$1.00

OWNER'S GUIDE

ASSEMBLY • OPERATION • MAINTENANCE • PARTS

(Model 272R Shown)

22″ SELF-PROPELLED ROTARY MOWERS

Model Numbers

129-271R000
129-272R000
129-281R000
129-282R000
129-286R000
129-289R000

Important: Read Safety Rules and Instructions Carefully

190-086-000

PRINTED IN U.S.A.

FORM NO. 770-6312D

INDEX

Dear Customer,

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

However, we at MTD Products Inc are taking a quick moment out to say. . .

"Thank you for your business."

Sincerely,
MTD PRODUCTS INC

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

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, 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, MTD 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.

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

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

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

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

WARNING: 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.

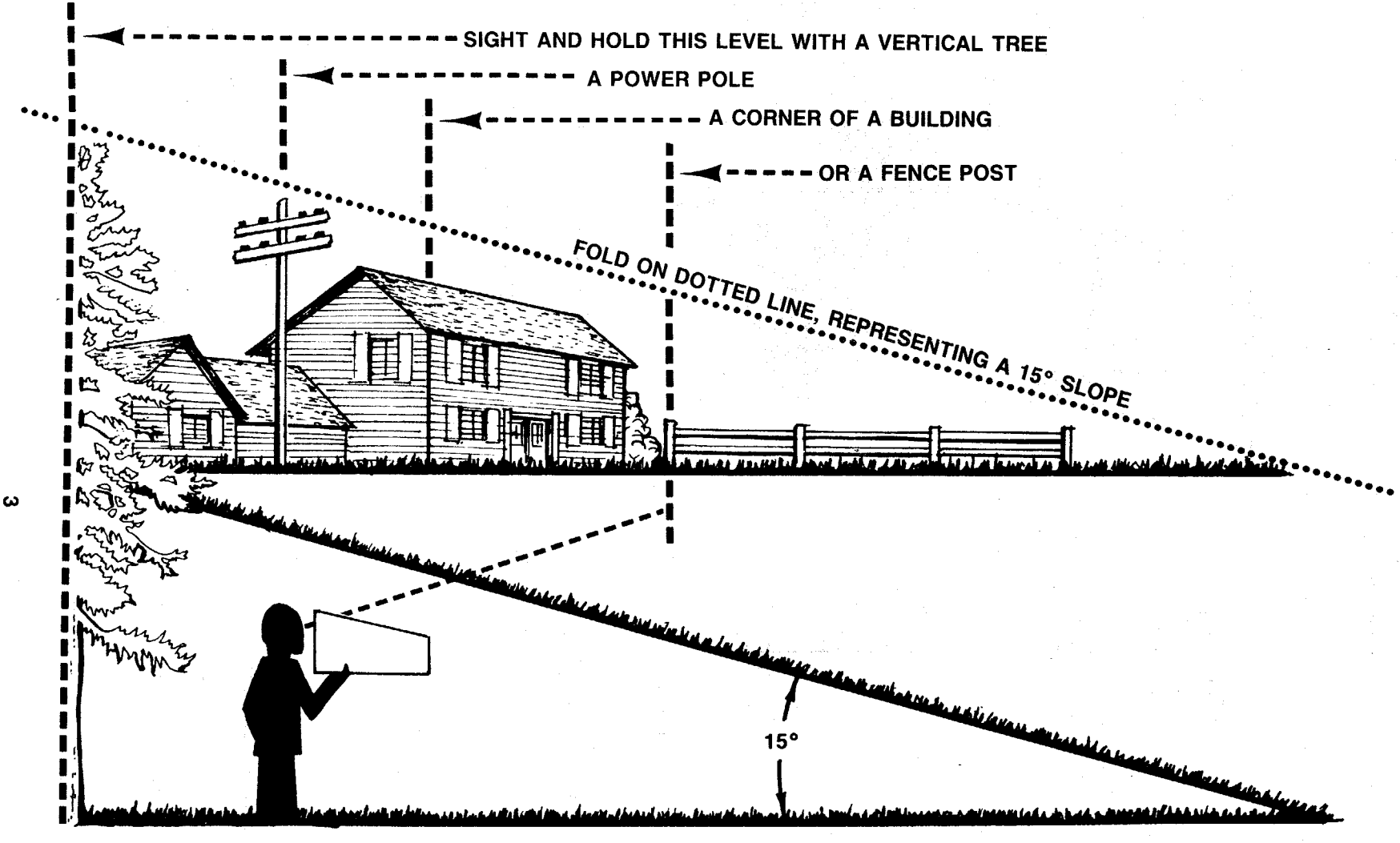
In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer.

Cut Along This Line

SLOPE GAUGE

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

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



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.

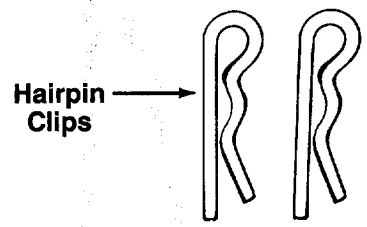
Operate RIDING mowers up and down slopes, never across the face of slopes.
Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.

CONTENTS OF HARDWARE PACK/PARTS IDENTIFICATION

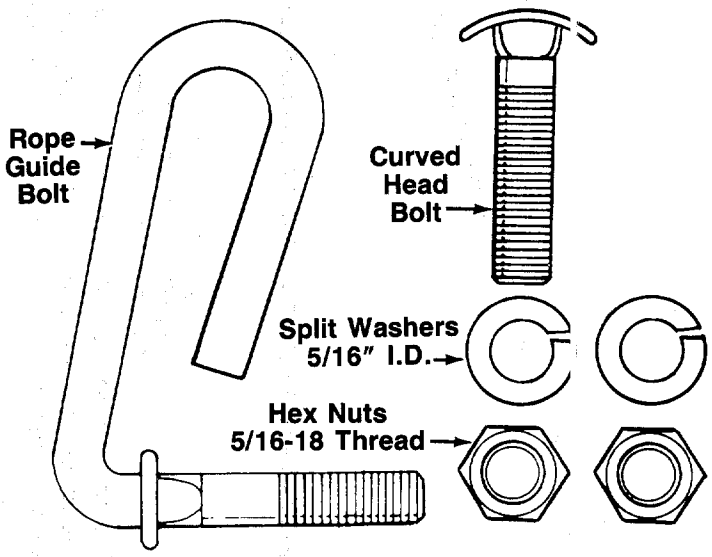
Remove this sheet from your owner's manual and lay the hardware on the illustration for identification purposes. After assembly, keep the Slope Gauge which is on the reverse side of this sheet for future use.

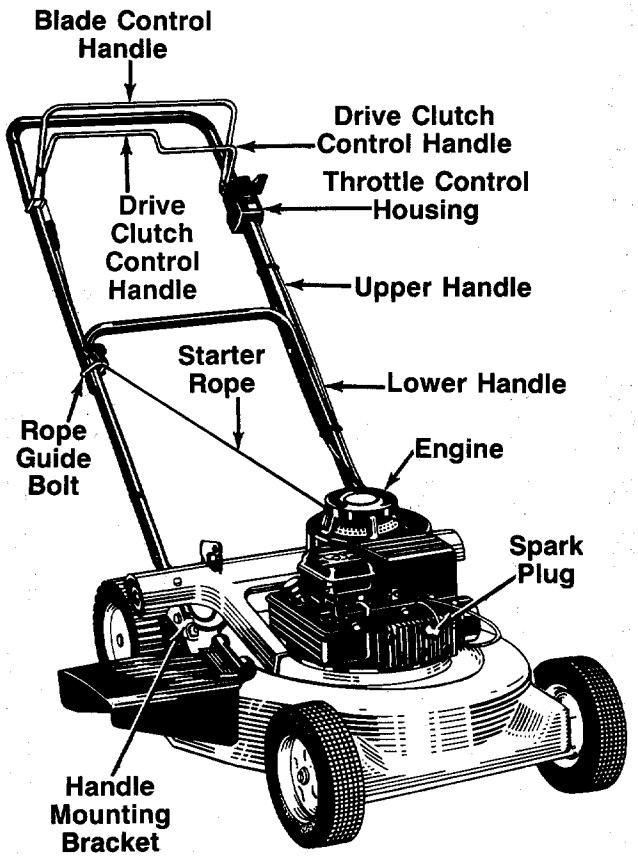
(Hardware pack may contain extra items which are not used on your unit.)

A ATTACHING THE LOWER HANDLE



B ATTACHING THE UPPER HANDLE

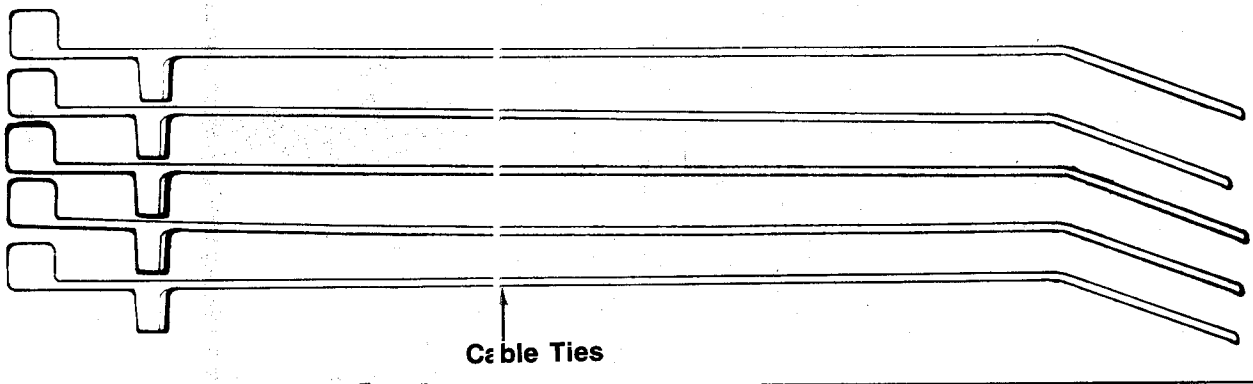




(Model 272R Shown)

PARTS IDENTIFICATION

C SECURING THE CABLES



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 accidently 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 15º 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.

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. Refer to parts identification on page 4 for location of parts when assembling the mower.

ASSEMBLY INSTRUCTIONS

Tools Required for Assembly

(1) Pair of Pliers
(2) 1/2" Wrenches*
(1) 5/16" Wrench or Nutdriver*
*Or two 6" Adjustable Wrenches.

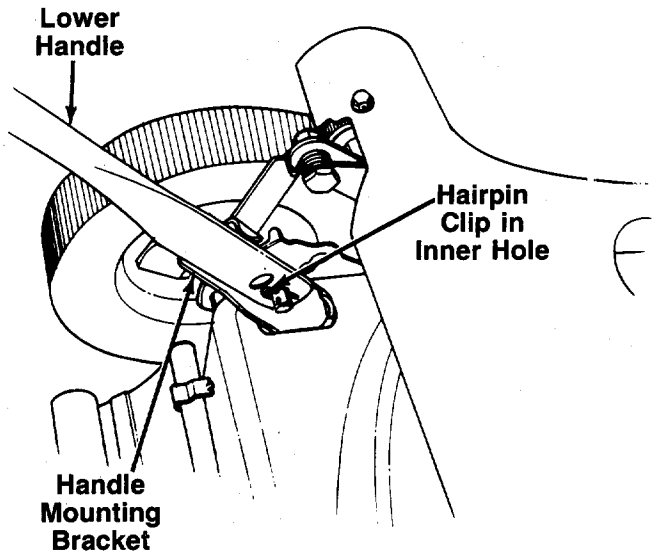


FIGURE 1.

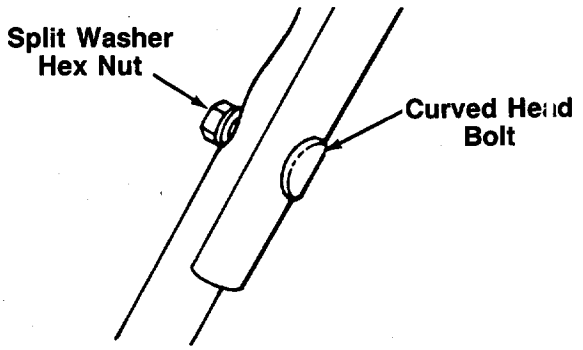


FIGURE 2.

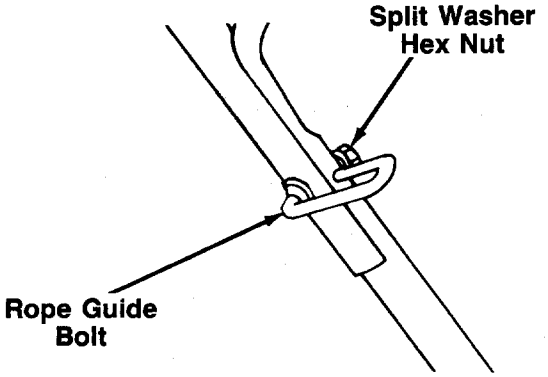


FIGURE 3.

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.

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.

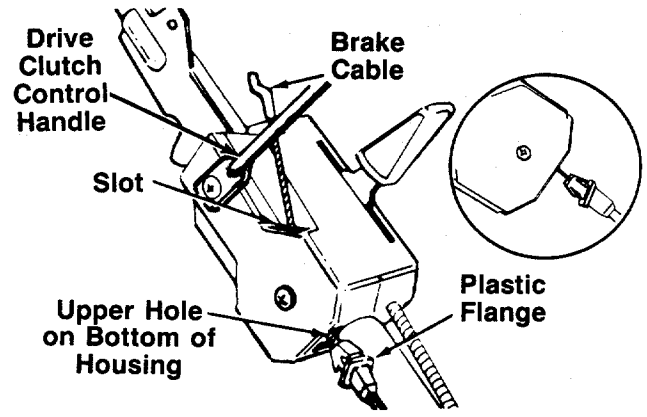


FIGURE 4.

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.

WARNING

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

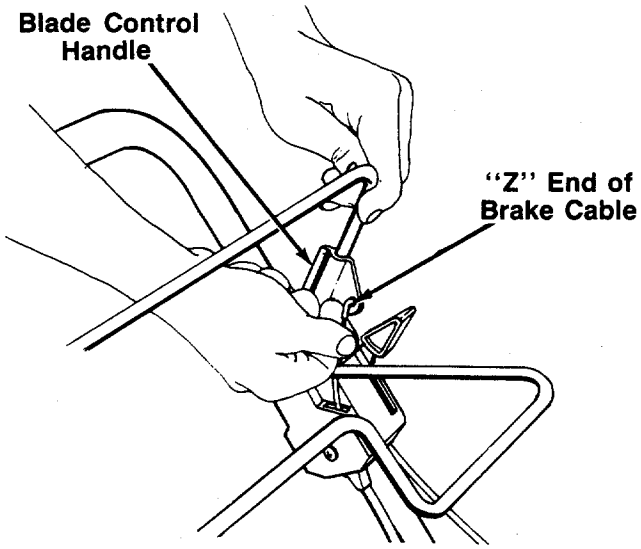


FIGURE 5.

3. Route the brake cable to the outside of the drive clutch control handle. See figure 4. 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.

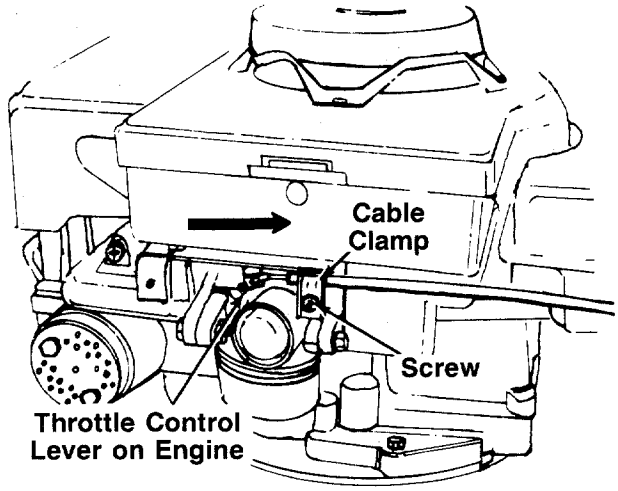


FIGURE 6A.

ATTACHING THE THROTTLE CABLE
Models 271R and 281R Only:

1. Place the throttle control lever on the handle in FAST position.
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 control lever on the engine as shown in figure 6A.
3. Loosen (do not remove) the screw on the cable clamp shown in figure 6A. Slip the control casing under the clamp (cable must move freely beneath the clamp).
4. Place the control lever on the engine in the full open position by pushing it as far toward the **rear** of the unit as it will go. Tighten the screw on the cable clamp to secure the cable in this position.

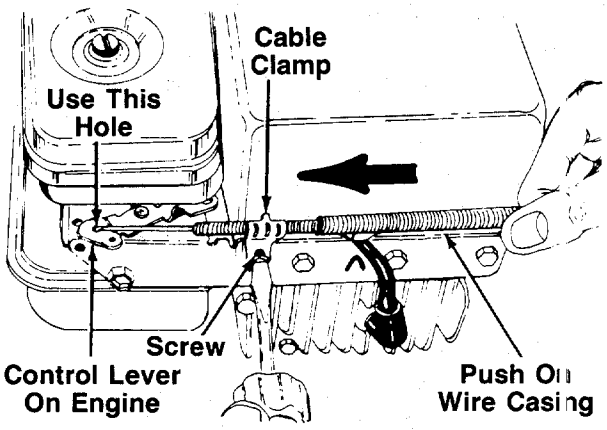


FIGURE 6B.—Models 272R and 282R

Models 272R and 282R Only:

1. Place the throttle control lever on the handle in FAST position.
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 arm on the control lever on the engine which has two holes, using the **outside** hole as shown in figure 6B.
3. Remove the screw on the cable clamp on the engine shown in figure 6B. Slip the control casing under the clamp. Replace the screw, but do not tighten (cable must still move freely beneath the clamp).
4. Slide the control lever on the engine as far toward the **outside** of the engine as it will go. Push the wire casing on the throttle control cable toward the control lever on the engine as shown in figure 6B as you tighten the screw on the cable clamp to secure the cable in this position.
5. Loosen the screw on the clamp on the side of the engine. Secure the cable **away from the muffler.** Be careful not to bend or kink the cable. Tighten the screw.

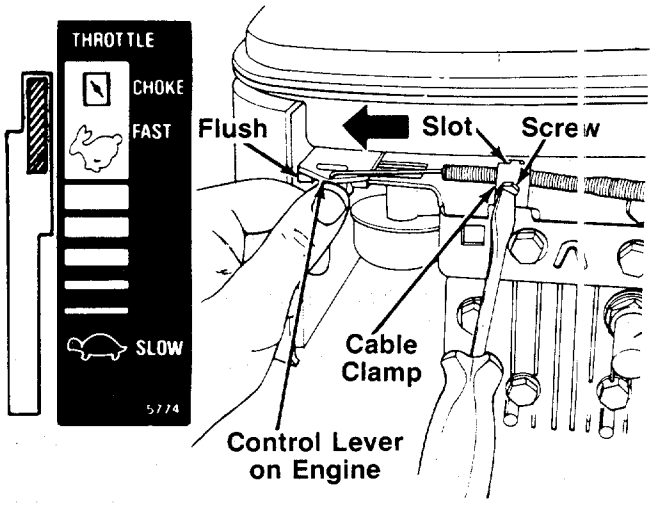


FIGURE 6C.—Models 286R and 289R

ATTACHING THE THROTTLE CABLE
Models 286R and 289R Only:

1. Push the throttle control lever on the handle all the way forward to CHOKE position. See figure 6C.
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 6C.
3. Using a 5/16" wrench or nutdriver, remove the screw on the cable clamp shown in figure 6C. Slip the control casing 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 6C. 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.

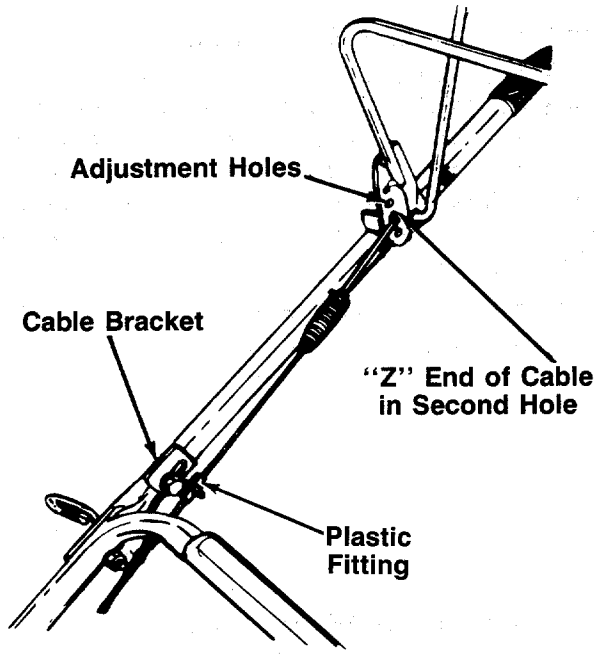


FIGURE 7.

ATTACHING THE DRIVE CLUTCH CONTROL CABLE

1. The drive clutch control cable is attached to the drive cover, and has a spring on one end. Route the clutch cable inside the handle mount bracket and under the lower handle. Hook the spring on the end of the cable into the second hole from the bottom on the drive clutch control handle. See figure 7.

2. Pull down on the plastic cable casing, and slip the control wire through the slot in the cable bracket. Push the plastic fitting on the end of the cable casing into the cable bracket.

NOTE

If necessary, push down on the drive cover (see figure 8) to obtain sufficient slack in the cable.

To adjust the drive clutch control cable, proceed as follows.

1. **Models 281R, 282R, 286R and 289R:** Place the wheels in the lowest cutting height position.
2. Loosen the screw which secures the cable bracket.
3. With the drive clutch control handle released, pull down on the cable and cable bracket until there is approximately 1/8" clearance between the drive pinions and the drive wheels. See figures 7 and 8. Tighten the cable bracket in this position.

Note: Two pieces of cardboard removed from the carton may be used to measure the clearance as follows. Place a piece of cardboard between the drive pinion and wheel on each side of the unit. With the drive clutch control handle released, pull down on the cable and cable bracket until the drive pinions contact the cardboard. Tighten the cable bracket in this position. Remove the cardboard.

Before starting the mower, check the drive clutch adjustment as follows.

When the clutch control is engaged (clutch control handle is squeezed against the upper handle), the drive pinions should mesh with the gear tread tires. The drive pinions should clear the drive wheels when the clutch is disengaged by a minimum of 1/8". See figure 8.

If adjustment is necessary, loosen the cable bracket on the upper handle and adjust it as instructed above. If additional adjustment is still required, unhook the cable from the clutch handle, and move it to a higher hole to obtain less clearance, or to the lowest hole for more clearance.

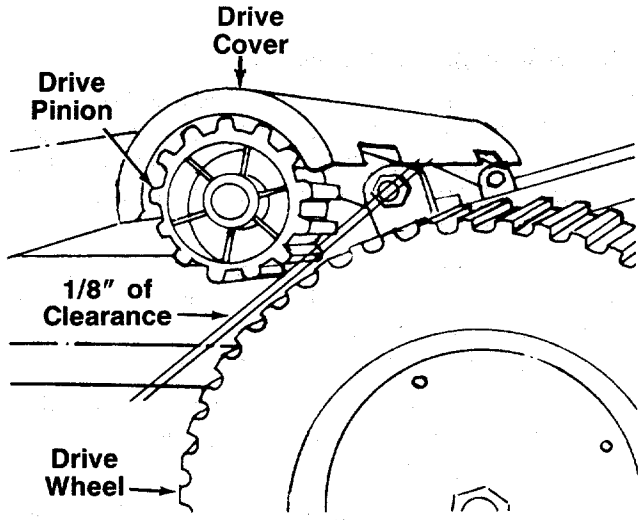


FIGURE 8.

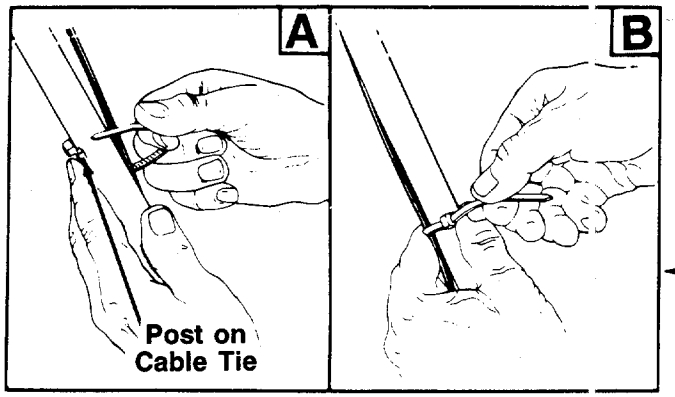


FIGURE 9.

SECURING THE CABLES (Hardware C)

Secure all cables to the handles as follows.

A. Insert posts on cable ties into holes provided on the handles. Two go on each side of the lower handle (one near the top and one near the bottom), and one goes on the left side of upper handle. The holes may be either on the inside or outside of the handles. See figure 9A.

B. Secure the cables with the cable ties. See figure 9B.

C. Trim excess ends of cable ties.

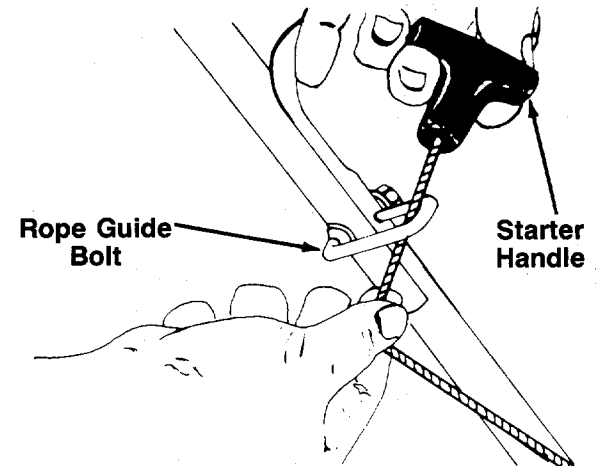


FIGURE 10.

ATTACHING THE STARTER ROPE

1. The starter rope is inside 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.

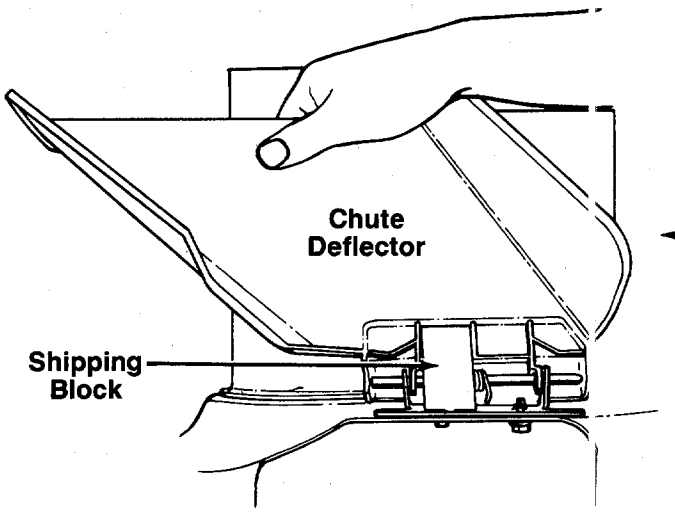


FIGURE 11.

FINAL ASSEMBLY OF MOWER

1. The chute deflector on your mower is held in an upright position by a block for shipping purposes only. This shipping block must be removed and discarded before the mower is put into operation. See figure 11.

   To remove the shipping block, pull the spring-loaded chute toward the engine. Remove the block and carefully lower the chute into operating position, keeping fingers out of the way.
2. Attach hub caps (optional) to the wheels by lining up the hub caps with the hub of the wheels. Push to lock in position.
3. Make certain **all** nuts and bolts are tightened securely.

CONTROLS

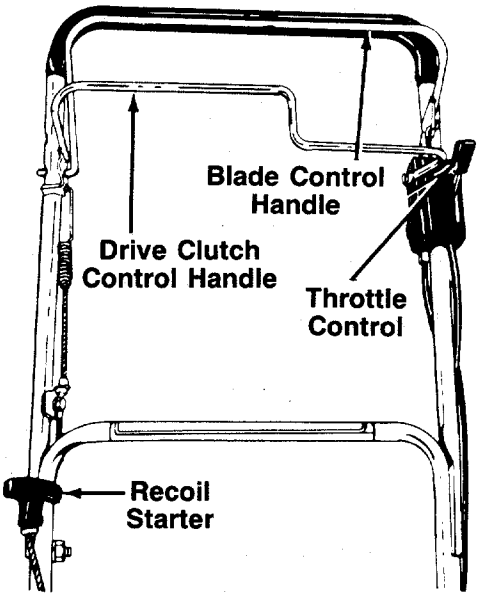


FIGURE 12.

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 12. The blade control handle must be depressed in order to operate the unit. Release the blade control handle to stop the engine and blade.

WARNING

The blade will be rotating whenever the engine is running.

THROTTLE CONTROL

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

WARNING

The throttle control cannot be used to stop the engine.

RECOIL STARTER

The recoil starter handle is attached to the handle. See figure 12. Stand behind the unit in the operating position to start the unit.

DRIVE CLUTCH CONTROL

Squeezing the drive clutch control handle 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 12.

OPERATION

FIGURE 13.

Keep hands and feet away from the chute area on cutting deck. See figure 13.

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.

NOTE

Your unit has been shipped without oil; however, a small amount of oil may be present from the factory. Do not overfill.

WARNING

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

Before each use, check drive clutch adjustment. When the clutch handle is engaged, the drive pinions should mesh simultaneously with the gear tread tires When the clutch handle is released, the pinions shou d clear the wheels by a minimum of 1/8". See drive clutch adjustment on page 13 for further details.

TO START ENGINE AND ENGAGE BLADE

WARNING

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. Refer to page 13 for further instructions on the drive clutch adjustment.

1. Attach spark plug wire to spark plug. If unit is equipped with a rubber boot over the end of the spark plug wire, 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 14.

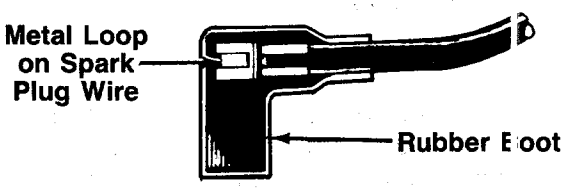


FIGURE 14.

2. **Models 286R and 289R only:** Open fuel shut-off valve. See figure 15.

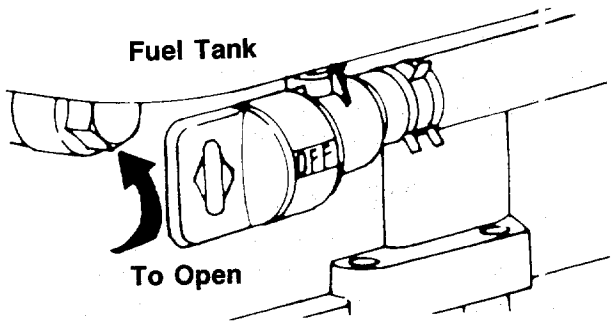


FIGURE 15.—Models 286R and 289R

3. **Models 271R thru 282R:** Move the throttle control lever to FAST or START position.

   Models 286R and 289R: Move throttle control lever to CHOKE position.

4. **Tecumseh Engines Only:** Prime engine as instructed in separate engine manual.
5. Standing behind the unit, depress the blade control handle and hold it against the upper handle. Be certain the drive clutch handle is released.
6. Grasp the recoil starter handle and pull back rapidly, extending rope fully. Return it slowly to the rope guide bolt.
7. After engine starts, move throttle control to desired engine speed. (On models 286R and 289R, move the throttle control at least halfway back, then forward to obtain FAST position.)

NOTE

If any problems are encountered, refer to the Trouble Shooting Guide on page 19.

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

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

For 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.

The best mowing pattern is one that allows the clippings to discharge towards the uncut part of the lawn. This permits recutting of the clippings to further pulverize them. When cutting high weeds, discharge towards cut portion, then recut at right angles to first direction.

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. Extensive 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

Models 281R, 282R, 286R and 289R:

An adjusting plate and thumb lever at each wheel position provides cutting height adjustment. Each adjusting plate has nine positions. Height of cut will be changed when the thumb lever is moved from one hole to another. Simply depress the lever towards wheel and move wheel and lever assembly to desired position. See figure 16.

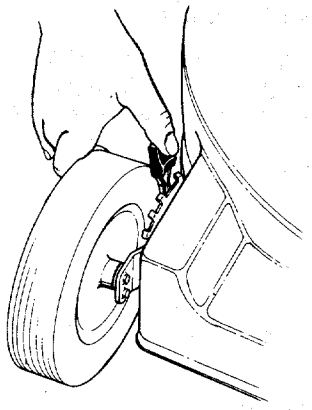


FIGURE 16.

Cutting height will be raised as the rear levers are lowered and the front levers are moved toward the front of the unit. Cutting height will be lowered as the rear levers are raised and the front levers are moved toward the rear of the unit. All wheels must be positioned at the same relative height.

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

Models 271R and 272R (without height adjustment brackets)

Adjustment may be made by removing and moving axle bolts to desired position. Cutting heights will be raised as axle bolts are moved to a lower hole and lowered as axle bolts are moved to a higher hole. All axle bolts must be mounted in the same relative position to the deck.

When changing the height of the front wheels, use the holes closest to the front of the deck. Belleville washers must be assembled on the inside and outside of the deck so that the cupped side of the washers are against the deck.

To change the height of the rear wheels, proceed as follows.

1. With an adjustable wrench, remove the hex nut, lock washer, axle bolt, belleville washer and rear wheel.
2. Reassemble in selected hole. The belleville washer must be assembled between the link and wheel bracket, with the cupped side of the washer against the deck. See figure 17.

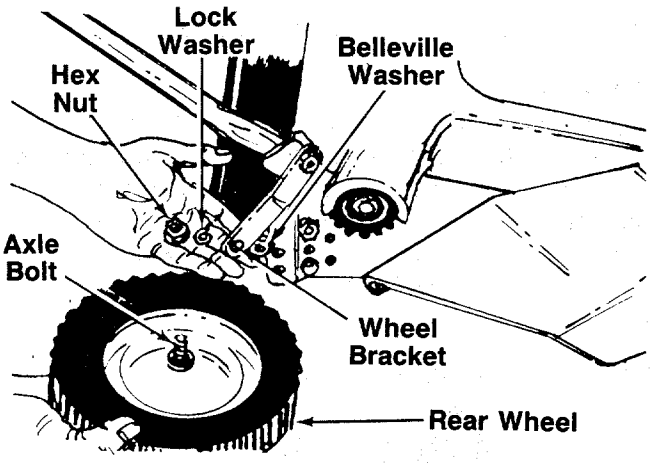


FIGURE 17.

DRIVE CLUTCH ADJUSTMENT

The drive pinions should be a minimum of 1/8" from the drive wheels when the clutch is disengaged (clutch control handle is not squeezed against upper handle). Refer to figure 8. When the clutch control is engaged, the drive pinions should mesh with the tires.

If adjustment is necessary, loosen the screw which secures the cable bracket on the handle. Adjust until there is at least 1/8" of clearance. If additional adjustment is required, unhook the cable from the clutch handle, and move it to a higher hole to obtain less clearance, or to a lower hole for more clearance. Retighten the cable bracket when the correct adjustment is reached.

CHAIN ADJUSTMENT

Check for correct chain adjustment and alignment after first five to ten hours of operation. Adjust as follows:

1. Loosen (do not remove) the hex bolt on each side of the pinion pivot plate. See figure 18.

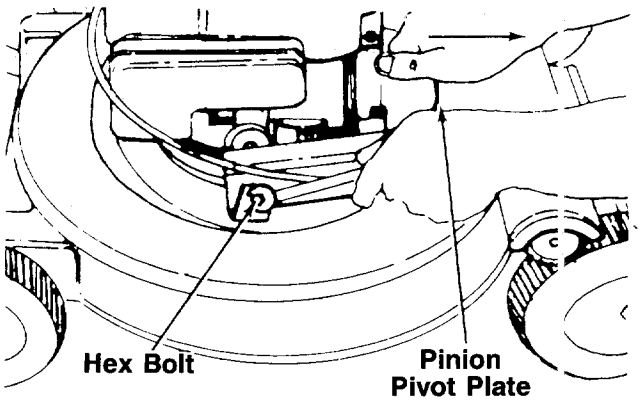


FIGURE 18.

2. Pull back on the left side of the pivot plate, by hand, until the proper chain tension is achieved. Tighten the hex bolt.
3. Pull back on the right side of the pivot plate until the clearance between the pinion and wheel is equal on both sides. Tighten the hex bolt.
4. Recheck for correct adjustment periodically.

THROTTLE

The throttle control wire assembly can be adjusted if necessary. To adjust the throttle control cable, loosen the screw on the cable clamp shown in figure 6. Place the throttle control lever on the handle in FAST or CHOKE position. Adjust as instructed in step 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 adjustment may be required to compensate for differences in fuel, temperature, altitude and load. Refer to the separate engine manual packed with your mower for carburetor adjustment information.

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. Refer to the separate engine manual.

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. The blade control must operate freely in both directions.

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

Wheels—Mower may be provided with ball bearing wheels. Lubricate 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.

Engine—Follow engine manual for lubrication instructions.

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

Chain—The chain should be lubricated periodically with a few drops of light oil to prevent any rust or binding. Use very little or no oil if unit is being used in a dusty or sandy area.

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 19 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 adapater 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.

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 OIL

Refer to the separate engine manual 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 muffer area.

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.

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 chains, springs, cables and all moving parts.

NOTE

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

GRASS CATCHER Model 086 is available as optional equipment for the mower shown in this manual.

WARNING

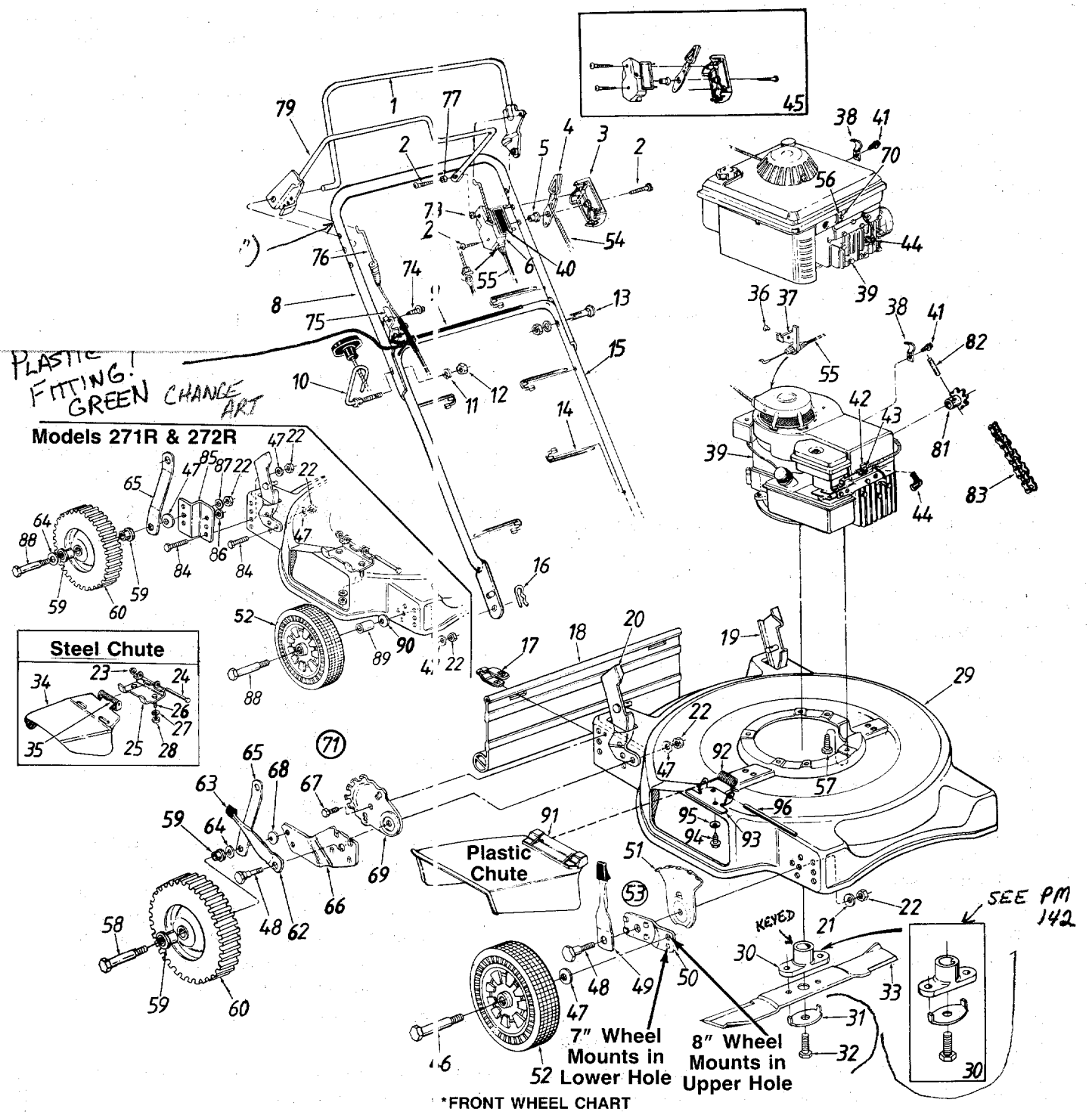
To reduce the risk of injury, do not operate mower unless rear trailing shield and guard or entire grass catcher is in its proper place.

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. 764-0271.

Models 271R, 272R, 281R, 282R, 286R and 289R



*FRONT WHEEL CHART

Wheel Assembly (8 x 1.75)					Optional Hub Caps	
Smooth	Waffle Tread	Twinline Tread	Bearing	Axle Bolt		
734-0843	734-0894	734-0661	Plastic—741-0262	738-0102	Red	731-0124A
734-0845	734-0645	734-0643	3/8" Ball—741-0267 ½" Ball—741-0484 Spacer—750-0434	710-1020	Orange Black Gray	731-0254 731-0354 731-0355A

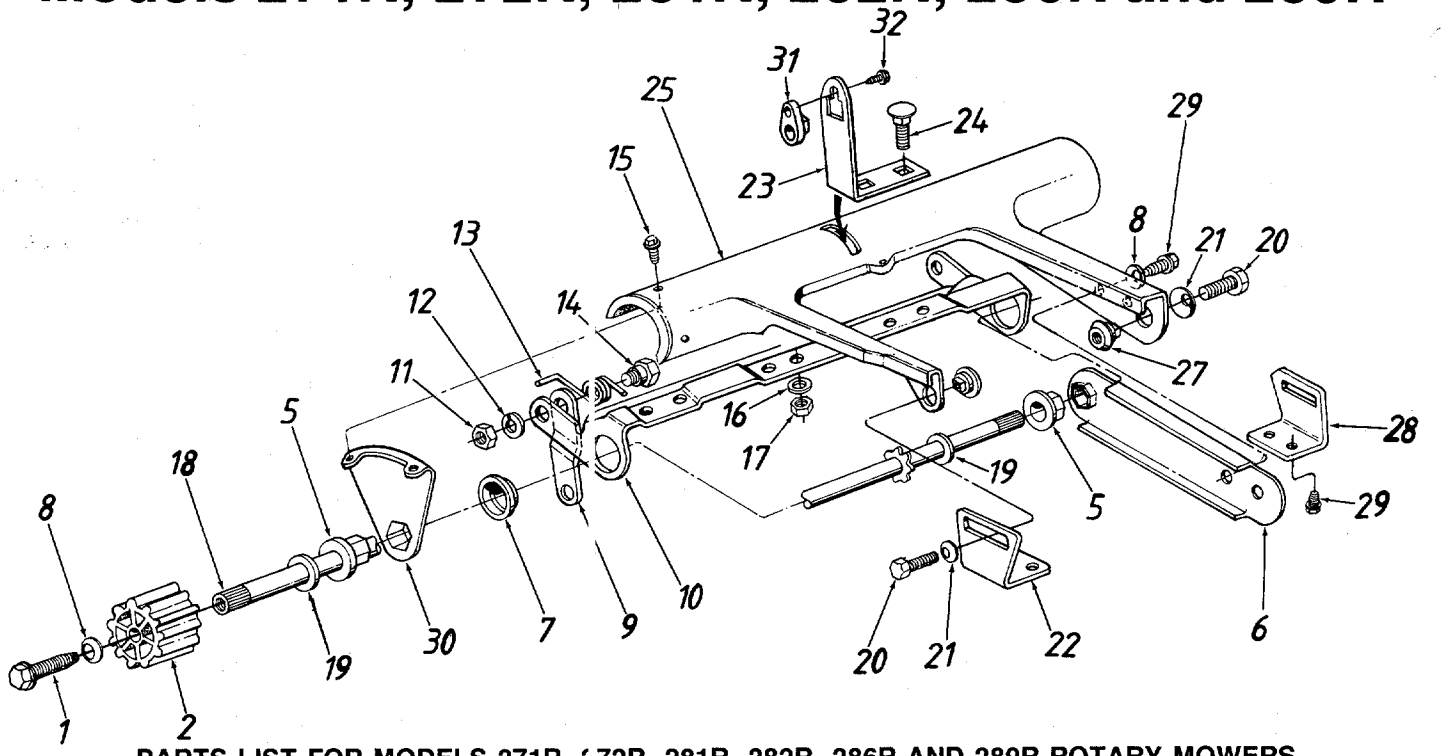
Models 271R, 272R, 281R, 282R, 286R and 289R

PARTS LIST FOR MODELS 271R, 272R, 281R, 282R, 286R AND 289R ROTARY MOWERS

REF. NO.	PART NO.	CODE	DESCRIPTION
1	14321		Control Handle Ass'y.
2	710-0796		Truss Mach. Scr. #12 x 1.5"
3	731-0817		Control Panel Half
4	731-0528A	N	Throttle Control Lever Use 731-09725
5	731-0524		Control Disc Pin
6	731-0816		Clutch Panel Half
8	749-0755		Upper Handle (Painted)
	749-0754		Upper Handle (Chrome)
9	777-5776		Instruction Label—Handle
10	710-0842B	N	Rope Guide Bolt
11	736-0119		L-Wash. 5/16" I.D.*
12	712-0267		Hex Nut 5/16-18 Thd.*
13	710-0671		Curved Carriage Bolt 5/16-18 x 1.38" Lg.
14	726-0240		Cable Tie
15	749-0372B	N	Lower Handle (Painted)
	749-0373B	N	Lower Handle (Chrome)
16	714-0104		Hairpin Cotter
17	17098		Hinge Clip
18	731-0872		Rear Flap
19	17189		Handle Bracket Ass'y.—L.H.
20	17188		Handle Bracket Ass'y.—R.H.
21	736-0356		Bell-Wash. .39" I.D. x 1.38"
22	712-0798		Hex Nut 3/8-16 Thd.*
23	726-0106		Push Cap ¼" Rod†
24	711-0555		Pivot Pin†
25	11130		Adapter Plate†
26	710-0289		Hex Bolt ¼-20 x .50" Lg.*†
27	736-0329		L-Wash. ¼" I.D.*†
28	712-0287		Hex Nut ¼-20 Thd.*†
29	17046	638	22" Deck Ass'y.
30	753-0462		Blade Adapter Kit
31	736-0415	See Bulletin	Blade Bell-Wash. .45" I.D.
32	710-1044	N	Hex Bolt 3/8-24 x 1.5" Lg.
33	742-0522		22" Blade
34	14944	638	Chute Deflector Ass'y.†
35	732-0253		Torsion Spring†
36	728-0171		Pop Rivet (B&S)
37	14924		Cable Bracket (B&S)
38	12894A	N	Cable Clamp (B&S)
39	—		Engine
40	777-5773		Throttle Label (271R, 272R, 281R, 282R)
	777-5774		Throttle Label (286R, 289R)
41	710-0429		Hex B-Tap Scr. #10 x .38"
42	751-0369		Cable Clamp (272R, 282R)
43	710-0227		Hex AB-Tap Scr. #8 x 38" Lg. (272R, 282R)
44	735-0639		Spark Plug Boot†
45	753-0430		Kit—Control Housing Comp.
46	**		Front Axle Bolt
47	736-0105		Bell-Wash. .400" I.D. x .88"
48	738-0507B	N	Shld. Bolt .50" Dia. x .357"
49	14832		Spring Lever Ass'y. w/Knob
50	15262B	N	Pivot Bar
51	15261A	N	Height Adj. Plate
52	**		Wheel Ass'y. Comp.
53	14578		Height Adj. Ass'y. Comp.—R.H.
	14579		Height Adj. Ass'y. Comp.—L.H. (Not Shown)
54	746-0632		Throttle Wire—53" (B&S) GREEN
	746-0630		Throttle Wire—39" (Tec.)
55	746-0476A	N	Control Cable—39" (B&S) GREEN
	746-0478A	N	Control Cable—49" (Tec.)
56	751-0463		Cable Clamp (286R & 289R)
57	710-0654A	N	Hex L-Wash. HD. Scr. 3/8-16 x 1.0" Lg.
58	738-0144		Rear Axle Bolt
59	741-0180		Fl. Ball Brg. ½" I.D.
60	734-1026		Rear Wheel Ass'y. Comp.
62	732-0417		Spring Lever
63	720-0190		Spring Lever Knob
64	736-0192		Fl-Wash. .531" I.D. x .93"
65	14760A	N	Link 4.58" Lg.
66	14765		Pivot Bar R.H.
	14766		Pivot Bar L.H. (Not Shown)
67	710-0892		Hex AB-Tap ¼-.62" Lg.
68	736-0105		Bell-Wash. .380" I.D. x .88"
69	14764C	N	Index Plate
70	710-0436		Hex B-Tap Scr. #10 x .62" (286R & 289R)
71	16106		Rear Height Adj. Ass'y.—R.H.
	16107		Rear Height Adj. Ass'y.—L.H. (Not Shown)
74	710-0726		Hex Wash. AB-Tap Scr. 5/16 x .75" Lg.
75	16309A	N	Cable Brkt.
76	746-0628		Clutch Cable w/Spring—36" GR
77	750-0649		Spacer .23" I.D. x .30" O.D.
78	736-0370		Spr.-Wash. .206" I.D. x .448
79	16391		S.P. Bail Ass'y.
80	**		Hub Cap
81	713-0308		10 Tooth Sprocket Ass'y.
82	715-0247		Spring Pin Spir. 3/16" Dia. x 1" Lg.
83	713-0311		#48 Chain ½" Pitch 50 Links (Endless)
84	710-0216		Hex Bolt 3/8-16 x .75" Lg.* (271R, 272R)
85	14761		Wheel Bracket (271R, 272R)
86	736-0117		Fl-Wash. .385" I.D. (271R, 272R—If Required)
87	736-0169		L-Wash. 3/8" I.D.* (271R, 272R)
88	738-0533		Shld. Bolt .498" Dia. (271R, 272R)
89	750-0728		Spacer .511" I.D. (271R, 272R)
90	736-0331		Bell-Wash. .39" I.D. (271R, 272R)
91	731-1034	N	Chute Deflector Ass'y.
92	732-0593	N	Torsion Spring
93	17032	N	Adapter Plate
94	710-0599		Hex Self-Tap Scr. ¼-20 x .5" Lg.
95	736-0270		Bell-Wash. ¼" I.D.
96	747-0710	N	Hinge Pin

*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.

Models 271R, 272R, 281R, 282R, 286R and 289R



PARTS LIST FOR MODELS 271R, 272R, 281R, 282R, 286R AND 289R ROTARY MOWERS

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	710-0642		Hex Wash. Hd. Tap Sc. ¼-20 x .75" Lg.	18	738-0732		Drive Shaft Ass'y.
2	731-0908		Wheel Drive Pinion	19	736-0160		Fl-Wash. .531" I.D. x .93" O.D.
5	741-0503		Hex Flange Brg. .504" I.D.	20	710-0759		Hex Bolt 5/16-18 x 5/8" Lg.*
6	17018		Hex Bearing Support	21	736-0242		Bell-Wash. .345" I.D. x .88" O.D.
7	741-0504		Flange Bearing .879" I.D.				
8	736-0270		Bell-Wash. .265" I.D. x .75" O.D.	22	16531A	N	Pivot Bracket—R.H.
9	14760A	N	Link 4.58" Lg.	23	16756		Engagement Arm—L.H.
10	16832	N	Drive Engagement Cam	24	710-0258		Hex Bolt ¼-20 x .62" Lg.
11	712-0267		Hex Nut 5/16-18 Thd.*	25	17019		Rear Pinion Pivot Cover
12	736-0119		L-Wash. 5/16" I.D.*	27	738-0739		Shoulder Nut
13	732-0569		Torsion Spring—R.H.	28	14759A	N	Pivot Bracket—L.H.
	732-0570		Torsion Spring—L.H. (Not Shown)	29	710-0892		Hex Wash. Hd. AB-Tap Scr. ¼ x .62" Lg.
14	738-0754		Shoulder Bolt .437" Dia.	30	17017		Hex Bearing Axle Brkt.
15	710-0892		Hex L-Hd. AB-Tap Scr. ¼" x .62" Lg.	31	746-0606		Barrel Cable Hold-Down—R.H.
				32	710-0919		Hex B-Tap Scr. #10 x .44" Lg.
16	736-0329		L-Wash. ¼" I.D.*				
17	712-0287		Hex Nut ¼-20 Thd.*				

NOTE

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

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."

Find It Fast In The Yellow Pages

CODE: N notates a **new part** (not previously existing). A three digit number is the **color code** (use if color or finish is important when ordering parts). See chart below. [i.e., (part no.)-638 for Red Finish].

Color Codes

460—Green Flake	630—Blue
483—Charcoal Grey	635—Grey
498—Yellow	636—White
499—Beige	637—Black
606—Orange	638—Red
629—Silver Flake	640—Green

Trouble Shooting Guide

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	1. Blade control handle disengaged. 2. Spark plug wire disconnected. 3. Throttle control lever not in CHOKE or START position. 4. Fuel shut-off valve closed (if so equipped). 5. Fuel tank empty, or stale fuel. 6. Blocked fuel line. 7. Faulty spark plug. 8. Engine flooded.	1. Engage blade control handle. 2. Connect wire to spark plug. 3. Move throttle lever to CHOKE or START 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	1. Unit running in CHOKE or START 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.	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	1. Engine oil level low. 2. Air flow restricted. 3. Carburetor not adjusted properly.	1. Fill crankcase with proper oil. 2. Remove blower housing and clean.† 3. Adjust carburetor.†
Occasional skip (hesitates) at high speed	1. Carburetor idle speed too slow. 2. Spark plug gap too close. 3. Carburetor idle mixture adjustment improperly set.	1. Adjust carburetor.† 2. Adjust gap to .030″. 3. Adjust carburetor.†
Idles poorly	1. Spark plug fouled, faulty or gap too wide. 2. Carburetor improperly adjusted. 3. Dirty air cleaner.	1. Reset gap to .030″ or replace spark plug. 2. Adjust carburetor.† 3. Clean air cleaner.†
Mower will not drive	1. Drive clutch cable out of adjustment. 2. Chain out of adjustment or stretched.	1. Adjust drive clutch cable (see adjustment section). 2. Adjust or replace chain.
Excessive vibration	1. Cutting blade loose or unbalanced. 2. Bent cutting blade.	1. Tighten blade and adapter. Balance blade. 2. Replace blade.
Mower will not discharge grass	1. Engine speed too low. 2. Wet grass. 3. Excessively high grass.	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	1. Wheels not positioned correctly. 2. Dull blade.	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.

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service 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	**BIRMINGHAM**	
Auto Electric & Carburetor Co.	2625 4th Ave. S. Box 2466	35233
ARKANSAS	**NORTH LITTLE ROCK**	
Sutton's Lawn Mower Shop	5301 Roundtop Drive Box 368, Rt. 4	72117
CALIFORNIA	**PORTERVILLE**	
Billious	75 North D Street	93257
COLORADO	**DENVER**	
Spitzer Industrial Products Co.	6601 N. Washington St.	80229
FLORIDA	**JACKSONVILLE**	
Radco Distributors	4909 Victor St. Box 5459	32207
	HIALEAH	
Small Eng. Dist.	7995 W. 26th Court	33016
GEORGIA	**EAST POINT**	
East Point Cycle & Key Inc.	2834 Church St.	30344
ILLINOIS	**LYONS**	
Keen Edge Co.	8615 Ogden Ave.	60534
INDIANA	**ELKHART**	
Parts & Sales Inc.	2101 Industrial Pkwy. Box 277	46516
IOWA	**DUBUQUE**	
Power Lawn & Garden Equip.	2551 J.F. Kennedy	52001
LOUISIANA	**LAFAYETTE**	
Jourdan Engine Co.	214 W. Vermillion St. Box 3503	70501
MARYLAND	**TAKOMA PARK**	
Center Supply Co.	6867 New Hampshire Ave.	20912
MASSACHUSETTS	**SPRINGFIELD**	
Morton B. Collins Co.	300 Birnie Ave.	01107
MICHIGAN	**MOUNT CLEMENS**	
Power Equipment Dist.	340 Hubbard	48043
MINNESOTA	**PLYMOUTH**	
Hance Distributing Inc.	12795 16th Ave. North	55441
MISSOURI	**EARTH CITY**	
Oscar Wilson Engine & Parts	4159 Shoreline Dr.	63045
	KANSAS CITY	
Automotive Equip. Service	3117 Holmes St.	64109
NEW JERSEY	**ALLOWAY**	
Piersons	Canal St., Box 494	08001
NEW YORK	**CARTHAGE**	
Gamble Dist., Inc.	West End Ave. Box 389	13619
NORTH CAROLINA	**GREENSBORO**	
Dixie Sales Company	335 N. Green Box 1408	27402
OHIO	**CARROLL**	
Stebe's Mid-State Mower Supply	Box 366, 71 High St.	43112
	CLEVELAND	
Bleckrie, Inc.	7900 Lorain Ave.	44102
	WADSWORTH	
National Central	687 Seville Rd.	44281
	YOUNGSTOWN	
Burton Supply Co.	1301 Logan Ave. Box 929	44501
PENNSYLVANIA	**HARRISBURG**	
EECO Inc.	4021 N. 6th St.	17110
	WILLOW GROVE	
Thompson Rubber Co.	850 Davisville Rd.	19090
	PITTSBURGH	
Bluemont Co.	11101 Frankstown Rd.	15235
	PUNXSUTAWNEY	
Frank Roberts & Sons	R.D. 2	15767
	SCRANTON	
Scranton Auto Ignition Co.	1133-35 Wyoming Ave.	1850[illegible]
TENNESSEE	**KNOXVILLE**	
Ace Distributors	2103 Magnolia	37917
	MEMPHIS	
American Sales & Service, Inc.	3035-43 Bellbrook	38116
TEXAS	**DALLAS**	
Marr Brothers, Inc.	423 E. Jefferson	75203
	SAN ANTONIO	
Engine House Inc.	4918 Golden Quail	78249
UTAH	**SALT LAKE CITY**	
Powered Products	1661 N. Beck St.	84116
VIRGINIA	**ASHLAND**	
RBI Corp.	101 Cedar Ridge Dr.	23005
WASHINGTON	**SEATTLE**	
Equip. Northwest	1410 14th Ave.	98122
WISCONSIN	**MILWAUKEE**	
Wisconsin Magneto Inc.	4727 N. Teutonia St.	53209
PUERTO RICO	**AGUADILLA**	
CIE & Associates, Inc.	Box 427 Ramey Station	00604

WARRANTY PARTS AND SERVICE POLICY (0588)

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, Serial Number and/or Data Code** of unit involved.
2. **Date** unit was purchased or first put into service.
3. **Date of Failure.**
4. **Nature of Failure.**