FIFTY CENTS

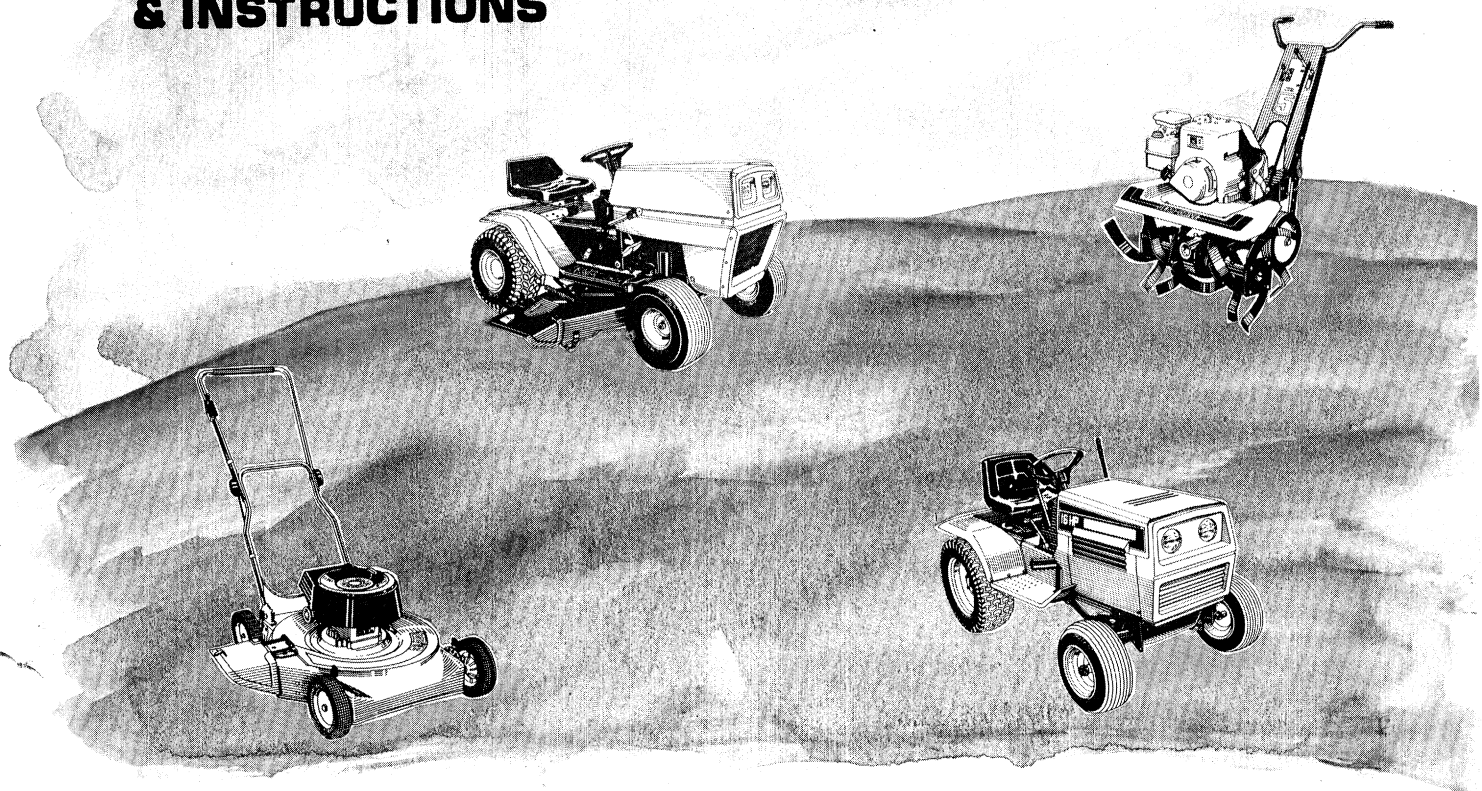
OWNER'S GUIDE

MODEL NO. 149-990A

ASSEMBLY
OPERATION
PARTS
MAINTENANCE

16 H.P. HYDROSTATIC TRACTOR

IMPORTANT:
READ SAFETY RULES & INSTRUCTIONS



PRINTED IN U.S.A.

FORM No. 770-8296

The mower should not be operated without the chute deflector in place.

LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges under this warranty must be paid by the purchaser unless return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

WARNING TO PURCHASERS
OF INTERNAL COMBUSTION ENGINE EQUIPPED
MACHINERY OR DEVICES IN THE STATE OF CALIFORNIA

The equipment which you have just purchased does not have a spark arrester. If this equipment is used on any forest covered land, brush covered land, or grass covered unimproved land in the State of California, before using on such land, the California law requires that a spark arrester be provided. In addition, spark arrester is required by law to be in effective working order. The spark arrester must be attached to the exhaust system and comply with Section 4442 of the California Public Resources Code.

IMPORTANT

It is suggested that this manual be read in its entirety before attempting to assemble or operate. Keep this manual in a safe place for future reference and for ordering replacement parts.

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see operating section of this manual for proper fuel and amount.

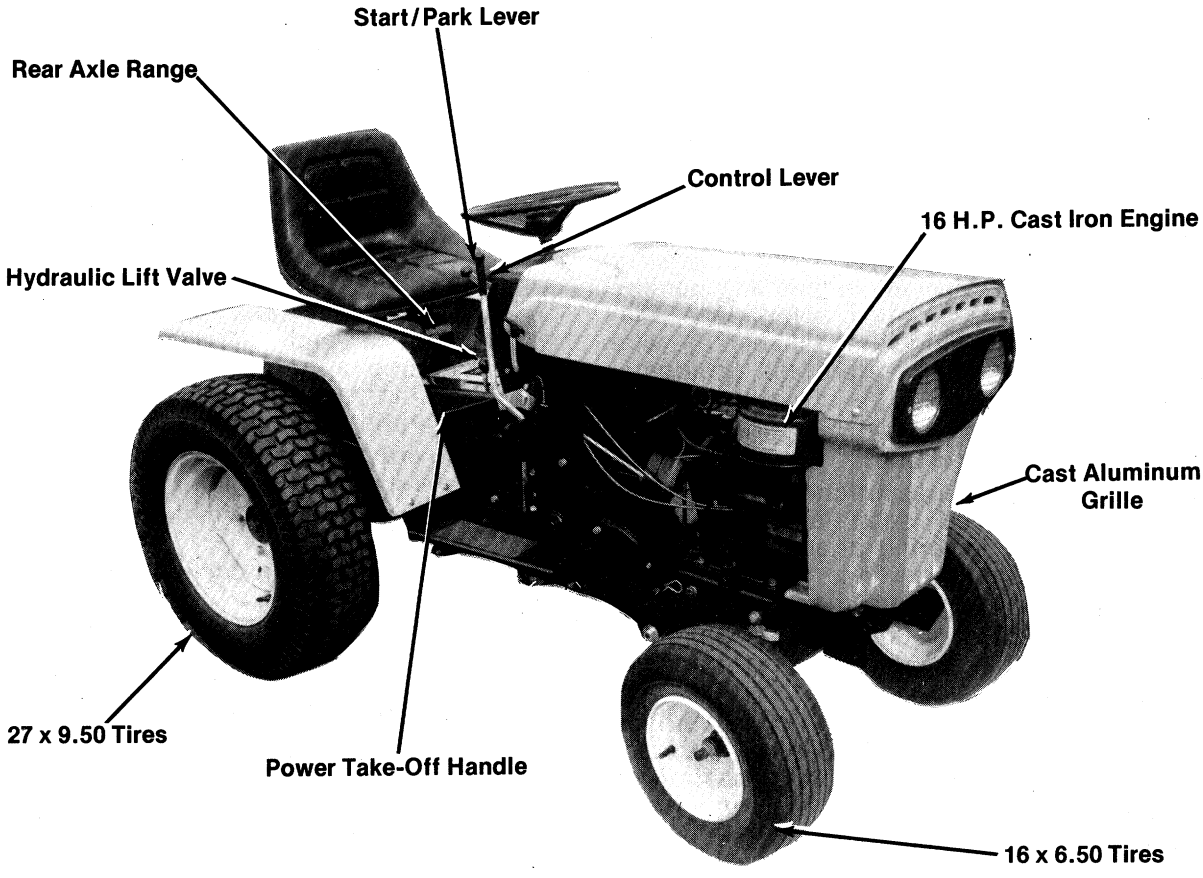
Your rotary mower is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.

SAFE OPERATION PRACTICES FOR RIDING VEHICLES

1. Know the controls and how to stop quickly—READ THE OWNER'S MANUAL.
2. Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
3. Do not carry passengers.
4. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower. Although the area of operation should be completely cleared of foreign objects, a small object may have been overlooked and could be accidently thrown by the mower in any direction.
5. Clear work area of objects which might be picked up and thrown by the mower in any direction.
6. Disengage all attachment clutches and shift into neutral before attempting to start engine.
7. Disengage power to attachment(s) and stop engine before leaving operator position.
8. Disengage power to attachment(s) and stop engine before making any repairs or adjustments. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
9. Before attempting to unclog the mower or discharge chute, stop the engine and be sure the blade(s) have stopped completely. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
10. Disengage power to attachment(s) when transporting or not in use.
11. Take all possible precautions when leaving vehicle unattended such as disengaging power-take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.
12. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face.
13. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
14. Stay alert for holes in terrain and other hidden hazards.
15. Use care when pulling loads or using heavy equipment.
    A. Use only approved drawbar hitch points.
    B. Limit loads to those you can safely control.
    C. Do not turn sharply. Use care when backing.
    D. Use counterweight(s) or wheel weights when suggested in owner's manual.
16. Watch out for traffic when crossing or near roadways.
17. When using any attachments never direct discharge of material toward bystanders nor allow anyone near vehicle while in operation.
18. Handle gasoline with care—it is highly flammable.
    A. Use approved gasoline container.
    B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe up spilled gasoline.
    C. Open doors if engine is run in garage—exhaust fumes are dangerous. Do not run engine indoors.
19. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in owner's manual.
20. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
21. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
22. To reduce fire hazard keep engine free of grass, leaves or excessive grease.
23. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.
24. Do not change the engine governor settings or overspeed the engine.
25. When using the vehicle with mower, proceed as follows:
    (1) Mow only in daylight or in good artificial light.
    (2) Never make a cutting height adjustment while engine is running if operator must dismount to do so.
    (3) Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher.
    (4) Check blade mounting bolts for proper tightness at frequent intervals.
26. Check grass catcher bags frequently for wear or deterioration. For safety protection replace only with new bag meeting original equipment specifications.
27. Look behind to make sure the area is clear before placing the transmission in reverse and backing up.

INDEX

KNOW YOUR TRACTOR



BATTERY INFORMATION

A. Battery acid must be handled with great care as it will blister the skin and damage clothing. It is advisable to wear goggles, rubber gloves, and a protective apron when working with it.

B. Neutralize acid spilled on clothing with dilute ammonia water or a water solution of baking soda. If acid gets on clothes, dilute it with clean water first, then neutralize.

C. If for any reason acid should be spattered in the eyes, wash it out immediately with clean cold water. Seek medical aid if discomfort continues.

D. Since battery acid is corrosive to metals, do not pour into any sink or drain. Rinse empty electrolyte containers and mutilate before discarding.

BATTERIES CONTAIN SULFURIC ACID AND MAY CONTAIN EXPLOSIVE GASES (when electrolyte has been added)

A. Keep sparks, flame, cigarettes away.

B. Hydrogen gas is generated during charging and discharging.

C. Ventilate when charging or using in enclosed space.

D. When using a charger—to avoid sparks, NEVER connect or disconnect charger clips to battery while charger is turned on.

E. Always shield eyes, protect skin and clothing when working near batteries.

A. ACTIVATING THE BATTERY

1. Place battery to be filled on bench or workbench. NEVER activate battery in unit. Remove vent caps from all cells.
2. Fill each cell carefully using battery grade 1.250-1.265 specific gravity. Sulfuric acid to be 3/8" above the top of the separators or to the split ring.
3. Allow battery to set for 20 minutes to ½ hour. Add additional acid if necessary to bring it up to the proper level.
4. Replace the vent caps.
5. The battery can now be charged after the 20 minute setting period. Battery can be SLOW CHARGED (DO NOT FAST CHARGE) at a maximum bench rate of 4-5 amperes until the specific gravity reading is 1.265-1.275. A charging rate in excess of this will buckle and warp the positive plates and perforate the separators. If electrolyte bubbles violently while charging, reduce charging rate until excessive bubbling action subsides, then continue charging until specific gravity is reached.

After battery has been in service, add only approved water. DO NOT ADD ACID.

B. TO INSTALL BATTERY

To install the battery in this unit, refer to page 5.

C. MAINTENANCE

1. Check periodically (every two weeks or before and after charging) to be sure electrolyte level is 9/16" above separator plates. Add only distilled water or good quality drinking water. NEVER add additional acid or other chemicals to battery after initial activation.
2. The battery should be checked with a hydrometer after every 25 hours of operation. If the specific gravity is less than 1.225 remove battery and recharge.
3. Coat the terminals and exposed wiring with a thin coat of grease or petroleum jelly for longer service and protection against electrolyte corrosion.
4. The battery should be kept clean. Any deposits of acid should be neutralized with soda and water. Be careful not to get this solution in the cells.

D. STORAGE

1. Charge battery using normal methods. NEVER store discharged battery as it will not recover.
2. Store in cold, dry place.
3. Recharge battery whenever the specific gravity is less than 1.225 before returning to service or every two months, whichever occurs first.

E. BATTERY SPECIFICATIONS

12 Volt 54 Plate
40 Amp. Hours at 20 Hour Rate

F. COMMON CAUSES FOR BATTERY FAILURE ARE:

1. Overcharging
2. Undercharging
3. Lack of water
4. Loose hold downs and/or corroded connections
5. Excessive loads
6. Battery electrolyte substitutes
7. Freezing of electrolyte

NOTE

THESE FAILURES DO NOT CONSTITUTE WARRANTY.

ASSEMBLY

The Garden Tractor is packed and shipped in one container and is fully assembled except for the three point hitch and the battery.

NOTE

Reference to Left or Right side of machine is from the operator's position in the seat facing forward.

Installing the Battery

NOTE

The positive battery terminal is marked Pos. (+). The negative battery terminal is marked Neg. (-).

1. Place the battery in the battery case with the Negative (-) terminal to the front.

NOTE

Do not push the battery back all the way.

2. Attach the positive battery cable (which has two wires) to the positive battery terminal. (See figure 1.)

3. Attach the negative battery cable (grounded, single wire) to the negative battery terminal.

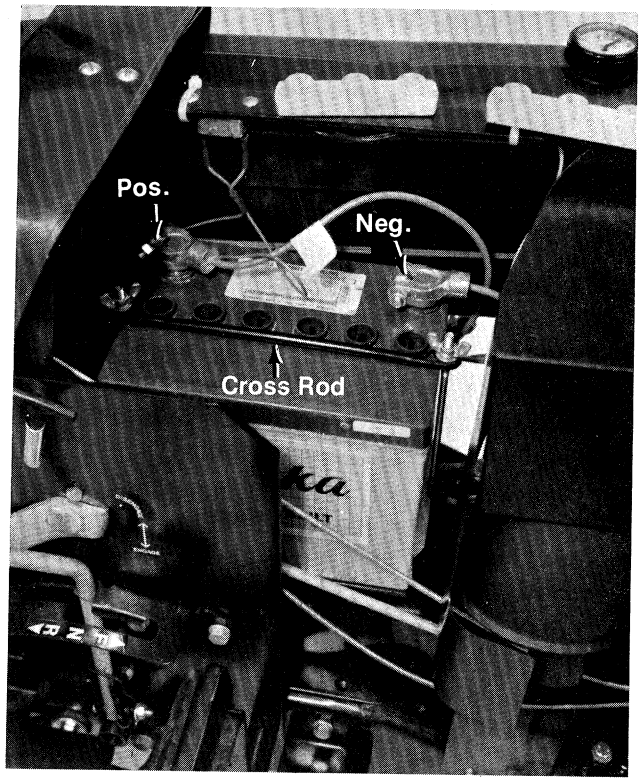


FIGURE 1.

4. Assemble the hold down rods and cross rod before you place it over the battery. (See figure 2.)

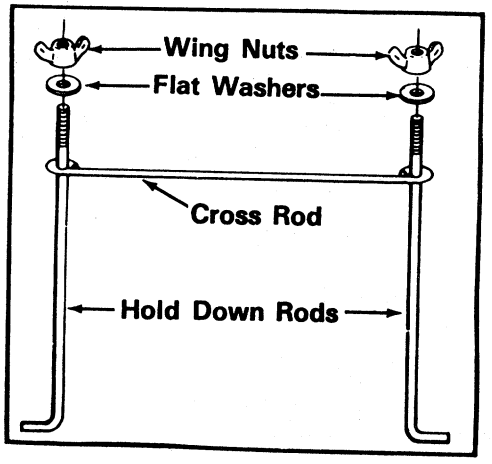


FIGURE 2.

5. Place the battery hold down assembly over the battery and slide the battery into place. (See figure 1.)

WARNING

Place the cross rod on the side opposite the terminals.

6. Hook the hold down rods into the battery case and tighten finger tight (Do not overtighten.)

Assembling the Three Point Hitch

NOTE

Use the three point hitch only for the rear attachments such as the mold-board plow, disc and clutivator. If you are using the mowing deck, snow blade or snow thrower it is not necessary to attach the three point hitch.

1. Adjust the clevis ends on both pull rods so that they measure 32½ inches. (See figure 3.)

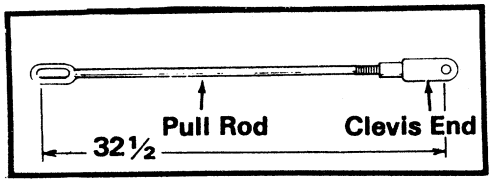


FIGURE 3.

2. Assemble each draft bar to the axle brackets using the longest clevis pins, two large washers, and secure with a cotter hairpin. (See figures 4 and 5.)

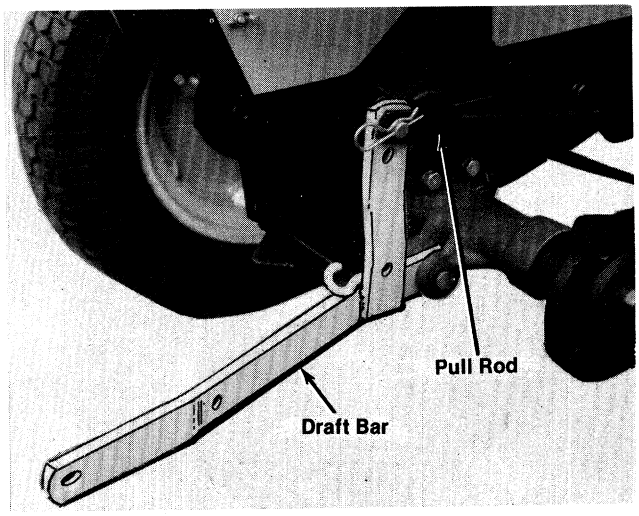


FIGURE 4.

NOTE

Refer to figure 6 to determine which is the right and left draft bars.

3. Attach the flat end of the pull rod to the top hole in the draft bar with the shorter clevis pin, flat washer and cotter hairpin. (See figure 4.)
4. Assemble the draw bar to the draft bars and secure each end with a cotter hairpin. (See figure 6.)
5. Screw one hex nut all the way on to each of hook bolts.
6. Place a lockwasher next to the hex nut and insert the hook bolt through the inside of the draft bar. Secure using a second nut. Do not tighten. (See figure 6.)

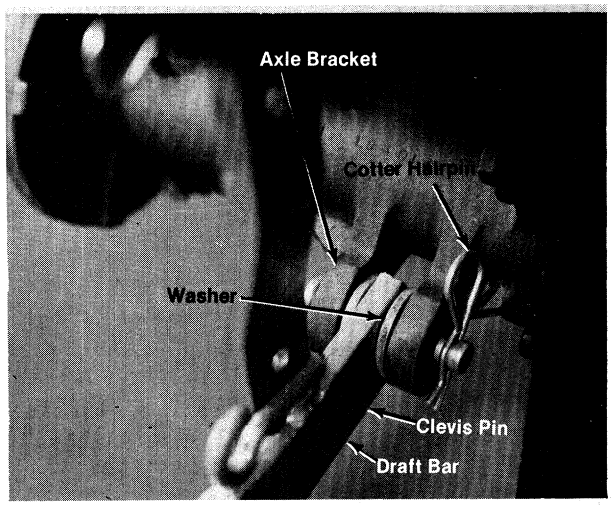


FIGURE 5.

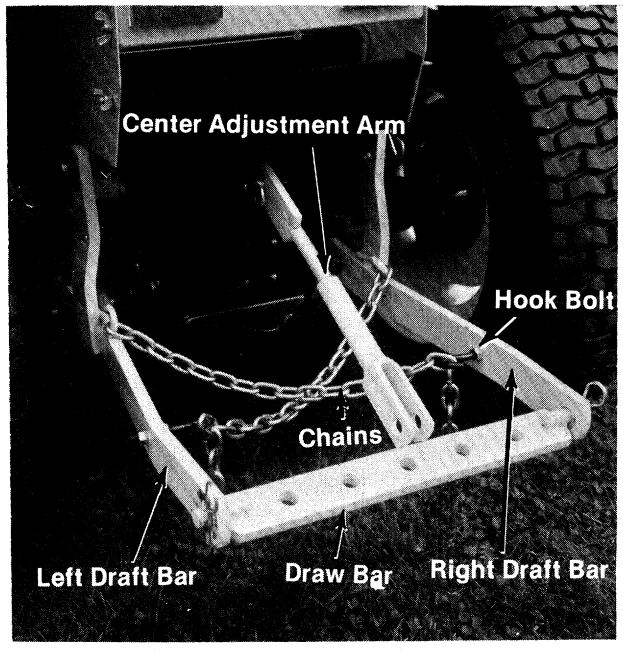


FIGURE 6.

7. Fasten the chains to the hooks welded on the draft bars. Cross the chains over and attach to the opposite hook bolts.

NOTE

Pull the chains to make them as tight as possible.

8. Tighten the outside nuts on the hook bolts until there is approximately one inch of play in the center of the chains.
9. Tighten the inside nuts on the hook bolts.
10. Assemble and adjust the two halves of the center adjustment arm until it is 12 inches long. (See figure 7.)

11. Assemble the flat end of the center adjustment arm to the upper hole in the center hitch bracket with a clevis pin, two flat washers and a cotter hairpin. (See figure 6.)

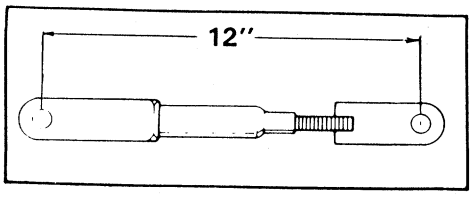


FIGURE 7.

TIRE PRESSURE

FOR SHIPPING PURPOSES, THE TIRES ON YOUR UNIT MAY BE OVER-INFLATED. TIRE PRESSURE SHOULD BE REDUCED BEFORE UNIT IS PUT INTO OPERATION. PRESSURE SHOULD BE APPROXIMATELY 15 P.S.I. EQUAL TIRE PRESSURE SHOULD BE MAINTAINED ON ALL TIRES. MAXIMUM TIRE PRESSURE IS 30 P.S.I.

CAUTION

Installation of tire to rim:

1. Lubricate tire beads and rim flanges.
2. Do not exceed 30 P.S.I. when seating beads.
3. Adjust to recommended pressure after beads are sealed.

OPERATION

CAUTION

1. Keep all shields and guards in place.
2. Before leaving operator's positon:
   Shift transmission in neutral
   Set the parking brake
   Disengage the blade engagement lever
   Shut off engine
   Remove ignition key
3. Wait for all movement to stop, remove and ground the spark plug wire to the engine block before servicing the machine.
4. Keep people and pets a safe distance away from the machine.

Before starting the engine fill the crankcase with oil. Refer to the Engine Operation and Maintenance manual.

Throttle Control

The throttle control is located on the right side of the dashboard and is used to regulate the engine speed. (See figure 8.) The engine should be operated from 3/4 to full throttle FAST when operating any equipment that uses the tractor engine as a source of power such as the cutting deck, snow thrower or rotary tiller.

Choke Control

Pull the choke knob all the way out. Set throttle in the FAST position. A warm engine requires less choking.

Ignition Switch

The ignition switch is located on the left side of the dashboard. Turn the key to the START position to start the engine. When the engine is running leave the key in the ON position. To stop the engine turn the key to the OFF position.

WARNING

Remove the key from the tractor when the tractor is not in use to prevent accidental starting.

Light Switch

The headlamps are operated by pulling out the light switch located on the dashboard. The headlamps will only operate when the ignition switch is turned on.

Ammeter

The ammeter registers the rate of battery charge or discharge. The ammeter should register on the plus (+) side when the engine is running in the FAST position until the battery is completely charged.

With a fully charged battery or with the engine idling the ammeter may not show a charge.

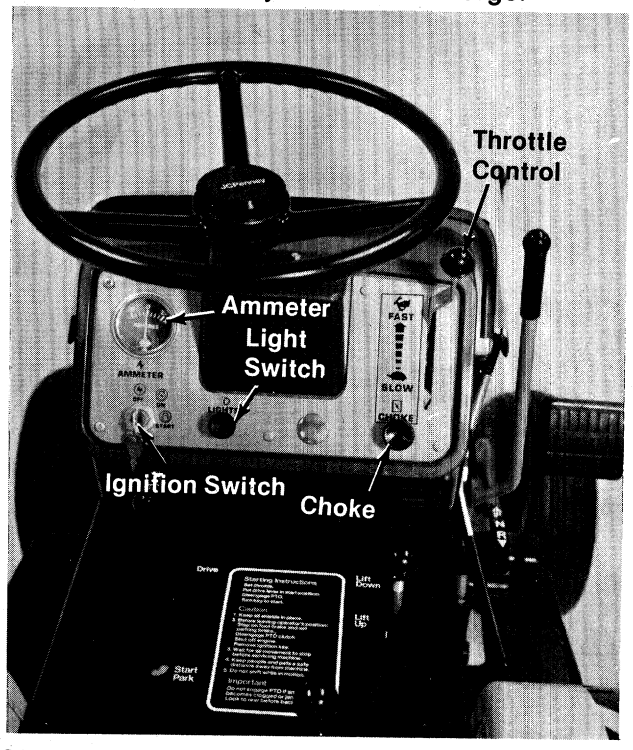


FIGURE 8.

Power Take Off Operation (PTO)

There are two PTO's on your tractor. The front PTO is a pulley located behind the grille and is used to operate the snow thrower. This PTO is directly connected to the engine and operates whenever the engine is running.

The rear PTO is located under the tractor and is used to operate the grass cutting deck and the rotary tiller. (See figure 9.)

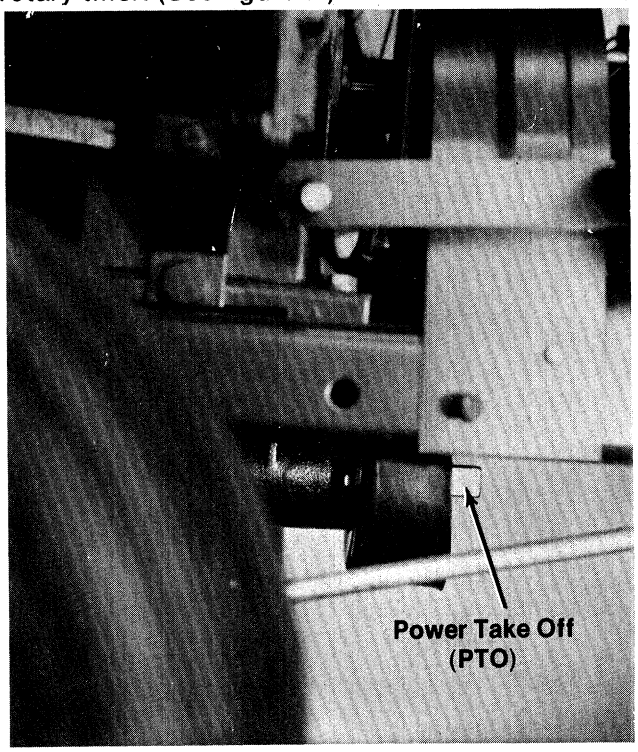


FIGURE 9.

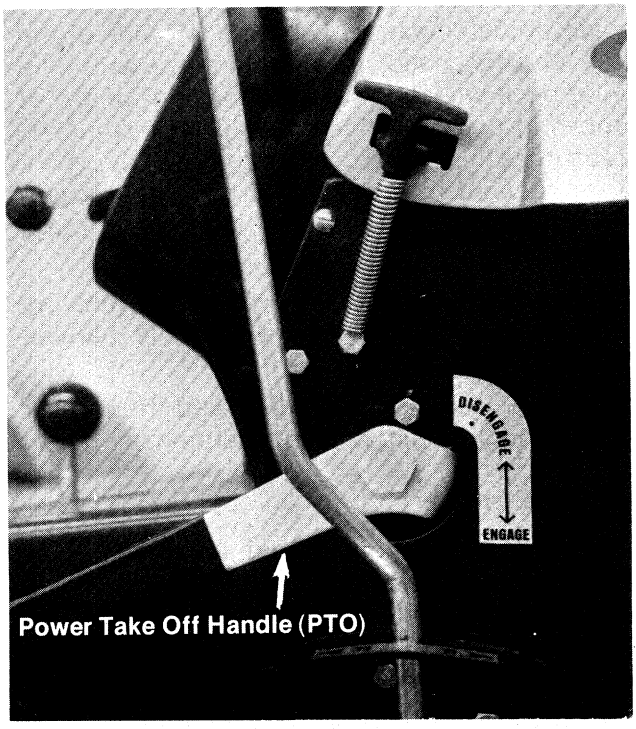


FIGURE 10.

The rear PTO is operated by the PTO lever. (See figure 10.)

NOTE

The PTO lever must be in the DISENGAGED position to start the engine.

High/Low Axle Range

Your tractor is equipped with a two speed rear axle for greater versatility. (See figure 11.) The LOW range is used when operating the rotary tiller, moldboard plow and should also be used when extra power is required.

HIGH range operation is for normal loads, grass cutting and normal use.

LOW Range (0-4 mph)
HIGH Range (0-8 mph)

The Axle Range Lever must be in either the HIGH or LOW range position. The tractor will not move if it is in the center position.

NOTE

When pushing the tractor by hand with the engine shut off, place the Axle Range Lever between the HIGH and LOW position. The hydrostatic pump will not rotate and the tractor will be easier to push.

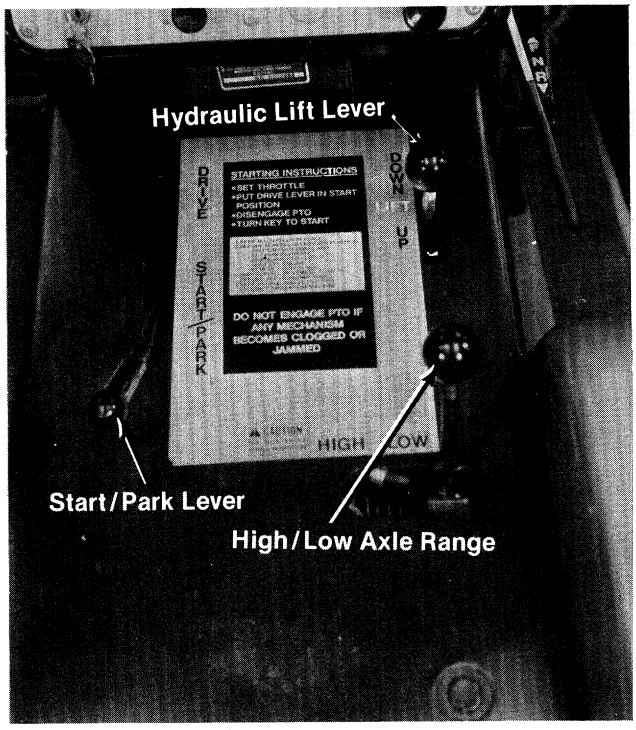


FIGURE 11.

Hydraulic Lift Lever

The hydraulic lift lever is used to raise or lower all of the tractor attachments. Move the lever forward to raise the attachment and move the lever backwards to lower the attachment. (See figure 11.)

Brake Pedal

The brake pedal is located on the right side of the tractor. Depressing the brake pedal operates the brake. It is used for emergency stopping only. When you depress the brake pedal the Control Lever will return close to the neutral position. The Control Lever is used for normal stopping. (See figure 12.)

Start/Park Lever

The Start/Park Lever is located on the center console. To set in the Start/Park position, depress the brake pedal and pull the lever all the way back. Always set the lever in the Start/Park position when you park the tractor. It must be in this position to start the engine. (See figure 11.)

Control Lever (Hydrostatic)

The Control Lever is used to regulate the ground speed of the tractor. Moving the Control Lever to its extreme position makes the tractor travel faster. Moving the Control Lever forward (F) moves the tractor forward, moving the Control Lever backwards (R) reverses the tractor. The Control Lever is used to regulate the ground speed of the tractor. (See figure 12.)

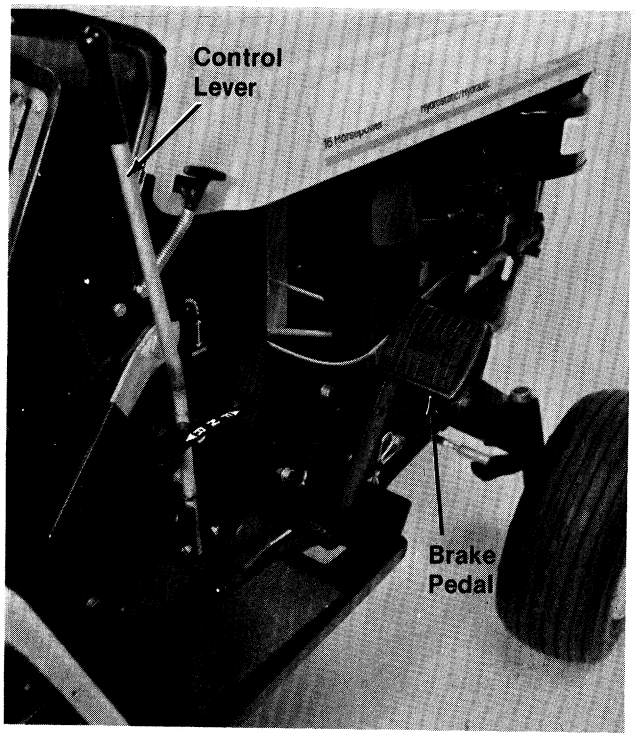


FIGURE 12.

To increase rear wheel torque (pulling power) move the control lever towards the neutral position. The tractor responds similar to shifting to a lower gear with a gear type transmission.

The Control Lever is used for normal slowing down and stopping by moving the Control Lever towards neutral (N). Especially useful when rotary tilling hard or rough ground. Additional braking may be obtained by moving the Control Lever gradually in the opposite direction of your travel.

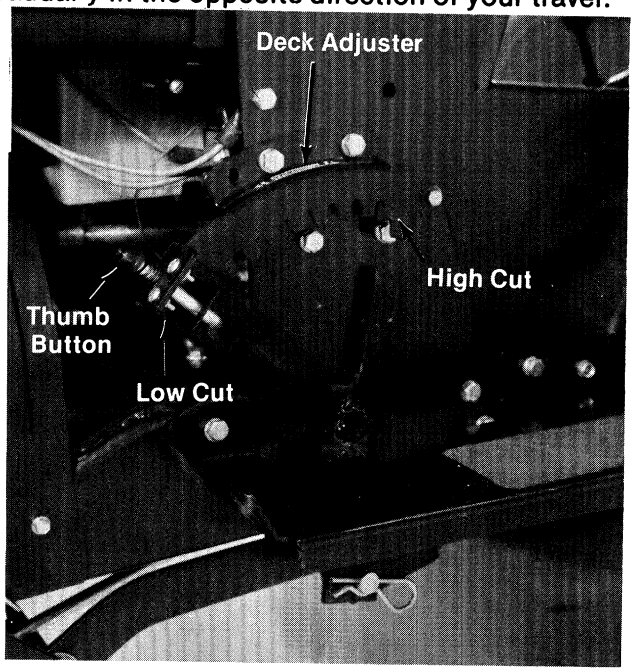


FIGURE 13.

Deck Adjuster

The deck adjuster is located on the left side of the tractor and is used in conjunction with the mowing deck wheels to set the cutting height of the mowing deck. To operate the deck adjuster, depress the thumb button and move the deck adjuster forward to lower the cutting height and move it towards the rear to raise the cutting height.

The deck adjuster and the wheels on the mowing deck must be adjusted so the deck is parallel to the ground. (See figure 13.)

The deck is designed to raise and float over ground irregularities to prevent scalping.

Carriage Locks

The carriage locks hold the quick disconnect frame in the raised position when the rear attachments are used.

Remove the carriage locks, raise the quick disconnect frame by hand and reassemble the carriage locks to the inside so they hold the quick disconnect frame up. (See figure 14.)

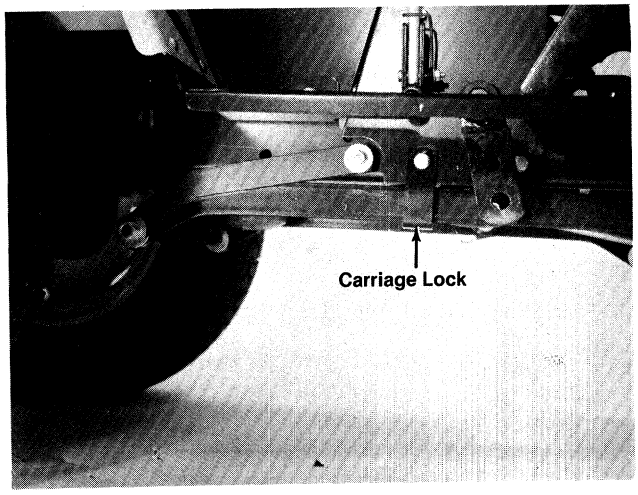


FIGURE 14.
Rear Wheel Tread Adjustment
The rear hubs are extended to give greater stability when operating on hilly terrain.

NOTE
Do not over extend the hubs.

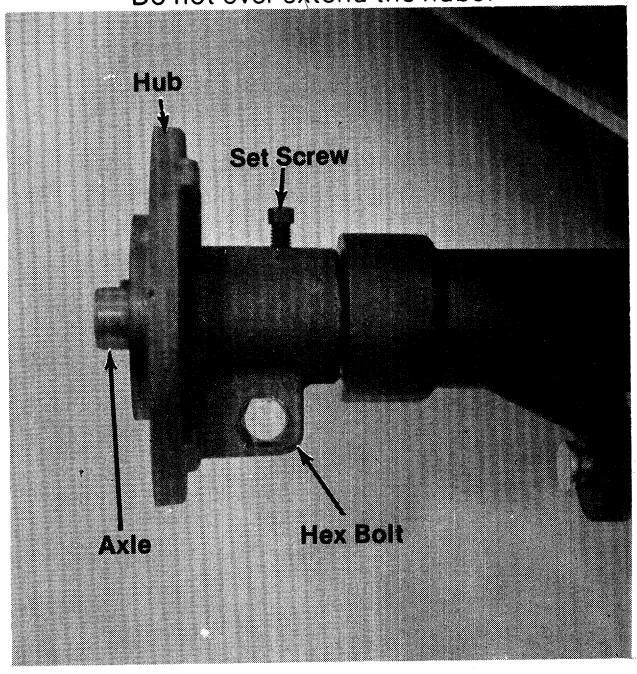


FIGURE 15.

To adjust, loosen the hex bolt and the set screw and slide the hubs out. The wheel has been removed in the photograph for clarity. (See figure 15.)

Seat Adjustment

The seat is adjustable forwards or backwards by loosening the nut on the carriage bolt under the seat and sliding it either direction. Tighten the nut after you obtain the desired position.

Operating the Tractor

1. Start the engine as outlined in the Engine Operating and Maintenance manual.
2. The engine should be run with the throttle control in the FAST position to obtain the maximum efficiency. The sound you may hear when you accelerate is the normal operating sound of the hydrostatic transmission. The faster you push the control lever forward or backward, the louder the sound.
3. While depressing the brake pedal, move the Start/Park Lever into the DRIVE position.
4. Release the brake and move the control lever into either the forward (F) or reverse (R) position.
5. The brake pedal is used for emergency stopping only. Normal stopping is done by using the control lever. When the brake pedal is depressed the control lever will return close to the neutral position so the tractor brake will stop the tractor, however, the tractor may creep either forward or backward when the brake pedal is released.

Maintenance and adjustments for the engine are covered in the Engine Operating and Maintenance Instructions manual.

MAINTENANCE

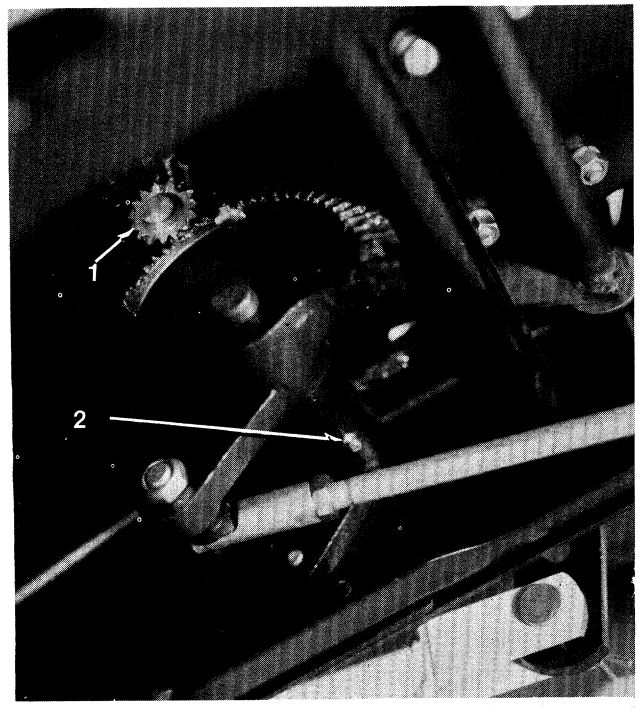


FIGURE 16.

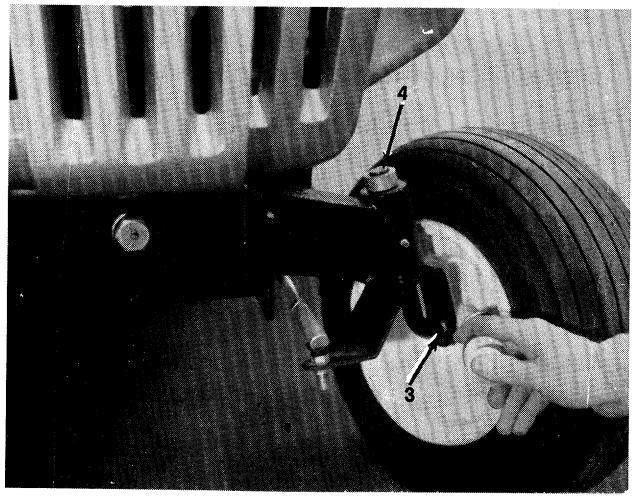


FIGURE 17.

Lubrication

Item numbers 1 through 6 must be lubricated once a year with multi-purpose automotive grease.

Steering Gear 1—(See figure 16.)
Steering Arm 2—
Wheel Bearings 3—(See figure 17.)
King Pin 4—
Pivot Bolt 5—
Deck Linkage 6—Oil with SAE 30 oil on all pivot points once a season. (See figure 18.)

Hydrostatic Control—Lubricate between the control slide and the control adjustment plate. (See figure 31.)

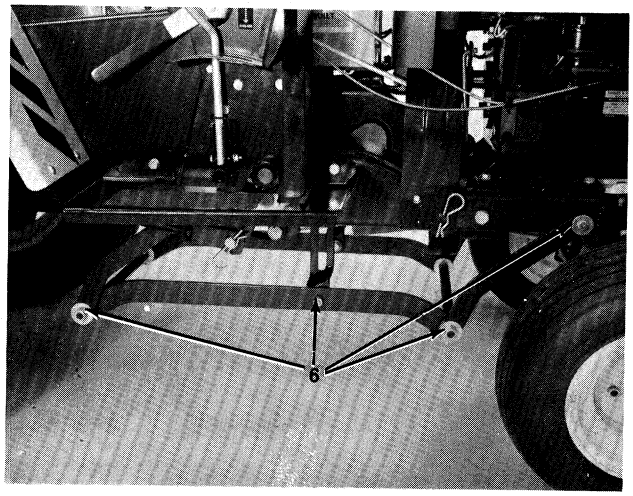


FIGURE 18.

Hydrostatic Pump 7—Before checking the oil level clean the area around the dipstick hole to prevent the entry of dirt.

To check the oil level remove the five wing nuts holding the tool tray and remove it. Unscrew the dipstick located on the rear of the transaxle. The entire hydraulic system (hydrostatic pump, hydraulic lift and transaxle) can be checked at this location. (See figures 19 and 20.) The oil level should be maintained within the flat area on the end of the dipstick. Check the oil level every 8 hours of operation. Change the oil every 200 hours or once a year. (Use the Maintenance Record.)

Use 20 weight oil with a zinc additive package of .07% minimum. Below are listed a group of industrial oils which meet these specifications:

Rykon Industrial Oil #31
Amoco 300, 20 wt. — Standard Oil

Rotella, 20 wt.
Rimula Series 3, 20 wt.
X100 Motor Oil, 20 wt. — Shell Oil

Haviland Motor Oil, 20 wt.
Ursa, Extra Heavy, 20 wt. — Texaco

NOTE

All of the above oils are equivalent to an S.E. rated oil.

If the above oils cannot be obtained, SAE 20 motor oil with a SE rating may be substituted.

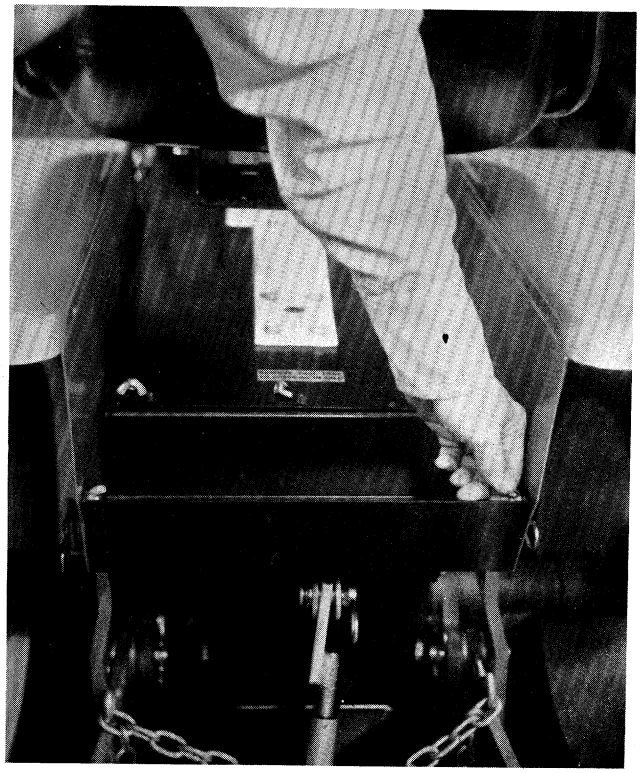


FIGURE 19.

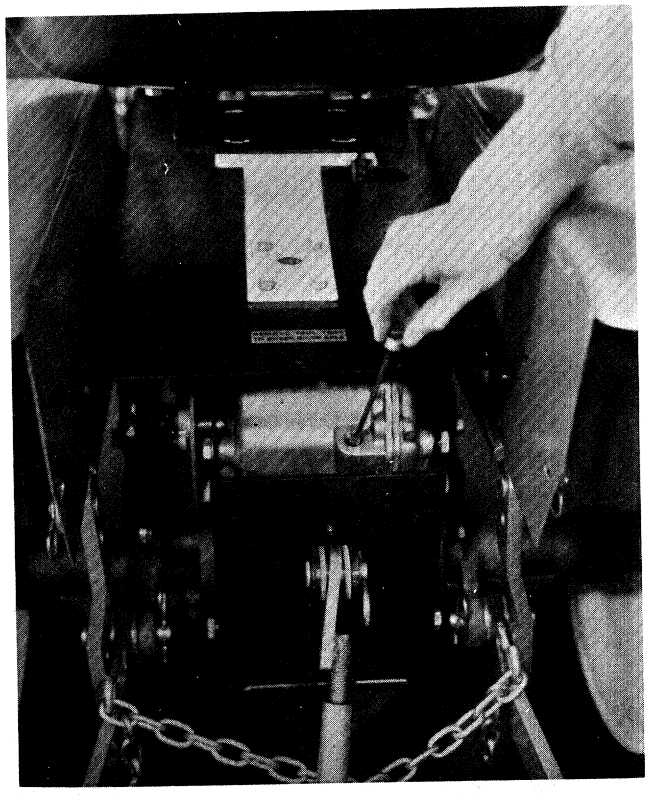


FIGURE 20.

Engine—See the Engine Operating and Maintenance Instruction manual.

The following parts should be oiled once a year with SAE 30 oil.

PTO linkage and pivot points.
Steering column bearings.
Lift mechanism.
Throttle and choke cables.

The following parts have sealed bearings and require no further lubrication.

PTO Spindle
Tie Rod Ends
Drag Link Ends

Disc Brake Adjustment

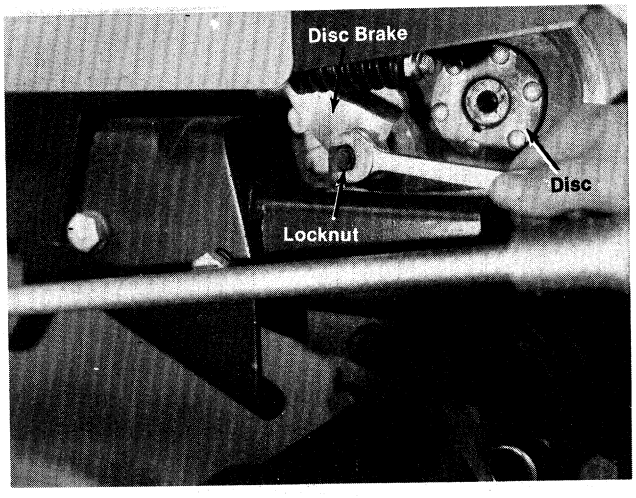


FIGURE 21.

The disc brake is located on the left side of the transaxle. To adjust, tighten the locknut. (See figure 21.) (Wheel removed for clarity.) The locknut should be tightened just enough to stop the tractor when the brake pedal is depressed, allowing the disc to turn freely between the brake pads when the pedal is released.

Starter-Generator Belt

If the starter-generator turns over and the engine does not turn over or if there is a high pitched squeal when the starter-generator is turned on, it is an indication that the belt is loose.

NOTE

Check the belt tension after the first 10 hours of operation and make any necessary adjustments.

Adjustment—To tighten, loosen the bolt in the adjusting strap and swing the starter-generator away from the engine until the belt is tight. The belt should deflect ¼" when depressed with your thumb.

NOTE

It may be necessary to loosen the mounting bolts on the bracket if the starter-generator does not pivot freely.

Removal—Follow the same procedure as above except swing the starter-generator toward the engine and remove the belt. Install a new belt and set the tension as outlined in the adjustment paragraph. (See figure 22.)

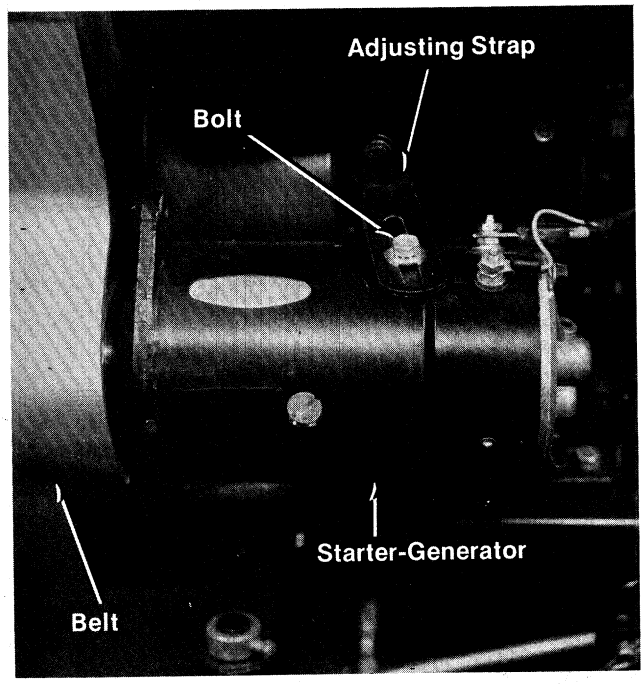


FIGURE 22.

PTO Belt Removal

1. Place the PTO Lever in the Disengaged position.
2. Remove the lower belt guard. (See figure 23.)

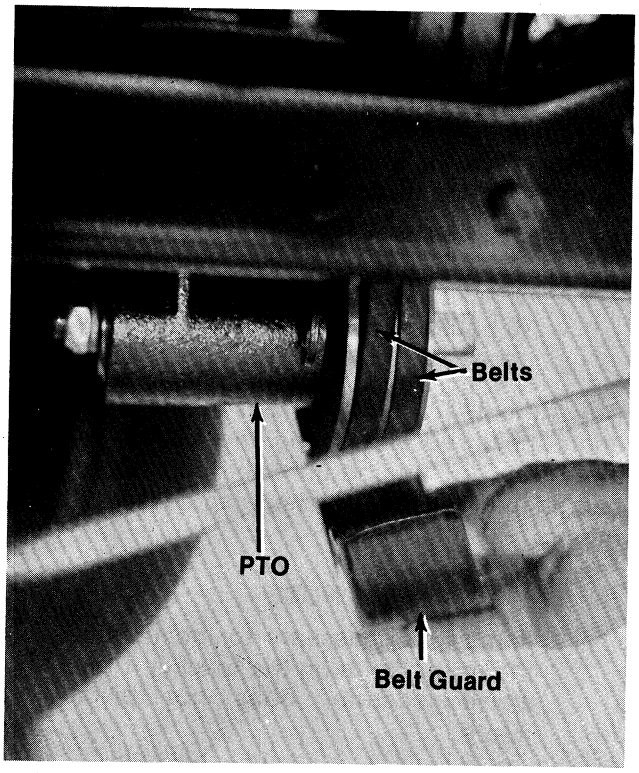


FIGURE 23.

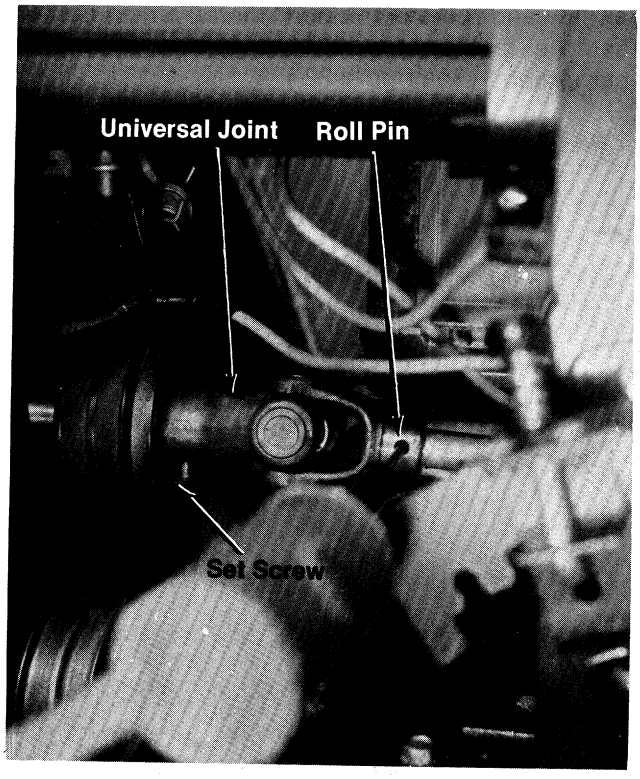


FIGURE 24.

3. Loosen the set screw in the universal joint. (See figure 24.)
4. Drive out the roll pin in the universal joint. (See figure 24.)
5. Slide the universal joint towards the rear of the tractor.
6. Remove the PTO belts. (See figure 25.)
7. Reassemble in reverse order using matched belts.

NOTE

PTO belts must be replaced using matched sets.

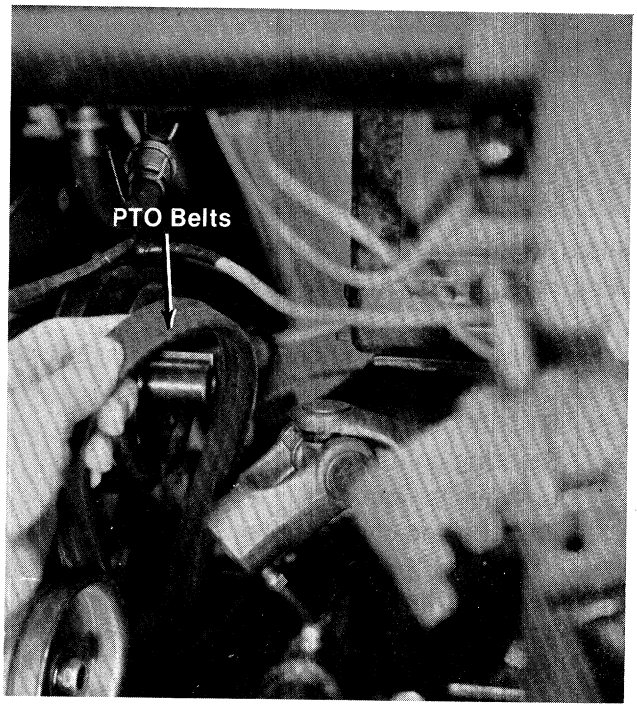


FIGURE 25.

Wheel Alignment

The front wheels should toe-in approximately 1/8".

Measure the distances A and B on the front wheels. (See figure 26.)

NOTE

Dimension B should be approximately 1/8 inch less than dimension A.

To adjust the toe-in, loosen the hex jam nut, remove the elastic locknut, lift the tie rod end out of the hole in the steering arm and screw the tie rod end in or out as necessary. (See figure 27.)

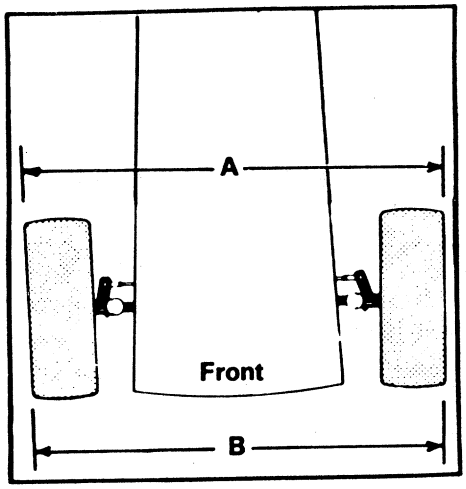


FIGURE 26.

Reassemble the tie rod end after the correct alignment is made.

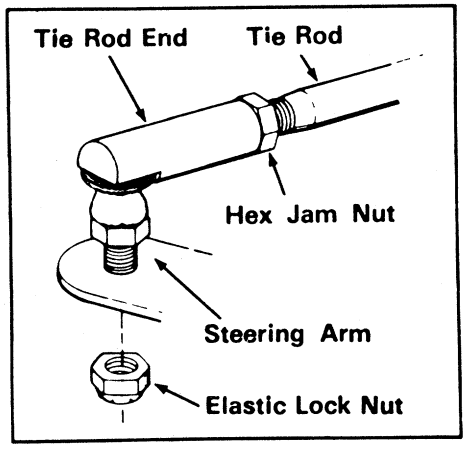


FIGURE 27.

Control Lever Adjustment

The hydrostatic control lever should be adjusted so that the tractor does not creep forward or backward when the control lever is in the neutral (N) position. When the brake pedal is depressed the control lever should return to the neutral area or close enough so that the brake prevents tractor motion. If this does not occur, adjust the control lever as follows.

NOTE

This adjustment is made with the engine off.

1. Depress the brake and pull the Start/Park Lever into the Start/Park position.
2. Loosen the four jam nuts so the lever can be moved without moving the control rod. (See figure 28.)
3. Move the control lever to the neutral (N) position. (See figure 29.)
4. Retighten the jam nuts on each side of the ferrule without moving the control lever.
5. Start the engine and test the unit.

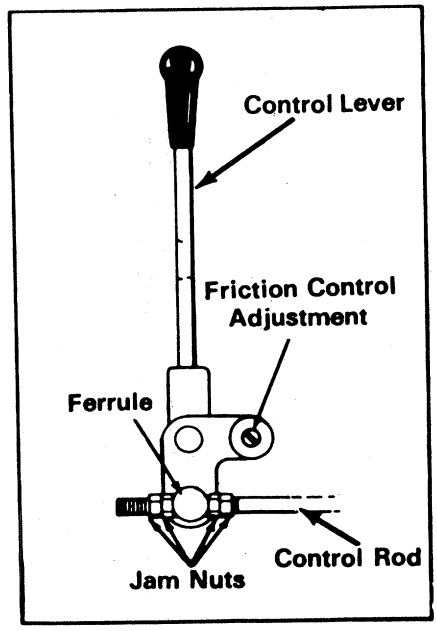


FIGURE 28.

6. If the tractor stops and does not creep, but the lever is still slightly off the neutral position the control index bracket may be loosened and centered to the lever.
7. This procedure may be repeated until the proper adjustment is obtained.

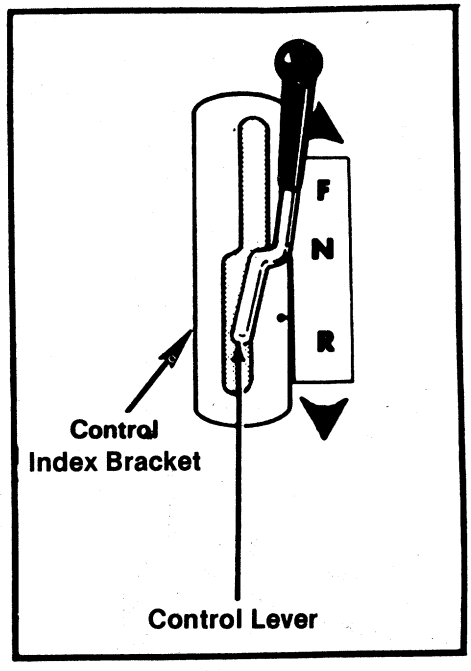


FIGURE 29.

Friction Control Adjustment

The harder the tractor pulls, the greater the tendency for the control lever to return to neutral. For example, the adjustment would need to be much tighter when using the moldboard plow than when using the mowing deck.

Adjustment can be made for the different attachments by loosening the locknut and adjusting the screw as shown in figure 28. Turn the screw in (clockwise) to increase friction. The friction control must be free of grease and oil.

Hydrostatic Linkage Adjustment

1. Put the control lever in the neutral position.
2. Place the Start/Park Lever in the Start/Park position.
3. Put the axle range lever in the center (neutral) position.
4. Jack up the rear of the tractor so that the wheels are off the floor. Block the front wheels securely.
5. Loosen the nut on the end of the brake rod until the brake is loose. You should be able to rotate the rear wheels freely. (See figure 30.)

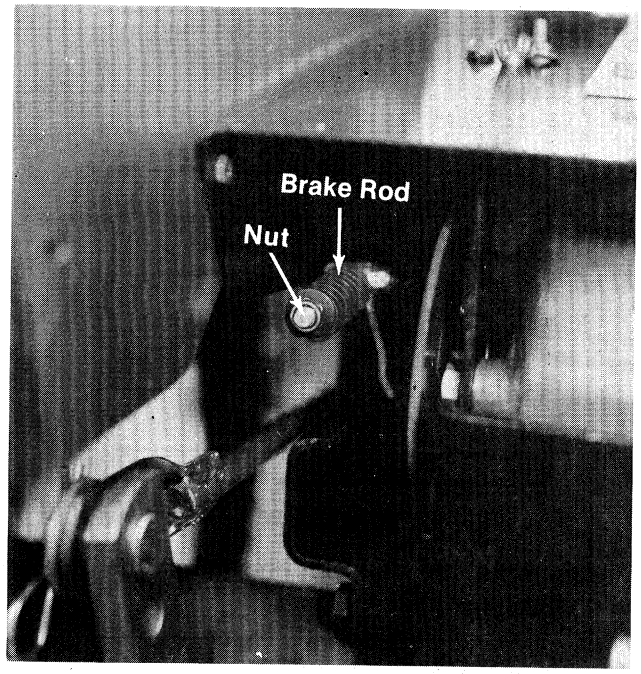


FIGURE 30.

6. Position the axle range lever in the LOW position.

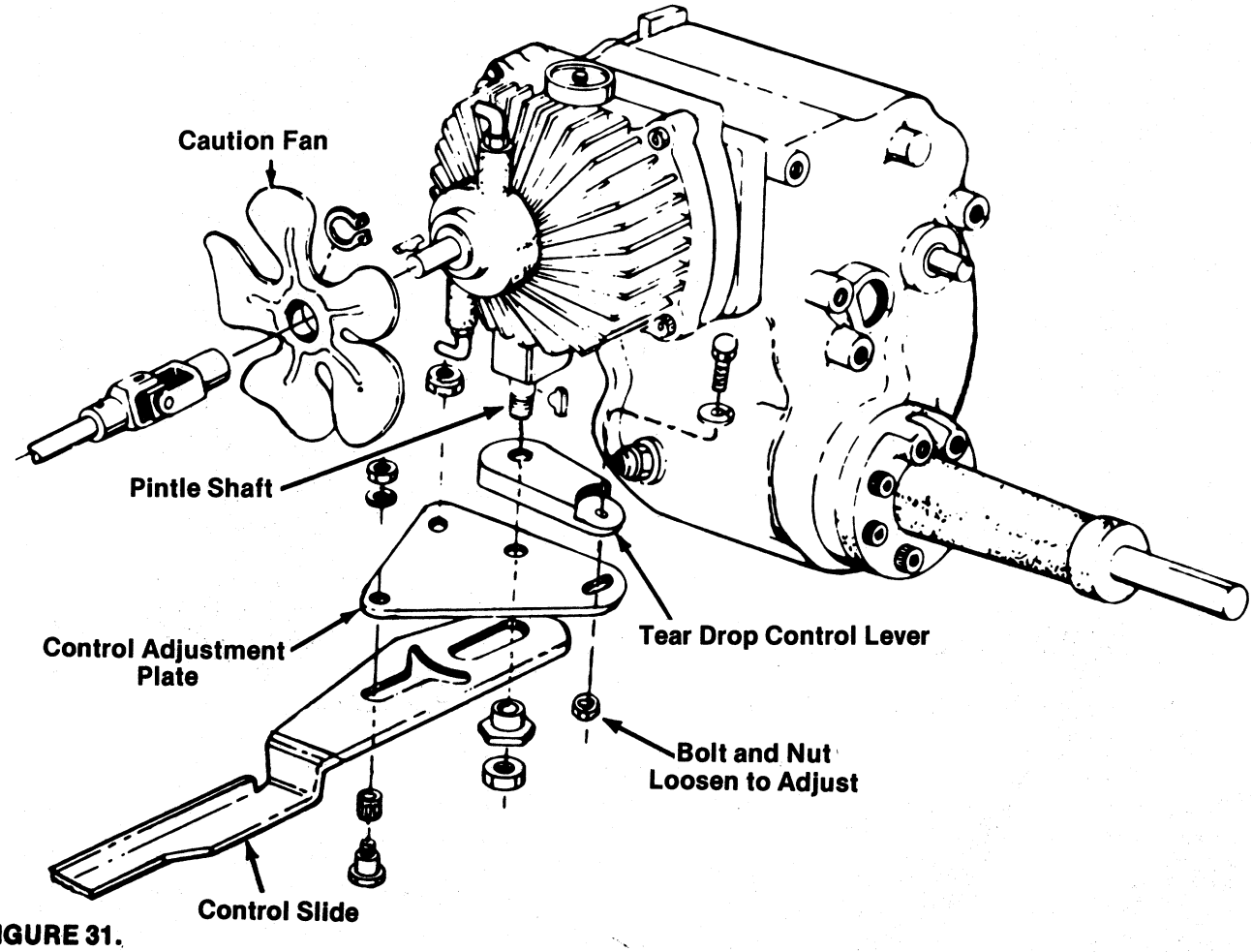


FIGURE 31.

7. Loosen the bolt and nut on the control adjustment plate enough to allow the tear drop control lever and the control adjustment plate to move independently of each other. (See figure 31.)

8. Start the engine and run it at half throttle.

WARNING

Use extreme caution from this point on due to the cooling fan revolving on the hydrostatic pump.

9. Rotate the tear drop control lever on the pintle shaft in both directions and determine the true neutral (the point which the rear wheels stop).

NOTE

Some new hydrostatic units may turn very slowly, but if the wheels can be stopped by hand the adjustment is correct.

10. In this position, with care not to move the control lever, tighten the bolt and nut on the control adjustment plate.

11. Stop the engine. Position the axle range lever in neutral.

12. Tighten the nut on the end of the brake rod until the brake holds and the rear wheels cannot be rotated.

13. Lower the tractor to the floor.

14. Start the engine and road test it.

Oil Filter

A full flow replaceable oil filter, located in the oil lines under the left side of the frame, should be replaced initially after twenty hours of operation and thereafter every 100 hours for commercial or industrial applications and yearly for normal usage. It can be removed by turning it counterclockwise by hand. Use Fram filter number PH-16 order part number 727-0162.

Hydraulic Lift Valve Adjustment

The valve is located under the right side of the tractor frame directly under the hydraulic lift lever. (See figure 11.)

The hydraulic lift valve is adjustable. Before making adjustments to the valve be sure the engine is running at maximum speed. If the hydraulic lift will not raise your attachments, especially the heavier ones, you must increase the pressure.

The equipment being used should be attached to the tractor during the adjustment.

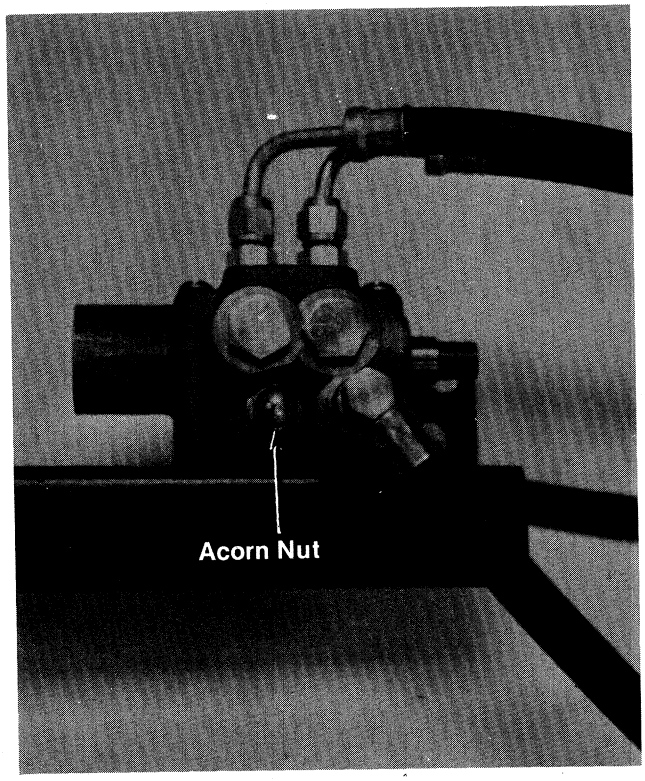


FIGURE 32.

1. Remove the acorn nut and washer. (See figures 32 and 33.)

2. Back off the locknut at least three complete turns. (See figure 34.)

3. Turn the screw in three complete turns. (See figure 35.)

4. Tighten the locknut.

5. Reassemble the washer and acorn nut and tighten.

6. Test the hydraulic lift valve with the attachment on the tractor with the engine operating at maximum speed.

7. If additional adjustment is necessary, repeat steps one through six. Only turn the screw one turn.

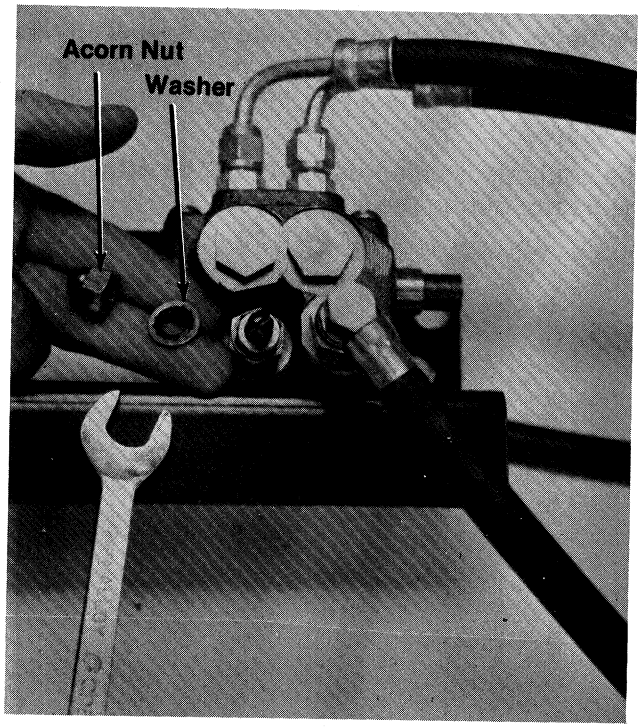


FIGURE 33.

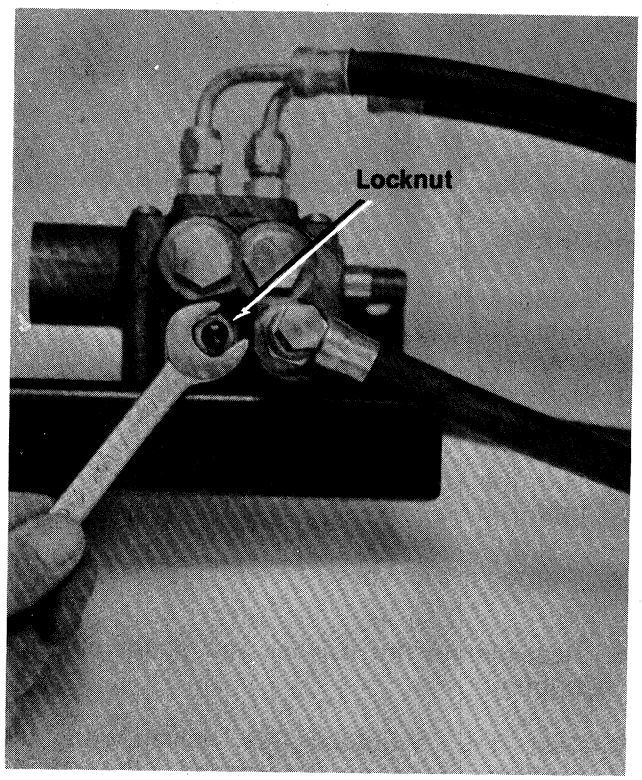


FIGURE 34.

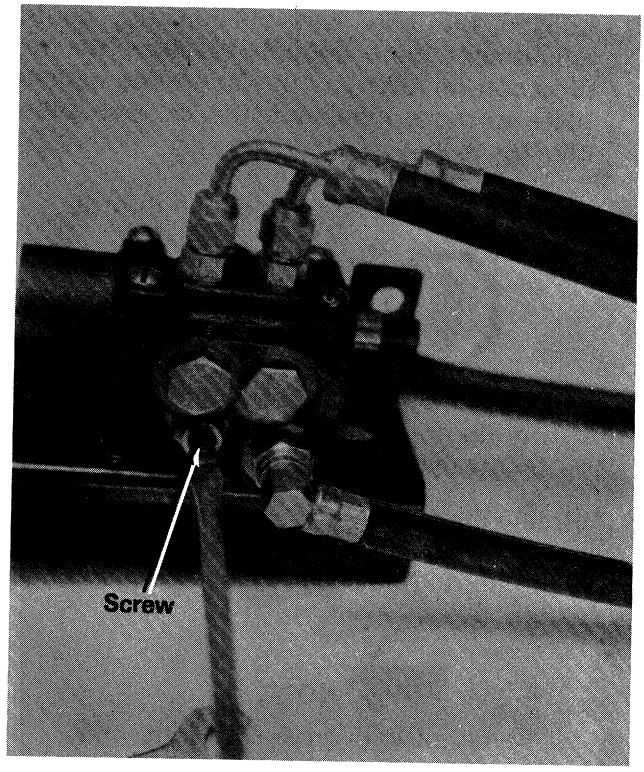


FIGURE 35.

Installation of Tire to Rim

WARNING

The following procedure must be followed when removing or installing a tire to the rim.

1. Lubricate tire beads and rim flanges.
2. Do not exceed 30 P.S.I. when seating beads.
3. Adjust to recommended pressure after beads are sealed.

Removing and Installing the Battery

Whenever a battery is installed in a tractor, attach the positive cable first and then the negative (ground) cable.

When removing the battery, always disconnect the negative cable first.

TROUBLE SHOOTING CHART

TROUBLE	LOOK FOR	REMEDY
Engine fails to start.	Safety System	A. Check for open circuit breaker on the small wire from the positive terminal on the battery. Circuit breaker will reset itself. B. Before checking the safety system further, be sure the clutch control and the blade control are disengaged; only the starting system is being checked. Therefore remove the spark plug lead and ground it to prevent the engine from starting. C. Attach a wire (minimum 18 gauge) to the positive terminal of the battery and touch the other end to the small terminal (coil primary) of the solenoid. If the engine cranks, the problem is in the safety system. D. Check for continuity from the battery to the solenoid. NOTE: The positive terminal of the battery should have a large cable (#8 gauge) and a small wire (#18 gauge) attached to it. E. Check all wires and cable for tightness. F. Use a #8 gauge wire and jump between the two large terminals of the solenoid. If the unit starts, replace the solenoid. G. If the unit fails to start after following the above procedure the problem is probably in the starting motor of the engine.
	Blocked fuel line or empty gas tank.	Clean fuel line; check fuel supply. Also check fuel shut-off valve. Fuel filter and valve located under gasoline tank.
	Defective spark plug.	Spark plug lead wire disconnected. Faulty spark plug—spark should jump gap between control electrode and side electrode. If spark does not jump, replace spark plug. NOTE: Use insulated pliers to hold the spark plug wire.
	Throttle setting.	Throttle control lever not in the starting position.
	Loose connections.	Spark plug wire loose.
Hard starting or loss of power.	Dirty air cleaner.	Remove air cleaner and clean as outlined in **Engine Manual.**
	Carburetor improperly adjusted.	Review paragraph **Carburetor Adjustment.**
Excessive vibration.	Bent or damaged blade spindle.	Stop engine immediately; tighten all bolts and make all necessary repairs. If vibration continues, have the unit serviced by a competent repairman.
Unit fails to discharge grass.	Discharge chute clogged.	Clean discharge chute and inside of deck.
	Foreign object lodged in deck.	Remove object from deck. See CAUTION following step 1 in paragraph **Operation.**
Engine overheats.	Obstructions in air passages.	Remove any obstruction from air passages in shroud Grass and dirt in engine shroud. Clean cooling fins.
	Oil level.	Fill crankcase to proper oil level.

Attaching The 12" Mold Board Plow (Optional) To The Tractor

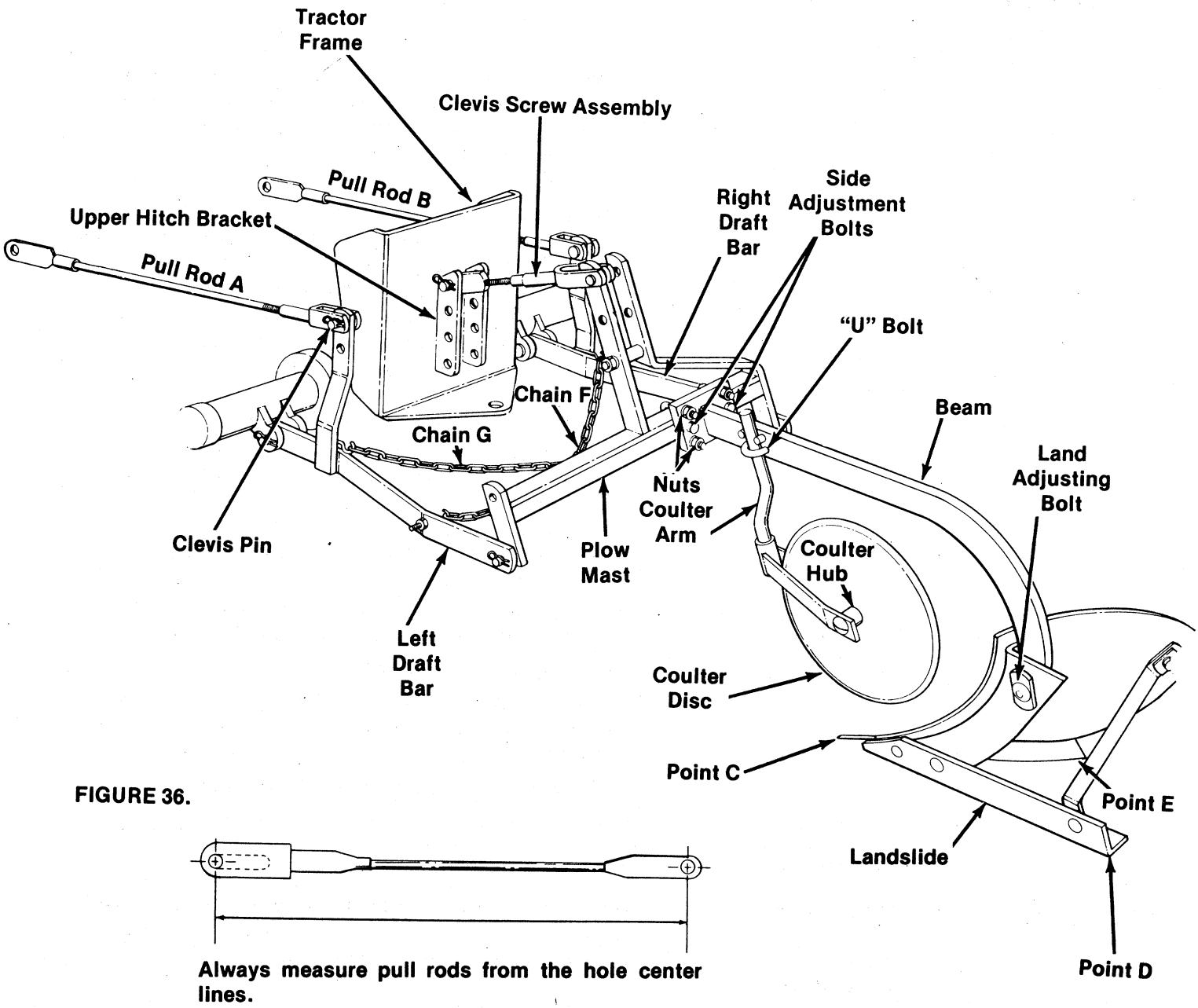


FIGURE 36.

Always measure pull rods from the hole center lines.

Preparing Tractor and 3-Point Hitch

The surface of the plow bottom must be cleaned so that dirt will slide off the moldboard without sticking. Wipe the polished surface with a rag soaked in turpentine, naptha or gasoline. An old brick or pumice stone can also be used to remove the protective coating, but usually this is not necessary if soil is not too wet or sticky.

Attaching the Plow to the Tractor

(See figure 36.)

1. Place two 4" blocks under both the left front and left rear wheels of the tractor.
2. Attach the right and left pull rods to the clevis pins on the plow.
3. The upper hitch bracket on the rear of the tractor has two mounting positions. Place the upper hitch bracket in the two **upper** holes.
4. Adjust the length of the clevis screw assembly to 12½" long.

NOTE

Refer to inset drawing for correct way to measure the length of the clevis screw assembly.

5. Attach the flat end of the clevis screw assembly to the top hole in the upper hitch bracket using a clevis pin and cotter hairpin.
6. Attach the clevis end of the clevis screw assembly to the top left hole on the plow mast using a clevis pin and cotter hairpin.
7. Adjust pull rod A to 31½" long.
   Adjust pull rod B to 31" long.

NOTE

These two dimensions are approximate. Final adjustment will have to be made later.

8. The beam position is adjustable on the plow mast. To adjust, loosen the nuts on both of the "U" bolts. To plow hard soil, slide the bar to the right as far as it will move. For softer soil, move to the left. For very soft soil you can straddle the upright on the plow mast or even move to the left side of the plow mast.

NOTE

This adjusts the width of cut. The harder the soil the narrower cut you must take. Do not tighten the nuts on the "U" bolts at this time.

9. Use the two side adjustment bolts to adjust the beam so the landslide travels in a line parallel to the centerline of the tractor. (See figure 37.)

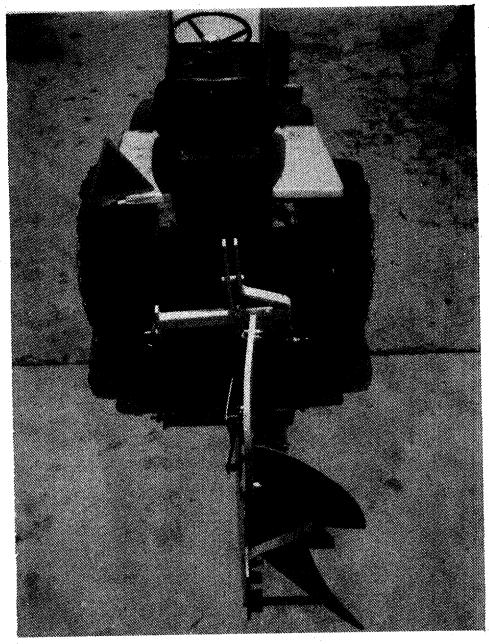


FIGURE 37.

10. Tighten the four nuts on the "U" bolts.
11. Make your final adjustment on the pull rods A and B so that:
    Point C touches the ground
    Point D is ½" off the ground
    Point E is ½" off the ground
12. Tighten the hook so chain F has no slack and chain G has approximately ½" travel.
13. Adjust the coulter arm so the bottom of the coulter disc is 1 inch off the ground.

Operation

The land adjusting bolt sets the angle of the share. If the plow comes out of the ground, loosen the land adjusting bolt and pivot the top of the share forward. This will make the plow penetrate deeper. To reduce the depth, pivot the top of the share backwards.

If the plow does not follow the tractor in a straight line, adjust the side adjustment bolts.

NOTE

Loosen the nuts of the "U" bolts to do this.

If the right and left draft bars swing off to the side too far making the plow run at an angle, readjust chains G and F.

If the plowed sod does not completely turn over, shorten rod B and lengthen rod A.

Hints For Best Performance

The width of cut is determined by the position of the beam on the mast. To plow hard soil, attach the beam close to the right side of the mast as shown in figure 36. For softer soil move the beam to the left.

Your first furrow up and back is referred to as a dead furrow. It may be necessary to shorten the clevis screw assembly slightly for these first two rows. Always plow your field the long way. (See figure 38.)

Always lift the plow at the end of the row to make the turn. After you make your dead furrow, the right wheels of the tractor run in the furrow.

Never plow wet soil. If the soil is very dry it will be difficult for the plow to properly lay over the soil. If you are busting the sod for the first time it will be more difficult and it may be necessary to adjust the angle and depth of the plow for the conditions.

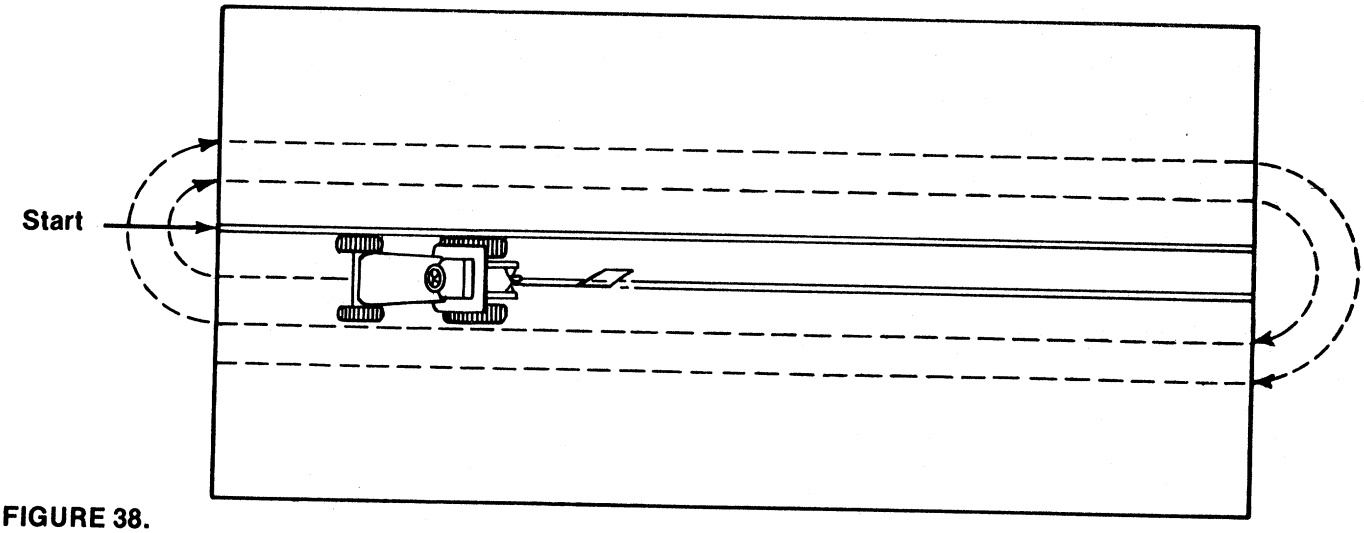
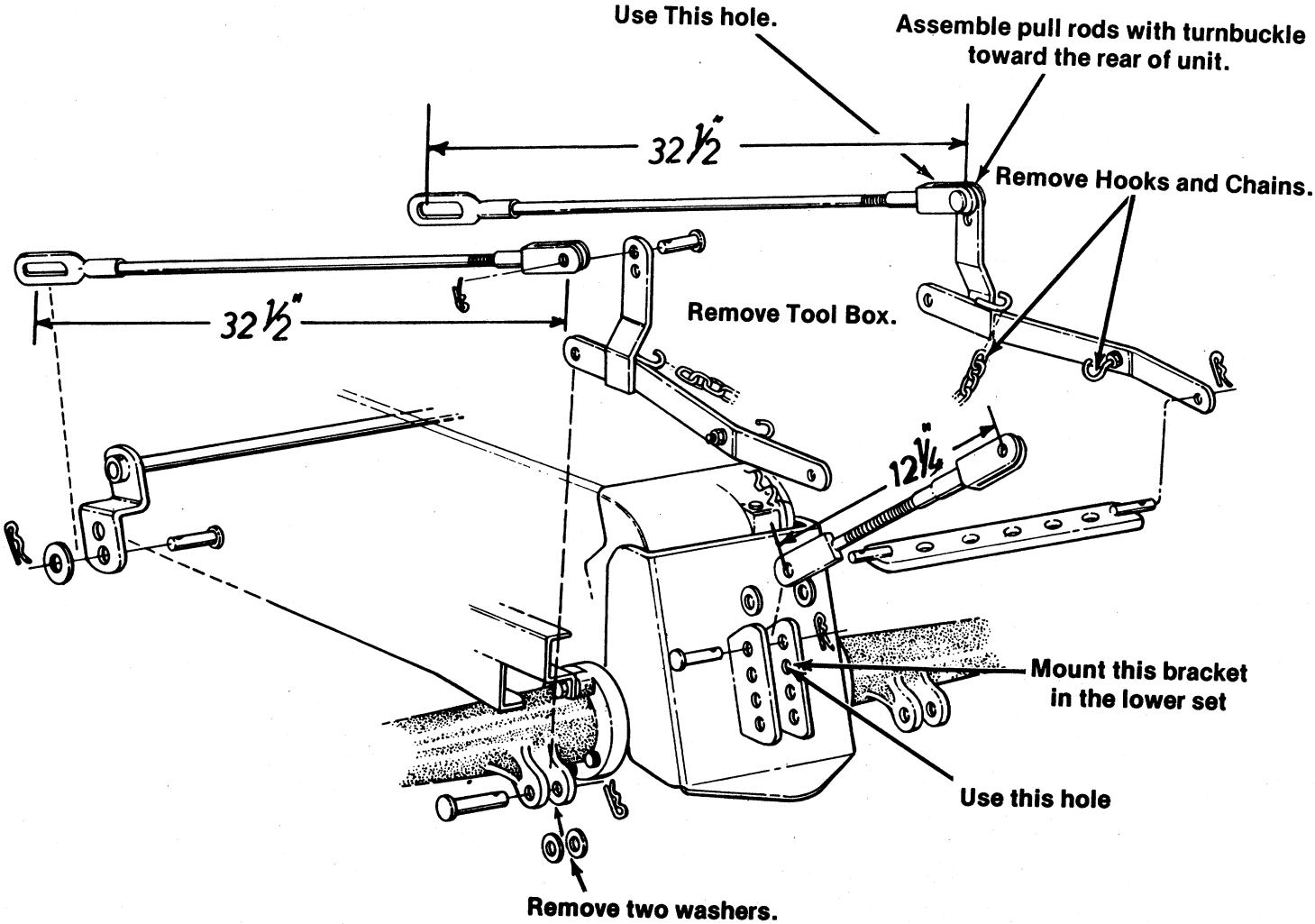


FIGURE 38.

Attaching The Rotary Tiller (Optional) To The Tractor



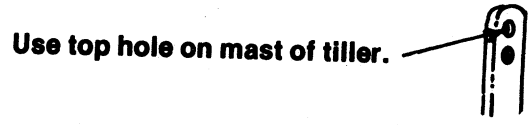


FIGURE 39.

Attaching the Rotary Tiller to the Tractor

1. Before attaching your rotary tiller to your tractor, be sure the rear wheels on the tractor are all the way into the minimum wheel width.
2. Remove the draw bar assembly from the three point hitch of your tractor by removing the two cotter hairpins.
3. Adjust the tractor pull rods to 32½" long. See figure 39.
4. Place the rotary tiller behind the tractor in the approximate position shown in figure 40.
5. Attach the universal drive shaft to the tractor power take off. Tighten set screw. See figure 2.
6. Start the tractor engine and, using the hydraulic lift lever, lower the draft bars until they line up with the pivot brackets. Attach with washers and cotter hairpins.
7. Be sure the mounting bracket on the rear tractor frame is mounted in the two lower holes.

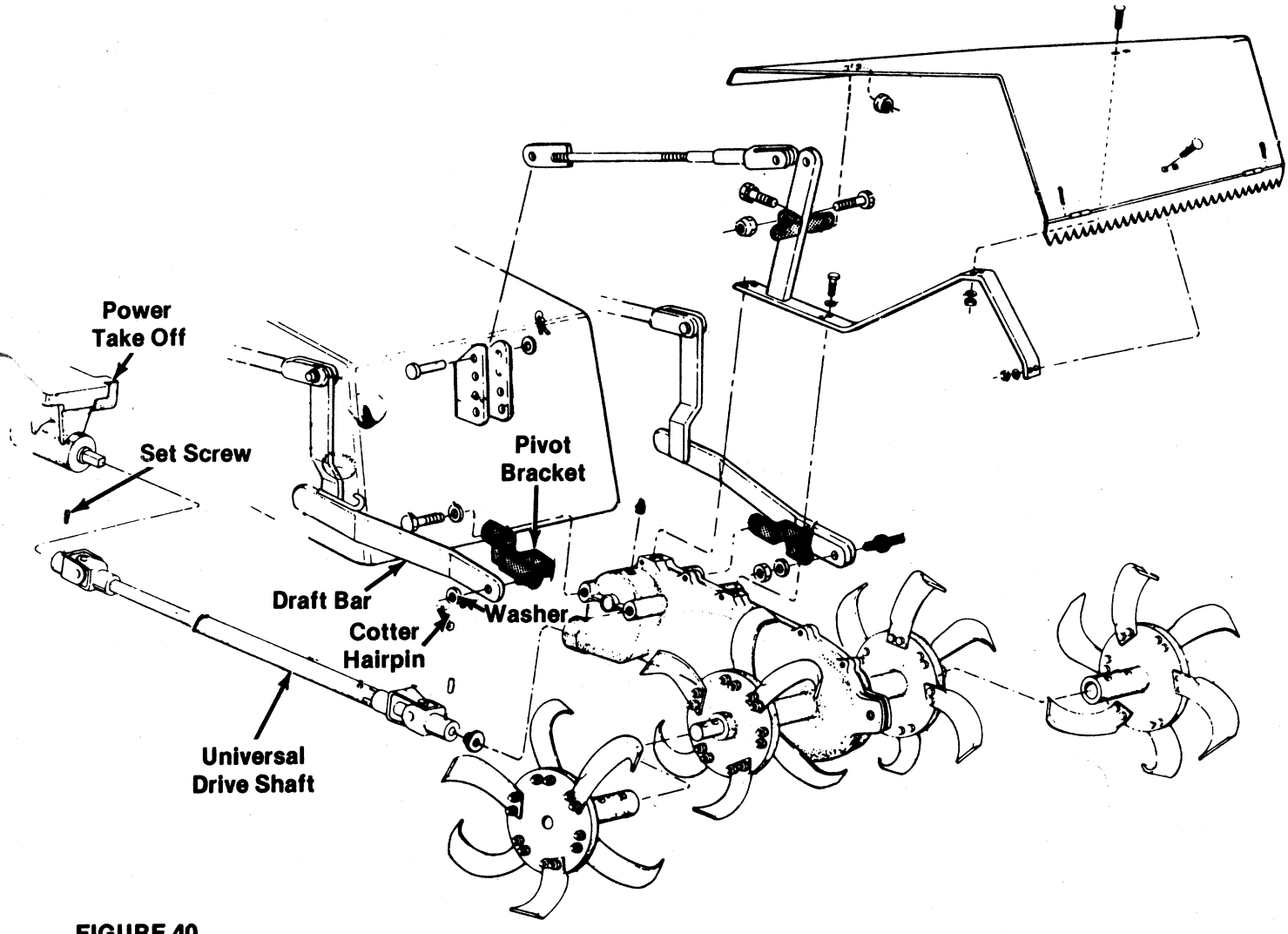


FIGURE 40.

8. Remove the tool tray on the rear of the tractor.
9. Adjust the clevis screw assembly to 12¼" and attach the clevis end to the mast on the tiller.
10. Attach the other end of the clevis screw assembly in the second hole from the top of the mounting bracket.

⚠ CAUTION

Before operating your tiller, slowly raise the tiller with the hydraulic lift. The universal drive shaft must NOT touch the transaxle gear case or any other part of the tractor. If it does, adjust your pull rods and clevis screw assembly until it clears.

General Rotary Tiller Operation

ALWAYS shut the engine off when removing a stone or anything that becomes entangled in the tines.

All large stones or rocks should be removed from the area before you begin tilling.

Tilling can be done with or without the outer tine assemblies. You can till 32½" wide with the outer tines and 17" wide with only the inner tines.

Use rear wheel weights when tilling.

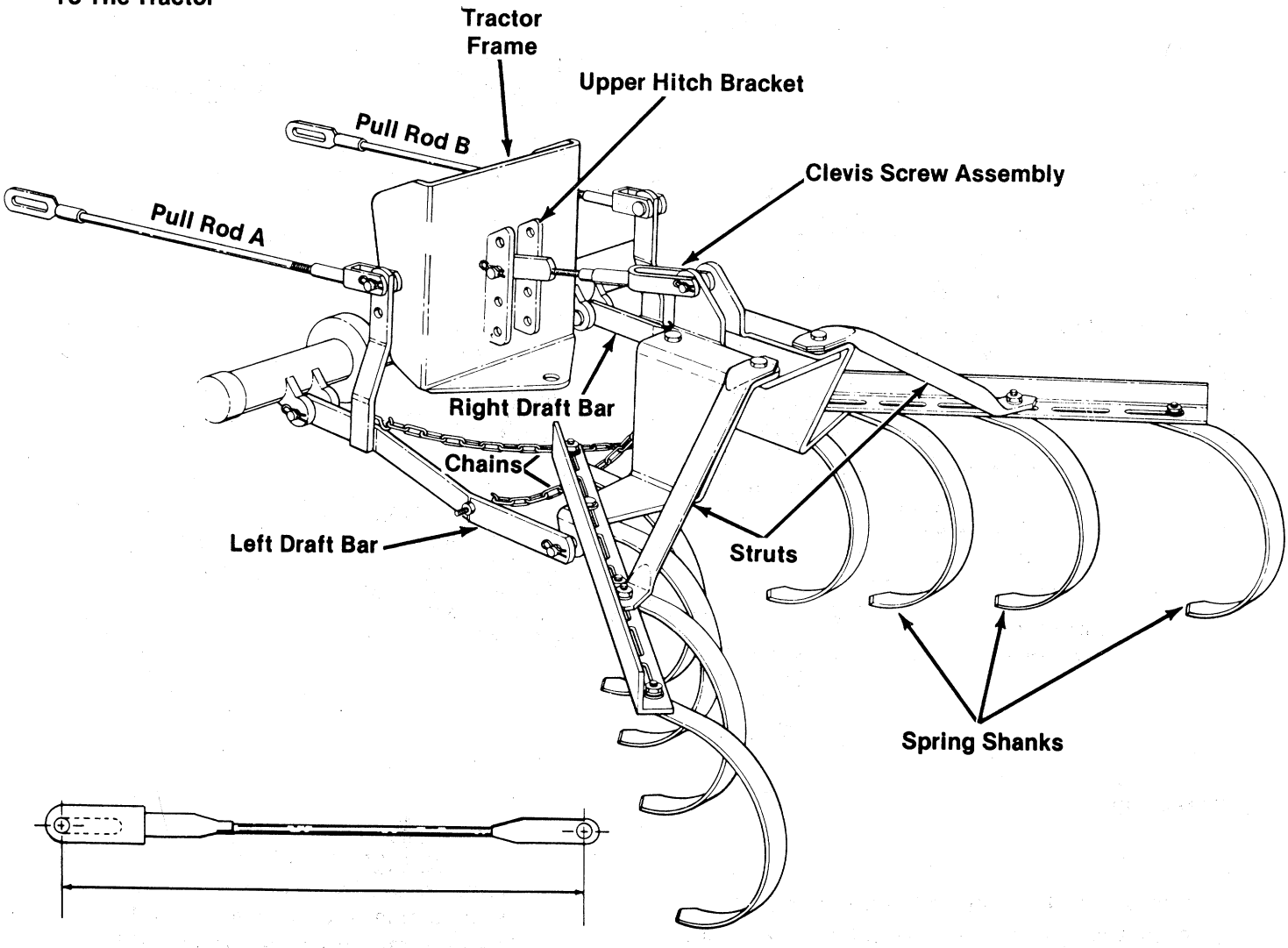
Maximum tilling depth is approximately 10" depending on the type of soil. This CANNOT be accomplished in one pass. Maximum tilling depth may be only 2½" on extremely hard soil on the first pass.

The more passes you make with the tiller over the same area, the deeper you can till and the finer you pulverize the soil. Change directions as often as you can to level out the ground and to prevent furrows.

When tilling, the tiller will push the tractor and the transmission on the tractor will hold the tractor back.

For easy lifting of the rotary tiller from the ground, shut off the power by disengaging the PTO handle and continue to drive the tractor forward. The tines will climb out of the hole when you pull the lift lever handle back.

Attaching The Spring Shank Cultivator (Optional) To The Tractor



Always measure pull rods from the hole center lines.

FIGURE 41.

Attaching to Tractor

1. Adjust the tractor rear wheels out as far as they will go to give maximum plant clearance. (See tractor manual.)
2. Adjust the length of the pull rods by screwing the ends in or out.
   Pull Rod A 32½
   Pull Rod B 32½
3. Attach the pull rods to the right and left draft bars.
4. Adjust the clevis screw assembly length to 13½".
5. Attach the flat end of the clevis screw assembly to the upper hitch bracket. Use second hole from top.
6. Attach the clevis end of the clevis screw assembly to the top hole in the cultivator frame.
7. Tighten the two chains to prevent side sway of the cultivator during operation.

Adjustments

The final adjustment of the cultivator will be made under operating conditions. Lengthening or shortening of the clevis screw assembly causes the spring shanks to dig shallow or deeper.

Weights may also be added to the cultivator frame for deeper cultivating.

The width of the cultivator can be adjusted by changing the position of the frame struts. Both sides should be adjusted the same so the cultivator pulls evenly.

Attaching The Double Disc (Optional) To The Tractor

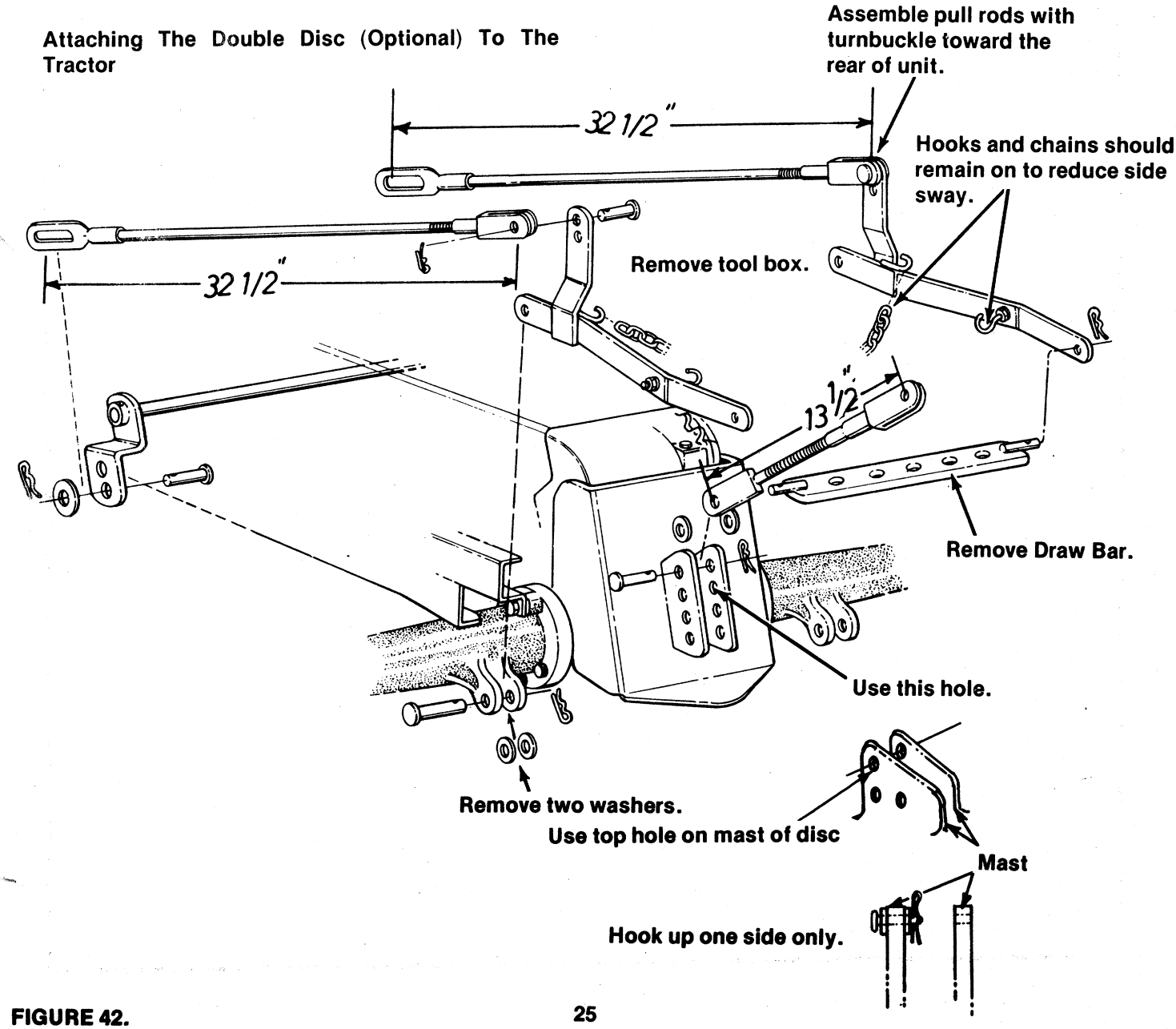
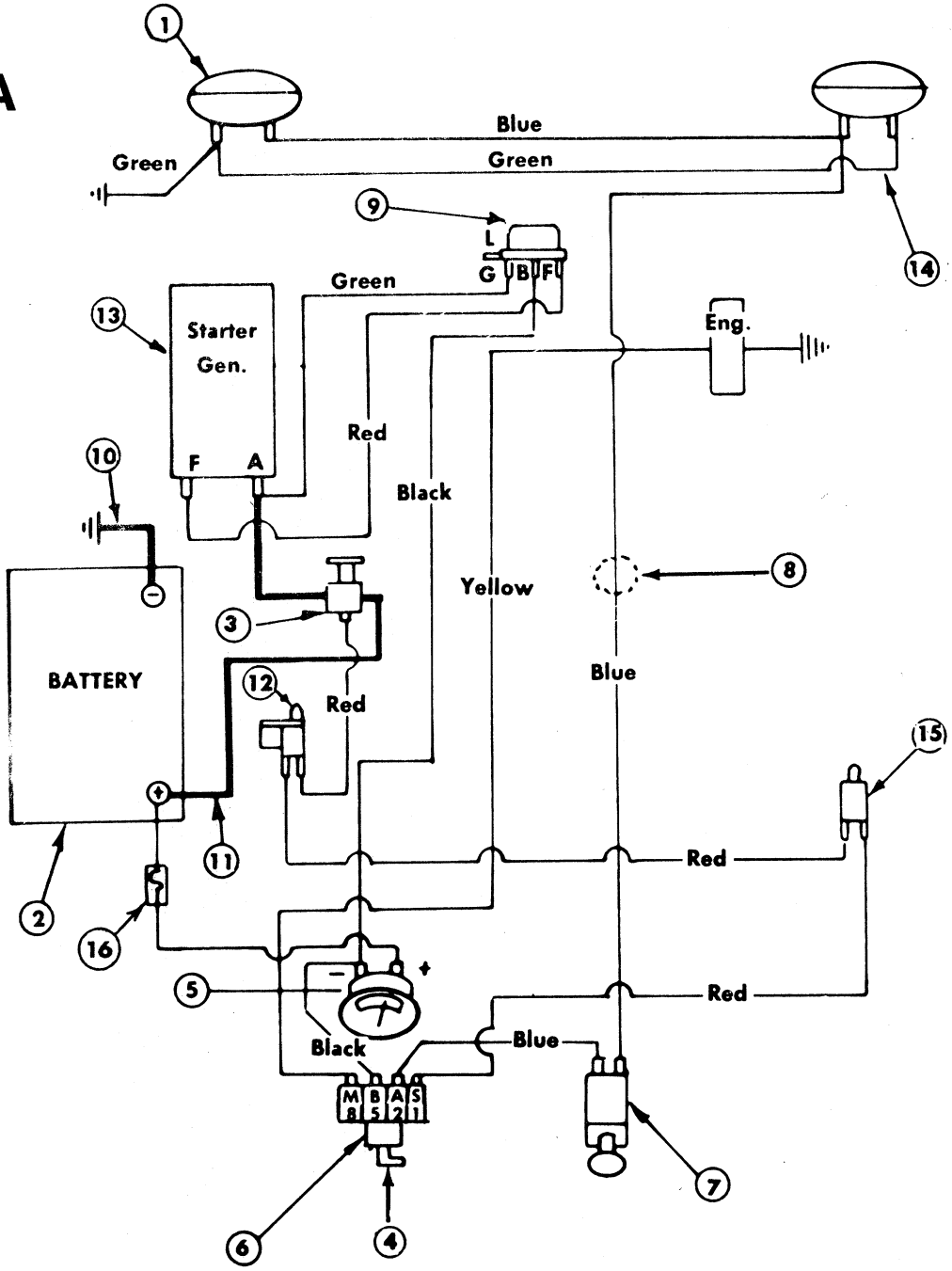


FIGURE 42.

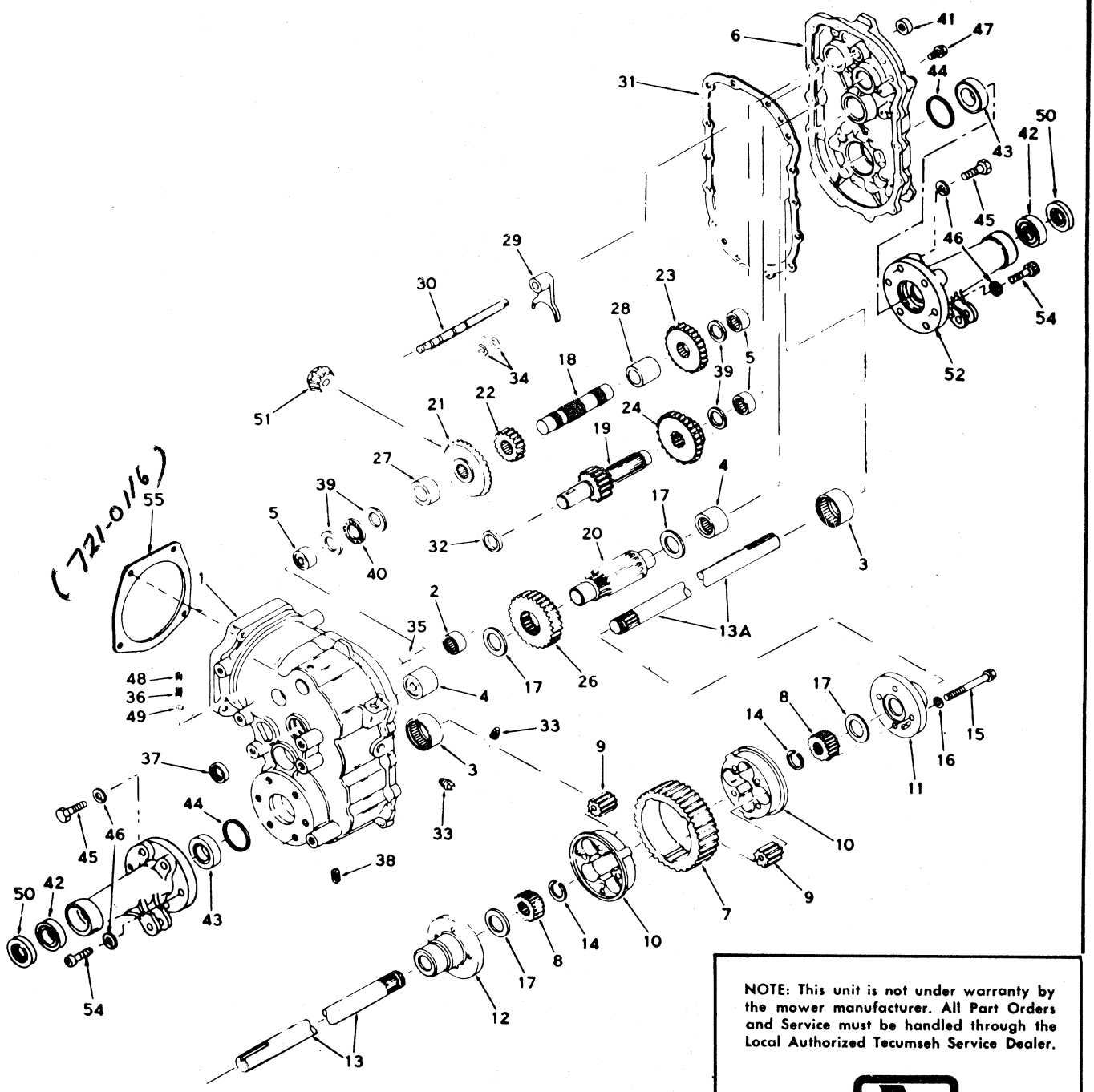
149-990A



PARTS LIST FOR SCHEMATIC OF ELECTRICAL SYSTEM

REF. NO.	PART NO.	DESCRIPTION	NEW PART
1	725-0222	Head Light	
2	725-0130	Battery	
3	725-0530	Solenoid	
4	725-0201	Ignition Key	
5	725-0475	Ammeter	
6	725-0267	Key Switch	
7	725-0202	Light Switch	
8	725-0275	Wire Harness	
9	725-0390	Voltage Regulator	
10	725-0139	Battery Ground Wire	
11	725-0258	Bat. to Sol. & Bat. to Amp. Meter	
12	725-0268	Safety Switch	
13	725-0144	Starter and Generator	
14	725-0204	Electric Wire	
15	725-0277	Safety Switch	
16	725-0493	Circuit Breaker	

149-990A



TRANSAXLE MODEL 2503

NOTE: This unit is not under warranty by the mower manufacturer. All Part Orders and Service must be handled through the Local Authorized Tecumseh Service Dealer.

yellow pages

PEERLESS MODEL 2503

This unit is under warranty by Tecumseh Products Company. Parts and Service are available through all Tecumseh, Lauson Power Products Service Dealers. Check the "Yellow Pages" of your telephone directory under "Engines—Gasoline."

149-990A

PARTS LIST FOR TRANSAXLE MODEL 2503

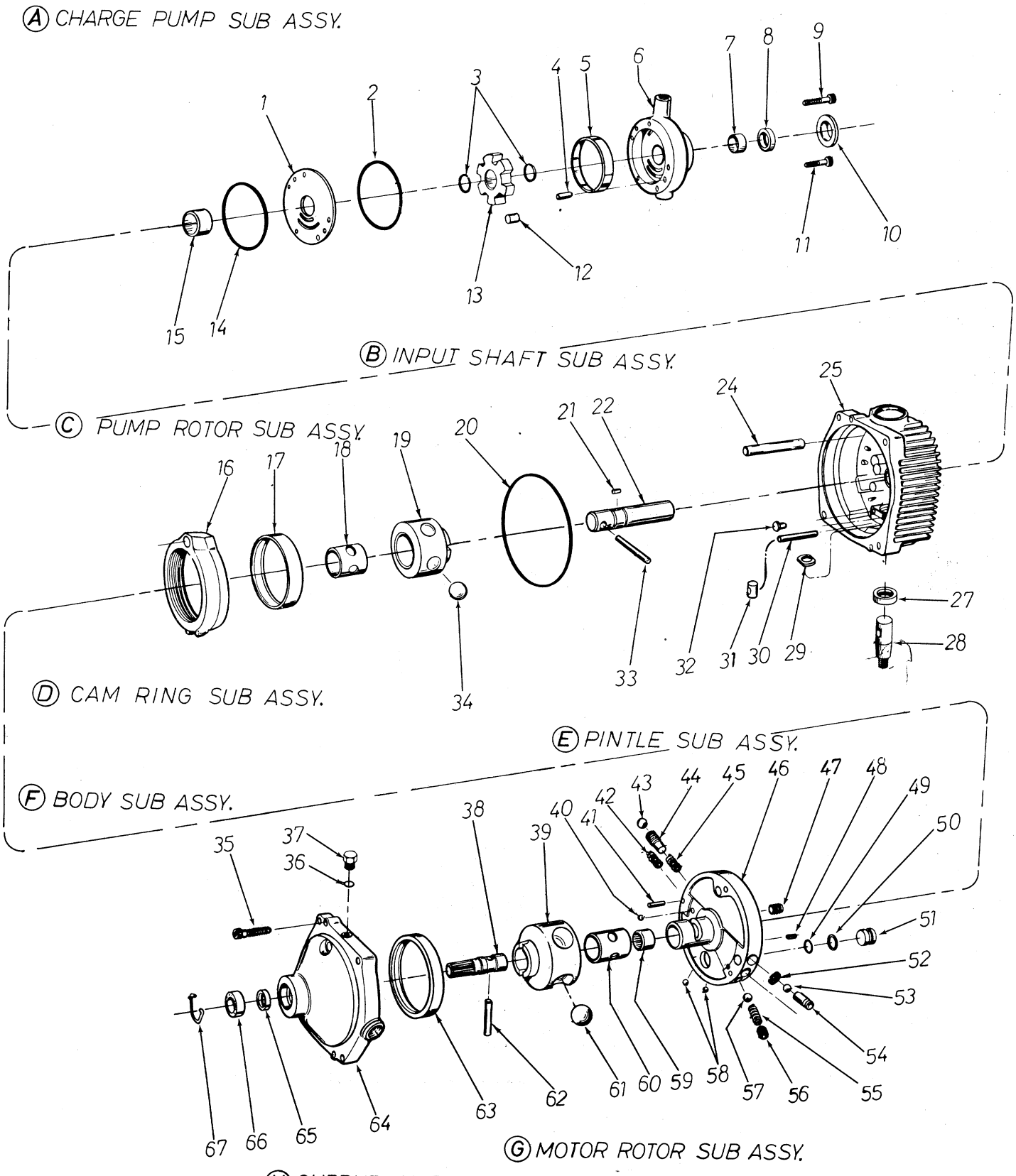
REF. NO.	PART NO.	DESCRIPTION
1	PE-770060	Case Ass'y., Transaxle (Incl. Nos. 2 thru 5)
2	PE-780097	Bearing, Needle
3	PE-780098	Bearing, Needle
4	PE-780099	Bearing, Needle
5	PE-780100	Bearing, Needle
6	PE-772065	Cover Ass'y., Transaxle (Incl. 3, 4 & 5)
7	PE-778084	Gear, Ring
8	PE-778085	Gear, Side
9	PE-778086	Gear, Pinion
10	PE-786054	Core, Body
11	PE-774199	Carrier, Differential
12	PE-774200	Carrier, Differential
13	PE-774204	Axle, Left Hand
13A	PE-774205	Axle, Right Hand
14	PE-792062	Ring, Snap
15	PE-792063	Screw, 3/8-16 x 3-3/8 Hex Hd.
16	PE-792011	Lockwasher, 3/8"
17	PE-780101	Washer, Thrust
18	PE-776118	Shaft, Counter
19	PE-776122	Shaft, Brake
20	PE-776120	Pinion, Output
21	PE-778087	Gear, Bevel (30 teeth)
22	PE-778088	Gear, Spur (16 teeth)
23	PE-778096	Gear, Spur (23 teeth)
24	PE-778097	Gear, Cluster (20 and 27 teeth)
26	PE-778098	Gear, Output (37 teeth)
27	PE-786055	Spacer
28	PE-786056	Spacer
29	PE-784195	Fork, Shift
30	PE-784196	Rod, Shift
31	PE-788047	Gasket, Case and Cover
32	PE-780005	Spacer
33	PE-792010	Plug, Pipe
34	PE-792064	Ring, Snap
35	PE-786026	Pin, Dowel
36	PE-792003	Spring
37	PE-788008	Seal, Oil
38	PE-792019	Plug, Magnetic Drain
39	PE-780045	Washer, Thrust
40	PE-780012	Bearing, Thrust
41	PE-788034	Seal, Oil
42	PE-780103	Bearing, Ball
43	PE-780104	Bearing, Thrust
44	PE-788048	Seal, Square Cut
45	PE-792065	Screw, ½-13 x 1 ½ Hex Hd.
46	PE-792066	Lockwasher, ½"
47	PE-792067	Screw, 5/16-18 x 1 Thd. Forming Hex Hd.
48	PE-792068	Screw, ¼-20 x ½ Set
49	PE-792001	Ball, Steel
50	PE-788049	Seal, Oil
51	PE-778093	Pinion, Bevel
52	PE-782039	Housing, Axle
53	PE-782040	Housing, Axle
54	PE-792069	Screw, ½-13 x 1 ½ Allen Hd. Cap
55	PE-788050	Gasket

NOTE: This unit is not under warranty by the mower manufacturer. All Part Orders and Service must be handled through the Local Authorized Tecumseh Service Dealer.

PEERLESS MODEL 2503

This unit is under warranty by Tecumseh Products Company. Parts and Service are available through all Tecumseh, Lauson Power Products Service Dealers. Check the "Yellow Pages" of your telephone directory under "Engines—Gasoline."

149-990A


Ⓐ CHARGE PUMP SUB ASSY.
Ⓑ INPUT SHAFT SUB ASSY.
Ⓒ PUMP ROTOR SUB ASSY.
Ⓓ CAM RING SUB ASSY.
Ⓔ PINTLE SUB ASSY.
Ⓕ BODY SUB ASSY.
Ⓖ MOTOR ROTOR SUB ASSY.
Ⓗ OUTPUT SHAFT SUB ASSY.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
24
25
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67

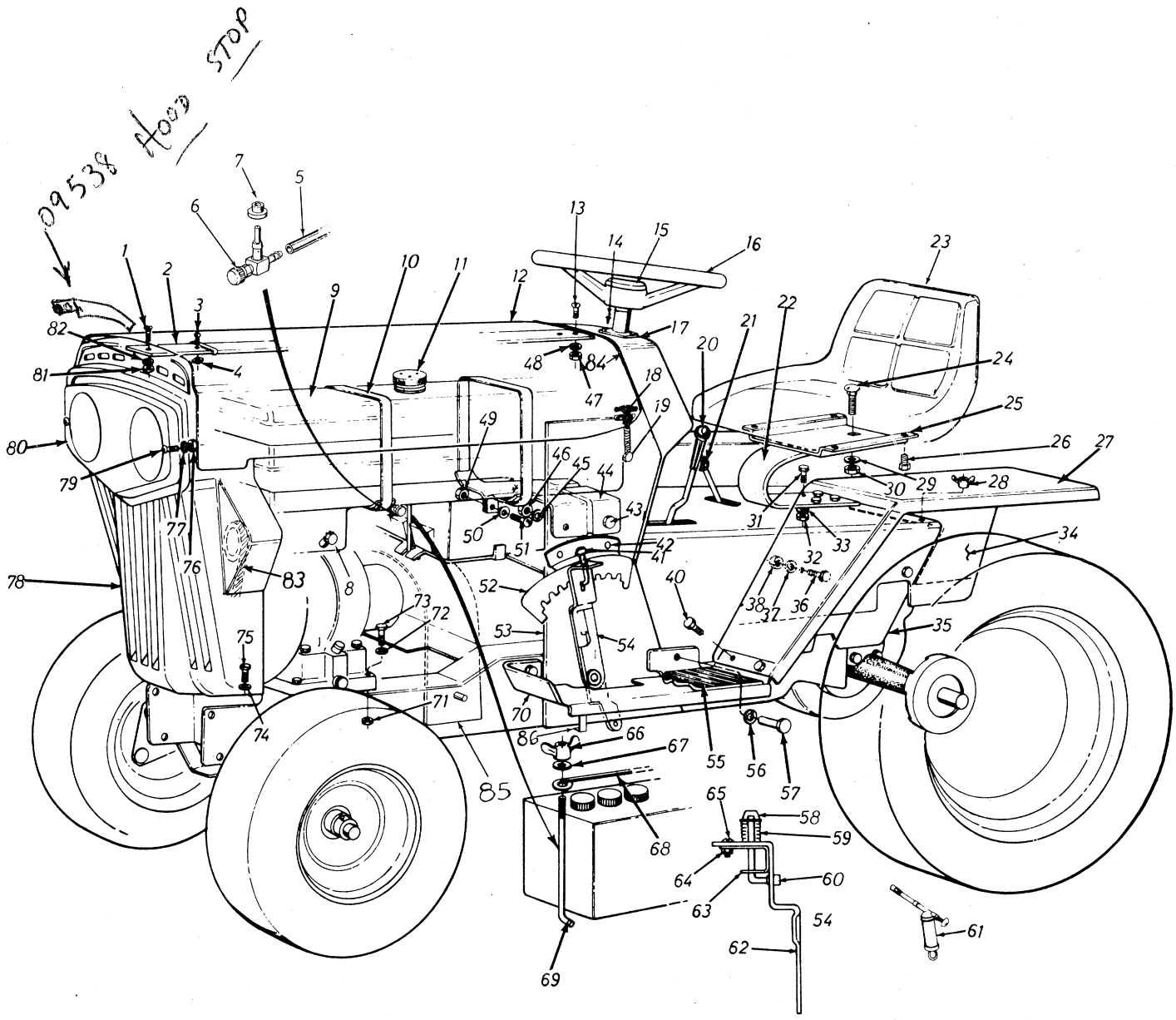
149-990A

PARTS LIST FOR MARSHALLMATIC M-10 HYDROSTATIC PUMP MODEL NO. 717-0344

REF. NO.	PART NO.	Qty. Req'd.	DESCRIPTION	REF. NO.	PART NO.	Qty. Req'd.	DESCRIPTION
1	ET-97447	1	Plate—Aux. Charge Pump	43	ET-095881-062	2	Ball—.625 Dia. Acc. Valve Plug
2	ET-008771-036	1	Seal—Square Cut				
3	ET-9458	2	Ring—Snap Input Shaft	44	ET-72162	2	Valve—Acceleration
4	ET-090101-075	2	Dowel—.3127 Dia. Aux. Charge Pump	45	ET-7680	1	Spring—Acceleration Valve
5	Sub Ass'y. A	1	Insert, Aux. Charge Pump	46	Sub Ass'y. E	1	Pintle
6	Sub Ass'y. A	1	Body, Aux. Charge Pump	47	Sub Ass'y. E	2	Scr.—Allen—Pintle Plug
7	Sub Ass'y. A	1	Bushing—Aux. Charge Pump	48	ET-98294-075	1	Pin—Coil
				49	ET-008765-115	2	Ring—"O" Ring Piston
8	ET-93955	1	Seal, Oil, Input Shaft	50	ET-008770-115	2	Ring—Back-up—Piston
9	ET-095912-175	1	Hex Scr. 5/16-18	51	ET-101564	2	Piston—Pintle
10	ET-93902	1	Shield—Grass	52	ET-95214	2	Retainer—Directional Valve
11	ET-095912-125	1	Hex Scr. 5/16-18				
12	See Kit A	6	Roll—Aux. Charge Pump	53	ET-095881-031	2	Ball 5/16 Dia. Directional Valve
13	See Kit A	1	Carrier—Aux. Charge Pump	54	ET-70130	2	Body—Directional Valve
14	ET-008771-038	1	Seal—Square Cut	55	ET-72097	1	Spring—Charge Pressure Relief Valve
15	Sub Ass'y. B	1	Bushing—Cover Input Shaft	56	ET-93906	1	Plug—Charge Pressure Relief Valve
16	ET-101565	1	Ring—Cam				
17	ET-40528	1	Race—Cam	57	ET-096617-044	1	Ball—7/16 Dia. Charge Press. Relief
18	Sub Ass'y. C	1	Bushing—Pump Rotor				
19	Sub Ass'y. C	1	Rotor—Pump	58	ET-095881-028	2	Ball—Pintle Plug
20	ET-8771-166	1	Seal—Ring Square Cut	59	ET-94950	1	Bearing—Needle
21	ET-90880	1	Pin—Drive Aux. Charge Pump	60	Sub Ass'y. G	1	Bushing—Motor Rotor
				61	Sub Ass'y. G	5	Ball—Motor Rotor
22	Sub Ass'y. B	1	Shaft—Input	62	Sub Ass'y. H	1	Dowel—.3752 Dia. Output Shaft
24	Sub Ass'y. B	1	Dowel—Cam Ring Pivot Pin	63	ET-40525	1	Race—Motor
25	Sub Ass'y. B	1	Cover—Pump Trans.	64	ET-32276	1	Body—Motor
27	ET-92999	1	Seal—Oil—Control Shaft	65	ET-93955	1	Seal—Oil Output Shaft
28	Sub Ass'y. B	1	Shaft—Control	66	ET-90797	1	Bearing—Ball—Output Shaft
29	ET-97538	1	Washer Control Shaft				
30	Sub Ass'y. B	1	Dowel—.4377 Dia. Control Shaft	67	ET-91231	1	Ring—Snap—Output Shaft
31	ET-97841	1	Insert—Cam Ring (Steel)	A	ET-990045	1	Charge Pump Kit
32	ET-101597	2	Cap	B	ET-24490	1	Shaft S/A Input
33	Sub Ass'y. B	1	Dowel—.3752 Dia. Input Shaft	C	ET-22710	1	Rotor/Ball S/A Pump
				D	ET-101566	1	Race—Cam S/A
34	Sub Ass'y. C	5	Ball—Pump Rotor Pistons	E	ET-101571	1	Pintle S/A
35	ET-0959-2-125	2	Hex. Scr. 5/16-18 Socket Hd.	F	ET-24611	1	Body S/A Trans. Motor
				G	ET-22709	1	Rotor—Ball S/A Motor
36	ET-088758-006	1	Seal—"O" Ring Vent Plug	H	ET-24608	1	Shaft S/A—Output
37	ET-096047-006	1	Plug—Vent Plug	*	ET-025095-010	1	Fitting—S/A Aux. Charge Pump Intake
38	Sub Ass'y. H	1	Shaft—Output Shaft				
39	Sub Ass'y. G	1	Rotor—Motor	*	ET-025095-006	1	Fitting—S/A Aux. Charge Pump Discharge
40	ET-095881-019	1	Ball—3/16 Dia. Pintle Plug				
41	ET-97515	1	Dowel—Acceleration Valve Plug	*	ET-025095-006	1	Fitting—S/A Trans. Return
42	ET-7680	1	Spring—Acceleration Valve				

NOTE: A complete disassembly procedure and repair manual for the hydrostatic pump is available from the factory. Write for manual covering · Model 717-0344. Form No. 770-5390.

149-990A



LEFT HAND VIEW

NOTE

This instruction manual covers various models and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

PARTS LIST FOR MODEL 149-990A

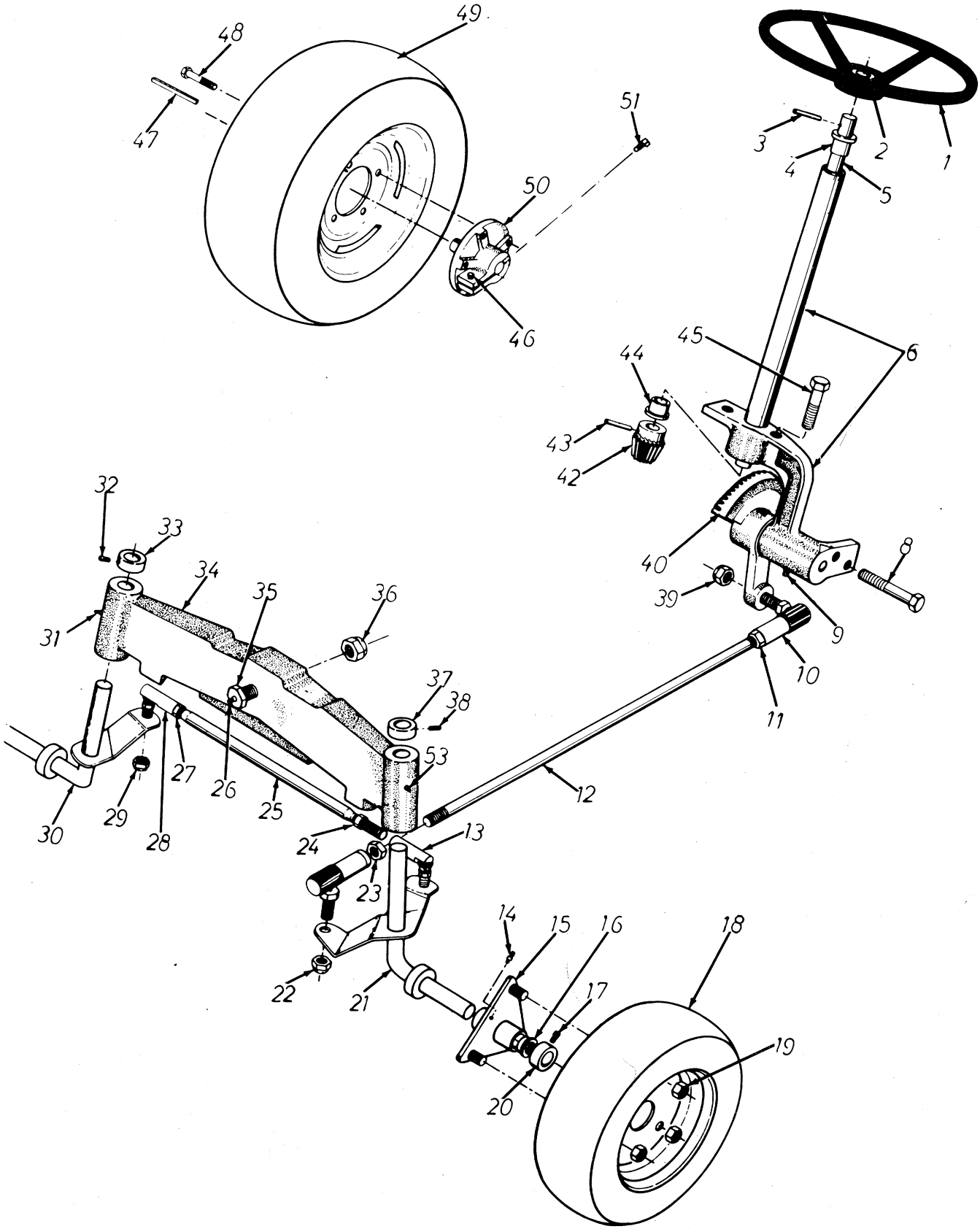
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0350		Counter Sunk Fl. Hd. Scr. ¼-20 x 1.00" Lg.*	
2	09576		Grille Brace	
3	710-0166		Truss Mach. Scr. ¼-20 x 1.00" Lg.*	
4	712-0287		Hex Nut ¼-20 Thd.*	
5	751-0173		Gas Hose 17" Clear	
6	751-0171		Filter and Shutoff Valve	
7	735-0149		Rubber Bushing	
8	710-0198		Sems Scr. 5/16-18 x .75" Lg.*	
9	751-0174		Fuel Tank	
10	10852		Fuel Tank Strap	
11	723-0333		Fuel Gauge	
12	12290	—462	Hood	
13	710-0166		Truss Mach. Scr. ¼-20 x 1.00" Lg.*	
14	710-0473		Truss Mach. #10-24 x .50" Lg.*	
15	723-0188		Steering Wheel Cap	
16	723-0185		Steering Wheel	
17	10706		Steering Tube Hole Cover	
18	723-0296		Hood Latch Ass'y.	
19	710-0258		Hex Scr. ¼-20 x .62" Lg.*	
20	720-0143		Grip	
21	720-0165		Gear Shift Knob	
22	732-0325		Seat Spring	
23	757-0274		Seat	
24	710-0385		Car. Bolt ½-13 x 1.00" Lg.*	
25	10807		Seat Bracket	
26	710-0216		Hex Scr. ¾-16 x .75" Lg.*	
27	10739	—462	Fender Ass'y.—L.H.	
	10740	—462	Fender Ass'y.—R.H. (not shown)	
28	712-0109		Ins. Wing L-Nut ¼-20 Thd.	
29	736-0921		L-Wash. ½" Scr.*	
30	712-0249		Elastic Stop Nut ½-13 Thd.*	
31	710-0322		Hex Sems Scr. 5/16-18 x 1.00" Lg.*	
32	712-0267		Hex Nut 5/16-18 Thd.*	
33	736-0119		L-Wash. 5/16" Scr.*	
34	10927		Tool Tray Ass'y.	
35	12198		Rear Frame Cover Ass'y.	
36	710-0258		Hex Scr. ¼-20 x .62" Lg.*	
37	736-0329		L-Wash. ¼" Scr.*	
38	712-0287		Hex Nut ¼-20 Thd.*	
39				
40	710-0134		Carriage Bolt ¼-20 x .62" Lg.*	
41	726-0110		Push Cap	
42	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
43	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
44	10726		Fuel Tank Brkt.—Rear	
45	736-0169		L-Wash. 3/8" Scr.*	
46	712-0798		Hex Nut 3/8-16 Thd.*	
47	712-0287		Hex Nut ¼-20 Thd.*	
48	736-0329		L-Wash. ¼" Scr.*	
49	712-0287		Hex Nut ¼-20 Thd.*	
50	736-0329		L-Wash. ¼" Scr.*	
51	710-0279		Filster Hd. Scr. ¼-20 x 1.75" Lg.*	
52	11336		Index Brkt.—L.H.	
53	12702		Side Plate—L.H.	
54	11333		Lift Pre-set Brkt. Ass'y.	
55	723-0303		Foot Pad 3.25 x 8.5 Lg.	
56	736-0169		L-Wash. 3/8" Scr.*	
57	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
58	726-0110		Push Cap	
59	732-0165		Compression Spring	
60	11335		Locking Rod	
61	727-0143		Grease Gun	
62	11334		Lift Brkt. Pre-set	
63	11343		Locking Rod Guide	
64	712-0121		Sq. Nut #10-24 Thd.*	
65	710-0399		Truss Sems Scr. #10-24 x .50"	
66	712-0109		Wing Nut ¼-20 Thd.*	
67	736-0173		Fl-Wash. .28 I.D x .75 O.D.	
68	711-0278		Battery Hold Down Rod	
69	711-0284		Battery Hold Down Stud	
70	10747		Foot Pad—L.H.	
	10746		Foot Pad—R.H. (not shown)	
71	712-0798		Hex Nut 3/8-16 Thd.*	
72	736-0169		L-Wash. 3/8" Scr.*	
73	710-0344		Hex Scr. 3/8-16 x 1.50" Lg.*	
74	736-0169		L-Wash. 3/8" Scr.*	
75	710-0253		Hex Scr. 3/8-16 x 1.00 Lg.*	
76	712-0287		Hex Nut ¼-20 Thd.*	
77	736-0329		L-Wash. ¼" Scr.*	
78	719-0209		Grille	
79	710-0346		Oval Hd. Scr. ¼-20 x 1.50 Lg.*	
80	09516	—462	Bezel Head Lamp	
81	712-0287		Hex Nut ¼-20 Thd.*	
82	736-0329		L-Wash. ¼" Scr.*	
83	754-0169		Generator Belt 3/8" x 35-3/4" Lg.	
84	731-0130		Ext. Vinyl—21.5" Lg.	
85	10482		Clutch Guard	
86	12739		Locking Clip	

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

(462—Red Flake)
When ordering parts, if color or finish is important use the appropriate color code shown above (e.g. Red Flake Finish—12290 (462).)

NOTE: The engine is not under warranty by the mower manufacturer . . . If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."

149-990A



STEERING ASSEMBLY

PARTS LIST FOR MODEL 149-990A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	723-0185		Steering Wheel	
2	723-0188		Steering Wheel Cap	
3	715-0115		Spring Pin ¼" x 2.50" Lg.	
4	748-0157		Steering Tube Bushing	
5	09535		Steering Rod	
6	10851		Steering Tube Seg. Ass'y.	
8	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
9	737-0479		Grease Fitting	
10	723-0179		Drag Link End	
11	712-0922		Hex Nut ½-20 Thd.*	
12	711-0455		Drag Link	
13	723-0156		Tie Rod End	
14	736-0259		Flat Washer	
15	731-0374		Front Wheel Bearing (2)	
16	714-0142		Cotter Pin	
17	731-0349		Dust Cover	
18	734-0771		Front Wheel Ass'y.—Comp.*	
21	13579		Front Axle Ass'y.—L.H.	
22	712-0200		Elastic Stop Nut ½-20 Thd.*	
23	712-0922		Hex Nut ½-20 Thd.*	
24	712-0711		Hex Jam Nut 3/8-24 Thd.*	
25	711-0454		Tie Rod	
26	737-0479		Grease Fitting	
27	712-0711		Hex Jam Nut 3/8-24 Thd.*	
28	723-0156		Tie Rod End	
29	712-0200		Elastic Stop Nut ½-20 Thd.*	
30	13578		Front Axle Ass'y.—R.H.	
31	737-0479		Grease Fitting	
32	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50" Lg.*	
33	711-0518		Axle Collar	
34	10587		Front Axle Support	
35	710-0335		Pivot Bolt ¾-10 x 4.00" Lg.	
36	712-0205		Elastic Stop Nut ¾-10 Thd.	
37	711-0518		Axle Collar	
38	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50" Lg.*	
39	712-0200		Elastic Stop Nut ½-20 Thd.*	
40	10573		Gear Segment	
42	717-0269		Pinion Gear	
43	715-0101		Spring Pin Spiral ¼ x 1.50" Lg.*	
44	748-0157		Steering Tube Bushing	
45	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
46	710-0489		Hex Scr. ½-13 x 2.00" Lg.*	
47	714-0120		Sq. Key ¼ x 3.00" Lg.*	
48	710-0470		Wheel Lug Bolts ½-20 x 1.50" Lg.	
49	734-0341		Rear Wheel Ass'y.—Comp.	
50	10770		Rear Wheel Hub	
51	710-0531		Sq. Hd. Set Scr. 3/8-16 Thd.*	
53	737-0479		Grease Fitting	
54	716-0122		Snap Ring	

(* see suplement sheet for drawing)

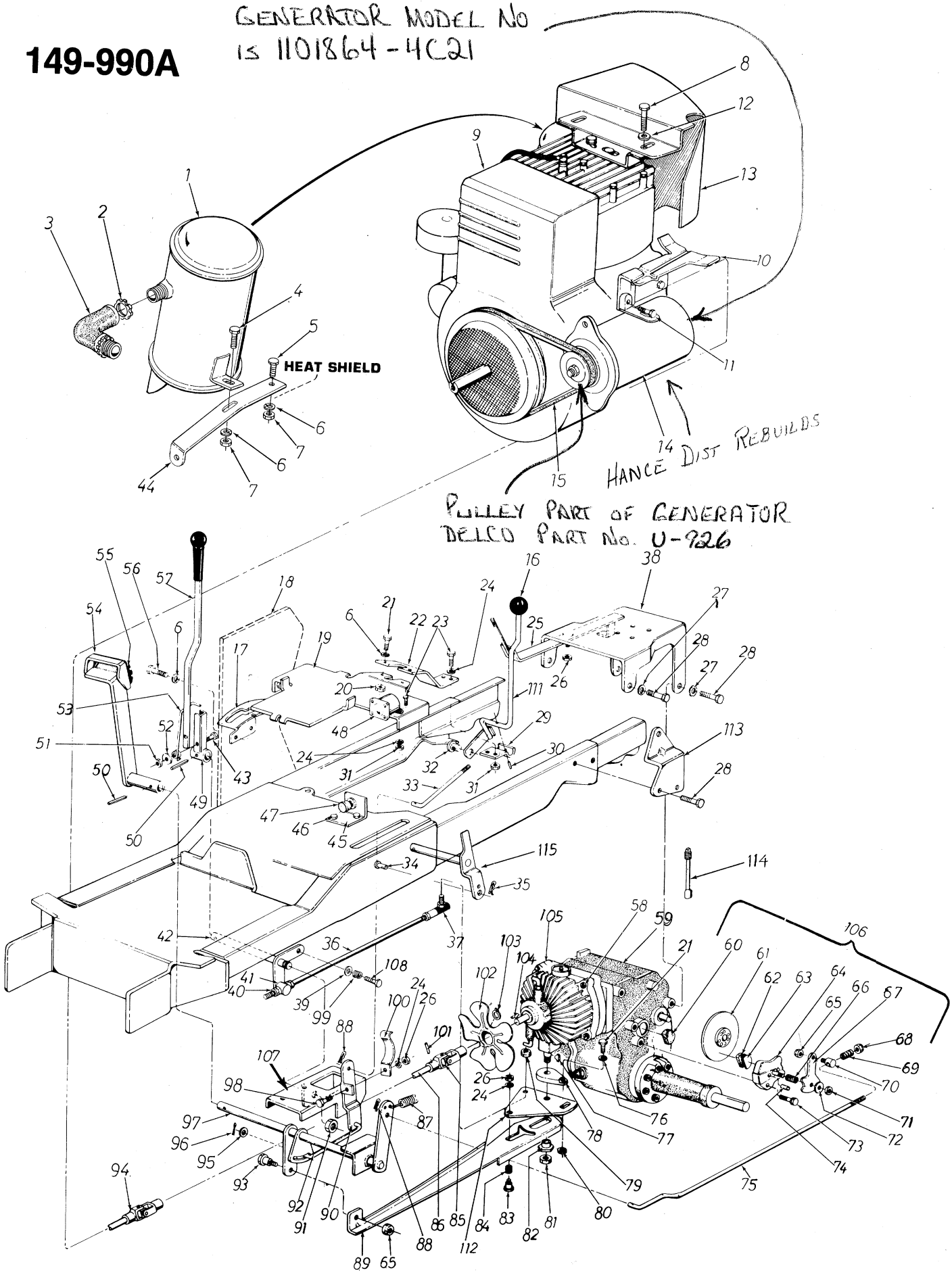
732-0265 - Flat Washer (Used for shimming up segment gear on steering segment.)

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

The engine is not under warranty by the mower manufacturer. If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines — Gasoline."

149-990A

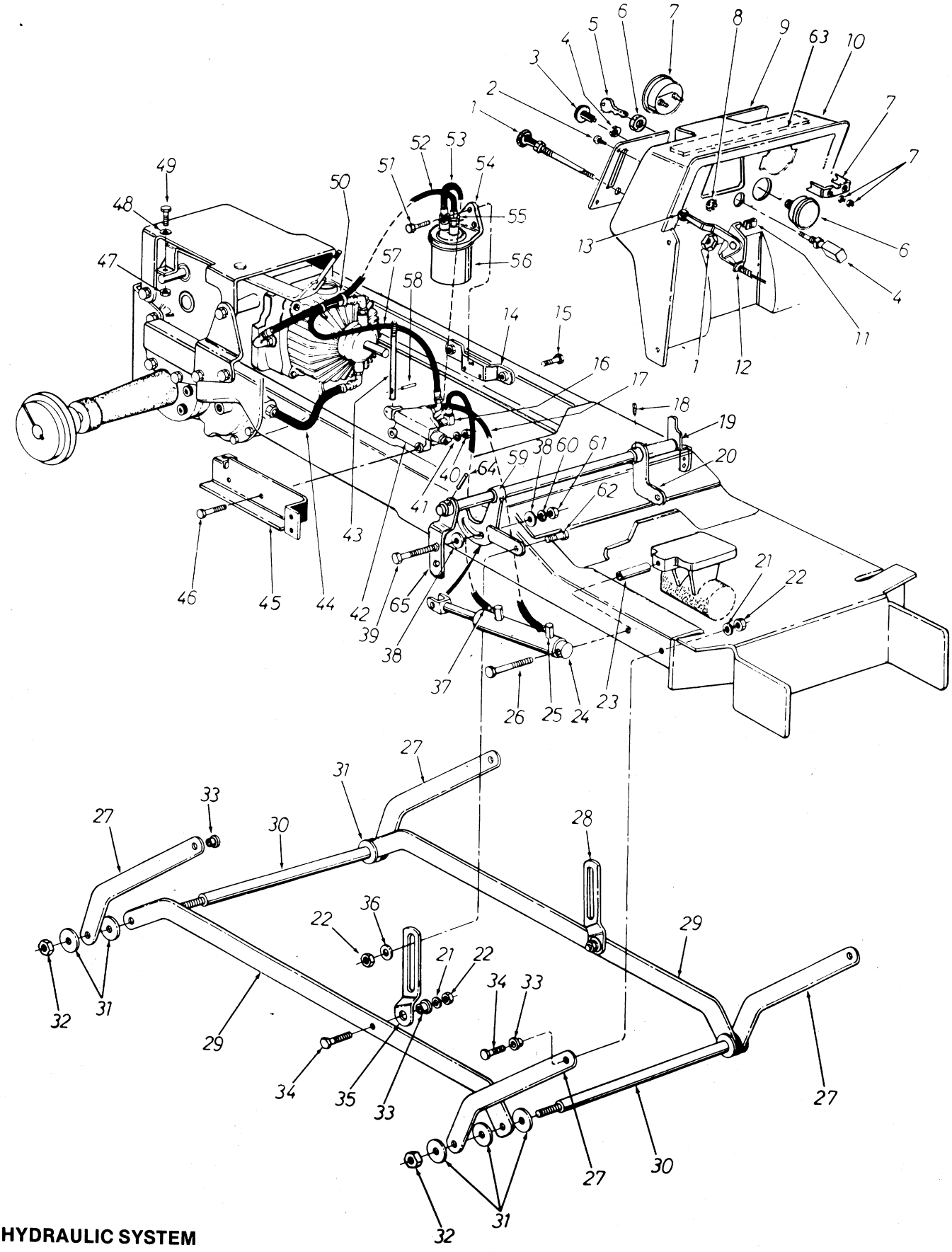
GENERATOR MODEL NO IS 1101864-4C21



PARTS LIST FOR MODEL 149-990A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	751-0191		Muffler Ass'y.	
2	712-0250		Conduit Nut 1.00" I.D. 11.5 Thd.	
3	—		Part of Engine	
4	710-0258		Hex Scr. ¼-20 x .62 Lg.*	
5	710-0258		Hex Scr. ¼-20 x .62 Lg.*	
6	736-0169		L-Wash. 3/8" Scr.*	
7	712-0287		Hex Nut ¼-20 Thd.*	
8	710-0258		Hex Scr. ¼-20 x .62" Lg.*	
9	—		Engine	
10	10725		Fuel Tank Brkt.—Front	
11	710-0198		Hex Sems Scr. 5/16-18 x .75" Lg.*	
12	736-0329		L-Wash. ¼" Scr.*	
13	12910		Heat Shield Ass'y.	
14	725-0144		Starter Generator	
15	754-0169		Generator Belt 3/8" x 35.75" Lg.	
16	720-0165		Gear Shift Knob	
17	10908		Control Index Brkt.	
18	12703		Side Plate—R.H.	
19	10681		Steering Tube Sup. Brkt. Ass'y.	
20	712-0798		Hex Nut 3/8-16 Thd.*	
21	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
22	10683		Selector Lever Support Brkt.	
23	710-0258		Hex Scr. ¼-20 x .62" Lg.*	
24	736-0329		L-Wash. ¼" Scr.*	
25	10713		Shift Lever Ass'y.	
26	712-0429		Hex L-Nut 5/16-18 Thd.	
7	736-0114		Int. L-Wash. ½" Scr.*	
28	710-0493		Hex Scr. ½-13 x 1.00" Lg.*	
29	10705		Selector Lever Support	
30	715-0247		Spirol Pin	
31	712-0287		Hex Nut ¼-20 Thd.*	
32	711-0288		Ferrule	
33	711-0474		Parking Brake Adj. Rod	
34	711-0308		Clevis Pin	
35	714-0117		Hair Pin	
36	710-0454		Control Rod (Thd. Both Ends)	
37	723-0156		Tie Rod End	
38	10675		Seat Brkt. Ass'y.	
39	07387		Fl-Wash.	
40	712-0711		Hex Jam Nut 3/8-24 Thd.	
41	711-0471		Ferrule	
42	11304		Control Shaft Ass'y.	
43	710-0136		Hex Scr. ¼-20 x 1.75" Lg.*	
44	12913		Heat Shield Angle Brace	
45	10710		Switch Brkt.	
46	710-0258		Hex Scr. ¼-20 x .62" Lg.*	
47	725-0277		Safety Switch w/o Brkt.	
48	725-0530		Solenoid	
49	10841		Handle Brkt. Ass'y.	
50	715-0107		Spring Pin Spiral 5/16" Dia. x 1.38" Lg.	
51	712-0324		Elastic L-Nut ¼-20 Thd.*	
52	736-0463		Fl-Wash. ¼" I.D.	
53	732-0231		Torsion Spring	
54	10714		Brake Pedal Ass'y.	
	12378		Pedal Pad	
	710-0216		Hex Scr. 3/8-16 x .75" Lg.*	
57	10734		Control Lever	
58	710-0492		Sock. Hd. Scr. 3/8-16 x 2.75" Lg.	
59	—		Transaxle—Comp.	
60	HH-15-02533		Fric. Pad 1.600" Dia. x .370 Thk.	
61	761-0142		Brake Disc Ass'y.	
62	HH-15-02533		Fric. Pad 1.600" Dia. x .370 Thk.	
63	HH-03-03097		Backup Washer	
64	HH-12-03041		Casting Cam	
65	712-0429		Elastic L-Nut 5/16-18 Thd.	
66	HH-06-03031		Spring Compression .350" Dia. 4 Coils	
67	HH-18-02006		Cam Lever 30°	
68	712-0430		Elastic L-Nut 3/8-16 Thd.	
69	732-0274		Spring (Brake Rod)	
70	711-0471		Ferrule	
71	712-0134		Hex Top L-Nut 5/16-24 Thd.	
72	HH-03-03032		Fl-Wash. .349 I.D. x 1.004 O.D.	
73	710-0216		Hex Scr. 3/8-16 x .75" Lg.*	
74	HH-05-03034		Push Pin .309" Dia. x .857" Lg.	
75	711-0475		Brake Rod	
76	736-0148		Ext. L-Wash. 3/8" Scr.*	
77	714-0131		#5 Hi-Pro-Key 1/8" x 5/8" Dia.	
78	11265		Pintle Control Lever	
79	712-0116		Elastic L-Nut 3/8-24 Thd.	
80	712-0375		Hex Cent. L-Nut 3/8-16 Thd.*	
81	712-0278		Hex Elastic L-Nut ½-13 Thd.	
82	711-0473		Slide Nut	
83	710-0491		Skt. Hd. Shld. Scr. 5/16 x ½"	
84	741-0154		Needle Bearing	
85	717-0171		Universal Joint	
86	10736		Drive Shaft	
87	732-0121		Brake Return Spring	
88	714-0101		Int. Cotter Pin	
89	10711		Control Slide	
90	10709		Parking Brake Crank	
91	712-0221		Elastic L-Nut 5/8-18 Thd.*	
92	10698		Parking Brake Rod—Front	
93	711-0118		Shld. Scr.—Special	
94	717-0170		Universal Joint	
95	736-0300		Fl-Wash.	
96	714-0101		Int. Cotter Pin	
97	10727		Brake Shaft Ass'y.	
98	710-0289		Sems Scr. ¼-20 x .50" Lg.*	
99	732-0108		Compression Spring	
100	09521		Height Adj. Spring	
101	715-0114		Spring Pin Spiral ¼" Dia. x 1.50" Lg.*	
102	731-0317		Fan Ass'y.	
103	716-0123		Snap Ring	
104	714-0388		#61 Hi-Pro-Key 3/16 x 5/8" Dia.	
105	717-0344		Hydrostatic Pump—Comp.	
106	761-0139		Disc Brake Ass'y.—Comp.	
107	10699		Control Brkt. Ass'y.	
108	710-0442		Hex Scr. 5/16-18 x 1.50 Lg.*	
111	10692		Selector Lever Ass'y.	
112	11266		Control Adj. Plate	
113	10678		Axle Support—L.H.	
	10677		Axle Support—R.H	
114	11243		Dipstick	
115	12561		Lift Shaft Ass'y.	

149-990A



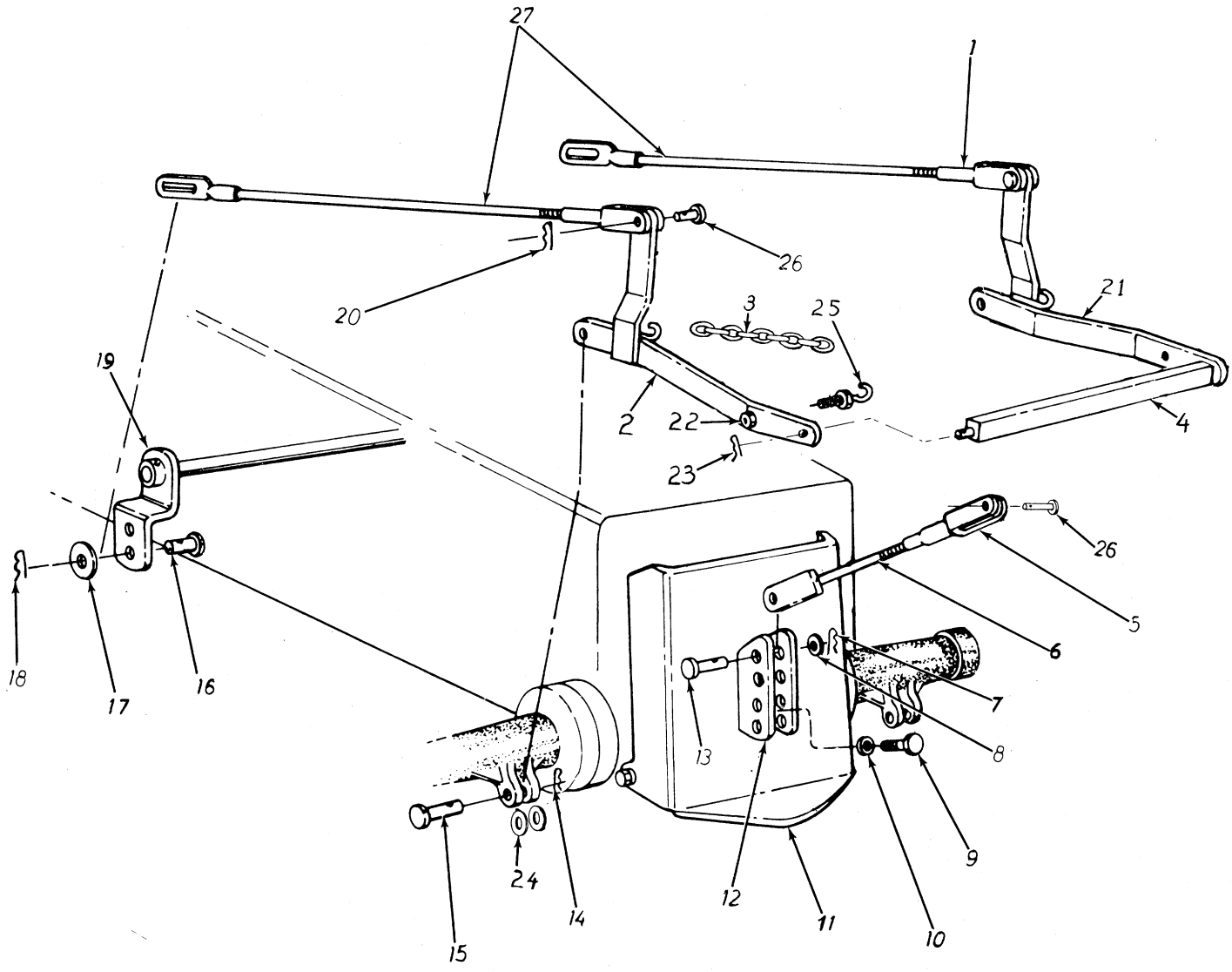
HYDRAULIC SYSTEM

PARTS LIST FOR MODEL 149-990A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	746-0129		Choke Control	
2	710-0351		Phil. Hd. Scr. #10-Type Z x .50" Lg.*	
3	—		Part of Ref. No. 4	
4	725-0202		Light Switch	
5	725-0201		Ignition Key	
6	725-0267		Ignition Key	
7	725-0475		Ammeter	
8	726-0119		Plug Button	
9	09528		Bezel—Instrument Panel	
10	10850		Dash Panel	
11	712-0526		Speed Nut #10-24	
12	746-0130		Throttle Control	
13	720-0166		Throttle Control Knob	
14	10707		Filter Brkt. Ass'y.	
15	710-0198		Hex Sems Scr. 5/16-18 x .75" Lg.*	
16	727-0187		Flare Adapter	
17	727-0182		Hose—Valve to Cyl. Front, Port 31.50" Lg.	
18	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50" Lg.*	
19	12561		Lift Shaft Ass'y.	
20	12553		Lift Arm Ass'y.	
21	736-0300		Fl-Wash. .381 I.D. x .87 O.D. x .059	
22	712-0375		Hex Cent. L-Nut 3/8-16 Thd.	
3	750-0157		Cylinder Spacer	
4	727-0159		Hyd. Cylinder	
25	727-0174		90° Adapter (Cyl. Ports)	
26	710-0496		Hex Scr. ½-13 x 4.50" Lg.*	
27	12559		Lift Arm	
28	12557		Lift Link—L.H.	
29	12560		Lift Arm Link	
30	738-0294		Cross Shaft	
31	736-0179		Fl-Wash. .531 I.D. x 1.25 O.D.	
32	712-0200		Elastic L-Nut ½-20 Thd.	
33	748-0241		Shoulder Spacer	
34	710-0342		Hex Scr. 3/8-16 x 1.25" Lg.*	
35	12558		Lift Link—R.H.	
36	736-0160		Fl-Wash. .531 I.D. x .93 O.D.	
37	727-0183		Hose Valve to Cyl. (Rear Port 26" Lg.)	
38	736-0160		Fl-Wash. .531 I.D.x .93 O.D.	
39	738-0126		Shld. Scr. .498 Dia. x 1.450"	
40	712-0287		Hex Nut ¼-20 Thd.*	
41	736-0329		L-Wash. ¼" Scr.*	
42	727-0200		Lift Valve Ass'y.	
43	11331		Lift Handle Ass'y.	
44	727-0202		Axle to Pump Hose	
45	11341		Lift Valve Brkt. Ass'y.	
46	710-0106		Hex Scr. ¼-20 x 1.25" Lg.*	
47	712-0107		Hex Cent. L-Nut ¼-20 Thd.*	
48	736-0463		Fl-Wash.	
49	710-0106		Hex Scr. ¼-20 x 1.25" Lg.*	
50	725-0157		Cable Tie—Self Locking	
51	710-0322		Hex Sems Scr. 5/16-18 x 1.00" Lg.*	
52	727-0165		Filter Return Hose	
53	727-0201		Valve to Filter Hose	
54	727-0163		Filter Base	
55	727-0173		Pipe Adapter (9/16-18 JIC to 1/2-14 NPTE)	
56	727-0162		Fram—Filter Ass'y. PH-16	
57	727-0167		Pump to Valve Hose	
58	715-0247		Sprg. Pin Rod 3/16" Dia x 1.0" Lg.*	
59	12620		Lift Lever Ass'y.	
60	736-0169		L-Wash. 3/8" Scr.*	
61	712-0130		Hex Ele. L-Nut 3/8-16 Thd.*	
62	738-0297		Shld. Scr. .498 Dia. x .710	
63	12809		Dash Panel Support	
64	715-0118		Spring Pin Spirol	
65	11323		Lift Arm	

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

149-990A

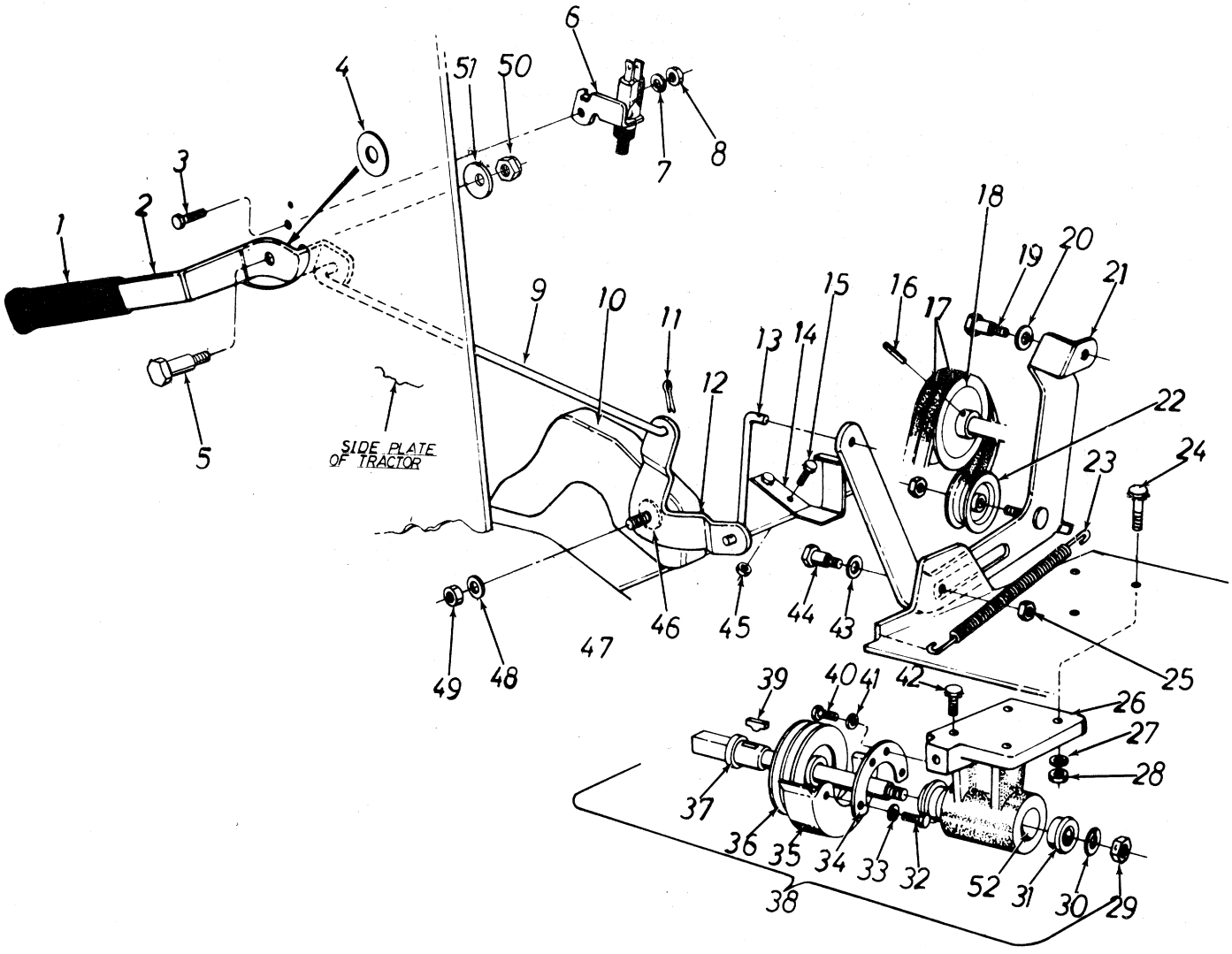


PARTS LIST FOR MODEL 149-990A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	10991		Adjustment Clevis Ass'y.	
2	10986		Draft Bar Ass'y. L.H.	
3	713-0148		Chain—20" Lg.	
4	10996		Draw Bar Ass'y.	
5	10991		Adjustment Clevis Ass'y.	
6	10994		Clevis Scr. Ass'y.	
7	714-0117		Cotter Hair Pin	
8	07387		Fl-Wash. .640 I.D.	
9	710-0216		Hex Scr. 3/8-16 x .75" Lg.*	
10	736-0169		L-Wash. 3/8" Scr.*	
11	10679		Hitch Plate Ass'y.	
12	10993		Upper Hitch Bracket	
13	711-0174		Clevis Pin	
14	714-0117		Cotter Hair Pin	
15	711-0577		Clevis Pin 5/8 x 2.65" Lg.	
16	711-0308		Clevis Pin	
17	736-0179		Fl-Wash. 17/32" I.D.*	
18	714-0117		Int. Cotter Pin 5/8" Dia.	
19	12561		Lift Arm Ass'y.	
20	714-0117		Cotter Hair Pin	
21	10985		Draft Bar Ass'y. R.H.	
22	712-0342		Hex Jam Nut 3/8-16 Thd.*	
23	714-0117		Cotter Hair Pin	
24	07387		Fl-Wash. .640 I.D.	
25	711-0513		Chain Hook	
26	711-0225		Clevis Pin	
27	10729		Lift Pull Rod Ass'y.	

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

149-990A



POWER TAKE-OFF

PARTS LIST FOR MODEL 149-990A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	720-~~0143~~ 147		Grip	
2	12197		P.T.O. Handle	
3	710-0136		Hex Scr. ¼-20 x 1.75" Lg.*	
4	736-0167		Fl-Wash. .656 I.D. x 1.25" O.D.	
5	738-0322		Shld. Scr. .625" Dia. x .217	
6	725-0268		Safety Switch	
7	736-0329		L-Wash. ¼" Scr.*	
8	712-0287		Hex Nut ¼-20 Thd.*	
9	747-0137		P.T.O. Rod	
10	11322		Clutch Pivot Brkt. Ass'y.	
11	714-0507		Cotter Pin 3/32" Dia. x .75" Lg.	
12	11344		Idler Crank	
13	11570		P.T.O. Clutch Rod	
14	09476		Belt Trapout Brkt.	
15	710-0211		Hex Sems Scr. ¼-20 x .75" Lg.*	
16	715-0114		Sprg. Pin Spir. ¼" Dia. x 1.50"	
17	754-0165		V-Belt ½" x 34" Lg. (Matched Set)	
18	756-0176		P.T.O. Engine Pulley	
19	738-0163		Shld. Scr. .625 Dia. x .261	
20	736-0116		Fl-Wash. .635 I.D. x .93 O.D.	
21	11434		P.T.O. Clutch Idler Brkt. Ass'y.	
22	756-0183		Fl-Idler 3.62 O.D.	
23	732-0199		Extension Spring	
24	710-0344		Hex Scr. 3/8-16 x 1.50" Lg.*	
25	712-0375		Hex Center L-Nut 3/8-16 Thd.	
26	717-0219		P.T.O. Housing	
27	736-0169		L-Wash. 3/8" Scr.*	
28	712-0798		Hex Nut 3/8-16 Thd.*	
29	712-0221		Hex Ins. L-Nut 5/8-18 Thd.	
30	736-0158		L-Wash. 5/8" Scr.*	
31	741-0161		Ball Brg. .787 I.D. x 1.85 O.D.	
32	710-0289		Hex Scr. ¼-20 x .50" Lg.*	
33	736-0329		L-Wash. ¼" Scr.*	
34	11327		Belt Guard Mtg. Brkt.	
35	11328		Belt Guard Ass'y.	
36	756-0177		P.T.O. Pulley	
37	738-0156		P.T.O. Shaft	
38	717-0218		P.T.O. Ass'y.—Comp.	
39	714-0113		#A Hi-Pro-Key ¼ x .78" Dia.	
40	710-0289		Hex Scr. ¼-20 x .50" Lg.*	
41	736-0329		L-Wash. ¼" Scr.*	
42	710-0937		Hex Scr. 3/8-16 x 2.50" Lg.*	
43	736-0179		Fl-Wash. .531 I.D. x 1.25 O.D.	
44	738-0143		Shld. Scr. .498" Dia. x .340	
45	712-0107		Hex Cent. L-Nut ¼-20 Thd.	
46	736-0116		Fl-Wash. .635 I.D. x .930 O.D.	
47	710-0198		Hex Sems Scr. 5/16-18 x .75"*	
48	736-0300		Fl-Wash. .385 I.D. x .87 O.D.	
49	712-0130		Hex Ins. L-Nut 3/8-16 Thd.*	
50	712-0130		Hex Ins. L-Nut 3/8-16 Thd.*	
51	736-0219		Belleville Wash. .400 I.D. x 1.13 O.D.	
52	750-0185		Bearing Spacer Tube .836 I.D. x 1.00" O.D. x 2.61 Lg.	

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

WHEEL CHART

REAR WHEEL

PART NO.	DESCRIPTION
734-0341	Wheel Ass'y.—Comp. 27 x 9.50
734-0537	Rim Ass'y. Only
734-0397	Tire Only—Tubeless 27 x 9.50
—	Bearings (Part of Transaxle)
734-0255	Air Valve
10770	Hub Ass'y.

FRONT WHEEL

PART NO.	DESCRIPTION
734-0771	Wheel Ass'y.—Comp. 16 x 6.50
09262	Rim Ass'y. Only
734-0526	Tire Only—Tubeless 16 x 6.50
734-0255	Air Valve
731-0374	Wheel Bearing (2 per wheel)
10457	Hub Ass'y.
734-0253	Inner Tube (Service Only)

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service for all MTD manufactured power equipment are available through the authorized service firms listed below. All orders should specify the model number of your unit, parts number, description of parts and the quantity of each part required.

ALABAMA
BIRMINGHAM
Auto Electric & Carburetor Co. . . 2625 4th Ave. S. 35233
ARKANSAS
NORTH LITTLE ROCK
Sutton's Lawn Mower Shop . . . . Rt. 4 Box 368 72117
FORT SMITH
Mity Mite Motors, Inc. . . . . 2515 Towson Ave. 72901
CALIFORNIA
PORTERVILLE
Billious . . . . . 75 North D Street 93257
SAN BERNARDINO
Lawn Mower Supply Co. . . . . 25608 E. Baseline 92410
SAN FRANCISCO
J.W. Jewett Co. . . . . 981 Folsom St. 94107
SACRAMENTO
Luttig & Severson . . . . . 2030 28th St. 95818
COLORADO
DENVER
South Denver Lawn Equip. . . . . 527 West Evans 80223
FLORIDA
JACKSONVILLE
Radco Distributors . . . . . 2403 Market St. 32206
CORAL GABLES
Moz-All of Florida, Inc. . . . . 365 Greco Ave. 33146
GEORGIA
EAST POINT
East Point Cycle & Key . . . . . 2834 Church St. 30344
ILLINOIS
LYONS
Keen Edge Co. . . . . 8615 Ogden Ave. 60534
INDIANA
ELKHART
Parts & Sales Inc. . . . . 2101 Industrial Pkwy. . 46514
IOWA
DUBUQUE
Power Lawn & Garden Equip. . . . 2551 J.F. Kennedy . . . 52001
LOUISIANA
NEW ORLEANS
Suhren Engine Co. . . . . 8330 Earhart Blvd. . . . 70118
MARYLAND
TAKOMA PARK
Center Supply Co. . . . . 6867 New Hampshire Ave. . 20012
MASSACHUSETTS
SPRINGFIELD
Morton B. Collins Co. . . . . 300 Birnie Ave. 01107
MICHIGAN
MOUNT CLEMENS
Power Equipment Dist. . . . . 36463 South Gratiot . . 48043
LANSING
Lorenz Service Co. . . . . 2500 S. Pennsylvania . 48900
MINNESOTA
MINNETONKA
Hance Distributing Inc. . . . . 11212 Wayzata Blvd. . . 55343
ST. PAUL
Power Tools Inc. . . . . 3771 Sibley Memorial Hwy. . 55122
MISSISSIPPI
BILOXI
Biloxi Sales & Service, Inc. . . . . 506 Caillavet St. 39533
MISSOURI
KANSAS CITY
Automotive Equip. Service . . . . . 3117 Holmes St. 64109
ST. JOSEPH
Ross-Frazier Supply Co. . . . . 8th and Monteray 64503
ST. LOUIS
Henzler, Inc. . . . . 2015 Lemay Ferry Rd. . 63125
NEW JERSEY
BELLMAWR
Lawnmower Parts Inc. . . . . 717 Creek Rd., P.O. Box 7 . 08030
RUTHERFORD
Feld Distributor . . . . . 28 Glen Rd. 07070
NEW YORK
CARTHAGE
Gamble Dist., Inc. . . . . West End Ave. 13619
SYRACUSE
GTP Leisure Products Inc. . . . . 420 Marcellus St. 13204
NORTH CAROLINA
GREENSBORO
Dixie Sales Company . . . . . 327 Battleground Ave. 27402
GOLDSBORO
Smith Hardware Co. . . . . 515 N. George St. 27530
OHIO
WADSWORTH
National Central . . . . . 687 Seville Rd. 44281
CLEVELAND
Bleckrie, Inc. . . . . 7900 Lorain Ave. 44102
CARROLL
Stebe's Mid-State Mower Supply. Box 366-71 High St. . . 43112
YOUNGSTOWN
Burton Supply Co. . . . . 1301 Logan Ave. Box 929 . 44501
OKLAHOMA
MUSKOGEE
Victory Motors, Inc. . . . . 605 S. Cherokee. 74401
OKLAHOMA CITY
Forest Sales Inc. . . . . 1039 NW 63rd St. 73116
ADA
Ada Auto Supply . . . . . 301 E. 12th St. 74820
OREGON
PORTLAND
Kenton Supply Co. . . . . 8216 N. Denver Ave. . . 97217
PENNSYLVANIA
CHESTER
Stull Equipment Corp. . . . . 742 W. Front St. 19013
HARRISBURG
EECO Inc. . . . . 4021 N. 6th St. 17110
PHILADELPHIA
Thompson Rubber Co. . . . . 5222-24 N Fifth St. . . . 19120
PITTSBURGH
Bluemont Co. . . . . 11125 Frankstown Rd. 15235
TENNESSEE
KNOXVILLE
Master Repair Service . . . . . 2423 Broadway, N.E. . 3791
MEMPHIS
Memphis Cycle & Supply Co. . . . 421 Monroe Ave. 3810
American Sales & Service, Inc. . . 1922 Lynnbrook 38116
TEXAS
DALLAS
Marr Brothers, Inc. . . . . 423 E. Jefferson. 75203
HOUSTON
Bullard Supply Co. . . . . 2409 Commerce St. . . . 77003
SAN ANTONIO
Catto & Putty, Inc. . . . . P.O. Box 2408 78206
FORT WORTH
Woodson Sales Corp. . . . . 1702 N. Sylvania 76111
UTAH
SALT LAKE CITY
A-1 Engine & Mower Co. . . . . 437 E. 9th St. 84111
VERMONT
BURLINGTON
Vermont Hdwe. Co. Inc. . . . . 180 Flynn Ave. 05401
VIRGINIA
RICHMOND
RBI Corp. . . . . 963 Myers St. 23260
WASHINGTON
SEATTLE
Bailey's Inc. . . . . 1414 14th Ave. 98122
WEST VIRGINIA
CHARLESTON
Young's, Inc. . . . . 233 Virginia St., E. . . . 25301
WISCONSIN
APPLETON
Automotive Supply Co. . . . . 123 S. Linwood Ave. . . 54911

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should handled by your nearest authorized engine service firm. Check t yellow pages of your telephone directory under the listing **Engines—Gasoline**, Briggs & Stratton or Tecumseh Lauson.

WARRANTY PARTS AND SERVICE POLICY

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES

1. **Replacement of Missing Parts** on new equipment.
2. **Replacement of Defective Parts** within the warranty period.
3. **Repair of Defects** within the warranty period.

All claims MUST be substantiated with the following information:

1. **Model Number** of unit involved.
2. **Date** unit was purchased or first put into service.
3. **Date of failure.**
4. **Nature of failure.**