

## Oversized Pressure Regulator Valve

Part No.

**33886-02**



**WARNING:** Required oversized pressure regulator valve **33886-02** is no longer in production. Check with your distributor for availability.

## Tool Kit

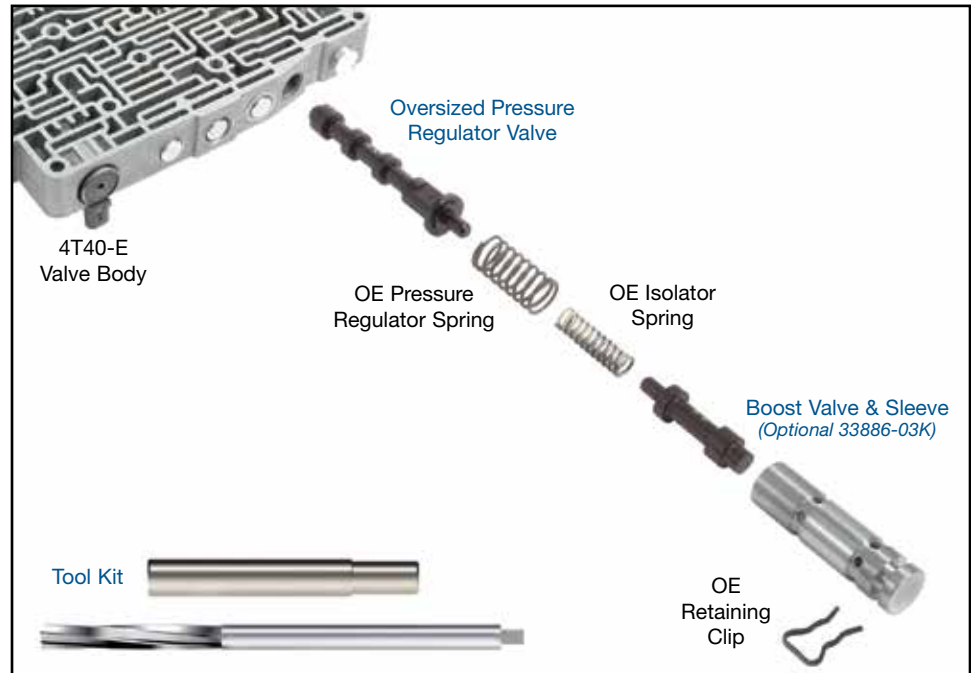
Part No.

**33886-TL2**

- Reamer
- Reamer Jig
- Drill Bit

Not Shown

## GM 4T40-E, 4T45-E



**NOTE:** Inspect separator plate to be installed for presence of pressure regulator balance orifice. If no orifice, modify plate per illustrations (**Figure 1**).

### 1. Disassembly

- Remove all components from the bore and discard pressure regulator valve.
- Save OE pressure regulator and isolator springs as well as retaining clip for reuse.
- Save OE boost valve and sleeve for reuse or replace with Sonnax boost valve and sleeve.

### 2. Bore Reaming

Ream pressure regulator bore (for reaming instructions/reamer care, please visit [www.sonnax.com](http://www.sonnax.com)). Sonnax reaming tool kit **33886-TL2** is required for this operation.

- Clean bore thoroughly in solvent tank.
- Securely clamp housing to bench, do not clamp directly over bore to be reamed.
- Insert reamer jig into the bore.
- Soak bore and reamer with cutting fluid (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 through jig and into bore until cutting tip contacts the first bore to be reamed.
- Select a 1/4" square drive socket and attach to a wobble/swivel socket drive.

### 2. Bore Reaming (continued)

- g. The reamer should be turned either by hand using a speed handle or by a low rpm, high-torque air drill regulated to a maximum of 200 rpm.
- h. The reaming action should be clockwise in a smooth and continuous motion, at 60-200 rpm. The reamer should actually pull itself through the bore, so little or no forward force should be applied.
- i. Continue reaming until the reamer stop is reached. The approximate reaming time is 5 minutes.
- j. Using low air pressure, blow chips free before removing the reamer.
- k. To remove reamer, turn clockwise while slowly pulling outward on reamer.
- l. Remove any remaining debris from bore with low air pressure and clean in a solvent tank.
- m. Examine bore after cleaning for surface finish, debris and burrs. Flashing and burrs on the exit side of casting bores can be carefully removed with a small piece of Scotchbrite™ on the end of a long wire.
- n. Clean the reamer after each use and store in its protective tube.

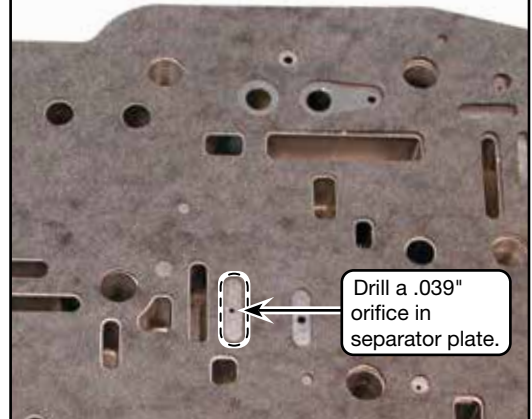
### 3. Installation & Assembly

- a. Be certain all debris has been removed from the valve bore and valve body.
- b. Install Sonnax valve.
- c. Reinstall OE pressure regulator and isolator springs.
- d. Reinstall OE or install Sonnax boost valve and sleeve assembly.
- e. Secure with OE retaining clip.
- f. If working on 2000-earlier models, modify separator plate and gasket (**Figure 1**).  
No modification is necessary for 2000-later models.



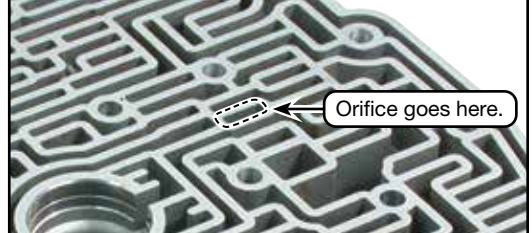
**NOTE:** Most gasket kits will have the oval hold cut out, in that case, only the separator plate will need to be drilled.

**PR Balance Orifice Location on Separator Plate & Gasket** Figure 1



- **2000-Later** gaskets will have this oval slot.
- **2000-Earlier** gaskets may NOT have this slot. This oval will have to be cut out of gasket. Then drill a .039" orifice in the separator plate in location shown.

**Figure 2**



Location of pressure regulator balance orifice in separator plate locates over this passage.