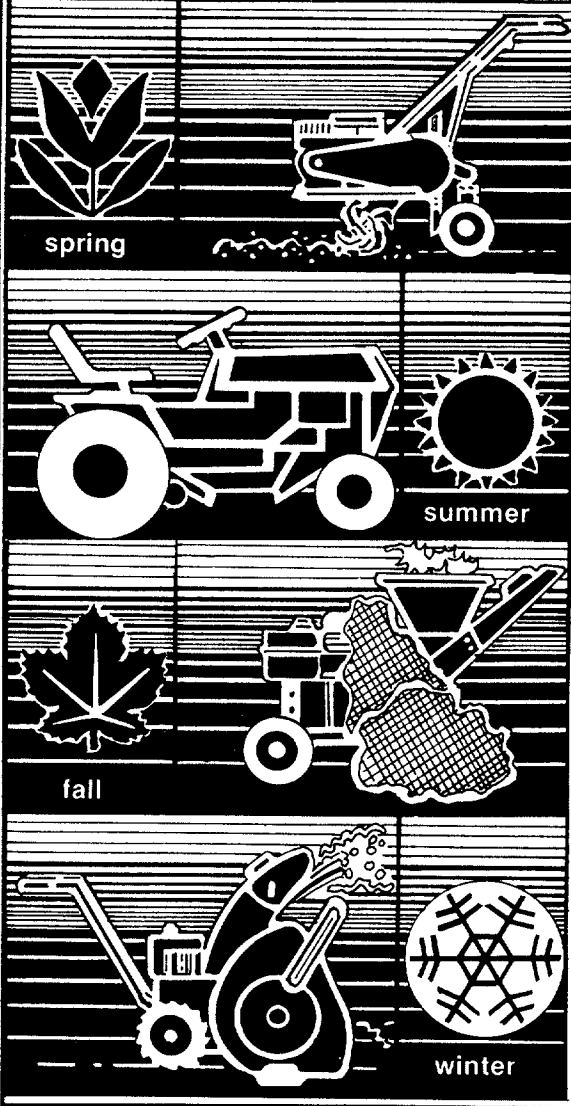


OWNER'S GUIDE

OUTDOOR POWER EQUIPMENT
for all seasons



21" REAR DISCHARGE ROTARY MOWER

Model Number
125-320-000
125-322-000

Important:
Read Safety Rules and
Instructions Carefully

Thank you for purchasing
an American-built product.

INDEX

Safe Operation Practices	3	Maintenance	12
Assembly	4	Off-Season Storage	14
Controls	9	Illustrated Parts	16, 18
Operation	10	Repair Parts List	17, 18
Adjustments	11	Trouble Shooting Chart	19
Lubrication	12	Parts Information	Back Cover



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, 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.



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 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. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
5. 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 over-speed 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 with the chute door open, unless the complete grass catcher is properly mounted on the mower.

MAINTENANCE AND STORAGE

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

NOTE

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

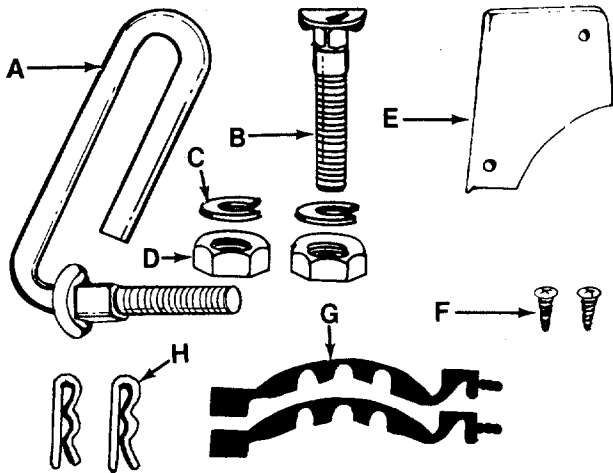


FIGURE 1.

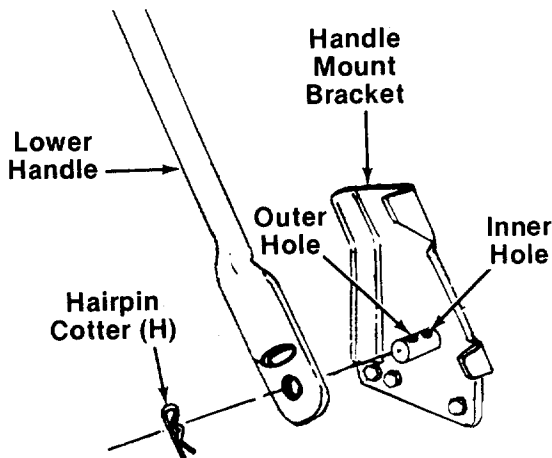


FIGURE 2.

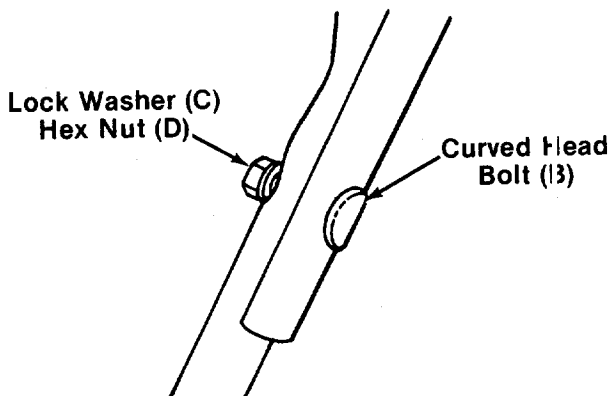


FIGURE 3.

ASSEMBLY INSTRUCTIONS

NOTE

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

Contents of hardware pack: (See figure 1)

- A (1) Rope Guide Bolt
- B (1) Curved Head Carriage Bolt
- C (2) Lock Washers 5/16" I.D.
- D (2) Hex Nuts 5/16-18 Thread
- E (1) Plastic Cap
- F (2) Phillips Head Screws
- G (2) Cable Ties
- H (2) Hairpin Cotter
- I (2) Front Hub Caps (Optional)
- J (2) Plastic Plugs (Not Shown)

1. Remove lawn mower and loose parts from carton. Make certain all parts and literature have been removed from the carton before the carton is discarded.
2. Extend all the control cables and place on the floor. Be careful not to bend or kink control cables.
3. Attach the lower handle by placing the bottom holes in the lower handle over the weld pins on the handle mount brackets. Make certain the instruction label on the lower handle can be read from the operating position. Secure with hairpin cotters (H) in inner holes on weld pins. See figure 2.

NOTE

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

NOTE

It may be necessary to bend the ends of the lower handle inward slightly to obtain a tight fit against the handle mount brackets.

4. Place the upper handle in position over the lower handle. The control housing must be on the left hand side of the handle. Secure the left hand side of upper handle using the curved head bolt (B), lock washer (C) and hex nut (D) as shown in figure 3.

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.

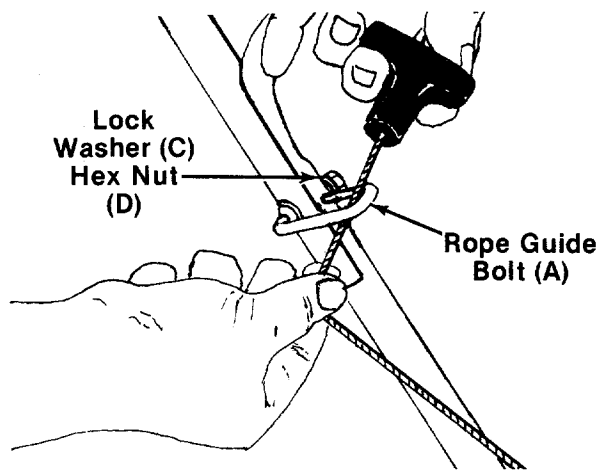


FIGURE 4.

5. Insert the rope guide bolt (A) through the right hand side of upper and lower handle.
6. The starter rope is wound around the starter handle. Maintain the tension on the rope as you unwind it.
7. Slip the starter rope into the rope guide bolt as shown in figure 4. Secure the rope guide bolt with lock washer (C) and hex nut (D). If more slack is needed in the starter rope, disconnect and ground the spark plug wire. Depress the blade control handle and pull additional rope out from the engine.

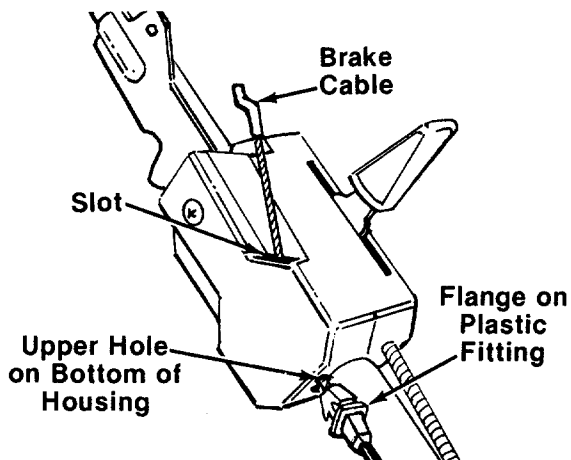


FIGURE 5.

8. The brake cable is attached to the engine, and has a "Z" fitting on the loose end. Route the brake cable under 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 flange on the plastic fitting must be positioned downward as shown in figure 5. Be careful not to bend or kink the cable.



WARNING

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

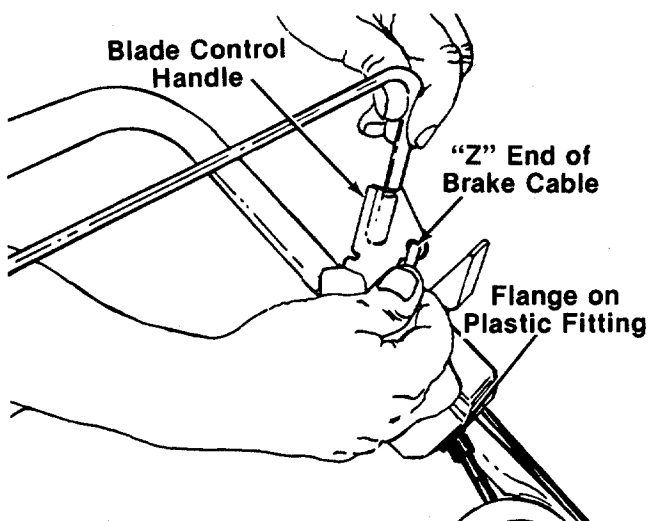


FIGURE 6.

9. Snap the plastic fitting on the end of the cable into the control housing. Hook the "Z" end of the brake cable into the hole in the blade control handle. See figure 6. If additional slack is needed in order to hook the cable into the handle, proceed as follows.

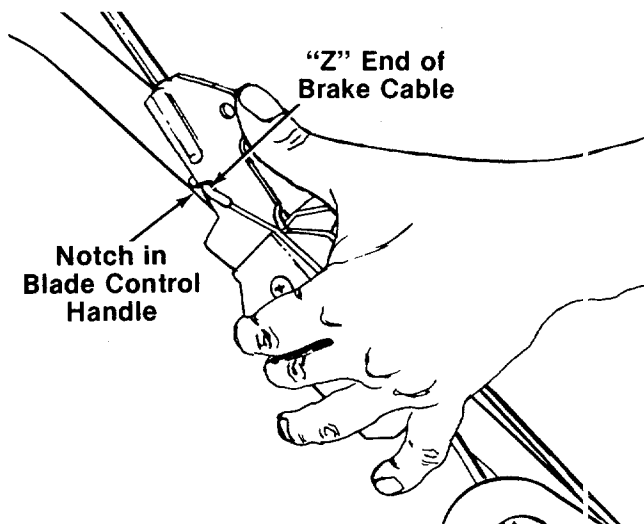


FIGURE 7.

- a. Hook the "Z" end of the cable into notch provided in the blade control handle. See figure 7.
- b. 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.

10. Place the throttle control lever on the handle in "Fast" position.
11. 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 8.
12. The throttle control cable is attached to the upper handle. Hook the "Z" end of the throttle control cable into the hole in the control lever on the engine.

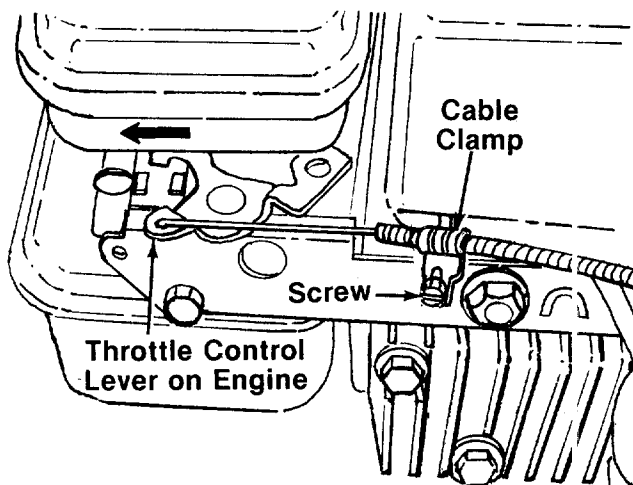


FIGURE 8.

NOTE

If there are two holes in the throttle control lever on the engine, hook the throttle control cable into the outside hole.

13. Remove the screw on the cable clamp shown in figure 8. 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.
14. 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.

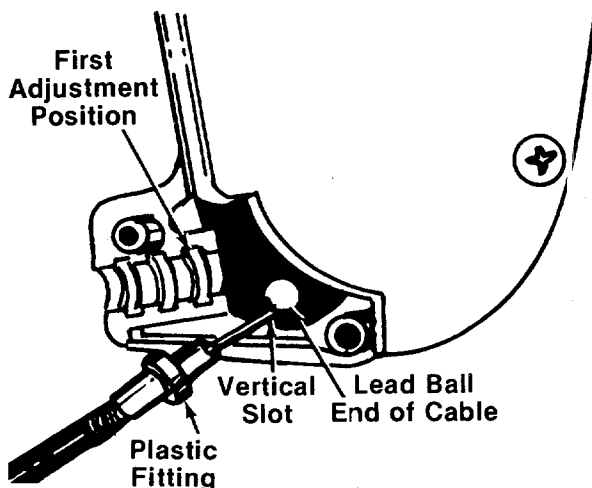


FIGURE 9.

15. The drive clutch control cable is attached to the deck. Attach the cable to the lever in the clutch control housing, located in the middle of the upper handle, as follows.
 - a. Place the lead ball end of the cable into the fitting provided in the end of the clutch control lever. Slip the braided wire into the vertical slot as shown in figure 9.

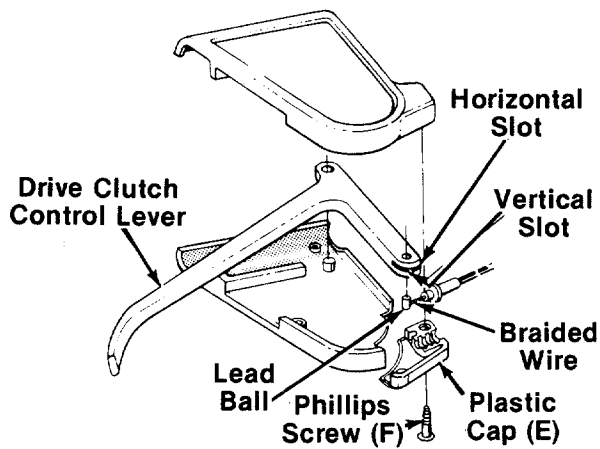


FIGURE 10.

- b. Slide the braided wire around in the horizontal slot. See figure 10.
- c. Place the plastic fitting on the control cable into the first adjustment position in the clutch control housing. See figure 9.
- d. Secure the plastic cap (E) to the clutch control housing using the two Phillips head screws (F). See figure 10.



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

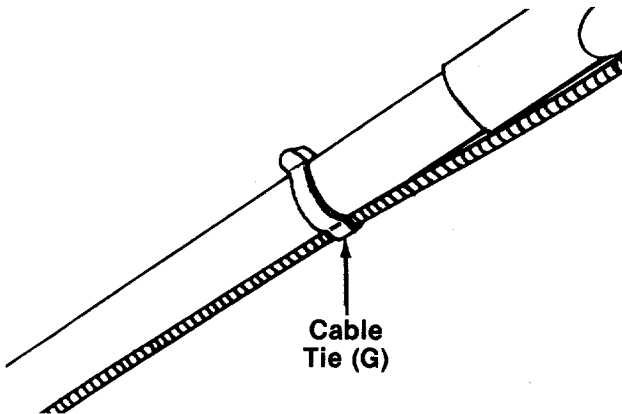


FIGURE 11.

- 16. Secure control cables to upper and lower handles with cable ties (G). See figure 11.
- 17. Insert plastic plug (P) into hole in the top rear of the deck by slipping one end of plug into hole, then pressing down on the other end of plug.
- 18. Check all nuts and bolts for correct tightness.

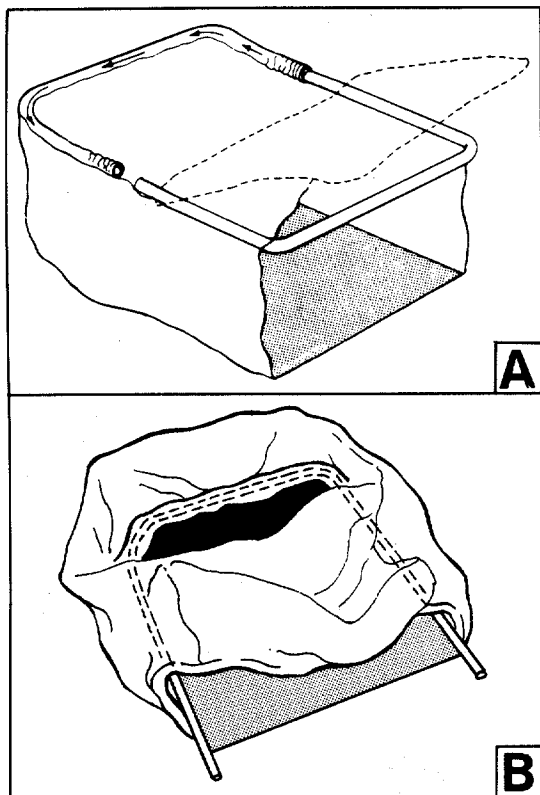


FIGURE 12—Bag with Flip Top Opening.

Grass Catcher Assembly

There are two different types of grass bags, bags with and without flip top openings. Follow the instructions which pertain to your unit.

- 1. Grass Bags with Flip Top Opening:
 - a. Attach bag to rear frame by inserting one end of frame into pocket from inside bag. See figure 12A.
 - b. Thread all material on one side of frame before working it around the frame.
 - c. After threading, both ends of frame should be inside the bag. See figure 12B.

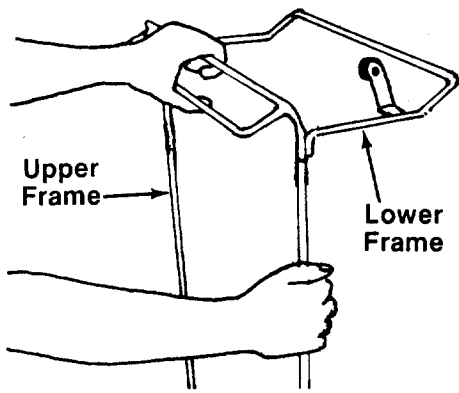


FIGURE 13.

2. Join the upper frame and lower frame assembly as shown in figure 13.

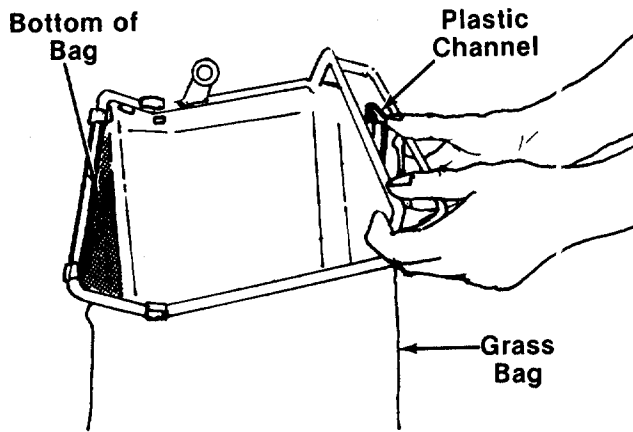


FIGURE 14.

3. Grass Bags without Flip Top Opening: Place bag over frame (black plastic side is the bottom of bag). Upper frame goes to the top of bag.
4. Secure bag to frame by slipping plastic channels on bag over frame. See figure 14.
5. Grass Bags with Flip Top Opening: Close top of bag by stretching loose material over the end of the frame.



WARNING
Never operate the mower with the bag open.

To Attach Bag To Mower



DO NOT operate the mower with the chute door open unless the complete grass catcher is properly mounted on the mower.

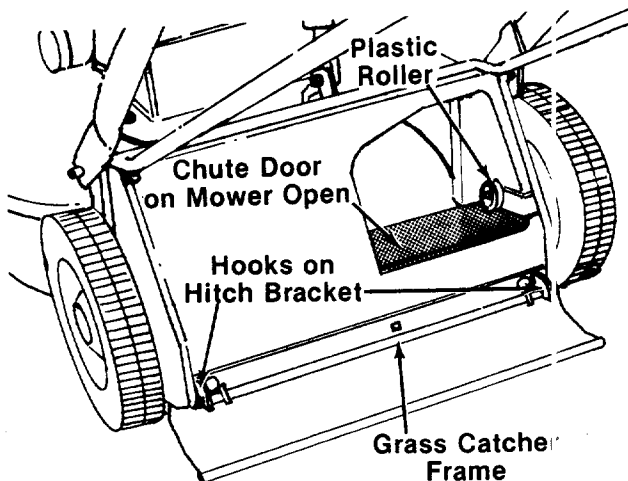
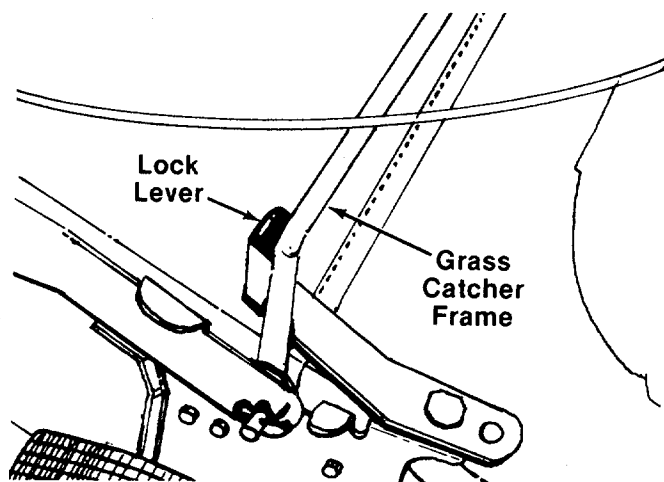


FIGURE 15.

1. Attach the grass catcher frame to grass catcher hitch bracket on rear of the mower by hooking grass catcher into hooks on grass catcher hitch bracket. See figure 15.
2. Lift the rear of grass catcher up. The roller on the grass catcher will push the chute door on the mower open. See figure 15.



NOTE
Figure 15 is shown with the chute door open for clarity only.



The grass catcher frame will snap into place, secured by the lock lever. See figure 16.

To remove the grass catcher, unhook the lock lever and slip the grass catcher off the unit. See figure 16.

FIGURE 16.

CONTROLS

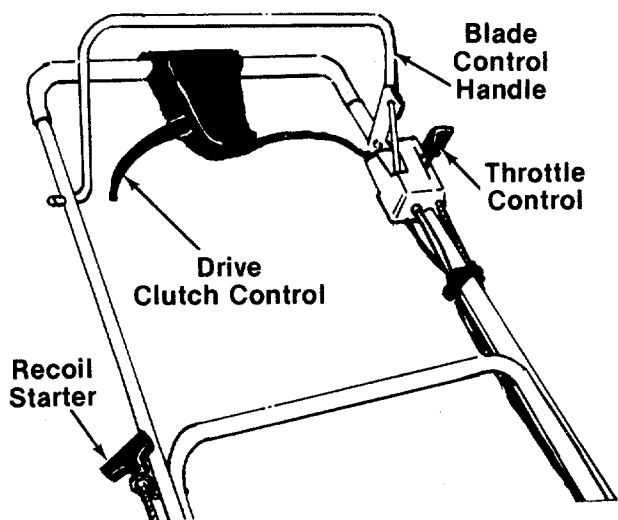


FIGURE 17.

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



The blade will be rotating whenever the engine is running.

THROTTLE CONTROL

The throttle control is located on the left side of the upper handle. It is used to regulate the engine speed. The engine should be started with the engine in the FAST or START position.



The throttle control cannot be used to stop the engine.

DRIVE CLUTCH CONTROL

Squeezing the drive clutch control engages the drive mechanism to the rear wheels. Releasing the clutch control stops the rear wheels from driving. Release the drive clutch control to slow down when negotiating an obstacle, making a turn or stopping. See figure 17.

RECOIL STARTER

The recoil starter handle is attached to the handle. See figure 17. Stand behind the unit in the operating position to start the unit.

OPERATION



FIGURE 18.

Keep hands and feet away from the chute area on cutting deck. See figure 18.



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.

BEFORE STARTING

1. Before operating the unit for the first time, lubricate all the bronze bearings on the drive shaft. The same oil which is used for the engine may be used for this.
2. Fill sump with oil as instructed in the separate engine manual packed with your unit.
3. Fill fuel tank, using clean, fresh, lead-free, low-lead or regular grade leaded gasoline. Fill tank completely!
DO NOT MIX OIL WITH GASOLINE.
4. Attach spark plug wire to spark plug.
5. Before each use, check for proper drive clutch operation by performing the following before starting the engine:

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

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

TO START ENGINE AND ENGAGE BLADE



When starting the unit for the first time, face the mower against a solid object such as a wall, fence, etc. Start the unit, and if it shows any signs of motion with the drive clutch control disengaged, shut the engine off immediately. Check the position of the drive clutch control cable. The plastic fitting must be assembled in the first adjustment position inside the housing, all the way to the right, as shown in figure 9.

1. Move the throttle control lever to FAST or START position.
2. Standing behind the unit, depress the blade control handle and hold it against the upper handle.
3. Grasp the recoil starter handle as shown and pull up rapidly. Return it slowly to the rope guide bolt.
4. After engine starts, move throttle control to desired engine speed.

TO STOP ENGINE AND BLADE

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



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



DO NOT operate the mower with the chute door open 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. 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.

DRIVE CLUTCH CONTROL ADJUSTMENT

If the unit does not self-propel with the drive clutch control engaged, remove the plastic cap from beneath the drive clutch control housing. Move the plastic fitting on the control cable to the next adjustment position on the left. Reassemble the plastic cap and retest. See figure 19.

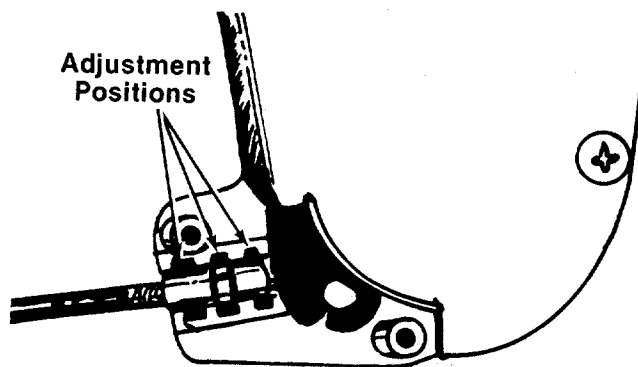


FIGURE 19.

CUTTING HEIGHT ADJUSTMENT

An adjusting plate and thumb lever at each wheel position provides cutting height adjustment. Each adjusting plate has nine height 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 20.

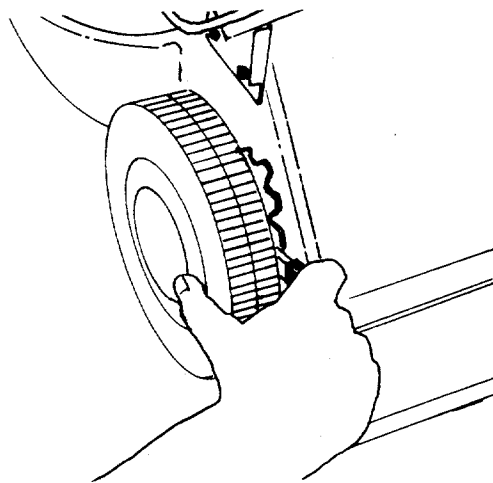


FIGURE 20.

Cutting height will be raised as front levers are moved to the front, and rear levers are lowered. Cutting height will be lowered as front levers are moved to the rear, and rear levers are raised. All wheels must be placed in the same relative position.

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

THROTTLE

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

1. Loosen, but do not remove, the screw securing throttle control wire assembly at engine. See figure 8.

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



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

Minor carburetor adjustments may be required to compensate for differences in fuel, temperature, altitude and load.

To adjust carburetor, refer to the separate engine manual packed with your mower.

LUBRICATION



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

Blade Control—Lubricate the pivot points on the blade control handle and the brake cable at least once a season with light oil. See figure 21. The blade control must operate freely in both directions.

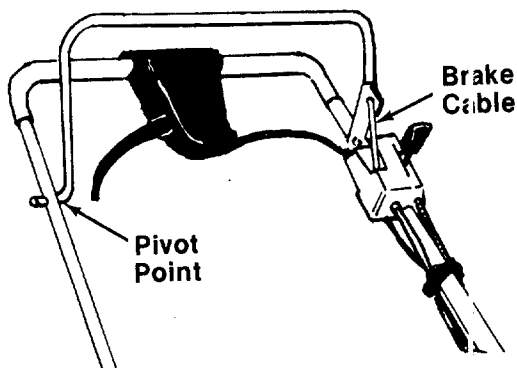


FIGURE 21.

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—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.

Bronze Bearings—Periodically lubricate all bronze bearings with a few drops of light oil to minimize friction.

MAINTENANCE



NOTE

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

CUTTING BLADE

A. Removal for Sharpening or Replacement



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

Remove the large bolt and lock washer which holds the blade and adapter to the engine crankshaft. Remove the blade and adapter from the crankshaft.

If the blade or blade adapter needs replacing, remove the two small bolts, lock washers and nuts which hold the blade to the adapter.



CAUTION

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

B. Sharpening

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

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

It is recommended that the blade always be removed from the adapter for the best test of balance. The blade can be tested by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly.

C. Reassembly

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

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

Blade Mounting Torque

3/8" Dia. Bolt 375 in. lb. min., 450 in. lb. max.

5/16" Dia. Bolt 150 in. lb. min., 250 in. lb. max.

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

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.

Pay particular attention to the area of the belt cover, belt and idler pulley. Grass may accumulate in this area and must be cleaned out periodically to prevent possible problems with the clutch engagement.

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.



NOTE

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 engine 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 tube. 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 drain on bottom of the engine. 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 the air cleaner, refer to the separate engine manual packed with your unit.

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.

BELT REPLACEMENT (See Figure 22)



Always stop engine and disconnect spark plug wire before performing any repairs or maintenance on the mower.

1. Remove the drive pinion cover by removing three hex self-tapping screws. A 3/8" wrench is required.
2. Remove both tension springs. See figure 22.
3. Using a screwdriver, remove the E-rings and pinions on both wheels.
4. Remove the shoulder bolt, lock washers and nut on the belt cover.
5. Unhook the belt from the idler, and slide the belt cover to the left.
6. Unhook the belt from the pulleys.
7. Remove the shoulder bolt, lock washer and nut from the cover support bracket.
8. Remove belt and reassemble in reverse order with a new belt.

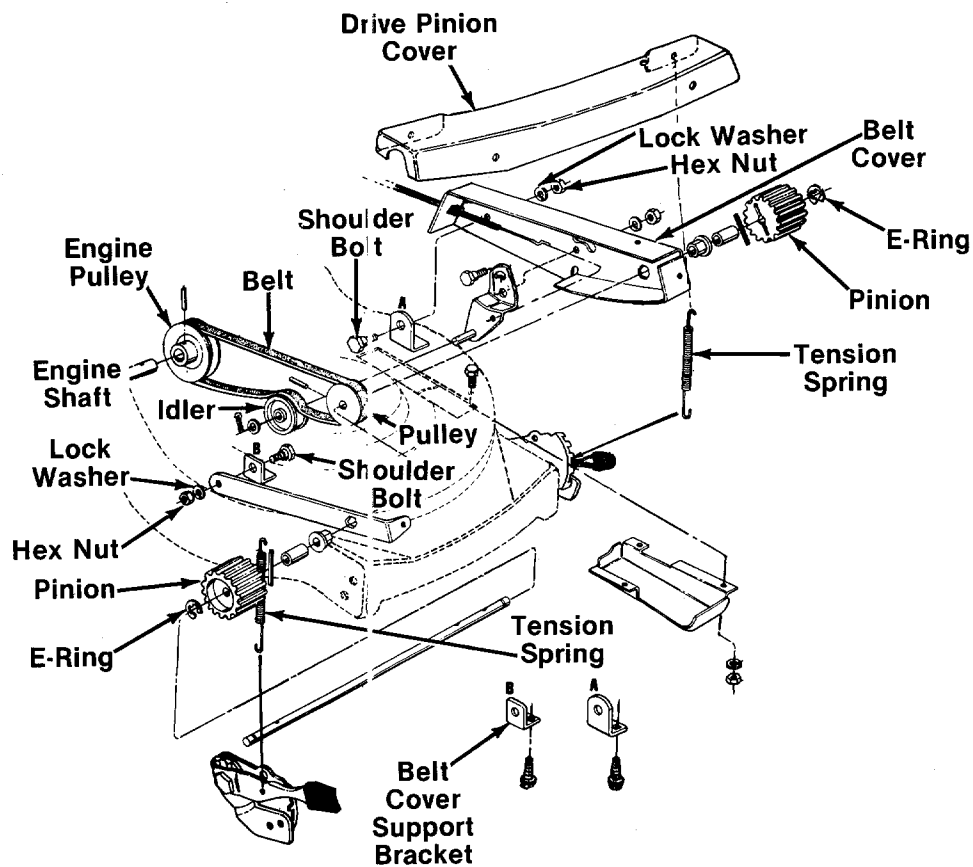


FIGURE 22.

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 cables and all moving parts.

HANDLE STORAGE

The handle may be placed in an upright position for storage.

Move hairpin cotters to outer hole on weld pins. See figure 2. Press outward on the bottom of the lower handle and push forward. The handle will lock in this position.

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

NOTE

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

GRASS CATCHER Model 028 is available as replacement equipment for the mower shown in this manual.



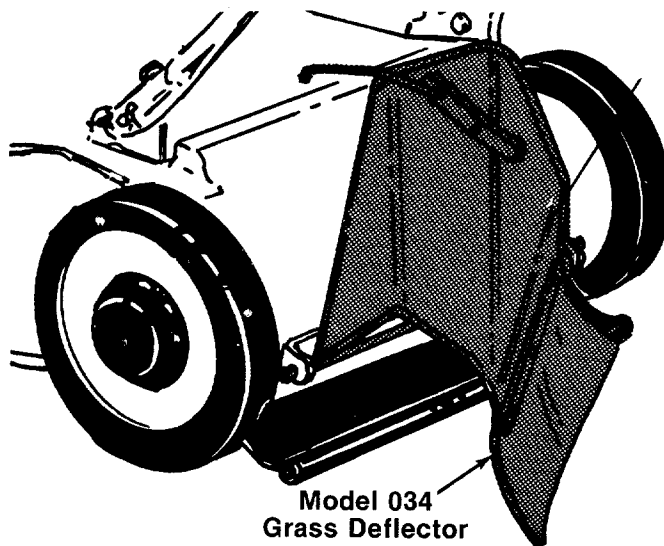
WARNING

1. DO NOT operate the mower with the chute door open 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.

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. 764-0171 (without Flip Top) or 764-0170 (with Flip Top).



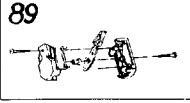
Grass Deflector model 195-034-000 is available as optional equipment.

Model 320 Model 322

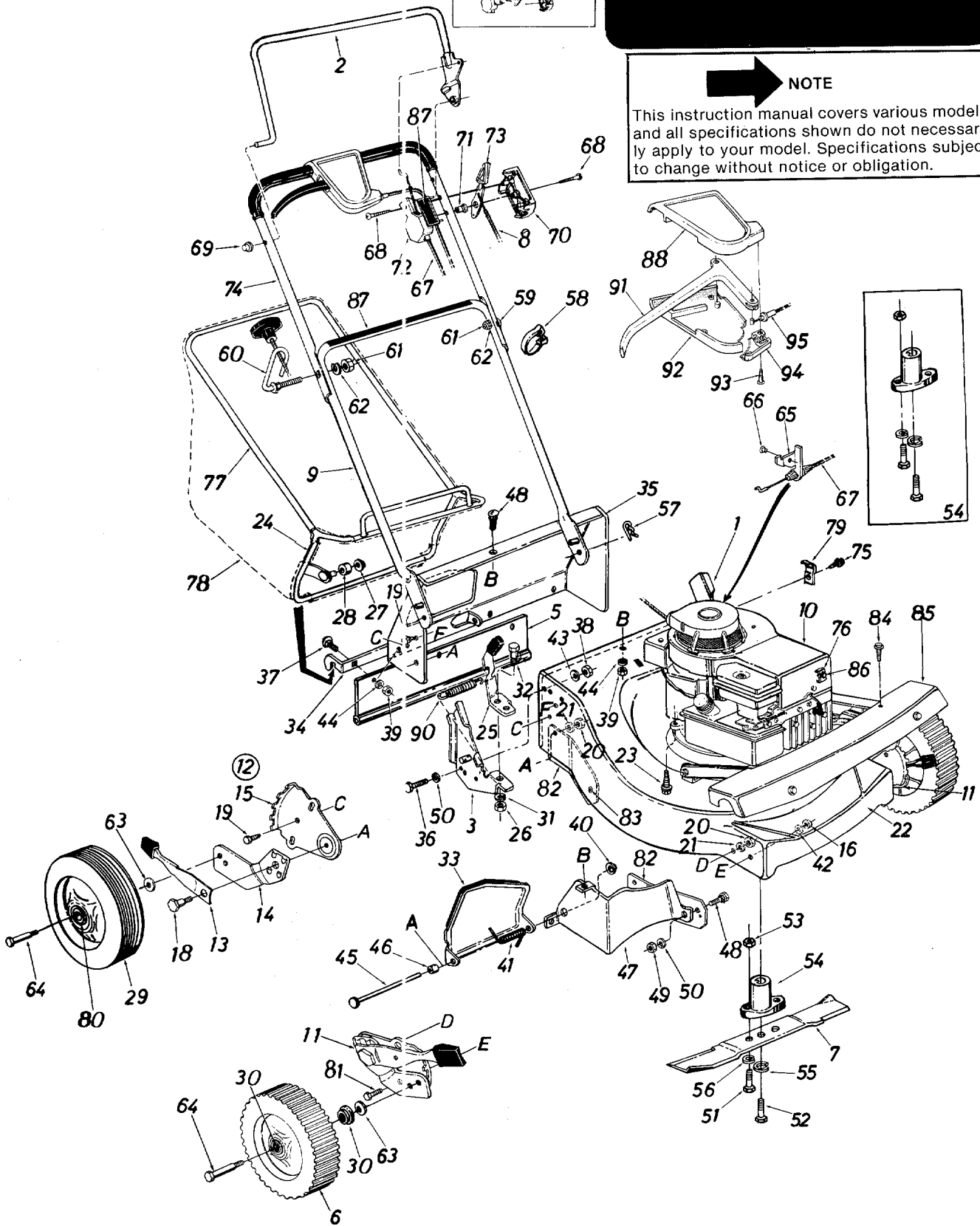
Meets CPSC Blade Safety Requirements

Lot/Model

Mfg. Date



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.



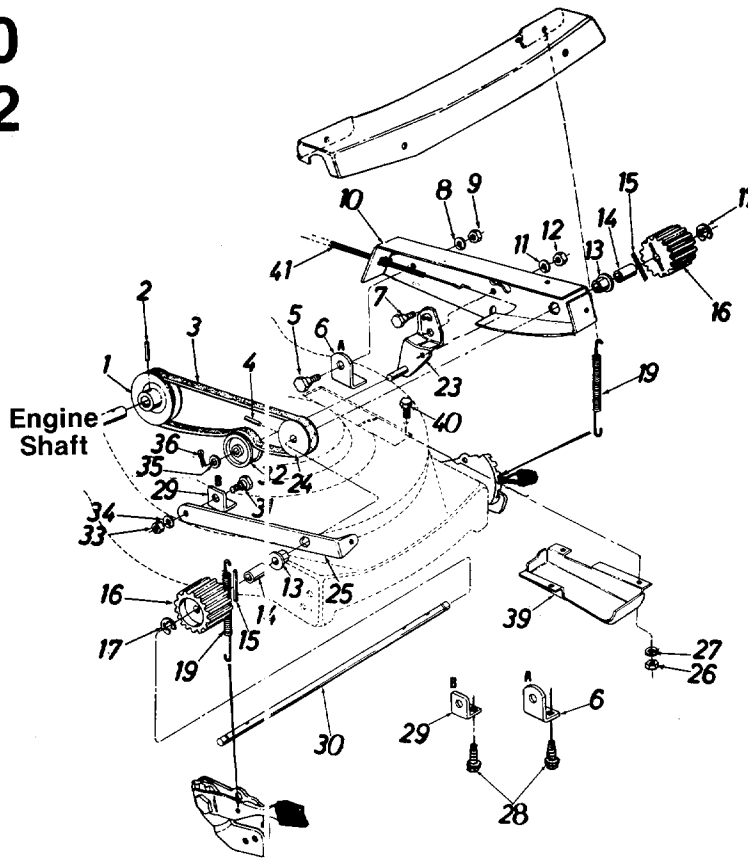
Model 320

Model 322

PARTS LIST FOR 20" ROTARY MOWER

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	14159		Handle Brkt. Ass'y.—L.H.		47	16259		Rear Baffle	N
2	14321		Control Handle Ass'y.—L.H.		48	710-0167		Carriage Bolt 1/4-20 x .50"*	
3	14752		Handle Brkt. Ass'y.—R.H.		49	712-0287		Hex Nut 1/4-20 Thd.*	
5	731-0665		Rear Flap Ass'y.		50	736-0329		L-Wash. 1/4" I.D.*	
6	734-1026		Wheel Ass'y. Comp. 8 x 1.75		51	710-0888		Hex Bolt 5/16-24 x 1.00" Lg.	
7	742-0124		21" Blade					(Grade 5)	
8	746-0472		Throttle Wire—58.0"		52	710-0331		Hex Bolt 3/8-24 x 2.25" Lg.	
9	749-0505		Lower Handle					(Grade 5)	
10	—		Engine		53	712-0123		Hex Nut 5/16-24 Thd.*	
11	16423		L.H. Height Adj. Ass'y.	N	54	753-0348		Blade Adapter Kit	
			(Front)		55	736-0217		L-Wash. 3/8" I.D.—H.D.	
	16424		R.H. Height Adj. Ass'y.	N	56	736-0119		L-Wash. 5/16" I.D.*	
			(Front)		57	714-0104		Intern. Cot. Pin 5/16" Dia.	
12	16423		R.H. Height Adj. Ass'y.	N	58	726-0192		Cable Tie	
			(Rear)		59	710-0671		Curved Carriage Bolt	
	16424		L.H. Height Adj. Ass'y.	N	60	710-0842		5/16-18 x 1.38" Lg.	
			(Rear)		61	712-0267		Rope Guide Bolt	
13	732-0417		Spring Lever		62	736-0119		Hex Nut 5/16-18 Thd.*	
14	16421		Pivot Bar—L.H.	N	63	736-0105		L-Wash. 5/16" I.D.*	
	16422		Pivot Bar—R.H.	N				Bell-Wash. .400" I.D. x .88"	
15	14764		Index Plate					O.D. x .060	
16	712-0375		Hex Cent. L-Nut 3/8-16 Thd.		64	738-0102		Axle Bolt	
17	736-0255		Bell-Wash. .515 I.D. x 1.14"		65	14924		Cable Bracket	
			O.D. x .040		66	728-0171		Pop Rivet .156" Dia. x .379	
18	738-0507		Shld. Bolt .500" Dia. x .430		67	746-0477		Brake Control Cable—43.0"	
19	710-0892		Hex L-Wash. Hd. AB-Tap		68	710-0796		Truss Mach. Hd. "B" Tap	
			Scr. 1/4 x .62" Lg.					Scr. #12 x 1.50" Lg.	
20	712-0798		Hex Nut 3/8-16 Thd.*		69	726-0135		Cap Speed Nut 5/16" Rod	
21	736-0356		Bell-Wash. .39" I.D. x 1.38"	N	70	731-0523		Control Panel Half	
			O.D.		71	731-0524		Control Disc Pin	
22	16245		21" Deck Ass'y.		72	731-0526		Control Panel Half	
23	710-0654		Self-Tap Screw 3/8-16 x 1.0"		73	731-0528		Throttle Control Lever	
24	14582		Grass Catcher Lower Frame		74	749-0436		Upper Handle	
			Ass'y.		75	710-0429		Hex AB-Tap Scr. #10 x .38"	
25	14845		Grass Catcher Lock Lever		76	751-0369		Casing Clamp	
26	712-0267		Hex Nut 5/16-18 Thd.*		77	749-0278		Grass Catcher Upper Frame	
27	726-0100		Push Nut 3/8" Rod		78	764-0171		Grass Bag	
28	731-0430		Plastic Roller		79	12894		Casing Clamp	
29	734-0874		Wheel Ass'y. Comp. 8 x 1.75		80	741-0262		Fortiflex Bearing	
30	741-0180		Ball Bearing		81	710-0216		Hex Bolt 3/8-16 x .75" Lg.*	
31	736-0119		L-Wash. 5/16" I.D.*		82	16366		Side Baffle	N
32	738-0155		Shld. Bolt .437" Dia. x .162		83	728-0141		Rivet	
33	13407		Chute Door		84	710-0599		Hex Wash. Hd. Self-Tap Scr.	
34	14012		Grass Catcher Hitch Brkt.					1/4-20 x .50" Lg.	
35	16258		Rear Discharge Deck Section	N	85	12982		Drive Cover	
36	710-0412		Hex Bolt 1/4-28 x .75" Lg.*		86	710-0227		Hex Wash. Hd. AB-Tap Scr.	
37	710-0703		Carr. Bolt 1/4-20 x .75" Lg.*					#8 x .38" Lg.	
38	712-0138		Hex Nut 1/4-28 Thd.*		87	777-		Instruction Labels	
39	712-0271		Sems Nut 1/4-20 Thd.*		88	731-0617		Control Cover Top Half	
40	726-0106		Push Nut 1/4" Rod		89	753-0360		Kit—Control Housing	
41	732-0346		Torsion Spring					Complete	
42	736-0169		L-Wash. 3/8" I.D.*		90	732-0357		Extension Spring	
43	736-0270		Bell-Wash. 1/4" I.D. x .88"		91	731-0620		Control Lever	
			O.D.		92	731-0618		Control Cover—Bottom Half	
44	736-0211		Fl-Wash. .285" I.D. x 1.25"		93	710-0841		Fl-"C" Sunk Hd. Scr. #10 x	
			O.D.					.75" Lg.	
45	738-0386		Hinge Pin .250" Dia. x 7.25"		94	731-0619		Cable Mounting Cap	
46	750-0218		Spacer .262" I.D. x .31" O.D.		95	746-0465		Self-Propelled Cable	
			x .58						

Model 320 Model 322



PARTS LIST FOR 20" ROTARY MOWER

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	756-0289		1/2 "V"-Engine Pulley		23	13608		Idler Brkt. Ass'y.	
2	715-0246		Spring Pin Spiral 3/16" Dia. x 1.25" Lg.		24	756-0290		1/2 "V"-Pulley	
3	754-0163		"V"-Belt 1/2" x 28.0" Lg.		25	12980		Cover Support Brkt.	
4	715-0247		Spring Pin Spiral 3/16" Dia. x 1.00" Lg.		26	712-0287		Hex Nut 1/4-20 Thd.*	
5	738-0147		Shld. Bolt .500 Dia. x .17)		27	736-0329		L-Wash. 1/4" I.D.*	
6	15346		Belt Cover Pivot Brkt.		28	710-0599		Hex Wash. Hd. Self-Tap Scr. 1/4-20 x .50" Lg.	
7	738-0147		Shld. Bolt .500 Dia. x .17)		29	15347		Cover Support Pivot Brkt.	
8	736-0169		L-Wash. 3/8" I.D.*		30	738-0356		Pinion Shaft	
9	712-0342		Hex Jam Nut 3/8-16 Thd.		31	738-0147		Shld. Bolt .500 Dia. x .170	
10	13613 —462		Belt Cover Ass'y.		32	756-0360		Plastic Flat Idler	
11	736-0169		L-Wash. 3/8" I.D.*		33	712-0342		Hex Jam Nut 3/8-16 Thd.*	
12	712-0342		Hex Jam Nut 3/8-16 Thd.		34	736-0169		L-Wash. 3/8" I.D.*	
13	748-0228		Hex Flange Brg. .503 I.D.		35	736-0160		Fl-Wash. .53 I.D. x .93 O.D.	
14	711-0313		Spacer .52 I.D. x .69 O.D. x .88		36	714-0115		Cotter Pin 1/8" Dia. x 1.00" Lg.*	
15	715-0246		Spring Pin Spiral 3/16 Dia. x 1.25" Lg.		39	13610		Belt Cover Baffle	
16	731-0393		13 Teeth Drive Pinion		40	710-0286		Truss Mach. Scr. 1/4-20 x .50" Lg.*	
17	716-0104		"E"-Ring for .500 Dia. Shaft		41	746-0465		S.P. Cable x 53.0"—Yellow	
19	732-0479		Extension Spring .40 O.D. x 3.25" Lg.						

*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. (e.g. Red Flake Finish—12982 (462).)

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."



Trouble Shooting Chart

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

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 Auto Electric & Carburetor Co.	BIRMINGHAM 2625 4th Ave. S.	35233	OHIO Stebe's Mid-State Mower Supply	CARROLL Box 366, 71 High St.	43112
ARKANSAS Sutton's Lawn Mower Shop	NORTH LITTLE ROCK 5301 Roundtop Drive Box 368, Rt. 4	72117	Bleckrie, Inc.	CLEVELAND 7900 Lorain Ave.	44102
CALIFORNIA Billious	PORTERVILLE 75 North D Street	93257	National Central	WADSWORTH 687 Seville Rd.	44281
COLORADO Spitzer Industrial Products Co.	DENVER 6601 N. Washington St.	80229	Burton Supply Co.	YOUNGSTOWN 1301 Logan Ave. Box 929	44501
FLORIDA Radco Distributors	JACKSONVILLE 4909 Victor St. Box 5459	32207	OKLAHOMA Victory Motors, Inc.	MUSKOGEE 605 S. Cherokee	74401
Small Eng. Dist.	HAIALEAH 7995 W. 26th Court	33016	OREGON Kenton Supply Co.	PORTLAND 8216 N. Denver Ave.	97217
GEORGIA East Point Cycle & Key Inc.	EAST POINT 2834 Church St.	30344	PENNSYLVANIA EECO Inc.	HARRISBURG 4021 N. 6th St.	17110
ILLINOIS Keen Edge Co.	LYONS 8615 Ogden Ave.	60534	Thompson Rubber Co.	PHILADELPHIA 5222-24 N. Fifth St.	19120
INDIANA Parts & Sales Inc.	ELKHART 2101 Industrial Pkwy.	46516	Bluemont Co.	PITTSBURGH 11125 Frankstown Rd.	15235
IOWA Power Lawn & Garden Equip.	DUBUQUE 2551 J.F. Kennedy	52001	Frank Roberts & Sons	PUNXSUTAWNEY R.D. 2	15767
LOUISIANA Suhren Engine Co.	NEW ORLEANS 8330 Earhart Blvd.	70118	Scranton Auto Ignition Co.	SCRANTON 1133-35 Wyoming Ave.	18509
MARYLAND Center Supply Co.	TAKOMA PARK 6867 New Hampshire Ave.	20912	TENNESSEE Master Repair Service	KNOXVILLE 2000 Western Ave.	37921
MASSACHUSETTS Morton B. Collins Co.	SPRINGFIELD 300 Birnie Ave.	01107	American Sales & Service, Inc.	MEMPHIS 3035-43 Bellbrook	38116
MICHIGAN Lorenz Service Co.	LANSING 2500 S. Pennsylvania	48910	TEXAS Marr Brothers, Inc.	DALLAS 423 E. Jefferson	75203
Power Equipment Dist.	MOUNT CLEMENS 340 Hubbard	48043	Woodson Sales Corp.	FORT WORTH 6733 Baker Blvd. Hwy. 10	76118
MINNESOTA Hance Distributing Inc.	HOPKINS 420 Excelsior Ave. W.	55343	Bullard Supply Co.	HOUSTON 2409 Commerce St.	77003
MISSOURI Automotive Equip. Service	KANSAS CITY 3117 Holmes St.	64109	Engine House Inc.	SAN ANTONIO 8610 Botts Lane P.O. Box 17867	78217
Ross-Frazer Supply Co.	ST. JOSEPH 8th and Monterey	64503	UTAH Powered Products	BOUNTIFUL 485 N 500 W.	84010
Henzler, Inc.	ST. LOUIS 2015 Lemay Ferry Rd.	63125	VIRGINIA RBI Corp.	ASHLAND 101 Cedar Ridge Dr.	23005
NEW JERSEY Lawnmower Parts Inc.	BELLMAWR 717 Creek Rd.	08030	WASHINGTON Equip. Northwest	SEATTLE 1410 14th Ave.	98122
NEW MEXICO Spitzer Eng. & Parts Co.	ALBUQUERQUE 1023 Third Ave. N.W.	87103	WISCONSIN Horst Dist. Inc.	CHILTON 444 N. Madison St.	53014
NEW YORK Gamble Dist., Inc.	CARTHAGE West End Ave.	13619	NORTH CAROLINA Smith Hardware Co.	GOLDSBORO 515 N. George St.	27530
			Dixie Sales Company	GREENSBORO 335 N. Green	27402

WARRANTY PARTS AND SERVICE POLICY

(0484)

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

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

All claims MUST be substantiated with the following information:

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