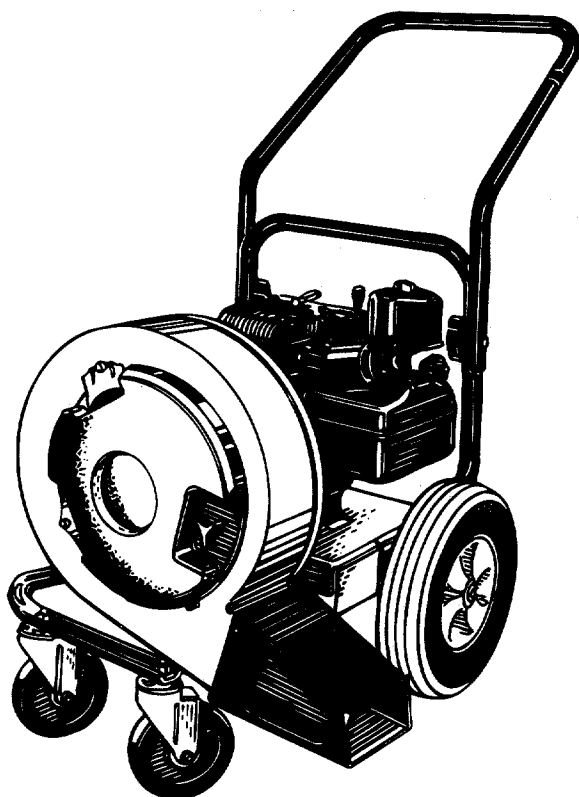


OWNER'S GUIDE

• ASSEMBLY • OPERATION • MAINTENANCE •



LEAF BLOWERS

**Model Series
692 thru 699**

IMPORTANT!

Record the exact **Model No.** and **Serial No.** which appear on the frame of your unit in the space below. You **must** have these numbers, along with the date of purchase, in order to receive warranty or service.

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

MODEL NO.

SERIAL NO.

24 -69 -




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 368022, Cleveland, Ohio 44136-9722.

IMPORTANT

SAFE OPERATION PRACTICES



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



DANGER:

Your leaf blower 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 unit is capable of amputating fingers and hands and throwing objects.

I. GENERAL OPERATION

1. Read this owner's guide carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine and in the manual(s) before operation. Be completely familiar with the controls and the proper use of the machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Your leaf blower is a powerful tool, not a plaything. Therefore, exercise extreme caution at all times. Your unit has been designed to perform one job; to blow leaves. Do not use it for any other purpose.
3. Never allow children under 14 to operate the unit. Children 14 years and older should only operate under close parental supervision. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use your unit.
4. Keep the area of operation clear of all persons, particularly small children and pets. Stop the engine when they are in the vicinity of the unit.
5. Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair, to protect eyes from debris or foreign objects that may be thrown from machine.
6. Wear close fitting slacks and shirt. Shirt and slacks that cover the arms and legs are recommended. Do not wear loose fitting clothes or jewelry and secure hair so it is above shoulder length. They can be caught in moving parts.
7. Do not operate the unit while under the influence of alcohol or drugs.
8. Never place your hands or any part of your body or clothing near rotating parts. Keep clear of the discharge opening at all times. Never insert your hands, fingers, feet, or any other part of your body or clothing into the discharge or air-intake openings as the rotating impeller inside the housing can cause serious injury.
9. Never operate unit without directional discharge chute and plastic impeller guard properly affixed to unit. These devices shield the operator from accidental contact with the rotating impeller.
10. Keep all guards and safety devices in place and operating properly.
11. Exercise caution when operating blower. Do not allow the discharge to point in the direction of by-standers or pets.
12. If your machine should start making an unusual noise or vibration, immediately stop the engine, disconnect the spark plug wire and move the wire away from the spark plug. Allow the machine to stop and take the following steps:
 - Inspect for damage.
 - Repair or replace any damaged parts.
 - Check for any loose parts and tighten to assure continued safe operation.
13. Muffler and engine become hot and can cause a burn. Do not touch.

14. Do not allow leaves or other debris to build-up on engine's muffler. The debris could ignite and cause a fire.
15. Do not operate engine if air cleaner or cover over carburetor air-intake is removed, except for adjustment. Removal of such parts could create a fire hazard.
16. Only use accessories approved for this machine by the manufacturer. Read, understand, and follow all instructions provided with the approved accessory.
17. Only operate unit in good daylight. Do not operate unit at night or in dark areas where your vision may be impaired.
18. If situations occur which are not covered by this manual, use care and good judgment. Contact your dealer for assistance.



II. CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of small children. Children are often attracted to the blowing activity. Never assume that children will remain where you last saw them.

1. Keep children out of the work area and under the watchful eye of a responsible adult other than the operator.
2. Be alert and turn the unit off if a child enters the area.
3. Never allow children under the age of 14 to operate the leaf blower.






III. SERVICE

1. Use extreme care in handling gasoline and other fuels. They are extremely flammable and the vapors are explosive.
 - a. Store fuel and oil in approved containers, away from heat and open flame, and out of the reach of children.
 - b. Check and add fuel before starting the engine. Never remove gas cap or add fuel while the engine is running. Allow engine to cool at least two minutes before refueling.
 - c. Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
 - d. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
 - e. Never refuel unit indoors because flammable vapors will accumulate in the area.
 - f. Never store the machine or fuel container inside where there is an open flame or spark such as a gas hot water heater, clothes dryer or furnace.
2. Never run your machine in an enclosed area as the exhaust from the engine contains carbon monoxide, which is an odorless, tasteless and deadly poisonous gas.
3. To reduce fire hazard, keep engine and muffler free of leaves, grass, and other debris build-up. Clean up fuel and oil spillage. Allow unit to cool at least 5 minutes before storing.
4. Before cleaning, repairing, or inspecting, make certain the impeller and all moving parts have stopped. Disconnect the spark plug wire and keep wire away from spark plug to prevent accidental starting. Do not use flammable solutions to clean air filter.
5. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.

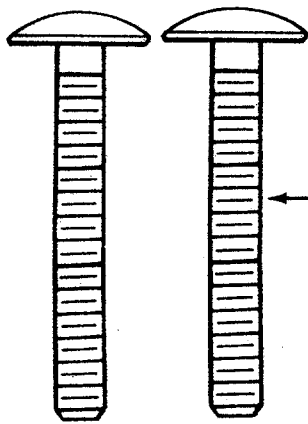
6. Never tamper with safety devices. Check their proper operation regularly.
7. Do not alter or tamper with the engine's governor setting. The governor controls the maximum safe operating speed of the

engine. Over-speeding the engine is dangerous and will cause damage to the engine and to other moving parts of the machine.

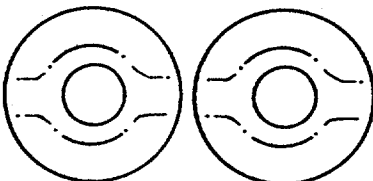
OWNER'S MANUAL 	SAFETY LABEL 	<div style="text-align: center;">  WARNING — YOUR RESPONSIBILITY </div> <p>Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.</p>
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CONTENTS OF HARDWARE PACK

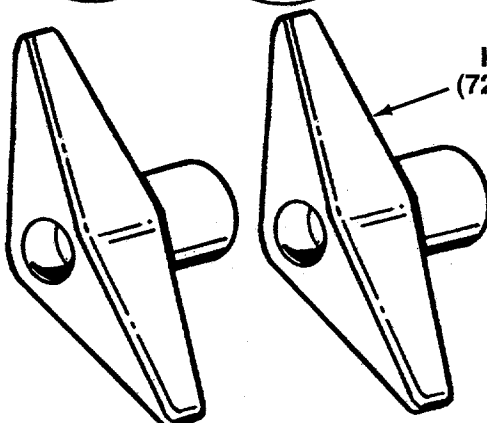
A ATTACHING THE UPPER HANDLE



Curved
Head Bolts
(710-1134)

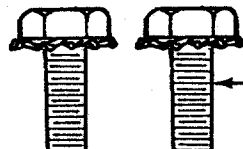


Saddle
Washers
(736-0451)



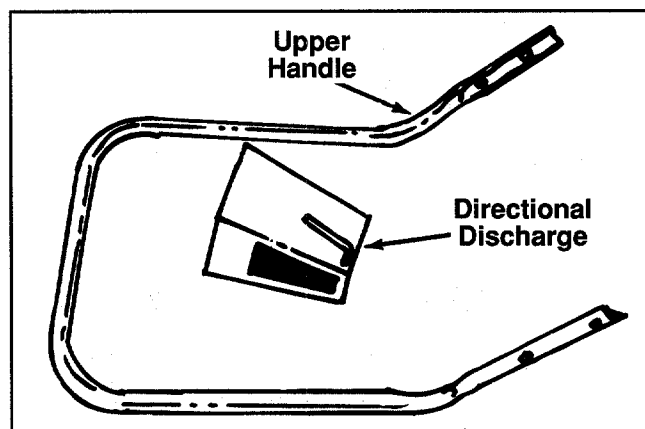
Hand
Knobs
(720-0241)

B ATTACHING THE DIRECTIONAL DISCHARGE



Hex Sems
Bolts
(710-0259)

LOOSE PARTS IN CARTON



UNPACKING

TO REMOVE UNIT FROM CARTON

1. Remove staples, break glue on top flaps, or cut tape at carton end and peel along top flap to open carton.
2. Remove loose parts if included with unit (i.e., owner's manual, etc.)
3. Cut along dotted lines and lay carton down flat.
4. Remove packing material.
5. Roll or slide unit out of carton. Check carton thoroughly for loose parts.
6. Lay out the contents of hardware pack according to the illustration at left.

TOOLS REQUIRED FOR ASSEMBLY

- (1) 1/2" Open End or Box Wrench

ASSEMBLY INSTRUCTIONS

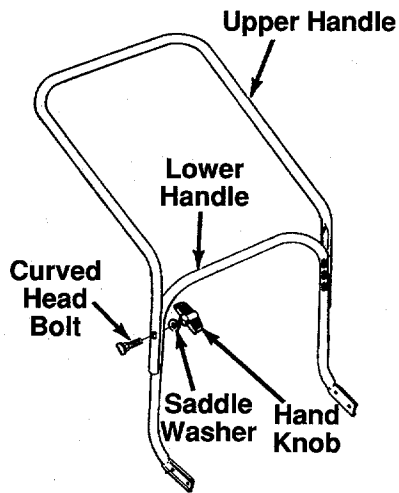


FIGURE 1.

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

NOTE: Reference to right or left hand side of the leaf blower is observed from behind the unit in the operating position.

ATTACHING THE UPPER HANDLE (Hardware A)

Place the upper handle over the lower handle, lining up the holes in the upper handle with the **middle** holes in lower handle. Secure with curved head bolts and hand knobs. See figure 1.

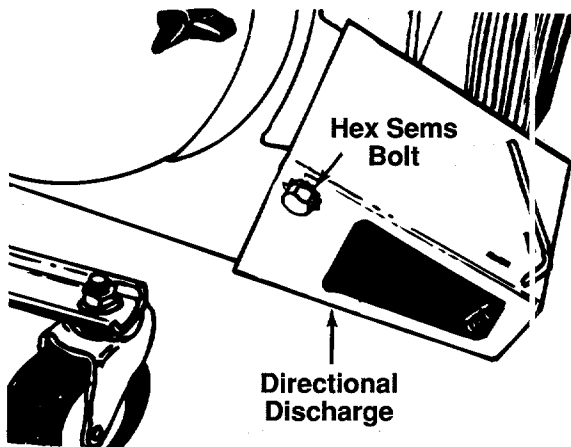


FIGURE 2.

ATTACHING THE DIRECTIONAL DISCHARGE (Hardware B)

Slip end of directional discharge over chute opening. Secure in position with hex sems bolts. See figure 2.

OPERATION

GAS AND OIL FILL-UP

Service the engine with gas and oil as instructed in the separate engine manual packed with your leaf blower. Read instructions carefully.



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

TO START ENGINE



WARNING: Revolving blades -- keep hands away from all openings.

1. Attach spark plug wire securely to spark plug.

2. Move choke lever on engine to CHOKE position. (A warm engine may not require choking.)
3. Move throttle control lever on engine to FAST position.
4. Grasp starter handle and pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point). Let the rope rewind slowly.
5. Pull rope with a rapid, continuous, full arm stroke. Keep a firm grip on starter handle. Let rope rewind slowly. Do not let starter handle snap back against starter.
6. Repeat instructions 4 and 5 until engine fires. When engine starts, move choke control gradually to RUN position.

TO STOP ENGINE

1. To stop engine, move throttle control lever to OFF position.
2. Disconnect spark plug wire and ground to prevent accidental starting while equipment is unattended.

ADJUSTMENTS



WARNING: Do not at any time make any adjustment to the unit without first stopping engine and disconnecting spark plug wire.

TWO-WAY DISCHARGE

The leaf blower can be adjusted to discharge toward the front of the unit or to the side. Simply push down on the handle and swing door toward the front to discharge out the side, or to the side to discharge out the front. See figure 3.

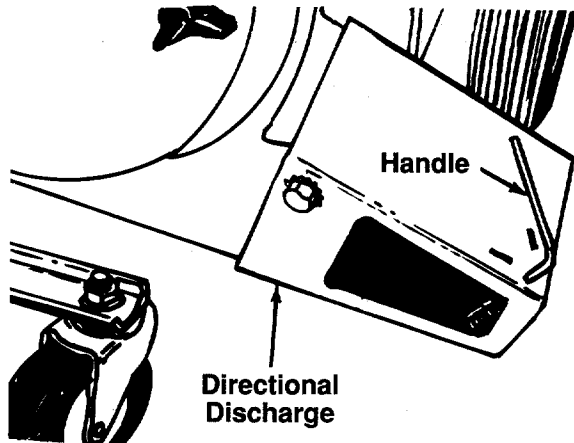


FIGURE 3.

HEIGHT ADJUSTMENT

The height adjustment crank is located on the right hand side of the leaf blower. See figure 4. Turn the crank clockwise to raise the discharge chute. Turn the crank counterclockwise to lower.

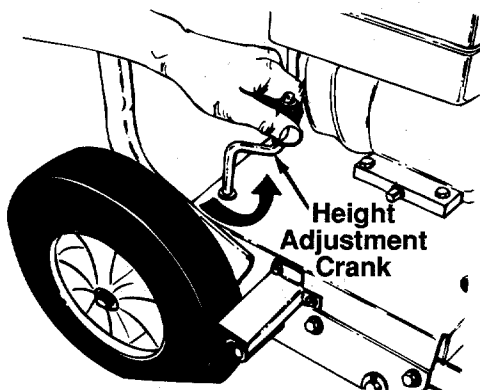


FIGURE 4.

CARBURETOR ADJUSTMENT



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

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

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

Do not make unnecessary adjustments. Factory settings are satisfactory for most applications and conditions. If adjustment is needed, refer to the separate engine manual packed with your leaf blower.

MAINTENANCE



WARNING: Always stop engine and disconnect spark plug wire before cleaning, lubricating or performing any repairs or maintenance.

LUBRICATION

Wheels—Rear wheels are provided with light oil bearings. Place a few drops of SAE 30 oil on each bearing once a season.

Directional Discharge—Lubricate the spring and the pivot point on the door mechanism at least once a season with light oil.

ENGINE

Refer to the separate engine manual for engine maintenance instructions.

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

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

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

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

OFF-SEASON STORAGE

The following steps should be taken to prepare your leaf blower for storage.

1. Clean and lubricate the vacuum thoroughly as described in the lubrication instructions.
2. Refer to engine manual for correct engine storage instructions.
3. If storing in an unventilated or metal storage shed, coat metal parts with a light oil or silicone to prevent rust.
4. Store in a dry, clean area. Do not store next to corrosive materials, such as fertilizer.

OPTIONAL EQUIPMENT

Hose Attachment Kit Model 290-204-000 is available as optional equipment. See figure 5.

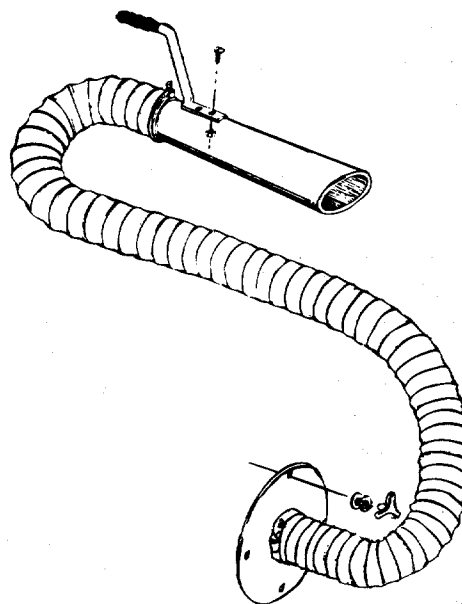


FIGURE 5.—Model 290-204-000

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Engine fails to start	<ol style="list-style-type: none"> 1. Fuel tank empty, or stale fuel. 2. Spark plug wire disconnected. 3. Faulty spark plug. 	<ol style="list-style-type: none"> 1. Fill tank with clean, fresh fuel. 2. Connect wire to spark plug. 3. Clean, adjust gap or replace.
Loss of power; operation erratic	<ol style="list-style-type: none"> 1. Spark plug wire loose. 2. Unit running on CHOKE. 3. Blocked fuel line (if so equipped) or stale fuel. 4. Water or dirt in fuel system 5. Carburetor out of adjustment. 6. Dirty air cleaner. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Move choke lever to OFF position. 3. Clean fuel line; fill tank with clean fresh gasoline. 4. Disconnect fuel line at carburetor to drain fuel tank. Refill with fresh fuel. 5. Adjust carburetor.†
Engine overheats	<ol style="list-style-type: none"> 1. Carburetor not adjusted properly. 2. Engine oil level low. 	<ol style="list-style-type: none"> 1. Adjust carburetor.† 2. Fill crankcase with proper oil.
Too much vibration	Loose parts or damaged crankshaft.	Stop engine immediately and disconnect spark plug wire. Tighten all bolts and nuts. Make all necessary repairs. If vibration continues, have unit serviced by an authorized service dealer.
Unit does not discharge	<ol style="list-style-type: none"> 1. Directional discharge clogged. 2. Foreign object lodged in air vane plate assembly. 	<ol style="list-style-type: none"> 1. Stop engine immediately and disconnect spark plug wire. Clean directional discharge. 2. Stop engine immediately and disconnect spark plug wire. Remove lodged object.

†Refer to the engine manual packed with your unit.

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

1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has solutions for arbitrary values of the parameters α and β if and only if the condition $\alpha + \beta = 1$ is satisfied. In this case the solutions are unique and are given by the formulas

$$\begin{aligned} x_1 &= \frac{1}{\alpha} \ln \frac{1}{1 - \alpha} \\ x_2 &= \frac{1}{\beta} \ln \frac{1}{1 - \beta} \end{aligned}$$

2. The second part of the paper is devoted to a detailed analysis of the properties of the solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the solutions are unique and are given by the formulas

Model No.	692	699
Air Filter Element	491588	33268
Foam Pre-Cleaner	491435	—
Spark Plug	J19LM	J-8C
Engine Oil (SAE 30)	737-0208 (21 oz. req'd.)	737-0208 (26 oz. req'd.)
Hose Kit (Optional)	290-204-000	290-204-000

The only way to ensure the performance of your product is to use original equipment parts and accessories, which are designed and engineered to exacting specifications. When you substitute, you take a chance on quality, reliability, safety and performance. Use original equipment parts—See your local service dealer.

For Replacement Parts, Contact:
SERVICE DEPARTMENT • P.O. BOX 368022 • CLEVELAND, OHIO 44136-9722