



## Turbochargers

Refer to the authorized original equipment service manual for detailed installation instructions. If you do not have the experience, proper tools or manuals, please seek the services of a qualified technician.



Replacement  
TIME:

8 hrs

## COMMON SYMPTOMS

- A decrease in engine power may be your first indication your turbocharger is damaged or has failed.
- Contact of either wheel resulting from excessive radial play indicates worn rotating components likely due to improper lubrication.
- Axial end play of the wheels and shaft in-and-out greater than the thickness of a sheet of paper indicates a worn thrust bearing due to excessive exhaust backpressure.
- Any nicks, scratches or chips on either wheel are evidence of foreign object damage caused by contaminants entering the airflow to or from the engine.

## MYTH BUSTER

**Myth:** Boost control can be adjusted on the replacement turbo.

**Myth Busted:** Attempting to adjust or replace any mechanical or electrical turbocharger component will void warranty, cause premature failure of the turbocharger and possibly damage the engine.



SKILL  
LEVEL:

Service Technician

B

or higher

## TIPS

- Replace oil, oil filter and air filter when installing a new turbocharger using only manufacturer-recommended oil and filter types.
- Inspect the used oil for any contaminants such as metal particles and cross contamination from other fluids. If contamination is found, perform a thorough diagnosis to determine the root cause of the contamination. Contaminated oil may have caused the original unit to fail and will damage the replacement unit.
- Prime the Turbocharger with the supplied syringe before engine startup to ensure proper lubrication.
- Clean or replace oil inlet and return lines of any carbon deposits, sludge or debris that could restrict oil flow.
- Never use Teflon tape or sealant on gaskets or fittings in the oil system as this could lead to a potential oil supply blockage.
- Clean and inspect the entire air intake and exhaust systems, including the turbocharger intercooler, for residual fuel and debris.
- Identify any source of restriction in the exhaust and replace any damaged components.
- Allow engine to warm up at least 20 seconds after startup and up to 2 minutes in freezing temps to prevent oil starvation.
- Avoid hot shut downs by allowing the engine to idle for at least 1 minute before turning off to properly cool turbocharger.
- Clean the oil inlet and drain ports that connect to the engine side of the pedestal to assure adequate oil supply and drainage.
- Some turbo configurations have a filter in the oil supply line that may not have a bypass feature. This screen must be cleaned or replaced.

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