

Operating/Service Instructions

GARDEN TRACTOR

IMPORTANT

SAFE OPERATION PRACTICES - RIDING MOWERS

Model No.

142-760 & 142-960

3 point
hitch

192-81

10HP
15HP

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 instruc-
tion.
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 (motor).
6. Disengage power to attachments and stop engine
(motor) before leaving operator position.
7. Disengage power to attachment(s) and stop en-
gine (motor) before making any repairs or adjust-
ments.
8. Disengage power to attachments when transport-
ing or not in use.
9. Take all possible precautions when leaving ve-
hicle unattended; such as disengaging power-
take-off, lowering attachments, shifting into neu-
tral, setting parking brake, stopping engine and
removing key.
10. Do not stop or start suddenly when going uphill or
downhill. Mow up and down the face of steep
slopes; never across the face.
11. Reduce speed on slopes and in sharp turns to pre-
vent 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 equip-
ment.
 - 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 road-
ways.
15. When using any attachments never direct dis-
charge 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 run-
ning or hot engine or fill fuel tank indoors.
Wipe up spilled gasoline.
 - C. Open doors if engine is run in garage — ex-
haust fumes are dangerous. Do not run engine
(motor) indoors.
17. Keep 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
equipment is in safe working condition.
19. Never store equipment with gasoline in the tank
inside a building where fumes may reach an open
flame or spark.
20. Allow engine to cool before storing in any en-
closure.
21. To reduce fire hazard keep engine free of grass,
leaves or excessive grease.
22. Vehicle and attachments should be stopped and
inspected for damage after striking a foreign ob-
ject and the damage should be repaired before
restarting and operating the equipment.
23. Do not change engine governor settings or over-
speed engine.
24. When using vehicle with mower:
 - (1) Mow only in daylight or in good artificial light.
 - (2) Never make a cutting height adjustment while
engine (motor) is running if operator must dis-
mount to do so.
 - (3) Shut engine (motor) off when removing grass
catcher and/or unclogging chute.
 - (4) Check blade mounting bolts for proper tight-
ness at frequent intervals.
25. Check grass catcher bags frequently for wear or
deterioration. Replace with new bags for safety
protection.

KNOW YOUR TRACTOR

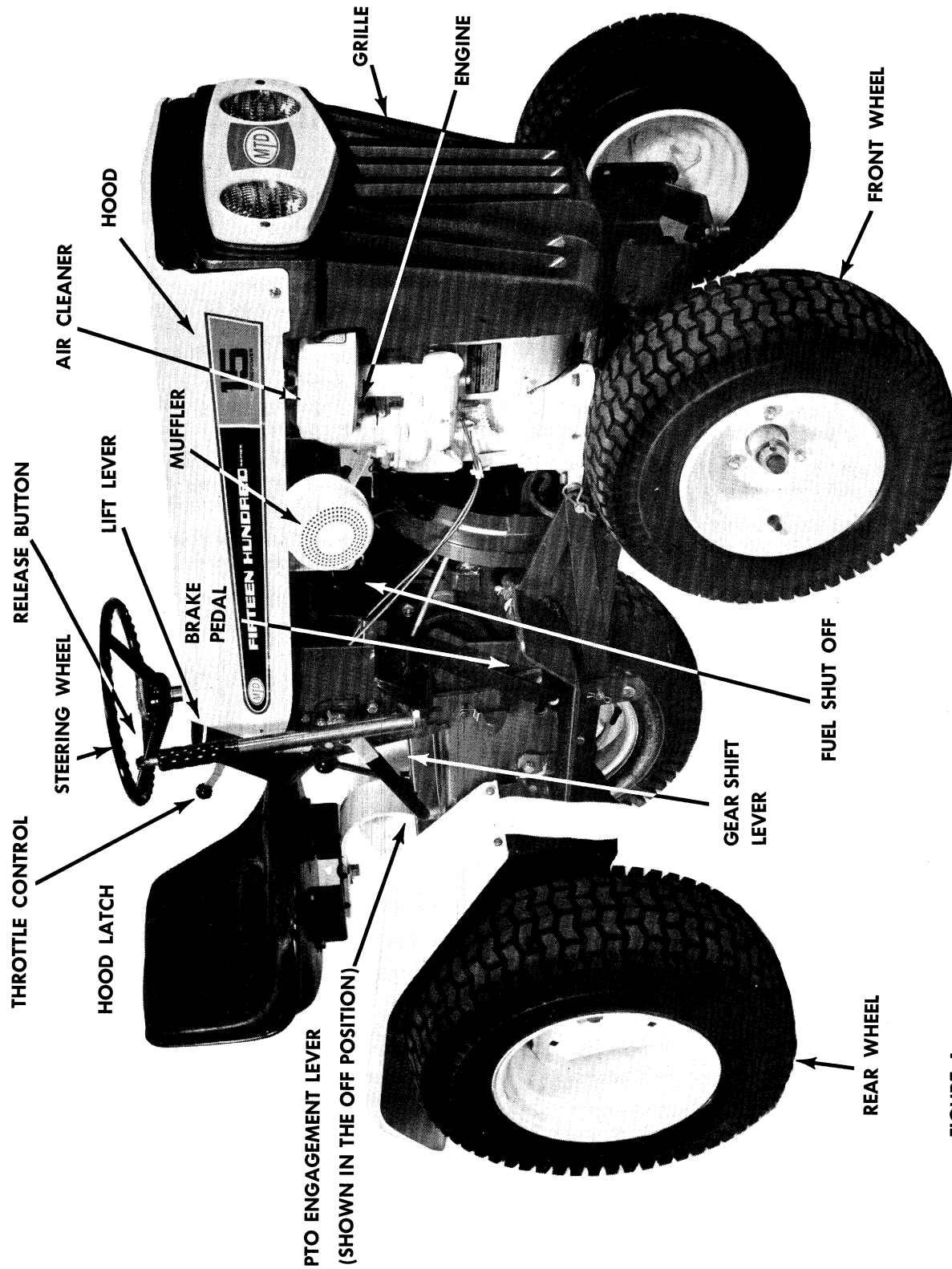


FIGURE 1.

ASSEMBLY INSTRUCTIONS

WARNING

The tractor shall not be operated without the entire grass catcher or chute deflector in place when using the cutting deck.

NOTE

Under normal usage bag material is subject to wear, and should be checked periodically. Be sure any replacement bag complies with the mower manufacturer's recommendations.

ACTIVATING THE BATTERY

WARNING

ELECTROLYTE IS A MIXTURE OF SULPHURIC ACID AND WATER. AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. IF ELECTROLYTE IS SPILLED FLUSH AREA WITH CLEAR WATER AND NEUTRALIZE WITH SOLUTION OF WATER AND BAKING SODA OR WATER AND AMMONIA.

CAUTION

Always add electrolyte to battery before battery is installed in vehicle.

1. Remove vent plugs.
2. When using 6 quart or 2 quart container—place package upright; pull tab back to edge of carton, pull out hose; snip off end of hose. Fill each cell until electrolyte level rises to split ring at bottom of vent well.

DO NOT OVER FILL

3. After filling cells, wait five to ten minutes and add additional electrolyte if necessary to bring electrolyte to proper level.
4. Replace vent caps.
5. Charge battery for 10 to 15 minutes at 25-30 amps. or for 30 minutes at 4-6 amps.

INSTALLING THE BATTERY.

- Step 1. Place the battery in the tractor with the Negative terminal towards the front of the tractor. Do not push the battery all the way in.
- Step 2. Attach the positive cable to the positive battery terminal. The positive cable is marked (P +).
- Step 3. Attach the negative cable to the negative battery terminal. The negative cable is marked (N).
- Step 4. Assemble the hold down rods and cross rods with the flat washer and wing nut. See Figure 2.
- Step 5. Place the battery hold down assembly over the battery and slide the battery into place. See Figure 3.
- Step 6. Hook the hold down rods into the battery case and tighten finger tight.

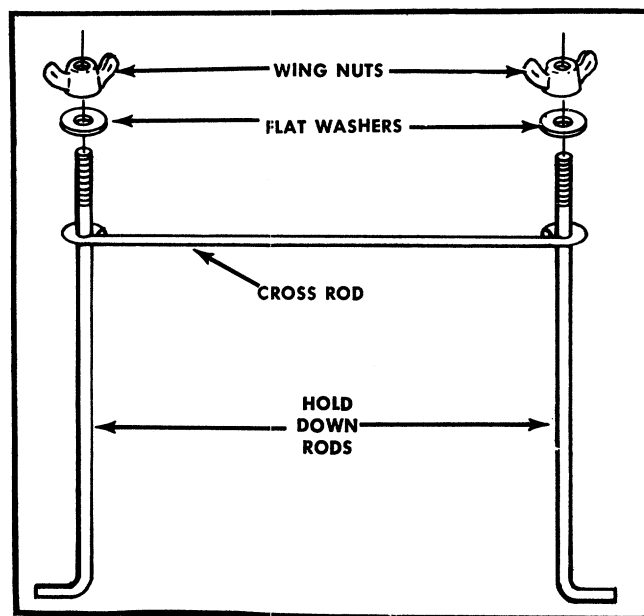
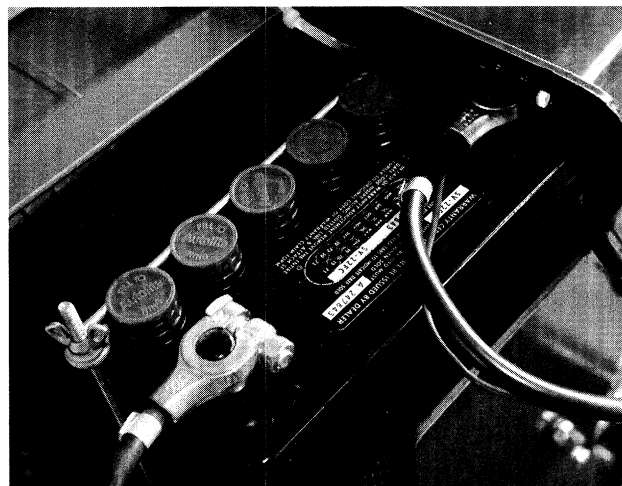


FIGURE 2. HOLD DOWN ASSEMBLY



ASSEMBLING THE THREE POINT HITCH.

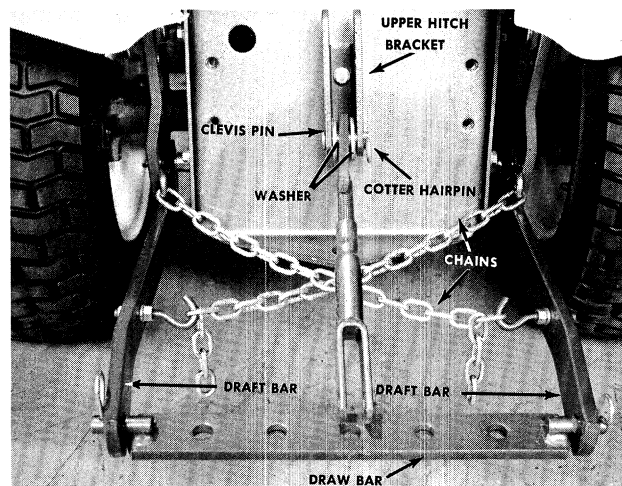


FIGURE 4. THREE POINT HITCH

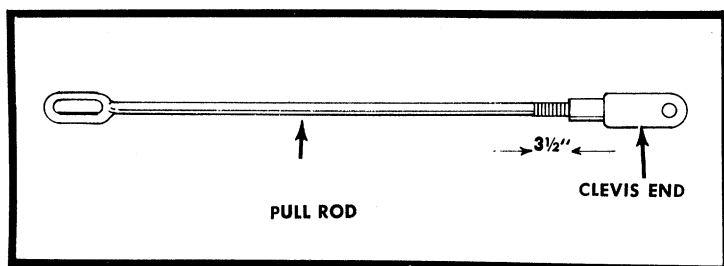


FIGURE 5. PULL RODS

- Step 1. Adjust the clevis end on both the right and left sides of the tractor, so that one inch of threads show. See Figure 5.
- Step 2. Assemble the threaded clevis pins to the hole on each side of the rear frame as shown. Fasten with lockwashers and nuts. See Figure 6.

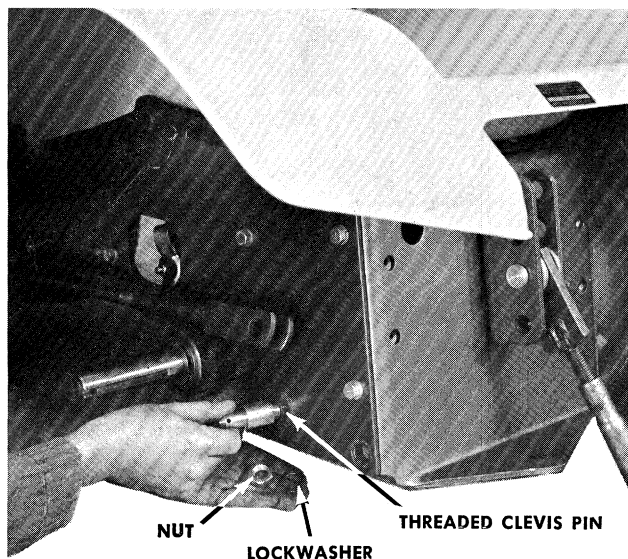


FIGURE 6. THREADED CLEVIS PINS

- Step 3. Assemble the two draft bars as shown. (Refer to Figure 4 to determine which is the right hand and left hand). Secure with cotter hairpins on the top and bottom. See Figure 7.
- Step 4. Assemble the draw bar to the draft bars and secure with cotter hairpins. See Figure 4.

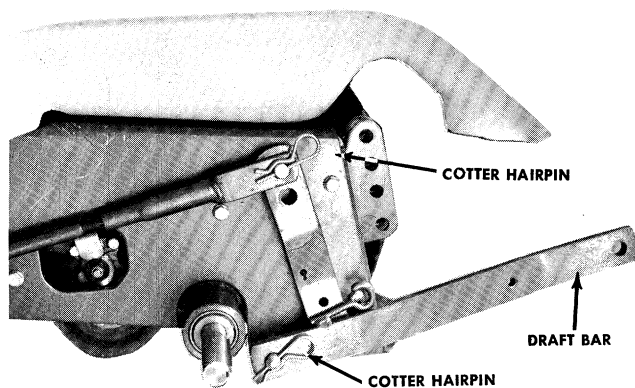


FIGURE 7. DRAFT BAR ASSEMBLY

- Step 5. Screw one hex nut all the way on each of the hook bolts. See Figure 8.

- Step 6. Place a lockwasher on the hook bolt and place the hook through the draft bar so it is on the inside. Do this on both draft bars. See Figures 4 and 8.

NOTE

Only screw the outside nut on a few threads so it can be adjusted to take up the slack in the chain.

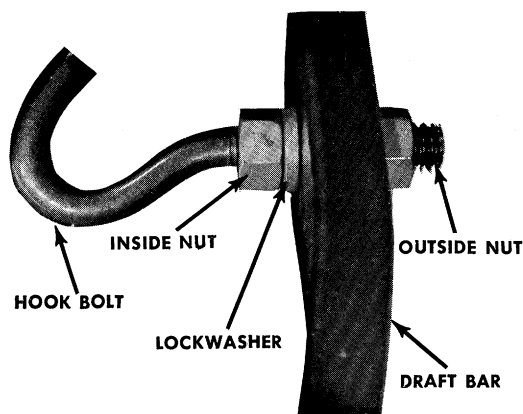


FIGURE 8. HOOK BOLT ASSEMBLY

- Step 7. Fasten the chains to the rear hook welded on the draft bar and cross over to the hook bolt. Do both chains this way. See Figure 4.
- Pull the chains to make as tight as possible.
- Step 8. Tighten the outside nuts on the hook bolt until there is only about 1/2" slack in the center of the chain. See Figures 4 and 8.
- Step 9. Tighten the inside nut. See Figure 8.
- Step 10. Assemble the two halves of the center adjustment arm together until there is 1" of thread showing. See Figure 9.

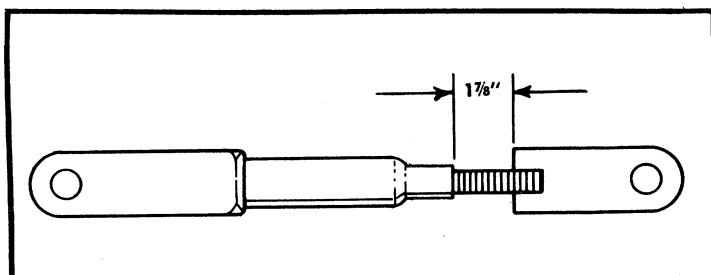


FIGURE 9. CENTER ADJUSTMENT ARM

- Step 11. Assemble the flat end of the Center Adjustment Arm to the bottom hole in the Upper Hitch Bracket with two flat washers, a clevis pin and a cotter hairpin. See Figure 4.

THREE POINT HITCH ADJUSTMENT

The upper hitch bracket can be attached in the lower mounting position as shown in Figure 4 or the two bolts can be removed and the upper hitch bracket can be mounted in the higher position. It also can be mounted upside down to obtain the maximum adjustment when using the rear mounted attachments.

The draft bars can also be switched from side to side so they bow in instead of out as shown in Figure 4.

CHECKING OIL AND GASOLINE

FILL FUEL TANK

Use clean fresh "regular" grade gasoline. Fill tank completely. Gasoline tank capacity is 1-1/2 gallons.

DO NOT FILL GASOLINE TANK WHILE ENGINE IS RUNNING. Avoid spilling gasoline on a hot engine—this may cause an explosion and serious injury.

DO NOT MIX OIL WITH GASOLINE

OIL RECOMMENDATIONS

WINTER
(Below 40° F.)
Use SAE 5W-20

SUMMER
(Above 40° F.)
Use SAE 30

Any high quality detergent oil having the American Petroleum Institute classification "For Service MS" can be used in your Briggs & Stratton engine. Detergent oils keep the engine cleaner and retard the formation of gum and varnish deposits.

The above oil recommendations are the result of extensive testing. No special additives should be used.

FILL CRANKCASE WITH OIL

Remove the oil filler plug. Place the engine level. Fill the crankcase to overflowing. POUR SLOWLY. CAPACITY 4 PINTS. Replace the filler plug.

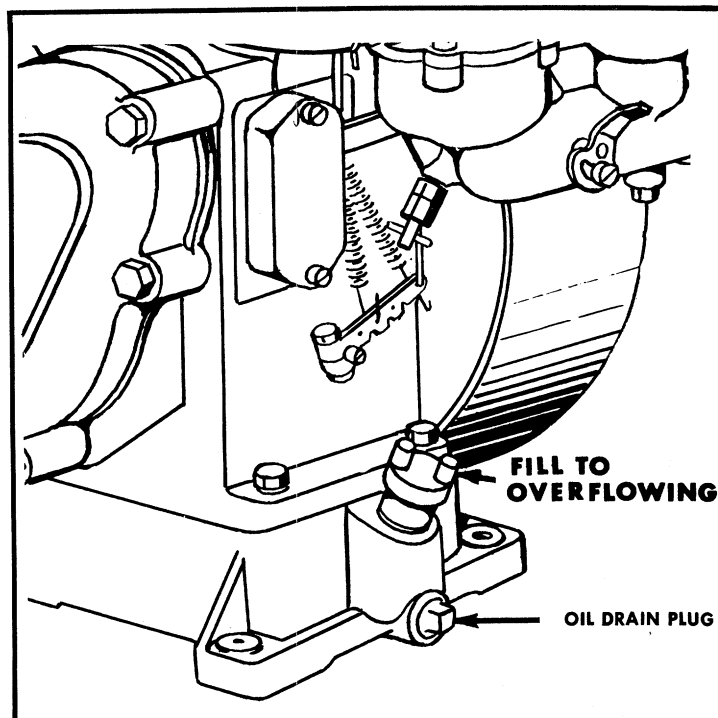


FIGURE 10. OIL FILL AND DRAIN

GENERAL INFORMATION

ENGINE AND DRIVE TRAIN

ENGINE—10 or 15 HP Synchro-Balanced Briggs & Stratton cast iron block with 12 volt electric starter.

TRANSAXLE—Peerless with four forward speeds and reverse.

CREEPER GEAR—3/4 MPH at full throttle. Fourth gear 6-1/2 MPH at full throttle. All speeds variable with throttle.

CLUTCH—Five and one-half inch double faced disc clutch.

ORIENTATION

Your tractor is right hand (R.H.) or left hand (L.H.) as you operate it.

CLUTCH PEDAL.

The clutch pedal is located on the left hand side of the tractor. Depress it with your left foot to separate the clutch and disconnect the power from the engine to the transaxle. The clutch pedal must be depressed to start the engine.

CAUTION

Do not shift while in motion.

BRAKE PEDAL

The brake pedal is located on the right side of the tractor. Depress it with your right foot to stop the tractor. The clutch pedal should also be depressed when coming to a complete stop.

PARKING BRAKE LOCK

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

To release the parking brake, hold your foot against the brake pedal and turn the parking brake lock counter-clockwise one turn. Release the brake pedal slowly.

GEAR SHIFT LEVER

The selection of the correct gear and throttle setting will be determined by the attachment being used. Generally, anything that uses the tractor engine as a power source should be run at full throttle with the ground speed determined by the gear selection.

1st Gear	Rotary Tiller Snow Thrower Snow Blade Mold Board Plow
2nd Gear.....	Rotary Tiller Snow Thrower Snow Blade Mold Board Plow Heavy Grass Cutting
3rd Gear	Medium Grass Cutting
4th Gear.....	Light Grass Cutting Road Gear

A lock is provided to prevent accidentally engaging the 1st gear. Do not move the gear shift lever all the way against the lock.

Second gear has a detent and you can feel it click when you are in second gear. Over shifting will cause the teeth to grind on first gear and can cause damage to the transaxle.

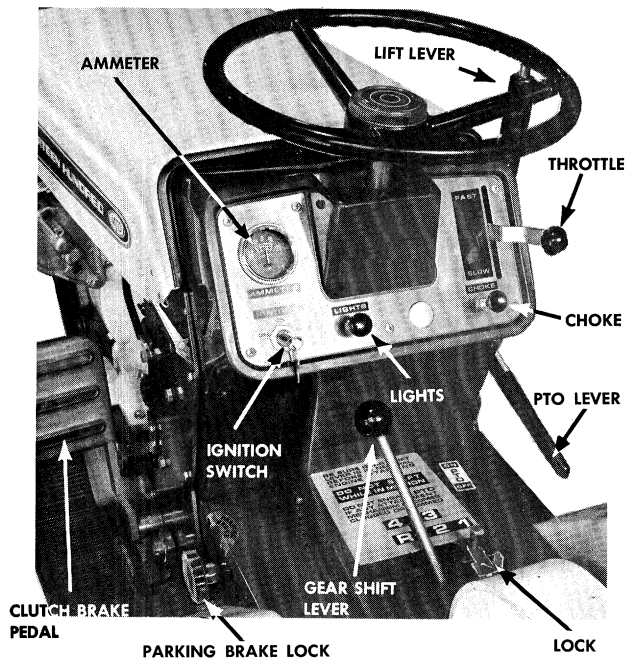


FIGURE 11. CONTROLS

LIFT LEVER

The lift lever is used to change the height of the attachments such as the cutting deck, tiller and plow. To operate, depress the thumb button, move the lift lever to the desired height and release the button.

The three point hitch operates off the lift lever and does not have to be disconnected when attaching the cutting deck or snow blade.

IGNITION SWITCH

Turn the key to the right to engage the starting motor on the engine. To shut off the engine turn the key to the left to the OFF position. See Figure 11. THE IGNITION SWITCH MUST BE ON TO OPERATE THE HEADLIGHTS.

WARNING

Remove the key from the switch when the tractor is not in use.

THROTTLE CONTROL

The throttle is used to regulate the engine speed. Move the throttle up to the FAST position and down to the SLOW position. See Figure 11.

When using the tractor engine for a source of power for the cutting deck and the rotary tiller, the engine should be operated at the FAST speed.

CHOKE

Before starting the engine, pull the choke knob all the way out. After engine starts, move the choke knob in gradually until it is completely in.

When the engine is hot the choke may not be needed to start. See Figure 11.

POWER TAKE OFF (PTO) FRONT AND REAR

There are two PTO's on your tractor. The front PTO (See Figure 12) is located behind the grille and is used to operate the snow thrower. This PTO is attached directly to the engine and runs whenever the engine is running.

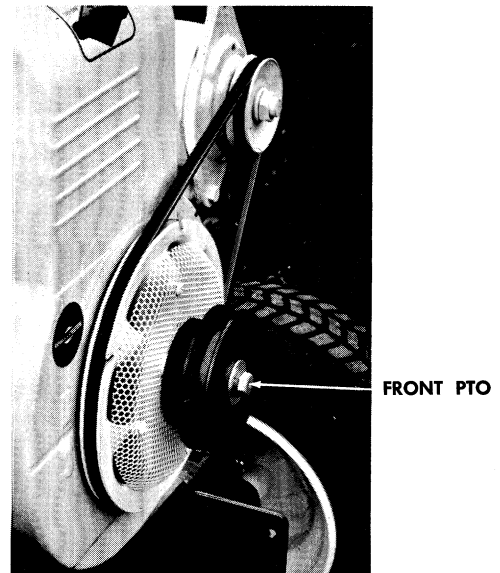


FIGURE 12. FRONT PTO SHOWN WITH GRILLE REMOVED

The rear PTO (See Figure 13) is located under the tractor and is used to operate the grass cutting deck and the rotary tiller.

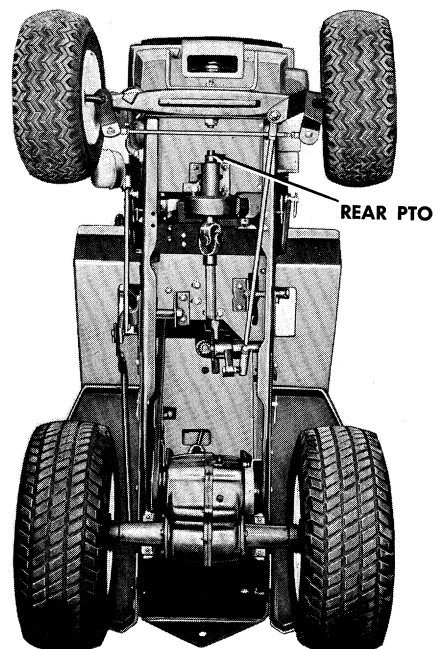


FIGURE 13. REAR PTO SHOWN WITH DRIVE SHAFT ATTACHED

The rear PTO can be shut off while the engine is running by moving the PTO lever, located on the right hand side of the tractor, into the OFF position. See Figures 11 and 14.

The PTO Lever must be in the disengaged position before the engine will start. See Figure 14.

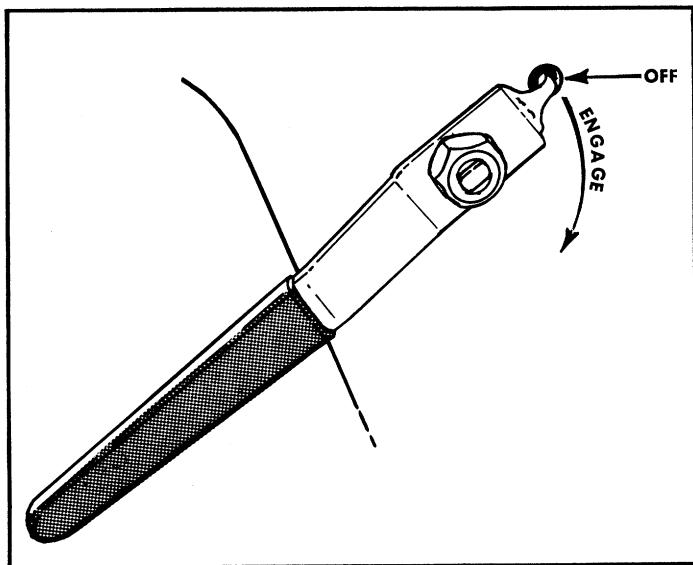


FIGURE 14. PTO LEVER

LIGHTS

Pull the light switch out to turn on the head lights. The ignition switch must be on to operate the head lights.

WHEELS

Front (10 and 14 HP).....	16 x 6.50-12
Rear (10 HP).....	23 x 8.50-12
Rear (14 HP).....	23 x 9.50-12

Tire pressure is from 7 to 10 psi.

NOTE

Tires are overinflated for shipment. Reduce tire pressure to 7 to 10 psi before using.

The rear valve stems are to the inside to accommodate wheel weights.

One hundred pounds (two 50 pound weights) can be attached to the rear wheels to increase rear traction for attachments such as the plow, snow blade, snow blower and rotary tiller.

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 will not show a charge. See Figure 11.

REAR WHEEL ADJUSTMENT

Each rear wheel is adjustable out 2-3/4 inches on the axle. See Figure 15.

NOTE

Do not over extend the hubs.

The rear hubs are extended to give greater stability when operating on hilly terrain.

To adjust, loosen the hex bolt and slide the rear hubs out.

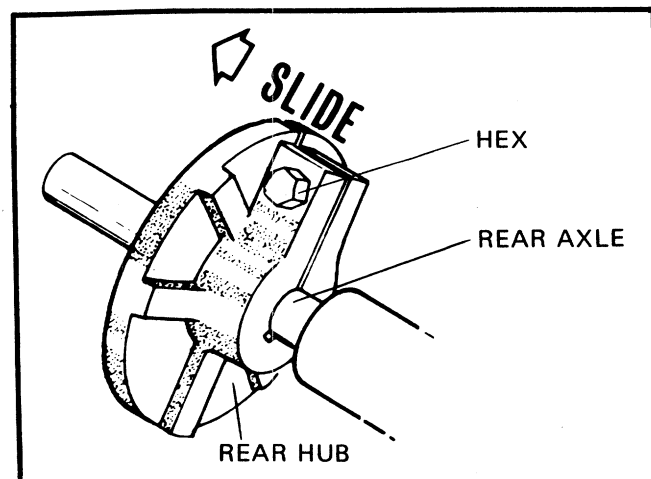


FIGURE 15. REAR HUBS

SEAT

The seat is adjustable forward or backward by removing the seat bolt and reassembling it in a different hole.

OPERATING INSTRUCTIONS

IMPORTANT

After striking a foreign object, stop the engine (motor), remove wire from spark plug, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower.

CAUTION

1. Keep all shields and guards in place.
2. Before leaving operator's position:
 - Shift transmission to neutral
 - Set parking brake
 - Disengage attachment clutch
 - Shut off engine
 - Remove ignition key
3. Wait for all movement to stop before servicing machine.
4. Keep people and pets a safe distance away from machine.

STARTING YOUR ENGINE

To get the feel of your tractor, operate it in a large open space until you become familiar with the controls.

1. Be sure you have read the manual to acquaint yourself with the controls.
2. Fill engine with oil and gasoline as outlined on page 5 of this manual.
3. Open fuel shut-off valve located under the gasoline tank. See Figure 16.

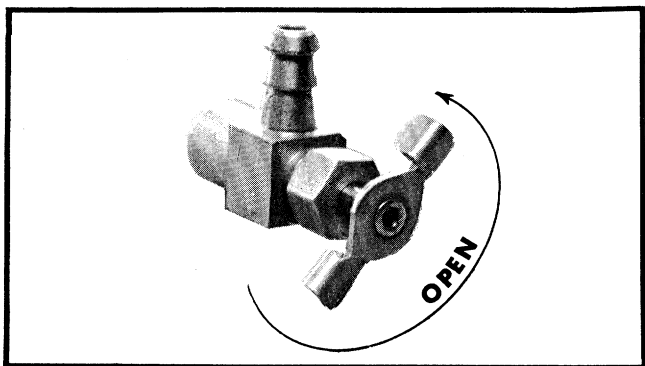


FIGURE 16. FUEL SHUT OFF VALVE

4. Attach the spark plug wire.
5. Pull the choke knob all the way out.
6. Place the throttle control lever halfway between FAST and SLOW.
7. Place the PTO Lever in the disengaged position. See Figure 14. The engine will not start unless the PTO Lever is disengaged.
8. Depress the Clutch Pedal. The engine will not start unless the clutch pedal is depressed.
9. Turn the ignition key to the right to engage the starter. When the engine starts, move the choke knob in half way. After the engine warms up, push the choke knob in gradually until completely in.

NOTE

When the engine is hot, the choke may not be needed to start the engine.

CAUTION

Do NOT run starter for more than 30 seconds at a time. If engine does not start after several tries, place throttle control in FAST position, wait several minutes and try again without moving the throttle lever from the FAST position.

STOPPING YOUR ENGINE

To stop the engine, turn the ignition key to the left.

WARNING

Never leave the ignition key in the tractor when not in use to prevent accidental starting.

Remove the spark plug wire from the spark plug when tractor is not in use to prevent accidental starting.

POWER TAKE OFF (PTO)

The PTO should be in the "OFF" position (Handle Down) when starting the engine and when attachments using the PTO are not on the tractor. If, while using the cutting unit or the rotary tiller, they become clogged and will not operate, shut off the engine AND THE PTO and remove the spark plug wire before clearing the attachment.

The PTO engagement lever should be engaged fast to prevent wear on the PTO belts.

The cutting unit and the rotary tiller can be raised or lowered while they are operating under full power. For example, the rotary tiller can be lifted from the ground with the lift lever in order to turn the tractor around without shutting off the PTO.

MAINTENANCE

CLUTCH ADJUSTMENT

- Step 1. Remove the spark plug from the engine.
- Step 2. Rotate the clutch disc by hand and tighten the elastic locknut (Figure 17) until the bearing stops rotating (Figure 18).

NOTE

When the bearing stops turning, all the play has been taken from the throw out assembly.

- Step 3. Back off the elastic locknut just enough for the bearing to rotate freely when you rotate the clutch disc.

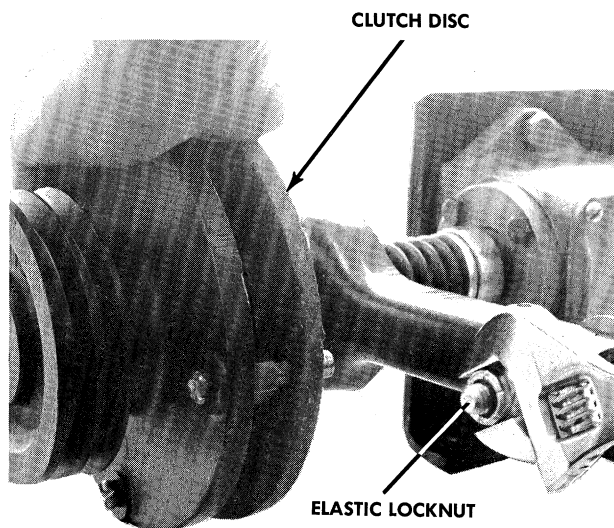


FIGURE 17. CLUTCH ADJUSTMENT

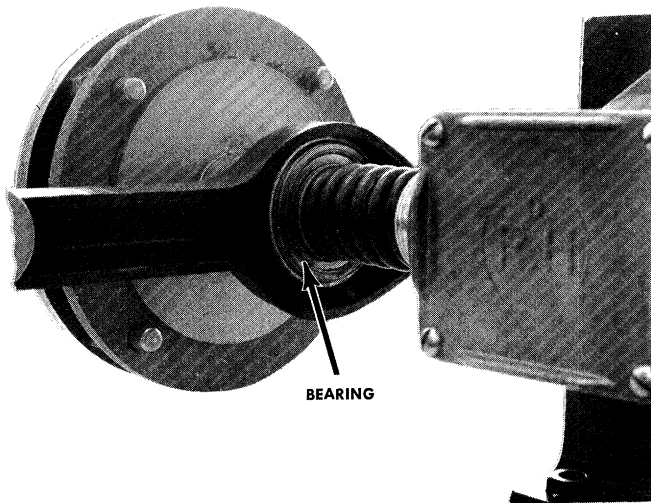


FIGURE 18. THROW OUT BEARING

Step 4. To ensure that the clutch disc is separating, check the pressure on the clutch disc.

WARNING

Do not have the engine running.

Depress the clutch pedal with your left hand and try to rotate the small spring located between the pressure plate and the throwout yoke with your right hand. See Figure 19. You should be able to rotate this spring by hand. If it does not repeat steps 2 and 3.

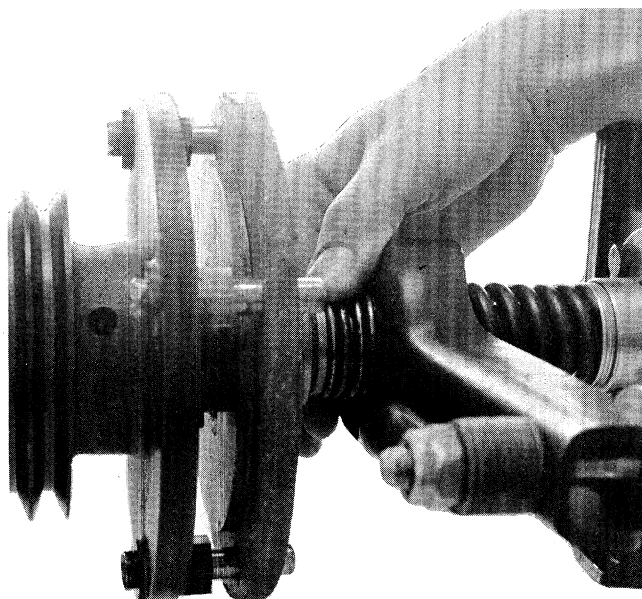


FIGURE 19. CLUTCH SPRING

TROUBLESHOOTING CLUTCH PROBLEMS

If the clutch does not disengage after following the proper adjustment procedures or you cannot shift from neutral to any gear without the gears grinding, the following conditions could exist.

1. The milled slot in the rear pressure plate is not centered and it is binding on the roll pin. Replace the rear pressure plate.
2. If either of the pressure plates are warped, the clutch will not separate and they should be replaced.
3. If any weld splash is on either pressure plate, it will cause the disc to hang up and the clutch will not disengage. Remove the splash or replace the pressure plates.
4. When the holes are not drilled properly in the fiber clutch disc it will hang up on the drive pins and will not separate. Replace the fiber disc.
5. Rust on the center shaft of the clutch can cause the spring guides under the small spring to bind. See Figure 19. Remove the rust from the shaft and lubricate with a thin film of oil.

BRAKE ADJUSTMENT

To adjust the brake, tighten the locknut on the disc brake located on the left hand side of the transaxle. The brake should be tightened enough to stop the tractor when the pedal is depressed but still allow the disc to turn free between the brake pads when the pedal is released. See Figure 20.

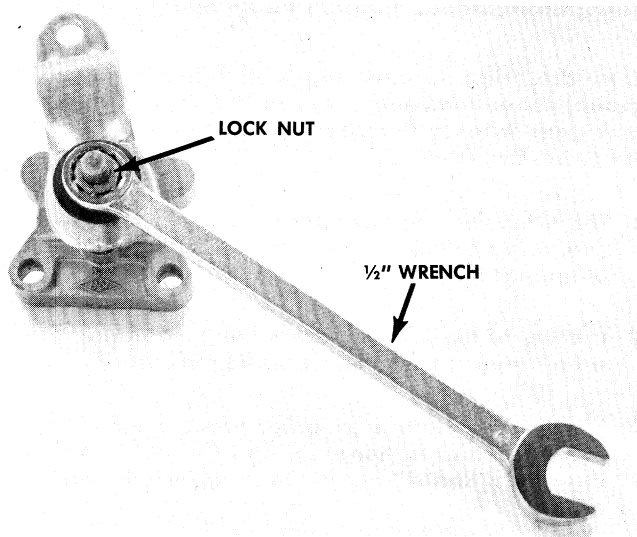


FIGURE 20. BRAKE ADJUSTMENT

POWER TAKE OFF (PTO) BELT REMOVAL

1. Drive out the roll pin with a drift and a hammer. See Figure 21.

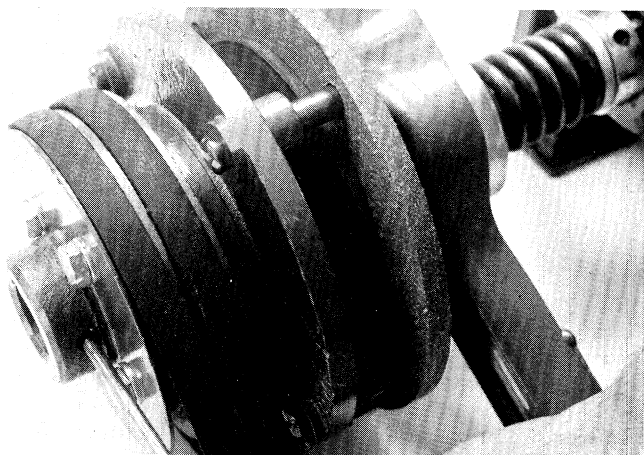


FIGURE 21. REMOVING ROLL PIN

2. Remove the four cap screws on the inside of the pulley. See Figure 22.

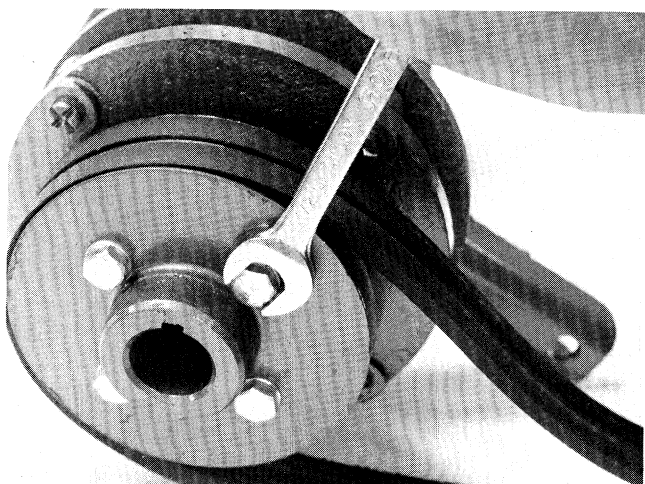


FIGURE 22. REMOVE CAP SCREWS

3. Slide the front half of the pulley forward and the back half of the pulley backwards and drop the belts between the two halves. See Figure 23.

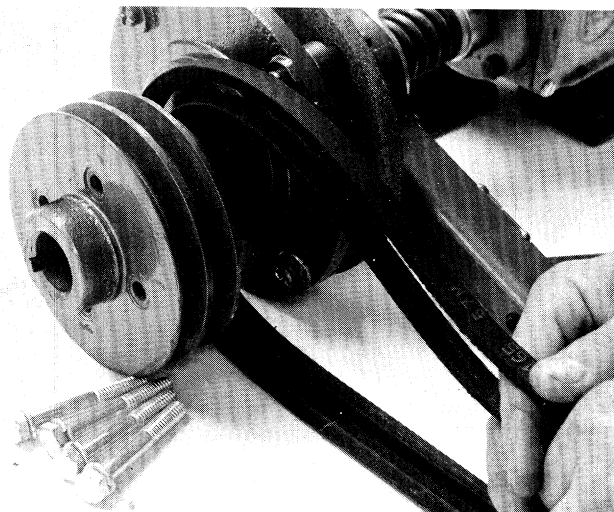


FIGURE 23. SPLITTING THE PULLEY

4. Remove the belt guard on the PTO Spindle and remove the old belts.
5. Reassemble in reverse order with two matched belts. Adjust the lower belt guard so it is about 1/8" away from the belts when the PTO Lever is engaged.

NOTE

A piece of cardboard can be used as a feeler gauge to adjust the lower belt guard.

TRANSMISSION BELT

ADJUSTMENT—The tension of the belt is increased by **UNSCREWING** the leveler screw until you obtain a 1/2" deflection on the belt when you apply 10 pounds of force midway between the transmission pulley and the pulley. Lock leveler in place by tightening the lock nut.

REMOVAL—Screw the leveler screw all the way in until the idler is loose and remove the belt. See Figure 24.

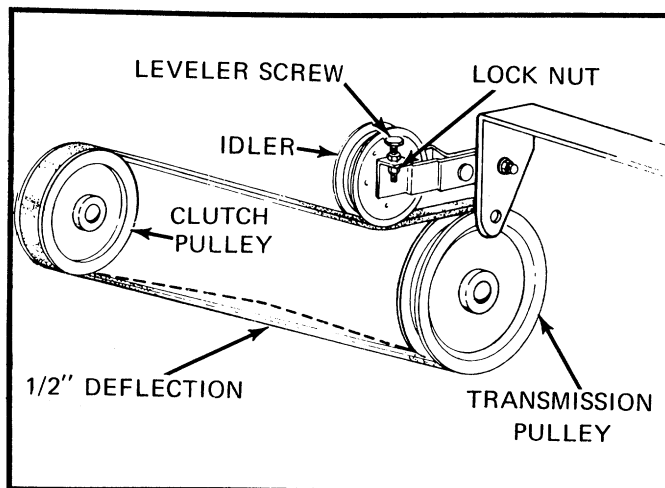


FIGURE 24. TRANSAXLE BELT

STARTER—GENERATOR BELT

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

NOTE

The starter-generator belt should be checked for proper adjustment after the first 10 hours of operation.

ADJUSTMENT—To tighten, loosen the bolt in the bracket slightly, loosen the belt in the adjusting strap and swing the starter-generator away from the engine until the belt is tight. (Belt should deflect 1/4" when depressed with your thumb.) Tighten all bolts. See Figure 25.

REMOVAL—Follow same procedure as above except when the bolts on the bracket and adjusting strap are loose, swing the starter-generator towards the engine until the old belt can be removed and replaced. Follow the above procedure for tightening the new belt. See Figure 25.

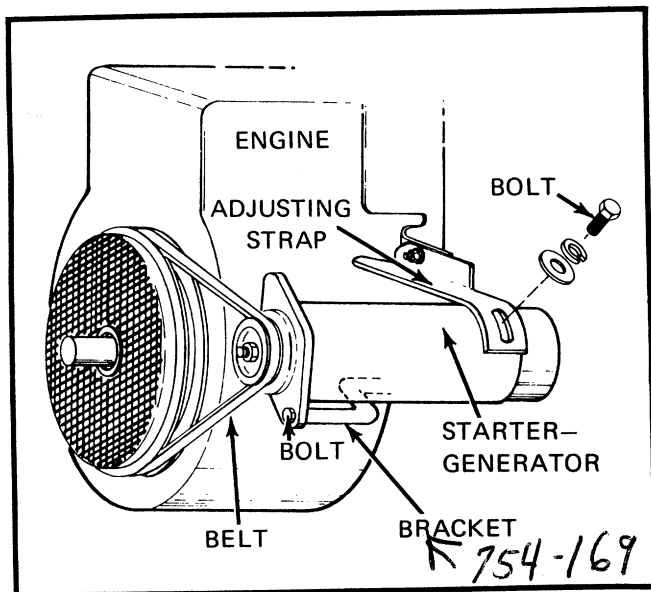


FIGURE 25. STARTER-GENERATOR BELT

REAR POWER TAKE OFF ADJUSTMENT

If the PTO creeps when it is in the disengaged position the belt should be adjusted. To adjust:

- Step 1. Set the engagement lever in the ENGAGED position.
- Step 2. Remove the cotter-pin on the PTO adjusting rod.
- Step 3. Remove the rod from the bracket and unscrew it 3 complete turns and insert back into the bracket.
- Step 4. Replace the cotter-pin. See Figure 26.

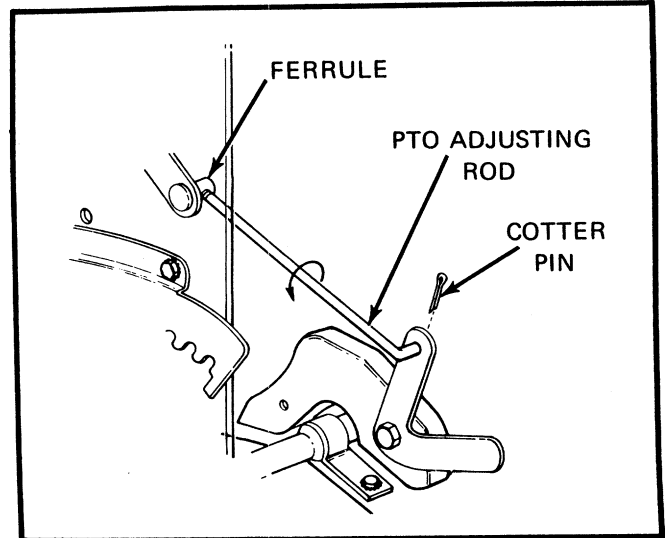


FIGURE 26. PTO ADJUSTMENT

TIE ROD ADJUSTMENT (TOE-IN)

The front wheels should be approximately parallel. See Figure 27.

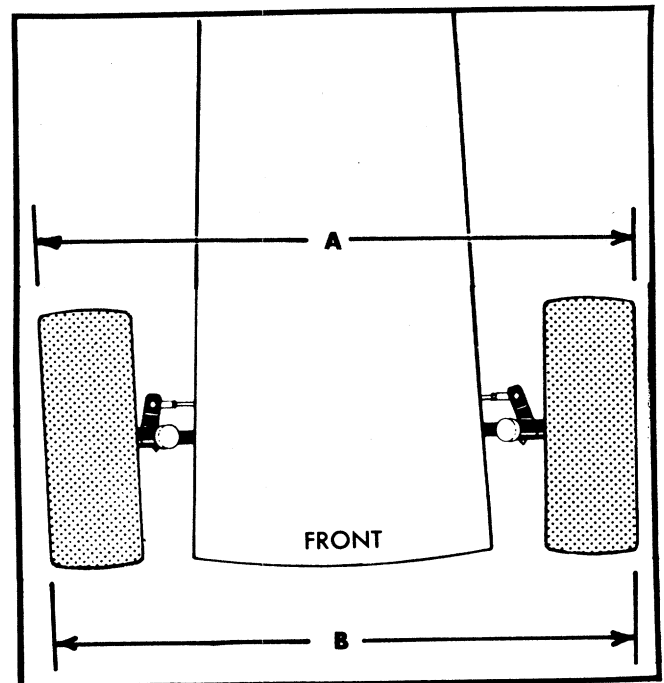


FIGURE 27. TOE-IN ADJUSTMENT

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 to make your adjustment. See Figure 28.

Use a tape measure or a yard stick and measure the distance A and B on the front wheels. The difference between A and B should be less than 1/8 of an inch.

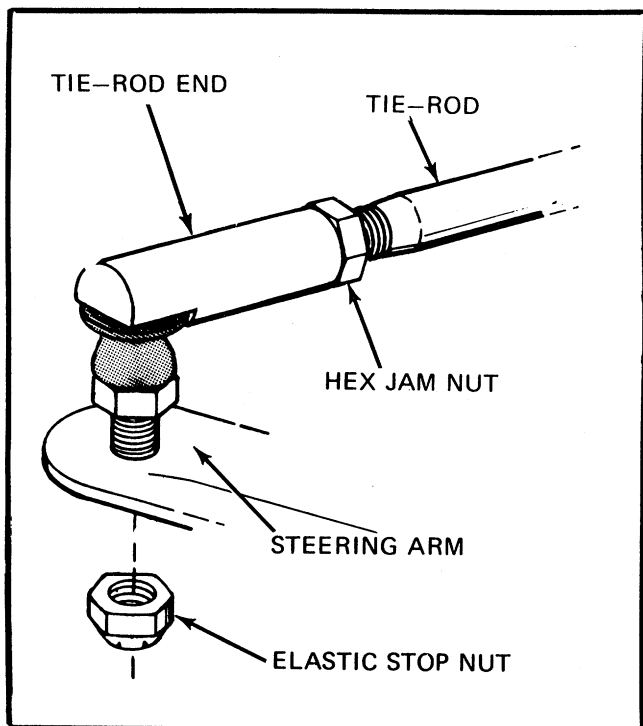


FIGURE 28. TIE ROD END

LIFT LEVER LOCKOUT

The lift lever, located on the right hand side of the tractor, is used to raise and lower the attachments. A lockout lever is provided to keep the ratchet from engaging. The lockout is used on the snow blade and snow thrower so it is free floating and the lockout **MUST** be used when the electric lift kit is installed. See Figure 29.

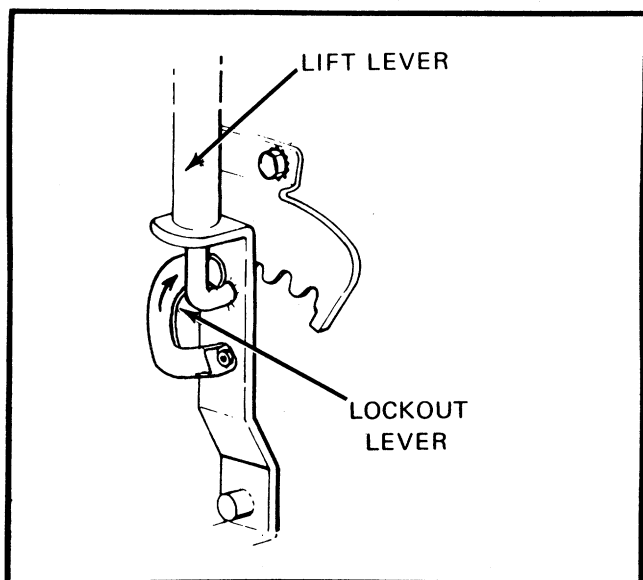


FIGURE 29. LOCKOUT LEVER

BATTERY CARE

BATTERY FAILURE—Many times new batteries are returned for charging within a few days or a week after sale. Before returning the battery to the dealer who sold you the tractor, make these following checks:

1. Was the battery fully charged when installed? The dry-pack battery should have been placed on a charger and the specific gravity of the battery should read 1.265 to 1.275 before it was installed in the tractor.
2. Were the battery terminals clean, greased and properly tightened when the battery was installed?
3. Batteries are usually involved in ANY starting failure, however, insufficient hours of driving, worn cables, trouble in the electrical system, corroded connections, slipping drive belt can cause a battery to become discharged without the battery being at fault.

SERVICING YOUR BATTERY

It is alright to use drinking water in your battery, excluding mineral water.

Adding water to a battery cell will lower the specific gravity of the electrolyte. Water should not be added unless the tractor is going to be run immediately during freezing weather.

Maintain electrolyte level in the battery to the level indicated on the top of the battery.

Keep the terminals clean and coated with grease.

BATTERY STORAGE

If your tractor is to be stored during an off-season, the battery should be removed from the tractor, placed in a charger until the specific gravity reads 1.265 to 1.275 and stored at approximately 72° F. Batteries should not be placed directly on cement as this will drain the battery. Recharge to bring the specific gravity to normal before placing it in the tractor after storage.

BATTERY REPLACEMENT

Your battery is a standard automotive type battery and replacements can be purchased locally through your local dealer under part number 725-130.

SPECIFICATIONS

45 Amp. Hours at 20 hours.
9 plates per cell.
Splash Proof Vents
Round automotive type terminals.
Size: 9 x 6-3/4 x 7-1/2 inches.

NOTE

Size may vary slightly between different makes of batteries. Be sure it will fit in the tractor battery case.

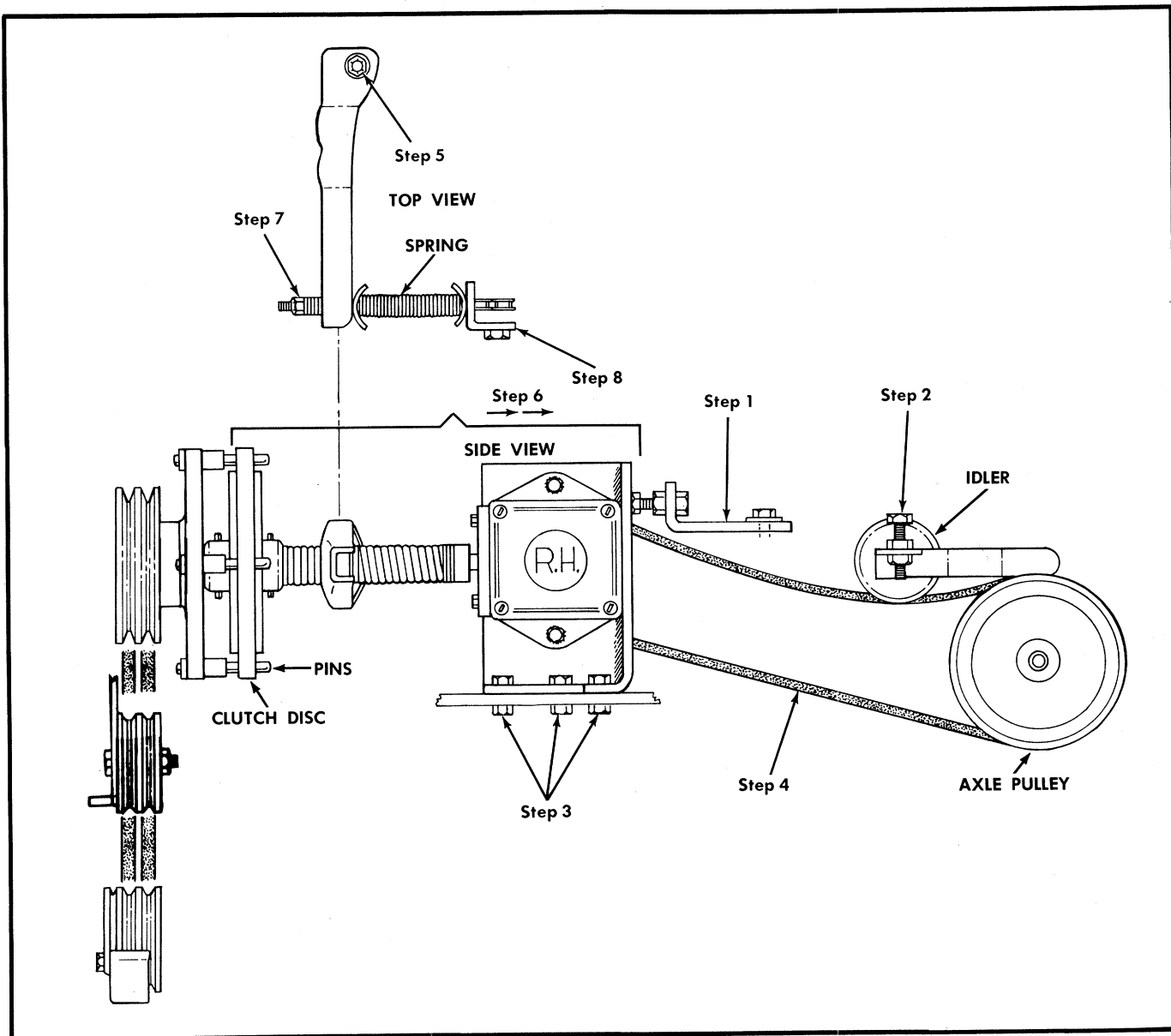


FIGURE 30. CLUTCH REMOVAL

CLUTCH REMOVAL (Refer to Figure 30) Preparation: Before working on the tractor, 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. See Figure 14.

Step 1. Remove the support bracket behind the clutch.

Step 2. Loosen the belt tightener on the idler so the belt is slack.

Step 3. Remove the four screws holding the rear of the clutch in place.

NOTE

A reinforcement plate is under the screws.

Step 4. Remove the belt.

Step 5. Remove the elastic locknut and shoulder bolt.

NOTE

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

Step 6. Push the clutch assembly to the rear of the tractor until the pins clear the clutch disc, then move the clutch towards the left side of the tractor.

Step 7. Remove the elastic locknut and all the washers from the stud. The large cup washers and spring will be loose now and can be set aside.

Step 8. Remove the two screws holding the "el" bracket to the frame.

Step 9. Remove the clutch assembly from the tractor.

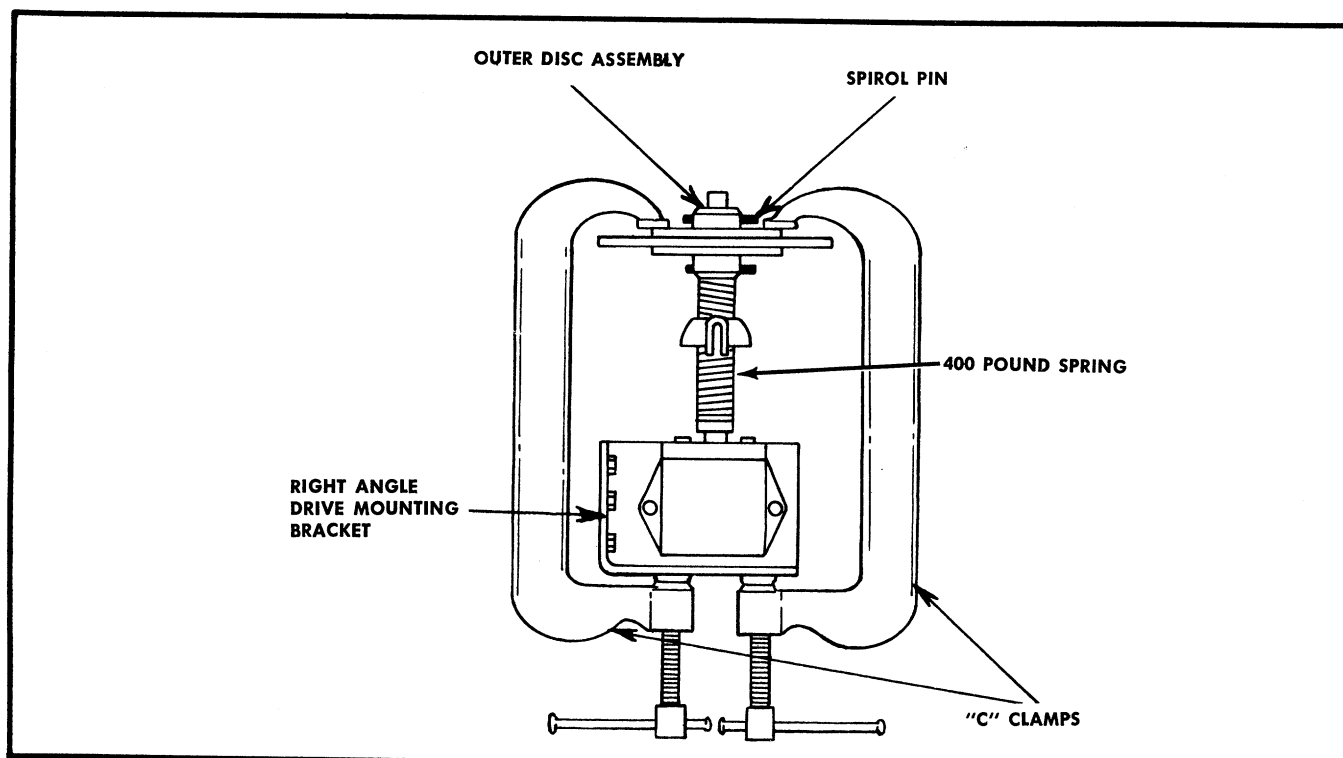


FIGURE 31. CLUTCH DISASSEMBLY

CLUTCH REPAIR

The clutch can be replaced as an entire unit or it can be disassembled and rebuilt.

If you disassemble the clutch, place it in an arbor press or use two "C" clamps as shown in Figure 31 to release the pressure on the spirol pin.

NOTE

WARNING

The large spring on the clutch is compressed to 400 pounds pressure and extreme care should be taken during disassembly.

Apply the pressure to the outer disc assembly.

Drive the spirol pin out with a punch.

Slowly release the pressure.

Removal of the second spirol pin will free the other parts for inspection or replacement.

LUBRICATION

Your tractor has been engineered to give you years of trouble-free service, however, by following these simple lubrication procedures, you can greatly extend the life of your tractor.

1 ENGINE LUBRICATION

DO NOT MIX OIL WITH GASOLINE

OIL RECOMMENDATIONS (4 PINTS)

WINTER
(Below 40°F.)
Use SAE 5W-20

SUMMER
(Above 40°F.)
Use SAE 30

Any high quality detergent oil having the American Petroleum Institute classification "For Service MS" can be used in your Briggs & Stratton engine. Detergent oils keep the engine cleaner and retard the formation of gum and varnish deposits.

Check before starting and after every 5 hours of operation. **BE SURE OIL LEVEL IS MAINTAINED.**

Change oil after first 5 hours of operation. Thereafter change oil every 25 hours of operation. Remove the oil drain plug. Drain oil while engine is warm. Remove oil filler cap or plug and refill with new oil. Replace oil filler cap or plug. Add oil regularly after each 5 hours of operation.

The above oil recommendations are the result of extensive testing. No special additives should be used.

2 TRANSAXLE

Lubricate with 4 pints of SAE E. P. 90 oil. Refill if below upper plug level. Prelubricated at factory.

The following grease fittings should be lubricated every 25 hours with an automotive multi-purpose grease.

3 POWER TAKE OFF (REAR)

Lubricated at the factory and requires no further lubrication.

4 DECK PIVOT BAR

2 fittings—one each side of the tractor

5 STEERING GEAR

1 fitting—center of tractor

6 AXLE PIVOT

1 fitting—center of tractor

7 KING PIN

2 fittings—one each side of the tractor

8 WHEEL BEARINGS

2 fittings—one each side of the tractor

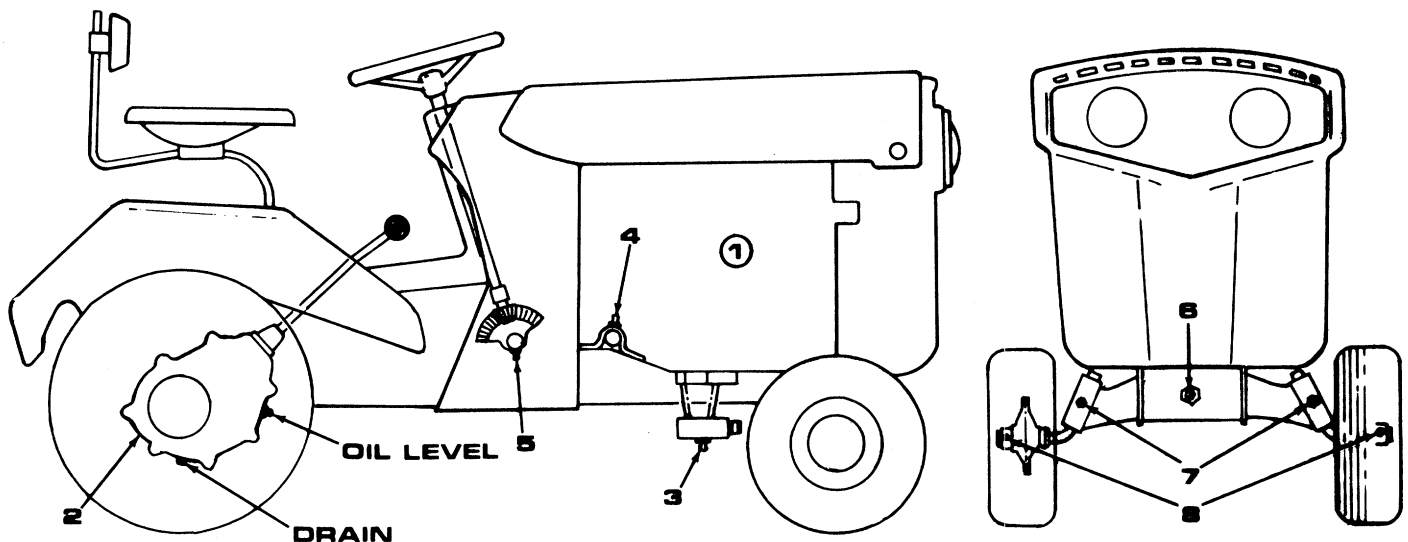


FIGURE 32. LUBRICATION POINTS

ILLUSTRATED PARTS

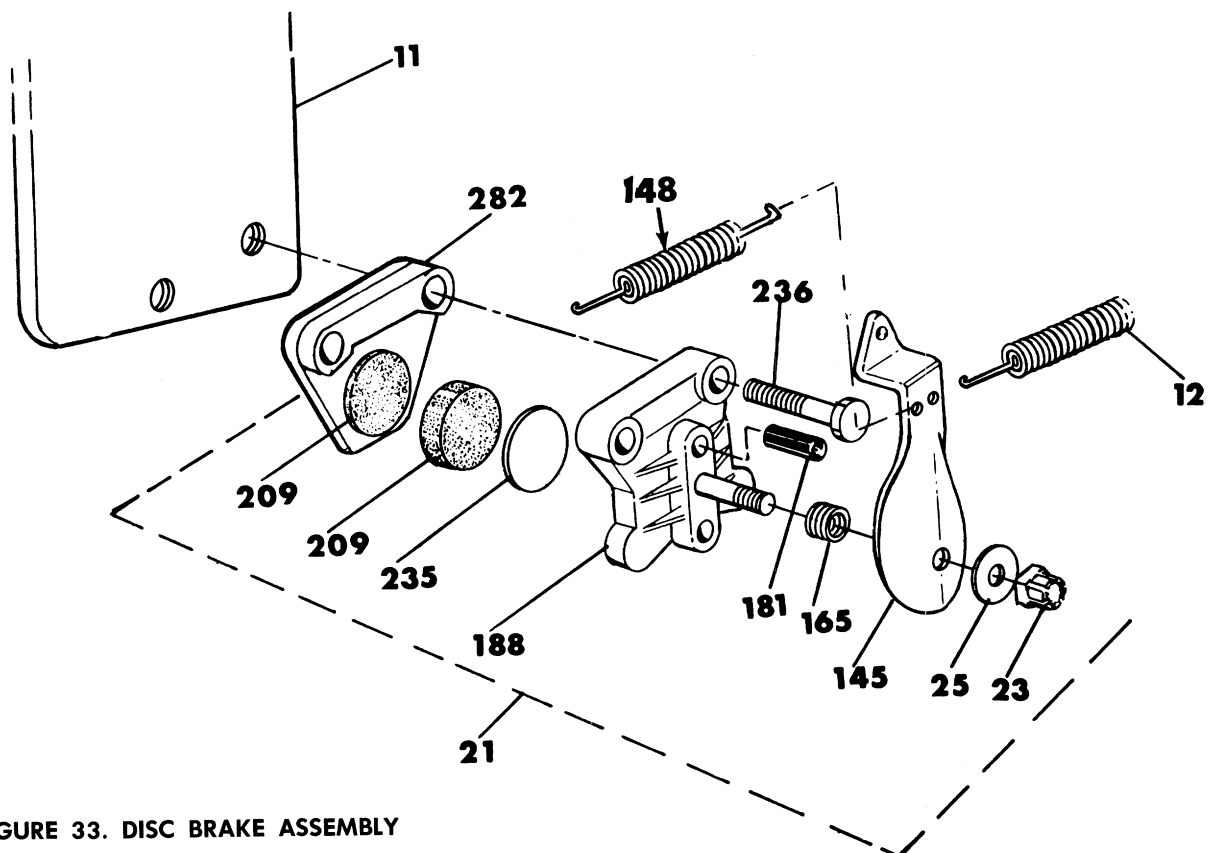


FIGURE 33. DISC BRAKE ASSEMBLY

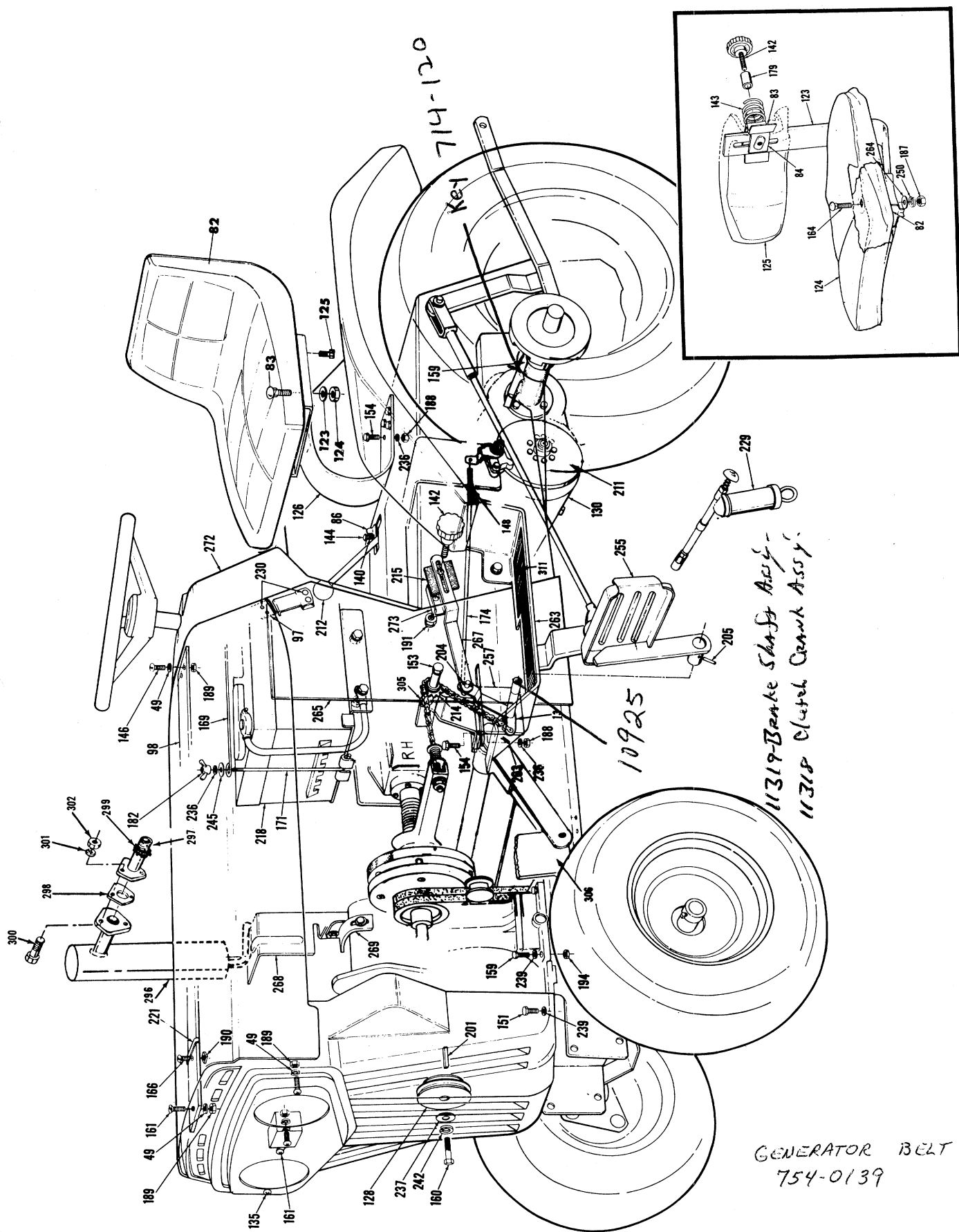


FIGURE 35. LEFT HAND SIDE OF TRACTOR

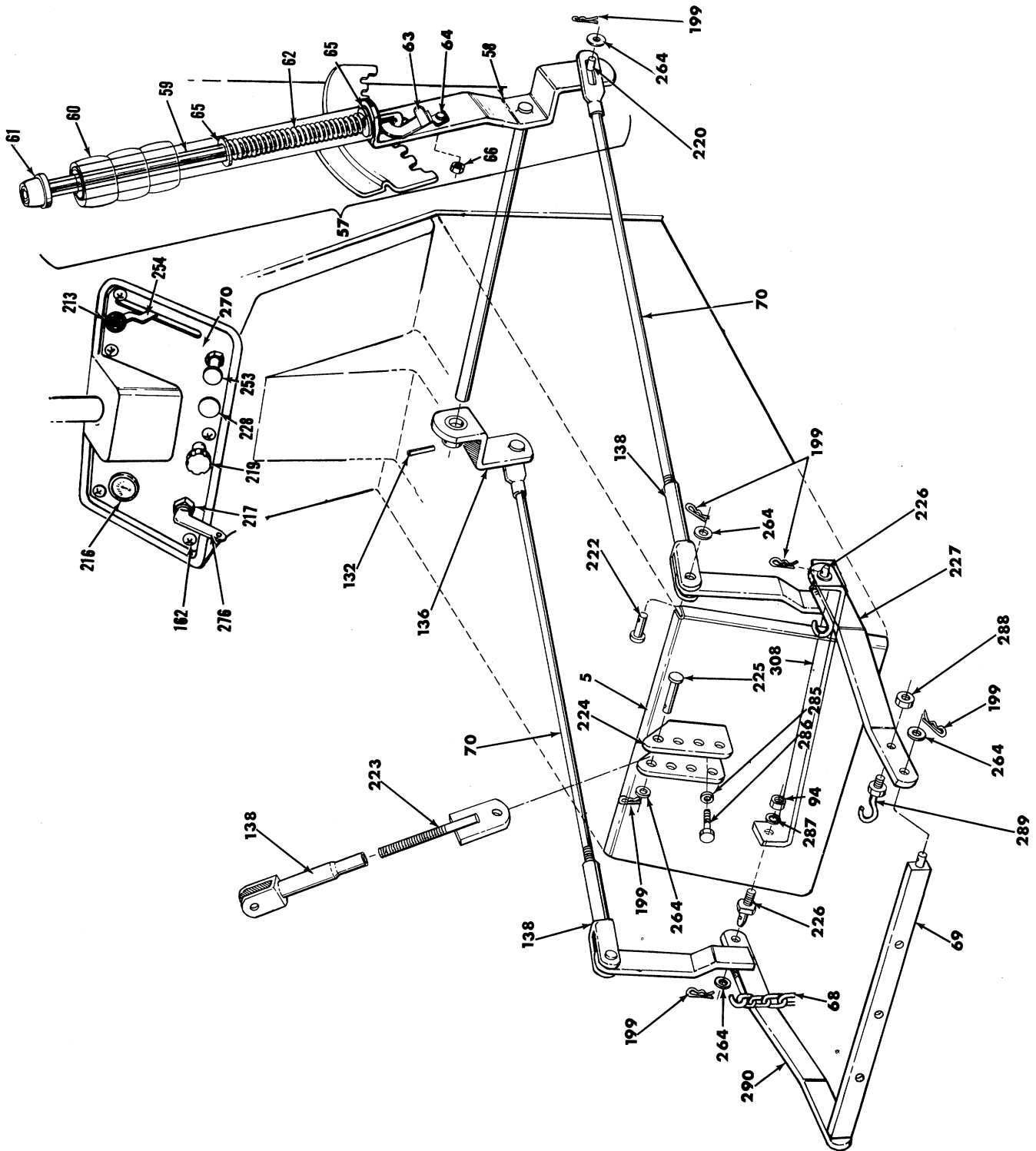


FIGURE 36. LIFT ASSEMBLY AND THREE POINT HITCH

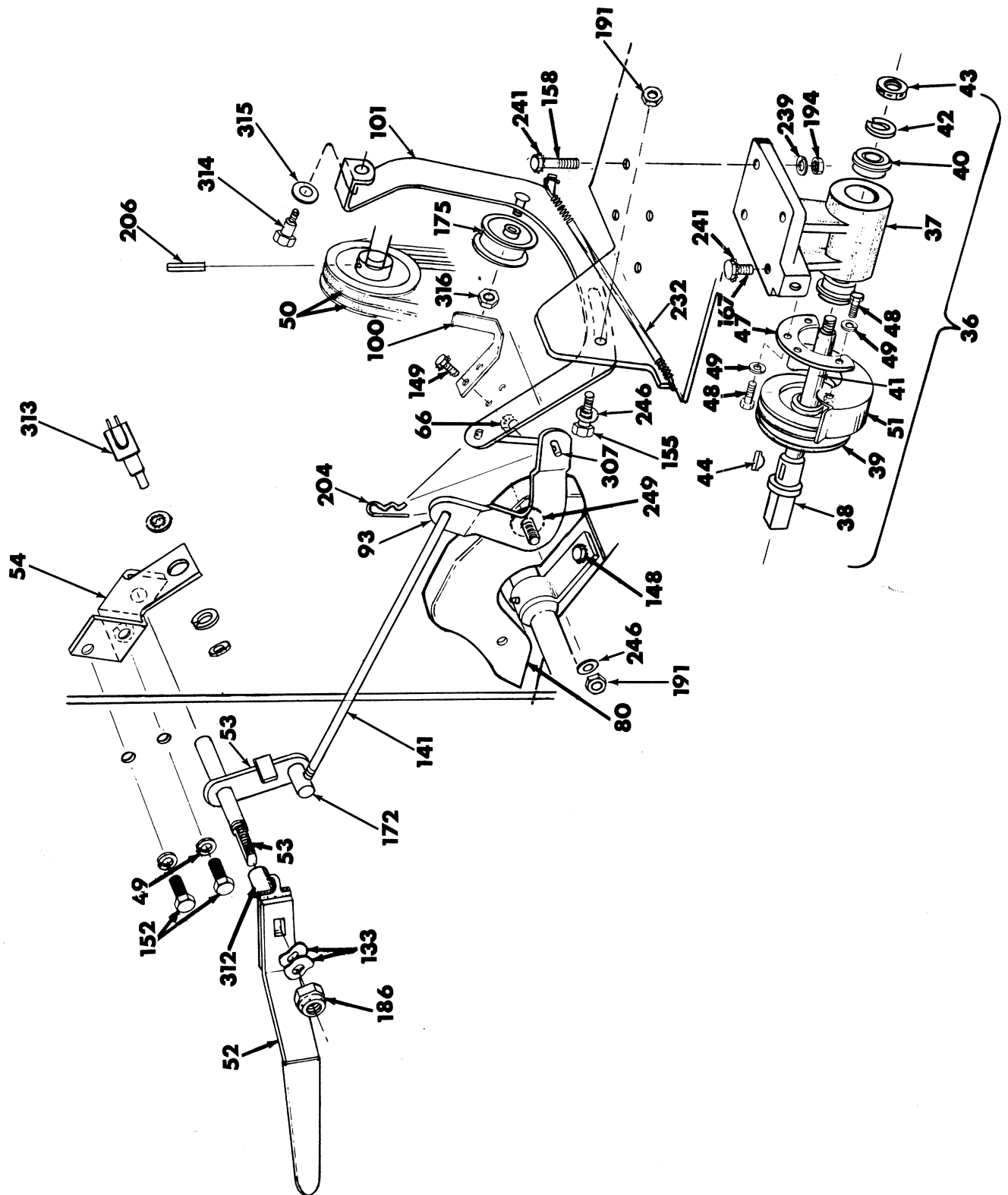


FIGURE 37. POWER TAKE OFF

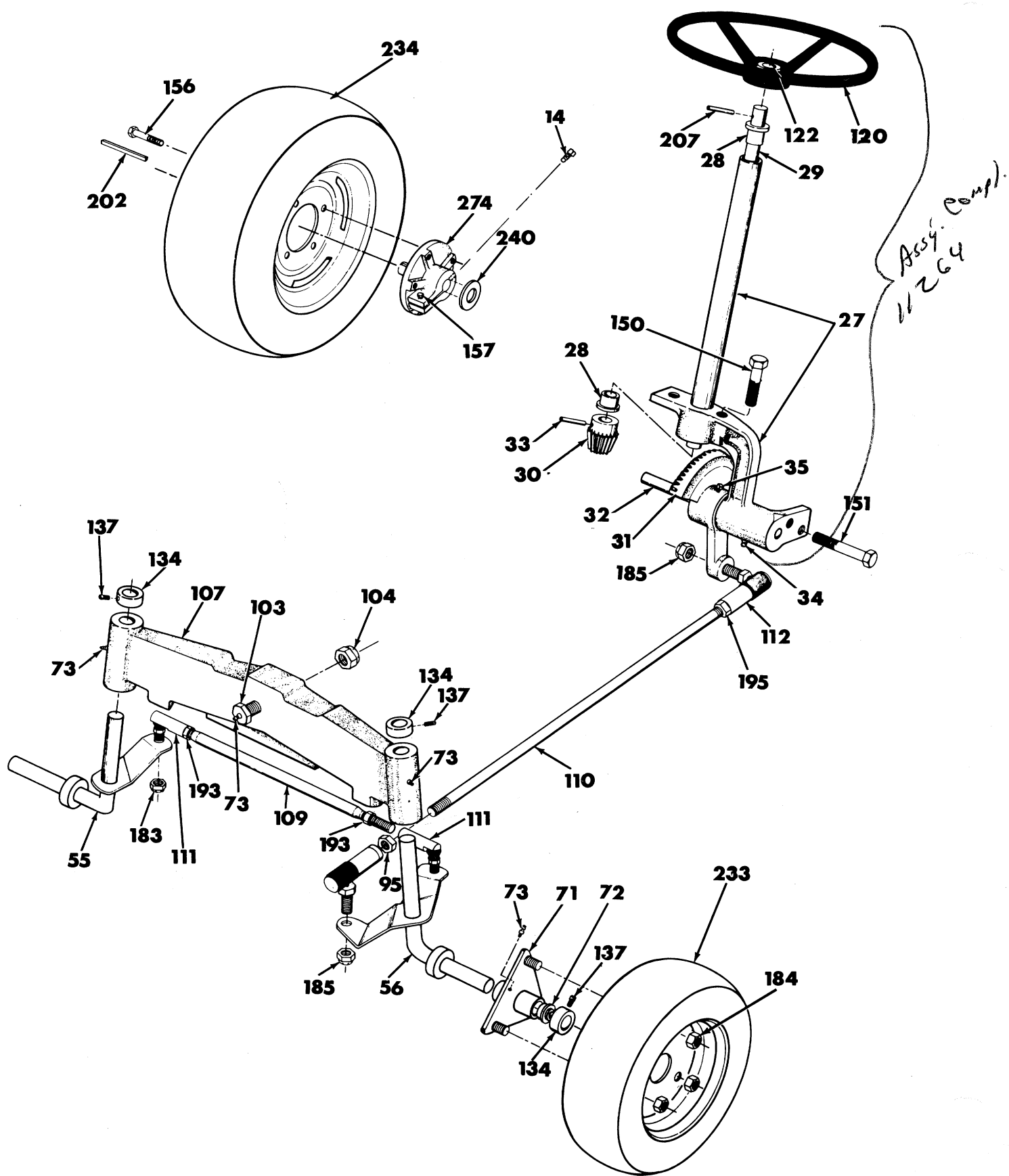


FIGURE 38. STEERING ASSEMBLY

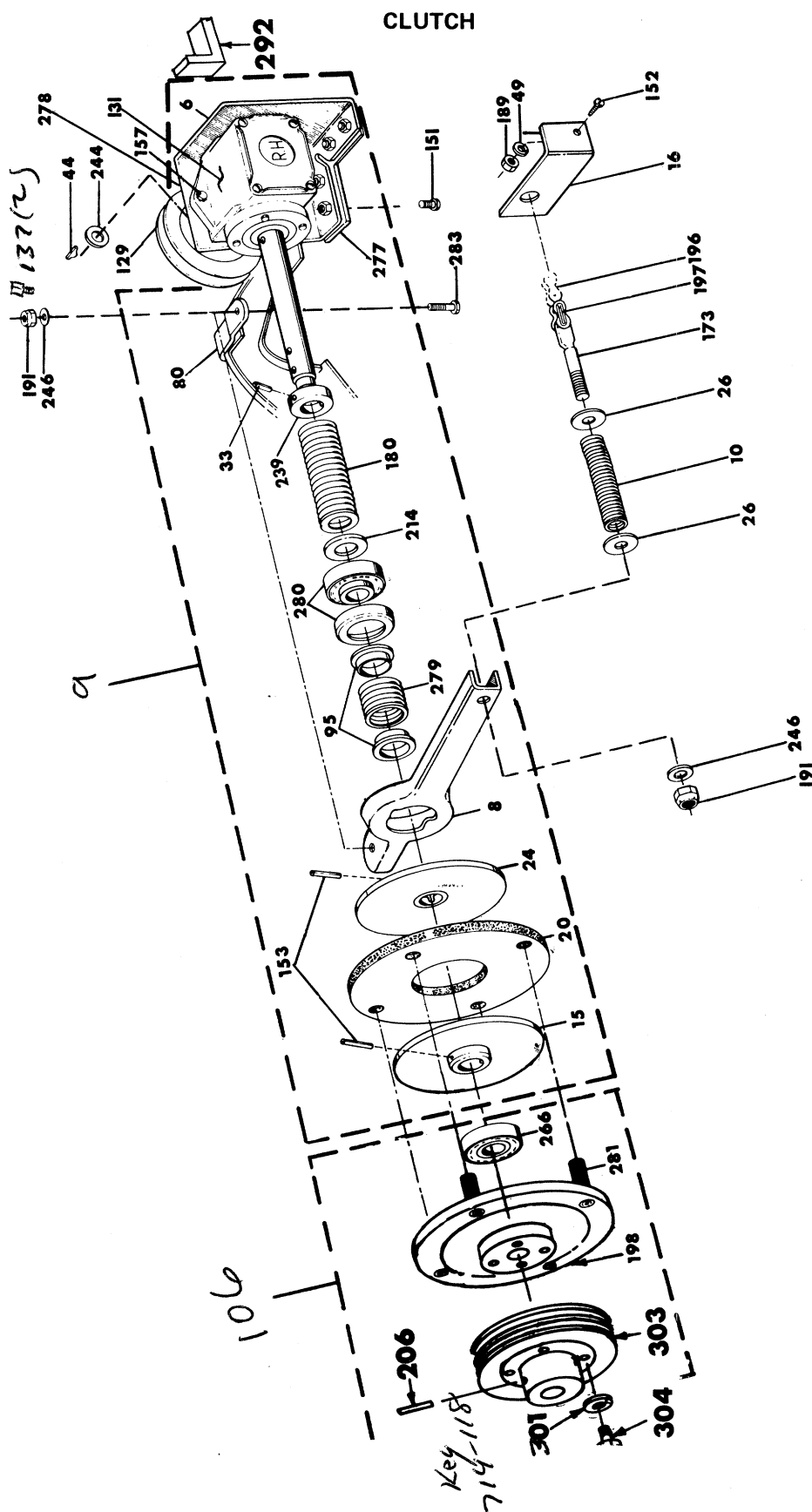


FIGURE 39. CLUTCH ASSEMBLY

PARTS LIST FOR 10 AND 15 H.P. TRACTOR

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
1	10384	Frame—Rail Assembly L.H.	68	713-148	Chain
2	9402	Frame—Rail Assembly R.H.	69	10996	Draw Bar Assy
3	9511	Frame—Front Assembly	70	10923	Lift Pull Rod Assy
4	9403	Gear Box Mount Assembly	71	10457	Front Hub Assembly with Bearings
5	9406	Frame—Plate Assembly Rear	72	741-141	Ball Bearings
6	9410	Gear Box Mounting Bracket Assy	73	737-108	Grease Fitting
7	9412	Gas Tank & Bat. Mount. Brkt Assy	75	9583	Idler Bracket Assy Complete
8	11350	Clutch Yoke	76	9446	Left Half Bracket Assy
9	717-228	Clutch Assembly With Rt. Angle Drive	77	10116	Right Half Bracket
10	732-207	Yoke Return Spring	78	711-306	Belt Idler
11	10385	Transaxle Mounting Brkt Assy	79	710-307	Leveler Screw
12	732-149	Brake Tension Spring	80	10450	Clutch Yoke Pivot Brkt Assy
13	11318	Clutch Lever	81	9580	Center Console Assembly
14	710-123	Square Head Set Screw 3/8-16 Thd. *	82	9522	Seat Assembly (10 HP only)
15	10443	Disc Assembly—Clutch		757-203	Molded Seat (15 HP only)
16	11317	Spring Retainer	83	9572	Seat Back Assy (10 HP only)
18	710-473	Truss Head Mach. Scr. #10-24 x 1/2 Lg. *	84	9569	Seat Slide Plate Assembly (10 HP only)
19	736-147	Ext. Lockwasher #10 Scr. *	85	9582	Foot Pad Assembly R.H.
20	717-160	Clutch Disc.	86	9480	Second Gear Stop
21	761-132	Caliper Disc Brake Assembly	87	9493	Rear Fender
23	02-1011-0000	Lock Nut	88	9516	Bezel—Head Lamp
24	10444	Disc Assembly—Clutch	89	9525	Hood
25	03-1030-0000	Washer, Thrust	91	9433	Index Bracket
26	736-112	Belleville Washer	92	9408	Side Plate R. H.
27	9517	Steering Tube Seg. Assy.	93	11344	Idler Crank
28	748-157	Steering Tube Bushing	94	712-923	Hex Center Lock Nut 5/8-18 Thd. *
29	9535	Steering Rod	95	711-447	Spring Guide—Clutch
30	719-121	Pinion Gear	96	9538	Hood Stop
31	719-122	Gear Segment	97	9575	Hood Catch
32	9563	Gear Segment Shaft	98	9576	Grille Brace
33	715-114	Roll Pin 1/4 x 1-1/2 Lg. *	99	9479	Lift Bar
34	737-479	Grease Fitting	100	9476	PTO Belt Trapout
35	710-349	Square Head Set Screw 5/16-18 x 3/4 Lg. *	101	11434	Clutch Idler Bracket Assy
36	717-218	PTO Assembly Complete	102	9457	Pivot Bar Assembly
37	717-219	PTO Housing	103	710-335	Pivot Bolt
38	738-156	PTO Shaft	104	712-205	Elastic Stop Nut 3/4-10 Thd. *
39	756-177	PTO Drive Pulley	105	10593	Transaxle Drive Sheave
40	741-161	Ball Bearing	106	717-229	PTO Drive and Adapter Assy
41	750-185	Spacer	107	10587	Front Axle Support
42	736-158	Lockwasher 5/8 Scr. *	108	711-282	Hitch Pin
43	712-221	Locknut 5/8-18 Thd. *	109	711-454	Tie Rod
44	714-113	Key Hi Pro 1/4-7/8 Dia.	110	711-455	Drag Link
46	710-356	Sq. Hd. Set Scr. 5/16-18 x 1/2 Lg. *	111	723-156	Tie Rod Ends
47	11327	PTO Mounting Bracket	112	723-179	Drag Link Ends
48	710-289	Hex Head Screw 1/4-20 x 1/2 Lg. *	113	723-182	Gas Tank w/straps
49	736-329	Spring Lockwasher 1/4 Scr. *	114	723-155	Gas Gauge
50	754-165	PTO Matched Belts 21/32-34 Lg. +	115	723-152	Gas Hose 1-1/2 Lg.
51	11328	PTO Belt Guard Assembly	116	723-154	Gas Filter
52	9439	PTO Handle	117	723-157	Hose Clamps
53	10688	PTO Handle Shaft Assembly	118	723-159	Gas Valve
54	11325	Handle Support Assembly	119	723-158	Gas Hose 8-1/2 Lg.
55	9422	Axle Assembly Front R.H.	120	723-185	Steering Wheel
56	9423	Axle Assembly Front L.H.	121	723-186	Hood Latch
57	11749	Lift Handle Assembly Complete	122	723-188	Steering Wheel Cap
58	11750	Lift Handle Assembly	123	723-189	Seat Back Spring (10 HP only)
59	9470	Handle Spacer Tube	124	723-190	Seat Cover (10 HP only)
60	8818	Handle Grip	125	723-191	Seat Back Rest Cover (10 HP only)
61	726-110	Push Cap	126	723-181	Seat Spring
62	732-156	Compression Spring	127	719-139	Grille
63	9448	Lift Handle Lockout	128	10576	Front Sheave
64	710-252	Hex Hd Cap Scr. 1/4-20 x 3/4 Lg. *	129	10572	Gear Box Sheave
65	736-185	Flat Washer *	130		Transaxle
66	712-107	Hex Locknut 1/4-20 Thd. *	131	717-161	Right Angle Gear Box

PARTS LIST CONTINUED

REF NO.	PART NUMBER	DESCRIPTION	REF NO.	PART NUMBER	DESCRIPTION
132	715-107	Spirol Pin 5/16 x 1-3/8 Lg.	197	713-116	Master Link
133	736-182	Wave Washer	198	717-230	Drive Plate
134	748-386	Axle Collar	199	714-117	Hair Pin Cotter *
135	710-346	Oval Head Screw 1/4-20 x 1-1/2 Lg. *	200	714-118	Square Key 1/4 x 1-1/2 Lg. *
136	11323	Lift Arm Assembly	201	714-119	Square Key 1/4 x 3/4 Lg. *
137	710-356	Sq. Hd. Set Screw 5/16-18 x 1/2 Lg. *	202	714-120	Square Key 1/4 x 3 Lg. *
138	10991	Adjustment Clevis Assembly	203	714-121	Cotter-Pin 5/32 Dia. x 1 Lg. *
139	9405	Frame—Rear	204	714-474	Cotter - Pin 1/8 Dia. x 3/4 Lg. *
140	732-145	Spring	205	715-107	Spirol Pin 5/16 x 1-3/8 Heavy Duty *
141	711-293	PTO Clutch Rod	206	715-113	Spirol Pin 5/16 x 2-1/2 Heavy Duty *
142	722-117	Knob	207	715-101	Spirol Pin 1/4 x 2-1/2
144	710-106	Hex Head Cap Scr. 1/4-20 x 1-1/2 Lg. *	208	716-101	Snap Ring Truarc #5100-75
145	761-135	Cam Lever	209	15-1070-1069	Pad, Friction
146	710-166	Truss Hd. Mach Scr 1/4-20 x 1-1/8 Lg. *		15-1070-1049	Pad, Friction
147	710-182	Hex Hd Cap Scr 1/2-13 x 3 Lg. *	210	716-111	Snap Ring Truarc #5100-87
148	732-245	Spring	211	761-136	Brake Disc Assembly
149	710-211	Sems Hex Hd Cap Scr 1/4-20 x 3/4 Lg. *	212	722-116	Gear Shift Knob
150	710-216	Hex Head Cap Screw 3/8-16 x 3/4 Lg. *	213	722-118	Throttle Control Knob
151	710-253	Hex Head Cap Screw 3/8-16 x 1 Lg. *	214	723-168	Sprocket <i>736-0211 WASHER</i>
152	710-258	Hex Head Cap Screw 1/4-20 x 5/8 Lg. *	215	723-183	Serrated Place
153	715-121	Spirol Pin 1/4 x 2" Lg. Heavy Duty	216	725-119	Ammeter
154	710-322	Sems Hex Hd. Cap Screw 5/16-18 x 1 Lg. *	217	725-267	Ignition Switch
155	710-334	Shoulder Screw 3/8-16 x .625 Dia.	218	725-130	Battery
156	710-470	Wheel Lug Bolts 1/2-20 x 1-1/2 Lg. *	219	725-202	Light Switch
157	710-342	Hex Hd. Cap Screw 3/8-16 x 1-1/4 Lg. *	220	711-309	Clevis Pin 5/8 Dia. x 1-1/16" Lg.
158	710-344	Hex Hd. Cap Screw 3/8-16 x 1-1/2 Lg. *	221	725-157	Cable Ties (Not Shown)
159	710-347	Hex Hd. Cap Screw 3/8-16 x 1-3/4 Lg. *	222	711-225	Clevis Pin 5/8 Dia.
160	710-348	Hex Hd. Cap Screw 7/16-20 x 3/4 Lg. *	223	10994	Clevis Screw Ass'y.
161	710-350	Counter Sunk Flat Hd. Screw 1/4-20 x 1 Lg. *	224	10993	Upper Hitch Bracket
162	710-351	Phil. Hd. Screw #10-Type Z - 1/2 Lg. *	225	711-174	Clevis Pin 5/8 Dia.
163	710-355	Rd. Hd. Screw 1/4-20 x 1-1/4 Lg. *	226	711-497	Link Clevis Pin
164	710-360	Carriage Bolt, 1/2-13 x 1-3/4 Lg. * 10 H.P. Only	227	10986	Draft Bar Ass'y.—R.H.
165	06-1029-0000	Spring, Compression	228	726-119	Button
166	710-473	Truss Hd. Mach. Screw #10-24 x 1/2 Lg. *	229	727-143	Grease Gun
167	710-937	Hex Hd. Cap Screw 3/8-16 x 2-1/2 Lg. *	230	728-111	Pop Rivet SD 44 B 5
168	711-225	Clevis Pin	231	728-113	Pop Rivet SD 64 B 3
169	711-278	Battery Hold Down Rod	232	732-199	Extension Spring
171	711-284	Battery Hold Down Stud	233	10239	Wheel Assembly Complete **
172	711-288	Ferrule		9262	Rim Only
173	711-289	Clutch Stud		734-255	Valve Stem
174	747-111	Brake Rod		734-275	Tire Tubeless 16 x 6.50-8 **
175	756-183	PTO Idler		734-253	Tube 16 x 6.50-8 (Service Only)
176	711-308	Clevis Pin	234	734-262	Wheel Assembly Complete (10 HP only) **
177	711-309	Clevis Pin		734-320	Wheel Assembly Complete (15 HP only) **
178	711-310	Clevis Pin		734-279	Rim (all models)
179	711-313	Sleeve 10 H.P. Only		734-255	Valve Stem (all models)
180	732-205	Clutch Spring		734-278	Tires 23 x 8.50 - 12 (10 HP only) **
181	05-1033-0000	Pin, Push		734-330	Tube 23 x 8.50 - 12 (Service Only)
182	712-113	Wing Nut 1/4-20 Thd. *		734-322	Tire 23 x 9.50 - 12 (15 HP only) **
183	712-116	Elastic Stop Nut 3/8-24 Thd. *		734-329	Tube 23 x 9.50 - 12 (Service Only)
184	712-193	Lug Nut 3/8-24 Thd.	235	03-1031-0000	Disc, Back-up
185	712-200	Elastic Stop Nut 1/2-20 Thd. *	236	710-442	Hex Hd. Cap Screws 5/16-18 x 1-1/2 Lg. *
186	712-204	Elastic Stop Nut 1/2-13 Thd. *	237	736-133	Flat Washer *
187	712-206	Hex Nut 1/2-13 Thd. * 10 & 12 H.P. Only	238	736-147	External Lockwasher #10 Screw *
188	12-1984-0000	Castings, Cam Side	239	711-444	Spring Collar - Clutch
189	712-287	Hex Nut 1/4-20 Thd. *	240	736-163	Flat Washer *
190	712-425	Square Nut #10-24 Thd. *	241	736-148	External Lockwasher 3/8 Screw *
191	712-430	Elastic Stop Nut 3/8-16 Thd. *	242	736-171	Spring Lockwasher 7/16 Screw *
192	712-492	Square Nut 1/4-20 Thd. *	243	736-180	Flat Washer *
193	712-711	Hex Jam Nut 3/8-24 Thd. *	244	736-181	Flat Washer *
194	712-798	Hex Nut 3/8-16 Thd. *	245	736-264	Flat Washer 5/16 SAE *
195	712-922	Hex Nut 1/2-20 Thd. *	246	736-300	Flat Washer *
196	713-164	Clutch Bracket Chain	247	736-466	Flat Washer *

PARTS LIST CONTINUED

REF NO.	PART NUMBER	DESCRIPTION	REF NO.	PART NUMBER	DESCRIPTION
248	712-429	Elastic Stop Nut 5/16-18 *	284	754-139	Starter Generator "V" -Belt (Special)
249	736-860	Flat Washer *	285	736-217	Spring Lockwasher 3/8 Scr. Heavy Duty *
250	736-921	Spring Lockwasher 1/2 Screw * 10 H.P. Only	286	710-253	Hex Hd. Cap Scr. 3/8-16 x 11/31 *
252	737-112	Gas Tank Nipple 3/8" Dia. *	287	736-158	Spring Lockwasher *
253	746-129	Choke Control	288	712-342	Hex Jam Nut 3/8-16 Thd. *
254	746-130	Throttle Control	289	711-513	Hitch Chain Hook w/3/8 Thd.
255	11321	Clutch Pedal Assembly	290	10985	Draft Bar Ass'y.—L.H.
257	9431	Clutch Shaft Bracket Assembly	291	738-150	Shoulder Bolt
258	711-318	Sleeve	292	10549	Brace Assembly
259	310-9437	Brake Link	293	710-421	Set Screw
260	714-117	Hair Pin Cotter *	294	10714	Brake Pedal
261	312-9531	Heat Shield Assembly	295	11319	Brake Shaft
262	312-9529	Heat Shield Mounting Bracket Assembly	296	11726	Muffler Assembly
263	9581	Foot Pad Assembly L.H.	297	11737	Pipe Assembly
264	310-7387	Flat Washer 10 H.P. only	298	721-127	Gasket
265	9409	Side Plate L.H.	299	712-250	Conduit Locknut
266	741-140	Ball Bearing	300	710-152	Hex Head Cap Screw 3/8-24 x 1 Lg. *
267	11349	Parking Brake Link	301	736-169	Lockwasher 3/8 Scr. *
268	9526	Generator Bracket	302	712-241	Hex Nut 3/8-24 Thd. *
269	9527	Generator Pivot Bracket	303	756-176	PTO Pulley
270	9528	Bezel	304	710-395	Hex Head Cap Screw 5/16-18 x 2-1/4 Lg. *
271	11578	Heat Shield Angle Bracket	305	9417	Sprocket Support Bracket
272	9584	Instrument Panel	306	10482	Clutch Guard
273	9443	Parking Brake Bracket Assy	307	11570	PTO Clutch Rod
274	10577	Rear Wheel Hub	308	11316	Rear Frame Support
275	754-124	Belt—Transaxle	309	10807	Bracket—Seat
276	725-128	Key	311	723-215	Foot Pads
277	10551	Gear Box Mounting Washer	312	711-310	Sleeve
278	9591	Gear Box Mounting Plate	313	725-277	Safety Switch
279	732-204	Clutch Helper Spring	314	738-163	Shoulder Screw
280	10477	Bearing Assembly—Clutch	315	736-860	Flat Washer
281	711-459	Replacement Stud	316	712-375	Hex Centerlock Nut 3/8-16 Thd. *
	712-195	Hex Nut for Stud			
282	12-1536-0001	Casting, Carrier Side			
283	710-340	Shoulder Bolt 1/2" dia. x 3/4" Lg.			

**When ordering service parts include all the information on the side wall of the tire such as the size and brand name.

*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.

+Power Take Off belts are matched. Always order in pairs.

NOTE: Any part listed above beginning with the number 1, 8 or 9 is a painted part. The following prefixes are the color codes.

312—White

330—Terra Cotta (Orange)

395—Heather Green

436—Yellow

417—Pineapple Metallic

437—Red

438—Blue

To order a specific color, place the prefix in front of the number. For example, reference number 89 (9525) is a hood. 312-9525 is a white hood.

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."



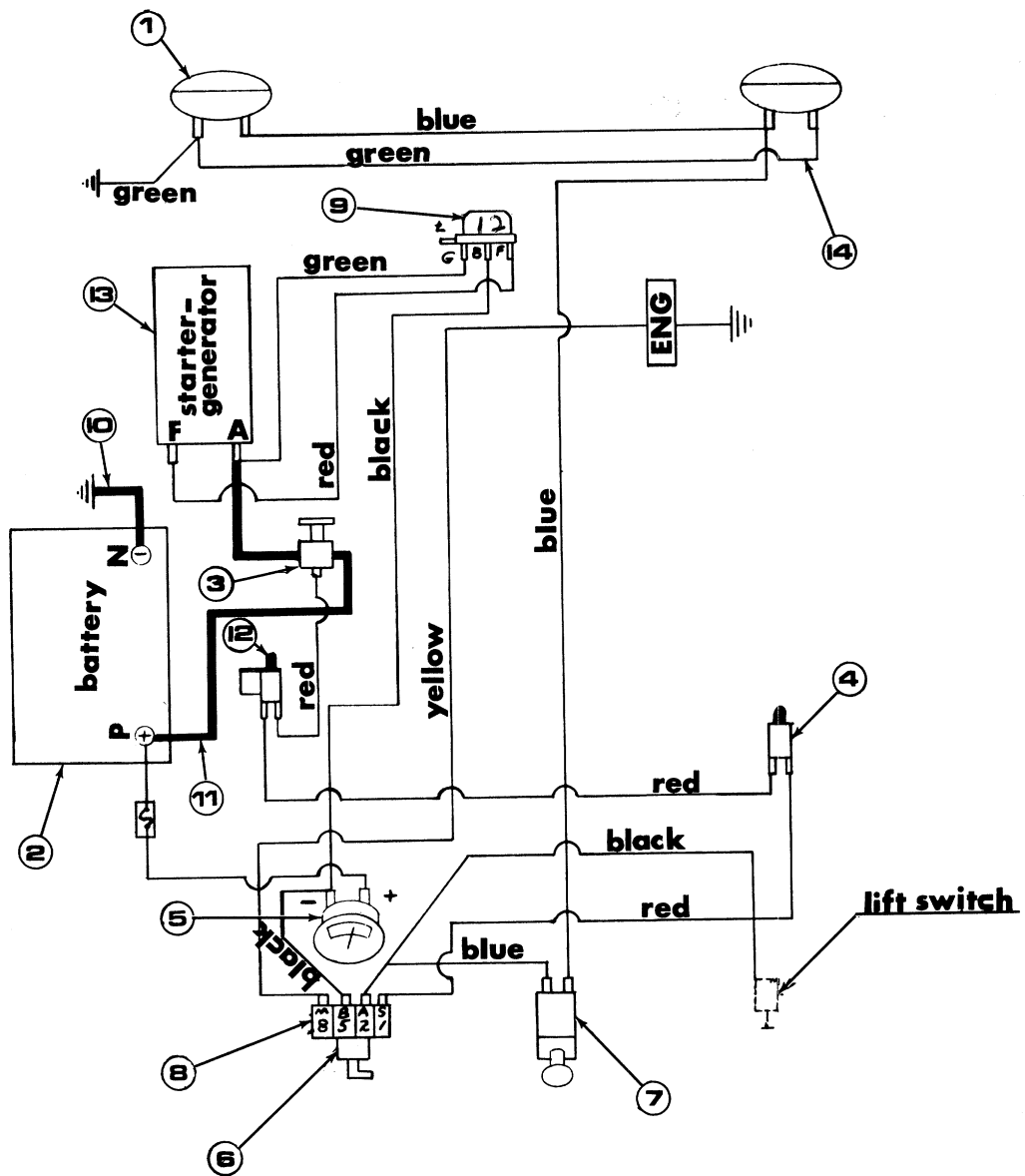


FIGURE 40. ELECTRICAL SYSTEM 10 AND 15 H.P. TRACTOR

REF NO.	PART NUMBER	DESCRIPTION
1	725-222	Head Light
2	725-130	Battery
3	725-270	Solenoid
4	725-277	Safety Switch
5	725-119	Ammeter
6	725-267	Key Switch
7	725-201	Key Only
8	725-202	Light Switch
9	725-275	Wire Harness
10	725-120	Regulator
11	725-139	Ground Wire
12	725-258	Wire (2)
13	725-268	Safety Switch
14	725-144	Starter-Generator
	725-204	Electric Wire

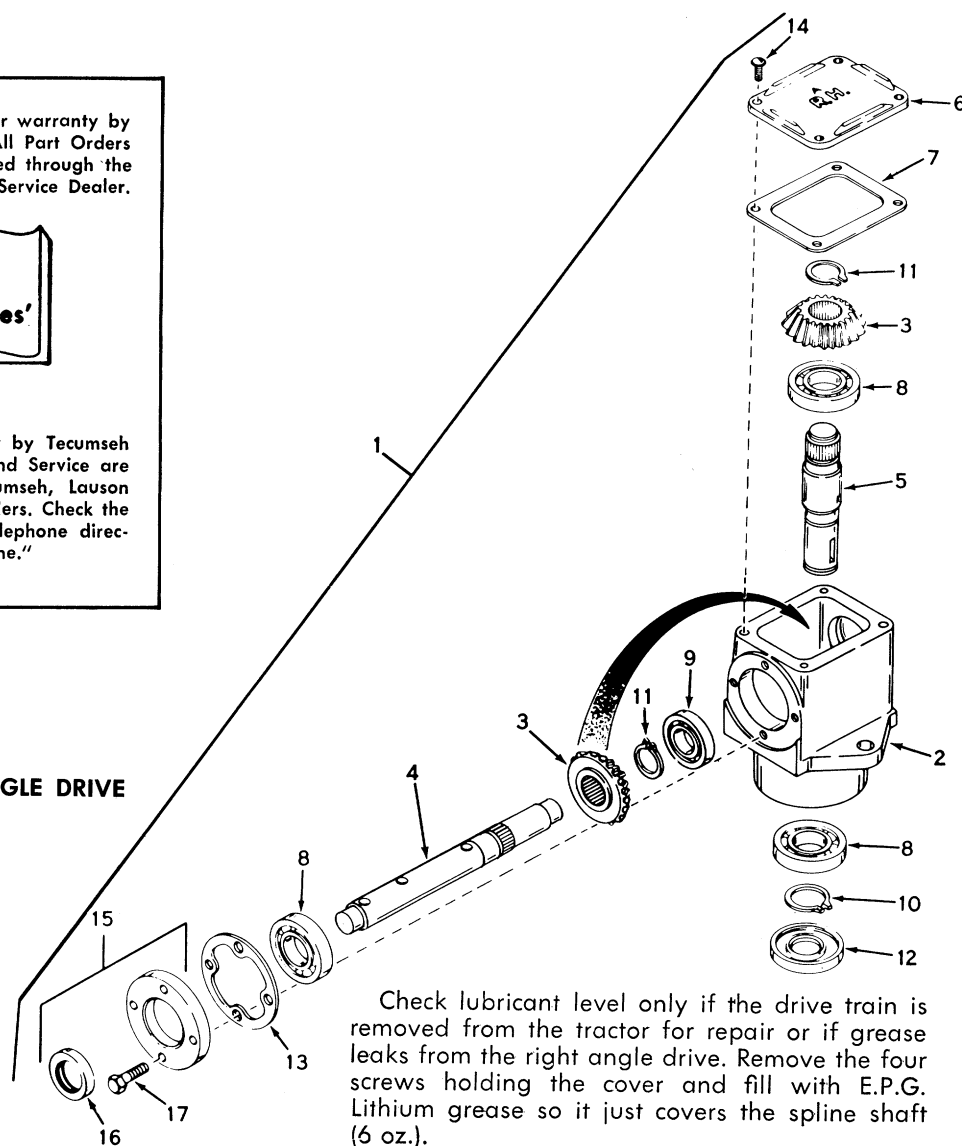
(754-169 Belt for Generator)

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."

FIGURE 41. RIGHT ANGLE DRIVE



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

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

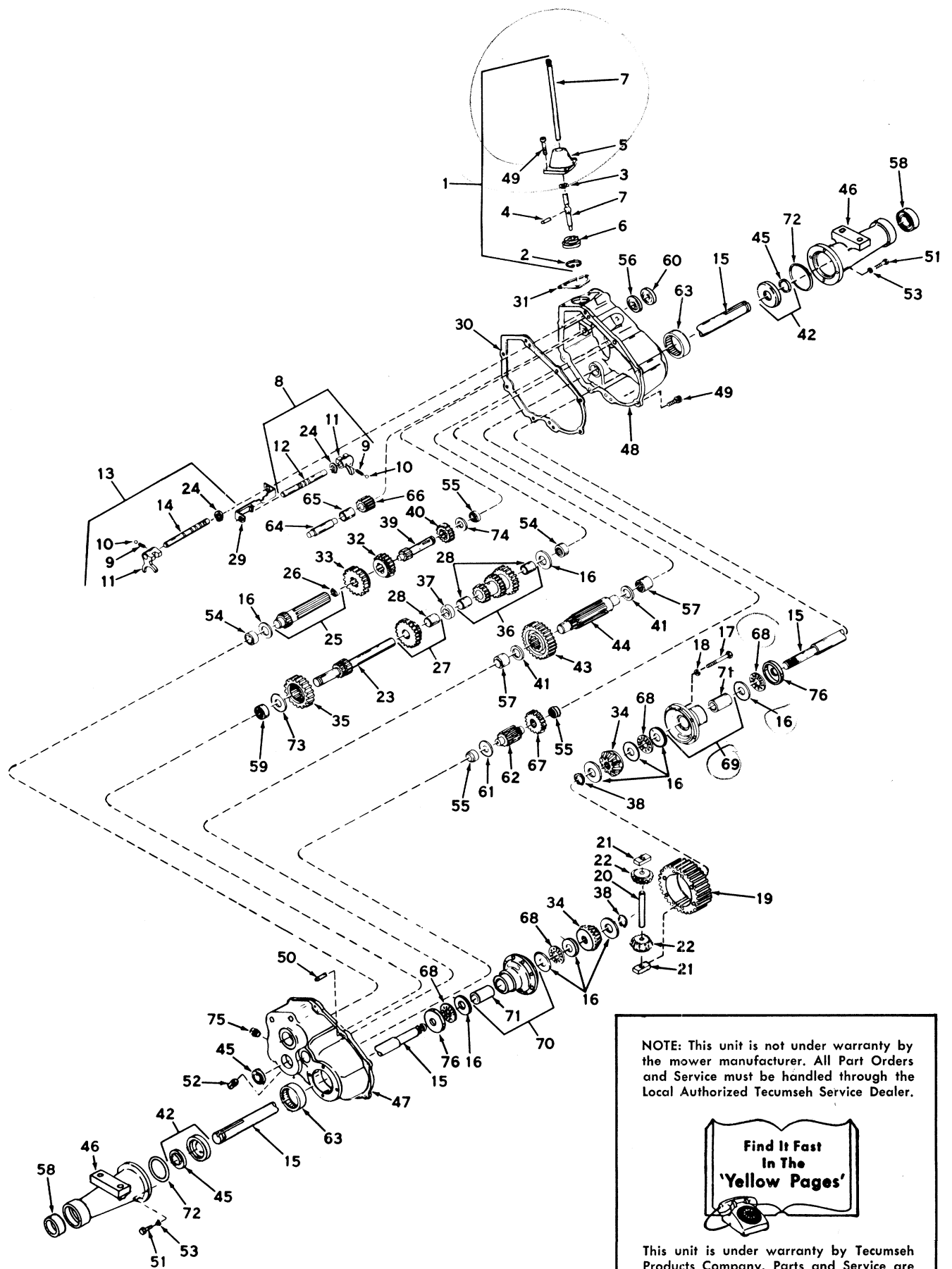


FIGURE 42. TRANSAXLE (PEERLESS 2315A)

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

BATTERY WARRANTY CERTIFICATE

The following general warranty policy applies to all batteries sold by IBMA members using this warranty. The nationwide warranty applies only to batteries bearing the IBMA seal of approval.

All new batteries sold by IBMA members carry a warranty against faulty material or workmanship for 90 days from date of purchase. A faulty battery is to be adjusted, repaired or replaced with a new battery by an IBMA member, jobber or dealer only, or the warranty becomes void. An IBMA type battery that is faulty within the 90 day period is to be repaired or replaced with a new battery F.O.B. any IBMA factory supplier or any IBMA authorized dealer, without charge.

Your battery carries a further warranty on a pro-rata adjustment basis covering the number of months deter-

mined by the class of service and type of battery. In determining the exchange cost of a new battery, charges will be made for months of service used and the warranty is valid to the original purchaser only.

IBMA approved factory suppliers, as well as all IBMA authorized dealers, are to honor this Warranty. If your IBMA approved battery carries the IBMA seal of approval, this Warranty is to be honored by dealers handling IBMA approved batteries everywhere. (Independent Battery Manufacturers Association, Inc.)

Failures in service that are caused by fire, collision, freezing, abuse, faulty electrical equipment or the use of a battery of a group size smaller or specifications lower than the original battery are not covered by this policy.

BATTERY MANUFACTURER MEMBERSHIP LIST

ALABAMA

Birmingham
Southern Bty.
Yocam Batteries
Mobile
Yocam Batteries
Montgomery
Ebco Battery

ALASKA

Anchorage
Alaska Husky Bty.

ARKANSAS

Hot Springs
Red Diamond Bty.

CALIFORNIA

Los Angeles
Estee Battery
Laher Bty. Prod.
Oakland
Laher Bty. Prod.
Sacramento
Laher Bty. Prod.
San Francisco
Amp King Bty.
Laher Bty. Prod.
Pico Bty. Mfg.
Stockton
Stockton Battery

COLORADO

Denver
Moore Battery

D. C.

Washington
Express Bty. Div.
Leeth Brothers

FLORIDA

Fort Lauderdale
Florida Bty.
Hialeah
East Penn Mfg.
Jacksonville
Tropex Batteries
Yocam Batteries
Orlando
Yocam Batteries

Miami

Tropex Batteries
Yocam Batteries

Pensacola

Yocam Batteries

St. Petersburg

Electro Battery Co.

Tampa

Bilt-Rite Bty. Mfg.
Contract Bty. Mfg.
DeSoto Bty. & Elec.
Tropex Batteries
Yocam Batteries

GEORGIA

Albany
Ebco Battery
Atlanta
Ebco Battery
Southern Bty.
Yocam Batteries

Columbus
Ebco Battery
Contract Bty. Mfg.
Yocam Batteries

ILLINOIS

Belleville
Bell City Bty. Mfg.
Chicago
Illinois Bty. Mfg.
Universal Bty.
Volta Bty. Corp.
Peoria
Red Diamond Bty.

INDIANA

Muncie
Stout Storage Bty.

IOWA

Corydon
Voltmaster
Council Bluffs
Reliance Bty. Prod.
Des Moines
Voltmaster

KANSAS

Kansas City
American Batteries
Contract Bty. Mfg.

KENTUCKY

Whitesburg
Electro-Lite Bty.

LOUISIANA

New Orleans
Central Bty.
Reliable Bty.
Shreveport
Central Bty.

MARYLAND

Baltimore
East Penn Mfg.

MASSACHUSETTS

Watertown
Atlantic Bty.

MICHIGAN

Detroit
Batteries Mfg.
Flint
ABC Batteries
Holly
Detroit Battery
Madison Heights
C & W Lektra
Warren
G & M Battery

MINNESOTA

St. Paul
Standard Storage Bty.

MISSISSIPPI

Florence
Contract Bty. Mfg.
Jackson
Central Bty.

MISSOURI

JOPLIN
Lead Products
Maryland Heights
Electro Bty. Mfg.
Sikeston
Electro Bty.

NEW JERSEY

Atlantic City
Landis Battery

NEW MEXICO

Albuquerque
Sandia Bty. Mfg.

NEW YORK

Buffalo
East Penn Mfg.
Lockport
Great Lakes Battery

NORTH CAROLINA

Charlotte
Yocam Batteries
Thomasville
East Penn Mfg.

OHIO

Akron
Crown Battery
Cincinnati
Moore Battery
Cleveland
Crown Battery
New Castle Bty.
Columbus
Crown Battery
Fremont
Crown Battery

OREGON

Beaverton
Western Bty., Inc.
Portland
Laher Bty. Prod.

PENNSYLVANIA

Altoona
East Penn Mfg.
Erie
New Castle Bty.
Lancaster
Lancaster Bty.
Lyon Station
East Penn Mfg.
New Castle
New Castle Bty.
Philadelphia
East Penn Mfg.
Pittsburgh
Simon Bty. & Res.
Geidel Bty. Div.

RHODE ISLAND

Providence
Pilot Mfg., Inc.

SOUTH CAROLINA

Columbia
Yocam Batteries

TENNESSEE

Chattanooga
Electro-Lite Bty.
Knoxville
Southern Bty.
Memphis
Central Battery
Laher Bty. Prod.
Southern Bty.
Nashville
Electro-Lite Bty.
Southern Bty.

TEXAS

Dallas
Continental Bty.
Reliable Battery
El Paso
El Paso Bty.
Houston
Texford Bty. Co.
Reliable Battery
San Antonio
Reliable Battery

UTAH

Salt Lake City
Laher Bty. Prod.

VIRGINIA

Arlington
Express Bty. Div.
Leeth Bros.
Lynchburg
Hydrate Battery

WASHINGTON

Seattle
Laher Bty. Prod.
Spokane
Laher Bty. Prod.

CANADA

Vancouver, B. C.
Industrial Bty. &
Supply

WARRANTY

For one year from date of purchase, MTD Products Inc will replace for the original purchaser, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. All transportation charges on parts submitted for replacement under this warranty must be paid by the purchaser. This warranty does not include replacement of parts which become inoperative through misuse, excessive use, accident, neglect, improper maintenance or alterations by unauthorized persons. This warranty does not include the engine, motor, battery, battery charger or any component parts thereof. For service on these units refer to the applicable manufacturer's warranty.

The above warranty will apply only to the original owner and will be effective only if the warranty card has been properly processed. It will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. UNDER NO CIRCUMSTANCES WILL THE RETURN OF A COMPLETE UNIT BE ACCEPTED BY THE FACTORY UNLESS PRIOR WRITTEN PERMISSION HAS BEEN EXTENDED.

PARTS INFORMATION

MOWER, TILLER, SNOW THROWER AND TRACTOR PARTS

Mower, tiller, snow thrower and tractor parts are available through the authorized service firms listed below. All orders should specify the model number of your unit, parts numbers, description of parts and the quantity of each part required.

A 1 Engine & Mower Co.
327 East 9th Street
Salt Lake City, Utah 84102

American Electric Ignition Co.
124 N. W. 8th Street
Oklahoma City, Oklahoma 73102

Auto Electric & Carburetor Co.
2625 4th Avenue, S.
P. O. Box 1948
Birmingham, Alabama 35233

Automotive Equipment Service Co.
3117 Holmes Street
Kansas City, Missouri 64109

Bailey's Rebuild Inc.
1325 E. Madison Street
Seattle, Washington 98102

Brown Equipment Distributor Inc.
110 Beech Street
Corydon, Indiana 47112

Bullard Supply
2409 Commerce Street
Houston, Texas 77003

Center Supply Company
6867 New Hampshire Avenue
Takoma Park, Maryland 20012

R. T. Clapp Co.
2016 Magnolia Ave., N. E.
Knoxville, Tennessee 37917

W. B. Clements
400 Salem Avenue
Roanoke, Virginia 24016

Morton B. Collins Co.
300 Birnie Avenue
Springfield, Massachusetts 01107

Dixie Sales Company
P. O. Box 1408
327 Battleground Avenue
Greensboro, North Carolina 27402

East Point Cycle & Key Shop
1617 Whiteway
East Point, Georgia 30044

Gamble Distributors
West End Avenue
Carthage, New York 13619

Garden Equipment Co., Inc.
6600 Cherry Avenue
Long Beach, California 90805

Henzler, Inc.
2015 Lemay Ferry Road
St. Louis, Missouri 63125

Frank E. Ives & Son
1101 Lincoln Avenue
Prospect Park, Pennsylvania 19076

J. W. Jewett Co.
981 Folsom Street
San Francisco, California 94107

Kenton Supply
8216 North Denver Avenue
Portland, Oregon 97217

Kimber's inc.
615 W. Genesee Street
Syracuse, New York 13204

ENGINE PARTS AND SERVICE

Engine 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 and Stratton or Tecumseh Lauson — Power Products.

Marr Brothers
423 E. Jefferson
Dallas, Texas 75203

Mathews Auto Electric Co.
420 East 2nd Street
Tulsa, Oklahoma 74120

McClure Lawn & Garden Supply
1114 Lexington Avenue
Mansfield, Ohio 44907

Memphis Cycle & Supply Co.
421 Monroe Avenue
Memphis, Tennessee 38103

Moz-All of Florida, Inc.
365 Greco Avenue
Coral Gables, Florida 33146

**National Central, Div. of
Joe Sterling, Inc.**
Drawer "D" 687 Seville Rd.
Wadsworth, Ohio 44281

Power Equipment Distributor
36463 So. Gratiot Avenue
Mt. Clemens, Michigan 48043

Parts & Sales Inc.
335 West St. Charles Road
Villa Park, Illinois 60181

Power Lawn & Garden Equip. Co.
2551-2571 J. F. Kennedy Road
Dubuque, Iowa 52001

Raub Supply Company
James & Mulberry Sts.
Lancaster, Pennsylvania 17604

Radco Distributors
2403 Market Street
P. O. Box 3216
Jacksonville, Florida 32206

Richmond Battery & Ignition
P. O. Box 25369—957 Myers St.
Richmond, Virginia 23260

Smith Hardware Company
515 N. George Street
Goldsboro, North Carolina 27530

South Denver Mawn Equip. Co.
527 West Evans
Denver, Colorado 80223

Suhren Engine
8330 Earhart Blvd.
New Orleans, Louisiana 70118

Sutton's lawn Mower Shop
Route 4, Box 343
North Little Rock, Arkansas 72117

Warner Equipment
7520 Lyndale Avenue, So.
Minneapolis, Minnesota 55423