

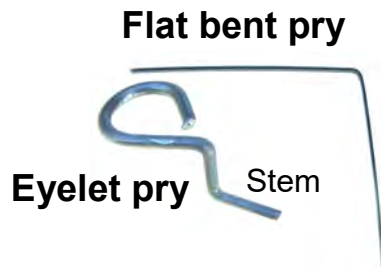
# LJ4AEL Shift Kit®

1995-03 Mazda Millenia-S 2.3L  
JF403E 1990up Geo Storm  
Isuzu Impulse and Gemini



**This Kit is about: Prevents Clutch Drum Blowout and Planetary failures caused by Hi-line and Low-Lube .**

Falls out of gear at stop sign, hot. Burns 3-4 clutches. No 2nd. No 3rd after a 3-2 or 4-2 kick down. Direct clutch (3rd) inner seal leaks. Corrects Soft 1-2 and 2-3.

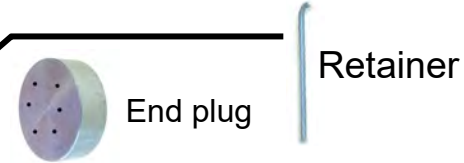
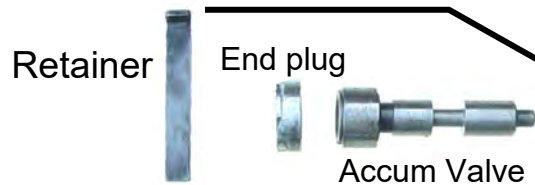


**LISTEN UP: If trans is out of vehicle do page 7 first.**

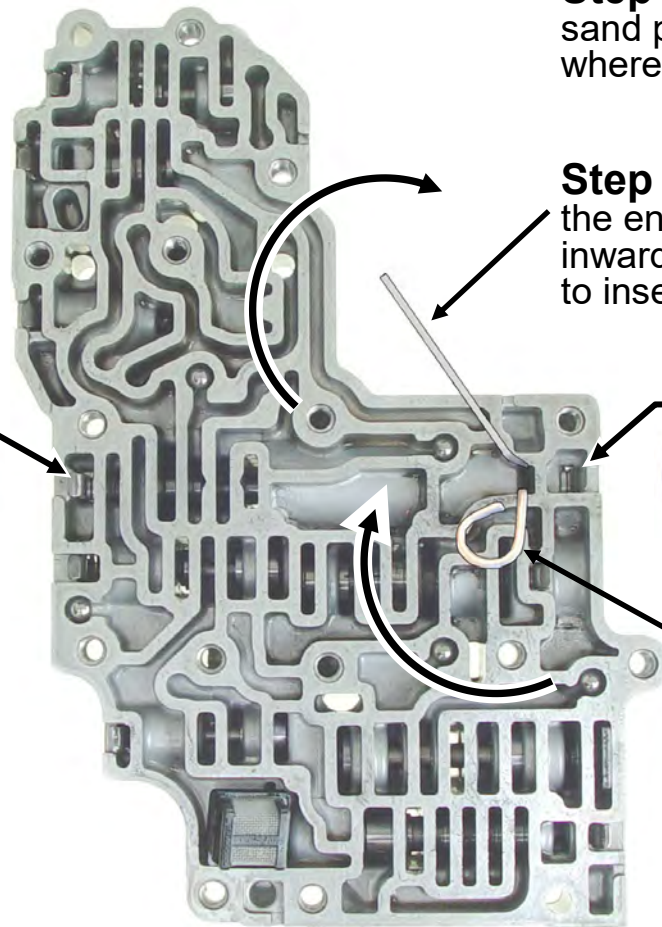
**Step 1.** Remove **Retainers**. With sand paper smooth the small burr where the retainer was against bore.

**Step 2.** Insert **Flat Bent Pry** between the end plug & accum piston. Push piston inward *away* from the end plug far enough to insert the stem end of eyelet pry.

**Step 3.** With **Eyelet Pry** *push* the end plug **GENTLY** in various spots to remove it. Then remove 2nd accum piston, spring & washer on **Page 2**. Then *push* accum valve and end plug from this side of VB with a thin punch.



**Upper Valve Body**

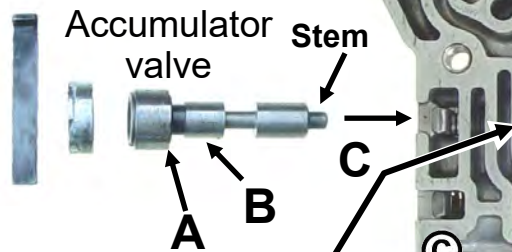


## Hello Mechanic:

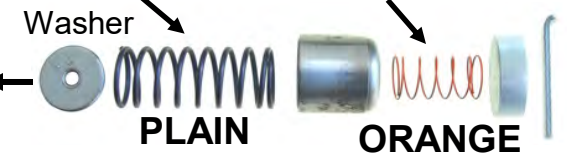
Install accumulator valve first. Then install the flat washer on the **stem** of accum valve, then the remaining parts as shown.

**Step 1:** Remove accum valve and chamfer partition as shown below. Clean bore and **reinstall** the valve.

**Here's Why:** Edge **A** on the valve hits partition at **C**. This deforms the bore which sticks the valve at land **B**.

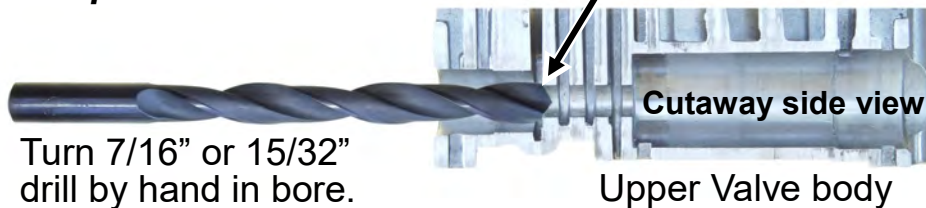


**Step 2: 2nd Accumulator piston**  
Install the washer, then install **PLAIN** and **ORANGE** springs.



## Here's how to fix it:

By **HAND**, make a small chamfer in the valve bore at "**C**" with a **sharp** 7/16 or 15/32 drill.

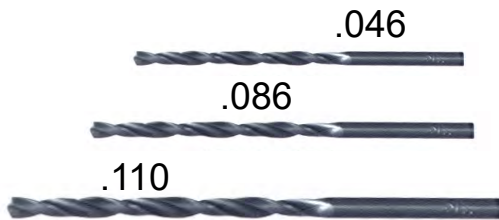


© **5 Checkballs:**  
Steel .214 to .218  
Don't use plastic balls.



# Small Plate

Make this hole .086  
OK if already bigger.



# Main Plate

JF403E trans has this hole and must have ball at location "J" page 3.

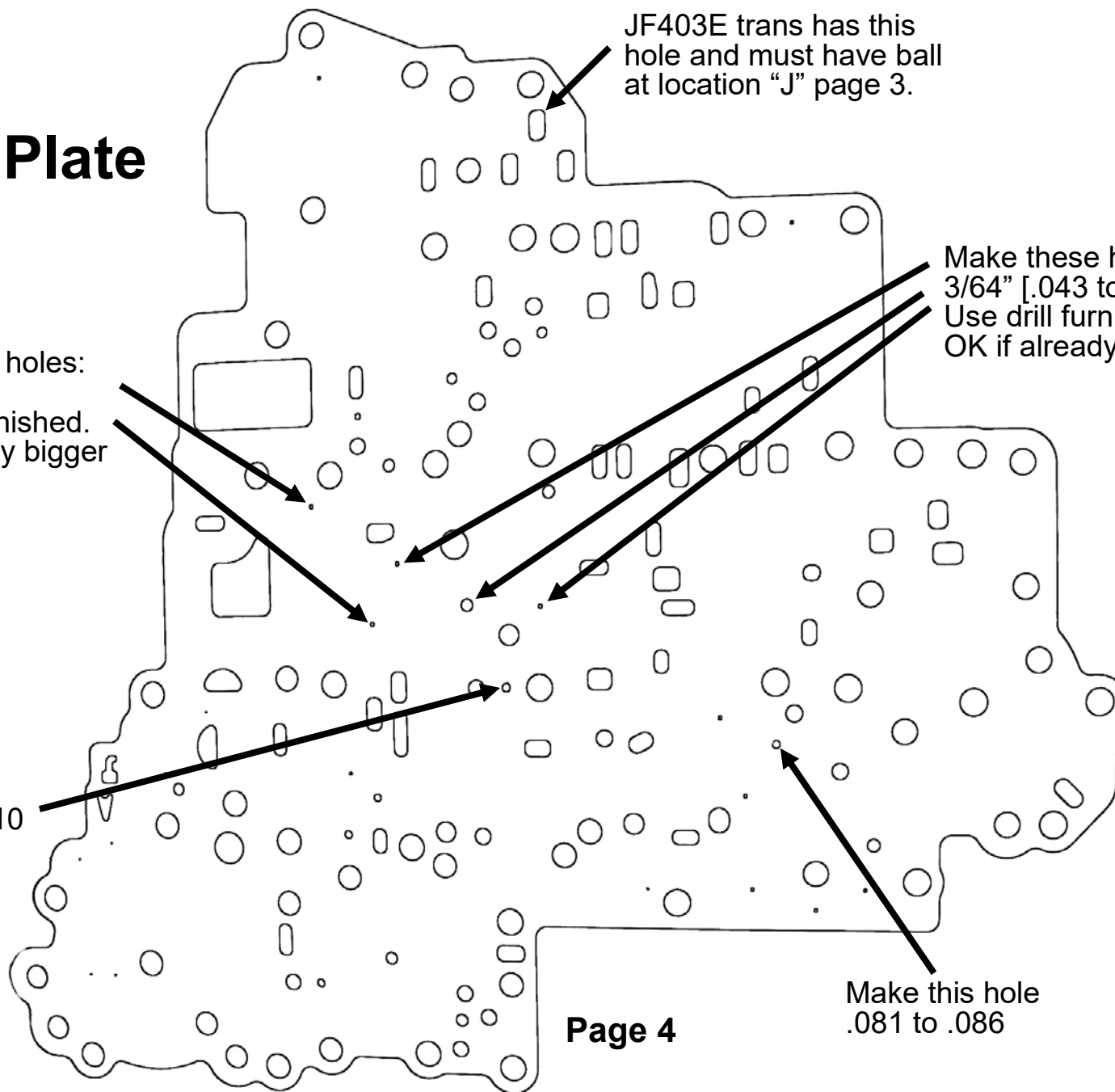
Make these holes:  
3/64" [.043 to .047]  
Use drill furnished.  
OK if already bigger.

Make these holes:  
.081 to .086  
Use drill furnished.  
OK if already bigger

Make this hole .110

Make this hole  
.081 to .086

Page 4



If main plate has slotted "JF"  
hole install ball "J" here.

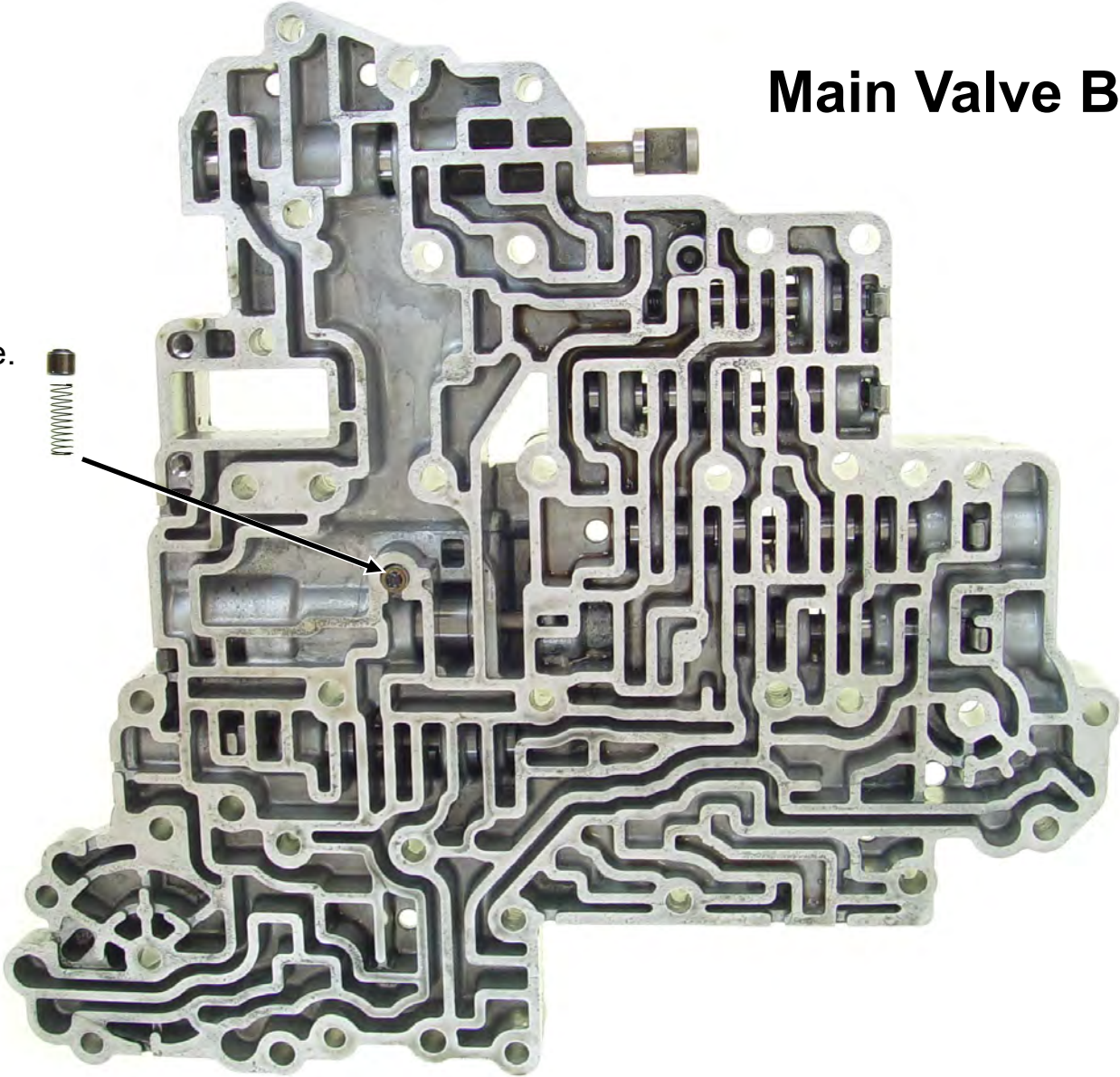
## Intermediate Valve Body

© All Balls: .214 to .218 steel  
Do not use plastic balls.



# Main Valve Body

One way Lube Valve.  
[Very weak Spring]

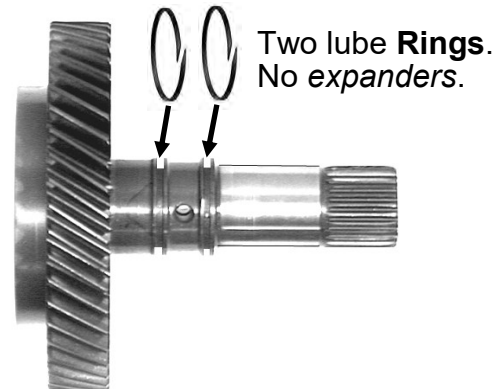
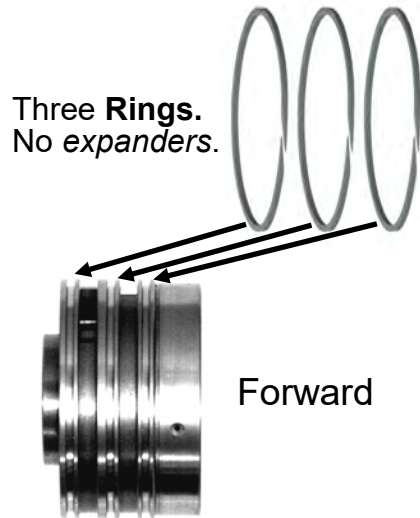


# Hi-Temp Low-Shrink Rings

If trans is in vehicle skip this page.

## 1. Forward & Lube Rings

Use Trans Jel and **GENTLY** push rings down into grooves. Ends of rings should just touch or have small gap. If pushed together **FIRMLY** they **BIND** in groove & **WON'T SEAL**.

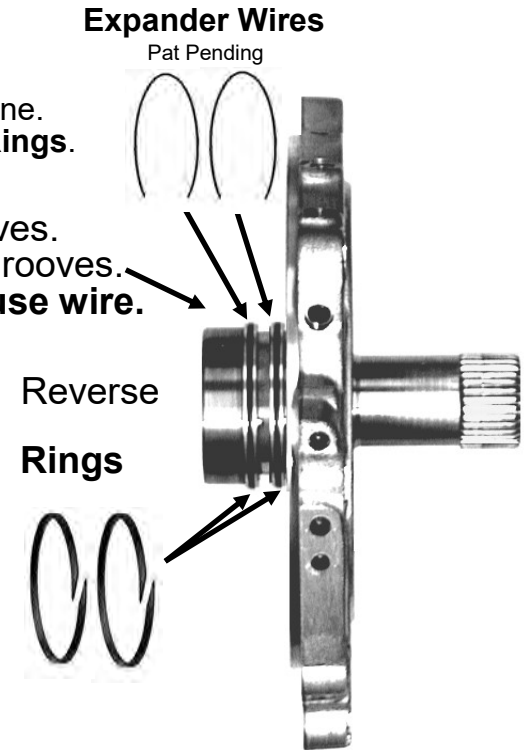


## 2. Reverse Rings

Fill grooves with Trans Jel or Vaseline. Install **Expander Wires**, then two **Rings**.

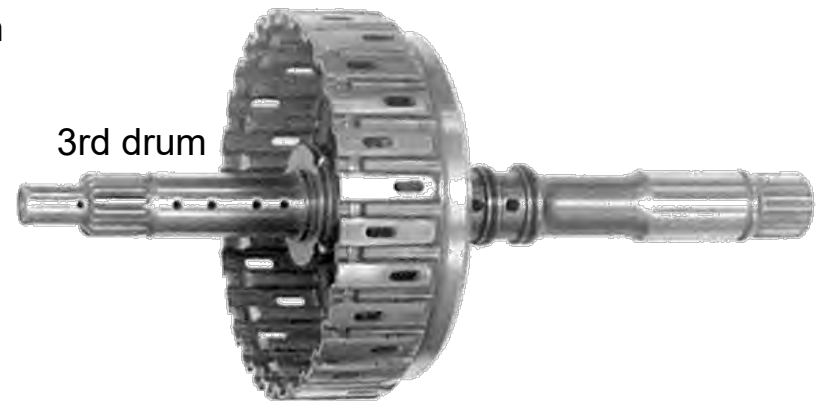
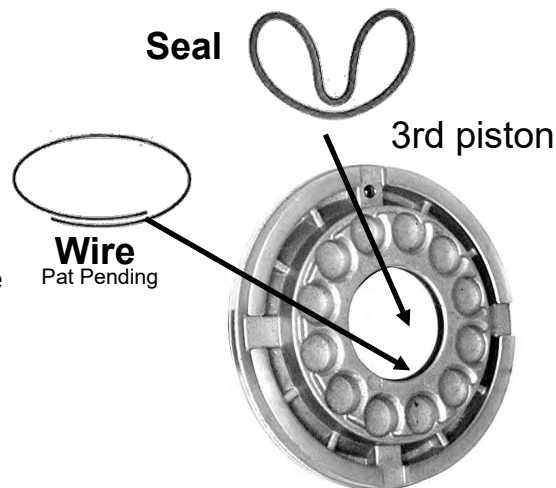
### LISTEN UP:

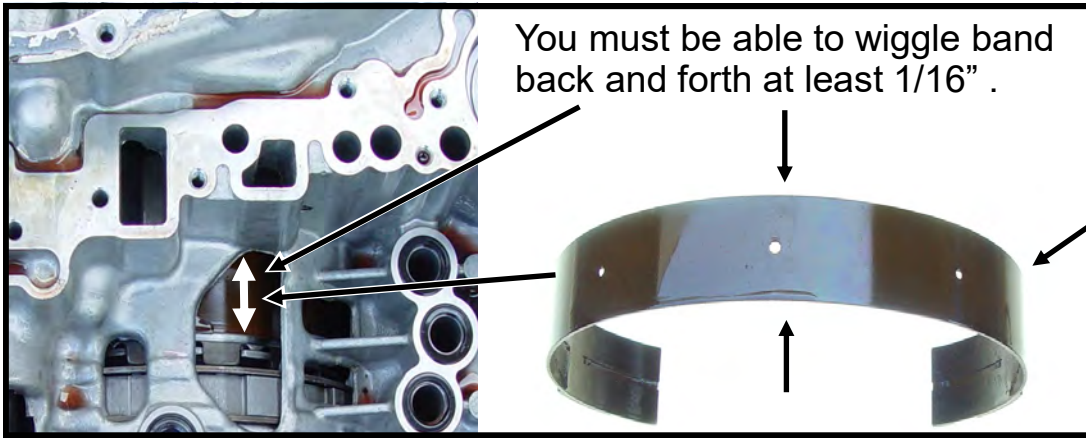
Some models have shallow grooves. Rings **MUST** push **flush** into the grooves. **If rings wont push flush don't use wire.**



## 3. Third Clutch (Direct) Inner Piston Seal

Insert overlap part of **Wire** into groove at 6 O'clock. Then shape the **Seal** as shown and install into the piston groove.



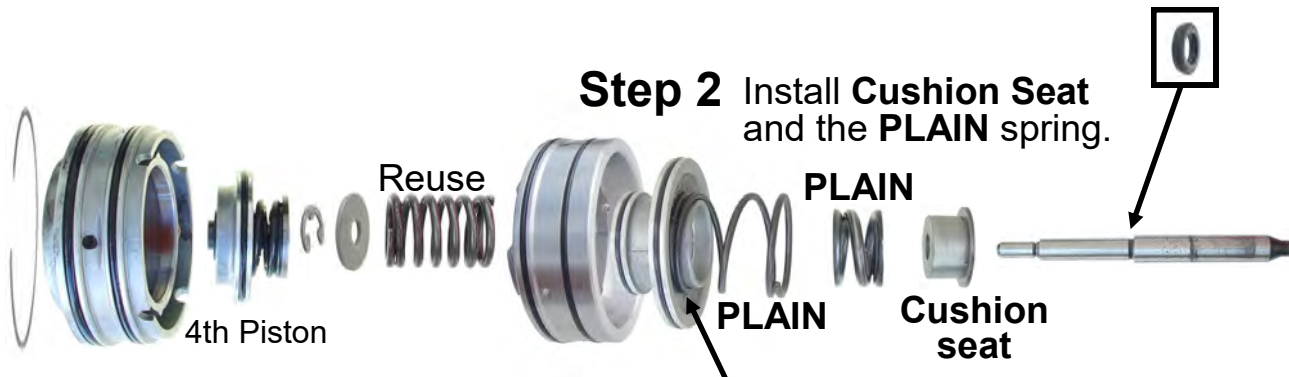


**Check Band Adjust:** Install 2nd piston with new cushion seat and spring. If band will wiggle 1/16" by hand skip band adjustment shown below.

**Band adjustment:**  
Loosen Locknut.  
Adjust snug with short wrench, then back off 2 to 2-1/2 turns and tighten the lock nut.  
Use 14mm wrench and T30 TORX bit.

**Step 1** Remove and discard original hard washer.

**Step 2** Install **Cushion Seat** and the **PLAIN** spring.

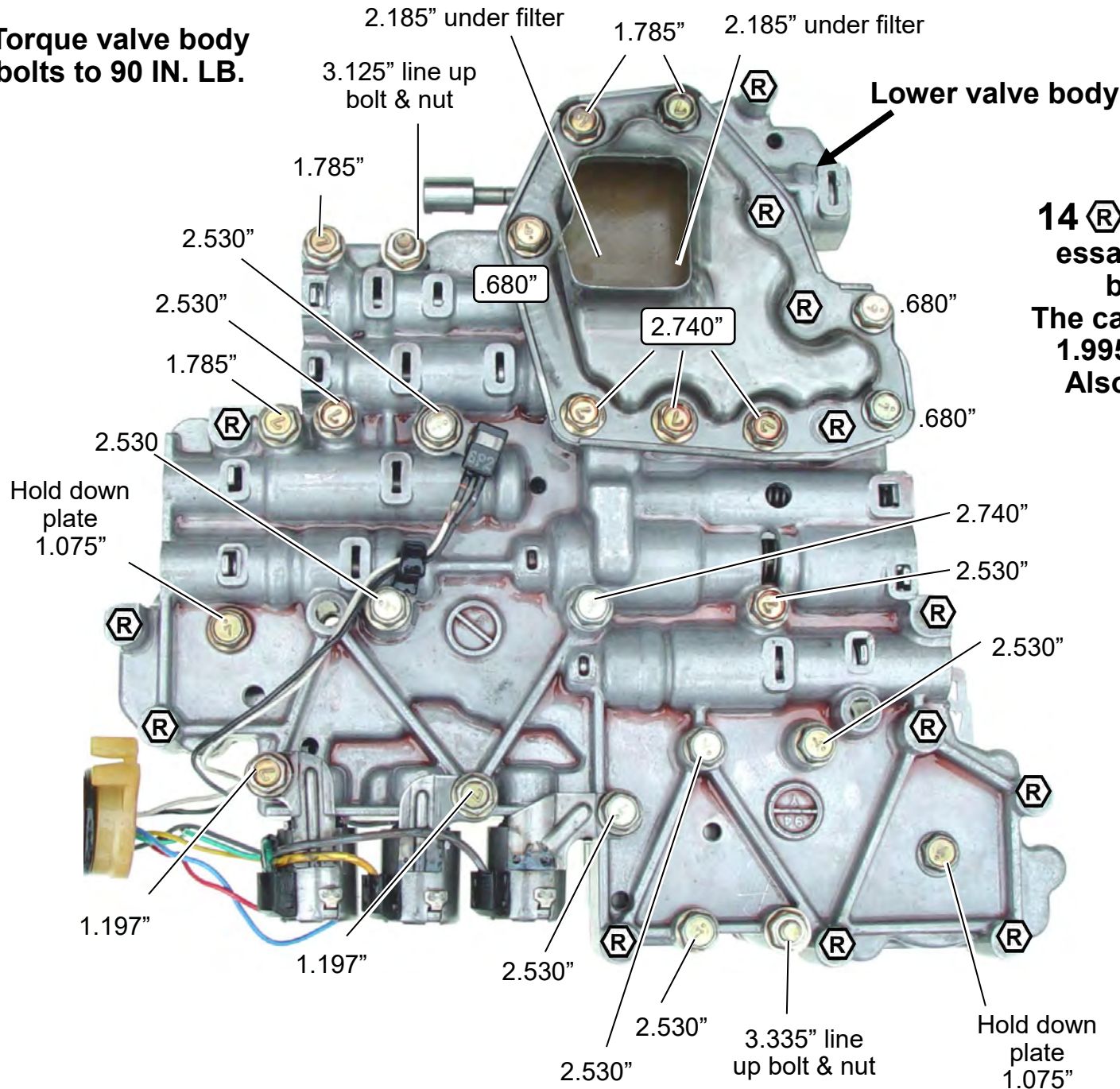


**Step 3** Install **PLAIN** spring over lip on the 2nd piston as shown. Use smallest end of spring that fits snug.





**Torque valve body bolts to 90 IN. LB.**



**14 (R) bolts are the ones necessary to remove the valve body from the case. The case bolts on the filter are 1.995\"**

