

# Troubleshooting

Engine lacks power	Black exhaust smoke	Excessive engine oil usage	Blue exhaust smoke	Turbocharger noisy	Cyclic sound from turbo	Oil leak from compressor seal	Oil leak from turbine seal	Possible Problems	Solutions
▲	▲	▲	▲			▲		Clogged air filter element	Replace elements 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	Correct leak by replacing seals or tightening fasteners as required
				▲				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 engine manufacturers manual and replace gaskets or tighten fasteners as required
▲	▲	▲	▲	▲		▲		Obstruction in exhaust manifold	Refer to engine manufacturers manual and remove obstruction
▲	▲					▲		Obstruction in muffler or exhaust stack	Remove obstruction or replace faulty components as required
▲	▲			▲		▲		Gas leak in exhaust manifold to engine joint	Refer to engine manufacturers manual and replace gaskets or tighten fasteners as required
▲	▲			▲		▲		Gas leak in turbine inlet to exhaust manifold joint	Replace gaskets or tighten fasteners as required
				▲				Gas leak in ducting after the turbine outlet	Refer to engine manufacturers manual and 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 center housing sludged or coked	Change engine oil and oil filter, overhaul or replace turbo as required
▲	▲							Fuel injection pump or fuel injectors incorrectly adjusted	Refer to engine manufacturers manual - replace or adjust faulty component(s) as required
▲	▲							Engine camshaft timing incorrect	Refer to engine manufacturers manual and replace worn parts
▲	▲	▲	▲			▲	▲	Worn engine piston rings or liners (blowby)	Refer to engine manufacturers manual and repair engine as required
▲	▲	▲	▲			▲	▲	Internal engine problem (valves, pistons)	Refer to engine manufacturers manual and repair engine as required
▲	▲	▲	▲	▲	▲	▲	▲	Dirt caked on compressor wheel and/or diffuser vanes	Clean using a Non-Caustic cleaner and soft brush. Find and correct source of unfiltered air and change engine oil and oil filter
▲	▲	▲	▲	▲	▲	▲	▲	Damaged turbocharger	Analyze failed turbocharger, find and correct cause of failure, overhaul or replace turbocharger as required