

TROUBLESHOOTING

HINT: Before troubleshooting the turbocharger, first check the engine itself. (Valve clearance, engine compression, ignition timing etc.)

INSUFFICIENT ACCELERATION, LACK OF POWER OR EXCESSIVE FUEL CONSUMPTION

| (Possible Cause) | (Check Procedure and Correction Method) |
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| 1. TURBOCHARGING PRESSURE TOO LOW | Check turbocharging pressure. (See page TC-8) Turbocharging pressure: 49 – 81 kPa (0.50 – 0.83 kgf/cm², 7.1 – 11.8 psi) If the pressure is below specification, begin diagnosis from item 2. |
| 2. RESTRICTED INTAKE AIR SYSTEM | Check intake air system, and repair or replace parts as necessary. (See page TC-9) |
| 3. LEAK IN INTAKE AIR SYSTEM | Check intake air system, and repair or replace parts as necessary. (See page TC-9) |
| 4. RESTRICTED EXHAUST SYSTEM | Check exhaust system, and repair or replace parts as necessary. (See page TC-9) |
| 5. LEAK IN EXHAUST SYSTEM | Check exhaust system, and repair or replace parts as necessary. (See page TC-9) |
| 6. ERRATIC TURBOCHARGER OPERATION | Check rotation of impeller wheel. If it does not turn or turns with a heavy drag, replace the turbocharger assembly. Check axial and radial plays of impeller wheel. (See page TC-13) Axial play: 0.13 mm (0.0051 in.) or less Radial play: 0.18 mm (0.0071 in.) or less If not within specification, replace the turbocharger assembly. |

ABNORMAL NOISE

(Possible Cause)

(Check Procedure and Correction Method)

**1. TURBOCHARGER HEAT INSULATOR
RESONANCE**

Check for loose, improperly installed or deformed insulator mounting bolts, and repair or replace as necessary.

**2. EXHAUST PIPE LEAKING OR
VIBRATING**

Check for deformed exhaust pipe, loose mounting bolts or damaged gasket, and repair or replace as necessary.

**3. ERRATIC TURBOCHARGER
OPERATION**

Refer to Item 6 of INSUFFICIENT ACCELERATION, LACK OF POWER OR EXCESSIVE FUEL CONSUMPTION.

EXCESSIVE OIL CONSUMPTION OR WHITE EXHAUST

(Possible Cause)

(Check Procedure and Correction Method)

FAULTY TURBOCHARGER SEAL

Check for oil leakage in exhaust system.

- Remove the turbine elbow from the turbocharger and check for excessive carbon deposits on the turbine wheel. Excessive carbon deposits indicate a faulty turbocharger.

Check for oil leakage in intake air system.

- Check for axial and radial plays in impeller wheel, and replace the turbocharger if necessary. (See page [TC-13](#))

Axial play: 0.13 mm (0.0051 in.) or less
Radial play: 0.18 mm (0.0071 in.) or less

NOTICE: There is some oil mist from the PCV in the blowby gas so care must be taken not to diagnose this as an oil leakage from the turbocharger.