# **Turbocharger Installation Guide**



This turbocharger "turbo" installation guide is intended as a reference to be used as general guidance by those with the automotive knowledge, experience, tools, and facilities necessary to conduct this work in accordance with mandated safety protocols. This guide is not appropriate for those without adequate automotive knowledge and repair qualifications. Professional service is recommended when replacing a turbo.

Safety First! Wear gloves and safety goggle.

#### RECOMMNEDED TOOLS:

gpd turbos are equipped with application specific accessories (exhaust gaskets and clamps, hose clamps, installation studs, locking nuts, o-rings, and sealing washers), work gloves and a syringe prefilled with engine oil.

- Gloves and safety glasses
- Applicable gaskets, bolts, clamps, and fittings
- Plier, wrench, ratchet and socket, and screwdriver sets
- Engine oil
- Engine oil lines, if necessary
- Oil filter, and air filter
- High temperature anti-seize compound

\*Do not use liquid gasket, sealant, exhaust gum or air/power tools while installing the turbo. Use a high temperature anti-seize compound on all threaded fasteners connected to the turbo.

#### BEFORE REMOVING THE TURBO

- Assess system to determine why the original turbo failed and if additional replacement parts are needed. For example: leaking intercooler, damaged intake or return lines, faulty exhaust gas recirculation (EGR) valve, clogged air filter, etc. Note: If the turbo failed because the turbine/compressor wheel seized, often due to contaminants/foreign objects, the intercooler should also be replaced.
- 2. Identify placement of bolts/studs, gaskets, and o-rings to match when installing new turbo.
- 3. Fill the turbo oil inlet port to "overflowing" with clean engine oil prior to mounting the oil feed line.
- 4. Assess oil levels and pressure to ensure system is leak proof.

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### INSTALLING THE NEW TURBO

Before installing turbo it is imperative that engine oil and filter is changed. Failure to do so may void warranty.

- 1. Remove all protective caps and ensure turbo is clean and free of debris.
- Ensure oil intake and return lines are clear and in good condition. In some cases, the oil intake line may be damaged internally if too close to a heat source. Because this is not always noticeably upon inspection, gpd recommends replacing the intake line when replacing the turbo.
- 3. Before connecting the oil intake and return lines, start the engine without firing until a steady stream of oil flows from the drain port.
- 4. Locate exhaust manifold and carefully position new gasket CENTERED on opening. Failure to fit gasket opening exactly over exhaust manifold openings will affect performance, often noticeable by a whistling noise or low engine power.
- 5. Mount turbo to exhaust on engine block and carefully torque studs/bolts to specifications.
- 6. Allow the engine to idle for at least 3 minutes after installing the turbo to ensure turbo system is properly lubricated. If the turbo is connected to engine coolant lines, it is important to allow coolant to cycle through the turbo to prevent damage from excessive heat.

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