

Oversized Solenoid Regulator Valve Kit

96201-21K

- 1 Oversized Solenoid Regulator Valve
- 1 Spring
- 1 Retainer



96201-TL2

- 2 Reamers

Also Available:

96201-23K

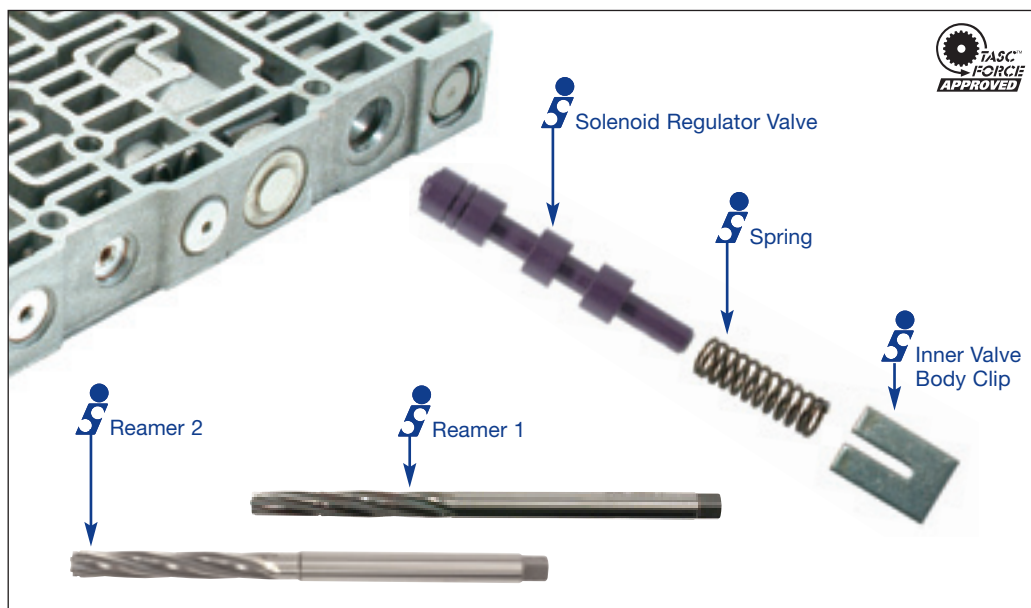
- 1 Oversized Converter Regulator Valve
- 1 Retainer Clip
- 1 White Spring (2-Spool Application)
- 1 Black Spring (4-Spool Application)



96201-TL3

- 2 Reamers

More technical information
is available at www.sonnax.com. Type
in this part number under "Part Finder."



Prep and Set-up

1. Remove all components from the bore. Save the converter regulator valve line-up for reuse if parts are not worn. If the converter regulator valve is worn, replace it with Sonnax **96201-23K**.
2. Clean the bore thoroughly in a solvent tank.
3. Securely clamp the valve body to the bench, making sure not to clamp directly over the bore to be reamed.
4. Soak the bore and Reamer #1 with cutting fluid (Mobilmet S-122, Lubegard Bio-Tap, Tap Magic™, etc.). For best results, provide a continuous flow of water-soluble cutting fluid (e.g. Mobilmet S-122) during the reaming process.
5. Gently insert Reamer #1 into the bore until the cutting tip contacts the first bore to be reamed. This is a self-piloting reamer, so no reamer jig is necessary.
6. Use a 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. The approximate reaming time is 3 minutes.
4. Using low air pressure, blow the chips free before removing the reamer.
5. To remove the reamer, turn clockwise while slowly pulling outward on the reamer.
6. Remove any remaining debris from the bore with low air pressure and clean in a solvent tank.
7. Use Reamer #2 and repeat the same reaming processes listed above.

Finish and Clean-up

1. 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.
2. Clean the reamers after each use and store in their 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.

AXODE, AX4S, AX4N

PART NUMBERS 96201-21K, -TL2

Oversized Solenoid Regulator Valve Kit

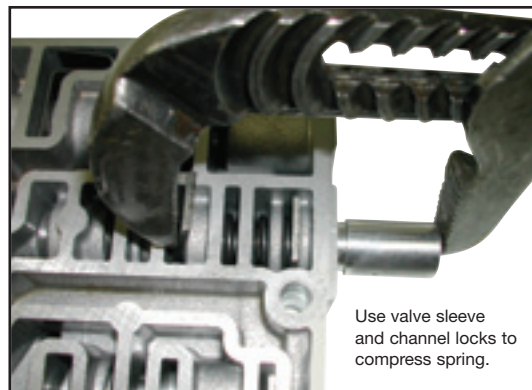
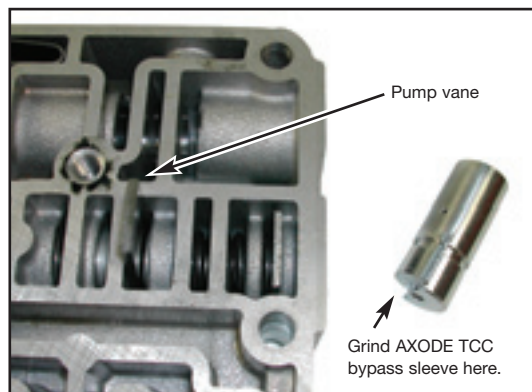
Installation Instructions:

A. If installing OEM or Sonnax 4-Spooled Converter Regulator Valve

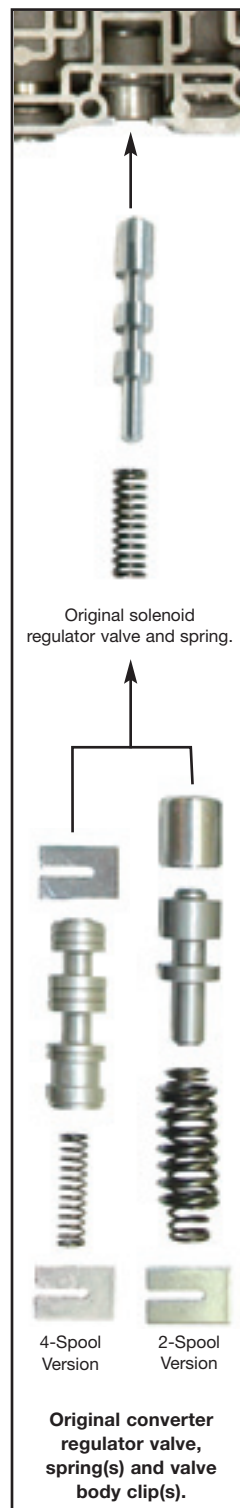
1. Lubricate the oversized solenoid regulator valve and reamed bore with ATF.
2. Place the replacement spring over the long valve stem, and push this spring/valve assembly into the bore, with the stem side facing outward.
3. Compress the spring with a flathead screwdriver, and insert the Sonnax replacement inner valve body clip into the valve body casting.
4. Install the converter regulator valve and spring as oriented in photos to right.

B. If installing OEM 2-Spooled Converter Regulator Valve

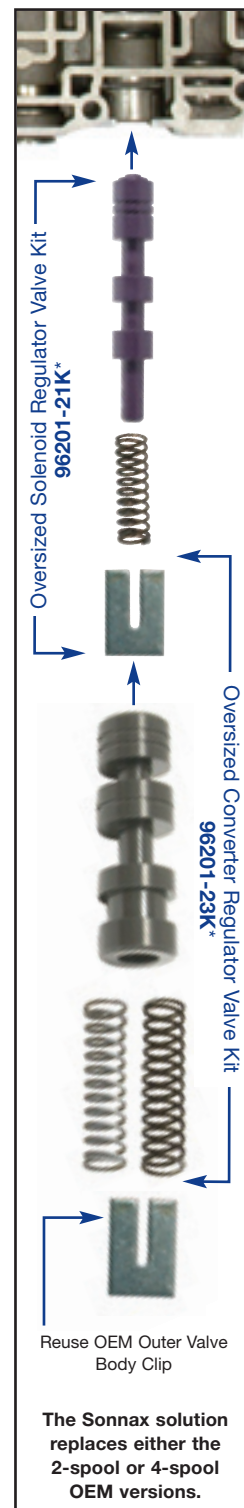
1. Lubricate the oversized solenoid regulator valve and reamed bore with ATF.
2. Place the replacement spring over the long valve stem, and push this spring/valve assembly into the bore, with the stem side facing outward.
3. Reinstall the OEM solenoid regulator plug. The replacement inner valve body clip will NOT be used.
4. Due to the heavy duty springs used with the 2-spooled TCC regulator valve, it is very difficult to reinstall these components into the valve bore. The following is a suggestion:
 - Insert a 700-R4 pump vane into the circuit as shown.
 - Use an AXODE TCC bypass sleeve with about 1/3 of its diameter ground back the width of the OEM retainer.
 - Use a channel lock between the sleeve and the vane to compress the 2 OEM springs.
 - Insert the retainer.



OEM LINE-UP



SONNAX LINE-UP



- **Note:** 96201-21K & 96201-23K are sold individually. Each of these kits come with a new inner valve body clip. If using these two kits together, only one inner valve body clip is necessary in the replacement line-up.