

Owner's Operating Service Instruction Manual

10¢

**Model No.
146-960A**

- ASSEMBLY
- OPERATION
- REPAIR PARTS

16 H.P. GARDEN TRACTOR

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.

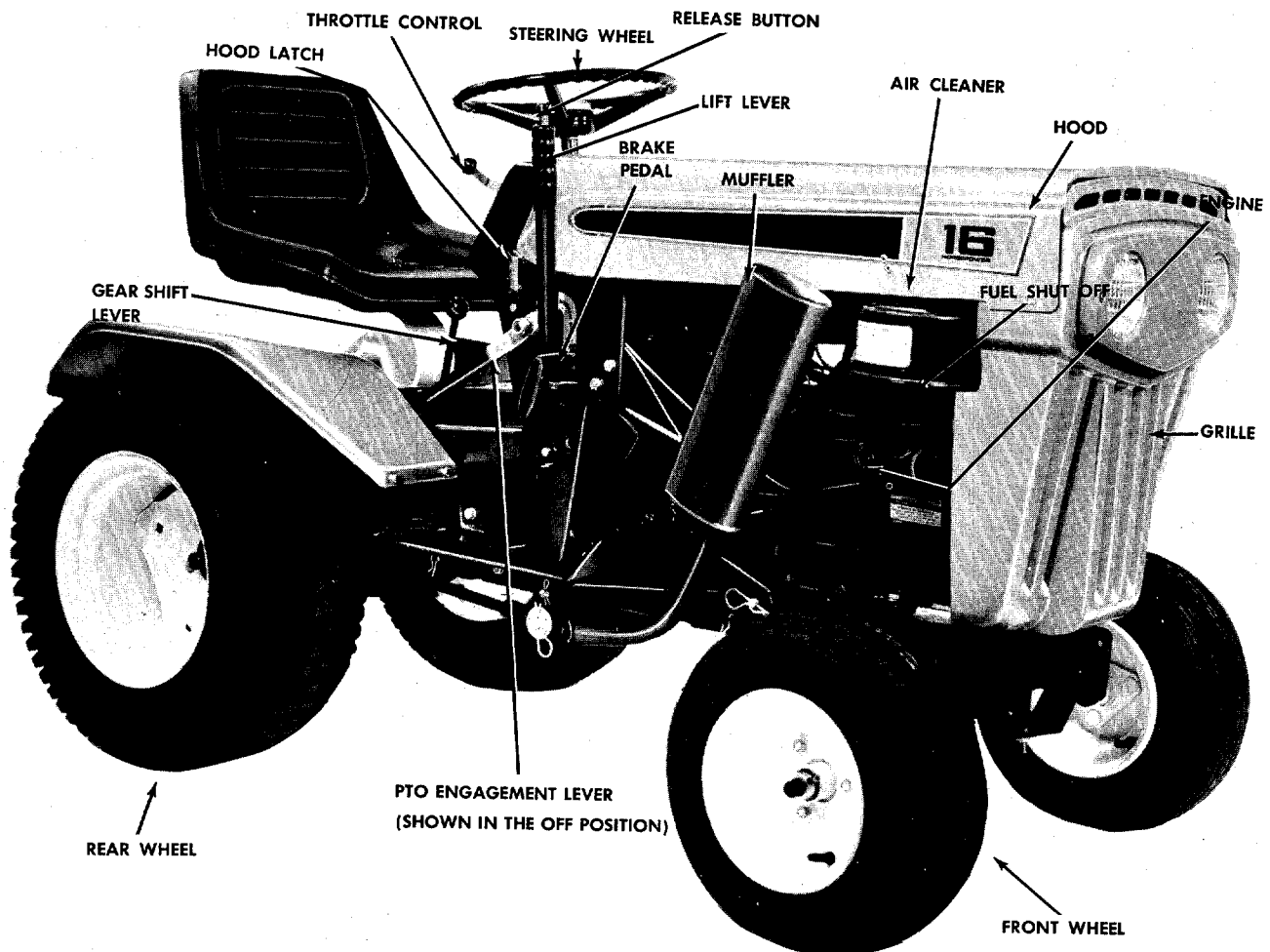
SAFE OPERATION PRACTICES FOR RIDING VEHICLES

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.
3. Do not carry passengers. **Keep children and pets a safe distance away.**
4. Clear work area of objects which might be picked up and thrown.
5. Disengage all attachment clutches and shift into neutral before attempting to start engine.
6. Disengage power to attachment(s) and stop engine before leaving operator position.
7. Disengage power to attachment(s) and stop engine before making any repairs or adjustments.
8. Disengage power to attachment(s) when transporting or not in use.
9. 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.
10. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face.
11. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
12. Stay alert for holes in terrain and other hidden hazards.
13. 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.
14. Watch out for traffic when crossing or near roadways.
15. When using any attachments never direct discharge of material toward bystanders nor allow anyone near vehicle while in operation.
16. 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.
17. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in owner's manual.
18. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
19. 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.
20. To reduce fire hazard keep engine free of grass, leaves or excessive grease.
21. 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.
22. Do not change the engine governor settings or overspeed the engine.
23. 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 engine off when removing grass catcher and/or unclogging chute.
 - (4) Check blade mounting bolts for proper tightness at frequent intervals.
24. Check grass catcher bags frequently for wear or deterioration. Replace with new bags for safety protection.
25. Look behind to make sure the area is clear before placing the transmission in reverse and backing up.

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KNOW YOUR TRACTOR



BATTERY INFORMATION

For Electric Start Models



WARNING

- 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.



DANGER

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 1/2 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.



CAUTION

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. 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.

LIMITED WARRANTY

For ninety (90) days of original retail purchase, the battery carries a limited warranty against faulty material or workmanship by the battery manufacturer.

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.

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

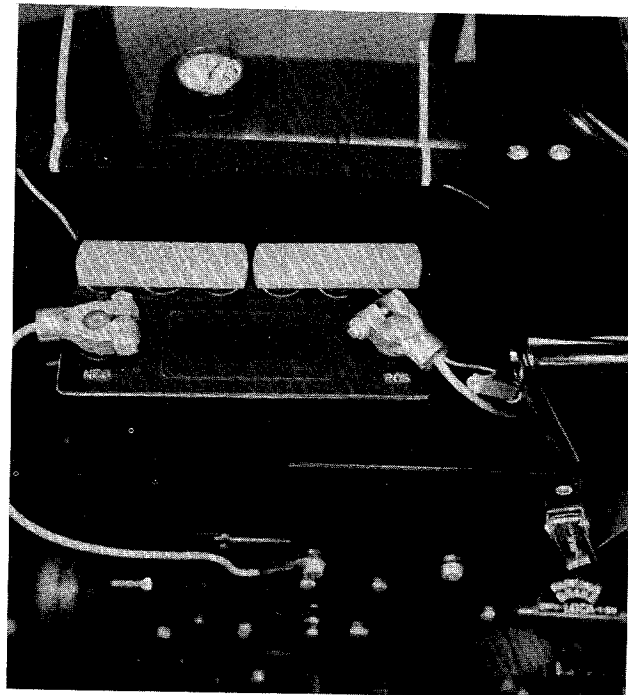


Figure 1

5. Place the battery hold down assembly over the battery and slide the battery into place. (See figure 3.) (The battery caps have been removed for clarity.)
6. Hook the hold down rods into the battery case and tighten finger tight. (Do not overtighten.)

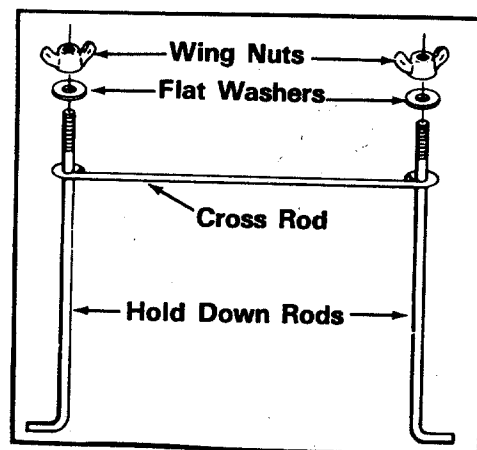


Figure 2

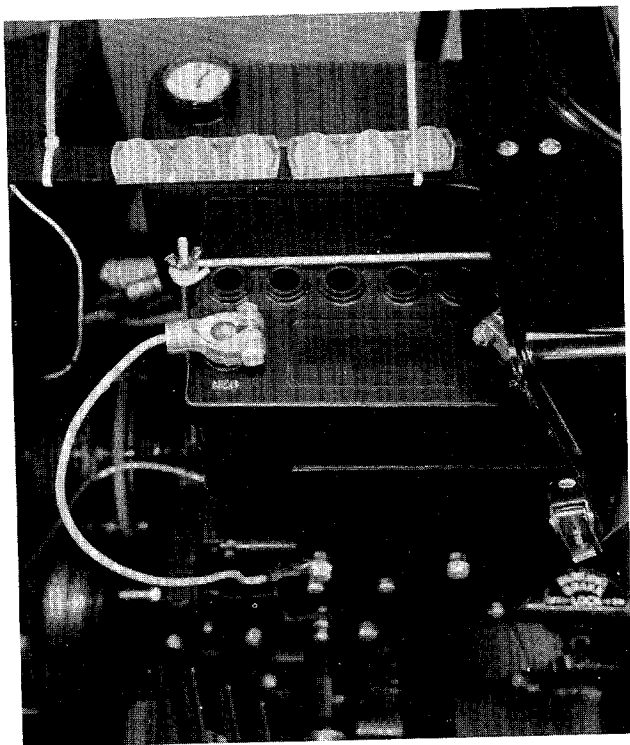


Figure 3

Assembling the Three Point Hitch

NOTE

Use the three point hitch only for the rear attachments such as the mold-board plow, disc and cultivator. 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 27½ inches. (See figure 4.)

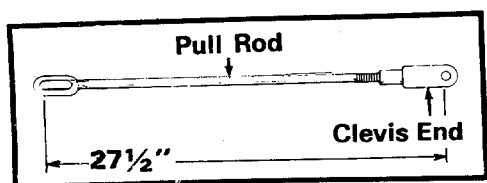


Figure 4

2. Assemble the two draft bars as shown. (Refer to figure 6 to determine which is the right and left draft bars.) Secure with cotter hairpins. (See figure 5.)

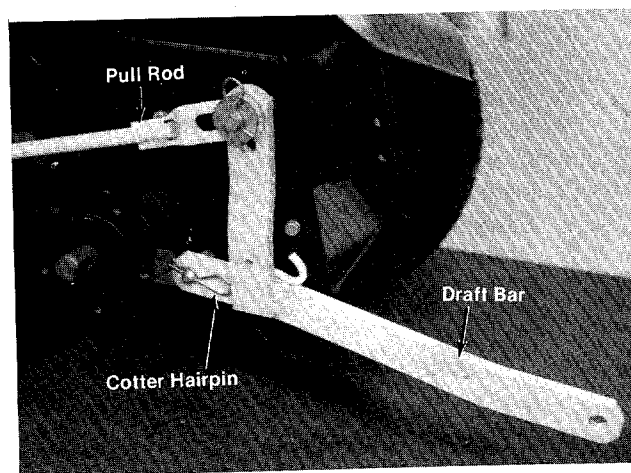


Figure 5

3. Attach the flat end of the pull rod to the top hole in the draft bar with a clevis pin, flat washer and secure with cotter hairpin. (See figure 5.)
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 the 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.)

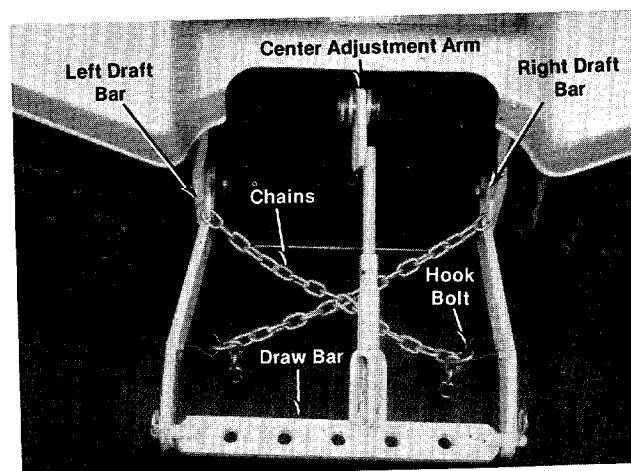


Figure 6

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.)

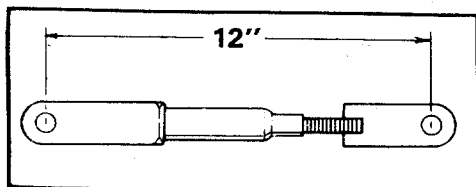


Figure 7

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.

OPERATION



CAUTION

1. Keep all shields and guards in place.
2. Before leaving operator's position:
 - 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 $\frac{3}{4}$ 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

The choke control is located under the throttle and is operated manually. Details for the choke operation are covered in the Engine Operating and Maintenance manual.

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.



CAUTION

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.

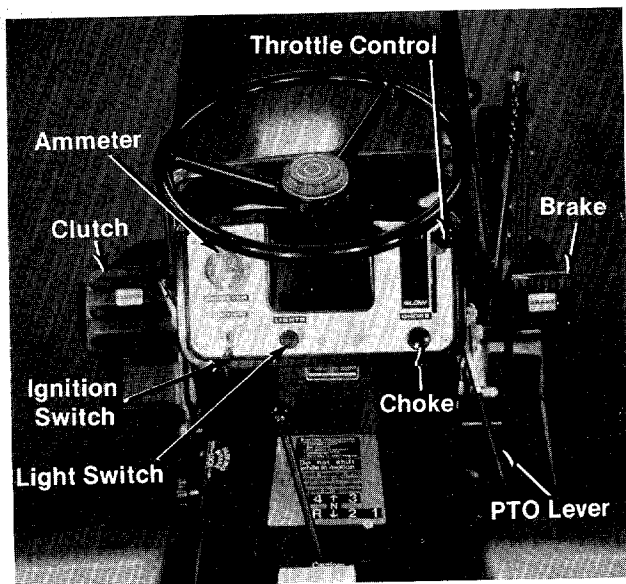


Figure 8
Power Take Off Operation (PTO)

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.)

The rear PTO is operated by the PTO lever. (See figure 8.)

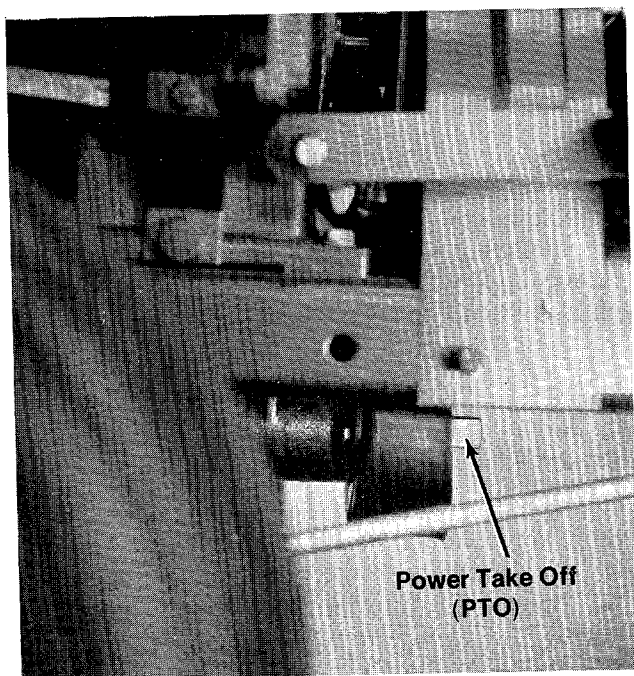


Figure 9



NOTE

The PTO lever must be in the DISEN-GAGED position to start the engine.

Clutch Pedal

The clutch pedal is located on the left side of the tractor. Depressing the pedal operates the clutch and disconnects the power from the engine to the transaxle. The clutch must be depressed to start the engine, shift gears or stop the tractor. (See figure 10.)

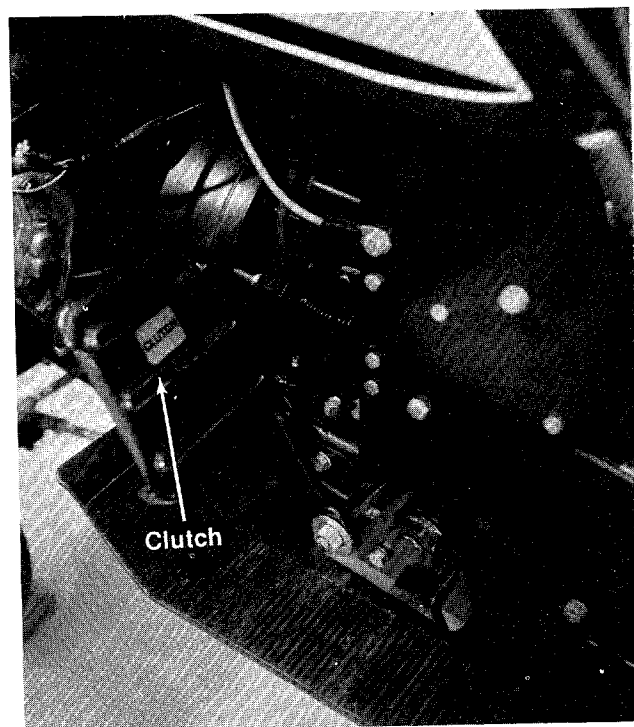


Figure 10

Brake Pedal

The brake pedal is located on the right side of the tractor. Depressing the pedal operates the brake to stop the tractor. The clutch pedal should also be depressed when coming to a complete stop. (See figure 11.)

Parking Brake

The parking brake knob is located on the low left side of the tractor. To operate, depress the brake pedal completely and lock it by turning the parking brake knob clockwise until it tightens.

To release the parking brake, depress the brake pedal and turn the parking brake knob counter-clockwise one turn. Release the brake pedal slowly. (See figure 12.)

Gear Shift Lever

The transmission has four forward positions, neutral and reverse. You do not shift through the gears on this transaxle as you would on an automobile. Pre-select the gear appropriate for the job you are doing. You must depress the clutch pedal and come to a stop before shifting gears.

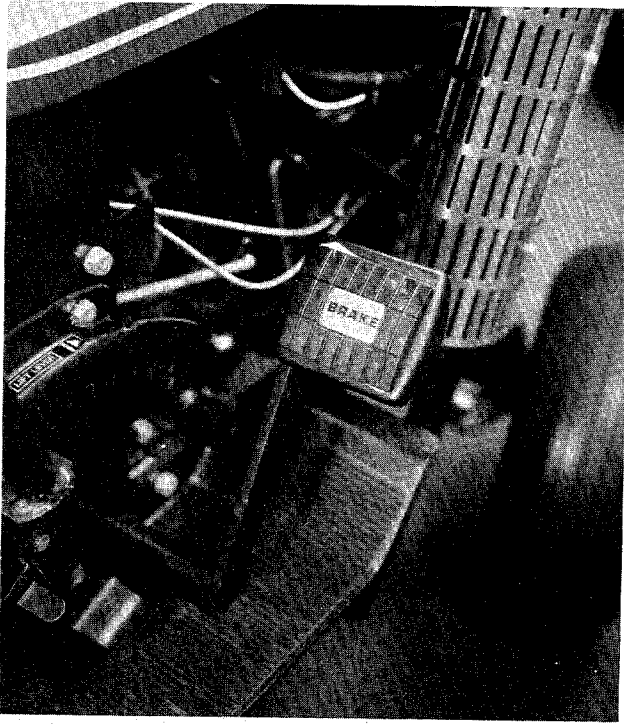


Figure 11



NOTE

Because of the safety interlock system it is necessary to depress the clutch pedal and disengage the PTO lever before the engine will start.

The following can be used as a guide to select the proper gear position:

- 1st Rotary Tilling
Heavy Snow Removing
Heavy Plowing
- 2nd Normal Rotary Tilling
Normal Snow Removing
Plowing
Heavy Grass Cutting
- 3rd Medium Grass Cutting
- 4th Light Grass Cutting
Traveling

A lock is provided to accidentally prevent engaging the first gear. To engage the first gear, lift and swing the lockout away and move the gear shift into position.

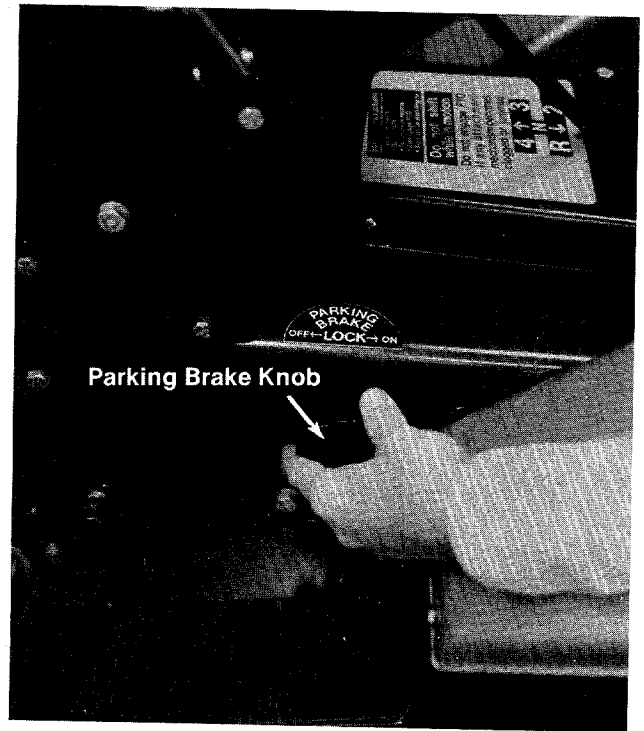


Figure 12

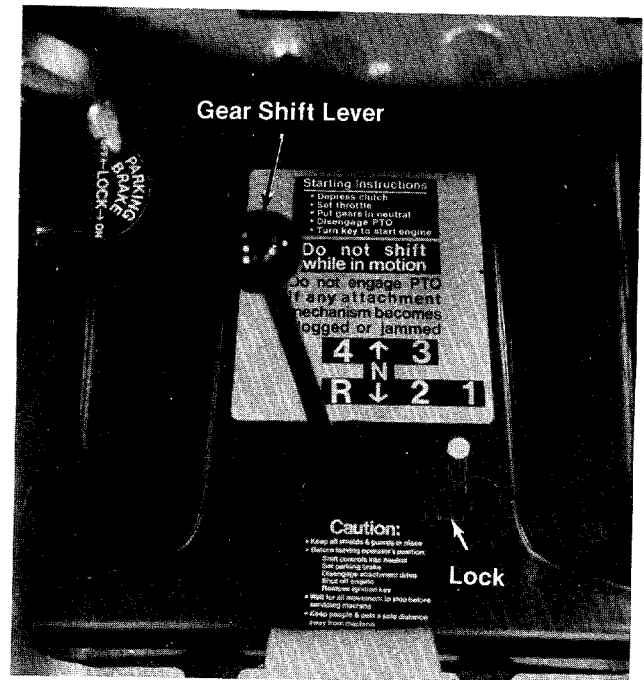


Figure 13



► **NOTE**

When using second gear, do not move the gear shift lever all the way against the lock. You may overshift causing the teeth to grind on the first gear and cause damage to the transaxle. Second gear has a detent which can be felt when correctly in gear.

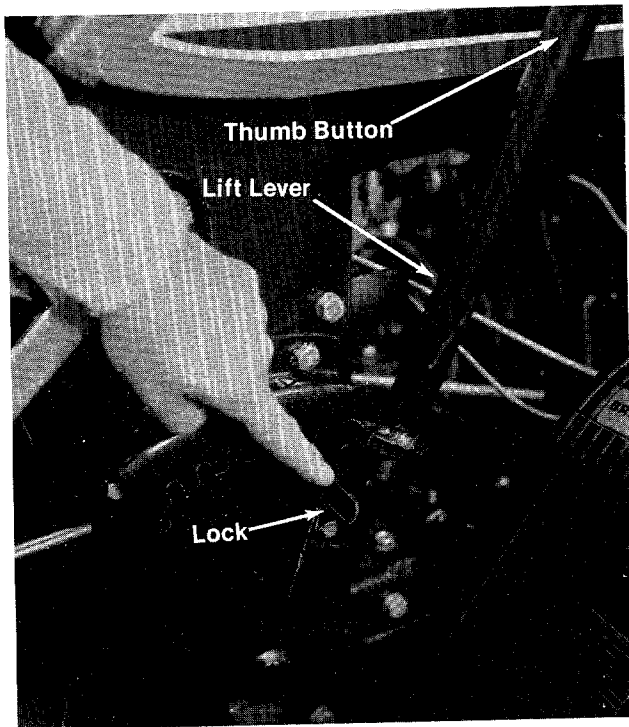


Figure 14

Lift Lever

The nine position lift lever is used to change the operating position of all the front, center and rear mounted attachments. To operate, depress the thumb button, move the lift lever to the desired position and release the button.

The lift lever has a lockout used to allow free floating of the lift lever when using the snow blade. To operate the lockout, depress the thumb button and lock it down. (See figure 14.)

MAINTENANCE

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.

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.)

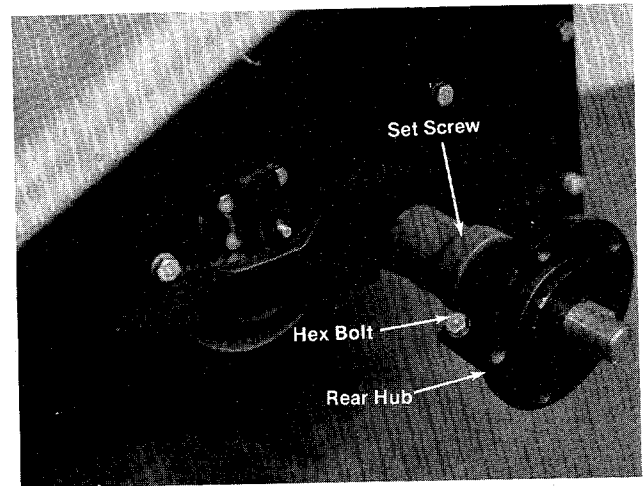


Figure 15

Seat Adjustment

The seat is adjustable forwards or backwards by loosening the nut on the carriage bolt under the seat and sliding it in either direction. Tighten the nut after you obtain the desired position. (See figure 16.)

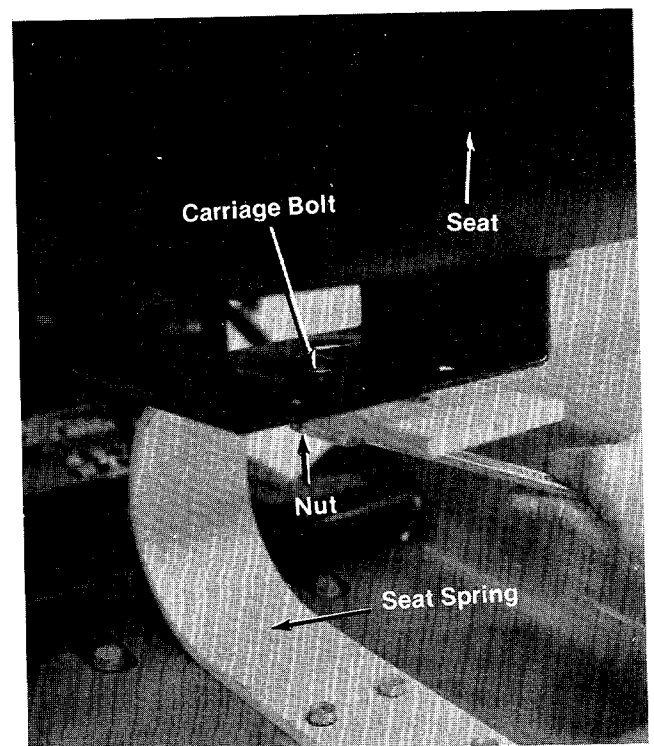


Figure 16

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

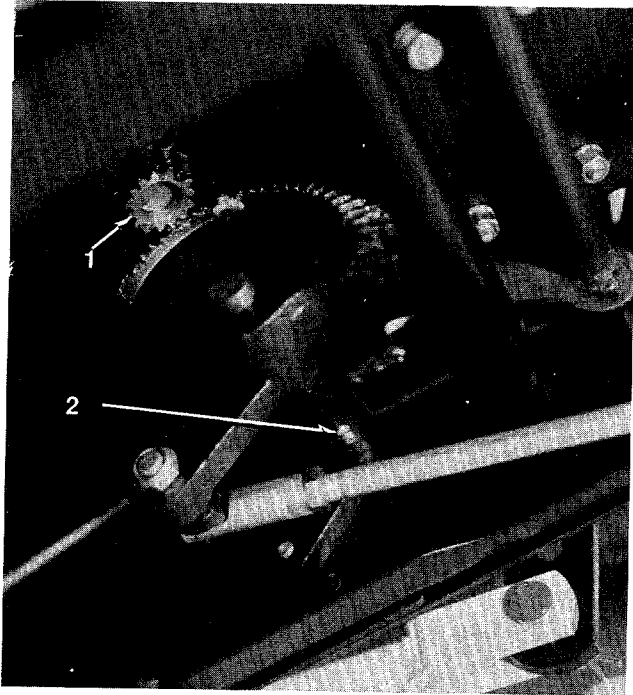


Figure 17

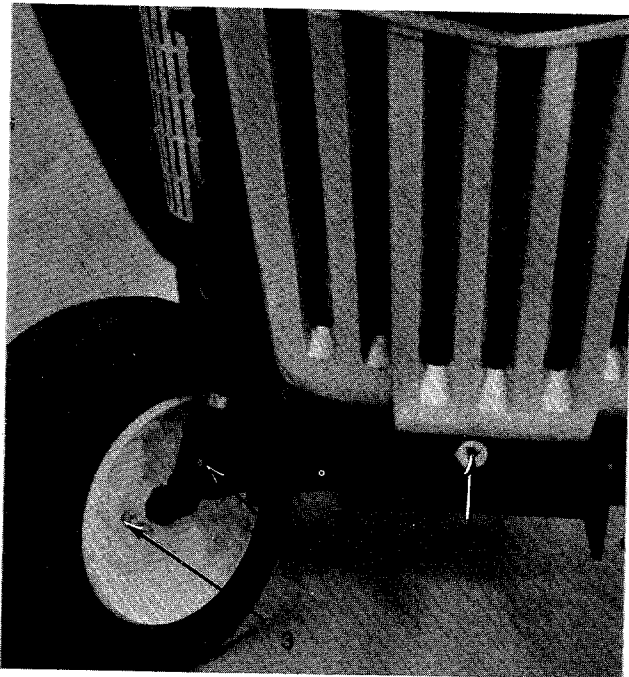


Figure 18

LUBRICATION

Item numbers 1 through 7 must be lubricated once a year with multi-purpose automotive grease.

Steering Gear 1—(See figure 17.)

Steering Arm 2

Wheel Bearings 3—(See figure 18.)

King Pin 4

Pivot Bolt 5

Pivot Bar 6—One fitting on each side of the tractor. (See figure 19.)

Clutch Pedal 7

Transaxle 8—Check oil level four times a year. Lubricant should be at the point of overflowing. Use SAE E.P. 90 oil. Drain and refill every two years. The capacity is 4 pints of oil. (See figure 20.)

Right Angle Drive 9—Check lubricant level only if the clutch assembly is removed from the tractor or if any grease leaks from the unit.

To add lubricant remove the four screws holding the cover, remove the old grease and fill with 6 ounces of E.P.G. Lithium grease. (See figure 21.)

Engine—See the Engine Operating and Maintenance manual.

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

PTO linkage and pivot points.

Steering column bearings.

Lift lever mechanism.

Chain from the clutch pedal to the throwout yoke.

Throttle and choke cables. (Wipe with an oil soaked rag) (See parts list.)

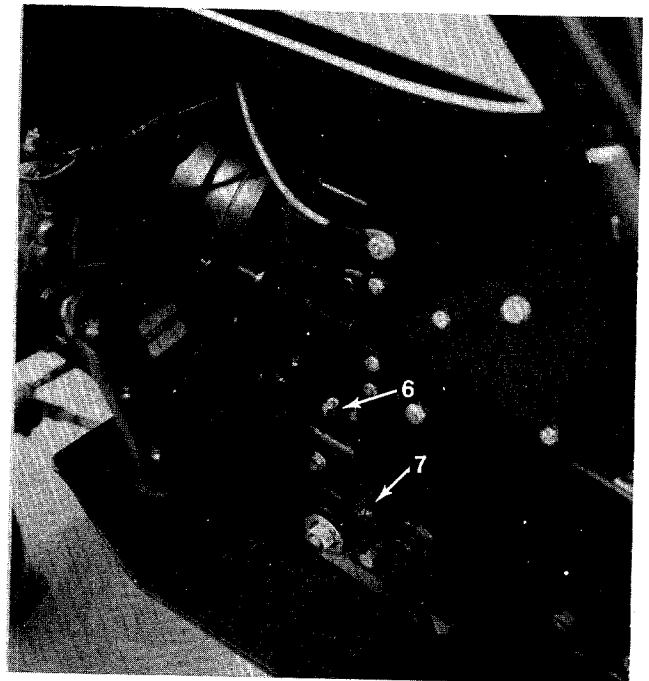


Figure 19

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

PTO spindles
Tie Rod Ends
Drag Link Ends
Clutch pilot bearing
Clutch throwout bearing

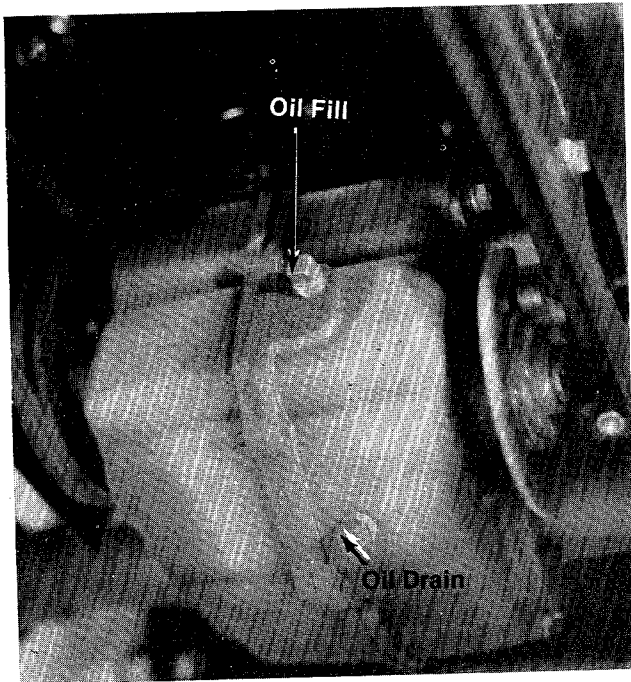


Figure 20

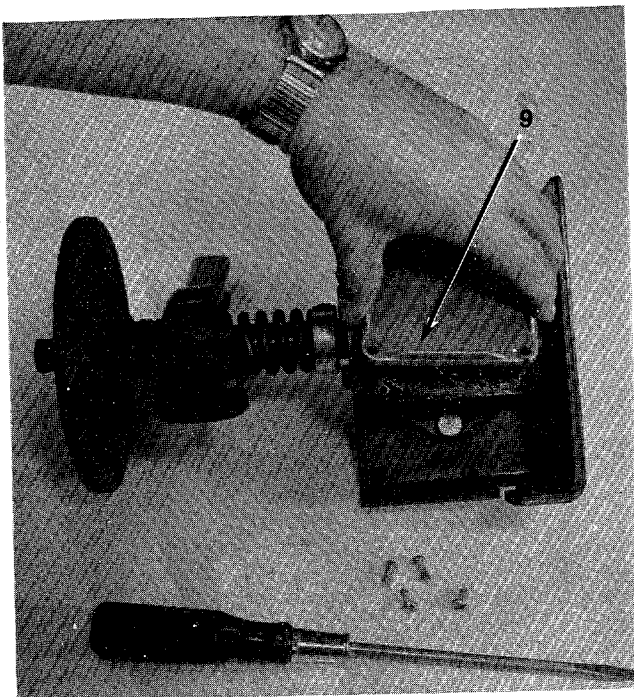


Figure 21

Clutch Adjustment



WARNING

Remove the spark plug from the engine when adjusting the clutch.

1. Rotate the clutch disc by hand and tighten the elastic locknut (See figure 22.) until the bearing stops rotating. (See figure 23.)



NOTE

All the play has been removed from the throwout assembly when the bearing stops turning.

2. Loosen the elastic locknut just enough for the bearing to rotate freely as you rotate the clutch disc.

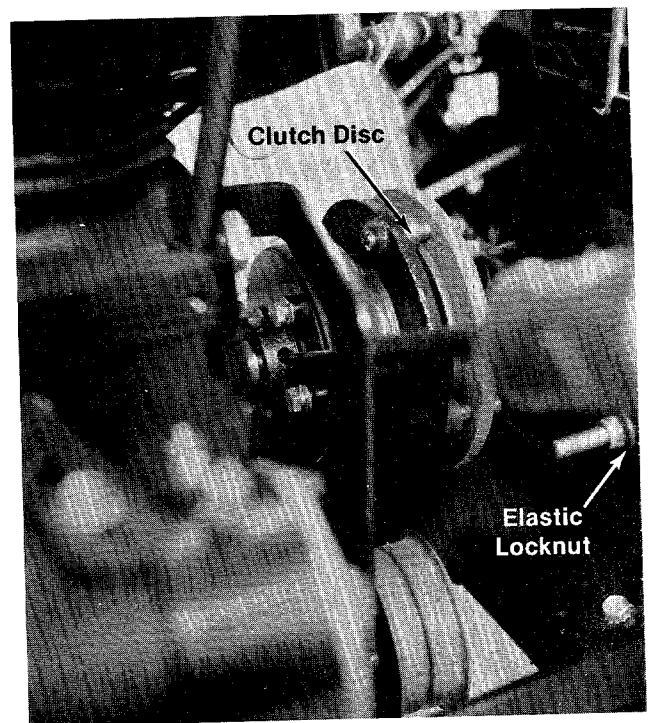


Figure 22

3. To check the disengagement of the clutch without starting the engine depress the clutch pedal with one hand and using the other hand, try to rotate the small spring located between the pressure plate and the throwout assembly. The spring should rotate. If not, repeat steps 1 and 2. (See figure 24.) If the correct adjustment cannot be obtained, refer to the troubleshooting chart.

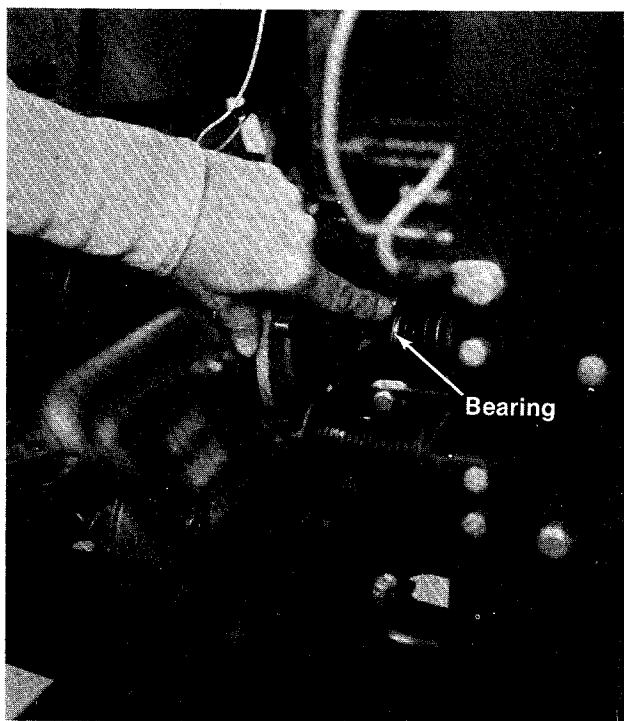


Figure 23

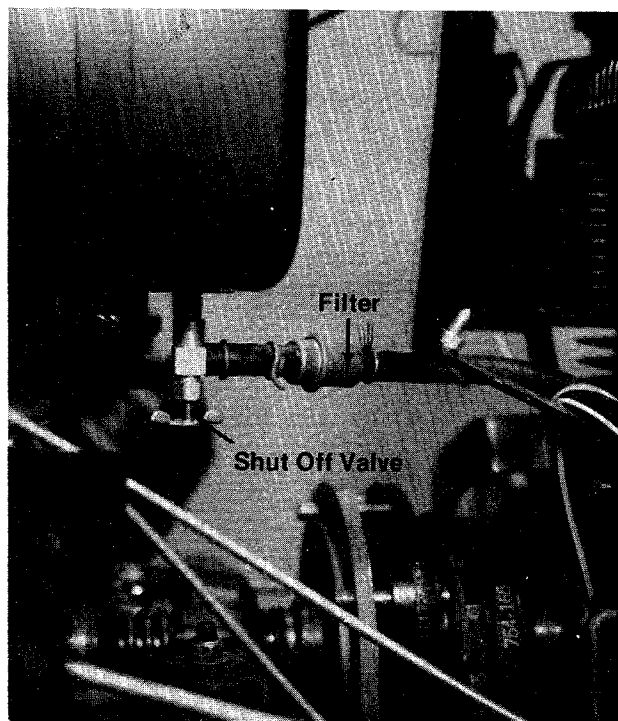


Figure 25

The in-line gasoline filter is located next to the shut off valve. Under normal usage, replace the filter every two years. (See figure 25.)

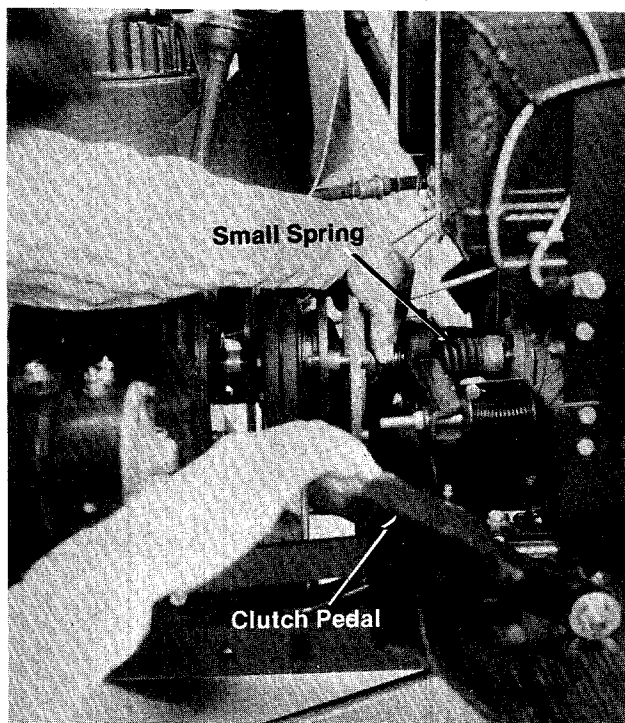


Figure 24

Fuel Filter and Shut Off

The fuel shut off valve is located under the gasoline tank. Turn the handle clockwise (in) to shut off the fuel flow. Turn counterclockwise to turn on the fuel.

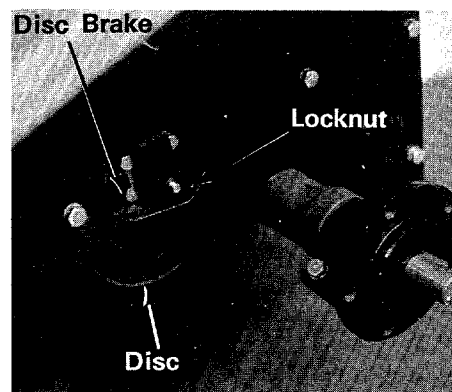


Figure 26

Disc Brake Adjustment

The disc brake is located on the left side of the transaxle. To adjust, tighten the locknut. (See figure 26.) (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.

Battery

Troubleshooting. See the troubleshooting chart on page 18.

Transaxle Drive Belt

Adjustment—The tension on the belt is increased by unscrewing the leveler screw. Adjust until you obtain a $\frac{1}{2}$ " deflection when you apply 10 pounds of force midway between the two pulleys. Lock the leveler screw in place by tightening its locknut.

Removal—Screw the leveler screw all the way in until the idler is loose and remove the belt. (See figure 27.)

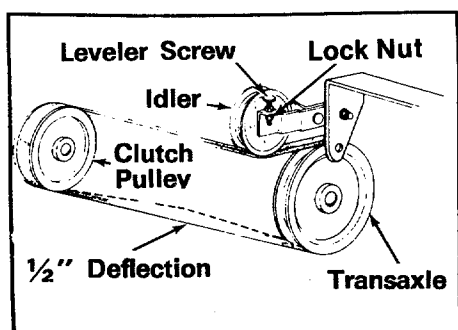


Figure 27

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 $\frac{1}{4}$ " 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 towards the engine and remove the belt. Install a new belt and set the tension as outlined in the adjustment paragraph. (See figure 28.)

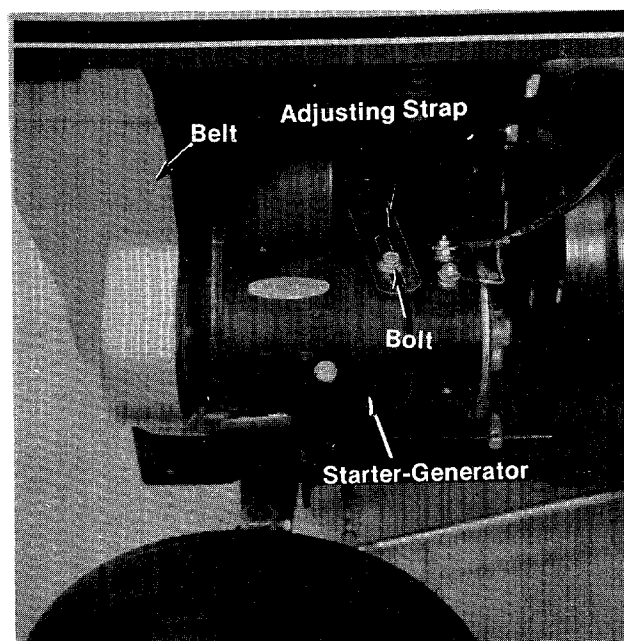


Figure 28

Wheel Alignment

The front wheels should toe-in approximately $\frac{1}{8}$ ".

Measure the distances A and B on the front wheels. (See figure 29.)



NOTE

Dimension B should be approximately $\frac{1}{8}$ 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 30.)

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

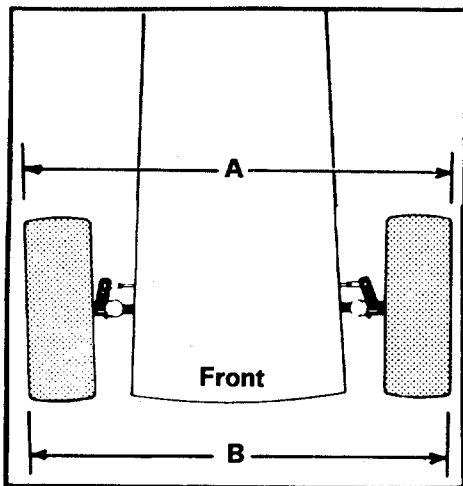


Figure 29

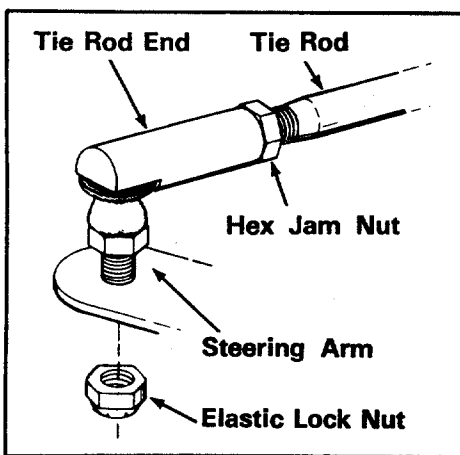


Figure 30

Power Take Off (PTO)

Belt Removal

1. Remove the clutch guard.
2. Drive out the roll pin with a drift and a hammer. (See figure 31.)
3. Remove the four cap screws from the inside of the pulley.
4. Slide the front half of the pulley forward and the back half of the pulley backwards. Remove the belts through the two halves. (See figure 32.)
5. Remove the lower belt guard on the PTO and remove the belts. (See figure 33.)
6. Reassemble in reverse order.

NOTE

PTO belts must be replaced using matched sets.

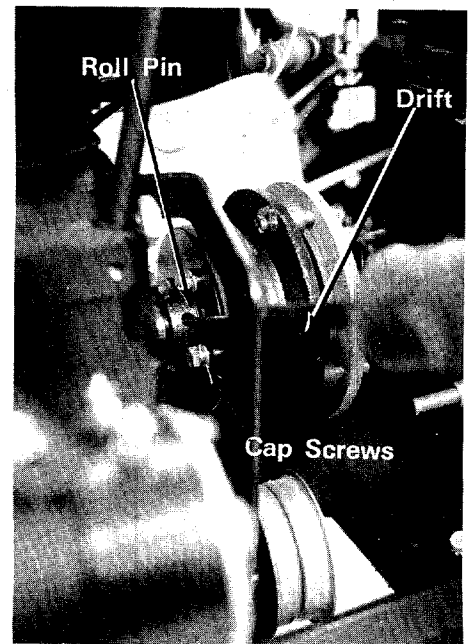


Figure 31

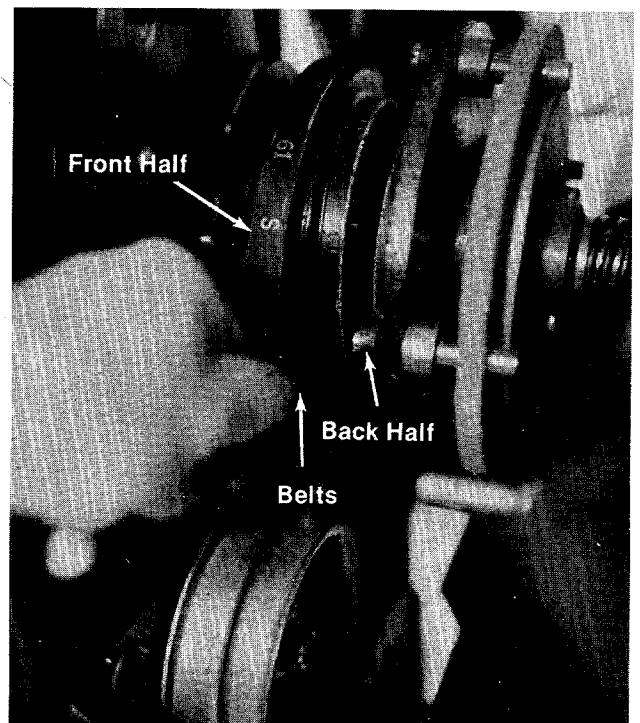


Figure 32

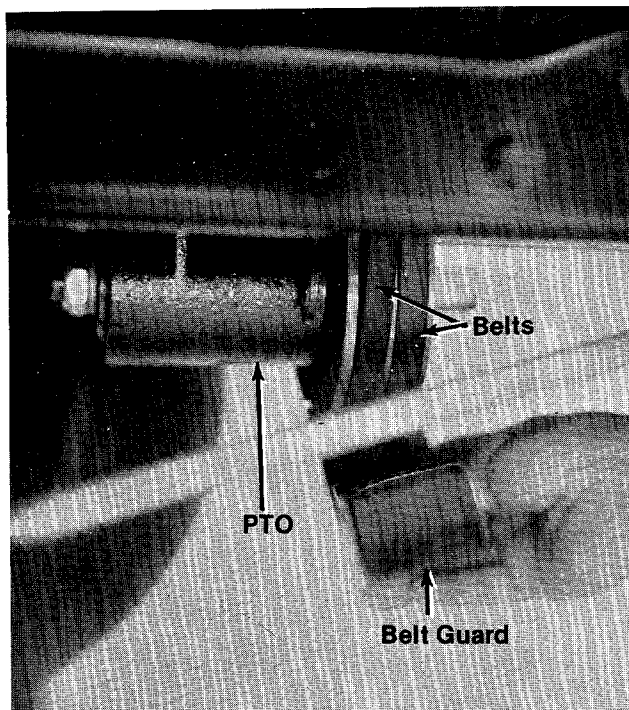


Figure 33

Clutch Removal

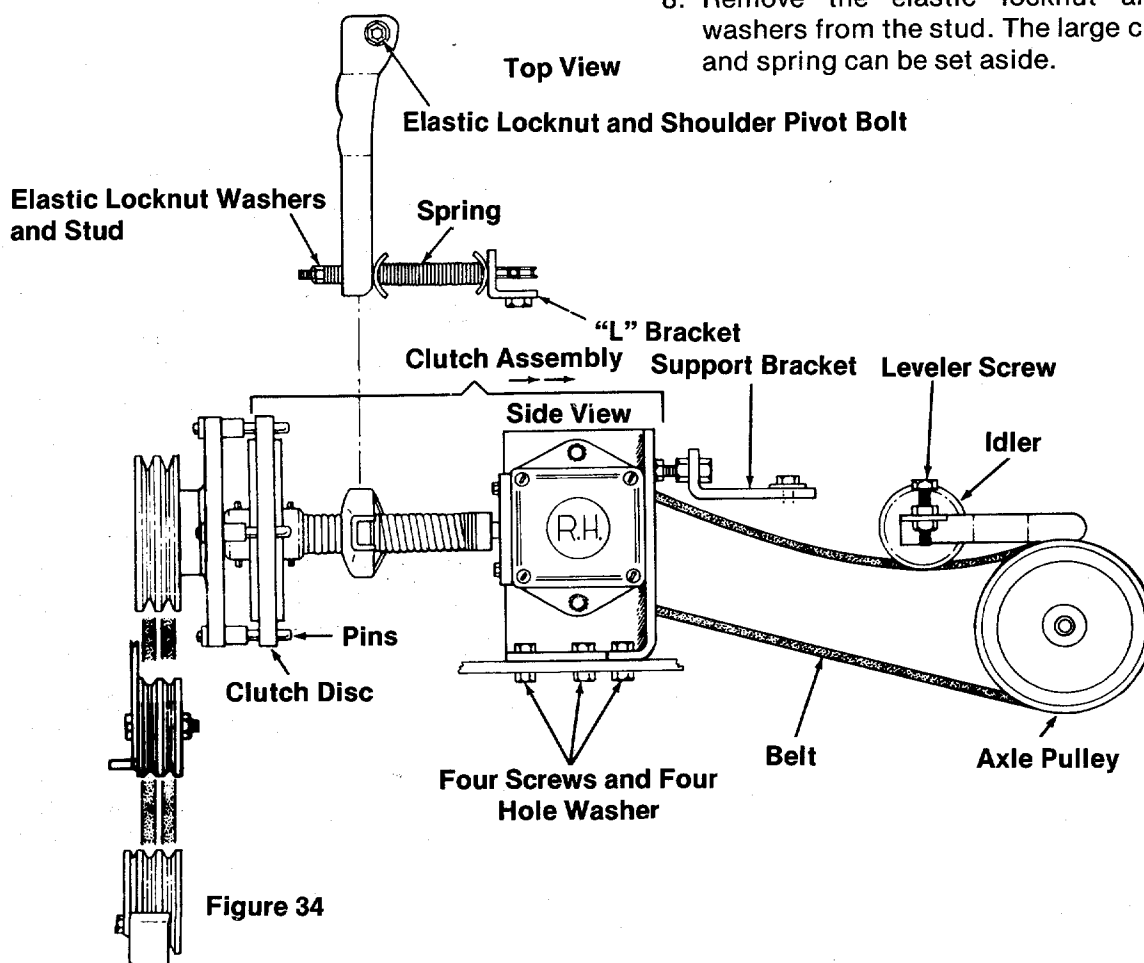
(See figure 34.)

1. Remove the spark plug from the engine and turn the steering wheel all the way to the left. Place the PTO lever in the disengaged position.
2. Remove the support bracket behind the clutch.
3. Loosen the leveler screw on the idler so the belt is slack.
4. Remove the four screws and the four-hole washer holding the rear of the mounting bracket in place.
5. Remove the belt.
6. Remove the elastic locknut and shouldered pivot bolt.



Use a 1/4" allen wrench to loosen the shoulder bolt.

7. Push the clutch assembly to the rear of the tractor until the pins clear the clutch disc, then move the clutch assembly towards the left side of the tractor.
8. Remove the elastic locknut and all the washers from the stud. The large cup washers and spring can be set aside.



9. Remove the two screws holding the "L" bracket to the frame.
10. Remove the clutch assembly from the tractor.
11. After the clutch has been repaired or replaced, assemble in reverse order of this assembly. Follow the instructions on "Clutch Adjustment" after a new clutch is installed.



CAUTION

The clutch is assembled under 400 pounds of pressure. Do not disassemble the clutch unless you have a suitable arbor press available. (See figure 35.)

Clutch Repair

The clutch can be replaced as an assembly (See figure 37.) or it may be disassembled and its components can be replaced. (See figure 36.)

Clutch Disassembly

1. Set the clutch assembly in a suitable arbor press with a minimum 12 inch height. (See figure 36.)
2. Place blocks on the clutch so the pressure is pushing against the stationary plate. (See figures 35 and 36.)
3. While maintaining pressure to the stationary plate, drive out the roll pin.

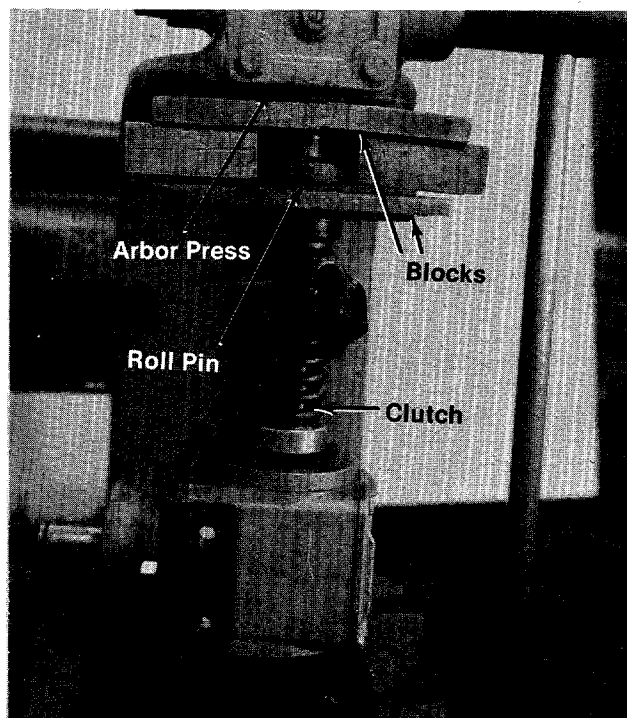


Figure 35

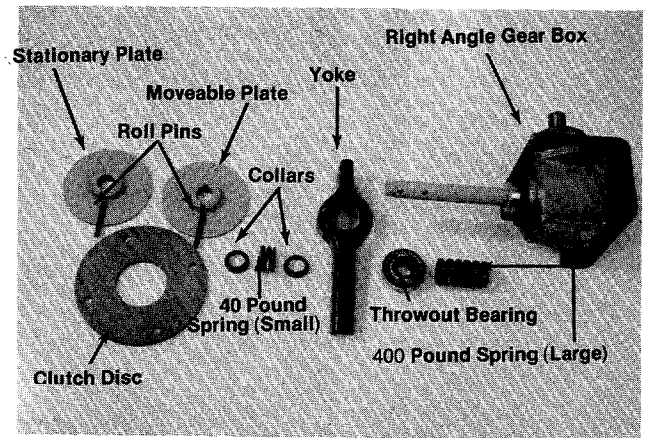


Figure 36

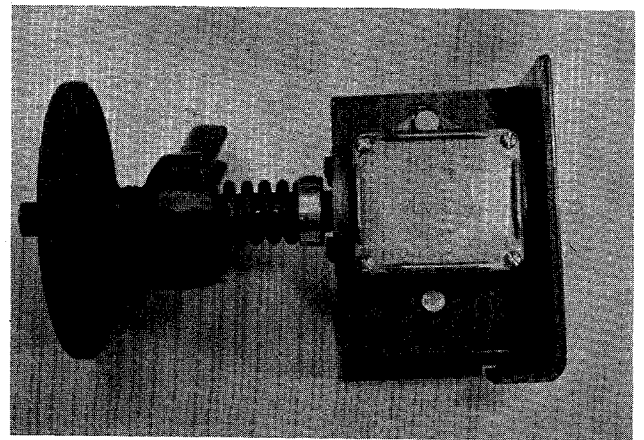


Figure 37

4. Slowly release the pressure on the stationary plate.
5. Remove the clutch from the arbor press.
6. Lift off the stationary plate and clutch disc. If only the clutch disc is being replaced it is not necessary to disassemble the clutch any further.
7. Drive out the roll pin in the moveable plate with a drift.



NOTE

The use of an arbor press is not needed to remove the second roll pin. The clutch is under a slight amount of pressure at this time.

8. Disassemble the rest of the clutch components.



NOTE

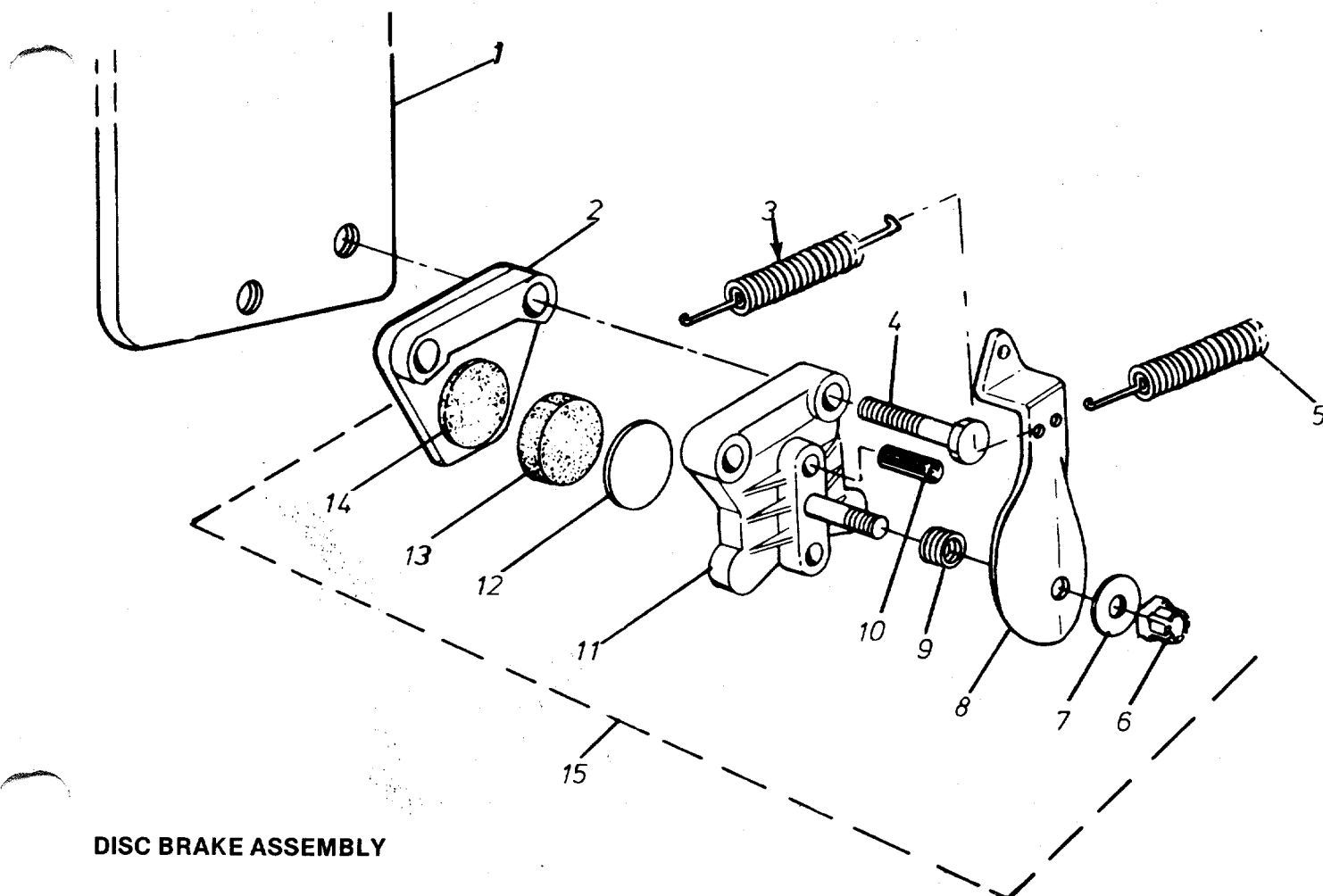
Be sure to reassemble the collars and throwout bearing correctly.

9. Reassemble in reverse order.

TROUBLE SHOOTING CHART

TROUBLE	LOOK FOR	REMEDY
Engine fails to start.	Safety System	<p>A. Check for a blown fuse in the wire leading from the positive terminal of the battery.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>E. Check all wires and cable for tightness.</p> <p>F. Use a #8 gauge wire and jump between the two large terminals of the solenoid. If the unit starts, replace the solenoid.</p> <p>G. If the unit fails to start after following the above procedure the problem is probably in the starting motor of the engine.</p>
	Blocked fuel line or empty gas tank.	Clean fuel line; check fuel supply. Also check fuel shut-off valve.
	Defective spark plug.	<p>Spark plug lead wire disconnected.</p> <p>Faulty spark plug—spark should jump gap between control electrode and side electrode. If spark does not jump, replace spark plug.</p> <p>NOTE: Use insulated pliers to hold the spark plug wire.</p>
	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.

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DISC BRAKE ASSEMBLY

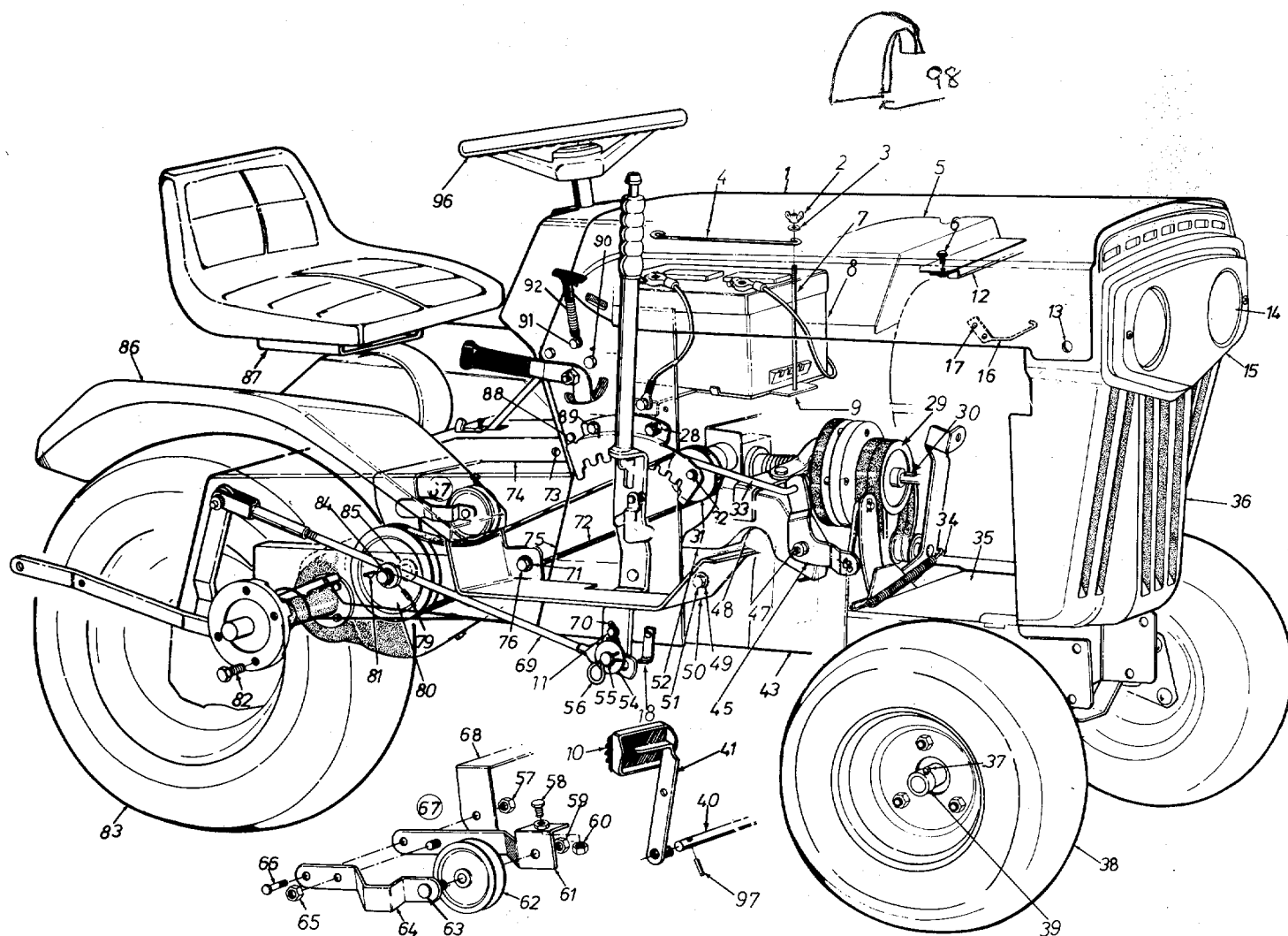
PARTS LIST FOR DISC BRAKE ASSEMBLY

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	10385		Transaxle Mounting Bracket Ass'y.	
2	HH-12-04338		Casting—Carrier Side	
3	732-0245		Spring (Brake)	
4	710-0442		Hex Hd. Cap Scr. 5/16-18 x 1-1/2" Lg.*	
5	732-0199		Brake Return Spring	
6	712-0134		Lock Nut	
7	HH-03-03032		Thrust Washer	
8	HH-18-03525		Cam Lever	
9	HH-06-03031		Compression Spring	
10	HH-05-03034		Push Pin	
11	HH-12-03357		Casting Cam Side	
12	HH-03-03033		Back-Up Disc (Cam Side) 1.110" Dia. x .370 thk.	
13	HH-15-03077		Back-Up Disc (Car. Side) 1.110" Dia. x .245 thk.	
14	HH-15-03074		Caliper Disc Brake Ass'y. Comp.	
15	761-0132			

*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.

146-960A

IF YOU WRITE TO US ABOUT THIS ARTICLE
OR IF YOU ORDER REPLACEMENT PARTS AL-
WAYS MENTION THIS MODEL & SERIAL NO
MODEL



RIGHT HAND SIDE OF TRACTOR

PARTS LIST FOR MODEL 146-960A

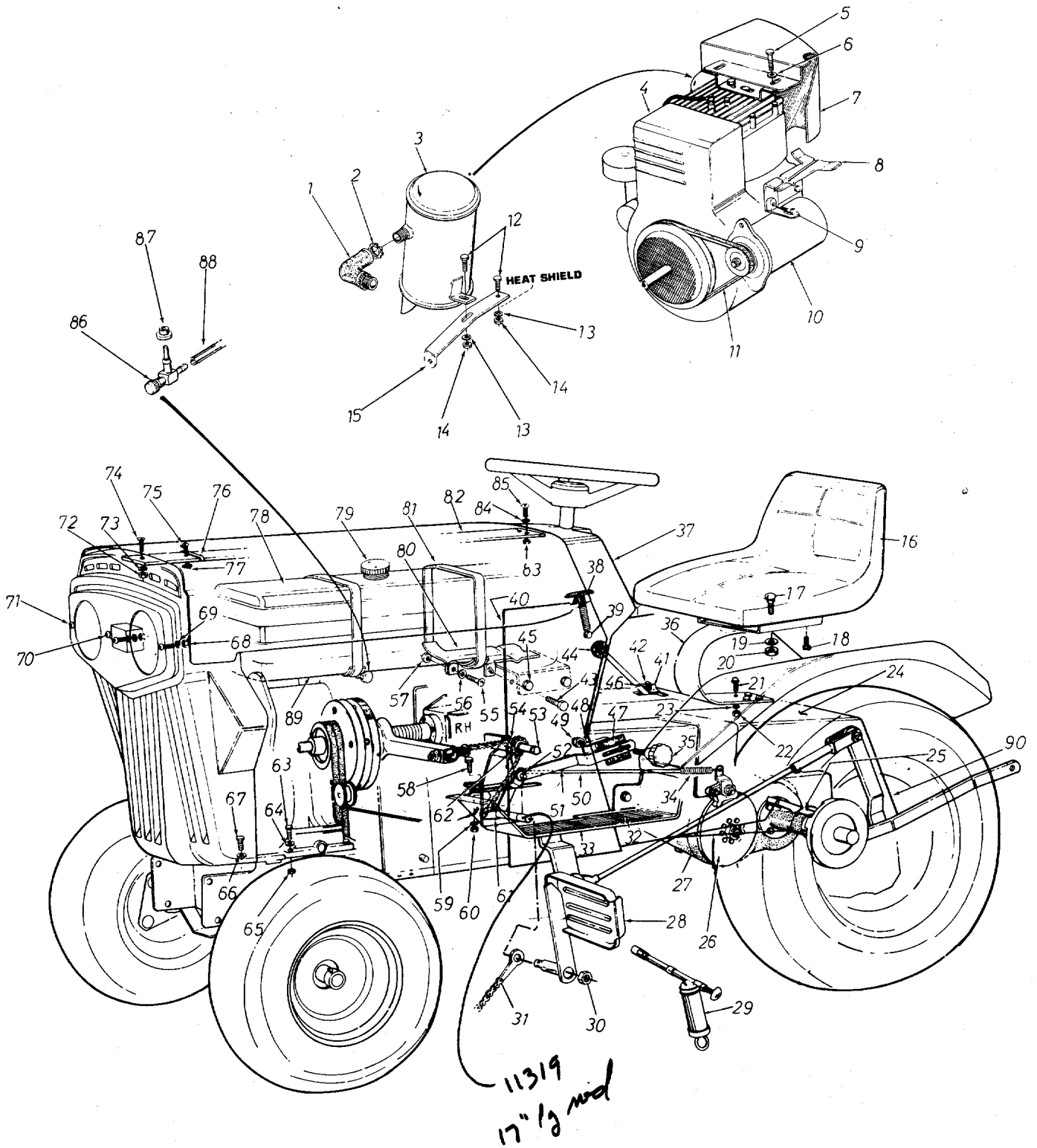
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	12290	—462	Hood		54	07387		Fl-Wash. .640 I.D. x 1 3/4" O.D. x 3/16"	
2	712-0109		Wing L-Nut 1/4-20 Thd.		55	711-0309		Clevis Pin .500 Dia.	
3	736-0264		Fl-Wash. .344 I.D. x .62 O.D.		56	714-0117		Int. Cotter Pin 5/8" Dia.	
4	711-0278		Battery Hold Down		57	712-0798		Hex Nut 3/8-16 Thd. *	
5	12910		Heat Shield Ass'y.	N	58	710-0307		Leveler Scr. 3/8-16 x 1.50 Lg.	
6	710-0211		Hex Sems Scr. 1/4-20 x .75" Lg. *		59	712-0798		Hex Nut 3/8-16 Thd. *	
7	711-0284		Battery Hold Down Studs		60	712-0798		Hex Nut 3/8-16 Thd. *	
8	725-0130		12 Volt Battery		61	09446		Idler Brkt. Ass'y.—L.H.	
9	12914		Battery Support Brkt. Ass'y.	N	62	711-0306		Deck Idler	
10	12378		Brake Pedal Pad		63	738-0150		Shld. Bolt .625 Dia. x .960	
11	711-0310		Clevis Pin .500 Dia.		64	10116		Idler Brkt.—R.H.	
12	09529		Mounting Brkt. Ass'y.		65	712-0798		Hex Nut 3/8-16 Thd. *	
13	710-0166		Truss Mach. Scr. 1/4-20 x 1.00 Lg. *		66	710-0342		Hex Scr. 3/8-16 x 1.25" Lg. *	
14	725-0222		Head Light		67	09583		Drive Belt Idler Ass'y.—Comp.	
15	09516	—462	Head Lamp Bezel		68	10385		Transaxle Mtg. Brkt. Ass'y.	
16	09538		Hood Stop		69	10923		Lift Pull Rod Ass'y.	
17	728-0123		Pop Rivet .188" Dia. x .402		70	714-0121		Cotter Pin 5/32" Dia. x 1.00" Lg. *	
18	12739		Stop Clip Implement Carriage	N	71	736-0169		Spring L-Wash. 3/8" Scr.	
28	712-0798		Hex Nut 3/8-16 Thd. *		72	754-0124		"V" Belt A Sect. 57.375" Lg.	
29	717-0229		Drive Plate and PTO Pulley Ass'y.		73	710-0351		Truss Mach. Scr. B-Tapp #10 x .50" Lg.	
30	714-0118		Sq. Key 1/4" x 1/4" x 1.50" Lg.		74	09580		Center Console Ass'y.	
31	10572		Rt. Angle Gear Box Sheave Ass'y.		75	12180		Frame Side Plate—R.H.	
32	716-0111		Snap Ring for .875" Dia. Shaft		76	710-0253		Hex Scr. 3/8-16 x 1.00" Lg. *	
33	747-0137		PTO Clutch Rod		79	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50 Cup	
34	10384		Frame Rail Ass'y.—L.H.		80	10593		Transaxle Drive Sheave	
35	09511		Plate Ass'y.—Front Frame		81	714-0126		#9 Hi-Pro Key 3/16 x 3/4" Dia. Hdn.	
36	719-0209		Grille		82	710-0336		Wheel Hub Bolt 7/16-20 x 1.19" Lg.	
37	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50" Lg. Cup Point		83	734-0320		Rear Wheel Ass'y. Comp.—23.0 x 9.50	
38	734-0525		Front Wheel Ass'y.—Comp. 16.0 x 6.50			734-0279		Rim Ass'y. Only—Rear Wheel	
	09262		Front Wheel Rim Ass'y—Only			734-0322		Tire Only—Rear Wheel	
	734-0526		Tire Only 16.0 x 6.50—Front Wheel		84	716-0101		Snap Ring for .750" Dia. Shaft	
39	748-0386		Collar 3/4" I.D.		85	736-0180		Fl-Wash. .812 I.D. x 2.00 O.D. x .060	
40	11319		Brake Shaft Ass'y.		86	09493	—462	Rear Fender	
41	10714		Brake Pedal Ass'y.		87	10807		Seat Brkt.	
43	09402		Frame Rail Ass'y.—R.H.		88	710-0258		Hex Scr. 1/4-20 x .62" Lg. *	
45	11344		Idler Crank		89	710-0216		Hex Scr. 3/8-16 x .75" Lg. *	
47	738-0143		Shld. Scr. .498 Dia. x .340 Lg.		90	710-0253		Hex Scr. 3/8-16 x 1.00" Lg. *	
48	10450		Clutch Yoke Pivot Brkt. Ass'y.		91	710-0258		Hex Scr. 1/4-20 x .62" Lg. *	
49	736-0169		Spring L-Wash. 3/8" Scr.		92	723-0296		Hood Latch Ass'y.	
50	09508		Foot Pad—R.H.		96	723-0185		Steering Wheel	
51	710-0216		Hex Scr. 3/8-16 x .75" Lg.		97	715-0118		Spring Pin Spir. 5/16" Dia. x 1.75 Lg. *	
52	09403		Gear Box Mtg. Plate Ass'y.		98	10498		Clutch Guard	

(462—Red Flake)

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.

When ordering parts, if color or finish is important use the appropriate color code shown above (e.g. Red Flake Finish—09525 (462).)

146-960A



LEFT HAND SIDE OF TRACTOR

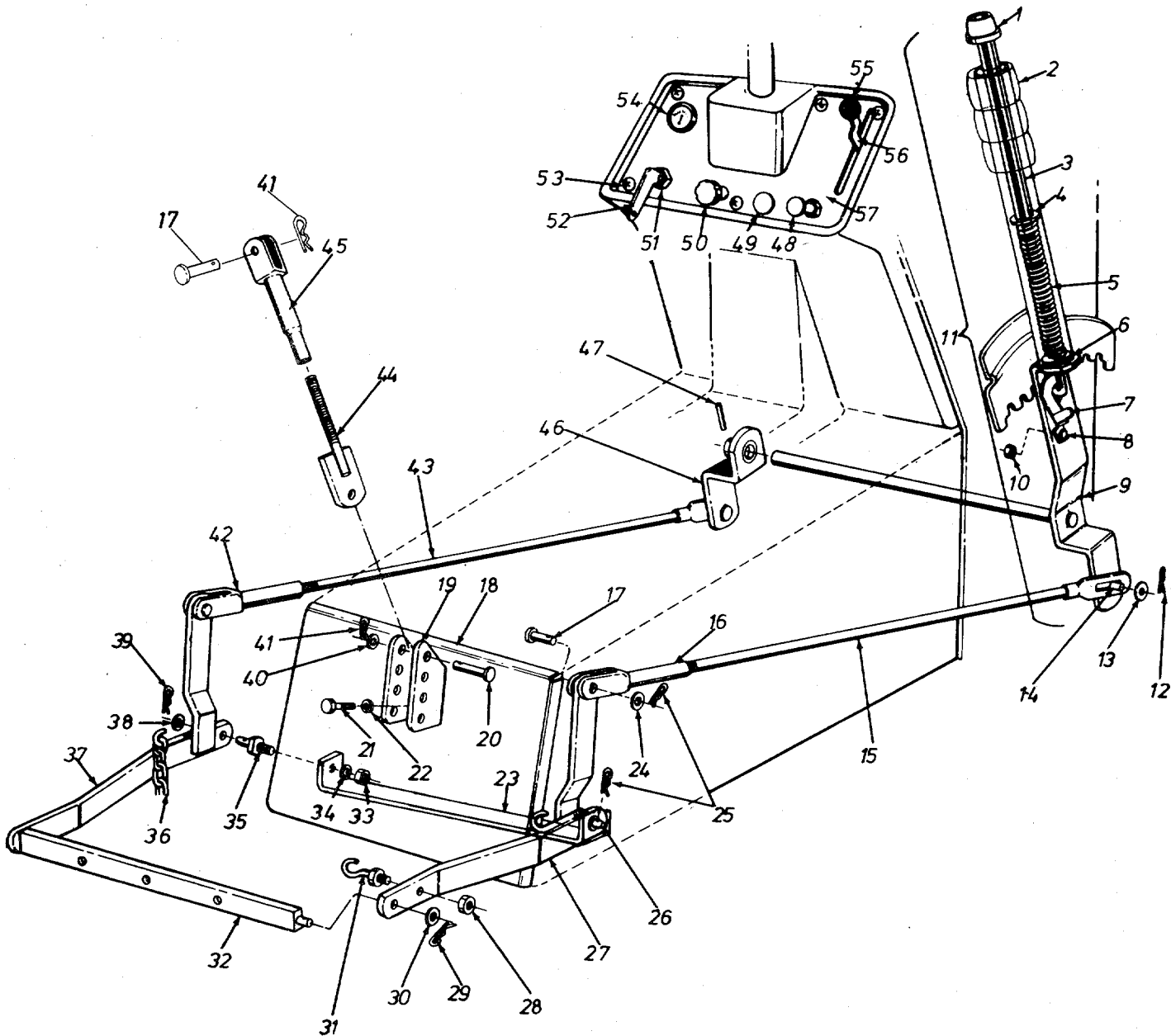
PARTS LIST FOR 146-960A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	—		Part of Engine		49	712-0130		Hex Ins. L-Nut 3/8-16 x 3.50" Lg.*	
2	712-0250		Conduit Nut 1.00" I.D. x 11.5 Thd.		50	747-0111		Brake Rod .25" Dia. x 12.62" Lg.	
3	751-0191		Muffler Ass'y.		51	11349		Parking Brake Link	
4	—		Engine		52	714-0507		Cotter Pin 3/32" dia x .75" Lg.	
5	710-0258		Hex Scr. 1/4-20 x .62" Lg.*		53	710-0316		Hex Scr. 3/8-16 x 3.50" Lg.	
6	736-0329		L-Wash. 1/4" Scr.*		54	09417		Clutch Sprocket Support Brkt.	
7	12910		Heat Shield Ass'y.		55	710-0279		Fillister Scr. 1/4-20 x 1.75" Lg.	
8	10725		Fuel Tank Brkt.—Front		56	736-0329		L-Wash. 1/4" Scr.*	
9	710-0198		Hex Sems Scr. 5/16-18 x .75 Lg.*		57	712-0287		Hex Nut 1/4-20 Thd.*	
10	725-0144		Starter Generator		58	710-0198		Hex Sems Scr. 5/16-18 x .75" Lg.*	
11	754-0169		Generator Belt 3/8" x 35.75" Lg.		59	736-0119		Spring L-Wash. 5/16" Scr.*	
12	710-0258		Hex Scr. 1/4-20 x .62 Lg.*		60	712-0267		Hex Nut 5/16-18 Thd.*	
13	736-0169		L-Wash. 3/8" Scr.*		61	11318		Clutch Lever	
14	712-0287		Hex Nut 1/4-20 Thd.*		62	723-0168		Sprocket Idler 10 Teeth	
15	12913		Heat Shield Angle Brace		63	710-0344		Hex Scr. 3/8-16 x 1.50" Lg.*	
16	757-0203		Seat		64	736-0169		Spring L-Wash. 3/8" Scr.*	
17	710-0385		Car. Bolt 1/2-13 x 1.00" Lg.*		65	712-0798		Hex Nut 3/8-16 Thd.*	
18	710-0216		Hex Scr. 3/4-16 x .75" Lg.*		66	736-0169		Spring L-Wash. 3/8" Scr.*	
19	736-0921		L-Wash. 1/2" Scr.*		67	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
20	712-0384		Hex Cent. L-Nut 1/2-13		68	712-0287		Hex Nut 1/4-20 Thd.*	
21	710-0322		Hex Sems Scr. 5/16-18 x 1.00" Lg.*		69	736-0329		Spring L-Wash. 1/4" Scr.*	
22	712-0267		Hex Nut 5/16-18 Thd.*		70	710-0350		Fl. C-Sunk Mach. Scr. 1/4-20 x 1.00" Lg.	
23	736-0119		L-Wash. 5/16" Scr.*		71	710-0346		Oval C-Sunk Mach. Scr. 1/4-20 x 1.50" Lg.	
24	10273		Rear Frame Section		72	712-0287		Hex Nut 1/4-20 Thd.*	
25	710-0342		Hex Scr. 3/8-16 x 1.25" Lg.*		73	736-0329		Spring L-Wash. 1/4 Scr.*	
26	761-0136		Brake Disc Ass'y.		74	710-0350		Fl. C-Sunk Mach. Scr. 1/4-20 x 1.00" Lg.	
27	—		Transaxle		75	710-0473		Truss Mach. Scr. #10-24 x .50" Lg.	
28	11321		Clutch Pedal Ass'y.		76	725-0157		Cable Tie Self Clinching	
29	727-0143		Grease Gun #5911		77	712-0425		Sq. Nut #10-24 Thd.*	
30	712-0200		Hex Ins. L-Nut 1/2-20 Thd.		78	751-0174		Fuel Tank	
31	11318		Clutch Lever		79	723-0155		Fuel Gauge	
32	723-0215		Foot Pad 3 1/4 x 17		80	12917		Fuel Tank Brkt.—Rear	
33	09509		Foot Pad—L.H.		81	10852		Fuel Tank Strap	
34	732-0245		Brake Spring		82	09576		Grille Brace	
35	722-0117		Parking Brake Knob		83	712-0287		Hex Nut 1/4-20 Thd.*	
36	723-0181		Seat Spring		84	736-0329		Spring L-Wash. 1/4" Scr.	
37	09584		Instrument Panel		85	710-0166		Truss Mach. Scr. 1/4-20 x 1.00" Lg.	
38	723-0296		Hood Latch Ass'y.		86	751-0171		Fuel Shut Off Valve and Filter	
39	710-0258		Hex Scr. 1/4-20 x .62" Lg.*		87	735-0149		Rubber Bushing	
40	12737		Frame Side Plate—L.H.		88	751-0173		Fuel Hose 17" Clear	
41	09480		Second Gear—Stop Clip		89	12918		Fuel Tank Brkt.—Front	
42	710-0106		Hex Scr. 1/4-20 x 1.25" Lg.*		90	09406		Rear Frame Plate Ass'y.	
43	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*						
44	720-0165		Gear Shift Knob						
45	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*						
46	732-0145		Compression Spring						
47	723-0183		Serrated Plate						
48	09443		Parking Brake Lock Ass'y.						

or 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.

When ordering parts, if color or finish is important use the appropriate color code shown above (e.g. Red Flake Finish—09525 (462).)

146-960A



LIFT ASSEMBLY AND THREE POINT HITCH

PARTS LIST FOR LIFT ASSEMBLY AND THREE-POINT HITCH 146-960A

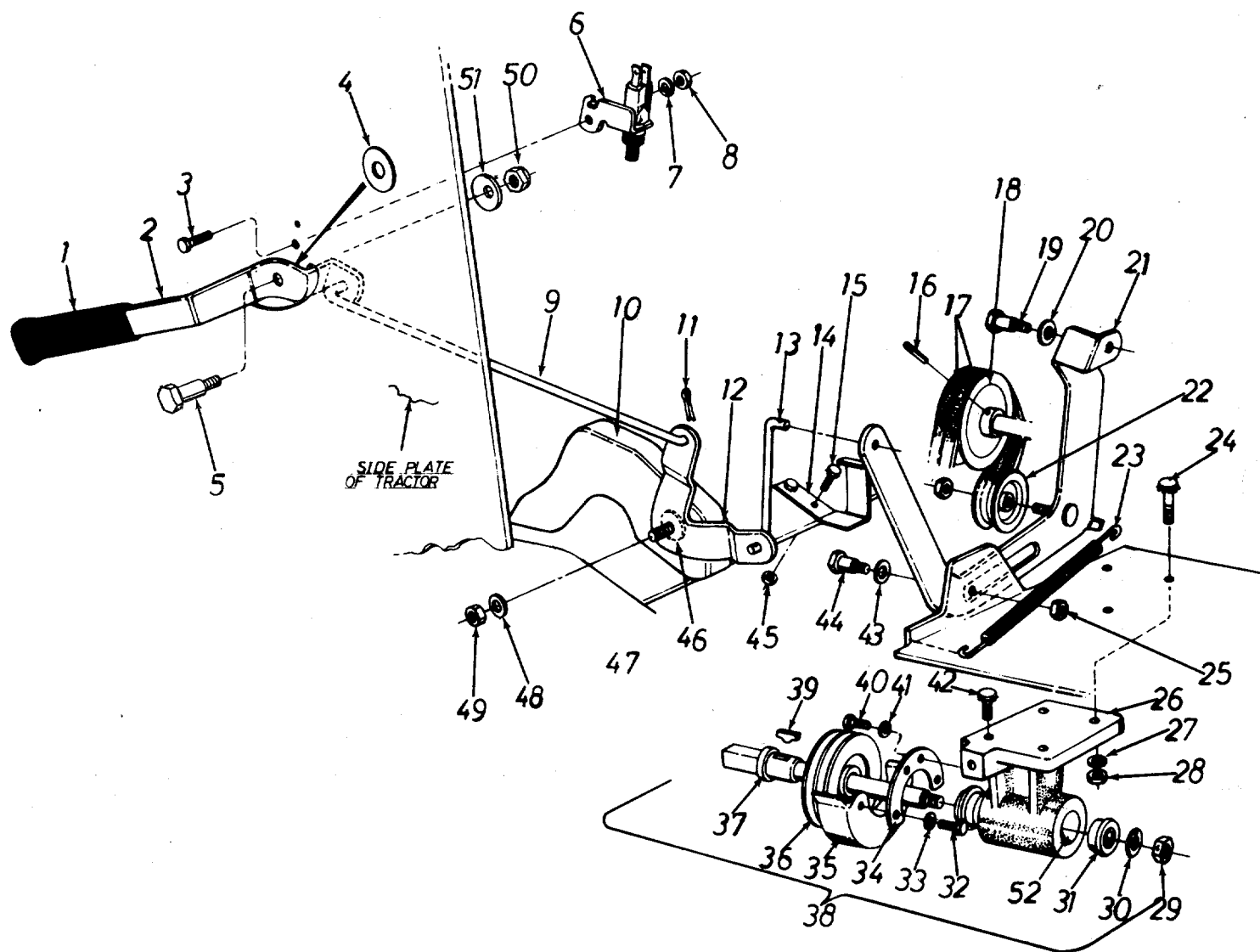
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	726-0110		Push Cap .375 Rod (Black)		29	714-0117		Inter. Cotter-Pin 5/8" Dia.	
2	08818		Grip 1.00" I.D.		30	07387		FI-Wash. .640 I.D x 1 3/4"	
3	750-0279		Lift Handle Spacer Tube					O.D. x 3/16	
4	736-0185		FI-Wash. .406 I.D. x .74		31	711-0513		Hitch Chain Hook	
			O.D. x .063	N	32	10996		Draw Bar Ass'y.	
5	732-0156		Compression Spring		33	712-0923		Hex Cent. L-Nut 5/8-18 Thd.	
6	736-0185		FI-Wash. .405 I.D. x .74		34	736-0158		Spring L-Wash. 5/8" Scr. *	
			O.D. x .063		35	711-0497		Link Clevis Pin	
7	09448		Lift Handle Rod Lockout		36	713-0148		Chain 3/16" Dia. x 20 Links	
8	710-0252		Hex Hd. Cap Scr. 1/4-20 x		37	10985		Draft Bar Ass'y.—L.H.	
			.75" Lg. *		38	07387		FI-Wash. .640 I.D. x 1 3/4"	
9	12551 12735		Lift Handle Sub Ass'y.	N				O.D. x 3/16	
10	712-0107		Hex Cent. L-Nut 1/4-20 Thd.		30	714-0117		Inter. Cotter-Pin 5/8" Dia.	
11	12552 12735		Lift Handle Ass'y.—Comp.	N	40	07387		FI-Wash. .640 I.D. x 1 3/4"	
12	714-0117		Inter. Cotter-Pin 5/8" Dia.					O.D. x 3/16	
13	07387		FI-Wash. .640 I.D. x 1 3/4"		41	714-0117		Inter. Cotter-Pin 5/8" Dia.	
			O.D. x 3/16		42	10991		Adjustment Clevis Ass'y.	
14	711-0309		Clevis Pin .62" Dia.		43	10923		Lift Pull Rod Ass'y.	
15	10923		Lift Pull Rod Ass'y.		44	10994		Clevis Screw Ass'y.	
16	10991		Adjustment Clevis Ass'y.		45	10991		Adjustment Clevis Ass'y.	
17	711-0225		Clevis Pin .624" Dia.		46	11323		Lift Arm Ass'y.	
18	09406		Rear Frame Plate Ass'y.		47	710-0356		Sq. Hd. Set Scr. 5/16-18 x	
19	10993		Upper Hitch Bracket					.50" Lg. (Cup Point)	
20	711-0174		Clevis Pin .624" Dia.		48	746-0129		Choke Control Comp.	
21	710-0253		Hex Hd. Cap Scr. 3/8-16 x		49	726-0119		Plug Button	
			1.00" Lg. *		50	725-0202		Head Light Switch	
22	736-0217		Spring L-Wash. 3/8" Scr.		51	725-0267		Ignition Switch	
			Heavy Duty		52	725-0128		Ignition Key	
23	11316		Rear Frame Support		53	710-0351		Truss Hd. Mach. Scr.	
24	07387		Wash. .640 I.D. x 1 3/4" O.D.					B-Tapp. #10 x .50" Lg.	
			x 3/16		54	725-0119		Ammeter	
25	714-0117		Inter. Cotter-Pin 5/8" Dia.		55	722-0118		Throttle Control Knob	
26	711-0497		Link Clevis Pin		56	746-0130		Throttle Control	
27	10986		Draft Bar Ass'y.—R.H.		57	09528		Instrument Panel—Bezel	
28	712-0342		Hex Jam Nut 3/8-16 Thd.						

*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—09525 (462).)

146-960A



POWER TAKE OFF

PARTS LIST FOR POWER TAKE OFF MODEL 146-960A

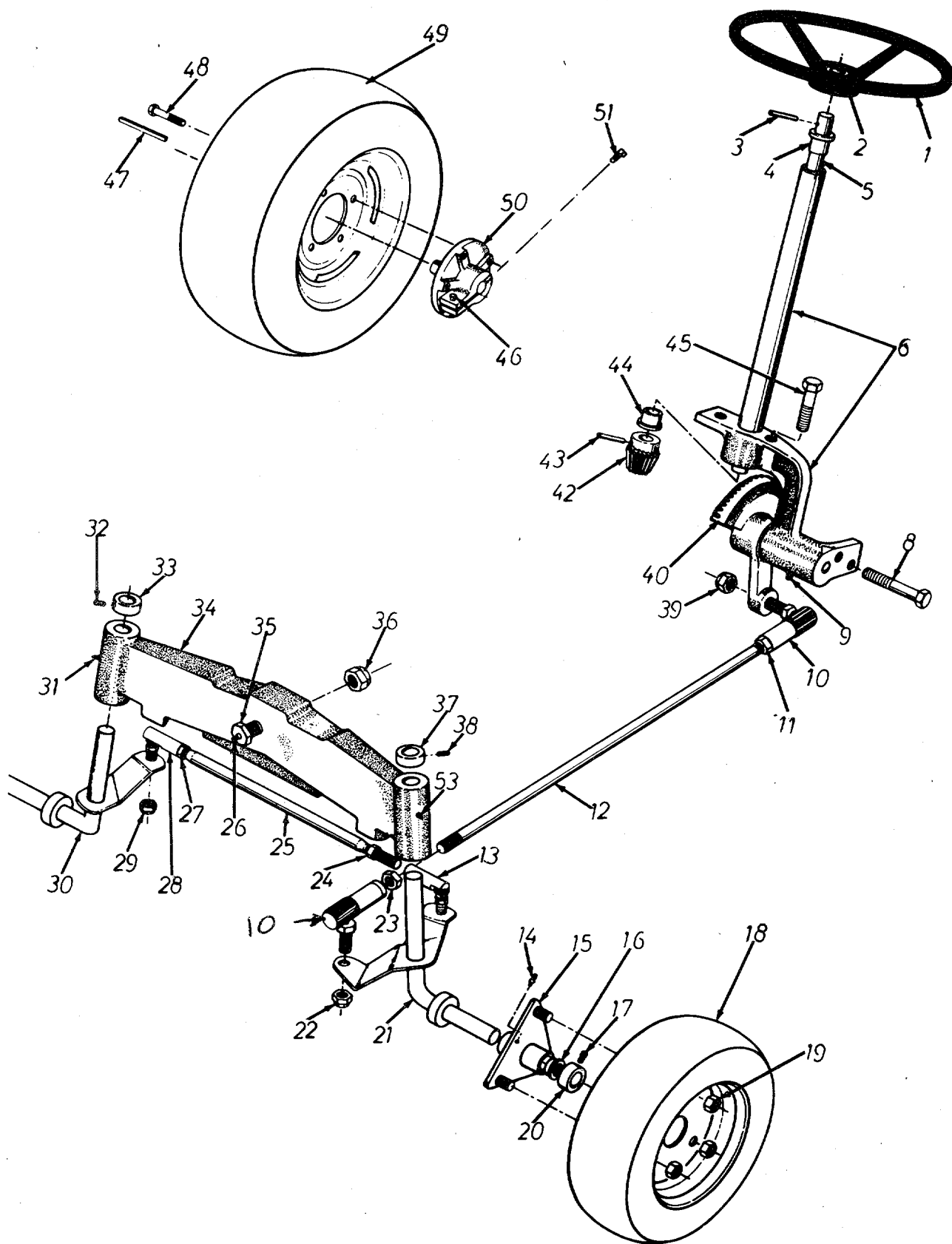
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	720-0143		Grip		26	717-0219		P.T.O. Housing	
2	12197		P.T.O. Handle		27	736-0169		L-Wash. 3/8" Scr. *	
3	710-0136		Hex Scr. 1/4-20 x 1.75" Lg. *		28	712-0798		Hex Nut 3/8-16 Thd. *	
4	736-0167		FI-Wash.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

(462—Red Flake)

*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.

When ordering parts, if color or finish is important use the appropriate color code shown above (e.g. Red Flake Finish—09525 (462).)

146-960A



STEERING ASSEMBLY

PARTS LIST FOR STEERING ASSEMBLY 146-960A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	723-0185		Steering Wheel		30	10717 94 22		Front Axle Ass'y.—R.H.	
2	723-0188		Steering Wheel Cap		31	737-0479		Grease Fitting	
3	715-0115		Spring Pin 1/4" x 2.50" Lg.		32	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50" Lg.*	
4	748-0157		Steering Tube Bushing		33	711-0518		Axle Collar	
5	09535		Steering Rod		34	10587		Front Axle Support	
6	10721 11264		Steering Tube Seg. Ass'y.		35	710-0335		Pivot Bolt 3/4-10 x 4.00" Lg.	
8	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*		36	712-0205		Elastic Stop Nut 3/4-10 Thd.	
9	737-0479		Grease Fitting		37	711-0518		Axle Collar	
10	723-0179		Drag Link End		38	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50" Lg.*	
11	712-0922		Hex Nut 1/2-20 Thd.*		39	712-0200		Elastic Stop Nut 1/2-20 Thd.*	
12	711-0455		Drag Link		40	10570 12530		Gear Segment	
13	723-0156		Tie Rod End		42	717-0269		Pinion Gear	
14	737-0479		Grease Fitting		43	715-0101		Spring Pin Spiral 1/4 x 1.50" Lg.*	
15	10457		Front Wheel Hub Ass'y.		44	748-0157		Steering Tube Bushing	
16	741-0141		Ball Bearing		45	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
17	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50" Lg.*		46	710-0489		Hex Scr. 1/2-13 x 2.00" Lg.*	
18	734-0525		Front Wheel Ass'y.—Comp.		47	714-0120		Sq. Key 1/4 x 3.00" Lg.*	
19	712-0193		Lub Nut 3/8-24 Thd.		48	710-0470		Wheel Lug Bolts 1/2-20 x 1.50" Lg.	
20	711-0518		Axle Collar		49	734-0341		Rear Wheel Ass'y.—Comp.	
21	10718 94 23		Front Axle Ass'y.—L.H.		50	10770		Rear Wheel Hub	
22	712-0200		Elastic Stop Nut 1/2-20 Thd.*		51	710-0531		Sq. Hd. Set Scr. 3/8-16 Thd.*	
23	712-0922		Hex Nut 1/2-20 Thd.*		53	737-0479		Grease Fitting	
24	712-0711		Hex Jam Nut 3/8-24 Thd.*		54	716-0122		Snap Ring (Used on the Outside of Rear Wheel Not Shown)	
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 1/2-20 Thd.*						

(462—Red Flake)

*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.

When ordering parts, if color or finish is important use the appropriate color code shown above (e.g. Red Flake Finish—09525 (462).)

WHEEL CHART

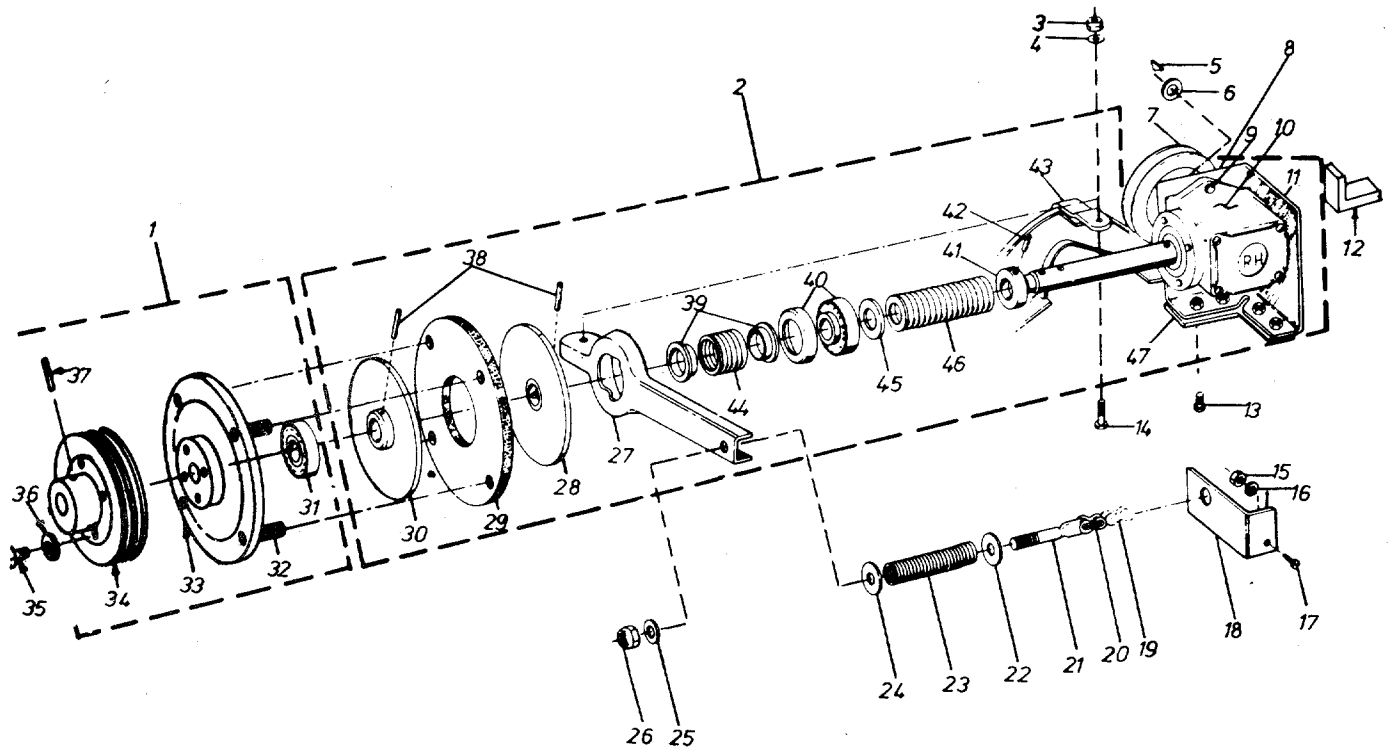
FRONT WHEEL

PART NO.	DESCRIPTION
734-0525	Wheel Ass'y.—Comp. 16 x 6.50
09262	Rim Only
734-0526	Tire Only 16 x 6.50 Tubeless
741-0141	Bearing
10457	Hub Ass'y.
734-0255	Air Valve
734-0253	Inner Tube (Service Only)

REAR WHEEL

PART NO.	DESCRIPTION
734-0320	Wheel Ass'y.—Comp. 23 x 9.50
734-0279	Rim Only
734-0322	Tire Only 23 x 9.50 Tubeless
—	Bearing (Part of Transaxle)
10577	Hub Ass'y.
734-0255	Air Valve
734-0329	Inner Tube (Service Only)

146-960A



CLUTCH ASSEMBLY

PARTS LIST FOR CLUTCH ASSEMBLY 146-960A

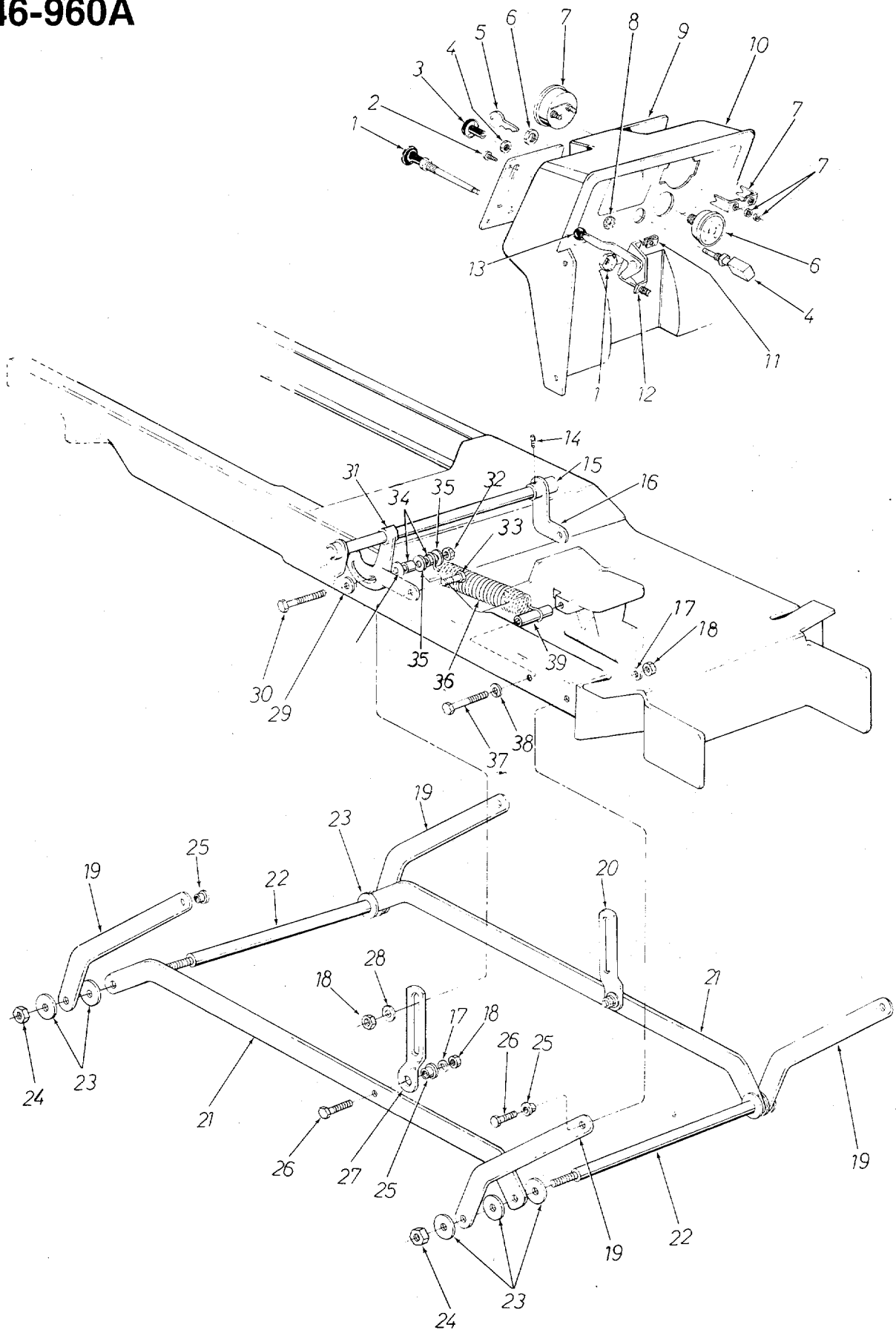
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	717-0229		Drive Plate and PTO Pulley Ass'y.		24	736-0112		Bell. Wash. .535 I.D. x 1.50 O.D. x .052	
2	717-0228		Clutch Ass'y.		25	736-0300		Fl-Wash. .385 I.D. x .87 O.D. x .060	
3	712-0130		Hex Inserted L-Nut 3/8-16 Thd.		26	712-0130		Hex Inserted L-Nut 3/8-16 Thd.	
4	736-0300		Fl-Wash. .385 I.D. x .87 O.D. x .060		27	11350		Clutch Yoke Ass'y.	
5	714-0126		#9 Hi-Pro-Key 3/4" x 3/4" Dia. Hon.		28	10444 10443		Disc Ass'y.—Clutch	
6	736-0181		Fl-Wash. .938 I.D. x 1.47 O.D. x .100		29	717-0160		Drive Disc	
7	10572		Sheave Ass'y.—For Right Angle Gear Box		30	10443 10444		Disc Ass'y.—Clutch	
8	09591		Gear Box Mounting Plate		31	741-0140		Ball Brg. .750 Bore 1.625 O.D.	
9	710-0342		Hex Hd. Cap Scr. 3/8-16 x 1.25" Lg.		32	711-0459		Replacement Stud	
10	717-0161		Right Angle Gear Box			712-0195		Hex Nut for Replacement Stud	
11	09410		Gear Box Mtg. Brkt. Ass'y.		33	717-0230		Drive Plate Sub Ass'y.	
12	10549		Brace Ass'y.		34	756-0176		PTO Engine Pulley	
13	710-0253		Hex Hd. Cap Scr. 3/8-16 x 1.00" Lg.*		35	710-0116		Hex Hd. Cap Scr. 5/16 x 2.00" Lg.*	
14	710-0340		Socket Hd. Shld. Scr. .50" Dia. x .75" Lg.		36	736-0119		Spring L-Wash. 5/16" Scr.*	
15	712-0287		Hex Nut 1/4-20 Thd.*		37	715-0118		Spring Pin Spiral 5/16" Dia. x 1.75" Lg.	
16	736-0329		Spring L-Wash. 1/4" Scr.*		38	715-0121		Spring Pin Spiral 1/4" Dia. x 2.00" Lg.	
17	710-0258		Hex Hd. Cap Scr. 1/4-20 x .62" Lg.		39	711-0447		Spring Guide	
18	11317		Spring Retainer		40	10477		Bearing Ass'y.	
19	713-0136		#48 Chain 1/2" Pitch x 19 Links		41	711-0444		Spring Collar	
20	713-0116		#48 Master Link 1/2" Pitch Type I		42	715-0114		Spring Pin Spiral 1/4" Dia. x 1.50" Lg.	
21	711-0289		Clutch Adjusting Rod		43	10450		Clutch Yoke Pivot Brkt. Ass'y.	
22	736-0112		Bell. Wash. .535 I.D. x 1.50 O.D. x .052		44	732-0204		Clutch Helper Spring	
23	732-0207		Yoke Return Spring		45	736-0214		Fl-Wash. .885 I.D. x 1.37 O.D. x .060	
					46	732-0205		Clutch Spring	
					47	10551		Gear Box Mounting Washer	

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(462—Red Flake)

When ordering parts if color or finish is important, use color code shown at left.
(e.g. Red Flake Finish—09525(462).)

146-960A



UNDER CARRIAGE

PARTS LIST FOR MODEL 146-960A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	746-0129		Choke Control		20	12557		Lift Link—L.H.	
2	710-0351		Truss Mach. B-Tapp. Scr. #10 x .50" Lg.*		21	12560		Lift Arm Link	
3	—		Part of Ref. No. 4		22	738-0294		Cross Shaft	
4	725-0202		Light Switch		23	736-0179		Fl-Wash. .531 I.D. x 1.25 O.D. x .100	
5	725-0201		Ignition Key		24	712-0239		Hex 0.375 L-Nut 1/2-20 Thd. ELASTIC	
6	725-0267		Ignition Key Switch		25	748-0241		Shld. Spacer	
7	725-0119		Ammeter		26	710-0342		Hex Scr. 3/8-16 x 1.25" Lg.*	
8	726-0119		Plug Button		27	12558		Lift Link—R.H.	
9	09528		Bezel—Instrument Panel		28	736-0192		Fl-Wash. .531 I.D. x .93 O.D. x .09	
10	09584		Dash Panel		29	736-0179		Fl-Wash. .531 I.D. x .93 O.D. x .100	
11	712-0526		Speed Nut #10-24		30	710-0489		Hex Scr. 1/2-13 x 2.00" Lg.	
12	746-0130		Throttle Control		31	12620		Lift Lever Ass'y.	
13	720-0166		Throttle Control Knob		32	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
14	710-0356		Sq. Hd. Set Scr. 5/16-18 x .50" Lg.*		33	738-0297		Shld. Scr. .498 Dia. x .710	
15	—		Part of Ref. No. 16		34	711-0494		Spacer	
16	12553		Lift Arm Ass'y.		35	736-0192		Fl-Wash. .50 I.D. x .93 O.D.	
17	736-0300		Fl-Wash. .385 I.D. x .87 O.D. x .06		36	732-0246		Spring	
18	712-0375		Hex Cent. L-Nut 3/8-16 Thd.		37	710-0496		Hex Scr. 1/2-13 x 4.50" Lg.	
19	12559		Lift Arm		38	736-0921		L-Wash. 1/2" Scr.*	
					39	750-0157		Spacer	

(462—Red Flake)

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.

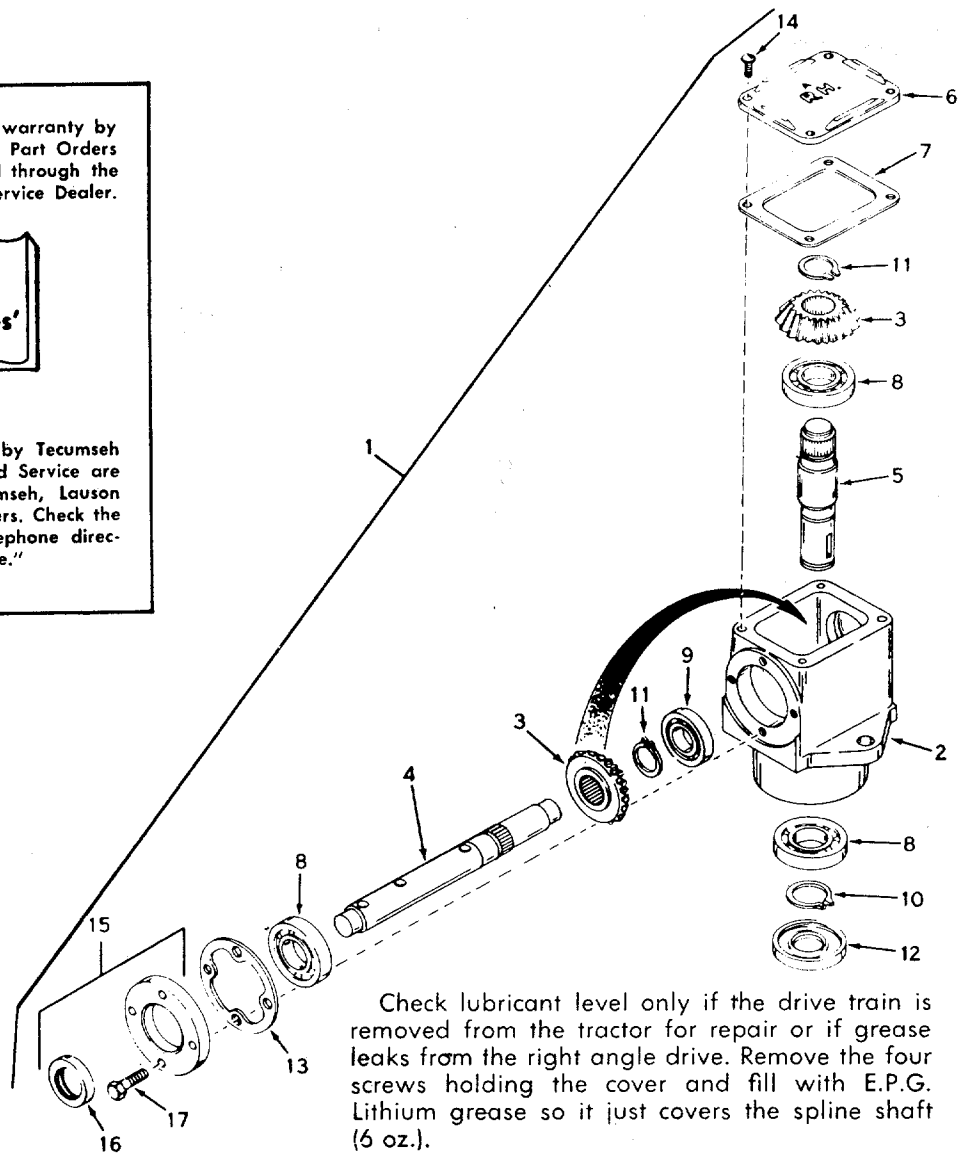
When ordering parts, if color or finish is important use the appropriate color code shown above (e.g. Red Flake Finish—09525 (462).)

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.



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."

RIGHT ANGLE DRIVE

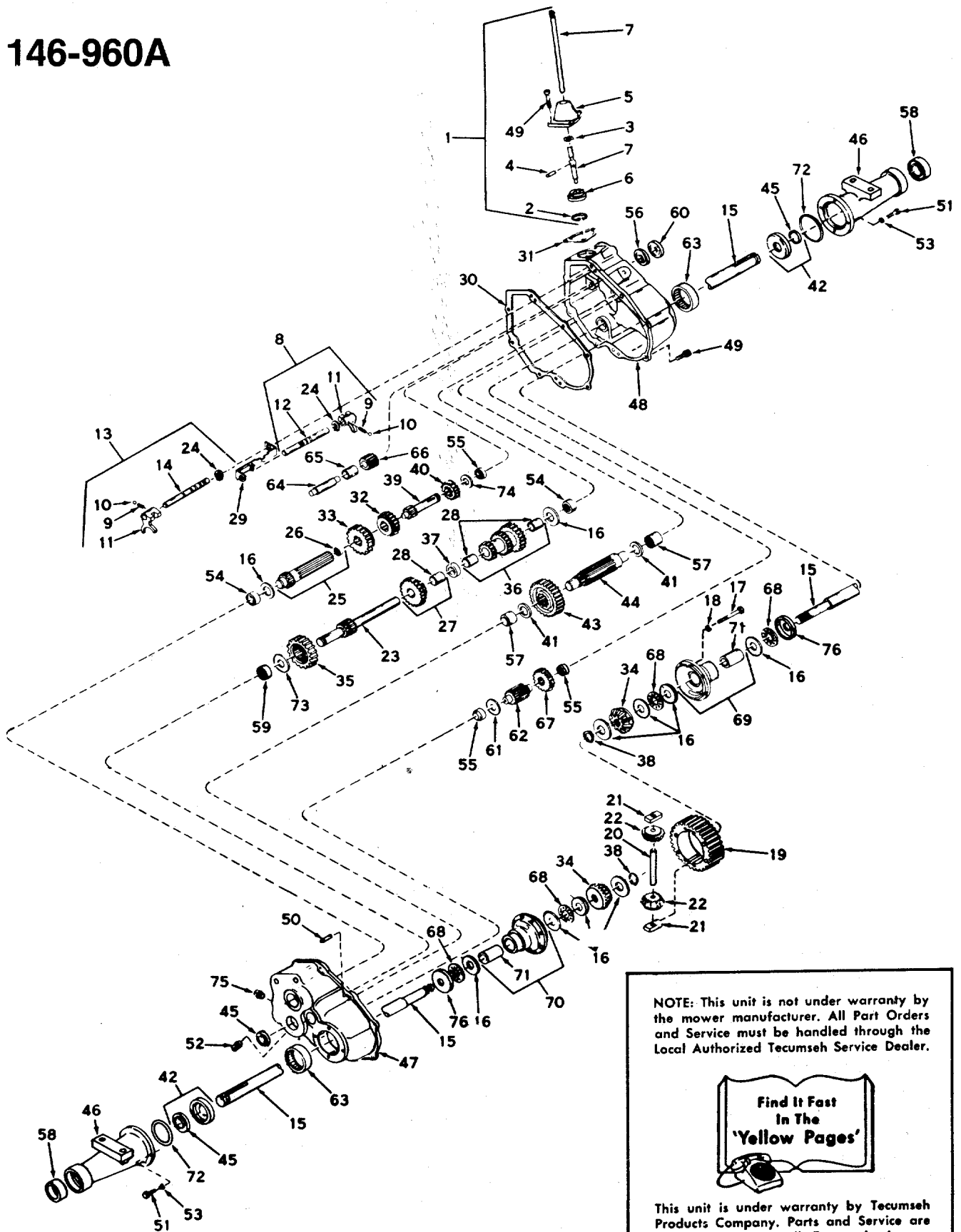


Check lubricant level only if the drive train is removed from the tractor for repair or if grease leaks from the right angle drive. Remove the four screws holding the cover and fill with E.P.G. Lithium grease so it just covers the spline shaft (6 oz.).

RIGHT ANGLE DRIVE MODEL NO. (PEERLESS RA-208-P91)

REF NO.	PART NUMBER	DESCRIPTION
1	PE- 794077	Head Assy. Right hand (Incl. Nos. 2 thru 15)
2	PE- 770026	Housing, Right angle drive
3	PE- 778046	Gear, Miter
4	PE- 776116	Shaft, Input pinion
5	PE- 776060A	Shaft, Output
6	PE- 772034	Cover, Right hand
7	PE- 788028	Gasket, Cover
8	PE- 780034	Bearing, Ball
9	PE- 780024	Bearing, Ball
10	PE- 788019	Ring, Snap
11	PE- 788018	Ring, Snap
12	PE- 788029	Seal, Oil
13	PE- 788030	Gasket, Cap
14	PE- 792025	Screw, Rd. hd. self tap, 10-24 x 1/2
15	PE- 786029	Cap & Seal Assy., Retainer (Incl. Nos. 16 & 17)
16	PE- 788031	Seal, Oil
17	PE- 792026	Screw, Hex hd. 1/4-20 x 7/8

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TRANSAXLE (PEERLESS 2315A)

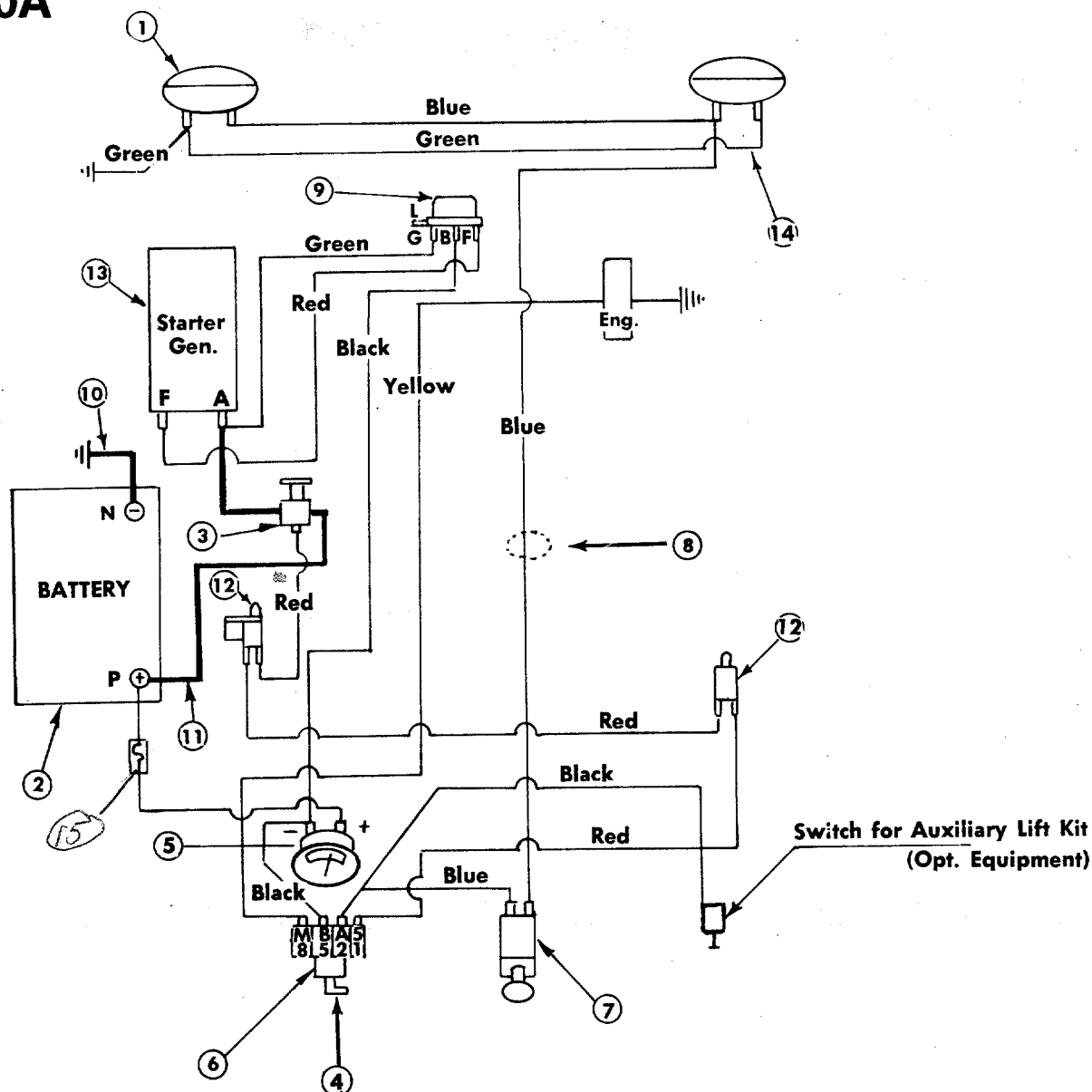
NOTE: This unit is not under warranty by the mower manufacturer. All Part Orders and Service must be handled through the Local Authorized Tecumseh Service Dealer.



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."

TRANSAXLE MODEL NO. (PEERLESS 2315-A)					
Ref. No.	Part Number	DESCRIPTION	REF NO.	PART NUMBER	DESCRIPTION
1	PE-784151	Lever & Housing Assy., Shift (Incl. Nos. 2 thru 7)	39	PE-776015A	Shaft, Input
2	PE-792016	Ring, Snap	40	PE-778024	Spur Gear, Input shaft
3	PE-792001	Ring, Quad	41	PE-780052	Washer, Thrust
4	PE-792002	Pin, Roll	42	PE-788021	Seal & Retainer Assy., Oil (Incl. No. 45)
5	PE-784093	Housing, Shift lever	43	PE-778036	Gear, Output
6	PE-784094	Keeper, Shift lever	44	PE-776028	Pinion, Output
7	PE-784152	Lever, Shift	45	PE-788008	Seal, Oil
8	PE-784054	Rod Assy., Shift (Incl. Nos. 9 thru 12 & 24)	46	PE-782024	Housing, Axle
9	PE-792003	Spring	47	PE-772016A	Cover Assy., Transaxle (Incl. Nos. 54, 55, 57, 59 & 63)
10	PE-792004	Ball, Steel	48	PE-770012	Case Assy., Transaxle (Incl. Nos. 54, 55, 57 & 63)
11	PE-784004	Fork, Shifter	49	PE-792007	Screw, Socket hd. cap, 1/4-20 x 3/4
12	PE-784055	Rod, Shifter (3rd & 4th)	50	PE-786026	Pin, Dowel
13	PE-784056	Rod Assy., Shift (Incl. Nos. 9, 10, 11 & 14)	51	PE-792028	Screw, Hex hd. 5/16-18 x 7/8
14	PE-784057	Rod, Shifter (low)	52	PE-792019	Plug, Magnetic drain
15	PE-774124	Axle	53	PE-792029	Lockwasher, Split 5/16"
16	PE-780042	Washer, Thrust	54	PE-780049	Bearing, Needle
17	PE-792005	Screw, Hex hd. cap, 1/4-20 x 2-1/2	55	PE-780022	Bearing, Needle
18	PE-792006	Lockwasher, 1/4	56	PE-780024	Bearing, Ball
19	PE-778033A	Gear, Ring	57	PE-780047	Bearing, Needle
20	PE-786019	Pin, Drive	58	PE-780050	Bearing, Ball
21	PE-786027	Block, Drive	59	PE-780046	Bearing, Needle
22	PE-778094	Pinion, Bevel	60	PE-788025	Seal, Oil
23	PE-776029A	Shaft & Gear, Brake	61	PE-780001	Washer
24	PE-792017	Ring, Snap	62	PE-776031	Shaft & Pinion
25	PE-776026	Shaft & Bearing Assy., Pinion (Incl. No. 26)	63	PE-780048	Bearing, Needle
26	PE-780018	Bearing	64	PE-776030	Shaft, Reverse idler
27	PE-778034	Gear Cluster Assy., (Incl. No. 28)	65	PE-786025	Spacer, Reverse idler
28	PE-780053	Bushing	66	PE-778016	Idler, Reverse
29	PE-784074	Stop, Shifter	67	PE-778038	Spur gear (22 teeth)
30	PE-788023	Gasket, Case & Cover	68	PE-780039	Bearing, Thrust
31	PE-788022	Gasket, Shift lever housing	69	PE-774072A	Carrier Assy., Differential (Incl. No. 71)
32	PE-778019	Gear, Shifting (3rd & 4th)	70	PE-774071A	Carrier Assy., Differential (Incl. No. 71)
33	PE-778020	Gear, Shifting (1st, 2nd & Rev.)	71	PE-780041	Bushing
34	PE-778095	Gear, Bevel	72	PE-788024	"O" Ring
35	PE-778037	Gear, Idler	73	PE-780007	Washer, Thrust
36	PE-778035	Gear Cluster Assy., (Incl. No. 28)	74	PE-780051	Washer, Thrust
37	PE-786024	Spacer	75	PE-792010	Plug, Pipe
38	PE-792018	Ring, Snap	76	PE-780075	Race, Thrust

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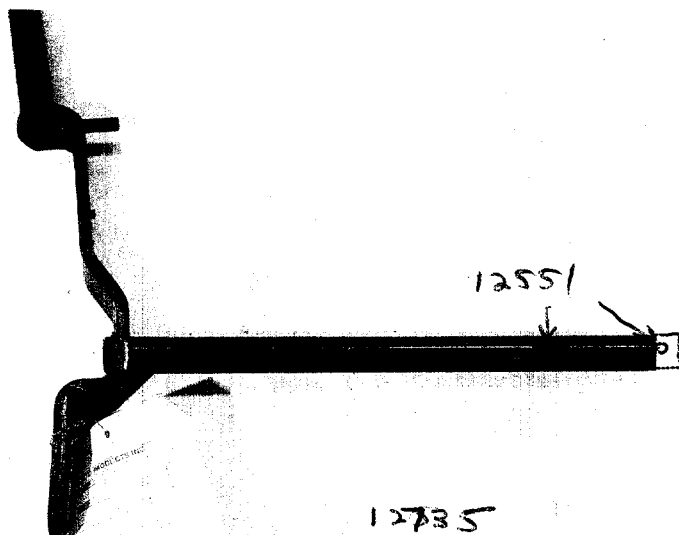
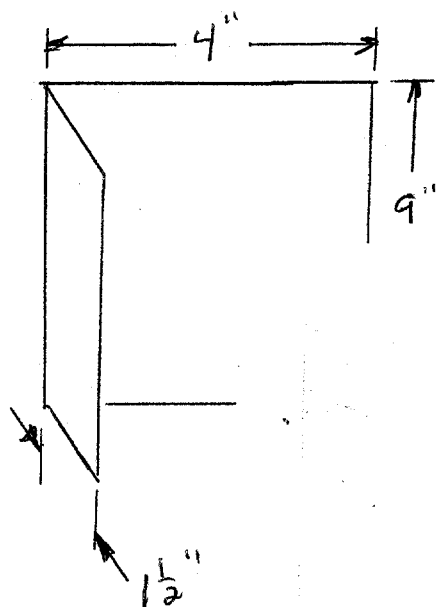


PARTS LIST FOR SCHEMATIC OF ELECTRICAL SYSTEM

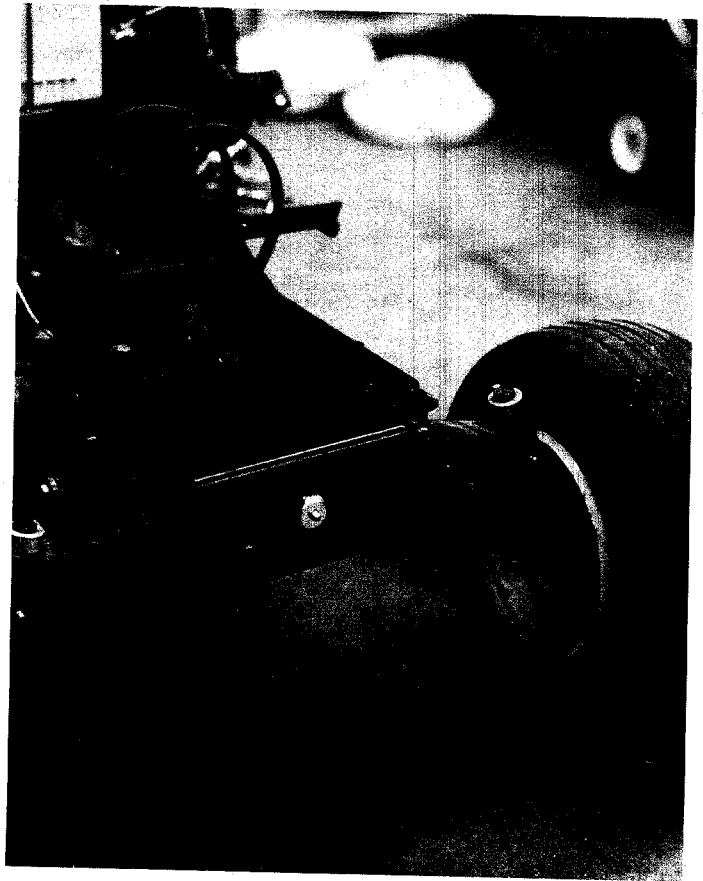
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	725-0222		Head Light	
2	725-0130		Battery	
3	725-0270		Solenoid	
4	725-0201		Ignition Key	
5	725-0475		Ammeter	N
6	725-0267		Key Switch	
7	725-0202		Light Switch	
8	725-0275		Wire Harness	
9	725-0390		Voltage Regulator	
10	725-0139		Battery Ground Wire	
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	725-0493	Circuit Breaker
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*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.



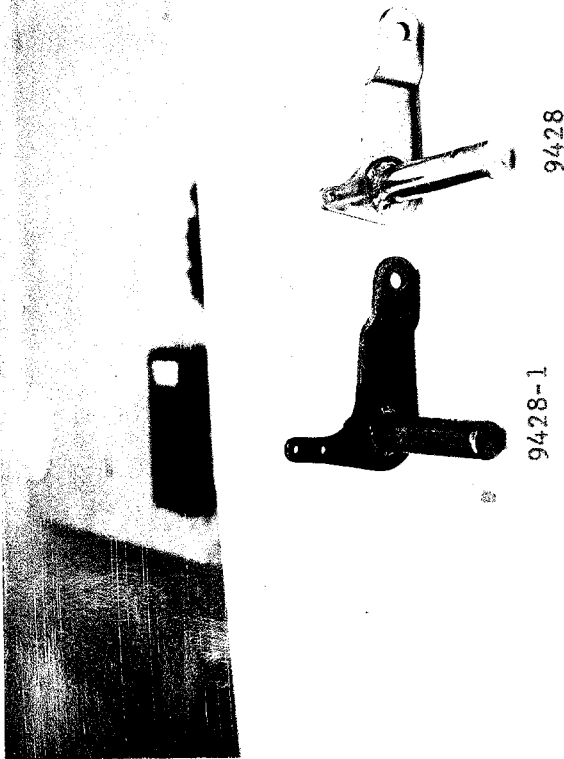
12735
2 KEYWAYS 6x6x13/4
1 ROLL PIN HOLE



PARTS INFORMATION

BRIGGS & STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

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



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
MISSISSIPPI	BILOXI	
Biloxi Sales & Service, Inc.	506 Caillavet St.	39533
MISSOURI	KANSAS CITY	
Automotive Equip. Service	3117 Holmes St.	64109
	ST. LOUIS	
Henzler, Inc.	2015 Lemay Ferry Rd.	63125
NEBRASKA	OMAHA	
R.P.W., Inc.	7402 "L" St.	68127

NEW YORK	CARTHAGE	
Gamble Dist., Inc.	West End Ave.	13619
	SYRACUSE	
Kimber's, Inc.	115 N. Geddes St.	13204
	ROCHESTER	
Henry W. O'Neil & Associates ..	410 N. Goodman St. ...	14609
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
	CARROL	
Stebe's Mid-State Mower Supply Box 366		43112
	WILLARD	
Sunshine Wholesale Tire Outlet Route 224		44890
	MANSFIELD	
McClure Lawn & Garden Supply...1114 Lexington Ave. .		44903
OKLAHOMA	MUSKOGEE	
Victory Motors, Inc.	605 S. Cherokee	74401
	ADA	
Ada Auto Supply	301 E. 12th St.	74820
OREGON	PORTLAND	
Kenton Supply Co.	8216 N. Denver Ave. .	97217
PENNSYLVANIA	LANCASTER	
Raub Supply Co.	James & Mulberry Sts...	17604
	PITTSBURGH	
Bluemont Co.	11125 Frankstown Rd..	15233
TENNESSEE	KNOXVILLE	
Master Repair Service	2423 Broadway, N.E. ...	37911
	MEMPHIS	
Memphis Cycle & Supply Co.	421 Monroe Ave.	38103
American Sales & Service, Inc. .	1922 Lynnbrook	38117
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 Appliance Co.	44 Lakeside Ave.	05401
VIRGINIA	RICHMOND	
RBI Corp.	963 Myers St.	23260
WASHINGTON	SEATTLE	
Bailey's Rebuild, Inc.	1325 E. Madison St. ...	98102
WEST VIRGINIA	CHARLESTON	
Young's, Inc.	233 Virginia St., E. ...	25301
WISCONSIN	APPLETON	
Automotive Supply Co.	123 S. Linwood Ave. ..	54911

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 over 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.