

Oversized Pressure Regulator Valve Kit

Part No.
84741-03K



- Balance Sleeve
- Balance Valve
- Retaining Clip
- O-Rings (2)
- Pressure Regulator Valve
- Spring

1 extra

Tool Kit

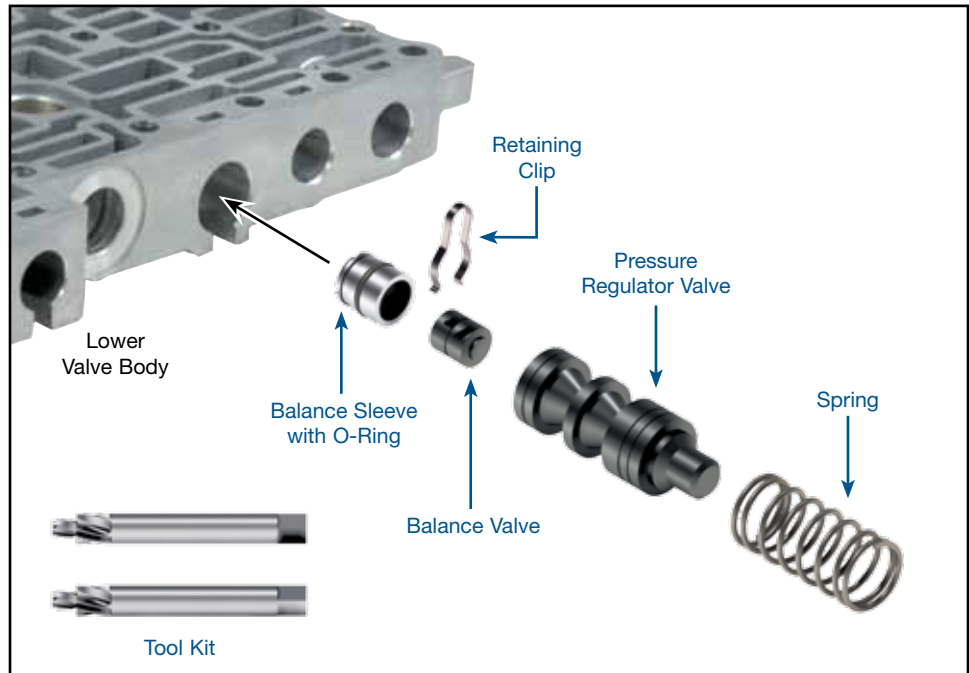
Part No.
84741-TL3

Reamers (2)

Also Available

Boost Valve Kit
84741-01K

Hyundai/Kia A4CF1, A4CF2



1. Disassembly

- Remove OE retainer, adjuster plug and boost valve assembly and save for reuse.

IMPORTANT NOTE: Keep OE setting of the adjuster plug to maintain OE line pressure. Turning the adjusting nut clockwise will reduce the gap setting, reducing base line pressure. Turning the adjusting nut counter-clockwise will increase the gap setting, increasing base line pressure. To prevent excessively low line pressure and pressure regulator valve bore engagement issues, always maintain a minimum of .060" gap setting.

- Remove and discard OE pressure regulator valve and spring.

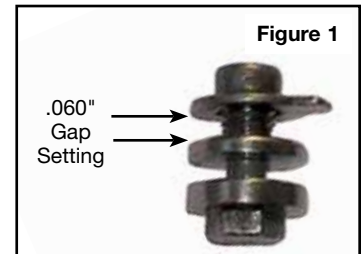
2. Bore & Reaming Preparation

- Clean the bore thoroughly in a solvent tank.
- Securely clamp the housing to a bench or vise, making sure not to clamp directly over the bore to be reamed.

3. Reaming

CAUTIONS AND 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.



3. Reaming (continued from page 1)

NOTE: Using this tool kit **84741-TL3** is a two-reamer process. Use the self-guiding reamer **84741-RM** (marked Reamer #1) first. The bore should be cleaned of chips, and then use the self-guiding reamer **84741-RM2** (marked Reamer #2) last.

- 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.
- Gently insert the reamer into the bore until the cutting tip contacts the first bore to be reamed.
- 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.
- Using low air pressure, blow the chips free before removing the reamer.
- To remove the reamer, turn clockwise while slowly pulling outward on the reamer. Blow all remaining chips clear from the bore.
- Repeat steps (a) through (e) with the second reamer.

4. Finish & Clean-up

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

5. Installation & Assembly

- Place the Sonnax O-ring in the narrow groove on the Sonnax balance sleeve. Lubricate with Sonnax Slippery Stick™ **O-LUBE** and roll on bench to size.
- Install the Sonnax balance sleeve and valve with grooved end of sleeve inboard.
NOTE: The OE pressure regulator valve makes a good installation tool.
- Secure the Sonnax balance sleeve and valve in the bore with the Sonnax retaining clip. Install this retaining clip in the wide sleeve groove through the balance casting port.
- Install the modified Sonnax pressure regulator valve with the spring stem facing outboard.
- Install the Sonnax spring.
- Reinstall the OE boost assembly, adjuster plug and retaining pin, maintaining proper gap setting as noted at the beginning of the instruction sheet (**Figure 1**).

6. Final Testing

A vacuum test at the ports indicated holds 18 in-Hg or more.

If poor vacuum results are discovered at the OE boost valve, Sonnax boost valve kit **84741-01K** should be installed.

