

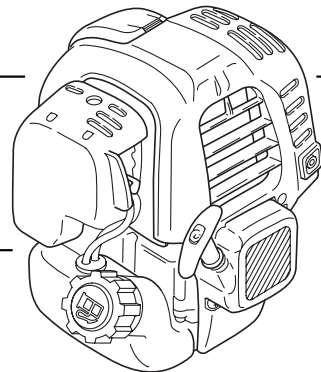


MODEL

**EHO25A**  
**EHO35A**

# INSTRUCTIONS FOR USE

FOR EMISSION CERTIFIED ENGINE



ISSUE EMD-EU1717

2ZZ9020098

# **Robin Engines**



## WARNING :



The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## NOTICE

FEDERAL EMISSION COMPONENT DEFECT WARRANTY and CALIFORNIA EMISSION CONTROL WARRANTY are applicable to only those engines complied with EPA (Environmental Protection Agency) and CARB (California Air Resources Board) emission regulations in the U.S.A.

## NOTICE

To the engines exported to and used in the countries other than the U.S.A., warranty service shall be performed by the distributor in each country in accordance with the standard Robin engine warranty policy as applicable.

## AIR INDEX

To show compliance with California emission regulations, a hangtag has been provided displaying the Air Index level and durability period of this engine.

The Air Index level defines how clean an engine's exhaust is over a period of time. A bar graph scaled from "0" (most clean) to "10" (least clean) is used to show an engine's Air Index level. A lower Air Index level represents cleaner exhaust from an engine.

The period of time (in hours) that the Air Index level is measured is known as the durability period. Depending on the size of the engine, a selection of time periods can be used to measure the Air Index level (see below).

<u>Descriptive Term</u>	<u>Applicable to Emissions Durability Period</u>
Moderate	- 50 hours (engine from 0 to 65 cc) 125 hours (engine greater than 65 cc)
Intermediate	- 125 hours (engine from 0 to 65 cc) 250 hours (engine greater than 65 cc)
Extended	- 300 hours (engine from 0 to 65 cc) 500 hours (engine greater than 65 cc)

**Notice :** This hangtag must remain on this engine or piece of equipment, and only be removed by the ultimate purchaser before operation.

# FEDERAL EMISSION COMPONENT DEFECT WARRANTY

## EMISSION COMPONENT DEFECT WARRANTY COVERAGE

This emission warranty is applicable in all States, except the State of California.

Fuji Heavy Industries Ltd. and Robin America Inc., Wood Dale Illinois, (herein "ROBIN AMERICA") 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 ROBIN AMERICA 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              | (iii) Air cleaner element                     |
| (i) Carburetor and internal parts     | (3) Ignition System                           |
| (ii) Fuel filter, if applicable       | (i) Spark plug                                |
| (iii) Throttle stopper, if applicable | (ii) Flywheel Magneto                         |
| (iv) Choke System, if applicable      | (iii) Ignition Coil                           |
| (2) Air Induction System              | (4) Miscellaneous Items Used in Above Systems |
| (i) Air cleaner plate                 | (i) Fuel hoses, clamps and sealing gaskets    |
| (ii) Air cleaner case                 |   |

## OBTAINING WARRANTY SERVICE

To obtain warranty service, take your engine to the nearest authorized ROBIN AMERICA, distributor or dealer.

Bring your sales receipts indicating date of purchase for this engine. The dealer or service center authorized by ROBIN AMERICA 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 ROBIN AMERICA.

## WHAT IS NOT COVERED

\*Conditions resulting from tampering, misuse, improper adjustment (unless they were made by the dealer or service center authorized by ROBIN AMERICA 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 of 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, ROBIN AMERICA recommends that you retain all receipts covering maintenance on your engine, but ROBIN AMERICA 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 ROBIN AMERICA 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 ROBIN AMERICA when a problem exists.

If you have any questions regarding your warranty rights and responsibilities, you should contact the Robin America customer service department at 1-630-350-8200 for the information.

### **THINGS YOU SHOULD KNOW ABOUT THE EMISSION CONTROL SYSTEM WARRANTY MAINTENANCE AND REPAIRS**

You are responsible for the proper 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. ROBIN AMERICA 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 ROBIN AMERICA. THE USE OF PARTS THAT ARE NOT EQUIVALENT IN PERFORMANCE AND DURABILITY TO AUTHORIZED PARTS MAY IMPAIR THE EFFECTIVENESS OF THE EMISSION CONTROL SYSTEM AND MAY HAVE A BEARING ON THE OUTCOME OF A WARRANTY CLAIM.**

If other than the parts authorized by ROBIN AMERICA 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 ROBIN AMERICA 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 ROBIN AMERICA. In the event that any emission-related part is found to be defective during the warranty period, you shall notify Robin America customer service department at 1-630-350-8200 and you will be given the appropriate warranty service facilities where the warranty repair can be performed.

# **CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS**

The California Air Resources Board and Fuji Heavy Industries Ltd. are pleased to explain the emission control system warranty on your 2000 and later Small Off-Road engine (herein "engine"). In California, the engines must be designed, built and equipped to meet the State's stringent anti-smog standards. Fuji Heavy Industries Ltd. must warrant the emission control system on your engine for the periods of time described below, provided there has been no abuse, neglect or improper maintenance of your 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 Heavy Industries Ltd. will repair your engine at no cost to you including diagnosis, parts and labor.

## **MANUFACTURER'S WARRANTY COVERAGE:**

The 2000 and later 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 Heavy Industries Ltd..

## **OWNER'S WARRANTY RESPONSIBILITIES:**

- As the engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. Fuji Heavy Industries Ltd. recommends that you retain all receipts covering maintenance on your engine, but Fuji Heavy Industries Ltd. cannot 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 Fuji Heavy Industries Ltd. may deny you 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 manufactured by Fuji Heavy Industries Ltd. to a dealer, distributor or warranty station authorized by ROBIN AMERICA Inc., 940 Lively Blvd., Wood Dale, IL60191 which is the U.S. importer and/or OEM of the Small Off-Road Engine as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact ROBIN AMERICA Inc., 940 Lively Blvd., Wood Dale, IL60191 at 1-630-350-8200.

# **LIMITED WARRANTY**

## **on Emission Control Systems**

### **- California Only -**

Fuji Heavy Industries Ltd. warrant to the owner of the 2000 and later 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 engine is delivered to a first retail purchaser.

#### **B. LENGTH OF COVERAGE**

Fuji Heavy 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 after the date of delivery to the first retail purchaser.

#### **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 the ROBIN AMER-ICA Inc., 940 Lively Blvd., Wood Dale, IL60191 at 1-630-350-8200 which is the U.S. importer/OEM of the Small Off-Road engine manufactured by Fuji Heavy 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 the component parts which are not scheduled for replacement as required maintenance. Further, component parts which are 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 damage 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 2000 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) failure to follow recommendations on fuel use contained in the 2000 and later Owner's Manual.
  - (4) repairs performed outside of the authorized warranty service facility.
  - (5) use of parts, which are not authorized by Fuji Heavy 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  
ROBIN AMERICA Inc., 940 Lively Blvd., Wood Dale, IL60191, any authorized dealer, distributors and warranty 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 ROBIN AMERICA Inc., 940 Lively Blvd., Wood Dale, IL60191. In the event that any emission-related part is found to be defective during the warranty period, you shall notify ROBIN AMERICA Inc., 940 Lively Blvd., Wood Dale, IL60191 at 1-630-350-8200 and 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**

Only warranted engine replacement parts approved by Fuji Heavy 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 Heavy 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 EMISSIONS WARRANTY**

- (1) Fuel Metering System
  - (i) Carburetor and internal parts
  - (ii) Air cleaner plate (including choke system)
  - (iii) Air cleaner cover
  - (iv) Air cleaner element
  - (v) Fuel Filter

- (2) Ignition System
  - (i) Spark plug
  - (ii) Flywheel magneto
  - (iii) Ignition coil
- (3) Miscellaneous Items Used in Above Systems
  - (i) Hoses and sealing gaskets, bolts, connectors, and assemblies.

## I. MAINTENANCE STATEMENTS

It is your responsibility to have all scheduled inspection and maintenance services performed at the times recommended in the 2000 and later Owner's Manual and to retain proof that inspection and maintenance services are performed at the times when recommended. Fuji Heavy Industries Ltd. will not deny a warranty claim solely because you have no record of maintenance; however, Fuji Heavy 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 2000 and later Owner's Manual. The scheduled maintenance below is based on the normal engine-operating schedule.

PROCEDURE	INTERVAL
1) Clean engine and check bolts and nuts. Retighten if necessary.	: Every 8 hours(daily)
2) Check and refill engine oil (4 stroke).	: Every 8 hours(refill daily up to upper limit)
3) Change engine oil (4 stroke).	: Initial 20 hours and every 50 hours afterward
4) Check clogging of cooling air passage and cylinder fins. Remove and clean if necessary.	: Every 8 hours (daily)
5) Clean air cleaner.	: Every 8 hours (daily)
6) Check spark plug. Clean and adjust if necessary.	: Every 8 hours (daily)
7) Check muffler exhaust outlet (or port). Clean if necessary.	: Every 50 hours (monthly)
8) Check fuel filter. If clogged, replace with new one.	: Every 50 hours (monthly)
9) Adjust valve clearance, if applicable (4 stroke).	: Every 200 hours (yearly)
10) Replace fuel lines.	: Every 200 hours (yearly)
11) Overhaul engine.	: Every 200 hours (yearly)
12) Replace packings and gaskets with new ones.	: Every reassembling

Note: More frequent maintenance may be necessary under dusty, dirty or severe conditions.


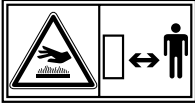
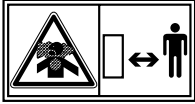













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## SYMBOLS

	<p><i>Read the owner's manual.</i></p>		
	<p><i>Stay clear of the hot surface.</i></p>		
	<p><i>Exhaust gas is poisonous. Do not operate in an unventilated area.</i></p>		
	<p><i>Stop the engine before refueling.</i></p>		
	<p><i>Fire, open flame and smoking prohibited.</i></p>		
	<p><i>On (Run)</i></p>		<p><i>Plus ; positive polarity</i></p>
	<p><i>Off (Stop)</i></p>		<p><i>Battery</i></p>
	<p><i>Engine oil</i></p>		<p><i>Engine start (Electric start)</i></p>
	<p><i>Add oil</i></p>		

# 1. SAFETY PRECAUTIONS

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Please make sure you review each precaution carefully.

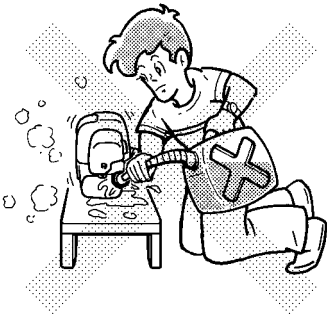


## EXHAUST PRECAUTIONS

- **N**Never inhale exhaust gasses. They contain carbon monoxide, a colorless, odorless and extremely dangerous gas which can cause unconsciousness or death.
- Never operate the engine indoors or in a poorly ventilated area, such as tunnel, cave, etc.
- Exercise extreme care when operating the engine near people or animals.
- Keep the exhaust pipe free of foreign objects.

## REFUELING PRECAUTIONS

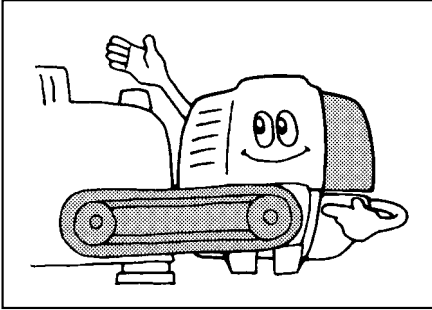
- Be sure to stop the engine prior to refueling.
- Do not overfill the fuel tank.
- If fuel is spilt, wipe it away carefully and wait until the fuel has dried before starting the engine.
- After refueling, make sure that the fuel cap is secured to prevent spillage.



## FIRE PREVENTION

- Do not operate while smoking or near an open flame.
- Do not use around dry brush, twigs, cloth rags, or other flammable materials.
- Keep the engine at least 3 feet (1 meter) away from buildings or other structures.
- Keep the engine away from flammables and other hazardous materials (trash, rags, lubricants, explosives).





## PROTECTIVE COVER

### ■ Place the protective covers over the rotating parts.

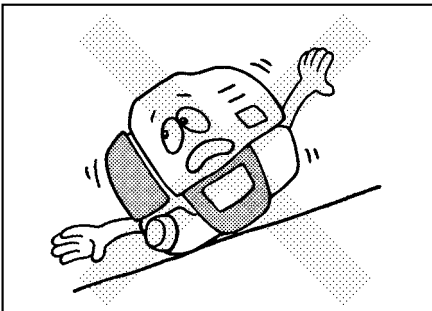
If rotating parts such as the drive shaft, pulley, belt, etc. are left exposed, they are potentially hazardous.

To prevent injury, equip them with protective covers or shrouds.

### ■ Be careful of hot parts.

The muffler and other engine parts become very hot while the engine is running or just after it has stopped. Operate the engine in a safe area and keep children away from the running engine.

- ### ■ Never make adjustments on the machinery while it is connected to the engine, without first removing the ignition cable from the spark plug.
- Turning the crankshaft by hand during adjusting or cleaning might start the engine, and machinery with it, causing serious injury to the operator.

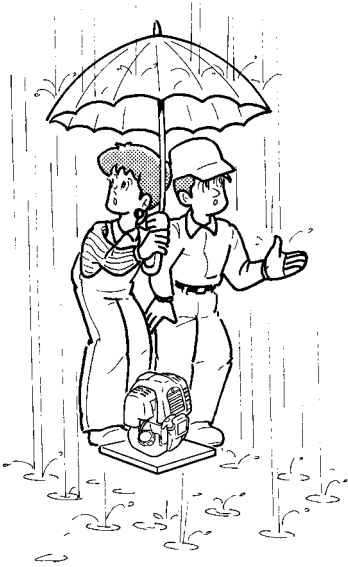


## SURROUNDINGS

- ### ■ Operate the engine on a stable, level surface free of small rocks, loose gravel, etc.

### NOTE

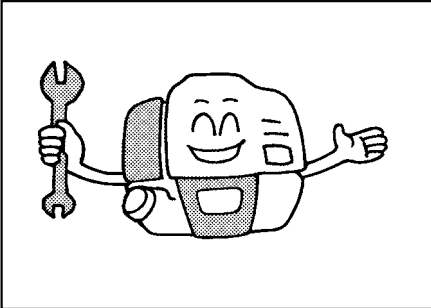
Operating the engine at a steep incline may cause seizure due to improper lubrication even with a maximum oil level.



- Drain the fuel when transporting the engine.
- Do not move the engine while in operation when it has been removed from the equipment.
- Keep the unit dry (do not operate it in rainy conditions).

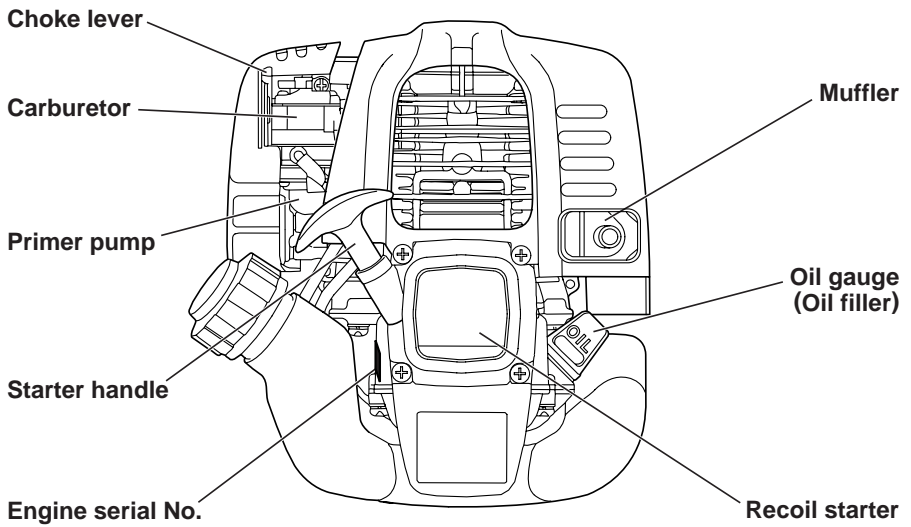
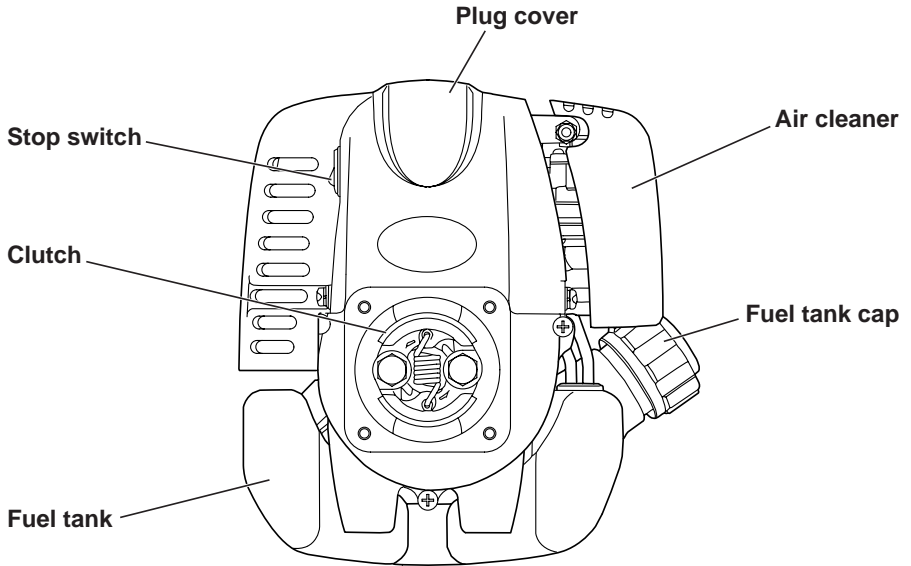
## **PRE-OPERATION CHECKS.**

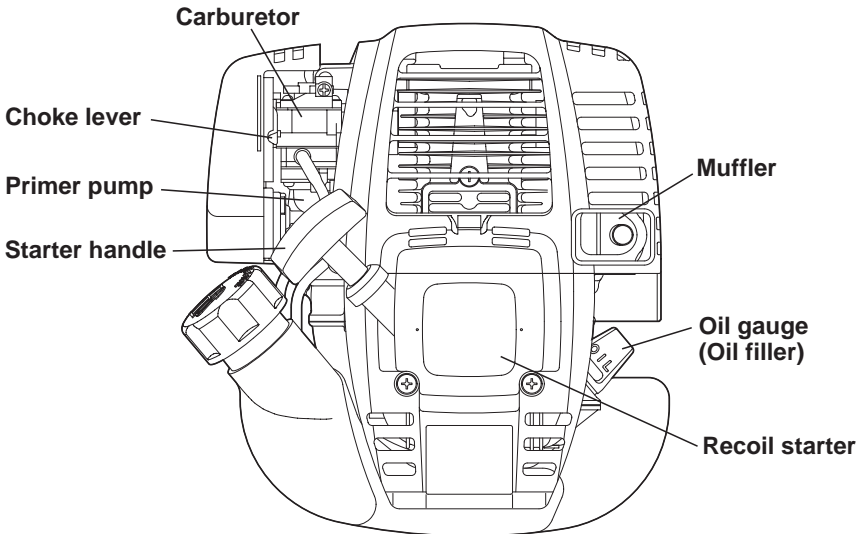
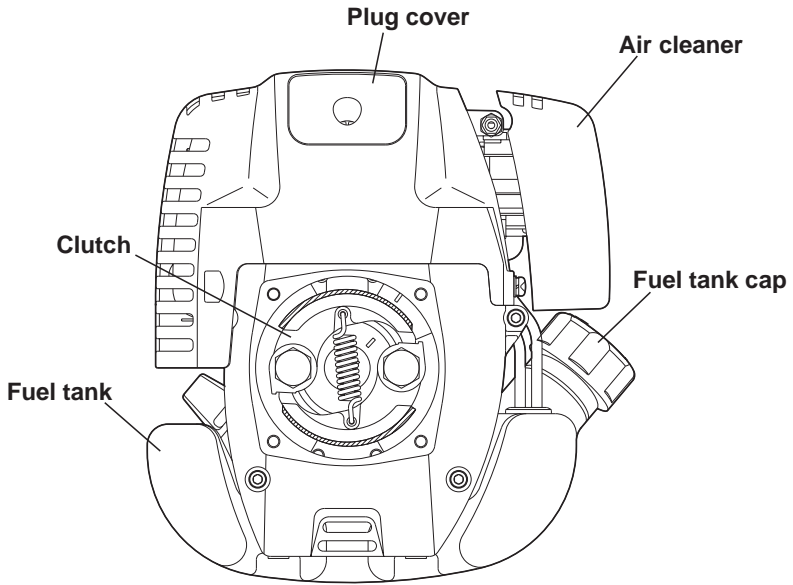
- Carefully check fuel hoses and joints for looseness and fuel leakage. Leaked fuel creates a potentially dangerous situation.
- Check bolts and nuts for looseness. A loose bolt or nut may cause serious engine trouble.
- Check the engine oil and refill if necessary.
- Check the fuel level and refill if necessary. Take care not to overfill the tank.
- Wear snug fitting working clothes when operating the engine. Loose aprons, towels, belt, etc., may be caught in the engine or drive train, causing a dangerous situation.



# 2. COMPONENTS

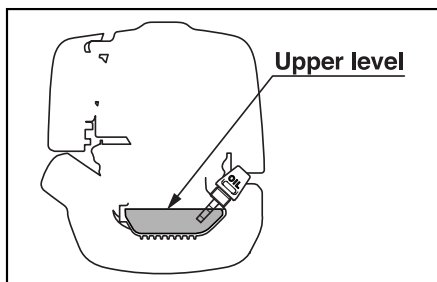
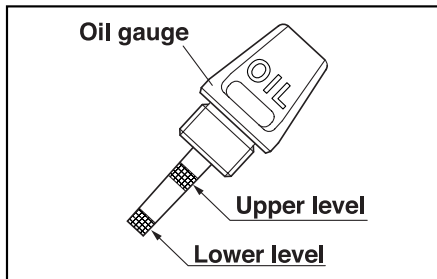
**EH025**



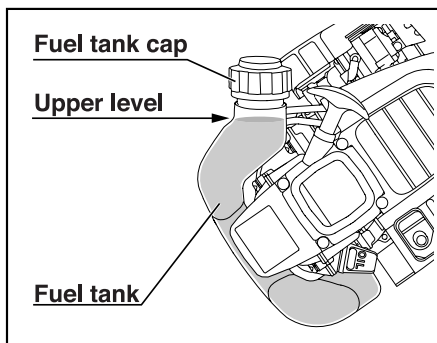




# 3. PRE-OPERATION CHECKS



Single grade	5W	10W	20W	#20	#30	#40	
Multi grade	10W-30		10W-40				
Ambient temperature	-20	-10	0	10	20	30	40°C
	-4	14	32	50	68	86	104°F



## CHECK ENGINE OIL

Before checking or refilling engine oil, be sure the engine is located on a stable, level surface and stopped.

- Do not thread the gauge into oil filler to check oil level.
- If the oil level is below the lower level line on the dipstick, refill with the proper oil (see table) up to the upper level (up to the point of overflowing the filler neck).

**OIL CAPACITY**.....EH025 : 80 mL  
EH035 : 100 mL

- Change oil if it is contaminated. (See page 11 Maintenance Schedule.)
- Use class SF (API classification) or higher grade oil.
- If multi-grade oil is employed, oil consumption tends to increase when the ambient temperature is high.
- Wipe off any spilled oil before starting the engine.

## CHECK FUEL

**⚠ CAUTION**

**Do not refuel while smoking, near an open flame or other potential hazards.**

- Stop the engine and open the cap.
- Incline the engine as fuel inlet upward, then refill fuel to the upper level. Do not fill fuel too much.
- Use automotive unleaded gasoline only. (This engine is 4-stroke gasoline engine)
- When filling the fuel tank, always use the fuel filter.
- Wipe off any spilled fuel before starting the engine.

# 4. OPERATING YOUR ENGINE

## STARTING

### STOP SWITCH

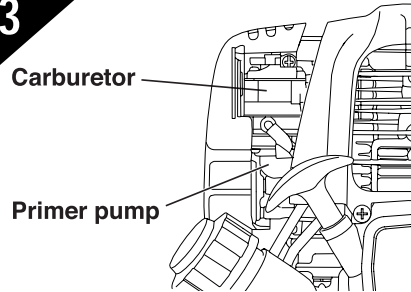
1



- Set the throttle lever to the idling position.
- If the stop switch is installed on the engine. Set the stop switch to the position "ON or I".
- If the stop switch is installed on a machine side. Set the stop switch to the position "ON or I".

### PRIMER PUMP

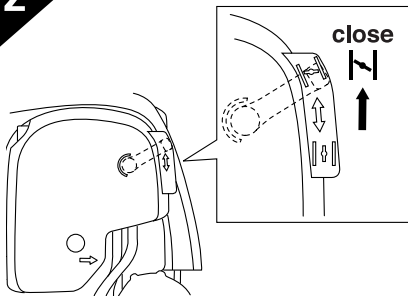
3



Push the primer pump 7 to 10 times to feed the fuel to the carburetor.

### CHOKE LEVER

2

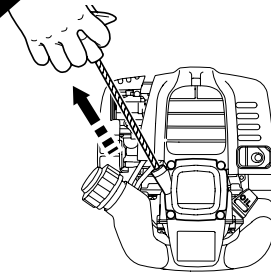


Close the choke lever.

- If the engine is cold or the ambient temperature is low, close the choke lever fully.
- If the engine is warm or the ambient temperature is high, open the choke lever half-way, or keep it fully open.

### RECOIL STARTER

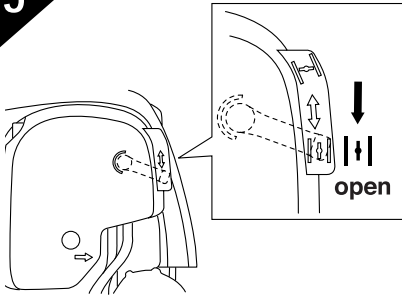
4



- Pull the starter handle slowly, until resistance is felt. This is the "compression" point. Return the handle to its original position and pull swiftly.
- Do not pull out the rope all the way.
- After starting the engine, allow the starter handle to return to its original position while still holding the handle.

## CHOKE LEVER

5



- After starting the engine, gradually open choke by turning the choke lever and finally keep it fully opened.
- Do not fully open the choke lever immediately when the engine is cold or the ambient temperature is low, because the engine may stop.

## RUNNING

Allow the engine to warm up without load for a few minutes. Gradually move the throttle lever toward the high speed position and set it at the required engine speed.

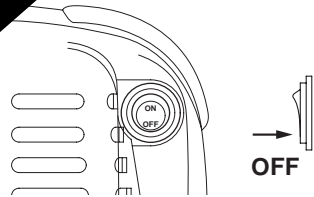
### NOTE :

If the engine is operated at upside down, white smoke may be exhausted from the muffler.

## STOPPING

### STOP SWITCH

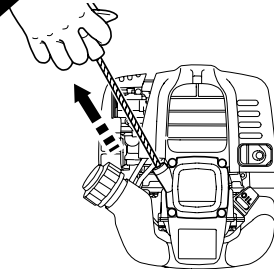
1



- Set the throttle lever at the low speed position and allow the engine to run at low speed for 2 or 3 minutes before stopping.
- If the stop switch is installed on the engine. Set the stop switch to the position "OFF or O".
- If the stop switch is installed on a machine side. Set the stop switch to the position "OFF or O".

### RECOIL STARTER

2

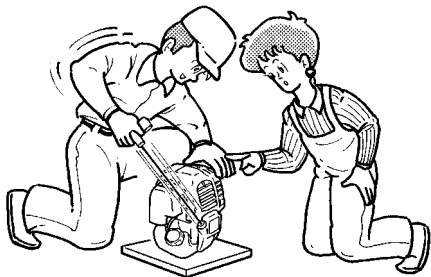


- Pull the starter handle slowly and return the handle to its original position when resistance is felt.

### NOTE :

The above operation is necessary to prevent outside moist air from intruding into the combustion chamber.

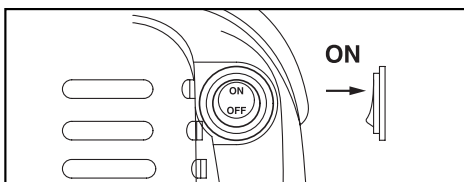
# 5. EASY TROUBLESHOOTING



## WHEN ENGINE DOES NOT START:

- Perform the following checks before you take the engine to your Robin dealer.
- If you still have trouble after completing the checks, take the engine to your nearest Robin dealer.

### Is the engine switch set ON?

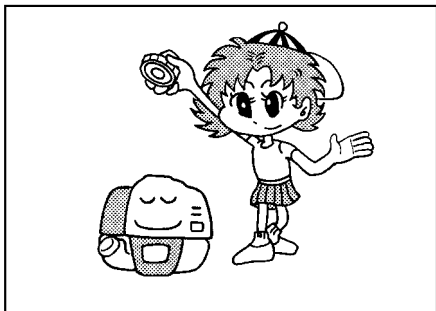


### Is there enough compression?

1. Pull the starter handle slowly and check if resistance is felt.
2. If little force is required to pull the starter handle, check if the spark plug is tightened firmly.
3. If the spark plug is loose, tighten it.

### Is the spark plug wet with gasoline?

1. Choke (close choke lever) and pull the starter handle five or six times. Remove the plug and check if its electrode is wet. If the electrode is wet, fuel is well supplied to your engine.
2. When the electrode is dry, check where the fuel stops. (Check the fuel intake of the carburetor and fuel strainer intake.)
3. In case the engine does not start with well supplied fuel, try using fresh fuel.





**Is there a strong spark  
across the electrode?**

**⚠ WARNING**

**Wipe out spilled fuel carefully  
before checking.  
Place spark plug as far away from  
spark plug hole as possible.  
Do not hold spark plug by hand  
while checking.**

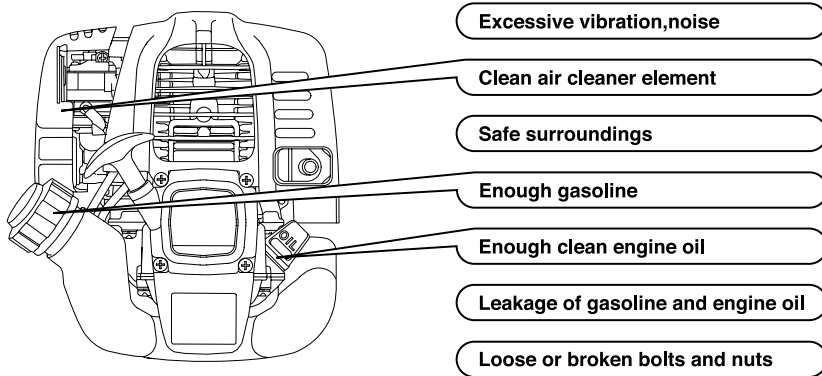
1. Remove the spark plug and connect it to the plug cap.  
Pull the starter handle while grounding spark plug against engine body using an insulated pliers.
2. Try with a new spark plug if the spark is weak or there is no spark.
3. The ignition system is faulty if there is no spark with a new spark plug.  
Take your engine to your nearest Robin dealer.

# 6. MAINTENANCE SCHEDULE

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## DAILY INSPECTION

Before running the engine, check the following service items.



## PERIODIC MAINTENANCE

Periodic maintenance is vital to safe and efficient operation of your engine.

Check the table below for periodic maintenance intervals.

**IT IS ALSO NECESSARY FOR THE USER OF THIS ENGINE TO CONDUCT THE MAINTENANCE AND ADJUSTMENTS ON THE EMISSION-RELATED PARTS LISTED BELOW TO KEEP THE EMISSION CONTROL SYSTEM EFFECTIVE.**

The emission control system consists of the following parts:

- |  |                         |  |
|--|-------------------------|--|
| (1) Carburetor and internal parts              | (4) Air cleaner element | (9) Hoses and sealing gaskets, belts, connectors, and assemblies |
| (2) Air cleaner plate (including choke system) | (5) Fuel Filter         |  |
| (3) Air cleaner cover                          | (6) Spark plug          |  |
|  | (7) Flywheel magneto    |  |
|  | (8) Ignition coil       |  |

The maintenance schedule indicated in the following table is based on the normal engine operation. Should the engine be operated in extremely dusty condition or in heavier loading condition, the maintenance intervals must be shortened depending on the contamination of oil, clogging of filter elements, wear of parts, and so on.

## Periodic Maintenance Schedule table

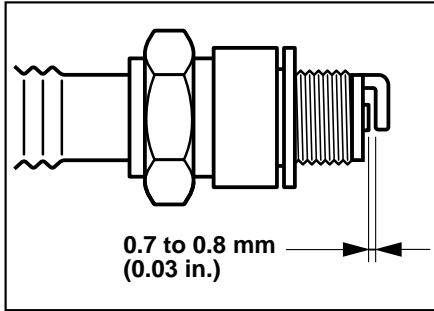
Maintenance Items	Every 8 hours (daily)	Every 50 hours	Every 200 hours
Clean engine and check bolts and nuts	● (Daily)		
Check and refill engine oil	● (Refill daily up to upper limit)		
Clean air cleaner	●		
Change engine oil (* <b>Note 1</b> )	(Initial 20 hours)	●	
Clean spark plug	●		
Clean fuel filter		●	
Clean and adjust spark plug and electrodes			●
Clean and adjust carburetor			●
Check and adjust valve clearance (* <b>Note 2</b> )			●
Clean fuel tank			●
Overhaul engine if necessary (* <b>Note 2</b> )			●

\*Note 1 : Initial oil change should be performed after first twenty (20) hours of operation. Thereafter change oil every fifty (50) hours.  
 Before changing oil, check for a suitable way to dispose of old oil.  
 Do not pour it down into sewage drains, onto garden soil or into open streams.  
 Your local zoning or environmental regulations will give you more detailed instructions on proper disposal.

\*Note 2 : As to the procedures for these items, please refer to the SERVICE MANUAL or consult your nearest Robin service dealer.

**NOTE** : Replace rubber hoses for passage every one year. If and when fuel leakage is found, replace hose at once.

# 7. "HOW-TO" MAINTENANCE

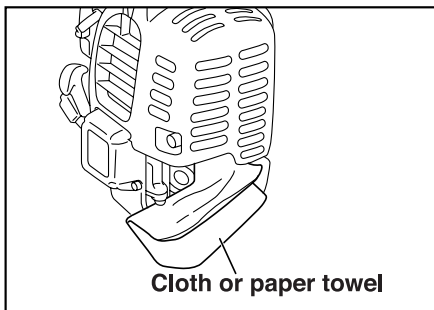
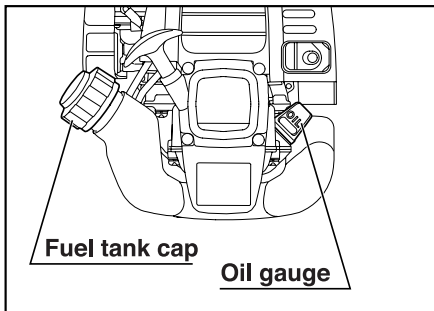


## INSPECTING THE SPARK PLUG

- Clean off carbon deposits on the spark plug electrode using a plug cleaner or wire brush.
- Check electrode gap.  
Adjust gap 0.7 mm to 0.8 mm (0.03 inches)
- Use a proper spark plug :  
**NGK CMR6A**

## ENGINE OIL CHANGE

- Initial oil change  
After 20 hours of operation
- Thereafter  
Every 50 hours of operation
- Refer to the recommended oil table on page 5.
- Always use the best grade and clean oil. Contaminated oil, poor quality oil and shortage of oil cause damage to engine or shorten the engine life.  
**OIL CAPACITY : 80 mL**

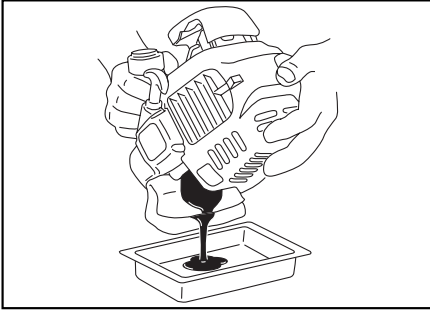


## CAUTION

**Make sure the fuel cap is tightly secured to avoid spillage.**

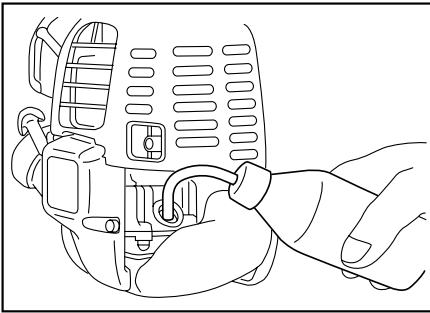
- 1) Remove the oil gauge.  
Be cautious to place the oil gauge in a place where it will not gather dirt, dust or other foreign matter.
- 2) Place a cloth or paper towel to the area around the oil filler hole.



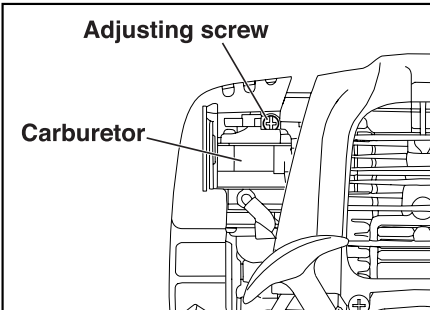


3) Remove the oil gauge, then tilt the engine and drain the oil into a pan or other receptacle.

4) Put the engine on a level surface, then fill with the oil up to the point of overflowing the filler neck. Pour the oil in from a squeeze bottle or other appropriate.



5) After filling the engine with oil, reinsert the oil gauge. Ensure that the oil gauge is tight, as if it loosens later oil will leak out.



## ADJUSTING CARBURETOR

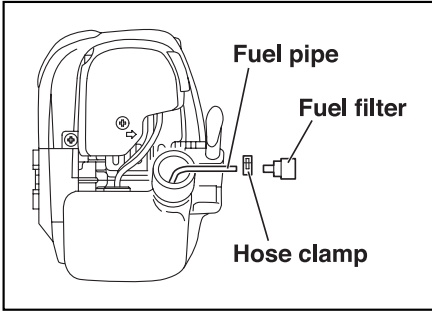
### Adjusting idling rpm

When adjust screw is turned right, engine rpm increases, and when it is turned left, rpm decreases. (Refer to illustration.)

Normal idling rpm	3000 ± 100rpm
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#### **NOTE:**

The carburetor greatly affects the performance of the engine. Since it has been adjusted carefully at our factory before shipment, avoid adjusting unless absolutely necessary. If adjustments are needed, contact your nearest dealer.



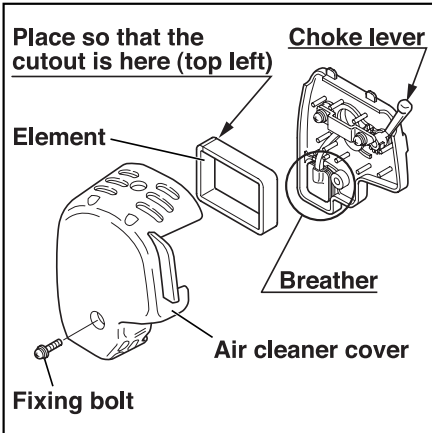
## CLEANING FUEL FILTER

Remove the hose clamp and pull out the fuel filter from fuel pipe.

Wash the fuel filter with kerosene.

After washing, reassemble it.

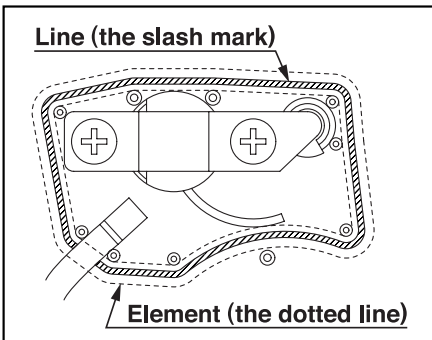
If the fuel filter is heavy dirty, replace it with new one.



## CLEANING AIR CLEANER

Dirty air cleaner element will cause starting difficulty, power loss, engine malfunctions, and shorten engine life extremely. Keep the air cleaner element clean.

- Remove the fixing bolt of air cleaner cover.
- Pull out the lower edge of the cover to remove the air cleaner cover.
- Place the choke lever to the fully closed position, taking care to ensure that dust and dirt are not allowed to enter the carburetor.
- Remove the element, then clean it with a solution of warm water and a mild detergent, thoroughly drying it afterward. Install it in alignment with the lines as shown in illustration.
- Wipe off any oil adhering to the area around the air cleaner cover and breather with a cloth.
- After cleaning, reassemble the cleaner cover (insert the tab at the top first, then insert the bottom tab) and tighten the fixing bolt.





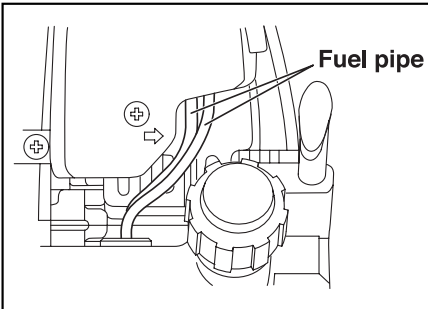
## CHECKING BOLTS, NUTS AND SCREWS

Retighten loose bolts and nuts.

Check for fuel and oil leaks.

Replace damaged parts with new ones.

Keep safety in your mind.



## FUEL PIPE REPLACEMENT

Replace the fuel pipe every 1 year.

If the fuel leakage is found on the fuel pipe, replace it immediately.

# 8. PREPARATIONS FOR STORAGE

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## DISCHARGE FUEL (NO SMOKING !)

In case the engine is not going to be used for more than one month, discharge fuel thoroughly from fuel tank and carburetor in order to prevent from hard starting and/or poor engine operation due to deteriorated fuel when you use the engine next time.

- Pour out the fuel in the tank from its filler neck.
- Push the primer pump of the carburetor until the fuel in it is thoroughly discharged.



## ENGINE OIL

- Change the engine oil with fresh oil.
- Remove the spark plug, pour about 2 cc engine oil into the cylinder, slowly pull the starter handle of the recoil starter 2 or 3 times, and tighten the spark plug.



## CLEAN AND STORE

- Slowly pull the recoil starter handle until resistance is felt and leave it in that position.
- Clean the engine thoroughly with an oiled cloth, put the cover on and store the engine indoors in a well-ventilated, low humidity area.

# 9. SPECIFICATIONS

MODEL	EH025A	EH035A
Type	Air-Cooled, 4-Stroke, Single Cylinder, Overhead valve, Gasoline Engine	
Bore x Stroke	1.34 in. x 1.06 in. (34 mm x 27 mm)	1.54 in. x 1.10 in. (39 mm x 28 mm)
Displacement	1.49 cu. in. (24.5 cm <sup>3</sup> )	2.04 cu. in. (33.5 cm <sup>3</sup> )
Maximum Output	0.81kW (1.1 HP) / 7000 rpm	1.18kW (1.6 HP) / 7000 rpm
Maximum Torque	1.18 N · m (0.12 kgf · m)/ 5000 rpm	1.76 N · m (0.18 kgf · m)/ 5000 rpm
Direction of Rotation	Counterclockwise as viewed from P.T.O. shaft side	
Lubricant	Automobile Engine Oil SAE #20, #30 or 10W-30 ; Class SF or higher grade	
Capacity of Lubricant	80 mL	100 mL
Carburetor	Diaphragm type	
Fuel	Automotive unleaded gasoline	
Fuel Consumption Ratio At Continuous Rated Output	408 g/kw · h (300g/HP · h)	340 g/kw · h (250g/HP · h)
Fuel Tank Capacity	0.5 L	0.65 L
Spark plug	NGK CMR6A (M10 xP1.0)	
Starting System	Recoil starter	
Dry Weight	6.17 lb. (2.8 kg)	7.72 lb. (3.5 kg)
Dimension (L x W x H)	6.50 in. x 8.39 in. x 8.86 in. (165 mm x 213 mm x 225 mm)	7.52 in. x 9.21 in. x 9.72 in. (191 mm x 234 mm x 247 mm)
Valve Clearance (Intake & Exhaust)	0.0059 in. (0.15 mm) Note : Adjust the valve clearance while the engine is cold.	
Emissions Durability Period (California only)	300 hours	
Emissions Compliance Period (Except the State of California)	For handheld engines : The Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to meet Federal emission requirements. Category C=50 hours, B=125 hours, and A=300 hours.	



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