4T60 & E

Part Numbers 84754-16K, 84754-22K, 84754-97K, 84754-98K, 84754-TL5

TCC Apply Valve Kit

84754-16K
'96 & earlier oversized

84754-22K
'96 & earlier standard size

84754-97K
'97 & later oversized

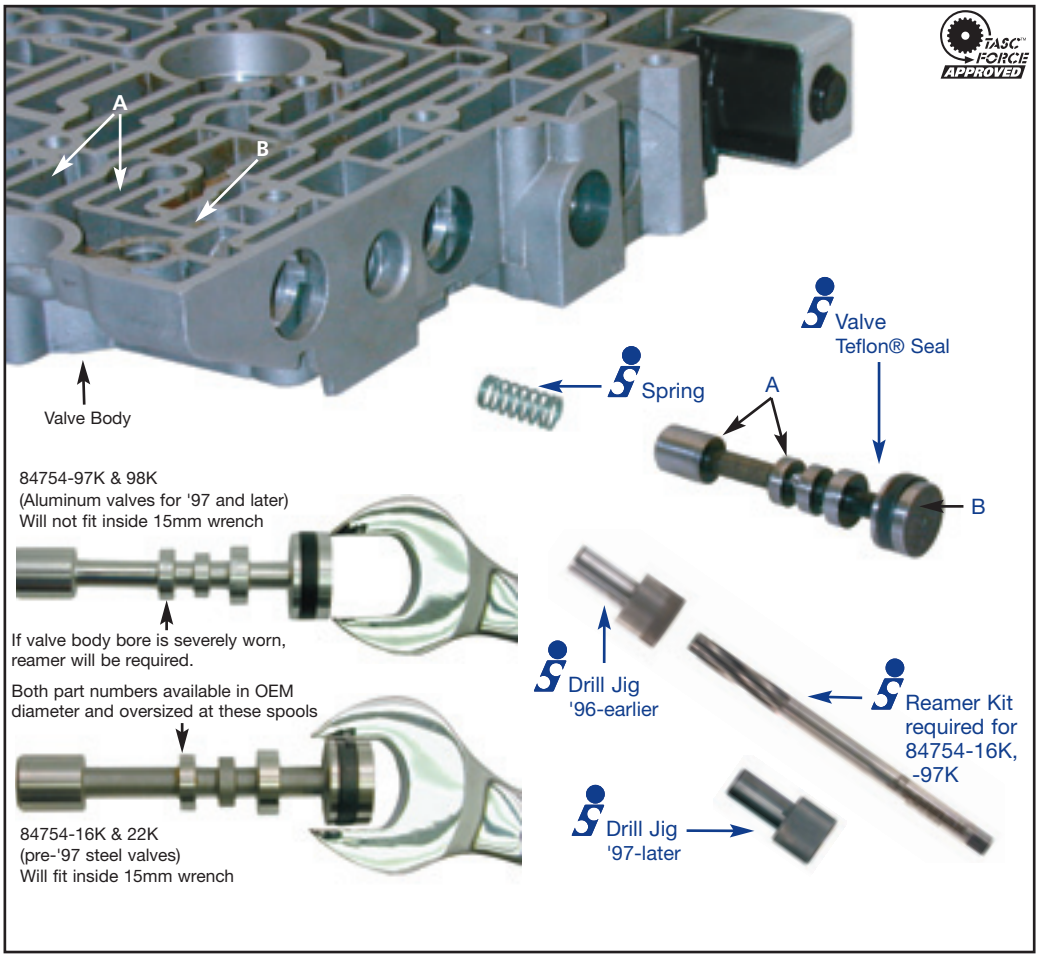
84754-98K
'97 & later standard size

Each kit includes the following:
1 Apply Valve
1 Teflon® Seal
1 Spring

Note: U.S. Patent No. 6,832,671

84754-TL5
Kit required for 84754-16K & -97K only

1 '96 & earlier Drill Jig
1 '97 & later Drill Jig
1 Reamer



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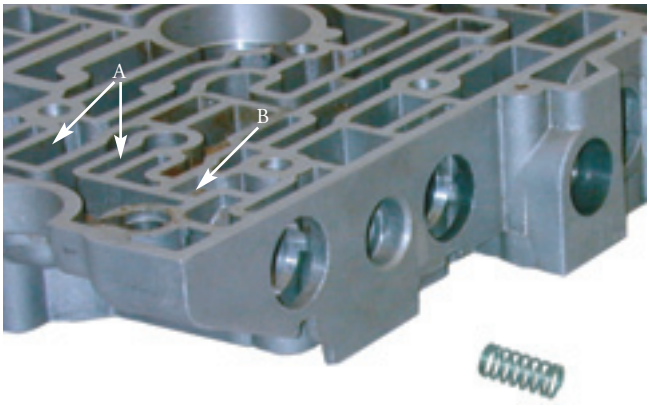
Wet Air Test:



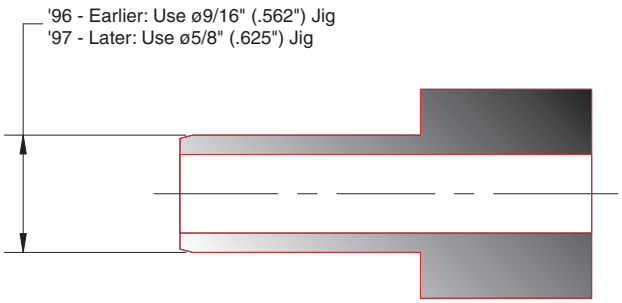
1. Test with TCC solenoid installed and energized (solenoid closed).
2. Regulate air pressure to TCC signal circuit (B).
3. There should be no leakage into release circuits (A).
4. Pressure must stroke valve inward.
5. Valve should return without sticking once pressure is removed.

Additional Diagnostic Information:

It is difficult to isolate converter codes that are valve-related. The TCC apply valve should be considered as the switch for converter apply and release oil, whereas the regulator valve controls the apply pressure and TCC piston slippage. The apply valve and its bore wear can be isolated with the SonnaFlow™ and a scanner. On the Sonnaflow™, the TCC valve stroke will be evident as a .2 gpm increase in flow as the valve strokes. When the valve releases hydraulically, the flowmeter will indicate a .2 gpm reduction. When the bore is worn, the solenoid has no control over the valve as heat rises and the oil thins. The scanner will still electronically indicate TCC enable and the solenoid will be grounded, but the hydraulic force/signal oil may be leaking at the solenoid seat or valve spool. The scanner is often watched for TCC/PWM duty cycle percentage and slip rpm as an indication of hydraulic control. The duty percentage controls the converter regulator valve. The slip rpm of a worn regulator valve increases with temperature.

Reaming Instructions

1. Remove the valve from bore.
2. Clean the valve body.
3. Clamp the valve body horizontally to bench with open circuits up.
4. Fill bore with proper cutting fluid (kerosene, Tap Magic®, etc.).
5. Insert the reamer jig into bore as illustrated. Note: The '96 & earlier applications use the 9⁄16 (.562") diameter drill jig; and the '97 & later applications use the 5⁄8 (.625") diameter drill jig. Refer to the illustration below.
6. Soak the fluted end of reamer with cutting fluid.
7. Insert the reamer into reamer jig until the guide nubbin enters the first bore to be cut, as illustrated.
8. 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 1 1⁄2 revolutions per second.
9. The reamer should actually pull itself through the bore, so little or no back pressure should be applied to the reamer or speed handle.
10. Continue reaming until the tip of the reamer bottoms in the bore. Spin the reamer 5-10 more times after bore bottoming to allow for excess material removal and better surface finish.
11. Using low air pressure, blow the chips free before removing the reamer.
12. To remove the reamer, turn clockwise while slowly pulling outward on the reamer.
13. Remove any remaining debris from the bore with low air pressure and cleaning solvent.
14. Lubricate the replacement valve, without the Teflon® seal installed, with ATF. Fit the valve into the reamed bore to check for fit.
15. Due to variations in valve body wear and reaming processes, the valve may seem snug at the middle spool diameter. In these instances, buff the indicated bore with emery cloth until the valve strokes freely. The valve body should be cleaned again to remove any grit.



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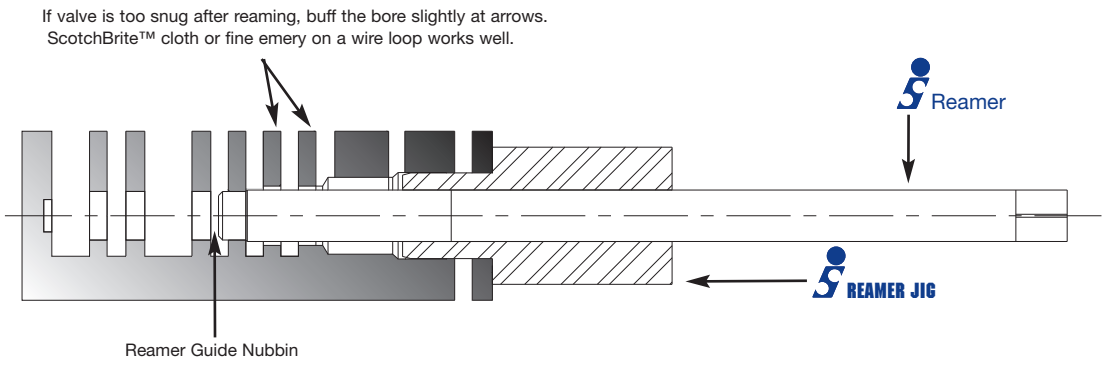

Assembly Instructions

1. Lubricate the casting bore and replacement valve prior to intallation.
2. Secure the spring into the pocket at the end of the valve.
3. Using gel, secure the seal into the valve groove. Depress/guide the seal through the TCC signal passage to prevent damage.
4. Manually stroke the valve fully a number of times to make sure there are no hang-ups.

Note: Some OEM applications do not have the inboard valve return spring. In these applications, line pressure is the force holding the valve into TCC off position. The addition of the return spring requires more signal oil pressure, and ensures that a restricted solenoid or large feed signal filter/orifice does not force the valve into apply.