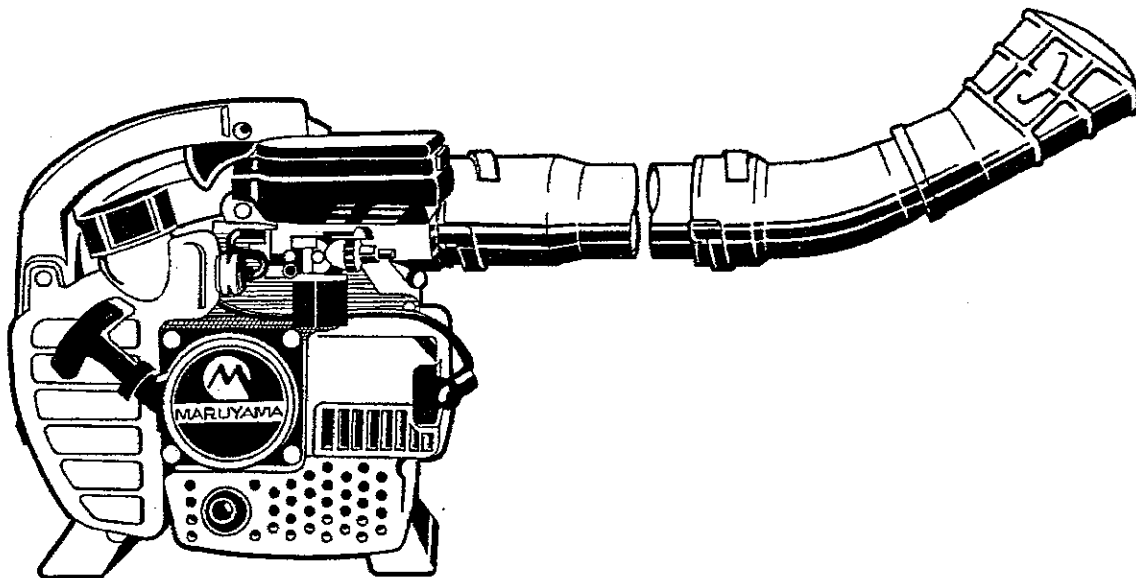





## INSTRUCTION MANUAL

FOR HANDHELD POWER BLOWER

MODEL: BL230



It is essential that any operator of a MARUYAMA Power Blower reads and understands the contents of this manual before the engine is started.

Important safety instructions will be identified by the safety symbol. 

Failure to comply with the instructions in this manual may result in serious injury.

# FOREWORD

This Instruction Manual is designed to familiarize the operator with the various features and component parts of the equipment and to assist you with the assembly, operation and maintenance of your new Power Blower. Please read this Instruction Manual carefully before using the blower, and acquaint yourself thoroughly with the equipment.

Special attention should be given to the Safety Instructions provided throughout the Instruction Manual.

For additional assistance, contact any local authorized Maruyama dealer, or Maruyama U.S., Inc., 301-30<sup>th</sup> St. NE, Suite 118, Auburn, WA 98002.

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## SPECIFICATIONS

MODEL BL230

HANDHELD POWER BLOWER

Dimensions L X W X H.....	11.8 X 8.7 X 11.6 in. (300 X 220 X 295 mm)
Dry Weight.....	9.5 lbs / (4.3 kg)
Engine Type.....	Kawasaki/ 2-stroke, Air cooled, TA22
Displacement.....	22.6 cc
Ignition Type.....	Electronic
Carburetor.....	TK; All-position Diaphragm
Fuel Tank Capacity.....	0.64 Qts. (0.6 lit)
Attachments (standard).....	Two section pipe W/Cone tip; Shoulder Hanging Strap



## SAFETY INSTRUCTIONS

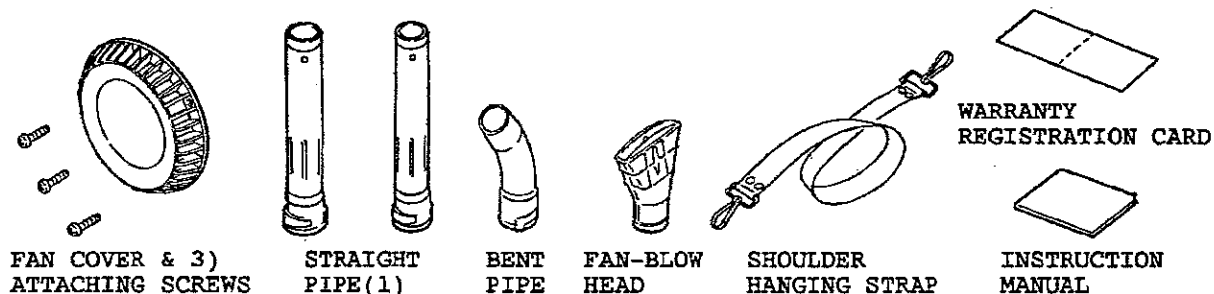


1. Read and understand this Instruction Manual before using the power blower. Be thoroughly familiar with the proper use of the power blower.
2. Never allow children to operate the power blower. It is not a toy. Never allow adults to operate the unit without first reading the Instruction Manual.
3. Become familiar with the controls and know how to stop the engine quickly.
4. Always use eye protection and hearing protection.
5. Keep the area of operation clear of all persons, particularly small children and pets.
6. Never operate a power blower when you are fatigued.
7. Never operate a power blower without proper guards or other protective safety devices in place.
8. Dress properly; do not wear loose clothing or jewelry that can be caught in moving parts. Always wear substantial footwear, long pants, and long sleeved shirt.
9. Gasoline is highly flammable; handle it carefully.
  - A. Do not smoke while handling gasoline.
  - B. Use an approved fuel container for storing the gasoline/oil mixture.
  - C. Do not fill the fuel tank when the engine is hot or running.
  - D. Fill the fuel tank outdoors and only up to one-half inch from the top of the tank. Do not fill the filler neck.
  - E. Wipe away any spilled gasoline before starting the engine.
10. Always be sure of your footing; keep a firm hold of the blower pipes, and walk, never run while operating a power blower.
11. Use the correct accessories. Do not use the power blower for any job except that for which it is intended.
12. Keep all fasteners tight and be sure the power blower is in safe working condition. Follow the maintenance instructions provided on page 8-9 of this manual.
13. Do not put hands or feet near or under the rotating parts. Keep clear at all times.
14. If the power blower should start to vibrate abnormally, stop the engine immediately and check for the cause. Vibration is generally a warning of trouble.
15. Avoid using the power blower near rocks, gravel, stones and similar matter in order to avoid dangerous flying debris.
16. Use the power blower only in daylight or good artificial light.

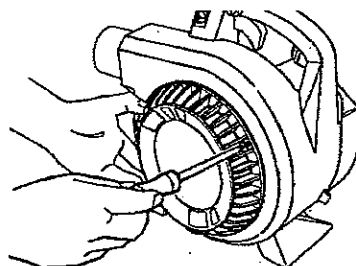
The Maruyama Handheld Power Blower is packed with a Shoulder Hanging Strap, Instruction Manual, and a Warranty Registration Card. Some assembly and attachment of component parts is required.

## ASSEMBLY INSTRUCTIONS

STEP #1) Locate and identify all the components.

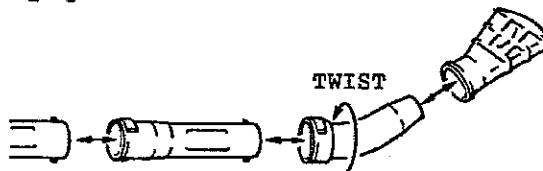


STEP #2) Attach the fan cover with the 3) attaching screws.



STEP #3) Assemble the straight pipe, bent pipe and fan-blow head as follows:

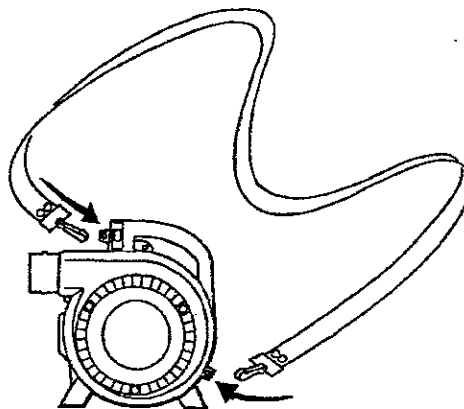
A) Align the pipes.



B) Insert the ends.

C) Twist to lock the pipes to each other.

STEP #4) Attach the shoulder strap.



## BEFORE OPERATION

Be sure the power blower is correctly assembled and all fasteners and fittings are properly secured.

### FUEL: MIXING GASOLINE AND OIL



CAUTION—READ THE SAFETY INSTRUCTION CONCERNING GASOLINE ON PAGE(2).

The two-cycle engine used on the MARUYAMA power blower requires a mixture of GASOLINE and OIL for lubrication of bearings and other moving parts. The correct fuel mixture ratio is 25:1, which is 5.0oz. of oil mixed with one gallon of gasoline.

NOTE: Gasoline and oil must be premixed in a clean gasoline container. Never mix gasoline and oil indoors or in the power blower fuel tank. Always use fresh gasoline.

Add a small amount of unleaded regular gasoline to a gasoline container. Pour the proper amount of two-cycle oil into the gasoline container. Do not use multi-viscosity oils. Install the cap on the gasoline container before shaking. Shake the gasoline container vigorously so the oil mixes with the gasoline. Add the additional gasoline needed to complete the required amount of mixed fuel (see the fuel mixture chart below).

IMPORTANT: Do not fill the blower fuel tank with gasoline that does not have oil mixed in it. Do not use gasoline additives because the engine could be damaged.



WARNING!! NEVER USE GASOHOL OR ALCOHOL BLENDED FUELS IN MARUYAMA ENGINES.

Before filling the power blower fuel tank, clean around the fuel tank cap so dirt and debris does not enter the fuel tank. Always shake the fuel container before filling the fuel tank. Remove the fuel cap, then fill the fuel tank to within 1/4-1/2 inch from the top of the tank. Avoid filling the fuel tank filler neck. Install the cap securely onto the fuel tank.

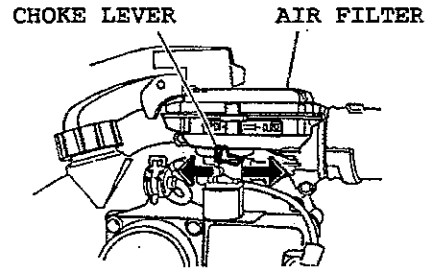
### FUEL MIXTURE CHART FOR 25:1 RATIO

WITH	1 GALLON GASOLINE MIX	5.0 oz OIL
	2 GALLON GASOLINE MIX	10.0 oz OIL
	5 GALLON GASOLINE MIX	25.0 oz OIL

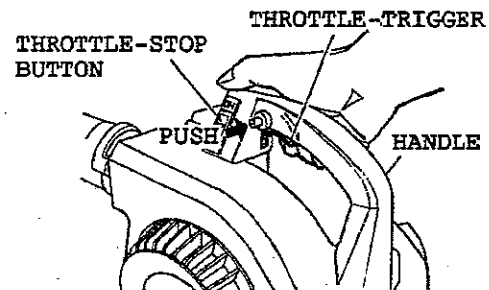
# OPERATING INSTRUCTIONS

## STARTING PROCEDURE

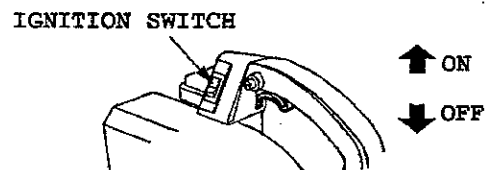
STEP #1) Place the choke lever in the "closed" position.



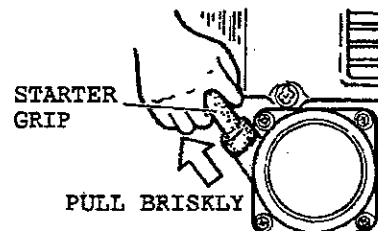
STEP #2) Hold the throttle trigger fully depressed against the handle, and push-in the throttle-stop button. While holding the button in, release the trigger. Then release the button. The throttle should now be in the fast-idle position.



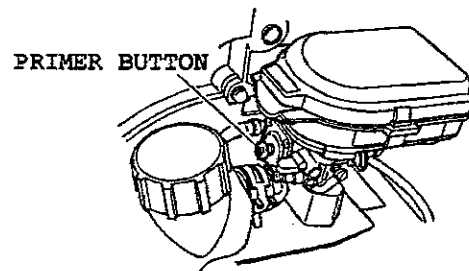
STEP #3) Place the ignition switch in the "on" position.



STEP #4) Pull the starter grip briskly. (Repeat until engine starts.)



NOTE: A primer button is located in the diaphragm cover of the carburetor. If the power blower has not been operated recently, depressing the primer button while pulling the starter grip will aid in charging the carburetor with fuel mixture.



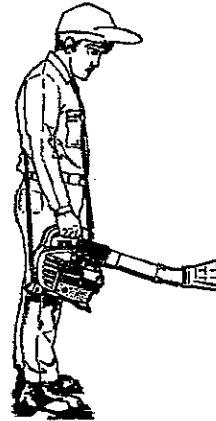
STEP #5) When the engine starts, place the choke lever in the "open" position and allow the engine to warm-up while running at fast idle. Pulling the throttle trigger will release the throttle-stop button and allow the throttle to return to the idle position.

## BLOWER OPERATION

After a brief warm-up period, the power blower is ready for operation. Adjust the shoulder hanging strap so the power blower rests comfortably at arms length. (see sketch)



Before operating the power blower read the safety instructions on page two.



## STOPPING THE ENGINE

To stop the engine, release the throttle trigger and allow the engine to run at idle for a short time. When the engine has cooled, move the ignition switch to the "off" position.

## REGULAR MAINTENANCE

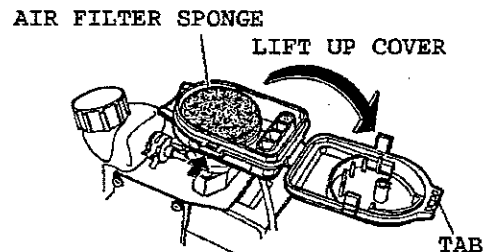
Before each use, the power blower should be inspected for proper assembly and fitness of all components. All fasteners should be checked for correct tightness. Always inspect for fuel leaks.



CAUTION—Do not attempt to start or operate a power blower that indicates a fuel leak.

### AIR FILTER

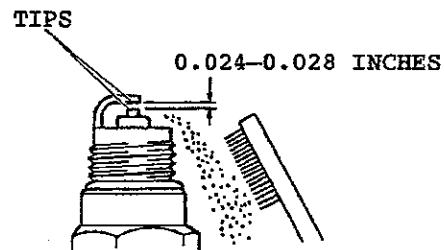
The air filter sponge should be cleaned each time the power blower is used (or more often with extreme conditions). To remove the sponge, lift the cover by the tab at the rear of the cover (see sketch). The sponge will lift out from the air filter case. Wash the sponge in kerosene or warm detergent solution, then squeeze it dry. Apply motor oil to the sponge and squeeze out all excess oil. Reassemble the air filter.



### SPARK PLUG

The spark plug should be removed from the engine and checked after each 25 hours of operation.

The tips can be cleaned with a stiff brush. Adjust the gap to 0.024–0.028 inches (see sketch). Replace the spark plug if it is oil-fouled or damaged.

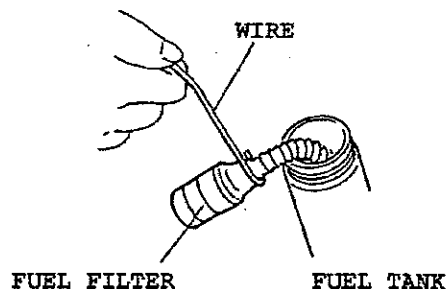


CAUTION—Do not over-tighten the spark plug. The correct torque is 10–12 ft.lbs.



## FUEL FILTER

The fuel filter should be cleaned and inspected for damage after each fifty (50) hours of use. The fuel filter is attached to the fuel pickup tube inside the fuel tank. The other end of the fuel pickup tube is attached to the primer bulb assembly on top of the fuel tank. For access to the fuel filter, remove the fuel tank cap and pull the filter from the fuel tank. A wire with a hooked end aids in the removal. Avoid damaging the fuel pickup tube.



To clean the fuel filter, remove it from the fuel pickup tube and wash it with fuel mixture. Inspect and clean the fuel tank before re-installing the fuel filter. Always replace a defective fuel filter.

## MUFFLER AND EXHAUST PORTS

The muffler should be removed and serviced after each one hundred (100) hours of use. At the same time, the exhaust ports should be cleaned and inspected. An AUTHORIZED MARUYAMA DEALER should be contacted for this service.

## GENERAL CLEANING AND TIGHTENING

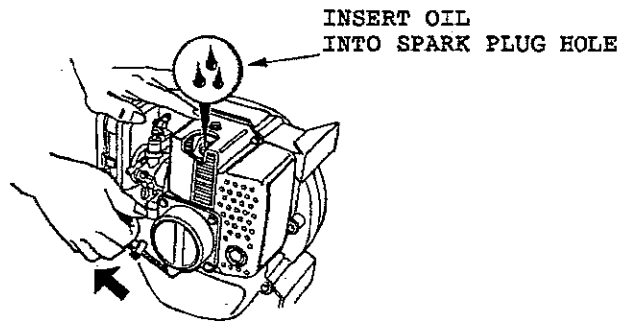
The MARUYAMA power blower will provide maximum performance for many, many hours if it is maintained properly. Good maintenance includes regular checking of all fasteners for correct tightness, and cleaning the entire machine. Contact an authorized MARUYAMA dealer for additional maintenance suggestions.

## STORAGE

ALL MODELS: For long-term storage of the HANDHELD POWER BLOWER, perform all regular maintenance procedures and needed repairs. Empty the fuel tank.

Start the engine and allow it to run until it stops. Pull the starter cord a few times to remove any excess fuel from the engine. Remove the spark plug and insert a small amount of oil. Pull the starter cord once and bring the piston to a position closest to the spark plug hole.

Re-install the spark plug. Apply a thin coating of oil to the entire machine and store in a dry place.



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# MEMO

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### LIMITED WARRANTY STATEMENT

All Maruyama products are warranted to the original purchaser to be free from defects in material and workmanship for a period of two (2) years from the date of purchase when applied to residential use, or six (6) months from the date of purchase when applied to commercial use.

Any part(s) of Maruyama products found to be defective within the warranty period shall, at Maruyama's option, be repaired or replaced without charge. Warranty consideration is obtained by delivering any Maruyama product believed to be defective to an Authorized Maruyama Service Dealer within the applicable warranty period.

Warranty will not apply to conditions resulting from:

1. Damage(s) and/or costs associated with shipping and/or transportation.
2. Lack of normal maintenance, adjustments, or service required for regular use of the product.
3. Modifications, service/repairs, parts or components not authorized by Maruyama.
4. Normal wear, accident, abuse, neglect, misuse, negligence, improper fuels/fuel mixtures, or failure to operate or maintain the product in accordance with instructions approved by Maruyama.

Maruyama shall not be liable for any special, consequential, direct or indirect damages, and expressly states there are no implied warranties. Some states do not allow limitation of incidental or consequential damages, accordingly the above limitations and exclusions may not apply to you.

This warranty provides you with specific legal rights which may vary from state to state.

It is the owners responsibility to properly complete and mail the Warranty Registration Card. Proof of purchase and registration will be required in order to obtain warranty service.

For the name of the authorized Maruyama dealer nearest you.

### CONTACT

**Maruyama U.S., Inc. / 301 - 30<sup>th</sup> Street NE, Suite 118 / Auburn, WA 98002**