

MARUZEN

HYDRAULIC POWER UNIT

MODEL UH070

OPERATING MANUAL



CAUTION

FOR THE SAFETY PURPOSE, PLEASE READ THIS MANUAL THOROUGHLY BEFORE ATTEMPTING TO USE THIS POWER UNIT. ANY FALES OPERATING PROCEDURES WILL CAUSE DAMAGES OF THE MACHINE. ALWAYS KEEP THIS MANUAL TO AN EASILY ACCESSABLE PLACE.



MARUZEN KOGYO CO., LTD.

(Revised March 29, 2017)

FOREWORD

This manual is an important part of your equipment. It provides rules and guidelines which will help you use this machine safely and effectively. You **MUST** familiarize yourself with the functions and operations by reading the manual thoroughly before you begin using this machine. For your safety, it is especially important that you read and observe all precautions in this manual and on the machine. The precautions **MUST** be followed strictly at all times when performing operation and maintenance. * Fail to follow the guidelines and safety alerts in the manuals and on the machine, or use this machine in alternative ways from the manuals may result in system failure or serious personal injury.

Keep this manual with the equipment or in an easily accessible place in all times for future reference. Make sure all personnel involved in working on this machine can consult it periodically. In case this manual should be lost or damaged, immediately contact us or your dealer to purchase a new copy.

We recommend you always use Maruzen original components and parts. Replacing components and parts from other sources may cause damages to this machine and endanger operators.

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SAFETY INFORMATION

To enable you to use this machine safely, safety precautions and labels are given in this manual and affixed to the machine to give explanations of situations involving potential hazards and of the methods of avoiding such situations.

SAFETY ALERT CLASSIFICATIONS

The following safety alert symbols are used to inform you that there is a potential hazardous situation that may lead to personal injury or damage.

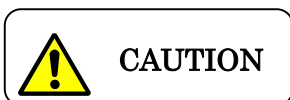
In this manual and on machines labels, the following safety alert symbol are used to express the potential level of hazard.



Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

**** Safety alert symbols are to emphasize all operation which, if not strictly followed, could result in a life-threatening situation, bodily injury or damage to equipment.**

SAFETY ALERTS

DO NOT OPERATE THE MACHINE UNLESS THE FOLLOWING SAFETY INSTRUCTIONS HAVE BEEN THOROUGHLY READ AND UNDERSTOOD!



WARNING

Before operating the equipment, be sure to wear personal protective equipments such as follows:

1. Helmet
2. Protective goggles
3. Protective boots
4. Safety gloves
5. Hearing Protection



WARNING

Do not operate the equipment if you are

1. taking medication, feeling drowsy, feeling unwell or feeling tired.
2. under the influence of drugs or alcohol.
3. hands, feet, lower back or other parts of your body hurt or being injured.

*** Failure to observe this precaution can result serious injury or even death.**

**CAUTION**

Do not touch the machine with your bare hands

1. The oil tank may become hot under continuous running.
Do not touch the equipment with your bare hands.

2. Tools may become hot under continuous use, make sure to wear gloves before any contact with the tools.

* Failure to observe this precaution can result getting burned

**CAUTION**

When lending someone the equipment

Make sure the safety instructions have been thoroughly read and fully understood by the person who is going to use the equipment.

**WARNING**

Operating in a well – ventilated area

1. Always operate the machine in a well – ventilated area.
2. While operating indoor, always ventilate the room.

Failure to observe this precaution can result gas inhalation or even death.

**DANGER**

Fire Prevention: Avoid flammable goods

1. Do not smoke or use any flame near fuel or oil.
2. Stop the engine before refueling.

Failure to observe this precaution can result fire, explosion which can even cause death.

**CAUTION**

Do not operate the equipment on a slope.

1. Do not operate the equipment on a slope.
2. When operate the equipment on an uneven ground, make sure to lock the wheels.

Failure to observe this precaution can result serious injury

INTRODUCTION

This power unit is designed to be used as power source for the following handheld equipments:

Hydraulic handheld breakers: **BH201, BH112, BH163**

Hydraulic handheld chipping hammer: **BH050**

Hydraulic handheld pile driver: **KH182/ KH183**

Hydraulic handheld earth drill (vertical): **OH1**

Hydraulic handheld earth drill (horizontal): **AY01H**

Hydraulic handheld rock drill: **DH203/ DH204**

Hydraulic handheld concrete cutter: **CH130**

Hydraulic handheld water pump: **PH300**

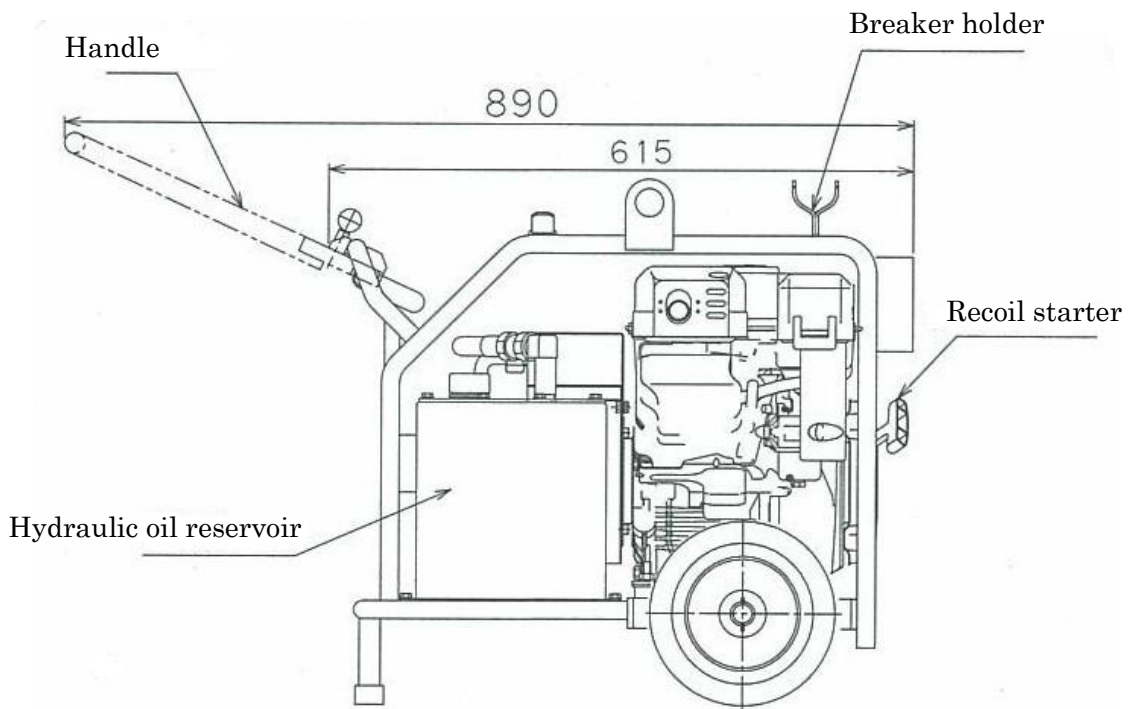
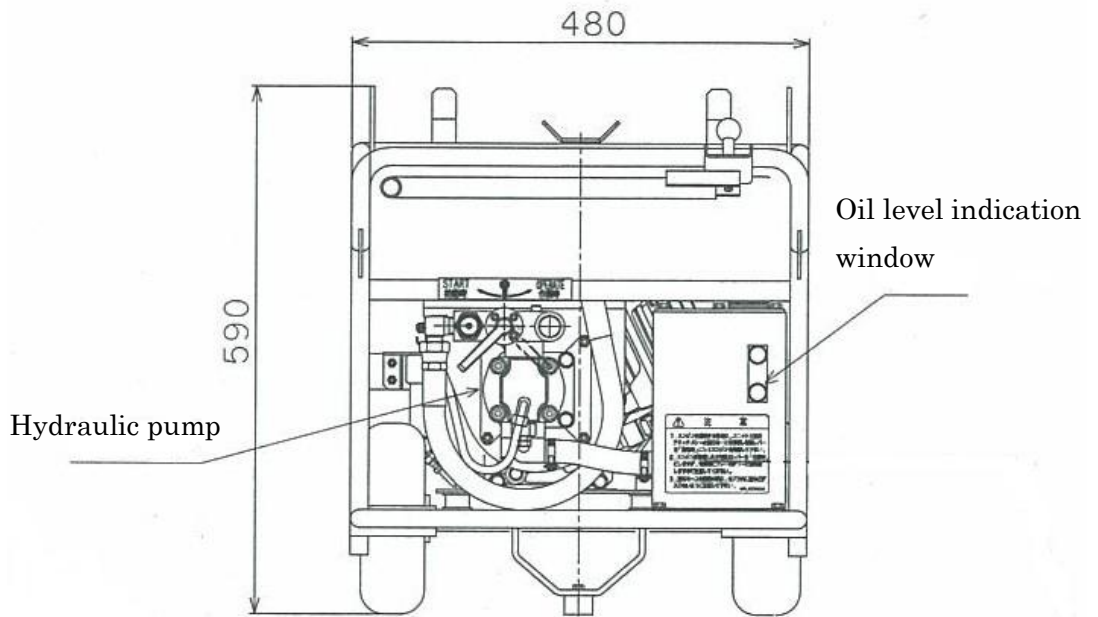
DO NOT operate this power unit on the following situations:

1. Close by inflammable objects or objects which catch fire easily
2. Underground, or any places which are not well-ventilated.
3. At high altitudes which exceeds 1,000m *(Consult with us if you have any questions)
4. Use the equipment for purposes other than stated in this manual.

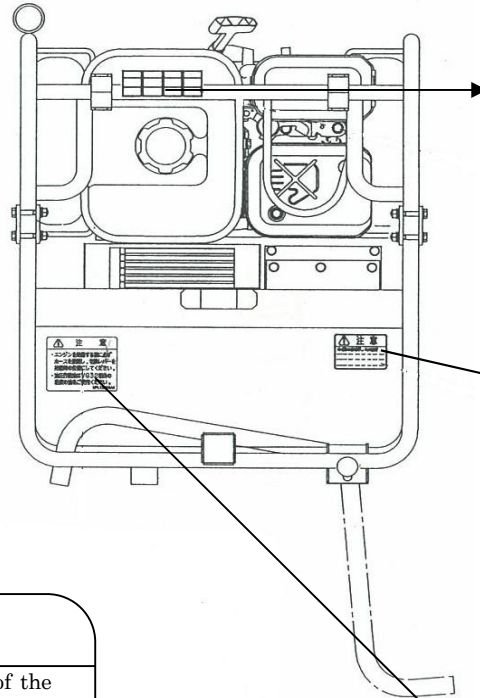
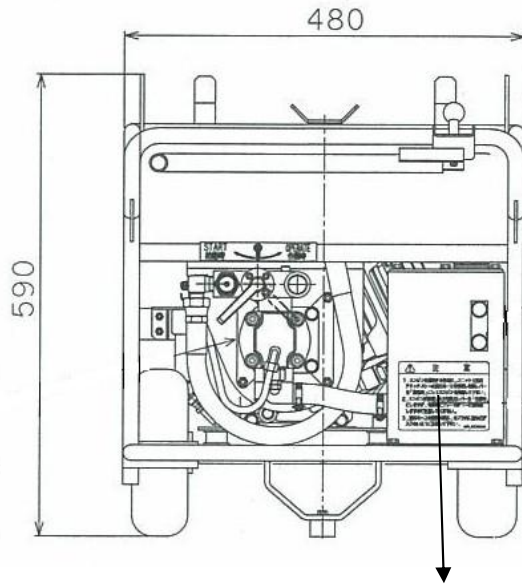
SPECIFICATIONS

| | |
|------------------------------|--|
| Overall Dimensions: | 615mm X 480mm X 590mm |
| Weight | 40kg |
| Max. Pressure | 11.7MPa |
| Required Oil Flow | 20.5L/min |
| Engine | Robin EX21D Max. Torque 5.2KW |
| Fuel Tank Capacity | 3.6L |
| Hydraulic reservoir Capacity | 4L |
| Engine Starting | Recoil Starter |
| Coupling | 3/8" Couplers |
| Hydraulic Oil Viscosity | ISO VG32 or equivalent |
| Others | Equipped with a air cooling oil cooler Foldable carriage handle |

DESCRIPTIONS



PRECAUTION LABELS AND POSITIONS



CAUTION

1. Before starting the engine, connect the hoses of the breaker with the power unit and turn the control lever at "START" position.
2. After starting the engine turn the control lever at "OPERATE" position. At the time, be careful that the breaker may hit once or twice.
3. Be careful so that dust or mud cannot put into the couplings when connecting and disconnecting.

CAUTION

Do not use on any slant places basically.
If used on a slant place, lock the wheels firmly.

CAUTION

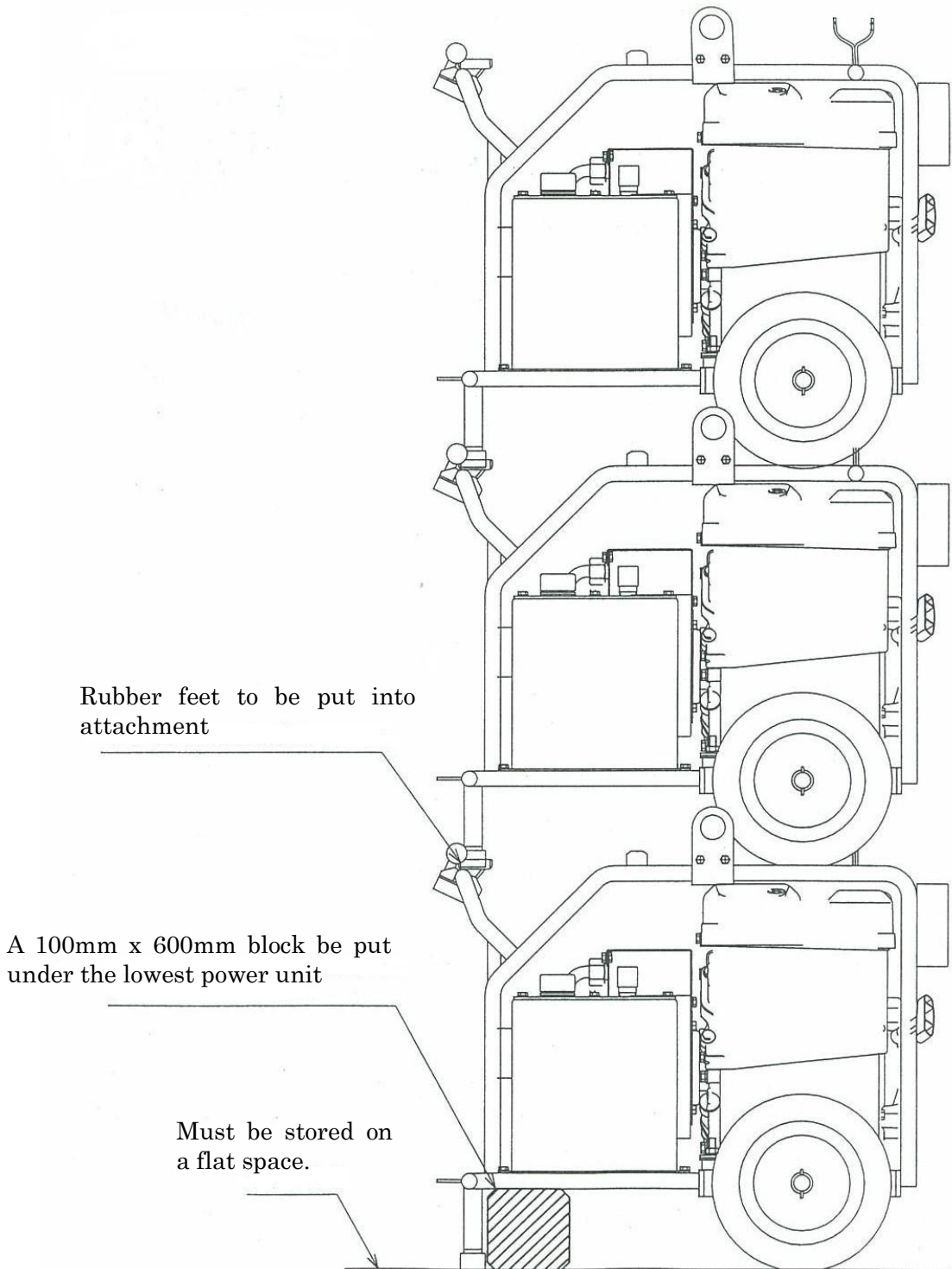
Before starting engine, connect hoses and put the control lever at "START" position. Always use the hydraulic oil viscosity grade VG32 or equivalent

GUIDELINES

Following these guidelines before using this power unit:

1. Do not use the machine on slopes. When the machine is necessary to be used on slope, make sure the wheels are locked firmly.
2. Make sure that dirt, dust, and mud do not get into hoses while connecting and disconnecting the hoses.
3. Warm up the engine before using if the temperature is under 10°C.
4. Make sure there is no flammable object near the muffler of the exhaust system
5. Anything related to engine, such as adjustments, storage and etc., refer to Robin Engine owner's manual for more information.
6. In case of sudden hydraulic hose breakage or hydraulic oil belch out of the hose, STOP the power unit right away.
7. When disconnecting power unit from other equipments (such as breakers), make sure all the couplers are capped.
8. When connecting and disconnecting hoses, a small amount of hydraulic oil might slip out. Make sure the circumference does not contaminated by hydraulic oil.
9. Hydraulic power units can be stored in 3 tiers under the following conditions:
 - (1) Must be stored on a flat space.
 - (2) Rubber feet be put into the attachments.
(Refer to the drawing on page 12)
 - (3) A 100mm x 600mm block be put under the lowest power unit.
(Refer to the drawing on page 12)

STORAGE



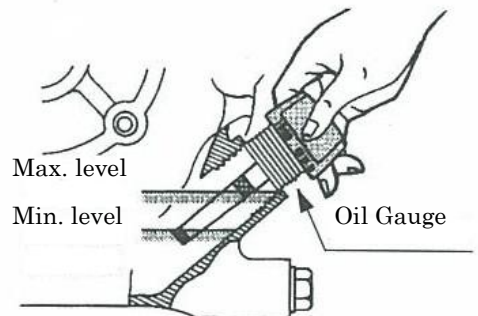
BEFORE THE OPERATION

1. Before Starting Engine:

(1) Engine Oil:

Check the engine oil level by oil gauge. Refill engine oil when the oil is below the min. level.

Recommended engine oil: **SAE 10W-30** or equivalent.
Capacity: 0.6L



(2) Hydraulic Oil:

Refill hydraulic oil when the oil level is below the oil indication window. Open the plug on the top of the oil tank, pour in hydraulic oil till the oil level reach to the middle of the indication window.

Recommended hydraulic oil: **ISO VG32** or equivalent.
Capacity: 4L

(3) Fuel:

Refill gasoline into the fuel tank.

Capacity: 3.6L

* Wipe out spilled gasoline on machines.

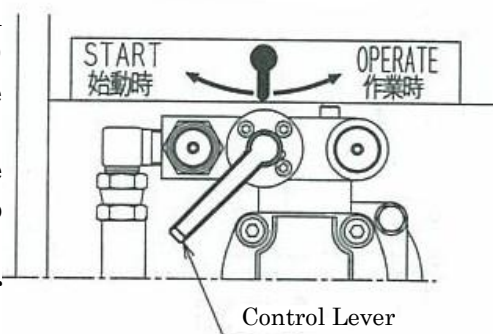
(4) Unlock the latch on breaker, load a chisel, and lock the latch.

2. Starting Engine:

(1) Attach power unit and equipment (breakers and etc) with connection hoses before starting engine.

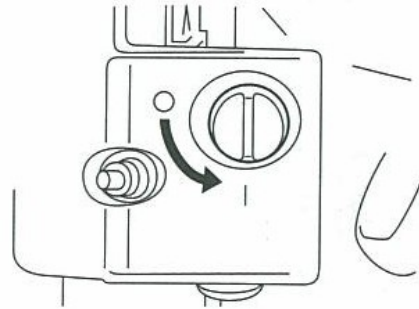
DO NOT start engine without connecting to equipment with hoses.

MAKE SURE control lever indicate to "START" position.

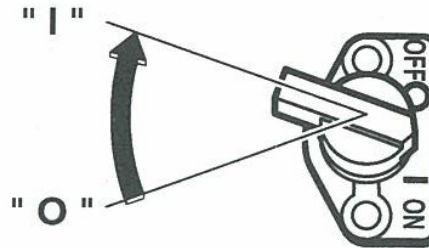


(2) Start operation

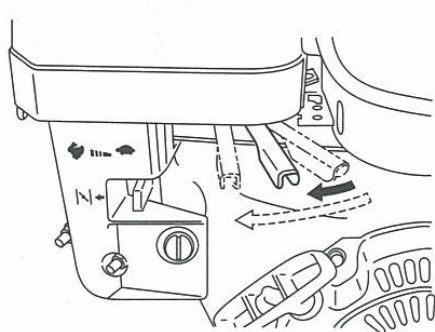
- ① Open the fuel cock.



- ② Turn the switch to "ON"



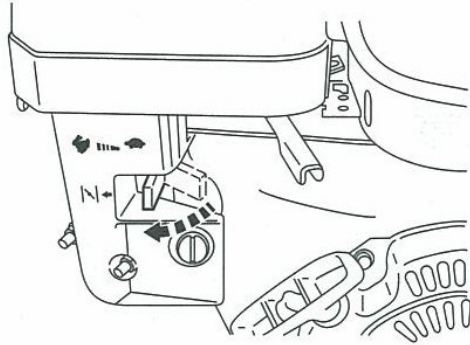
- ③ Turn the speed control lever from low speed (L) toward to high speed (H) and stop at 1/3 closer to (H) position.



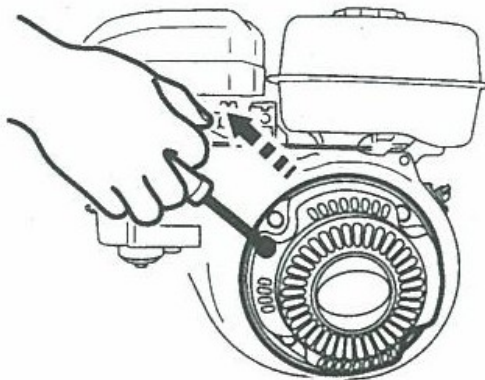
④ Close the choke lever.

When to open the choke lever:

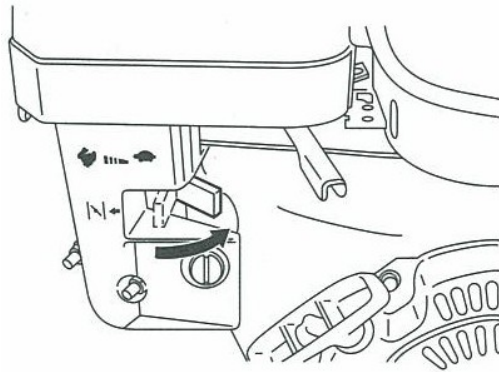
- When the weather is cold or when the engine is cold, close the choke lever.
- When the weather is warm or when starting the engine right after stopping, fully or partially open the choke.



⑤ Pull start rope gradually. DO NOT pull the starting rope rapidly. After the rope being fully pulled, DO NOT release it from your hand. Hold the starting rope till it returns to its original position.



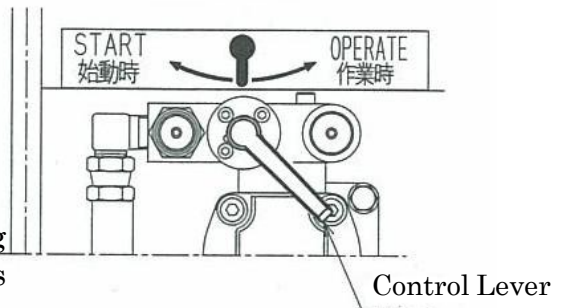
- ⑥ After the engine being started, open the choke lever.
- Open the choke lever gradually according to the engine's condition. Eventually, the choke lever should be fully opened.
 - When the weather is cold, engine might stop if you turn the choke lever too rapidly.



3. Operation:

- (1) Turn the throttle to high speed (H)

- (2) Turn the control lever to the "OPERATE" position. (Refer to the drawing on the right)

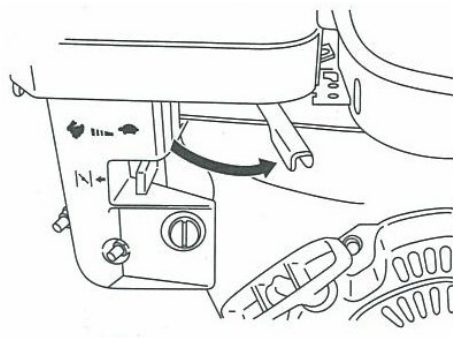


- (3) Read through all operating manuals of equipments which you intend to use with this power unit.

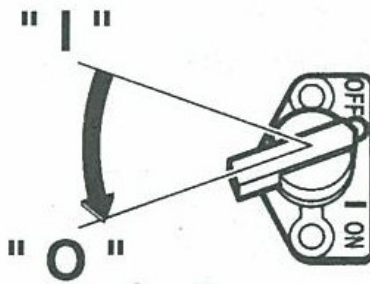
- (4) When stopping the operation of the equipment (breakers and etc) ALWAYS turn the engine throttle to the Low Speed (L) side. This can save energy and reduce the noise level.

4. Stoppage:

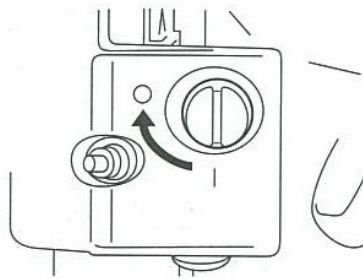
- (1) Turn the speed control lever to Low Speed (L) side and run the machine for 1 to 2 minutes.



- (2) Turn the switch to "O" Off side.



- (3) Turn off the fuel cock.



- (4) Detach connection hoses from equipment (breakers and etc).
Connect couplers on the hoses together.



The temperature of the machine goes high while being operated. Always wear gloves when operating the equipments (breakers and etc,) and be attentive for the heat on the equipments (breakers and etc), hoses and power unit.

MAINTANANCE

I. Daily Inspections

- (1) Check the engine oil level each time before starting the engine.
- (2) Make sure hydraulic oil is above the middle line on the indicator window. Refill hydraulic oil if necessary.
(Recommended Hydraulic Oil: ISO VG32 or equivalent)
- (3) Clean the element of the air cleaner in the engine.
- (4) Make sure there is no oil leakage from the pump and hoses. Tighten up the hose joints and bolts if necessary.
- (5) Start the engine, make it run in low speed (Idling) and make sure there is no abnormal sound and abnormal movement.

II. Periodically Inspections

For the purpose of keeping the power unit in a good condition, make sure the following maintenance items are done periodically.

| Item | Operating Hours | | |
|-----------------------------------|-----------------|------|------|
| | 50H | 100H | 200H |
| Change engine oil | * ○ | | |
| Clean the air cleaner | ○ | | |
| Clean the strainer | | | ○ |
| Clean the spark plug | ○ | | |
| Change hydraulic oil | | ○ | |
| Replace cartridge filter | | | ○ |
| Clean the radiator | | ○ | |
| Clean the suction filter | | | ○ |
| Clean the hydraulic oil reservoir | | | ○ |

* The first replacement is 20 hours

- (1) Draw out the hydraulic oil from the drain plug at the bottom of the oil tank.
Changing the hydraulic oil when the color of the hydraulic oil changed or when it smells burning. Always replace the same type of hydraulic oil.
- (2) Suction filter should be cleaned by non-lead gasoline.
- (3) Blow away the dust, dirt from oil cooler.
- (4) Inspect the connection hoses which connected to breaker thoroughly. Replace a new one if there are scratches, damages which may lead to oil leakage.

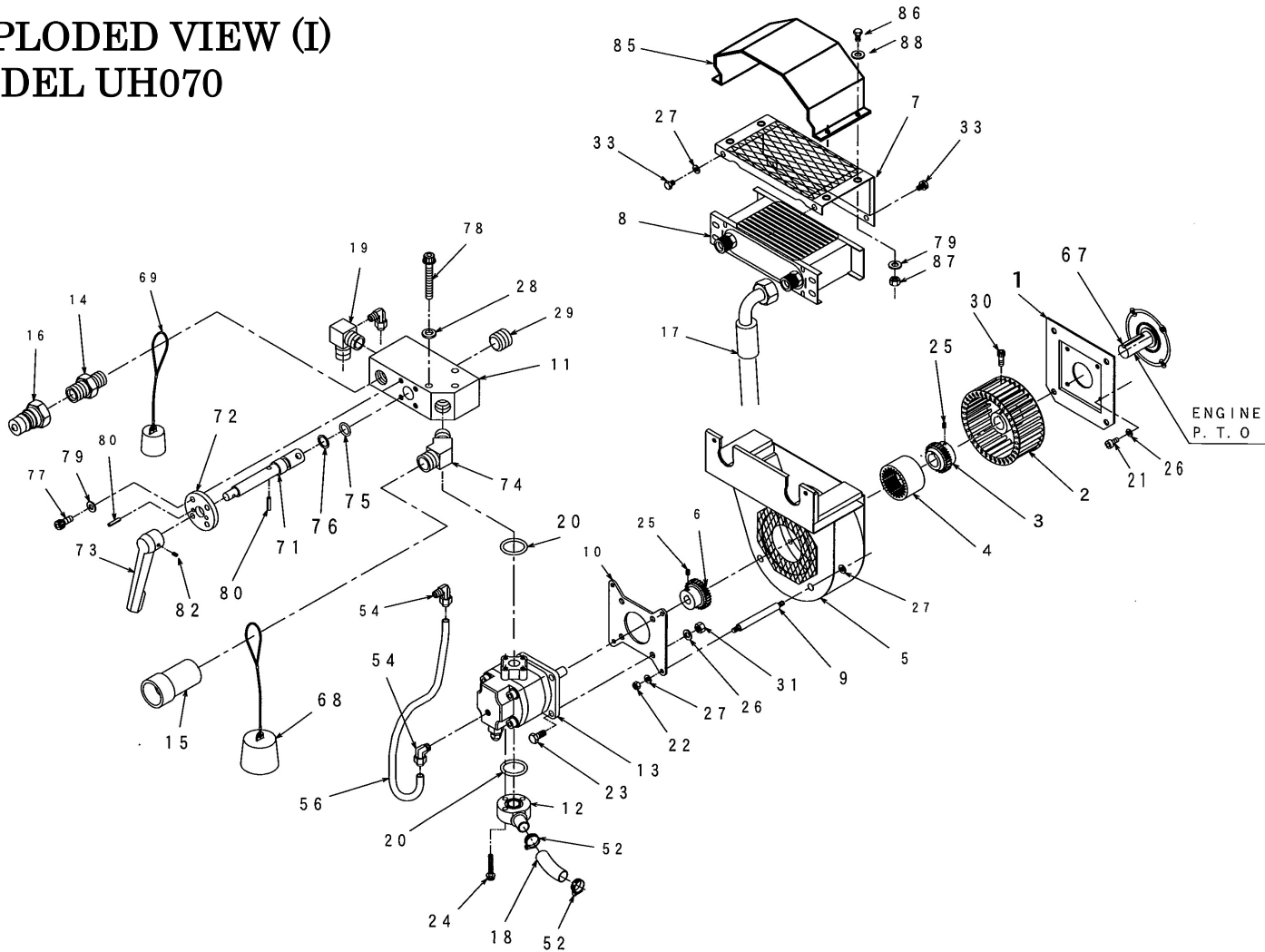
TROUBLESHOOTING

Ask your dealer for service for items with*

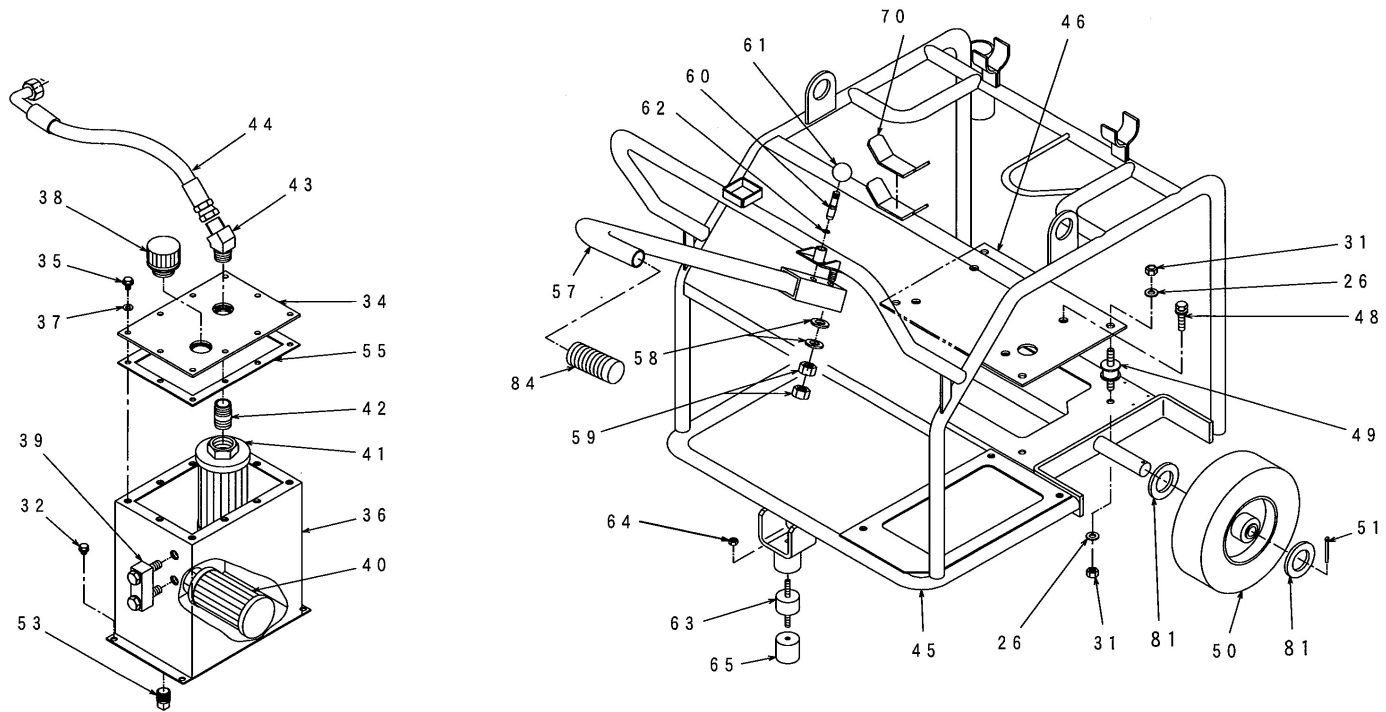
| Symptoms | Causes | Countermeasures |
|---|---|---|
| Engine does not start | <ol style="list-style-type: none"> 1. No fuel in fuel tank 2. Damage of ignition plug 3. Clog of carburetor 4. Fuel cock is closed 5. Overflow of fuel by overusing choke 6. Trouble of ignition 7. Clog of fuel filter 8. Switch is in "OFF" position 9. Clog of air cleaner. | <ol style="list-style-type: none"> 1. Refill fuel 2. Clean or replace ignition plug 3. Disassemble and clean the carburetor 4. Open the fuel cock 5. Turn the choke lever to close position, pull starter rope several times. 6. Inspect or repair if necessary* 7. Clean the fuel filter 8. Turn the switch to "ON" position 9. Clean the air cleaner |
| Start rope is heavy when pulling | <ol style="list-style-type: none"> 1. Power unit is not connected with the equipment (breaker and etc) 2. Burning of cylinder due to less engine oil 3. Damage of couplers | <ol style="list-style-type: none"> 1. Connected power unit to equipment (breaker and etc) 2. Disassemble and repair* 3. Inspect, replace new ones if necessary |
| Engine rotation (rpm) does not raise up | <ol style="list-style-type: none"> 1. Choke was not turned to the original position 2. Not enough fuel 3. Clog of fuel filter 4. Clog of air cleaner | <ol style="list-style-type: none"> 1. Turn the choke to its original position 2. Refill fuel 3. Clean the fuel filter 4. Clean the air cleaner |
| Attached equipment does not operate or operate in lower power | <ol style="list-style-type: none"> 1. Not enough hydraulic oil 2. Insufficiency of the hydraulic oil | <ol style="list-style-type: none"> 1. Refill hydraulic oil 2. Change hydraulic oil |

| | | |
|--|--|--|
| | <ol style="list-style-type: none"> 3. Decrease of relief valve pressure 4. Wear of pump 5. Low rotation(rpm) of the engine 6. Clog of the air cleaner in engine 7. Control lever is in “START” position | <ol style="list-style-type: none"> 3. Adjust relief valve pressure* 4. Replace a new pump* 5. Adjust rotation (rpm) of the engine 6. Clean the air cleaner in engine 7. Turn the control lever to “ OPERATE” position |
| Oil temperature is abnormal high (Over 90°C) | <ol style="list-style-type: none"> 1. Clog of radiator 2. Clog of fan | <ol style="list-style-type: none"> 1. Clean the radiator 2. Clean the fan |
| Oil leakage from hoses or couplers | <ol style="list-style-type: none"> 1. Loose of hoses fitting and couplers 2. Damage of hoses | <ol style="list-style-type: none"> 1. Tighten up hoses and couplers 2. Replace new hoses or couplers if necessary |

EXPLODED VIEW (I) MODEL UH070



EXPLODED VIEW (II) MODEL UH070



PARTS LIST MODEL UH070

| No. | Code | Description | Q'ty | No. | Code | Description | Q'ty |
|-----|--------------------|----------------------|------|-----|-----------------|---------------------|------|
| 1 | MU02E019A | Mounting Plate(A) | 1 | 24 | BH-6X40 (2P) | Bolt | 3 |
| 2 | CAB050050020BY (H) | Fan | 1 | 25 | SH-4X6 | Screw, Hex. Xocket | 2 |
| 3 | MU08Z052A | Coupling(E) | 1 | 26 | WS-8 | Washer | 20 |
| 4 | MU08Z054A | Hub | 1 | 27 | WS-6 | Washer | 22 |
| 5 | MU08Z064A | Fan Case (N) A'ssy | 1 | 28 | MU02Z092A | Washer | 3 |
| 6 | MU08Z053A | Coupling (P) | 1 | 29 | BPH1-PT3/8 | Plug | 1 |
| 7 | MU08Z051A | Radiator Cover A'ssy | 1 | 30 | BH-4X6 | Bolt | 1 |
| 8 | MU08Z007A | Radiator | 1 | 31 | N1-8 | Nut | 12 |
| 9 | MU02E008B | Stud Bolt | 4 | 32 | B-6X15 (2P) | Bolt | 4 |
| 10 | MU04Z005A | Pump Flange | 1 | 33 | B-6X10 (2P) | Bolt | 4 |
| 11 | MU08Z018A | Valve Body (L) | 1 | 34 | MU08Z006A | Lid | 1 |
| 12 | MU04Z006A | Suction Flange | 1 | 35 | BG-6X15 | Bolt | 10 |
| 13 | 403-40099 | Pump | 1 | 36 | MU08Y002A | Tank | 1 |
| 14 | AJ-2083-06 | Adapter | 1 | 37 | 1240-404 | ∅ 6 Washer | 10 |
| 15 | QC-03F | Coupler (Female) | 1 | 38 | BM-3/4 | Tank Cap | 1 |
| 16 | QC-03M | Coupler (Male) | 1 | 39 | KLA-40A-C | Oil Level Indicator | 1 |
| 17 | 01126 · 8--52-- | Low Pressure Hose | 1 | 40 | CT-04W | Suction Filter | 1 |
| 18 | MU08Z019A | Suction Hose | 1 | 41 | RC-04-30-15 | Return Filter | 1 |
| 19 | MU08Z009A | Elbow | 1 | 42 | LJ-04BN | Barrel Nipple | 1 |
| 20 | OP-22 | O-Ring | 2 | 43 | AJ-1036-08 | Adapter | 1 |
| 21 | BH-8X20 | Bolt | 4 | 44 | 01126 · 8--31-- | Low Pressure Hose | 1 |
| 22 | N1-6 | Nut | 4 | 45 | MU08X001C | Frame (P) | 1 |
| 23 | B-8X25 | Bolt | 4 | 46 | MU08Z044A | Engine Base | 1 |

| No. | Code | Description | Q'ty | No. | Code | Description | Q'ty |
|-----|---------------------|----------------------|------|-----|--------------------|-------------------|------|
| 47 | --- | --- | --- | 70 | MU08Z012A | Holder Rubber | 1 |
| 48 | B-8X40 (3P) | Bolt | 4 | 71 | MU08Z015B | Rotary (L) | 1 |
| 49 | KA-30 | Cushion Rubber | 4 | 72 | MU08Z017A | Plate (L) | 1 |
| 50 | G-200B | Tire | 2 | 73 | MU08Z030A | Fixed Lever | 1 |
| 51 | PS-3.2X30 | Pin | 2 | 74 | AJ-2097-06 | Adaptor | 1 |
| 52 | SS-8 | Hose Band | 2 | 75 | OP-10A (1A) | O-Ring | 1 |
| 53 | BPQ-PT3/8 | Plug | 1 | 76 | OBP-10 | Back Up Ring | 1 |
| 54 | L4N8X6-PT1/4 | Elbow | 2 | 77 | BH-5X15 | Bolt | 4 |
| 55 | MU08Z005A | Tank Packing | 1 | 78 | BH-6X45 (2P) | Bolt | 3 |
| 56 | N5-4-8X6-0.250 KURO | Tube | 1 | 79 | WS-5 | Washer | 4 |
| 57 | MU08Z008B | Handle | 1 | 80 | PR-4X14 | Pin | 4 |
| 58 | WF-12(1L) | Washer | 2 | 81 | WP-20 | Washer | 4 |
| 59 | N-12 | Nut | 1 | 82 | SH-5X6(TOGARISAKI) | Screw | 1 |
| 60 | MU05Z003A | Pin | 1 | 83 | --- | --- | --- |
| 61 | PCA8-25 | Plastic Ball | 1 | 84 | C-30B | Line Grip | 1 |
| 62 | OS-7 | O-Ring | 1 | 85 | MU03Y113A | Radiator Cover EX | 1 |
| 63 | KA-25 | Cushion Rubber | 1 | 86 | B-5*12 | Bolt | 4 |
| 64 | NN-6 | Nut | 1 | 87 | N1-5 | Bolt | 4 |
| 65 | MU08Z058A | Front Foot | 1 | 88 | WP-5 | Washer M5 | 1 |
| 66 | MU08Z020A | Label E(Operation) | 1 | | | | |
| 67 | 032-00501-50 | Key | 1 | | | | |
| 68 | CC-03F | Coupler Cap (Female) | 1 | | | | |
| 69 | CC-03M | Coupler Cap (Male) | 1 | | | | |