

MODEL EH025/035/035V

(US) INSTRUCTIONS FOR USE (USA only)

(GB) INSTRUCTIONS FOR USE

(FR) MANUEL D'UTILISATION

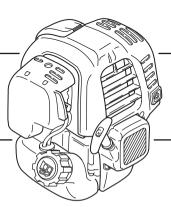
(DE) BEDIENUNGSANLEITUNG

NL) GEBRUIKSAANWIJZING

(ES) MANUAL DE INSTRUCCIONES

PT MANUAL DE INSTRUÇÕES

(RU) РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ



2ZZ9990082

Robin Engines



MANUFACTURER'S DECLARATION FOR MACHINERY PARTS IN ACCORDANCE WITH 98/37/EC 1998

Manufacturer of machinery parts : Industrial Products Company

Ratiama Plant
Saitama Plant
4-410 Asahi, Kitamoto City, Saitama 364-8511, Japan

Description of the machinery parts:
"Robin" EC, EY, EH, DY and EX series spark ignition Engines.

Engine Models

Engine Models : EC01, 02, 03, 04, 06, 08, 10, 12, 17, 25 EY08, 15, 20, 28, 35, 40 EH025, 035, 09, 12, 17, 25, 30, 34, 36, 41, 63, 64, 65, 72 DY23, 27, 30, 35, 41, 42 EX13, 17, 21, 27, 30

Declaration :

The above designated engines are intended for installation in a machine as set out in the FC machines quideline

Note:

This machinery part must not be put into service until the machinery into of the appropriate machinery directive.

Signed : H Dho

K. Ohno Department Manager, Customer Service

Dated: February 2005



DÉCLARATION DU FABRICANT POUR DES PIÈCES DE MACHINES SELON LA NORME 09/27/CE 1009

Fabricant des pièces de machines:

Description des composants de machines :

Moteurs à allumage par étincelle série "Robin" EC, EY, EH, DY et EX;

Madàlas da mataur :

EC01, 02, 03, 04, 06, 08, 10, 12, 17, 25

EC01, 02, 03, 04, 06, 08, 10, 12, 17, 25 EY08, 15, 20, 28, 35, 40 EH025, 035, 09, 12, 17, 25, 30, 34, 36, 41, 63, 64, 65, 72 DY23, 27, 30, 35, 41, 42 EX13, 17, 21, 27, 30

Les moteurs indiqués ci-dessus sont prévus pour l'installation dans une machine comme spécifié dans la directive des machines CF

Remarque .

DE

HERSTELL ERERKI ÄRLING FÜR MASCHINENTEILE ENTSPRECHEND 98/37/FG 1998

Hersteller von Maschinenteilen

Beschreibung der Maschinenteile :

Motorenmodelle :

EC01, 02, 03, 04, 06, 08, 10, 12, 17, 25 EC01, 02, 03, 04, 06, 08, 10, 12, 17, 25 EY08, 15, 20, 28, 35, 40 EH025, 035, 09, 12, 17, 25, 30, 34, 36, 41, 63, 64, 65, 72 DY23, 27, 30, 35, 41, 42 EX13, 17, 21, 27, 30

Erklärung:

Hinweis:

*Iniweis: Dieses maschinenteil darf nicht in betrieb genommen werden, bevor die maschine, in der es zum einsatz kommen soll, mit den bestimmungen der entsprechenden maschinenrichtlinie konform bzw. Diesen entsprechend erklätzt wurde.



VERKLARING VAN DE FARRIKANT VOOR MACHINE ONDERDELEN VOI GENS 98/37/FG 1998

Fabrikant van machine onderdelen :

4-410 Asahi, Kitamoto City, Saitama 364-8511, Japan

Beschrijving van de machine onderdelen :

Motormodellen:

wotormodellen: EC01, 02, 03, 04, 06, 08, 10, 12, 17, 25 E708, 15, 20, 28, 35, 40 EH025, 035, 09, 12, 17, 25, 30, 34, 36, 41, 63, 64, 65, 72 D723, 27, 30, 35, 41, 42 EX13, 17, 21, 27, 30

Opmerking:

Deze machine onderdelen mogen niet in werking worden gesteld alvorens zeker is dat de applicatie waarvoor deze onderdelen worden gebruikt geheel volgens figerende richtlijnen zijn.



DECLARACIÓN DEL FABRICANTE DE CONFORMIDAD DE LAS PARTES DE LA MAQUINARIA CON LA DIRECTIVA 98/37/CE 1998

Fabricante de las partes de la maquinaria :

Descripción de las partes de la maquinaria :

Modelos de motores :

ECO1 1.02, 03, 04, 06, 08, 10, 12, 17, 25 ECO8, 15, 20, 28, 35, 40 EH025, 035, 09, 12, 17, 25, 30, 34, 36, 41, 63, 64, 65, 72 DY23, 27, 30, 35, 41, 42 EX13, 17, 21, 27, 30

Declaración :

Nota:

Esta pieza no debe ser puesta en funcionamiento hasta que la maquina a la cual se incorpore haya sido declarada conforme con las disposiciones de las correspondientes directivas sobre maquinaria.



DICHIARAZIONE DEL COSTRUTTORE RELATIVA AI COMPONENTI PER MACCHINE IN ACCORDO ALLA DIRETTIVA 98/37/CE 1998

Costruttore dei componenti per macchine :

Descrizione del componente della macchina

Modelli di motore :

MODENI DI MOTORE: 5 EC01, 02, 03, 04, 06, 08, 10, 12, 17, 25 EY06, 15, 20, 28, 35, 40 EH025, 035, 09, 12, 17, 25, 30, 34, 36, 41, 63, 64, 65, 72 DY23, 27, 30, 35, 41, 42 EX13, 17, 21, 27, 30

Dichiarazione :

Nota:

ISSUE EMD-RC2088

FOREWORD

Thank you very much for purchasing a ROBIN ENGINE.



Your ROBIN ENGINE can supply the power to operate various sorts of machines and equipment.

Please take a moment to familiarize yourself with the proper operation and maintenance procedures in order to maximize the safe and efficient use of this product.

Due to constant efforts to improve our products, certain procedures and specifications are subjected to change without notice.

When ordering spare parts, always give us the MODEL, PRODUCTION NUMBER and SERIAL NUMBER of your engine. Please fill in the following blanks after checking the production number on your engine.

PROD NO.	Ε	Н							
SERIAL NO.									

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SYMBOLS

		Read the owner's manual.						
	↔¶	Stay clear of the hot surface.						
	↔ ¶	Exhaust gas is poisonous. Do not operate in an unventilated area.						
		Stop the engine before refueling.						
		Fire, open flame and smoking prohibited.						
	On (Ru	n)	+	Plus ; positive polarity				
0	Off (Sto	pp)	= -	Battery				
4	Engine	oil		Engine start (Electric start)				
	Add oil							

1. SAFETY PRECAUTIONS

Please make sure you review each precaution carefully.

Pay special attention to statement preceded by the following words.

AWARNING "WARNING" indicates a strong possibility of severe personal injury or loss of life if instructions are not followed

*CAUTION "CAUTION" indicates a possibility of personal injury or equipment damage if instructions are not followed.



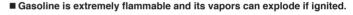
↑ WARNING: EXHAUST PRECAUTIONS

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.

↑ WARNING: REFUELING PRECAUTIONS

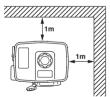


- Do not refuel indoors or in a poorly ventilated area.
- Be sure to stop the engine prior to refueling.
- Do not remove fuel tank cap nor fill fuel tank while engine is hot or running. Allow engine to cool at least 2 minutes before refueling.
- Do not overfill the fuel tank.
- If fuel is spilt, wipe 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.



▲ WARNING: FIRE PREVENTION

- Do not operate the engine while smoking or near an open flame.
- Do not use around dry brush, twigs, cloth rags, or other flammable materials.
- Keep cooling air intake (recoil starter area) and muffler side of the engine at least 1 meter (3 feet) away from buildings, obstructions and other burnable objects.
- Keep the engine away from flammables and other hazardous materials (trash, rags, lubricants, explosives).



AWARNING: OTHER SAFETY PRECAUTIONS



■ 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.



- Do not touch the spark plug and ignition cable when starting and operating the 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 cause serious injury to the operator.
- Operate the engine on a stable, level surface. If the engine is tilted, fuel spillage may result.



NOTE

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

- Do not transport the engine with fuel in tank or with fuel strainer cock open.
- 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).

ACAUTION: PRE-OPERATION CHECKS



■ Carefully check fuel hoses and joints for looseness and fuel leakage.

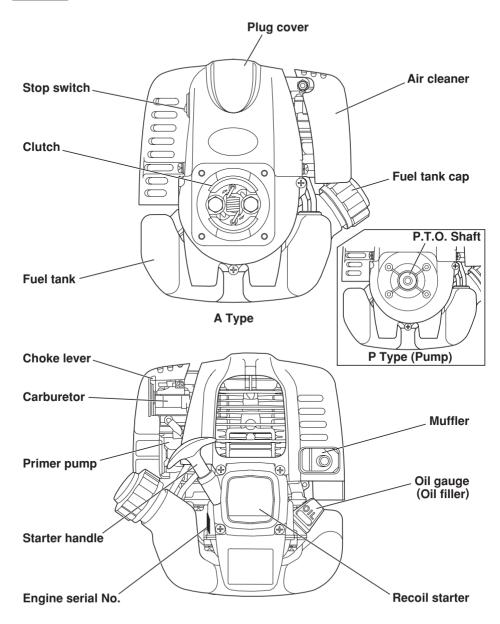
Leaked fuel creates a potentially dangerous situation.

- 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.
- Keep cylinder fins and recoil starter free of dirt, grass and other debris.
- Wear snug fitting working clothes when operating the engine.

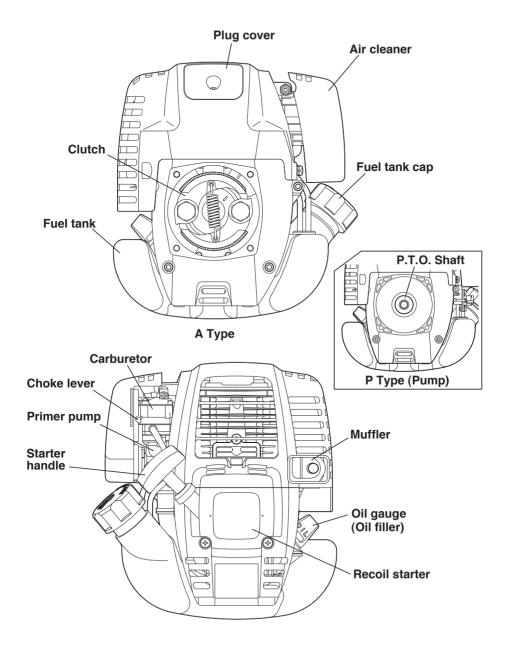
 Loose aprons, towels, belt, etc., may be caught in the engine or drive train, causing a dangerous situation.

2. COMPONENTS

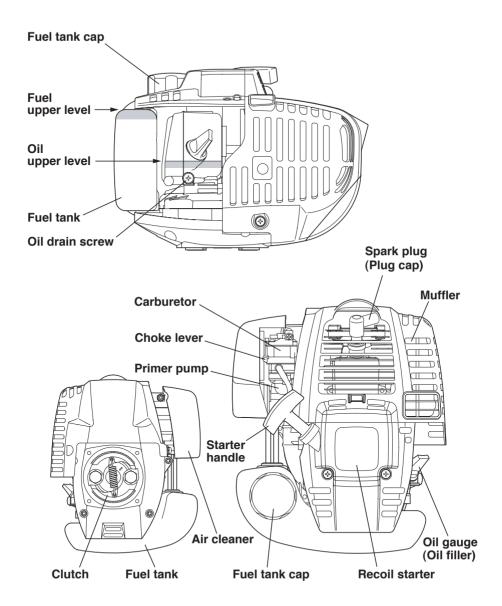
EH025



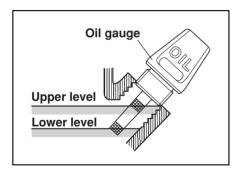
EH035

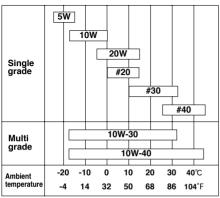


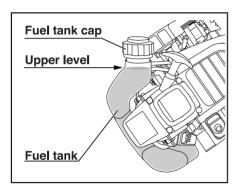
EH035V



3. PRE-OPERATION CHECKS







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 FH035: 100 ml

- (EH035V) Before filling oil, make sure that the oil drain screw is secured thoroughly.
- Change oil if it is contaminated. (See page 12 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



A 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 automobile 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

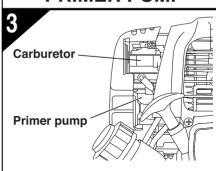
STARTING

STOP SWITCH



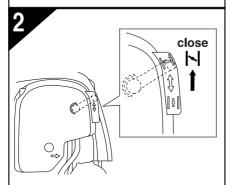
- Set the throttle lever to the idling position.
- If the stop switch is installed on the engine.Set the stop switch to the position "ON or I".
- If the stop switch is installed on a machine side. Set the stop switch to the position "ON or I".

PRIMER PUMP



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

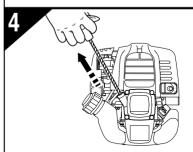
CHOKE LEVER



Close the choke lever.

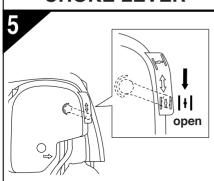
- If the engine is cold or the ambient temperature is low, close the choke lever fully.
- If the engine is warm or the ambient temperature is high, open the choke lever half-way, or keep it fully open.

RECOIL STARTER



- 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



- 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.

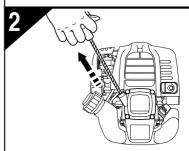
STOPPING

STOP SWITCH



- 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



■ 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



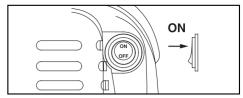




WHEN ENGINE DOES NOT START:

- 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 vour 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?

- 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

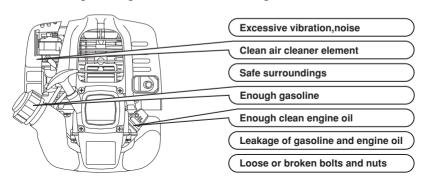
Wipe out spilled fuel carefully before checking. Place spark plug as far away from spark plug hole as possible. Do not hold spark plug by hand while checkina.

- 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

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.

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 level)		
Clean air cleaner	•		
Change engine oil (*Note 1)	(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 (*Note 2)			•
Clean fuel tank			•
Overhaul engine if necessary (*Note 2)			•

^{*}Note 1 : Initial oil change should be performed after first twenty (20) hours of operation.

Thereafter change oil every fifty (50) hours.

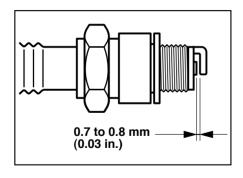
Before changing oil, check for a suitable way to dispose of old oil.

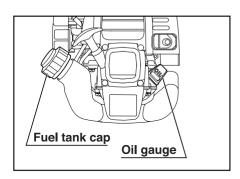
Do not pour it down into sewage drains, onto garden soil or into open streams. Your local zoning or environmental regulations will give you more detailed instructions on proper disposal.

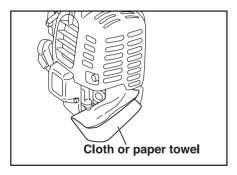
*Note 2 : As to the procedures for these items, please refer to the SERVICE MANUAL or consult your nearest Robin service dealer.

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 PI UG

- 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

FNGINE OIL CHANGE

- Initial oil change After 20 hours of operation
- Thereafter Every 50 hours of operation
- Refer to the recommended oil table on page 7.
- 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.

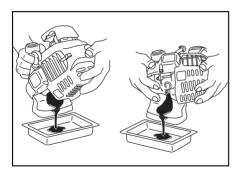
OIL CAPACITY · · · · EH025 : 80 mL EH035: 100 mL

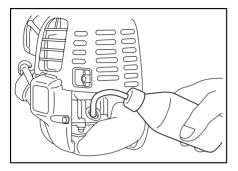


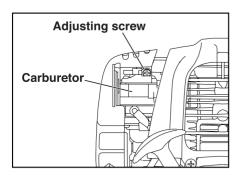
A CAUTION

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.(EH035V) Remove the oil drain screw and drain the oil
- 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.)

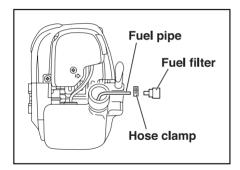
Normal idling rpm 3000 ± 100 rpm

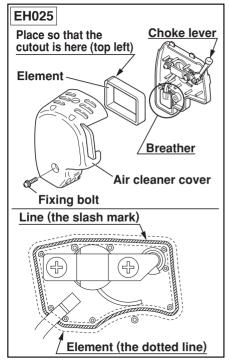
NOTE:

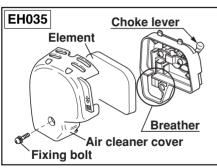
The carburetor greatly affects the performance of the engine.

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

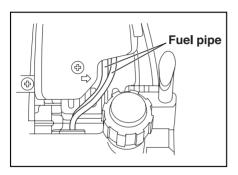
Dirty air cleaner element will cause starting difficulty, power loss, engine malfunctions, and shorten engine life extremely. Keep the air cleaner element clean

- 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

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.



- 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	EH025P	EH035A	EH035P	EH035V			
Туре	Air-Cooled, 4-Stroke, Single Cylinder, Overhead valve, Gasoline Engine							
Bore x Stroke mm	34 2	¢ 27	39 x 28					
Displacement cm ³	24	1.5	33.5					
Maximum Output kW (HP) / rpm	0.81 (1.	1) / 7000	1.18 (1.6) / 7000					
Maximum Torque N · m (kgf · m)/ rpm	1.18 (0.1	2)/ 5000	1.76 (0.18) / 5000					
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 mL	8	0	100					
Carburetor		С	е					
Fuel	Automotive unleaded gasoline							
Fuel Consumption Ratio At Continuous Rated Output g/kw•h (g/HP•h)	408	(300)	340 (250)					
Fuel Tank Capacity L	0	.5	0.0	0.75				
Spark plug	NGK CMR6A (M10 xP1.0)							
Starting System	Recoil starter							
Dry Weight kg	2.8	3.0	3.5	3.85	3.4			
Dimension (L x W x H) mm	165 x 213 x 225	219 x 213 x 225	191 x 234 x 247	253 x 234 x 247	191 x 220 x 261			

ISSUE EMD-EU2089

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INDUSTRIAL PRODUCTS COMPANY

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