sonnax®

TRANSMISSION PARTS

Instructions

Toyota/Lexus U140E, U140F, U240E, U241E

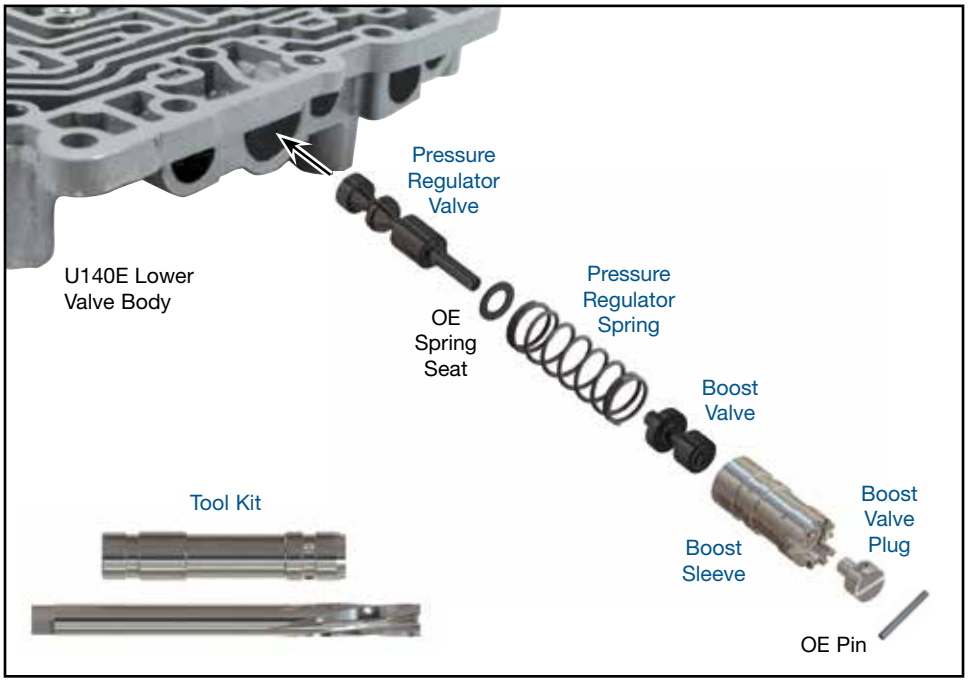
Oversized Pressure Regulator & Boost Valve Kit

TOOL REQUIRED

Part No. 57917E-08K

- Pressure Regulator Valve
- Pressure Regulator Spring
- Boost Valve
- Boost Sleeve
- Boost Valve Plug

NOTE: This tool kit is also used to install 27741-08K oversizied pressure regulator and boost valve kit for Toyota/Lexus U151E, U151F and U250E units.



Tool Kit

VALVE BODY FIXTURE REQUIRED

Part No. 57917E-TL8

- Reamer
- Reamer Jig

NOTE: Sonnax "F-Tool" kits designed to service a specific bore require the VB-FIX, a self-aligning valve body reaming fixture. More information and instructions can be found online at www.sonnax.com.

IMPORTANT: Boost assemblies between 4-speed and 5-speed **CANNOT** be interchanged! The U140E/F, U241E (4-speed) boost valve sleeve and the U151E/F, U250E (5-speed) boost sleeve are identical except for the middle O.D. ribs. The extra rib on the 5-speed sleeve seals an EPC port. If sleeves are mismatched, line pressure problems will occur (**Figure 1**).

NOTE: This assembly is adjustable, and set for the particular application at the factory. Make note of which position of adjustable step on OE boost sleeve the retainer resides in prior to removing from the valve body. Failure to do so will result in no line rise (**Figure 2**).

1. Disassembly

a. Record position of adjustable step on OE boost sleeve.

b. Remove OE pressure regulator and boost assembly.

c. Save OE spring seat and retaining pin for reuse and discard all other parts.

Figure 1

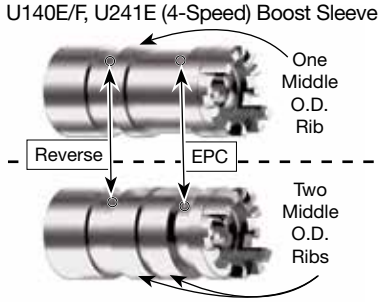
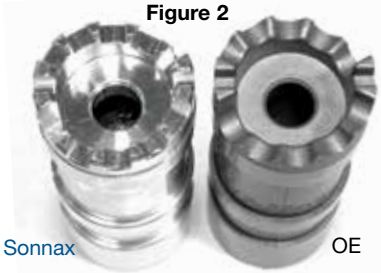


Figure 2



SLEEVE COMPARISON: Sonnax & OE sleeves function the same but have visual differences on their stepped ends.

2. Reaming

CAUTIONS & SUGGESTIONS:

- The reaming action must be clockwise in a smooth and continuous motion.
- Turning the reamer backward will dull it prematurely.
- Pushing on the reamer results in poor surface finish and inadequate and sporadic material removal.
- Never use a crescent wrench, ratchet or pliers to turn the reamer.
- A dull reamer will cut a smaller hole. Reamers can be sharpened, but this should only be done by a professional tool sharpener. Actual life of a Sonnax reamer before resharpening or replacing averages 50-70 bores.

2. Reaming (continued)

a. Insert the reamer jig into the bore.

b. Generously lubricate the bore and reamer with cutting fluid (i.e. Mobilmet S-122, Lubegard® Bio-Tap, Tap Magic™, etc.). For best results, provide a continuous flow of water-soluble cutting fluid (i.e. Mobilmet S-122) during the reaming process.

c. Gently insert the reamer through the jig and into the bore until the cutting tip contacts the first bore to be reamed.

d. Use a loose fitting reamer socket and a wobble adapter to ream the bore. The reamer can be turned by using a speed handle or with a low-RPM, high-torque air drill regulated to a maximum of 200 RPM. The reaming actions must be clockwise in smooth and continuous motion at 60-200 RPM. Continue reaming until the reamer stop is reached.

3. Finish & Clean Up

a. Using low air pressure, blow the chips free before removing the reamer.

b. To remove the reamer, turn clockwise while slowly pulling outward on the reamer.

c. Examine the bore after cleaning for surface finish, debris and burrs. Flashing and burrs on the exit side of land and in bores must be carefully removed. A small piece of Scotch-Brite® material attached to a wire and powered with a drill motor is ideal for the task. Scotch-Brite® is a very abrasive material and all residual debris must be cleaned to ensure particles do not migrate or remain imbedded into the surface. Post cleaning involves several progressive steps with solvent on a lint-free rag.

d. Clean the reamer after each use and store in its protective tube.

4. Installation & Assembly

a. Install Sonnax presure regulator valve and sleeve.

b. Reinstall OE spring seat.

c. Install Sonnax pressure regulator spring.

d. Install Sonnax boost valve and sleeve.

e. Install Sonnax boost valve plug and reinstall OE retaining pin into the same notch step as noted prior to disassembly.

5. Final Testing

Vacuum testing at the port indicated holds the recommended minimum 18 in-Hg (**Figure 3**).

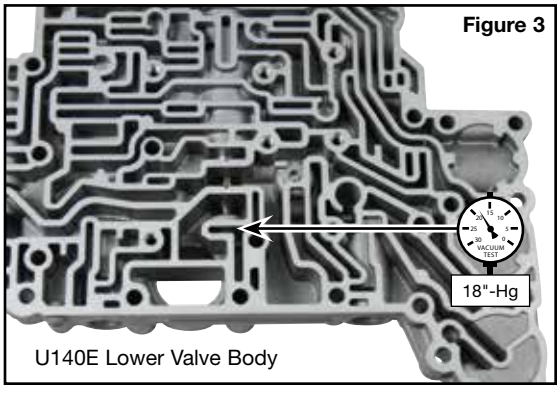


Figure 3