Instruction Data Sheet

Ford 4F27E / Mazda FN4A-EL

PART NUMBERS **46892-01K, F-46892-TL**

Oversized Pressure Regulator Valve

46892-01K

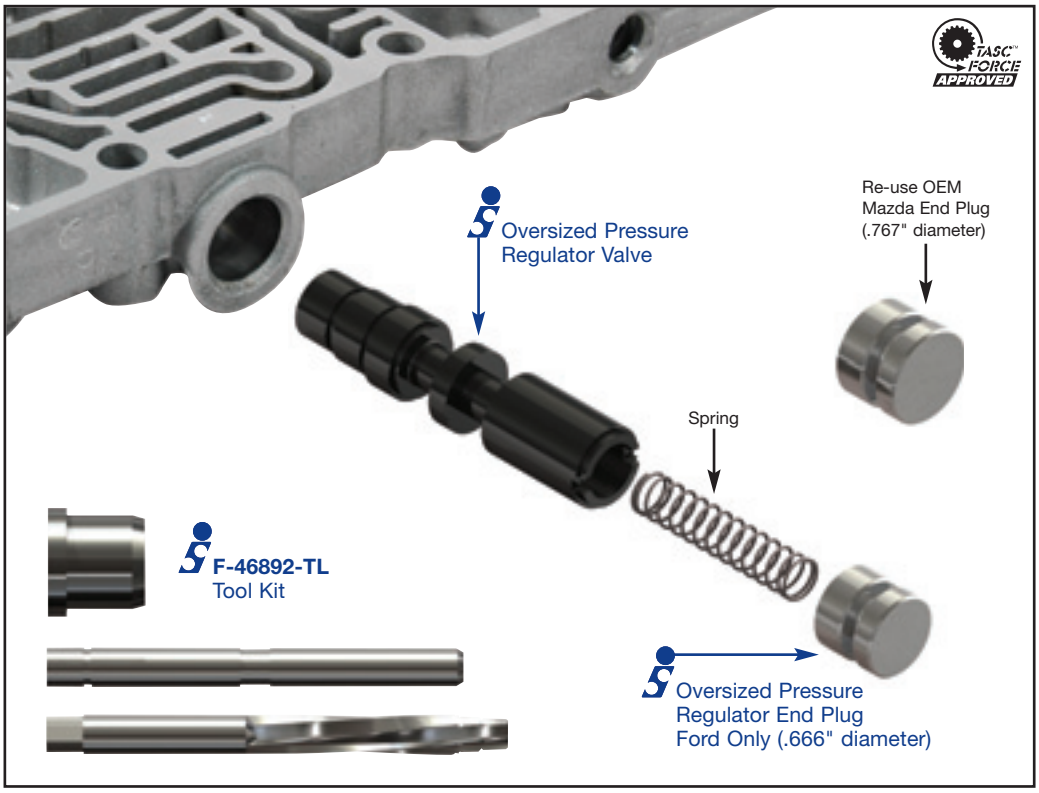
TOOL REQUIRED

1 Valve
1 End Plug - Ford Only

F-46892-TL

VALVE BODY FIXTURE REQUIRED

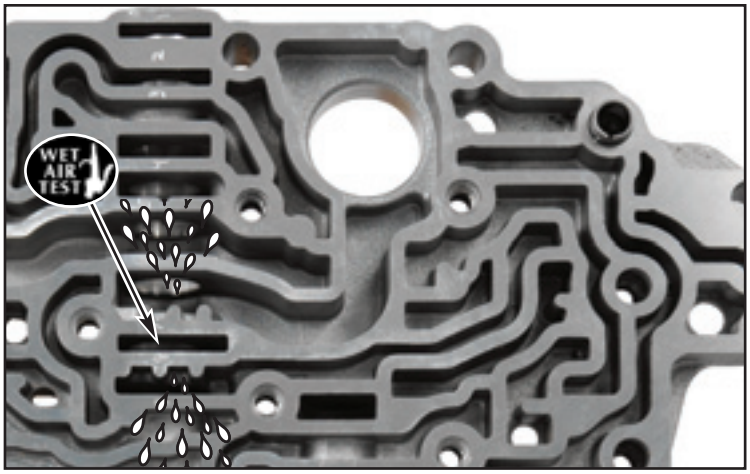
1 Reamer
1 Reamer Jig
1 Guide Pin



WAT or Inspection Procedure:

Visible wear is usually detectable by looking into the ports with a small flashlight.

Place a small amount of ATF into the balance line circuit. Follow with low air pressure while holding the valve inboard. There should be little or no leakage of air or oil past the valve spool and out either the suction or D,R,L,N port.



Disassembly Steps:

1. Remove all components.
2. Discard the pressure regulator valve.
3. Retain the OEM spring and retainer.
4. On Ford 4F27E valve bodies, the plug is the same diameter as the OEM valve. This plug should be discarded.
5. On Mazda FN4A-EL valve bodies, the plug diameter is significantly larger than the OEM valve, and it should be retained. The Sonnax end plug will not be used for this application.

Prep and Set-Up

1. Clean the bore thoroughly.
2. To align the pressure regulator bore in the fixture, follow the **VB-FIX** instructions. From tool kit **F-46892-TL**, use jig **F-46892-RJ** and guide pin **F-46892-GP**, then ream with reamer **F-46892-RM.** *(See continuing note on following page.)*

(Continued from page 1.)

Note: Extra attention should be paid to alignment and securing the valve body to the fixture on this bore. A very smooth action to insert and remove the guide pin after final securing is a must to provide easy, on-center reaming of this bore.

3. Soak the 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.
4. Gently insert the reamer through the jig and into the bore until the cutting tip contacts the first bore to be reamed.
5. Select the correct sized socket to fit the square shank of the reamer, and attach it to a wobble/swivel socket drive.

Reaming

Note: Once a valve body alignment has been established on the VB-FIX, do not disturb or loosen the valve body setting or guide setting in any way until the reaming process is complete. Be sure to use plenty of continuously supplied cutting fluid while reaming these bores.

1. The reamer should be turned by hand using a speed handle or by a low rpm, high torque air drill regulated to a maximum of 200rpm.
2. 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.
3. Continue reaming until the reamer stop is reached.

Finish and Clean-up

1. Using low air pressure, blow the chips free before removing the reamer.
2. To remove the reamer, turn clockwise while slowly pulling outward on the reamer.
3. Remove any remaining debris from the bore with low air pressure and clean in a solvent tank.
4. Examine the 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.
5. Clean the reamer after each use and store in its protective tube.

Cautions and Suggestions:

1. Turning the reamer backward will dull it prematurely.
2. Pushing on the reamer will result in poor surface finish and inadequate and sporadic material removal.
3. Never use a crescent wrench, ratchet or pliers to turn the reamer.
4. A dull reamer will cut a smaller hole.

Installation/Assembly Steps:

1. Insert the replacement valve, fully seating it in the bore.
2. Place the OEM spring in the valve spring pocket.
3. Place the necessary end plug into the bore and secure with the OEM retainer.