

# TF-2 *REPROGRAMMING KIT*<sup>™</sup>

## High Performance & Heavy Duty

This Kit fits: **1960up Alum Torqueflite  
Rear Drive Three Speed**  
*\*Note: Optional Gear Command is not available  
on 1960-65 models. See page 6 for details.*

Got a Four Speed?  
Use TFOD-HD2

This is not a “do it yourself” kit. It is for the  
Experienced, Professional Trans Mechanic only.

**Rip Roaring, Coffee Spilling, Tire Blazing, Brutal Shifts**

**~Or~**

**Short, Firm Shifts with Performance, Durability and “CLASS”  
Shift Command Feature:**

**Holds 1st and 2nd to any engine speed--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.*

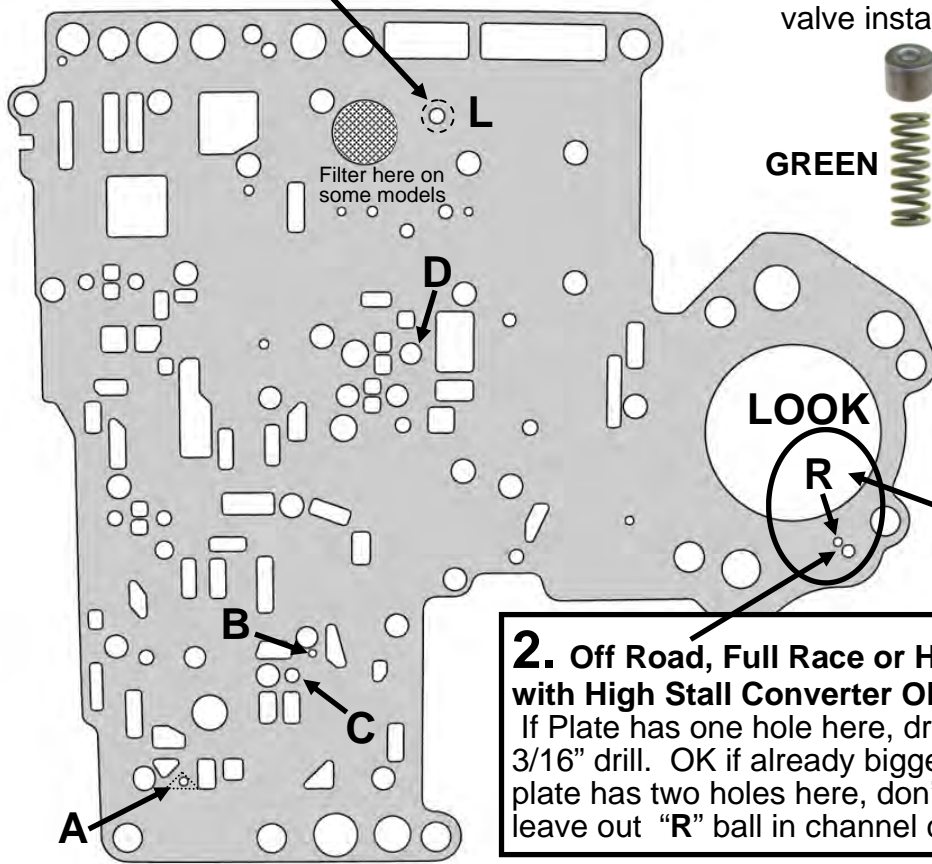


**Mr Shift**

You'll just Love it.



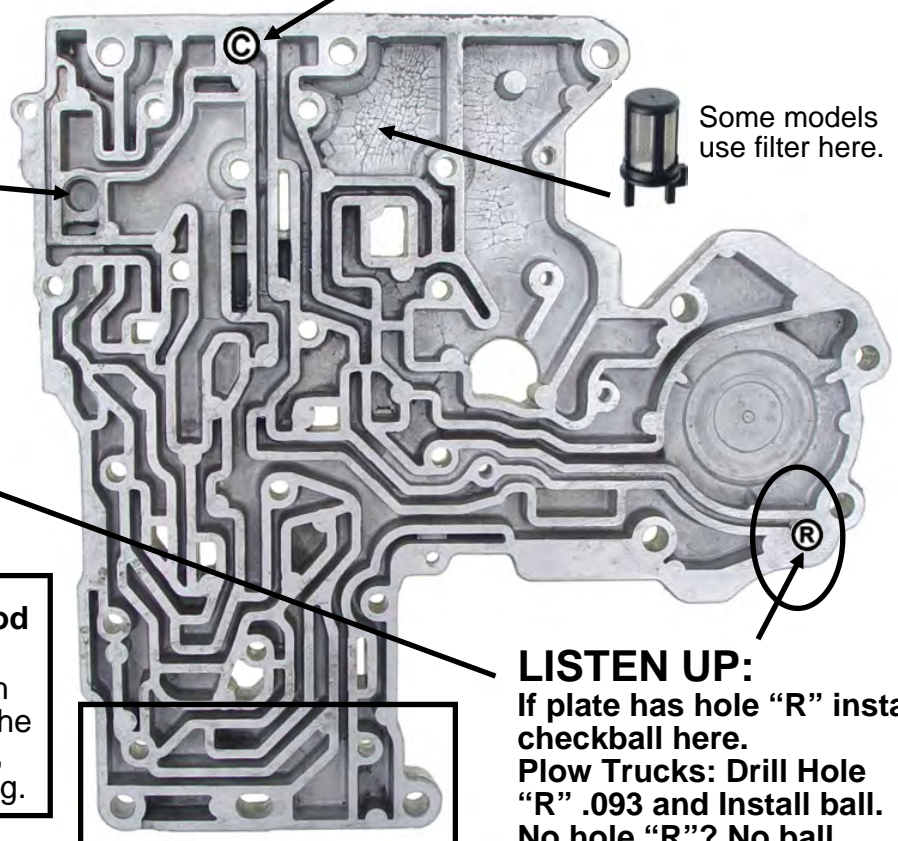
If plate has hole "L" valve body must have either 3/8" steel ball & spring, or poppet valve and spring. See Page 4.



3. If channel casting has bypass valve install the **GREEN** spring.



If channel casting has checkball here, reinstall it. Remove only for **Off Road, Full Race or Hot Rod with High Stall Converter applications.**



2. **Off Road, Full Race or Hot Rod with High Stall Converter ONLY.**  
If Plate has one hole here, drill with 3/16" drill. OK if already bigger. If the plate has two holes here, don't drill, leave out "R" ball in channel casting.

**LISTEN UP:**  
If plate has hole "R" install checkball here.  
Plow Trucks: Drill Hole "R" .093 and Install ball.  
No hole "R"? No ball.

### 1. Separator Plate Hole Sizes

Pass Car-- Towing-- Truck-- Motor Home

- A = .110 to .140 If triangle don't drill.
- B = 1-2 shift .086 to .125, Bigger is firmer.
- C = 2-3 shift .086 to .125, Bigger is firmer.
- D = .110 to .140 OK if already bigger.

Hot Rod-- Off Road-- Street/Strip-- Full Race

- A = .187 (3/16") If triangle don't drill.
- B = 1-2 shift Don't drill, leave out Ball "2" Page 5.
- C = 2-3 shift .140 to .187 Bigger is firmer.
- D = .187 (3/16") OK if already bigger.



If VB has conv clutch control body, no need to take apart.

4. 60-65 models reinstall poppet valve & spring.



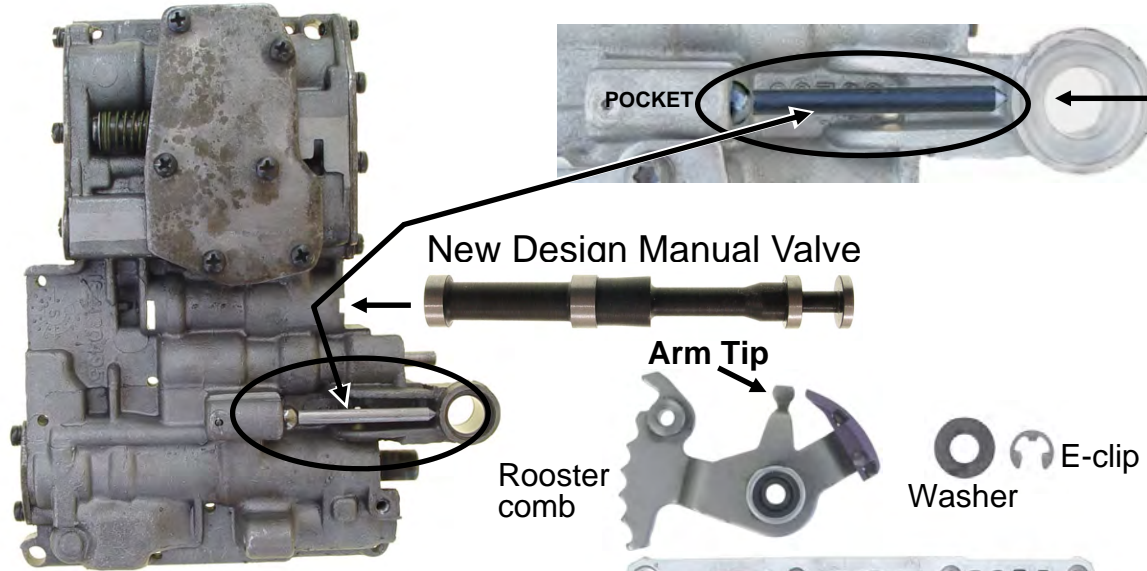
Drills furnished



# 1960-65 models with Rear Pump Skip this page!

**1.** Remove E-clip & washer. Remove rooster comb, being careful to catch ball & spring. Discard original manual valve.

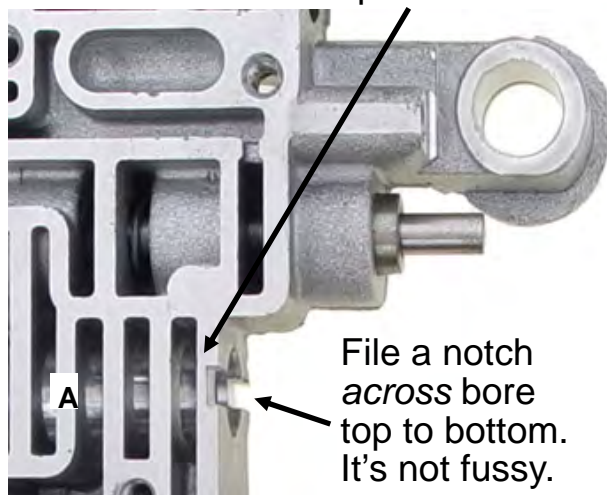
**Fluid level checking:** While the new manual valve provides oil to the converter in park, **DO** check fluid level in **Neutral** for accuracy as the converter is charged **MORE** in neutral.



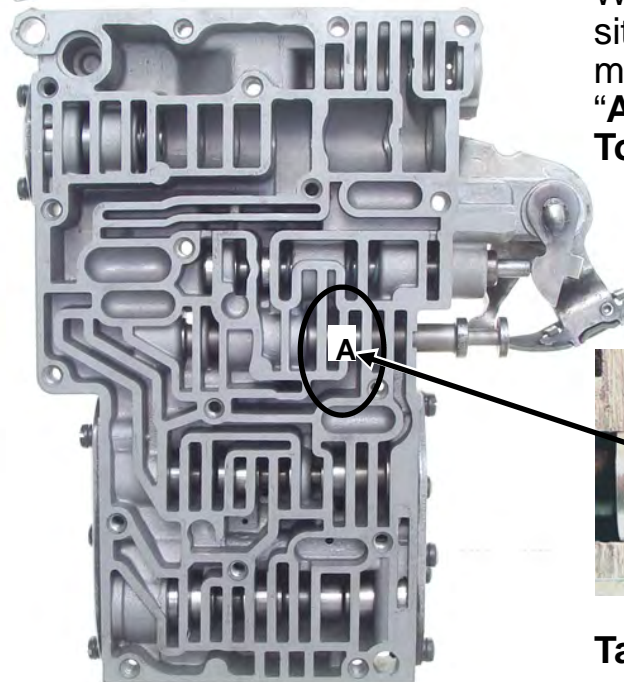
**3.** Insert spring and ball into VB pocket using the **Mumbly Peg** to hold the ball in place. Insert new **Manual Valve** and reassemble the rooster comb. Remove peg.

**2.** Turn the valve body over. Using the edge of a large file, file a notch about *halfway* thru the thickness of this partition.

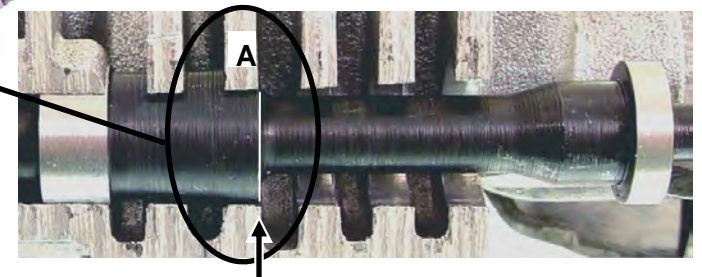
**4. Manual Valve position.** With valve all the way inboard (Park position) the *right edge* of the Tapered land must be flush with *right edge* of partition "A". (.030" from flush either way is ok.) **To Adjust:** Bend **Arm tip** with pliers.



File a notch across bore top to bottom. It's not fussy.



**Cutaway View Partition "A"**



**Tapered Land flush with right edge of Partition "A"**

# 1. 77up V-8 Trans With Lockup

If the trans has a lockup converter, drill **two** .086 to .096 [3/32"] holes down *thru* bottom of the most **outboard** passage.

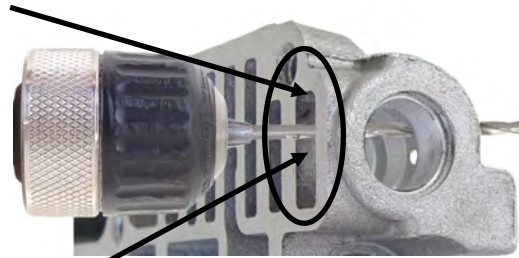
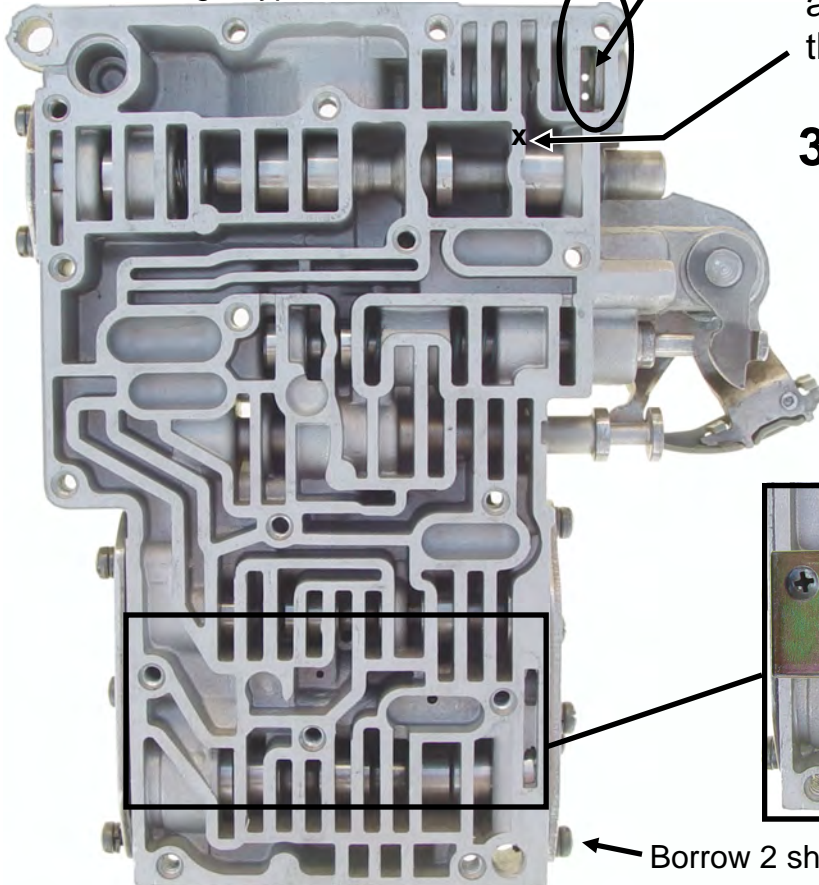
## 1977up Type VB

Has Six or Seven Passages

Seven Passage Type 1 2 3 4 5 6 7



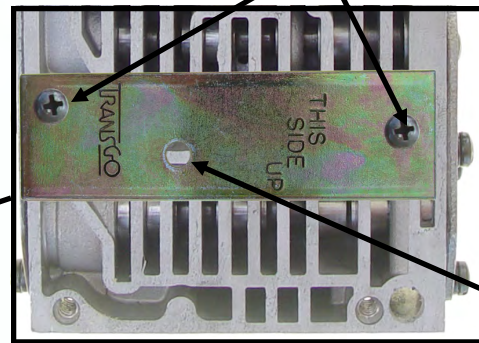
Six Passage Type 1 2 3 4 5 6



2. If your valve body has a hole drilled through this partition, plug it.

3. If VB has barrier here, in direction of the arrow drill thru it with .125 (1/8") drill.

4. Install **Drill Plate** on VB *this side up*. Use two short endplate screws to hold drill plate.

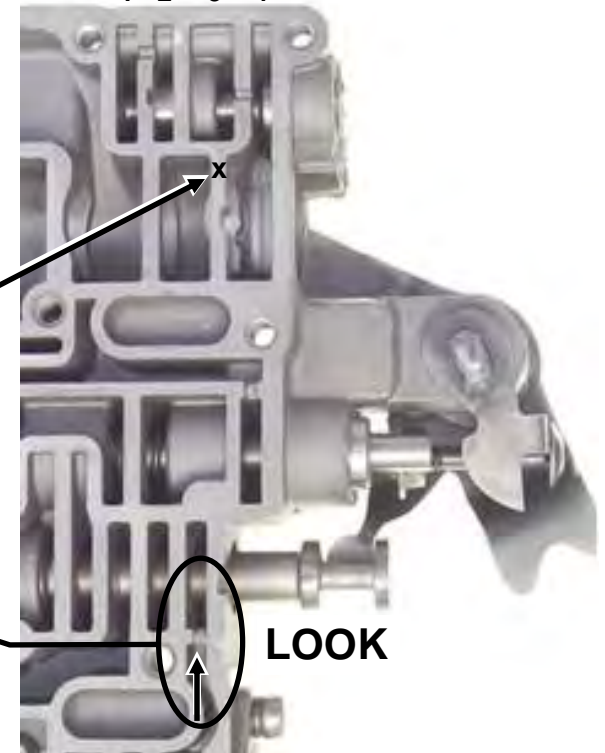


Borrow 2 short endplate screws.

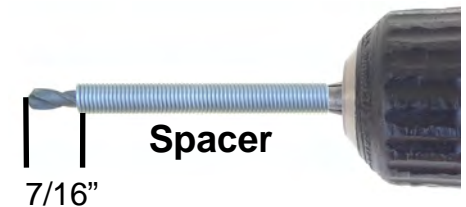
## 1960 to 76 Type VB

Has Four Passages

1 2 3 4



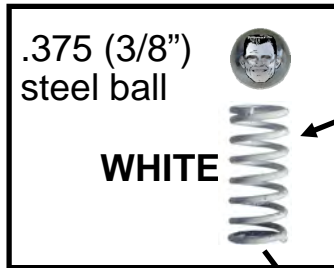
5. Use the **Spacer** furnished to adjust the 3/16" drill to 7/16".



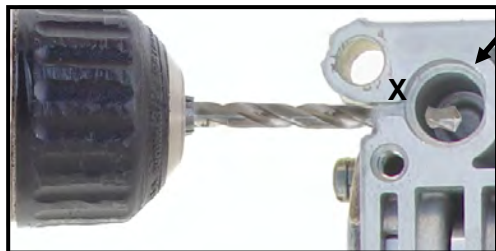
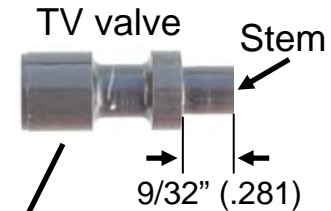
6. Using **Spacer** as a stop, drill straight down into this hole with the 3/16" drill.

**1.** If VB **HAS** line bypass ball & spring, drill 3/16" hole into spring pocket thru VB casting under "X". De-burr hole inside. Install **WHITE** spring & 3/8" ball.

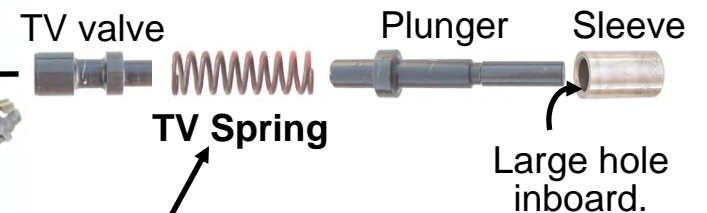
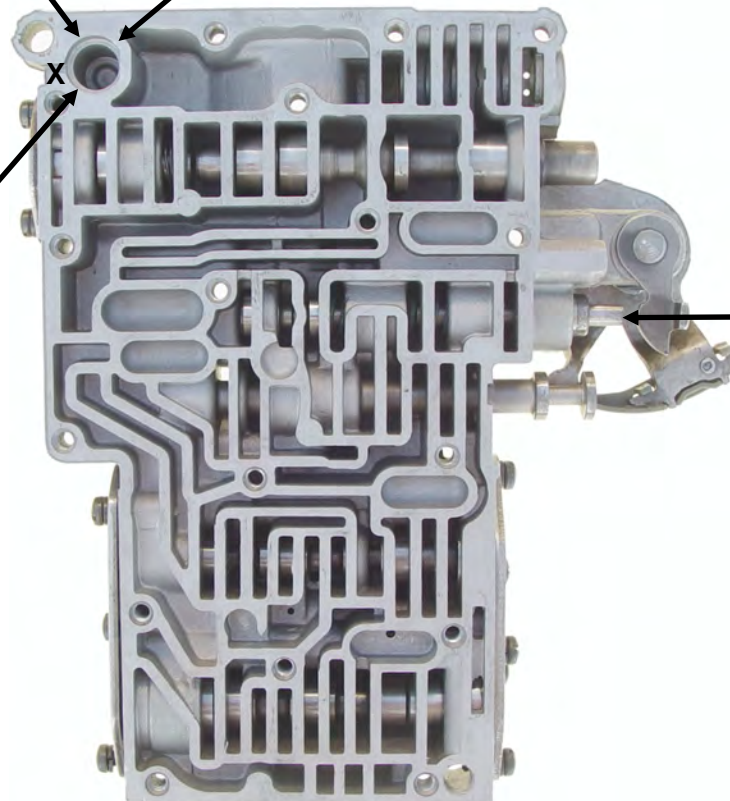
**LISTEN UP -- Bypass location RULE:**  
 NO **Hole L** in Plate, nothing goes here (Plate **Page 1**)  
 60-65 Don't drill, has poppet valve & spring, reinstall.  
 66-68 Don't drill & nothing goes here.  
**68-76 Has line bypass ball & spring DO STEP 1.**  
 77up Don't drill & nothing goes here.



**2.** Grind **stem end** of TV valve using the picture as guide, leaving stem length of prox 9/32" (.281).



Spring pocket drilling

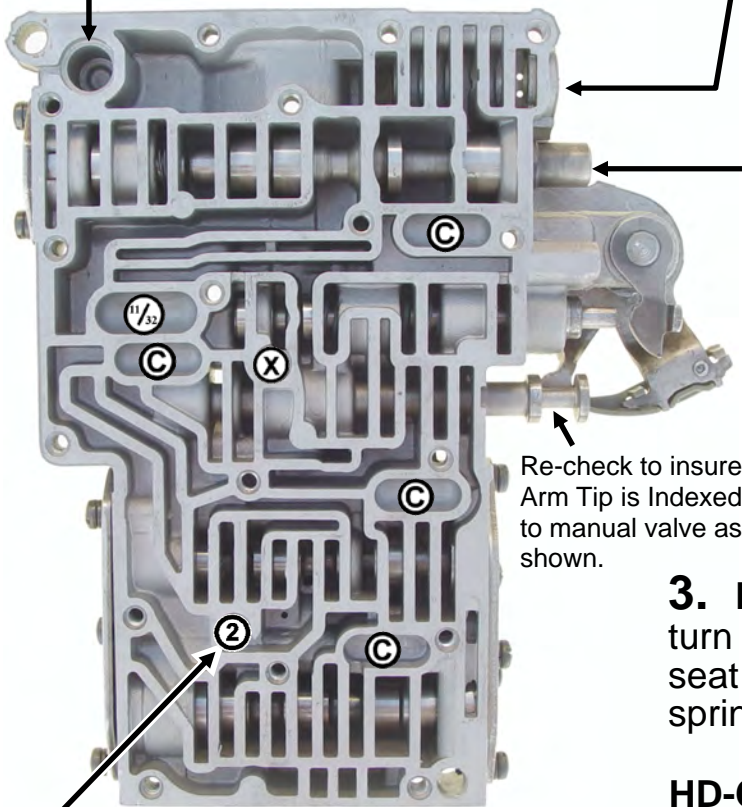


**3.** Install **YELLOW** or **PINK** TV spring that's same diameter as original TV spring.

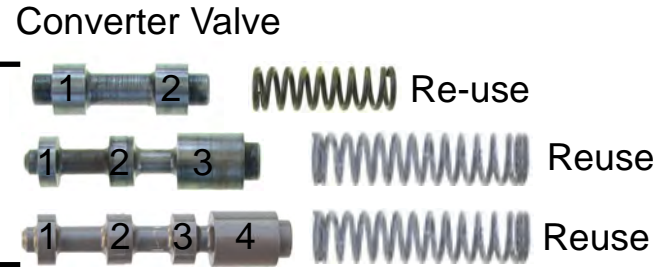
#### 4. Checkball Usage

- © 1/4" (.250)
- ⑪/32 11/32" (.343)
- ⓧ 1/4" (.250) 77up models

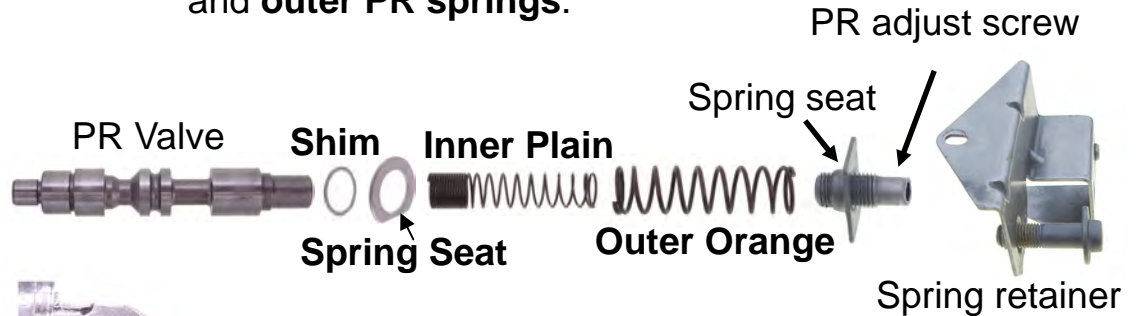
See previous page for info on part usage for this location.



1. Reinstall converter valve with original spring.



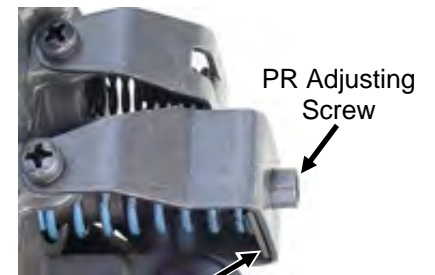
2. Install **New shim** and **spring seat** on PR valve before installing **new inner** and **outer PR springs**.



Install Spring Seat as shown. Make sure flat on spring seat has some clearance from casting. File casting if necessary to give it a little room to rotate slightly. Do not allow it to bind between PR valve and casting!

Re-check to insure Arm Tip is Indexed to manual valve as shown.

3. **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.



Spring seat **just flush**

② For **FIRMEST Hot Rod 1-2 Shift**, Do NOT install ball here. All others, install ball.

**HD-Car/Truck, Street/Strip:** Leave Flush  
**Competition & Race Car ONLY:** Adjust screw *counter-clockwise*, no more than four (4) turns from *flush*.

# Optional Shift Command Feature

Allows Driver to manually select Manual Low Gear at any speed.

**Skip this page for all 1960-65 models OR any Work Trucks, Diesels or Motor Homes.**

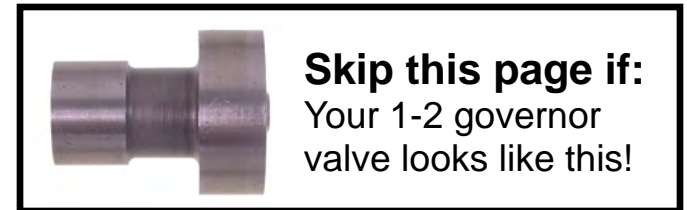
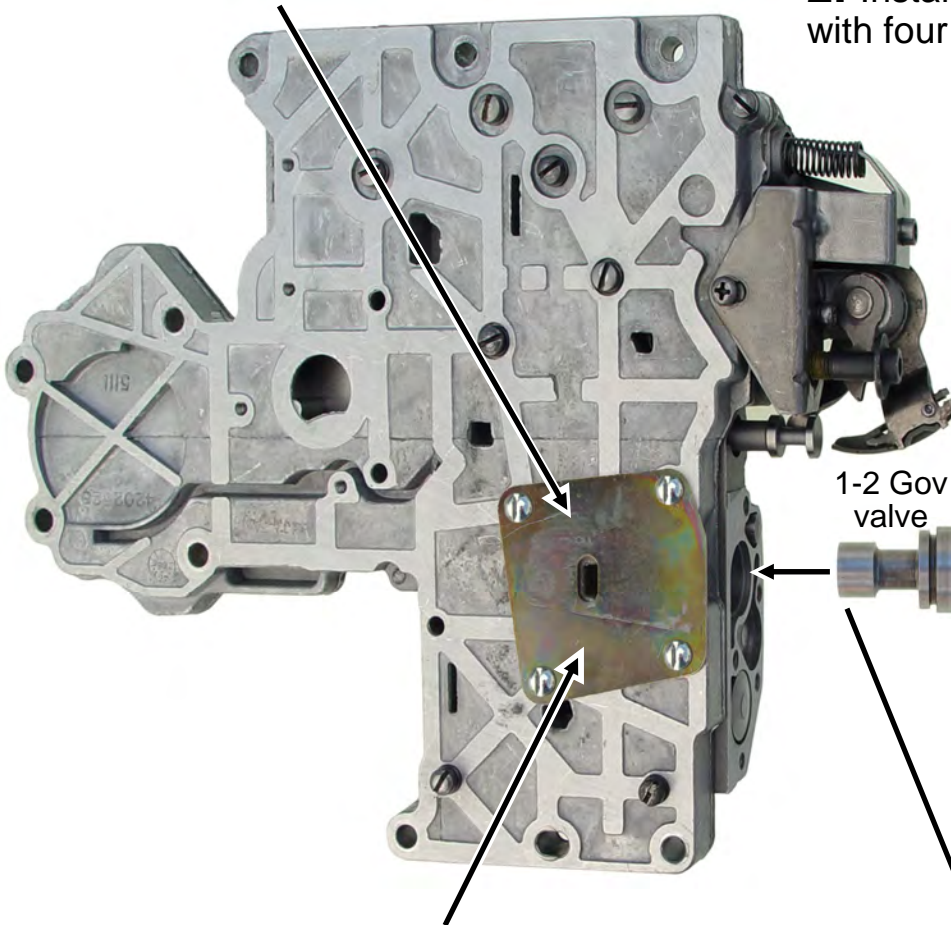
(Or if Shift Command feature is not desired.)

## Shift Command Plate

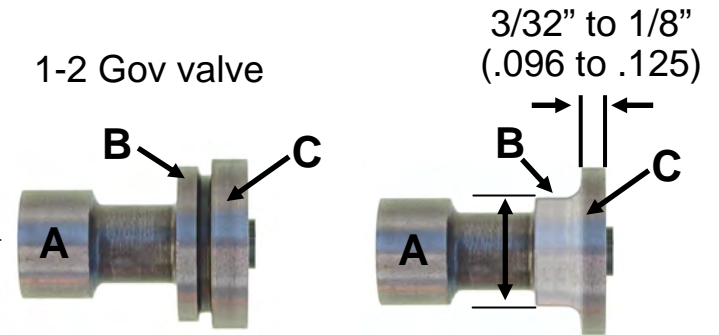


4 Long Screws

**2. Install Shift Command Plate with four Long Screws furnished.**



**1. Grind original 1-2 Governor Valve as shown. It gets *hot* so have a dish of water handy.**



**LISTEN UP:** If you didn't grind 1-2 Gov valve, DON'T install this plate!

Grind land "B" to prox diameter of land "A".  
Grind land "C" 3/32" to 1/8" wide.

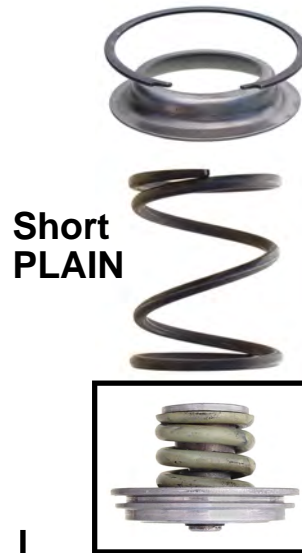
## Step 1. L/R Piston: 904 & 727

**904 Trans:** Don't take apart the piston. Install **Short PLAIN** spring. If spring won't fit retainer or piston reuse *original* spring.

**727 Type 1:** Remove cushion spring. Reassemble piston. Install **Short PLAIN** spring. If spring won't fit retainer or piston reuse *original* spring.

**727 Type 2:** Install **Spacer**, assemble piston. Install **Long PLAIN** spring.

### 904 All Types



Short PLAIN

Snap ring  
Retainer

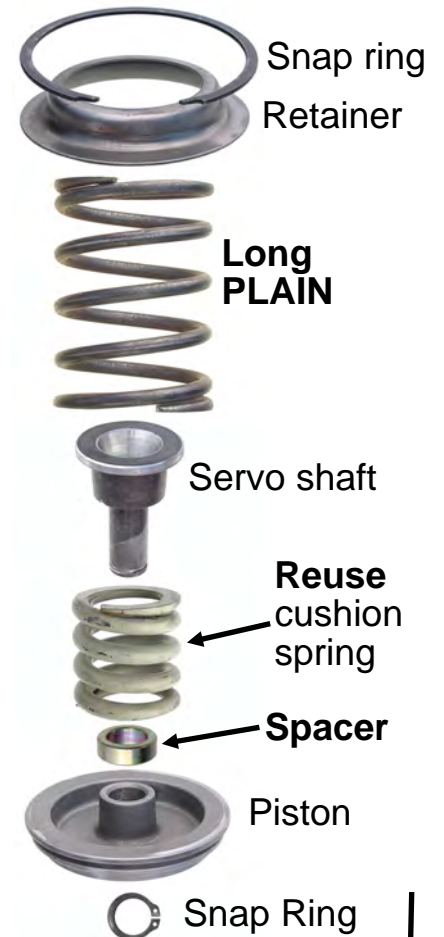
### 727 Type 1



Short PLAIN

Wire ring  
Inner piston  
Remove cushion spring  
Piston

### 727 Type 2

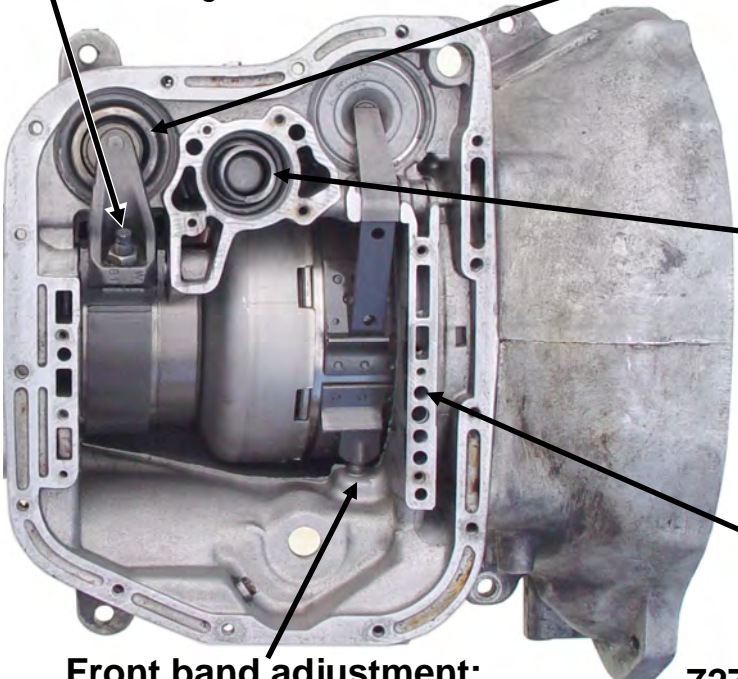


Long PLAIN

Servo shaft  
Reuse cushion spring  
Spacer  
Piston

○ Snap Ring

**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.

727 Case Shown

Don't take apart



Orifice Plug

**Accum Piston & Spring(s)**  
Accum piston spring(s) might be on the top, bottom, both or none at all. Reinstall as it came apart.

**Step 2. 727 models only!**  
With 5/16" punch or bolt, install the **Orifice Plug** into this hole in case.



Now get ready to have some fun!

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