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TURBOCHARGER INSTALLATION INSTRUCTIONS

IT IS HIGHLY RECOMMENDED THAT THE COMPLETE TURBOCHARGER BE CHANGED OUT AS A FAILURE TO DO SO LEADS TO PREMATURE FAILURES AND MAY VOID WARRANTIES.

Step 1. PRE-INSTALLATION

- Before installing turbocharger make sure the following are checked:
- Ensure turbocharger part number is correct for engine application.
 - Make sure air filters are clean and piping free of all foreign material and flanges are true.
 - Check all air piping to make sure there are no leaks.
 - Check exhaust manifold and remove any loose material.
 - Ensure oil supply and drain lines are cleaned and free of debris and remove old gaskets.
 - If oil supply line has magnetic plugs pull these out and clean.

Step 2. REPOSITIONING OF HOUSINGS

- a) Loosen the compressor and turbine housing bolts and/or V-band nut(s), only the minimum required to rotate the housings. Excessive loosening of the housings will allow contact and possible wheel damage.
- b) Temporarily secure turbocharger to exhaust manifold outlet.
- c) Rotate the centre housing so that the oil inlet and outlet pads mate with the engine oil lines. The oil outlet hole may not be more than 35° from vertical. Tighten bolts or V-band to lock centre housing to turbine housing.
- d) Rotate compressor housing until it lines up with intake manifold or air piping. Tighten bolts or V-band to lock centre housing to compressor housing.
- e) Remove turbocharger off of engine and tighten all bolts/V-bands. Double check all bolts to make sure they are tight and bend locking tabs against a flat on the bolt. Always bend tabs in a direction which will tend to tighten the bolt. When tightening V-bands, lightly hit the V-band with a soft mallet to make sure band is seated completely.

Step 3. INSTALLATION AND PRE-OILING OF TURBOCHARGER

- a) Install turbocharger on engine using new gaskets and anti-seize compound on studs and bolts.
- b) Tighten turbocharger to the exhaust manifold, and install the oil drain line. **DO NOT** use silicone sealer or Teflon tape on oil inlet lines or flanges.
- c) Fill the oil inlet hole with clean engine oil and spin the compressor wheel several times to coat the bearings with oil. Refill the oil inlet hole and connect the oil supply line. (If compressor wheel cannot be spun freely by hand or if there is any indication of rubbing or scraping, determine the reason before starting the engine or failure will occur).
- d) Connect turbocharger inlet and outlet hoses/piping.

Step 4. STARTING ENGINE

- a) Before attempting to start the engine pre-lube engine, or crank engine with the fuel shut off until oil pressure is present. Verify oil is at the level of the turbocharger. This can be done by loosening oil inlet line one turn and visually checking for oil. After the oil presence is verified at turbocharger, tighten oil inlet fitting and line and clean off any oil residue from exterior of oil lines and turbocharger.
- b) Start and run engine at idle for four to five minutes before increasing RPM and applying load to the engine.
- c) CHECK FOR OIL, EXHAUST AND AIR LEAKS.