TROUBLESHOOTING

PROBLEM SYMPTOMS TABLE

TC025–02

HINT:

Before troubleshooting the turbocharger, first check the engine itself. (valve clearance, engine compression, injection timing etc.)

1. INSUFFICIENT ACCELERATION, LACK OF POWER OR EXCESSIVE FUEL CONSUMPTION

Possible Cause	Check Procedure and Correction Method
1. TURBOCHARGING PRESSURE TOO LOW	Check turbocharging pressure. (See page TC–5) **Turbocharging pressure:** **60 – 79 kPa (0.61 – 0.81 kgf/cm^2, 8.7 – 11.5 psi)** If pressure is below specifications, begin diagnosis from item 2.
2. RESTRICTED INTAKE SYSTEM	Check intake air system, and repair or replace parts as necessary. (See page TC–6)
3. LEAK IN INTAKE AIR SYSTEM	Check intake air system, and repair or replace parts as necessary. (See page TC–6)
4. RESTRICTED EXHAUST SYSTEM	Check exhaust system, and repair or replace parts as necessary. (See page TC–6)
5. LEAK IN EXHAUST SYSTEM	Check exhaust system, and repair or replace parts as necessary. (See–page TC–6)
6. ERRATIC TURBOCHARGER OPERATION	Check rotation of impeller wheel. If it does not turn or turns with heavy drag, replace turbochager. Check axial and radial plays of turbine shaft. **Maximum axial play: 0.13 mm (0.0051 in.) or less** **Maximm radial play: 0.18 mm (0.0071 in.) or less** If play is greater than maximum, replace turbocharger.

2. ABNORMAL NOISE

Possible cause	Check Procedure and Correction Method
1. TURBOCHARGING HEAT INSULATOR RESONANCE	Check for loose, improperly installed or deformed Insulator nut and bolts, and repair or replace as necessary.
2. EXHAUST PIPE LEAKING OR VIBRATING	Check for deformed exhaust pipe, loose 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.

3. EXCESSIVE OIL CONSUMPTION OR WHITE EXHAUST

Possible Cause	Check Procedure and Correction Method
FAULTY TURBOCHARGER OIL SEAL	Check for oil leakage in exhaust system. • Remove turbine outlet elbow from turbocharger, and check for excessive carbon deposits on turbine wheel. Excessive carbon deposits indicate a faulty turbocharger. Check for oil leakage in exhaust system. • Check for axial and radial plays of turbine shaft, and replace turbocharger if necessary. **Maximum axial play: 0.13 mm (0.0051 in.) or less** **Maximum radial play: 0.18 mm (0.0071 in.) or less** **NOTICE:** **Some oil mist in blowby from PCV is normal. Do not mistake it for oil leak from turbocharger.**