

# OWNER'S MANUAL

# 30" LAWN TRACTORS

Model Numbers 133-390A 133-395A

# Important:

Read Safety Rules and Instructions Carefully

Thank you for purchasing an American built product.

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# **LIMITED WARRANTY**

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

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

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

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

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

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



This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester muffler is available at your nearest engine authorized service center.



To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

### SAFE OPERATION PRACTICES FOR RIDING VEHICLES

- Read this owner's manual carefully in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
- This unit is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.
- Know the controls and how to stop quickly— READ THIS OWNER'S MANUAL.
- Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
- No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
- Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts to avoid entanglement in the moving parts. Never operate a unit in bare feet, sandals, or sneakers.
- To prevent injury, do not carry passengers or give rides. Keep children, pets and bystanders out of the area while mowing. Only the operator should ride on the unit and only ride in the seat.
- 8. Check overhead clearance carefully before driving under power lines, guy wires, bridges or low hanging tree branches, before entering or leaving buildings, or in any other situation where the operator may be struck or pulled from the unit, which could result in serious injury.
- To maintain control of the unit and reduce the possibility of upset or collision, operate the tractor smoothly. Avoid erratic operation and excessive speed.
- 10. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower. Although the area of operation should be completely cleared of foreign objects, a small object may have been overlooked and could be accidently thrown by the mower in any direction and cause injury.
- Clear work area of objects which might be picked up and thrown by the mower in any direction and cause injury.
- 12. Stop the blade(s) when crossing gravel drives, walks or roads.
- 13. Disengage all attachment clutches and shift into neutral before attempting to start engine.
- 14. Disengage power to attachment(s) and stop engine before leaving operating position.
- 15. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times as the rotating blade(s) can cause injury.

- 16. Disengage power to attachment(s) and stop engine before making any repairs or adjustments. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
- 17. Before attempting to unclog the mower or discharge chute, stop the engine. The mower blade(s) may continue to rotate for a few seconds after the engine is shut off. Therefore, be sure the blade(s) have stopped completely. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
- 18. Disengage power to attachment(s) when transporting or not in use.
- 19. 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.
- 20. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face. Use extreme caution if it is necessary to drive the tractor up an incline or back the tractor down an incline because the front of the tractor could lift and rapidly flip over backward which could cause serious injury.
- 21. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Always keep the tractor in gear when going down steep hills to take advantage of engine braking action.
- 22. Stay alert for holes in terrain and other hidden hazards.
- 23. 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.
- 24. Watch out for traffic when crossing or near roadways.
- 25. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near vehicle while in operation.
- 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.

- 27. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in operator's manual.
- 28. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- 29. 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.
- 30. To reduce fire hazard, keep engine free of
- grass, leaves or excessive grease.

  31. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object. The damage should be repaired before restarting and operating the equipment.
- 32. Do not change the engine governor settings or overspeed the engine.
- 33. When using the vehicle with mower, proceed as follows:
  - (1) Mow only in daylight or in good artificial light.

- (2) Never make a cutting height adjustment while engine is running if operator must dismount to do so.
- (3) Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher.
- (4) Check blade mounting bolts for proper tightness at frequent intervals.
- 34. Check grass catcher bags frequently for wear or deterioration. For safety protection, replace only with new bag meeting original equipment specifications.
- 35. Look behind to make sure the area is clear before placing the transmission in reverse and continue looking behind while backing up. Disengage blades before shifting into reverse and backing up.
- 36. This unit should not be driven up a ramp onto a trailer or truck under power, because the unit could tip over, causing serious personal injury. The unit must be pushed manually to load properly.

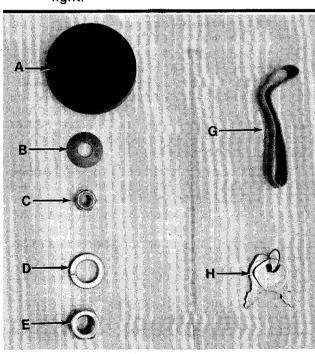


FIGURE 1.

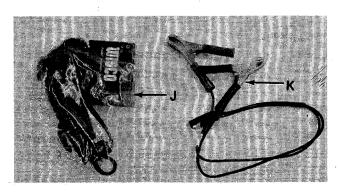


FIGURE 2.

### **ASSEMBLY**



This unit is shipped WITHOUT GAS-OLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

#### **Tools Required:**

- (1) 7/16" Open End or Box Wrench
- (1) 1/2" Open End or Box Wrench
- (1) 3/4" Open End or Box Wrench
- (1) Adjustable Wrench

#### Contents of Hardware Pack: (See Figure 1)

- A (1) Steering Wheel Cap
- B (1) Belleville Washer
- C (1) Hex Lock Nut 5/16-18 Thread
- D (1) Lock Washer 1/2" I.D.
- E (1) Hex Nut 1/2-13 Thread
- G (1) Battery Strap\*
- H (2) Ignition Keys
- I (1) Battery Pack\* (Not Shown)
- J (4) Foam Strips\* (Not Shown)

#### Loose Parts in Carton: (See Figure 2)

- K (1) Battery Charger\*
- L (1) Charger Leads\*
- M (1) Seat (Not Shown)
- N (1) Steering Wheel (Not Shown)
- \*Electric Start Model 395 Only

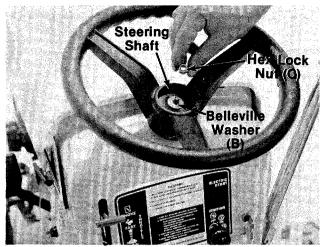


FIGURE 3.



NOTE

Reference to right-hand or left-hand side of machine is from the driver's seat facing forward.

- 1. Remove the lawn tractor and all parts from the carton. Make certain that all loose parts and literature have been removed before the carton is discarded.
  - 2. Place steering wheel over steering shaft.
  - 3. Secure with belleville washer (B) and hex lock nut (C). See figure 3.

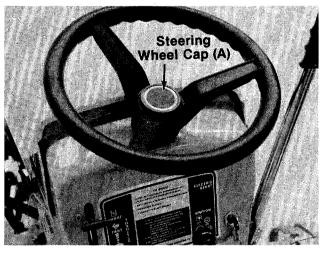
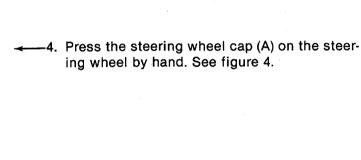


FIGURE 4.



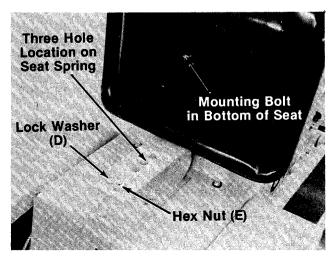


FIGURE 5.

5. The seat spring on the lawn tractor has three hole locations for mounting the seat (L). See figure 5.

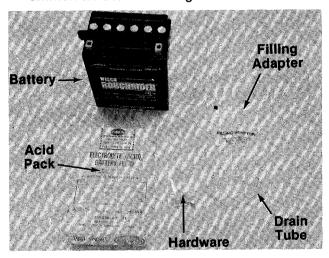
> The seat comes with the mounting bolt molded in the bottom of seat.

> Secure the seat in position on seat spring with lock washer (D) and hex nut (E). See figure 5.

### BATTERY INFORMATION FOR ELECTRIC START MODELS



- A. Battery acid must be handled with great care as contact with it can burn and blister the skin. It is also advisable to wear protective clothing (goggles, rubber gloves and apron) when working with it.\*
- B. Should battery acid accidentally splatter into the eyes or onto the face, rinse the affected area immediately with clean cold water. If there is any further discomfort, seek prompt medical attention.
- C. If acid spills on clothing, first dilute it with clean water, then neutralize with a solution of ammonia/water or baking soda/water.



- FIGURE 6.
- Manifold on Battery

  Clear Plastic Drain Tube
- FIGURE 7.

- D. Since battery acid is corrosive, do not pour it into any sink or drain. Before discarding empty electrolyte containers, rinse them with a neutralizing solution.
- E. NEVER connect or disconnect charger clips to battery while charger is turned on as it can cause sparks.
- F. Keep all lighted materials (cigarettes, matches, lighters) away from the battery as the hydrogen gas generated during charging can be combustible.
- G. As a further precaution, only charge the battery in a well-ventilated area.
  - \*Always shield eyes, protect skin and clothing when working near batteries.

#### **ACTIVATING AND INSTALLING THE BATTERY**

1. Upon opening the battery pack, you should receive acid pack, battery, drain tube, filling adapter and hardware. See figure 6.

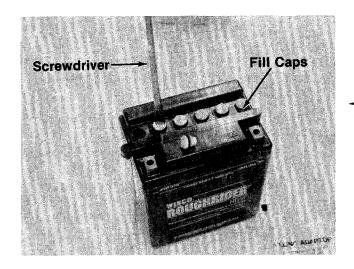


BATTERIES CONTAIN SULFURIC ACID AND MAY CONTAIN EXPLOSIVE GASES (when electrolyte has been added).

- 2. Place the battery on table or workbench to be filled.
- 3. Place one end of clear plastic drain tube on manifold of battery. See figure 7.

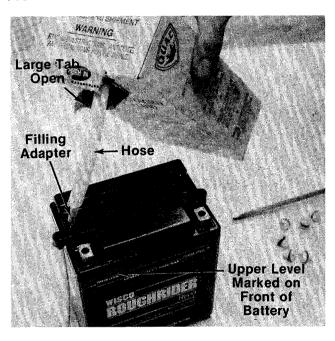


Some batteries may already have the drain tube installed, in which case it may be necessary to snip off the sealed end.



4. Remove the six fill caps from the top of the battery with a screwdriver. Care should be taken not to damage the fill caps. See figure 8.

FIGURE 8.



- 5. Lay acid package down, with "push in" facing up. Using thumb, push in small perforated tab at dot on front of package. Tear down large tab to solid line, exposing hose. **Do not** use any sharp object to open acid package.
- 6. Pull out hose from package and hold upright. Squeeze hose forcing all acid back into package. Cut off tip of hose and insert filling adapter. See figure 9.
  - 7. Fill each cell to upper level marked on front of battery. Replace fill caps on battery. See figure 9.
  - 8. Allow battery to sit for 20 to 30 minutes. Add additional acid, if necessary, to bring it up to the proper level.

FIGURE 9.



Battery contains sulfuric acid. Refer to warning on page 6. Antidote: EXTERNAL—Flush with water. INTERNAL—Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Seek prompt medical attention. EYES: Flush with cool water for at least 15 minutes, then seek immediate medical attention.

Since batteries produce explosive gases, keep all lighted materials (cigarettes, lighters, matches, etc.) away. Be sure to charge battery only in well-ventilated areas.

KEEP BATTERIES
OUT OF THE REACH OF CHILDREN!

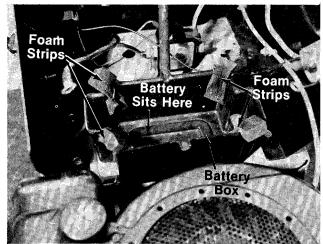
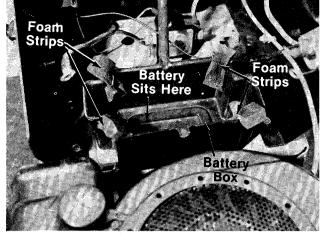


FIGURE 10.



- shows the battery box in which the battery will be mounted.
  - 10. Install the four foam strips into the battery box as follows.

9. Open the hood of the lawn tractor. Figure 10

- A. Using a cloth, clean the inside of the battery box with a thinner or solvent.
- B. Peel the paper off the foam strips to expose the adhesive backing. Press foam strips firmly into the corners of the battery box. See figure 10.

11. Place the battery in the rider so that the positive terminal is facing the left side of the unit. See figure 11.



Right and left hand sides of the unit are determined by sitting on the seat in the operating position, facing forward.

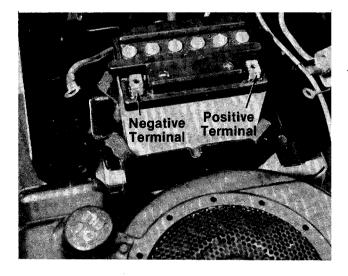
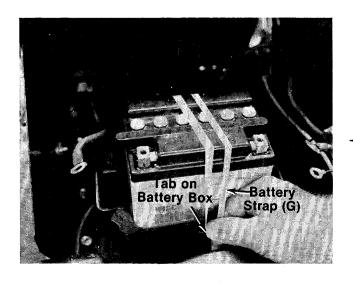


FIGURE 11.



12. Secure the battery to the battery box by stretching the battery strap (G) across the battery. Loop each end around the tab on the sides of the battery box. See figure 12.

FIGURE 12.

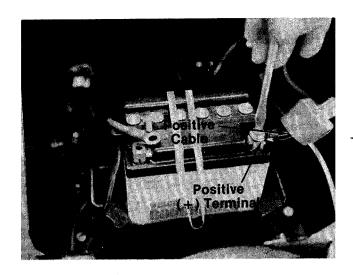


FIGURE 13.

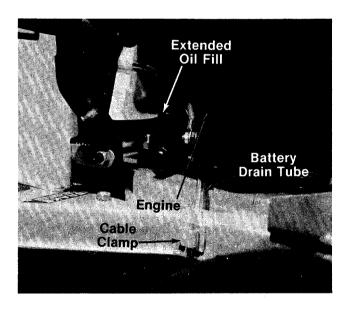


FIGURE 14.

- 13. Slide the square nut (provided with battery hardware) into the positive (+) terminal. Slide the rubber boot back which is on the positive cable. Place the positive (heavy red wire) cable and the small red wire (with a fuse holder in it) on the positive terminal. Secure with screw and lock washer provided. See figure 13.
- 14. Slide the square nut (provided with battery hardware) into the negative (-) terminal. Place the negative (heavy red wire) cable on the negative terminal. Secure with screw and lock washer provided.

- 15. Feed the plastic drain tube through the hole in the frame beside the battery.
- 16. Route the battery drain tube between the extended oil fill and the engine. Slip it into the plastic cable clamp as shown in figure 14.

17. The battery can be slow charged (do not fast charge) at a maximum bench rate of 1.4 amperes until the specific gravity reading is 1.260-1.280. Charge for a minimum of 2 hours and a maximum of 8 hours.



The battery charger provided is specially designed for the battery in this unit. **Do not use any other charger.** A charging rate in excess of the above specifications will buckle and warp the positive plates and/or perforate the separators.

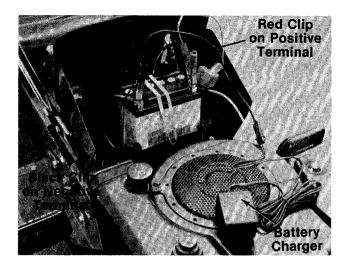


FIGURE 15.

#### To Attach the Battery Charger:

- 1. Attach the red clip on the charger to the positive terminal.
- 2. Attach the black clip on the charger to the negative terminal.
- 3. Plug the other end of the battery charger into a standard household 110 A.C. outlet.

#### To Remove the Battery Charger:

- 1. Unplug the charger from the 110 A.C. outlet.
- Remove the black clip from the negative terminal.
- 3. Remove the red clip from the positive terminal.



Failure to follow the above procedure when charging a battery can cause the gases in the battery to explode.



NOTE

Charging rate after battery has been put into operation: The battery is to be charged with the charger provided, for a period of 14-16 hours. NO LONGER THAN 30 HOURS.

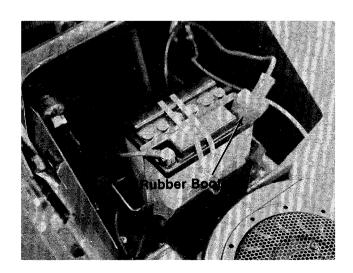


FIGURE 16.



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

18. Slide the rubber boot over the positive terminal. See figure 16.

### **CONTROLS** (See Figure 17)

This manual should be read in its entirety before operating the lawn tractor. The more you know and understand about the machine and its operation, the better job it will do for you. While reading the manual, compare the illustrations with your tractor to familiarize yourself with the locations of various controls, lubrication points, attachments and adjustment features.

Study the operating instructions and safety precautions thoroughly to insure proper functioning of your tractor and to prevent injury to yourself and others. Be sure to save this manual for future reference.

#### THROTTLE CONTROL

The throttle control is used to regulate the engine speed and to activate the choke on the engine. To get maximum efficiency from cutting, the throttle should be in the FAST position when operating the mower. Pushing the throttle all the way forward past FAST, will choke the engine. See figure 17.

#### **IGNITION KEY**

Recoil Model. The key must be turned to the "ON" position before you pull the recoil handle to start the engine. Turn the key to the left to the "OFF" position to stop the engine. Remove the key when the unit is not in use. See figure 20.

Electric Start Model. The key must be turned to the "START" position to start the engine. After the engine is running, let the key return to the "ON" position. Turn the key to the "OFF" position to stop the engine. Remove the key when the mower is not in use. See figure 17.

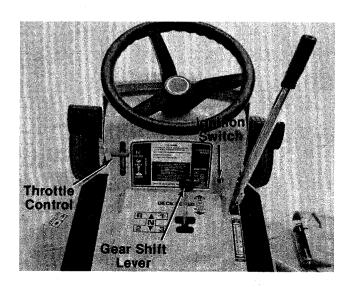


FIGURE 17.

#### **INTERLOCKS (Not Shown)**

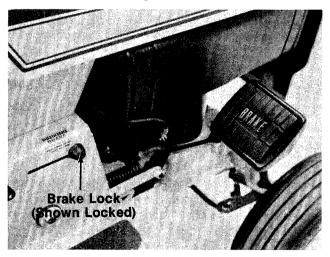
Interlock safety switches are located on the clutch pedal, the lift and disengagement lever and gear shift lever.

Before the engine will start, the clutch pedal must be depressed all the way and the lift and disengagement lever must be in the disengaged position.

Before the unit can be shifted into reverse, the lift and disengagement must be in the disengaged position.

#### **BRAKE**

The brake pedal is located on the right hand side of the tractor and is operated by depressing it with your right foot. See figure 18.



#### FIGURE 18.

#### **BRAKE LOCK**

The brake lock is located on the right hand side of the tractor. To lock the brake, depress the brake pedal and lift up the lock button. The pedal will stay depressed. To release, depress the brake pedal. Always lock the brake when you park the mower. See figure 18.

#### **CLUTCH**

The clutch pedal is located on the left hand side of the tractor and is operated with your left foot. Depress the pedal to disengage the drive mechanism. Release the clutch slowly to engage. The clutch and brake pedals must both be depressed when stopping the tractor. When shifting gears, the clutch pedal must be disengaged, and the tractor cannot be moving. See figure 19.

#### **CLUTCH LOCK**

When the clutch pedal is depressed all the way, it can be locked by lifting up the lock button. The pedal will stay depressed. To release, depress the pedal. See figure 19.



The clutch pedal must be depressed to start the engine.

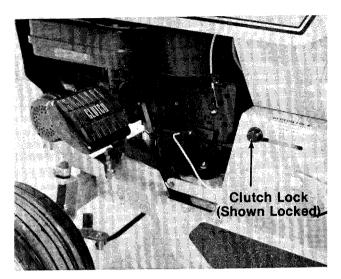


FIGURE 19.

# RECOIL STARTER HANDLE (Model 390 Only)

The recoil starter handle is located on the right side of the dashboard. The recoil starter handle can either be pulled while seated on the rider or pulled while standing behind the rider. The ignition key must be on before the engine will start. After the engine starts, the recoil starter handle must be returned and locked into the dashboard before the blade or clutch are engaged. The engine will stop if these instructions are not followed. See figure 20.

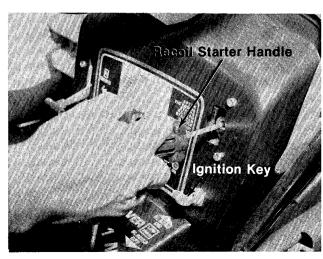


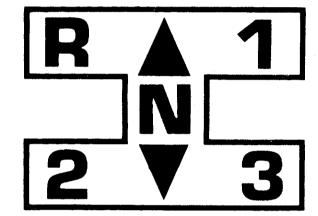
FIGURE 20.

#### **GEAR SHIFT LEVER**

Three Speed—The three speed transmission has three forward speeds, neutral and reverse. The clutch pedal must be depressed to shift gears. It may be necessary to release the clutch pedal slightly to shift the gear shift lever. Do not force the shift lever.

1st Gear—Heavy Cutting 2nd Gear—Medium Cutting 3rd Gear—Medium Cutting N—Neutral R—Reverse

See figures 17 and 21.



# FIGURE 21. THREE SPEED TRANSMISSION MOWER LIFT AND DISENGAGEMENT LEVER

The lift and disengagement lever is used to raise the cutting deck. Pulling it all the way back and locking it disengages the blade.



The lift and disengagement lever must be in the disengaged position when starting the engine and when shifting into reverse. See figure 22.

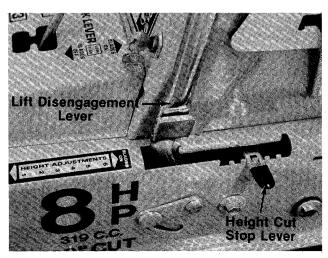


FIGURE 22.

#### **HEIGHT OF CUT CONTROLS**

The cutting controls consist of the height of cut stop and the wheel height adjusters.

Height of Cut Stop. See figure 22. Lift the stop and set it at the desired cutting height. Allow the lift and disengagement lever to come forward to rest against the height of cut stop.

Wheel Height Adjuster. Move the lever towards the wheel and set it in the desired cutting height position. See figure 23. Both wheels must be in the same relative position.

#### SETTING THE CUTTING HEIGHT

The cutting height of the mower can be set in two different ways: Full float position where the deck follows the contour of the ground, and the suspended position where the deck hangs from the frame of the rider. The suspended position is normally used for cutting rough uneven ground.

To set the cutting deck in the full float position: Set the wheel height adjusters in the desired cutting height as indicated in figure 23. Set height of cut stop in the lowest position. See figure 22.

To set the cutting deck in the suspended position: Set the height of cut stop in the desired cutting height. Then set the deck wheels so they just clear the ground.

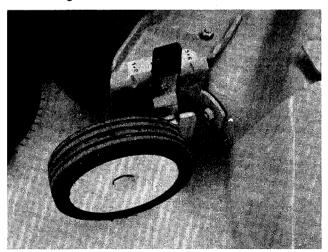


FIGURE 23.

### **OPERATION**

For shipping purposes, the tires on your unit may be over-inflated. Tire pressure should be reduced before unit is put into operation. Recommended pressure should be approximately 15 p.s.i. Equal tire pressure should be maintained on all tires. Maximum tire pressure is 30 p.s.i.

# CAUTION

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

# **DANGER**

DO NOT OPERATE MOWER UNLESS GUARD OR ENTIRE GRASS CATCHER IS IN ITS PROPER PLACE.

#### STARTING THE ENGINE



This unit is equipped with a safety interlock system for your protection. The purpose of the safety interlock system is to prevent the engine from cranking or starting unless the clutch pedal is depressed and the lift and disengagement lever is in the disengaged position. In addition, the lift and disengagement lever must be in the disengaged position when the unit is put into reverse or the engine will shut off.



Do not operate the rider if the interlock system is malfunctioning because it is a safety device, designed for protection.

1. Be sure the crankcase is filled with oil as recommended in the engine manual. Put clean, fresh, unleaded, low-lead or regular grade leaded gasoline in the gasoline tank.

- 2. Attach the wire to the spark plug.
- 3. Depress the brake pedal and lock it down with the brake lock. See figure 18.
- 4. Depress the clutch pedal and lock it down with the clutch lock. See figure 19.
- 5. Move the lift and disengagement lever backward to the disengaged position and lock it. See figure 22.
- Set the throttle control lever in the "CHOKE" position. See figure 17.
- 7. a. Recoil Model. Turn the ignition key to the "ON" position. Twist the recoil starter handle until it is free and pull it with a quick steady motion. After the engine starts, return the recoil starter handle and twist it until it locks. See figure 20.
  - b. Electric Start Model. Turn the ignition key to the "START" position. As soon as the engine starts, let the key return to the "ON" position. See figure 17.

Slowly return the throttle to the running position as soon as the engine starts.

8. To stop the engine, turn the ignition key to the "OFF" position. Remove the key when the unit is not in use.

#### **PUTTING THE LAWN TRACTOR IN MOTION**

- Advance the throttle control from 3/4 to full throttle to prevent strain on the engine and to operate the cutting blades.
- 2. Depress the clutch pedal so the clutch lock releases.
- 3. Depress the brake pedal so the brake lock releases.



Parking Brake **must** be disengaged before unit is put into motion.

- 4. Place the gear shift lever in the number 1 position on the three speed unit.
- 5. Slowly release the clutch pedal.
- 6. To stop the unit, depress the clutch pedal and the brake pedal.



Unit is equipped with separate brake and clutch pedals. It is necessary to disengage clutch when applying brakes to stop.

7. The blade can be engaged either while moving forward or while standing still. Move the lift and disengagement lever forward slowly until the blade is running.



As you become more familiar with the tractor, stop the unit and shift into a higher gear.

#### **STOPPING**

**Engine**—Turn the ignition key to the left to the "OFF" position.

Lawn Tractor—Depress the clutch and brake pedals.

**Blades**—Move the lift and disengagement lever all the way to the rear and lock it.



If you strike a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower.

### **ADJUSTMENTS**



Do not at any time make any adjustment to lawn tractor without first stopping engine and disconnecting spark plug wire.

#### **CHAIN ADJUSTMENT**

After the first five hours of operation, the initial slack should be removed from the chain. The chain should be tight enough so that it deflects approximately ½" when it is depressed with the thumb.

To tighten the chain, loosen the four locking nuts on each side of the rear axle. See figure 24.

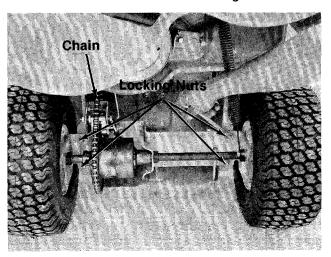


FIGURE 24.

Tighten the adjusting nuts until the proper chain tension is obtained. See figure 25.

Tighten the locking nuts on the rear axle. See figure 24.

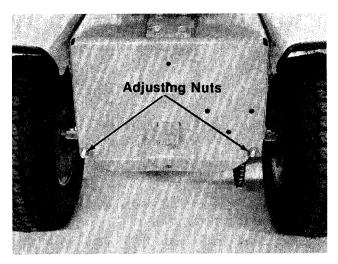


FIGURE 25.

#### **BRAKE ADJUSTMENT (See Figure 26)**

During normal operation of this machine, the brake is subject to wear and will require periodic examination and adjustment.

The brake is located by the right rear wheel inside the frame. To adjust the brake, remove the cotter pin. Tighten the castle nut one half turn and then test the brakes. After attaining the proper adjustment, replace the cotter pin.

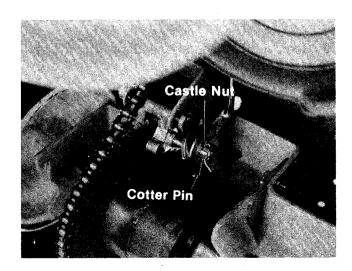


FIGURE 26.

#### **CARBURETOR ADJUSTMENT**



If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches, blades. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

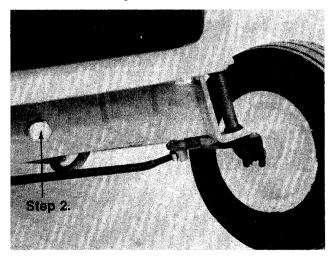
If carburetor adjustment is required, refer to the separate engine manual packed with your lawn tractor.

### LUBRICATION



Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on lawn tractor.

- 1. Steering Gears—Lubricate the two gears with automotive multi-purpose grease once a season.
- 2. Pivot Bolt—Lubricate with light oil once a season. See figure 27.



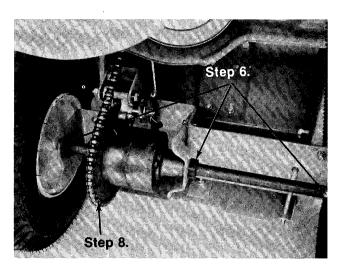
#### FIGURE 27.

- Differential—It is lubricated at the factory with 3 ounces of high temperature grease (450°F.). The grease should only be checked or replaced if the differential is disassembled for repair. See figure 28.
- 4. Transmission—It is lubricated at the factory with 12 ounces of E.P. Lithium grease. The grease should only be checked or replaced if the transmission is disassembled for repair.

- 5. Steering Column Bearings (2)—Oil once a season with light oil.
- 6. Rear Axle Bearings (3)—They require no lubrication. See figure 28.



Do not get oil on the sprocket or brake pads.



#### FIGURE 28.

- 7. Steering Shaft Bearings (2)—They require no lubrication.
- 8. Chain—Remove and clean with kerosene. Lubricate with an oil soaked rag. See figure 28

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

Blade Spindle Bearings Tie Rod Ends Idler Bearings

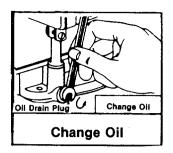
### **MAINTENANCE**

#### **CRANKCASE OIL**

To ensure maximum engine performance, perform the following periodic maintenance:

Check oil level before starting engine and after every 5 hours of operation. Be sure oil level is maintained to FULL mark on dipstick.

Change oil after first 5 hours of operation. Thereafter change oil every 25 hours of operation. Remove oil drain plug and drain oil while engine is warm. Replace drain plug. Remove dipstick and refill with new oil of proper grade. Replace dipstick. See figure 29.



#### FIGURE 29.

#### **MOWER DECK**

The underside of the mower deck should be cleaned after each period of use as grass clippings, leaves, dirt and other matter will accumulate. This accumulation of grass clippings, etc., is undesirable as it will invite rust and corrosion and may cause an uneven discharge of grass clippings at the next mowing.

The deck may be cleaned by washing with a stream of water from a garden hose.

Be sure to disconnect the spark plug wire and ground it while performing this maintenance.

#### **CUTTING BLADE**

A. Removal for Sharpening or Replacement



Be sure to disconnect and ground the spark plug wire and remove ignition key before working on the cutting blade to prevent accidental engine starting.

- Remove the large bolt and lock washer which holds the blade and adapter to the blade spindle.
- Remove the blade and adapter from the spindle. Be careful not to lose the key on the spindle.
- 3. If the blade or blade adapter needs replacing, remove the two small bolts, lock washers and nuts which hold the blade to the adapter.



#### **CAUTION**

Periodically inspect the blade adapter for cracks, especially if you strike a foreign object. Replace when necessary.

#### B. Sharpening

Remove the cutting blade by following the directions of the preceding section.

When sharpening the blade, follow the original angle of grind as a guide. It is extremely important that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade. An unbalanced blade will cause excessive vibration when rotating at high speeds, may cause damage to the mower and could break, causing personal injury.

The blade can be tested for balance by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly.



It is recommended that the blade always be removed from the adapter for the best test of balance.

#### C. Reassembly

Before reassembling the blade and the blade adapter to the unit, lubricate the spindle and the inner surface of the blade adapter with light oil. Lubricating the bolt holes, bolts and inner surface of the nuts with light oil is also recommended. A 4 oz. plastic bottle of light oil lubricant is available. Order part number 737-0170. Engine oil may also be used.

When replacing the blade, be sure to install the blade with the side of the blade marked "Bottom" (or with part number) facing the ground when the mower is in the operating position. Make certain key is in place on the crankshaft.

#### **Blade Mounting Torque**

3/8" Dia. Bolt 375 in. lb. min., 450 in. lb. max. 5/16" Dia. Bolt 150 in. lb. min., 250 in. lb. max.

To insure safe operation of your unit, ALL nuts and bolts must be checked periodically for correct tightness.

#### **ENGINE**

Refer to separate engine manual for maintenance procedures.

#### **BELT REPLACEMENT**



Before up-ending vehicle for maintenance, position it on a hard level surface. Make sure area is clear of children and pets. Secure (tie) in place. Disconnect the spark plug wire and ground it against the engine.

To prevent gasoline from leaking from the gasoline tank, remove the cap, place a piece of plastic film over the neck of the tank, screw on the cap, or drain tank.

- 1. Put the lift lever in the disengaged position.
- 2. Remove the belt keeper and shoulder bolt on the engine pulley. See figure 30.

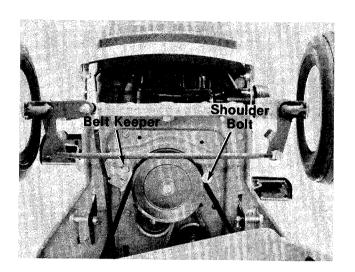


FIGURE 30.

- 3. Remove the blade belt from the engine pulley.
- 4. Put the lift lever in the engaged position.
- 5. Remove the two tension springs on the rear of the deck.
- 6. Remove the six pins holding the deck to the frame. See figure 31.
- 7. Lift off the deck and set it aside.

#### **BLADE BELT (See Figure 32)**

- 1. Take off both belt guards on the deck.
- 2. Remove and replace the belt with a new one.

#### TRANSMISSION BELT (See Figure 31)

- Remove the engine belt guard from the engine pulley by removing the two front engine bolts.
- 2. Remove the two belt guards from the transmission pulley.
- 3. Remove the V-idler pulley.
- 4. Remove and replace the transmission belt and reinstall pulley.

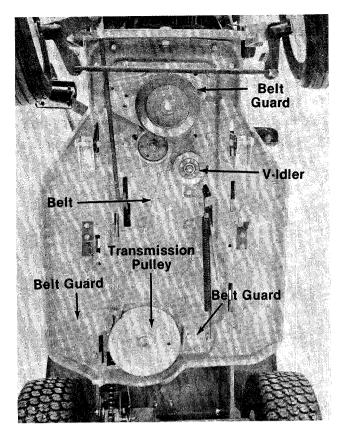


FIGURE 31.

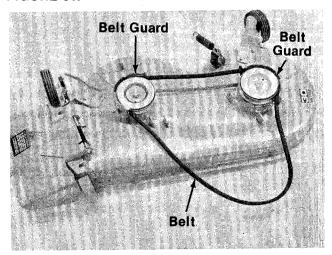


FIGURE 32.
BATTERY REMOVAL OR INSTALLATION



When removing the battery, follow this order of disassembly to prevent the screwdriver from shorting against the frame.

- 1. Remove the Negative cable.
- 2. Remove the Positive cable.

To install a battery:

- 1. Attach the Positive cable.
- 2. Attach the Negative cable.

#### JUMP STARTING

- 1. Attach the first jumper cable from the Positive terminal of the good battery to the Positive terminal of the dead battery.
- Attach the second jumper cable from the Negative terminal of the good battery to the FRAME OF THE UNIT WITH THE DEAD BAT-TERY.



Failure to use this starting procedure could cause sparking, and the gas in either battery could explode.

#### **BATTERY MAINTENANCE**

- Check periodically (every two weeks or before and after charging) to be sure electrolyte level is above the lowest line on battery. 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.
- 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.

#### **BATTERY STORAGE**

- Charge battery using normal methods. NEVER store discharged battery as it will not recover.
- 2. When storing battery for extended periods, disconnect battery cables. Removing battery from unit is recommended.
- 3. Store in cold, dry place.
- Recharge battery whenever the specific gravity is less than 1.225, before returning to service, or every two months, whichever occurs first.

#### **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



THESE FAILURES DO NOT CON-STITUTE WARRANTY.

### **OFF-SEASON STORAGE**

If the machine is to be inoperative for a period longer than 30 days, the following procedures are recommended:

- 1. Clean the engine and the entire unit thoroughly.
- 2. Lubricate all lubrication points. Wipe the entire machine with an oiled rag to protect the surfaces.
- Refer to the engine manual for correct engine storage instructions. The engine must be completely drained of fuel to prevent gum deposits from forming on essential carburetor parts, fuel lines and fuel tanks.
- 4. Refer to battery storage instructions on page 18.
- 5. Store unit in a clean, dry area.

GRASS CATCHER Model 015 is available as optional equipment for the mower shown in this manual.



The mower should not be operated without the entire grass catcher or chute deflector in place.

**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.

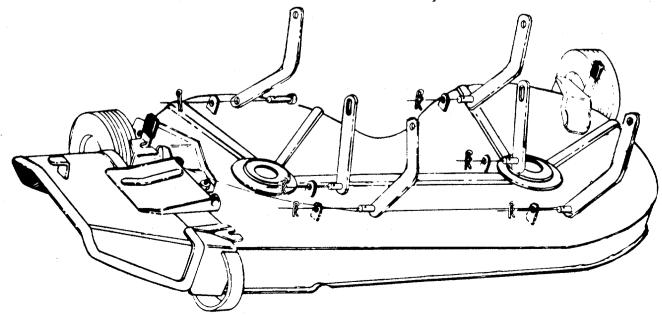
For replacement bags, use only factory authorized replacement bag No. 764-0121.

### **DECK LINKAGE**



NOTE

The illustration below shows proper deck link hook-up. If the deck is removed for any reason, use the illustration for correct assembly.



# TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

TROUBLE	LOOK FOR	REMEDY					
Engine will not crank	Battery installed incorrectly	The battery must be installed with the negative, identified at the terminal post by (Neg, N or -), grounded. The positive (Pos, P or $+$ ) attaches to the large cable from the solenoid. The small red wire from the fuse holder or circuit breaker is also attached to the positive terminal.					
	Blown fuse or circuit breaker	Replace fuse with 7½ amp. fuse ¼ x 1¼" Ig. Circuit breaker will reset itself when it cools off. Fuses or circuit breakers seldom open or fail without a reason. The problem must be corrected. Check for loose connections in the fuse holder. Replace fuse holder if necessary. A dead short may be in the cranking or charging circuit where the insulation may have rubbed through and exposed the bare wire. Replace the wire or repair with electrican's tape if the wire strands have not been damaged. Note: Look for a wire pinched between body panels, burned by the exhaust pipe or muffler or rubbed against a moving part.					
	Battery is dead or weak	Use a hydrometer to check the condition of the battery. The Specific Gravity (s.g.) should be 1.265 at 80°F. (1.215 s.g. minimum needed for cranking engine). The reason for the battery failing must be determined. (1) Defective battery. Battery will not accept or hold a full charge. (2) Short circuit. Check for grounded wire. (3) Charging system not working, either engine alternator or trickle charger.  Trickle Charger. Check with multimeter. Charger 725-0578—input 120 V A.C., no load output 13.5 V D.C., rated load current 1 amp. Charger 725-0507—input 120 V A.C., no load output 17.4 V D.C., rated load current 1/2 amp.  Alternator (dual or single circuit) The charging system is an alternator located under the flywheel. It is unregulated and rated 3 amp. at 3600 r.p.m. A diode (rectifier) is located in the output lead just before the wire harness plug on the engine side.					
		Red Wire Diode Tube (Batt.)  To Alternator  Black Wire Polarized Plug					
:		The diode changes A.C. to D.C. to charge the battery. A bad diode can either fail to charge the battery or discharge the battery if the alternator is shorted as well as the diode. To test: (1) Disconnect charger lead from the battery (small red wire). (2) Connect 12 V small test lamp between the 3 amp. D.C. charge lead and the positive terminal of the battery. (3) With the engine off, the lamp should not light. If it does, the diode and possibly the alternator should be replaced. (4) Start the engine. The lamp should light. If it does not, the alternator (stator) or lead wire is bad and should be replaced.					
	Mechanical failure. (Wires and switches)	The interlock system includes two mechanical activated switches which are wired in series in the circuit used to energize the starter solenoid. While testing the interlock system, you will make the mower temporarily unsafe by permitting the engine to be started with the blade and clutch engaged. WARNING: While testing, disengage the clutch, shut off the blade control, set the parking brake and place the gear shift lever in neutral. Attach a wire (minimum 18 gauge) to the positive terminal of the battery and touch the other end to the small terminal on the solenoid. If the engine does not crank: (1) There is a loose connection or poor ground. (2) The solenoid may be bad. The solenoid can be checked by using a heavy wire (#8 gauge minimum) and jumping between the two large terminals. If the engine cranks, the solenoid is bad. (3) If the engine does not crank when you jump the solenoid, have the starter motor tested by an authorized engine dealer. If the engine does crank, the problem is with one of the safety switches, ignition switch or the wire between the fuse holder (or circuit breaker) and the small terminal on the solenoid. Note: Look for a poor connection at the switches or a defective switch. Replace if necessary.					
Engine cranks but will not start	Throttle or choke not in starting position	Check owner's guide for correct position for throttle control and choke (if separate control) for starting.					

# TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

TROUBLE	LOOK FOR	REMEDY
	No spark to spark plug	Spark plug lead disconnected. Connect lead. Hold spark plug lead away from engine block about 1/8". Crank engine. There should be a spark. If not, have engine repaired at authorized engine service dealer.  Faulty spark plug. To test, remove spark plug. Attach spark plug lead to spark plug. Ground the spark plug body against the engine block. Crank the engine. The spark plug should fire at the electrode. Replace if it does not.
	No fuel to the carburetor	Gasoline tank empty. Fill. Fuel valve shut off. Open valve. Valve is located either at the bottom of the fuel tank or on the carburetor. Fuel line plugged. Remove and clean.
	Air filter dirty	If the air cleaner is dirty, the engine may not start. Clean or replace as recommended by the engine manufacturer.
Engine smokes	Engine loses crankcase vacuum	Dipstick not seated or broken. Replace defective part. Engine breather defective. Replace.
Excessive vibration	Bent or damaged blade spindle	Stop engine immediately. Check all pulleys, blade spindles, blade adapters, keys and bolts for tightness and damage. Tighten or replace any damaged parts.
	Bent blade	Stop engine immediately. Replace damaged blade. Only use original equipment blades.
Mower will not discharge grass or leaves uncut strips	Engine speed low Transmission selection Blades short or dull	Throttle must be set between 3/4 and full throttle. Use lower transmission gear. The slower your ground speed, the better the quality of cut. Sharpen or replace blades (uncut strip problem only).

## **BELT TROUBLE SHOOTING CHART**

Failure	Probable Cause	Corrective Action
1 Broken Belt	1A Sudden stop or shock load to belt	1A Inspect rider for cause such as foreign objects stuck in between deck and frame or belt path. Remove obstruction and inspect for damage. Replace belt per parts list in this manual.
	1B Incorrect belt used	1B Replace with proper belt only. See parts list in this manual. Roll belt onto pulley. Do not use a screwdriver to push or pry belt onto pulley. The sharp bend can damage internal cords.
•	1C Abrupt engagement	1C Slower engagement required.
	1D Defective or damaged belt	1D Refer to 1B.
2 Belt Shreds	2A Belt guides or guards in- correctly adjusted	2A Belt guides and guards should be adjusted to approximately 1/16 to 1/8 inch from belt when in the engaged position.
	2B Pulleys not aligned	2B Realign pulleys to be within approximately 1/16 inch of each other. Check with straight edge. Be sure fastening hardware is tight.
	2C Bad pulley—rough, rusty, chipped, bent, frozen bearing, etc.	2C Replace as necessary. Adjust as per 2B.
3 Belt Comes Off	3A Belt stretched	3A Adjust as necessary when applicable. Refer to 1B.
	3B Broken or weak idler spring	3B Replace.

## TROUBLE SHOOTING CHART FOR RECOIL START MODELS

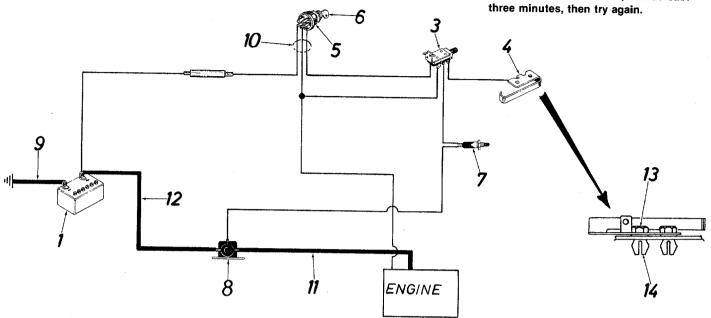
CAUTION: ALWAYS DISCONNECT SPARK PLUG BEFORE ATTEMPTING ANY REMEDY.

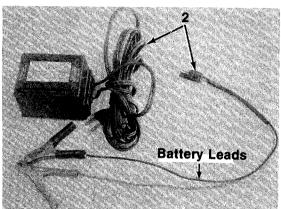
TROUBLE	LOOK FOR	REMEDY					
Engine will not start when re- coil handle is pulled.	Clutch and blade not disengaged.	Clutch pedal must be depressed and blade must be shut off.					
pulled.	Ignition key not in the ON position.	Turn on the ignition key.					
	Throttle not in the starting position.	Check owner's guide for correct position for throttle control for starting.					
	No spark to spark plug.	Spark plug lead disconnected. Connect lead. Hold spark plug lead away from engine block about 1/8". Crank engine. There should be a spark. If not, have the engine repaired at authorized engine service dealer. Faulty spark plug. To test, remove spark plug. Attach spark plug lead to spark plug. Ground spark plug body against the engine block. Crank the engine. The spark plug should fire at the electrode. Replace if it does not.					
	No fuel to the carburetor.	Gasoline tank empty. Fill. Fuel valve shut off. Open valve. Valve is located either at the bottom of the fuel tank or on the carburetor. Fuel line is plugged. Remove and clean.					
	Air filter dirty.	If the air cleaner is dirty, the engine may not start. Clean or replace as recommended by the engine manufacturer.					
	Mechanical failure (wires or switch).	The interlock system includes two mechanical activated switches which are wired in parallel. If the buttons on both switches are not depressed at least 1/8", the magneto will be grounded and the engine will not start. While testing the interlock system, you will make the mower temporarily unsafe by permitting the engine to be started with the blade and clutch engaged. WARNING: While testing, disengage the clutch, shut off the blade control, set the parking brake and place the gear shift lever in neutral. Disconnect the yellow wire where it attaches to the primary wire from the breaker assembly on the engine. Try to start the engine. If the engine does not start, the problem is in the engine (e.g. no fuel or no ignition). If the engine does start, the problem is in the safety system. Check the following: 1. The interlock wire may be grounded by being pinched or rubbing through the insulation. Tape or replace the wire. 2. The bolt on the flat spring behind the recoil starter where the yellow wire attaches must be insulated from the spring. Use a continuity tester. If it is not insulated, remove the bolt and nut, and replace the two fiber washers and reassemble.					
Engine stops when the mow- er blade is en- gaged or the clutch is re- leased.	Recoil handle is not in proper position.	After the engine starts, the recoil starter handle must be pushed into the dashboard and turned a quarter turn either direction to lock it in place.					
Engine smokes.	Engine loses crankcase vacuum.	Dipstick not seated or broken. Replace defective part. Engine breather defective. Replace.					
Excessive vibration	ration spindle tightness or damage.  Tighten or replace any damaged parts.						
	Bent blade.	Stop engine immediately. Replace damaged blade. Only use original equipment blades.					
Mower will not discharge grass or leaves uncut strips.	Engine speed too low.	Throttle must be set between 3/4 and full throttle.					
1	Transmission selection.	Use lower transmission gear. The slower your ground speed, the better the quality of cut.					
	Blades short or dull.	Sharpen or replace blades (uncut strip problem only).					

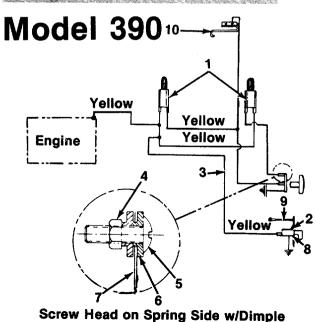
# Model 395



Your battery charger may be equipped with a circuit breaker. If battery charger fails to work the first time, wait at least three minutes, then try again.





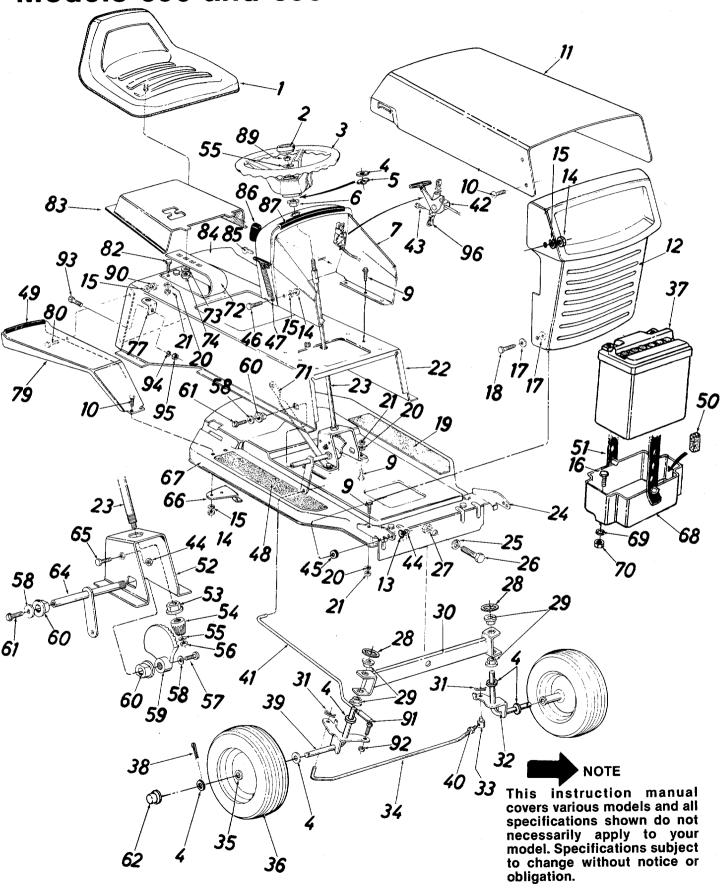


#### PARTS LIST FOR SCHEMATIC MODEL 395

	TAILIO		OU SCUEMMING MODEL 989	
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	725-05	14	Battery	
2	725-050	)7	Battery Charger	
	725-057	79	Charger Clip Adapter Wire	
3	725-081	19	Safety Switch (Blade)	
4 5	725-075	59	Spring Switch (Reverse)	
5	725-026	37	Key Switch	
6 7	725-020	)1	Key	
	725-026	88	Safety Switch (Clutch)	
8	725-077	71	Solenoid	
9		725-0421 Ground Wire		
10	725-081	18	Wire Harness	
11	725-042		Electric Wire	
12	725-022	- '	Electric Wire	
13	710-022	24	Hex AB-Tap Scr. #10 x	
			½″ Lg.	
14	726-020	)6	Push Nut	

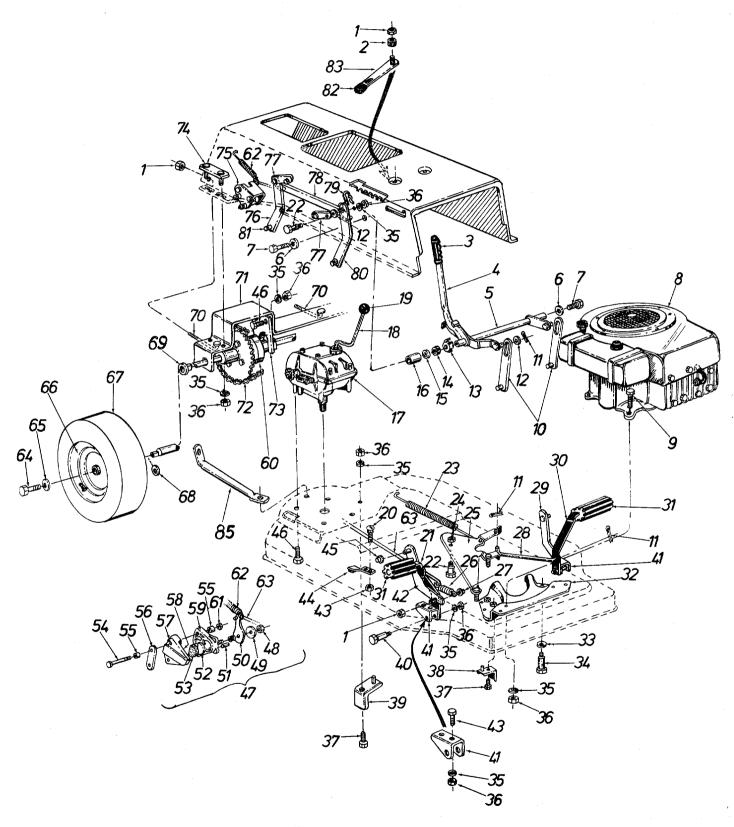
#### PARTS LIST FOR SCHEMATIC MODEL 390

PARTS LIST FOR SCHEMATIC MODEL 390							
REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART			
1	725-026	89	Safety Switch—Red (Clutch and Blade)				
2	725-026	66	Magneto Ignition Switch w/Nut				
	725-020	)1	Ignition Key				
3	725-081	16	Wire Harness				
4	712-012	21	Hex Nut #10-24				
4 5	710-042	25	Truss Mach. Scr. #10-24 x .62				
6	736-033	38	Fiber Washer (2 Reg'd.)				
7	732-025	57	Switch Spring				
8	736-022	25	Internal Lock Washer 5/8 I.D.				
9	725-029	7	Ground Wire				
10	725-075	9	Spring Switch (Shift Lever)				



### PARTS LIST FOR

	MODELS 390 AND 395 LAWN TRACTORS								
REF.	NO. CODE		NEW PART	REF.		COLOR CODE		NEW	
1	757-0264	Seat Assembly		44	712-03	75	Hex Cent. L-Nut 3/8-16 Thd.		
2	731-0220	Cap for Steering Wheel		45	748-019		Spacer	1	
3	731-0219	12" Dia. Steering Wheel		46	710-028		Hex Scr. 1/4-20 x .50" Lg.*		
4	736-0156	FI-Wash635 I.D. x 1.120		47	723-029		Hood Lock Ass'y.	1	
		O.D.		48	723-030		Foot Mat—R.H.		
5	736-0174	Wave Wash66 I.D. x .88		49	731-049		Edge Strip (6.5" Lg.)		
		O.D.		50	722-013		P.V.C. Foam 1" x 2" x		
6	748-0227	Hex Flange Brg630 I.D.					1/2 " (395)		
7	12740	Dash Panel Ass'y.—Recoil		51	735-020	)4	Battery Strap (395)		
		(390)		52	12850	•	Steering Gear Support Brkt.		
	12742	Dash Panel Ass'y.—Elect.		53	748-022	28	Hex Flange Brg505 I.D.		
		(395)		54	748-023		Pinion Gear		
9	710-0198	Hex Sems Scr. 5/16-18 x .75		55	736-024		Belleville Wash345 I.D. x	ŀ	
		Lg.*				_	.88 O.D.		
10	710-0255	Truss Mach. Scr. ¼-20 x		56	712-023	37	Hex Cent. L-Nut 5/16-24 Thd.	ļ	
		.75" Lg.*		57	710-018		Hex Scr. 3/8-24 x .75" Lg.*	1	
11	11836 —447	Hood		58	736-010		Belleville Wash.	ļ	
12	731-0563	Grille—Complete		59	748-023		Bevel Gear		
13	736-0169	L-Wash. 3/8" I.D.*		60	741-019	9	Plastic Flanged Brg.	ļ	
14	712-0287	Hex Nut 1/4-20 Thd.*		61	710-032		Hex Scr. 3/8-24 x .50" Lg.*	Ì	
15	736-0329	L-Wash. 1/4 " Scr.*		62	731-048		Hub Cap		
16	710-0377	Hex Sems Bolt 1/4-20 x	l	64	12749		Steering Arm Shaft Ass'y.		
		.62" Lg.* (395)		65	710-067	70	Hex Scr. Nylon 3/8-16 x		
17	736-0253	Belleville Wash515 I.D. x					1.25" Lg.		
		1.00" O.D.		66	11055		Transmission Belt Guard		
18	738-0145	Shid. Scr498 Dia. x .835"		67	13879	-462	Lower Frame		
		Lg.		68	731-053		Battery Box (395)		
19	723-0305	Foot Mat—L.H.		69	712-028	37	Hex Nut 1/4-20 Thd.* (395)	i	
20	736-0119	L-Wash. 5/16" Scr.*		70	736-014	12	Fl-Wash281 I.D. x .500"		
21	712-0267	Hex Nut 5/16-18 Thd.*					O.D. x .063 (395)		
22	13880 —462	Upper Frame		71	12934	ļ	Transmission Support Brkt.		
23	738-0307	Steering Shaft		72	732-025		Seat Spring 3.25 High		
24	12746 —462	Front Pivot Bracket		73	736-092		L-Wash. 1/2 " Scr.*		
25	736-0158	L-Wash. 5/8" Scr.*	l	74	712-020		Hex Nut 1/2-13 Thd.*		
26	710-0312	Hex Scr. 5/8-18 x 1.31—		77	09963		Hitch Bracket		
07	740 0000	Special		79	11002		Rear Fender		
27	712-0923	Hex Cent. Jam Nut 5/8-18		80	710-019		Hex Scr. 1/4-28 x .62" Lg.*		
00	700 0450	Thd.		82	710-032	22	Hex Sems Scr. 5/16-18 x		
28	726-0159	Push Nut .625" Shaft					_ 1.00" Lg.*		
	741-0225	Hex Flange Brg.	1	83	13881				
30 31	13274 —462 714-0115	Pivot Bar Ass'y.	-	84	11002		Rear Fender		
31	7 14-01 15	Cotter Pin 1/8" Dia. x 1.00"	1	85	725-020		Ignition Key Only		
22	14453	Lg.*	•		725-026	66	Ignition Switch (Not Shown)	l	
	711-0198	Axle Ass'y.—Front—L.H. Ferrule	1		705 000	_	(390)		
34	747-0198	Tie Rod	l		725-026	1	Ignition Switch (Not Shown)		
35	741-0313			00	44000		(395)		
36	734-1044	Flange Bearing .630 I.D. Front Wheel Ass'y.—Comp.		86	11263	,	Plastic Handle (390)		
	10-7-10-7-	11.0 x 4.0		87	731-051		Trim Strip 12" Lg.		
37	725-0514	12 V Battery (395)		89	712-015		Hex Cent. L-Nut 5/16-18 Thd.	ł	
	714-0470	Cotter Pin 1/8" Dia. x		90 91	712-013 723-015		Hex Nut 1/4-28 Thd.*	j	
- 33		1.25" Lg.*	1	92	712-011		Ball Joint Ass'y, 3/8-24 Thd.	1	
39	14452	Axle Ass'y.—Front—R.H.	]	93	710-021		Hex Ins. L-Nut 3/8-24 Thd.	j	
	712-0711	Hex Jam Nut 3/8-24 Thd.		94	736-016		Hex Scr. 3/8-16 x .75" Lg.*		
	711-0625	Steering Rod	- 1	1	712-079		Lock Washer 3/8" I.D.* Hex Nut 3/8-16 Thd.*		
	746-0160	Throttle Control Ass'y.		96	712-079		Speed Nut #10		
	710-0351	Truss Mach. B-Tap Scr.#10		50	112-004	-	Opeda Nut #10		
		x .50" Lg.	1					ļ	

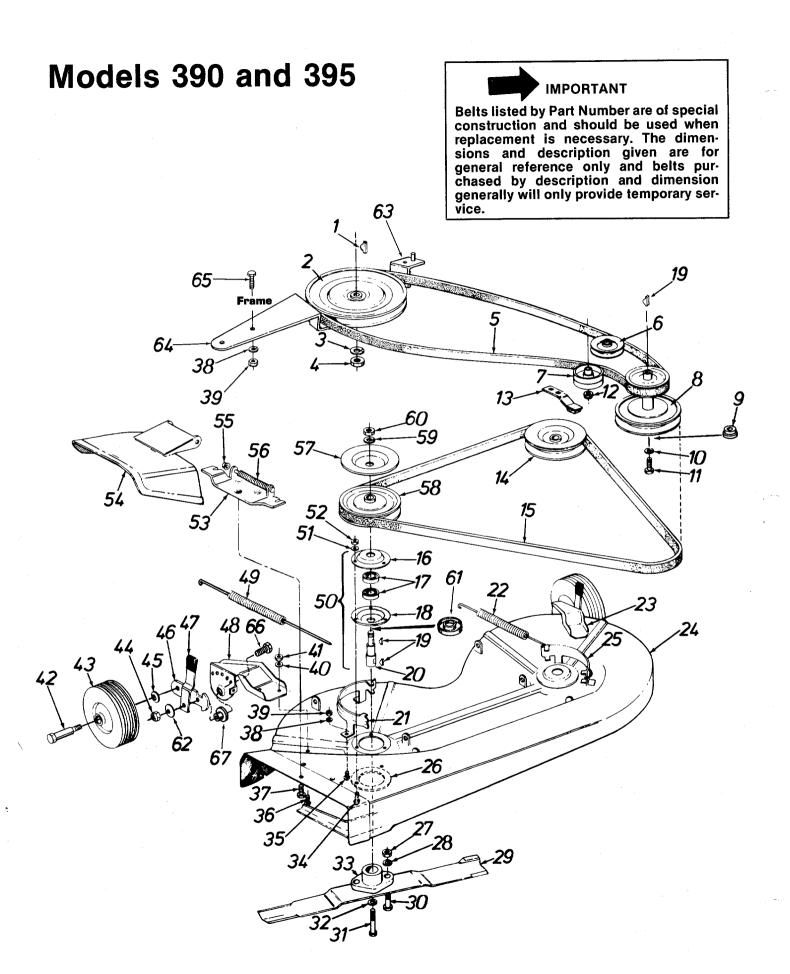


NOTE: If for any reason, disc brake is disassembled, be sure round end of push pins (Ref. No. 51) is toward the cam lever (Ref. No. 50).

	PARTS LIST FOR MODELS 390 AND 395 LAWN TRACTORS								
REF.		DESCRIPTION	NEW PART	REF.		DESCRIPTION	NEW PART		
1	712-0429	Hex Ins. L-Nut 5/16-18 Thd.	1 73111	43	712-0287	Hex Nut 1/4-20 Thd.	PARI		
2	735-0126	Rubber Wash33 I.D. x .87		44		Blade Brake Ass'y.			
_		O.D.		45	726-0121	Push Cap .250 Dia.			
3	08118	Grip Finger—Black		46	710-0198	Hex Sems Scr. 5/16-18 x			
4	749-0212	Lift Handle—R.H.		40	7 10-0 190				
5	13630	Lift Handle Brkt. Ass'y.		47	704 0400	.75" Lg.			
6	736-0219			47	761-0130	Disc Brake Ass'y.—Comp.			
0	730-0219	Belleville Wash40 I.D. x		48	HH-02-03631	Hex Lock Nut			
-	740 0004	1.13 O.D.		49		Washer			
7	710-0201	Hex Hd. Cap Scr. 3/8-16 x		50	HH-18-03493	Cam Lever			
_		62" Lg.*		51	HH-05-03034	Push Pin			
8		Engine		52	HH-03-03303	Disc Backup			
9	710-0442	Hex Hd. Cap Scr.		53	HH-15-02124	Friction Pad 1.110" Dia. x			
		5/16-18 x 1.50" Lg.*				.472 Thk.			
10	13851	Lockout Link Ass'y.		54	710-0176	Hex Hd. Cap Scr. 5/16-18			
11	714-0115	Cotter Pin 1/8" Dia. x 1.00"				x 2.75" Lg.			
		Lg.*		55	761-0133	Spacer for Disc Brake .322			
12	736-0192	FI-Wash531 I.D. x .93 O.D.		-		I.D. x .38" Lg.			
13	14024 1/029	Handle Pivot Brkt.		56	11010	Brake Plate			
14	735-0195	Rubber Wash.		57	HH-12-03292	Casting—Carrier Side			
	736-0237	Flat-Wash.		58	HH-15-03149	Friction Pad 1.110" Dia. x			
	748-0273	Spacer .632 I.D. x .88 O.D.		50	1111-10-001-0	.245 Thk.			
	717-0416	Three Speed Trans.—Comp.		59	HH-12-03292				
	747-0172	Shift Lever		60	717-0318	Casting—Cam Side			
	720-0165	Ball Knob				Differential Ass'y. Comp.			
	710-0134	Carriage Bolt 1/4-20 x .62"		61	712-0158	Hex Cent. L-Nut 5/16-18			
20	7 10-0 134	Carriage Boil 74-20 x .62		~~	700 0457	Thd.			
21	14219	Lg.*		62	732-0157	Spring .380 O.D. x 3.25"			
21		Brake Pedal Ass'y.				Lg. (Brake Return)			
22	738-0140	Shld. Scr431 Dia. x .18"		63	747-0107	Brake Rod .250 Dia. x			
00	700 0404	Lg.				24.12" Lg.			
23	732-0191	Spring (Idler) .75 O.D. x		64	710-0627	Hex Scr. w/Lock 5/16-24 x			
		11.0" Lg.				.750" Lg.	ĺ		
	712-0116	Hex Ins. L-Nut 3/8-24 Thd.		66	734-0521	Rear Wheel—Rim Ass'y.			
25	12446	Idler Brkt. Ass'y.				Less Tire			
	732-0245	Brake Spring		67	734-0427	Rear Wheel—Tire Only			
	726-0100	Push Nut 3/8" Dia. Rod				15.0 x 6.0			
	11061	Clutch Rod		68	736-0134	FI-Wash.			
29	11057	Clutch Lockout Lever Ass'y.			741-0199	Flange Brg.			
30	14220	Clutch Pedal Ass'y.		70		Chain Adj. Link 5/16-18 Thd.			
	735-0201	Foot Pad (Clutch and		71	11009	Rear Axle Brkt.			
		Brake)		72	713-0104	#41 Chain ½ Pitch x 65			
32	12654	Engine Belt Guard Ass'y.			. 10 0 104	Links			
	736-0242	Belleville Wash345 I.D. x		72	10364	Rear Axle Plate	}		
		.88 O.D.		74	10360				
34	738-0215	Shid. Bolt .498 Dia. x 3.00"			11011	Axle Bolt Plate Ass'y.			
J. T	. 55 52 10	Lg.			11024	Disc Brake Brkt. Ass'y.			
35	736-0119	L-Wash. 5/16" Scr.*				Deck Link			
	712-0267	Hex Nut 5/16-18 Thd.*		77	09721	Pivot Link Ass'y.			
	710-0259	Hex Sems Scr. 5/16-18 x	1	78		Connecting Lift Brkt.	ļ		
57	1 10-0208			79		Int. Cotter Pin ½" Dia.			
20	10160	.62" Lg.*	1		11023	Deck Link Ass'y. (3 Req'd.)			
	12160	Belt Keeper Ass'y.	-		711-0332	Left Brkt. Pin	-		
	10426	Belt Keeper Ass'y.			11249	Ht. Adj. Knob			
40	738-0373	Shld. Bolt .498 Dia. x 1.525"			11027	Handle Stop Brkt. Ass'y.			
		_ Lg.	İ		749-0469	Reinforcement Brkt.			
	11039	Pedal "U" Brkt. Ass'y.		86	HH-06-03031	Spring			
42	11056	Parking Brake Lever Ass'y.	-			_			
1				01:5	<b></b>				
	WHEEL CHART								

	FIGHT WHEEL	Hear Wheel				
PART NO.	DESCRIPTION	DESCRIPTION PART NO.				
734-1044 734-1042 734-0770 741-0313	Wheel Ass'y. Comp. 11.0 x 4.0 Rim Ass'y. Tire Only 11.0 x 4.0 Flange Brg. Front Wheel	734-0524 734-0521 734-0427 741-0199 734-0255	Wheel Ass'y. Comp. 15.00 x 6.00 Rim Ass'y. with Hub Tire Only Tubeless 15.00 x 6.00 Bearing—Rear Wheel Air Valve			

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### PARTS LIST FOR MODELS 390 AND 395 LAWN TRACTORS

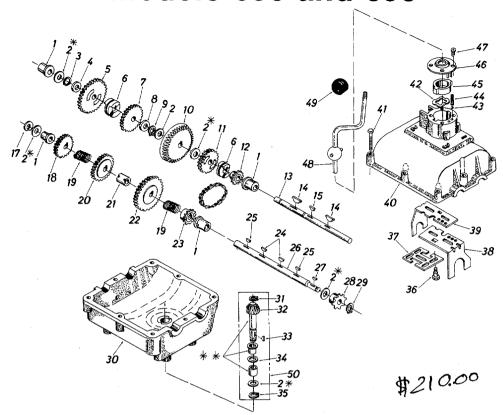
REF.	PART COLOR NO. CODE	DESCRIPTION	NEW PART	REF.	PART COLOR NO. CODE	T	NEW
1	714-0129	#4 Hi-Pro Key 3/32 x 5/8"		35	710-0289	Hex Hd. Cap Scr. ¼-20 x	FANI
2	756-0174	Dia. Transmission Split Pulley		36	710-0289	.50" Lg.* Hex Hd. Cap Scr. ¼-20 x	
3	736-0921	.50 I.D. L-Wash. ½" Scr.*		37	710-0195	.50" Lg.*	
4	712-0922	Hex Jam Nut 1/2-20 Thd.			710-0195	Hex Hd. Cap Scr. ¼-28 x .62" Lg. (3 Req'd.)	
5	754-0198	"V" Belt 1/2 x 62" Lg. (Drive Belt)		38 39	736-0329 712-0287	L-Wash. 1/4" Scr.* Hex Nut 1/4-20 Thd.*	
6	756-0116	"V" Idler 3.06 O.D.		40	736-0329	L-Wash. 1/4" Scr.*	
7	756-0217	"P" Flat Idler 2.75 O.D.		41	712-0287	Hex Nut 1/4-20 Thd.*	
8	756-0246	Two-Step Engine Pulley		42	738-0373	Axle Bolt .498 Dia. x 1.53"	
9	711-0572	Step Washer for Engine Pulley		43	734-0973	Wheel Ass'y.—Comp. 5 x 1.38 Dia.	
10	736-0217	L-Wash. 3/8" Scr.*		44	712-0181	Hex Jam L-Nut 3/8-16	ļ ·
11	710-0151	Hex Hd. Cap Scr. 3/8-24 x				Thd.	
		2.00" Lg.*		45	736-0105	Belleville Wash400 I.D. x	
12	712-0116	Hex Inserted L-Nut 3/8-24	ĺ			.88 O.D.	
		Thd.		46	10937	Wheel Pivot Bar	ļ
13	761-0174	Blade Brake Assembly		47	14082	Spring Lever Ass'y, with	l
14	756-0251	Deck Pulley 4.75 O.D. (2				Knob	1
		Req'd.)		48	09080	Wheel Brkt. Ass'y. R.H.	
15	754-0167	"V" Belt 21/32 x 64" Lg.		49	732-0307	Deck Spring	
1		(Blade Belt)		50	09321	Blade Spindle Ass'y.—	
16	08253	Housing—Bearing				Comp.	
17	741-0919	Ball Brg787 I.D. x 1.85		51	736-0119	L-Wash. 5/16" Scr.*	ĺ
_		O.D.		52	712-0267	Hex Nut 5/16-18 Thd.	
18	08253	Housing—Bearing		53	11399	Adapter Plate Ass'y.	
19	714-0365	#6_Hi-Pro Key 5/32 x 5/8"		54	11633	Chute Cover Ass'y.	
		Dia.		55	726-0106	Push Nut 1/4" Rod	
20	711-0255	Blade Spindle		56	732-0261	Torsion Spring	ĺ
21	12673	Belt Guard R.H.—Deck		57	09322	Blade Brake—Disc	
22	732-0307	Deck Spring		58	756-0251	Deck Pulley 4.75 O.D. (2	
23	09082	Wheel Bracket Ass'y.—L.H.				Req'd.)	
24	13962	30 In. Deck Assembly		59	736-0158	L-Wash. 5/8" Scr.*	
25	12672	Belt Guard L.H.—Deck		60	712-0261	Hex Jam Nut 5/8-11 Thd.	
26	09164	Deck Reinforcement Plate		61	13703	Bearing Shield	
27	712-0123	Hex Nut 5/16-24 Thd.*		62	736-0219	Bell-Wash.	
28	736-0119	L-Wash. 5/16" Scr.*		63	10426	Belt Keeper Ass'y.	
29	742-0118	15 In. Blade (2 Req'd.)		64	11055	Transmission Belt Guard	
30	710-0117	Hex Hd. Cap Scr. 5/16-24 x 1.00" H.T.		65	710-0255	Truss Hd. Mach. Scr. 1/4-20 x .75" Lg.	
31	710-0459	Hex Hd. Cap Scr. 3/8-24 x 1.50" H.T.		66 67	710-0253 748-0279	Hex Bolt 3/8-16 x 1.00" Lg. Shoulder Spacer	
32	736-0217	L-Wash. 3/8" Scr. H.D.		٠,	13978	Deck Ass'y.—Complete	
33	748-0189	Blade Adapter			.55.5	(For Service Only)	
	10769	Blade Adapter Kit				(1.01.0011100.0111)	.
34	710-0322	Hex Sems Cap Scr. 5/16-18	Į		·		
•		x 1.00" Lg.* (3 Req'd.)		1			j
	<u></u>	<u> </u>					

<sup>\*</sup>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 color code shown at left. (e.g. Red Flake Finish—11001 (462).)

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."



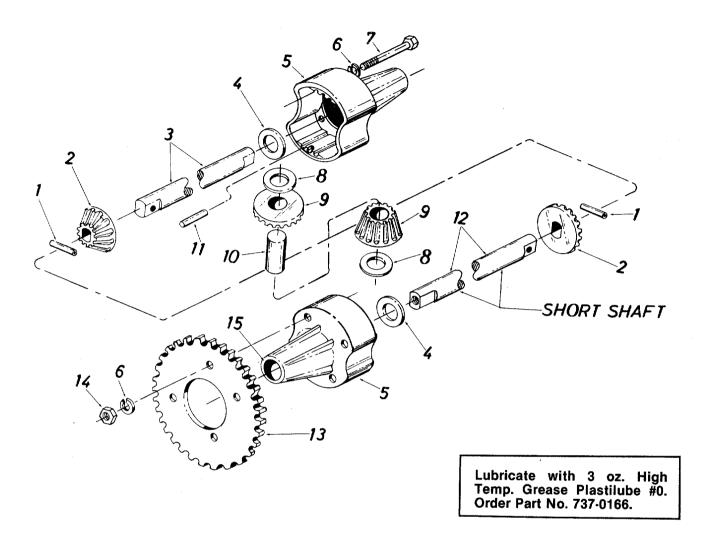


#### PARTS LIST FOR TRANSMISSION MODEL 717-0416

	PARTS LIST FOR TRANSMISSION MODEL 117-0410								
REF. NO.	PART NO.	Qty. Req'd.	DESCRIPTION	REF. NO.		Qty. Req'd.	DESCRIPTION		
1 1	FF-1101	4	Bearing, Flange	25	FF-1369	2	Key, #3 Wdrf., Alloy		
2	FF-1068	*	Washer, Plain (.040)	26	FF-1094	1	Shaft, Output		
2	FF-1082	*	Washer, Plain (.030)	27	FF-1371	1	Key, #4 Wdrf., Alloy		
2	FF-1358	*	Washer, Plain (.050)	28	FF-1084	1	Sprocket, 8T		
2	FF-1423	*	Washer, Plain (.025)	29	FF-1300	1	Ring, Retaining		
2	FF-1424	*	Washer, Plain (.035)	30	FF-1064-A		Housing, Lower		
2	FF-1425	*	Washer, Plain (.045)	31	FF-1100	1	Ring, Retaining		
2	FF-1441	*	Washer, Plain (.020)	32	FF-1105	1	Pinion, Bevel, 16T		
3	FF-3395	1	Ring, Rétaining	33	FF-1370	1	Key, Wdrf., #4		
4	FF-3422	1	Spacer	34	FF-1926	1	O-Ring		
5	FF-2770	1	Assembly, Gear, Kit, 30T	35	FF-1099	1	Ring, Retaining		
6	FF-1083	2	Collar, Clutch	36	FF-1073	4	Screw, Shoulder		
7	FF-2772	1	Assembly, Gear, Kit, 25T	37	FF-1074	1	Plate, Lock-Out		
8	FF-3423	1	Spacer	38	FF-1070	1	Fork, Shifter, L.H.		
9	FF-1099	1	Ring, Retaining	39	FF-1657	1	Fork, Shifter, R.H.		
10	FF-1085	1	Gear, Bevel, 42T	40	FF-1065-J		Housing, Upper		
111	FF-3460	1	Gear, Spur, 20T	41	FF-1360	8	Bolt, Hx. Hd. S.T., 1/4-20		
12	FF-1087	1	Sprocket, Special, 12T				x 1-5/16		
13	FF-3443	1	Shaft, Drive	42	FF-1096	1	Washer, Wave		
14	FF-3068	2	Key, Hi-Pro, Special	43	FF-1037	2	Ball, Detent		
15	FF-1374	1	Key, Wdrf., #9	44	FF-1475	2	Spring, Detent		
16	FF-1090	1	Chain	45	FF-1091	1	Insert, Nylon		
17	FF-1106	1	Ring, Retaining	46	FF-1670	1	Cover, Nylon		
18	FF-3149	1	Gear, Spur, 20T	47	FF-3405	4	Screw, Tapping, #10-24		
19	FF-1095	2	Spring, Compression				X ½		
20	FF-2771	1	Assembly, Gear, Kit, 25T	48	FF-2683	1 1	Assembly, Lever, Shift		
21	FF-3409	1	Spacer	49	FF-1318	1	Knob, Shift		
22	FF-3153	1	Gear, Spur, 30T	50	FF-2571	1	Assembly, Kit, Input		
23	FF-1104	1	Sprocket, 12T				Shaft		
24	FF-1375	2	Key, #16 Wdrf., Alloy						

<sup>\*</sup>Indicates usage in various combinations to maintain proper clearances.

<sup>\*\*</sup>Complete kit is required for proper service replacement.



PARTS LIST FOR DIFFERENTIAL ASSEMBLY 717-0318				
REF. NO.		Qty. Req'd.	DESCRIPTION	NEW PART
1	715-0247	2	Spring Pin Spiral 3/16" Dia. x 1.00" Lg.	
2	748-0156	2	Gear—Double "D" Hole	
2	738-0302		Shaft (Long)—15.11" Lg.	
4 5	736-0188	2	FI-Wash760 I.D. x 1.49 O.D.	
5	719-0150	2	Housing Half	
6	736-0119		L-Wash. 5/16" I.D.*	
7	710-0526		Hex Bolt 5/16-24 x 4.00" Lg.	
8	736-0187		FI-Wash640 I.D. x .24 O.D.	
9	748-0158	2	Gear—Round Hole	
10	711-0276	1	Drive Pin	
11	715-0145		Dowel Pin 3/16" Dia. x .62" Lg.	
12	738-0303	1	Shaft (Short)—7.58" Lg.	
13	09054	1	Sprocket—40 Teeth	
14	712-0237		Hex Cent. L-Nut 5/16-24 Thd.	
15	748-0169	2	Flange Bearing	

<sup>\*</sup>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.

## PARTS INFORMATION

#### **POWER EQUIPMENT PARTS AND SERVICE**

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

# BRIGGS AND 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.

NOTE: If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be made.

ALABAMA Auto Electric & Carburetor Co ARKANSAS Sutton's Lawn Mower Shop	BIRMINGHAM 2625 4th Ave. S 35233 NORTH LITTLE ROCK 5301 Roundtop Drive Box 368 Bt 4
Auto Electric & Carburetor Co ARKANSAS Sutton's Lawn Mower Shop	PORTERVILLE 75 North D Street93257 DENVER Box 29114, 6601
FLORIDA Radco Distributors	Box 545932207
GEORGIA	OPA LOCKA 2351 N.W. 147th St 33054 EAST POINT 2834 Church St 30344
Koon Edge Co	LYONS 8615 Ogden Ave 60534 ELKHART 2101 Industrial Pkwy 46514
Down Lown & Gordon Equip	2551 J. F. Kennedy 52001
Mid-South Power	MONROE 700 Pine St 71201 NEW ORLEANS 8330 Earnhart Blvd 70118
MARTLAND	COCT New Homnobire
MASSACHUSETTS  Morton B. Collins Co MICHIGAN	Ave
	MOUNI CLEMENS
MINNESUIA	420 Excelsion Ave. W 55343
MICCALIDI	BILOXI 506 Caillavet St39533 KANSAS CITY 3117 Holmes St64109
Ross-Frazier Supply Co	ST. JOSEPH 8th and Monterey 64503
Henzler, Inc.	ST. LOUIS 2015 Lemay Ferry Road
NEW JERSEY Lawnmower Parts Inc	Road
Gamble Dist., Inc.	ALBUQUERQUE 1023 Third Ave. N.W 87103 CARTHAGE West End Ave 13619
	·····

NORTH CAROLINA	GOLDSBORO
NORTH CAROLINA Smith Hardware Co	515 N. George St 27530
	CDEENSRORO
Dixie Sales Company	335 N. Green27402
OHIO	CARROLL
Stebe's Mid-State Mower Supply	. Box 366, 71 High St 43112
<b>-</b> 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CLEVELAND 7900 Lorain Ave44102
Bleckrie, inc.	WADSWORTH
National Central	WADSWORTH . 687 Seville Rd
rational Contral ::::::::::::::::::::::::::::::::::::	YOUNGSTOWN
Burton Supply Co	. 1301 Logan Ave. Box 929
	Box 929 44501
OKLAHOMA	<b>MUSKOGEE</b> 605 S. Cherokee 74401
ODEOON	DORTI AND
Kenton Supply Co	8216 N. Denver Ave 97217
PENNSYLVANIA	HARRISBURG
PENNSYLVÁNÍA EECO Inc	4021 N. 6th St17110
_ · <u>-</u>	PHILADELPHIA
Thompson Rubber Co	5222-24 N. Fifth St 19120 PITTSBURGH
Division and Co	11125 Frankstown Rd 15235
	DIINYSIITAWNEY
Frank Roberts & Sons	PD 2 15767
TENNESSEE	KNOXVILLE
Master Repair Service	KNOXVILLE 2000 Western Ave 37921
	MEMPHIS 3035-43 Bellbrook38116
American Sales & Service, Inc.	DALLAS
TEXAS	423 E. Jefferson 75203
	FORT WORLH
Woodson Sales Corp	1702 N. Sylvania 76111
	HOUSTON
Bullard Supply Co	2409 Commerce St 77003
Engine House Inc	SAN ANTONIO
UTAH	SALT LAKE CITY 439 E. 900 So
A-1 Engine & Mower Co	439 E. 900 So84111
VIRCINIA	ASHLAND
RBI Corp	Lake Ridge Rd.
	101 Cedar Run Dr 23005
WASHINGTON	<b>SEATTLE</b> 1414 14th Ave98122
NUCCONICINI	MADQUEIEI D
WISCONSIN Power Pac	301 E. 29th St54449
	APPLETON
Appleton Automotive Supply C	o 123 S. Linwood Ave. P.O. Box 798 54911
, .	P.O. Box 798 54911
	<b>TWIN LAKES</b> 122 Lance Dr 53181
E-K on Small Engine Spec	122 Lance Dr

#### WARRANTY PARTS AND SERVICE POLICY

(0782)

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.