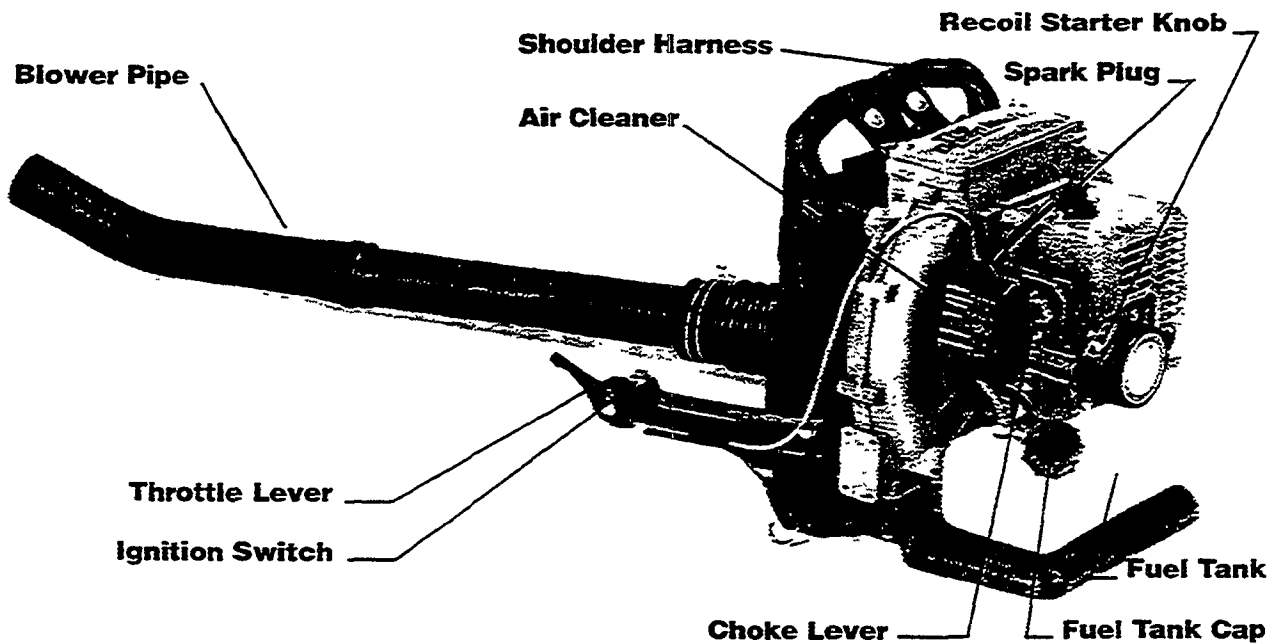


The Green Machine[®]

BACK PACK BLOWER Model 4600K

OPERATION MANUAL



• **CAUTION** •
READ OPERATING
PRECAUTIONS

• **WARNING** •
ALWAYS WEAR SAFETY GOGGLES
ALWAYS WEAR APPROVED DUST MASK
KEEP ALL BYSTANDERS 30 FT. AWAY AT ALL TIMES

• **CAUTION** •
READ PRECAUTIONS
WHEN REFUELING

To insure maximum performance and safe operation read and understand this manual before operating unit. Any service situation requiring a trained technician, return equipment to an authorized Green Machine service dealer.

WARRANTY CERTIFICATE

TWO (2) YEARS CONSUMER - LIMITED WARRANTY - ONE (1) YEAR COMMERCIAL

THE GREEN MACHINE® warrants your GREEN MACHINE to be free from defects in material and workmanship under normal use for a period of two (2) years from date of purchase when used by the consumer for residential home use, or one (1) year from date of purchase when used commercially.

Should your GREEN MACHINE PRODUCT fail within the warranty period due to defective parts or workmanship, just return the unit transportation prepaid to either (1) the retailer who sold it to you or (2) to your regional distributor, whose address is available from your retailer or (3) call Customer Service, (503) 826-8900, Ext. 398 for your nearest dealer location. The Green Machine or its agent will, at its option, repair or replace the unit at no charge. The Green Machine assumes no obligation to pay the registered owner a cash refund under any circumstances.

Please return the enclosed warranty card within ten (10) days after purchase. If we do not have the warranty card on file we will require other proof of purchase before completing the repairs. This warranty only extends to the original purchaser of the product.

This warranty does not apply if the product has been misused or used contrary to the instruction manual, or if it has been repaired or altered by anyone other than a Green Machine authorized service center.

This warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, or accidents, or lack of proper maintenance. Regular,

routine maintenance of the unit to keep it in proper operating condition is the responsibility of the owner.

THE GREEN MACHINE® IS NOT LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT INCLUDING ANY COST OF PROVIDING SUBSTITUTE EQUIPMENT DURING PERIODS OF MALFUNCTION.

Some states of the U.S.A. do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

Your (THE GREEN MACHINE®) product will perform as indicated in the instruction manual and in the accompanying literature. Your retailer may have sold you the machine with a promise that it would handle a particular task. You may return the machine to him if it does not perform that specific task, but we cannot be responsible for promises which are beyond the scope of the above instruction manual or literature.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN AS CONTAINED IN THIS STATEMENT, AND ANY IMPLIED WARRANTIES SHALL EXPIRE 90 DAYS AFTER DATE OF PURCHASE. Some state of the U.S.A. do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

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

TECHNICAL SPECIFICATIONS

Specification are subject to change without notice.

Dimensions:	L x W x H = 350 x 430 x 380 mm (13.7" x 16.9" x 15.0 ")
Weight, dry:	8.0 kg (17.7 lbs.)
Fuel capacity:	1.6 liters (0.4 gal.)
Engine type:	Air cooled-two stroke
Displacement:	40.2cc
Ignition system:	Transistorized electronic ignition.
Carburetor:	Diaphragm type
Spark plug:	NGK BM6A
Spark plug gap:	0.6 to 0.7 mm (.024" to .028")
Starter:	Automatic recoil
Max. air volume:	16.6m ³ /min. (589 cfm)
Max. air speed:	112m /sec. (251 mph)
Fuel:	Gasoline/oil mixture - 25:1
Noise level:	69.5 db(a) at 7,000 rpm from 50 ft.

SAFETY RULES & PRECAUTIONS

• **KNOW YOUR UNIT** •

1. Read your Operator's Manual carefully until you completely understand and can follow all safety rules, precautions, and operating instructions before operating the unit.
2. Restrict your unit to users who understand and follow all safety rules, precautions, and operating instructions found in this manual.

• **PLAN AHEAD** •

1. Always wear eye protection to prevent rocks or debris from being blown or ricocheting into eyes and face which could result in loss of vision or other serious personal injury.
2. Always wear a respirator or facemask when working in dusty environments.
3. Dress safely in long pants and wear boots or safety shoes. Do not wear loose clothing, jewelry, short pants or sandals, or go barefoot.
4. Do not operate the unit when you are tired, ill, or upset or if you are under the influence of alcohol, drugs, or medication.
5. Keep children, bystanders and pets away from the work area - a minimum of 30 feet (10 meters) when starting or operating the unit.
6. Inspect the area before starting the unit. Remove all debris and objects such as rocks, glass, wire, etc. that can be blown or cause damage during operation.

• **OPERATE YOUR UNIT SAFELY** •

1. Inspect the entire unit before each use for worn, loose, or damaged parts. Do not use until the unit is in proper working order.
2. Keep the outside surfaces free of oil and fuel.
3. Never start or run the engine inside a closed room or building. Exhaust fumes contain dangerous carbon monoxide.
4. Always start and run the unit in an upright position.
5. Avoid dangerous environments. Do not use in unventilated areas or where explosive vapors or carbon monoxide build up could occur.

6. Do not overreach or use from unstable surfaces such as ladders, trees, steep slopes, rooftops, etc. Keep firm footing and balance at all times.
7. Never place objects inside the extension tubes. Always direct the discharge of debris away from people, animals, glass, and solid objects such as trees, automobiles, walls, etc. The force of air can cause rocks, dirt, or sticks to be thrown or ricochet which may hurt people or animals, break glass or cause other damage.
8. Never place any object in the air intake opening as this could restrict proper air flow and cause damage to the unit.
9. Use only for jobs explained in this manual.
10. IF you do not understand these instructions or require assistance, see an authorized Green Machine dealer.



WARNING

Improper use of this product may cause serious injuries to yourself or bystanders. Especially, you must be aware of the possibility of injuries to the eyes, which can lead to blindness.

To prevent injuries to yourself and others, please follow *all* of the safety precautions listed throughout this manual.

• **USES FOR YOUR BLOWER** •

1. Sweeping debris or grass clippings from driveways, sidewalks, patios, parks, parking lots, barns, and stadiums.
2. Gathering grass clippings, straw or leaves into piles.
3. Fast drying of wet, outdoor areas such as a patio.
4. Removing debris from corners, around joints and between bricks.
5. Blowing light snow from driveways, patios or sidewalks.

ASSEMBLY INSTRUCTIONS

Unpacking Your Unit

Your unit has been carefully packed at the factory to prevent damage during shipping and storage. Carefully unpack the carton as follows:

1. Remove contents from the carton.
2. Check parts against the list in Fig. 1
3. Examine parts for damage.
4. Notify your dealer immediately if a part is missing or damaged.

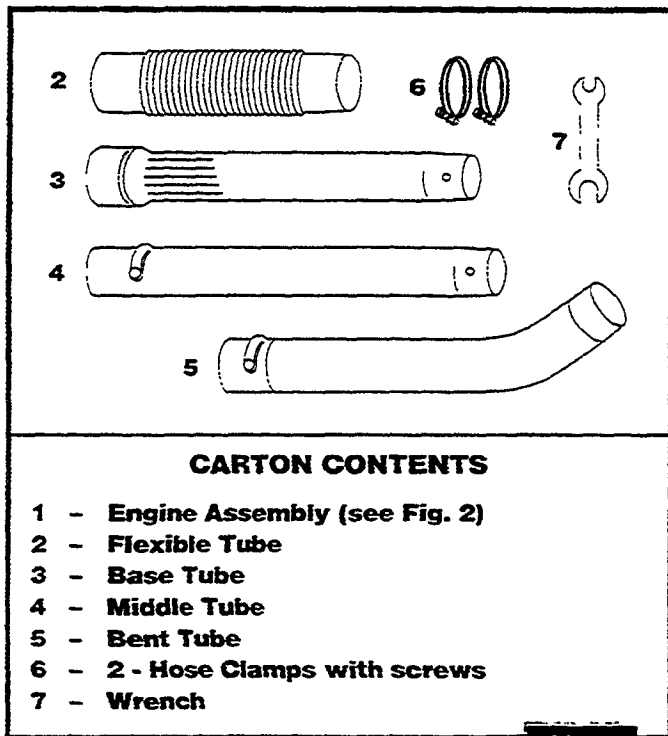


Fig. 1

Assembling Extension Tubes and Shoulder Straps (Fig. 2)

1. Slip one wire clamp onto each end of the flexible tube.
2. Install flexible tube onto the output tube on the blower housing.
3. Slide the grooved end of the base tube into the open end of the flexible tube and securely tighten the screws on the clamps with the Phillips screwdriver or wrench provided.

Note: The base tube is designed to swivel allowing air flow to be directed. Be certain that base tube, middle tube and bent tube are perfectly inserted up to each stopper in order to prevent slipping.

4. Install the middle tube into the base tube and the bent tube in the middle tube.
5. Attach Shoulder Straps - adjust straps to fit your body.

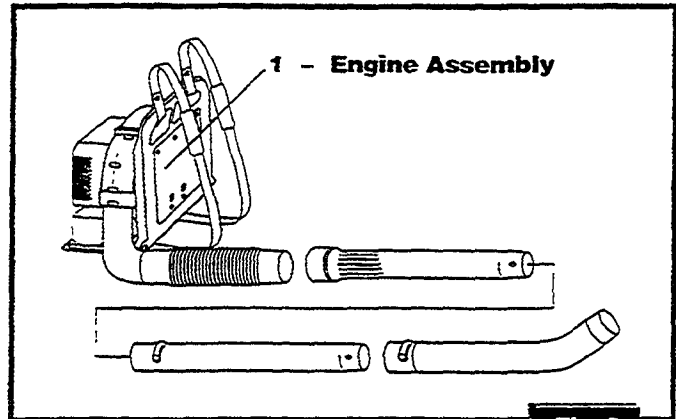


Fig. 2

FUELING INSTRUCTIONS

Gasoline

1. Handle gasoline with care.
2. Do not store gasoline near an open flame, such as a water heater, as it is highly flammable.
3. Refuel before starting work.
4. Do not refuel a hot engine.
5. Avoid spilling fuel or oil. Always wipe unit dry of fuel before using.
6. Move at least 10 feet (3 meters) away from the fueling point before starting engine.
7. Always store gasoline in an approved container.

Fuel and Oil Mixing

1. Use One-Mix® or a mixing ratio of fuel and oil at 25:1
2. Pour half the gasoline into the container, add the oil and thoroughly mix to ensure complete blending. Now add the remainder of gasoline and mix again.



CAUTION

When preparing fuel mixture, mix only the amount needed for the job you are to do. Do not use a fuel mixture that has been stored longer than two (2) months. Fuel mixture stored longer than this will cause hard starting and poor performance. If fuel mix has been stored longer than this time, it should be removed and refilled with a fresh mixture.

Use only a good grade of gasoline.

Use only a reputable brand of 2-cycle, air-cooled engine oil. (MMI recommends using a 2-cycle oil meeting or exceeding B.I.A. standards, such as One-Mix®.)

DO NOT USE:

Automotive Oil - as it does not have proper additives for 2-cycle engines and could cause damage.

Gasoline containing alcohol greater than 9.9%

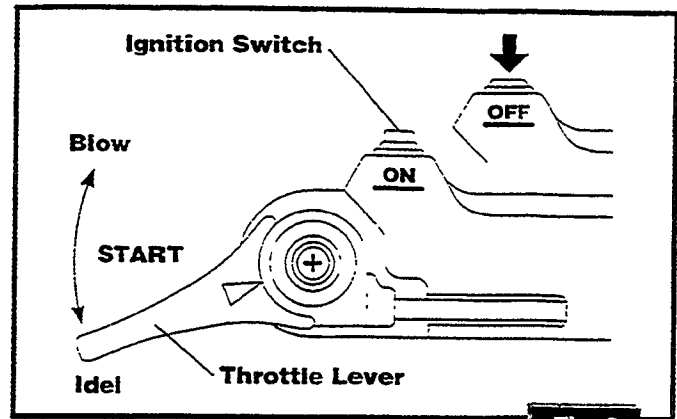


Fig. 3

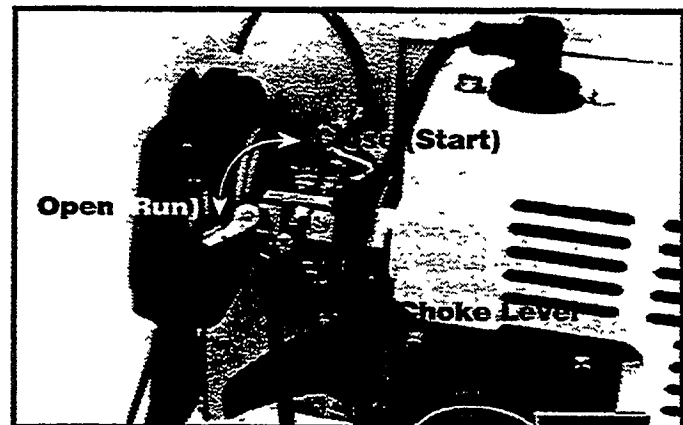


Fig. 4

Fueling Your Unit

1. Fill 7/8 of the tank with fuel without spilling.
2. Wipe off any spilled fuel with a dry cloth.
3. Tighten fuel cap securely.

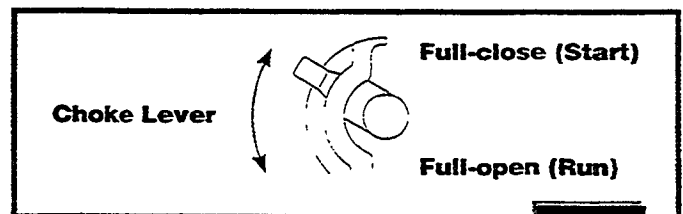


Fig. 5

OPERATING INSTRUCTIONS

Starting the Engine

1. Set ignition switch to the "on" position. (Fig. 3)
2. Use the lever to fully close the choke. (Fig. 4 & 5)
Note: In intense hot weather or when the engine is still warm, use half or no choke.
3. Open the throttle lever halfway. (Fig. 3)
4. Push primer pump several times until fuel flows out in clear overflow pipe. (Fig. 6)
5. Give the starter a rapid and vigorous pull until the engine fires. (Fig. 7)

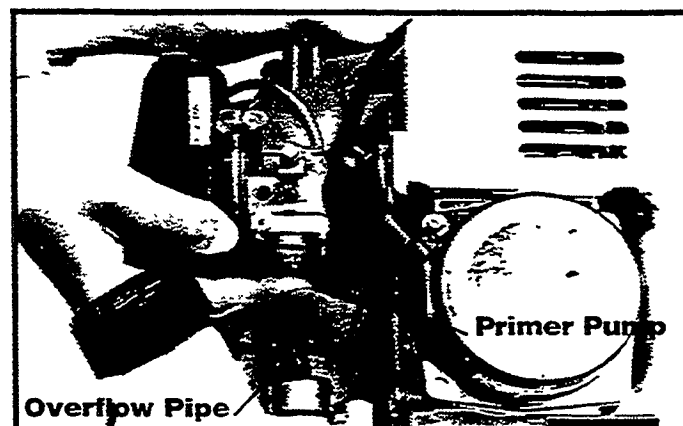


Fig. 6



- Do not pull the starter rope to the end.
- Rewind the rope slowly.

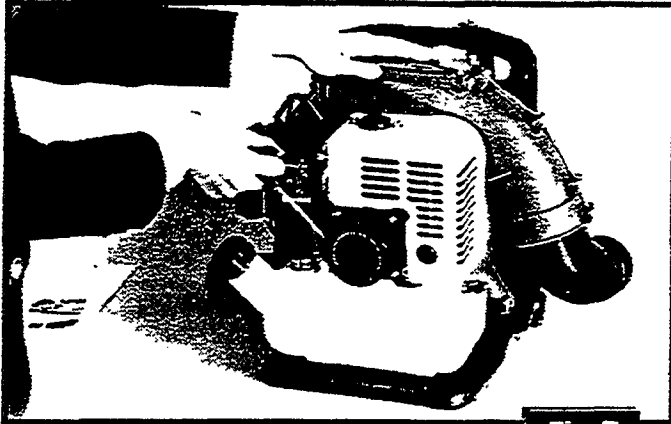


Fig. 7

6. After the engine fires, open choke lever gradually, and reduce engine speed.
7. Warm up the engine at low speed. Note: winter about 5 min., summer 2-3 min.

Stopping the Engine

1. Close throttle lever to reduce engine speed to idle.
2. Set ignition switch to the "Off" position. (fig. 3)

Operating the Blower

1. Adjust shoulder straps correctly to make the machine fit your body.
2. The velocity of air stream can be controlled from a gentle breeze to a high-speed blast by the throttle lever.
3. Select the best speed for each application of the blower. Example: low speed for blowing dry leaves, and high speed for wet leaves.

• **IMPORTANT** •

- Do not operate in unventilated areas.
- Do not allow bystanders in work area.
- Always wear proper clothing.
- Always wear safety glasses and a face filter mask.
- Wear ear protectors.
- Do not touch muffler, spark plug or rotating parts.

MAINTENANCE INSTRUCTIONS

Daily Maintenance

- Always check for efficient and safe operation.
- Remove dirt from blower.
- Tighten bolts if they are loose.
- Replace damaged parts.
- Always use recommended The Green Machine® replacement parts.

Air Cleaner (Fig. 8)

1. Remove air cleaner cover and take out air filter.
Note: Accumulated dust on the air filter will reduce engine efficiency and increase fuel consumption.
2. Wash air filter in mild detergent and water, then dry the filter well.
3. Put a few drops of oil on the foam filter. Squeeze out excess oil.



Fig. 8



Do not use gasoline or flammable solvent to clean the air filter!

STORAGE

1. Correctly preparing your Power Blower for extended storage will be amply rewarded by an increased service life and trouble-free performance.
2. Drain fuel tank and carburetor thoroughly.
3. Remove spark plug, pour one teaspoon of engine oil into cylinder and pull recoil starter gently to distribute the oil. Replace spark plug securely.
4. Thoroughly clean the blower and coat unprotected surfaces with oil to prevent rust.
5. Store the blower in a dry, dust-free area.

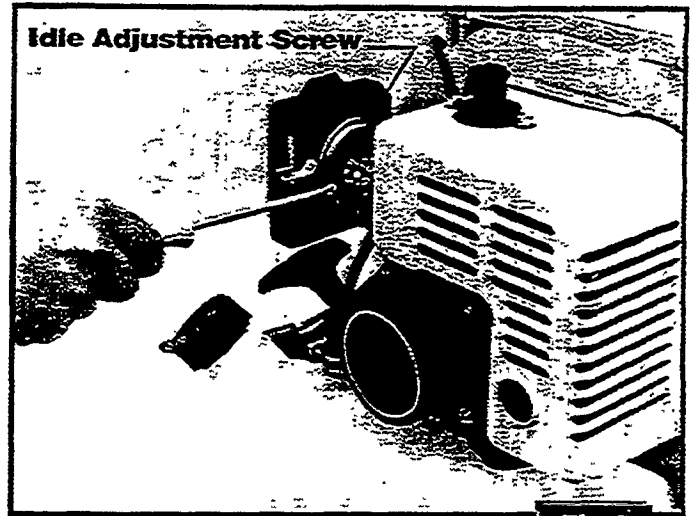


Fig. 9

ENGINE ADJUSTMENTS

Adjustment of Carburetor

1. Adjust the idle speed with the idle adjusting screw. Turning clockwise will increase idle speed and counter-clockwise will reduce idle speed. (Fig. 9)
2. The high speed adjustment is made by the high speed fuel air adjust screw. Turn the adjusting screw 2 to 3 turns counterclockwise from the tightened position. This is the normal operating position.
3. Idling speed must be adjusted to the minimum constant speed.

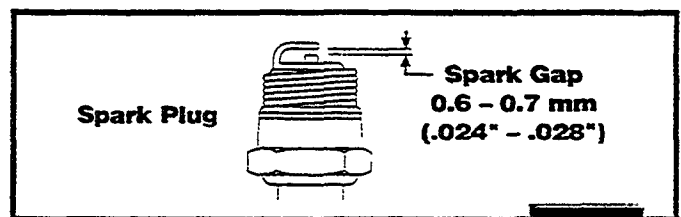


Fig. 5

Spark Plug (Fig. 10)

1. Clean or replace the plug if fouled with oily black deposits.
2. Replace the plug if the center electrode is rounded at the end or if the ground electrode is worn.
3. Adjust the gap 0.6-0.7mm (.024-.028). (Recommended spark plug is a NGK BM6A)

Muffler and Exhaust Port (Fig.11)

In the event that the engine should lose power and overheat, the muffler should be removed and checked for excessive deposits. Carbon build up in the exhaust port is normal, but should be removed. Remove carbon deposits from the muffler flange area and clean carbon from the spark arrestor.

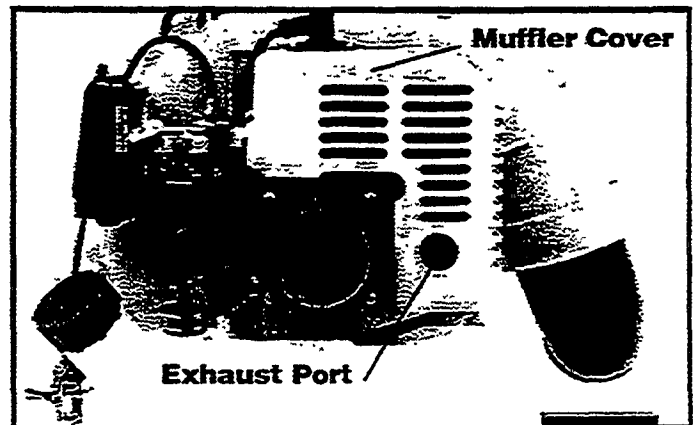
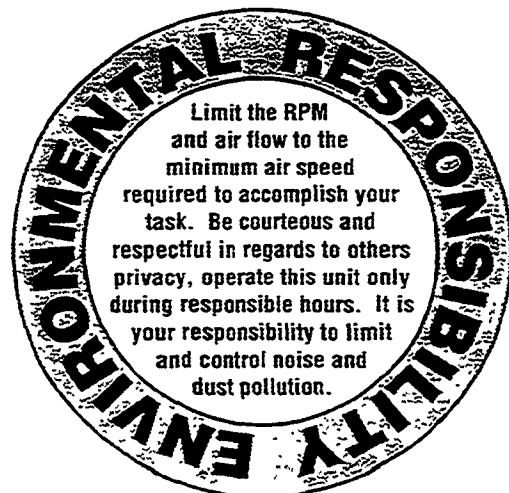


Fig. 11



TROUBLESHOOTING CHART

<u>Classification</u>	<u>Probable Cause</u>	<u>Remediary Measures</u>
1. ENGINE FAILS TO START		
Spark plug	<ol style="list-style-type: none"> 1. Spark plug electrodes are wet. 2. Spark plug electrodes are contaminated with carbon. 3. Spark plug insulating material is found cracked. 4. Spark plug gap distance is excessively long or short. 5. Spark plug electrodes are burnt. 	Dry Clean electrodes Replace spark plug Adjust the distance to (.65mm or .026in) Replace spark plug
Proper compression and fuel is supplied	<ol style="list-style-type: none"> 1. Fuel is too rich. 2. Improper fuel is used. 	Check choke operation, adj. high speed Replace with good fuel
No fuel to carburetor	<ol style="list-style-type: none"> 1. Fuel tank is empty. 2. Plugged fuel line. 3. Fuel filter is blocked with dirt or water. 4. Suction pipe, carburetor, etc. is loose. 	Refill tank Open or replace Clean or replace Tighten
2. ENGINE LACKS POWER		
Miscellaneous	<ol style="list-style-type: none"> 1. Loose fuel pipe fitting. 2. Air leak at intake manifold or carburetor. 3. Water is mixed in fuel. 4. Muffler is plugged with carbon deposit. 5. Air cleaner is plugged. 	Fasten fitting, etc. securely Replace packing or fasten joint securely Replace with good fuel Disassemble muffler and clean Clean
Overheating	<ol style="list-style-type: none"> 1. Fuel is excessively lean. 2. Ignition timing is retarded. 3. Fan cover, cylinder fin clearance, etc. are clogged with dirt. 	Adjust the carburetor high speed Adjust the ignition timing Clean
Engine has abnormal noise (knocking)	<ol style="list-style-type: none"> 1. Improper ignition timing 2. Use of improper fuel. 3. Combustion chamber is contaminated with carbon deposit. 	Adjust the ignition timing Replace with specified fuel Clean combustion chamber
3. ABRUPT STOP OF ENGINE FROM NORMAL RUNNING CONDITION		
Engine stops suddenly	Miscellaneous	Return to Auth. Green Machine Dealer
Engine stops after gradually slowing down	<ol style="list-style-type: none"> 1. Shortage of fuel. 2. Water is mixed in the fuel. 3. Incorrect or no oil in fuel. 	Refill tank Drain fuel and fill with fresh fuel Return to Auth. Green Machine Dealer
4. ENGINE DOES NOT STOP		
Electric system	Defective stop button.	Return to Auth. Green Machine Dealer

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