**KUBOTA DIESEL AC60 OC60 95**

**OPERATOR’S MANUAL**

Thank you very much for purchasing a KUBOTA diesel engine. We believe that it will serve you well for a long time. Before use, be sure to read this Operator’s Manual carefully. With proper handling and maintenance, this diesel engine will provide excellent service over an extended period of time.

**SAFETY FIRST**

This symbol, the industry’s “Safety Alert Symbol”, is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you attempt to assemble or use this unit.

**DANGER**

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

**CAUTION**

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

**IMPORTANT:**

Indicates that equipment or property damage could result if instructions are not followed.

**NOTE:**

Important information.

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**SPECIFICATIONS**

**AC60**

- **Type:** Vertical, air-cooled, 4-cycle diesel engine
- **Engine model number:** AC60-D
- **Recommended capacity of battery (in Use Hours):** 28 Ah
- **Recommended capacity of charging generator:** 180 W
- **Recommended capacity of starting motor:** 40 W

**POWER SERVICE**

- **Engine speed:** 2,800 rpm
- **Lubricating system:** Direct injection system
- **Lubricating oil:** Diesel fuel oil (SAE No. 30)
- **Cooling system:** Air-cooled ACTV (Oil & Air cooling)

**PERIODIC SERVICE**

- **1. Daily (before starting):** Check the coolant level, oil level, and battery. Check the engine and muffler for damage. Check the fuel pump and filter.
- **2. Every 300 hours:** Check the fuel filter, belt, and belt tension.
- **3. Every 600 hours:** Check the air filter, oil filter, and spark plug.
- **4. Every 1,200 hours:** Check the oil level, air filter, oil filter, and spark plug.
- **5. Every 2,400 hours:** Check the oil level, oil filter, and spark plug.

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**BATTERY**

**CONNECTING**

Always handle the battery correctly to ensure maximum performance.

1. Before use, be sure to check the polarity of the battery. If it is incorrect, it will not start.
2. Always carry out daily inspection and maintenance, and charge the battery before the voltage drops.
3. Always check the voltage level to avoid low battery voltage. Add distilled water as necessary. The battery will damage the battery if its fluid level stands below the LOWER mark.

**CAUTION**

- Do not use electric clothing and shoes with battery antistatic. When the battery antistatic, put dilute sulfuric acid, it will damage the battery. Wash away when battery electrolyte touches to the clothes.

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**SAFE OPERATION**

1. Before operation, wear a proper cap and work clothes to prevent clothing, hair, travel, and such from getting caught in the engine.
2. Before operation, check all nut bolts and nuts for looseness and fix or tighten them.
3. Avoid placing inflammable materials close to the engine during operation.
4. As exhaust gases are harmful:
   - (1) Avoid operating the engine in an unventilated place or where exhaust gases accumulate.
   - (2) Take special care during operation to prevent exhaust gases from affecting yourself or people or animals around you.
5. When using or cleaning the engine, be sure to use a hose to fuel to prevent the risk of injury. Be sure to clean the engine thoroughly.
6. If the engine is to be left to stand, make sure to turn off the fuel.
7. Keep children away from the engine during operation.
8. Do not touch the muffler, exhaust pipe or other parts during or immediately after operation.
9. Always stop the engine in the following cases:
   - (1) When checking, adjusting or cleaning the muffler.
   - (2) When discharging, recharging or injecting oil from or into the muffler.
10. Keep off the engine if its fluid level stands below the LOWER mark.

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**How to hoist up the engine**

1. Do not use or charge the battery if its fluid level stands below the LOWER mark.
2. Otherwise, the component parts may deteriorate faster than expected, which may shorten the service life or cause an explosion. Immediately, add distilled water until the fluid level is between the UPPER and LOWER levels.
3. Some of the engine parts, fuel filter, etc., are not resistant to acids. Be sure to change the battery in a place away from the engine, following the instructions of the battery manufacturer.

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**PULLEY**

To achieve the most efficient, the pulley must be as close to the engine as possible. If the size of the pulley is too small, the pulley will emit black fumes and output will decrease, not only lowering operating efficiency, but also shortening the life of the engine.

To select the proper pulley size, use the following formula:

- **Machine pulley size = Machine speed ÷ Engine speed**

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**Genuine Regulator Installation Example**

To install the regulator, follow these steps:

1. Install the regulator according to the instructions provided with the regulator.
2. Make sure the engine is cooled down.

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**WIRING DIAGRAM**

- **[Note]**
  - For the AC60-D engine, the wiring diagram is as follows.\n  - This diagram is different from that of the model with 180 W generator, as the model with 180 W generator is for the generator.

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**READ AND SAVE THIS BOOK**
STARTING AND OPERATION

THE OIL COOLER

When the temperature is 0°C (40°F) or less,
leave the starter switch at “ON” (protection) for approximately 5 seconds, then set it to “ST” (starting).

When conditions are harsh, starting lead should be kept as in a compressor.

THE RUBBER HOSE

STARTING (Electric starting model)

When the engine speed is 500 rpm or less,
leave the starter switch at “ON” (protection) for approximately 5 seconds, then set it to “ST” (starting).

When conditions are harsh, starting lead should be kept as in a compressor.

THE AIR CLEANER

When you feel heavy, return slowly.

Starting (Recoil starting model)

Set the control speed to the “starting” position.

This decompression device is automatic return system. After pulling the rope of recoil starter, the decompression returns automatically to the original position. And the decompression is released.

STARTING AT LOW TEMPERATURE

(Recoil starting model)

Take a small amount of oil through the oil cup of the air cleaner flange for smooth starting at low temperatures.

(1) Take the steps up of the recoil starting and make sure the air inside the engine is purged.

(2) Open the oil cup lid and pour a small amount (less than 3 cc of fuel).

(3) Close the oil cup lid.

(4) Take the starting rope to the recoil starting.

(5) Some models have no oil cup.

NOTE

Never pour any fuel or oil into the oil cup while the engine is running. The engine may catch fire, which is very dangerous.

OPERATION

Warm-up

Always take a certain amount of time for oil to circulate through the engine, and avoid load operation for several minutes to check the engine condition.

Break-in

Break-in the engine for the first week (40 ~ 50 hours) without applying excess load.

STORAGE

(1) Reduce the engine speed and stop it for two or three minutes.

(2) Pull the stop lever (red) in the direction of the arrow until the engine stops.

(3) Set the L/D switch to “O/F” (off), and then to “F” (fuel) in accordance with the oil level in the fuel tank.

(4) If the engine is to be stored for a long period, disconnect the battery from the engine, adjust the fuel level properly, and store in a dry, dark place.

(5) Store the engine in a small room, allow sufficient time for the engine to cool down before storage.

NOTE

Never stop the engine using the decompression lever. Difference, valves, or related parts may be damaged.

PRECAUTIONS AT RECOIL STARTING

If you pull the rope slowly, it causes engine not only a slow start but also a gum shot to your hand.

If you pull the rope fully at a dash, the engine starts. (Pulling the rope at a dash is the knack for easy starting.)

If the engine does not start, repeat from (1).

CAUTION

To avoid the risk of fire when storing the engine in a room, allow sufficient time for the engine to cool down before storage.

Always take a certain amount of time for oil to circulate through the engine, and avoid load operation for several minutes to check the engine condition.

CAUTION

Never pour any fuel or oil into the oil cup while the engine is running. The engine may catch fire, which is very dangerous.

NOTE

Never stop the engine using the decompression lever. Difference, valves, or related parts may be damaged.

(1) Replace the engine oil and clean each item.

(2) Thoroughly clean the cleaner element to prevent dust from entering.

(3) After the engine cools down, please over it in a plastic dust sheet, then store in a place free from moisture and dust.

(4) If the engine is to be stored for a long period, disconnect the battery from the engine, adjust the fuel level properly, and store in a dry, dark place.

(5) If the battery discharges even during storage, charge it every month in a dry, dark room.