

Turbocharger Failure Diagnosis



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This checklist provides a comprehensive list of the most common symptoms related to turbocharger failure. BEFORE replacing a turbocharger, verify the problem by consulting the chart below. If after taking the appropriate action problems still persist, please contact JM TURBO TECHNOLOGY CORP. for advice.

REASON <small>REASON</small>	Engine Running Hot	Poor Transient Response	Smoke	Engine Lacks Power	Black Exhaust Smoke	Blue Exhaust Smoke	High Oil Consumption	Turbocharger Noisy	Cyclic Sound From the Turbo	Oil Leak from Compressor Seal	Oil Leak From Turbine Seal	SYMPTOMS <small>SYMPTOMS</small> SOLUTION <small>SOLUTION</small>
Dirty air cleaner	●	●	●	●	●	●	●	●	●	●	●	Clean or replace element according to manufacturer's recommendations
Restricted compressor intake duct	●	●	●		●	●	●	●	●	●	●	Remove restriction or replace damaged parts as required
Restricted air duct from compressor to intake manifold	●	●		●	●			●				Replace seals, gaskets or tighten fasteners as required
Restricted intake manifold	●	●		●	●			●				Refer to engine manufacturer's manual and remove restriction
Air leak in feed from air cleaner to compressor								●				Replace seals, gaskets or tighten fasteners as required
Air leak in feed from compressor to intake manifold	●	●	●	●	●	●	●	●				Replace seals, gaskets or tighten fasteners as required
Air leak between intake manifold and engine	●		●	●	●	●	●	●				Refer to engine manufacturer's manual and replace gaskets or tighten fasteners as required

Foreign object in exhaust manifold (from engine)				●	●	●	●	●		●		Refer to engine manufacturer's manual and remove obstruction
Restricted exhaust system	●			●	●					●		Remove restriction or replace damaged parts as required
Exhaust manifold cracked, gaskets blown or missing		●	●	●	●			●				Refer to engine manufacturer's manual and replace gaskets or damaged parts as required
Gas leak at turbine inlet/exhaust manifold joint		●	●	●	●			●				Replace gasket or tighten fasteners as required
Gas leak in ducting after turbine outlet		●						●				Refer to engine manufacturer's manual and repair leak
Restricted turbocharger oil drain line						●	●			●	●	Remove restriction or replace damaged parts as required
Restricted engine crankcase breather						●	●			●	●	Refer to engine manufacturer's manual, clear restriction
Turbocharger bearing housing slugged or coked						●	●			●	●	Change engine oil and oil filter, overhaul or replace turbocharger as required
Fuel injection pump or fuel injectors incorrectly set		●	●	●	●							Refer to engine manufacturer's manual and replace or adjust faulty components as required
Engine valve timing incorrect				●	●							Refer to engine manufacturer's manual for correct settings and adjust as required
Worn engine piston rings or liners				●	●	●	●			●	●	Refer to engine manufacturer's manual and repair as required
Burnt valves and/or pistons				●	●	●	●			●	●	Refer to engine manufacturer's manual and repair as required
Excessive dirt build-up on impeller and/or diffuser vanes				●	●	●	●	●	●	●	●	Clean in accordance
Turbocharger damaged				●	●	●	●	●		●	●	Find and correct cause of failure, repair or replace turbocharger as necessary
Failed diaphragm	●							●				Replace using correct Actuator Service Kit
Seized valve	●	●										Free valve/replace complete turbine housing sub-assembly
Leaking hose	●							●				Replace hose and clips
Wastegate mechanism set incorrectly	●	●	●	●				●				Contact JM Turbo Technology Corp. for correct setting details