

### 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

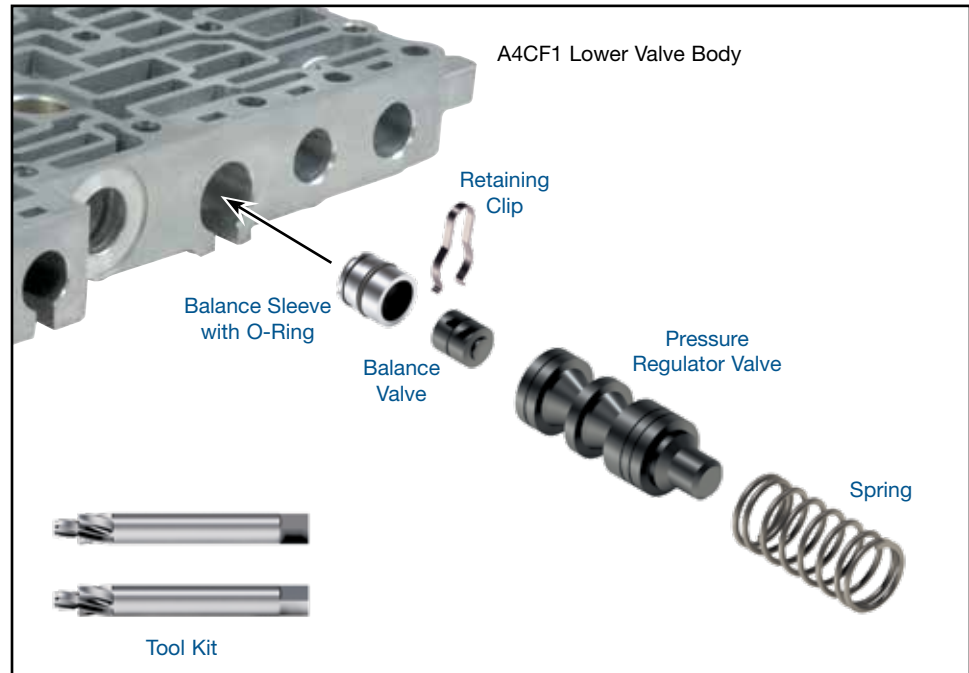
**Part No.**  
**84741-TL3**



- Reamer Reamer #1
- Reamer Reamer #2

**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](http://www.sonnax.com).

### Hyundai/Kia A4CF1, A4CF2

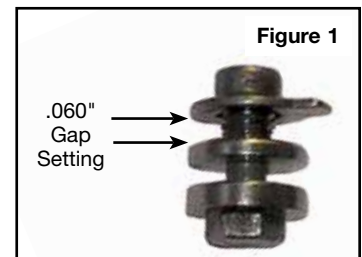


#### 1. Disassembly

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



**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



**NOTE:** Using 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 reamer #1 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.

### 2. Bore Reaming (continued)

- d. Using low air pressure, blow the chips free before removing the reamer.
- e. To remove reamer #1, turn clockwise while slowly pulling outward on reamer. Blow all remaining chips clear from the bore.
- f. Repeat steps (a) through (e) with reamer #2.

### 3. Finish & Clean-up

- a. 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.
- b. Clean the reamers after each use and store in their protective tube.

### 4. Installation & Assembly

- a. Be certain all debris has been removed from the valve bore and valve body.
- b. Place Sonnax O-ring in narrow groove on Sonnax balance sleeve. Lubricate with Sonnax Slippery Stick™ O-LUBE and roll on bench to size.
- c. Insert Sonnax balance valve into Sonnax balance sleeve. Then install the assembly with the grooved end of sleeve inboard.
 

**NOTE:** The OE pressure regulator valve makes a good installation tool.
- d. Secure Sonnax balance sleeve and valve assembly in bore with Sonnax retaining clip. Install retaining clip in the wide sleeve groove through the balance casting port.
- e. Install Sonnax pressure regulator valve, with spring stem facing outboard.
- f. Install the Sonnax spring.
- g. Reinstall OE boost assembly, adjuster plug and retaining pin, maintaining proper gap setting as previously noted (**Figure 1**).

### 4. Final Testing

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



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

