4L60E-PRO

Reprogramming Kit ™

Fits 1996-2018 except 2005 Corvette

Does Not Fit 1993-1995 or Hybrid

Kit Includes Optional Internal Upgrades. Unit Removal Recommended.

If the trans is on the bench, follow instructions for the Pump Ring Kit & Clutch Spring Kit Supplied.

Corrects/Reduces/Prevents

3-4 Clutch and 2nd Band Burn-up--Bang, Bump or Slide Bump 1-2, 2-3 Shift
Reduces code P1870, converter slip/shudder.

Optional Gear Command 1996-2008

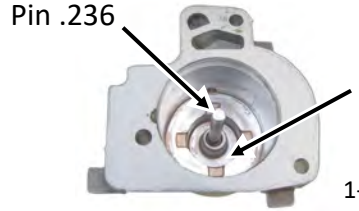
Holds Manual 1st--2nd--3rd to any RPM--Backshifts to gear you select.

Step 1

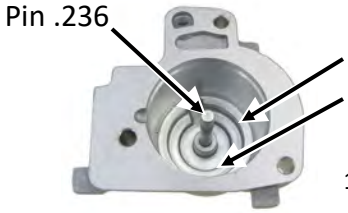
Identify the Type Accum housing you are using (**2nd** or **3rd Type**), then ***choose*** new spacer that matches your housing and install it with new small orange spring. Install new seal on new 1-2 piston furnished. Lubricate the seal & install piston with 3 tab side up, followed by large & medium orange springs as shown.

Don’t Use

Same as 700R4
1st Type



2nd Type
1-2 Accum Housing



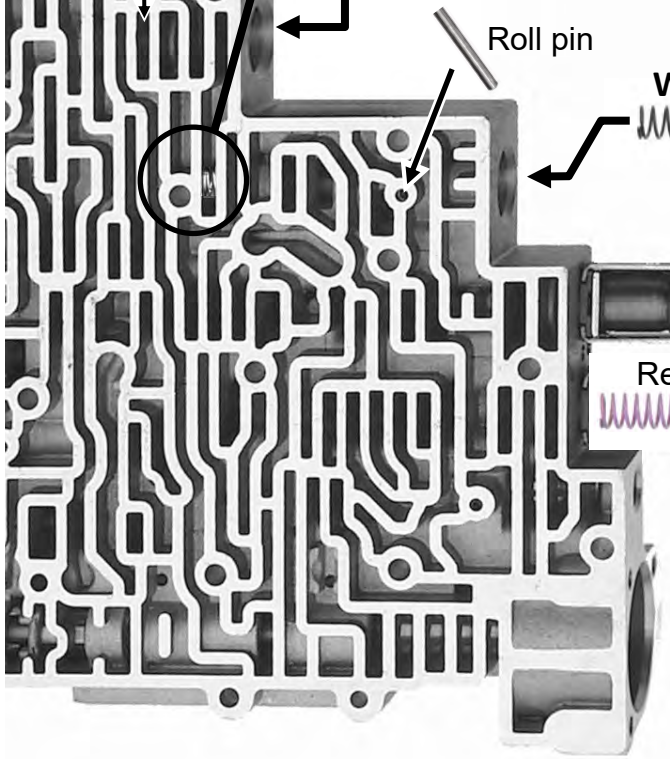
3rd Type
1-2 Accum Housing

LOOK

Make sure Accumulator spring is not ***crooked***.

Save the 2nd new larger White spring for page 3, step 5.

Step 1. Install the New larger **WHITE** spring ***inside*** original.

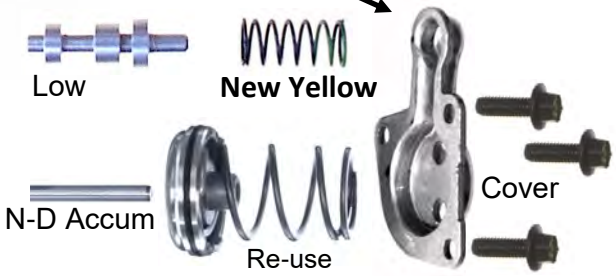


Step 2. Discard original spring Install the New small **WHITE** Accum Spring.

Optional Step 3.

Work Trucks & 2009 up Skip This Step!

Do step 3 only if you wish to add: Holds first gear to any speed in M1 and be able to go back to M1 at **ANY** speed! Discard original 1-2 shift valve. Re-use original spring, insert NEW **1-2 Shift Valve**, then **Spacer**, then Solenoid & Retainer.

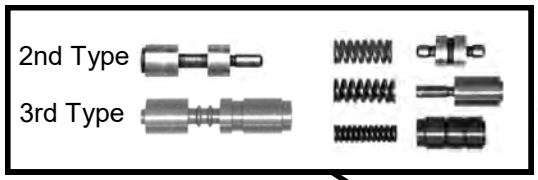


Step 4.

Remove Cover & Replace original Low spring with **NEW YELLOW**.

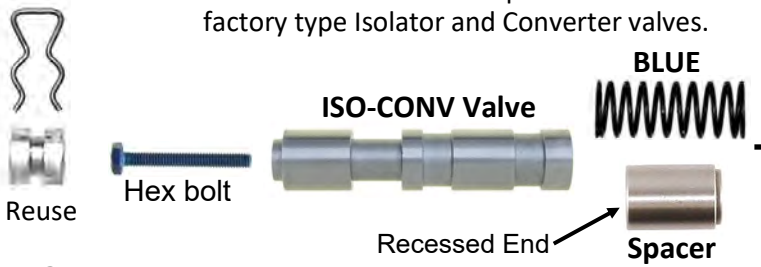
Step 1. Remove and discard the converter Reg valve, spring and isolator valve. Save the end plug and clip. **Note:** If the original outer Valve is in a bushing or it measures larger than .441" VB has been modified Skip Steps 1, 2 & 3 and reassemble as found.

Original Converter Reg & Isolator Valve Types



Step 2. Insert **ISO-CONV Valve** into bore. Using hex bolt as a handle, push valve in and out at least 20 times with slight side pressure. The valve must fall in and out of bore. Clean the bore. Remove the bolt.

New ISO-CONV valve replaces all of the earlier factory type Isolator and Converter valves.



Year & Models using Cylinder Deactivation

2005-07	Buick Rainier 5.3L
2007-09	Avalanche 5.3L
2008-09	Avalanche 6.0L
2005-09	Trailblazer, Envoy Denali 5.3L
2007-10	Silverado, Sierra, Suburban, Yukon, Tahoe, 1500 5.3L
2007-08	Silverado, Sierra, Suburban, Yukon, Tahoe, 1500 6.0L

Step 3.

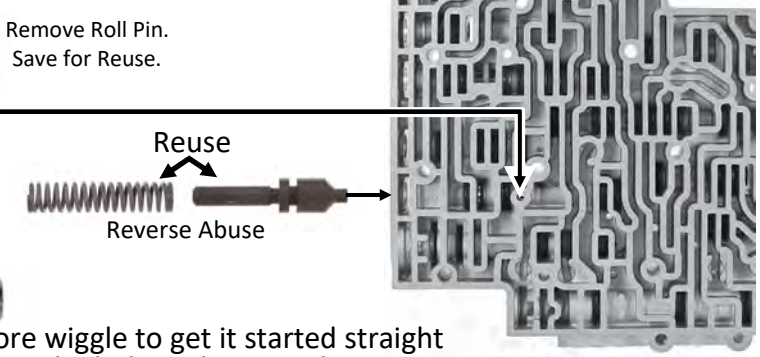
For Normal Use:
Install **BLUE** spring & **ISO-CONV Valve**,

Models with Cylinder Deactivation:
Install Spacer (Recessed end outward), & ISO-CONV Valve. *Do not use Blue Spring!*

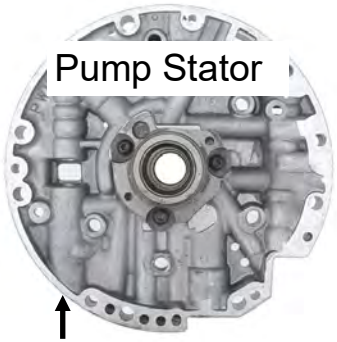
If Cylinder deactivation has been eliminated with a after-market tune Install New blue spring & ISO-CONV valve discarding new spacer.

Always Reuse original End Plug and Clip.

Step 4. Remove 3-2 Downshift Valve assembly to access & discard **original** divider **plug.** Save the roll pin for reuse.

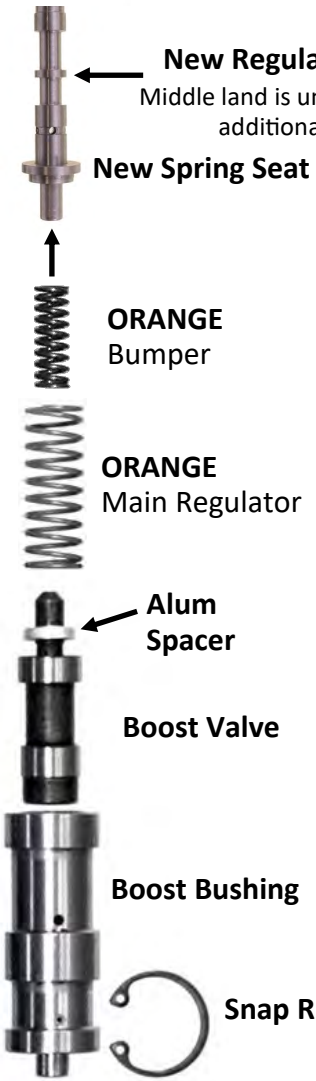


Step 5. Using longer threaded bolt, position new divider plug into the bore wiggle to get it started straight & making sure it installs deep enough for original roll pin to insert thru the hole in the new plug. Remove threaded bolt and reassemble 3-2 downshift with **New White Spring.**



Add this Step for 2009 & Up only.
(VB without 3-2 Solenoid) See Page 5 for Solenoid ID.
With a 5/16 Drill chamfer both sides of this hole by hand. Lay Plate on hard flat surface. Insert Slug into hole & gently whack it with a Hammer on both sides of Plate to expand it. **Skip This for** 1996-2008 models.

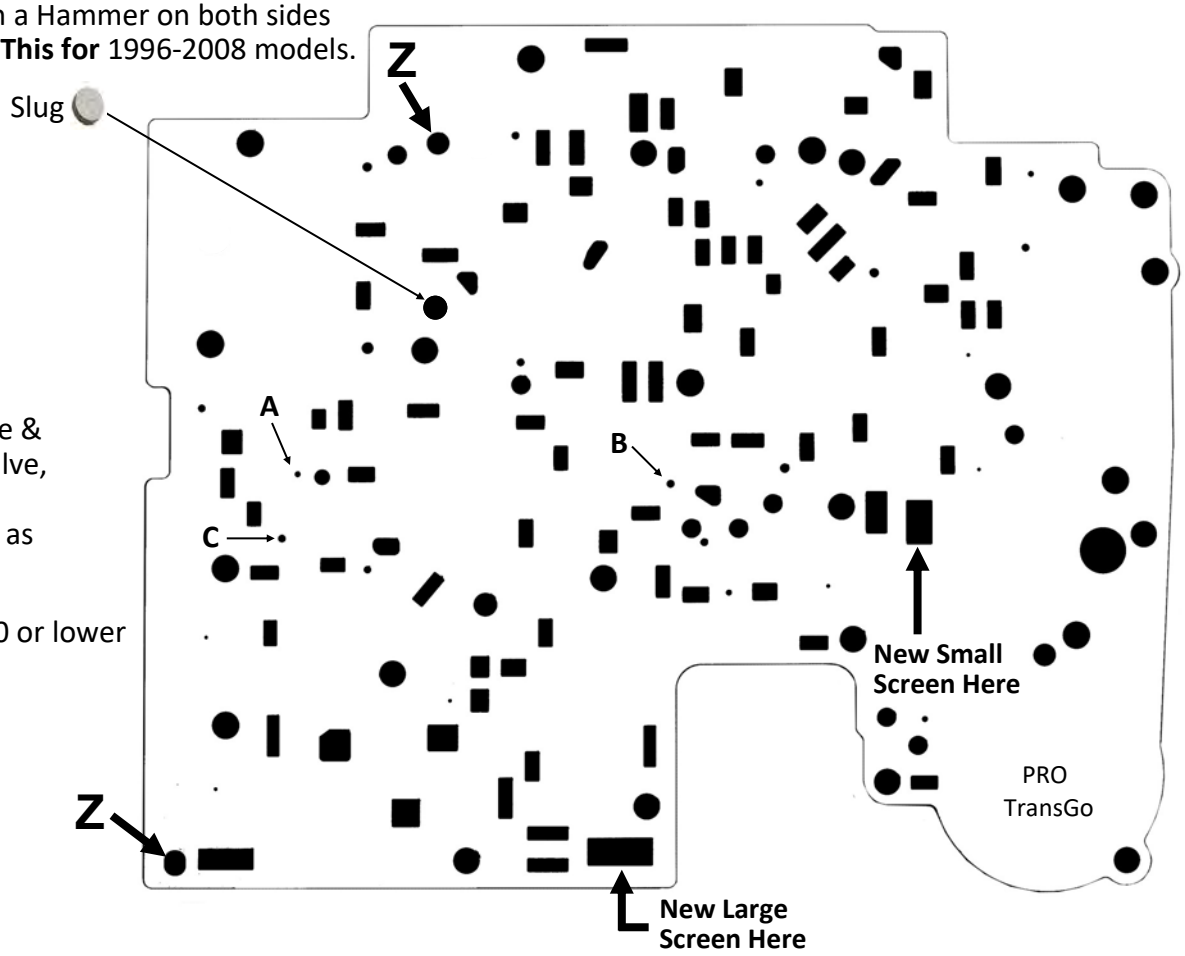
Step 4. Install New Plate & Gaskets
Start **Z** bolts first to align plate & gaskets to case.



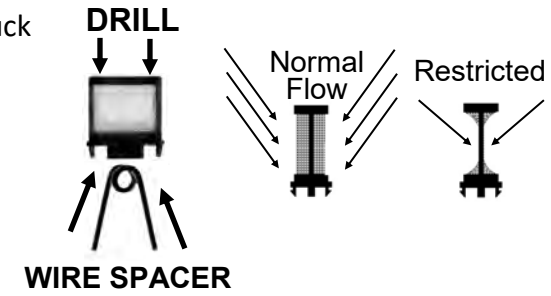
Step 1.
Remove original Boost Valve & Bushing, Main Regulator Valve, spring and bumper spring.
Install **NEW** parts furnished as shown.

With converter stall of 2800 or lower
Skip Step 2

Step 2.
High Stall Converter only.
(Above 2,800)
Enlarge holes as listed.
A .093 (2nd)
B .136 (3rd)
C .125 (4th)

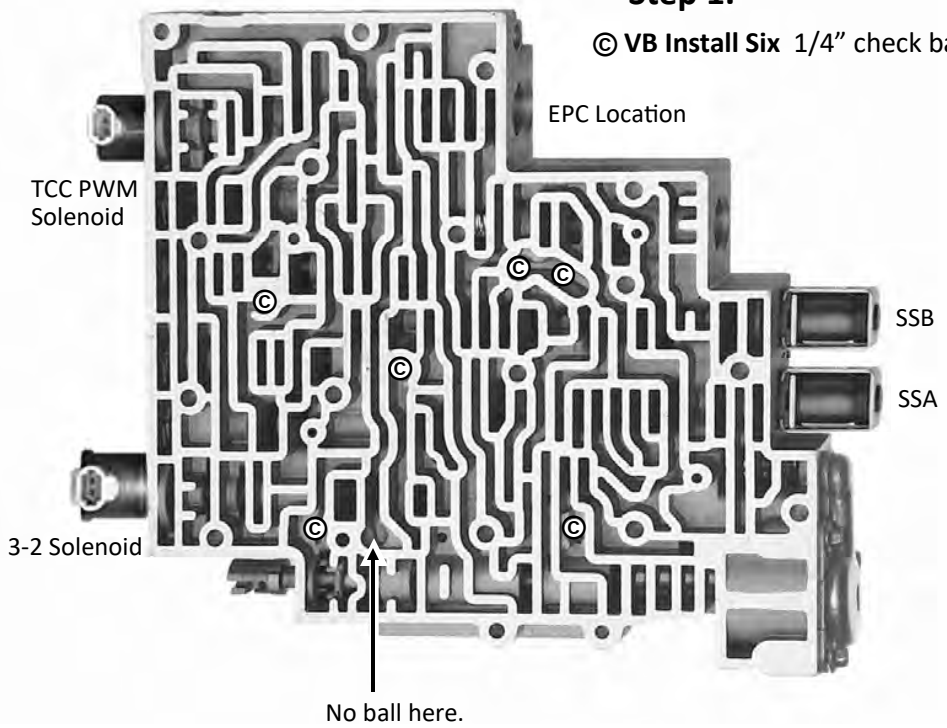


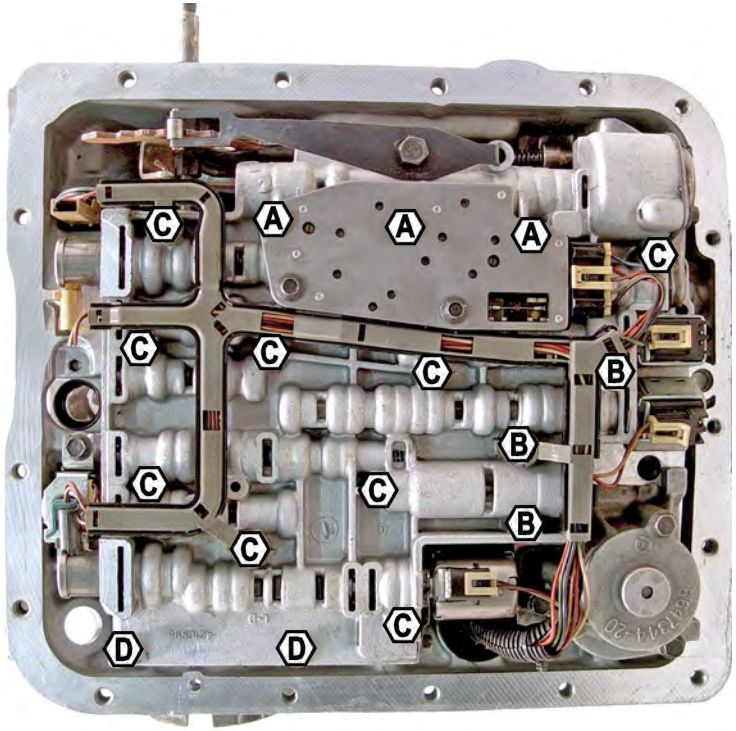
Step 3. **EPC Screen Fix**
Largest screen in VB plate. Sides of screen suck together causing low line pressure with high throttle. Burns clutches and band.
Wire Spacer will keep screens apart.
Additional safety: Drill four .040 to .047 or two 1/16" holes thru top of screen.



Step 1.

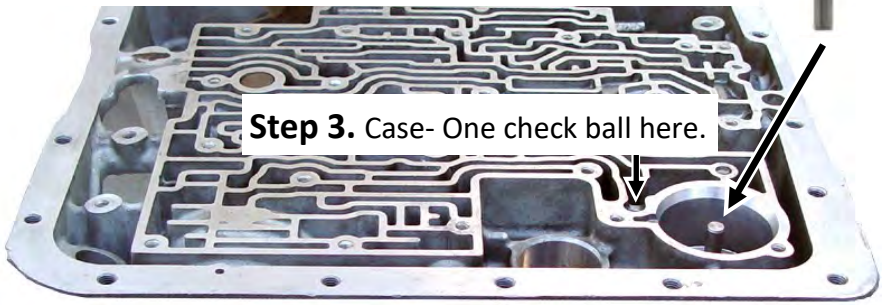
© VB Install Six 1/4" check balls as shown.





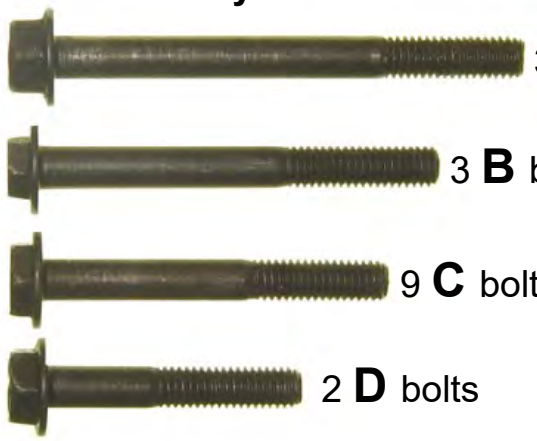
New Yellow & Red

Step 2. **4th Accumulator**
Discard original Spring. Install original guide Pin into Case first. Install original piston as shown followed by **Yellow & Red Springs <u>regardless of how it came apart.</u>**

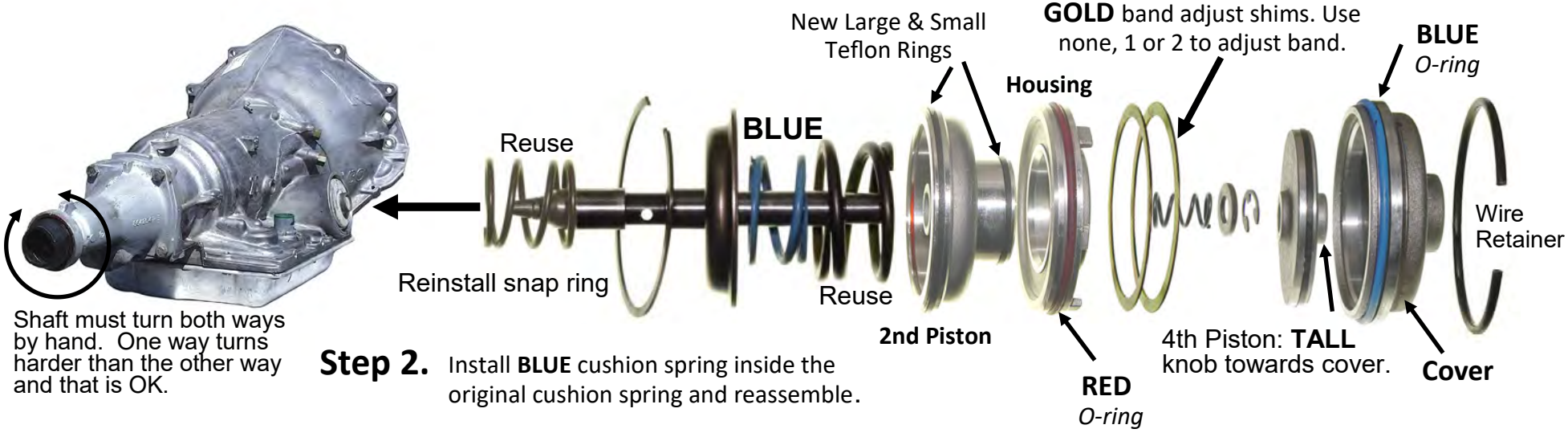


WARNING: Wrong Bolts locks Gear Train.

Valve Body Bolt Guide.

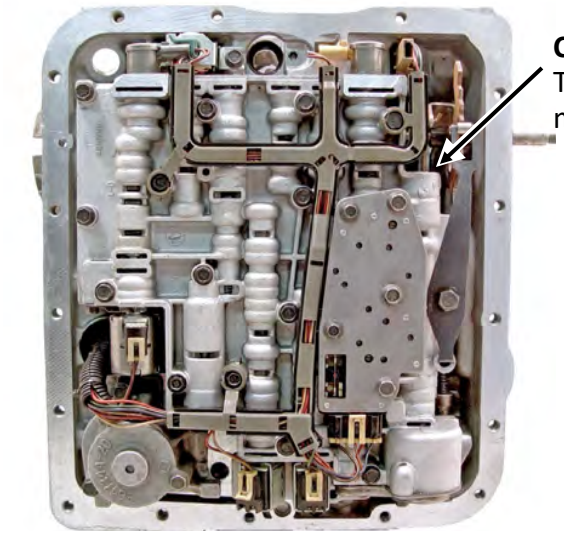


Step 1. Disassemble Servo as shown discard the original 2nd piston & housing Install the New supplied 2nd Piston & Housing using the new Rings & Seals provided.



Step 2. Install **BLUE** cushion spring inside the original cushion spring and reassemble.

Step 3. **Band Adjust:** Install 2nd Piston and housing into the trans. Install 2 **GOLD** shims against housing. Install 4th Piston and cover ***without Blue O-ring***. Install wire retainer. Check band by wiggling it front to rear 1/8" or more. (See below) Final Check– You must be able to turn driveshaft both ways by hand in Neutral. If too tight remove one shim, and test again. Then remove and install cover ***with* BLUE *O-ring.***



Check Band Clearance:
Through the opening in Case, with a Screwdriver make sure the Band wiggles on drum front to rear.

7-CS 700R4 & 4L60E Clutch Spring Kit

For High Performance Applications that rev **OVER 5500 RPM**.
Designed for use with either the 4l60-HD2 or 700 2-3 Reprogramming Kit®
Under 5500 rpm operation? This product is not needed, however you may install it if you follow instructions for “Under 5500 RPM”.

2621 Merced Ave. El Monte, CA 91733
Product Support (626) 443-7451

Problems & Solutions:

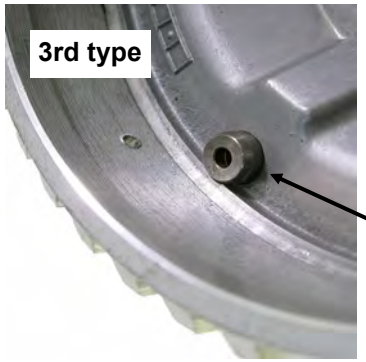
Problem 1: Above approx 5500 rpm, the check ball in the air bleed capsule of the input drum may not seat due to outward centrifugal force. When that occurs, you now have a **BIG** leak in 3rd gear oil. (The orifice provided fixes that.)

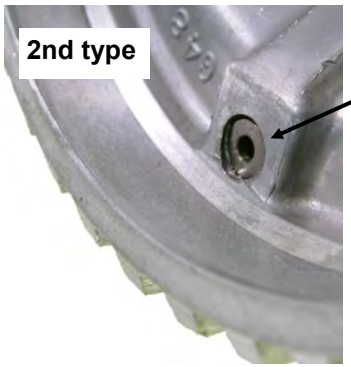
Problem 2: This same centrifugal force causes the residual fluid under the 3-4 piston to stack up at the outer edge and lift the piston up dragging the 3-4 clutches around in 1st and 2nd above 5500 RPM. (The springs provided fixes that.)

Problem 3: At even higher RPM’s, centrifugal force acts on the inner seal of the 3rd clutch piston causing it to pull away from the forward clutch steel housing. This usually starts above 6200 rpm’s (varies) and creates a leak in 3rd that gets worse and worse with more RPM.

This softens the 2-3 shift feel and worsens progressively as shift point RPM goes up. Finally it flairs or won’t even complete the 2-3 shift. This burns the 3-4 clutch and hazes the band.

Try lowering your 2-3 shift point below 6000 and retest.





(Skip this step for Under 5500 RPM use.)

Step 1: Identify your drum.

3rd type: Protruding type capsule
2nd type: Recessed type capsule.
See additional data on page 2.

1st type: No capsule (not shown) ball in drum. Don’t use for High rev applications. Use later drum, converter & pump.

“Thanks for Listening”
Gil

(Skip this page for Under 5500 RPM use.)

Step 2: Remove pistons. Drive the capsule out with punch from this side of drum**.**

After orifice is installed 3-4 piston should not rock when placed in drum.

2nd type capsule only: Grind the head of the new capsule to the dashed line. **Clean grinding flash from orifice hole.**

Step 3: If you have 2nd type capsule be sure to grind the new 3-4 orifice as described above.
3rd type capsule, No grinding required.
Place new 3-4 orifice in housing and gently tap in with 1/4" flat nose punch.

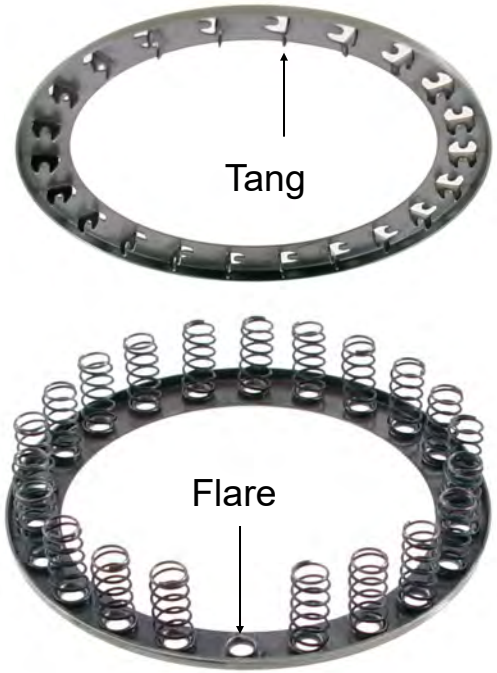
700/4L60E Clutch Spring Installation:

Reduces 3-4 Clutch Burnup
Caused by Cross-leaks, Centrifugal Apply and Slow KD Release

This keeps the 3-4 clutches from accidentally applying because of minor cross leaks at the rings, support, case or valve body. It also reduces clutch drag during 3-2 kick-down and prevents residual oil clutch apply at revs above 5500.
This spring kit works with the standard 3-4 clutch pack or when installing additional plates.

3-4 Spring Retainer Types

1st type retainer: No Hooks If the **White** springs will snap over the flares on retainer use them. If flares are to big use small **Plain** tapered springs with the large end over the flares.



1st Type 3/4 retainer No Hooks

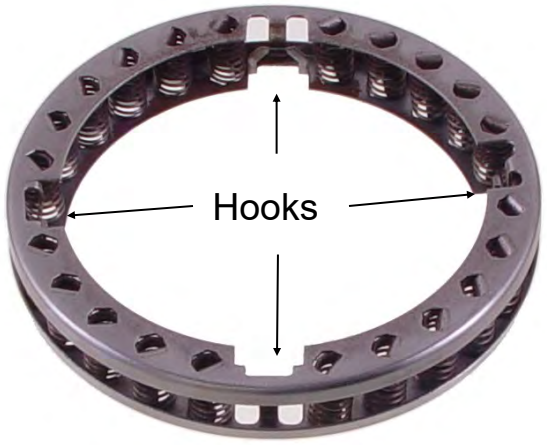
Step 1 For **Under 5500 RPM** use: All V6, V8,s & Diesel's Install 14 New Springs that fit your retainer. Install two springs then skip one, install two, skip one, all the way around retainer.

For over 5500 RPM use only: Install All 22 Springs

2nd type retainer Has Hooks : Use **Yellow** springs Install small end of springs on tang side of retainer. Bend hooks inward so they won't hook.

Remove these return springs if you are using this kit.

If you **are not** using this kit always put them back in.



2nd Type 3/4 retainer Has Hooks

Fwd / Coast Spring Retainer Types

Installation Washer

1st Type Retainer No bottom
Install **Plain Springs**

Step 1 For **Under 5500 RPM** use: V6, V8,s and Diesel install 10 New large plain springs leaving blanks at 3, 6, 9 and 12 O'clock
Large plain springs are tapered. Install the end that fits your retainer.

Over 5500 RPM use only: Install All 14 Springs

Installation washer only used for assembly. Place on top of retainer while compressing springs.

Installation Washer

2nd Type Retainer Has bottom
Install **Plain Springs**

Aluminum Piston

Note: If you change the 3-4 springs you MUST change the Fwd / Coast springs as well.

They work together as a team.
Do not attempt to use them alone.

Steel Piston

With UNBREAKABLE HARDENED STEEL RINGS

Rings in this kit are **not** cast iron or compressed metal. They're **not brittle.** They are tough **HARDENED** steel. Because they are slightly larger and STIFFER, pump efficiency is increased. You will notice higher pressure at HOT idle. The kit also includes a priming spring that corrects the high rev drop that occurs above 5500 RPM. You may have noticed that max throttle up-shifts on high revving models gets soft. This kit corrects high rev pressure drop.

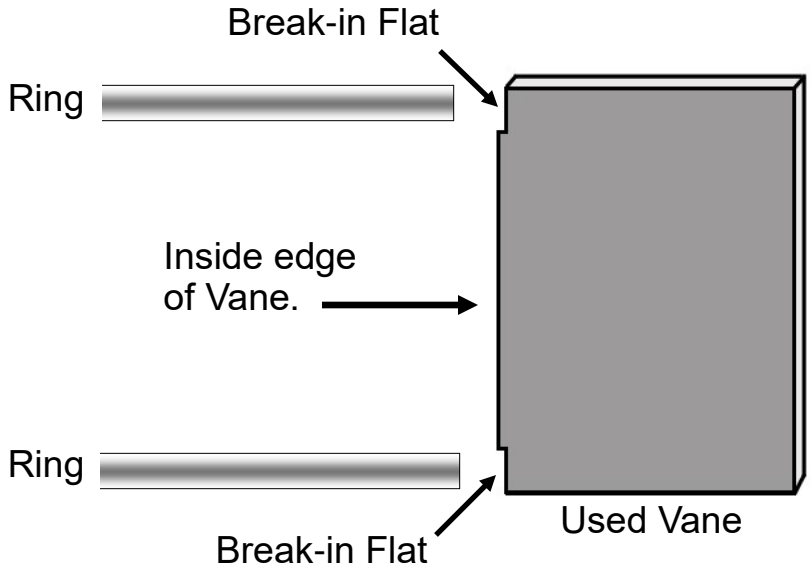
Installing Spring

1. Place the spring in the vise and squeeze it to coil bind. This will pre-set it so that it will not get weaker during usage.
2. Then open the vise until the length of the spring is about 1 7/16" and tap it over to the side of the vise jaws until about 3/16" is sticking out.
3. With the slide installed in the pump, place the spring pocket over the spring and against the vise. While holding the pump firmly against the vise, whack the spring into the pump with a hammer handle.

Have a nice day!

INSTALLATION WITH USED PUMP OR USED VANES

With used vanes you will notice two breaks in flats on the inside edge of the vanes where the rings ride. When assembling the pump be sure to install the vanes with the break-in flats against the new rings. If you don't the rotor may not turn freely.



INSTALLATION WITH NEW VANES, NEW PUMP or NEW ROTOR KIT.

Install the rings furnished. If rotor does not turn freely remove vanes one at a time and run the inside edge about 5 times back and forth on emery cloth to make break-in flat. Install the break-in flat against the rings. No emery?
About a dozen back and forths on a cement floor also does a nice job.