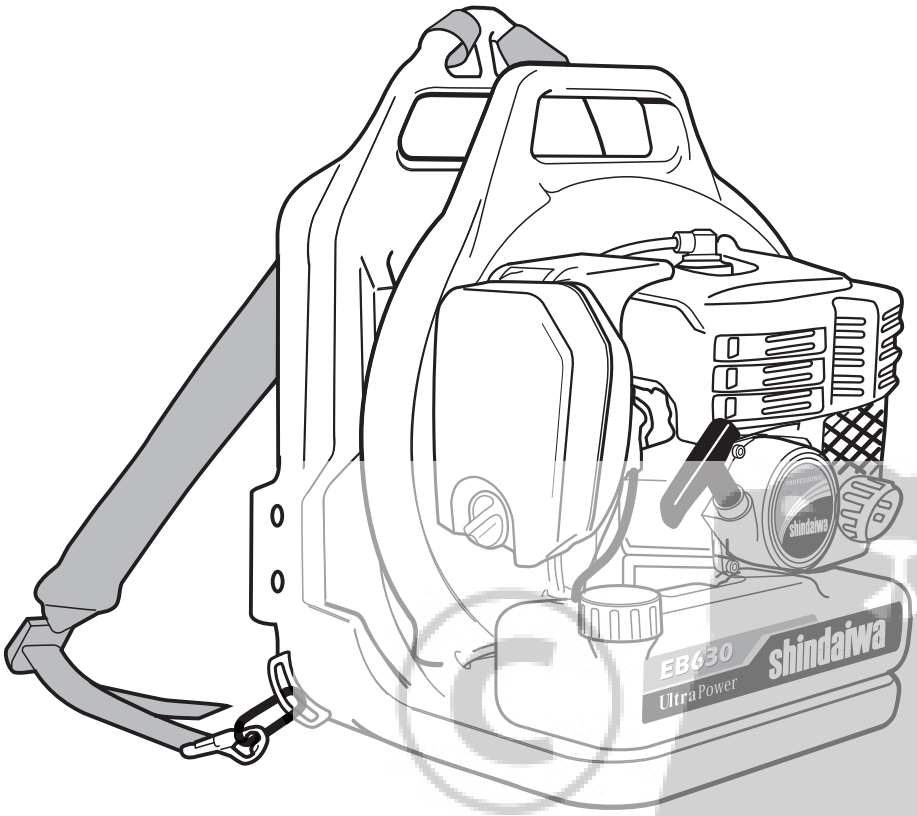
SHINDAIWA OWNER'S/OPERATOR'S MANUAL

EB630 BLOWER



WARNING!

Read this manual and familiarize yourself with its contents. Minimize the risk of injury to yourself and others. Do not operate or service this machine unless you clearly understand this manual. Keep this manual at a particular place so that you can reread it whenever you have a question about its use. Always wear eye and hearing protection when operating this unit.

shindaiwa

Part Number 68238-94310 Rev. 02/05

Introduction

CAUTION!

This blower is equipped with a spark-arresting muffler! Never operate this unit without both the muffler and spark arrester installed and properly functioning!

IMPORTANT!

Before using this unit, consult local regulations concerning noise restrictions and hours of operation!

The Shindaiwa EB630 has been designed and built to deliver superior performance and reliability without compromise to quality, comfort, safety, or durability.

The information contained in this manual describes units available at the time of production. While every attempt has been made to give you the very latest information about your Shindaiwa EB630 blower. There may be some differences between your EB630 blower and what is described here. Shindaiwa Inc. reserves the right to make changes in production without prior notice, and without obligation to make alterations to units previously manufactured.

Contents

Attention Statements

Throughout this manual are special "attention statements".

WARNING!

A statement preceded by the triangular Attention Symbol and the word WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION!

A statement preceded by the word CAUTION contains information that should be acted upon to avoid damaging the unit.

IMPORTANT!

A statement preceded by the word IMPORTANT is one that possesses special significance.

NOTE:

A statement preceded by the word "NOTE" contains information that is handy to know and may make your job easier.

Read and follow this manual. Failure to do so could result in serious injury.

Wear eye and hearing protection at all times during the operation of this unit.

Sound Power Level (measured in accordance with 2000/14/EC)

IMPORTANT!

The operational procedures described in this manual are intended to help you get the most from this unit and also to protect you and others from harm. These procedures are general guidelines only, and are not intended to replace any safety rules/laws that may be in force in your area.
If you have any questions regarding your EB630 blower, or if you do not understand something in this manual, your Shindaiwa dealer will be glad to assist you. For additional information, you may also contact Shindaiwa Inc. at the address printed on the back of this manual.

General Safety Instructions

Work Safely

Blowers operate at a very high speed and can do serious damage or injury if they are misused or abused. Never allow a person without training or instruction to operate your EB630 Blower!

Stay Alert

You must be physically and mentally fit to operate this unit safely.

WARNING!
Use Good Judgment

NEVER run the engine when transporting the unit.
NEVER run the engine indoors! Make sure there is always good ventilation. Fumes from engine exhaust can cause serious injury or death.
ALWAYS stop the unit immediately if it suddenly begins to vibrate or shake. Inspect for broken, missing or improperly installed parts.
ALWAYS keep the unit as clean as practical. Keep it free of loose vegetation, mud, etc.
ALWAYS keep the handles clean.
ALWAYS disconnect the spark plug wire before performing any maintenance work.
ALWAYS turn off the engine before putting the unit down. When transporting the unit in a vehicle, properly secure it to prevent the unit from over turning, fuel spillage and damage to the unit.
NEVER insert any foreign objects into the air intake or outlet opening of the blower while in operation.

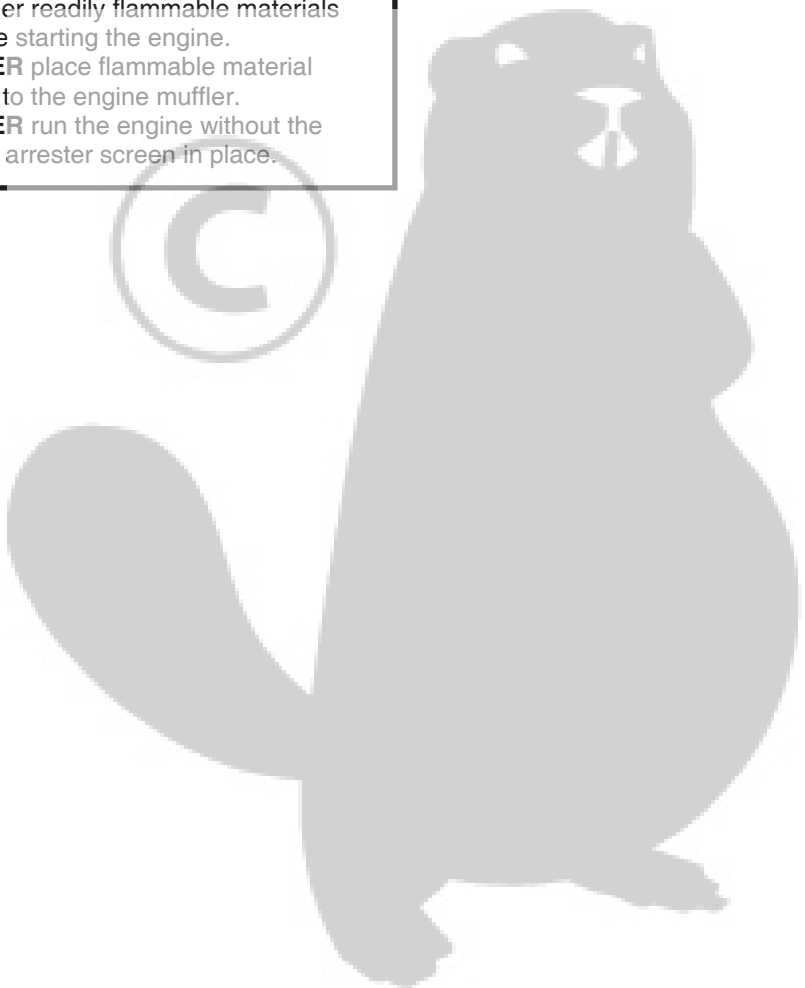
WARNING!
Never make unauthorized modifications or attachment installations. Never use attachments not approved by Shindaiwa for use on this unit.

WARNING!

Never operate power equipment of any kind if you are tired or if you are under the influence of alcohol, drugs, medication or any other substance that could affect your ability or judgement.

WARNING!
Minimize the Risk of Fire

NEVER smoke or light fires near the unit.
ALWAYS stop the engine and allow it to cool before refueling. Avoid overfilling and wipe off any fuel that may have spilled.
ALWAYS inspect the unit for fuel leaks before each use. During each refill, check that no fuel leaks from around the fuel cap and/or fuel tank. If fuel leaks are evident, stop using the unit immediately. Fuel leaks must be repaired before using the unit.
ALWAYS move the unit to a place well away from a fuel storage area or other readily flammable materials before starting the engine.
NEVER place flammable material close to the engine muffler.
NEVER run the engine without the spark arrester screen in place.



The Properly Equipped Operator

Wear close-fitting clothing to protect legs and arms. Gloves offer added protection and are strongly recommended. Do not wear clothing or jewelry that could get caught in machinery or underbrush. Secure hair so it is above shoulder level. NEVER wear shorts!

Wear hearing protection when operating this unit.

Always wear eye protection such as a face shield or goggles while operating this unit. Never operate the blower when visibility is poor.

Wear a dust mask to reduce the risk of inhalation injuries.

*Keep a proper footing and **do not overreach**. Maintain your balance at all times during operation.*

Always be aware of the strength and direction of the blower discharge stream. Never direct the blower discharge stream toward people or animals!

*Wear appropriate footwear (non-skid boots or shoes): do not wear open-toed shoes or sandals. **Never operate the unit while barefoot!***

Be Aware of the Working Environment

Debris sometimes collects on the blower intake. Never clean out debris from the blower while the engine is running!

Avoid long-term operation in very hot or very cold weather.

Make sure bystanders or observers outside the 15 meter "danger zone" wear eye protection.

Never operate the blower if any component parts are damaged, loose, or missing!

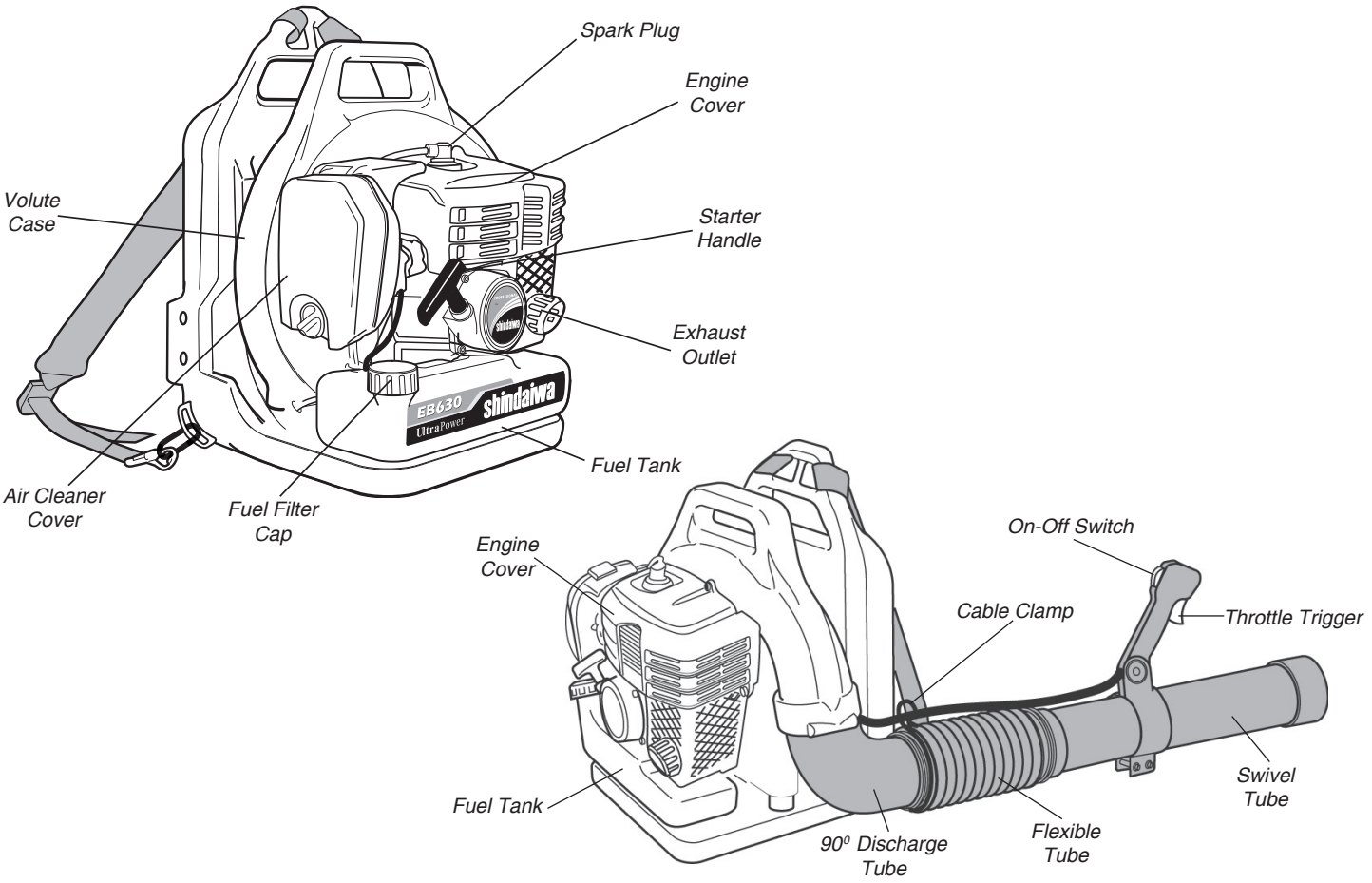
Reduce the risk of bystanders being struck by flying debris. Make sure no one is within 15 meters—that's about 16 paces—of an operating blower.

Be extremely careful of slippery terrain, especially during rainy weather. Never operate this blower on a roof, ledge or ladder.

Be constantly alert for objects and debris that could be thrown from the air blast and bounced from a hard surface.

Do not direct the air blast towards bystanders. The high air flow could blow small objects at great speed causing possible eye injury.

Unit Description



Prior to Assembly

Using the figures above as a guide, familiarize yourself with the blower and its components. Understanding the unit helps ensure top performance, longer service life, and safer operation.

Prior to Assembly

Before assembling the blower, make sure you have all required components.

- Power unit and blower assembly.
- Flexible tube, swivel tube, straight tube, and nozzle.
- Two tube clamps (100 and 85mm).
- This Owner's/Operator's Manual and a tool kit containing a tool bag, 3mm-4mm-5mm hex wrench, and a combination spark plug wrench.
- Lead wire assembly (anti-static).

Carefully inspect all components for damage.

IMPORTANT!

The terms "left", "left-hand", "LH"; "right", "right-hand", and "RH"; "front" and "rear" refer to directions as viewed by the operator during normal operation.

Specifications

Model	EB630/EC1
Dimensions	(LxWxH) 350 x 460 x 495 mm
Engine Type	2 cycle air cooled gasoline engine, vertical cylinder
Bore & Stroke	47.5 x 35 mm
Displacement	62.0 cm^3
Max Output/min^{-1}	2.9 kW/ 7,500 min^{-1}
Maximum Engine Speed	7,900 min^{-1}
Engine Speed at Idling	2,200 min^{-1}
Fuel/Oil Ratio	50:1
Carburetor	Walbro rotary-type with primer pump
Ignition	All transistor electronic ignition system
Spark Plug	Champion RCJ6Y
Starting	Recoil starter
Stopping EB630	Slide Switch
Fuel Tank Capacity	2,000 cm^3
Exhaust	Spark arrester muffler
Air Filtration	Dry Element
Dry weight (without blower tubes)	9.0 kg
Sound Pressure Level (in accordance with ISO 7917)	96 dB (A)
Sound Power Level (in accordance with ISO 10884.2)	108 dB (A)
Vibration Level (in accordance with ISO 7916)	Idling 1.2 m/s^2
	Racing 2.4 m/s^2
Blow air speed	86 m/s^2
Blow Air Volume	17.4 m^3/min

Specifications are subject to change without notice.

Assembling the Blower

IMPORTANT!

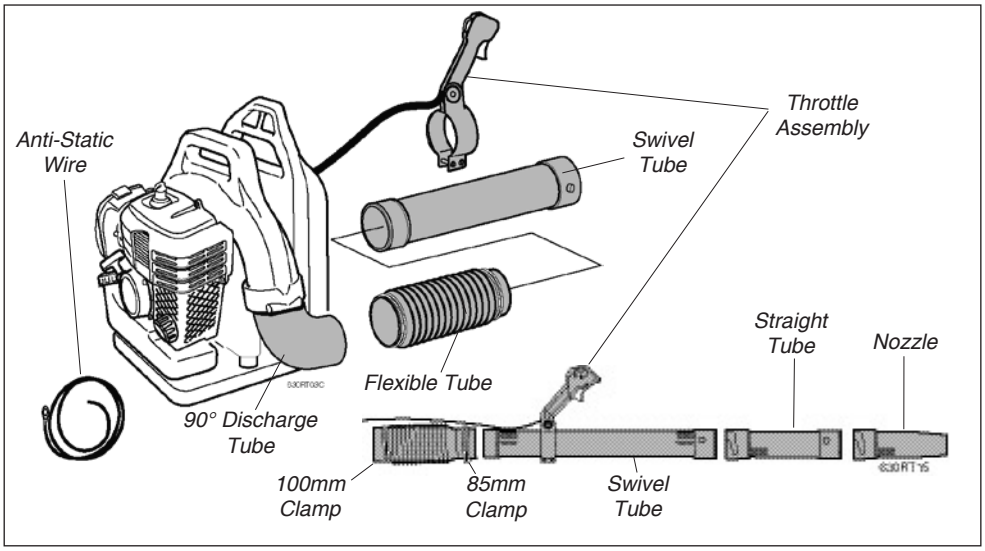
This unit is equipped with a static discharge reduction wire. This wire helps direct static buildup into the air stream reducing the felt amount to the operator.

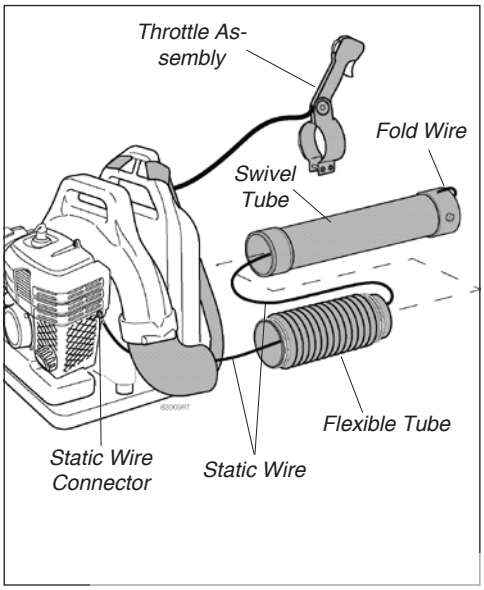
1. Place the blower upright on the ground or a sturdy work surface and note parts orientation as shown.
2. Remove static wire from package and fix eyelet to right hand engine cover screw.
3. Turn the dicharge tube out to a right angle and slip anti-static wire through the 100mm clamp and flexible tube.
4. Slip the flexible tube over the end of the 90° discharge tube, and secure with the 100mm clamp.

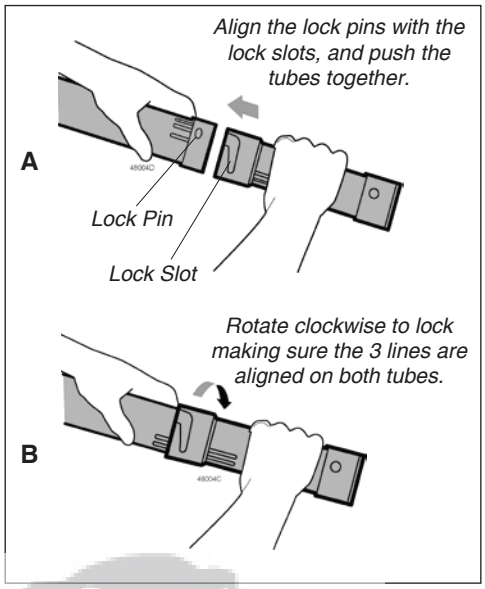
NOTE:

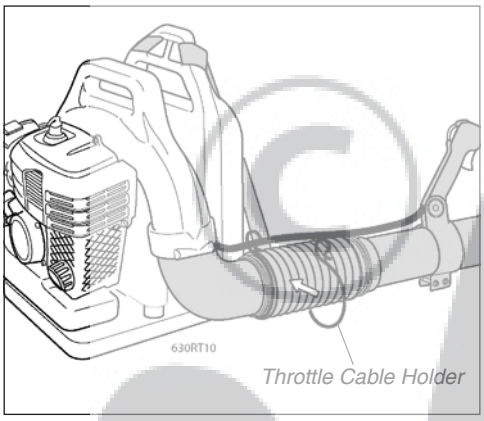
Check to make sure that the 90° discharge tube swivels freely from front to back. If any binding is present, loosen 100mm clamp and pull wire towards engine to get more slack and recheck for free movement.

5. Slide the throttle assembly over the swivel tube. Do not tighten clamp at this time.
6. Insert the static wire through the swivel tube, then install and tighten the 85mm clamp over the rotating band on the swivel tube.
7. Fold the end of the static wire back over the connection of the swivel tube.
8. Grasp the straight tube, and push the tube over the swivel tube locking pins securing the static wire.
9. Lock the straight tube to the swivel tube by rotating the straight tube.
10. Grasp the nozzle tube and lock the nozzle to the straight tube noting the alignment marks.
11. Install throttle cable holder just forward of the 100mm clamp.
12. Adjust throttle assembly for best operator comfort and tighten two socket-head screws.









IMPORTANT!

Blower tube installation affects blower performance! Make sure the tubes and nozzle are correctly assembled per above, and that all connections are tight. Blower tubes may come apart during use unless tubes are aligned and locked into place.

WARNING!

Danger from rotating impeller! Stop the engine before installing or removing the blower tubes! Never perform any maintenance or assembly procedures on this unit while the engine is running!

Mixing Fuel

WARNING!

Minimize the risk of fire, burns, and personal injury!

- **STOP** engine before refueling.
- **ALWAYS** allow the engine to cool before refueling
- **ALWAYS** open the fuel cap slowly to allow any pressure build-up in the tank to release fuel vapor slowly.
- **ALWAYS** transport and store fuels in an approved container.
- Avoid overfilling and wipe up all spilled fuel. Move the engine at least 3 meters from the fueling point, storage area, and other readily flammable materials before restarting.
- **ALWAYS** inspect the unit for fuel leaks before each use. During each refill, make sure there are no fuel leaks around the fuel cap and/or tank. If a fuel leak is evident, stop using the unit immediately. Fuel leaks must be repaired before using the unit.
- **NEVER** smoke or light any fires near the engine or fuel source.
- **NEVER** place any flammable material near the engine or muffler.
- **NEVER** operate the engine without the muffler in good working condition.
- **ALWAYS** move the unit to a place well away from a fuel storage area or other readily flammable materials before starting the engine.

CAUTION!

This engine is designed to operate on a 50:1 mixture consisting of unleaded gasoline and a premium 2-cycle mixing oil only. Use of Non-approved mixing oils can lead to excessive maintenance costs and/or engine damage.

CAUTION!

Some gasolines contain alcohol as an oxygenate! Oxygenated fuels may cause increased operating temperatures. Under certain conditions, alcohol-based fuels may also reduce the lubricating qualities of some mixing oils. Never use any fuel containing more than 10% alcohol by volume! Generic oils and some outboard motor oils may not be intended for use in high-performance air cooled 2-cycle engines, and should never be used in your Shindaiwa engine!

Filling The Fuel Tank

IMPORTANT!

Mix only enough fuel for your immediate needs! If fuel must be stored longer than 30-days, it should first be treated with a stabilizer such as StaBil™ or equivalent product!

- Use only fresh, clean unleaded gasoline with a pump octane rating of 87 or higher.
- Mix fuel with a Premium 2-cycle mixing oil designed for use with high-performance 2-cycle air-cooled engines.
- Refer to the following examples of 50:1 fuel to oil mix quantaties:

Gasoline liters	2-cycle mixing oil milliliters
2.5 l	50 ml
5 l	100 ml
10 l	200 ml
20 l	400 ml

CAUTION!

Never attempt to mix fuel in the unit's fuel tank. Always mix all fuels in a clean approved container.

1. Place the unit on a flat, level surface, and wipe any debris from around the fuel cap.
2. Remove the fuel cap.
3. Fill the tank with clean, fresh fuel.
4. Replace the cap, and wipe away any spilled fuel before starting the engine.

Starting the Engine

WARNING!

Danger from rotating impeller!

The impeller will rotate whenever the blower is operated! Never operate this blower unless the intake cover and blower tubes are properly installed and in good working order!

WARNING!

Danger from thrown dust or debris!

Always wear eye protection when operating this machine! Never direct the blower stream toward people or animals!
Never operate this blower unless all controls are properly installed and in good working order.

CAUTION!

The recoil starter can be damaged by abuse!

- Never pull the starter cord to its full length!
- Always engage the starter before cranking the engine!
- Always rewind the starter cord slowly!

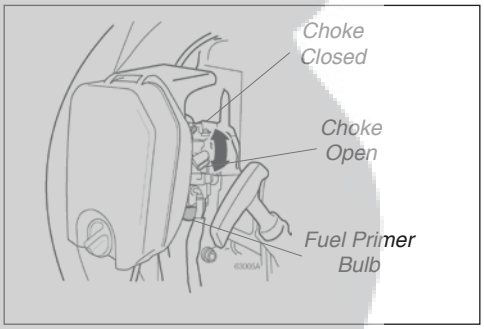
Never operate the blower if blower tubes are missing or damaged!

Starting procedure

1. Place the blower on the ground.
2. Prime the fuel system by repeatedly depressing the fuel primer bulb until no air bubbles are visible in the fuel discharge line.

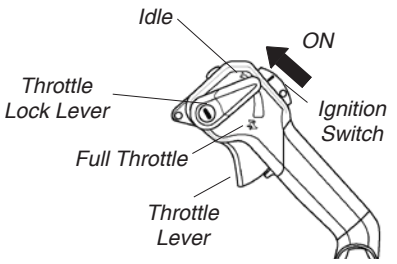
IMPORTANT!

The primer system only pushes fuel through the carburetor. Repeatedly pressing the primer bulb will not flood the engine with fuel.

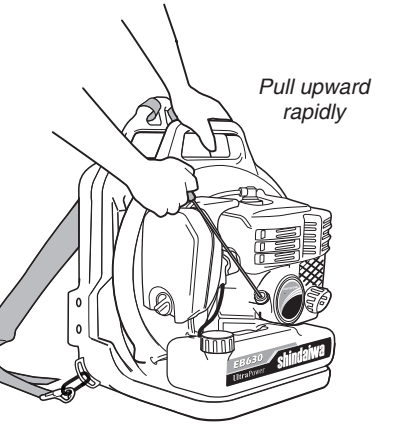


3. **Cold Engine Only.** Choke the engine by moving the choke lever up. (choke is closed).

Starting the Engine (cont.)



4. Slide the ignition switch to the "I" (ON) position, then depress the throttle lever half way and lock throttle by moving throttle lock lever halfway down.



5. Hold the blower firmly with your left hand on the volute case.
6. Using your right hand, pull the starter handle slowly until you feel the starter engage.
7. As the starter engages, pull the starter handle upward rapidly.
8. If necessary, repeat Steps 6 and 7 until the engine starts.

When The Engine Starts–

1. Open the choke (if it is not already open) by moving the choke lever down .
2. If the engine does not continue to run, repeat the appropriate starting procedures for a cold or warm engine.
3. Operate the throttle to reduce engine to idle speed until operating temperature is reached (2–3 minutes).

The blower should now be ready for use.

If The Engine Does Not Start–

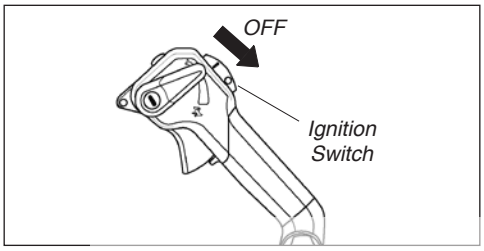
Repeat the appropriate starting procedures for warm or cold engine. If the engine still will not start, follow the “Starting a Flooded Engine” procedure.

WARNING!

Never operate the blower unless all controls are properly installed and in good working order. Never operate the blower if the cylinder cover is missing or damaged!

Starting A Flooded Engine

1. Disconnect the spark plug lead, and remove the spark plug (see page 11 for procedures).
2. If the spark plug is fouled or is soaked with fuel, clean or replace the plug as required.
3. With the spark plug removed, open the choke, put the throttle lever in the full throttle position, then clear excess fuel from the combustion chamber by cranking the engine several times.
4. Install and tighten the spark plug, and reconnect the spark plug lead.
5. Repeat the starting procedures for a warm engine.
6. If the engine still fails to start or fire, refer to the troubleshooting flow chart at the end of this manual.



Stopping The Engine

1. Cool the engine by allowing it to run at idle for 2–3 minutes.
2. Slide the ignition switch towards the rear to "O" OFF.

Adjusting Engine Idle Speed

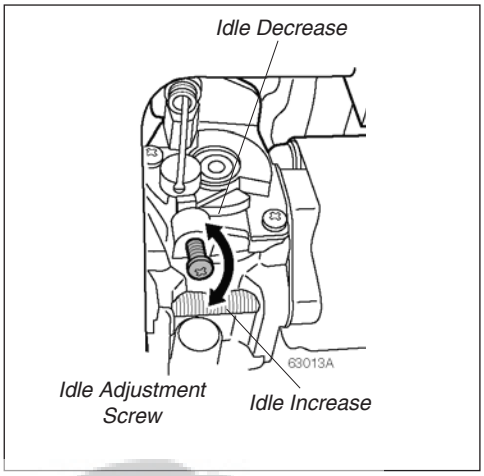
IMPORTANT!

A clean and unrestricted airflow is essential to your blower’s engine performance and durability! Before attempting any carburetor adjustments, inspect and clean the engine air filter as described on page 10 of this manual.

IMPORTANT!

Blower tubes and the air cleaner must be in place while adjusting engine idle! Engine idle speed will also be affected if the blower tubes are blocked or incorrectly installed!

1. Place the unit on the ground and start the engine, then allow it to idle 2-3 minutes until warm.
2. If a tachometer is available, the engine idle speed should be final adjusted to 2,200 (min^{-1}).



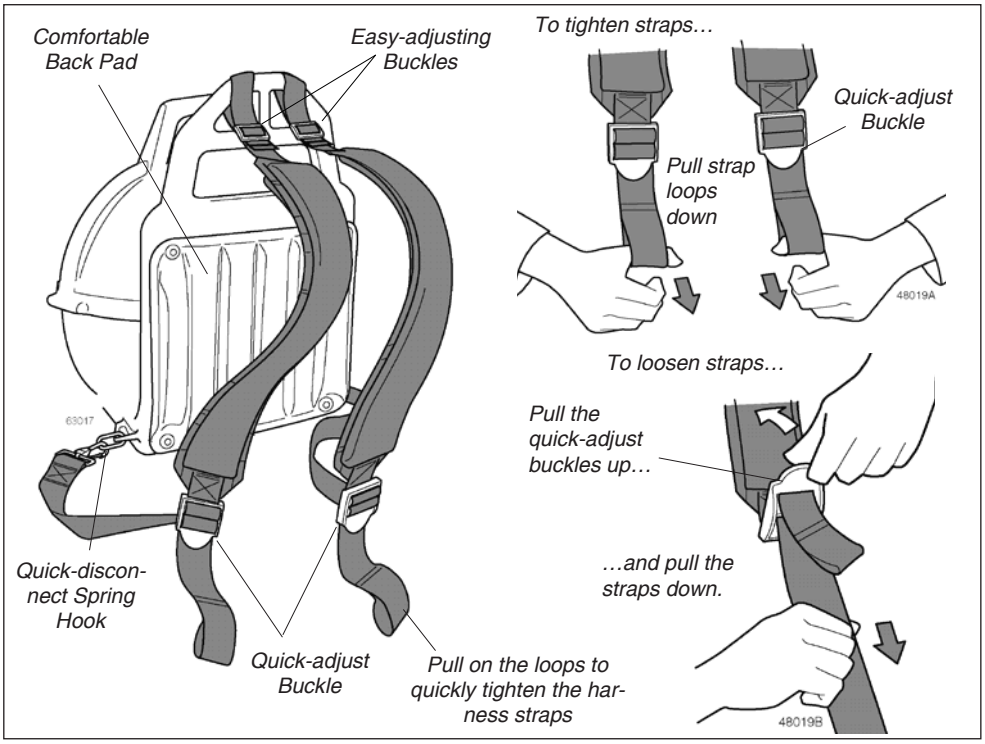
NOTE:

Carburetor fuel mixture adjustments are preset at factory on units with emission control systems and can not be serviced in the field.

Adjusting The Harness

The Shindaiwa EB630 Blower features an advanced harness system that helps ensure maximum operator comfort and ease of operation.

- The shoulder harness is filled with soft padding for reduced operator fatigue.
- The simplified adjustment system makes it easy to match the harness to every body size and type.



Using The Blower

OPERATING TIPS

In the hands of an experienced operator, the EB630 can efficiently move a wide variety of debris ranging from grass clippings to gravel. As a general rule, operate your blower at the lowest throttle setting required to get the job done:

- Use low throttle settings when clearing lightweight materials from around lawns or shrubbery.
- Use medium to higher throttle settings to move grass or leaves from parking lots or walkways.
- Use full throttle when moving heavy loads such as dirt or snow.

IMPORTANT!

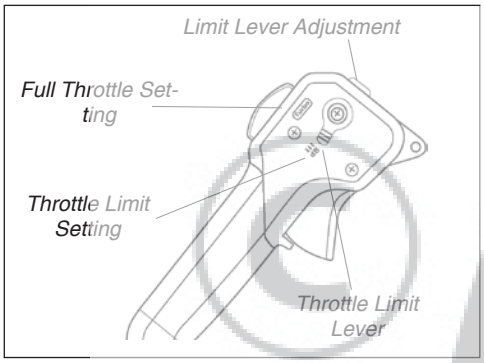
Blower noise increases at higher throttle settings! Always use the lowest throttle setting required to get the job done!

Throttle Limit Function

The EB630 has a throttle limit function that allows the operator to pre-set the maximum full-throttle setting. This is useful for limiting the noise emitted by the blower in sound sensitive areas.

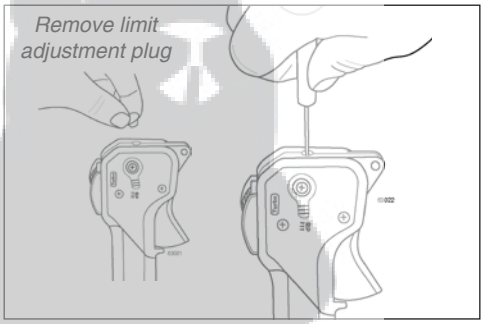
Setting throttle limit:

Move the throttle limit lever located on the right hand side of the throttle control to the dB setting.



Adjusting throttle limit:

1. Remove the plug located at the top of the throttle assembly.
2. Move the throttle limit lever to the "limit" setting.
3. Using a small Phillips screw driver, Turn the adjustment screw clockwise to decrease limit RPM and counter-clockwise to increase until desired limit RPM is achieved.
4. Reinstall limit plug.



Maintenance

IMPORTANT

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 SHINDAIWA KOGYO CO., LTD. THE USER 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.

WARNING!

Before performing any maintenance, repair or cleaning work on the unit, make sure the engine is completely stopped. Disconnect the spark plug wire before performing service or maintnenance work.

WARNING!

Non-standard parts may not operate properly with your unit and may cause damage and lead to personal injury.

NOTE:

Using non-standard replacement parts could invalidate your Shindaiwa warranty.

Daily Maintenance

WARNING!

To reduce fire hazard, keep the engine and muffler free of dirt, debris, and leaves.

CAUTION!

The engine is cooled by air drawn into the air intake cover on the blower housing. The blower fan then pushes the cooling air through an opening in the fan housing, forcing it past the cylinder cooling fins. Failure to keep the cooling system and its passages clear of debris will likely result in engine overheating, a major cause of serious engine problems that can lead to failure.

Prior to each workday, perform the following:

- Remove all dirt and debris from blower exterior and the engine. Check the cooling fins and air cleaner for clogging and clean as necessary.
- Inspect the engine, tank, and hoses for possible fuel leaks, and repair as necessary.
- Inspect the entire blower for loose, damaged, or missing components, and repair as necessary.
- Carefully remove any accumulations of dirt or debris from the muffler and fuel tank. Dirt build-up in these areas can lead to engine overheating, fire or premature wear.

Every 10 Hours

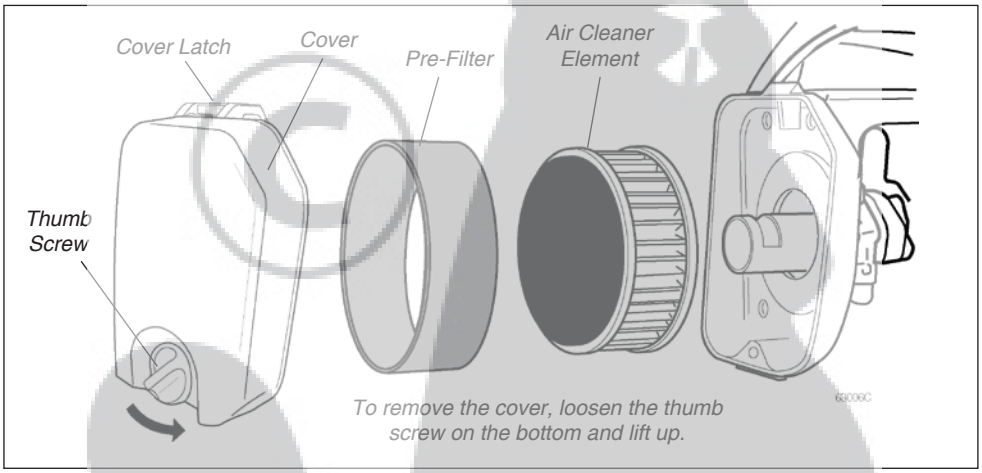
(more frequently in dusty conditions)

1. Remove the air cleaner cover by loosening the thumb screw and lifting up.
2. Remove and inspect the pre-filter. If the pre-filter is torn or otherwise damaged, replace it with a new one.
3. Clean the pre-filter with soap and water. Let dry before reinstalling.
4. Inspect the air cleaner element. If the element is damaged or distorted, replace it with a new one.

IMPORTANT!

The EB630 uses a special high capacity dry-type air filter element. The filter should not be cleaned with a liquid cleaner and must NEVER be oiled!

5. Tap filter gently on a hard surface to dislodge debris from element or use compressed air from the inside to blow debris out and away from the air filter element.



To remove the cover, loosen the thumb screw on the bottom and lift up.

IMPORTANT!

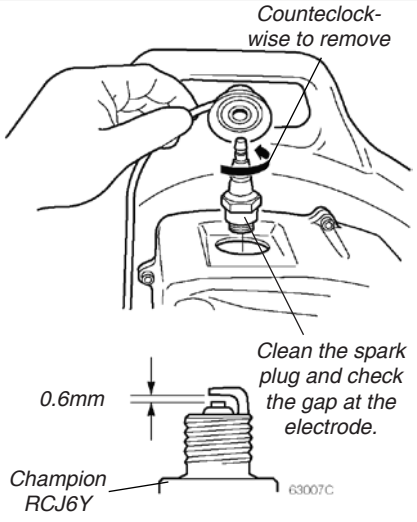
Direct the air stream at the inside face of the filter only!

6. Install the filter element, pre-filter and cover in the reverse order of removal.

CAUTION!

Never operate the blower if the air cleaner assembly is damaged or missing!

Every 10/15 Hours



CAUTION!

Never allow dirt or debris to enter the cylinder bore! Before removing the spark plug, thoroughly clean the spark plug and cylinder head area!

Allow the engine to cool before servicing the spark plug! Cylinder threads can be damaged by tightening or loosening the spark plug while the engine is hot!

1. Use the spark plug wrench to remove the spark plug.
2. Clean and adjust the spark plug gap to 0.6mm. If the plug must be replaced, use only Champion RCJ6Y or equivalent type plug of the correct heat range.
3. Install the spark plug finger-tight in the cylinder head, then tighten it firmly with the spark plug wrench. If a torque wrench is available, torque the spark plug to 16.7 - 18.6 N-m.

Every 50 Hours

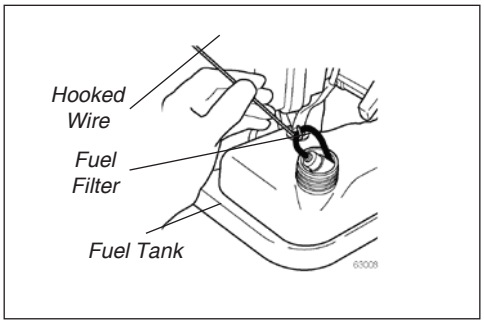
(more frequently if reduced performance is noted)

- INSPECTION Inspect the entire blower and tubes for damage, including loose or missing components, and repair as necessary.
- SPARK PLUG Replace the spark plug with a Champion RCJ6Y (or equivalent), gapped to 0.6mm.
- FUEL FILTER Use a hooked wire to extract the fuel filter from inside the fuel tank.

CAUTION!

Make sure you do not pierce the fuel line with the end of the hooked wire. The line is delicate and can be damaged easily.

- Inspect the filter element for signs of contamination from debris. A contaminated fuel filter should be replaced with a new Shindaiwa replacement element. Before reinstalling the filter, inspect the condition of the fuel line. If you note damage or deterioration, the blower should be removed from service until it can be inspected by a Shindaiwa-trained service technician.
- COOLING SYSTEM Use a wood or plastic scraper and a soft brush to remove dirt and debris from the cylinder fins and crankcase.

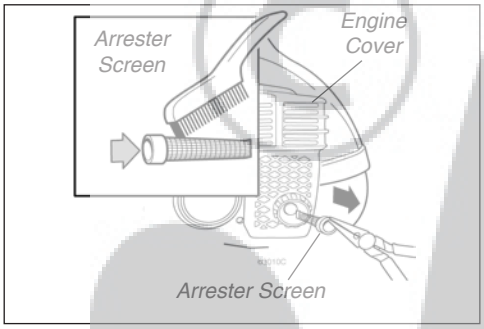


Spark Arrester Maintenance

WARNING!

Never operate this blower with a damaged or missing muffler or spark arrester! Operating with missing or damaged exhaust components is a fire hazard, and can also damage your hearing!

Hard starting or a gradual loss of performance can be caused by carbon deposits lodged in the spark arrester screen. For maximum performance, the spark arrester screen should be periodically cleaned as follows.



1. Use a needle-nose pliers to remove the spark arrester from the exhaust tube. The arrester is press-fit in place; there are no screws to remove.
2. Use a plastic scraper or wire brush to remove carbon deposits from the arrester screen and exhaust tube.
3. Inspect the screen carefully, and replace any screen that has been perforated, distorted, or is otherwise unserviceable.
4. Press the spark arrester into the exhaust tube. A soft mallet may be used to tap the spark arrester home.

If carbon accumulation in the muffler or cylinder are severe, or if you do not notice an improvement in performance after servicing, have the unit inspected by an authorized servicing Shindaiwa dealer.

Long Term Storage

Whenever the unit will not be used for 30 days or longer, use the following procedures to prepare it for storage:

- Clean external parts thoroughly.
- Drain all the fuel from the fuel tank.

IMPORTANT!

All stored fuels should be stabilized with a fuel stabilizer such as Sta-Bil™ if Shindaiwa One oil with fuel stabilizer is not used.

To remove the remaining fuel from the fuel lines and carburetor and with the fuel drained from the fuel tank.

1. Prime the primer bulb until no more fuel is passing through.
2. Start and run the engine until it stops running.
3. Repeat steps 1 and 2 until the engine will no longer start.

CAUTION!

Gasoline stored in the carburetor for extended periods can cause hard starting, and could also lead to increased service and maintenance costs.

- Remove the spark plug and pour about 7 grams of 2-cycle mixing oil into the cylinder through the spark plug hole. Slowly pull the recoil starter 2 or 3 times so oil will evenly coat the interior of the engine. Reinstall the spark plug.
- Before storing the unit, repair or replace any worn or damaged parts.
- Remove the air cleaner element from the unit and clean it as outlined on page 10.
- Store the unit in a clean, dust-free area.

Troubleshooting Guide

ENGINE DOES NOT START

What To Check		Possible Cause	Remedy
Does the engine crank?	NO	Faulty recoil starter. Fluid in the crankcase. Internal damage.	Consult with an authorized servicing dealer.
YES Good compression?	NO	Loose spark plug. Excess wear on cylinder, piston, rings.	Tighten and retest. Consult with an authorized servicing dealer.
YES Does the tank contain fresh fuel of the proper grade?	NO	Fuel incorrect, stale, or contaminated; mixture incorrect.	Refill with clean fresh unleaded gasoline with a pump octane of 87 or higher, mixed with Shindaiwa Premium 2-cycle mixing oil at a 50:1 gasoline/oil ratio.
YES Is fuel visible and moving in the return line when priming?	NO	Check for clogged fuel filter and/or vent.	Replace fuel filter or vent as required. Restart.
YES Is there spark at the spark plug wire terminal?	NO	The ignition switch is in "O" (OFF) position. Shorted ignition system. Faulty ignition unit.	Move switch to "I" (ON) position and re-start. Consult with an authorized servicing dealer.
YES Check the spark plug.		If the plug is wet, excess fuel may be in the cylinder.	Crank the engine with the plug removed, replace the plug, and re-start.
		The plug is fouled or improperly gapped.	Clean and re-gap the plug to 0.6 mm. Re-start.
		The plug is damaged internally or of the wrong size.	Replace the plug with a Champion RCJ6Y or equivalent type spark plug of the correct heat range. Adjust the spark plug electrode gap to 0.6mm; Restart.

Troubleshooting Guide

LOW POWER OUTPUT

What To Check	Possible Cause	Remedy
Is the engine overheating?	Operator is overworking the unit.	Use a lower throttle setting.
	Carburetor mixture is too lean.	Consult with an authorized servicing dealer.
	Improper fuel ratio.	Refill with clean fresh unleaded gasoline with a pump octane of 87 or higher, mixed with Shindaiwa Premium 2-cycle mixing oil at a 50:1 gasoline/oil ratio.
	Fallen leaves or debris on intake cover.	Clean the intake cover.
	Fan, fan cover, cylinder fins dirty or damaged.	Clean, repair or replace as necessary.
	Carbon deposits on the piston or in the muffler.	Consult with an authorized servicing dealer.
Engine is rough at all speeds. May also have black smoke and/or unburned fuel at the exhaust.	Clogged air filter.	Clean or replace the air filter.
	Loose or damaged spark plug.	Tighten or replace the plug with a Champion RCJ6Y or equivalent type spark plug of the correct heat range.
	Air leakage or clogged fuel line.	Repair or replace filter and/or fuel line.
	Water in the fuel.	Refill with fresh fuel/oil mixture. See Page 7.
	Piston seizure.	Consult with an authorized servicing dealer.
	Faulty carburetor and/or diaphragm.	Consult with an authorized servicing dealer.
Engine is knocking.	Overheating condition.	See above.
	Improper fuel.	Check fuel octane rating; check for presence of alcohol in the fuel. Refuel as necessary. See page 7.
	Carbon deposits in the combustion chamber.	Consult with an authorized servicing dealer.

Troubleshooting Guide

ADDITIONAL PROBLEMS

Symptom	Possible Cause	Remedy
Poor acceleration.	Clogged air filter.	Clean or replace the air filter.
	Clogged fuel filter.	Replace the fuel filter.
	Lean fuel/air mixture.	Consult with an authorized servicing dealer.
	Idle speed set too low.	Adjust: 2,200 min^{-1}
Engine stops abruptly.	Ignition switch turned off.	Reset the switch and re-start.
	Fuel tank empty.	Refuel. See page 7.
	Clogged fuel filter.	Replace filter.
	Water in the fuel.	Drain; replace with clean fuel. See page 7.
	Shorted spark plug or loose terminal.	Clean or replace spark plug with a Champion RCJ6Y or equivalent type spark plug of the correct heat range.
	Ignition failure.	Replace the ignition unit.
	Piston seizure.	Consult with an authorized servicing dealer.
Engine difficult to shut off.	Ground (stop) wire is disconnected, or switch is defective.	Test and replace as required.
	Overheating due to incorrect spark plug.	Replace spark plug with a Champion RCJ6Y or equivalent spark plug of the correct heat range.
	Overheated engine.	Idle engine until cool.
Excessive vibration.	Debris build-up in impeller.	Clean debris from impeller as required.
	Loose or damaged impeller.	Inspect and replace impeller as required.
	Loose or damaged engine mounts.	Tighten or replace engine mounts as required.
Engine overspeeding	Blower intake or discharge ports or tubes are clogged with debris.	Inspect and remove debris.
	Impeller blades are missing or damaged.	Consult with an authorized servicing dealer.

DECLARATION OF CONFORMITY

We hereby declare the Shindaiwa Blower, Model EB630 (EB630/EC1).

meets the following respective requirements.

Council Directives:
89/336/EEC as amended
98/37/EC as amended
2000/14/EC as amended
2004/26/EC as amended

Standard taken:
EN 292 parts 1&2
CISPR 12

Measured sound power level: 111dB(A)

Guaranteed sound power level: 112dB(A)

Technical documentation is kept by:
K. Maeda DIV. Manager
Engineering Research and Development DIV.

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17 January, 2005

T. Yoshitomi

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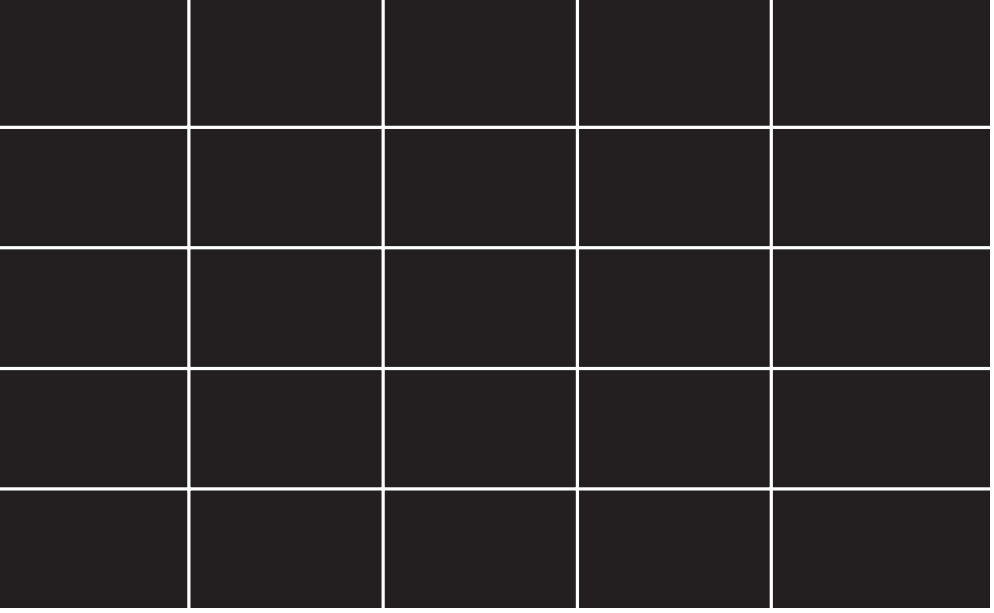

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