

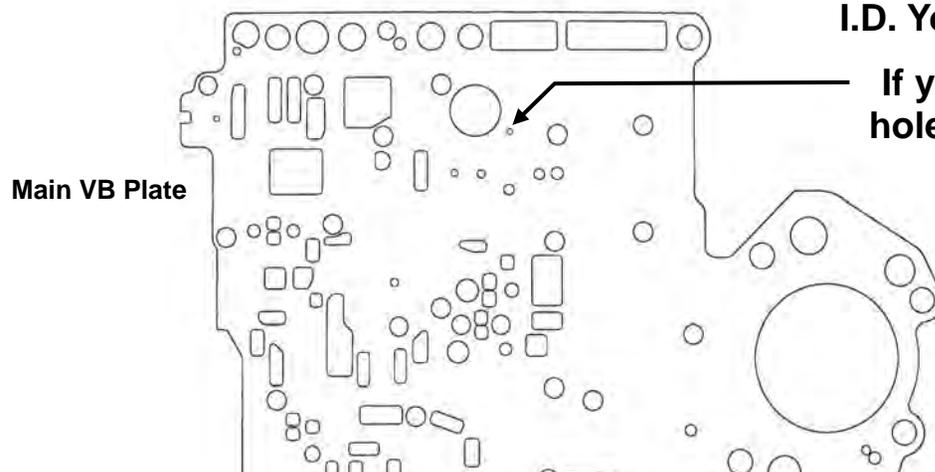
TFOD-3 Reprogramming Kit™

Fits: 1988 & up 500, 518, 42-44-46 and 47RH & RE models
Does NOT Fit 2003 & Up 48RE (See Plate ID Below.)

Short, Firm Shifts with Performance, Durability and “CLASS”.
Fully Manual Shifting- no automatic function!

FULL COMMAND CONTROL: Upshift & Backshift to ANY gear you want.

*Assures lube flow even with heavy loads on long hills.
Reduces drainback and leak out the vent and side seal.
Reduces killing engine in reverse.*



I.D. Your VB Plate BEFORE Starting!

If your main VB plate has this hole, you have a 48RE and this product will NOT fit it.



To begin, remove Switch valve, PR valve, Manual valve and Rooster Comb.

If working on a NON lockup transmission **SKIP Step 1.**

Step 1 Drill one or two .076 to .096 holes down through the bottom of the most outboard passage.

One Hole = Slightly firmer Lockup

Two Holes = Much firmer Lockup.



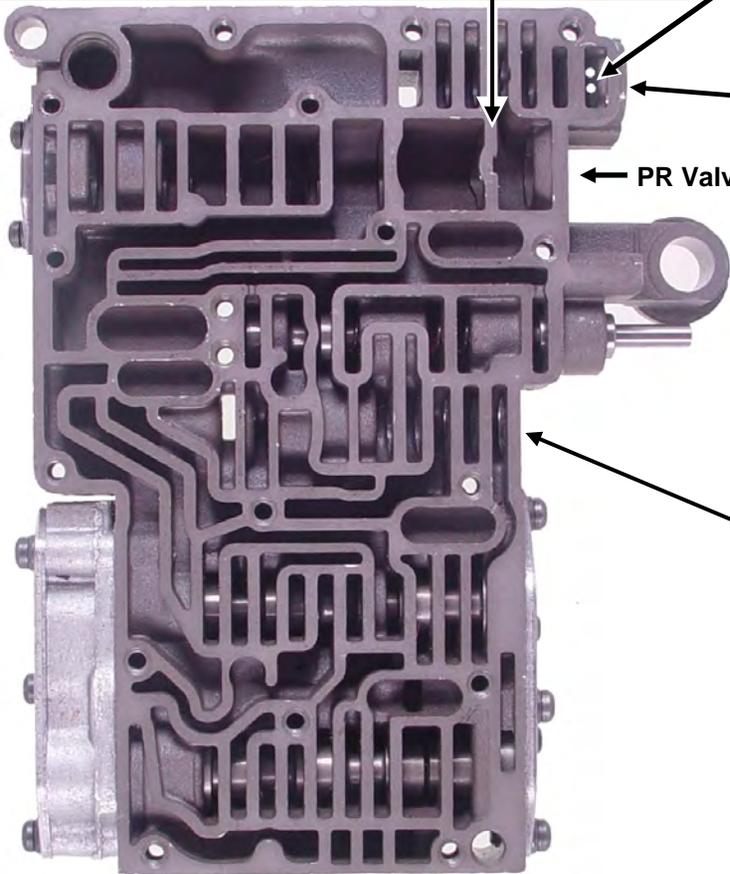
Step 3 Four Land switch valve ONLY: Grind one notch on a slight *angle* to about the middle of this land. Don't Grind three land switch valve.



Four Land Switch valve

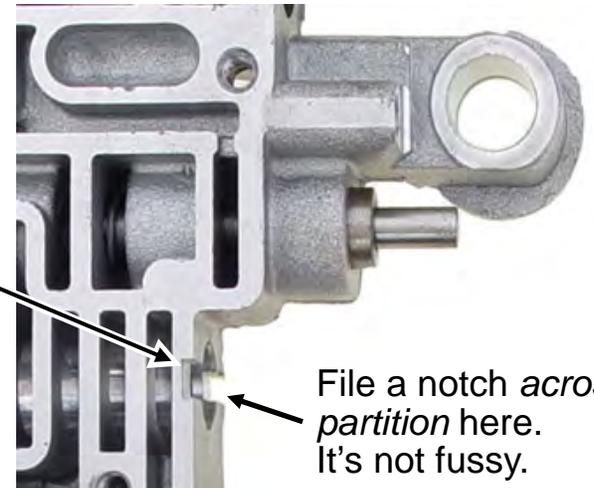


Three Land Switch



PR Valve Bore

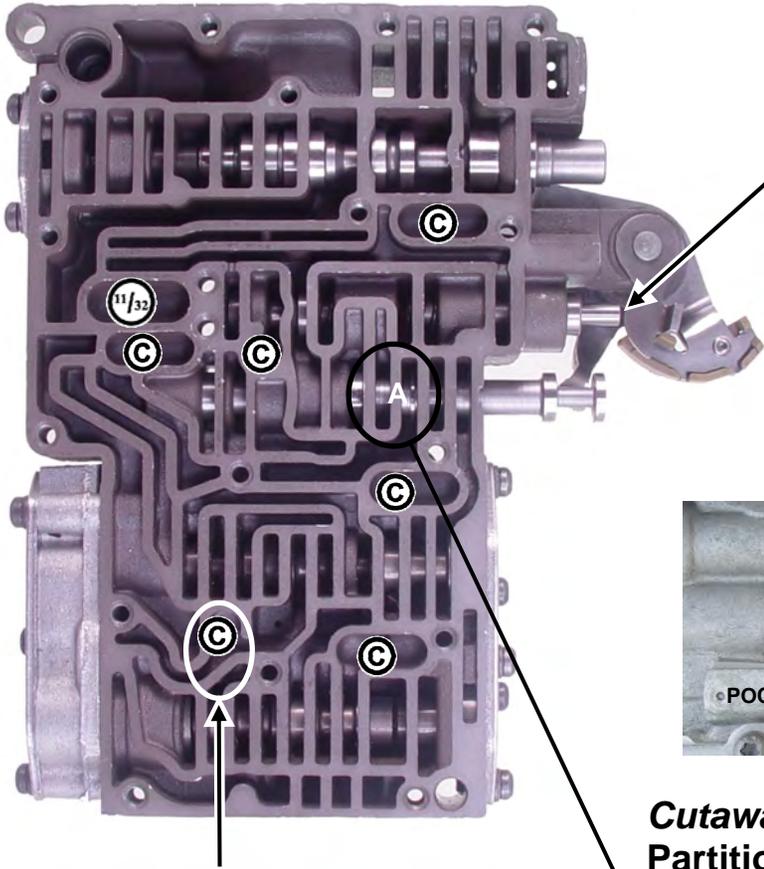
Step 4 With Manual valve removed turn the valve body over. Using the edge of a large file, file a notch about *halfway* thru the thickness of this partition.



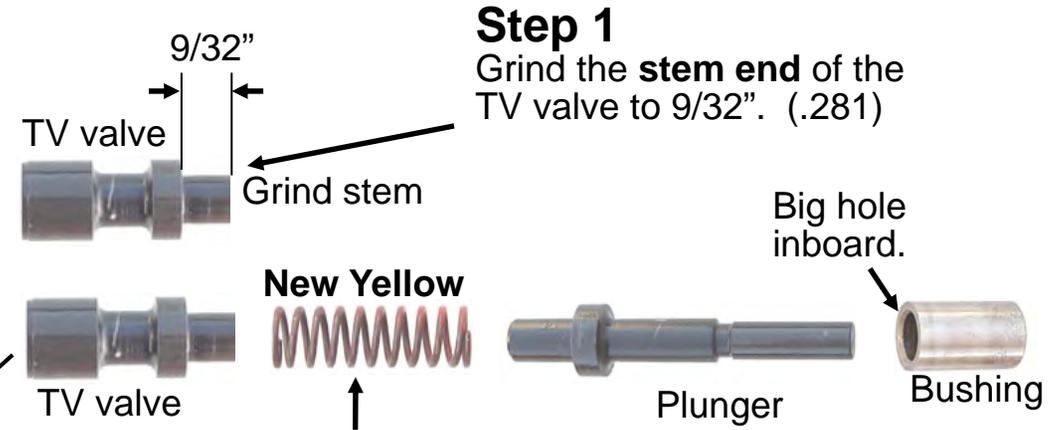
File a notch *across partition* here. It's not fussy.

Seven Checkballs

- Ⓒ Six 1/4" (.250)
- Ⓒ One 11/32" (.343)



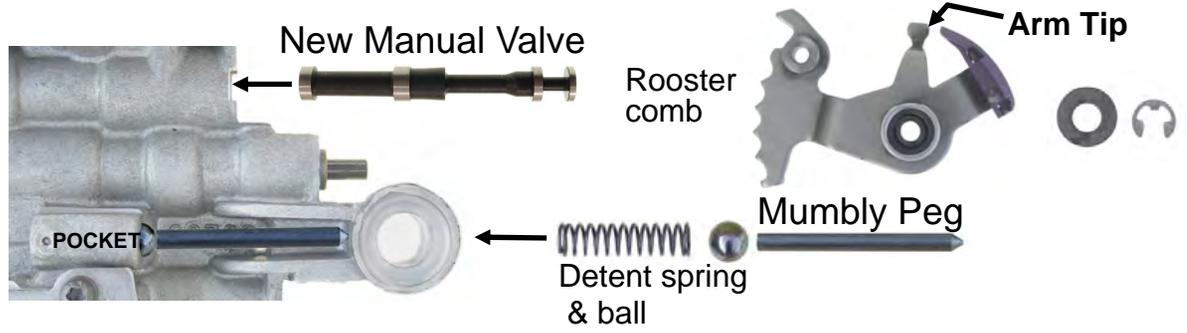
Step 5
Optional For a MUCH *FIRMER* 1-2 shift, leave this ball out **ONLY** if the **Rear Servo Parts** **HAVE** been installed. See Page 7, Step 1.



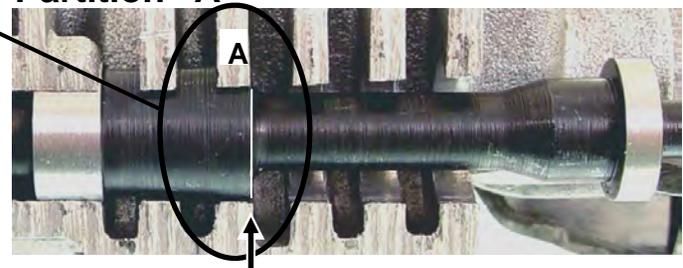
Step 1
 Grind the **stem end** of the TV valve to 9/32". (.281)

Step 2 Remove & save original TV Spring. Install **New Yellow Spring**. If your original spring diameter is different than new **Yellow** spring, Re-use your original spring.

Step 3 Insert spring and ball into VB pocket using the Mumbly Peg to hold the ball in place. Insert new Manual Valve and reassemble the rooster comb. Remove peg.



Cutaway View Partition "A"



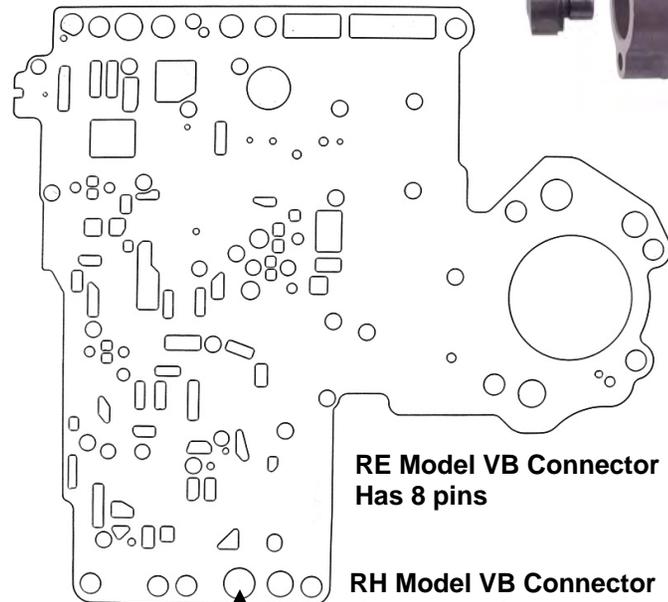
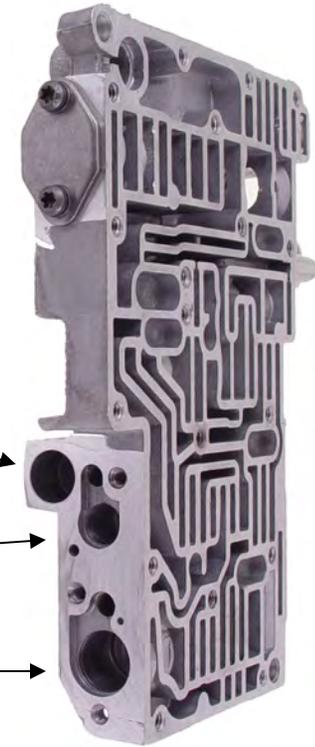
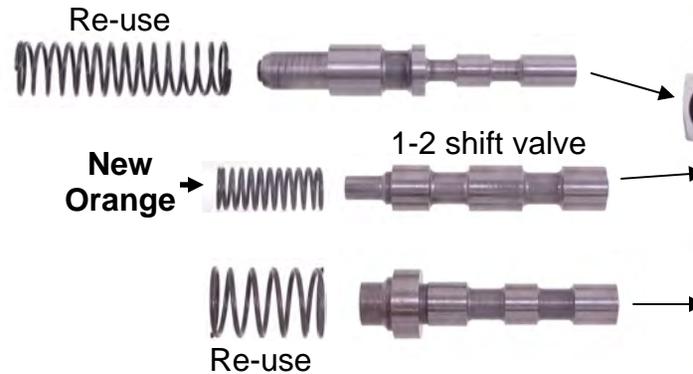
Tapered Land flush with right edge of Partition "A"

Step 4 Manual Valve position. With valve all the way inboard (Park position) the *right edge* of the Tapered land must be flush with *right edge* of partition "A". (.030" from flush either way is ok.)
To Adjust:
 Bend **Arm tip** with pliers.

Step 1 Remove original 3-2 spring and install **NEW Black** spring.



Step 2 Remove original 1-2 spring and install **NEW Orange** spring.



Valve Body ID

RE Model VB Connector
Has 8 pins

RH Model VB Connector
Has 2 or 3 pins



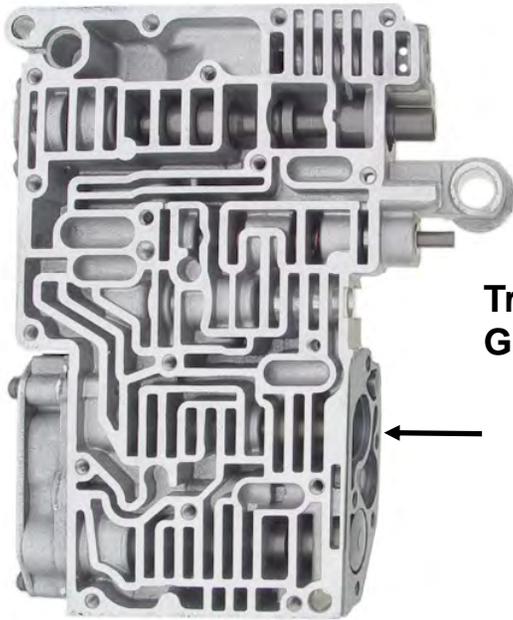
Plug this hole.
RH Models Only.

Step 3 RH Models Only: (Look at VB Connector to ID)

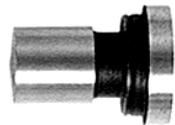
Plate hole plugging: With a 7/16" or larger drill bit, **by hand** turn the drill bit in the plate hole on both sides of the plate at the location shown to create a knife like edge on the inside diameter of the hole. Do not drill through the hole!

Lay plate on a hard surface and insert aluminum plug furnished into hole. Hold the plate down close to the hole and smack the plug 3-4 times with a 6-8 oz hammer. File the plug flush on both sides of the plate.

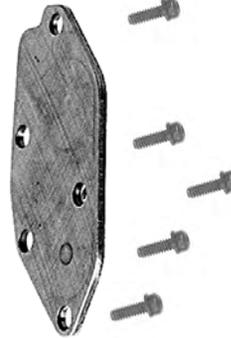
Step 1 Remove and save old 1-2 governor valve. Install new **TransGo® 1-2 Gov Valve** into your valve body, don't force it. A little wiggling and it should slide right in. Reinstall the cover. Do not skip this step!



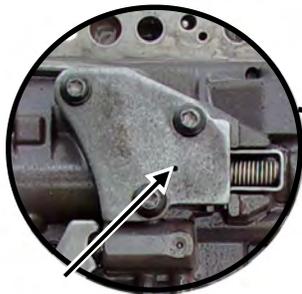
TransGo® 1-2 Gov Valve



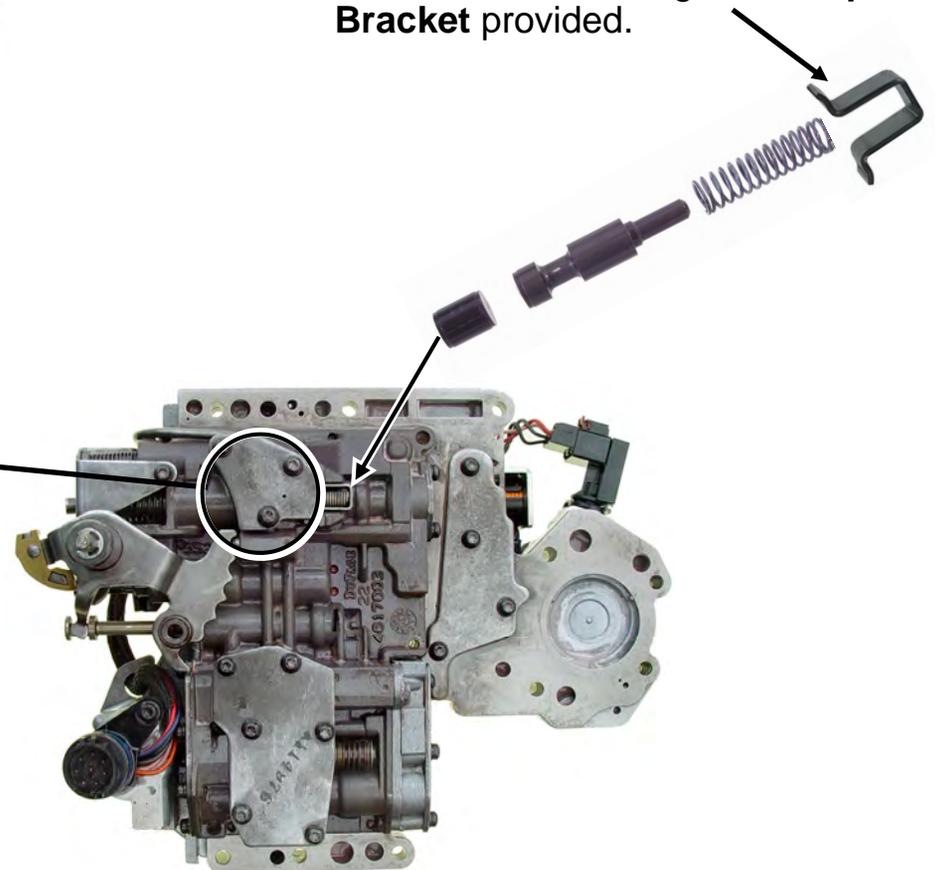
Cover

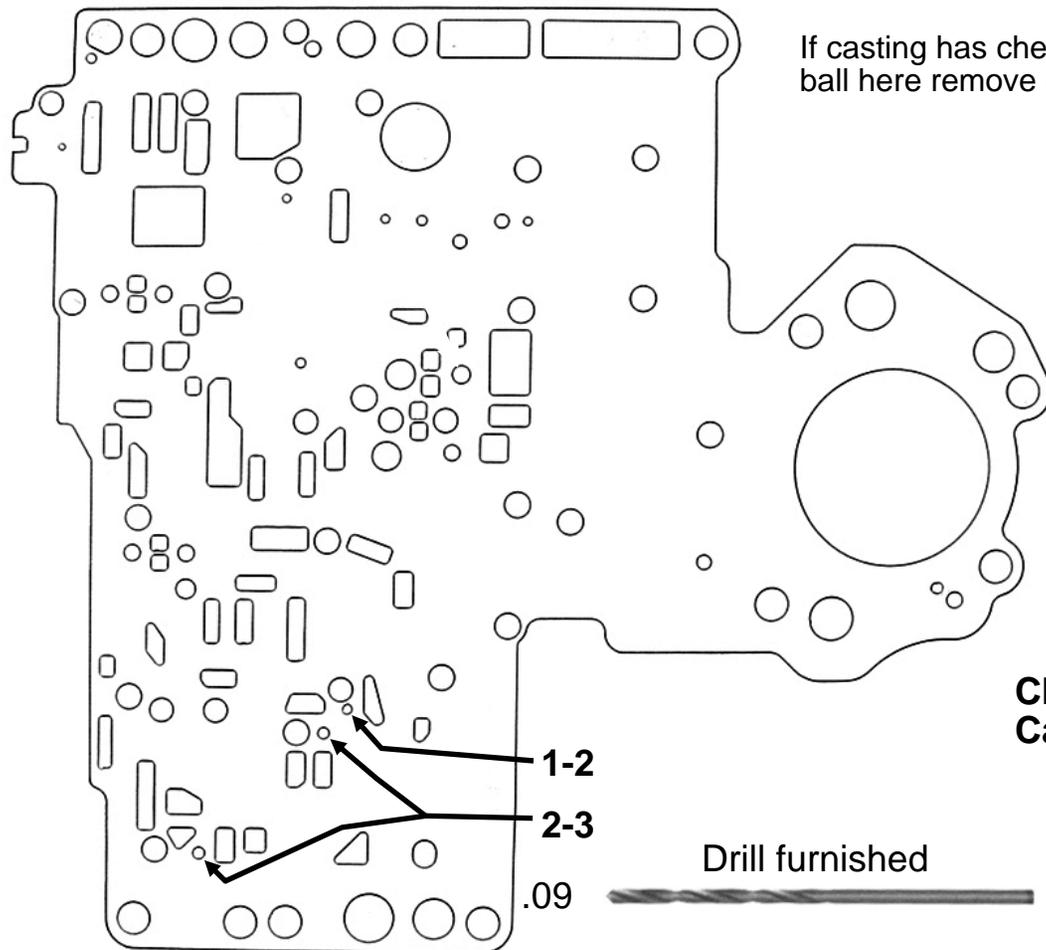


Step 2 If equipped, remove 3 screws and cover, discard old Lockup Bracket and install new stronger **Lockup Bracket** provided.



Step 3 For modified engines that need more lockup pressure enlarge this hole .063.





Step 2 Separator Plate

Shift Firmness:

Short Comfortable Shifts

1-2 Hole = .073 to .082

2-3 Holes = .093

Racing & Show Off

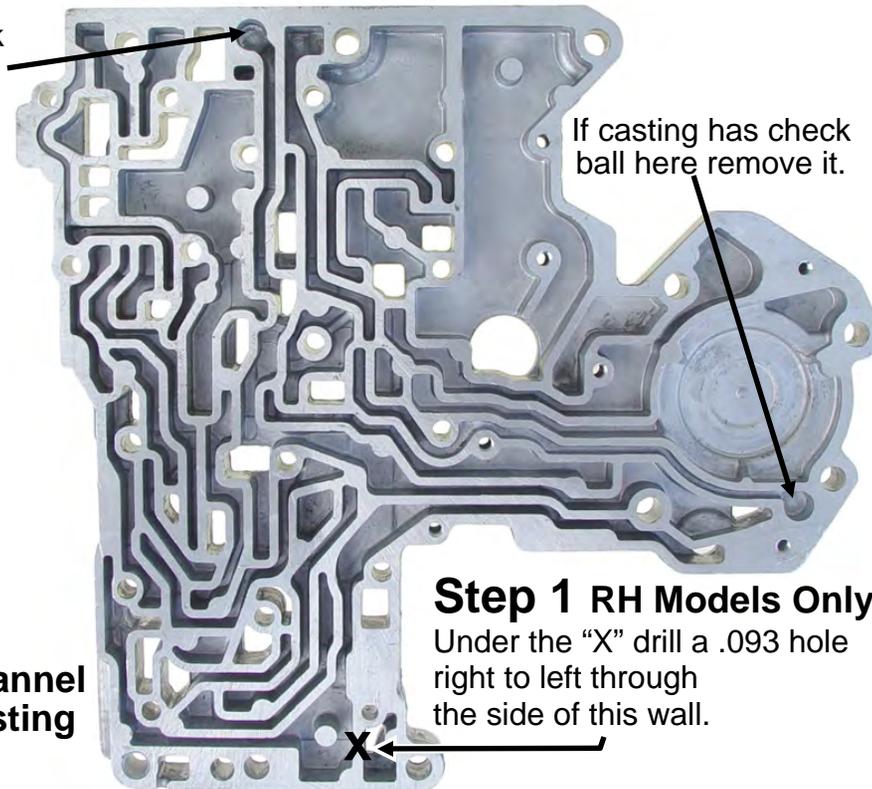
1-2 Hole = .093 to .101

2-3 Holes = .128 to .135

If Page 2 Step 5 was chosen, no need to drill 1-2 hole.

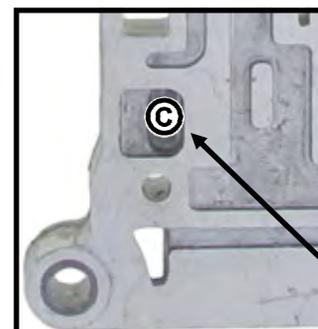
If casting has check ball here remove it.

Channel Casting



Step 1 RH Models Only

Under the "X" drill a .093 hole right to left through the side of this wall.

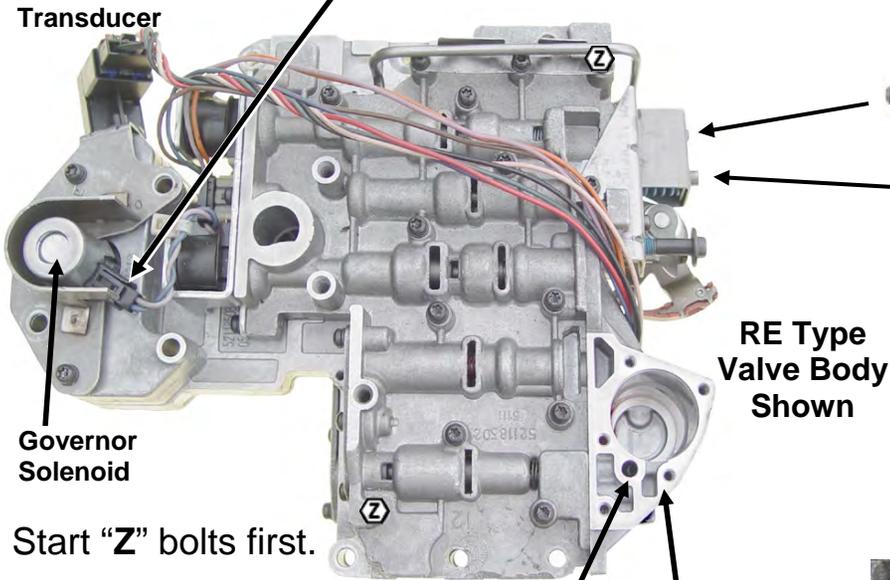


Bottom side of channel casting

LOOK

If bottom side of the channel casting has a square pocket here, a 3/16" (.187) checkball **must** be installed.

Step 1 RH Models do NOT have this Governor Solenoid or Transducer shown here. If your VB is an RE Type, Unplug this connector & secure with zip tie provided.

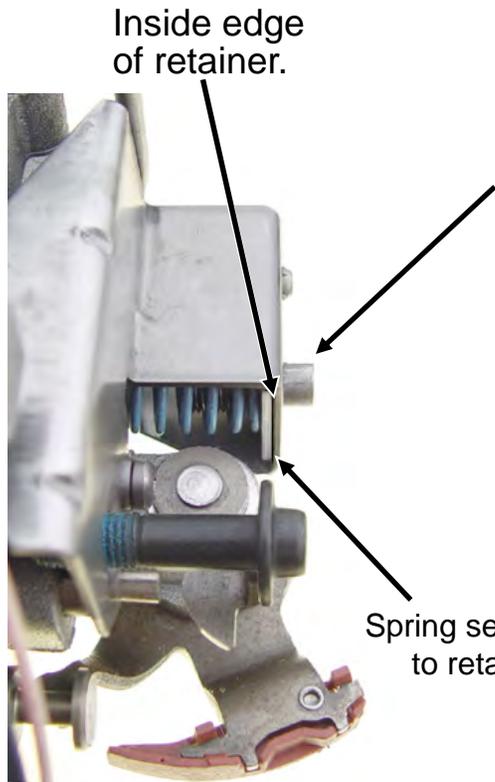
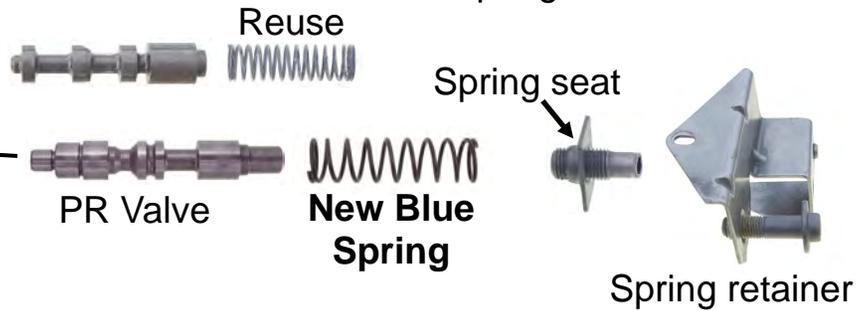


Step 2 Install Tapered Bushing into hole. With long VB bolt, drive bushing into hole about 1" down. It's not fussy. Reinstall cover.

Step 3 Remove & discard the original OD accum spring. Install **YELLOW** furnished.



Step 4 Install New Blue Spring on PR valve and re-use original switch valve spring.



Step 5 PR Adjustment
With 3/16" allen wrench, turn PR adjust screw *clockwise* until spring seat is just *flush* against the inside edge of spring retainer.

Unmodified Engine: Leave flush
Modified Engine: Adjust screw *counter-clockwise*, no more than five (5) turns from *flush*. (2 to 3) turns are the norm for street/strip use. (5) for fire breathing dragon strip use only.

LISTEN UP!

Rear servo parts **MUST** be installed if optional 1-2 shift check ball is removed from the VB! See **Page 2, Step 5**. **Do NOT do Page 2, Step 5 if you are unable to install rear servo parts!**

Some models require the removal of the servo anchor pin & servo arm to install the servo parts. Access to pin requires removing bolts from overdrive housing and sliding it back far enough to remove anchor pin. Seek the help of a professional trans tech or skip **this page Step 1** and **Page 2, Step 5**.

Step 2 Measure the distance between the 2 pan bolt holes marked by the "X's". If the distance between the holes is approx 14 1/2" install the orifice cup plug furnished with a flat nose punch. All others skip this step.

Step 1. Rear Servo
Install **Spacer** and reassemble piston. Two **PLAIN** Springs are furnished. Install **ONE** that fits piston & retainer. If neither spring fits, reuse original.

Accum Piston & Spring(s)
Accum piston spring(s) might be on the top, bottom, both or none at all.
Model specific, reinstall the spring(s) as removed.

Adjust rear band
Tighten snug with short wrench.
Single wrap band: Back off 2 1/2 turns.
Double wrap band: Back off 3 1/2 turns
[Double wrap band has three sections across]
Tighten the locknut.

Front band adjustment:
Tighten snug with short wrench.
Back off 2 turns and tighten nut.

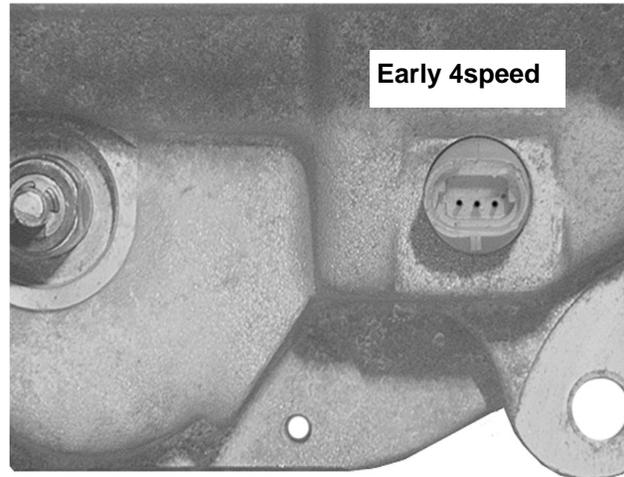
3.8 to 4.2 lever arms work best

TFOD-3 06 Aug 2014

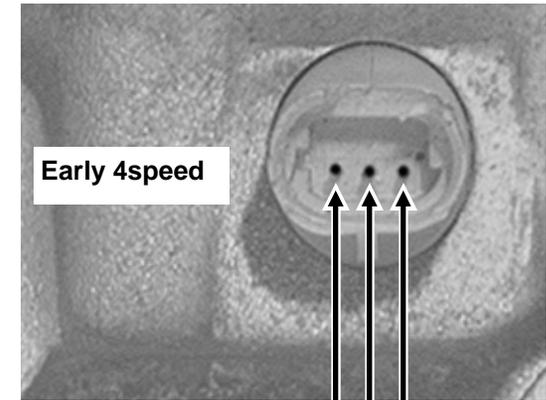
Page 7

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Driver Controlled 4th and TCC



RH Model Connector
Models without TCC have 2 pins here.
(OD Solenoid Only)



Pin ID 6 1 7

4th gear is driver selected with a toggle switch mounted in the drivers compartment. Lock-up is also driver selected with a separate toggle switch, or can be made to apply along with 4th from the same switch. We prefer separate switches. **Always turn off lock-up first before downshifting.**

STEP 1 Connect an ignition switch operated 10 amp fused 12V (B+) supply to terminal 1.

Step 2 Connect terminal 6 to one side of a toggle switch and the other side of the switch to ground. This is for 4th.

Step 3 Lock-up can be controlled separately by connecting terminal 7 to one side of a 2nd toggle switch and the other side of the 2nd switch to ground. Or it can be connected along with terminal 6 to use 1 switch to turn lock-up and 4th on together.

RE Model Connector



Pin ID
Connector in the case

Pin ID

1. TCC, Gov, & OD Sol common 12V+
2. 5V+ Transducer (gov pressure sender)
3. Ground, transducer & thermistor
4. Gov pressure signal to TCM
5. Variable ground to Gov Solenoid
6. Ground from TCM for OD Solenoid
7. Ground from TCM for TCC Solenoid
8. Temp signal (thermistor) to TCM