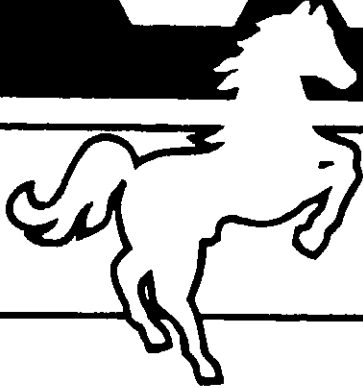
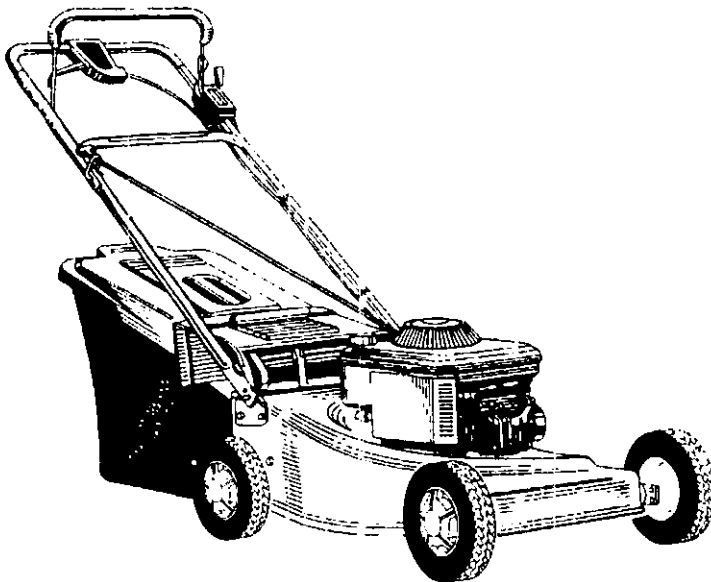


WHITE



OUTDOOR PRODUCTS OWNER'S GUIDE

LAWN BOSS 21" Self Propelled Rotary Mower



Model No.
129-476R190

Thank you for purchasing
an American-built product.

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Dear Customer,

So often throughout the year we are all in a rush to meet our daily obligations.

However, we at White Outdoor Products are taking a quick moment out to say...

"Thank you for your business."

Sincerely,

WHITE OUTDOOR PRODUCTS



INSTRUCTIONS GIVEN WITH THIS SYMBOL ARE FOR PERSONAL SAFETY. BE SURE TO FOLLOW THEM.

LIMITED WARRANTY

For two years from the date of original retail purchase, WHITE OUTDOOR PRODUCTS 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 WHITE OUTDOOR PRODUCTS.

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, Peerless components, motor, battery (except as noted below) or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

A battery which proves defective within ninety (90) days will be replaced without charge. After 90 days but within one year from the date of purchase, WHITE OUTDOOR PRODUCTS will replace the defective battery for a charge of 1/12 of the current retail price of the battery for each full 30 day period between the date of purchase and the date of return.

Warranty on units used commercially is limited to sixty (60) days.

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 WHITE OUTDOOR PRODUCTS.

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

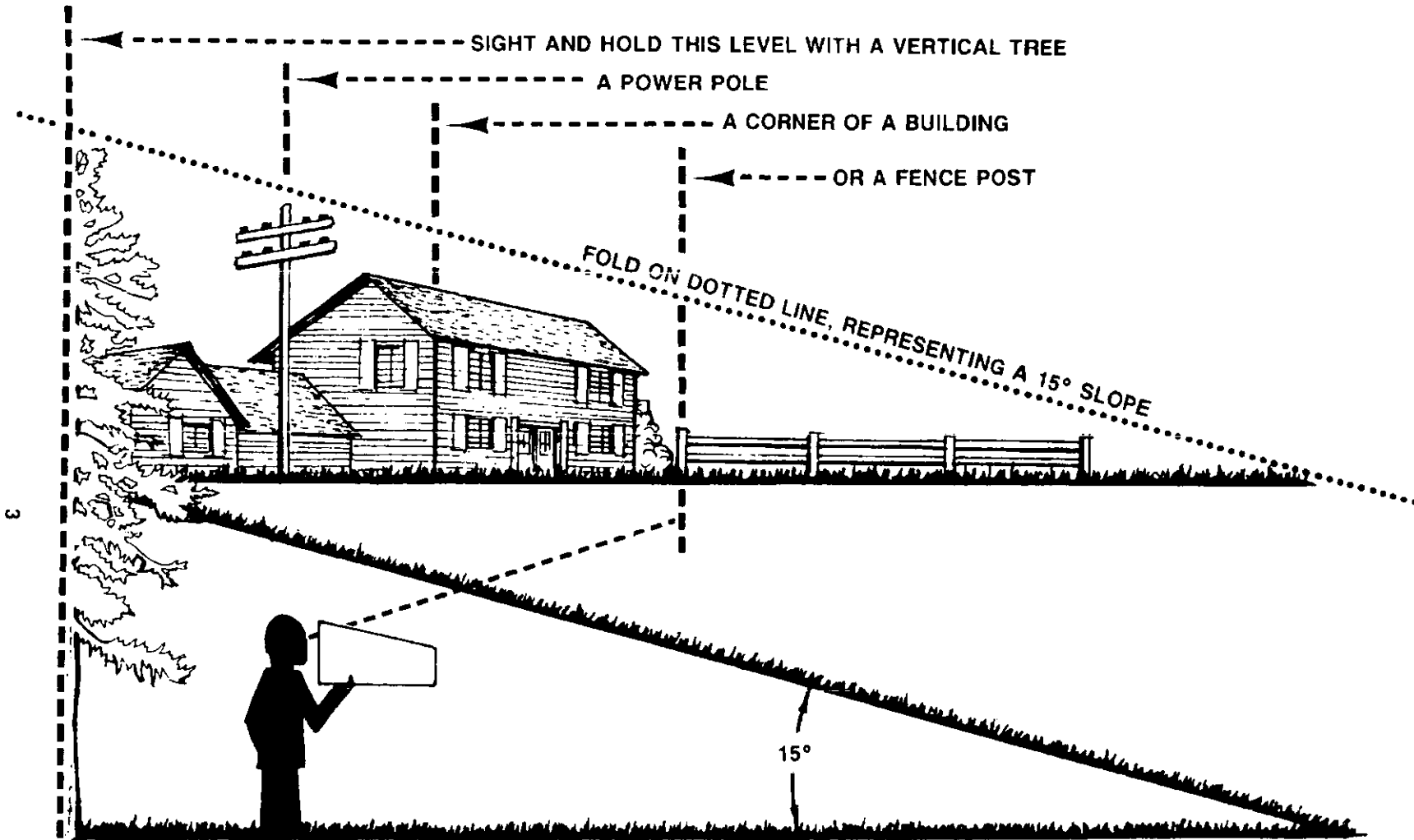
This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

WARNING: 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 for the muffler is available through your nearest engine authorized service dealer.

---Cut Along This Line---

USE THIS SHEET AS A GUIDE TO DETERMINE SLOPES WHERE YOU MAY NOT OPERATE SAFELY.



3

(Keep this sheet in a safe place for future reference.)

SLOPE GAUGE



WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2½ feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious injury.

Operate RIDING mowers up and down slopes, never across the face of slopes.

Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.

Download from www.Somanuals.com. All Manuals Search And Download.

CONTENTS OF HARDWARE PACK/PARTS IDENTIFICATION

Remove this sheet from your owner's manual and lay the hardware on the illustration for identification purposes. After assembly, keep the Slope Gauge which is on the reverse side of this sheet for future use.
(Hardware pack may contain extra items which are not used on your unit.)

A ATTACHING THE LOWER HANDLE

Hairpin Clips

B ATTACHING THE UPPER HANDLE

Rope Guide Bolt

Curved Head Bolt

Split Washers 5/16" I.D.

Hex Nuts 5/16-18 Thread

Blade Control Handle

Drive Control Housing

Throttle Control Housing

Upper Handle

Rope Guide Bolt

Grass Catcher

Handle Mount Bracket

Lower Handle

Rear Deflector

Spark Plug

PARTS IDENTIFICATION

C ATTACHING THE DRIVE CLUTCH CONTROL CABLE

Phillips Head Screws

Plastic Cap

E ASSEMBLY OF GRASS CATCHER

Self-Tapping Screws

Flat Washer 1/4" I.D. x 5/8" O.D.

F FINAL ASSEMBLY

Hub Caps and Hub Cap Labels (Not Shown)

D SECURING THE CABLES

Cable Ties


Cut Along This Line



IMPORTANT

RULES FOR SAFE OPERATION



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR LAWN MOWER. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL—  **HEED ITS WARNING.**



DANGER

Your lawn mower was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.



TRAINING

1. Read this owner's guide carefully in its entirety before attempting to assemble or operate this machine. Be completely familiar with the controls and the proper use of this machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Your rotary mower is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times.
3. Never allow children to operate a power mower. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
4. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower to help prevent blade contact or thrown object injury. Although the area of operation should be completely cleared of foreign objects, an object may have been overlooked and could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator or any others allowed in the area.



PREPARATION

1. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones and other foreign objects which could be picked up and thrown by the mower in any direction and cause serious personal injury to the operator or any others allowed in the area.
2. Always wear safety glasses or eye shields during operation or while performing an adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine in any direction.
3. 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.
4. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill the gasoline tank indoors, while the engine is running, or until engine has been allowed to cool for two minutes after running. Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
5. Disengage the self-propelled mechanism or drive clutch on units so equipped before starting the engine.
6. The blade control handle is a safety device. Never attempt to bypass its operation. Doing so makes the safety device inoperative and may result in personal injury through contact with the rotating blade. The blade control handle must operate easily in both directions.
7. Never attempt to make a wheel or cutting height adjustment while the engine is running.
8. Never operate the equipment in wet grass. Always be sure of your footing. A slip and fall can cause serious personal injury. Keep a firm hold on the handle and walk, never run. Mow only in daylight or in good artificial light.

9. For your safety, use the slope gauge included as part of this manual to measure slopes before operating this unit on a sloped or hilly area. If the slope is greater than 15° as shown on the slope gauge, do not operate this unit on that area or serious injury could result.



OPERATION

1. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.
2. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times as the rotating blade can cause injury.
3. Stop the blade when crossing gravel drives, walks or roads.
4. After striking a foreign object, stop the engine, remove the wire from the spark plug, and thoroughly inspect the mower for any damage. Repair the damage before restarting and operating the mower.
5. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
6. Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher or unclogging the chute. The cutting blade continues to rotate for a few seconds after the engine is shut off. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
7. Before cleaning, repairing or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire, and keep the wire away from the spark plug to prevent accidental starting.
8. Do not run the engine indoors.
9. Mow across the face of slopes, never up-and-down. Exercise extreme caution when changing direction on slopes. Do not mow excessively steep slopes. Always be sure of your footing. A slip and fall can cause serious personal injury.
10. Never operate mower without proper guards, plates or other safety protective devices in place.
11. Do not operate this mower with the chute door open, unless the complete grass catcher is properly mounted on the mower.



MAINTENANCE AND STORAGE

1. Check the blade and engine mounting bolts at frequent intervals for proper tightness.
2. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
3. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
4. To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.
5. Check the grass catcher bag frequently for wear or deterioration. For safety protection, replace only with new bag meeting original equipment specifications.

➔ IMPORTANT: This unit is shipped **WITHOUT GASOLINE** or **OIL**. After assembly, service engine with gasoline and oil as instructed in the separate engine manual packed with your unit.

➔ NOTE: Reference to right or left hand side of the mower is observed from the operating position.

ASSEMBLY INSTRUCTIONS

Tools Required for Assembly

- (1) Pair of Pliers
- (1) 1/2" Wrench*
- (1) 5/16" Wrench or Nutdriver*
- (1) Phillips Screwdriver
- (1) Flat Blade Screwdriver
- *Or one 6" Adjustable Wrench.

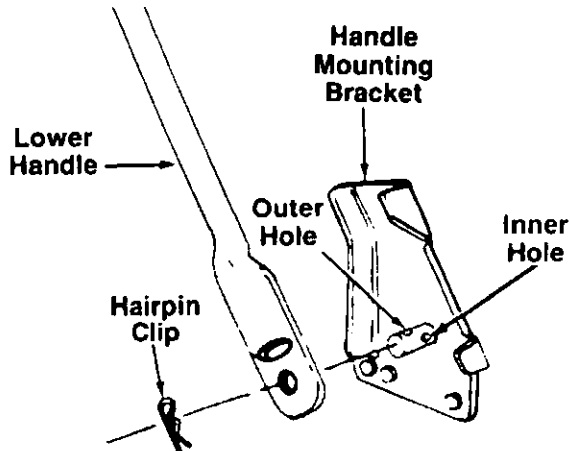


FIGURE 1.

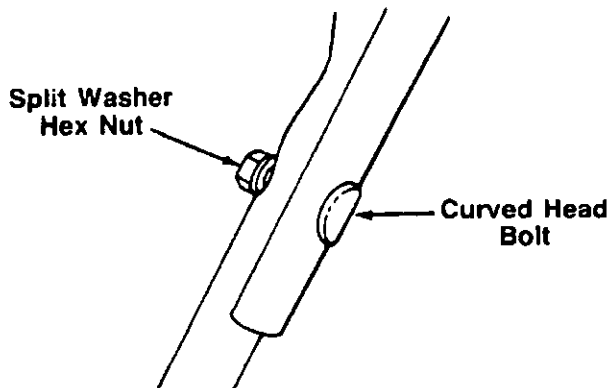


FIGURE 2.

UNPACKING

1. Remove the lawn mower from the carton by opening the top flaps and lifting the unit out. Be careful of the staples. Make certain all parts and literature have been removed from the carton before the carton is discarded.
2. Disconnect and ground the spark plug wire against the engine. Check beneath the deck for any cardboard packaging. Remove if present.
3. Stretch out all control cables and place on the floor. Be careful not to bend or kink the cables at any time during assembly.
4. Remove page four from this manual and lay the contents of the hardware pack on the illustration for identification.

ATTACHING THE LOWER HANDLE (Hardware A)

1. Attach the lower handle by placing the bottom holes in the lower handle over the weld pins on the handle mounting brackets on the rear of the deck. Make certain the instruction label on the lower handle can be read from the operating position.
2. Using a pair of pliers, squeeze one leg of the lower handle against the handle mounting bracket. Insert the hairpin clip into the **inner** hole on the weld pin. See figure 1. Repeat on other side.

➔ NOTE

There are two (2) holes in the handle mounting brackets. Place the hairpin clip in the inner hole for operation. Outer hole is for storage.

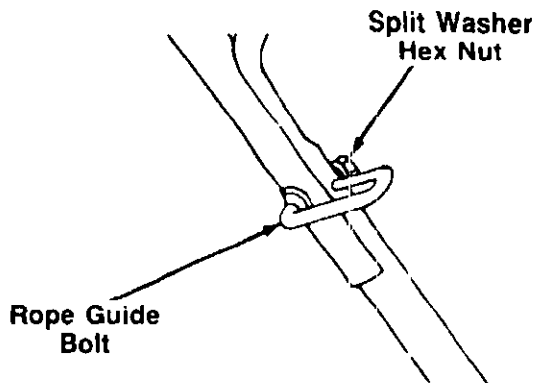
ATTACHING THE UPPER HANDLE (Hardware B)

1. Place the upper handle in position over the lower handle. **The label on the throttle control housing and the control lever must be facing up.**

➔ NOTE

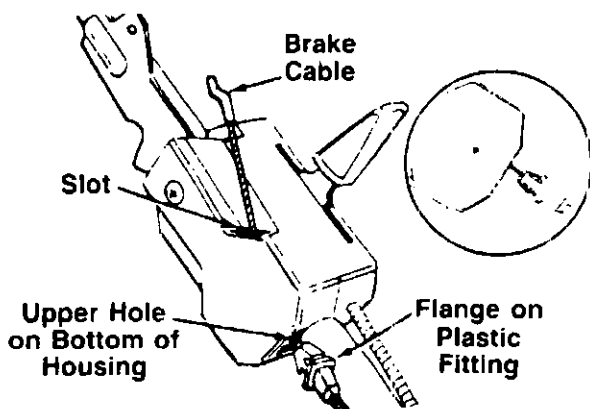
The right hand side of the handle will be secured with the rope guide bolt. However, left handed operators may assemble the rope guide bolt to the left side of the handle for easier starting by following steps 2 and 3 and reversing the left and right hand instructions.

- ➔ 2. Secure the left hand side of upper handle using the curved head bolt, split washer and hex nut as shown in figure 2.



3. Insert the rope guide bolt through the right hand side of upper and lower handle. See figure 3. Secure with split washer and hex nut, finger tight only.

FIGURE 3.



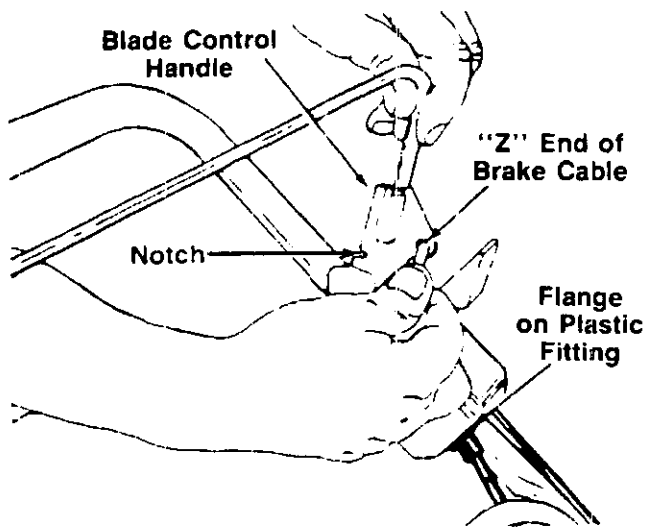
ATTACHING THE BRAKE CABLE

1. The brake cable is attached to the engine, and has a "Z" fitting on the loose end. Route the brake cable below the lower handle. Place end of cable into the upper hole on the bottom of the control housing, and through the slot as shown. The angle of the plastic flange must be positioned downward as shown in figure 4. Be careful not to bend or kink the cable at any time.
2. Push the plastic fitting until it locks into the control housing.



Brake cable must be assembled as shown for proper blade brake operation.

FIGURE 4.



3. Hook the "Z" end of the brake cable into the hole in the blade control handle from the inside to the outside as shown in figure 5.

FIGURE 5.

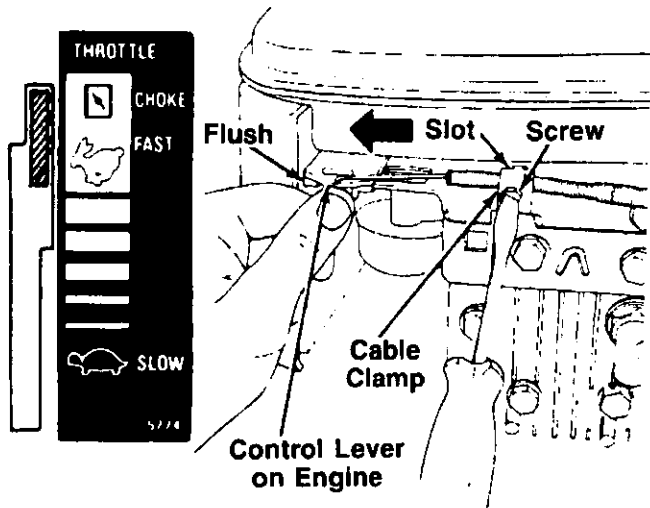


FIGURE 6.

ATTACHING THE THROTTLE CABLE

1. Push the throttle control lever on the handle all the way forward to CHOKE position. See figure 6.
2. The throttle control cable is attached to the upper handle. Route the throttle control cable under the lower handle and inside the handle mounting bracket. Hook the "Z" end of the throttle control cable into the hole in the control lever on the engine. See figure 6.
3. Using a 5/16" wrench or nutdriver, remove the screw on the cable clamp shown in figure 6. Slip the control cable under the clamp. Replace the screw (cable should be above the screw), but do not tighten (cable must still move freely beneath the clamp). Make certain the tab on the cable clamp is seated into the slot on the engine.
4. Push the control lever on the engine as far toward the **outside** of the engine as it will go. The edge of the control lever should be flush with the bracket on the engine. See figure 6. Hold the control lever in this position as you tighten the screw on the cable clamp to secure the throttle cable.
5. Loosen the screw on the clamp on the side of the engine. Slip the cable casing under the clamp to secure the cable away from the muffler. Be careful not to bend or kink the cable. Tighten the screw.

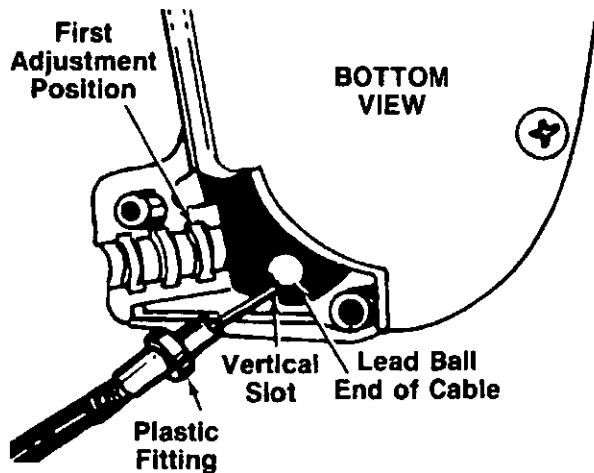


FIGURE 7.

ATTACHING THE DRIVE CLUTCH CONTROL CABLE (Hardware C)

The drive clutch control cable is attached to the deck. Attach the cable to the lever in the clutch control housing, located in the middle of the upper handle, as follows.

1. Place the lead ball end of the cable into the fitting provided in the end of the clutch control lever. Slip the braided wire into the vertical slot as shown in figure 7.
2. Slide the braided wire around in the horizontal slot. See figure 8.
3. Place the plastic fitting on the control cable into the first adjustment position in the clutch control housing. See figure 7.
4. Secure the plastic cap to the clutch control housing using the two Phillips head screws. See figure 8.

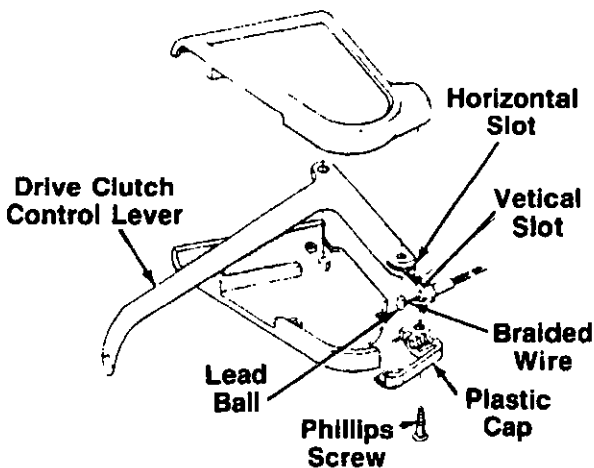


FIGURE 8.



Drive clutch adjustment must be checked before the unit is operated, as described in the operation section.

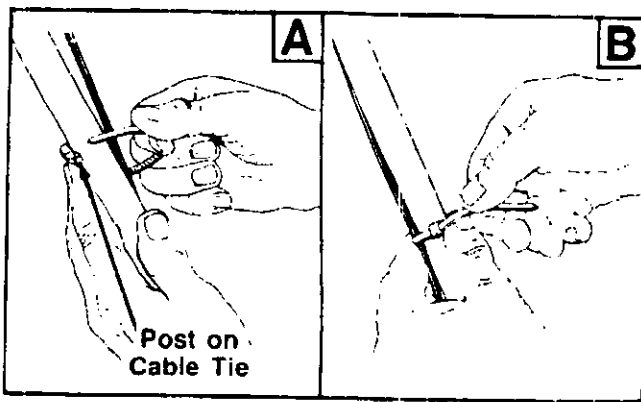


FIGURE 9.

SECURING THE CABLES (Hardware D)

Secure all cables to the left side of the handle as follows.

1. Insert posts on cable ties into holes provided on the lower handle. The holes may be either on the inside or outside of the handles. See figure 9A.
2. Secure the cables with the cable ties. See figure 9B.
3. Trim excess ends of cable ties.

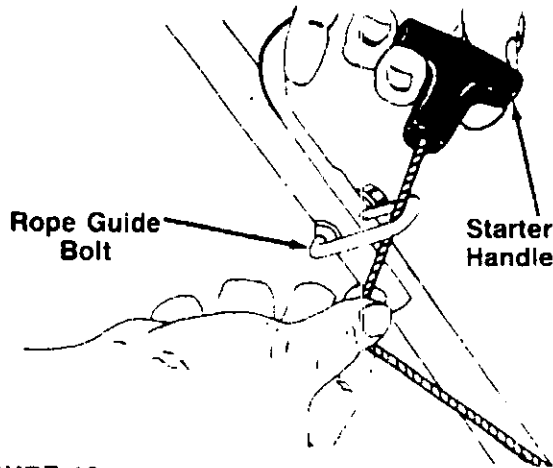


FIGURE 10.

ATTACHING THE STARTER ROPE

1. The starter rope is protruding from the top of the engine. Additional rope may be wound around the starter handle. If so, unwind the rope from the handle.
2. With the spark plug wire disconnected and grounded depress the blade control handle and pull the rope out of the engine.
3. Slip the starter rope into the rope guide bolt as shown in figure 10.
4. Tighten the hex nut on the rope guide bolt securely.

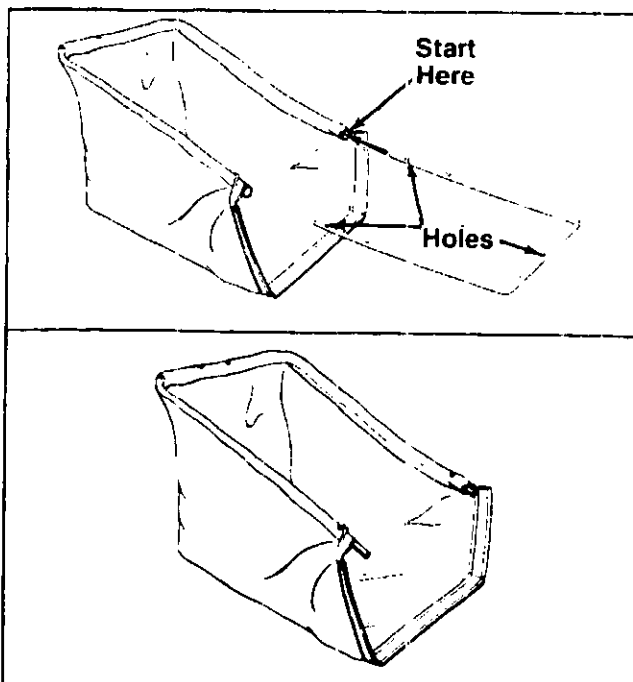


FIGURE 11.

FINAL ASSEMBLY OF MOWER (Hardware F)

1. Attach hub caps to the wheels by lining up the hub caps with the wheels. Push to lock in position.
2. Peel backing paper off hub cap labels. Apply to hub caps. Press on securely.
3. Make certain all nuts and bolts are tightened securely.

ASSEMBLY OF GRASS CATCHER (Hardware E)

NOTE

Make certain the grass bag is turned right side out before assembling (warning label will be on the outside).

1. There are three holes in the rear frame. With the holes on the upper side as shown in figure 11, insert one end of the rear frame into the cloth channel on the edge of the grass catcher bag. Feed all the material on one side of the frame before working it around the frame. See figure 11.

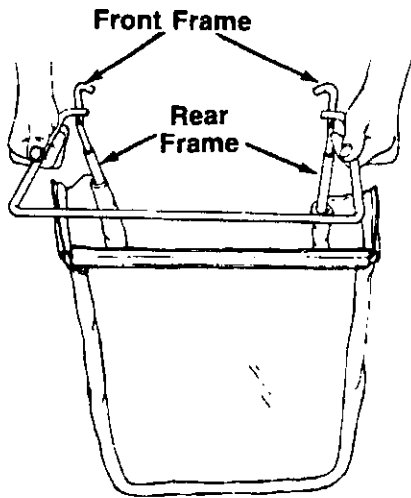


FIGURE 12.

2. Slide the ends of the front frame assembly into the ends of the rear frame as shown in figure 12.

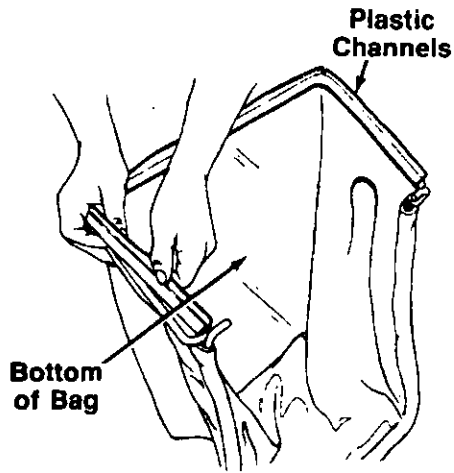


FIGURE 13.

3. Secure front of bag to front frame by slipping plastic channels on sides and bottom of bag over frame. See figure 13.

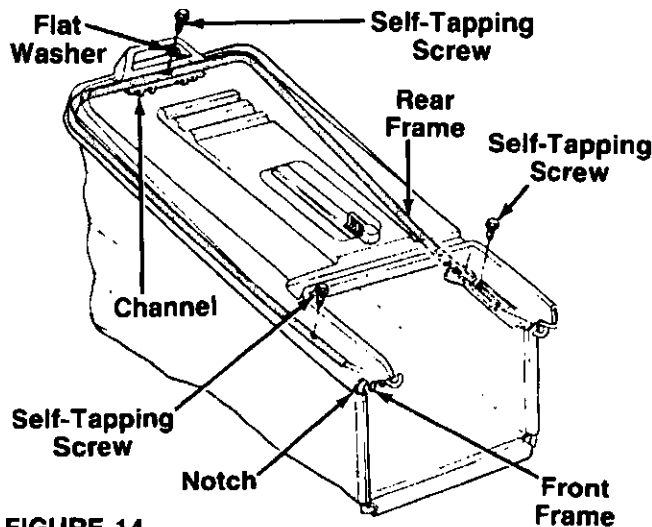


FIGURE 14.

4. Attach the hardtop cover to the grass catcher as follows. See figure 14.
- Place the cover in position on top of the grass catcher. Press the rear frame into the channel on the rear of the cover (beneath the rear handle).
 - Slide the notches on the sides of the cover over the front catcher frame.
 - Attach rear of cover to frame using the flat washer and one self-tapping screw as shown in figure 14. Attach the sides of the cover to frame with the other two self-tapping screws.

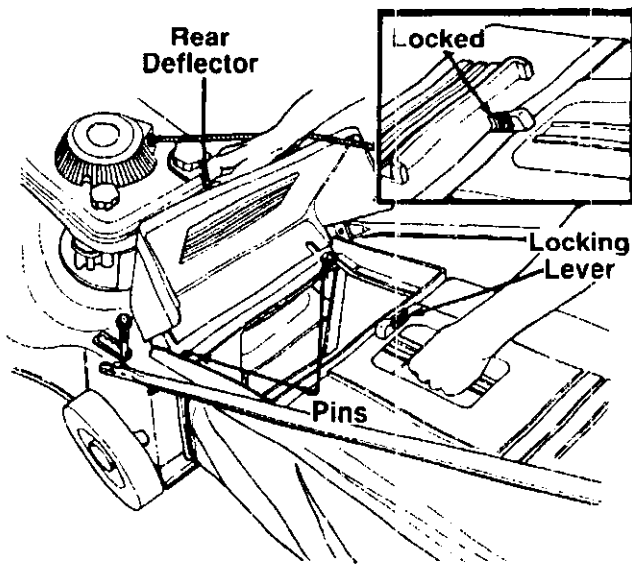


FIGURE 15.

ATTACHING BAG TO MOWER

Lift the rear deflector on the mower. Place the hooks on the grass catcher over the pins on the back of the mower. See figure 15. Release the rear deflector. Turn the locking lever to the locked position to secure the rear deflector. See figure 15, inset

To remove the grass catcher, turn the locking lever to the unlocked position and lift the rear deflector on the mower. Lift the grass catcher up, over the pins on the back of the mower. Release the deflector.

CONTROLS

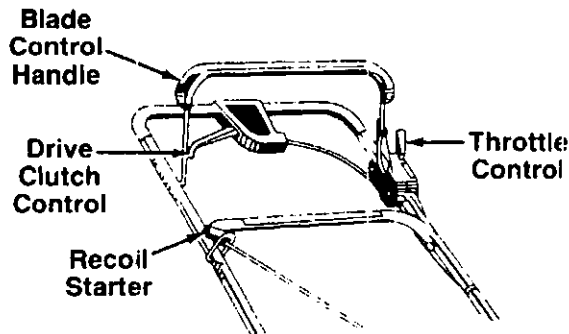


FIGURE 16.

BLADE CONTROL HANDLE

WARNING
THIS CONTROL MECHANISM IS A SAFETY DEVICE NEVER ATTEMPT TO BYPASS ITS OPERATIONS

The blade control handle is located on the upper handle of the mower. See figure 16. The blade control handle must be depressed in order to operate the unit. Release the blade control handle to stop the engine and blade.



The blade will be rotating whenever the engine is running.

THROTTLE CONTROL

The throttle control is located on the side of the upper handle. It is used to regulate the engine speed.



The throttle control cannot be used to stop the engine.

RECOIL STARTER

The recoil starter handle is attached to the handle. See figure 16. Stand behind the unit in the operating position to start the unit.

DRIVE CLUTCH CONTROL

Squeezing the drive clutch control engages the drive mechanism to the rear wheels. Releasing the clutch control stops the rear wheels from driving. Release the drive clutch control to slow down when negotiating an obstacle, making a turn or stopping. See figure 16.

OPERATION



FIGURE 17.

Keep hands and feet away from the chute area on cutting deck. See figure 17.

NOTE

For shipping purposes your mower is set with the wheels in a low cutting height position. For best results raise the cutting position until it is determined which height is best for your lawn. See cutting height adjustment section.

GAS AND OIL FILL-UP

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your mower. Read instructions carefully.

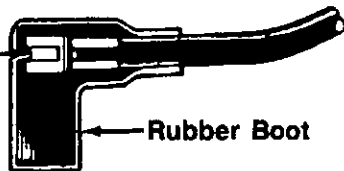


Never fill fuel tank indoors, with engine running or until the engine has been allowed to cool for at least two minutes after running.

BEFORE STARTING

1. Attach spark plug wire to spark plug. Make certain the metal loop on the end of the spark plug wire (inside the rubber boot) is fastened securely over the metal tip on the spark plug. See figure 18.

Metal Loop
on Spark
Plug Wire



Rubber Boot

FIGURE 18.

2. Open fuel shut-off valve. See figure 19.

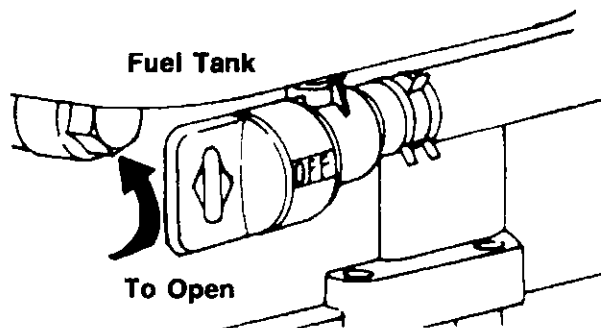


FIGURE 19.

3. Before each use, check for proper drive clutch operation by performing the following before starting the engine:

With the drive clutch control released, push mower forward. It should move freely. **Pull mower backward.** It should move freely.

If it does not and the rear wheels tend to lock up, the clutch may not be releasing completely. Do not start the engine until corrections have been made. Check the control cable for severe bend, kinks and binding, or grass build-up in the pulley groove. Correct and adjust as required.

TO START ENGINE AND ENGAGE BLADE



When starting the unit for the first time, face the mower against a solid object such as a wall, fence, etc. Start the unit, and if it shows any signs of motion with the drive clutch control disengaged, shut the engine off immediately. Check the position of the drive clutch control cable. The plastic fitting must be assembled in the first adjustment position inside the housing, all the way to the right, as shown in figure 7.

1. Move throttle control lever to CHOKE position.

NOTE

A warm engine may not require choking.

2. Standing behind the unit, depress the blade control handle and hold it against the upper handle as shown. See figure 20.
3. Grasp the recoil starter handle and pull back rapidly, extending rope fully. Return it slowly to the rope guide bolt.
4. After engine starts, move throttle control to desired engine speed. (Move the throttle control lever at least halfway back, then forward to obtain FAST position.)

NOTE

If any problems are encountered, refer to the Trouble Shooting Guide on page 17.

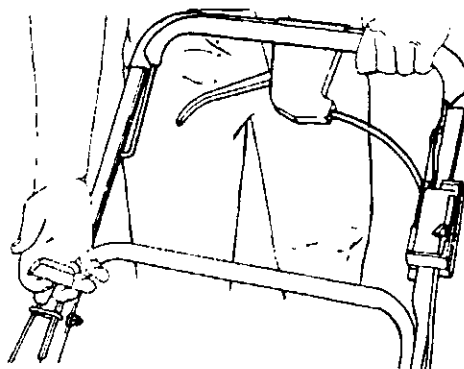


FIGURE 20.

TO STOP ENGINE AND BLADE

1. Release the blade control handle to stop the engine and blade.



WARNING

The blade continues to rotate for a few seconds after the engine is shut off.

2. Disconnect the spark plug wire and ground it against the engine to prevent accidental starting while equipment is unattended.

USING YOUR ROTARY MOWER



WARNING

Never operate your unit without either the rear deflector or entire grass catcher assembly in place.

Be sure that lawn is clear of stones, sticks, wire, or other objects which could damage lawn mower or engine. Such objects could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator and others.

For the best results, do not cut wet grass because it tends to stick to the underside of the mower, preventing proper discharge of grass clippings, and could cause you to slip and fall. New grass, thick grass or wet grass may require a narrower cut. Blade speed should be adjusted to the condition of the lawn.

For best results, cut off one-third or less of the total length of the grass. Lawn should be cut in the fall as long as there is growth.

This mower is designed to be operated at full throttle to give you the best cut and do the most effective job of bagging the cut grass.

➔ IMPORTANT

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. Excessive vibration of the mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

ADJUSTMENTS



WARNING

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

CUTTING HEIGHT ADJUSTMENT

The height adjustment handle is located on the left side of the deck. The handle may be placed in one of nine cutting height positions. Push the handle to the left and then either forward to lower the cutting height or backward to raise the cutting height. See figure 21.

For rough or uneven lawns, move the height adjustment handle to a position which will give a higher cutting height.

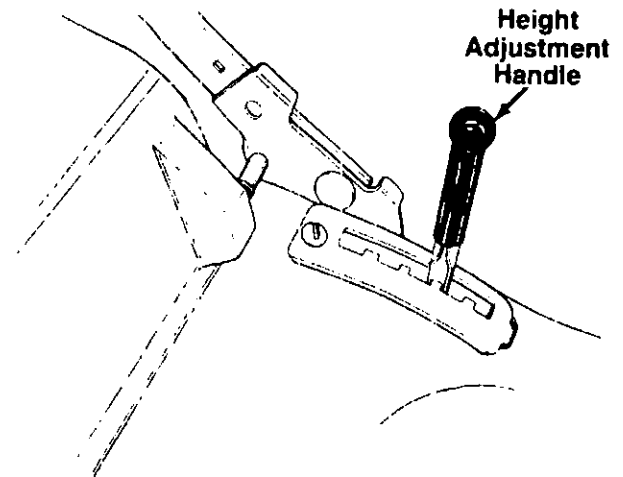


FIGURE 21.

THROTTLE

The throttle control wire assembly can be adjusted if necessary. Loosen the screw on the cable clamp shown in figure 6. Adjust as instructed in steps 1 and 4 of 'Attaching the Throttle Control Cable' in Assembly Instructions.

CARBURETOR ADJUSTMENTS



WARNING

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

Minor carburetor adjustments may be required to compensate for differences in fuel, temperature, altitude and load. To adjust carburetor, refer to the separate engine manual.

NOTE

A dirty air cleaner will cause an engine to run rough. Be certain air cleaner is clean and attached to the carburetor before adjusting carburetor.

DRIVE CLUTCH CONTROL ADJUSTMENT

If the unit does not self-propel with the drive clutch control engaged, remove the plastic cap from beneath the drive clutch control housing. Move the plastic fitting on the control cable to the next adjustment position on the left. Reassemble the plastic cap and retest. See figure 22.

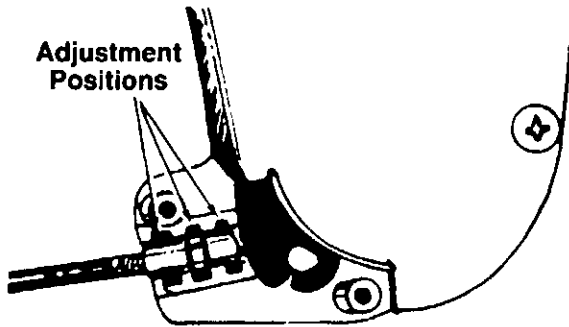


FIGURE 22.

LUBRICATION



WARNING

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

Blade Control—Lubricate the pivot points on the blade control handle and the brake cable at least once a season with light oil. See figure 23. The blade control must operate freely in both directions.

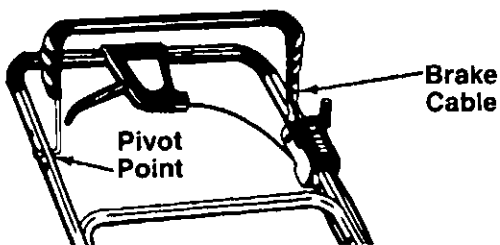


FIGURE 23.

Discharge Chute Door Mechanism—The torsion spring and pivot point should be lubricated periodically with light oil to prevent any rust or binding. Door must work freely.

Wheels—Lubricate the wheel bearings at least once a season with light oil. Also, if the wheels are removed for any reason, lubricate the surface of the axle bolt and the inner surface of the wheel with light oil. A 4 oz. plastic bottle of light oil lubricant is available. Order part number 737-0170. Engine oil may also be used.

Throttle—Periodically lubricate throttle control lever and throttle wire assembly with a few drops of light oil for ease of operation.

Transmission—The transmission is pre-lubricated and sealed at the factory. It does not require checking. If disassembled for any reason, fill with 2 ounces of Alvania grease, part number 737-0168.

MAINTENANCE



WARNING

Be sure to disconnect and ground the spark plug wire before performing any repairs or maintenance.



NOTE

When tipping the unit, empty the fuel tank and keep engine spark plug side up.

TROUBLE SHOOTING

Refer to page 17 of this manual for trouble shooting information.

CUTTING BLADE

When removing the cutting blade for sharpening or replacement, protect hands by using heavy gloves or a rag to grasp the cutting blade. Remove the bolt and blade bell washer which hold the blade and adapter to the engine crankshaft. Remove the blade and adapter from the crankshaft.



CAUTION

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

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 by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly.

Before reassembling the blade and the blade adapter to the unit, lubricate the engine crankshaft, the inner surface of the blade adapter and the center bolt with light oil. 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.

Blade Mounting Torque

Center Bolt: 375 in. lb. min., 450 in. lb. max. If lacking torque wrench, tighten until the blade bell washer is flattened.

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

DECK

The underside of mower deck should be cleaned after each use to prevent a buildup of grass clippings, leaves, dirt or other matter. If this debris is allowed to accumulate, it will invite rust and corrosion, and may cause an uneven discharge of grass clippings at the next cutting.

The deck may be cleaned by tilting the mower and scraping clean with a suitable tool (make certain the spark plug wire is disconnected).

ENGINE

Refer to the separate engine section for all engine maintenance instructions.

Maintain **engine oil** as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.

Service **air cleaner** every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner, refer to the separate engine manual packed with your unit.

The **spark plug** should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specifications.

Clean the engine regularly with a cloth or brush. Keep the cooling system (blower housing area) clean to permit proper air circulation which is essential to engine performance and life. Be certain to remove all grass, dirt and combustible debris from muffler area.

BELT REMOVAL AND REPLACEMENT

1. Disconnect the spark plug wire and ground it against the engine.

2. Drain the fuel tank or place a piece of plastic beneath the cap to prevent gasoline leakage.
3. Tip the mower back on its handle. Block securely.
4. Remove the rear belt baffle by removing the lock washer and hex nut shown in figure 24. Then remove one Torx bolt, using a #27 Torx driver. A 9/64" Allen wrench may also be used. Then remove one carriage bolt, lock washer and nut as shown.

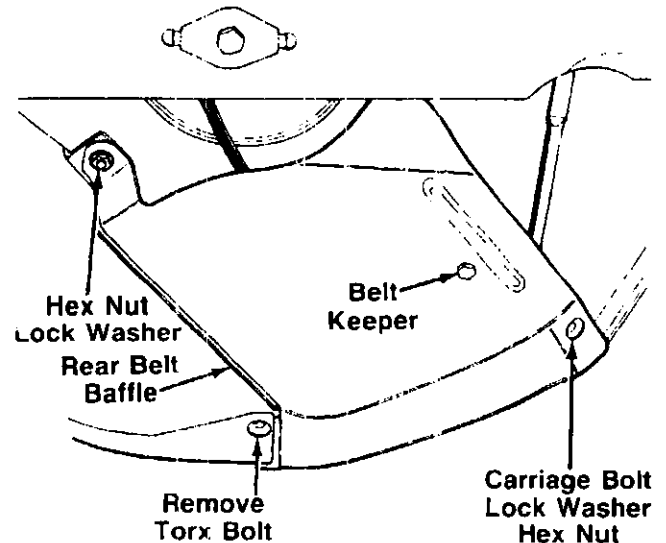


FIGURE 24.

5. Roll the belt off the transmission pulley. Remove the belt from between the idler pulley and belt guard. See figure 25.
6. Remove the belt from the pulley on the engine crankshaft, and pull it over the blade.

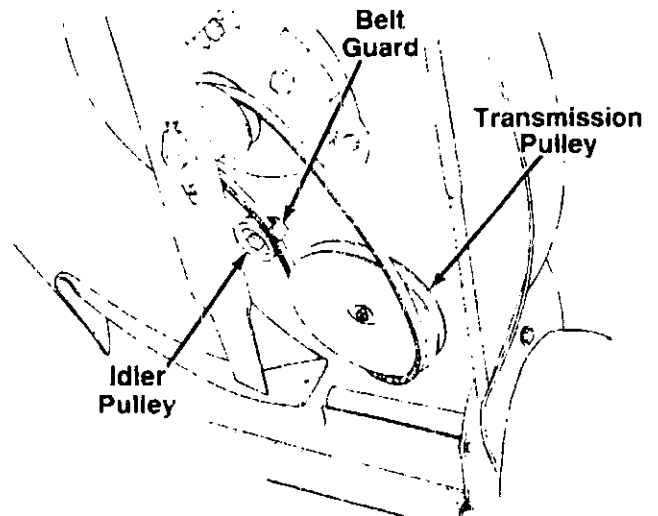


FIGURE 25.

7. Reassemble in reverse order with the new belt.

 **NOTE**

When reassembling the rear belt baffle, make certain the belt keeper is outside of the belt, and the edge of the rear belt baffle is between the rear chute baffle and the rear panel as shown in figure 24. Make certain to tighten all nuts and bolts securely. If plastic was placed under the gas cap, be certain to remove it.

 **NOTE**

When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially cables and all moving parts.

OFF-SEASON STORAGE

The following steps should be taken to prepare lawn mower for storage.

1. Clean and lubricate mower thoroughly as described in the lubrication instructions.
2. Refer to engine manual for correct engine storage instructions.
3. Coat mower's cutting blade with chassis grease to prevent rusting.
4. Store mower in a dry, clean area.

HANDLE STORAGE

The handle may be placed in an upright position for storage. Move hairpin clips to outer hole on weld pins. See figure 1. Press outward on the bottom of the lower handle and push forward. The handle will lock in this position.

To place the handle in the operating position, remove the starter rope from the rope guide bolt. Grasp the lower handle at the bottom, press outward slightly and tip the handle backward. Place the hairpin clips in the inner holes. With the spark plug wire disconnected and grounded, depress the blade control handle and pull the starter rope out from the engine. Slip the starter rope into the rope guide bolt.

 **NOTE**

The use of any accessory on this Rotary Mower other than those manufactured by the mower manufacturer is **not** recommended.



1. DO NOT operate the mower without the entire grass catcher or chute deflector in place.
2. DO NOT operate the mower without the protective shield on the rear of the deck 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.

Trouble Shooting Guide

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	<ol style="list-style-type: none"> 1. Blade control handle disengaged. 2. Spark plug wire disconnected. 3. Throttle control lever not in CHOKE position. 4. Fuel shut-off valve closed. 5. Fuel tank empty, or stale fuel. 6. Blocked fuel line. 7. Faulty spark plug. 8. Engine flooded 	<ol style="list-style-type: none"> 1. Engage blade control handle. 2. Connect wire to spark plug. 3. Move throttle lever to CHOKE position. 4. Open fuel shut-off valve. 5. Fill tank with clean, fresh gasoline. 6. Clean fuel line. 7. Clean, adjust gap or replace. 8. Remove spark plug, dry the plug, and crank engine with plug removed and throttle in off position. Replace spark plug, connect wire and resume starting procedures.
Engine runs erratic	<ol style="list-style-type: none"> 1. Unit running in CHOKE position. 2. Spark plug wire loose. 3. Blocked fuel line or stale fuel. 4. Vent in gas cap plugged. 5. Water or dirt in fuel system. 6. Dirty air cleaner. 7. Carburetor out of adjustment. 	<ol style="list-style-type: none"> 1. Move throttle lever to FAST position. 2. Connect and tighten spark plug wire. 3. Clean fuel line; fill tank with clean, fresh gasoline. 4. Clear vent. 5. Drain fuel tank. Refill with fresh fuel. 6. Clean air cleaner. † 7. Adjust carburetor. †
Engine overheats	<ol style="list-style-type: none"> 1. Engine oil level low 2. Air flow restricted. 3. Carburetor not adjusted properly. 	<ol style="list-style-type: none"> 1. Fill crankcase with proper oil. 2. Remove blower housing and clean. † 3. Adjust carburetor. †
Occasional skip (hesitates) at high speed	<ol style="list-style-type: none"> 1. Carburetor idle speed too slow. 2. Spark plug gap too close. 3. Carburetor idle mixture adjustment improperly set. 	<ol style="list-style-type: none"> 1. Adjust carburetor. † 2. Adjust gap to .030". 3. Adjust carburetor. †
Idles poorly	<ol style="list-style-type: none"> 1. Spark plug fouled, faulty or gap too wide. 2. Carburetor improperly adjusted. 3. Dirty air cleaner. 	<ol style="list-style-type: none"> 1. Reset gap to .030" or replace spark plug. 2. Adjust carburetor. † 3. Clean air cleaner. †
Excessive vibration	<ol style="list-style-type: none"> 1. Cutting blade loose or unbalanced. 2. Bent cutting blade. 	<ol style="list-style-type: none"> 1. Tighten blade and adapter. Balance blade. 2. Replace blade.
Mower will not discharge grass	<ol style="list-style-type: none"> 1. Engine speed too low. 2. Wet grass. 3. Excessively high grass. 	<ol style="list-style-type: none"> 1. Set throttle between 3/4 and full throttle. 2. Do not mow when grass is wet; wait until later to cut. 3. Mow once at a high cutting height, then mow again at desired height or make a narrower cutting swath (1/2 width).
Uneven cut	<ol style="list-style-type: none"> 1. Wheels not positioned correctly. 2. Dull blade 	<ol style="list-style-type: none"> 1. Place all four wheels in same height position. 2. Sharpen or replace blade

†Refer to separate engine manual packed with your unit.

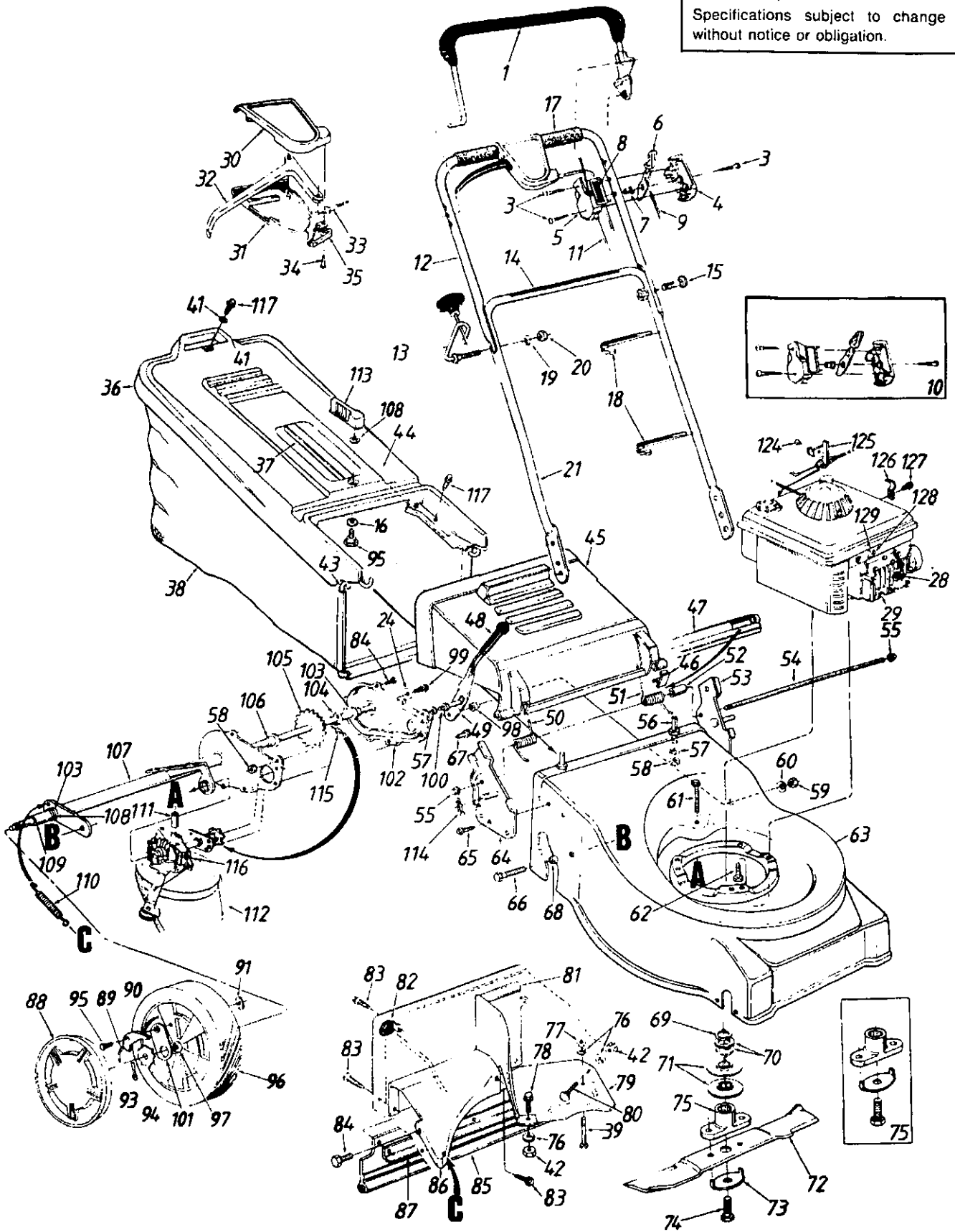
Note: For repairs beyond the minor adjustments listed above, contact your local authorized service dealer.

Model 479R



NOTE

Specifications subject to change without notice or obligation.



Model 479R

PARTS LIST FOR MODEL 479R ROTARY MOWER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	731-0609		Control Handle Ass'y.	62	710-0654A	N	Hex L-Wash. Hd. Scr.
3	710-0796		Truss Mach. B-Tap Scr #12 x 1.5" Lg.	63	16997	483	21" Deck Ass'y.
4	731-0817		Control Panel Half	64	12296A	N	Handle Brkt. Ass'y.—R.H.
5	731-0816		Clutch Panel Half	65	710-0892		Hex L-Wash. Hd. AB-Tap Scr.
6	731-0528A	N	Throttle Control Lever	66	710-1006		¼ x .62" Lg.
7	731-0524		Control Disc Pir	67	710-0599		Hex Wash. Hd. Tap Scr.
8	777-5774		Control Label—Throttle				3/8-16 x .75" Lg.
9	746-0672		Throttle Wire—58" Lg.	68	750-0736		Hex Wash. Hd. Tap Scr.
10	753-0430		Control Housing Comp.	69	736-0409		¼-20 x .5" Lg.
11	746-0477A	N	Control Cable—43" Lg.	70	736-0408		Spacer .383" I.D.
12	749-0439A	N	Upper Handle	71	756-0502		Serrated Washer 1.0" I.D.
13	710-0842B	N	Rope Guide Bolt	72	742-0306		Wave Washer 1.005" I.D.
14	777-5776		Instruction Label—Handle	73	736-0415		Serrated Pulley Half
15	710-0671		Curved Carriage Bolt 5/16-18 x 1.38" Lg.	74	710-0757		21" Blade
16	736-0286		Bowed Washer	75	753-0463		Blade Bell-Wash. .44" I.D.
17	720-0225		Foam Grip (2 Req'd.)	76	736-0329		Hex Bolt 7/16-20 x 1.5" Lg.
18	726-0240		Cable Tie	77	712-0298		(Gr. 5)
19	736-0119		L-Wash. 5/16" I.D.*	78	710-0252		Blade Adapter Kit
20	712-0267		Hex Nut 5/16-18 Thd.*	79	17013		L-Wash. ¼" I.D.*
21	749-0504C	N	Lower Handle	80	710-0167		Hex Jam Nut ¼-20 Thd.
24	736-0270		Bell-Wash. .265" I.D x 75"	81	17006		Hex Bolt ¼-20 x .85" Lg.
28	735-0639		Spark Plug Boot	82	731-0931		Rear Belt Baffle
29	—		Engine	83	710-1017		Carr. Bolt ¼-20 x .50" Lg.*
30	731-0617A	N	Control Cover Half—Upper	84	710-0352		Rear Panel Baffle
31	731-0618A	N	Control Cover Half—Lower	85	731-0668		Corner Plug
32	731-0620		Control Lever	86	17008		Torx Mach. AB-Tap Scr. ¼ x
33	746-0651		Drive Cable—53" Lg	87	17008		.62" Lg.
34	710-0841		Flat C-Sunk Hd. Tap Scr. #10 x .75" Lg	88	731-0975A	N	Hex B-Tap Scr. ¼ x .38" Lg.
35	731-0619A	N	Cable Mtg. Cap	89	10622B	N	Rear Flap
36	731-0857A	N	Hardtop Bag Cover	90	748-0188B	N	Rear Chute Baffle
37	731-0856		Hardtop Handle	91	712-0189		Retaining Strip
38	764-0252		Grass Bag	92	714-0115		Hub Cap
39	710-0166		Truss Mach. Scr. ¼-20 x 1.0" Lg.	93	748-0318		Plastic Spring
41	736-0463		Fl-Wash. .231" I.D. x .62"	94	738-0137		Pawl .345" I.D.
42	712-0287		Hex Nut ¼-20 Thd.*	95	734-1510A	N	Weld Nut ¼-20 Thd.
43	747-0693B	N	Front Catcher Frame	96	741-0486B	N	Cotter Pin 1/8" Dia.
44	749-0736A	N	Rear Catcher Frame	97	750-0624		Ratchet Wheel 1.62" O.D.
45	731-0859		Chute Deflector	98	710-0751		Shld. Bolt .342" Dia. x .268"
46	731-0970A	N	Deflector Plug	99			Wheel Ass'y. Comp.—Rear
47	731-0858		Seal—Extrusion	100	711-0805		Sleeve Bearing ½" I.D.
48	720-0223		Grip	101	16855	N	Shld. Spacer .50" Dia.
49	732-0580		Spring Lever	102	17053A	N	Hex Bolt ¼-20 x .62" Lg.
50	732-0578A	N	Torsion Spring—R.H.	103	741-0324		(Gr. 5)
51	732-0577A	N	Torsion Spring—L.H.	104	736-0160		Shld. Pin 3/8-24 x 1.43" Lg.
52	750-0566		Spacer .255" I.D.	105	738-0719A	N	Pawl Plate
53	12297A	N	Handle Brkt. Ass'y.—L.H.	106	741-0522		Chain Cover Ass'y
54	747-0698		Hinge Pin 17.75" Lg.	107	17009		Hex Flange Brg. .506" I.D.
55	726-0106		Cap Speed Nut	108	736-0498		Fl-Wash. .531" I.D x .93"
56	711-0805		Shld. Pin 3/8-24 x 1.43" Lg	109	748-0190		Rear Axle Ass'y.
57	736-0169		L-Wash. 3/8" I.D.*	110	732-0481		Hex Flange Bearing
58	712-0711		Hex Jam Nut 3/8-24 Thd.	111	750-0589		Chain Axle Ass'y.
59	712-0296		Hex L-Nut 3/8-24 Thd.	112	754-0346		Internal L-wash. 1/4" I.D.
60	736-0105		Bell-Wash. .38" I.D. x .88"	113	720-0224		Spacer .513" I.D.
61	710-0778		Hex Wash. Hd. Tap Scr ¼-20 x 1.5" Lg.	114	714-0104		Extension Spring 3.8" Lg.
							Spacer .325" I.D.
							V-Belt
							Grass Catcher Locking Knob
							Internal Cotter Pin 5/16" Dia.

Model 479R

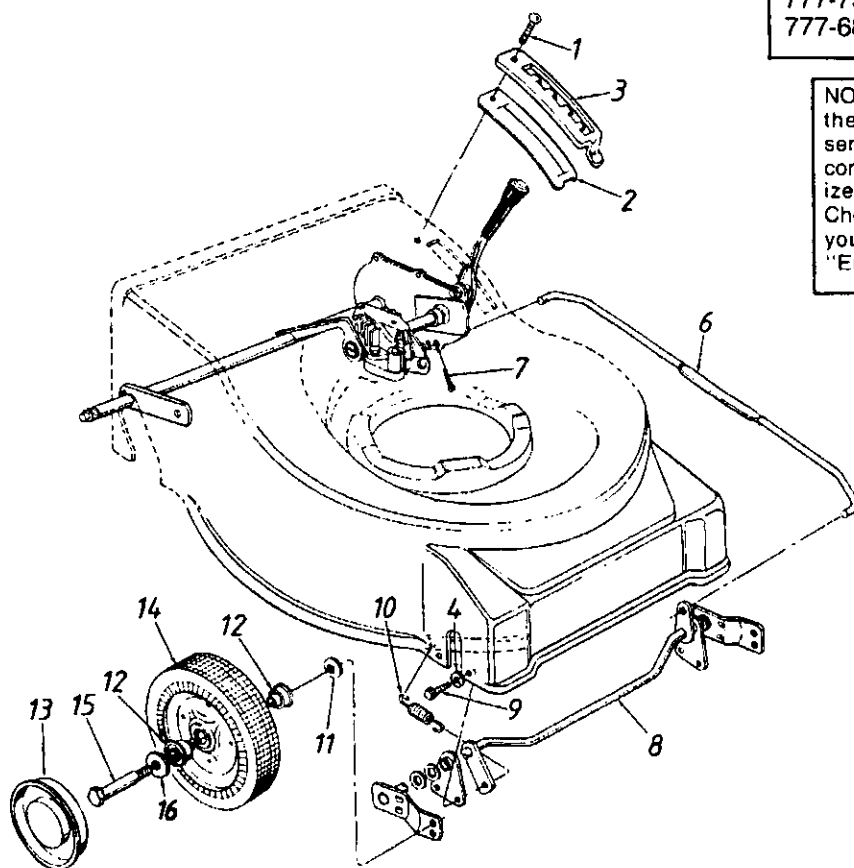
PARTS LIST FOR MODEL 479R ROTARY MOWER (CONTINUED)

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
115	713-0353		#48 Chain .50" Pitch x 30 Links	124	728-0171		Pop Rivet .156" Dia.
116	717-0417		Transmission Comp. (See Breakdown)	125	14924		Cable Brkt.
117	710-0892		Hex L-Wash. H.D. AB-Tap Scr. 1/4 x .62" Lg.	126	12894A	N	Cable Clamp
				127	710-0429		Hex B-Tap Scr. #10 x .38" Lg.
				128	710-0436		Hex B-Tap Scr. #10 x .62" Lg.
				129	751-0463		Cable Clamp

*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.

Part No.	Description
777-7321	Engine Label
777-7769	Drive Control Label
777-7578	Deck Label
777-6808	Label on Hub Cap

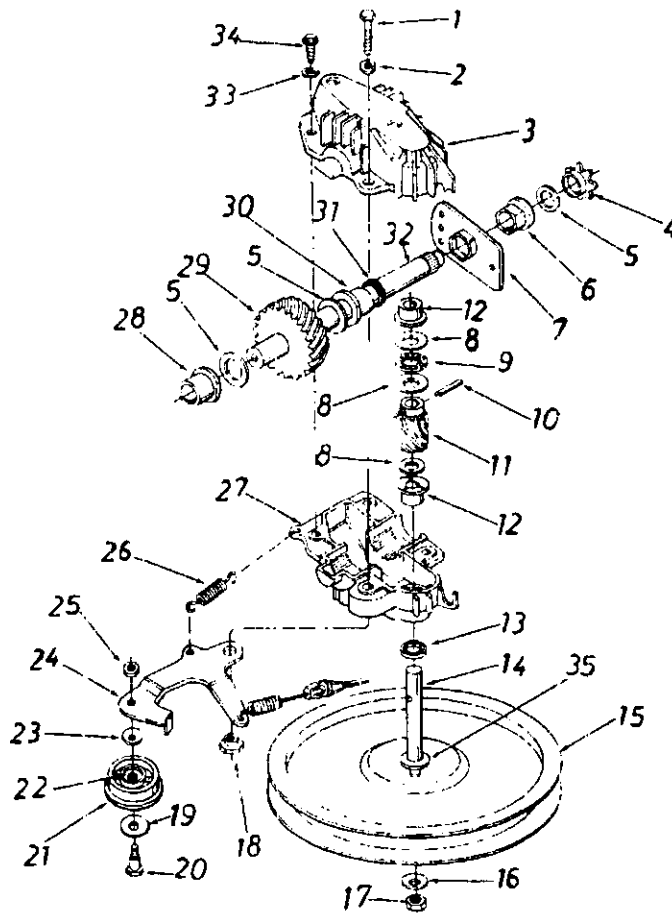
NOTE: The engine is not under warranty by the mower manufacturer. . . If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."



PARTS LIST FOR MODEL 479R ROTARY MOWER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	710-1017		Torx Mach. AB-Tap Scr. 1/4 x .62" Lg.	10	732-0589		Extension Spring 2.39" Lg.
2	721-0216		Height Adjustment Support	11	736-0105		Bell-Wash. .380" I.D. x .88" O.D.
3	17323		Height Adjustment Plate	12	741-0180		Flange Ball Bearing 1/2" I.D.
4	736-0329		L-Wash. 1/4" I.D.*	13	731-0981A		Hub Cap
6	747-0699		Height Adj. Connecting Rod	14	734-1513A	N	Wheel Ass'y. Comp.—Front
7	714-0507		Cotter Pin 3/32" Dia.	15	738-0102		Shld. Bolt .498" Dia. x 1.45"
8	17022		Front Axle Ass'y.	16	736-0160		FI-Wash. .531" I.D. x .93" O.D.
9	710-0352		Hex L-Wash. Hd. AB-Tap Scr. 1/4 x .38" Lg.				

Model 479R



PARTS LIST FOR MODEL 479R ROTARY MOWER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	710-0106		Hex Bolt 1/4-20 x 1.25" Lg.†	18	738-0440		Shld. Spacer 375" Dia. x .170†
2	736-0329		L-Wash. 1/4" I.D.†	19	736-0344		Fl-Wash. .390" I.D. x 1.0"†
3	717-0418A	N	Upper Hsg. Half	20	738-0691		Fl-Idler Plastic 1.50" Dia.†
4	713-0400		#48 Sprocket 7 Tooth x 1/2 Pitch	21	756-0447		Needle Brg. .375" x .31†
5	736-0336		Fl-Wash. 5/8" I.D. x .030	22	741-0482		Bell-Wash. .265" I.D. x .75"†
6	741-0413		Hex Flange Brg. .631" I.D.	23	736-0270		Idler Brk't. Ass'y.†
7	16500A	N	Hex Bearing Cup	24	17052		Hex Patch L-Nut 1/2-28 Thd.†
8	736-0314		Thrust Wash. .382" I.D. x .70" O.D.	25	712-0138		Extension Spring 1.12" Lg.†
9	741-0479		Thrust Bearing .375" I.D. x .812" O.D.	26	732-0357		Lower Hsg. Half
10	715-0152		Spring Pin Spir. 1/8" x .62" Heavy	27	717-0419A	N	Flange Bearing .566 Dia.
11	717-0420		11 Tooth Helical Gear	28	741-0415		33 Tooth Helical Gear
12	748-0208A	N	Flange Bearing	29	717-0422		Flange Bearing .629 Dia.
13	721-0212		Oil Seal	30	741-0414		Oil Seal .625 Dia.
14	738-0708B	N	Pulley-Transmission Shaft	31	721-0213		Gear Sprocket Shaft
15	756-0330		Fl-Pulley 5.06" O.D.†	32	738-0607		L-Wash. #10 I.D.
16	736-0270		Bell-Wash. .265" I.D. x .75"†	33	736-0722		Hex B-Tap Scr. #10 x .62"†
17	712-0351		Hex L-Nut 1/2-28 L.H. Thd.†	34	710-0436		Hex Washer .26" x .88"†
				35	736-0410		Transmission Comp.
				--	717-0417		

†Not Part of Transmission Complete



WHITE



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