5R55W/S

PART NUMBERS 56947J-09K, 56947J-TL9

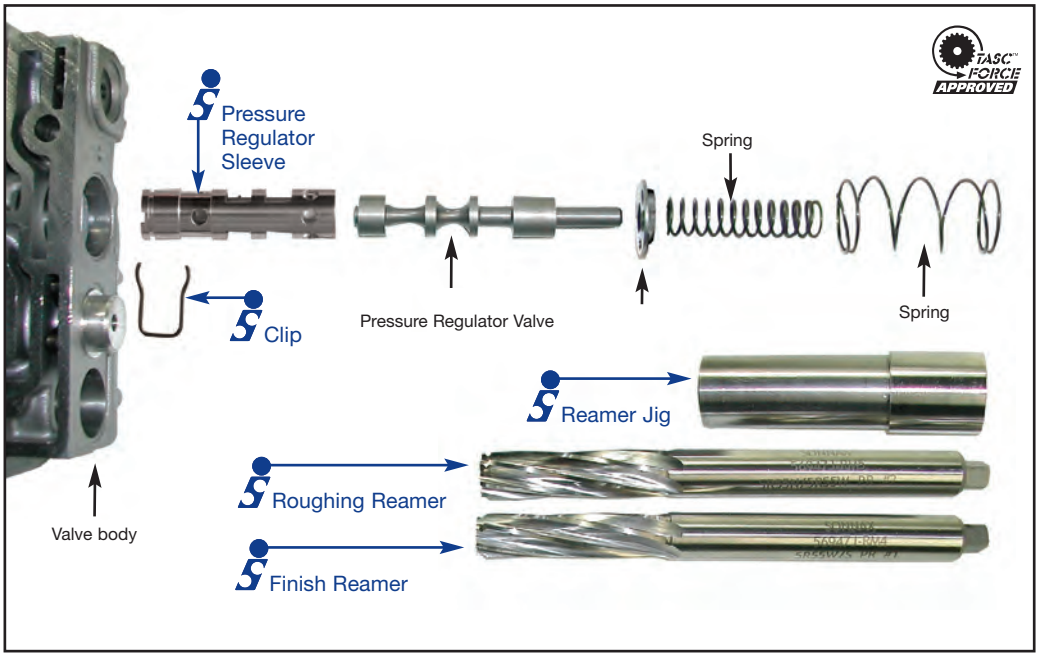
Pressure Regulator Sleeve Kit

56947J-09K

1 Pressure Regulator Sleeve
1 Clip

56947J-TL9

1 Reamer Jig
1 Roughing Reamer
1 Finish Reamer
1 Drill Bit .052"



Inspection

Block the pressure regulator valve into the bottom of the bore. Place a small amount of oil into the balance line pressure port. Follow with low air pressure. There should be minimal to no air/oil leakage past the valve spool and out the exhaust port on the back of the valve body.

Disassembly

Remove and retain all components from the pressure regulator valve bore.

Reaming Instructions

Prep and Set-up

1. Remove all components from the bore.
2. Clean the bore thoroughly in a solvent tank.
3. Securely clamp the housing to the bench, making sure not to clamp directly over the bore to be reamed.
4. Insert the reamer jig into the bore.
5. Use Sonnax reamer marked “#1” first. 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.
6. Gently insert the reamer through the jig and into the bore until the cutting tip contacts the first bore to be reamed.
7. Select the correct sized socket to fit the square shank of the reamer, and attach it to a wobble/swivel socket drive.

Reaming

1. 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.
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.
4. Repeat steps 1-3 with Sonnax reamer marked “#2.”

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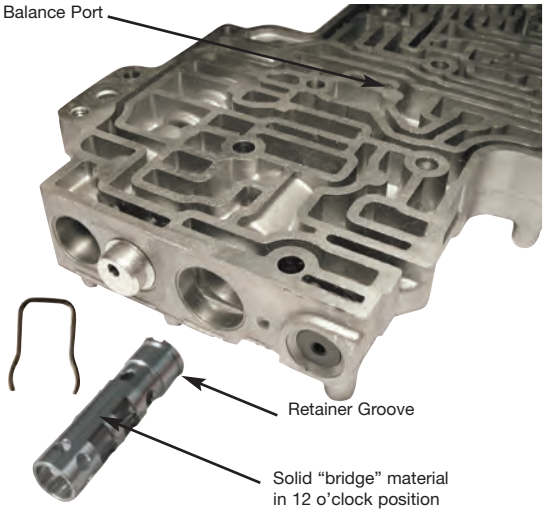
Finish and Clean-up

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. Reamers can be sharpened, but should only be done by a professional tool sharpener. Actual life of a reamer before resharpening or replacing averages 50-70 bores.



Sleeve Installation

1. Insert the sleeve as shown in the photo, with the "bridge" in the 12 o'clock position to give added support to the valve.

   Optional: Loctite™ can be used to secure and seal the sleeve. During installation and before the sleeve retainer groove disappears into the most inboard casting bore, place a drop of Loctite on the sleeve. Rotate the sleeve into the proper 12 o'clock position. Adequate cure time per the Loctite instructions is required to ensure valve does not stick.

2. For proper sleeve retention, the casting must be drilled and the retainer pressed in place.

   • **Drilling**

   a. Hold the sleeve inward using the squared end of the reamer. This prevents rotation.

   b. Using the sleeve'xs retainer groove as the guide, drill between the sleeve and the casting on both sides as shown. The drill bit will pilot toward the casting.

   c. Drill until the bit is just past the sleeve, approximately .240" total drill depth. CAUTION: Do not overdrill!

   • **Retainer installation**

   a. Press the retainer into the groove opened with the .052" drill bit.

   b. When installed correctly, the retainer will be against the casting and slightly below the plate.

   c. If the groove in the sleeve is not visible enough to guide the drill, remove material from the valve body walls with a #194 Dremel bit to increase inboard distance.

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