

4L60E-3 Reprogramming Kit™



Full race – *Stick shift* Manual shifts only

The transmission will start off in whatever gear the shifter is in, and will shift to any gear, at any speed, by moving lever.

Shift performance is dependent on the 2nd gear servo and the 3-4 clutch. For optimum results, a 093 or 95-1 Corvette 2nd servo piston is required: **TransGo part number 7-2P**. Assemble the 3-4 clutch with nine ***brown paper*** friction plates. Frictions and steels are available in 0.060” thickness that will allow additional steels and frictions. Note: Engine torque, axle ratio and vehicle weight also plays a big part in shift performance.

Installing non lock up converter?
Install **TransGo 4L6-CCV** for correct
converter fill and cooling.

Measure here.
1.800" diameter is
required. The servo
piston may have
casting # 093 or 95-1



2nd servo piston

2nd servo piston:

A Corvette servo piston and housing required.
This servo is **not furnished**.

If you don't have one get **TransGo part # 7-2P**.

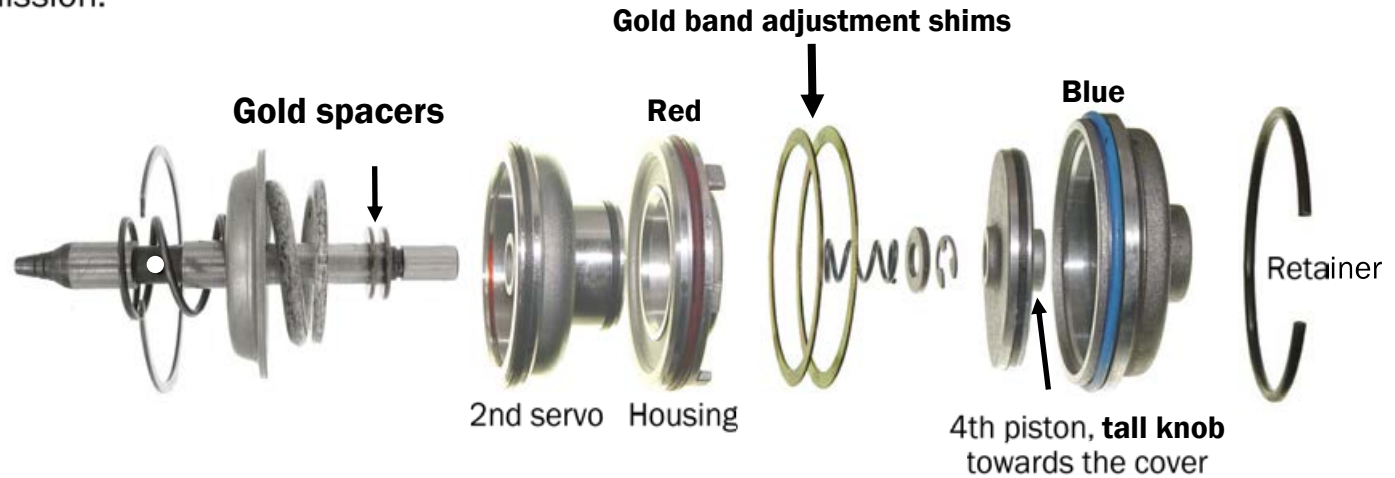
Step 1.

Install **two gold spacers** and reassemble the 2nd servo.

Follow the band adjust instructions on step two below
before reinstalling the servo into transmission.



Shaft must turn both ways by hand.
One way will turn harder than the
other way and that is OK.

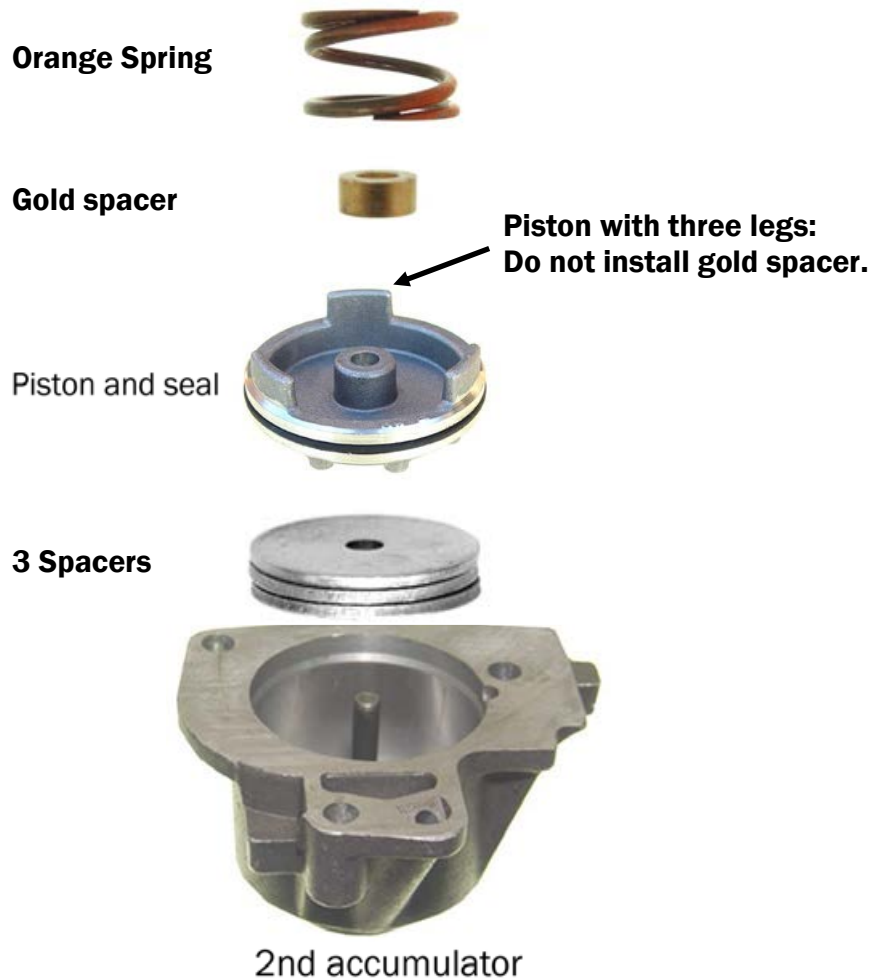


Step 2.

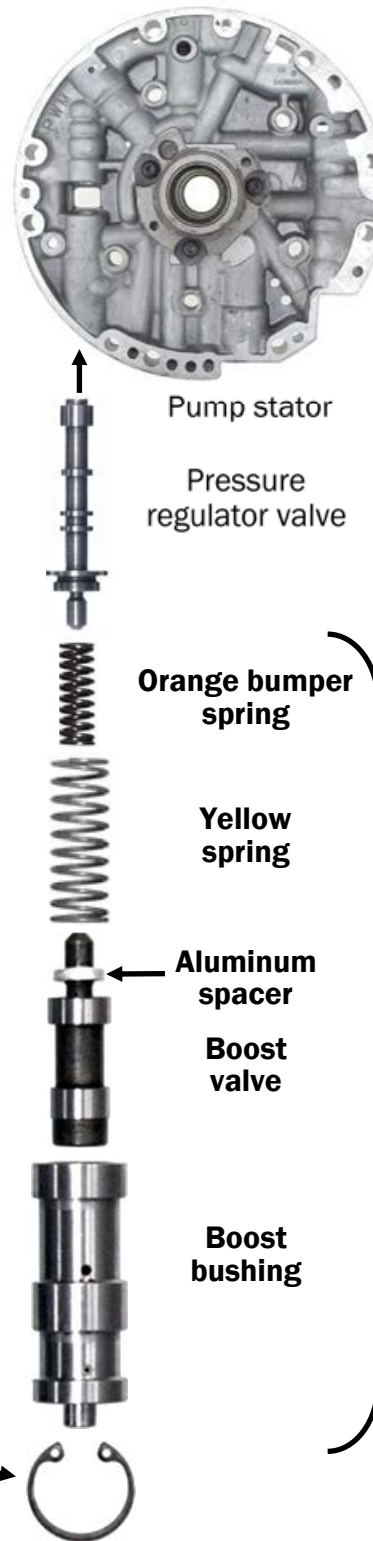
Install the 2nd servo and housing into the transmission. Install **2 gold band adjustment shims** against the housing. Next, install the 4th piston and cover **without the blue O-ring**, then the retainer. The band must wiggle on drum front to rear, (see page 7) **or you must be able to turn the driveshaft both ways by hand**. If too tight, remove one band adjustment shim and test again. The retainer groove in the case must be clean before final assembly. The retainer must be **fully seated in groove** when installed to avoid servo blow out and case damage.

Step 3.

Discard the original springs and install the **3 spacers**, piston and **orange spring**. Install the **gold spacer** only if your piston **does not** have three legs.



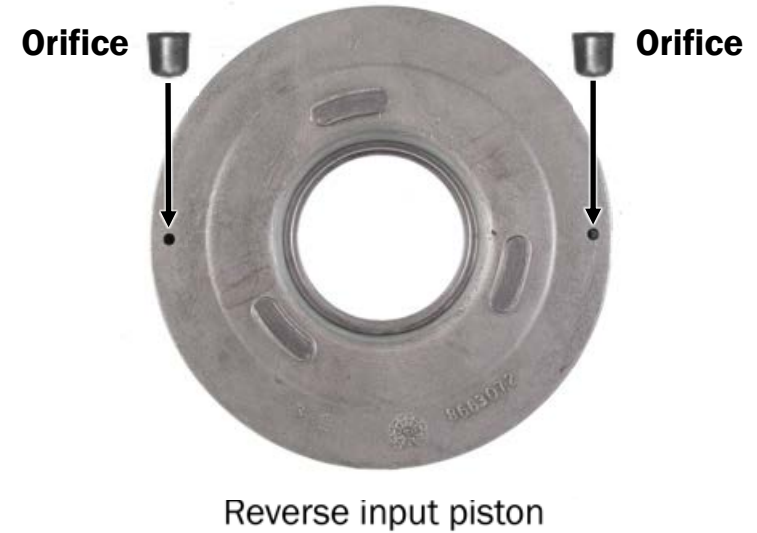
Make **sure** this snap-ring is fully seated in the groove by pushing up on the bushing. Low line pressure, slips or no reverse is common if snap-ring blows out.



Skip this step if trans is in the vehicle.

Step 4.

With a 0.093 drill, drill **thru** the existing holes in the reverse input piston. Install the **2 black orifice cup plugs** in the holes.



Step 5.

Remove the 2 original pressure regulator valve springs, the boost valve and the boost bushing and discard them.

Reinstall the OE pressure regulator valve back in the pump, followed by the **new orange bumper spring, yellow spring, aluminum spacer** (all models), **boost bushing**, and OE snap ring.

See page 7 for in-case location and data

Do not connect any wires going to the shift solenoids.

Note: *This usually turns the check engine light on if the vehicle has a computer.*

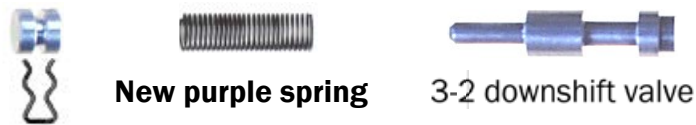
Step 6.

Remove and save the original 3-4 shift valve spring. Install **new white spring**. Install the clip from **bottom** side of valve body.



Step 7.

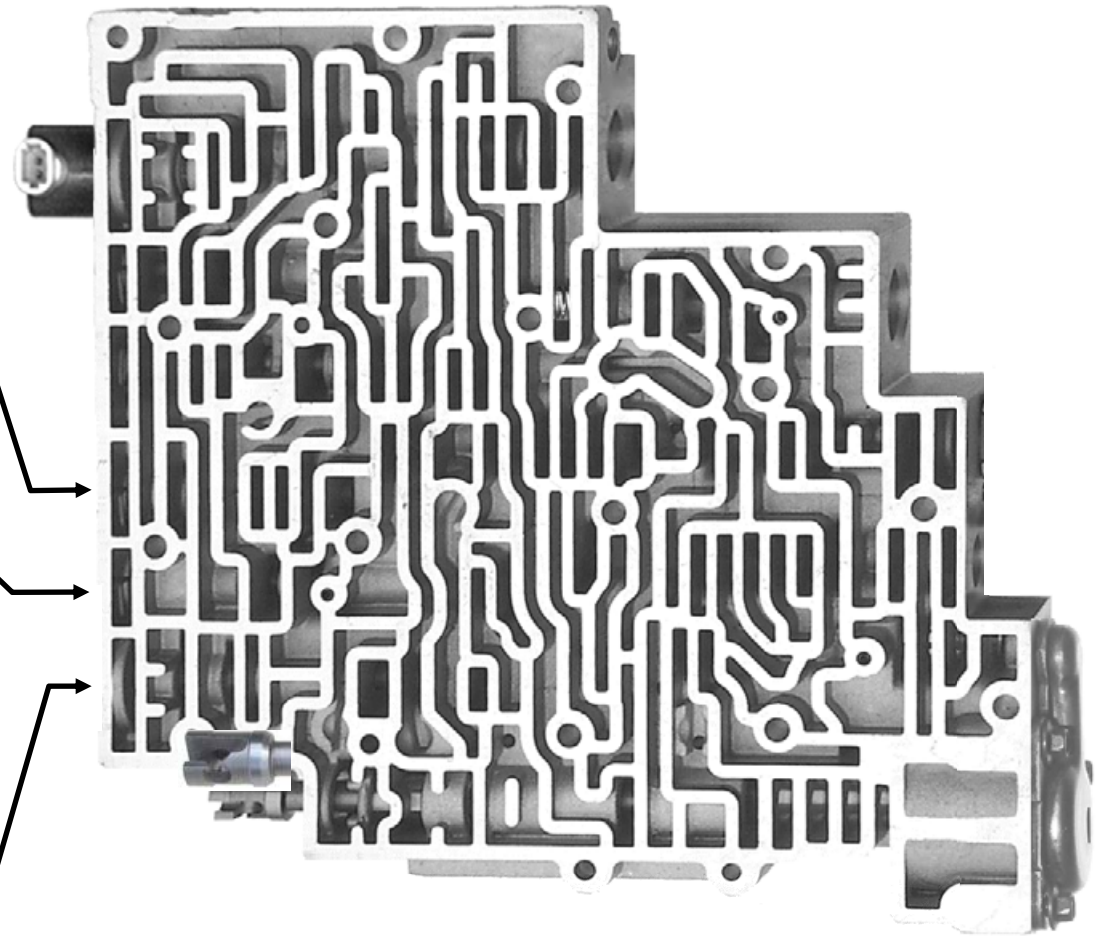
Install **new purple** 3-2 downshift spring



Step 8.

2nd type valve only!

Remove and discard 3-2 control valve spring. Install **new plain spring** between the solenoid and the valve as shown.

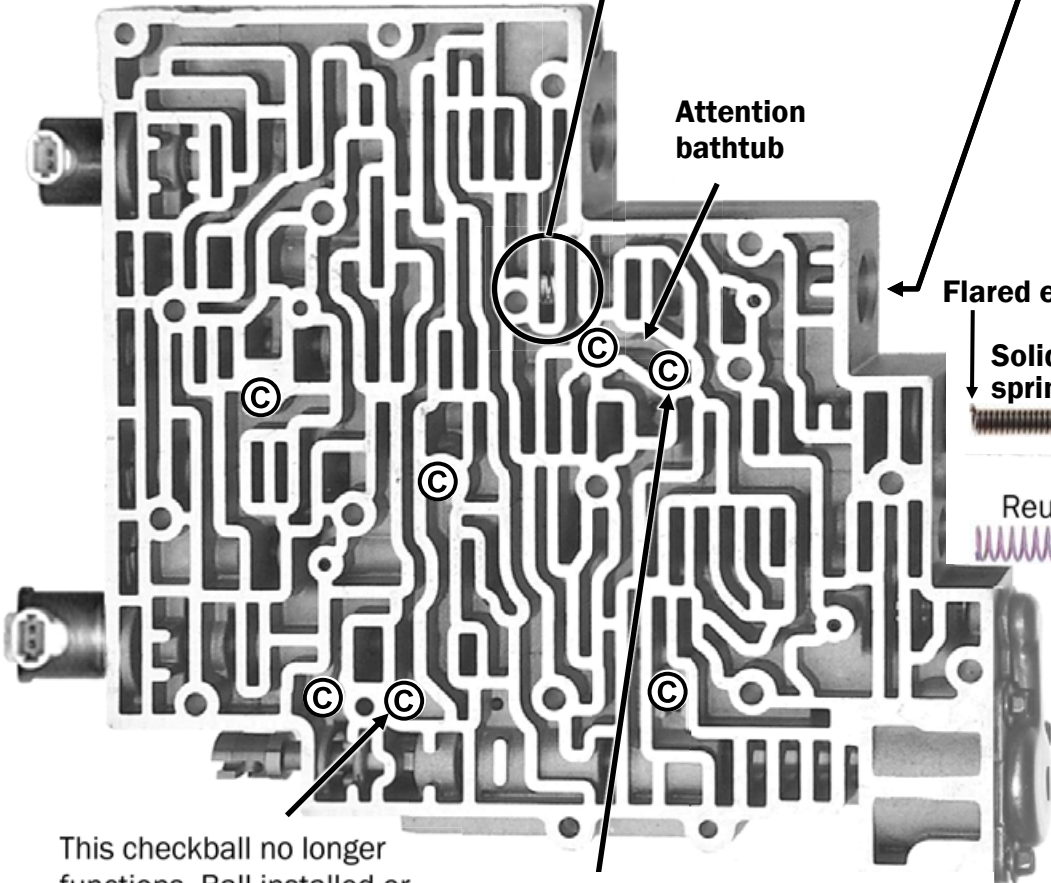


Checkballs: ©

7 checkballs in the valve body and 1 in the case. Some valve bodies do not have a ball in the bathtub.



Make sure the accumulator spring is not **crooked**.



Attention bathtub

Flared end out!

Solid spring

Reuse

Orange spring



This side up

Accumulator bushing and valve

Step 10.

Remove shift solenoid B. Remove **only** the outer shuttle valve. Leave the inner valve installed! Install new solid spring into new 2-3 shuttle valve with the **flared end outboard** and insert new valve with solid spring into bore. Next, insert the **small ball and the tapered spring** into the outer end of **new 2-3 shuttle valve**. Large end of spring **outward!** Reinstall SSB and clip.

New 2-3 shuttle valve

Small ball and tapered spring

Clip



New 1-2 shift valve and spacer

Clip

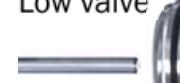


Step 11.

Remove and save the original 1-2 shift valve. Reusing the original inner spring, insert the **new 1-2 shift valve**, the **spacer**, solenoid and retainer as shown. (Retainer inserts up from the bottom of the valve body)

Step 12. Replace original spring with the new yellow spring

Low valve



Cover

N-D Accum

This checkball no longer functions. Ball installed or left out is okay.

Listen up!

Lay the plate over the bathtub. If the plate has **2 holes over the bathtub, install a checkball.** With **1 hole, no checkball in the bathtub.** See page 6.

Step 13. Separator Plate

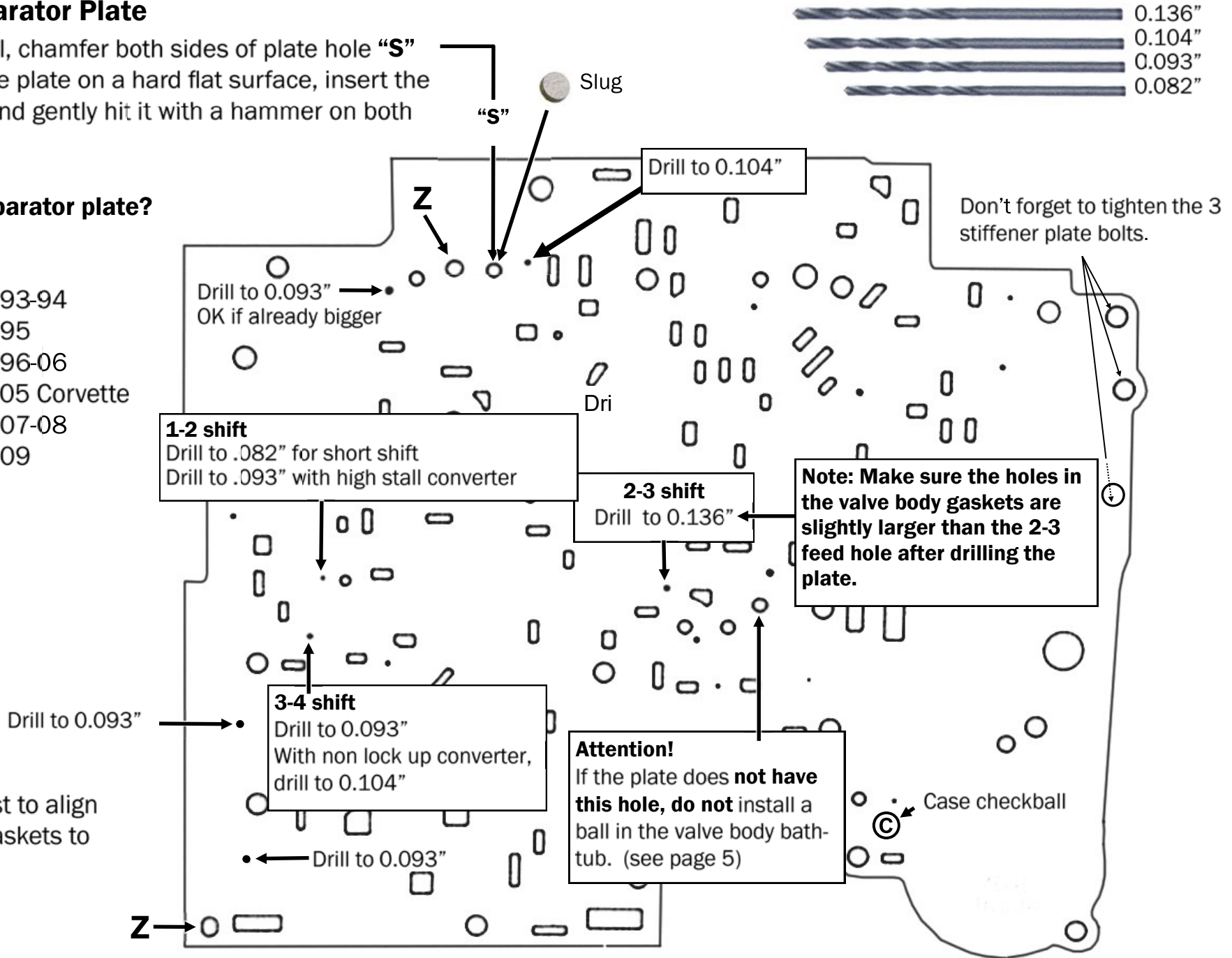
With a 5/16 drill, chamfer both sides of plate hole "S" by hand. Lay the plate on a hard flat surface, insert the slug into hole, and gently hit it with a hammer on both sides of plate.

Need a new separator plate?

TransGo part #:

- 46-PLT-94 fits 93-94
- 46-PLT-95 fits 95
- 46-PLT-96 fits 96-06
- 46-PLT-05V fits 05 Corvette
- 46-PLT-07 fits 07-08
- 46-PLT-09 fits 09

Start Z bolts first to align the plate and gaskets to the case.



Before installing the valve body, follow pages titled 4L60E-3 vacuum modulator system installation.

Step 14. 4th Accumulator





1. Remove and discard the original spring
2. Install the original guide pin in the case first
3. Install the **new yellow spring** and piston

This may differ than OE set up, it's okay.



WARNING: Wrong bolts locks the geartrain.

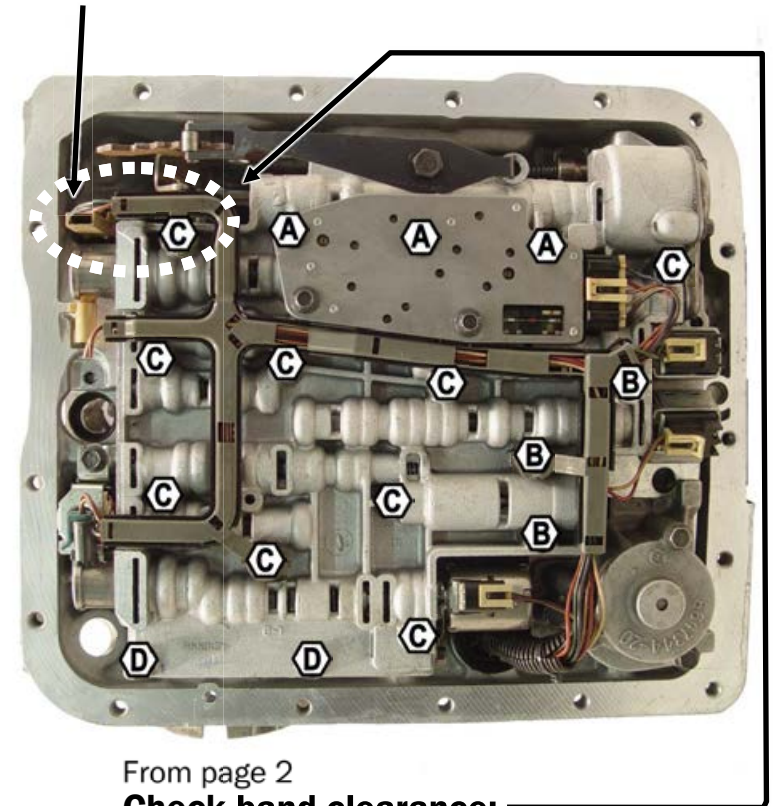
Valve body bolt guide.

- | | | |
|----------------|---|------------------|
| A 10 MM |  | 3 A bolts |
| B 8MM |  | 3 B bolts |
| C 10MM |  | 9 C bolts |
| D 10MM |  | 2 D bolts |

Pressure regulator valve location

If yours has a turbine sensor harness here, skip step 2 on page 3.

If the transmission is on the bench, remove the pump and install the pressure regulator valve lineup parts on step 2 of page 3.



From page 2

Check band clearance:

Through opening in the case, using a screwdriver, make sure the band wiggles on drum front to rear. ←→

Final check: With engine off, wheels off the ground and the transmission in neutral, the driveshaft **must** turn in both directions. If it won't, the band is too tight or one or more valve body bolt is in wrong hole location. **Do not drive until corrected!**

Converting back to automatic shifts

For Computer equipped Vehicles only

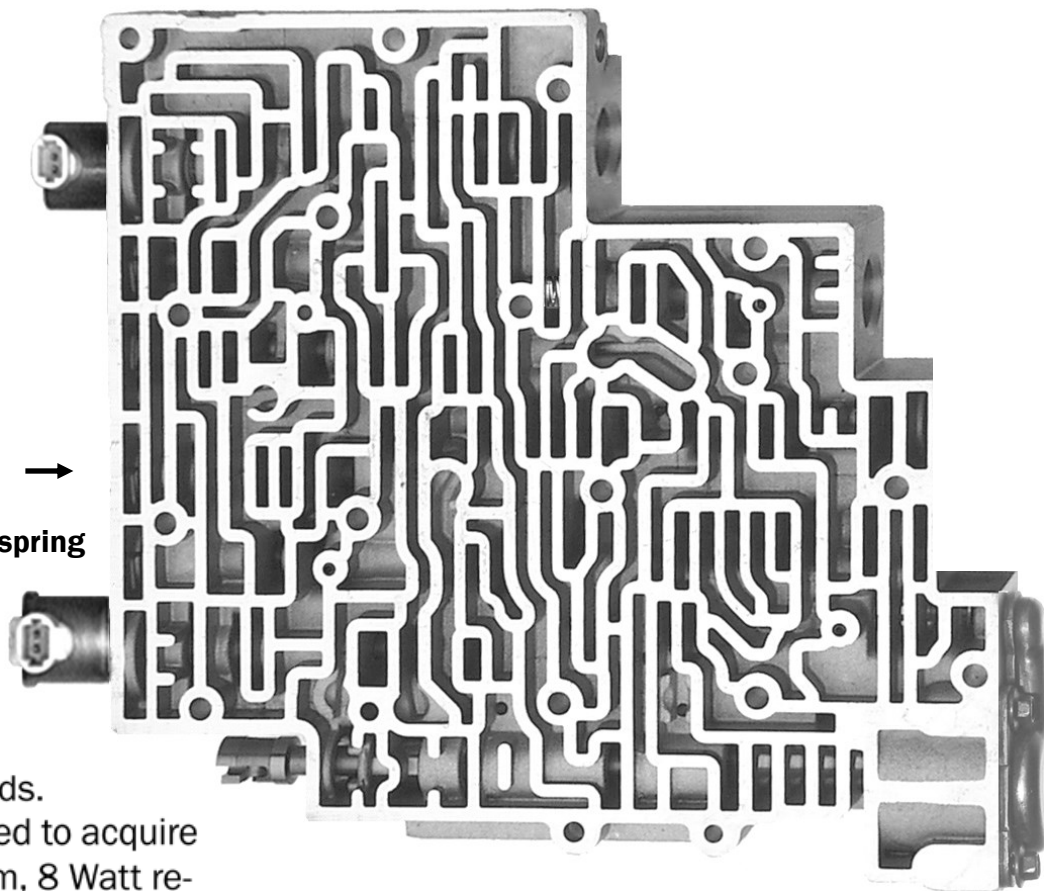
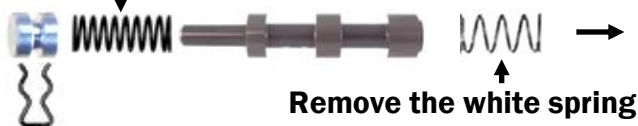
Make changes with the valve body still on the transmission

Remove the retaining clip from bottom

Step A.

Remove the white 3-4 shift valve spring. Install the original saved OE spring.

Reinstall original spring



Mr Shift

"Thanks for listening"

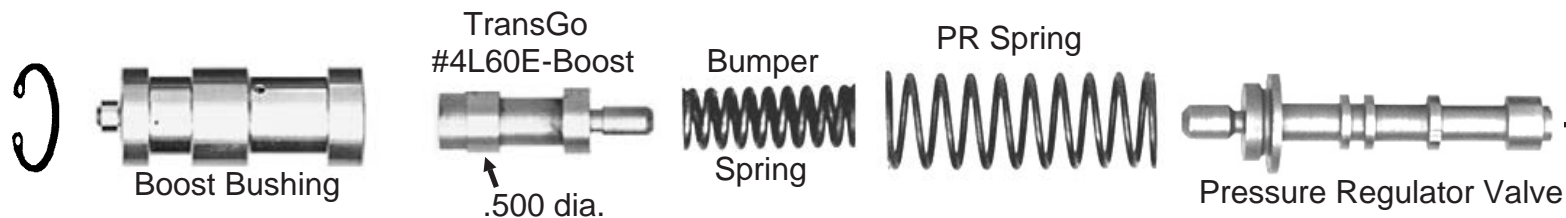
Step B.

Reconnect the wires to shift solenoids.

If the modulator is used: you will need to acquire from an electronics supplier a 5 Ohm, 8 Watt resistor and install it across the two wires of the force motor connector.



4L60E-3 Vacuum Modulator System Installation



Step 1

Circle boost valve size here:

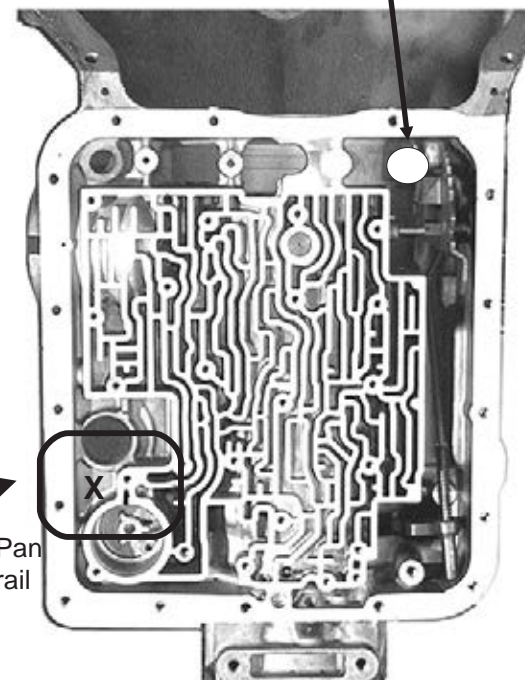
.471 .500

If you were unable to install boost valve upgrade due to speed sensor harness interference, circle .471 as your valve diameter.

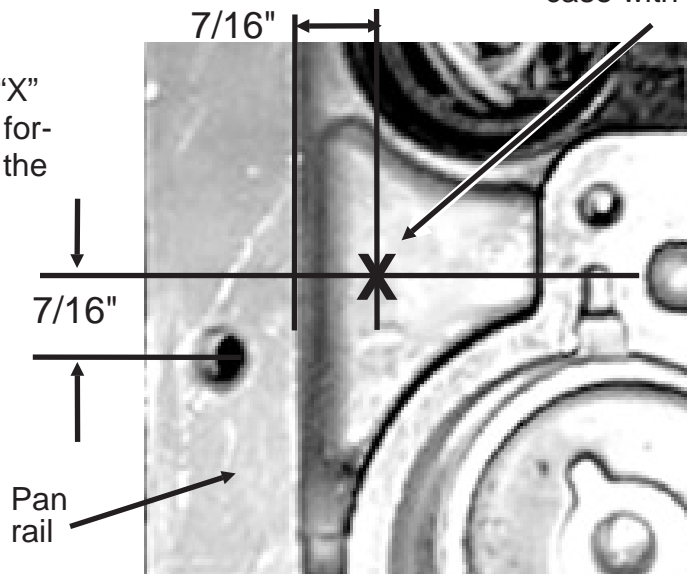


Step 3

Install fitting into the case with some sealer.



Step 2 Drill 11/32" hole at "X" 7/16" in from pan rail and 7/16" forward of the pan bolt hole. Tap the hole, from this side 1/8" NP.



4L60E-3 Mod Sys Cont'd

Line pressure and accumulator pressure are adjusted by changing the length of the modulator pin. Adjust the pin length to match boost valve diameter and vehicle use.





Step 4 ADJUSTING PIN LENGTH

Circle the boost valve diam here.

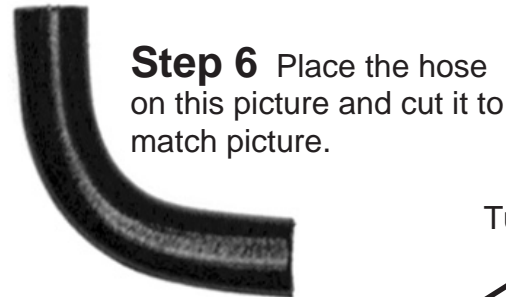
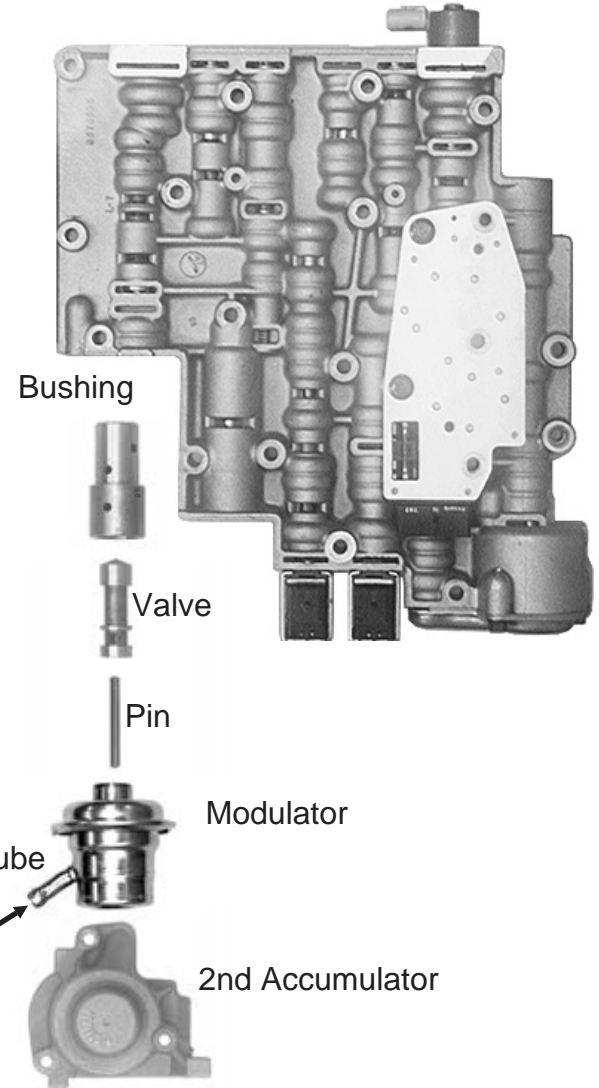
Grind pin shorter as needed.

Diam	Usage	Pin length
.471	Hot rod with small converter	1.365
	Police & Street Hot Rod	1.325
	All other uses	1.300
.500	Race car with small converter	1.365
	Police & Street Hot Rod	1.300
	All other uses	1.285

Check Pin length

	1.365
	1.325
	1.300
	1.285

Step 5 Install bushing, valve, pin and modulator as shown. Install 2nd accumulator *loosely*. [Sometimes it is necessary to grind the accumulator casting slightly, where it butts the modulator, before installing the bolts.]



Step 6 Place the hose on this picture and cut it to match picture.

Step 7 Install skinny **SILVER** spring into the tube. Install hose over skinny spring & tube. Install Zip tie on both ends of hose and install hose onto the fitting in the case. Tighten zip-ties.

If engine has supercharger or turbo you will need the TransGo Vac bypass kit in the vacuum line.
Order: VBP-Vac bypass
"We had fun making this setup and we hope you are going to like it."

WARRANTY: Warranty is limited to the replacement of defective parts only and does not include inconvenience or ancillary dysfunctions real or projected.

Installing Vacuum Line

Step 1

Using 3/16 Brake line (not provided), route brake line down to modulator case fitting. Use enough line to comfortably reach within 2" of both the vacuum brake booster Tee location (Step 2) and the case vacuum fitting. After determining correct length that will allow you to secure the line and reach both fittings, cut the brake line and swedge both ends to prevent vacuum hoses from slipping off. Secure lines and hoses with Zip-ties.

"If the engine has supercharger or turbo you will need a pressure bypass valve in the vacuum tube to prevent high pressure trans damage."

Order: TransGo® P/N **VBP-Vac**

Step 2

Cut power brake hose and insert tee into hose. Install clamps [not furnished] or Zip-ties on brake hose.

Step 3

Install a short piece of Vacuum hose between case fitting and brake line. Make sure rubber vacuum line is as straight as possible to prevent it from becoming kinked. Zip-tie hose to line and fitting as shown.



Mr Shift®

"Thanks for listening!"

Supercharged & Turbo'd engines require bypass here.

