

# TROUBLESHOOTING GUIDE

## 1. ENGINE

This guide is not intended to cover every conditions, however many of the more common possibilities are listed.

| Trouble  | Service  | Remark |
|--|--|--------|
| The engine oil pressure lamp lights ON when engine speed is raised after completion of warm up.                  | <ul style="list-style-type: none"> <li>• Add the oil to the specified level.</li> <li>• Replace the oil filter cartridge.</li> <li>• Check oil leakage from the pipe or the joint.</li> <li>• Replace the monitor.</li> </ul>  |        |
| Steam is emitted from the top part of the radiator(The pressure valve).<br>Coolant level warning lamp lights ON. | <ul style="list-style-type: none"> <li>• Supply the coolant and check leakage.</li> <li>• Adjust fan belt tension.</li> <li>• Wash out inside of cooling system.</li> <li>• Clean or repair the radiator fin.</li> <li>• Check the thermostat.</li> <li>• Tighten the radiator cap firmly or replace the packing of it.</li> <li>• Replace the monitor.</li> </ul> |        |
| The engine does not start when the starting motor is turned over.  | <ul style="list-style-type: none"> <li>• Add fuel.</li> <li>• Repair where air is leaking into fuel system.</li> <li>• Check the injection pump or the nozzle.</li> <li>• Check the valve clearance.</li> <li>• Check engine compression pressure.</li> </ul>  |        |
| Exhaust gas is white or blue.  | <ul style="list-style-type: none"> <li>• Adjust to specified oil quantity.</li> <li>• Replace with specified fuel.</li> </ul>  |        |
| Exhaust gas occasionally turns black.  | <ul style="list-style-type: none"> <li>• Clean or replace the air cleaner element.</li> <li>• Check the nozzle.</li> <li>• Check engine compression pressure.</li> <li>• Clean or replace the turbocharger.</li> </ul>   |        |
| Combustion noise occasionally changes to breathing sound.  | <ul style="list-style-type: none"> <li>• Check the nozzle.</li> </ul>  |        |
| Unusual combustion noise or mechanical noise.  | <ul style="list-style-type: none"> <li>• Check with specified fuel.</li> <li>• Check over-heating</li> <li>• Replace the muffler.</li> <li>• Adjust valve clearance.</li> </ul>  |        |

## 2. ELECTRICAL SYSTEM

| Trouble   | Service   | Remark |
|---|---|--------|
| Lamp does not glow brightly even when engine runs at high speed.<br>Lamp flickers while engine runs.                    | <ul style="list-style-type: none"> <li>• Check for loose terminals and open-circuit wiring.</li> <li>• Adjust belt tension.</li> </ul>  |        |
| Battery charging lamp does not go out even when engine runs at high speed.  | <ul style="list-style-type: none"> <li>• Check the alternator.</li> <li>• Check and repair wiring.</li> </ul>   |        |
| Unusual noise is emitted from the alternator.   | <ul style="list-style-type: none"> <li>• Check the alternator.</li> </ul>   |        |
| Starting motor does not turn when starting switch is turned ON.   | <ul style="list-style-type: none"> <li>• Check and repair the wiring.</li> <li>• Charge the battery.</li> <li>• Check the starting motor.</li> <li>• Check the safety relay.</li> </ul> |        |
| The pinion of the starting motor keeps going in and out.  | <ul style="list-style-type: none"> <li>• Charge the battery.</li> <li>• Check the safety relay.</li> </ul>  |        |
| Starting motor turns the engine sluggishly.   | <ul style="list-style-type: none"> <li>• Charge the battery.</li> <li>• Check the starting motor.</li> </ul>  |        |
| The starting motor disengages before the engine starts up.  | <ul style="list-style-type: none"> <li>• Check and repair the wiring.</li> <li>• Charge the battery.</li> </ul>   |        |
| The engine warming up lamp does not go ON.  | <ul style="list-style-type: none"> <li>• Check and repair wiring.</li> <li>• Check the monitor.</li> </ul>  |        |
| The engine oil pressure lamp does not light up when engine is stationary(When the starting switch is in ON position.)   | <ul style="list-style-type: none"> <li>• Check the monitor.</li> <li>• Check the caution lamp switch.</li> </ul>  |        |
| Battery charging lamp does not light up when the engine is stationary.<br>(When the starting switch is in ON position.) | <ul style="list-style-type: none"> <li>• Check the monitor.</li> <li>• Check and repair the wiring.</li> </ul>  |        |

### 3. OTHERS

| Trouble   | Service  | Remark |
|---|--|--------|
| Track slip out of place.<br>Excessive wear of the sprocket. | <ul style="list-style-type: none"><li>• Adjust tension of track.</li></ul>   |        |
| Bucket either rises slowly or not at all.                   | <ul style="list-style-type: none"><li>• Add oil to specified level.</li></ul>  |        |
| Slow speed of travel, swing, boom, arm and bucket.          | <ul style="list-style-type: none"><li>• Add oil to specified level.</li></ul>  |        |
| Unusual noise emitted from pump.                            | <ul style="list-style-type: none"><li>• Clean the hydraulic tank strainer.</li></ul>   |        |
| Excessive oil temperature rise of hydraulic oil.            | <ul style="list-style-type: none"><li>• Clean the oil cooler.</li><li>• Adjust fan belt tension.</li><li>• Add oil to specified level.</li></ul> |        |