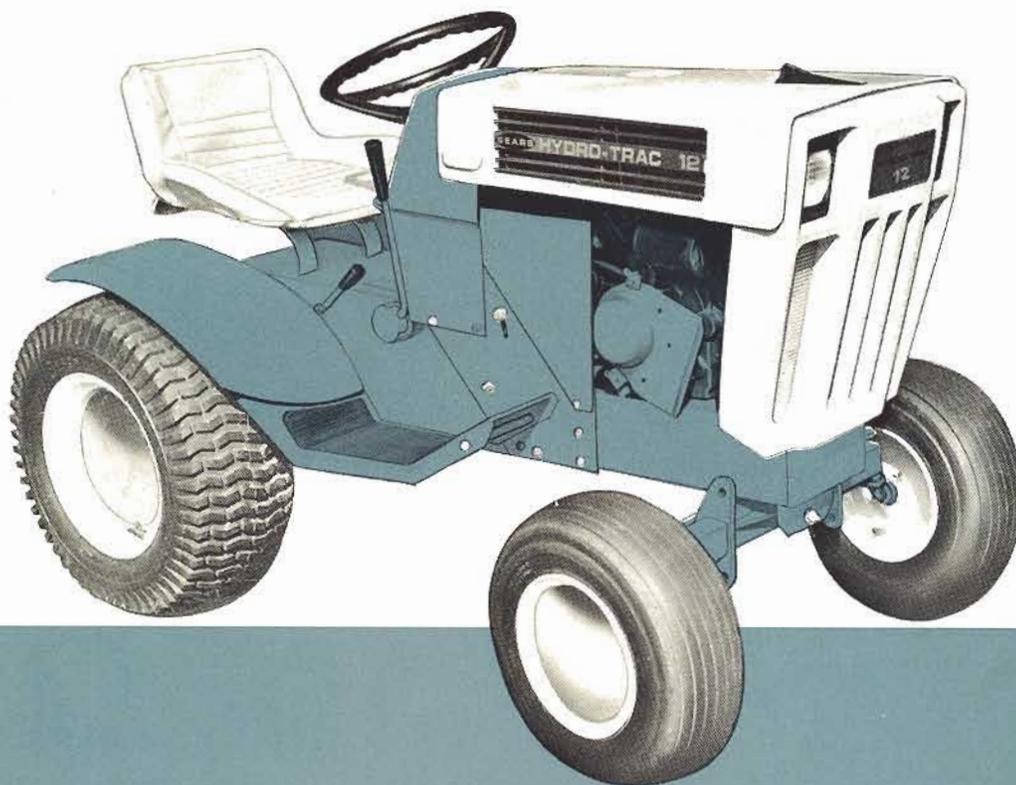


# assembly and operating instructions



Sears

## Super 12 Hydro-Trac Drive Tractor

SEARS, ROEBUCK AND CO.....U.S.A.

SIMPSONS-SEARS LIMITED.....CANADA

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**TO THE HYDRO-TRAC OWNER**

Please accept our congratulations on your investment in a Sears Hydro-Trac Tractor. We feel you will obtain from your Hydro the economical and superior performance it is designed to give. It is certain that you will derive a large measure of personal satisfaction from its operation.

Years of tractor manufacturing experience and contact with the actual customer have been combined with advancements in engineering to produce all the features and refinements built into your tractor.

Properly adjusted, operated and maintained, this tractor will respond to every reasonable demand you make upon it and give you reliable service for years to come.

  
**MODEL NUMBER 917.25501**

INSTRUCTION BOOK 9396H

PARTS IDENTIFICATION

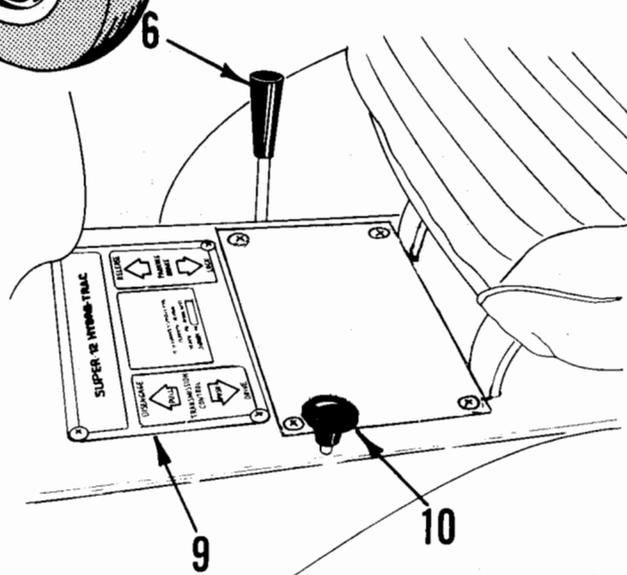
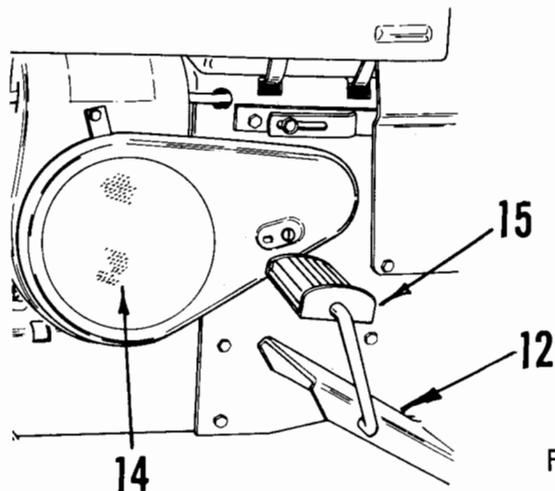
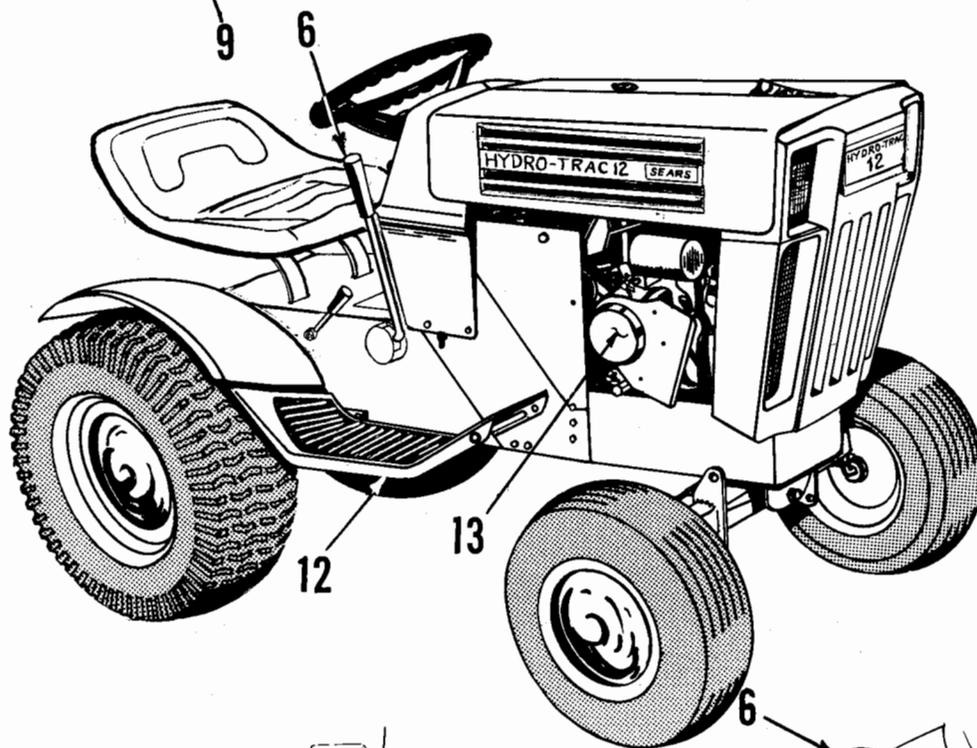
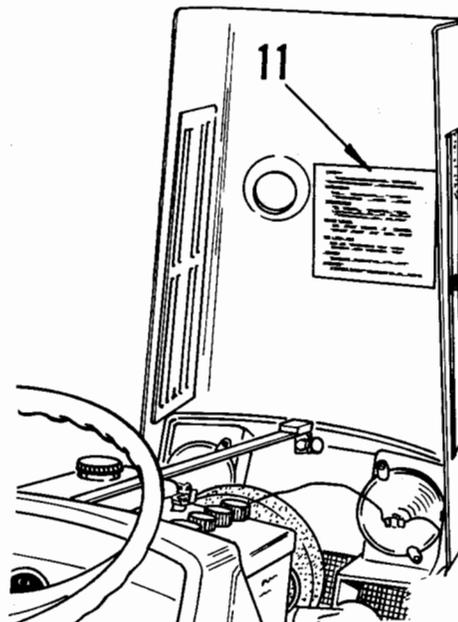
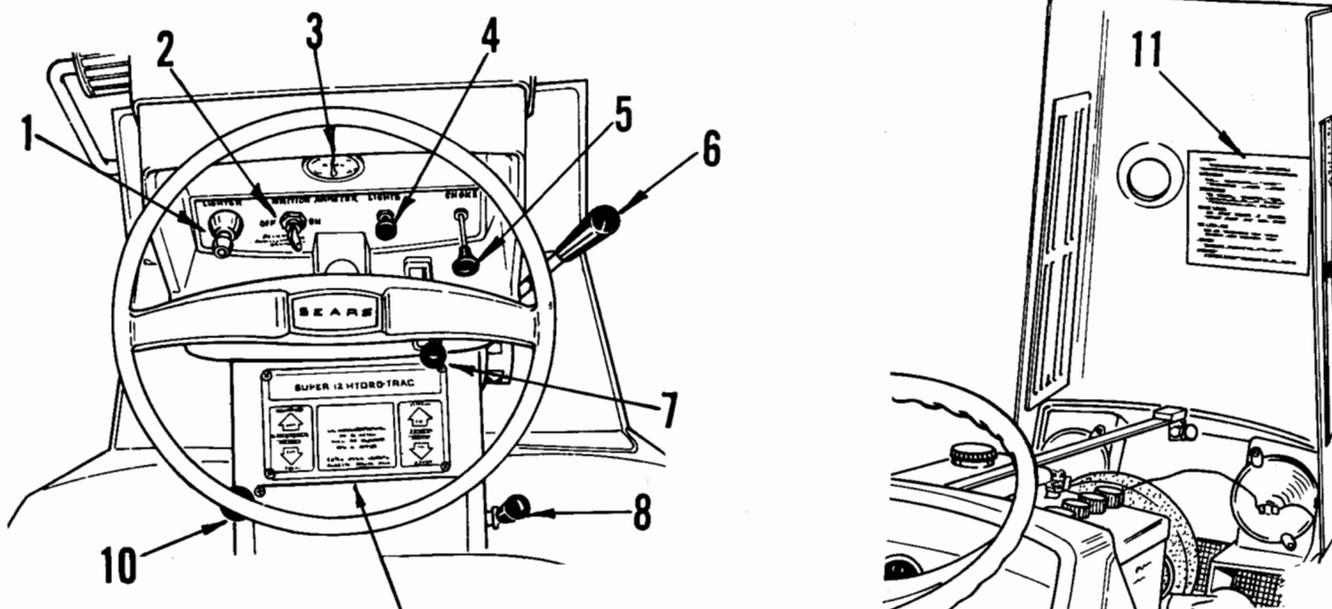


FIG. 1

another free manual from [www.searstractormaterials.com](http://www.searstractormaterials.com)

# PARTS IDENTIFICATION

another free manual from [www.searstractormanuals.com](http://www.searstractormanuals.com)

1. LIGHTER
2. IGNITION STARTER SWITCH
3. AMMETER
4. LIGHT SWITCH – Headlights and Tail Light
5. CHOKE
6. DRIVE CONTROL
7. THROTTLE CONTROL
8. PARKING BRAKE
9. MODEL NUMBER PLATE
10. TRANSMISSION CONTROL
11. MAINTENANCE REMINDER
12. FOOT REST
13. BELT GUARD
14. STARTER AIR SCREEN
15. DRIVE, CLUTCH AND BRAKE PEDAL
16. OIL FILLER CAP AND DIPSTICK
17. AIR CLEANER
18. ENGINE OIL DRAIN PLUG
19. FUEL TANK SHUT-OFF VALVE

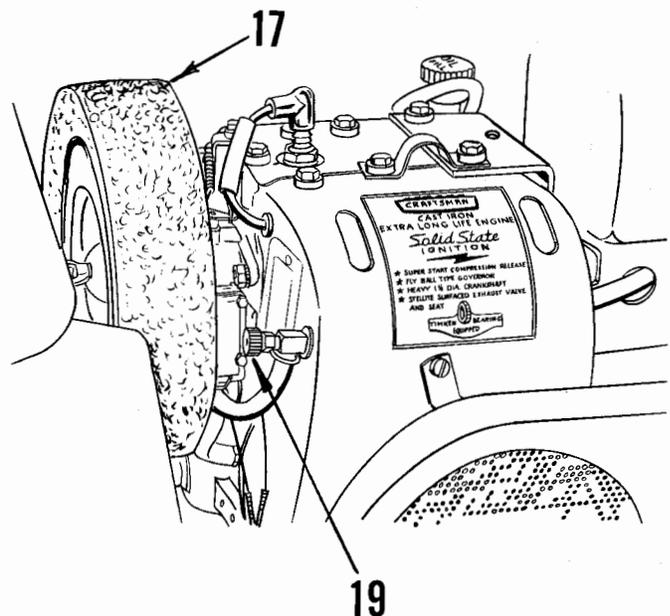
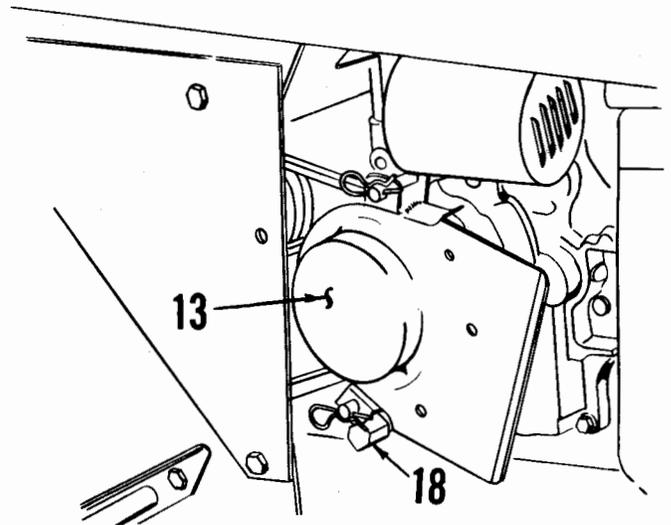
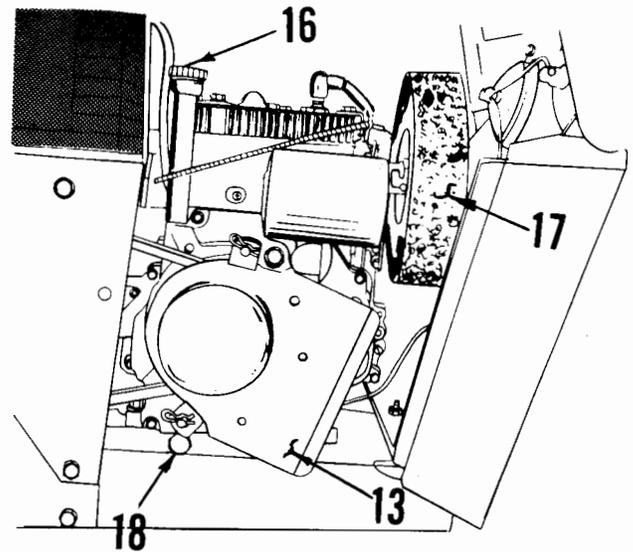


FIG. 2

YOU CAN DO MANY JOBS EASILY WITH THE WIDE VARIETY OF ATTACHMENTS BUT, FIRST OF ALL BE CAREFUL!

DO NOT START, RUN OR REFUEL IN A CLOSED BUILDING.

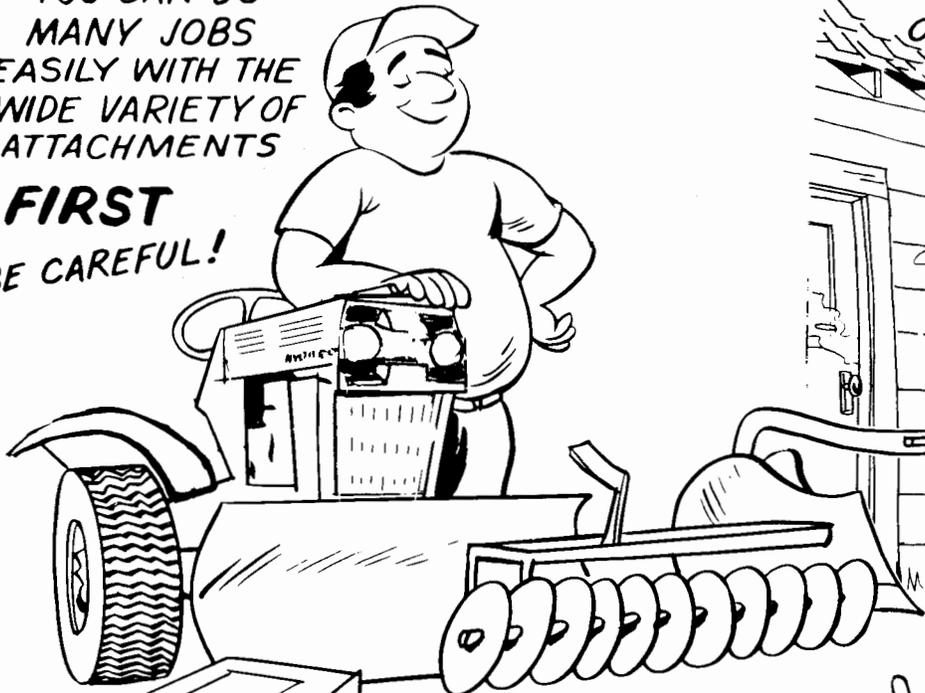
ONLY ONE PERSON ON THE TRACTOR AT A TIME.

# RULES OF SAFETY

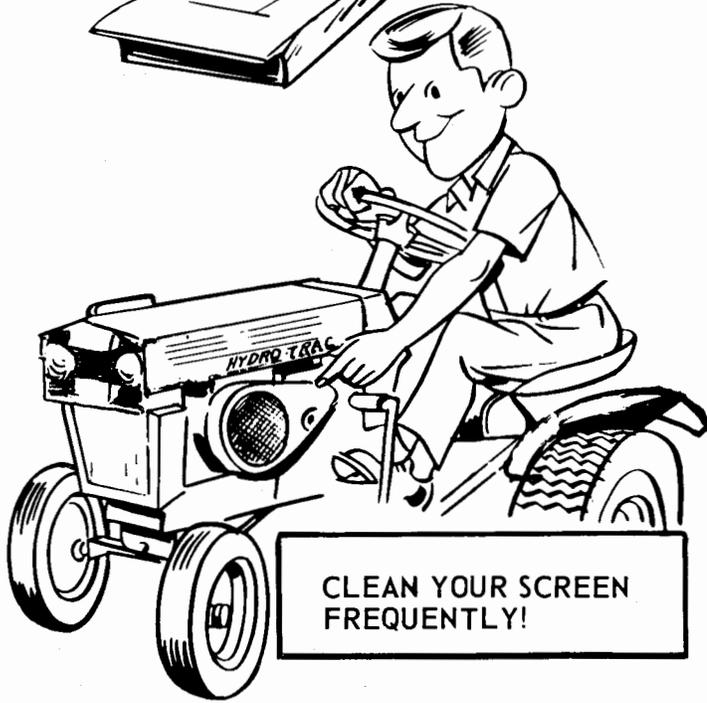
YOU CAN DO  
MANY JOBS  
EASILY WITH THE  
WIDE VARIETY OF  
ATTACHMENTS

**FIRST**  
BE CAREFUL!

**DO NOT - START, RUN  
OR REFUEL IN A  
CLOSED BUILDING**

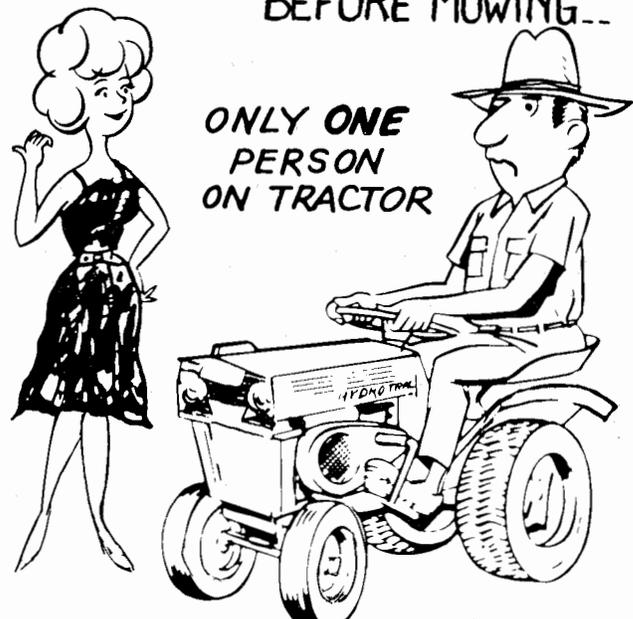


**CLEAR THE  
AREA OF RUBBISH  
BEFORE MOWING...**



**CLEAN YOUR SCREEN  
FREQUENTLY!**

**ONLY ONE  
PERSON  
ON TRACTOR**



**ALWAYS START IN NEUTRAL!**

another free manual from [www.searstractormanuals.com](http://www.searstractormanuals.com)

## SETTING UP INSTRUCTIONS

A number at the beginning of a paragraph in the following instructions refers to an arrow in the adjoining figure except when otherwise stated. When R.H. (Right Hand) and L.H. (Left Hand) are used, it should be understood to mean from a position behind and facing the tractor (or direction of travel). Reference to "front" indicates the engine and hood end of tractor, and the "rear" the transmission.

1. Remove carton from around tractor. You have an electric start tractor, remove battery from crate bottom and prepare for operation as given below. This will require about 2½ to 3 hours of time.
2. Cut banding holding tractor to crate bottom.
3. Tires were over-inflated for shipping purposes. Reduce air pressure to 12 lbs. in front tires and 6 lbs. in rear tires.
4. This tractor has been completely assembled at the factory, except for battery installation. The battery was shipped dry. Below are instructions for filling and installing battery.
5. Lubricate the tractor, refer to Lub Chart page 9.
6. Add fuel. Use a good grade of regular, clean, fresh gasoline. Do NOT mix oil with gasoline. Refer to page 7.

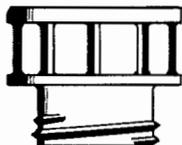
### FILL AND CHARGE BATTERY

**CAUTION: DO NOT ASSEMBLE BATTERY TO TRACTOR UNTIL BATTERY HAS BEEN FILLED AND CHARGED.**

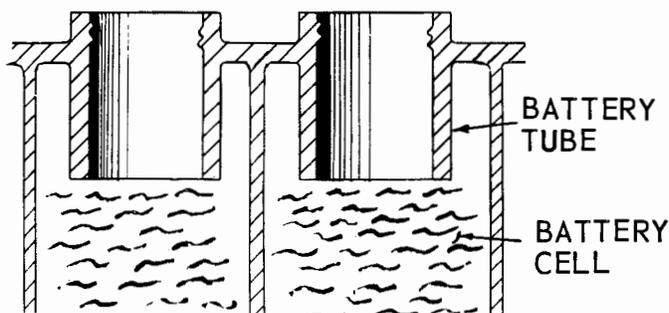
1. Fill battery with electrolyte and charge battery as outlined in instructions in battery container. NOTE: After filling cells, let battery stand for thirty minutes. Then charge battery at a rate not exceeding three (3) amperes for about 2½ hours.

FILL BATTERY AS SHOWN

**WARNING DO NOT OVERFILL --**  
CORRECT LEVEL IS  
BOTTOM OF TUBES IN CELLS..



CUT-AWAY VIEW  
OF BATTERY



9396H-23.2.70

### BATTERY INSTALLATION

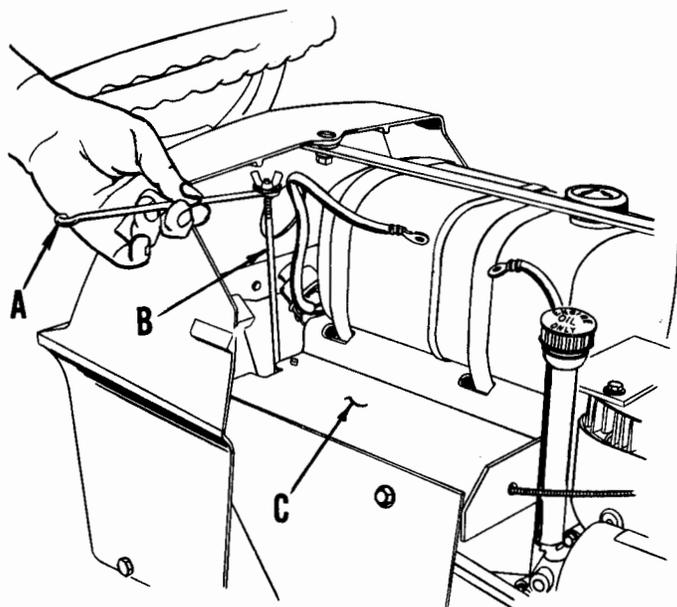


FIG. 3

2. Lift cowling, refer to Fig. 6. Assemble clamp (A), to one of two battery bolts (B). Flat washer and wing nut above clamp as shown in Fig. 3. Hook the bolt into rear of battery support (C), and turn clamp to the side as shown to allow positioning of battery. Bolt, clamp, washer and wing nut shipped in plastic bag located beneath cowling. Battery installation continued on page 6.

**READ CAREFULLY ALL SETTING-UP, OPERATING AND MAINTENANCE INSTRUCTIONS IN THIS MANUAL. YOU WILL FIND MANY HELPFUL POINTERS WHICH WILL NOT ONLY SAVE YOU TIME BUT WILL HELP YOU OPERATE THE TRACTOR MOST EFFICIENTLY.**





## TO OPERATE TRACTOR

1. Try your tractor in a large, open area. Learn to start, stop and reverse.
2. WITH THE FOOT PEDAL COMPLETELY DEPRESSED, (this is especially helpful for cold weather starting), Hydro drive control lever in neutral, and park brake released, start the engine and put the throttle control at about  $\frac{1}{2}$  throttle.

**IMPORTANT:** The Hydrostatic drive control lever is extremely sensitive to the slightest movement. Always move lever slowly.

Move drive control lever slowly to the forward position and tractor will begin to travel. Adjust throttle control so that engine is not overloaded.

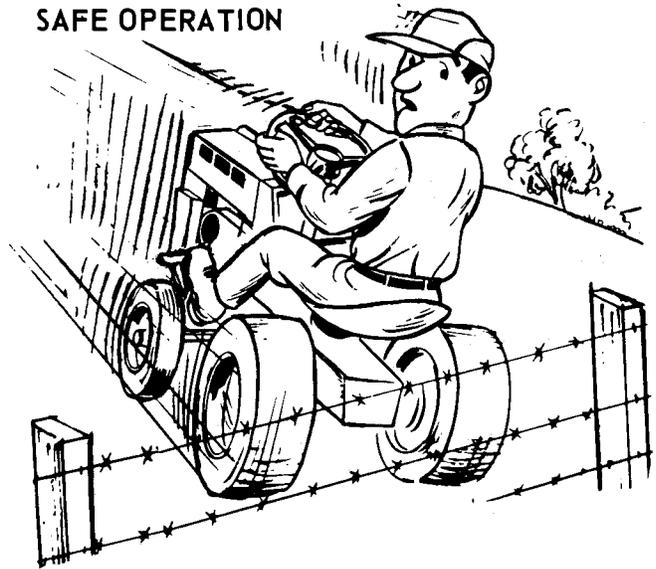
**NOTE:** Always operate power-driven equipment such as the mower, rotary snowplow, etc., at full throttle speed unless otherwise specified in the attachment Owners Manual. Use the Hydrostatic drive control lever to select a safe travel speed. Proper travel speed will depend first on the type of equipment used on the tractor and second, on field, garden or yard conditions.

3. To stop tractor, bring Hydro drive control lever to neutral position, reduce throttle control speed and set park brake. Always check to be sure park brake will hold tractor secure. Turn ignition key counterclockwise to stop engine. Remove key. By removing the key, you are certain the ignition is off. Also, the chances for inexperienced operators to start the tractor are minimized. Develop the habit of removing the key each time you leave the tractor.



**CAUTION:** AFTER OPERATING THE TRACTOR OR ENGINE, NEVER TOUCH THE MUFFLER UNTIL IT HAS HAD SUFFICIENT TIME TO COOL.

## SAFE OPERATION



**CAUTION:** Do not operate tractor crossways on slopes of more than a 25 percent slope, or up or down slopes with more than a 35 percent slope.

Be careful on hillsides and curves. The rate of tractor travel on hillsides and curves should be so that there is no danger of tipping. Be careful to prevent your tractor from tipping sideways if it strikes a hole, ditch, or other irregularity, especially when operating on hillsides. Don't start or stop suddenly when going uphill or downhill.

**NOTE:** The engine produces considerable braking action when throttled back to idling speed without declutching, and this is recommended before applying brake. If tractor becomes mired in a hole, try to back out rather than driving forward. **REMEMBER THIS TRACTOR IS NOT FOR HIGHWAY OR STREET USE.**

## SEAT POSITION

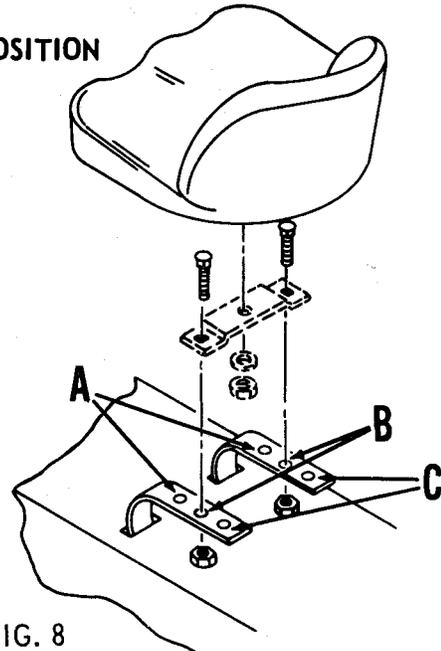


FIG. 8

Seat removed from tractor for illustrating. There are three positions, refer to Fig. 8, A, B and C above. The seat may be moved toward the front or to the rear to give the most comfortable riding and driving position. To move the seat, remove the two nuts and relocate bolts in the desired holes. Tighten nuts securely.

## TOWING TRACTOR

TOWING IS NOT RECOMMENDED.

As with any hydraulic power transmission, internal damage can result when vehicle is towed. Push tractor only short distances when necessary with controls in the following positions:

- Hydro control lever in neutral.
- Transmission control disengaged.
- Parking brake released

Use a trailer to transport tractor for long distances.

## ENGINE PULLEY GROOVES TO USE FOR YOUR VARIOUS ATTACHMENTS

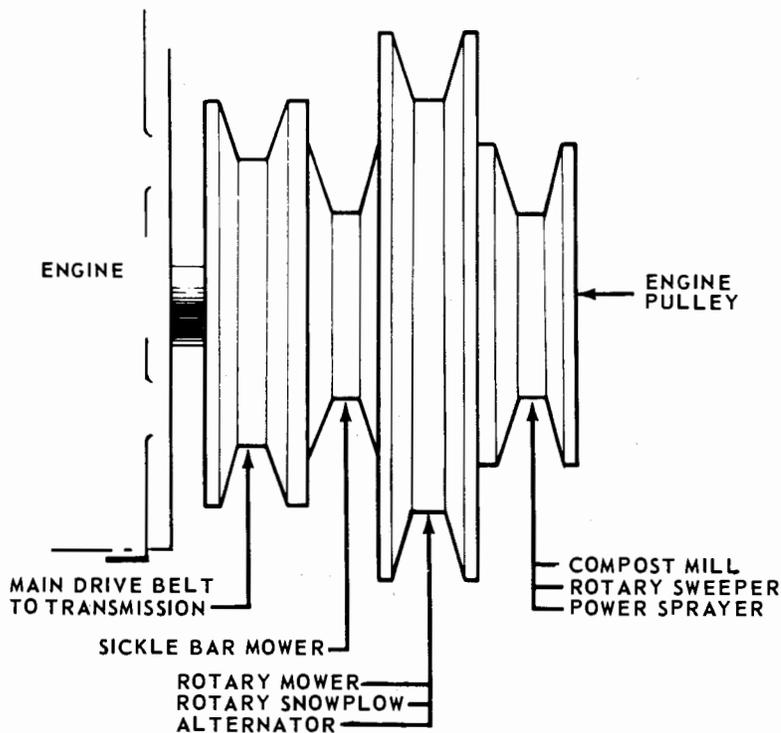


FIG. 9

## LUBRICATION CHART

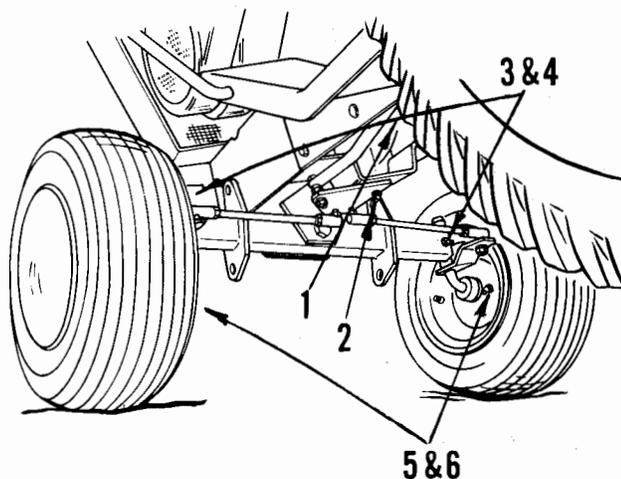


FIG. 10

## ENGINE LUBRICATION

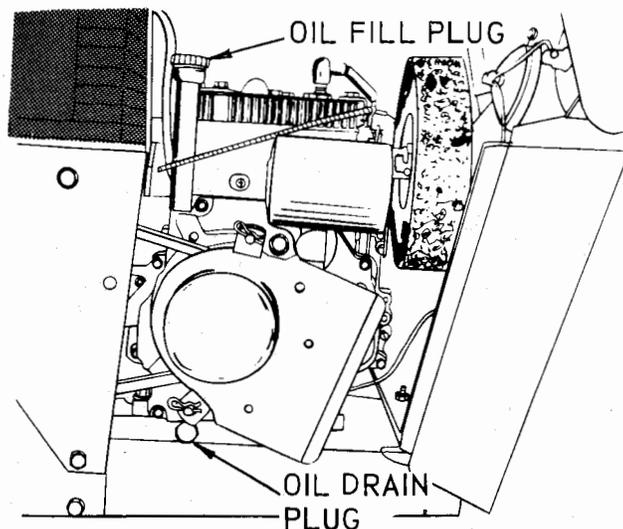


FIG. 11

- Change oil in crankcase after first 2 hours of operation. Engine should be warm when oil is changed.
- To drain oil, unscrew oil drain plug at lower R.H. side of engine, see Fig. 11. Catch oil in suitable container.
- Refill engine crankcase with oil as instructed under "Before Starting the Engine". Capacity is 3 pints. Check oil level after each five hours of operation and add oil, if necessary, to bring to correct level on dip stick.
- After first oil change, oil should be changed after each 25 hours of operation.

**BE SURE TRACTOR IS ON LEVEL GROUND AND ENGINE IS STOPPED BEFORE CHECKING OIL LEVEL.**

**STOP ENGINE AND WAIT SEVERAL MINUTES BEFORE CHECKING OIL LEVEL.**

**NOTE: THE BEST TIME TO DRAIN OIL IS AT THE END OF A DAY'S OPERATION AT WHICH TIME THE OIL IS HOT AND ALL DIRT AND FOREIGN MATERIAL IS SUSPENDED IN THE OIL.**

There are only 6 grease fittings on your tractor: Give each grease fitting two shots of grease every five hours of operation. Use Sears All-purpose Lithium gun grease or equivalent. Refer to Fig. 10. Check oil in engine crankcase at least every five hours of operation. Change oil every twenty-five hours of normal operation. In extremely dirty or dusty conditions, change oil every fifteen or twenty hours of operation. Refer to Fig. 11. Check oil in transaxle every fifty hours of operation. Change oil in transaxle every five hundred hours of operation. Refer to Fig. 12.

Check oil in Hydrogear reservoir once a year. Change only if contaminated. Refer to Fig. 13.

Apply several drops of oil to all pivot points every five hours of operation.

Do NOT attempt to repair any part of your Hydro unit --see your Sears Service Technician.

## TRANSAXLE LUBRICATION

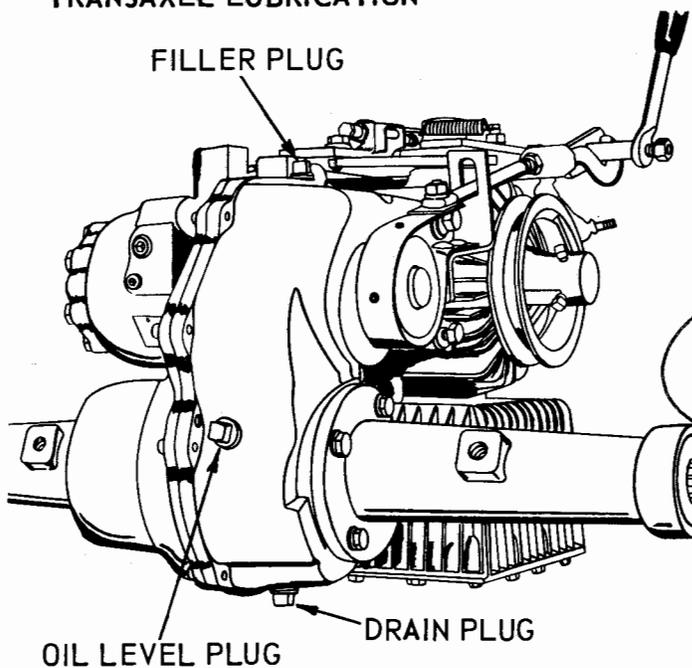


FIG. 12

Unit is removed from tractor for illustrating.

1. Check oil in transaxle every 50 hours of operation. To check oil level, remove oil level plug (Fig. 12), from transaxle. Oil level should be even with this plug.
2. Change oil in transaxle after 500 hours of operation. To drain, remove drain plug (Fig. 12), and catch oil in a suitable container.
3. To fill transaxle, use 2 pints of Allstate S.A.E. 90 motor oil or equivalent. Fill through filler plug as shown in Fig. 12.

**IMPORTANT: BE EXTREMELY CAREFUL TO PREVENT DIRT OR FOREIGN PARTICLES FROM ENTERING THE HYDRAULIC SYSTEM, ENGINE CRANKCASE OR TRANSAXLE WHEN CHECKING OIL LEVEL.**

### HYDROGEAR RESERVOIR

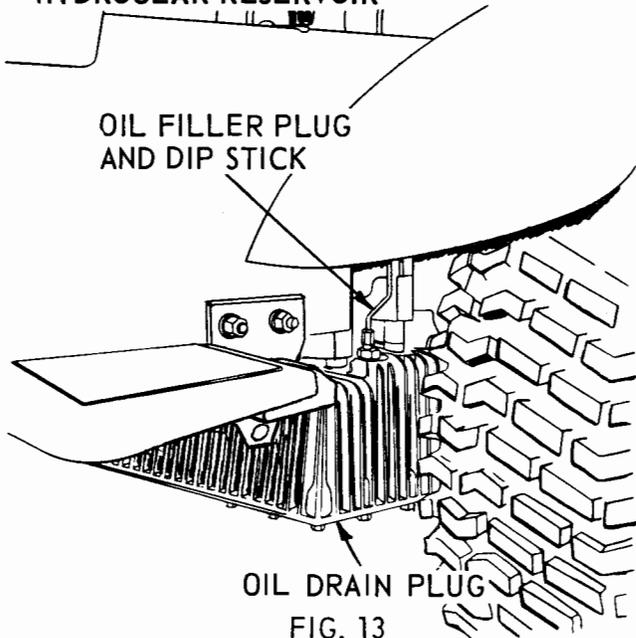


FIG. 13

Refer to Fig. 13. The Hydro-Static unit is a sealed system requiring little attention or service. If there is ever any evidence of hydraulic fluid leakage, we recommend that the unit be inspected and serviced by a Sears Service Technician. Under normal conditions a once a year check of the oil level in the Hydro-Static transmission reservoir should be sufficient. To check oil, loosen the top nut, refer to Fig. 13, one turn and unscrew bottom nut. Remove dip stick tube. If oil is present on tube, level is satisfactory.

**WARNING:** Whenever the oil stick is removed, be certain that no dust or dirt is allowed to fall into the transmission. Always fill with TYPE A Hydraulic fluid.

### AIR CLEANER

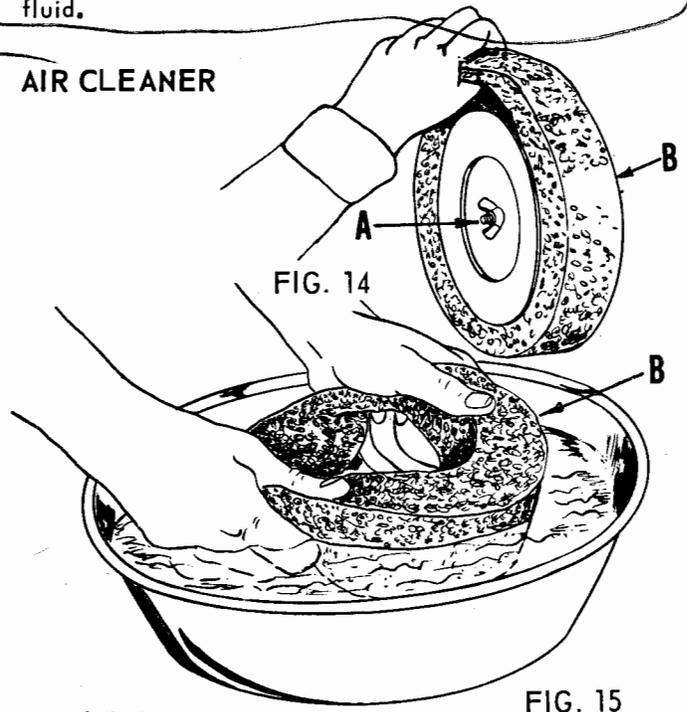


FIG. 15

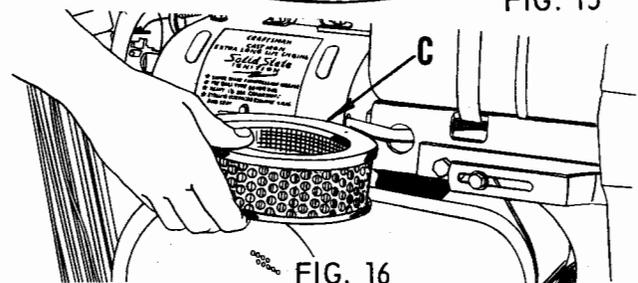


FIG. 16

**NOTE:** If air cleaner becomes too dirty, engine will not receive sufficient air to run properly. Symptoms: Loss of power, flooding, hard to start and overheating.

Your engine is equipped with a polyurethane pre-cleaner (B, Fig's. 14 and 15), that must be removed, cleaned and oiled every 25 hours of operation, or more often under dusty conditions.

1. To service the pre-cleaner, carefully stretch pre-cleaner over the outer metal cover and wash in water and detergent, refer to Fig. 15. Remove excess water by squeezing as a sponge and allow to dry thoroughly. Distribute three tablespoons of S.A.E. No. 30 engine oil evenly around pre-cleaner. Knead into and wring excess oil from pre-cleaner.

Continued on top of page 11.

## AIR CLEANER

Continued from page 10.

- Depending on conditions in which the tractor is operating, the inner paper element (C, Fig. 16), should be replaced whenever it becomes excessively dirty. To service inner paper element, loosen wing nut (A, Fig. 14), that holds outer metal cover to bracket, and remove complete air cleaner assembly. Slip pre-cleaner from inner paper element. Handle inner paper element with care to avoid perforations or distortion of shape.
- To reassemble, slip pre-cleaner (B), over inner paper element (C). Carefully hold complete air cleaner assembly in place on bracket and replace outer metal cover and secure with wing nut. Recheck to see that air cleaner assembly is in proper position.

**NEVER RUN YOUR ENGINE WITHOUT AIR CLEANER COMPLETELY ASSEMBLED.**

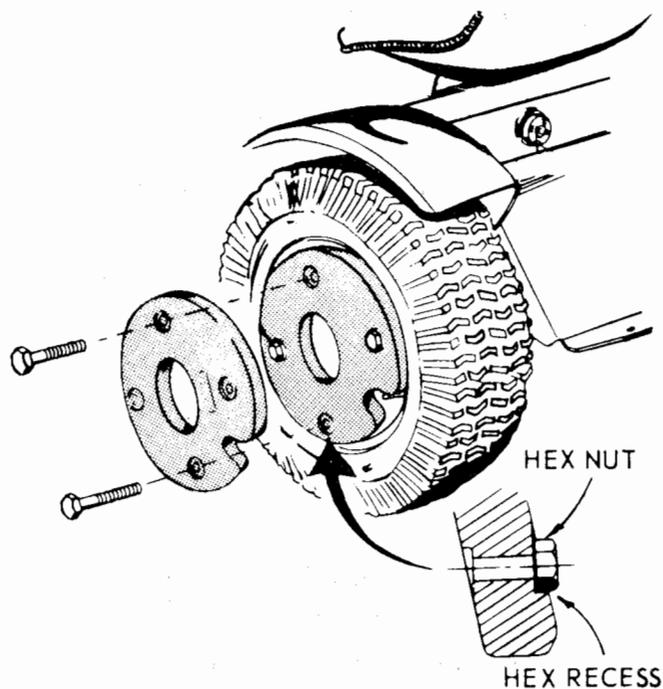
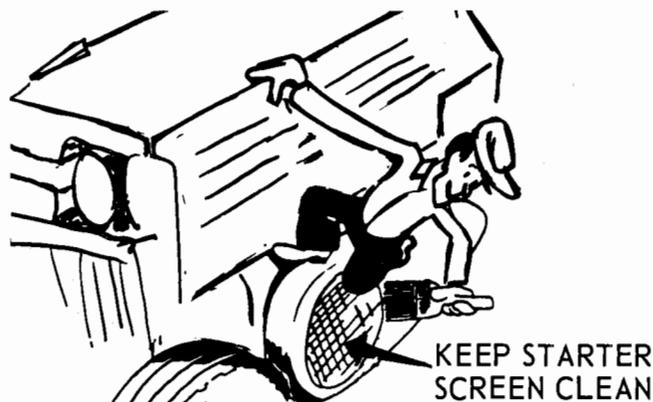


FIG. 17



### STARTER AIR SCREEN

The starter air screen is designed to keep grass, chaff and large leaves from entering the cooling system and must be cleaned periodically. The cleaning of this starter air screen will vary with the conditions in which the tractor is used. The starter air screen should not be allowed to become too plugged or dirty which would interfere with the cooling of the engine.

### TRANSMISSION COOLING FINS

Check and clean all cooling fins on transmission below the tractor. Dirt and grime on cooling fins can cause overheating and drive malfunction.

### ENGINE COOLING FINS

Be sure the engine cooling fins and the shrouds that cover them are clean at all times. Dirt, oil and other debris which may have entered them restrict the normal flow of air. This causes serious damage to engine parts because of overheating.

### WEIGHTS (Optional Equipment)

Rear wheel weights (Fig. 17), are very essential for added traction. This is especially true for attachments such as the plow, disc harrow, leveler blade, rotary snowplow, bulldozer, etc. Front or rear end weight (Fig's. 18 and 19), will act as a counterweight for heavy front or rear loads or attachments. Especially helpful with rotary snowplow.

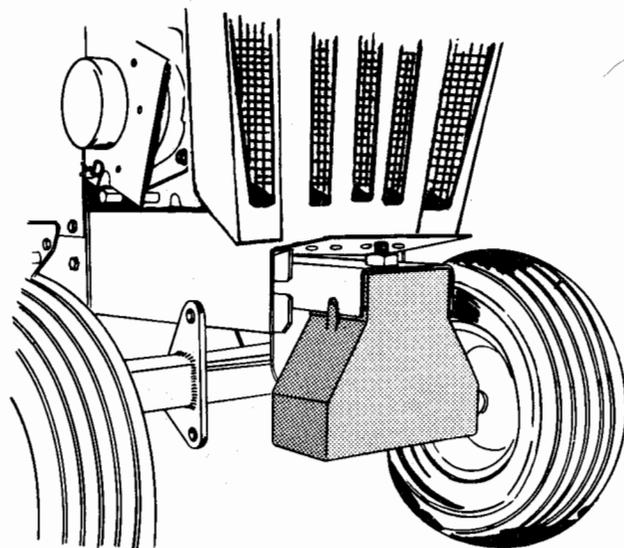


FIG. 18

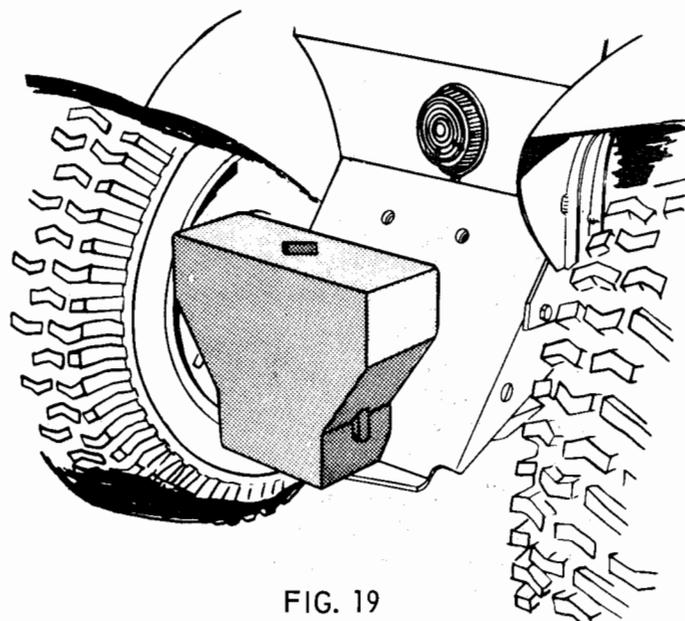


FIG. 19

## BELT ADJUSTMENT

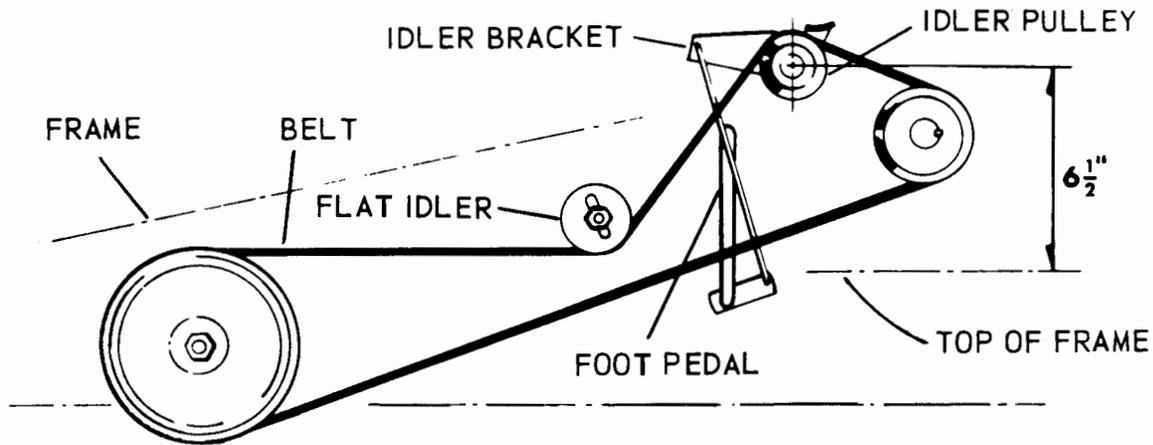


FIG. 20

1. Loosen bolt in flat idler and frame, and push idler and bolt down in slot of frame until center of idler pulley on idler bracket (just back of engine) is  $6\frac{1}{2}$  inches above frame as shown. Tighten bolt in flat idler and frame securely.

NOTE: Foot pedal should be in vertical or just back of vertical position with clutch engaged. New belts will stretch after a few hours of operation, then after initial stretch, adjustment is seldom necessary, so adjust belt after first 10 hours of operation.

## PARKING BRAKE ADJUSTMENT

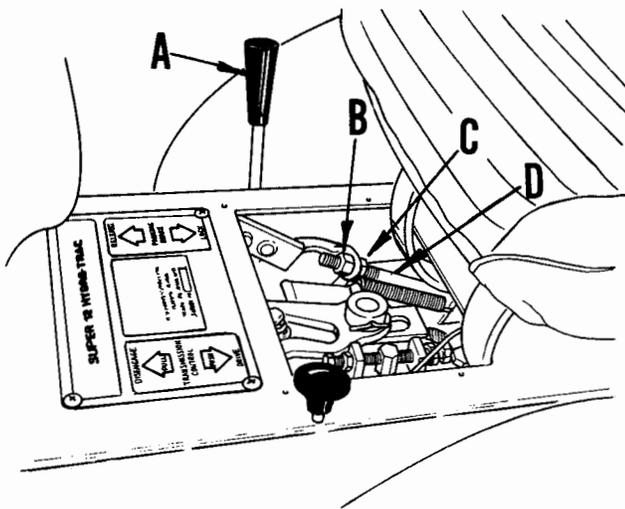


FIG. 21

Place park brake lever (A), in lock position as shown in Fig. 21 above. Loosen nut (C), and tighten nut (B). Lock in place with nut (C). Start and run tractor slowly, apply parking brake to be sure brake will hold. As brake band wears, this brake rod (D), will need to be readjusted.

BEFORE DISMOUNTING FROM TRACTOR, MOVE HYDRO DRIVE CONTROL LEVER TO NEUTRAL, SHUT OFF ENGINE AND SET PARKING BRAKE. ALWAYS REMOVE KEY FROM IGNITION.

MAJOR REPAIRS SHOULD NOT BE ATTEMPTED UNLESS YOU HAVE THE PROPER TOOLS AND A THOROUGH KNOWLEDGE OF THIS MACHINE.

## STARTER GENERATOR BELT

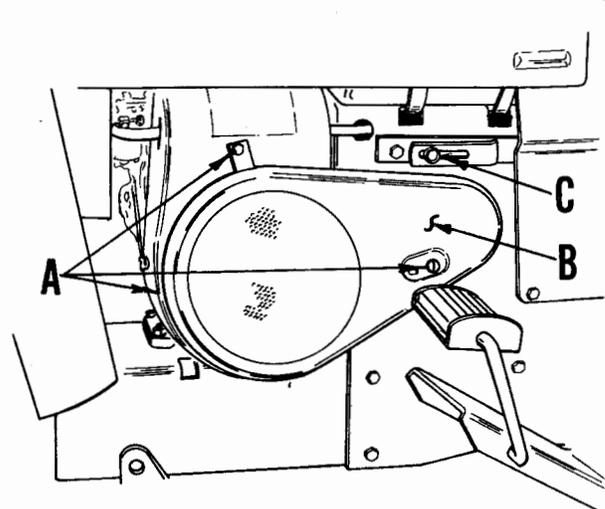


FIG. 22

1. Remove 3 screws (A), holding belt guard (B), to engine.
2. Loosen bolt (C), in generator adjusting strap and generator. Move starter generator back to tighten belt and tighten bolt (C), securely. Belt should be tight enough to prevent belt slippage when starting tractor.

NOTE: Belt can be tightened at bolt (C), without removing belt guard. However, belt tension will be easier to check with guard removed.

## HOW TO START IF BATTERY IS LOW

1. The quickest method would be to connect quick-start battery cables or "jumpers" from your automobile 12 volt battery to the tractor battery.

CAUTION: Connect positive (+) terminal to positive (+) terminal.



## TIRES

Keep tires inflated to 12 pounds of air in front; 6 pounds in rear.

To repair a punctured FRONT tire:

1. Block wheel up on a solid object high enough for the tire to clear floor.

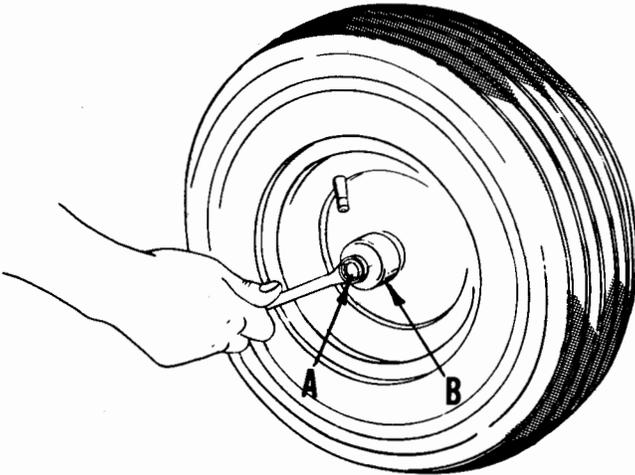


FIG. 24

2. Remove hex bolt (A), and dust cap (B).

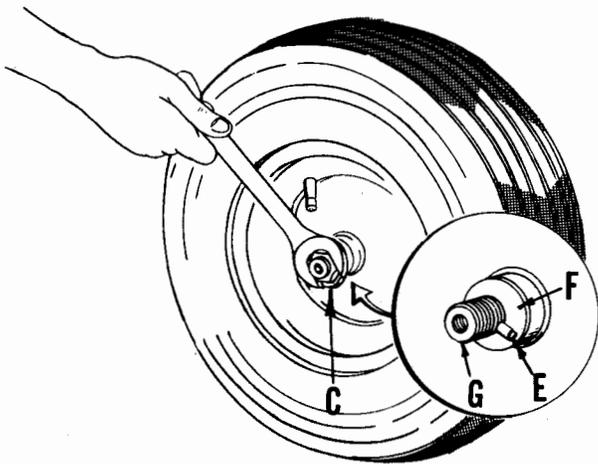


FIG. 25

3. Remove gripco nut (C), wear washer (D), pin (E), and washer (F), from spindle shaft assembly (G). Refer to Fig's. 25 and 26.

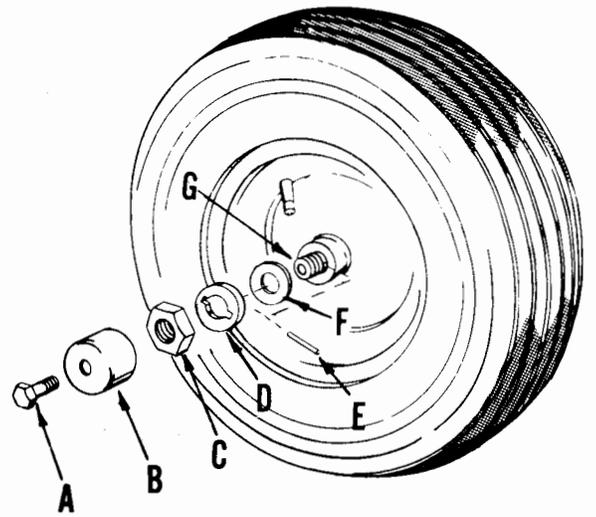


FIG. 26

4. Reverse procedure for reassembly, refer to Fig. 26.

To repair a punctured REAR tire:

5. Remove rear wheel by unscrewing five hub bolts from wheel and hub.

NOTE: Tire can be repaired at your local Sears automotive center or service station. They are repaired in same manner as an automobile tire.



**Safety 1st**

STOP ENGINE AND WAIT SEVERAL MINUTES BEFORE CHECKING OIL LEVEL.

NOTE: THE BEST TIME TO DRAIN OIL IS AT THE END OF A DAY'S OPERATION AT WHICH TIME THE OIL IS HOT AND ALL DIRT AND FOREIGN MATERIAL IS SUSPENDED IN THE OIL.

## TROUBLE SHOOTING

### Possible Cause

### Possible Remedy

#### HARD TO START

No gasoline in fuel tank or carburetor.....	Fill the tank with gasoline; open fuel shut-off valve. Check fuel line and carburetor.
Water in gasoline or old fuel.....	Drain fuel tank and carburetor. Use new fuel and dry spark plug.
Choked improperly. Flooded engine.....	Push in choke, open throttle control and crank engine several times to clear out the gas.
Dirty carburetor air filter.....	Remove and clean, see page 10.
Spark plug dirty or improper gap.....	Clean, adjust the gap or replace. Refer to engine manual.
Defective battery.....	Service or replace.
Defective ignition or loose wiring.....	Check the wiring and spark plug.

#### ENGINE MISSES OR LACKS POWER

Dirty starter air screen .....	Clean screen over starter, see page 11. Be sure fins on cylinder head and around cylinder are clean.
Partially plugged air cleaner.....	Remove and clean. See page 10.
Low oil level or dirty oil.....	Check or change oil, see page 9.
Improper carburetor adjustment.....	Refer to engine manual.
Spark plug dirty, wrong gap or wrong type.....	Clean, reset the gap or replace.
Engine overloaded.....	Shift to a lower gear or reduce load.
Faulty ignition .....	Check spark plug and for loose wires. If trouble cannot be corrected, contact Sears.
Belt slips.....	Tighten belt. Refer to page 12.
Oil in gasoline.....	Drain and refill gasoline tank and carburetor. Oil reduces the efficiency of the engine.
Poor compression.....	Contact Sears.

#### ENGINE OVERHEATS

Dirty starter air screen.....	Clean screen over starter, see page 11.
Low oil level or dirty oil.....	Check or change oil, see page 9.
Partially plugged muffler.....	Remove muffler from engine and clean.
Poor fuel or too lean a mixture.....	Refer to engine manual.
Partially plugged air cleaner.....	Remove and clean, see page 10.
Dirty engine.....	Clean fins on cylinder head and around cylinder.

#### POWER NOT TRANSMITTED TO REAR WHEELS

Transmission slips.....	Check for oil leaks and low oil level.
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## GENERAL

1. Just as your automobile needs professional mechanical maintenance from time to time, so does your air cooled engine. Cleaning and adjustment of the carburetor and periodic replacement of the spark plug and ignition points is made necessary by **NORMAL** use.
2. Professional air cooled engine service is as close as your nearest Sears Store.
3. A yearly check-up or tune-up by Sears is a good idea to avoid breakdowns or delays — Do it each fall, then you're ready for spring. We even prepare it for storage for you.

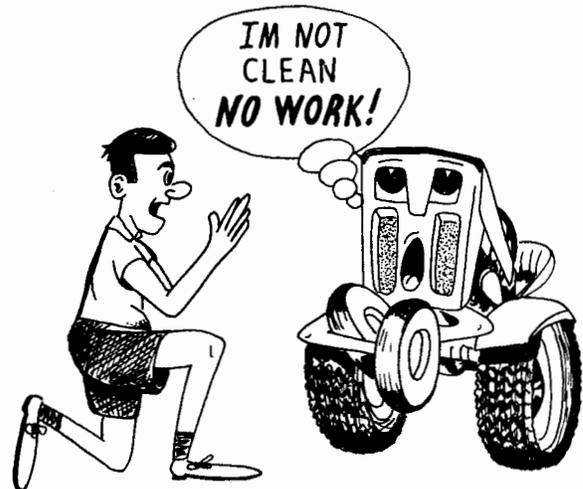
## STORAGE INSTRUCTIONS

In the event your tractor is to be inoperative for periods in excess of 30 days - prepare for storage as outlined below:

1. Drain gas tank.
2. Drain carburetor by allowing engine to run out of gasoline. Then push in fuel bowl drain plug to remove all gasoline from carburetor. Evaporating gasoline will leave gum deposits if not drained completely. These deposits make fuel systems inoperative resulting in a hard or nonstarting engine when again used. Refer to engine manual for location of fuel bowl drain plug.
3. Do not save or store gasoline over winter.

KEEP THE TRACTOR AND SUPPLY OF GASOLINE IN LOCKED STORAGE TO PREVENT CHILDREN OR OTHERS FROM PLAYING OR TAMPERING WITH THEM. ALWAYS REMOVE THE IGNITION KEY WHEN TRACTOR IS STORED. WHEN TRACTOR IS TO BE STORED FOR AN EXTENDED PERIOD OF TIME, COMPLY WITH "STORAGE" INSTRUCTIONS AS GIVEN IN THIS MANUAL.

640 x 6



STORE YOUR TRACTOR IN A DRY AND PROTECTED PLACE. LEAVING YOUR TRACTOR OUTDOORS, EXPOSED TO THE ELEMENTS, WILL RESULT IN MATERIALLY SHORTENING ITS LIFE.



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