged when the PTO switch is "OFF" (See Fig. 5). The clutch is engaged when the switch is turned to "ON". The engine will not start with the PTO switch in the "ON" position.

CAUTION

Always disengage the power take-off clutch (turn switch to "OFF") when implement mounted on the tractor is not being used.

Operating instructions, belt adjustments, etc. concerning the power take-off use with any implement will be covered in the Owner's Manual furnished with the implement.

Regular inspection and conscientious maintenance is the key to efficient economical operation. It will also help to assure that your tractor will perform satisfactory with minimum need for service and repair.

NOTE

Make a general inspection of the items beneath the hood and of the tractor as often as possible. Check for loose hardware, frayed wires, oil or fuel leaks, loose connections, poor condition of tires, etc. In case such conditions are detected, take appropriate steps to correct them before operating the tractor.

DAILY INSPECTION (Prior to Operation)

The following steps should be observed daily prior to starting and operation.

1. Check the oil level in the engine crankcase by means of the dipstick (See Fig. 1). The tractor must be level and the engine must be stopped or the reading will be inaccurate.
2. Add oil to the engine crankcase only if required. Keep the oil level between the marks on the dipstick.

Refer to your Engine Manual and follow the specific instructions as to grade of oil required.

3. The air intake screen on the engine flywheel is protected by a shield (See Fig. 7). Check to be certain that the air intake screen is clean and properly fitted to the flywheel. If the screen becomes bent, cracked, broken or otherwise damaged, it must be replaced.
4. Make a general inspection of the tractor, checking for leaks, loose nuts, bolts or fittings. Correct such conditions as they are detected.

WEEKLY INSPECTION (Inspect every 25 Hours)

1. **BATTERY** - Lift up battery access panel (See Fig. 1). Check the water level of the battery by removing each of the six caps. If the level is below the bottom of the filler tube (See Fig. 8), fill with distilled water.

Inspect the battery terminals to make certain that cables are securely fastened and that terminals are free from corrosion. Refer to section headed "Servicing the Battery".

2. **TIRES** - Inspect tires as to general condition. Check for cracks, cuts and damage; take necessary steps.

Check the tire pressure, using a "low-pressure" gauge with one P.S.I. graduations. Refer to "Tire Maintenance", for recommended inflation pressure. Adjust inflation as required.

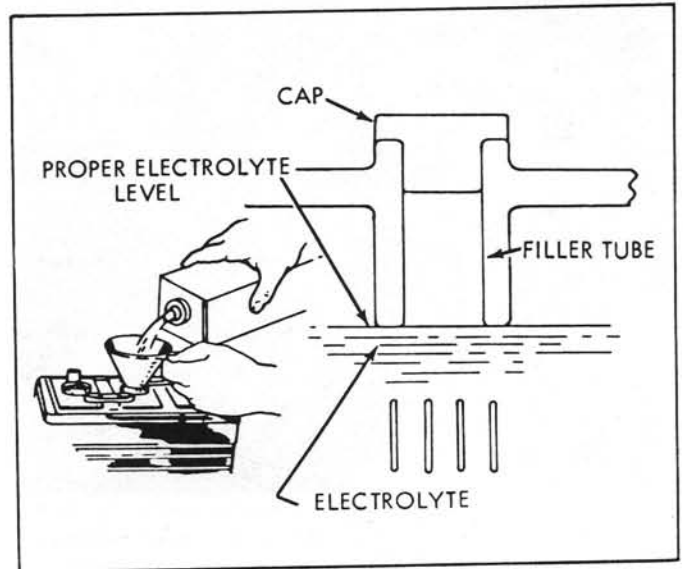


Figure 8.

3. **BELTS** - Visually inspect the PTO drive belt for cracks, cuts, excessive wear, etc.

HYDROSTATIC TRANSMISSION (Inspect Every 40 Hours)

Check the reservoir oil by removing plug at "A" (See Fig. 9). The oil should just dribble out through the hole and must be kept at this level. If additional oil is required, remove breather at "B", and also plug at "A". Add oil at "B" until it dribbles out through "A"; then replace both plug and breather. Use Texaco Transhydral #2209 or Ford Motor Co. #M-2C41-A, or equivalent.

NOTE

It is very important that the fan, located on the front of the hydrostatic transmission, and the fins on the hydrostatic transmission (See Fig. 10) be kept free and clean from grass clippings, dirt, dust, or other objects that could hinder proper cooling of the transmission. Debris can be removed with a soft brush, or blown clean with an air hose. Be careful not to bend or damage the fan blades or break any of the cooling fins on the hydrostatic transmission. **DO NOT ATTEMPT TO CLEAN FAN WHILE THE ENGINE IS RUNNING.**

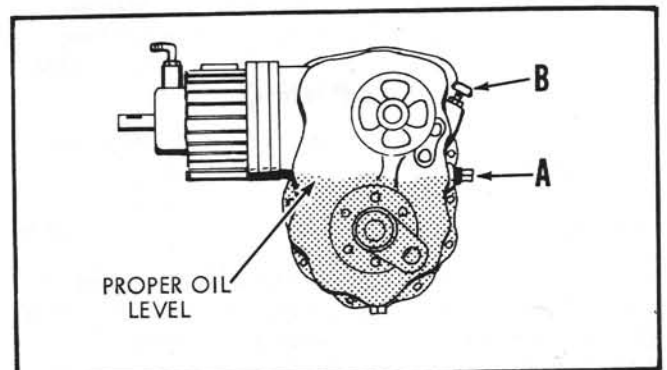


Figure 9.

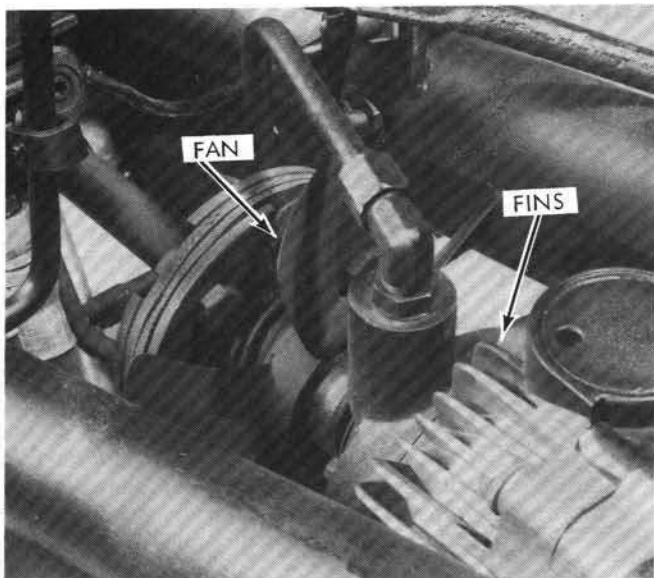


Figure 10.

ENGINE CRANKCASE OIL

Refer to your Engine Owner's Manual for oil changes, intervals, grade of oil, etc.

1. The ideal time to drain and replace the crankcase oil is when the oil is hot; after the engine has run for 5 minutes or more, or after the tractor has been in operation. The oil will drain more quickly and completely; and dirt, foreign material, etc., if present, will be in suspension and thus be removed.

Crankcase Capacity 4-1/2 U.S. Pints

2. Place a pan under the drain to catch the used oil.
3. The oil drain of the tractor is located on lower left side of the engine. It extends down a few inches from the oil pin, is a square head pipe plug, and can be easily removed with an adjustable wrench.
4. Remove the drain plug and allow ample time for the used oil to drain out.
5. Reinstall the drain plug or cap securely. Wipe away any spilled oil. Replace crankcase oil as directed in Engine Owner's Manual.

NOTE

The crankcase oil should be changed more frequently when the tractor is operated under unusually severe or dusty conditions.

WARNING

Never oil or grease the tractor while the engine is running.

OIL FILTER (Part of Hydrostatic Transmission)

It is recommended that the filter be changed after the initial 10 hours of operations, and no further changes are necessary unless the system becomes contaminated through oil level checks, refill, or tear-down.

LUBRICATING THE TRACTOR

Every 100 hours or more frequently if operating under dusty or heavy load conditions, make the regular weekly - 25 hours - inspection and perform the following steps.

Refer to the accompanying Lubrication Chart (Figs. 11, 11-A, 11-B, and 12) and the figures stated in the following:

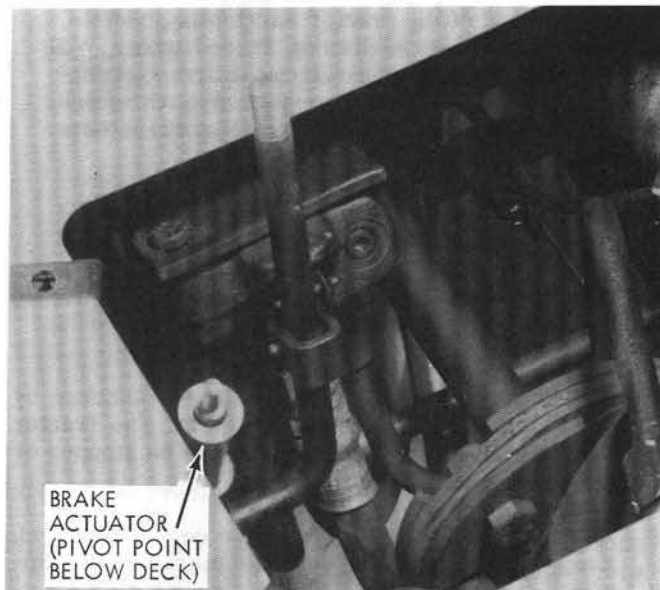


Figure 11.

APPLY GREASE TO THE FOLLOWING:

1. BRAKE ACTUATOR AND PIVOT. Grease these pivot points (Figure 11).
2. STEERING GEAR. Grease fitting - fill slowly with grease gun until lubricant begins to seep out.
3. LIFT LINKS. Sliding surfaces and slotted holes (Figure 11-A). Ref. No. 1

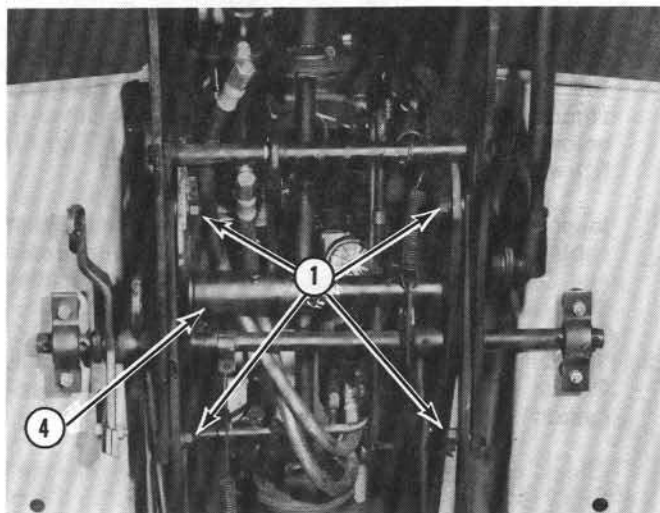


Figure 11A.