



BL460/BL560

Owner's/Operator's Manual

Completely read and understand this manual before using this product.

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Introduction

Thank you for purchasing a Maruyama Backpack Blower.

Maruyama, its distributors, and dealers want you to be completely satisfied with your new Backpack Blower. Please feel free to contact your local authorized service dealer for help with service, genuine Maruyama parts, or other information you may require.

Whenever you contact your authorized service dealer or the factory, have the model and serial number of your product handy. This number will help the Service Dealer or representative provide exact information about your specific product. You will find the model and serial number located on the product.

For future reference, you may record this information in the space provided below:

Model Name: _____ **Serial No.** _____

This Owner/Operator's Manual is designed to familiarize the operator with the various features and component parts of the equipment. Read this manual carefully to assist you with the operation and maintenance of your new Backpack Blower.

For additional assistance, visit any local authorized Maruyama dealer or write to:
Maruyama U.S., Inc., 301 30th St. NE, Suite 118 Auburn, WA 98002.

Product Safety

Although Maruyama designs, produces and markets safe, state-of-the-art products, you are responsible for using your new Backpack Blower properly and safely. You are also responsible for training any person you allow to use this product about its safe operation.

The Maruyama warning system in this manual identifies potential hazards and has special safety messages that help you and others avoid personal injury, even death. **DANGER**, **WARNING** and **CAUTION** are signal words used to identify the level of hazard. However, regardless of the level of hazard, be extremely careful when operating power equipment.

- >> **DANGER** signals an extreme hazard that will cause serious injury or death if the recommended precautions are not followed.
- >> **WARNING** signals a hazard that may cause serious injury or death if the recommended precautions are not followed.
- >> **CAUTION** signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed.

Two other words are also used to highlight information:

- >> **IMPORTANT** calls attention to special mechanical information.
- >> **NOTICE** emphasizes general information worthy of special attention.

Operator Safety

1. Read and understand this Owner's/Operator's Manual before using this product. Be thoroughly familiar with the proper use of this equipment.
2. Never allow children to operate the Backpack Blower. It is not a toy. Never allow adults to operate the unit without first reading the Owner's/Operator's Manual.
3. Always wear eye protection that complies with ANSI (American National Standards Institute) Z87-1.
4. Wear hearing protection.
5. Always wear heavy, long pants, boots and gloves. Do not wear loose clothing, jewelry, short pants, sandals or go barefoot. Secure hair so it is above shoulder length.
6. Never operate this Backpack Blower when you are tired, ill, or while under the influence of alcohol, drugs or medication.
7. Never start or run the engine inside a closed room or building. Breathing exhaust fumes can cause death.



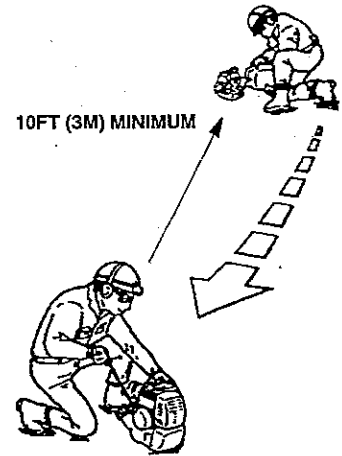
Backpack Blower Safety

1. Make sure the Backpack Blower is correctly assembled as instructed in the Assembly section of this manual.
2. Before each use, inspect the Backpack Blower. replace damaged parts. Check for fuel leaks. Make sure all fasteners are in place and tightened securely.
3. Maintain the Backpack Blower in accordance with the recommended maintenance intervals and procedures detailed in the "Maintenance" section, beginning on page 13.
4. Use the correct accessories. Never use replacement parts that are not approved by Maruyama U.S., Inc.
5. Shut off the engine before performing maintenance or working on the machine.
6. If running problems or excessive vibration occur, stop immediately and inspect the unit for the cause. If the cause cannot be determined, or is beyond your ability to correct, return the Backpack Blower to your servicing dealer for repair.

Fuel Safety

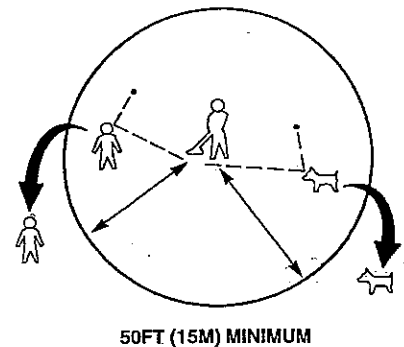
1. Gasoline is highly flammable and must be handled and stored carefully. Use a container approved for storing gasoline and/or fuel/oil mixture.
2. Mix and pour fuel outdoors away from sparks or flames.
3. Do not smoke near fuel storage containers or the Backpack Blower. Do not smoke while operating the Backpack Blower.
4. Do not overfill the fuel tank. Stop filling 1/4 to 1/2 inch (6mm-13mm) from the top of the tank.
5. Wipe up any spilled fuel before starting the Backpack Blower engine.

6. Move the Backpack Blower at least 10 feet (3m) away from the fueling location before starting the engine.
7. Do not remove the fuel tank cap while the engine is running or immediately after stopping the engine.
8. Allow the engine to cool before refueling.
9. Empty the fuel tank before storing the Backpack Blower. Fuel should be emptied after each use as fuel remaining in the tank may leak during storage.
10. Store both fuel and the Backpack Blower away from open flame, sparks and excessive heat. Make sure vapors cannot reach sparks or open flames from heaters, furnaces, electric motors, etc.



Operating Safety

1. **THIS BACKPACK BLOWER CAN CAUSE SERIOUS INJURIES.** Read the instructions carefully. Be familiar with all controls and the proper use of the Backpack Blower.
2. Avoid using the Backpack Blower near rocks, gravel, stones and similar materials which can become dangerous projectiles.
3. Keep children, bystanders and animals outside a 50ft. (15m) radius surrounding the area of operation.
4. If you are approached while operating the Backpack Blower, stop the engine.
5. Never allow children to operate the Backpack Blower.
6. Use the Backpack Blower only in daylight or adequate artificial lighting.
7. Never operate the Backpack Blower without proper guards or other protective safety devices in place.
8. Do not put hands or feet near any moving parts. Keep clear of hot surfaces such as the muffler.
9. Maintain a firm footing while operating the Backpack Blower.
10. Use the right tool for the job. Do not use the Backpack Blower for any job that is not recommended.
11. Know how to stop the machine quickly in an emergency. For information on how to stop the engine refer to the Starting and Stopping Procedures on page 11.

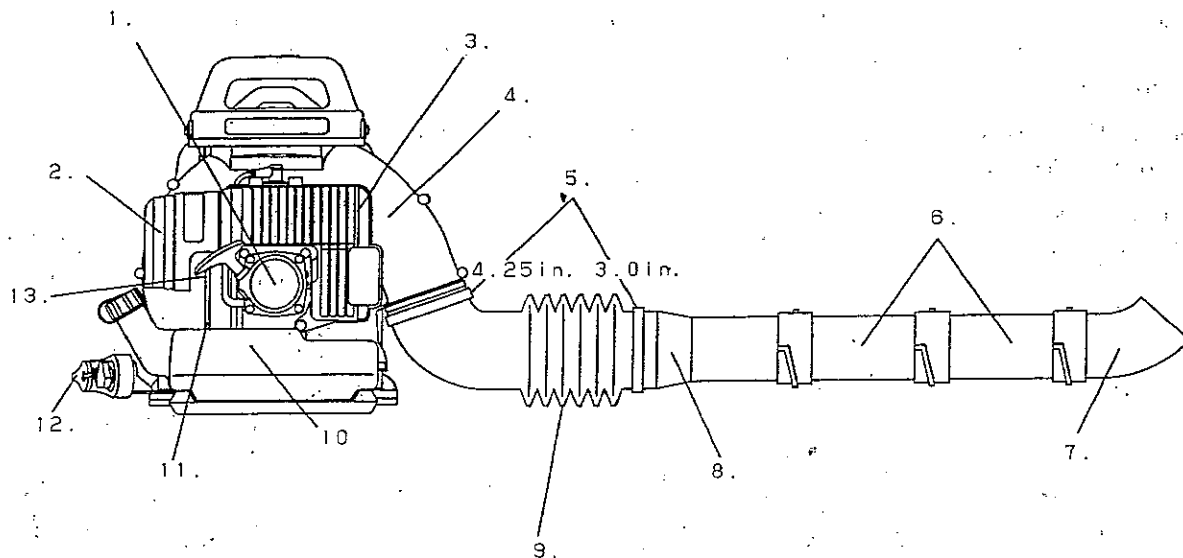


Operating Techniques

1. Operate power equipment only at reasonable hours — not early in the morning or late at night when people may be disturbed. Comply with the times listed in local ordinances. Usual recommendations for hours of operation are 9:00 a.m. to 5:00 p.m., Monday through Saturday.
2. To reduce noise levels, limit the number of pieces of equipment used at any one time and operate power blowers at the lowest possible throttle speed to do the job.
3. Check your equipment before operation, especially the muffler, air intakes and air filters.
4. Use rakes or brooms to loosen debris before blowing.
5. In dusty conditions, slightly dampen surfaces or use a mister attachment when water is available. Conserve water by using power blowers instead of hoses for many lawn and garden applications, including areas such as gutters, screens, patios, grills, porches and gardens.
6. Use the full blower nozzle extension so the air stream can work close to the ground. Watch out for children, pets, open windows or freshly washed cars and blow debris safely away.
7. After using blowers and other equipment, CLEAN UP! Dispose of debris in trash receptacles.

Product Description

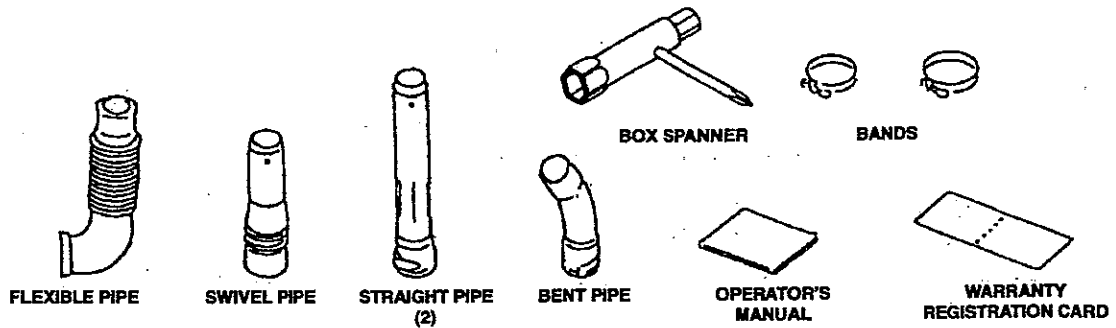
- | | |
|-------------------|--------------------|
| 1. Recoil Starter | 8. Swivel Pipe |
| 2. Air Cleaner | 9. Flexible Pipe |
| 3. Engine | 10. Fuel Tank |
| 4. Blower Housing | 11. Return Pipe |
| 5. Band | 12. Throttle Lever |
| 6. Straight Pipe | 13. Primer Bulb |
| 7. Bent Pipe | |



Assembly

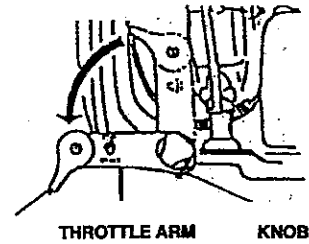
Blower Pipe Assembly

1. Locate and identify all components.
2. Using the bands, connect the flexible pipe to the blower, and the swivel pipe to the flexible pipe.
3. Assemble the straight pipe, and bent pipe, then connect them to the swivel pipe (refer to Product Description illustration page 7).



Throttle Lever Assembly

1. Attach throttle lever bracket to blower housing.



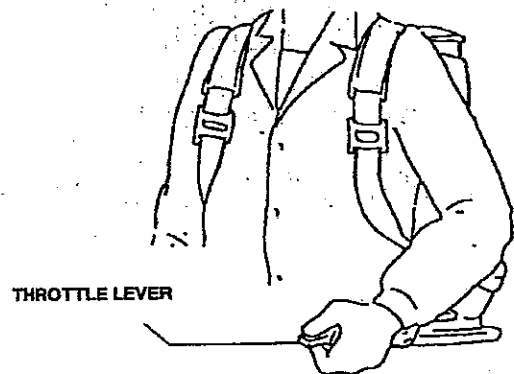
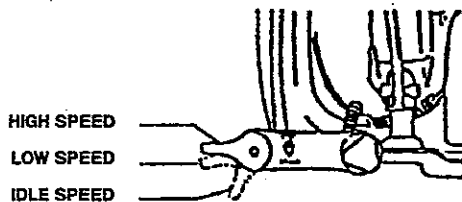
Before Operation

Throttle Lever Setting

Before operating, make sure the Backpack Blower is correctly assembled and all fasteners and fittings are properly secured. To set the throttle lever, release the knob and rotate the throttle arm to the position. Fix the knob.

When the Backpack Blower is strapped to the back of the operator, the throttle lever of the BL460/BL560 is located on the left side.

The lowest position of the lever is "IDLE" setting.
The highest position is the "FULL THROTTLE" setting.



Fueling

>> DANGER

Under certain conditions, gasoline is extremely flammable and highly explosive. The following precautions will greatly reduce the potential hazard.

1. Gasoline is highly flammable and must be handled and stored carefully. Use a container approved for gasoline storage and keep out of the reach of children.
2. Do not smoke near fuel, the Blower, or while operating the Blower.
3. Always shut off the engine and allow it to cool before refueling.
4. Always open the fuel tank cap slowly to release any possible pressure inside the tank. Never remove the fuel tank cap while running, or immediately after stopping the engine.
5. Using a funnel, mix and pour fuel outdoors away from sparks and flames.
6. Do not overfill the fuel tank. Stop filling 1/4 - 1/2 inch (6mm-13mm) from the top of the tank to allow gasoline room for expansion.
7. Tighten the tank fuel cap carefully but firmly after refilling.
8. Wipe up any spilled fuel before starting the engine.
9. Move the Backpack Blower at least 10 feet (3m) away from the fueling location before starting the engine.

Recommended Oil Type

For your fuel pre-mix, use only Maruyama 50:1 two-cycle oil, or a quality oil designed for a high-performance, two-cycle air-cooled engine.

>> IMPORTANT

- Do not use National Marine Manufacturer's Association (NMMA) or BIA certified oils. These types of 2-cycle engine oil do not have the proper additives for air-cooled, 2-cycle engines and can cause engine damage.
- Do not use automotive motor oil. This type of oil does not have the proper additives for air-cooled, 2-cycle engines and can cause engine damage.

Recommended Fuel Type

Use clean, fresh, lead-free gasoline, including oxygenated or reformulated gasoline, with an octane rating of 85 or higher. To ensure freshness, purchase only the quantity of gasoline that can be used in 30 days. Use of lead-free gasoline results in fewer combustion chamber deposits and longer spark plug life. Use of a premium grade fuel is not necessary or recommended.

Use of Fuel Additives

>> IMPORTANT

- Never use methanol, gasoline containing methanol, gasohol containing more than 10% ethanol, premium gasoline, or white gas as engine fuel system damage could result.
- Do not use fuel additives other than those manufactured for fuel stabilization during storage.
- Maruyama does not recommend stabilizers with an alcohol base, such as ethanol, methanol or isopropyl. Additives should not be used to try to enhance the power or performance of the machine.

Mixing Gasoline and Oil

>> IMPORTANT

- The engine used on this Backpack Blower is of a two-cycle design. The internal moving parts of the engine, i.e., crankshaft, bearings, piston-pin bearings and piston-to-wall contact surfaces, require oil mixed with gasoline for lubrication. Failure to add oil to the gasoline, or failure to mix oil with the gasoline at the appropriate ratio, will cause major engine damage which will void your warranty.
- For your fuel pre-mix, only use a quality oil designed for two-cycle, air-cooled engines. Maruyama 50:1, two-cycle oil is formulated to meet the requirements of high-performance, air-cooled two-cycle engines.

Fuel Mixture

The oil ratio is 50 parts gasoline to one part oil or 50:1.



>> NOTICE

- Never use a mixing ratio of less than 50:1 regardless of the oil package mixing instructions. Ratios of less than 50:1 (for example, 60:1, 80:1, 100:1), reduce the amount of lubrication to the internal parts of the engine and can cause damage.

Fuel Mixture Chart

GASOLINE	MARUYAMA 50:1 2-CYCLE OIL	GASOLINE	MARUYAMA 50:1 2-CYCLE OIL
1 gallon	2.6 oz.	1 litre	20 ml
2 1/2 gallons	6.4 oz.	2 litres	40 ml
5 gallons	12.8 oz.	5 litres	100 ml

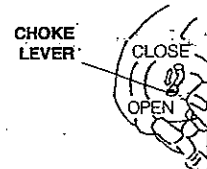
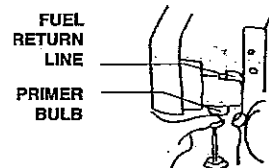
Mixing Instructions

1. Always mix fuel and oil in a clean container approved for gasoline.
2. Mark the container to identify it as fuel mix for the Backpack Blower.
3. Using regular unleaded gasoline, fill the container with half the required amount of gasoline.
4. Add the correct amount of oil to the container, then add the remaining amount of gasoline.
5. Close the container and shake it momentarily to evenly mix the oil and gasoline before filling the tank on the Backpack Blower.
6. When refilling the fuel tank, clean around the fuel tank cap to prevent dirt and debris from entering the tank during cap removal.
7. Always shake the premix fuel container momentarily before filling the fuel tank.
8. Always use a spout or funnel when fueling, to reduce spillage.
9. Fill the tank only to within 1/4 to 1/2 inch (6 mm - 13 mm) from the top of the tank.

Starting and Stopping

Before Starting the Engine

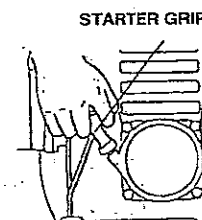
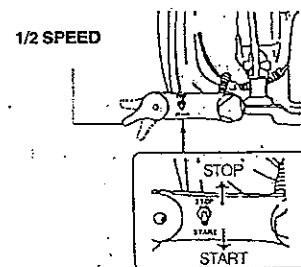
1. Fill the fuel tank as instructed in the "Before Operation" section.
2. Rest the Backpack Blower on the ground.
3. Make sure that the area is clear of any broken glass, nails, wire, rocks or other debris.
4. Keep all bystanders, children and animals away from the working area.



Cold Starting the Engine

This Backpack Blower is equipped with a fuel primer and a choke system. To start a "cold" engine properly:

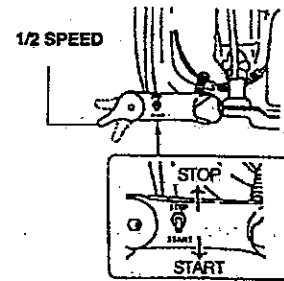
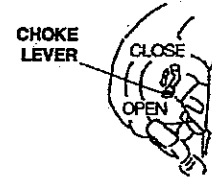
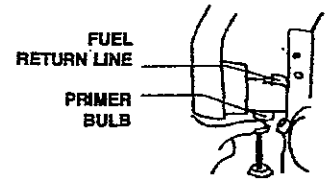
1. Push and release the fuel primer bulb located on the bottom of the carburetor until fuel may be seen flowing through the fuel-return hose back into the fuel tank. Flowing fuel should be almost clear, not foamy or full of air bubbles.
2. Move the choke lever to the closed position and set the engine stop switch to the "ON" position.
3. Set the throttle at the 1/2 speed.
4. Pull the starter grip. Grasping the starter grip, slowly pull the starter cord out until you feel resistance, then pull the cord quickly and powerfully. Pull the starter grip until the engine starts.
5. After the engine has started, move the choke lever fully upward to the open position. Allow the engine to warm up at less than 1/2 speed.



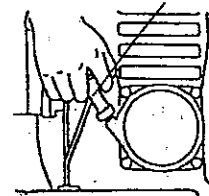
Hot Restart

To start an engine that is a ready warm (hot restart), or if the ambient temperature exceeds 68 degrees F (20 degrees):

1. Push and release the fuel primer bulb located on the bottom of the carburetor until fuel may be seen flowing through the fuel-return hose back into the fuel tank. Flowing fuel should be almost clear, not foamy or full of air bubbles.
2. Move the choke lever to the open position and move the stop switch to the "On" position.
3. Leave the throttle lever at the 1/2 speed position and pull the starter grip.
4. If the engine fails to start after three or four pulls, follow the instructions for "Cold Starting" in the previous section. If the engine fails to start after following the above procedures for both "Cold Starting" and "Hot Restart," contact an authorized Maruyama dealer.



STARTER GRIP



Stopping the Engine

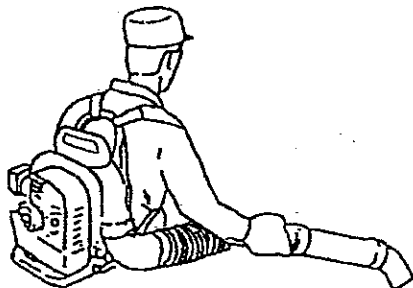
1. Release the throttle trigger.
2. Slide the stop switch to the "STOP" position.

Backpack Blower Operation

1. When the engine is warmed up, the Backpack Blower can be positioned on the back of the operator.
2. When the Power Blower is positioned and ready for operation, adjust the throttle to a speed required to accomplish the task.

>> CAUTION

- Never operate a power blower when you are fatigued.
- Never operate a power blower without the proper guards or other protective safety devices in place.



OPERATING POSITION

Maintenance

Maintenance, replacement or repair of emission control devices and systems may be performed by any repair establishment or individual; however, warranty repairs must be performed by a dealer or service center authorized by Maruyama U.S., Inc. The use of parts that are not equivalent in performance and durability to authorized parts may impair the effectiveness of the emission control system and may have a bearing on the outcome of a warranty claim.

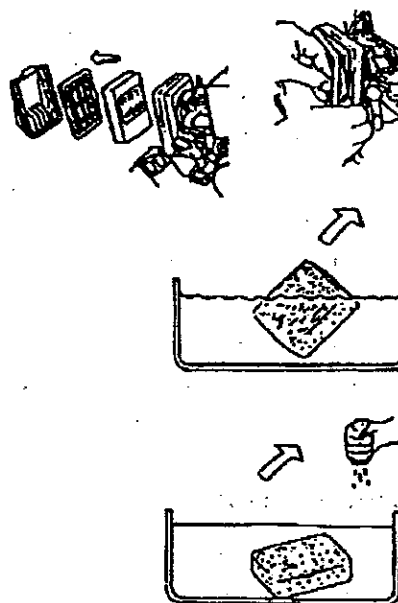
Air Filter

Maintenance Interval:

The air filter should be cleaned and inspected each time the Backpack Blower is used, or more often when working in extremely dusty conditions.

Maintenance:

1. Open the air filter cover and remove the foam element.
2. Clean the filter with warm, soapy water. Let the filter completely dry.
3. Lightly apply SAE 30 motor oil to the foam filter and squeeze out all excess oil.
4. Reinstall the filter to the air filter case and close the air filter cover.



Fuel Filter

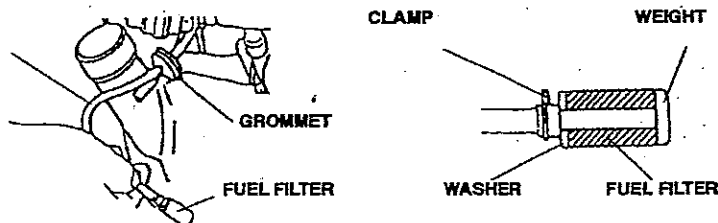
Maintenance Interval:

The fuel filter should be cleaned and inspected for damage after each 20 hours of operation.

Maintenance:

The fuel filter is attached to the end of the fuel pick-up hose inside the fuel tank. To replace the fuel filter:

1. Make sure the fuel tank is empty.
2. Remove the fuel cap.
3. Using a wire hook, gently pull the fuel filter out through the fuel filter opening.
4. Grasp the fuel hose next to the fuel filter fitting and remove the filter, without releasing the hose.
5. While still holding the fuel hose, attach the new fuel filter.
6. Drop the fuel filter back into the fuel tank.
7. Make sure that the fuel filter is not stuck in a corner of the tank and that the fuel hose is not doubled over (kinked) before refueling.



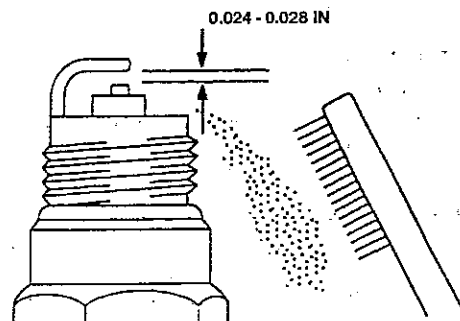
Spark Plug

Maintenance Interval:

The spark plug should be removed from the engine and checked after each 50 hours of operation. Replace the spark plug after every 100 hours of operation.

Maintenance:

1. With the engine at ambient (room) temperature, twist the high-tension lead boot on the spark plug back and forth a couple of times to loosen boot, then pull the boot off of the spark plug.
2. Remove the spark plug.
3. After removing the spark plug, the electrodes can be cleaned with a stiff brush.
4. Adjust the electrode air gap to 0.6-0.7 mm (0.024-0.028 in.).
5. Replace the spark plug if it is oil-fouled, damaged or if the electrodes are worn down.
6. Do not over tighten the spark plug when installing. The tightening torque is 10.7-16.6 Nm (95-148 in. lbs.)



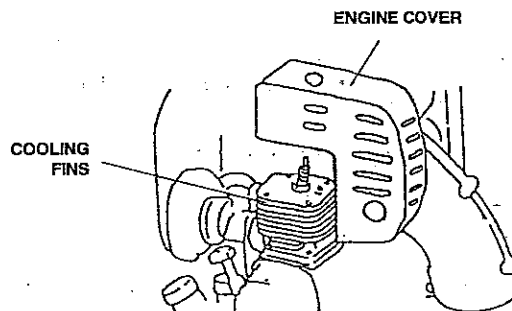
Cylinder Cooling Fins

Maintenance Interval:

The cylinder cooling fins should be cleaned after every 25 hours of operation or once a week whichever comes first. Air must flow freely around and through the cylinder cooling fins to prevent engine overheating. Leaves, grass, dirt and debris build up on the fins will increase the operating temperature of the engine which can reduce engine performance and shorten engine life.

Maintenance:

1. With the engine at ambient (room) temperature, remove the engine cover.
2. Clean all dirt and debris from the cooling fins and from around the cylinder base.
3. Reinstall the engine cover.



Muffler and Exhaust Port

Maintenance Interval:

The muffler should be removed and serviced after each 100 hours of use.

Maintenance:

Each time the muffler is serviced, the exhaust ports should also be cleaned and inspected. Contact an authorized Maruyama dealer for this service.

Periodic Maintenance Chart

Maintenance	Daily	First 20 hrs.	Every 20 hrs.	Every 50 hrs.	Every 100 hrs.
Check and replenish fuel	•				
Check for fuel leakage	•				
Check bolts, nuts and screws for looseness or loss	•				
Clean fuel filter			•		
* Clean air filter element			•		
Tighten nuts and bolts		•		•	
Clean spark plug and adjust electrode gap				•	
* Remove dust and dirt from cylinder fins				•	
M Remove carbon deposits on piston head and inside cylinder				•	
M Remove carbon deposits in the exhaust pipe of muffler				•	
M Clean net or spark arrester (if equipped)				•	
M Check the sliding portion of crankshaft, connecting rod, etc.					•
Fuel tube	Recommended replacement every three years				

* Service more frequently under dusty operating conditions

M Service to be performed by an authorized Maruyama dealer

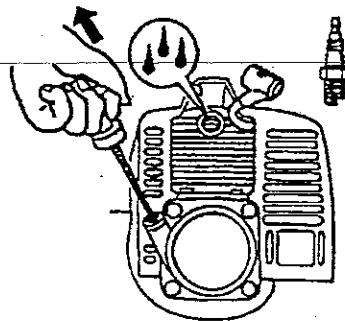
General Cleaning and Tightening

The Maruyama Backpack Blower will provide maximum performance for many, many hours if it is maintained properly. Good maintenance includes regular check of all fasteners for correct tightness and cleaning of the entire machine.

Storage

For long-term storage of the Backpack Blower:

1. Empty the fuel tank into a suitable fuel-storage container.
2. Pump the primer bulb on the carburetor until all fuel is discharged through the clear fuel return hose.
3. Run the engine to remove any remaining fuel from the carburetor.
4. Perform all regular maintenance procedures and any needed repairs.



Limited Warranty Statement

All Maruyama commercial/ industrial products are warranted to the original purchaser to be free from defects in material and workmanship **from the date of purchase** for the time periods listed as follows:

Lifetime for inner drive shaft on trimmers and brushcutters and all ignition modules.

3 years for residential, non-institutional, non-income producing use.

1 year for industrial, commercial, institutional, rental and income producing use.

Maruyama AE/CE series engines and Kawasaki TEX45/TEX54/TE59 are covered exclusively for one additional year of industrial, commercial, institutional, rental and income producing use (total of 2 years).

All other engines refer to engine manufacturer's warranty statement.

Any part of a Maruyama product found to be defective within the applicable 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 Servicing Dealer within the applicable warranty period.

The purchaser shall not be charged for diagnostic labor that leads to the determination that a warranted part is defective, if the diagnostic work is performed at a Maruyama Dealer.

Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for the warranty period. Any warranted part, which is scheduled for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement point for that part. Maruyama Mfg. Co., Inc. is liable for damages to other engine components caused by the failure of a warranted part still under warranty.

The purchaser is responsible for the performance of the required maintenance, as defined by Maruyama Mfg. Co., Inc. in the Owner's/Operator's Manual.

EMISSION-RELATED PARTS WARRANTY:

In addition to the above warranty coverage, Maruyama Mfg. Co., Inc. will repair or replace, free of charge, for the original purchaser and each subsequent purchaser any emission-related part or parts found to be defective in material and workmanship for two (2) years from original retail delivery date **except catalytic converter.**

Catalytic converter is warranted one year from original retail delivery date. Emission-related parts are the carburetor assembly, the ignition coil assembly, the ignition rotor and the spark plug and catalytic converter.

Any replacement part that is equivalent in performance and durability may be used in non-warranty maintenance or repairs, and shall not reduce the warranty obligations of Maruyama Mfg. Co., Inc.

This warranty does not cover the following:

1. Maintenance items (excluding defects in materials and workmanship) including hoses, spark plugs, starter rope, air and fuel filters, clutch shoes, vibration isolators, throttle cables and all cutting attachments, etc.
2. Extra expenses including shipping and handling, travel, payment for lost time or pay and for any inconvenience and storage.
3. Alterations or modifications including aftermarket parts not authorized by Maruyama U.S., Inc.
4. Wear, accident, abuse, neglect, misuse, negligence, improper fuels, lubricants, fuel mixtures (when applicable), or failure to operate or maintain the product in accordance with instructions approved by Maruyama

Repair or replacement as provided under this warranty is the exclusive remedy of the consumer. Maruyama shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on these products except to the extent prohibited by applicable law. Any implied warranty of merchantability or

fitness for a particular purpose on these products is limited in duration to the warranty period as defined in the limited warranty statement. Maruyama reserves the rights to change or improve the design of the product without notice and does not assume obligation to update previously manufactured products.

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

It is the Owner's and Dealer's responsibility to make sure the Warranty Registration Card is properly filled out and mailed to Maruyama U.S., Inc. Proof of purchase and registration will be required in order to obtain warranty service.

To locate an Authorized Maruyama Servicing Dealer nearest you, contact:

Maruyama U.S., Inc.
301 30th St. NE Suite 118 Auburn, WA 98002 USA
(253) 735-7368 tel
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Maruyama Limited Warranty California and Federal Emission Control Systems Small Off-Road Engines

The California Air Resources Board, the Environmental Protection Agency (EPA), and MARUYAMA U.S., INC. (hereinafter "MARUYAMA") are pleased to explain the Emission Control Systems Warranty on your Maruyama small off-road engine. In California and other states, new small off-road engines must be designed, built and equipped to meet stringent anti-smog standards. Maruyama must warrant the emission control system on your small off-road engine for the period of time listed below provided there has been no abuse, neglect or improper maintenance of your small off-road engine. Your emission control system may include parts such as the carburetor or fuel-injection system, the ignition system, and catalytic converter. Also included may be hoses, belts, connectors and other emission related assemblies. Where a warrantable condition exists, Maruyama will repair your small off-road engine at no cost to you including diagnosis (if the diagnostic work is performed at a Maruyama small off-road engine dealer), parts and labor.

Owners Warranty Responsibilities. The following obligations must be fulfilled by the owner to maintain the validity of the Maruyama California / EPA Emissions Systems Warranty:

- (a) As the small off-road engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. Maruyama recommends that you retain all receipts covering maintenance on your small off-road engine, but Maruyama cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.
- (b) You are responsible for presenting your small off-road engine to an authorized Maruyama small off-road engine Dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.
- (c) As the small off-road engine owner, you should also be aware that Maruyama may deny you warranty coverage if your small off-road engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.
- (d) If you have any questions regarding your warranty rights and responsibilities, you should contact MARUYAMA U.S., INC., 301 30th St. NE, Suite Auburn, WA 98052, (253)735-7368

1. **Coverage.** Maruyama warrants to the initial owner and each subsequent purchaser that the small off-road engine is free from defects in materials and workmanship which cause a failure of a warranted part for a period of two years. Maruyama is liable for damages to other engine components caused by the failure of a warranted part still under warranty. The 1995 and later small off-road engines are warranted for two years in California. In all other states, 1997 and later model year small off-road engines are warranted for two

years. If any emission-related part on your engine is defective, the part will be repaired or replaced by Maruyama. This warranty time period shall begin on the date the small off-road engine is delivered to the initial purchaser, or on the date the small off-road engine is first placed in service. Warranty defects shall be remedied during customary business hours at any authorized Maruyama small off-road engine dealer located within the United States of America. Any manufacturer-approved replacement part may be used in the performance of any warranty maintenance or repairs on emission-related parts, and must be provided without charge to the owner if the part is still under warranty. Any part or parts replaced under this warranty shall become the property of Maruyama. The emission related warranted parts are specifically defined by the California Air Resources Board's Emission Warranty Parts List. (EPA , s regulations do not include a parts list, but EPA considers emission-related parts to include all parts listed here.) These warranted parts are: carburetor and internal parts, spark advance/retard system, cold start enrichment system, magneto or electronic ignition system, catalytic converter, intake manifold, exhaust manifold, air cleaner element, and spark plugs if failure occurs prior to the first required scheduled replacement, hoses, clamps, fittings, gaskets, sealing devices, mounting hardware and tubing used directly in these parts. Since emission related parts may vary slightly from model to model, certain models may not contain all of these parts and certain models may contain functionally equivalent parts.

2. Limitations. This Emission Control Systems Warranty shall not cover any of the following:

- (a) Repair or replacement required as a result of (i) misuse or neglect, (ii) lack of required maintenance, (iii) repairs improperly performed or replacements improperly installed, (iv) use of replacement parts or accessories not conforming to Maruyama specifications which adversely affect performance and/or durability, (v) alterations or modifications not recommended or approved in writing by Maruyama.
- (b) Replacement of parts and other services and adjustments necessary for required maintenance at and after the first scheduled replacement point.

3. Limited Liability.

- (a) The liability of Maruyama under this Emission Control Systems Warranty is limited solely to the remedying of defects in materials or workmanship by any authorized Maruyama small off-road engine dealer at its place of business during customary business hours. This warranty does not cover inconvenience or loss of use of the small off-road engine or transportation of the small off-road engine to or from the Maruyama Dealer. MARUYAMA SHALL NOT BE LIABLE FOR ANY OTHER EXPENSE, LOSS OR DAMAGE, WHETHER DIRECT, INCIDENTAL, CONSEQUENTIAL (EXCEPTION LISTED UNDER COVERAGE) OR EXEMPLARY ARISING IN CONNECTION WITH THE SALE OR USE OF OR INABILITY TO USE THE MARUYAMA SMALL OFF-ROAD ENGINE FOR ANY PURPOSE.
- (b) NO EXPRESS EMISSION CONTROL SYSTEMS WARRANTY IS GIVEN BY MARUYAMA WITH RESPECT TO THE KAWASAKI SMALL OFF-ROAD ENGINE EXCEPT AS SPECIFICALLY SET FORTH HEREIN. ANY EMISSION CONTROL SYSTEMS WARRANTY IMPLIED BY LAW, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS EXPRESSLY LIMITED TO THE EMISSION CONTROL SYSTEMS WARRANTY TERMS SET FORTH HEREIN. THE FOREGOING STATEMENTS OF WARRANTY ARE EXCLUSIVE AND IN LIEU OF ALL OTHER REMEDIES.
- (c) No dealer is authorized to modify this Maruyama Limited Emission Control Systems Warranty.
- (d) Maruyama is not liable for parts which are not genuine Maruyama parts except when genuine Maruyama parts cause damage to non-Maruyama parts.

4. Legal Rights. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS.

5. THIS WARRANTY IS IN ADDITION TO THE MARUYAMA LIMITED SMALL OFF-ROAD ENGINE WARRANTY.

Effective August 1, 2000



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