4L60-E PWM & NON-PWM

PART NUMBER **77754-03K, -04K, -R2**

TCC Regulator Valve Kits

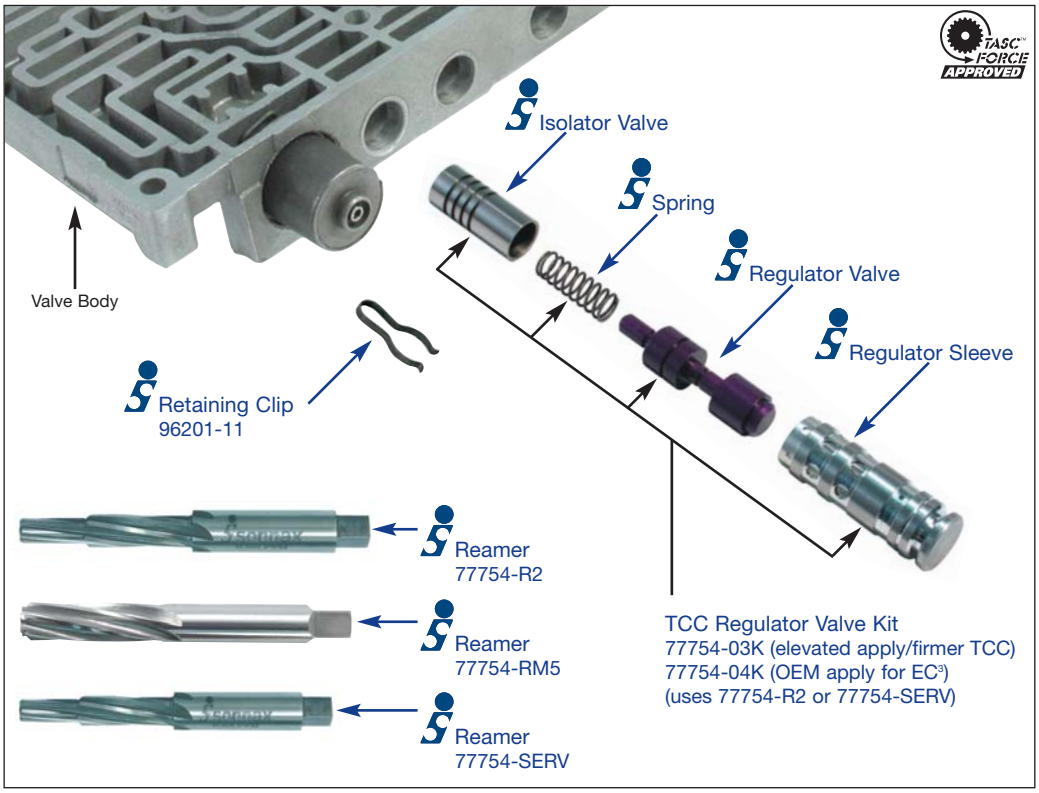
77754-03K
77754-04K

Each kit includes the following

1 Isolator Valve
1 Sleeve
1 Regulator Valve
1 Spring

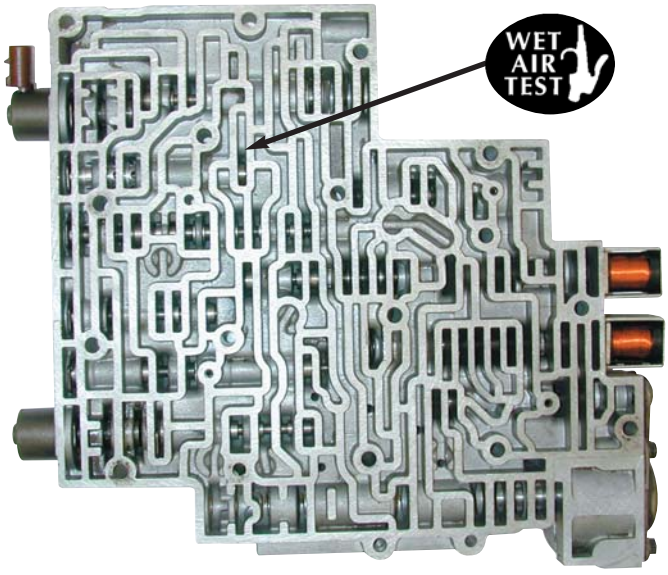
77754-R2

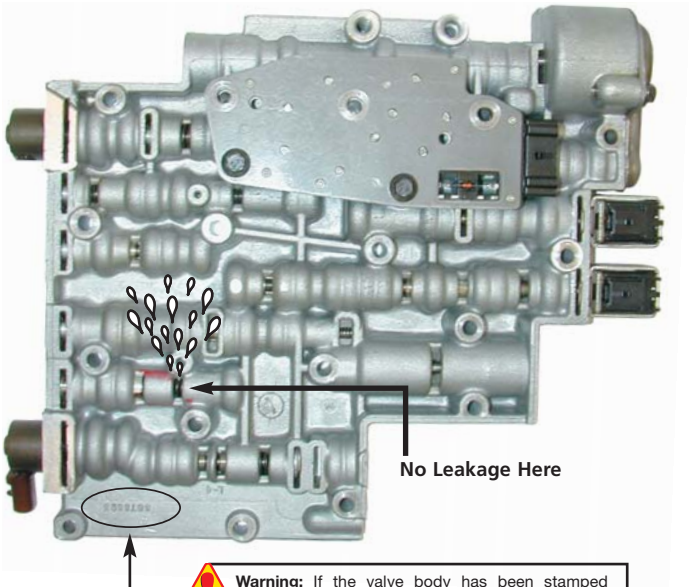
1 Reamer



Wet Air Test

To test for a signal oil leak, place oil into the PWM/TCC feed (2nd Clutch Oil on non-PWM units, see photos below). Follow with low air pressure.





NOTE

Warning: If the valve body has been stamped SERV in this area, it has been remanufactured by GM. Do ***NOT*** try to ream this SERV valve body with your **77754-R2** reamer! Remanufactured valve bodies require **77754-SERV** and **-RM5** reamers and part number **77754-ISO** in addition to this kit.

Reaming Instructions

1. Remove valves from the bore to be reamed. Discard valves and end plug.

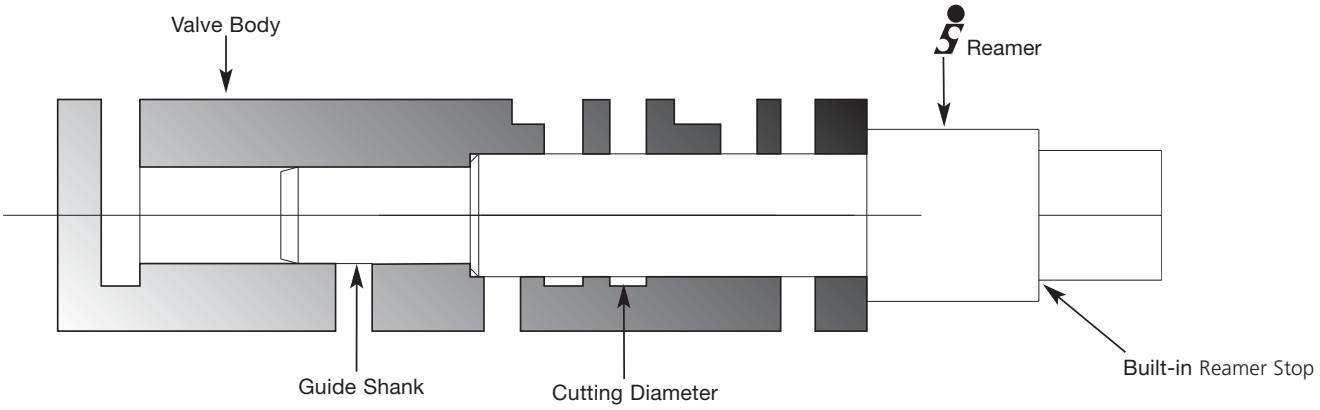
Important Note: Measure the Isolator valve you removed from the valve body. If your valve is .441" diameter go to step 2. If your valve measures .473" diameter, it will require **77754-SERV** and **77754-RM5** reamers and installation of **77754-ISO** sleeve.

2. Clean valve body. Mineral spirits & degreaser cocktail in a 5:1 mix ratio works well.
3. Clamp the valve body to bench with open circuits up.
4. Fill bore with cutting fluid (kerosene, Tap Magic™, etc.).
5. Soak fluted end of reamer with cutting fluid.
6. Insert reamer **77754-R2** into valve body bore until reamer tip contacts the first bore to be cut. Securely position the reamer against the bore to remove any reamer wobble.
7. With the reamer carefully and securely positioned, use a speed handle to ream the bore. The reaming action should be clockwise in a smooth and continuous motion, at approximately 1 to 1½ revolutions per second.
8. The reamer should actually pull itself through the bore, so little or no forward pressure should be applied to the reamer or speed handle.
9. Continue reaming until the shank of the reamer bottoms on the valve body. Spin the reamer five to 10 more times after bore bottoming to allow for excess material removal and better surface finish.
10. Using low air pressure, blow free the chips before removing the reamer.
11. To remove the reamer, turn clockwise while slowly pulling outward on the reamer.
12. Remove any remaining debris from the bore with low air pressure and mineral spirits/degreaser cocktail.
13. Lubricate the replacement sleeve with ATF. Fit the sleeve into the reamed bore. If snug, repeat the reaming procedure with an air drill at 500 rpm.

Reaming Cautions

- Never turn the reamer backwards.
- 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.

Reamers are designed to be turned by hand clockwise only. The cutting edge will become dull if turned counter-clockwise. A dull reamer will cut a smaller hole. Reamers can be sharpened. Actual life of reamer before resharpening averages 50 to 70 bores and depends on oil and turning process.



4L60-E PWM & NON-PWM

Isolator Valve Sleeve Kit

PART NUMBER **77754-03K, -04K, -R2**

Applications:

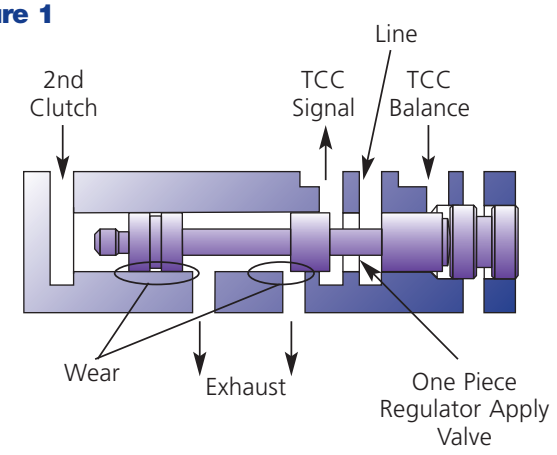
77754-03K: '93-'97 4L60-E with non-EC3 TCC apply logic. The **77754-03K** produces increased TCC apply pressure compared to the OEM design. This provides additional TCC holding capacity in units without EC3 TCC apply strategy.

77754-04K: '93 & up 4L60-E (required for '98 & up with EC3 apply strategy). The **77754-04K** restores OEM TCC apply pressure. This can be used in any application where OEM apply rate is preferred, but must be used in units with EC3 TCC apply strategy. EC3 TCC apply strategy can be identified by monitoring maintained TCC slip rates controlled by the PWM duty cycle, gradually bringing the TCC slip rate to 0 when highway speed is achieved. EC3 units will often begin applying a controlled slip after the 1-2 shift, and continue the controlled apply during shifts and deceleration. For more information, refer to page 50 of the Sonnax Volume 4 catalog.

Non-PWM Valve Line-Up

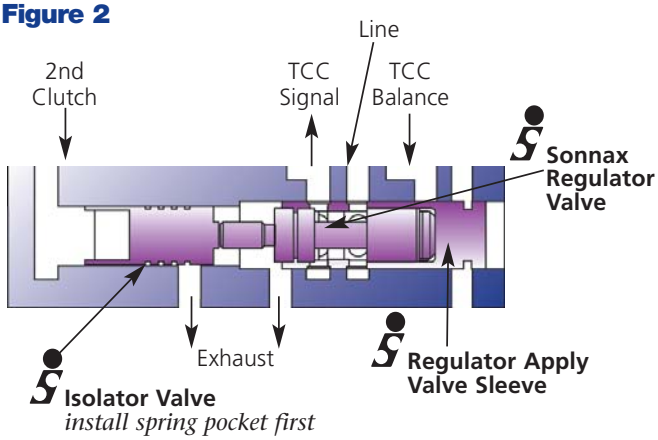
OEM '91-'94-NON PWM
1 solenoid at front of body & 12 pin case connector

Figure 1



Sonnax installed-NON PWM
Isolator valve installs with no spring

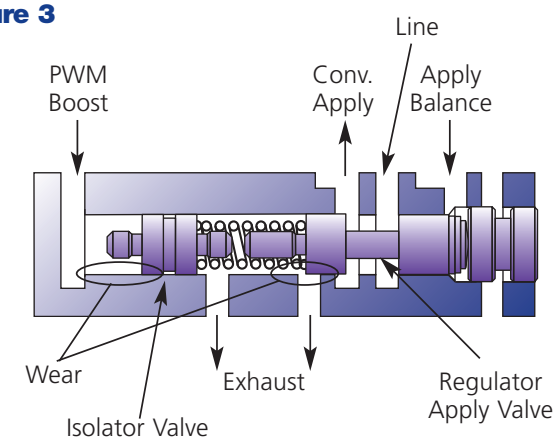
Figure 2



PWM Valve Line-Up

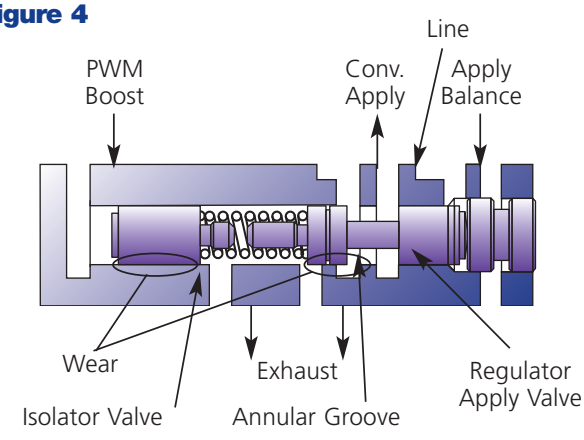
OEM '93-'97-PWM
2 solenoids at front of body & 13 pin case connector

Figure 3



OEM '98-PWM
Common to EC3 controls, see the application section

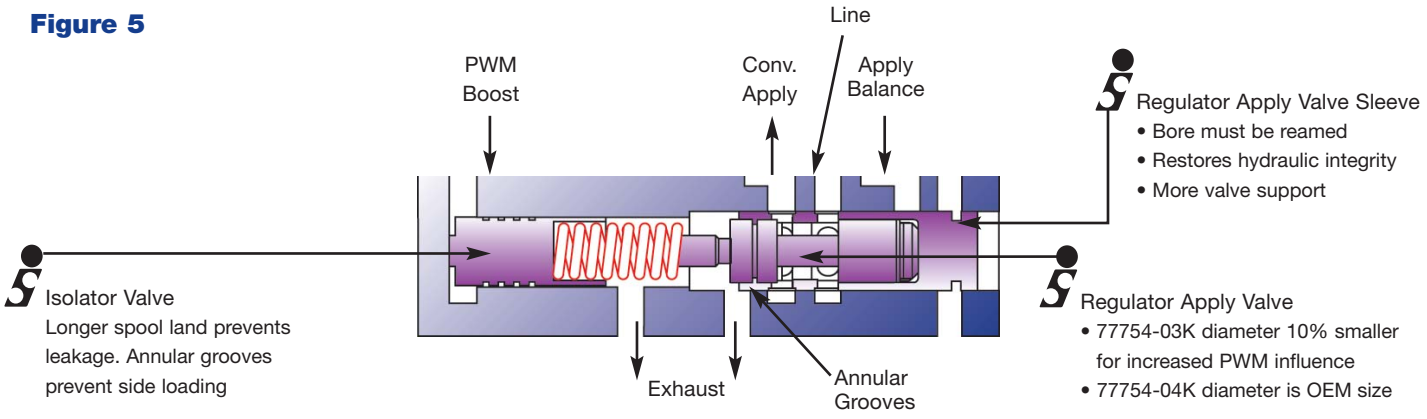
Figure 4



Installation Instructions

1. After the valve body bore had been reconditioned (see Reaming Instructions), refer to figures 2 and 5 to determine the proper valve line-up. Use figures 1, 3 & 4 to determine if you have a PWM or a non-PWM application.
2. For non-PWM applications, install the Sonnax valve line-up as pictured in Figure 2.
3. For PWM applications, install the Sonnax valve line-up as pictured in Figure 5. Use Transjel™ (Sonnax part no. **31295**) to retain the spring in the isolator plug during installation.
4. Push the sleeve assembly into the valve body, only deep enough to install the retaining clip around the sleeve.

Figure 5



Note: Refer to **77805-K** & **77805E-K** for other TCC overheat, slip conditions.

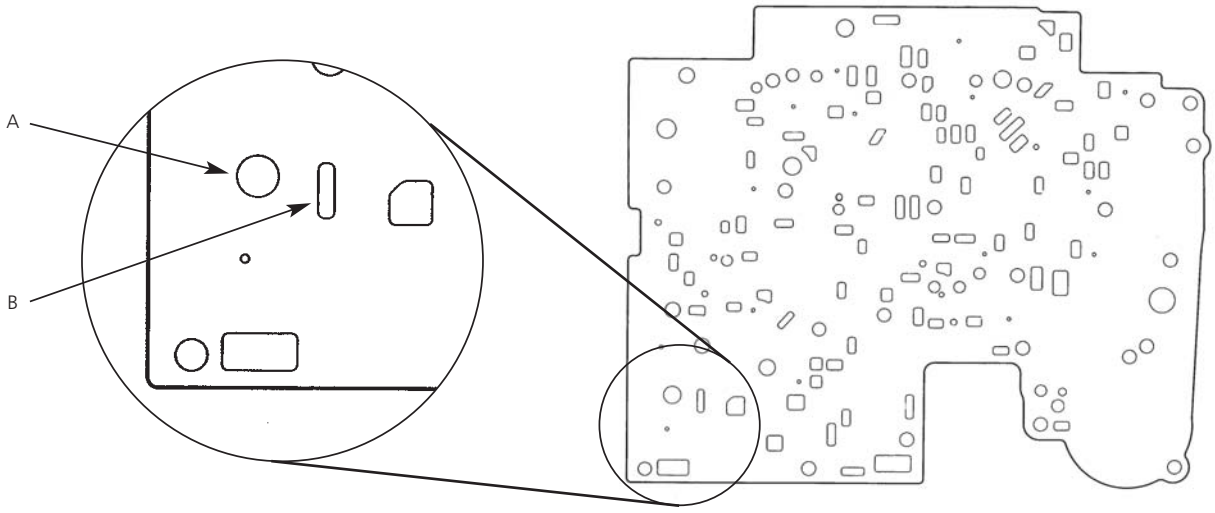


Figure 6

Note: Since the castings for PWM and non-PWM valve bodies are identical, this kit can be used when updating a non-PWM valve body for use in a PWM unit or retrofitting a PWM valve body for use in a non-PWM unit. The separator plate must also be changed when this is done (see Figure 6).

With PWM solenoid “A” & “B” holes (contains isolator, spring, two spooled regulator valve. See Figures 3 & 4).

Non-PWM do not have holes “A” & “B” (contains one-piece valve, three spools. See Figure 1).