

## **9.1 Daily Maintenance**

- 9.1.1 Drain out fluid in the natural gas separator in regular. Prevent it from freezing in winter.
- 9.1.2 Check the oil level in oil sump. Exam oil quality and fill with new oil if necessary.
- 9.1.3 Check pipelines if its pressure meets the specified requirements
- 9.1.4 Check and clean out water, particles and residue in gas pipelines.
- 9.1.5 Check the gas pipelines for gas leakage with gas leakage measuring instrument. If pipelines leakage, take measures to remove troubles.
- 9.1.6 Check electromagnetic valve and pressure regulating valve for correctness. Remove water, particles and residue in the valve in time.
- 9.1.7 Check water level in engine; fill cooling water if necessary.
- 9.1.8 Check all of the connections and mounted parts for correct tightness.
- 9.1.9 Monitor the operating parameters of the engine indicated in the instrument. Please pay much attention on exhaust temperature, in-cylinder temperature, oil pressure, oil temperature and water temperature.
- 9.1.10 Observe engine exhaust smoke and monitor its sound closely. If any abnormal phenomenon appears, find out causes and then remove.
- 9.1.11 Check the engine for water, oil and gas leakage. Make sure the engine in clean and good working condition. Keep it clean.
- 9.1.12 Inspect pressure differences of pipeline flame arrestor. Clean out if necessary.
- 9.1.13 Record its operating conditions carefully according to requirements.

## **9.2 Weekly Maintenance**

- 9.2.1 Undertake all the items prescribed for daily maintenance.
- 9.2.2 Check the spark plug; clean out carbon deposit on it. Adjust its gap by the methods described in its manual.
- 9.2.3 Clean out the air filter elements of the breather in time .
- 9.2.4 Clean out screen of breather in time.
- 9.2.5 Clean out the engine.

## **9.3 Monthly Maintenance**

It is necessary to do the following technical maintenance after the engine operates every month or 500~700h.

- 9.3.1 Undertake all the jobs prescribed for weekly maintenance.
- 9.3.2 Clean out the oil filter and replace paper elements.
- 9.3.3 Clean out the centrifugal filter.
- 9.3.4 Replace oil in the oil sump (replace it or not according to oil quality).
- 9.3.5 Check and adjust valve clearance.
- 9.3.6 Check the ignition advance angle.
- 9.3.7 Inspect the alarm system (including the alarm device in the engine room).
- 9.3.8 Clean out cooling system.
- 6.3.9 Check the forced ventilation equipment in the engine room.

## **9.4 Seasonal Maintenance**

Perform the following maintenance after the engine operates 2000h:

9.4.1 Undertake all jobs monthly maintenance.

9.4.2 Clean out the lubricating system and replace oil.

9.4.3 Check all of the instruments and alarm devices.

9.4.4 Examine the safety equipment

9.4.5 Dismantle to check the cylinder head. Grind the valve, if necessary (after 3000h operation).

9.4.6 Clean the cooling system. Fill antifreeze into cooling water in winter.