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**MANUFACTURER'S DECLARATION FOR MACHINERY PARTS
IN ACCORDANCE WITH 98/37/EC 1998**
Manufacturer of machinery parts :

FUJI HEAVY INDUSTRIES LTD.
Industrial Products Company
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 :

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

Declaration :

The above designated engines are intended for installation in a machine as set out in the EC machines guideline.

Note :

This machinery part must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the appropriate machinery directive.

Signed : K. Ohno

K. Ohno
Department Manager, Customer Service

Dated : July 2004

FR

**DÉCLARATION DU FABRICANT POUR DES PIÈCES DE MACHINES
SELON LA NORME 98/37/CE 1998**
Fabricant des pièces de machines :

FUJI HEAVY INDUSTRIES LTD.
Industrial Products Company
Saitama Plant
4-410 Asahi, Kitamoto City, Saitama 364-8511, Japan

Description des composants de machines :

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

Modèles de moteur :

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

Déclaration :

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

Remarque :

Ce composant de machine ne doit pas être mis en service tant que la machine dans laquelle il est intégré, n'a pas été déclarée conforme aux directives machines appropriées.

Signé : K. Ohno

K. Ohno
Directeur de Dept., Service de la clientèle

Daté : Juillet 2004

DE

**HERSTELLERERKLÄRUNG FÜR MASCHINENTEILE
ENTSPRECHEND 98/37/EG 1998**
Hersteller von Maschinenteilen :

FUJI HEAVY INDUSTRIES LTD.
Industrial Products Company
Saitama Plant
4-410 Asahi, Kitamoto City, Saitama 364-8511, Japan

Beschreibung der Maschinenteile :

"Robin" Funkenzündungsmotoren der Baureihen EC, EY, EH, DY und EX.

Motorenmodelle :

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

Erklärung :

Die oben aufgeführten Motoren sind zum Einbau in einer Maschine wie in den EG-Maschinenrichtlinien festgelegt gedacht.

Hinweis :

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 erklärt wurde.

Unterzeichnet : K. Ohno

K. Ohno
Abteilungsleiter, Kundendienst

Datum : Juli 2004

NL

**VERKLARING VAN DE FABRIKANT VOOR MACHINE ONDERDELEN
VOLGENS 98/37/EG 1998**
Fabrikant van machine onderdelen :

FUJI HEAVY INDUSTRIES LTD.
Industrial Products Company
Saitama Plant
4-410 Asahi, Kitamoto City, Saitama 364-8511, Japan

Beschrijving van de machine onderdelen :

"Robin" EC, EY, EH, DY en EX serie interne verbrandingsmotoren.

Motormodellen :

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

Verklaring :

De hierboven aangegeven motoren zijn bedoeld voor installatie in een machine als beschreven in de EG machinerichtlijn.

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.

Ondertekend : K. Ohno

K. Ohno
Afdelingshoofd Klantenservice

Datum : Juli 2004

ES

**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 :

FUJI HEAVY INDUSTRIES LTD.
Industrial Products Company
Saitama Plant
4-410 Asahi, Kitamoto City, Saitama 364-8511, Japan

Descripción de las partes de la maquinaria :

Motores de encendido por chispa "Robin" de las series EC, EY, EH, DY y EX.

Modelos de motores :

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

Declaración :

Los motores arriba designados están hechos para su instalación en una máquina según lo estipulado en la normativa de máquinas de la CE.

Nota :

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

Firmado : K. Ohno

K. Ohno
Jefe del departamento, Servicio de clientes

Fecha : Julio de 2004

IT

**DICHIARAZIONE DEL COSTRUTTORE RELATIVA AI COMPONENTI
PER MACCHINE IN ACCORDO ALLA DIRETTIVA 98/37/CE 1998**
Costruttore dei componenti per macchine :

FUJI HEAVY INDUSTRIES LTD.
Industrial Products Company
Saitama Plant
4-410 Asahi, Kitamoto City, Saitama 364-8511, Japan

Descrizione del componente della macchina :

Motori a candela "Robin" delle serie EC, EY, EH, DY ed EX.

Modelli di motore :

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

Dichiarazione :

I motori sopra specificati sono destinati all'installazione a bordo di macchine secondo quanto disposto dalle direttive macchine CE.

Nota :

Questo componente non può essere messo in servizio se la macchina della quale fa parte non è stata dichiarata conforme alle prescrizioni della vigente direttiva macchine.

Firma : K. Ohno

K. Ohno
Direttore di dipartimento, Servizio dei clienti

Data : Luglio 2004

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.

Keep this owner's manual at hand, so that you can refer to it at any time.

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

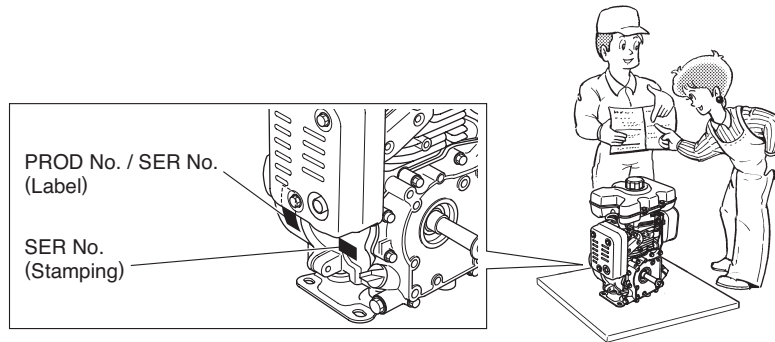
When ordering spare parts, always give us the MODEL, PRODUCTION NUMBER and SERIAL NUMBER of your engine.

Please fill in the following blanks after checking the production number on your engine.

(Location of label is different depending on the engine specification.)

PROD NO.									

SER NO.									



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NOTICE

The engines which have emission label are allowed to be exported to USA. The emission label placed on the engine indicates that the engine is complied with EPA (Environmental Protection Agency) and CARB (California Air Resources Board) emission regulations in USA. Exporting any engine to USA which does not have the emission label is a violation of EPA/CARB emission law subject to civil penalty.

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NOTE Please refer to the illustrations on the back page of the front cover or back cover for Fig. ① to ⑧ indicated in the sentence.

1. SAFETY PRECAUTIONS

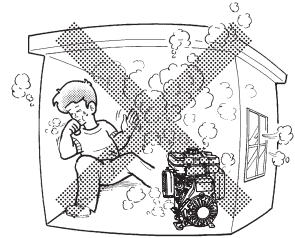
Please make sure you review each precaution carefully.
Pay special attention to statement preceded by the following words.

⚠ WARNING “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

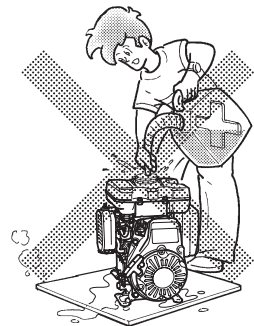
- Never inhale exhaust gasses.
They contain carbon monoxide, a colorless, odorless and extremely dangerous gas which can cause unconsciousness or death.
- Never operate the engine indoors or in a poorly ventilated area, such as tunnel, cave, etc.
- Exercise extreme care when operating the engine near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



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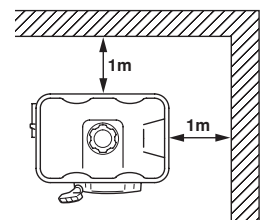
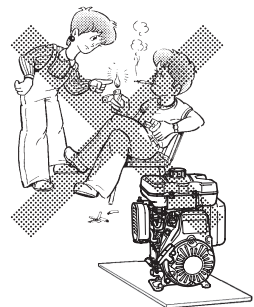
⚠ WARNING : REFUELING PRECAUTIONS

- Gasoline is extremely flammable and its vapors can explode if ignited.
- 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).



⚠ WARNING : 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.

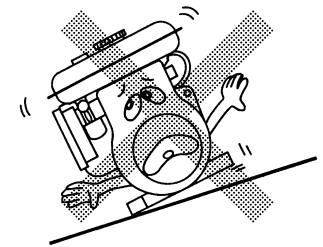
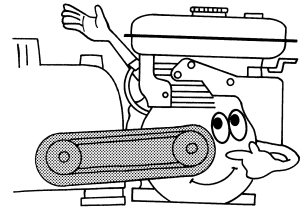
NOTE

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

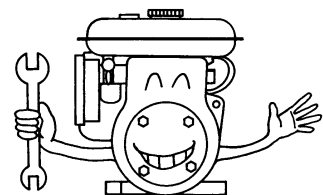
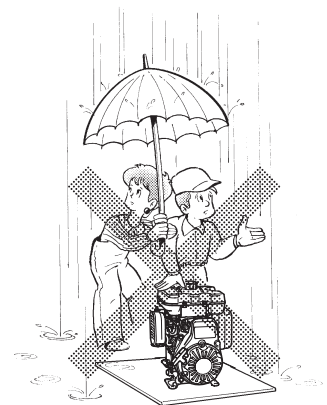
- Do not transport the engine with fuel in tank or with fuel strainer cock open.
- Do not move the engine while in operation when it has been removed from the equipment.
- Keep the unit dry (do not operate it in rainy conditions).

⚠ CAUTION : 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.



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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 (Run)		Plus ; Positive polarity
	Off (Stop)		Battery
	Engine oil		Engine start (Electric start)
	Add oil		Engine stop

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2. COMPONENTS

(See Fig. 1)

NOTE Please refer to the illustrations on the back page of the front cover or back cover for Fig. 1 to 8 indicated in the sentence.

- | | |
|-------------------------------|---------------------------------|
| ① SPEED CONTROL LEVER | ⑪ P.T.O. SHAFT |
| ② STARTER HANDLE | ⑫ OIL GAUGE (OIL FILLER) |
| ③ AIR CLEANER | ⑬ OIL DRAIN PLUG |
| ④ FUEL COCK | ⑭ ENGINE SERIAL NO. (STAMPING) |
| ⑤ CHOKE LEVER | ⑮ ENGINE NAME LABEL (SPEC. NO.) |
| ⑥ FUEL TANK | ⑯ EXHAUST OUTLET |
| ⑦ FUEL TANK CAP (FUEL FILLER) | ⑰ MUFFLER COVER |
| ⑧ STOP SWITCH | ⑱ SPARK PLUG |
| ⑨ RECOIL STARTER | |
| ⑩ CARBURETOR | |

3. PRE-OPERATION CHECKS

NOTE

Engine shipped from our factory is without oil. Before starting engine, fill with oil. Do not over-fill.

1. CHECK ENGINE OIL (See Fig. ②)

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

- Do not screw the oil gauge into the oil filler neck to check oil level. If the oil level is low, refill to the upper level with the following recommended oil.
- Use 4-stroke automotive detergent oil of API service class SE or higher grade. (SG, SH or SJ is recommended)
- Select the viscosity based on the air temperature at the time of operation as shown in the table. (See Fig. ②-①)

Oil capacity : 0.3 liter

Explanation of Fig. ②-②

- ① OIL GAUGE
- ② UPPER LEVEL
- ③ LOWER LEVEL

2. CHECK FUEL (See Fig. ③)

⚠ WARNING

Do not refuel while smoking, near an open flame or other such potential fire hazards. Otherwise fire accident may occur.

- Stop the engine and open the cap.
- Use unleaded automotive gasoline only.

Fuel Tank Capacity : 1.5 liter

- Close the fuel cock before filling the fuel tank.
- Do not fill above the top of the fuel filter screen (marked ②), or the fuel may overflow when it heats up later and expands.
- When filling the fuel tank, always use the fuel filter screen.
- Wipe off any spilled fuel before starting the engine.

4. OPERATING YOUR ENGINE

(See Fig. ④)

1. STARTING

- (1) Open the fuel cock. (See Fig. ④-①)
- (2) Turn the STOP SWITCH to the position " | " (ON). (See Fig. ④-②)
- (3) Close the choke lever. (See Fig. ④-③)
 - 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.
- (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. (See Fig. ④-④)
- (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. (See Fig. ④-⑤)

2. RUNNING

- (1) After the engine starts, set the speed control lever at ②(low speed) position and warm it up without load for a few minutes. (See Fig. ⑤-①)
- (2) Gradually move the speed control lever toward ③(high speed) position and set it at the required engine speed. (See Fig. ⑤-②)
 - Whenever high speed operation is not required, slow the engine down (idle) by moving the speed control lever toward ②(low speed) position to save fuel and extend engine life.

3. STOPPING

- (1) Set the speed control lever at ②(low speed) position and allow the engine to run at low speed for 1 or 2 minutes before stopping. (See Fig. ⑥-①)
- (2) Turn the STOP SWITCH counterclock-wise to the position " ○ " (OFF). (See Fig. ⑥-②)
- (3) Close the fuel cock. (See Fig. ⑥-③)
- (4) Pull the starter handle slowly and return the handle to its original position when resistance is felt. This operation is necessary to prevent outside moist air from intruding into the combustion chamber. (See Fig. ⑥-④)

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※ STOPPING ENGINE WITH THE FUEL COCK

Close the fuel cock and wait for a while until the engine stops.

Avoid to let the fuel remain in the carburator over long periods, or the passages of the carburator may become clogged with impurities, and malfunctions may result.

5. MAINTENANCE

(See Fig. 7)

1. DAILY INSPECTION (SEE FIG. 7-①)

Before running the engine, check the following service items.

- GB**
- ① LOOSE OR BROKEN BOLTS AND NUTS
 - ② CLEAN AIR CLEANER ELEMENT
 - ③ ENOUGH CLEAN ENGINE OIL
 - ④ LEAKAGE OF GASOLINE AND ENGINE OIL
 - ⑤ ENOUGH GASOLINE
 - ⑥ SAFE SURROUNDINGS
 - ⑦ EXCESSIVE VIBRATION, NOISE

2. PERIODIC INSPECTION

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

Check the table below for periodic maintenance intervals.

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.

Maintenance Items	Every 8 hours (Daily)	Every 50hours (Weekly)	Every 200hours (Monthly)	Every 500 hours	Every 1000 hours
Clean engine and check bolts and nuts	● (Daily)				
Check and refill engine oil	● (Refill daily up to upper level)				
Change engine oil	● (Initial 20 hours)	● (Every 100 hours)			
Clean spark plug		●			
Clean air cleaner		●			
Replace air cleaner element			●		
Clean fuel strainer			●		
Clean and adjust spark plug and electrodes			●		
Check and adjust valve clearance				●	
Remove carbon from cylinder head				●	
Clean and adjust carburetor				●	
Overhaul engine if necessary					●

3. INSPECTING THE SPARK PLUG

(See FIG. 7-②)

- (1) Clean off carbon deposits on the spark plug electrode using a plug cleaner or wire brush.
- (2) Check electrode gap. The gap should be 0.6 mm to 0.7 mm. Adjust the gap, if necessary, by carefully bending the side electrode.

Recommended Spark Plug : NGK : BMR4A

(CHAMPION : RCJ14)

4. ENGINE OIL CHANGE

(See FIG. 7-③,④)

Initial oil change : After 20 hours of operation

Thereafter : Every 100 hours of operation

- (1) When changing oil, stop the engine and loosen the drain plug. Drain the used oil while the engine is warm. Warm oil drains quickly and completely.

⚠ CAUTION

To prevent injury, pay attention to the hot oil.

- (2) Re-install the drain plug before refilling oil.

Oil capacity : 0.3 liter

- (3) Refer to page 5 for the recommended oil.

- 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.

5. CLEANING FUEL STRAINER

(See Fig. 7-5)

⚠ WARNING Flame Prohibited

- (1) Drain the fuel from the tank.
- (2) Close the fuel cock and remove the fuel strainer.
(See Fig. 7-5-1)
- (3) After removing dirt and water, wash the fuel strainer with kerosene or gasoline.
- (4) Reinstall securely to prevent leakage.

6. CLEANING AIR CLEANER

(See Fig. 7-6, 7)

A dirty air cleaner element will cause starting difficulty, power loss, engine malfunctions, and shorten engine life extremely.

Always keep the air cleaner element clean.

⚠ WARNING Flame Prohibited

A. Urethane Foam Element Type (See Fig. 7-6)

Remove the element and wash it in kerosene or diesel fuel. Then saturate it in a mixture of 3 parts kerosene or diesel fuel and 1 part engine oil. Squeeze the element to remove the mixture and install it in the air cleaner.

(See Fig. 7-6-1)

B. Dual Element Type (Urethane Foam and Nonwoven Cloth elements) (See Fig. 7-7)

- Remove the urethane foam from the nonwoven cloth element and clean it in the same way as described A. (See Fig. 7-7-1)
- Wash the element in kerosene and drain off the kerosene. Then saturate it in a mixture of 3 parts kerosene and 1 part engine oil, wring the element to remove the mixture and install. (See Fig. 7-7-2)

NOTE

Clean and replace air cleaner elements more often when operating in dusty environments. Replace the element in case that dirt or dust can not be removed and/or that the element is deformed or deteriorated.

7. FUEL HOSE REPLACEMENT

(See Fig. 7-8)

⚠ WARNING

Take extreme caution when replacing fuel hose ; gasoline is extremely flammable.

Replace the fuel hose every 2 years.

If fuel leaks from fuel hose, replace the fuel hose immediately.

8. CHECKING BOLTS, NUTS AND SCREWS

- Retighten loose bolts and nuts.
- Check for fuel and oil leaks.
- Replace damaged parts with new ones.

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6. PREPARATIONS FOR STORAGE

1. DISCHARGE FUEL (See Fig. 8)

⚠ WARNING Flame Prohibited

If you do not use the engine more than 1 month, discharge fuel to prevent gum in the fuel system and carburetor parts.

- Remove the fuel pipe, place the strainer over a container and open the strainer cock to discharge fuel from the fuel tank.
- Remove the carburetor float chamber bolt from the bottom and discharge fuel from the carburetor.

2. ENGINE OIL

- Change the engine oil with fresh oil.
- Remove the spark plug, pour about 5 cc of engine oil into the cylinder, slowly pull the starter handle of the recoil starter 2 or 3 times, and reinstall the spark plug.

3. 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.

7. OIL SENSOR INSTRUCTIONS

(OPTIONAL)

1. FUNCTION OF OIL SENSOR

The engine will stop automatically when the oil level falls below the safety limit. The engine cannot be started unless the level is raised above the prescribed limit. (See Fig. [2]-②)

2. RESTARTING

- (1) Fill the crankcase with oil up to the proper level.
 - (2) As for restarting and operating the engine, refer to section "4. OPERATING YOUR ENGINE" on page 5 .
- Check the wire connector from the engine. It must be connected securely to the wire from oil sensor.
 - When selecting the engine oil, refer to page 5 for the recommended oil.

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8. EASY TROUBLESHOOTING

WHEN ENGINE WILL 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.

1. Is there a strong spark across the electrode ?

- (1) Is the stop switch at position " | " (ON)?
- (2) Remove and inspect the spark plug.
If the electrode is fouled, clean or replace it with new one.
- (3) Remove the spark plug and connect it to the plug cap.
Pull the starter handle while grounding spark plug against engine body. Try with a new spark plug if the spark is weak or there is no spark. The ignition system is faulty if there is no spark with a new spark plug.

⚠ WARNING

- **Wipe out spilled fuel carefully before testing. Place spark plug as far away from spark plug hole as possible.**
- **Do not hold spark plug by hand while pulling recoil starter.**

NOTE

The engine with oil sensor will stop automatically when the oil level falls below the prescribed limit. Unless the oil level is raised above the prescribed limit, the engine will stop immediately after starting.

2. Is there enough compression?

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

3. Is the spark plug wet with gasoline?

- (1) Is the fuel cock opened?
- (2) 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.
- (3) When the electrode is dry, check where the fuel stops. (Check the fuel intake of the carburetor.)
- (4) In case the engine does not start with well supplied fuel, try using fresh fuel.

9. SPECIFICATIONS

MODEL		EH09-2D
Type		Air-cooled,4-cycle,single-cylinder, horizontal shaft,OHV,gasoline engine
Bore x Stroke	mm	51 x 42
Piston displacement	mL(cc)	86
Compression ratio		8.7
Maximum Output	kW / rpm	2.1 / 4200
Continuous Output	kW / rpm	1.5 / 3600
Maximum torque	N·m / rpm	4.9 / 3600
Direction of Rotation		Counter clockwise as viewed from PTO shaft side
Cooling system		Forced air cooling
Valve arrangement		Over Head Valve type
Lubrication		Splashing type
Lubricant		4-stroke automotive detergent oil - SAE; #20,#30 or 10W-30 API service class; SE or higher (SG, SH or SJ is recommended)
Oil Capacity	liter	0.3
Carburetor		Horizontal draft,float type
Fuel		Automotive unleaded gasoline
Fuel feed		Gravity type
Fuel Tank Capacity	liter	1.5
Method of ignition		Flywheel magneto (solid state)
Spark Plug		NGK : BMR4A (CHAMPION : RCJ14)
Starting System		Recoil starter
Governor		Centrifugal flyweight type
Air Cleaner system		Semi wet type
Dry Weight	kg	9.9
Dimensions (L x W x H)	mm	249 x 299 x 380

Specifications are subject to change without notice

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