

Oversized Pressure Regulator Valve

89010-03K

- Valve
- Spring
- Spacer



Tool Kit

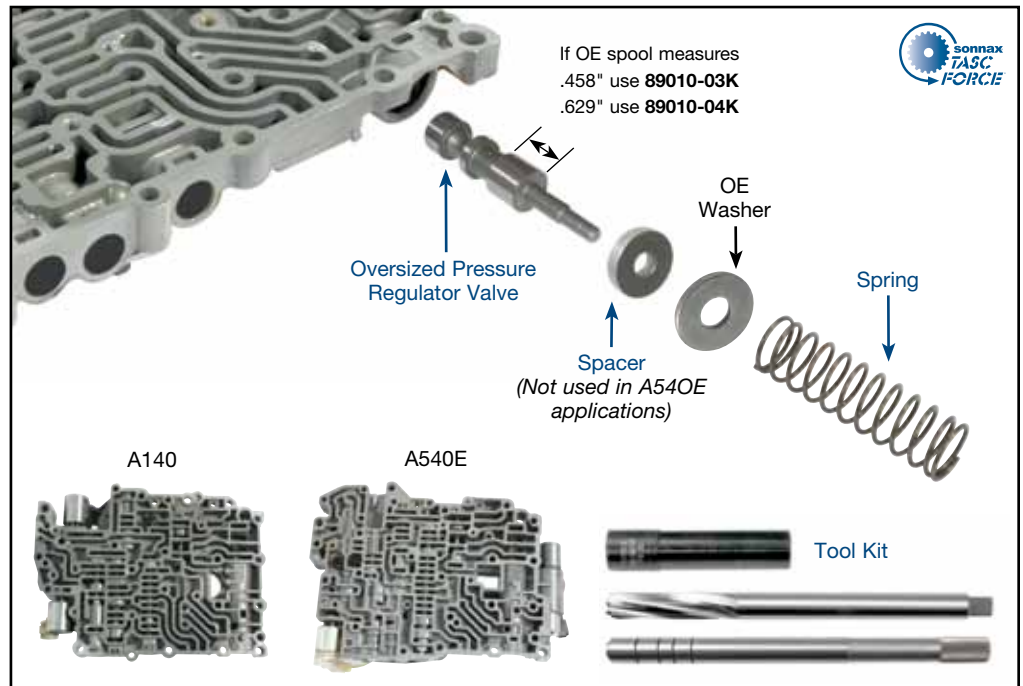
89010-TL

- Reamer
- Reamer Jig
- Bore Sizing Tool

NOTE: This tool kit, which can also be used to service 89010-04K and 97855-24K valve kits, is out of production. Please check with distributor for availability.

Also Available

for A540E valve bodies with A540Y stamp



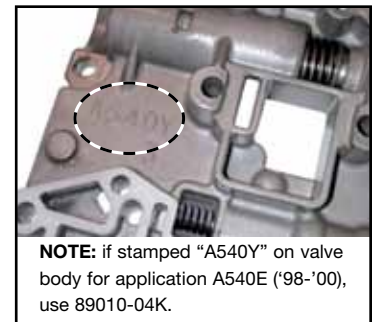
Oversized PR Valve

89010-04K

See Chart

Application	Valve Body Identificaion	Sonnax Part
A140		89010-03K
A340/E/F	3 land pressure regulator valve, 3 or fewer solenoids (early)	97855-24K
A540E	Not stamped A540Y	89010-03K
A540E	Stamped A540Y ('98-'00)	89010-04K

NOTE: None of the parts listed above work for the A340 * 4 land pressure regulator valve, 4 or fewer solenoids (late).



1. Inspection

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 the regulated line port.

3. Bore Preparation

- Remove all components from the bore.
- Clean the bore thoroughly in a solvent tank.
- Securely clamp the valve body to the bench, making sure not to clamp directly over the bore to be reamed.
- Insert the reamer jig into the bore.

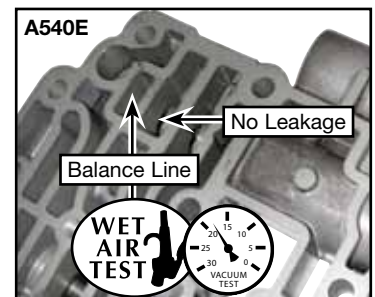
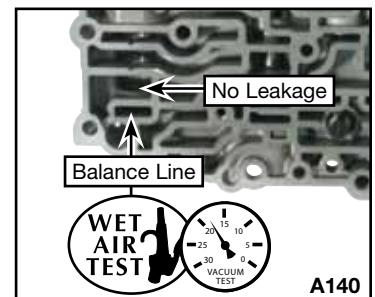
e. Soak the bore and reamer with cutting fluid (Mobilmet S-122, Lubeguard Bio-Tap, Tap Magic™, etc.). For best results, provide a continuous flow of water-soluble cutting fluid during the reaming process.

f. Gently insert the reamer through the jig and into the bore until the cutting tip contacts the first bore to be reamed.

g. Select the correct sized socket to fit the square shank of the reamer, and attach it to a wobble such as Snap-On part number FXW-1 socket drive.

4. Bore Reaming

a. 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.



4. Bore Reaming (continued)

- b. The reaming action should be clockwise in a smooth and continuous motion, at 60-200rpm. The reamer should actually pull itself through the bore, so little or no forward force should be applied. Continue reaming until the reamer stop is reached.
- c. Using low air pressure, blow the chips free before removing the reamer.
- d. To remove the reamer, turn clockwise while slowly pulling outward on the reamer.
- e. Remove any remaining debris from the bore with low air pressure and clean in a solvent tank.
- f. 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 with drill. If the valve goes in the bore with resistance, use the bore sizing tool as a final step.

CAUTIONS AND SUGGESTIONS:

- Turning the reamer backward will dull it prematurely.
- Pushing on the reamer will result in poor surface finish and inadequate and sporadic material removal.
- Never use a crescent wrench, ratchet or pliers to turn the reamer.
- 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 Sonnax reamer before resharpening or replacing averages 50-70 bores.



A140 and 89010-03K

- a. Remove all components from valve body bore. Discard the OE pressure regulator valve and spring.
- b. Ream bore according to instructions.
- c. Important! Place the OE washer and the enclosed .154" thick spacer over the replacement pressure regulator valve stem.
- d. Place the enclosed spring over the replacement pressure regulator valve stem.
- e. Push the valve/washer/spring assembly into the bore, stem end out, until the valve bottoms in the bore.
- f. Return the boost valve assembly to the bore, open end first, and secure with the OE retainer.

A540E and 89010-03K

- a. Take note of the position of the adjustable step on the original boost sleeve. Ensure that the adjustable step on the replacement sleeve or reused OE sleeve is in the same location when reassembled.
- b. Remove all components from valve body bore. Discard the OE pressure regulator valve and spring.
- c. Ream bore according to instructions.
- d. Important! Grind/cut .180" off of the replacement valve stem, making the length equal to the "V" notch. This is necessary to allow proper stroking of the valve in this application.
- e. Place the OE washer over the replacement pressure regulator valve stem. The enclosed .154" thick spacer is not needed for this application. It is only used on the A140 applications.
- f. Place the enclosed spring over the replacement pressure regulator valve stem.
- g. Push the valve/washer/spring assembly into the bore, stem end out, until the valve bottoms in the bore.
- h. Return the boost valve assembly to the bore, open end first, and secure with the OE retainer.

