

## Oversized Converter Regulator Tool Kit

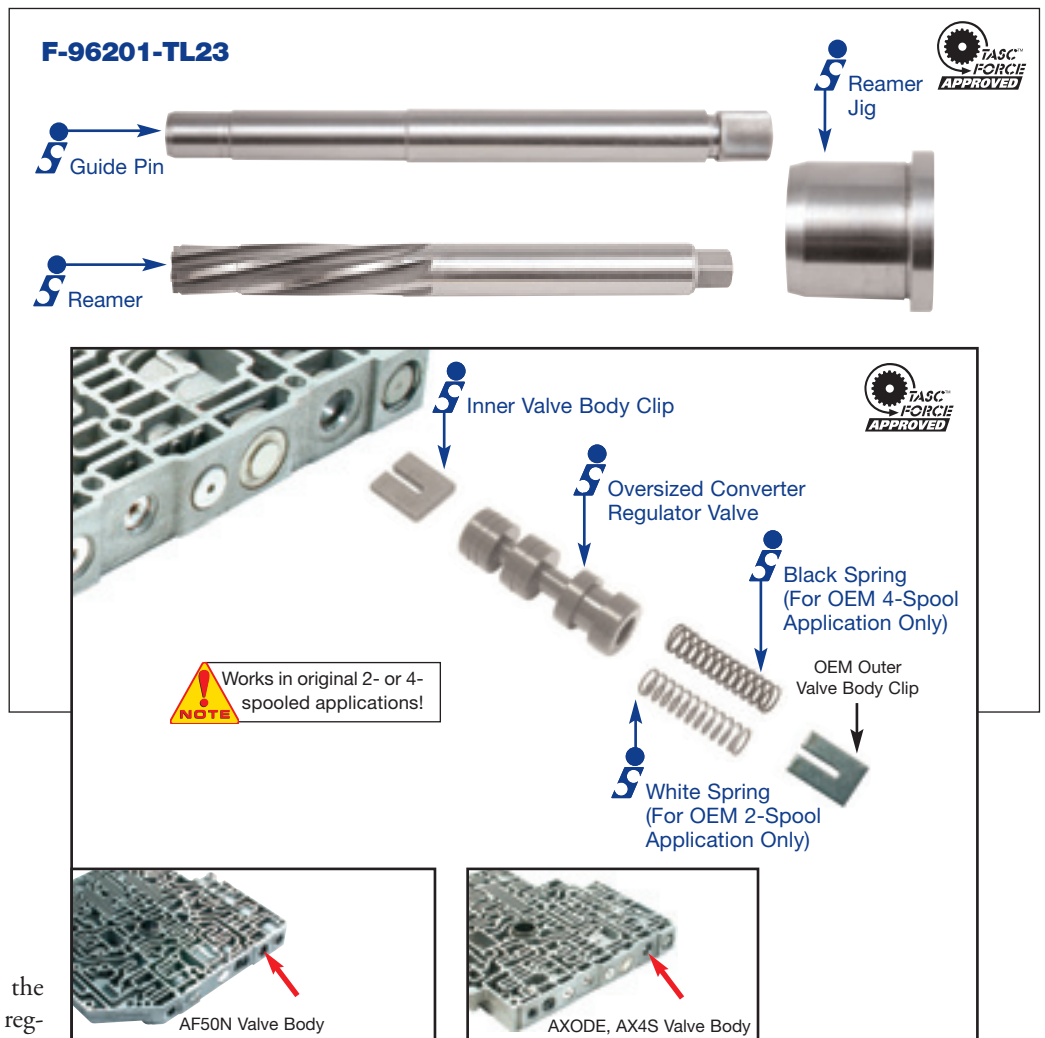
### 96201-23K

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



### F-96201-TL23

- 1 Reamer
- 1 Reamer Jig
- 1 Guide Pin



### Prep and Set-up

1. Remove all components from the bore. Discard the OEM 4-spool regulator valve or 2-spool regulator valve, plug (2-spool design), and springs. Save the outer retaining clip and OEM solenoid regulator valve and spring if bore is NOT worn. If worn, replace with Sonnax **96201-21K**.
2. Clean the bore thoroughly in a solvent tank.
3. Place the valve body on the reaming fixture (**VB-FIX**). Align and secure the valve body to the fixture according to the **VB-FIX** instructions, using the guide pin and reamer jig from the **F-96201-TL23** tool kit. Do not loosen wing nuts or clamp, once position has been established until, the entire reaming process is complete.
4. Remove the guide pin.
5. 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 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

# AXODE, AX4S, AX4N, AF50N

PART NUMBERS 96201-23K, F-96201-TL23

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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 them 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.

**NOTE:** The replacement TCC boost valve and sleeve assembly MUST be used with the oversized TCC apply valve to maintain proper ratios and valve functions. For identification purposes, the replacement TCC boost valve has a groove on the outboard-facing end stem. Reusing the OEM assembly can result in TCC slippage, burn-up and complaints.

### Installation Instructions: Original 2-Spooled or 4-Spooled Valve

1. Lubricate the oversized converter regulator valve and reamed bore with ATF.
2. Check solenoid regulator valve for wear. If worn, replace with Sonnax 96201-21K. This bore will need to be oversized with tool kit 96201-TL2.

### Installation Instructions: Original 2-Spooled or 4-Spooled Valve

3. Install OEM or Sonnax solenoid regulator valve and spring. Retain with replacement inner valve body clip. Sonnax inner valve body clip is twice as wide as the OEM inner valve body clip and MUST be installed in this position.
4. Place the correct replacement spring into the converter regulator valve spring pocket, and push this spring/converter regulator valve assembly, 96201-23K, into the bore in the indicated orientation.
5. Reinstall the OEM outer valve clip.

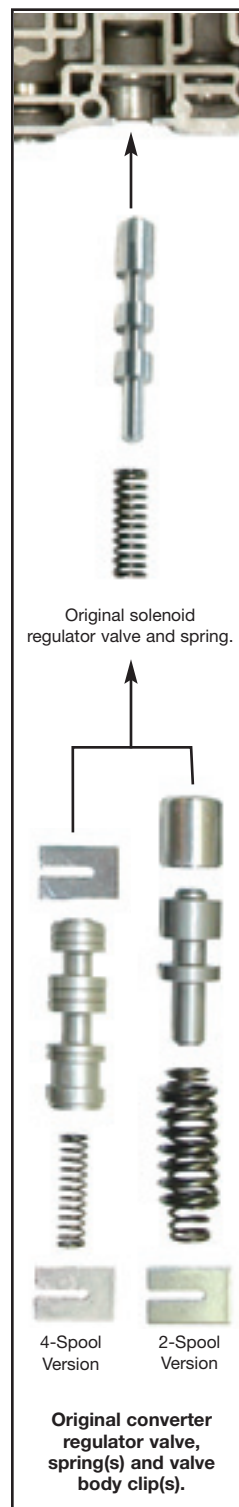
**Important Notes:**

- If OEM had a 4-spooled valve use the Sonnax black spring.
- If OEM had a 2-spooled valve use the Sonnax white spring.

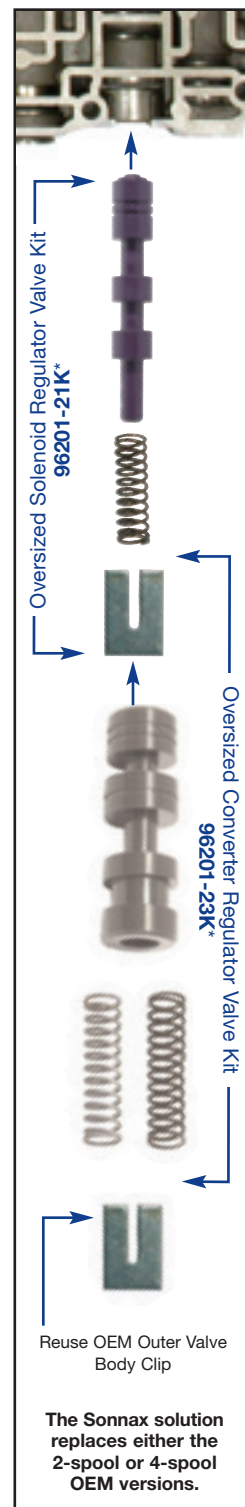
The white spring is stronger and has a higher rate than the black spring.

- If the white spring is installed in place of the black spring, it will result in higher EPC pressure and higher converter psi. Higher EPC can cause harsh reverse and forward piston failure at maximum EPC.
- If black spring is used in place of white spring, the result is lower converter psi and possible TCC shudder and lower line rise.

### OEM LINE-UP



### SONNAX LINE-UP



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