

Transmission Report

Volume 14, No. 2

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8L45/90 Zip Kit® Change



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Product Line Manager

*You Spoke,
We Listened!*



Kit Now Includes Full Set of 7 Signal Accumulator Pistons

The GM 8L45/90 valve body has seven signal accumulator pistons. When we first released shift Zip Kit **8L45-8L90-SHIFT-ZIP**, it included only four piston assemblies because often only a few bores are worn and require addressing. This allowed us to keep the Zip Kit cost lower — which everyone loves — and if more pistons were needed, another set of four was available separately in our **154740-06K** signal accumulator piston kit.

The Zip Kit has been very popular, but we received a lot of great feedback from you about the pistons. We heard that even though all seven do not always HAVE to be replaced, replacing the full set is preferred when the goal is a complete valve body overhaul. Since that's exactly what this Zip Kit should help you do, we changed the number of piston assemblies so you now get all seven! The rest of the kit components remain the same.

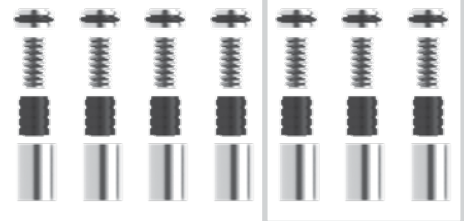
If you still prefer to address only the worn piston bores, the kit instructions explain how to evaluate each for wear. **See page 7** of this newsletter for some great tips on testing, assembling and installing Sonnax signal accumulator piston assemblies.

If you're working on an 8L45/90 valve body with shift-related complaints and burnt clutches, the **8L45-8L90-SHIFT-ZIP** is ideal. A different Zip Kit is available for targeting lube-, cooler- and converter-related complaints: **8L45-8L90-TCC-ZIP**. Use one Zip Kit or both for a job — it's a simple, cost-effective way to install drop-in repair parts you can trust.

See page 3 for more 8L45/90 repairs or visit www.sonnax.com.

Part No.
8L45-8L90-SHIFT-ZIP

NEW!



Signal Accumulator Piston Assemblies



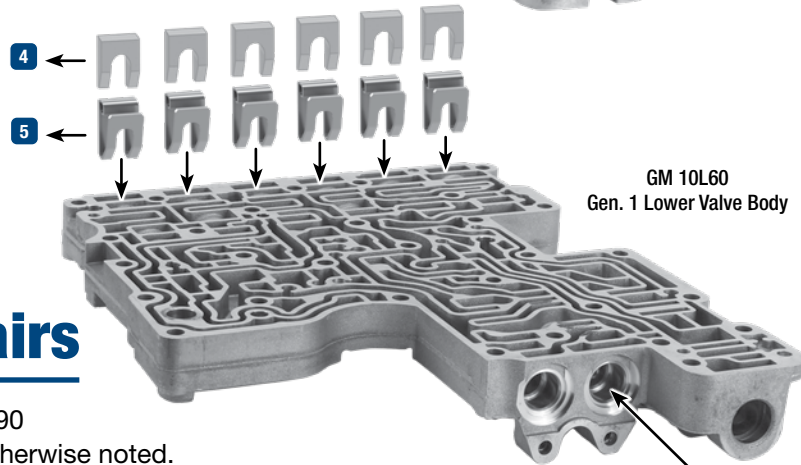
S2/S3/S4/TCC Clutch Control Valve Kit
Fits 1 of 4 Locations



S1/S5 Clutch Control Valve Kit
Fits 1 of 2 Locations



1-3-5-6-7 Accumulator Piston Kit



10-Speed Ford & GM Valve Body Repairs

Parts fit GM Gen. 1 and 2 10L60/80/90 and Ford 10R60/80/90/140 unless otherwise noted.

Symptoms/Part Type	Product Name	Part No.	Details
TCC/Lockup Symptoms			
TCC apply & release concerns, Overheated fluid, TCC slip codes	TCC Priority Valve Kit	1 105740-03K	ZIP
Pressure Problems			
Low line pressure, Various shift concerns, Delayed engagement, Poor shift quality	Main Pressure Regulator Valve Kit	2 105740-12K	ZIP Gen. 1 & 10R60/80/90/140 only
	Oversized Main PR Valve Kit	3 105740-20K	Gen. 1 & 10R60/80/90/140 only Requires F-105740-TL20*
	Oversized Main PR Valve Kit	3 105740-21K	Gen. 2 only Requires F-105740-TL20*
Component Damage/Failure			
Loss of shift solenoid control pressure, Poor shift quality, Various shift concerns	Solenoid Stabilization Clip Insert	4 105740-01K	ZIP 6/Bag
	Solenoid Stabilization Retainer	5 105740-19K	ZIP 6/Bag

* VB-FIX Required

6T40 & 6T70 3-5-R Drum Saver Kits

Simply THE END of 3-5-R Failure as You Know It

- Rugged Sonnax waved plate guarantees you THE BEST protection against breakage
- Accurately position the waved plate & set clutch clearance every time thanks to custom, billet steel plate
- Quickly & easily restore normal 3-5-R operation, even on drums with damaged splines

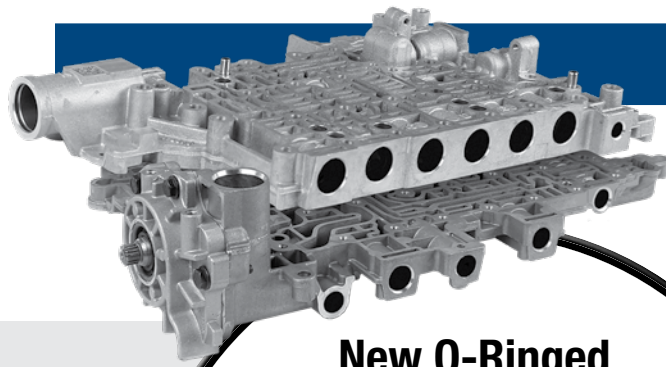


TECH VIDEO

Scan the code to see how a drum saver makes it easy to keep the comebacks away!



Choose Your 8L45/90 Control Valve Body Repairs



New O-Ringed Shuttle Valve Options!

In the many years that Sonnax has been serving your transmission needs, some things always seem to be true: 1) there are many ways to solve a problem and 2) you all have your preferences for which solution you find best.

It is for that reason that Sonnax has released not only O-ringed shuttle valves, but also non O-ringed versions. O-rings help with positive sealing to prevent critical fluid from cross leaking.



Shuttle Valve Kits

- Billet aluminum sleeve & hardcoat anodized aluminum valve combat premature wear
- Critical valve spool made 30% longer than OE for added sealing & durability

NEW!

O-Ringed

Part No. 154740-30K

Non O-Ringed

Part No. 154740-09K



Pressure Regulator & Shuttle Valve Kits

- Billet aluminum sleeve & hardcoat anodized aluminum valve combat premature wear
- PR valve VFS signal spool 200% longer than OE & operates in unworn area of the bore
- Critical shuttle valve spool made 30% longer than OE for added sealing & durability

NEW!

O-Ringed Part No. 154740-29K

Non O-Ringed Part No. 154740-02K

This kit also is included in TCC Zip Kit®
8L45-8L90-TCC-ZIP.



NEW!

S4 Clutch Control Valve Kits

These two new kits fit '19-later units only. Early-style valve bodies have a different S4 valve design that requires Sonnax kit 154740-11K.

- Hardcoat anodized aluminum valve combats premature wear
- Lengthened valve spool utilizes unworn bore section to seal apply oil
- Annular grooves help center the valve in the bore to reduce future side-load wear
- Scarf-cut seal prevents leaks at the signal apply end for proper clutch control



Drop-in

Part No. 154740-24K



Oversized

Part No. 154740-26K

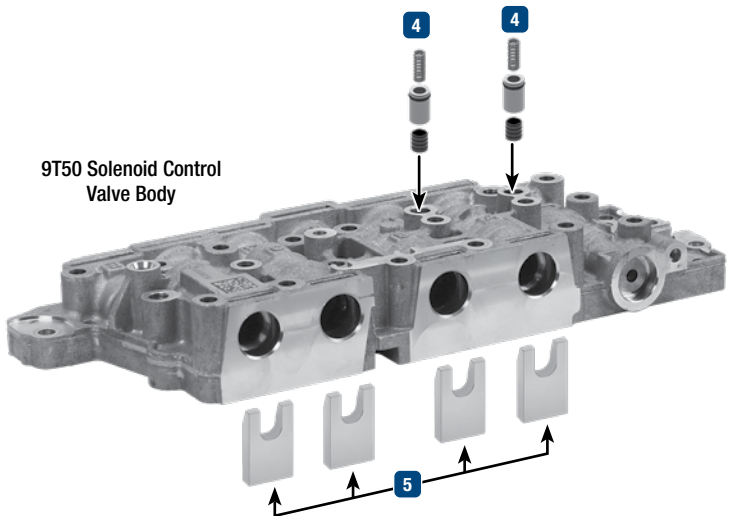
Requires F-154740-TL26 & VB-FIX





GM 9T45/50/60/65 Zip Valve™ Repairs

Symptoms/Benefits	Product Name	Part No.	Details
Pressure Problems			
Park release issues	ETRS Mode 2 Boost Valve Kit	1 184740-06K	ZIP
Harsh shifts, Burnt clutches, Pressure loss, Soft shifts, Flare shifts	O-Ringed End Plug Kit	2 184740-03K	ZIP Includes 5 end plugs
Erratic line pressure, Burnt clutches, Poor shift quality, Low converter & lube flow	Pressure Regulator Boost Valve Kit	3 184740-02K	ZIP
Burnt clutches, Soft shifts, Shift concerns associated with circuit pressure loss	Signal Damper Piston Kit	4 184740-01K	ZIP Includes 4 pistons
Component Damage/Failure			
Loss of shift solenoid control pressure, Poor shift quality, Various shift concerns	Solenoid Stabilization Clip Insert	5 184740-04K	ZIP 4/Bag

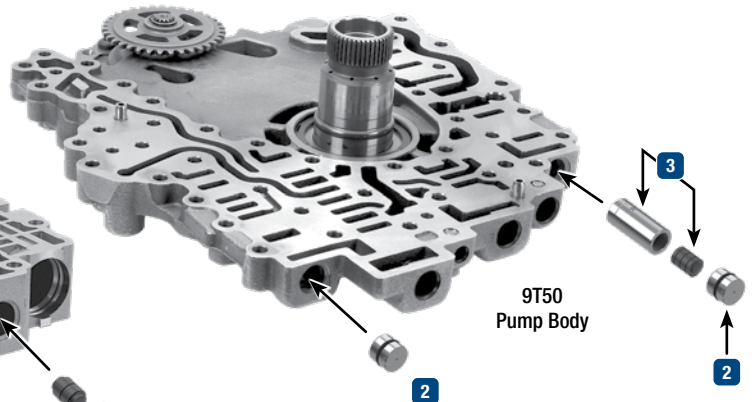
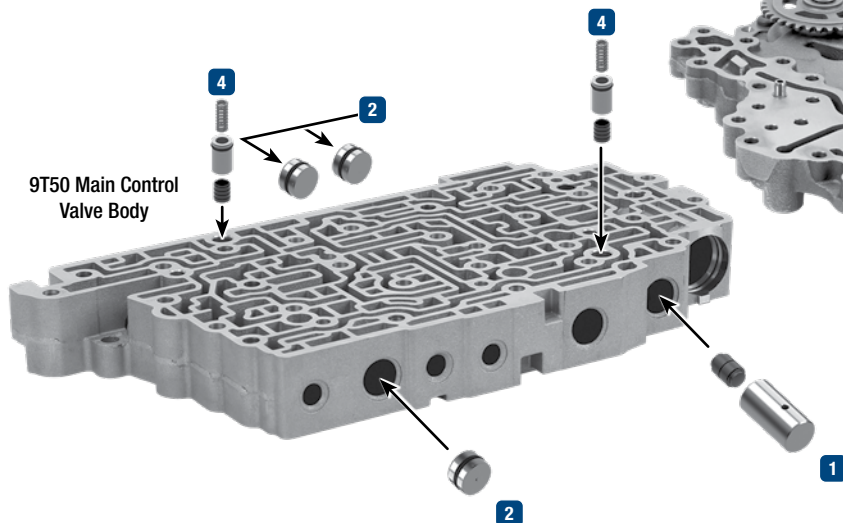


NEW!

Zip Kit®

Part No. 9T45-ZIP

Zip Kit includes all parts listed above. Parts also available separately!

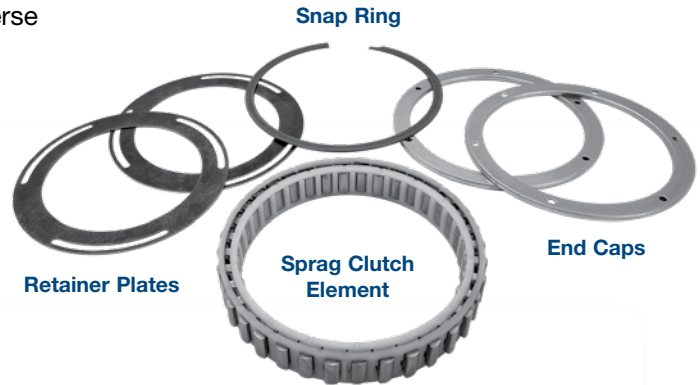


NEW!

Save the Race with Low/Reverse Sprag Rebuild Kits

In 68RFE and 6L80/90 transmissions, the low/reverse sprag elements, end caps and retainer plates are prone to wear, while the race is often unaffected. This results in a bind-up going into 2nd Gear or a 1-2 flare.

Sonnax sprag rebuild kits allow you to repair the race without the expense of buying a full sprag assembly.



68RFE Kit Part No. 72642SK



6L80 Kit Part No. 104642-80SK

6L90 Kit Part No. 104642-90SK

NEW!

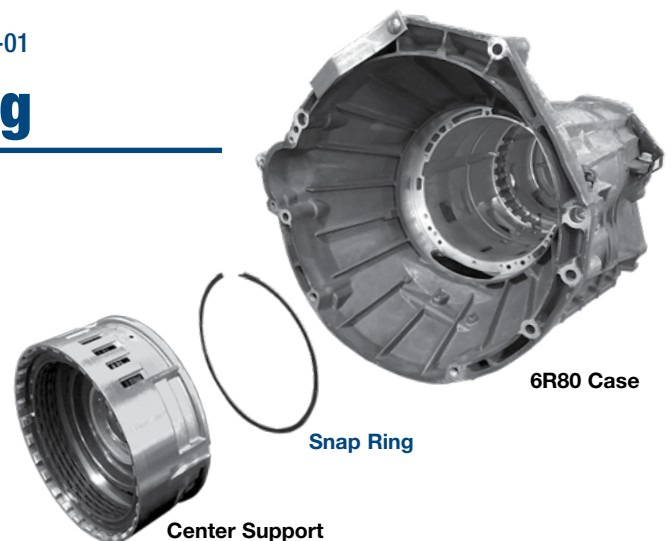
6R60/75/80 Center Support Snap Ring

Enhance Case Durability & Salvage Worn Center Supports

- Increased contact area between center support & case lugs combats future wear
- Preserves OE endplay tolerance

In Ford 6R60, 6R75, 6R80 transmissions, movement between the center support and case lugs causes fretting wear on the face of the center support, resulting in endplay exceeding specification.

Machining the center support contact face and installing Sonnax center support snap ring [95630-01](#) between the case lugs and center support restores endplay to proper levels, allowing the support to be reused.



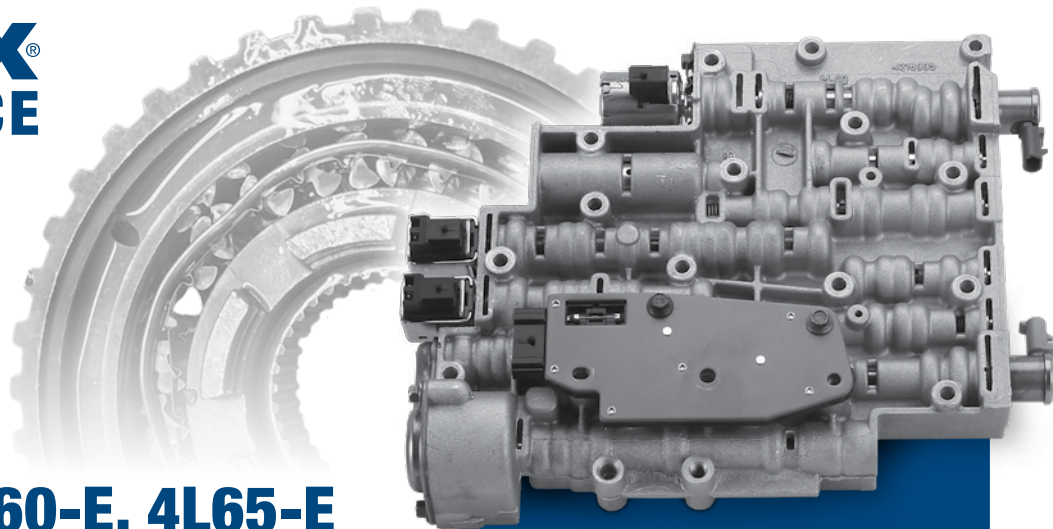
**BUILT TOUGHER
BUILT STRONGER**

Heavy Duty 4L60-E, 4L65-E Remanufactured Valve Bodies

Built-in Protection Against Forward Sprag & Clutch Failure

Lay the perfect foundation for work trucks and muscle cars with these premium remanufactured valve bodies from Sonnax.

- Overrun clutch applied in D, OD ranges for added holding power
- Delivers improved shifts, firmer TCC apply & moderately increased line pressure
- Valve body components come pre-installed, saving you time on the job
- Includes separator plate, gaskets & line pressure booster kit



Choose from Two Ranges of Enhanced Overrun Clutch Control

Part No. GM054-HD

- Applies the overrun clutch in D4 1st-3rd Gears & D3 1st, 2nd Gears
- Includes fluid rerouting for additional D4 protection & new servo cushion spring to reduce downshift clunk

Part No. GM053-HD

- Applies the overrun clutch in D3 1st, 2nd Gears
- Includes HD 2-3 shift valve for enhanced protection

These valve bodies fit '96-'08 units.

NEW! 4L80-E Heavy Duty Intermediate Clutch Backing Plates

Prevent Plate Failure at Higher Pressures

- Strong, billet steel plates with full set of case lugs improve durability
- OE & aftermarket case compatible
- Use with Sonnax case saver retainers to eliminate OE case lug blow out, no plate modifications required



34144HD-01



34144HD-02

Part No.	Thickness	Fitment	Use with Sonnax Case Saver Retainer
34144HD-01	.375"	4L80-E, TH400*	34762-10
34144HD-02	.275"	4L80-E, 4L85-E	34762-20

*Upgrades the TH400 .430" thick plate, allowing for more intermediate clutch setup options.



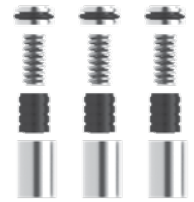
Caleb Perham
Product Support Representative

Tech Team Shop Talk

Contact Product Support (800) 843-2600, Ext. 398 • sonnaxtechsupport@sonnax.com

Mon. – Fri., 8:30 a.m. – 5 p.m. ET

Tips for Tackling 8L45/90 Shift Repairs with Sonnax Signal Accumulator Pistons



GM 8L45 and 8L90 shift quality issues are often traced to wear in the signal accumulators of the control solenoid valve body. While Sonnax signal accumulator piston kit [154740-06K](#) and shift Zip Kit® [8L45-8L90-SHIFT-ZIP](#) are popular for eliminating pressure loss, I wanted to share some tips that can help make the testing and installation process easier to navigate.

Diagnostic Testing

The best way to determine if repairs are needed is with vacuum testing. The OE accumulator piston and spring can also be blocked in place with varying-length pins in different positions to establish wear over the full stroke of the piston.* If vacuum testing isn't available, gauge pins can also be a helpful tool for identifying bore wear.

The Zip Kit now includes enough components to service all seven signal accumulator bores, but our experience shows that the S3 and S4 locations are generally the worst. This is why the smaller Sonnax kit [154740-06K](#) just services four of seven signal accumulator bores. For casting wear beyond the scope of our drop-in repairs, we offer oversized signal accumulator piston kit [154740-01K](#).

Installation

Test fit the sleeve and end plug. Make sure the step on the plug is facing down towards the spring and into the sleeve (**Figure 1**). Due to casting variations, it may be necessary to file the sleeve slightly for the end plug to sit flush. Be sure to dress the outside edges of the sleeve to remove any burrs that may have developed. These details are very important, as an end plug that sits too high will not allow the two casting halves to seal, causing cross leaks and pressure loss.

Final Assembly & Testing

After test fitting the sleeves in the bores, make sure to clean all parts thoroughly before final installation. Once completed, vacuum test each bore to verify your repair by simply installing a small test tip into the hole of the end plug (**Figure 2**). Remember to reset your adaptive tables and perform a relearn post repair or shift concerns may occur.

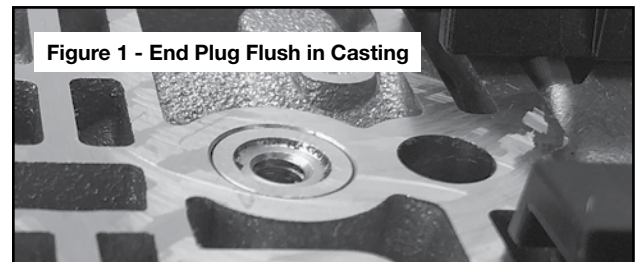


Figure 1 - End Plug Flush in Casting

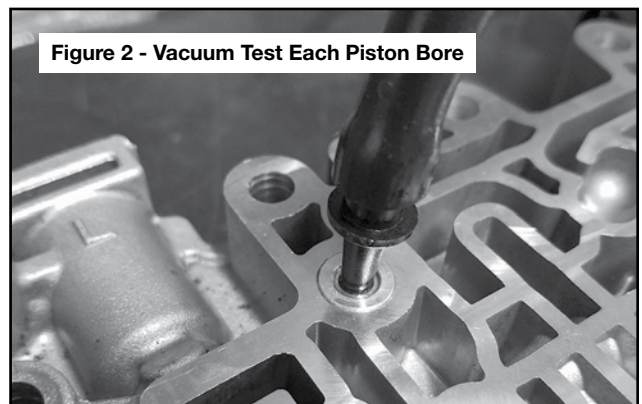


Figure 2 - Vacuum Test Each Piston Bore

*LEARN MORE

Read "Diagnosing 8L45 & 8L90 Shift Complaints: Always Check the VFS Solenoid Circuits" in the tech resources section at www.sonnax.com.

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Featured in this Issue

- 8L45/90 Signal Accumulator Piston Updates & Shuttle Valve Kit Options
- 9T45 Drop-in Valve & Pump Body Repairs
- 68RFE & 6L80/90 L/R Sprag Rebuild Kits
- 6R60/75/80 Center Support Snap Ring
- 4L60-E & 4L80-E Heavy Duty Upgrades

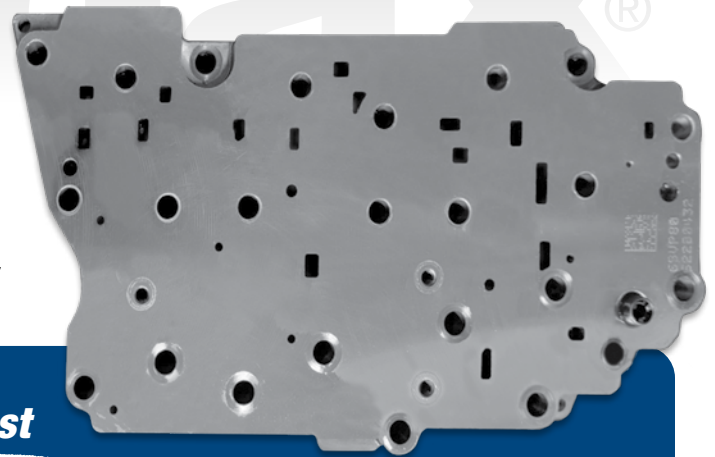
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Sonnax is an industry leader in the cutting edge design, manufacture and distribution of the highest quality products to the automotive aftermarket, commercial vehicle industries, and industrial sectors utilizing drivetrain technology.

 A Marmon |
Berkshire Hathaway
Company

NEW!

Gen. 2 & 3 6T40 Remanufactured Valve Body



Quality, Performance & Value You Can Trust

- Top-quality Sonnax parts & new, OE bonded separator plate & gaskets installed
- Includes full set of new, OE-quality NH & NL solenoids
- Hydraulically & electronically tested, ready to bolt up
- Limited Lifetime Warranty



Part No. GM6T40-2-3
Fits Gen. 2 6T30/40/50 & Gen. 3 6T40

GM Gen. 1 valve bodies cannot be interchanged with Gen. 2 (6T30/40/45/50) or Gen. 3 (6T31/35/41/46/51). Always verify which valve body you have by checking unit ID guides in the tech resources section at www.sonnax.com.