

# TURBOCHARGER FAULT FINDING GUIDE

ENGINE STALLS DURING ACCELERATION	ENGINE LACKS POWER	BLACK EXHAUST SMOKE	EXCESSIVE ENGINE OIL CONSUMPTION	BLUE EXHAUST SMOKE	TURBOCHARGER NOISY	CYCLIC SOUND FROM TURBO	OIL LEAK FROM COMPRESSOR SEAL	OIL LEAK FROM TURBINE SEAL	CAUSE	REMEDY
	●								Clogged air filter element	Replace element according to engine manufacturers recommendations
	●	●							Obstructed air intake duct to turbo compressor	Remove obstruction or replace damaged parts as required
	●	●							Obstructed air outlet duct from compressor to intake manifold	Remove obstruction or replace damaged parts as required
	●	●							Obstructed intake manifold	Refer to engine manufacturers manual & remove obstruction
					●				Air leak in duct from air cleaner to compressor	Correct leak by replacing seals or tightening fasteners as required
	●	●	●	●	●				Air leak in duct from compressor to intake manifold	Correct leak by replacing seals or tightening fasteners as required
	●	●	●	●	●				Air leak at intake manifold to engine joint	Refer to manufacturers manual & replace gaskets or tighten fasteners as required
	●	●	●	●	●		●		Obstruction in exhaust manifold	Refer to engine manufacturers manual & remove obstruction
	●	●					●		Restricted exhaust system	Remove obstruction or replace faulty components as required
	●	●					●		Gas leak in exhaust manifolds to engine joint	Refer to manufacturers manual & replace gaskets or tighten fasteners as required
	●	●					●		Gas leak in turbine inlet to exhaust manifold joint	Replace gasket or tighten fasteners as required
					●				Gas leak in ducting after the turbine outlet	Refer to engine manufacturers manual & repair leak
			●	●			●	●	Obstructed turbocharger oil drain line	Remove obstruction or replace line as required
			●	●			●	●	Obstructed engine crankcase vent	Refer to engine manufacturers manual, clear obstruction
			●	●			●	●	Turbocharger centre housing sludged or coked	Change engine oil & oil filter, overhaul or replace turbo as required
	●	●							Fuel system defective or maladjusted	Refer to engine manufacturers manual - replace or adjust faulty components as required
	●	●							Engine camshaft timing incorrect	Refer to engine manufacturers manual & replace worn parts
	●	●	●	●			●	●	Worn engine piston rings or liners (blowby)	Refer to engine manufacturers manual & repair engine as required
	●	●	●	●			●	●	Internal engine problem (valves, pistons)	Refer to engine manufacturers manual & repair engine as required
	●	●	●	●	●	●	●	●	Dirt caked on compressor wheel and/or diffuser vanes	Clean with Non-Caustic cleaner. Find & Correct source of unfiltered air and change engine oil & filter
	●	●	●	●	●		●	●	Damaged turbocharger	Find the correct cause of failure, replace turbocharger as required
	●								Turbocharger wastegate malfunction	Check wastegate and actuator operation
●									High boost pressure, triggering ignition cut out switch	Check wastegate and actuator operation. Replace faulty parts as required