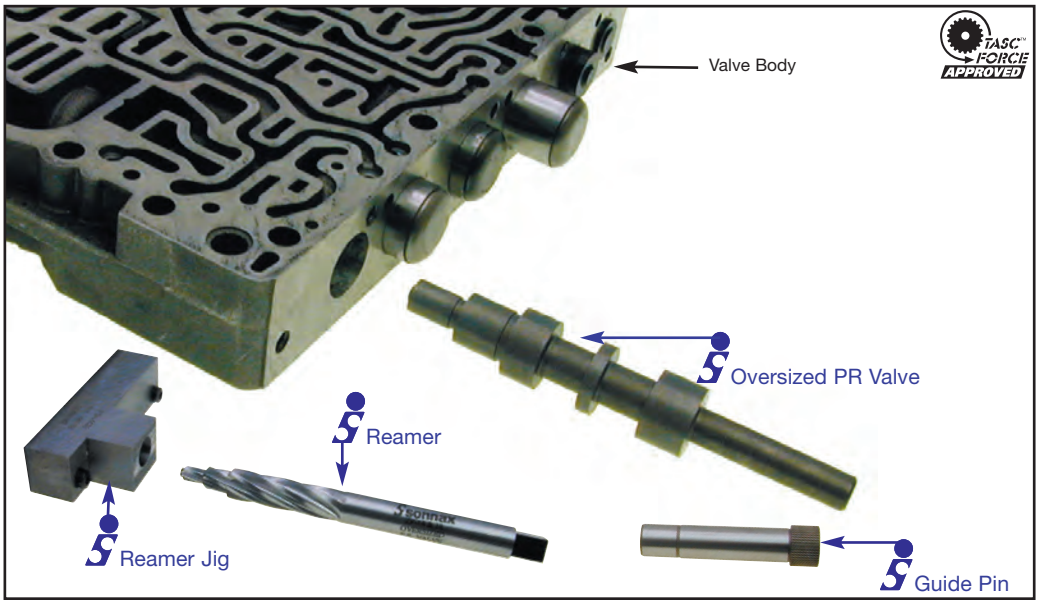
ZF4HP14/18

PART NUMBERS **85991-01, -TL**

Oversized Pressure Regulator Valve & Tool Kit

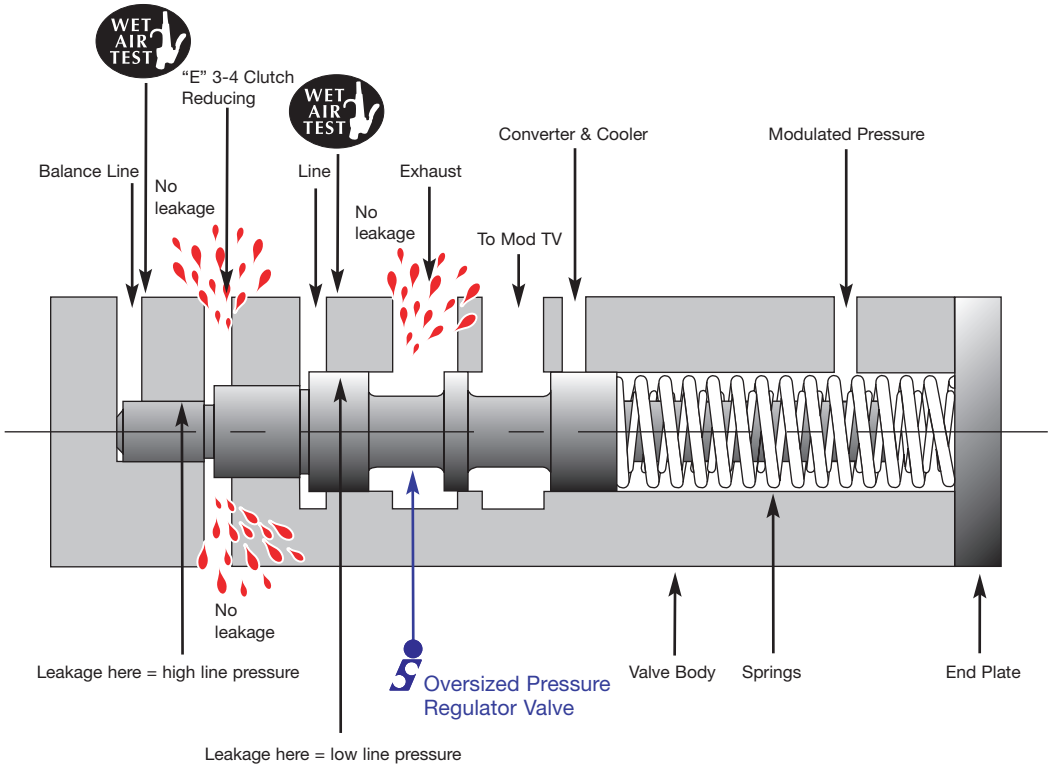
85991-01
1 Oversized Pressure Regulator Valve

85991-TL
1 Reamer
1 Reamer Jig
1 Guide Pin
2 Screws
2 Washers



Wet Air Test

1. Use a small flat tipped screwdriver to prop the valve open slightly (to the operating position).
2. Place a small amount of oil into both of the line orifices. Follow with low air pressure. There should be no oil leakage past the spool diameters into the 3-4 or exhaust circuits.



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85991-01 Rev:e, 85991-TL Rev:B, 85991-01(in)011-02-06
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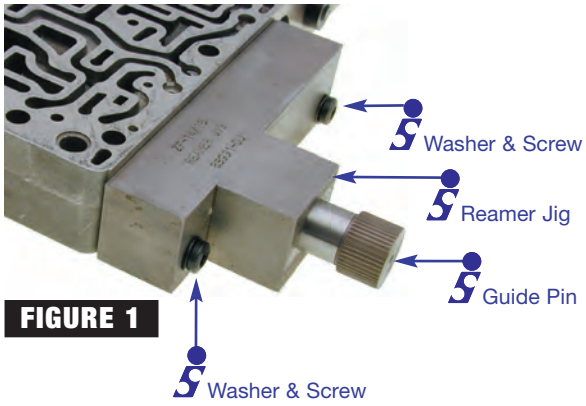

FIGURE 1

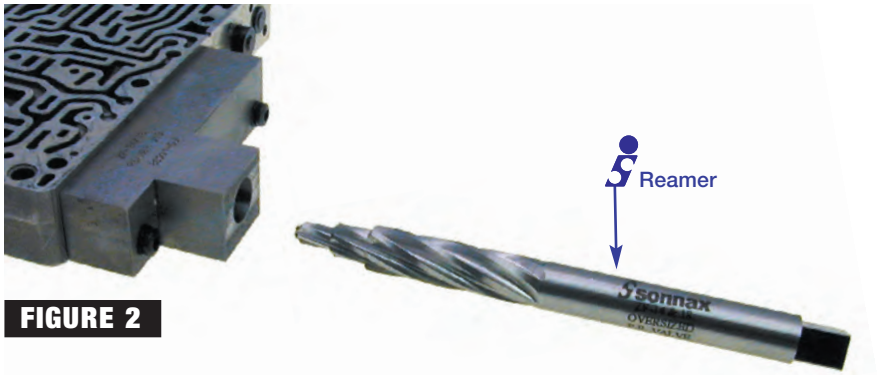

FIGURE 2

Set-up Instructions

1. Remove the original pressure regulator valve from the valve body bore and discard. Retain the OEM springs.
2. Clean the bore of debris. Clamp the valve body securely to a bench horizontally, as shown.
3. Using the Sonnax guide pin and reamer jig, insert the guide pin through the jig and into the pressure regulator valve bore, as shown in Figure 1. Use the Sonnax washers and screws to secure the jig in position against the valve body. When the jig is secure, remove the guide pin. Insert reamer as shown in Figure 2.

Reaming Instructions

1. Soak the reamer flutes and bore with cutting fluid (kerosene, Tap Magic™, etc.)
2. Carefully insert reamer into jig until tip contacts the first bore to be cut.
3. Using a speed handle, ream the bore by turning the reamer clockwise in a smooth and continous motion at approximately 1 to 1-1⁄2 revolution per second.
4. Continue reaming until the tip of the reamer bottoms in the bore. Spin the reamer five to 10 more times.
5. Using low air pressure, blow the chips free before removing the reamer.
6. Remove the reamer by turning clockwise while slowly pulling outward on the reamer.
7. Remove any remaining debris.

Valve Installation

1. Lubricate and install the new oversized pressure regulator valve with the long stem facing out. Stroke the valve with a pick to make sure it moves freely in the newly reamed bore. If the valve is too snug, repeat the reaming steps using a high speed drill at no more than 500 rpm.
2. Reinstall the 2 OEM springs over the pressure regulator valve stem and return the end plate.

Cautions

- Never turn the reamer backward.
- Pushing on the reamer will result in poor surface finish, inadequate and sporadic material removal, and material being left unremoved as the reamer exits a bore.
- Blow free any chips from the reamer after each use.
- Never use a crescent wrench to turn the reamer.

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