

Table 7-1 Turbocharger Troubleshooting

Problem								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 and 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 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 gasket 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 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 noncaustic 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.

Lombardo, David A. (Author). Aircraft Systems. Blacklick, OH, USA: McGraw-Hill Professional Book Group, 1998. p 149. <http://site.ebrary.com/lib/modarres/Doc?id=5001849&page=165>