

TURBOCHARGER FAULT DIAGNOSIS

ENGINE RUNNING HOT	POOR TRANSIENT RESPONSE	SMOKE	ENGINE LACKS POWER	BLACK EXHAUST SMOKE	BLUE EXHAUST SMOKE	HIGH OIL CONSUMPTION	TURBOCHARGER NOISY	OIL LEAK FROM THE TURBOCHARGER	OIL LEAK FROM COMPRESSOR SEAL	OIL LEAK FROM TURBINE SEAL	CAUSE	REMEDY
✓	✓	✓	✓	✓	✓	✓		✓			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)	Remove restriction or replace damaged parts as required
✓			✓	✓				✓			Restricted exhaust system	Refer to engine manufacturer's manual and replace gaskets or damaged parts as required
	✓	✓	✓	✓			✓				Exhaust manifold cracked gaskets blown or missing	Replace gasket or tighten fasteners as required
	✓	✓		✓			✓				Gas leak at turbine inlet/exhaust manifold joint	Refer to engine manufacturer's manual and repair leak
	✓						✓				Gas leak in ducting after turbine outlet	Remove restriction or replace damaged parts as required
				✓	✓		✓	✓			Restricted turbocharger oil drain line	Refer to engine manufacturer's manual, clear restriction
				✓	✓		✓	✓			Restricted engine crankcase breather	Change engine oil and oil filter, overhaul or replace turbocharger as required
				✓	✓		✓	✓			Turbocharger bearing housing sludged or coked	Refer to engine manufacturer's manual and replace or adjust faulty components as required
	✓	✓	✓	✓							Fuel injection pump or fuel injectors incorrectly set	Refer to engine manufacturer's manual for correct settings and adjust as required
			✓	✓							Engine valve timing incorrect	Refer to engine manufacturer's manual and repair as required
			✓	✓	✓	✓		✓	✓		Worn engine piston rings or liners	Refer to engine 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 with the appropriate SCM repair manual
			✓	✓	✓	✓		✓	✓		Turbocharger damaged	Find and correct cause of failure, repair or replace turbocharger as necessary – contact SCM
✓							✓				Failed diaphragm	Replace using correct Actuator Service Kit – contact SCM
✓	✓										Siezed valve	Free valve/replace complete turbine housing sub-assembly – contact SCM
✓							✓				Leaking hose	Replace hose and clips
✓	✓	✓	✓				✓				Wastegate mechanism set incorrectly	Contact SCM

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