

RFE TCC Apply Limit Switch Valve Kits

Spring

Transmission Report

Volume 15, No. 1

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NOTE: The OEM calls this a TCC switch valve. The improved Sonnax version is called a TCC apply limit switch valve because, while it functions like the OE valve, it also limits the converter apply pressure.

In the Chrysler 45/545/65/66/68RFE, the TCC regulator valve limits converter apply pressure only when in the partial apply phase. However, when in full apply mode, converter apply pressure is equal to line pressure.

In most cases this isn't a problem, but when a vehicle is chipped or performance enhanced, that line pressure can be increased to 250+ psi. This will absolutely deform the torque converter and cause expensive repairs.

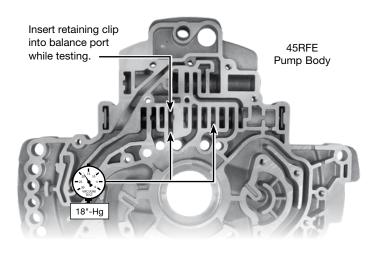
A Sonnax TCC apply limit switch valve allows those upgrades to vehicle and line pressure, but limits the torque converter apply pressure to 150 psi. This is enough to maintain proper lockup without ballooning the converter and avoids those costly issues.

Both drop-in and oversized valve options are available, making it easy to rebuild any RFE with quality parts that keep the comebacks away.

Diagnose Problems with a Vacuum Test

Bore wear allows critical fluid loss that prevents proper TCC operation. Repairs are needed if vacuum testing at the ports indicated fails to hold the recommended minimum 18 in-Hg or if wear is visually detected. Severe wear requires reaming the bore and installing oversized kit 44912-41K.

Requires F-44912-TL8 & VB-FIX





"Top Shop" Winners!

Every year, *Transmission Digest* magazine accepts nominations for the top products and tools in the powertrain aftermarket. Readers vote for their favorites to determine the winners. When the 2024 results came in, Sonnax won nine awards! Thank you all for your trust and support of Sonnax and Rostra products – we couldn't have done it without you.

Chrysler 42/44/46/47/48RE

Rostra Governor Pressure Sensor Part No. 50-1606 Fits '00-Later

Chrysler 68RFE

Bushing Kit Part No. 72030-68K

Ford 6R60/75/80 & ZF6HP26

Heavy Duty Overdrive "E" Piston Part No. 95984-01

GM 4L60/E Series

Heavy Duty Input Shafts See Page 7

Input Housing Forward Sleeve Kit Part No. 77733-52K

GM 6L45/50 & 6L80/90

Remanufactured TEHCMs See Page 6 Fit 6L80/90

The Sure Cure® Kit Part No. SC-6L80-6L90 Fits 6L80/90

 Bushing Kits

 Part No. 104030-01K Fits 6L45/50

 Part No. 104030A-01K Fits 6L80/90

ZF8HP55/70/75

Heavy Duty "D" Clutch Backing Plate Part No. 35570-75

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Heavy-Duty "A" Clutch Backing Plates

Prevent ZF8 & Chrysler Clutch Burnup



The Real Clutch Killer: Uneven Wear Caused by a Weak OE Backing Plate that Flexes During Apply

- 2X thicker than weak, stamped OE backing plate for significantly improved protection against burnup
- Easy to install, no special tools or machining required
- Prevent comebacks by installing in units that have not yet failed

Named a Top Shop Product by the readers of *Transmission Digest*, two upgraded "A" clutch plates are now available from Sonnax to cover an even wider range of units!

The "A" clutch in Chrysler and ZF transmissions has a thin, stamped OE backing plate that allows flexing and bowing (coning) of the clutch pack. This wears the clutches unevenly, generating and concentrating extra heat which leads to clutch burnup. Sonnax heavy-duty backing plates are designed to prevent flexing when the clutch is applied, eliminating the leading cause of "A" clutch failure.



Part No. 35577-45 Fits ZF8HP45/50/51 & Chrysler 845RE, 850RE

Part No. 35577-70 Fits ZF8HP55/70/75



Heavy-duty plates for both "A" and "D" clutch available for many ZF8 units!

48RE Zip Kit®



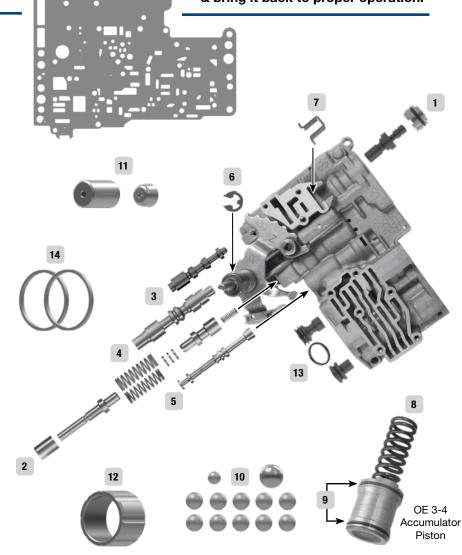
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The First Step in Correcting Common Shift Problems

NEW!

- Drop-in Zip Valves install easily, NO reaming or special tools required
- Stops leaks so the valve body works the way it should
- In-depth tech booklet covers installation, diagnostics & tips for more advanced transmission repairs

48RE Zip Kit includes a new OE separator plate to ensure your rebuild will undo past alterations & bring it back to proper operation.





Part No. 48RE-ZIP

- 1 Line Pressure Plug & Sleeve Kit
- 2 Throttle Valve Kit
- 3 4-Spool Switch Valve Fits Units with 4-Spool Valve
- 4 PR Valve Fits '78-Later Units Only
- 5 Manual Valve
- 6 E-Ring
- 7 Boost Valve Spring Retainer
- 8 3-4 Accumulator Spring
- 9 4th Accumulator Seal & D-Ring
- 10 Checkballs .250", .344" & .188" Dia.
- 11 Intermediate Plug & Pilot Kit
- 12 Output Pilot Bushing
- 13 Governor Bore Plug Kit
- 14 Turbine Shaft Seals
- 15 Valve Body Separator Plate

Also Available for 48RE

The Sure Cure[®] Kit Part No. SC-48RE Requires Tooling & VB-FIX

VB Separator Plate Part No. 22747-27 OE #52854127AA

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Piston Kit Roundup

When rebuilding a valve body, always be sure to vacuum test your signal damper and accumulator piston locations and replace as necessary to ensure a long-functioning transmission with less likelihood of comebacks.

Testing at the port(s) indicated should hold the recommended minimum 18 in-Hg. If not, replace with an improved Sonnax piston kit to recover hydraulic control and renew shift performance.

Get to Know the Newest Options from Sonnax

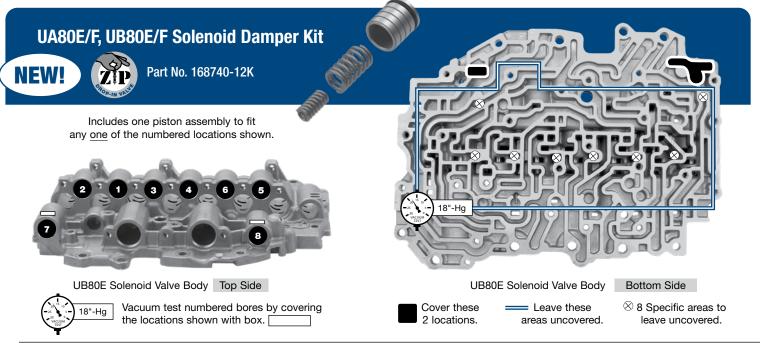
Recently Sonnax has been on a roll releasing products you have been asking for. With so many coming out, it may be a good idea for us to explain the differences between some of the kits — like signal damper piston kits and accumulator piston kits — and why they are needed.

Most of the time when rebuilding a valve body, we are looking for and testing the main valves and bores that control the main functions of the transmission, taking a shotgun approach to do the most good in the shortest amount of time. Then we start looking at other key areas that may be the culprit for issues. But often overlooked, and wrongfully so, are the signal damper and accumulator pistons. These have a critical function and, when replaced, truly ensure that the transmission will be functionally correct.

These pistons effectively balance the shock of the solenoid's signal pressure in their respective circuits, allowing the valves to be held in the correct place and not stroke incorrectly. They work just like your knees on the trampoline: when you jump, the varying forces applied to you are absorbed and balanced by your knees. Similarly, the forces the dampers and accumulators see vary with solenoid output pressure, and their goal is to absorb spikes, allowing for balanced pressure to their respective valves.

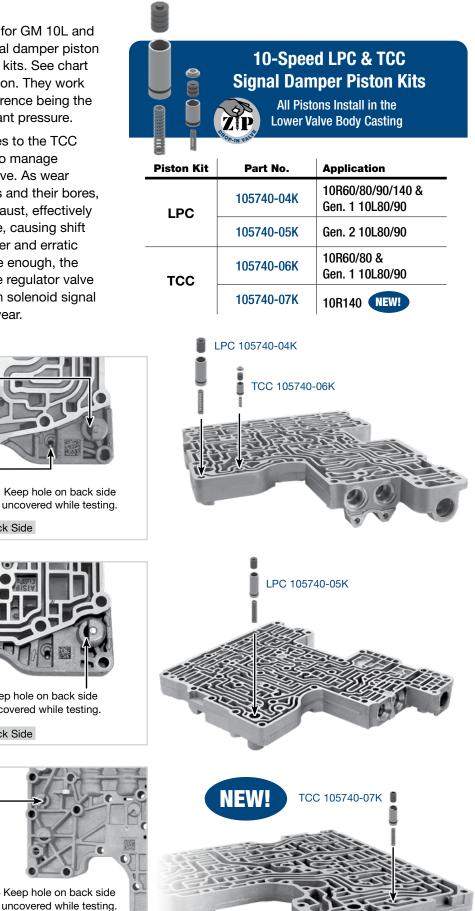
Sonnax offers many signal damper piston and accumulator piston repairs. Some of the newest are actuator feed accumulator piston kit 124740-76K for GM Gen. 2 6T70/75/80 and solenoid damper kit 168740-12K for Toyota/Lexus UA80E/F, UB80E/F.





Among the recently released parts for GM 10L and Ford 10R series units are LPC signal damper piston kits and TCC signal damper piston kits. See chart for part numbers and unit information. They work exactly as described, the only difference being the circuits on which they apply constant pressure.

The TCC kit helps to manage spikes to the TCC control valve while the LPC helps to manage spikes in the pressure regulator valve. As wear occurs to these TCC/LPC dampers and their bores, signal pressure can leak to the exhaust, effectively altering the pressure the valves see, causing shift and TCC apply issues, TCC shudder and erratic line pressure. If the wear is extreme enough, the TCC control valve and the pressure regulator valve could begin to stroke with spikes in solenoid signal pressure, leading to further valve wear.





Back Side

10R140

Lower Valve Body

Front Side

18"-Hq

10L80 (Gen. 1)

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Remanufactured 6L80/90 TEHCMs

Durable & Reliable OE Performance at an Affordable Cost

Image: market intervention

Top-Quality Remanufacturing

Every unit undergoes a rigorous ultrasonic cleaning and is then inspected to ensure all failed components are replaced. New pressure switches and a filter plate/screen are installed.

Rigorous Electro-hydraulic Testing

Sophisticated diagnostic testing to mimic a full and varied drive event guarantees functional performance consistent with a new OE TEHCM.

Ready for Reprogramming

As with a new OE, these remanufactured TEHCMs are ready for quick flashing at your facility using a J2534 device.

Choose Your TEHCM

Part No. GM6L-TEHCM-C5

OE Part No. 24251029, 24251412, 24254908, 24256051, 24256124, 24257141, 24258304, 24275874

Typically Fits Cadillac 2010–2011, Chevrolet 2010–2013, GMC 2010–2011

Part No. GM6L-TEHCM-C6

OE Part No. 24256939, 24257213, 24259639, 24259835, 24261870, 24264141, 24265259, 24267576, 24270598, 24275873, 24276637

Typically Fits Cadillac 2012–2015, Chevrolet 2011–2020, GMC 2011–2020, Isuzu 2012–2016



Get Time Tested, Industry Trusted Results with a SONNAX TEHCM

Ask for the Sonnax TEHCM, now featuring the Sonnax logo, so you know you're delivering customers a top-quality rebuild.

The peace of mind and value add Sonnax 6L80/90 TEHCMs bring our customers is one way our partnership with Sonnax produces an enhanced solution that trickles directly to our customers.

> B. Cook • Purchasing Manager Whatever It Takes Transmission Parts

The remanufactured TEHCMs for 6L80 and 6L90 are another example of Sonnax quality and expertise. We sell and use them exclusively in our own rebuilds. We highly recommend everyone try them.

> D. Apice • Owner/Operator Viper Transmission Parts

Sonnax® PERFORMANCE faster tougher stronger

300M STEEL INPUT SHAFTS

4L60/E #1 for High HP Street/Strip Builds



- High-strength 300M steel shafts are more than 2X stronger than OE
- Shot peened for extreme durability
- Unique design protects against failure from stress cracks
- Fully manufactured at Sonnax Vermont headquarters

Shafts also are available pre-installed in a Sonnax Smart-Tech[®] input housing kit.

Check out 4L60/E repairs and upgrades, HD/HP build guides and request your free copy of the NEW Sonnax catalog at www.sonnax.com/4L60E.

TH400Reliable Upgrades for Any Power Level

The forward drum spline on these input shafts is designed to be used with the Sonnax Smart-Tech[®] drum module, Sonnax heavy duty forward drum or other aftermarket drums with compatible 28-tooth spline.

1" Heavy Duty

Max Durability from a Stock-Size Shaft

1-1/8" Extreme Duty

35% Stronger than Standard, 1" Shafts

Using this 1-1/8" shaft requires changing to a 35-spline turbine hub in the torque converter and use of Sonnax big shaft stator support tube kit 28154S-125 with larger inner diameter.

1-3/16" Extreme Duty NEW!

For 27-Spline Race Applications

Ideal for use in vehicles up to 4,000 HP where pumps, stators and converters are converted for a 27-spline, 1-3/16" shaft configuration.



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New Parts in this Issue

- **RFE TCC Apply Limit Switch Valve Kits**
- ZF8HP45/50/51 & Chrysler 845RE, 850RE Heavy-Duty "A" Clutch Backing Plate
- 48RE Zip Kit[®] •
- **Damper & Accumulator Piston Kits**
- 4L60/E & TH400 Input Shaft Upgrades

To update your address or request to stop this mailing, please call 800-843-2600, 8:30 a.m. to 5 p.m. ET, or send an email to news@sonnax.com.

Sonnax is an industry leader in the cutting-edge design, manufacture and distribution of the highest quality products to the automotive aftermarket, commercial vehicle industries, and industrial sectors utilizing drivetrain technology.



In Stock & Available Now!

4L60/E HEAVY DUTY INPUT SHAFTS

Some State

The highly anticipated Sonnax 4L60/E heavy duty input shafts are back in stock and better than ever!

See Page 7



Now 300M Steel