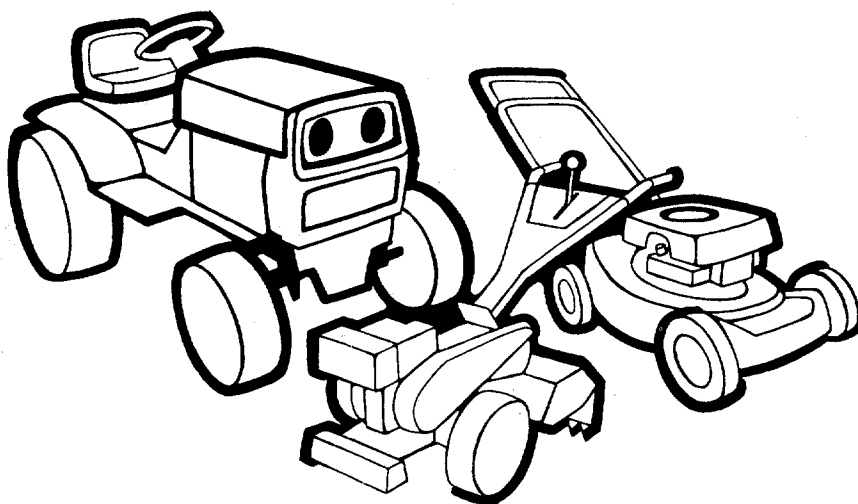


OWNERS MANUAL



**20"
REAR
DISCHARGE
ROTARY
MOWER**

**ASSEMBLY
OPERATION
MAINTENANCE
PARTS LIST**

**Model Number
114-333-000**

**Important:
Read Safety Rules and
Instructions Carefully**

Thank you for purchasing an
American built product.

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LIMITED WARRANTY

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

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

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

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

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

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



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

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



WARNING

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

SAFE OPERATION PRACTICES FOR WALK-BEHIND MOWERS

TRAINING

1. Read this owner's manual 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. 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. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
3. Do not wear loose fitting clothing that could get caught on the mower.
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 while the engine is still hot. 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. Mow only in daylight or in good artificial light.
9. 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.

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. Always disconnect electric mowers (line operated) before cleaning, repairing or adjusting.
11. Never operate mower without proper guards, plates or other safety protective devices in place.
12. **DO NOT OPERATE** this mower 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.

SAFE OPERATION PRACTICES (Continued)

BLADE BRAKE/CLUTCH MAINTENANCE

NOTE: Any required repair work on the blade brake/clutch should be performed by an authorized service dealer. If you cannot locate an authorized service dealer, contact the manufacturer as set forth on your copy of the Owner's Registration Card.

1. The blade brake/clutch hand control 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. This hand control must operate freely in both directions.
2. Striking a solid object can cause damage to the blade brake/clutch or to the engine crankshaft. Extensive vibration of the mower during operation is an indication of damage and the

unit should be promptly inspected and repaired.

3. A leak in the lower engine crankshaft oil seal could expose the blade brake/clutch friction pads to excess oil resulting in blade or brake slippage, which could increase the stopping time of the blade. Oil collection on the floor beneath the mower during storage may be an indication of an oil seal leak. The unit should be checked by an authorized service dealer.
4. Periodically inspect the inner control cable in the area where it attaches to the hand control. If the cable becomes frayed, it could cause the blade brake/clutch to operate improperly. Also, be careful to avoid pinching the blade brake/clutch control cable when storing the handle.



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

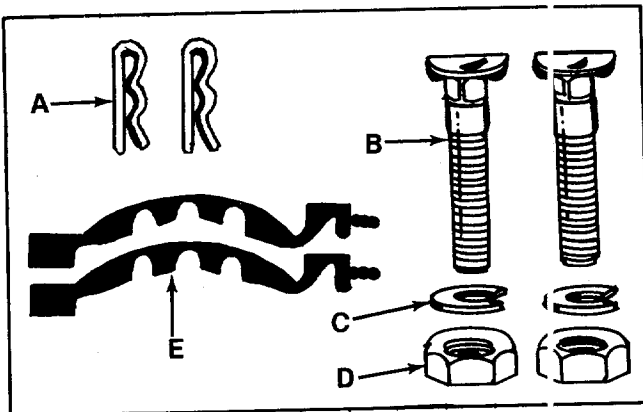


FIGURE 1.

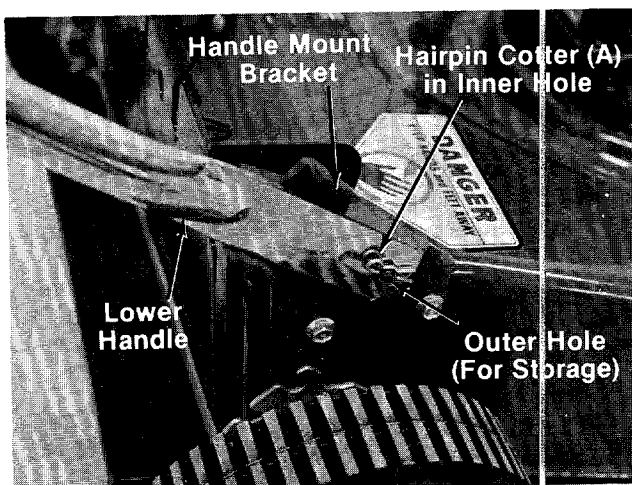


FIGURE 2.

ASSEMBLY

Contents of Hardware Pack: (See figure 1)

- A (2) Hairpin Cotters
 - B (2) Curved Carriage Bolts
 - C (2) Lock Washers 5/16" I.D.
 - D (2) Hex Nuts 5/16-18 Thread
 - E (2) Cable Ties
1. Remove the lawn mower, loose parts, hardware pack and literature from the carton. Make certain all parts and literature have been removed before the carton is discarded.
 2. Extend the throttle control cable (attached to the upper handle) and the blade brake/clutch cable (attached to blade brake/clutch beneath the deck) and place on the floor. Be careful not to bend or kink control cables.
 3. Place bottom hole in lower handle in position over weld pins in handle mount brackets on deck. Make certain the instruction label on the lower handle can be read from the operating position. Secure by placing two hairpin cotters (A) in inner hole on weld pins. See figure 2.



It may be necessary to bend the ends of the lower handle inward slightly to obtain a snug fit against the bracket.



There are two (2) holes in the handle mount brackets. Place hairpin cotter in the inner hole for operation. The outer hole is for storage.

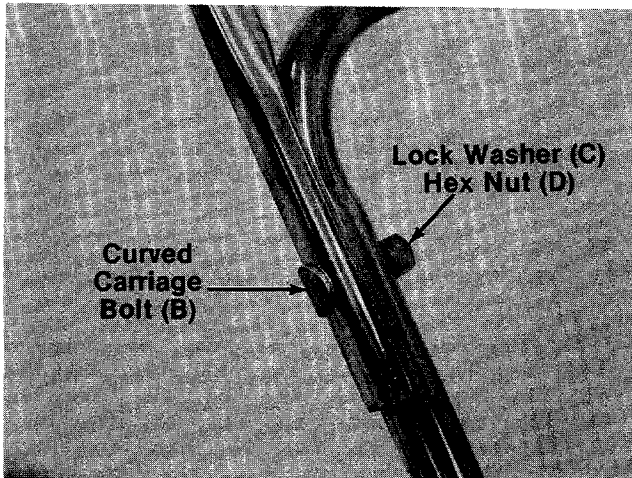


FIGURE 3.

- Place upper handle in position over lower handle. Control housing should be on the **left** side of the handle. Secure with two curved carriage bolts (B), lock washers (C) and hex nuts (D) as shown in figure 3.



Reference to left or right side of machine is determined from operator's position at the handle facing forward.

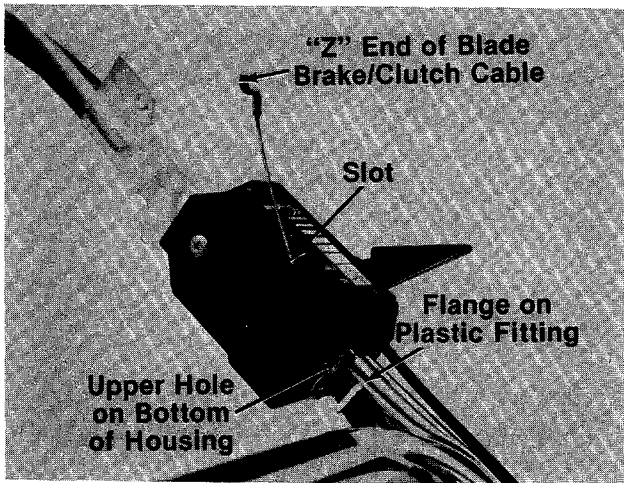


FIGURE 4.

- Route the blade brake/clutch cable under the lower handle. Place end of cable into the upper hole on the bottom of the control housing, and through the slot on the side of the housing as shown. The angle of the flange on the plastic fitting must be positioned downward as shown in figure 4. Be careful not to bend or kink the cable.



The cable must be assembled as shown for proper blade brake/clutch operation.

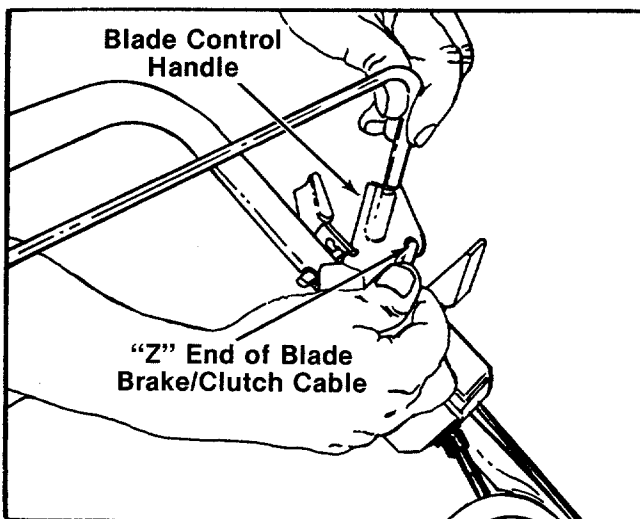


FIGURE 5.

- Snap the plastic fitting on the end of the cable into the control housing.
- Hook the "Z" end of the blade brake/clutch cable into the hole in the blade brake/clutch control handle. See figure 5. If additional slack is needed in order to hook the cable into the handle, proceed as follows.

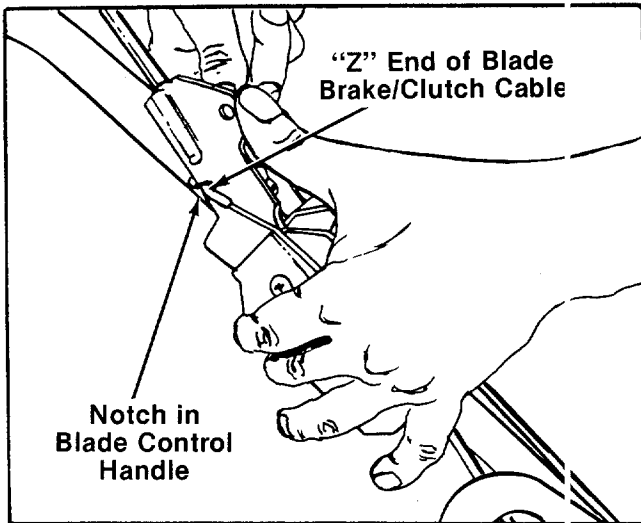


FIGURE 6.

- a. Hook the "Z" end of the cable into notch provided in the blade control handle. See figure 6.
- b. Push release lever (see figure 14), then squeeze blade control handle against upper handle.
- c. Release the blade control handle, unhook the cable from the notch and hook it into the hole in the blade control handle.

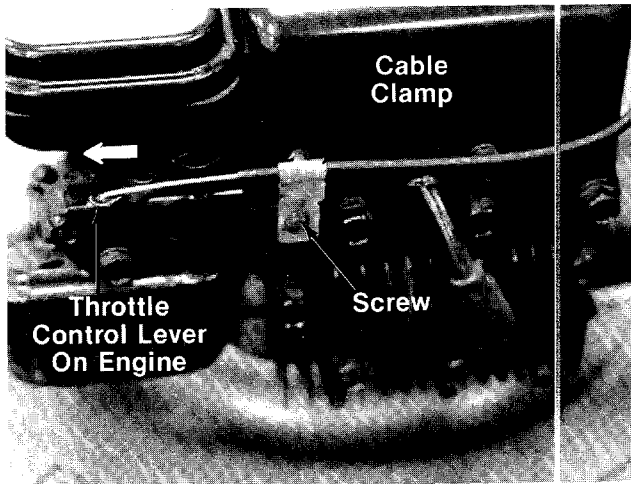


FIGURE 7.

8. Remove the engine shroud if unit is so equipped. Replace it after attaching the throttle control cable to the engine.
9. Place the throttle control lever on the handle in "Fast" position.
10. Push the throttle control lever on the engine to the full open position (as far toward the outside of the unit as it will go) as shown in figure 7.

11. Hook the "Z" end of the throttle control cable into the hole in the control lever on the engine.
12. Remove the screw on the cable clamp shown in figure 7. Slip the control casing under the clamp. With the throttle lever on the engine still in the full open position, replace and tighten the screw to secure the throttle control cable.
13. 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.

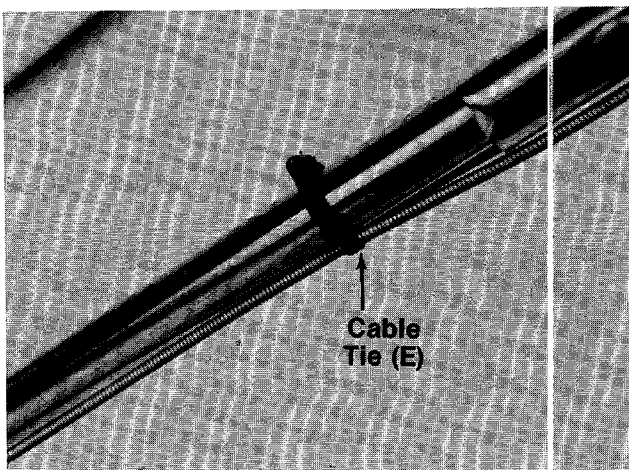


FIGURE 8.

14. Secure throttle control cable and blade brake/clutch cable to upper and lower handles with cable ties (E) provided. See figure 8.
15. Check **all** nuts and bolts for correct tightness.

Grass Catcher Assembly

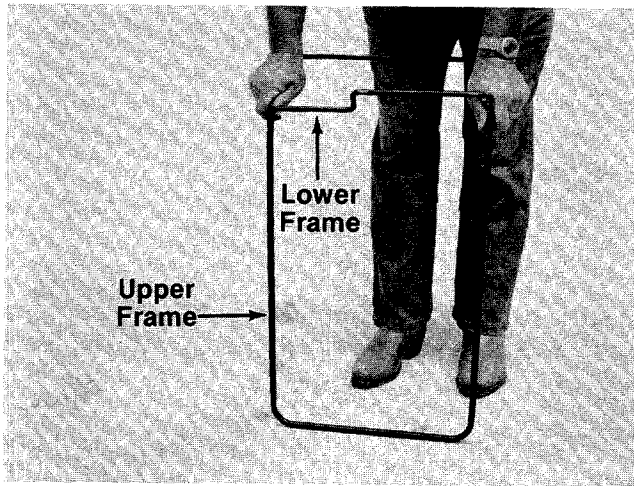


FIGURE 9.

1. Join the upper frame and lower frame assembly as shown in figure 9.

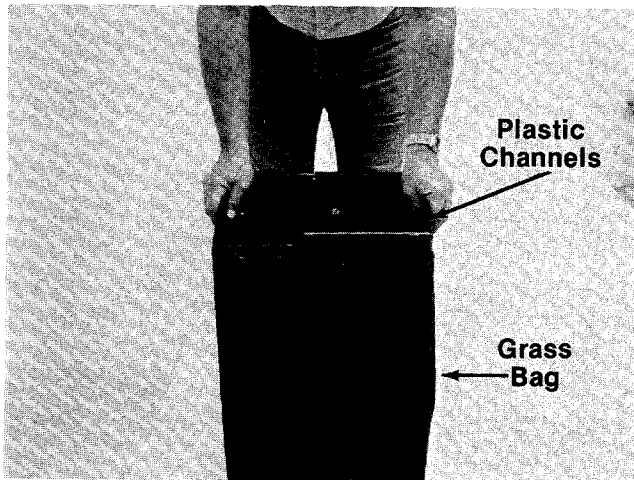


FIGURE 10.

2. Place bag over frame (black plastic side is the bottom of bag). Upper frame goes to the top of bag.
3. Secure bag to frame by slipping plastic channels on bag over frame. See figure 10.

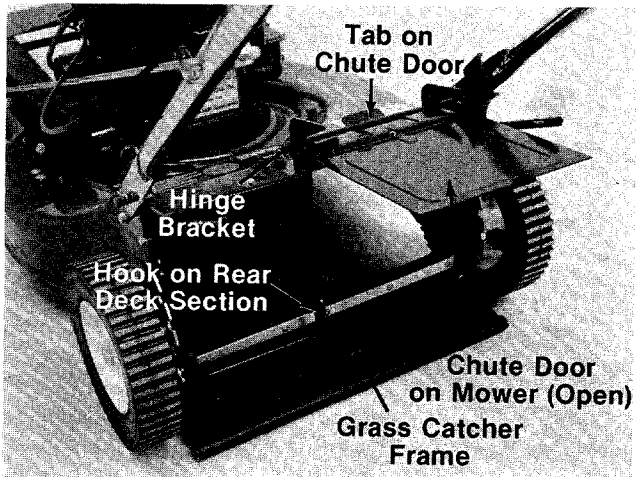


FIGURE 11.

To Attach Bag To Mower



WARNING

DO NOT operate the mower unless the complete grass catcher is properly mounted on the mower.

1. Attach the grass catcher frame to rear of the mower by hooking grass catcher into hook on rear deck section. See figure 11.



Figure 11 is shown with the chute door open for photo clarity only.

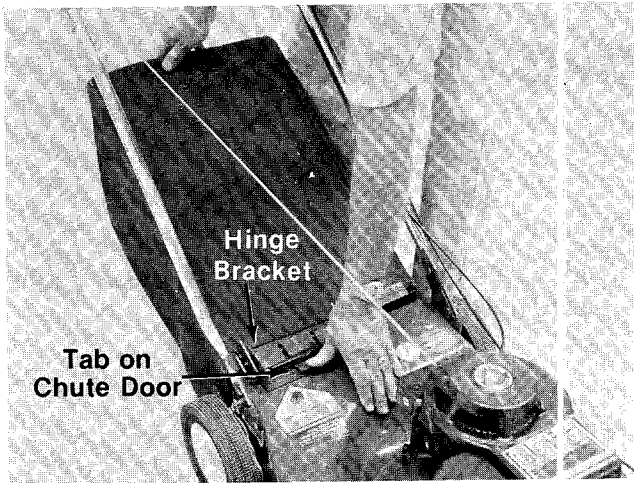


FIGURE 12.

2. Lift the rear of grass catcher up and slip the grass catcher frame into the slots on the hinge bracket. See figures 11 and 12.
3. Push the tab on the chute door. The grass catcher frame will snap into place, secured by the chute door. See figure 12.

← To remove the grass catcher, press the tab on the chute door and slip the grass catcher off the unit. See figure 12.

CONTROLS

THROTTLE CONTROL

The throttle is located on the left side of handle. It controls engine speed. See figure 13.

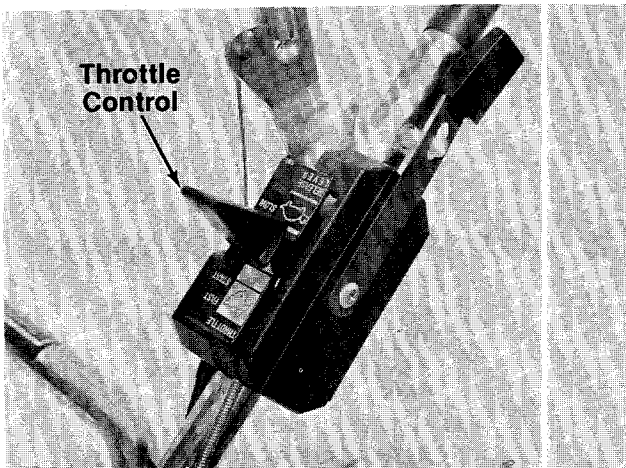


FIGURE 13.
BLADE BRAKE/CLUTCH CONTROL

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

The blade brake/clutch control is located on the upper handle of the mower. The blade brake/clutch handle engages and disengages the blade.

To engage the blade, pull the side release lever away from the unit. See figure 14. Pull the blade brake/clutch control handle against the upper handle. Release side lever.

Release the blade brake/clutch control handle to stop the blade from turning.

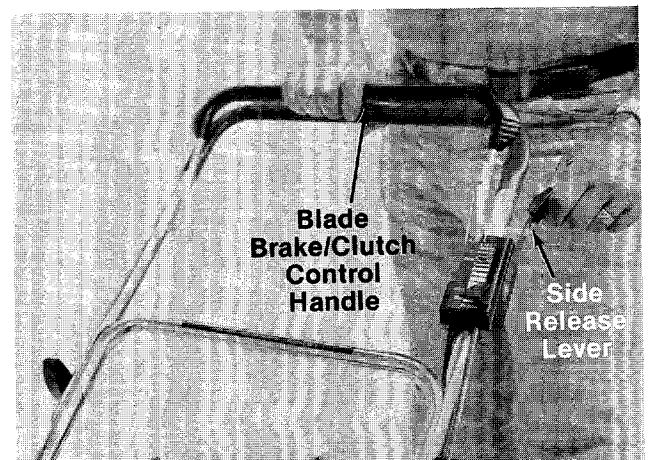


FIGURE 14.

OPERATION

DO NOT OPERATE THIS MOWER UNLESS THE COMPLETE GRASS-CATCHER IS PROPERLY MOUNTED ON THE MOWER.



FIGURE 15.

Keep hands and feet away from the chute area on cutting deck. See figure 15.



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.

BEFORE STARTING

1. Fill sump with oil, as instructed in the separate engine manual packed with your unit.
2. Fill fuel tank, using clean, fresh, lead-free, low-lead or regular grade leaded gasoline. Fill tank completely! **DO NOT MIX OIL WITH GASOLINE.**
3. Attach spark plug wire to spark plug.

START ENGINE

1. Move throttle control lever to "START" position.

2. With the blade brake/clutch handle **released**, crank engine by pulling recoil starter with a quick firm pull. Do not pull out so far that rope stops with a jerk as this will cause rope failure. Do not allow rope and handle to snap back into place.
3. After two or three full firm pulls on recoil, or as soon as engine starts, move throttle control to desired engine speed.

TO STOP ENGINE

1. Move throttle control lever to "STOP" position.
2. Disconnect spark plug wire from spark plug and ground against the engine to prevent accidental starting while equipment is unattended.

TO ENGAGE THE BLADE

1. Start engine as instructed above. Allow the engine to warm up for one minute before attempting to engage the blade.
2. To engage the blade, pull the side release lever away from the unit. Pull the blade brake/clutch control handle down against the upper handle. Release the side lever. See figure 14.



If a warm engine falters or stalls when attempting to engage the blade, refer to Carburetor Adjustment Section of this owner's manual.

3. Release the blade brake/clutch control handle to stop the blade from turning.

USING YOUR ROTARY MOWER



DO NOT operate the mower unless the complete grass catcher is properly mounted on the 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 accidentally thrown by the mower in any direction and cause serious personal injury to the operator and others.

Operate a new engine at intermediate speeds and light load for the first few hours as you would a new automotive engine.

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.

Striking a solid object can cause damage to the blade brake/clutch or to the engine crankshaft. Extensive vibration of the mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

ADJUSTMENTS



CAUTION

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

CUTTING HEIGHT ADJUSTMENT

An adjusting plate and thumb lever at each wheel position provides cutting height adjustment. Each adjusting plate has five holes. Height of cut will be changed when the thumb lever is moved from one hole to another. Simply depress thumb lever towards wheel and move wheel and lever assembly to desired position. All wheels must be placed in the same relative position.

THROTTLE

If adjustment becomes necessary, the throttle control wire assembly can be reset as follows:

1. Loosen, but do not remove, screw securing throttle control wire assembly at engine. Refer to figure 7.
2. Move throttle control lever on handle to "FAST" position.

3. Move control lever on engine to full open position. Retighten screw to secure throttle control wire assembly.

CARBURETOR ADJUSTMENTS



WARNING

If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and blades. 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.



NOTE

If a warm engine falters or stalls when attempting to engage the blade, the carburetor mixture should be adjusted 1/8 turn richer (counter-clockwise). See figure 16.

The carburetor should be adjusted with the air cleaner in place and the blade control handle in the blade disengaged position.

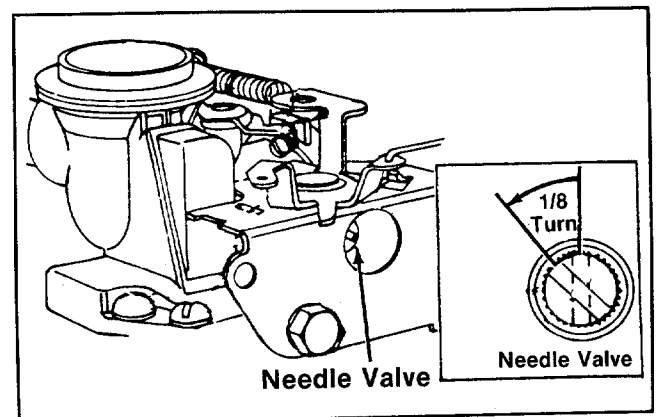


FIGURE 16.

LUBRICATION



IMPORTANT

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

Blade Brake/Clutch—Lubricate the pivot points on the blade brake/clutch handle and the cable at least once a season with light oil. The control must operate freely in both directions.

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—The wheels require no lubrication. However, 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.

MAINTENANCE



WARNING

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



CAUTION

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

CUTTING BLADE

To remove the cutting blade for sharpening or replacement, remove the two hex nuts and lock washers which hold the blade to the blade brake/clutch. See figure 17.

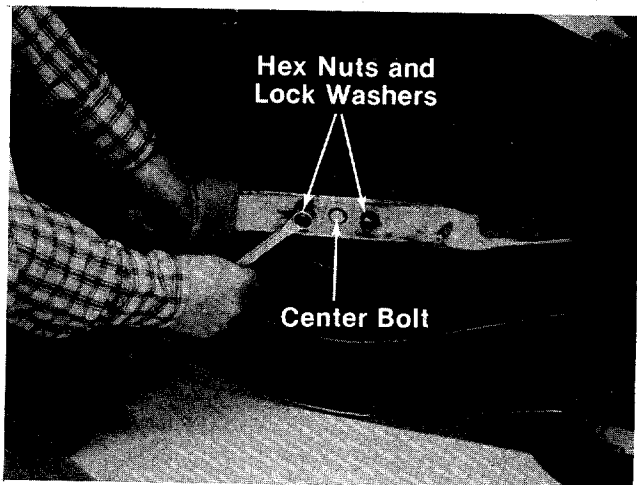


FIGURE 17.

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

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

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

Make certain that the center bolt which secures the blade brake/clutch and the two hex nuts which secure the blade are tightened to between 350 inch pounds (minimum) and 600 inch pounds (maximum).

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 period of use as grass clippings, leaves, dirt and other matter will accumulate. This accumulation of grass clippings, etc., is undesirable as it will invite rust and corrosion and may cause an uneven discharge of grass clippings at the next cutting.

The deck may be cleaned by tilting the mower forward or on its side and scraping clean with a suitable tool or by washing with a stream of water from a garden hose.



CAUTION

Do not direct the stream of water at a hot engine as damage to the engine may result.

ENGINE OIL

Check oil level before starting and after every 5 hours of operation. ADD oil as necessary to keep level to full mark on dipstick. Before removing dipstick, clean area around dipstick to prevent dirt from entering oil fill opening. Engine should be in a level position when checking oil.

Change oil after first 5 hours of operation. Thereafter change every 25 hours. Change oil while engine is warm. Oil may be drained thru oil fill opening by tipping the unit on its side. Oil capacity 1-1/4 pints.

AIR CLEANER

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 air cleaner, refer to the separate engine manual packed with your mower.

SPARK PLUG

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.

BLADE BRAKE/CLUTCH

This unit is equipped with a blade brake/clutch. If for some reason the blade brake/clutch becomes inoperative, it is suggested that all repair work on the blade brake/clutch should be performed by an authorized service dealer. The unit should be inspected by an authorized service dealer if any of the following conditions are noticed.

1. Frayed clutch control cable.
2. Leaking oil seal (oil collection on the floor during mower storage).
3. Extensive vibration of the unit.

Blade Brake/Clutch Removal

1. Disconnect the spark plug wire and ground it against the engine block.
2. Empty fuel tank and drain oil from crankcase.
3. Remove the cable ties which secure control cables to the handle.
4. Disconnect the "Z" fitting on the blade brake/clutch cable from the clutch control handle.
5. Remove one truss machine screw on the inside of the control housing as shown in figure 18.
6. Loosen the truss machine screw on the outside of the control housing until the two halves of control housing can be separated enough for the control cable to be freed. Slide the blade brake/clutch cable out of the control housing.
7. Retighten the truss machine screws on the control housing.

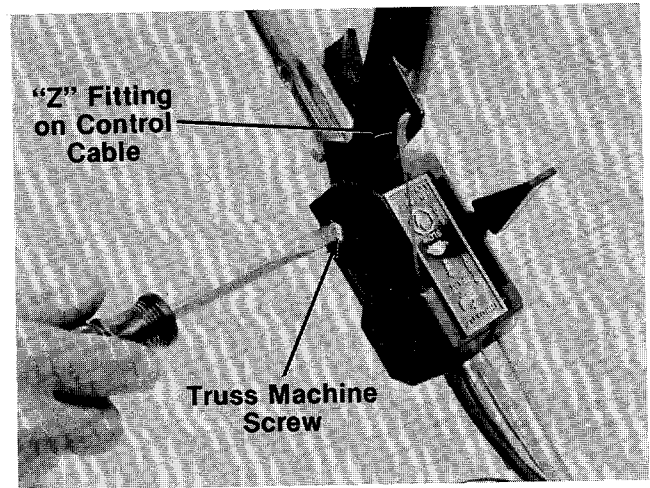


FIGURE 18.

8. Disconnect the throttle control cable from the engine by loosening screw on engine and disconnecting the "Z" fitting. See figure 19.

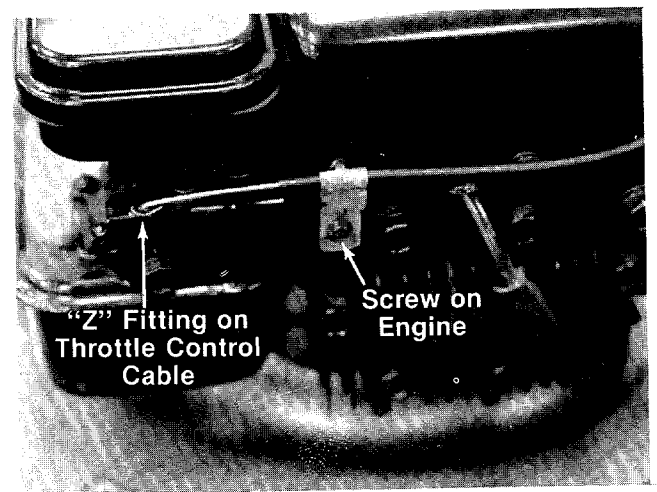


FIGURE 19.

9. Tip the mower on its side. Remove the blade by removing two hex nuts and lock washers. Refer to figure 17.

NOTE

When reassembling, tighten hex nuts to between 350 and 600 in. lbs.

10. Remove the center bolt as follows.
 - a. Insert a screwdriver into the slot provided in the blade brake/clutch housing where the control cable enters housing. See figure 20.

- b. Place a 9/16" wrench on the center bolt. Turn the wrench slowly until the screwdriver catches in a groove provided inside the clutch. The screwdriver will now keep the clutch from turning, and the center bolt and two belleville washers may be removed.



Upon reassembly, be certain to tighten center bolt to between 350 and 600 in. lbs.

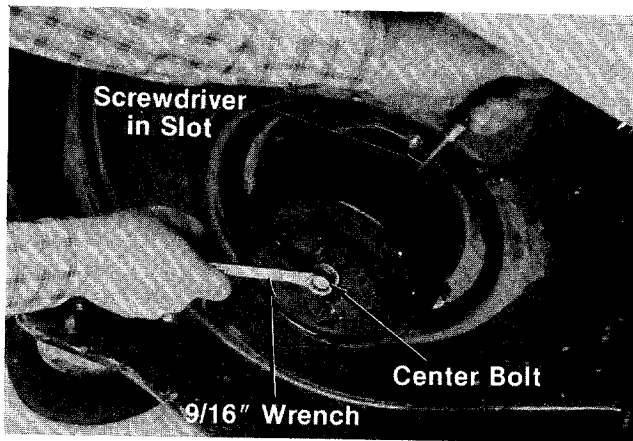


FIGURE 20.

11. Support the engine with one hand. Remove the three self-tapping screws which secure the deck and blade brake/clutch to the engine. A 1/2" socket wrench is required. See figure 21.

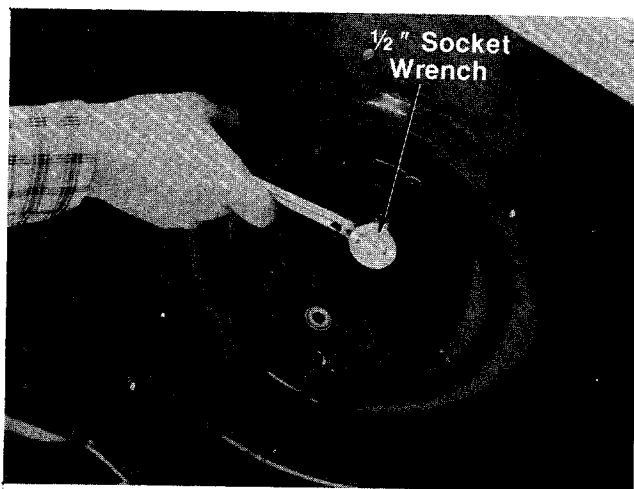


FIGURE 21.

12. Slide the blade brake/clutch cable through the hole in the deck as you lift off the engine and blade brake/clutch. Be careful not to kink control cable.

13. Remove blade brake/clutch from engine crankshaft.

Blade Brake/Clutch Installation

1. Place the new blade brake/clutch on engine crankshaft. Line up holes on blade brake/clutch with mounting holes on engine.
2. Place the two belleville washers onto crankshaft. Cupped side of washers must be against the blade brake/clutch. Secure with hex bolt finger tight only.
3. Place cable through engine mounting hole on deck.
4. Reverse steps 1 through 12 of preceding section for reassembly.

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.



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

HANDLE STORAGE

The handle can be stored in an upright position to take less space. Move hairpin coppers to outer hole on weld pins (see figure 2). Grasp the lower handle at the bottom and pull apart slightly. Tip the handle forward. It will lock in this position. Reverse this procedure to place the handle in the operating position.



Be careful not to kink or pinch blade brake/clutch cable when storing the handle.



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

GRASS CATCHER Model 061 is available as replacement equipment for the mower shown in this manual.



WARNING

1. DO NOT operate the mower unless the complete grass catcher is properly mounted on the mower.
2. DO NOT operate the mower without the protective shield on the rear of the deck in place.



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. 764-0197.

Trouble Shooting Chart

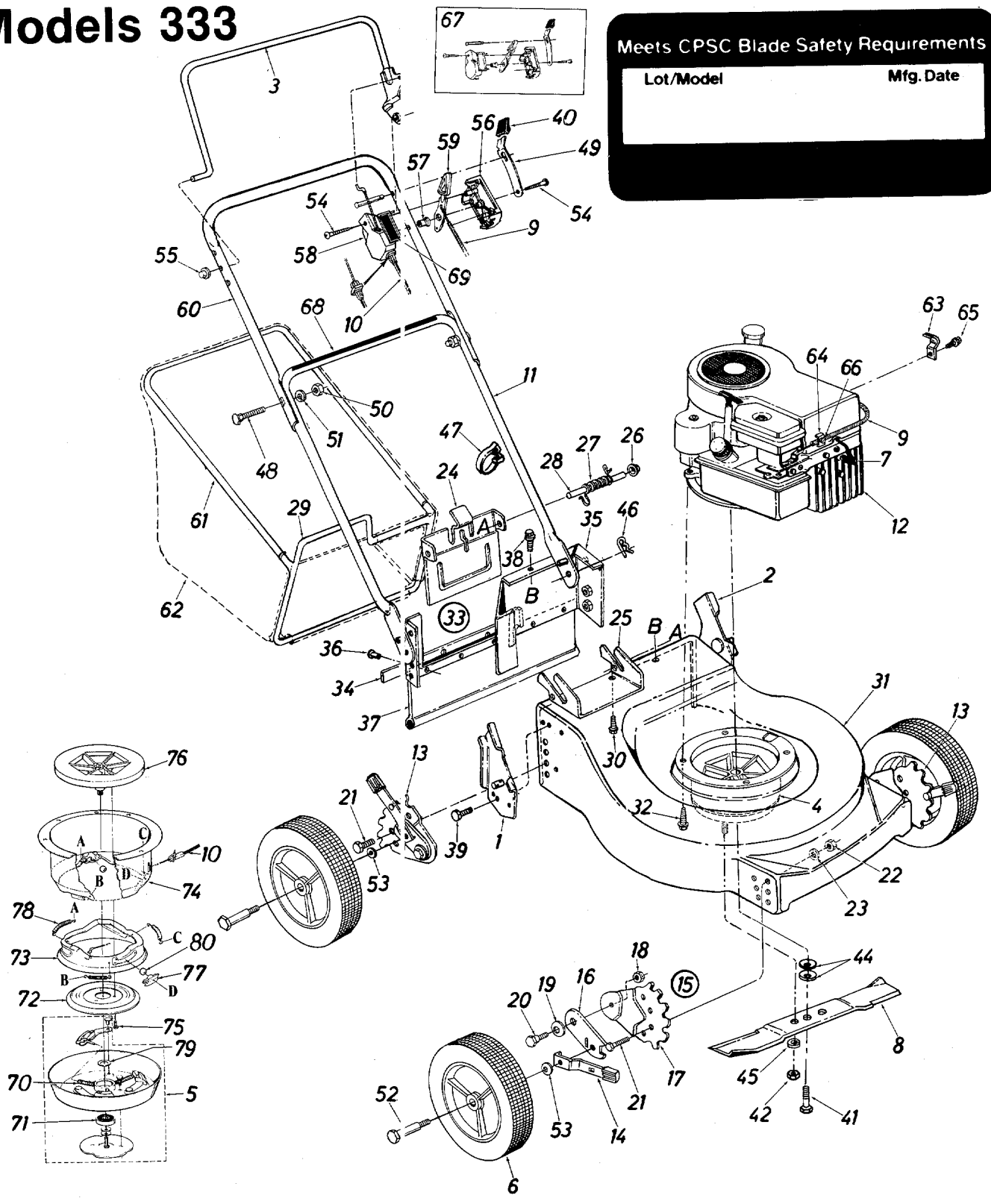
Problem	Cause	Remedy
1 Engine fails to start	<p>A Check fuel tank for gas B Spark plug lead wire disconnected C Throttle control lever not in the starting position D Faulty spark plug</p> <p>E Carburetor improperly adjusted, engine flooded</p> <p>F Old stale gasoline</p>	<p>A Fill tank if empty. B Connect lead wire.</p> <p>C Move throttle lever to start position. D Spark should jump gap between control electrode and side electrode. If spark does not jump, replace the spark plug. E Remove spark plug, dry the plug, crank engine with plug removed, and throttle in off position. Replace spark plug and lead wire and resume starting procedures. F Drain and refill with fresh gasoline.</p>
2 Hard starting or loss of power	<p>A Spark plug wire loose B Carburetor improperly adjusted C Dirty air cleaner</p>	<p>A Connect and tighten spark plug wire. B Adjust carburetor. See separate engine manual. C Clean air cleaner as described in separate engine manual.</p>
3 Operation erratic	<p>A Dirt in gas tank B Dirty air cleaner C Water in fuel supply D Vent in gas cap plugged E Carburetor improperly adjusted</p>	<p>A Remove the dirt and fill tank with fresh gas. B Clean air cleaner as described in separate engine manual. C Drain contaminated fuel and fill tank with fresh gas. D Clear vent or replace gas cap. E Adjust carburetor. See separate engine manual.</p>
4 Occasional skip (hesitates) at high speed	<p>A Carburetor idle speed too slow B Spark plug gap too close C Carburetor idle mixture adjustment improperly set</p>	<p>A Adjust carburetor. See separate engine manual. B Adjust to .030". C Adjust carburetor. See separate engine manual.</p>
5 Idles poorly	<p>A Spark plug fouled, faulty, or gap too wide B Carburetor improperly adjusted C Dirty air cleaner</p>	<p>A Reset gap to .030" or replace spark plug. B Adjust carburetor. See separate engine manual. C Clean air cleaner as described in separate engine manual.</p>
6 Engine overheats	<p>A Carburetor not adjusted properly B Air flow restricted</p> <p>C Engine oil level low</p>	<p>A Adjust carburetor. See separate engine manual. B Remove blower housing and clean as described in separate engine manual. C Fill crankcase with the proper oil.</p>
7 Excessive vibration	<p>A Cutting blade loose or unbalanced B Bent blade</p>	<p>A Tighten blade. Balance blade. B Replace blade.</p>

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

Models 333

Meets CPSC Blade Safety Requirements

Lot/Model	Mfg. Date



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."



NOTE
Specifications subject to change without notice or obligation.

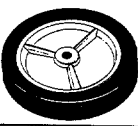

Models 333 PARTS LIST FOR MODEL 333 ROTARY MOWER

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	12296		Handle Brkt. Ass'y.—R.H.		42	712-0328		Hex Nut 3/8-24 Thd.*	
2	12297		Handle Brkt. Ass'y.—L.H.					(Grade 8)	
3	14321		Control Handle Ass'y.—L.H.		44	736-0105		Bell-Wash. 3/8" I.D.	
4	717-0480		Blade Brake/Clutch Ass'y.		45	736-0169		L-Wash. 3/8" I.D.*	
			Comp.		46	714-0104		Internal Cotter Pin 5/16" Dia.	
5	14300		Clutch Blade Housing Ass'y.		47	726-0192		Cable Tie	
6	**		Plastic Wheel		48	710-0671		Curved Carr. Bolt 5/16-18	
7	735-0639		Spark Plug Boot					x 1.38" Lg.	
8	742-0220		20" Blade		49	732-0401		Lockout Spring	
9	746-0472		Throttle Wire—58.0"		50	712-0267		Hex Nut 5/16-18 Thd.*	
10	746-0400		Clutch Cable—46.0"		51	736-0119		L-Wash. 5/16" I.D.*	
11	749-0505		Lower Handle		52	**		Axle Bolt	
12	—		Engine		53	736-0105		Bell-Wash. .400" I.D. x .88"	
13	12321		Height Adjust. Ass'y.—L.H.		54	710-0796		Truss Mach. Scr. #12 x 1.5"	
14	10531		Spring Lever Ass'y. w/Knob		55	726-0135		Push Nut 5/16" Rod	
15	12322		Height Adjust. Ass'y.—R.H.		56	731-0523		Control Panel Half	
16	10619		Pivot Bar		57	731-0524		Control Disc Pin	
17	12323		Index Plate		58	731-0526		Clutch Panel Half	
18	712-0375		Hex Cent. L-Nut 3/8-16 Thd.		59	731-0528		Throttle Control Lever	
19	736-0255		Bell-Wash. .515" I.D. x 1.14"		60	749-0436		Upper Handle	
20	738-0269		Shld. Bolt .500" Dia. x .295"		61	749-0468		Upper Frame—Grass Catcher	
21	710-0216		Hex Bolt 3/8-16 x .75" Lg.*		62	764-0197		Grass Bag	
22	712-0798		Hex Nut 3/8-16 Thd.*		63	12894		Casing Clamp	
23	736-0105		Bell-Wash. .40" I.D. x .88		64	751-0369		Casing Clamp	
			O.D.		65	710-0429		Hex B-Tap Scr. #10 x	
24	15946		Chute Door	N				.38" Lg.	
25	14418		Hinge Brkt.		66	710-0227		Hex Wash. Hd. AB-Tap Scr.	
26	726-0106		Push Cap 1/4" Rod					#8 x .38" Lg.	
27	732-0406		Torsion Spring		67	753-0361		Control Housing Comp.	
28	747-0375		Hinge Rod		68	777-3453		Instruction Label—Handle	
29	14447		Lower Frame Ass'y.—Grass		69	777-3456		Control Label—Throttle	
			Catcher		70	732-0396		Compression Spring .35"	
30	710-0599		Hex Wash. Hd. S-Tap Scr.					O.D. x 2.00" Lg.	
			1/4-20 x .50" Lg.		71	741-0124		Ball Brg. .669" I.D. x 1.574"	
31	15681 —462		20" Deck Ass'y.					O.D.	
32	710-0654		Hex Wash. Hd. TT-Tap Scr.		72	14304		Clutching Cone	
			3/8-16 x 1.0" Lg.		73	14305		Brake Cup Cone	
33	15684		Rear Deck Section Ass'y.		74	14306		Clutch Housing	
34	14419		Reinforcement Strap		75	710-0875		Hex Tap L-Scr. 1/4-20 x .75"	
35	15685		Rear Deck Section		76	719-0256		Fan Adapter	
36	728-0131		Rivet		77	731-0520		Ball Block	
37	731-0592		Rear Flap Ass'y.		78	732-0397		Extension Spring .35" O.D. x	
38	710-0599		Hex Wash. Hd. S-Tap Scr.					1.75" Lg.	
			1/4-20 x .50" Lg.		79	736-0333		FI-Wash. .690" I.D. x 1.060"	
39	710-0776		Hex Wash. Hd. AB-Tap Scr.					O.D.	
			1/4 x .62" Lg.		80	741-0326		Steel Ball .500" Dia.	
40	720-0190		Spring Lever Knob		—	731-0659		Engine Shroud (Not Shown)	
41	710-0818		Hex Bolt 3/8-24 x 2.0" Lg.		—	194-061-000		Grass Catcher—Comp.	
			(Grade 8)		—	8333-000-4		Hardware Pack	

*For faster service obtain standard nuts, bolts, and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

(462—Red Flake)
When ordering parts if color or finish is important, use the appropriate color code shown at left. (e.g. Red Flake Finish—12191 (462).)

**WHEEL CHART (8 x 1.75)

Plastic Rim		Steel Rim						
		Wheel Assembly			Bearing	Axle Bolt	†Hub Caps (Optional)	
		Smooth	Waffle Tread	Twinline Tread			Color	Part No.
		734-0843	734-0894	734-0661	Plastic—741-0262	738-0102	Red	731-0124
		734-0845	734-0645	734-0643	3/8" Ball—741-0267	710-0427	Orange	731-0254
734-0841	734-1162				1/2" Ball—741-0484		Black	731-0354
					Spacer—750-0434		Gray	731-0355

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 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	NORTH CAROLINA	GOLDSBORO
Auto Electric & Carburetor Co.	2625 4th Ave. S. 35233	Smith Hardware Co.	515 N. George St. 27530
ARKANSAS	NORTH LITTLE ROCK	Dixie Sales Company	GREENSBORO
Sutton's Lawn Mower Shop	5301 Roundtop Drive Box 368, Rt. 4 72117	Stebe's Mid-State Mower Supply	335 N. Green 27402
CALIFORNIA	PORTERVILLE	OHIO	CARROLL
Billious	75 North D Street 93257	Steb's Mid-State Mower Supply	Box 366, 71 High St. 43112
COLORADO	DENVER	Bleckrie, Inc.	CLEVELAND
Spitzer Industrial Products Co.	6601 N. Washington St. 80229	National Central	7900 Lorain Ave. 44102
FLORIDA	JACKSONVILLE	Burton Supply Co.	WADSWORTH
Radco Distributors	4909 Victor St. Box 5459 32207	OKLAHOMA	YOUNGSTOWN
Small Eng. Dist.	OPA LOCKA	Victory Motors, Inc.	1301 Logan Ave. Box 929 44501
GEORGIA	2351 N.W. 147th St. 33054	OREGON	MUSKOGEE
East Point Cycle & Key	EAST POINT	Kenton Supply Co.	605 S. Cherokee 74401
ILLINOIS	2834 Church St. 30344	PENNSYLVANIA	PORTLAND
Keen Edge Co.	LYONS	EECO Inc.	8216 N. Denver Ave. 97217
INDIANA	8615 Ogden Ave. 60534	Thompson Rubber Co.	HARRISBURG
Parts & Sales Inc.	ELKHART	Bluemont Co.	4021 N. 6th St. 17110
IOWA	2101 Industrial Pkw. 46516	Frank Roberts & Sons	PHILADELPHIA
Power Lawn & Garden Equip.	DUBUQUE	Scranton Auto Ignition Co.	5222-24 N. Fifth St. 19120
2551 J.F. Kennedy 52001	NEW ORLEANS	TENNESSEE	PITTSBURGH
LOUISIANA	8330 Earhart Blvd. 70118	Master Repair Service	11125 Frankstown Rd. 15235
Suhren Engine Co.	TAKOMA PARK	American Sales & Service, Inc.	PUNXSUTAWNEY
MARYLAND	6867 New Hampshire Ave. 20912	Marr Brothers, Inc.	R.D. 2 15767
Center Supply Co.	SPRINGFIELD	TEXAS	SCRANTON
MASSACHUSETTS	300 Birnie Ave. 01107	Marr Brothers, Inc.	1133-35 Wyoming Ave. 18509
Morton B. Collins Co.	LANSING	KNOXVILLE	2000 Western Ave. 37921
MICHIGAN	2500 S. Pennsylvania 48910	MEMPHIS	3035-43 Bellbrook 381
Lorenz Service Co.	MOUNT CLEMENS	DALLAS	423 E. Jefferson 75203
Power Equipment Dist.	340 Hubbard 48043	FORT WORTH	1702 N. Sylvania 76111
MINNESOTA	HOPKINS	Woodson Sales Corp.	HOUSTON
Hance Distributing Inc.	420 Excelsior Ave. N.W. 55343	Bullard Supply Co.	2409 Commerce St. 77003
MISSISSIPPI	BILOXI	Engine House Inc.	SAN ANTONIO
Biloxi Sales & Service, Inc.	506 Caillavet St. 39533	A-1 Engine & Mower Co.	8610 Botts Lane P.O. Box 17867 78217
MISSOURI	KANSAS CITY	UTAH	SALT LAKE CITY
Automotive Equip. Service	3117 Holmes St. 64109	RBI Corp.	439 E. 900 So. 84111
Ross-Frazier Supply Co.	ST. JOSEPH	WASHINGTON	ASHLAND
Henzler, Inc.	8th and Monterey 64503	Bailey's Inc.	101 Cedar Ridge Dr. 23005
NEW JERSEY	ST. LOUIS	WISCONSIN	SEATTLE
Lawnmower Parts Inc.	2015 Lemay Ferry Fd. 63125	Automotive Supply Co.	1414 14th Ave. 98122
NEW MEXICO	BELLMAWR	CHILTON	APPLETON
Spitzer Eng. & Parts	717 Creek Rd. 08030	Horst Dist.	123 S. Linwood Ave. P.O. Box 798 54911
NEW YORK	ALBUQUERQUE		SCHOHARIE
Gamble Dist., Inc.	1023 Third Ave. N.V. 87103		Rt. 30 P.O. Box 527 12157
Red Fox Parts Dist.	CARTHAGE		
	West End Ave. 13619		
	SCHOHARIE		
	Rt. 30 P.O. Box 527 12157		

WARRANTY PARTS AND SERVICE POLICY

(0783)

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 unimpaired and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

1. Replacement of Missing Parts on new equipment.
2. Replacement of Defective Parts within the warranty period.
3. Repair of Defects within the warranty period.

All claims MUST be substantiated with the following information:

1. Model Number of unit involved.
2. Date unit was purchased or first put into service.
3. Date of failure.
4. Nature of failure.