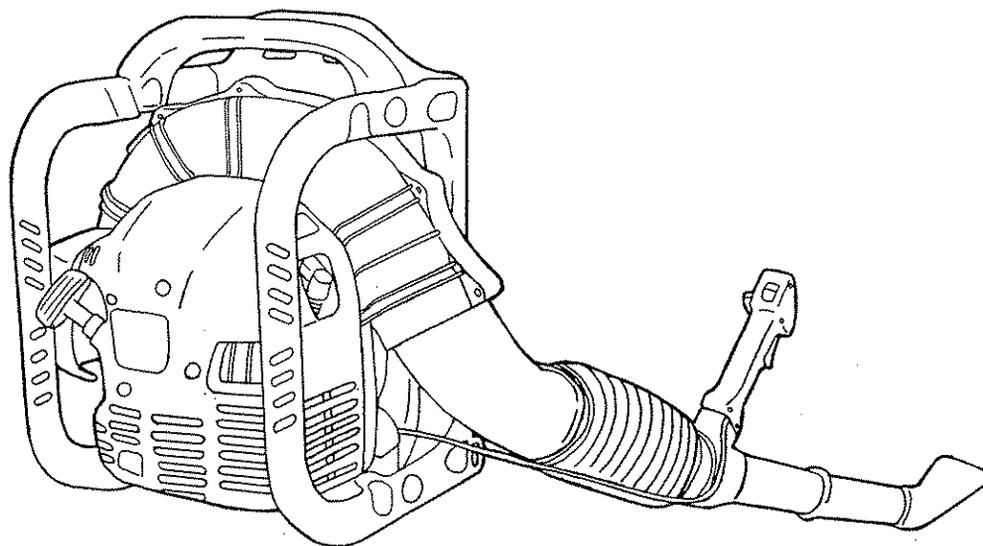


# **Robin**

## **BLOWER SOPLADOR**

**MODEL FL500  
MODELO FL500**

### **INSTRUCTION MANUAL MANUAL DE INSTRUCCIONES**



**WARNING:**

To reduce the RISK of injury, user must read and understand the instruction manual before using the blower. Manufacturer reserves the right to change specifications without notice. Specifications may differ from country to country. Do only hand over the Blower together with this manual.

**ADVERTENCIA:**

Para reducir el riesgo de posibles lesiones, el usuario deberá leer y entender las instrucciones de este manual antes de utilizar el soplador. El fabricante se reserva el derecho de cambiar las especificaciones sin previo aviso. Las especificaciones pueden variar de un país a otro. Ceda únicamente el soplador junto con este manual.

Thank you very much for selecting the ROBIN blower. We are pleased to be able to offer you the ROBIN blower which is the result of a long development programme and many ears of knowledge and experience.

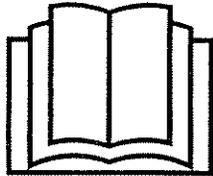
The blower models FL500 combines the advantages of state-of-the-art technology with ergonomic design, they are compact and represent professional equipment for a great variety of applications.

For your safety and best tool performance, be sure to read, understand and follow all the safety and operating procedures listed in the instruction manual before operation.

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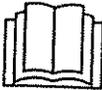
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## SYMBOLS

It is very important to understand the following symbols when reading this instructions manual.

	WARNING/DANGER		Wear Eye and Ear Protection
	Read, Understand and Follow Instruction Manual		Fuel and Oil Mixture
	Forbidden		Engine-manual Start
	No Smoking		Emergency Stop
	No Open Flame		First Aid
	Protective Gloves must be Worn		Recycling
	Keep the Area of Operation Clear of All Persons and Pets		ON/START
			OFF/STOP

# SAFETY INSTRUCTIONS

## GENERAL INSTRUCTIONS

- To ensure correct and safe operation, the user must read, understand and follow this instruction manual to assure familiarity with the handling of the blower (1). Users insufficiently informed will risk danger to themselves as well as others due to improper handling.
- It is recommended only to loan the blower to people who have proven to be experienced with blowers. Always hand over the instruction manual.
- First-time users should ask the dealer for basic instructions to familiarize oneself with the handling of a blower.
- Children and young persons aged under 18 years must not be allowed to operate the blower. Persons over the age of 16 years may however use the tool for the purpose of being trained only while under the direct supervision of a qualified trainer.
- Use blowers with the utmost care and attention.
- Operate the blower only if you are in good physical condition. Perform all work conscientiously and carefully. The user has to accept responsibility for others.
- Never use the blower while under the influence of alcohol or drugs(2).
- Do not use the blower when you are tired.
- **Save these instructions for future referral.**

## PERSONAL PROTECTIVE EQUIPMENT

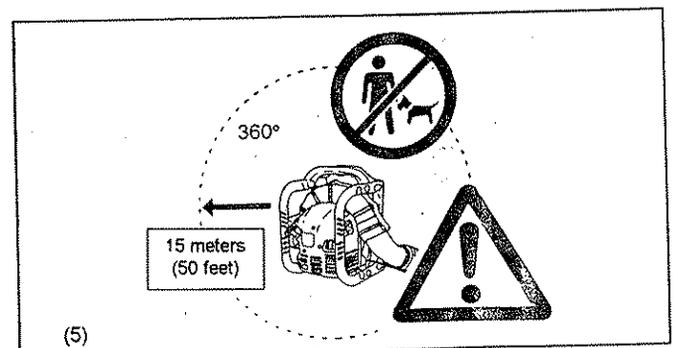
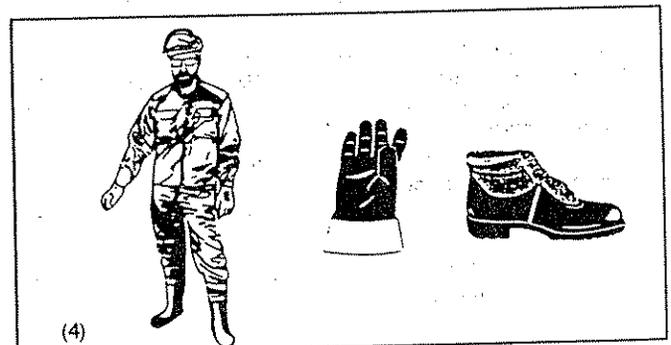
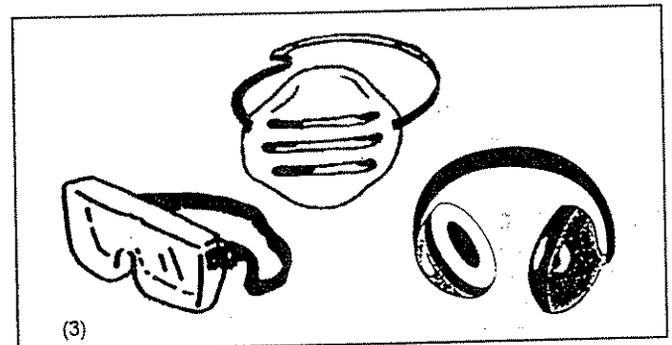
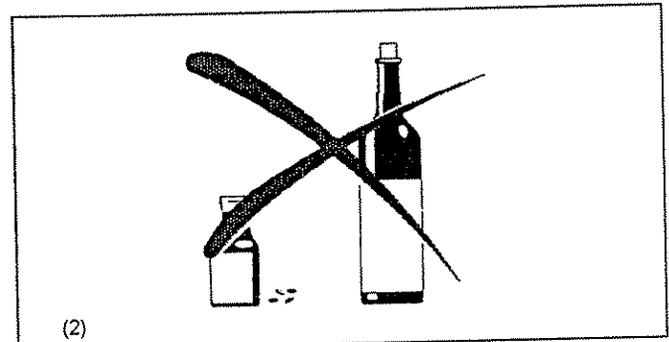
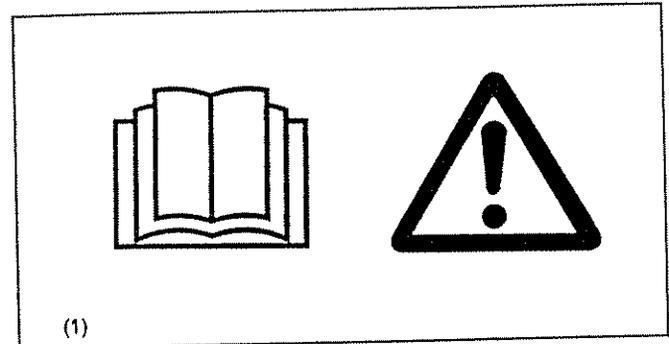
- The clothing worn should be functional and appropriate, i. e. it should be tight-fitting but not cause a hinderance. Do not wear jewelry, clothing or long hair which could be drawn into the air intake.
- In order to avoid head-, eye-, hand- or foot injuries as well as to protect you hearing the following protective equipment and protective clothing must be used during operation of the blower.

## PAY PARTICULAR ATTENTION TO THE FOLLOWING REGULATIONS:

- Clothing must be sturdy and snug-fitting, but allow complete freedom of movement. Avoid loose-fitting jackets, flared or cuffed pants, scarfs, neck chains, unconfined long hair or anything that could be drawn into the air intake. Wear overalls or long pants to protect your legs. Do not wear shorts. (4)
- Blower noise may damage your hearing. Wear hearing protection. Continual and regular users should have their hearing checked regularly. (3)
- Use of gloves when working with the blower is recommended. Good footing is most important. Wear sturdy shoes with nonslip soles. (4)
- Proper eye protection is a must. Even though the discharge is directed away from the operator, ricochets and bouncebacks can occur during blower operations. (3)
- Never operate a blower unless wearing goggles or properly fitted safety glasses with adequate top and side protection which comply with ANSI Z 87. 1 (or your applicable national standard).
- To reduce the risk of injury associated with the inhalation of dusty, use a face filter mask (3) in dusty conditions.

## STARTING UP THE BLOWER

- Please make sure that there are no children or other people within a working range of 50feet or 15 meters (5), also pay attention to any animals in the working vicinity.
- **Before operating, always check that the blower is safe for operation:**  
Check the security of the throttle lever. The throttle lever should be checked for smooth and easy action. Check for proper functioning of the throttle lever lock. Check for clean and dry handles and test the function of the STOP switch. Keep handles free of oil and fuel.
- Before operation, check and follow local regulations concerning sound level and hours of operations.
- Only start the blower positioned on the ground.
- Do not start it on the back.



Start the blower only in accordance with the instructions.

**Do not use any other methods for starting the engine (6)!**

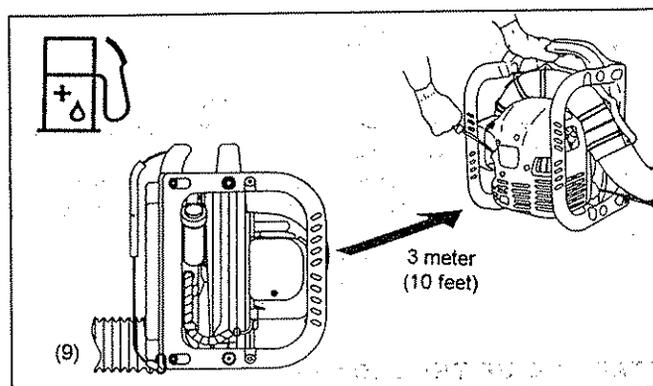
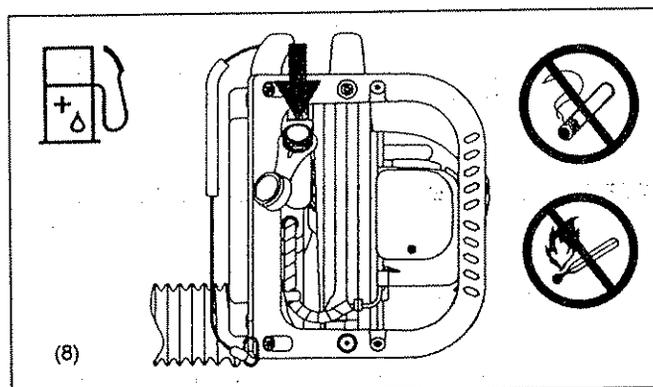
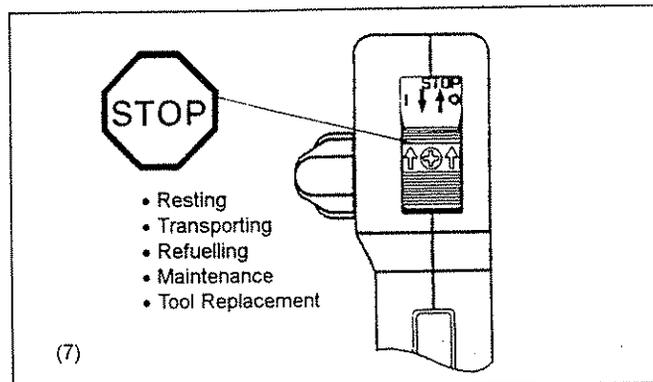
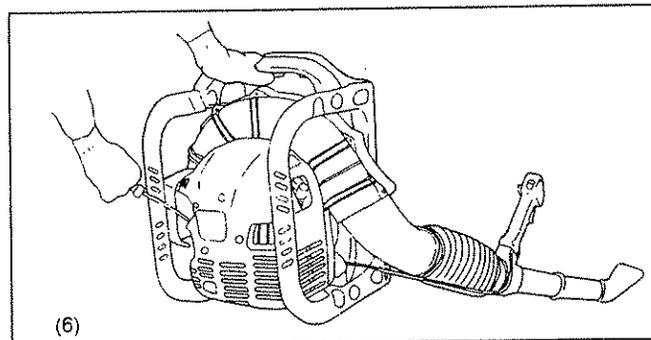
- Use the blower and the tools supplied only for applications specified.
- **Start the blower engine only after the entire blower has been assembled. Operation of the blowers is permitted only after all the appropriate accessories are attached!**
- To reduce the risk of injuries associated with contacting rotating parts, stop the engine before installing or removing attachments. Do not operate without guard(s) in place.
- The engine is to be stopped immediately if there are any engine problems.
- When working with the blower, always wrap your fingers tightly around the handle, keeping the control handle cradled between your thumb and forefinger. Keep your hand in this position to have your machine under control at all times. Make sure your control handle is in good condition and free of moisture, pitch, oil or grease.

**Always ensure a safe, well-balanced footing.**

- Operate the blower in such a manner as to avoid inhalation of the exhaust gases. Never run the engine in enclosed rooms (risk of suffocation and gas poisoning). Carbon monoxide is an odorless gas. Always ensure there is adequate ventilation.
- Stop the engine when resting and when leaving the blower unattended. Place it in a safe location to prevent danger to others, setting fire to combustible materials, or damage to the machine.
- Never lay down the hot blower onto dry grass or onto any combustible materials.
- All protective parts and guards supplied with the machine must be used the operation.
- Never operate the engine with a faulty exhaust muffler.
- Stop the engine during transport (7).
- Put the blower in upright position and fix it during car or truck transportation to avoid.
- When transporting the blower, ensure that the fuel tank is completely empty to avoid fuel leakage.
- Do not sit on the blower or throw it around.

**REFUELLING**

- To reduce the risk of fire and burn injury; handle fuel with care. It is highly flammable.
- Stop the engine during refuelling (7). Keep well away from open flame (8) and do not smoke.
- Avoid skin contact with petroleum products. Do not inhale fuel vapor. Always wear protective gloves during refuelling Change and clean protective clothing at regular intervals.
- Take care not to spill either fuel or oil. Always wipe unit dry before starting engine. Allow wet cloths to dry before disposing in proper, covered container to prevent spontaneous combustion.
- Avoid any fuel contact with your clothing. Change your clothing immediately if fuel has been spilled on it (danger hazard).
- Inspect the fuel cap at regular intervals making sure that it stays securely fastened.
- Carefully tighten the locking screw of the fuel tank. Move at least 10ft (3 meters) away from the refuelling point before starting engine (9).
- Never refuel in closed rooms. Fuel vapors accumulate at ground level (risk of explosions).
- Only transport and store fuel in approved containers. Make sure stored fuel is not accessible to children.
- Do not attempt to refuel a hot or a running engine.
- When mixing gasoline with two-stroke engine oil, use only gasoline which contains no ethanol or methanol (types of alcohol). This will help to prevent damage to fuel lines and other engine parts.
- Make sure the unit is properly assembled and in good operating condition.



## METHOD OF OPERATION

- Use the blower only in good light and visibility. During cold seasons beware of slippery or wet areas, ice and snow (risk of slipping). Always ensure a safe footing.
- Never work on unstable surfaces or steep terrain.
- Do not allow bystanders in work area, much less direct the air flow or blow debris toward another person or pet.
- Never insert any foreign object into the air intake of the machine or into the nozzle of the blower. It will damage the fan wheel and may cause serious injury to the operator or bystanders as a result of the object or broken parts being thrown out at high speed.
- Pay attention to the direction of the wind, i.e., do not work against the wind.
- To reduce the risk of stumbling and loss of control, do not walk backward while operating the machine.
- Always stop the engine before cleaning or servicing the unit or replacing parts.
- Operate power equipment only at reasonable hours not early in the morning or late at night when people might be disturbed. Comply with times listed in local ordinances. Usual recommendations are 9:00 a.m. to 5:00 p.m. Monday through Saturday.
- Use only one piece of power equipment at a time, when possible.
- Operate power blowers at the lowest possible throttle speed to do the job.
- Check your equipment before operation, especially the muffler, air intakes and air filters.
- Use rakes and brooms to loosen debris before blowing.
- In dusty conditions, slightly dampen surface or 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.
- Watch out for children, pets, open windows or freshly washed cars, and blow debris safely away.
- Use full blower nozzle extension so the air stream can work close to the ground.
- After using blowers and other equipment, CLEAN UP! Dispose of debris in trash receptacles.



(10)

## MAINTENANCE INSTRUCTIONS

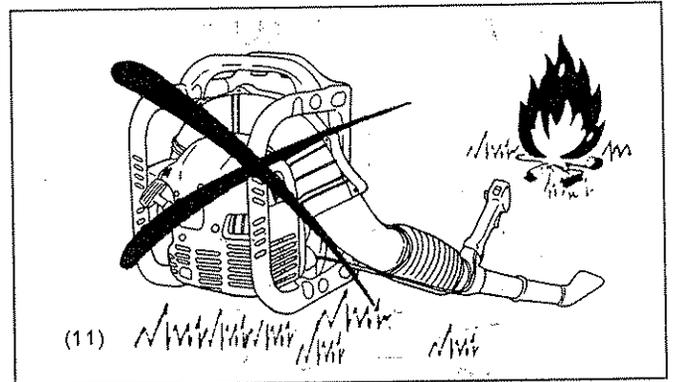
- Be kind to the environment. Operate the blower with as little noise and pollution as possible. In particular check the correct adjustment of the carburetor.
- Clean the blower at regular intervals and check that all screws and nuts are securely tightened.
- Never service or store the blower in the vicinity of open flames, sparks, etc. (11).
- Always store the blower in a well-ventilated locked room and with an emptied fuel tank.

**Observe and follow all relevant accident prevention instructions issued by the trade associations safety board and by insurance companies. Do not perform any modifications to the blower as this will risk your safety.**

The performance of maintenance or repair work by the user is limited to those activities as described in this instruction manual. All other work is to be done by ROBIN authorized or factory service centers.

Use only genuine spare parts and accessories supplied by ROBIN.

Use of non-approved accessories and tools means increased risk of accidents and injuries. ROBIN will not accept any liability for accidents or damage caused by the use of any non-approved accessories.



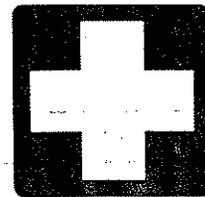
(11)

## FIRST AID

In case of accident make sure that a well-stocked first-aid kit, is available in the vicinity of the cutting operations. Immediately replace any item taken from the first aid kit.

**When asking for help, please give the following information:**

- Place of accident
- What happened
- Number of injured persons
- Extent of injuries
- Your name



(12)

## PACKAGING

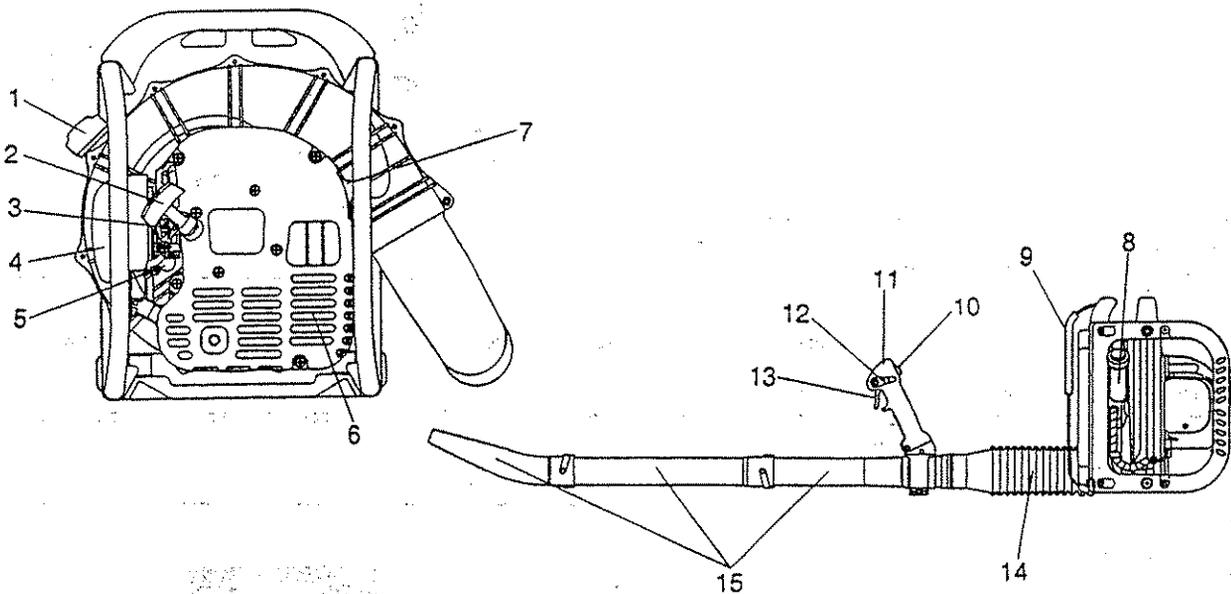
The ROBIN blower is delivered in a protective cardboard box to prevent shipping damage. Cardboard is a basic raw material and is therefore consequently reusable or suitable for recycling (waste paper recycling).



# Specification

Model	FL500	
Dimensions: length x width x height (without blower pipes)	mm	310 x 460 x 435 (12-7/32" x 18-1/8" x 17-5/32")
Mass (with blower pipes)	kg	8.7 (19.3 lbs)
Engine displacement	cm <sup>3</sup>	48.6
Bore	mm	44
Stroke	mm	32
Volume (fuel tank)	cm <sup>3</sup>	1800
Mixture ratio (Fuel: 2-stroke oil)		25 : 1
Carburetor (Diaphragm-carburetor)	type	ZAMA C1M
Maximum engine speed	rpm	6,800
Idling speed	rpm	2,600
Ignition system	type	Solid state ignition
Spark plug	type	NGK-BPM7A
Electrode gap	mm	0.6 - 0.7

# DESIGNATION OF PARTS



	DESIGNATION OF PARTS		DESIGNATION OF PARTS		DESIGNATION OF PARTS
1	Fuel filler cap	7	Spark Plug	13	Throttle Lever
2	Starter Knob	8	Fuel Tank	14	Flexible Pipe
3	Choke Lever	9	Shoulder Strap	15	Blower Pipes
4	Air Cleaner	10	Stop Switch		
5	Primer Pump	11	Control Handle		
6	Muffler	12	Setting Lever		

# ASSEMBLY INSTRUCTIONS

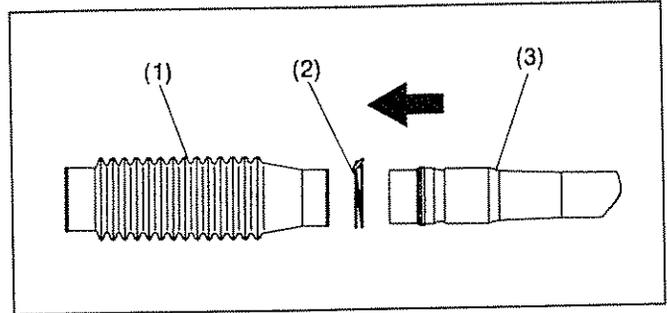
## ASSEMBLY OF BLOWER PIPES

**CAUTION:** Before performing any work on the blower, always stop the engine and pull the spark plug connectors off the spark plug.  
Always wear protective gloves!

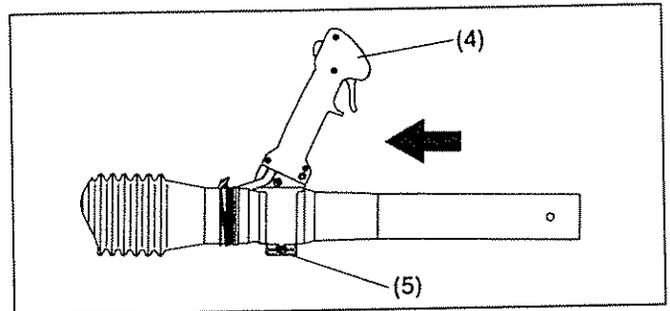


**CAUTION**  
**DO NOT START AND RUN THE BLOWER WITHOUT THE BLOWER TUBES IN PLACE. RUNNING THE BLOWER WITHOUT TUBES WILL DAMAGE THE ENGINE.**

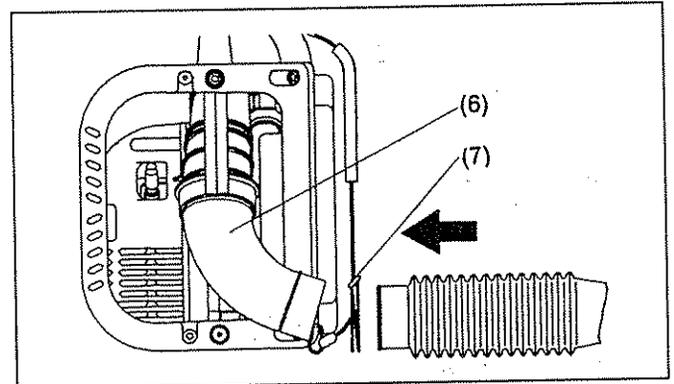
1. Assemble straight pipe with swivel (3) into flexible pipe (1) and tighten hose band  $\phi 78$  (2).
2. Install control handle (4) onto straight pipe with swivel and tighten the clamp screw (5).



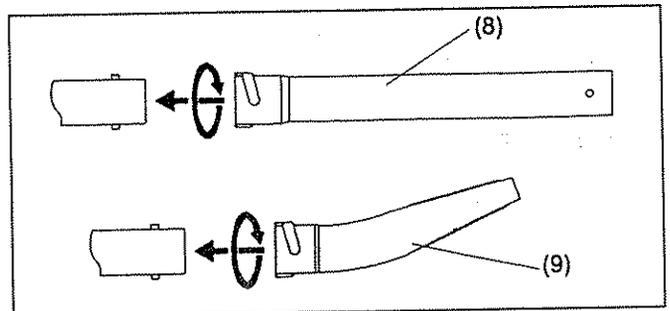
3. Assemble flexible pipe to elbow (6) on blower and tighten hose band  $\phi 91$  (7).



4. Assemble straight pipe (8) to straight pipe with swivel, turning straight pipe clockwise to lock it into place. Assemble end pipe (9) in the same way.

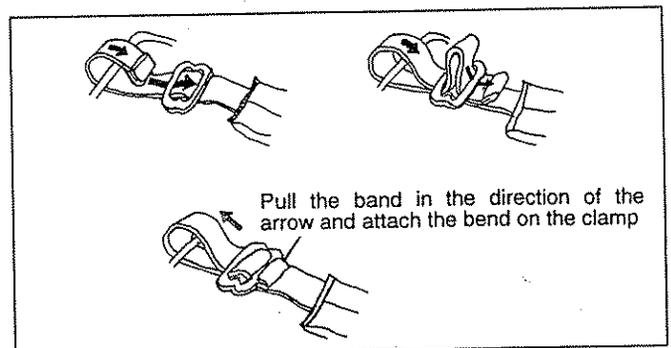


5. Make sure all clamps are tight.



6. Install the backstrap to the equipment.

**CAUTION:** Adjust the strap so that the equipment stays fixed on your back when carrying.



# FUELS/REFUELLING

## Handling petroleum products

Utmost care is required when handling fuel. Fuel may contain substances similar to solvents. Refuel either in a well ventilated area or outdoors. Do not inhale fuel vapors, avoid any contact of fuel or oil with your skin.

Mineral oil, fuel, etc., product degrease your skin. If skin comes in contact with these substances repeatedly or for an extended period of time, various skin diseases may result. In addition, allergic reactions are known to occur. Eyes can be irritated by contact with oil, fuel etc. If oil, fuel, etc., comes into your eyes, immediately wash them with clear water. If your eyes are still irritated, see a doctor immediately!

## FUEL AND OIL MIXTURE

Inspect the fuel tank and fill with clean, fresh fuel and oil of the proper mixture to assure the longer life of the tool. Use the following mixed gas.

Use the following mixed gas Gasoline Two-stroke engine oil = 25:1

### FOR CALIFORNIA REGULATION:

THIS EQUIPMENT IS CERTIFIED TO OPERATE ON GASOLINE + TWO-STROKE ENGINE OIL

WHEN MIXING GASOLINE WITH TWO-STROKE ENGINE OIL, USE ONLY GASOLINE WHICH CONTAINS NO ETHANOL OR METHANOL(TYPES OF ALCOHOL). THIS WILL HELP TO AVOID POSSIBLE DAMAGE TO ENGINE FUEL LINES AND OTHER ENGINE PARTS. MIX FUEL IN CONTAINER APPROVED FOR GASOLINE. DO NOT MIX GASOLINE AND OIL DIRECTLY IN THE FUEL TANK.

### IMPORTANT:

Failure to follow proper fuel mix instructions may cause damage to the engine.

### CAUTION:

- When preparing fuel mixture, mix only the amount needed for the job you are to do. Do not use fuel mixture that has been stored longer than two 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 filled with a fresh mixture.
- Never fill the fuel tank to the very top.
- Never add fuel to the tank in a closed unventilated area.
- Do not add fuel to this unit close to an open fire or sparks.
- Be sure to wipe off spilled fuel before attempting to start the engine.
- Do not attempt to refuel a hot engine.

## Refuelling

Always stop the engine and allow it to cool before refuelling.

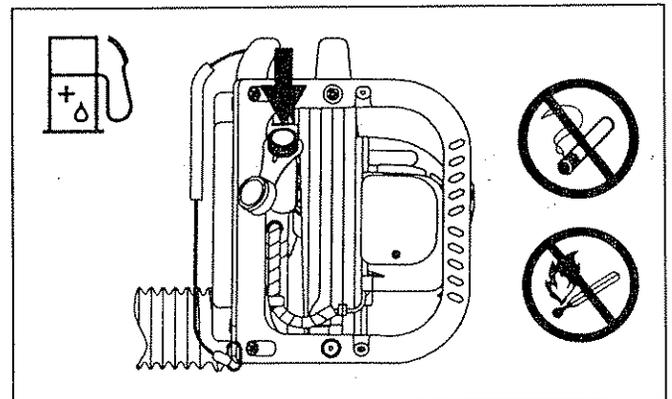
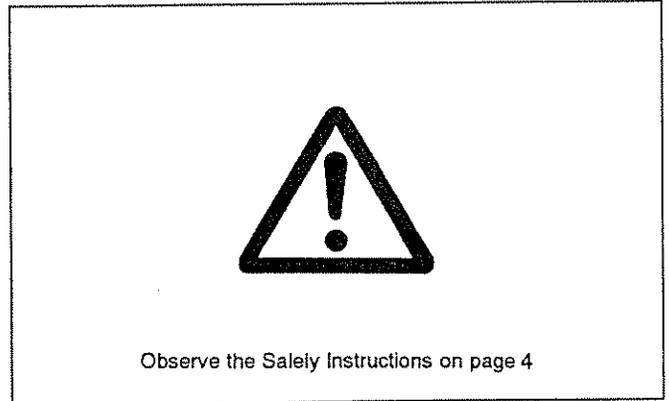
- Thoroughly clean the area around the fuel filler cap to prevent dirt from getting into the fuel tank.
- Unscrew the fuel filler cap and fill the tank with fuel.
- Tightly screw on the fuel filler cap.
- Clean the fuel filler cap and tank after refuelling!  
Wipe up any fuel spillage.

## Storage of Fuel

Fuel cannot be stored for an unlimited period of time. Purchase only the quantity required for a 4 week operating period. Only use approved fuel storage containers.

### WARNING!

Gasoline is an extremely flammable fuel. Use extreme caution when handling gasoline or fuel mix. Do not smoke or bring any fire or flame near the fuel.



# BLOWER OPERATION

Observe all applicable accident prevention regulations!



## Starting

Select bare ground for fueling and move at least 10 feet (3m) from fueling spot before starting the engine. Place the blower on an open area of ground taking care that the air flow does not blow objects. Make sure that this area is clear of combustible materials.

1. When the engine is cold, or it has been stopped for more than 5 minutes or fuel has been added to the engine:
  - 1) Push the STOP switch (1) to "I" position.
  - 2) Return setting lever to idling position.
  - 3) Give a gentle push on the primer pump repeatedly (7-10 times) until fuel comes into the primer pump (2).
  - 4) Close the choke lever fully by moving it to the | | position (3).
  - 5) Place the blower on the ground. Hold the handle and give several strong pulls to the starter knob using the other hand.
    - The choke lever return to the | | position automatically, when squeeze the throttle lever.

**NOTE: The throttle lever is unlocked when squeezing it slightly. It always start on the ground, the engine never start being as it carried to the back.**

2. Restarting immediately after the engine has stopped:
  - 1) Push the STOP switch (1) to "I" position.
  - 2) Return setting lever to idling position.
  - 3) Give a gentle push on the primer pump repeatedly (7-10 times) until fuel comes into the primer pump (2).
  - 4) Open the choke lever fully by moving it to the | | position (3).
  - 5) Leave the throttle lever fully released.
  - 6) Place the blower on the ground. Hold the handle and give several strong pulls to the starter knob using the other hand.

## Stopping

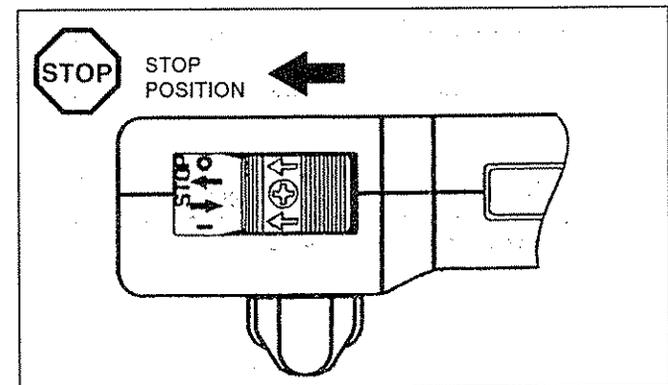
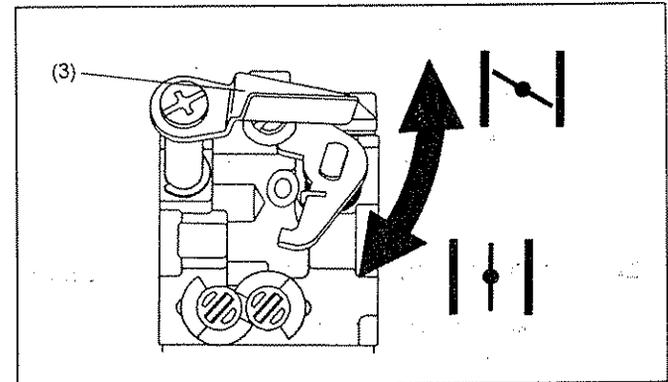
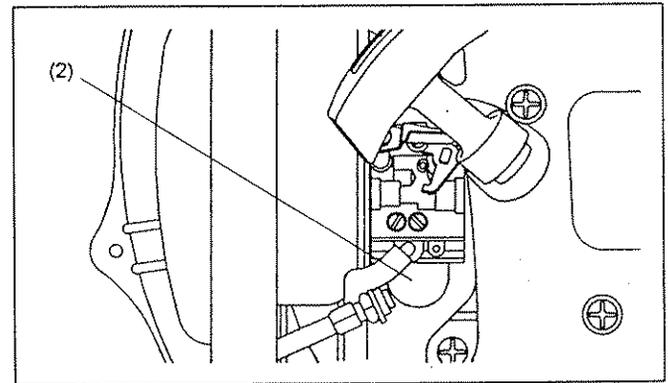
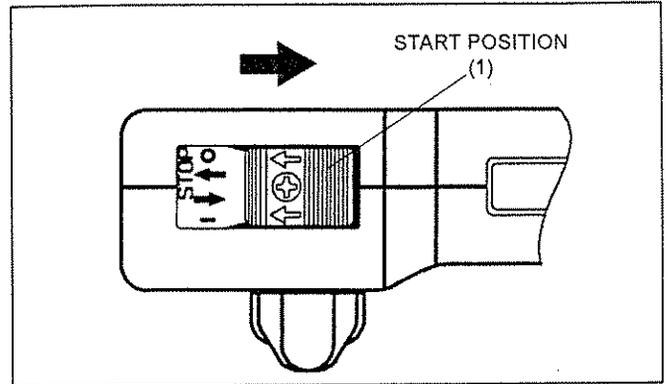
- Release the throttle lever fully, and when the engine rpm has lowered, push the stop switch to "O, STOP" position. Engine will stop.

## ADJUSTING CARBURETOR

**NOTE: Do not adjust carburetor unless necessary. If you have trouble with carburetor, see your dealer. Always adjust carburetor with pipes assembled to the blower.**

**NOTE: The needle screws have a sharp point. To avoid carburetor damage, do not use excessive force when seating needle in body.**

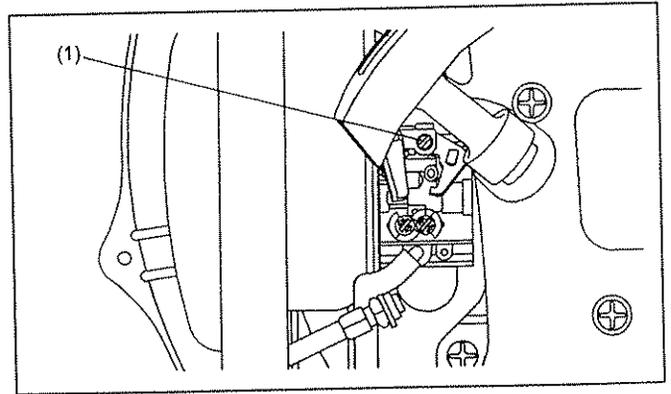
- The low (L) speed adjustment screw controls the volume of fuel/oil mixture at low engine speed. It also controls the supplementary fuel required to obtain smooth progression from idling to high speed.
- The high (H) speed adjustment screw controls the volume of fuel/oil mixture at full throttle



If you use your machine at high altitudes (mountains) or at sea level, it may be necessary to change the carburetor setting in the range of the adjustment. Carry out the correction at the two adjusting screws (L and H) as follows: Turn clockwise (leaner) for high altitude operation or counterclockwise (richer) for operation at sea level.

### IDLE ADJUSTMENT

- The idle speed adjustment screw controls the throttle opening at idle position.
- If engine stops while idling, turn the idle adjusting screw (1) clockwise until the engine runs smoothly.



## MAINTENANCE

**CAUTION:** Before doing any work on the blower always stop the engine and pull the plug caps off the spark plugs (see "Checking the spark plugs" page 11). Always wear protective gloves!



To ensure a long service life and to avoid any damage to the equipment, the following servicing operations should be performed at regular intervals.

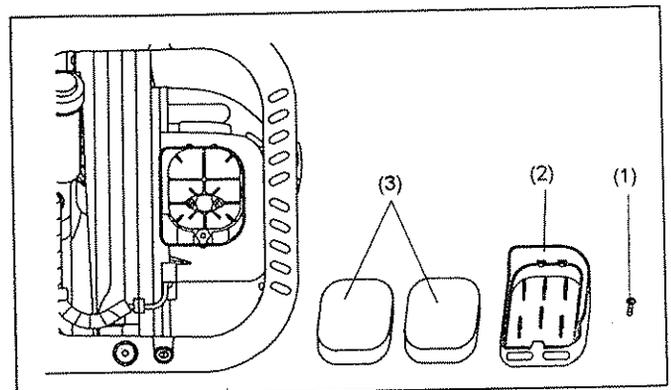
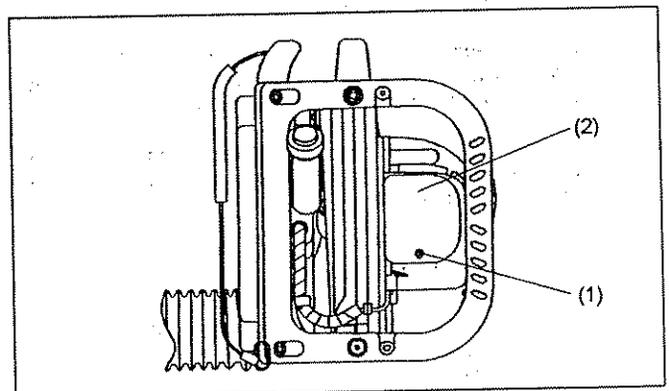
### DAILY CHECKUP AND MAINTENANCE

- Before operation, check the machine for loose screws or missing parts. Every 8 hours (Daily).
- Before operation, always check for clogging of the cooling air passage and the cylinder fins. Clean them if necessary. Every 8 hours (Daily)
- Perform the following maintenance daily after use:
  - Clean the blower externally and inspect for damage.
  - Clean the air filter. When working under extremely dusty conditions, clean the filter and blow out the cooling air passage and cylinder fins several times a day.
- Check for proper functioning of the stop switch, the throttle lever, and the setting lever.

### CLEANING OF AIR CLEANER Every 8 hours (Daily)

- Unscrew the air cleaner cover mounting screw (1).
- Remove the air cleaner cover (2).
- Push the choke lever to  position to prevent dirt particles from entering the carburetor.
- Take out the sponge element (3), wash it in lukewarm water and dry it completely.
- After cleaning, put back the sponge element and put back the air cleaner cover and tighten the screw to secure.

**NOTE:** If there is excessive dust or dirt adhering to the air cleaner, clean it every day. A clogged air cleaner may make it difficult or impossible to start the engine, or increase the engine rotational speed.

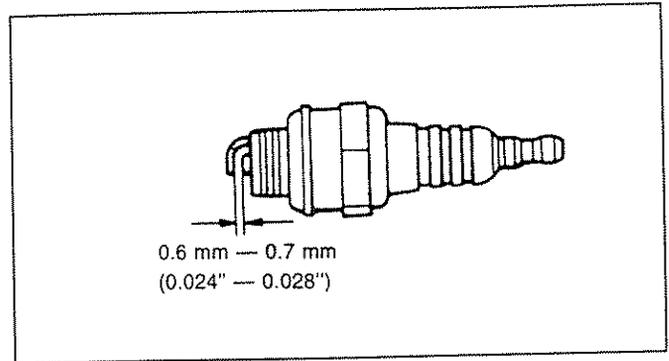


## CHECKING THE SPARK PLUGS Every 8 hours(Daily)



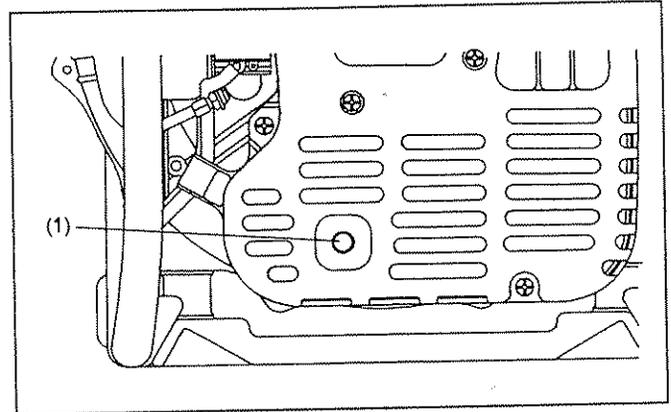
- Use only the supplied socket wrench to remove or install the spark plug. This engine uses NGK-BPM7A
- The gap between the two electrodes of the spark plug should be 0.6-0.7 mm (0.024" - 0.028"). If the gap is too wide or too narrow, adjust it. If the spark plug is clogged with carbon or fouled, clean it thoroughly or replace it. Use an exact replacement.

**CAUTION: Never touch the spark plug connector while engine is running (danger of high voltage electric shock).**



## CLEANING OF MUFFLER EXHAUST PORT Every 50 hours (monthly)

- Check muffler exhaust port (1) regularly.
- If it is clogged with carbon deposits, carefully scrape the deposits out with a suitable tool.



Check of fuel filter. If clogged, replace with new one : Every 50 hours  
Replace fuel lines : Every 200 hours (Yearly)  
Overhaul engine : Every 200 hours (Yearly)  
Replace packings and gaskets with new ones : Every time engine is reassembled.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by ROBIN Authorized or Factory Service Center, always using ROBIN replacement parts.

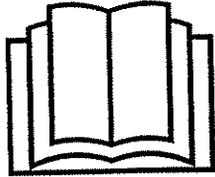
## STORAGE

- When keeping the machine in storage for a long time, drain fuel from the fuel tank and carburetor, as follows : Drain all fuel from the fuel tank into container approved for gasoline. Give a gentle push on the primer pump repeatedly until all fuel is expelled out of the primer pump.
- Remove the spark plugs and add a few drops of oil into spark plug hole. Then, pull the starter gently. Confirm that oil film covers the engine inside and tighten the spark plug.
- Clear dirt or dust from outside of engine, wipe them with an oil-immersed cloth and keep the machine locked in a dry, well-ventilated place that is inaccessible to children. Keep away from corrosive agents such as garden chemicals and de-icing salts.
- Do not store in a closed area where fuel vapors can reach an open flame from hot water heaters, furnaces etc.
- Abide by all Federal and local regulations for the safe storage and handling of gasoline.

Muchas gracias por comprar el soplador ROBIN. Nos complace recomendarle el uso del soplador ROBIN que es el resultado de un extenso programa de investigación desarrollado tras años de estudio y experiencia.

Los diferentes modelos de sopladores FL500 combinan las ventajas de la más avanzada tecnología con el diseño ergonómico, son compactos y representan el equipo de herramientas profesional para una gran variedad de aplicaciones.

Para mayor seguridad y rendimiento de la herramienta, asegúrese de leer, entender y seguir todas las instrucciones de seguridad y las operaciones del manejo que se indican en el manual de instrucciones antes de utilizar la herramienta.



## Contenidos

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## SÍMBOLOS

Es de gran importancia comprender los símbolos siguientes para la lectura de este manual de instrucciones.

	ADVERTENCIA/PELIGRO		mezcla de combustible y aceite
	Lea, comprenda y siga el Manual de Instrucciones		Encendido manual del motor
	Prohibido:		Paro de Emergencia
	No Fumar		Primeros Auxilios
	No acercar llamas		Reciclaje
	Deben utilizarse guantes protectores		ON/ENCENDIDO
	Mantener el Area de Operación libre de personas y animales		OFF/APAGADO
	Llevar protección de ojos y oídos		

# INSTRUCCIONES DE SEGURIDAD

## Instrucciones Generales

- Para asegurar un funcionamiento correcto y seguro, el usuario debe leer, comprender y seguir este manual de instrucciones para familiarizarse con el soplador (1). Los usuarios que no se informen suficientemente, ocasionarán un peligro a sí mismos y a otros.
- Se recomienda prestar el soplador únicamente a gente que demuestre experiencia en el uso de sopladores. Siempre debe entregar el manual de instrucciones.
- Los que utilizan la máquina por vez primera deben preguntar al vendedor las instrucciones básicas para familiarizarse con el manejo de un soplador motorizado.
- No se debe permitir el uso del soplador a niños y personas menores de 18 años. Las personas mayores de 16 años pueden, sin embargo, utilizar la máquina para aprendizaje únicamente, bajo supervisión directa de un monitor cualificado.
- Utilizar la máquina con el máximo cuidado y atención.
- Manejar el soplador sólo si se encuentra en buena condición física. Realizar el trabajo con calma y cuidadosamente. El usuario debe aceptar su responsabilidad con otras personas (2).
- Nunca utilizar el cortasetos después del consumo de alcohol o drogas, o si se encuentra cansado o enfermo.
- Conserve estas instrucciones para referencia futura.

## Equipo Personal de Protección

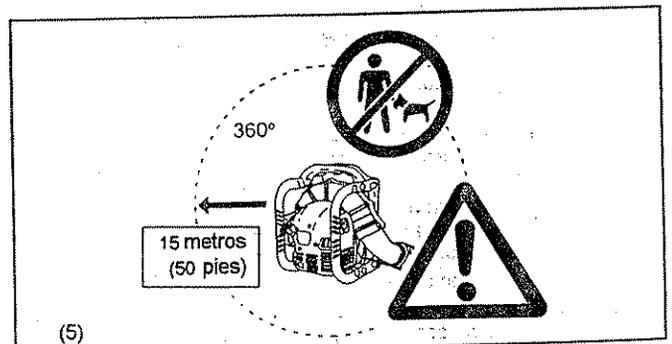
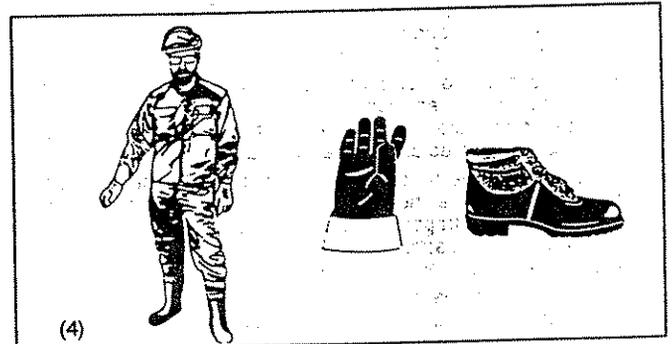
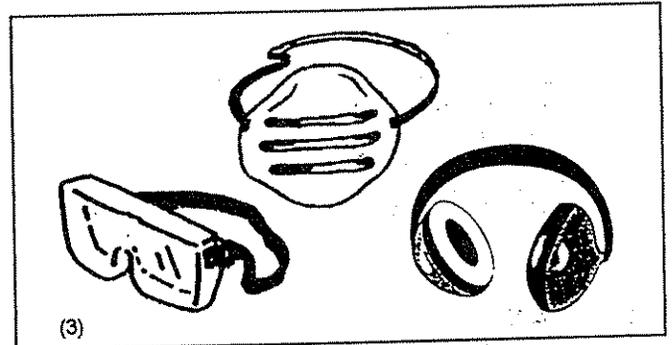
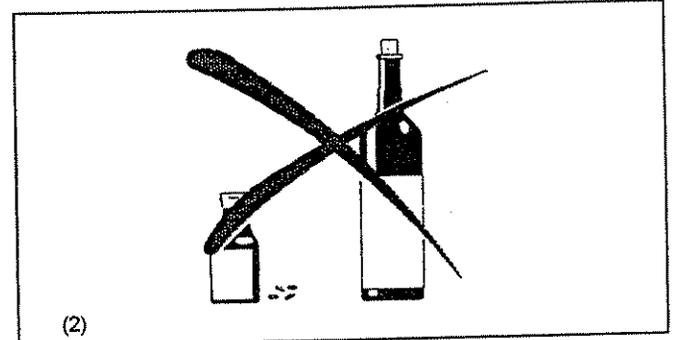
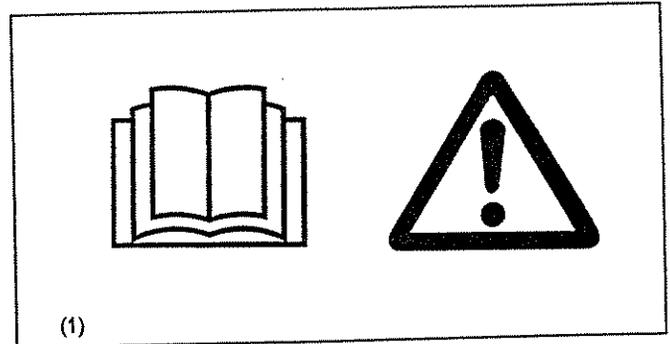
- La ropa utilizada debe ser funcional y adecuada. Por ejemplo, debe quedar ajustada, sin causar estorbo. No llevar joyas o ropa que pueda quedar atrapada con matorrales o arbustos, o con la máquina.
- Para evitar heridas en cabeza, ojos, manos o pies, así como para proteger su oído, el siguiente equipo y ropa de protección deben usarse durante el uso del soplador.

## Preste especial atención a las siguientes normas:

- Las ropas de trabajo deberán ser resistentes y bien ajustadas, pero al mismo tiempo permitir completa libertad de movimiento. Evite las chaquetas que queden sueltas, los pantalones acampanados o con las bajas recogidos, bufandas, cadenas, pelo largo suelto o cualquier cosa que pueda ser absorbida por la entrada del aire. Utilice un mono de trabajo o pantalones largos para proteger sus piernas. No utilice pantalones cortos. (4)
- El ruido del soplador puede dañar sus oídos. Use protectores para los oídos. Los usuarios que utilicen el soplador de forma continua y regular deberán hacerse un reconcimiento de oídos periódicamente. (3)
- Se recomienda el uso de guantes cuando trabaje con el soplador. Un buen calzado es de gran importancia. Lleve calzado resistente con suela antideslizante (4).
- Una protección adecuada de la vista es obligatoria. Aunque la descarga no se dirija directamente al usuario, Los rechazos y rebotes pueden ocurrir durante el manejo del soplador (3).
- Nunca utilizar el soplador sin llevar gafas o protectores adecuados para la vista con protección frontal y lateral que satisfagan la normativa ANSI Z 87.1 (o la aplicable en su país).
- Para reducir el riesgo de heridas o lesiones debido a la invasión de polvo, utilice una máscara con filtro (3) en lugares con mucho polvo.

## Arranque del soplador:

- Asegúrese de que no haya niños ni otras personas dentro de un radio de 50 pies ó 15 metros del punto de trabajo (5), tenga cuidado también con cualquier animal que pueda haber en las cercanías del lugar de trabajo. No utilice nunca el soplador en zonas urbanas.
- **Antes de utilizar el soplador, compruébelo siempre para asegurarse de que no exista peligro al utilizarlo:** Compruebe que la palanca del acelerador funciona correctamente. Deberá comprobar que la palanca de la mariposa de gases se puede mover suave y fácilmente. Compruebe que el bloqueo de la palanca de la mariposa de gases funciona correctamente. Asegúrese de que las empuñaduras estén secas y compruebe que el interruptor de parada funcione correctamente. Mantenga las empuñaduras limpias de aceite y de combustible.
- Antes de comenzar, compruebe y siga las regulaciones locales referentes a los niveles de sonido y horas de trabajo.
- Arranque únicamente el soplador cuando esté colocado sobre el suelo.
- No lo arranque en posición tumbada.



Arrancar el soplador sólo de acuerdo con las instrucciones.

**¡ No utilizar cualquier otro método para arrancar el motor (6)!**

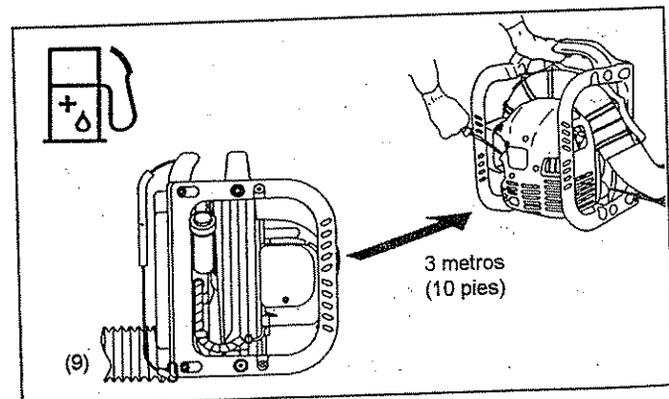
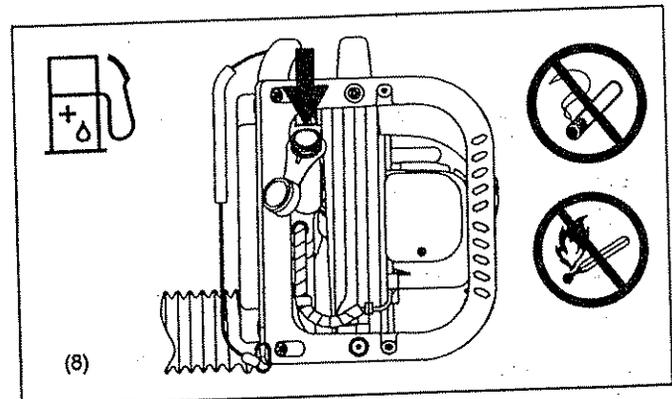
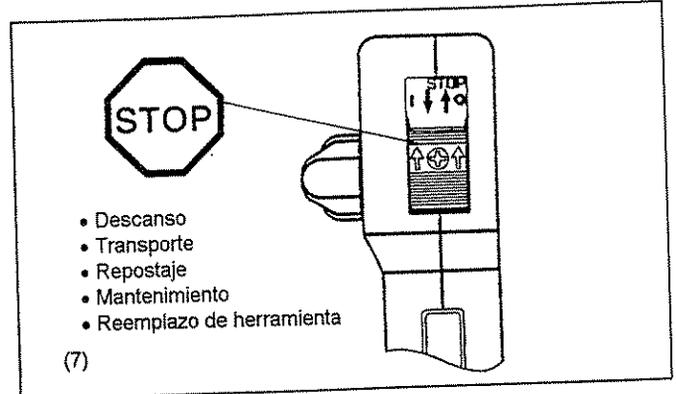
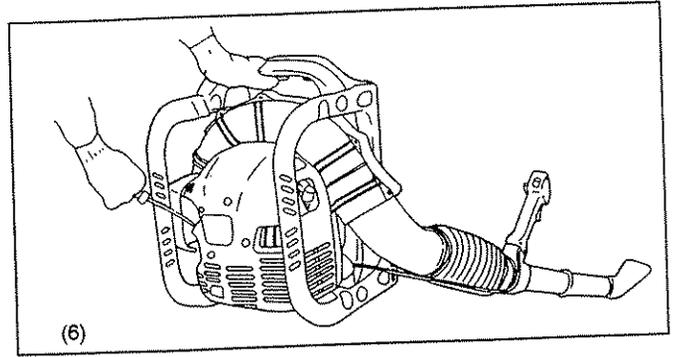
- Utilizar el soplador y las herramientas suministradas sólo para las aplicaciones establecidas.
- **Arranque el motor del soplador sólo después de que éste haya sido ensamblado completamente. Sólo se permite la utilización del soplador una vez que todos los accesorios necesarios hayan sido instalados.**
- Para reducir el riesgo de heridas o lesiones relacionadas con el contacto de piezas giratorias, detenga el motor antes de instalar o sacar cualquier accesorio. No lo opere si se encuentran protector en posiciones adecuadas.
- El motor debe apagarse (interruptor en posición OFF) si se detecta cualquier problema de motor.
- Cuando se trabaje con el soplador, debe colocar sus dedos envolviendo el manillar, manteniendo la palanca de control sujeta entre sus dedos pulgar e índice. Mantenga su mano en esta posición para tener la máquina bajo control en todo momento. Asegúrese de que la palanca de control (y asidero para el accesorio del aspirador) estén en perfectas condiciones y no tengan humedad, manchas de aceite, grasa o alquitrán.

**Siempre llevar un calzado seguro y estable.**

- Manejar el soplador de forma que se evite la inhalación de gases tóxicos de salida. Nunca encender el motor en estancias cerradas (riesgo de envenenamiento y sotoque). El monóxido de carbono es un gas inodoro. Siempre asegúrese que haya una ventilación adecuada.
- Apague el motor cuando descanse y cuando deje el soplador sin atender. Colóquelo en un lugar seguro para impedir daños a otras personas, causar incendios en materiales combustibles, o daños a la máquina.
- No deje nunca el soplador caliente sobre hierbas secas o materiales combustibles.
- Deberá utilizar todas las piezas para protección y seguridad que se suministran cuando trabaje con la herramienta.
- Nunca trabajar con un tubo de escape defectuoso.
- Apagar el motor durante el transporte (7).
- Coloque el soplador en posición vertical y asegúrelo cuando lo transporte en un vehículo para evitar daños a la herramienta.
- Durante el transporte, asegúrese de que el depósito de combustible esté vacío para evitar posibles fugas.
- No arroje o utilice esta herramienta como asiento.

**REPOSTAJE**

- Para reducir el riesgo de quemaduras o de fuego maneje el combustible con mucho cuidado. Es altamente inflamable.
- Apagar el motor durante el reabastecimiento (7), mantenerse alejado de llamas (8), y no fume.
- Evite el contacto de los productos derivados del petróleo con su piel. No inhale en vapor del combustible. Siempre lleve guantes protectores durante el reabastecimiento. Cambie y limpie la ropa protectora en intervalos periódicos.
- Tenga cuidado de no derramar combustible ni aceite. Pase un trapo seco por la herramienta antes de arrancar el motor. Permita que los trapos mojados se sequen antes de tirarlos en recipientes adecuados y tapados para evitar la combustión espontánea.
- Evite el contacto del combustible con su ropa. Cambie su ropa inmediatamente si se ha vertido combustible (riesgo importante).
- Inspeccione la tapa de combustible periódicamente y asegúrese de que quede firmemente sujeta.
- Cierre hermética y cuidadosamente la tapa del depósito de combustible. Sitúese como mínimo a unos 10 pies (3 metros) del lugar donde repuso el combustible antes de arrancar el motor (9).
- Nunca reponer combustible en habitaciones cerradas. Los vapores de combustible se acumulan al nivel del suelo (riesgo de explosión).
- Únicamente transporte y almacene el combustible en contenedores aprobados. Asegúrese de que el combustible almacenado no quede al alcance de niños.
- No intente repostar con el motor caliente o en marcha.
- Cuando mezcle gasolina con aceite para motores de dos tiempos, utilice una que no contenga etanol o metanol (tipos de alcohol). Esto evitará daños en los tubos de combustible y en otras piezas del motor.
- Asegúrese de que la herramienta esté ensamblada correctamente y en buenas condiciones de uso.



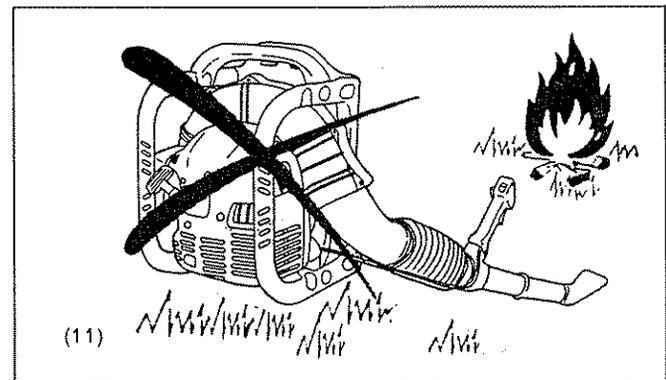
## METODO DE FUNCIONAMIENTO

- Utilizar el soplador sólo cuando las condiciones de luz y visibilidad sean buenas. Durante las estaciones frías, tome precauciones en áreas húmedas y resbaladizas, hielo y nieve (riesgo de caídas). Siempre utilice un calzado seguro.
- Nunca trabaje sobre superficies poco estables o terrenos con gran desnivel.
- Para reducir el riesgo de daños personales, no dirigir el chorro de aire hacia transeúntes, dado que la alta presión del aire puede herir los ojos y puede lanzar pequeños objetos a gran velocidad.
- Nunca inserte ningún objeto extraño en la entrada de aire ni en la salida del soplador. Se dañaría la hélice y puede causar un daño grave al operador o a transeúntes si el objeto o partes rotas salen rechazadas a gran velocidad.
- Prestar atención a la dirección del viento, es decir, no trabaje contra el viento.
- Para reducir el riesgo de volcar y perder el control, no camine hacia atrás mientras se trabaja con la máquina.
- Utilice la herramienta únicamente en horas en las que pueda molestar a los demás, ni muy de mañana ni muy de noche. Cumpla con los horarios establecidos por las ordenanzas locales. Los horarios recomendados son de 9:00 a.m. a 5:00 p.m. de lunes a sábados.
- Si es posible utilice una sola herramienta cada vez.
- Para trabajar utilice el soplador en la posición más baja de velocidad.
- Verifique el equipo antes de utilizarlo, especialmente el tubo de escape, las tomas y los filtros del aire.
- Antes de usar el soplador, utilice rastrillos y escobas para limpiar los escombros sueltos.
- En condiciones de mucho polvo y siempre que sea posible utilizar agua humedezca ligeramente las superficies a limpiar.
- Mantenga y extienda el agua utilizando el soplador en vez de mangueras como aplicaciones para superficies con césped o jardines, en las que también se incluirían zonas tales como arroyos, pantallas, patios, parrillas, pórticos y jardines.
- Ponga atención en niños, animales, ventanas abiertas y coches recién lavados y levante los escombros con cuidado.
- Utilice la boquilla de extensión total y así se asegurará de que el chorro de aire se extienda lo más cercano al suelo posible.
- Una vez que haya utilizado el soplador y otros equipos, límpielos. Deposite los escombros en receptáculos de basura apropiados.



## INSTRUCCIONES DE MANTENIMIENTO

- Guarde respeto al medio ambiente. Trabaje con el soplador realizando el mínimo ruido y polución posibles. En particular, compruebe que el ajuste del carburador es el adecuado.
- Limpie el soplador periódicamente y compruebe que todos los tornillos y tuercas están firmemente apretados.
- Nunca efectuar el mantenimiento o almacenaje del soplador cerca de llamas, chispas, etc (11).
- Guarde siempre el soplador lejos del alcance de los niños en una habitación con llave suficientemente ventilada y con el depósito de combustible vacío.



**Observe y siga todas las instrucciones publicadas por las asociaciones comerciales y por las compañías de seguros para evitar accidentes. No haga ninguna modificación en el soplador ya que pondría en peligro su propia seguridad.**

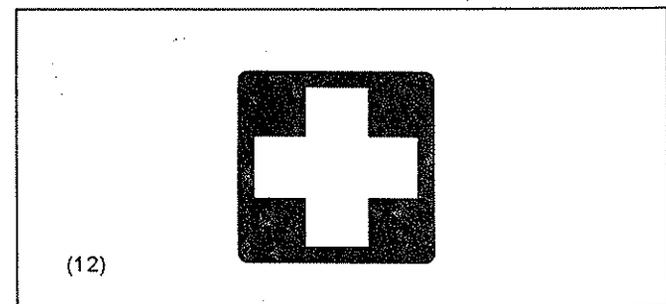
La utilización de piezas no aprobadas conlleva un aumento en el riesgo de accidentes y daños. ROBIN no aceptará ninguna responsabilidad por los accidentes o daños que sean causados por el uso de herramientas de corte o accesorios no aprobados.

## PRIMEROS AUXILIOS

Para el caso de accidente asegúrese de que un botiquín de primeros auxilios según DIN 13164 esté disponible cerca del lugar de trabajo. Reponer inmediatamente cualquier producto que se utilice del botiquín.

**Cuando se pida ayuda, se debe proporcionar la siguiente información.**

- Lugar del accidente.
- Qué ha ocurrido.
- Número de personas heridas.
- Clase de heridas.
- Su nombre.



## EMBALAJE

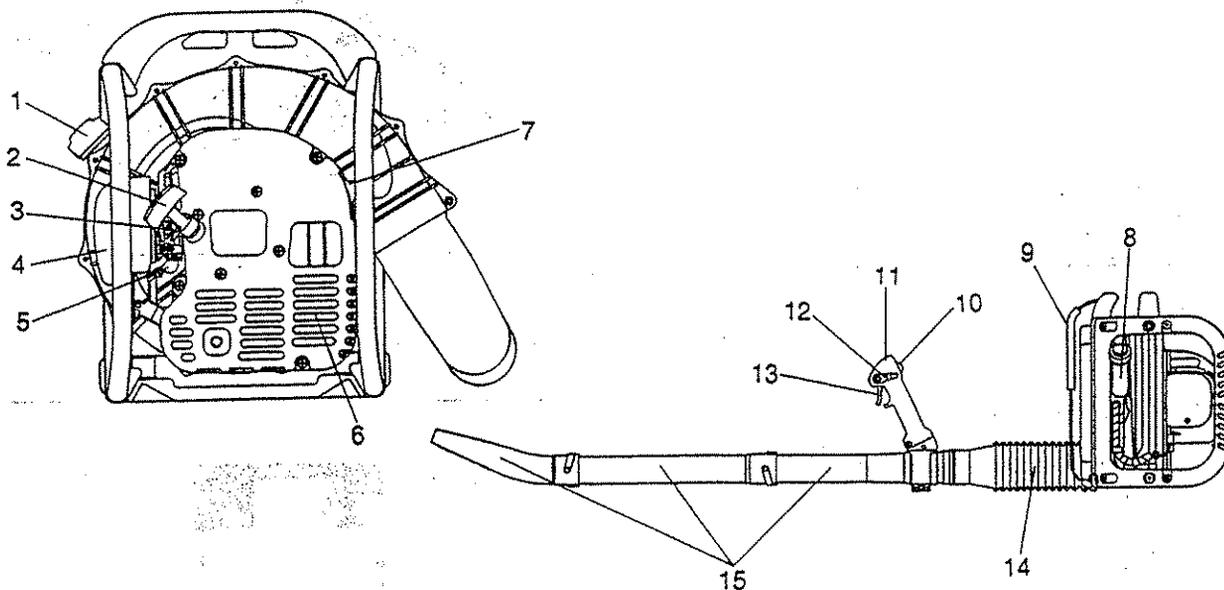
El soplador ROBIN se suministra en una caja protectora de cartón para impedir daños durante el transporte. El cartón es una materia primaria básica y puede ser reutilizado consecuentemente o reciclado.



## DATOS TÉCNICOS

Modelo	FL500	
Dimensiones: largo x ancho x alto (sin tubos)	mm	310 x 460 x 435 (12-7/32" x 18-1/8" x 17-5/32")
Peso (con tubos):	kg	8.7 (19.3 lbs)
Desplazamiento de Motor	cm <sup>3</sup>	48.6
Diámetro Pistón	mm	44
Recorrido Pistón	mm	32
Volumen (tanque de combustible)	cm <sup>3</sup>	1800
Ratio mezcla (combustible : Aceite de Motor 2 tiempos)		25 : 1
Carburador (diafragma)	type	ZAMA C1M
Máxima Velocidad del Motor	rpm	6,800
Ralentí	rpm	2,600
Sistema de Encendido	tipo	Incendido en estado sólido
Bujías	tipo	NGK-BPM7A
Distancia entre electrodos	mm	0.6 - 0.7

## DENOMINACIÓN DE PARTES:



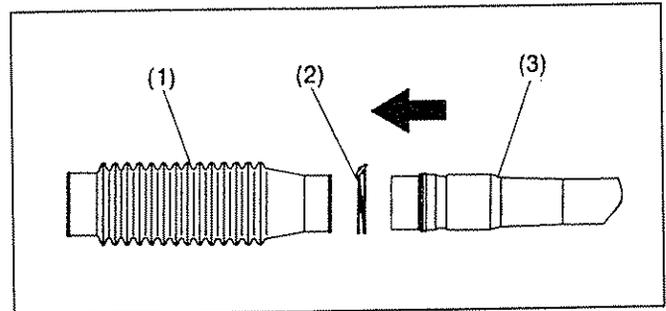
	Denominación de Partes		Denominación de Partes		Denominación de Partes
1	Tapón de llenado de Combustible	7	Bujía	13	Palanca de Control
2	Pomo de Arranque	8	Tanque de Combustible	14	Tubo flexible
3	Palanca del Estrangulador	9	Correa para el hombro	15	Tubo del Soplador
4	Filtro de Aire	10	Interruptor de parada		
5	Bomba Primaria	11	Empuñadura de control		
6	Silenciador	12	Palanca de selección		

# INSTRUCCIONES DE MONTAJE

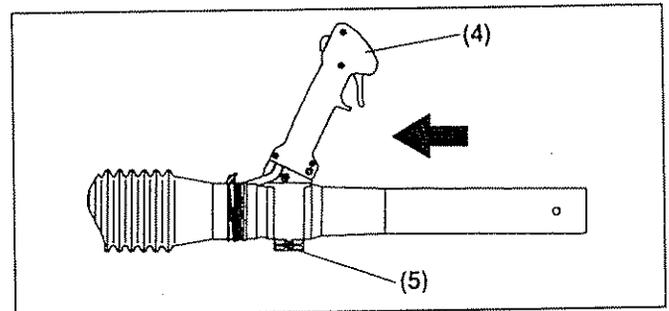
**PRECAUCIÓN:** Antes de efectuar cualquier trabajo en el soplador, siempre detener el motor y separar los conectores de la bujía. Siempre llevar guantes protectores.

**PRECAUCIÓN:** Arrancar el soplador sólo después de ensamblarlo completamente.

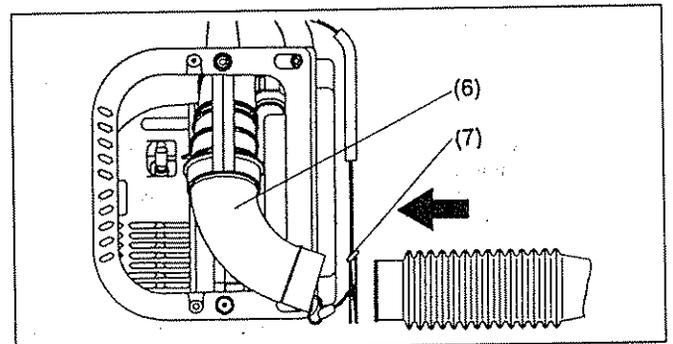
1. Una el tubo fijo girándolo (3) y metiéndolo en tubo flexible (1) y apriételes con la anilla  $\phi$  78 (2).



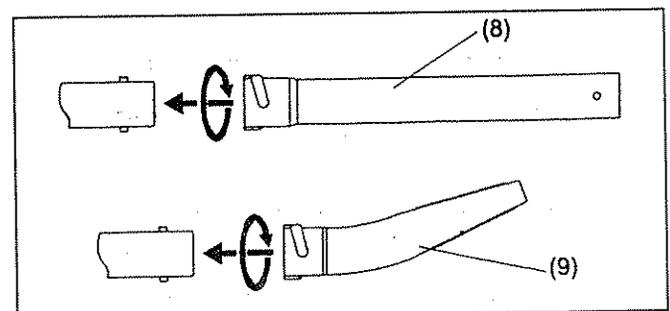
2. Instale la empuñadura de control (4) sobre el tubo fijo girándolo y apretándolo con el tornillo de la abrazadera (5).



3. Una el tubo flexible con el codo (6) sobre el soplador y apriete con la anilla  $\phi$  91 (7).



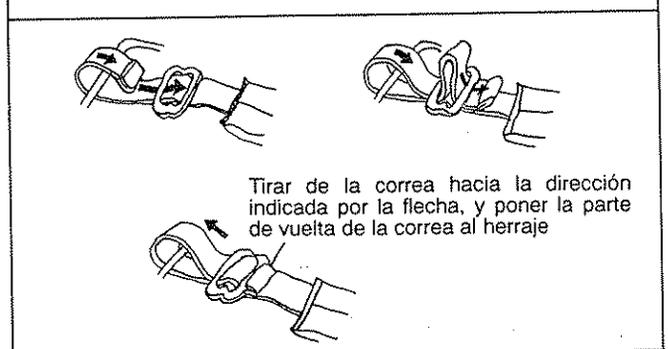
4. Una el tubo fijo (8) con el tubo fijo girándolos en el sentido de las agujas del reloj para bloquearlos hasta su alojamiento correcto. De la misma manera, una el final del tubo (9).



5. Asegúrese de que todas las abrazaderas estén apretadas.

6. Instalar la correa por hombro a la máquina.

**ATENCIÓN:** Ajustar la longitud de la correa por hombro para que la máquina se peque al cuerpo del usuario cuando la lleva al hombro.



# CARBURANTE/REABASTECIMIENTO

## Manejo del combustible

Téngase el mayor cuidado posible cuando se maneje el carburante. El combustible puede llevar sustancias parecidas a disolventes. Reabastezca en lugares cerrados bien ventilados o en el exterior. No inhale los vapores del carburante. Evite todo contacto del combustible o de aceites con la piel. Los aceites minerales pueden producirle. Si tiene repetidos contactos con estas sustancias y por un periodo de tiempo continuado su piel puede desecarse. Pueden dar como resultado varios tipos de enfermedades de la piel. Además, se tiene constancia de reacciones alérgicas. Al contacto con aceites, los ojos pueden resultar irritados. Si enrase aceite en los ojos, debe lavárselos inmediatamente con agua. Si continua la irritación visite a un médico.

Carburante y mezcla de aceite.

Inspeccione el depósito del carburante y rellénelo con una nueva mezcla en sus porciones adecuadas para asegurar una larga duración de la herramienta.

Utilice la siguiente mezcla.

Gasolina : Aceite para motores de dos tiempos = 25:1



## REGULACIONES PARA EL ESTADO DE CALIFORNIA

CERTIFICAMOS QUE ESTE EQUIPO TRABAJA CON UNA MEZCLA DE GASOLINA Y DE ACEITE PARA MOTORES DE DOS TIEMPOS

Cuando mezcle gasolina con aceite para motores de dos tiempos, utilice únicamente gasolina normal ya que no contiene etanol o metanol (tipo de alcohol). Con ello se evitan posibles daños a los tubos de la gasolina y a otras piezas del motor. No mezcle la gasolina y el aceite directamente en el depósito del carburante.

## IMPORTANTE:

No seguir las apropiadas indicaciones sobre la mezcla de combustible puede causar daños al motor.

## ATENCIÓN:

- Cuando prepare la mezcla de gasolina, prepare sólo la cantidad que necesite para el trabajo que vaya a realizar. No utilice una mezcla de gasolina que haya estado almacenada más de dos meses. Este tipo de mezcla produce que cueste poner en marcha el motor y una marcha lenta del mismo. Si hubiera una mezcla almacenada por un periodo mayor de tiempo debería ser cambiada por una nueva.
- No llene nunca el depósito del carburante hasta el límite de la entrada.
- No rellene nunca el depósito en un lugar cerrado que no esté bien ventilado.
- No añada carburante cerca de un lugar con fuego a donde se produzcan chispas.
- Asegúrese de limpiar bien el carburante que haya podido derramarse antes de poner en marcha el motor.
- No reabastezca con el motor caliente.

## Repostaje:

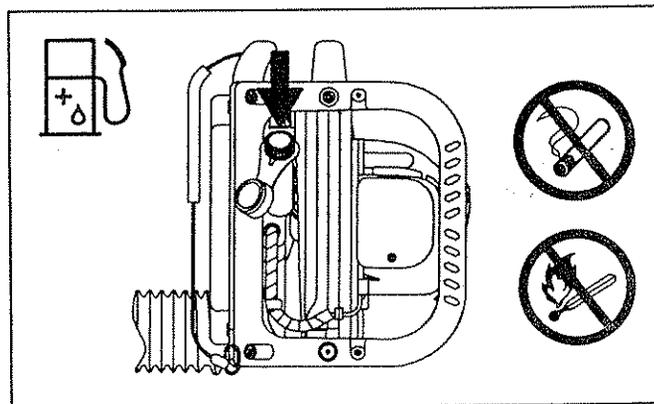
Detenga siempre el motor y permita que éste se enfríe antes de repostar.

- Limpie minuciosamente la zona alrededor del tapón del depósito para que no pueda entrar suciedad en el mismo.
- Abra el tapón del depósito y llénelo con el combustible.
- Apriete firmemente el tapón.
- Limpie el tapón y el depósito una vez haya repostado. Seque cualquier derrame de combustible.

## ALMACENAMIENTO DEL COMBUSTIBLE

El combustible no se puede almacenar durante un periodo indefinido de tiempo.

Compre únicamente la cantidad requerida para un periodo de trabajo de 4 semanas. Utilice únicamente contenedores de combustible aprobados.



## ADVERTENCIA

La gasolina es extremadamente inflamable. Ponga un cuidado especial cuando maneje gasolina o combustibles mezclados. No fume o acerque ninguna llama cerca del depósito.

¡Observe toda la normativa aplicable sobre prevención de accidentes!



## PUESTA EN MARCHA

Escoja un lugar sin maleza y sepárese un mínimo de 10 pies (3 metros) del lugar de repostaje antes de poner en marcha el motor. Coloque el soplador en una área abierta de terreno tomando la precaución de que el aire no vuele los objetos. Asegúrese de que no haya materiales combustibles en esa área.

1. Cuando el motor se haya enfriado, haya estado parado más de 5 minutos o se haya añadido combustible al motor.
  - 1) Coloque el interruptor de parada en posición "I".
  - 2) Vuelva la palanca fijadora en la posición de ralentí.
  - 3) Apriete ligeramente la bomba primaria varias veces, (7-10 veces) hasta que entre combustible en la bomba.
  - 4) Cierre la palanca del estrangulador colocándola en la posición (3).
  - 5) Coloque el soplador sobre el suelo. Sujete la empuñadura y con la otra mano tire enérgicamente varias veces de la perilla de arranque.
    - La palanca del estrangulador volverá a la posición | ↓ | automáticamente cuando apriete la palanca de gases.

**NOTA: La palanca de control se libera al apretarla ligeramente. El motor siempre arranca apoyado sobre el suelo, nunca cuando lo sujete como si utilizara la herramienta.**

2. Rearranque inmediatamente después de parar el motor.
  - 1) Coloque el interruptor I - O posición I.
  - 2) Vuelva la palanca fijadora en la posición de ralentí.
  - 3) Apriete ligeramente la bomba primaria 7-10 veces hasta que llegue combustible (2).
  - 4) Abra la palanca del estrangulador totalmente colocándola en posición | ↓ | (3).
  - 5) Deje la palanca de control completamente liberada.
  - 6) Coloque el soplador sobre el suelo. Sujete la empuñadura y con la otra mano tire enérgicamente varias veces de la perilla de arranque.

## PARADA

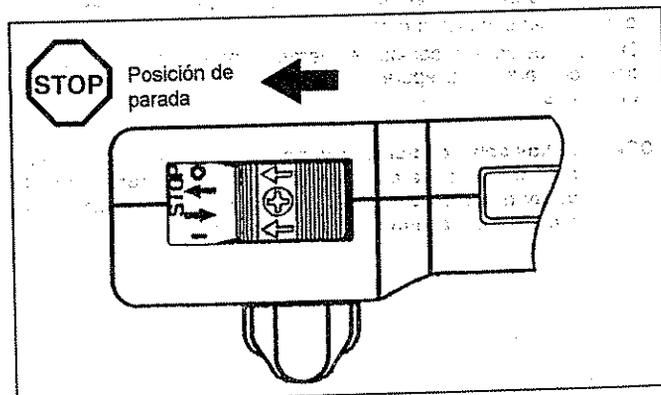
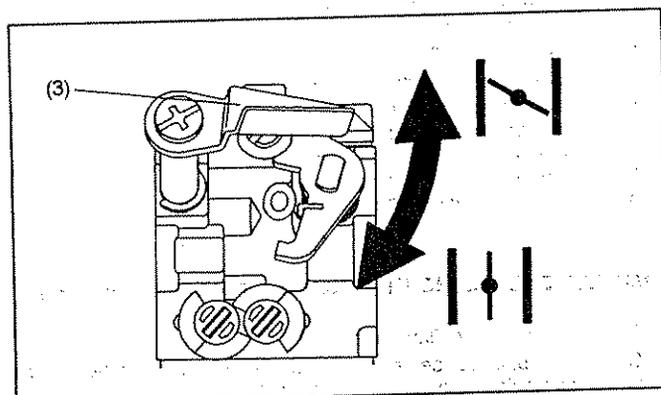
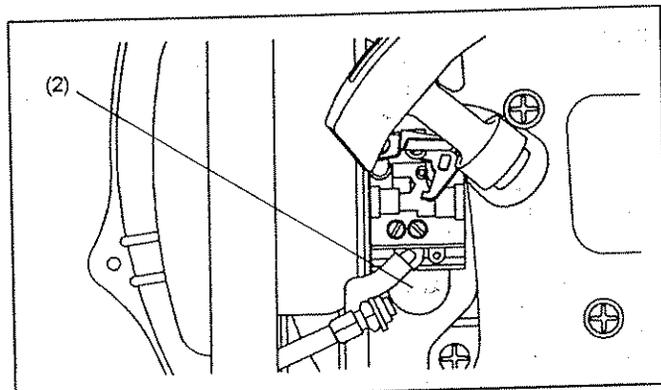
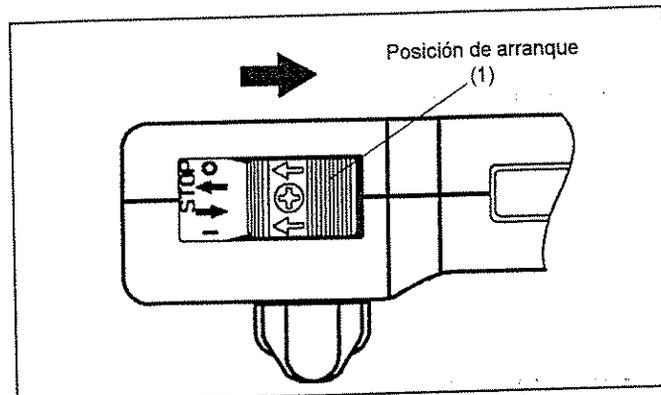
- Libere completamente la palanca de gases y cuando las revoluciones (r.p.m.) del motor hayan disminuido, apriete y coloque el interruptor de parada hasta la posición "O, STOP". El motor se detendrá

## AJUSTE DEL CARBURADOR

**NOTA: No ajuste el carburador a no ser que sea necesario. Si tiene problemas con el carburador, visite a su distribuidor. El carburador debe ajustarse con los tubos unidos al soplador.**

**NOTA: Los tornillos de aguja tienen las puntas muy afiladas. Para evitar daños en el carburador, no apriete excesivamente cuando los introduzca dentro del cuerpo.**

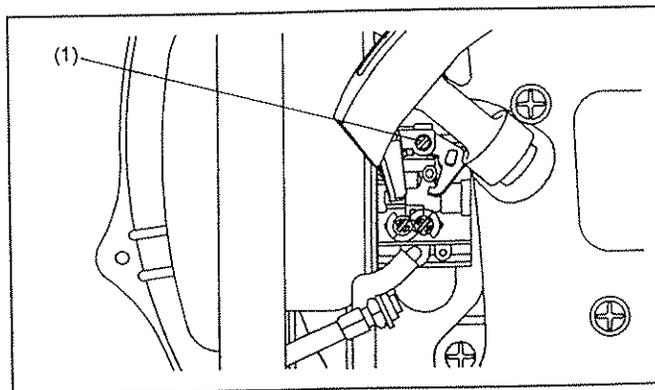
- El ajuste del tornillo a la posición (L) controla la cantidad de mezcla de aceite y combustible a velocidad baja del motor. También controla la cantidad de combustible suplementario que se requiere para obtener una suave progresión de ralentí a alta velocidad.
- El ajuste del tornillo a la posición (H) controla la cantidad de mezcla de aceite y combustible a aceleración plena.



Si utiliza la herramienta en altitudes elevadas (montañas) o a nivel del mar, es posible que sea necesario cambiar el ajuste del carburador. Realice las correcciones en los dos tornillos de ajuste (L y H) como se indica a continuación: Gire en el sentido de las agujas del reloj (inclinado) para altitudes elevadas y en contra del sentido de las agujas del reloj (recto) para el nivel del mar.

### AJUSTE DEL RALENTÍ

- El ajuste de la velocidad de ralentí coloca la aceleración de ralentí.
- Si se para el motor durante el ralentí, gire el tornillo de ajuste del ralentí (1) en dirección de las agujas del reloj hasta que funcione suavemente.



## INSTRUCCIONES DE SERVICIO

**PRECAUCIÓN:** Antes de realizar ningún trabajo en el soplador, apague el motor y saque los capuchones de las bujías (consulte "Comprobación de las bujías en la página 21). Utilice siempre guantes de protección.



Para asegurar una larga vida de servicio y evitar cualquier daño al equipo, las siguientes operaciones de mantenimiento deben efectuarse periódicamente.

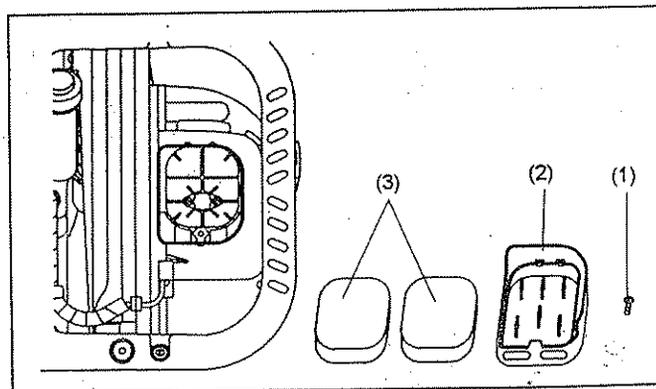
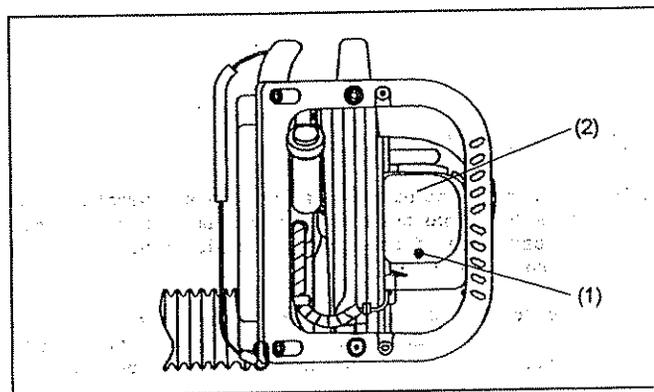
### COMPROBACIÓN DIARIA Y MANTENIMIENTO

- Antes de la puesta en marcha, comprobar que todos los tornillos están bien apretados y que no falta ninguna parte. Cada 8 horas (diariamente).
- Antes de poner en marcha, buscar si existe alguna obturación en el circuito del aire refrigerante y las aletas de los cilindros. Limpiarlos si es necesario. Cada 8 horas (diariamente).
- Realizar el siguiente mantenimiento diario después del uso.
  - Limpiar el soplador externamente y buscar si existe algún daño.
  - Colocar el filtro del aire. Cuando se trabaje en un ambiente cargado de polvo, limpiar el filtro y sople el paso de aire refrigerante y las aletas de los cilindros varias veces cada día.
- Compruebe el correcto funcionamiento del interruptor de parada, de la palanca de gases y de la palanca selectora.

### LIMPIEZA DEL FILTRO DE AIRE Cada 8 horas (diariamente)

- Quitar la cubierta del filtro de aire. (2)
- Colocar la palanca del estrangulador en [X] para impedir que entren partículas de polvo en el carburador.
- Quitar el elemento esponjoso (3), lávelo en agua templada y déjelo secar completamente.
- Después de limpiar, coloque el elemento de espuma y la tapa del filtro del aire y asegúrese de que los tornillos estén bien apretados.

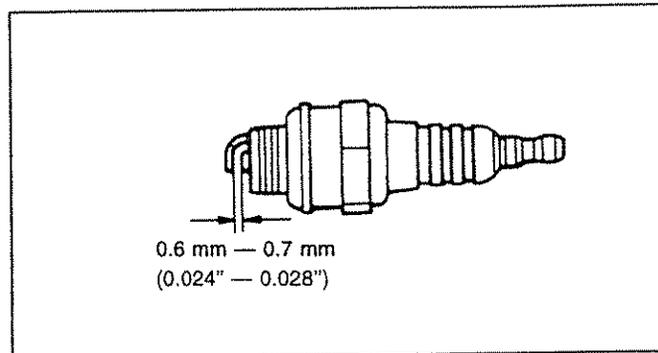
**NOTA:** Si hay polvo o suciedad excesivos adheridos al filtro de aire, lávelo cada día. Un filtro de aire obturado puede hacer que el arranque del motor sea difícil o imposible, o aumentar la velocidad de rotación del motor.



## COMPROBACION DEL ESTADO DE LAS BUJIAS

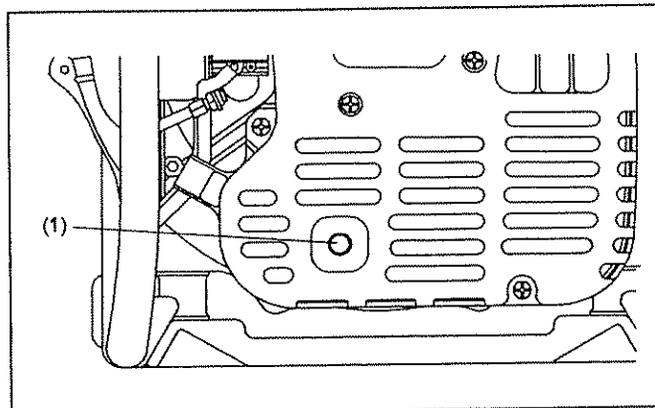
- Utilice únicamente la llave suministrada para quitar o poner las bujías. Este motor utiliza NGK-BPM7A
- La distancia entre electrodos de la bujía debe ser 0'6-0'7 mm (0.024" - 0.028"). Si esta distancia es mayor o menor, debe ajustarse. Si la bujía está sucia de carbón u obturada, deben limpiarse bien o sustituirse. Utilice repuestos originales.

**PRECAUCIÓN:** Nunca toque el conector de la bujía mientras el motor funciona (peligro de choque eléctrico de alto voltaje).



## LIMPIEZA DEL TUBO DE ESCAPE

- Compruebe periódicamente el oficio del tubo de escape.
- Si está obturado con depósitos de carbón, quite adecuadamente los depósitos con una herramienta indicada.



Reemplace los tubos del combustible: Cada 200 horas (anualmente)  
Revisión general del motor: Cada 200 horas (anualmente)  
Reemplace el embalaje y las juntas por unas nuevas : Cada vez que reensamble el motor.  
Cualquier otro tipo de trabajo de mantenimiento o de ajuste que no se haya descrito en este manual de instrucciones deberá ser realizado por el servicio de agentes autorizados.

## ALMACENAJE

- Cuando guarde la máquina por un período largo de tiempo, saque el combustible del depósito y del carburador tal y como se indica a continuación: Saque todo el combustible del depósito. Apriete suavemente y repetidas veces el cebador hasta que todo el combustible haya salido del mismo. Deshágase del combustible de acuerdo a las regulaciones locales.
- Saque las bujías, y ponga algunas gotas de aceite en cada uno de los orificios de las mismas. Una vez hecho esto, tire suavemente de la puesta en marcha. Verifique que el interior del motor se ha impregnado con el aceite y guarde las bujías.
- Limpie la suciedad o el polvo en el exterior del motor, envuélvalo con un paño mojado en aceite y mantenga la máquina guardada en un lugar cerrado pero bien ventilado.
- No guarde el aparato en un lugar sin ventilación en donde los vapores del combustible podrían tener contacto con el fuego, con el aire caliente de algún tipo de calefacción, horno, etc.

# California Emission Control Warranty Statement

## YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and FUJI ROBIN INDUSTRIES LTD. Are pleased to explain the emission control system warranty on your 1995 and later lawn and garden equipment engine. In California, new utility and lawn and garden equipment engines must be designed, built and equipped to meet the State's stringent anti—smog standards.

FUJI ROBIN INDUSTRIES LTD. Must warrant the emission control system on your lawn and garden equipment engine for the periods of time described below, provided there has been no abuse, neglect or improper maintenance of your lawn and garden equipment engine.

Your emission control system includes parts such as the carburetor and the ignition system. Also included may be hoses, connectors and other emission-related assemblies.

Where a warrantable condition exists, FUJI ROBIN INDUSTRIES LTD. Will repair your lawn and garden equipment engine at no cost to you including diagnoses, parts and labor.

### MANUFACTURE'S WARRANTY COVERAGE:

The 1995 and later Utility and lawn and garden equipment engines are warranted for two (2) years. If any emission-related part on your engine is defective, the part will be repaired or replaced by FUJI ROBIN INDUSTRIES LTD.

### OWNER'S WARRANTY RESPONSIBILITIES:

- As the lawn and garden equipment engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. FUJI ROBIN INDUSTRIES LTD. Recommends that you retain all receipts covering maintenance on your lawn and garden equipment engine, but FUJI ROBIN INDUSTRIES LTD. cannot deny warranty solely for the lack of receipts of for your failure to ensure the performance of all scheduled maintenance.
- As the lawn and garden equipment engine owner, you should be aware, however, that FUJI ROBIN INDUSTRIES LTD. may deny you warranty coverage if your lawn and garden equipment engine a part has failed due to abuse, neglect, improper maintenance or unproved modifications.
- You are responsible for presenting your lawn and garden equipment engine to a dealer, distributor or warranty station authorized by Carswell Import & Marketing Associates, Inc. (Winston-Salem, North Carolina 27115) which is the importer of the lawn and garden equipment into the U.S. manufactured by FUJI ROBIN INDUSTRIES LTD. as soon as a problem exists.  
The warranty repairs should be completed in a reasonable amount of time, no to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact Carswell Import & Marketing Associate, Inc. Technical Service Manager at (910) 767-7700.

**LIMITED WARRANTY**  
**on Emission Control Systems**  
**- California Only -**

FUJI ROBIN INDUSTRIES LTD. (Shizuoka, JAPAN) warrant to the owner of the 1995 and later lawn and garden equipment engine that the engine:

- (1) has been designed, built and equipped so as to conform at the time of manufacture with the applicable regulations of the California Air Resources Board, and
- (2) is free from defects in materials and workmanship which cause it to fail to conform with those regulations as may be applicable in the terms and conditions stated below;

**A. WARRANTY COMMENCEMENT DATE**

The warranty period begins on the date the lawn and garden equipment engine is delivered to a first retail purchaser.

**B. LENGTH OF COVERAGE**

FUJI ROBIN INDUSTRIES LTD. warrants to a first retail purchaser and each subsequent purchaser that the engine is free from defects in materials and workmanship which cause the failure of a warranted emission-related part for a period of two (2) years.

**C. WHAT IS COVERED:**

**1. REPAIR OR REPLACEMENT PARTS**

Repairs and replacement of any warranted part will be performed at no charge to you by an authorized dealer, distributor or a warranty station.

You may contact Technical Service Manager at (910) 767-7700 of Carswell Import & Marketing Associates, Inc. (Winston-Salem, North Carolina) which is the importer of the lawn and garden equipment into the U.S. manufactured by FUJI ROBIN INDUSTRIES LTD. To get the nearest appropriate location where your warranty repairs are performed.

**2. WARRANTY PERIOD**

This warranty continues for a period of two (2) years and shall apply only to the repair, replacement or adjustment of component parts listed at the conclusion of this warranty statement.

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.

**3. DIAGNOSIS**

You shall not be charged for diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed at an authorized dealer, distributor or warranty station.

**4. CONSEQUENTIAL DAMAGES**

If a warranted part failed causing damages to other engine components, consult a warranty station.

## **D. WHAT IS NOT COVERED**

1. This limited warranty does not cover any part which malfunctions, fails or is damaged due to failure to follow the maintenance and operating instructions set forth in the 1995 and later Owner's Manual including:
  - 1) improper or inadequate maintenance of any warranted parts
  - 2) improper installation, adjustment or repair of the engine or of any warranted part unless performed by an authorized dealer
  - 3) repairs performed outside of the authorized warranty service facility
  - 4) failure to follow recommendations on fuel use contained in the 1995 and later Owner's Manual
  - 5) use of parts which are not authorized by FUJI ROBIN INDUSTRIES LTD.
  
2. Add-on or modified parts  
This warranty does not cover any part which malfunctions, fails or is damaged due to alterations by changing, adding to or removing parts from the engine.
  
3. Expenses incurred by processing warranty claims  
Carsewell Import & Marketing Associates, Inc. any authorized dealer, distributors and warra station shall not be liable for any loss of use of the engine, for any alternative usage, for any damage to goods, loss of time or inconvenience.

## **E. HOW TO FILE A CLAIM**

All repairs qualifying under this Limited Warranty must be performed by a dealer who sold you the engine or distributors or warranty stations authorized by Carsewell Import & Marketing Associates, Inc.

In the event that any emission-related part is found to be defective during the warranty period, you shall notify Carsewell Import & Marketing Associates, Inc. at (910) 767-7700 and then you will be given the appropriate warranty service facilities where the warranty repair is performed.

## **F. WHERE TO GET WARRANTY SERVICE**

It is recommended that warranty service be performed by the authorized dealer who sold you the engine, although warranty service will be performed by any authorized dealers, distributors and warranty stations anywhere in the United States.

When warranty repair is needed, the engine must be brought to an authorized dealer, distributorship or warranty station's place of business during normal business hours. In all cases, a reasonable time, not to exceed 30 days, must be allowed for the warranty repair to be completed after the engine is received by the authorized dealer, distributor or service station.

## **G. MAINTENANCE, REPLACEMENT AND REPAIR OF EMISSION-RELATED PARTS**

Any warranted engine replacement parts approved by FUJI ROBIN INDUSTRIES LTD. Should be used in the performance of any warranty maintenance or repairs on emission-related parts. If other than authorized parts are used for maintenance, replacement or repair of components affecting emission control, you should assure yourself that such parts are warranted by their manufacturer to be equivalent to authorized parts in performance and durability. FUJI ROBIN INDUSTRIES LTD., however, assumes no liability under this warranty with respect to parts other than authorized parts.

The use of non-authorized replacement parts does not invalidate the warranty on other components unless the non-authorized parts cause damage to warranted parts.

## H. PARTS COVERED UNDER THE CALIFORNIA EMISSION WARRANTY

- 1) Fuel Metering system
  - (i) Carburetor and internal parts
  - (ii) Air cleaner plate ( including choke system)
  - (iii) Air cleaner case
  - (iv) Air cleaner element
  - (v) Fuel Filter
  
- 2) Ignition System
  - (i) Spark plug
  - (ii) Flywheel magneto
  - (iii) Ignition coil
  
- 3) Miscellaneous Item Used in Above Systems
  - (i) Fuel hoses and sealing gaskets

## I. MAINTENANCE STATEMENTS

It is your responsibility to have all scheduled inspection and maintenance service performed at the times recommended in the 1995 and later Owner's Manual and to retain proof that inspection and maintenance service are performed at the times when recommended.

FUJI ROBIN INDUSTRIES LTD. Will not deny a warranty claim solely because you have no record of maintenance; however, FUJI ROBIN INDUSTRIES LTD. May deny a warranty claim if your failure to perform required maintenance resulted in the failure of warranted part.

The proof which you maintain should be given to each subsequent owner of the engine.

You are responsible for performing the scheduled maintenance described below based on the procedures specified in the 1995 and later Owner's Manual.

The scheduled maintenance below is based on the normal engine operating schedule.

- 1) Check bolts and nuts. Retighten if necessary. --- Every 8 hours (daily)
- 2) Check clogging of cooling air passage and cylinder fins. Remove and clean if necessary. --- Every 8 hours (daily)
- 3) Clean air cleaner. --- Every 8 hours (daily)
- 4) Check spark plug. Clean and adjust if necessary. --- Every 8 hours (daily)
- 5) Check muffler exhaust port. Clean if necessary. --- Every 50 hours (monthly)
- 6) Check fuel filter. If clogged, replace with new one. --- Every 50 hours (monthly)
- 7) Replace fuel lines. --- Every 200 hours (yearly)
- 8) Overhaul engine. --- Every 200 hours (yearly)
- 9) Replace packings and gaskets and gaskets with new ones. --- Every reassembling

## FEDERAL EMISSION COMPONENT DEFECT WARRANTY

EMISSION COMPONENT DEFECT WARRANTY COVERAGE - This emission warranty is applicable in all States, except the State of California

FUJI ROBIN INDUSTRIES LTD. and Carswell Import & Marketing Associates, Inc., Winston-Salem, North Carolina, (herein "CARSWELL") warrant to the initial retail purchaser and each subsequent owner, that this utility equipment engine (herein "engine") was designed, built, and equipped to conform at the time of initial sale to all applicable regulations of the U.S. Environmental Protection Agency (EPA), and that the engine is free of defects in materials and workmanship which would cause this engine to fail to conform with EPA regulations during its warranty period.

For the components listed under PARTS COVERED, the dealer or service center authorized by CARSWELL will, at no cost to you, make the necessary diagnosis, repair, or replacement necessary to ensure that the engine complies with applicable U.S. EPA regulations.

### EMISSION COMPONENT DEFECT WARRANTY PERIOD

The warranty period for this engine begins on the date of sale to the initial purchaser and continues for a period of 2 years.

### PARTS COVERED

Listed below are the parts covered by the Emission Component Defect Warranty. Some of the parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part.

- 1) Fuel Metering System
  - (i) Carburetor and internal parts
  - (ii) Fuel filter, if applicable
  - (iii) Throttle stopper, if applicable
  - (iv) Choke System, if applicable
- 2) Air Induction System
  - (i) Air cleaner plate
  - (ii) Air cleaner case
  - (iii) Air cleaner element
- 3) Ignition System
  - (i) Spark plug
  - (ii) Flywheel Magneto
  - (iii) Ignition Coil
- 4) Miscellaneous Items Used in Above Systems
  - (i) Fuel hoses, clamps and sealing gaskets

## OBTAINING WARRANTY SERVICE

To obtain warranty service, take your engine to the nearest Authorized CARSWELL, distributor or dealer. Bring your sales receipts indicating date of purchase for this engine. The dealer or service center authorized by CARSWELL will perform the necessary repairs or adjustments within a reasonable amount of time and furnish you with a copy of the repair order. All parts and accessories replaced under this warranty become the property of CARSWELL.

## WHAT IS NOT COVERED

- \* Conditions resulting from tampering, misuse, improper adjustment (unless they were made by the dealer or service center authorized by CARSWELL during a warranty repair), alteration, accident, failure to use the recommended fuel and oil, or not performing required maintenance services.
- \* The replacement parts used for required maintenance services.
- \* Consequential damages such as loss of time, inconvenience, loss of use of the engine or equipment, etc.
- \* Diagnosis and inspection charges that do not result in warranty-eligible service being performed.
- \* Any non-authorized replacement part, or malfunction of authorized parts due to use of non-authorized parts.

## OWNER'S WARRANTY RESPONSIBILITIES

As the engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual, CARSWELL recommends that you retain all receipts covering maintenance on your engine, but CARSWELL can not deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the engine owner, you should however be aware that the CARSWELL may deny your warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your engine to the nearest dealer or service center authorized by CARSWELL when a problem exists.

If you have any questions regarding your warranty rights and responsibilities, you should contact the CARSWELL Warranty service department at 910-767-7700 (toll free from GA, NC, SC, TN & VA 1-800-929-1948) for the information.

## THINGS YOU SHOULD KNOW ABOUT THE EMISSION CONTROL SYSTEM WARRANTY

### MAINTENANCE AND REPAIRS

You are responsible for the proper use and maintenance of the engine. You should keep all receipts and maintenance records covering the performance of regular maintenance in the event questions arise. These receipts and maintenance records should be transferred to each subsequent owner of the engine. CARSWELL reserves the rights to deny warranty coverage if the engine has not been properly maintained. Warranty claims will not be denied, however, solely because of the lack of required maintenance or failure to keep maintenance records.

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 CARSWELL. 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 WARRANTY CLAIM.

If other than the parts authorized by CARSWELL are used for maintenance replacements or for the repair of components affecting emission control, you should assure yourself that such parts are warranted by their manufacturer to be equivalent to the parts authorized by CARSWELL in their performance and durability.

### HOW TO MAKE A CLAIM

All repairs qualifying under this limited warranty must be performed by a dealer or service center authorized by CARSWELL. In the event that any emission-related part is found to be defective during the warranty period, you shall notify CARSWELL at 910-767-7700 (toll free from GA, NC, SC, TN & VA 1-800-929-1948) and you will be given the appropriate warranty service facilities where the warranty repair can be performed.

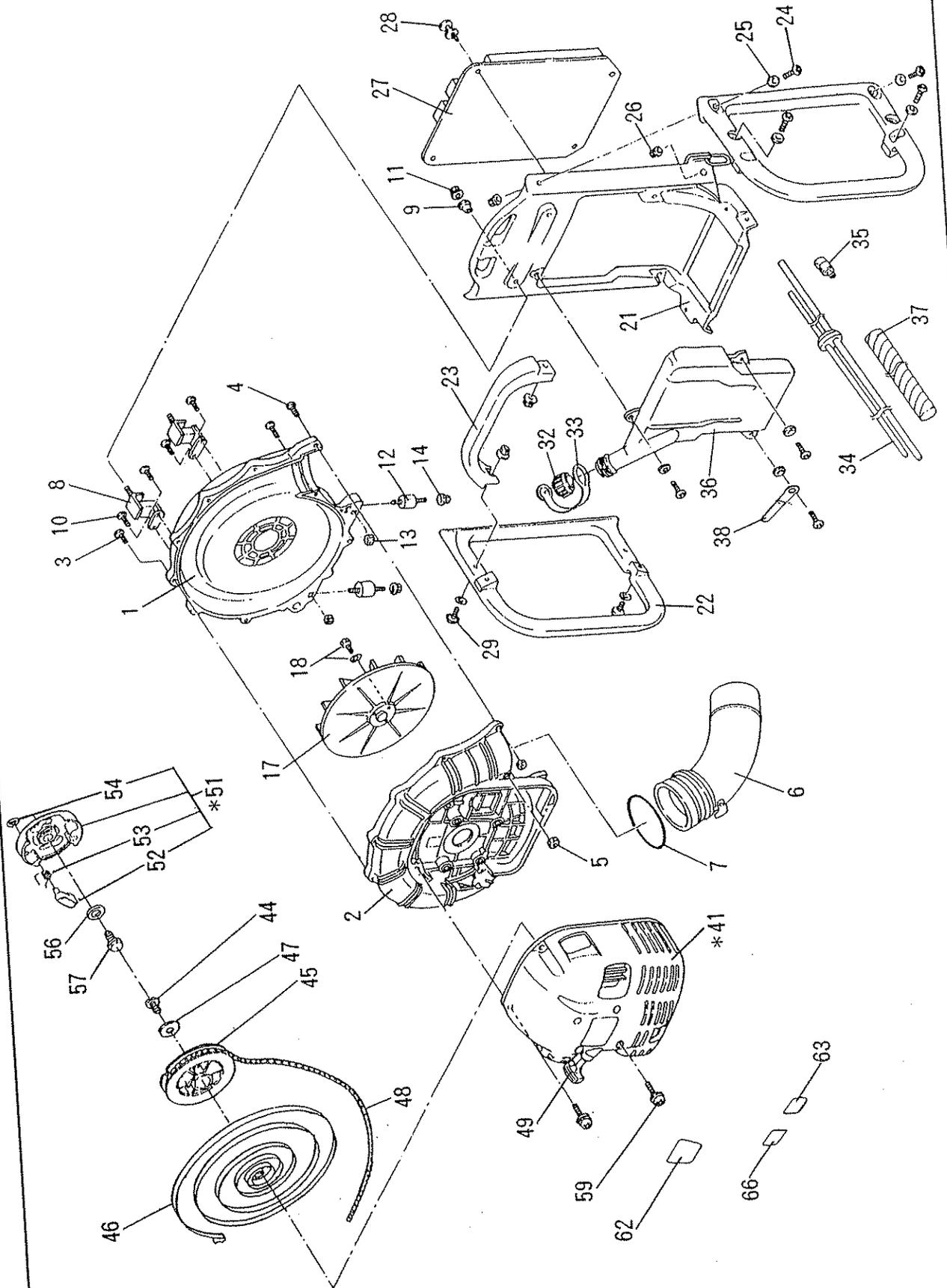
# **PARTS LIST**

## **MODEL FL500**

# FL500 PARTS LIST

(U. S. SPEC.)

## MACHINE BODY



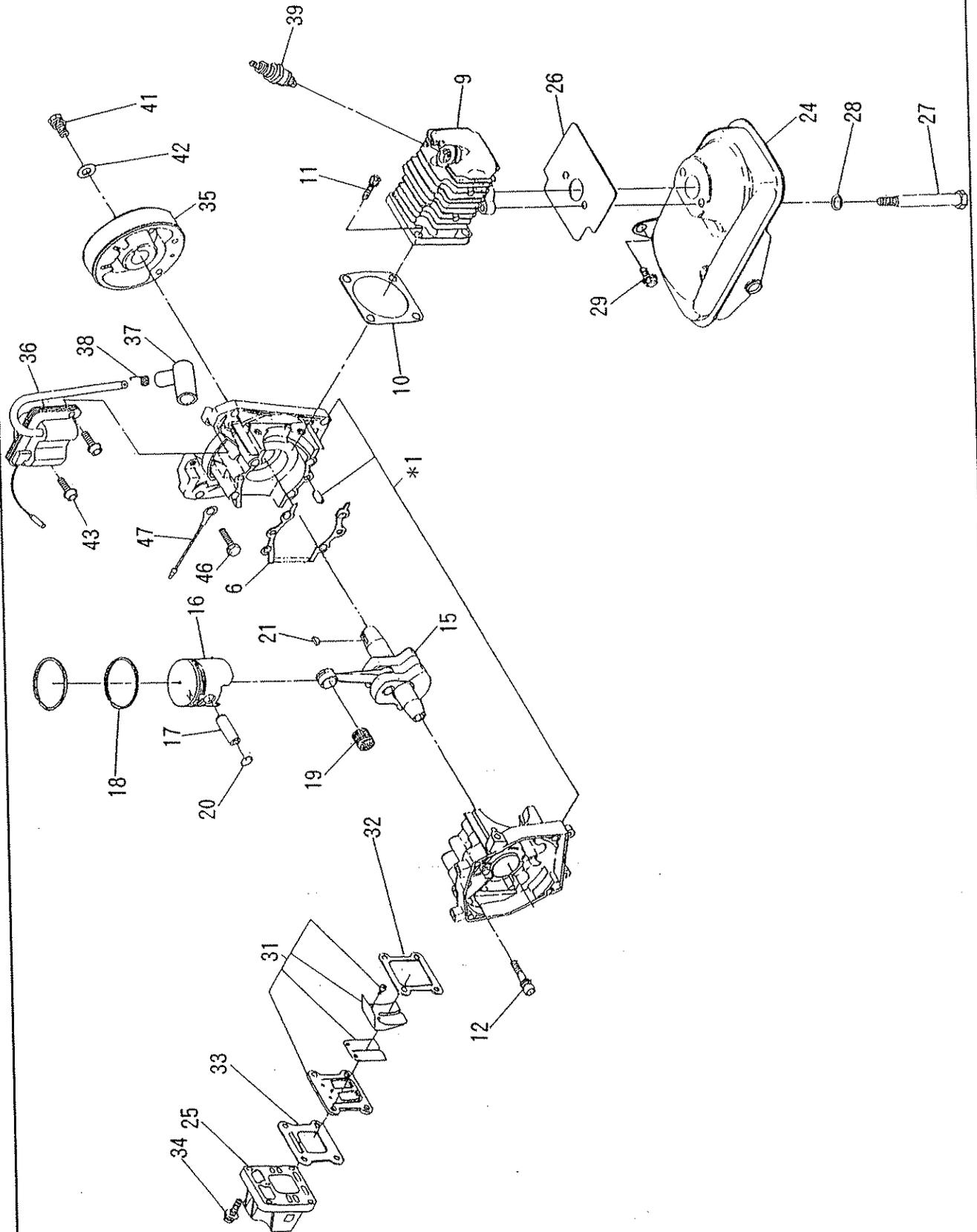
MACHINE BODY

KEY No.	OUR PART No.	QTY.	DESCRIPTION	PART No.
1	3 4 0 1	1	Case (1), volute	662 15002 01
2	3 4 0 2	1	Case (2), volute compl.	662 10040 01
3	3 4 0 3	10	Tapping screw (M5×25)	0150 05987 0
4	3 5 7 7	2	Screw ass'y (M5×25 W SW)	00436 0525 0
5	1 1 1 2	2	Nut (M5)	00217 0500 0
6	3 4 0 4	1	Elbow compl.	662 10060 01
7	7 0 2 5	1	O-ring	00626 3085 0
8	3 4 0 5	2	Bracket compl.	662 10050 00
9	3 4 0 6	2	Spacer	662 15003 00
10	3 4 0 7	4	Tapping screw (M5×10)	0150 05991 0
11	9 3 2 1	2	Flange nut (M5)	00237 0500 0
12	3 4 0 8	2	Damper	662 15004 01
13	1 2 9 0	2	Nut (M6×5)	00217 0600 0
14	7 5 0 5	2	Flange nut (M6)	00237 0600 0
17	3 4 0 9	1	Impeller	682 15002 01
18	3 5 7 3	3	Bolt ass'y (M6×25 SW)	00113 0625 0
21	3 4 1 0	1	Frame compl.	662 20080 01
22	3 4 1 1	2	Side frame	662 25006 00
23	3 4 1 2	1	Knob	662 25007 01
24	3 1 2 8	9	Screw, pan head (M5×20)	00431 0520 0
25	1 4 2 9	11	Washer (M5)	00312 0500 0
26	9 3 2 1	11	Flange nut (M5)	00237 0500 0
27	3 4 1 3	1	Cushion compl.	662 20100 01
28	3 5 4 9	4	Rivet, lock	682 25002 00
29	3 5 7 7	2	Screw ass'y (M5×25 W SW)	00436 0525 0
32	5 4 6 8	1	Cap, fuel tank	531 60140 00
33	5 4 4 4	1	Strap unit	625 50210 01
34	3 4 1 4	1	Tube	662 30030 01
35	5 3 7 0	1	Filter	523 65039 00
36	3 4 1 5	1	Tank, fuel	662 35003 00
37	3 4 1 6	1	Tube spiral	855 85022 00
38	3 4 1 7	1	Clip	855 85011 00
* 41	3 4 1 8	1	Cover, engine compl. (incl. 44-49, 51)	662 80040 00
44	3 6 0 3	1	Set screw (M5×12)	510 50151 10
45	3 6 0 0	1	Reel	541 50030 10
46	3 6 0 1	1	Spiral spring	541 50030 20
47	3 6 0 2	1	Washer	541 50030 30
48	3 6 0 4	1	Starter rope	541 50011 40
49	7 0 3 7	1	Starter knob	530 50021 10
* 51	3 6 0 5	1	Pulley compl. (incl. 52-54)	541 50110 00
52	3 6 0 7	1	Ratchet	541 50110 10
53	3 6 0 8	1	Return spring	541 50110 20
54	3 6 0 9	1	E-clip	521 50030 40
56	7 4 4 9	1	Washer (M6)	0200 06992 0
57	6 1 9 0	1	Bolt ass'y (M6×16 SW)	00113 0616 0
59	4 2 2 2	8	Screw ass'y (M6×20 W SW)	00436 0620 0
62	3 4 1 9	1	Label, model	662 95063 00
63		1	Label, engine	541 95024 00
66	3 4 2 2	1	Label, sound level	662 95068 00

FL500 PARTS LIST

(U. S. SPEC.)

ENGINE BODY



ENGINE BODY

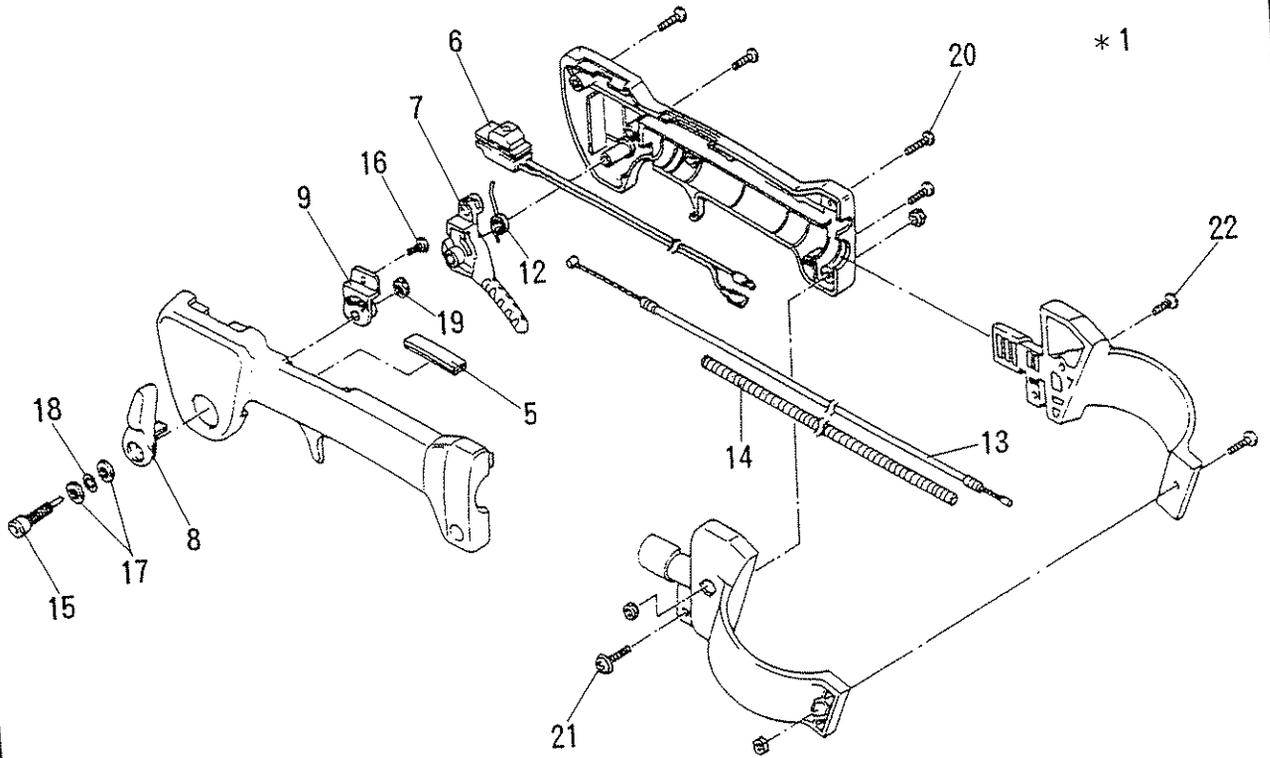
(U. S. SPEC.)

KEY No.	OUR PART No.	QTY.	DESCRIPTION	PART No.
* 1	3 5 8 1	1	Crankcase compl. (incl. 6)	541 10070 00
6	2 1 0 8	1	Gasket, crankcase	541 15012 00
9	3 4 3 5	1	Cylinder	541 15018 00
10	3 5 8 5	1	Gasket, cylinder	541 15005 00
11	1 2 1 3	4	Socket head bolt (M6×18)	0119 06999 0
12	1 2 1 5	4	Socket head bolt (M5×30 SW)	0119 05994 0
15	3 4 3 6	1	Crankshaft compl.	541 20240 00
16	3 4 3 7	1	Piston	541 25007 00
17	3 4 3 8	1	Pin, piston	560 25011 00
18	3 4 3 9	2	Ring, piston	560 25009 00
19	3 4 4 0	1	Needle roller bearing	0610 12995 0
20	1 2 3 0	2	Clip	0565 11999 0
21	1 0 7 7	1	Woodruff key	00532 0310 1
24	3 4 4 1	1	Muffler, exhaust	541 30450 01
25	3 4 4 2	1	Insulator compl.	541 30460 01
26	3 5 9 1	1	Gasket, muffler	541 35017 00-1
27	3 5 9 2	2	Bolt, muffler (M6×13)	541 35020 01
28	3 5 9 3	2	Washer (M6)	0200 09999 0
29	3 6 1 9	1	Bolt ass'y (M6×16 W SW)	00115 0616 0
31	3 4 4 3	1	Valve, lead ass'y	541 30360 00
32	4 0 1 4	1	Gasket, lead valve	541 35028 00
33	3 4 4 4	1	Gasket, insulator	540 35006 00
34	5 3 3 3	4	Socket head bolt (M5×20)	0119 05963 0
35	3 4 4 5	1	Flywheel	541 70210 10
36	3 4 4 6	1	Coil	541 70240 21
37	7 6 6 6	1	Cap, plug	0655 00994 0
38	2 1 1 5	1	Spring, plug cap	0654 00993 1
39	EM 6 A	1	Plug, spark (U. S. SPEC.)	0650 14971 0
41	3 6 2 0	1	Bolt ass'y (M8×16 SW)	00113 0816 0
42	3 6 2 1	1	Washer (M8)	00311 0800 0
43	6 3 4 8	2	Socket head bolt (M5×22 W)	0119 05979 0
46	3 5 7 3	4	Bolt ass'y (M6×25 SW)	00113 0625 0
47	3 4 4 7	1	Wire compl.	662 80030 00

# FL500 PARTS LIST

(U. S. SPEC.)

## CONTROL LEVER ASS'Y

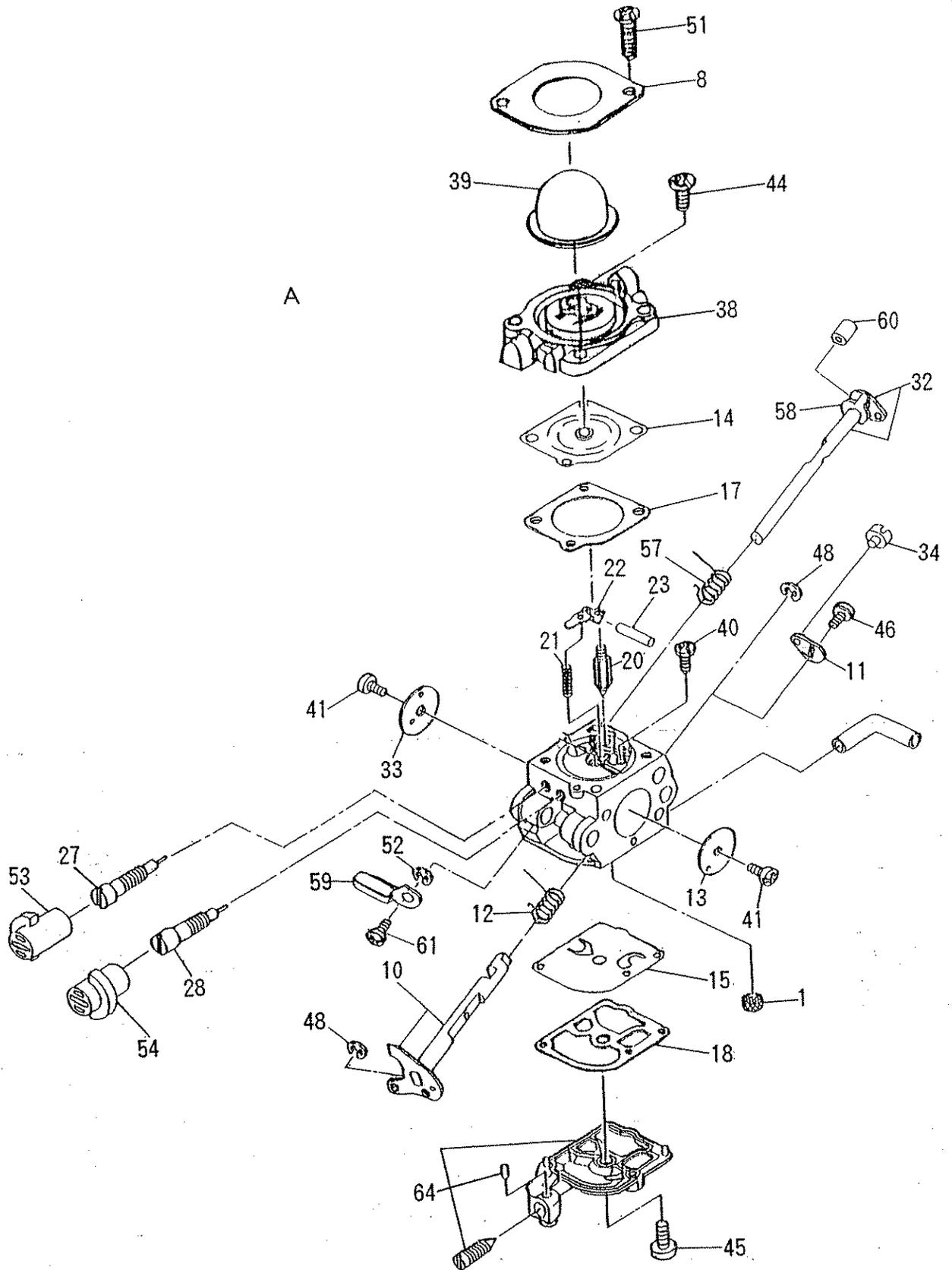


KEY No.	OUR PART No.	QTY.	DESCRIPTION	PART No.
# 1	3 4 2 3	1	Control lever ass'y (incl. 5-9, 12-22)	662 50010 02
5	3 4 2 4	1	Case, cover	662 55005 00
6	3 4 2 5	1	Switch compl.	662 50030 01
7	3 4 2 6	1	Lever (1), throttle	662 55006 01
8	3 4 2 7	1	Lever (2), throttle	662 55007 01
9	3 4 2 8	1	Plate compl.	662 50040 00
12	3 4 2 9	1	Torsion spring	662 55009 01
13	3 4 3 0	1	Control cable	0630 13990 1
14	3 4 3 1	1	Tube, cable	662 55010 01
15	3 4 3 2	1	Socket head bolt (M6×30)	662 55017 00
16	6 3 5 2	1	Tapping screw (M4×8)	0150 04997 0
17	7 0 2 2	2	Washer (M6)	00311 0600 0
18	3 4 3 3	1	Wave washer (M6)	00322 0600 0
19	1 2 9 0	1	Nut (M6)	00227 0600 0
20	3 4 3 4	4	Tapping screw (M4×16)	0150 04994 0
21	3 5 7 7	1	Screw ass'y (M5×25 W SW)	00436 0525 0
22	3 1 2 8	2	Screw, pan head (M5×20)	00431 0520 0



CARBURETOR

(U. S. SPEC.)







# LIMITED TWO YEAR WARRANTY

Carswell Import & Marketing Associates, Inc. (hereafter CIMA), sales agent for Fuji Robin Industries, Ltd. warrants each new Robin blower for twenty-four (24) months according to the following terms.

This warranty extends to the original retail purchaser only and commences on the date of original retail purchase.

Any part of Robin blower supplied by CIMA and found in the reasonable judgment of an Authorized Robin Service Center to be defective in material or workmanship will be repaired by an Authorized Robin Service Dealer without charge for parts and labor.

The Robin blower including any defective part must returned to an Authorized Robin Service Dealer within the warranty period. The expense of delivering the Robin blower to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner.

CIMA's responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Robin blower. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work should be performed by an Authorized Robin Service Dealer.

This warranty is limited to ninety (90) days from the date of original retail purchase for any Robin blower that is used for rental or commercial purposes, or any other income - producing purpose.

This warranty does not cover any Robin blower that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Robin blower that is the result of improper maintenance or to any Robin blower or parts that have not been assembled or installed as specified in the Robin Operator's Manual. The warranty does not cover any Robin blower that has been altered or modified so as to adversely affect the product's operation, performance or durability or that has been altered or modified so as to change its intended use. In addition, the warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the Robin blower or adversely affect its operation, performance or durability.

Robin reserves the right to change or improve the design of any Robin blower without assuming any obligation to modify any blower previously manufactured.

ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE TWENTY-FOUR (24) MONTHS WARRANTY PERIOD OR NINETY (90) DAYS FOR EDGER USED FOR ANY INCOME - PRODUCING PURPOSE. ACCORDINGLY, ANY SUCH IMPLIED WARRANTIES INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE DISCLAIMED IN THEIR ENTIRETY AFTER THE EXPIRATION OF THE APPROPRIATE TWENTY-FOUR (24) MONTHS OR NINETY (90) DAYS WARRANTY PERIOD.

CIMA'S OBLIGATION UNDER THIS WARRANTY, IS STRICTLY AND EXCLUSIVELY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS, AND CIMA DOES NOT ASSUME OR AUTHORIZE ANUONE TO ASSUME FOR THEM ANY OTHER OBLIGATION. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

CIMA ASSUMES NO RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, EXPENSE FOR GASOLINE, EXPENSE OF RETURNING THE ROBIN EDGER TO AUTHORIZED SERVICE DEALER AND EXPENSE OF DELIVERING IT BACK TO THE OWNER, MECHANIC'S TRAVEL TIME, TELEPHONE OR TELEGRAM CHARGES, RENTAL OF A LIKE PRODUCT DURING THE TIME WARRANTY SERVICE IS BEING PERFORMED, TRAVEL, LOSS OR DAMAGE TO PERSONAL PROPERTY, LOSS OF REVENUE, LOSS OF THE BLOWER LOSS OF TIME, OR INCONVENIENCE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION 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.

This warranty applies to Robin blower sold by CIMA in the United States. To validate this warranty original purchaser must complete the attached Warranty Registration Form and return it within ten (10) days of purchase.

CARSWELL IMPORT  
AND MARKETING ASSOCIATES, INC.  
WINSTON - SALEM, NORTH CAROLINA 27115

Fuji Robin Industries, Ltd.  
Shibuya-ku, Tokyo, Japan

## WARRANTY SERVICE

Warranty service can be performed by an Authorized Robin Service Dealer regardless of whether the consumer purchased the Robin product originally from that dealer. However, we recommend you first contact the original dealer who sold you the product. Remember, it is your responsibility to deliver your Robin product along with proof of purchase to the dealer within the warranty period, and all work must be performed by an Authorized Robin Service Dealer.

### Example of Parts and Service not covered by Warranty

- Normal service requirements occurring during the warranty period such as carburetor or ignition adjustment.
- Normal service over and above repair or replacement of defective parts.
- Repair or maintenance service due to normal wear, improper maintenance, misuse, neglect, negligence, accident, also alterations or modifications which adversely affect product's performance, durability, or change their intended use.
- Repairs or maintenance made necessary due to use of parts or accessories which are not compatible with Robin products or adversely affect its operation, performance, or durability
- Products not operated or maintained in accordance with the Instruction Manual
- Normal cleaning, lubrication, adjustments, or replacement of such items as spark plugs, filters, ignition points, etc.
- Expense of delivering the product to an Authorized Service Dealer or of returning such products, or mechanics travel time, or cost of any rental of a like product during the period warranty service is being performed
- Warranty applies only to original retail purchaser
- Owner's Obligation and Responsibility -  
It is the responsibility of the owner to provide for normal maintenance service and replacement of service items and to maintain all components in proper adjustment. These are not considered defects in material or workmanship. Individual operation and application determine the need for normal maintenance service.

## Robin Warranty Registration

Owner's Name \_\_\_\_\_

Address \_\_\_\_\_

City State Zip

Dealer's Name \_\_\_\_\_

Address \_\_\_\_\_

City State Zip

Date of Purchase \_\_\_\_\_

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

This Registration Form must be completed and returned within ten (10) days of purchase.

(Detach and Mail)

