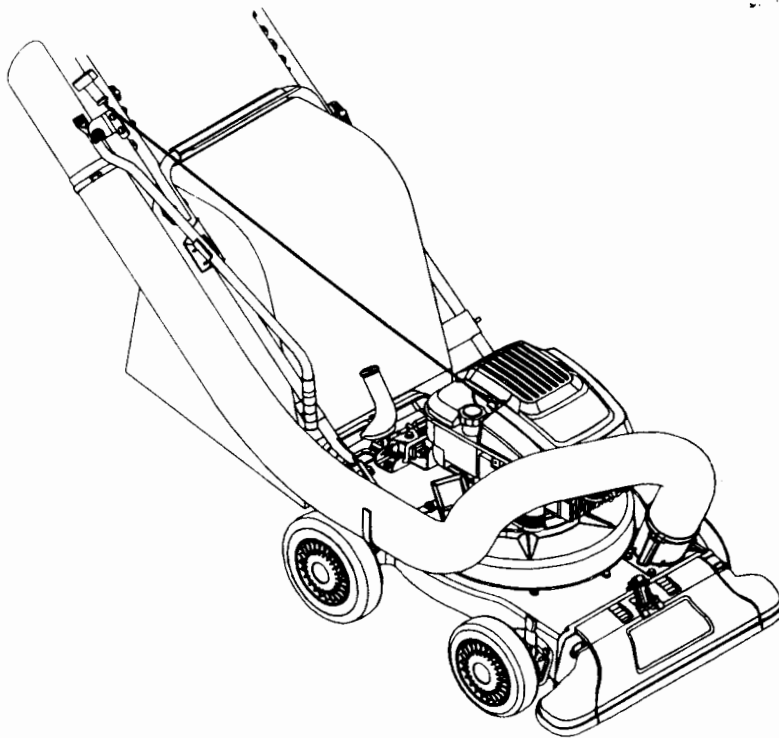




# OPERATOR'S MANUAL



## Yard Vacuum

Chipper/Shredder/  
Vacuum/Hose

Model Number

24A-060F063

### **IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY**

**Warning:** This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 361131 Cleveland, Ohio 44136-0019.

**TROY-BILT LLC P.O. BOX 361131 CLEVELAND, OHIO 44136-0019**

PRINTED IN U.S.A.

FORM NO. 769-00169

(7/02)

## SECTION 1: IMPORTANT SAFE OPERATION PRACTICES



**WARNING:** This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol - **heed its warning.**



**WARNING:** Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

**DANGER:** This machine was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

### TRAINING

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 16 years old to operate this machine. Children 16 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
4. Never allow adults to operate this machine without proper instruction.
5. Keep bystanders, helpers, pets, and children at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
6. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
7. Do not put hands and feet near rotating parts or in the feeding chambers and discharge opening. Contact with the rotating impeller can amputate fingers, hands, and feet.
8. Never attempt to unclog either the feed intake or discharge opening, remove or empty vacuum bag, or inspect and repair the machine while the engine is running. Shut the engine off and wait until all moving parts have come to a complete stop. Disconnect the spark plug wire and ground it against the engine.
2. Always wear safety glasses or safety goggles during operation or while performing an adjustment or repair, to protect eyes. Thrown objects which ricochet can cause serious injury to the eyes.
3. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Loose fitting clothes or jewelry can be caught in movable parts. Never operate this machine in bare feet or sandals. Wear leather work gloves when feeding material in the chipper chute.
4. Before starting, check all bolts and screws for proper tightness to be sure the machine is in safe working condition. Also, visually inspect machine for any damage at frequent intervals.
5. Maintain or replace safety and instructions labels, as necessary.
6. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.
  - a. Use only an approved gasoline container.
  - b. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
  - c. Never fuel machine indoors.
  - d. Never remove gas cap or add fuel while the engine is hot or running.
  - e. Allow engine to cool at least two minutes before refueling.
  - f. Never over fill fuel tank. Fill tank to no more than 1/2 inch below bottom of filler neck to provide space for fuel expansion.
  - g. Replace gasoline cap and tighten securely.
  - h. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.

### PREPARATION

1. Thoroughly inspect the area where the equipment is to be used. Remove all rocks, bottles, cans, or other foreign objects which could be picked up or thrown and cause personal injury or damage to the machine.



**WARNING - YOUR RESPONSIBILITY:** Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

**NOTE:** Not all safety labels may apply to your Yard Vacuum.

**⚠ DANGER**

**TO AVOID SERIOUS INJURY**

- READ OPERATOR'S MANUAL.
- KEEP HANDS OUT OF INLET AND DISCHARGE OPENINGS WHILE MACHINE IS RUNNING. ROTATING BLADES ARE INSIDE.
- TURN ENGINE OFF AND ALLOW IMPELLER TO COME TO COMPLETE STOP BEFORE REMOVING BAG.
- DO NOT ATTEMPT TO CLEAR A CLOG OR JAM WITH THE ENGINE RUNNING.
- DO NOT OPERATE UNIT WITHOUT BAG OR OPTIONAL BLOWER CHUTE IN PLACE.
- DO NOT STAND OR WALK IN FRONT OF BLOWER CHUTE OR AIM IT AT BYSTANDERS. OBJECTS THROWN OUT OF DISCHARGE CAN CAUSE PERSONAL INJURY.
- DO NOT OPERATE WHEN CHILDREN OR OTHERS ARE AROUND.
- WEAR APPROVED SAFETY GLASSES.

S30599

## SECTION 2: ASSEMBLING YOUR YARD VACUUM

**IMPORTANT:** This unit is shipped without gasoline or oil in the engine. Be certain to service engine with gasoline and oil as instructed in the separate engine manual before operating your machine.

**NOTE:** Reference to right or left hand side of the Yard Vacuum is observed from the operating position.

### Removing Unit From Carton

- Remove staples, break glue on top flaps, or cut tape at carton end and peel along top flap to open carton
- Remove loose parts if included with unit (i.e., operator's manual, etc.)
- Cut along corners, lay carton down flat, and remove packing material
- Roll or slide unit out of carton and check carton thoroughly for loose parts.

### Loose Parts In Carton (See Figure 1)

- Handle Assembly
- Bag
- Blower Chute (If Equipped)
- Hose Assembly

### Disconnecting Spark Plug Wire

Before setting up your Yard Vacuum, disconnect the spark plug wire from the spark plug and ground to a stud on the engine.

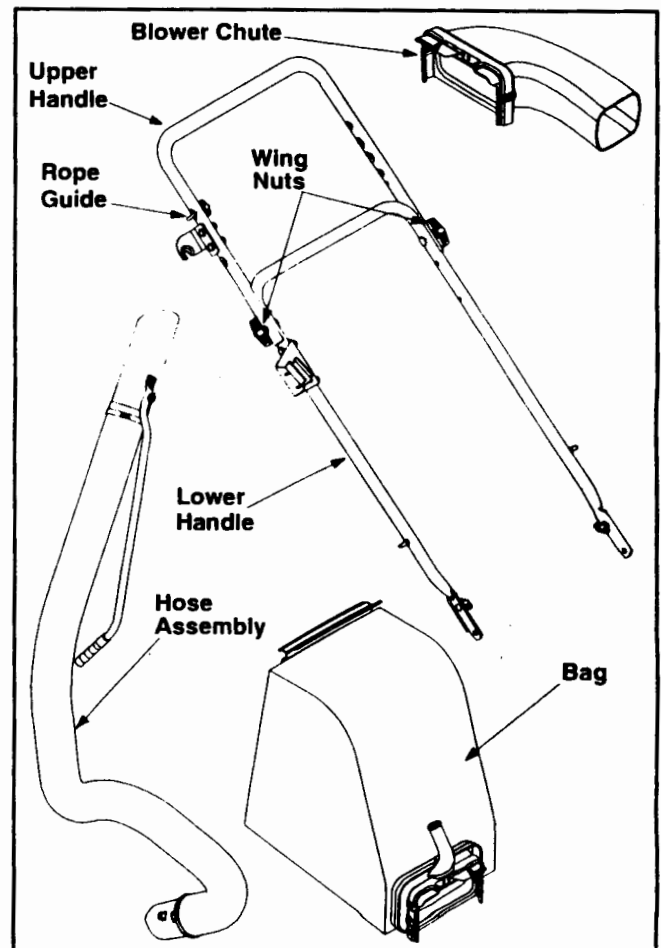


Figure 1

## Attaching The Blower Chute (If Equipped)

- Grasp blower chute with one hand and slide locking rod on mounting bracket with other hand toward engine. Use end of mounting bracket as leverage when sliding the locking rod. See Figure 5.
- Slip blower chute over rim of the discharge opening and release locking rod to secure chute in place. Make sure the safety switch button is fully depressed by the front tab on the blower chute.
- Raise the nozzle height to the highest setting when using the blower chute. Refer to nozzle height adjustment in the OPERATION section.

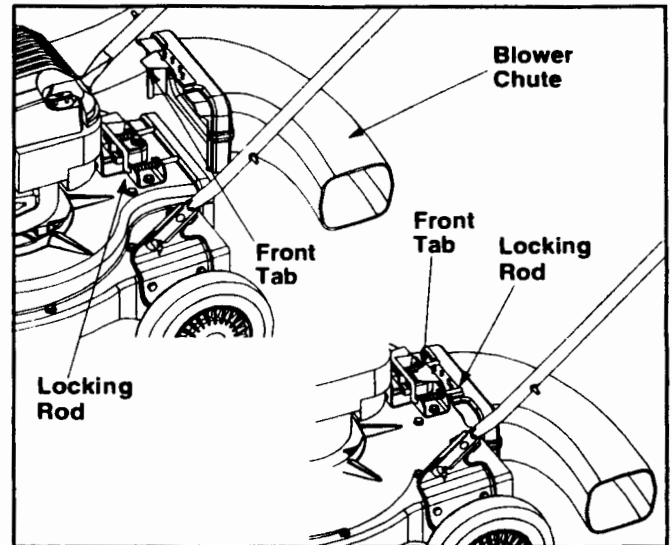


Figure 5

## SECTION 3: KNOW YOUR YARD VACUUM

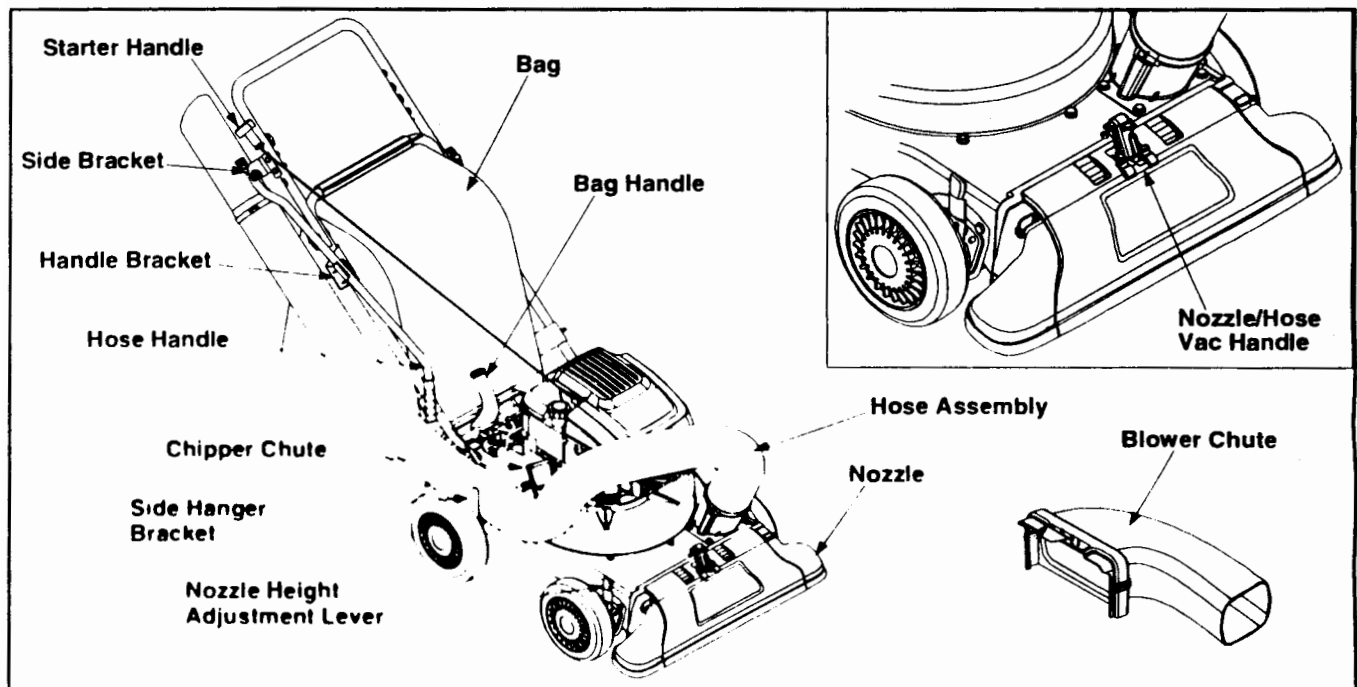


Figure 6

Read this operator's manual and safety rules before operating your Yard Vacuum. Compare the illustrations in Figure 6 with your unit to familiarize yourself with the location of various controls and adjustments.



**WARNING:** The operation of any Yard Vacuum can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses, provided with the Yard Vacuum, for operating this equipment or while performing any adjustments or repairs on it.

### Starter Handle

The starter handle is attached to the right upper handle. Stand behind unit and pull the starter handle to start engine.

### Bag

Collects shredded material fed through the chipper chute or vacuumed through the nozzle or hose.

### Bag Handle

Used to grasp bag in order to assist in attaching, removing, and emptying bag.

- Hold bag handle and bag clip while emptying the contents.
- Compress bag opening and fold inner flap over opening.
- Fold outer flap over inner flap and insert buttons on the bag through metal outlets.
- Twist the buttons to lock bag.

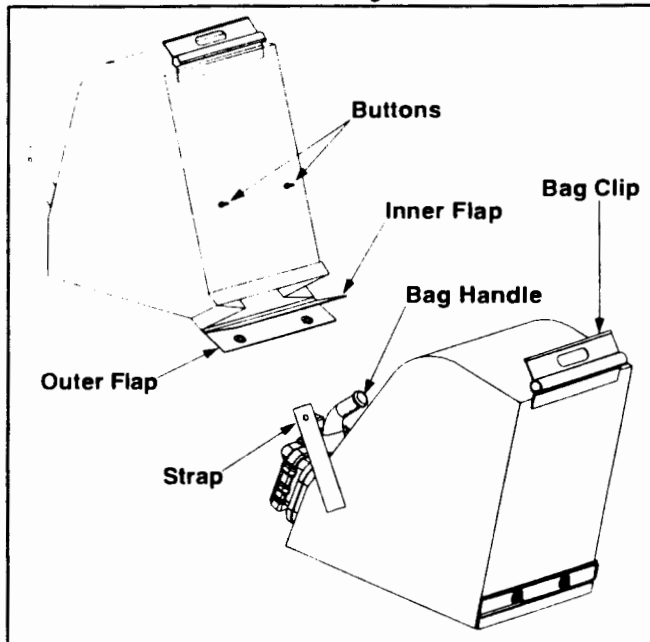


Figure 7

## To Remove Blower Chute

- Grasp blower chute with one hand and pull lock rod on mounting bracket with other hand toward engine to release. Refer to Figure 5.
- Remove blower chute from rim of the discharge opening.

## Using the Nozzle Vacuum

- Place nozzle/hose vac handle in the top position on the nozzle to vacuum through nozzle. See Figure 8.
- The spring loaded pin must be in the first hole of the hose adapter to operate the nozzle vac.
- Place both hands on top of upper handle to push unit over yard waste.

Yard waste such as leaves and pine needles can be vacuumed up through the nozzle for shredding. After material has been shredded by the flail blades on the impeller assembly, it will be discharged into catcher bag or through blower chute. Do not attempt to shred or chip any material other than vegetation found in a normal yard (i.e. branches, leaves, twigs, etc.) Avoid fibrous plants such as tomato vines until they are thoroughly dried out. Materials such as stalks or heavy branches up to 1 1/2" in diameter may be fed into the chipper chute.

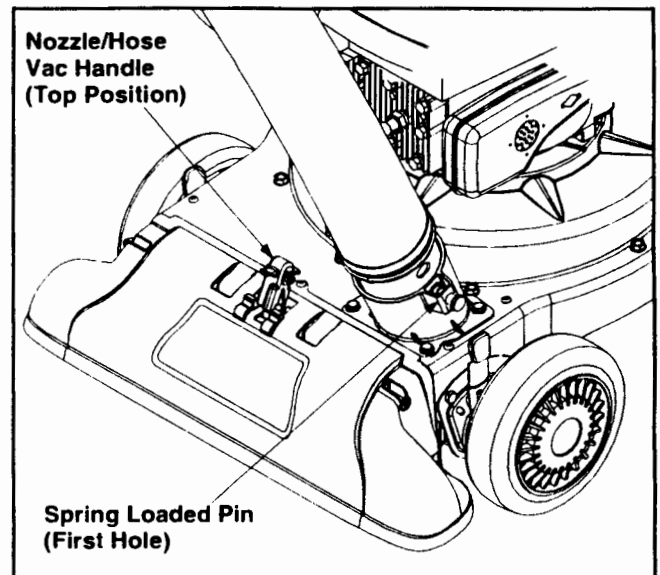


Figure 8

**IMPORTANT:** The flail screen is located inside the housing in the discharge area. If the flail screen becomes clogged, remove and clean as instructed in SECTION 5: MAINTAINING YOUR YARD VACUUM. For best performance, it is also important to keep the chipper blade sharp.



**WARNING:** Do not at any time make any adjustments without first stopping engine and disconnecting spark plug wire.

## Using the Hose Assembly

- Place nozzle/hose vac handle in the bottom position on the nozzle to redirect vacuum to the hose assembly. See Figure 9.
- The spring loaded pin must be in the second hole of the hose adapter to operate the hose assembly.
- Unhook the hose from upper handle bracket and grasp the hose handle to guide while vacuuming yard waste such as leaves or pine needles in hard to reach places.

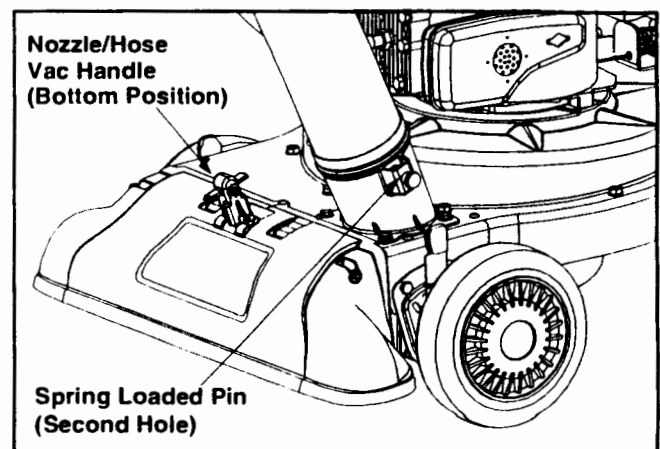


Figure 9

# Maintenance

## Engine

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

- Check **engine oil level** before each use as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.
- Clean **air cleaner** every 25 hours under normal conditions or once a season. Clean every few hours under extremely dusty conditions. To service the air cleaner, refer to the separate engine manual packed with your unit.
- The **spark plug** should be cleaned and the gap reset once a season. Check engine manual for correct plug type and gap specifications.

## Removing The Flail Screen

If the discharge area becomes clogged, remove the flail screen and clean area as follows:

- Stop the engine and make certain the Yard Vacuum has come to a complete stop.
- Disconnect spark plug wire from spark plug and ground against the engine.
- Remove the bag or blower chute from the unit as instructed in the OPERATION section to obtain access to flail screen. See Figure 11.

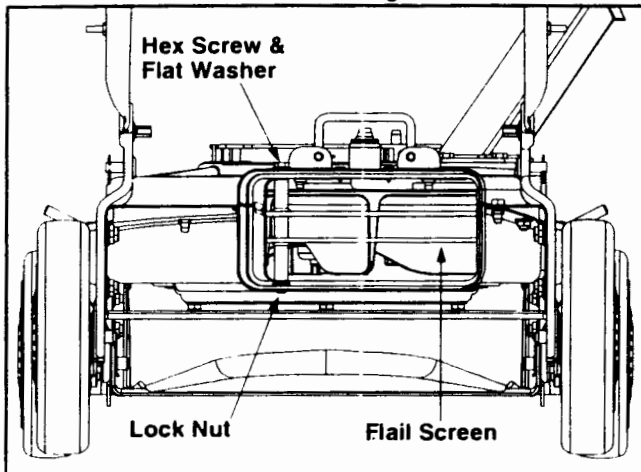


Figure 11

- Remove hex screw on right side of unit that attaches to the flail screen. It may be necessary to remove the hose bracket hanger to get access to the hex screw. See Figure 12.
- Remove hex screw and flat washer on top of rear housing mounting bracket and the lock nut that secures flail screen. See Figure 11.
- Remove and clean the screen by scraping or washing with water. Reinstall the flail screen.

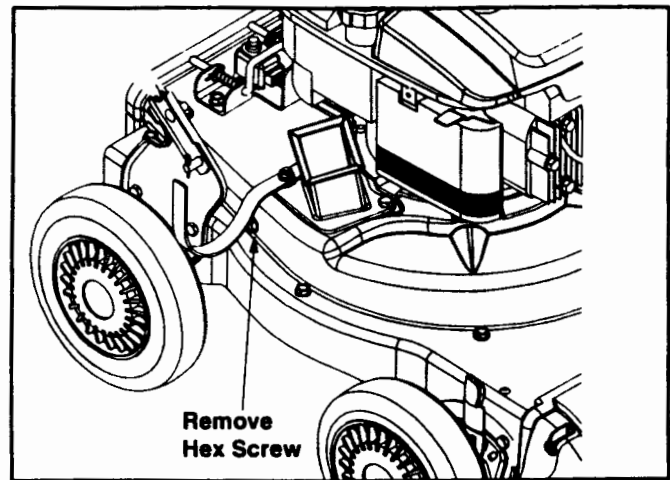


Figure 12

## Sharpening Or Replacing Chipper Blade

Because the engine on this unit has a tapered crankshaft, a special impeller tool (part number 753-0900) is required to remove the impeller assembly. For further assistance, contact your local service dealer.

**NOTE:** When tipping the unit, empty the fuel tank and keep spark plug side up.

- Disconnect the spark plug wire and ground it away from the spark plug.
- Remove the front hubcaps, lock nuts, front wheels, and wave washers that attach to the pivot arm assemblies. See Figure 13.
- Remove the shoulder screws and bell washers that go through the pivot arms and height bracket adjusters to the front support brace.

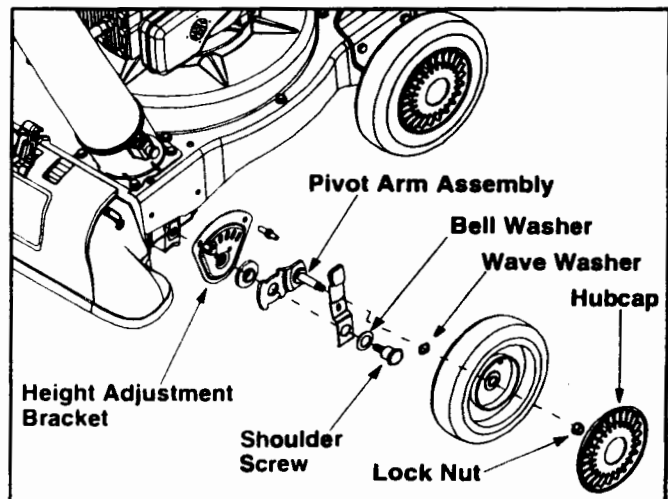


Figure 13

- Remove the three screws on the upper housing that secure the nozzle cover and the nine screws that secure the lower housing to the upper housing. See Figure 14.

## SECTION 6: TROUBLESHOOTING

Problem	Cause	Remedy
Engine fails to start	<ol style="list-style-type: none"> <li>1. Spark plug wire disconnected.</li> <li>2. Fuel tank empty or stale fuel.</li> <li>3. Throttle control lever not in correct starting position. (If Equipped)</li> <li>4. Choke not in CHOKE position.</li> <li>5. Blocked fuel line.</li> <li>6. Faulty spark plug.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect wire to spark plug.</li> <li>2. Fill tank with clean, fresh gasoline.</li> <li>3. Move throttle lever to FAST position.</li> <li>4. Move choke to CHOKE position.</li> <li>5. Clean fuel line.</li> <li>6. Clean, adjust gap, or replace.</li> </ol>
Engine runs erratic	<ol style="list-style-type: none"> <li>1. Spark plug wire loose.</li> <li>2. Unit running on CHOKE.</li> <li>3. Blocked fuel line or stale fuel.</li> <li>4. Water or dirt in fuel system.</li> <li>5. Dirty air cleaner.</li> <li>6. Carburetor out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect and tighten spark plug wire.</li> <li>2. Move choke lever (if equipped) to OFF position.</li> <li>3. Clean fuel line; fill tank with clean, fresh gasoline</li> <li>4. Drain fuel tank. Refill with fresh fuel.</li> <li>5. Clean or replace air cleaner.</li> <li>6. See authorized service dealer.</li> </ol>
Too much vibration	<ol style="list-style-type: none"> <li>1. Loose parts or damaged impeller.</li> </ol>	<ol style="list-style-type: none"> <li>1. See authorized service dealer.</li> </ol>
Engine overheats	<ol style="list-style-type: none"> <li>1. Engine oil level low.</li> <li>2. Dirty air cleaner.</li> <li>3. Carburetor not adjusted properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill crankcase with proper oil.</li> <li>2. Clean or replace air cleaner.</li> <li>3. See authorized service dealer.</li> </ol>
Occasional skip (hesitates) at high speed	<ol style="list-style-type: none"> <li>1. Spark plug gap too close.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust gap to .030".</li> </ol>
Unit does not discharge	<ol style="list-style-type: none"> <li>1. Discharge chute clogged.</li> <li>2. Foreign object lodged in impeller.</li> <li>3. Low engine RPM</li> <li>4. Vacuum bag is full.</li> </ol>	<ol style="list-style-type: none"> <li>1. Stop engine immediately and disconnect spark plug wire. Clean flail screen and inside of discharge opening.</li> <li>2. Stop engine and disconnect spark plug wire. Remove lodged object.</li> <li>3. Always run engine at full throttle.</li> <li>4. Empty bag.</li> </ol>
Rate of discharge slows considerably or composition of discharged material changes.	<ol style="list-style-type: none"> <li>1. Low engine RPM.</li> <li>2. Chipper blade dull.</li> </ol>	<ol style="list-style-type: none"> <li>1. Always run engine at full throttle.</li> <li>2. Replace chipper blade or see your authorized service dealer.</li> </ol>

**NOTE:** For repairs beyond the minor adjustments listed above, contact your nearest authorized service dealer.