



SK[®] AWF21

(Also Fits TF-81SC & AW6A-EL)

**05-06 Ford Fusion & 500, 05-06 Mazda 6
06 Lincoln Zephyr, 06 Mercury Milan,
05-06 Mercury Montego**

Reduces/Corrects/Prevents

Rough shifts, Bump-Bump downshifts above 30 mph hot, Part throttle downshift bang, Flares during up-shifts & kick-down, Rough coast downshifts, No pressure rise, TCC slip/shudder. Poor shift quality.

For Professional Use Only!

Hello Tech, Reports coming back to us from shops that have worked on these transmissions say that even though the trans came in with a lot of the complaints listed, the fluid is relatively clean and has no burned odor. When they take apart the transmission they are surprised to find so little wrong. Replacing the internal parts and re-installing the transmission **without** this kit or a **brand new high dollar** valve body installed, just doesn't fix them. The road test confirms it because the car still has the same malfunctions it came in the door with. YUK! Installing this kit and your careful attention to detail makes this trans "wake-up" and perform as it should. Clean, quick and responsive shifts with no bad habits. Your going to love it! Thanks for listening.

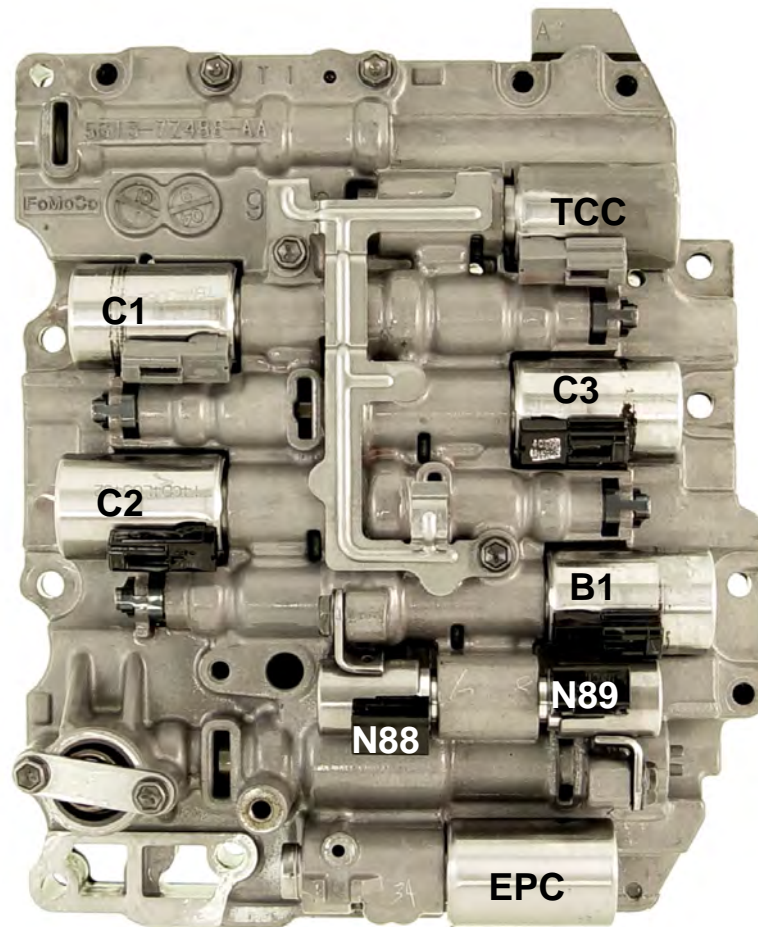
Mr. Shift[®]

Have a nice Day!



22 May 2012

Make an ID mark on each solenoid to return them back to their original locations before beginning.



*N88 & N89 are the same Normally Closed solenoid!
Mazda P/N AW01-21-1DX cost prox \$90.00 ea.

Tech Note: If the trans exhibits one or more of the listed complaints and fluid looks clean and has no burned odor, try installing just this kit. We think you'll be surprised at how well it works afterward.

Please read these instructions thoroughly **before starting!**

Linear Solenoid Disassembly and Correction

Steps 1-9 all 6 linear Solenoids.

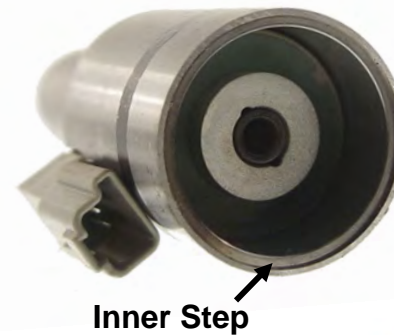
Step 1

Check solenoid resistance first! Solenoid resistance should be 5-7 ohms between Connector Pins. Checking from either Pin to Solenoid Body must be open. If Solenoid fails either check Solenoid will need replacing.



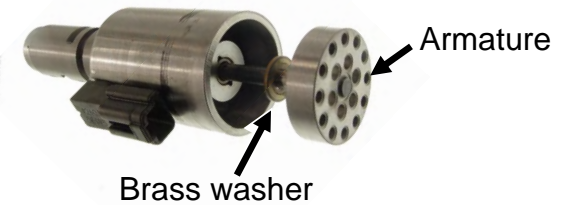
Step 2

Grind crimp until end cap falls off. Use side of bench grinding Wheel.



Step 3

Remove Armature & washer. Grind Body flush with inner step.



Step 4

Measure the Shaft.
.156-157 use long drill.
.154-155 use short drill.
Use selected drill in **Step 5**.



Step 5

Turn Drill **counter clockwise by hand** insert it all the way into Solenoid while holding the Drill turn the Solenoid both directions for 15 seconds. **Turn the drill counter clockwise & remove the drill.**



Step 6

After resizing Solenoid Bushings clean out debris with brake clean & blow out with air. Install Armature & stroke while spraying Sol Valve with Brake cleaner.



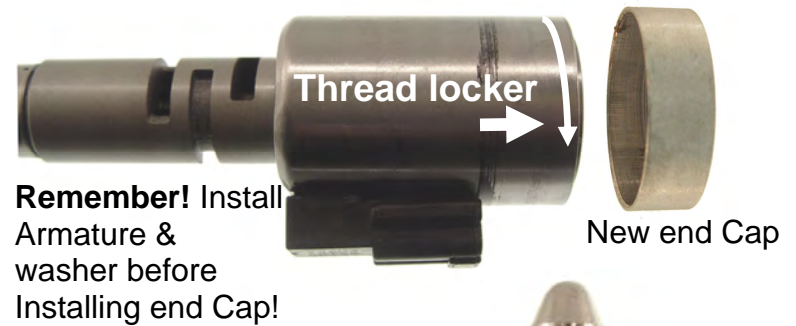
Step 7

Hold Solenoid upside down, Armature must fall out. If not perform step 5 again.



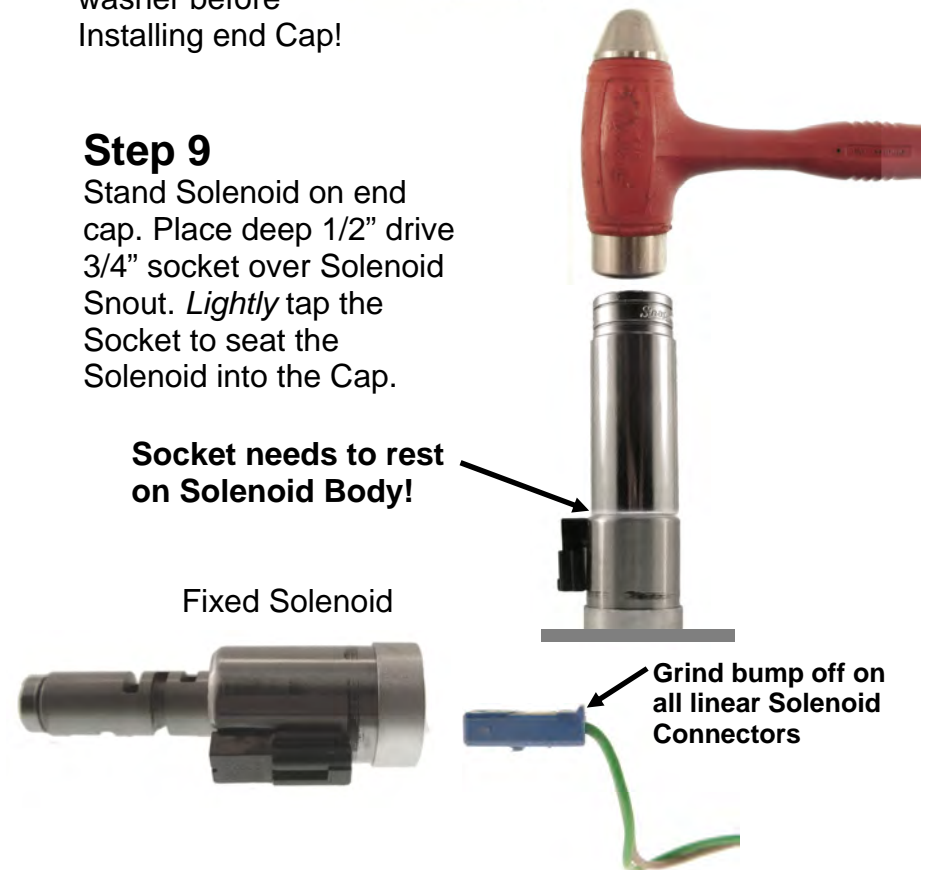
Step 8

Lay a narrow bead of Red Thread locker around the end of Solenoid Body. Keep Thread locker way from inside of Solenoid. Position new end Cap on Solenoid.



Step 9

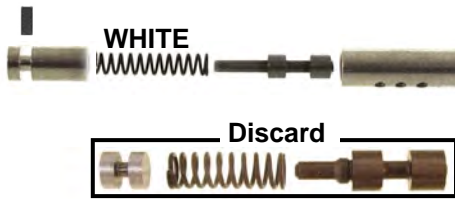
Stand Solenoid on end cap. Place deep 1/2" drive 3/4" socket over Solenoid Snout. *Lightly* tap the Socket to seat the Solenoid into the Cap.



Rear Body Repair Work

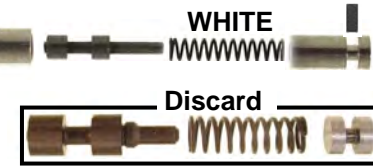
Step 1

Discard OE Valve, Spring & end Plug.
Install new Bushing, Valve, **WHITE** Spring & new end Plug.



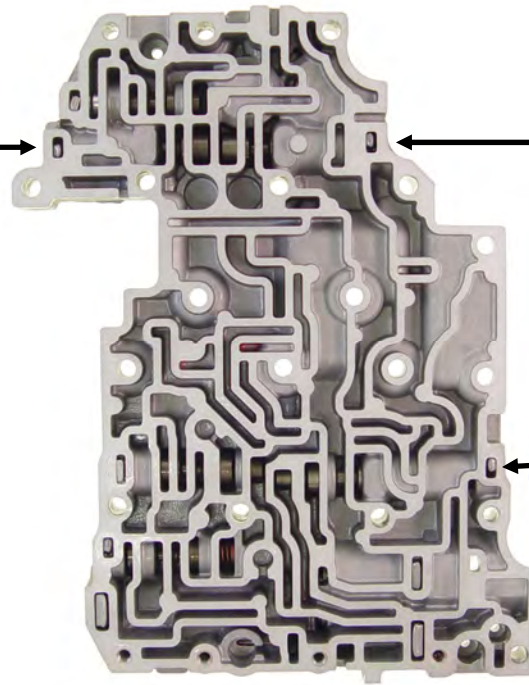
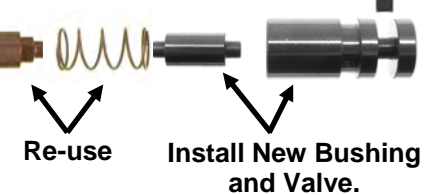
Step 2

Discard OE Valve, Spring & end Plug.
Install new Bushing, Valve, **WHITE** Spring & new end Plug.



Step 3

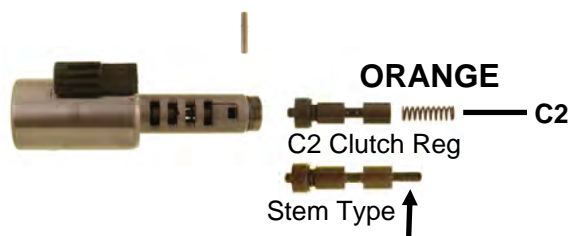
Install new Bushing & Valve



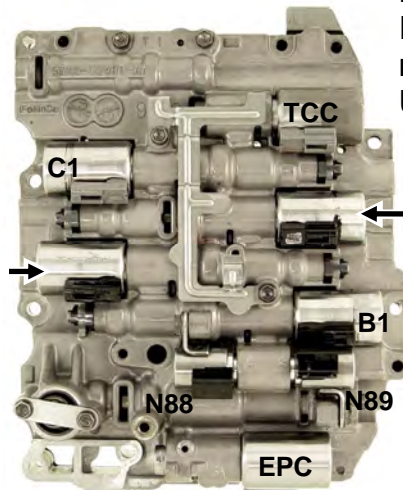
Front Body Repair Work

Step 1

Look at C2 & C3 Clutch Reg Valve springs (they break).
If your valve **has a stem** that the spring slides over, **re-use your original springs!** **No stem type valves:** Use **NEW Orange** springs provided.

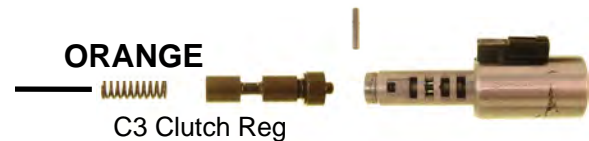


Do not use new orange springs on C2 or C3 Clutch Reg if **your valve has a stem** located here.

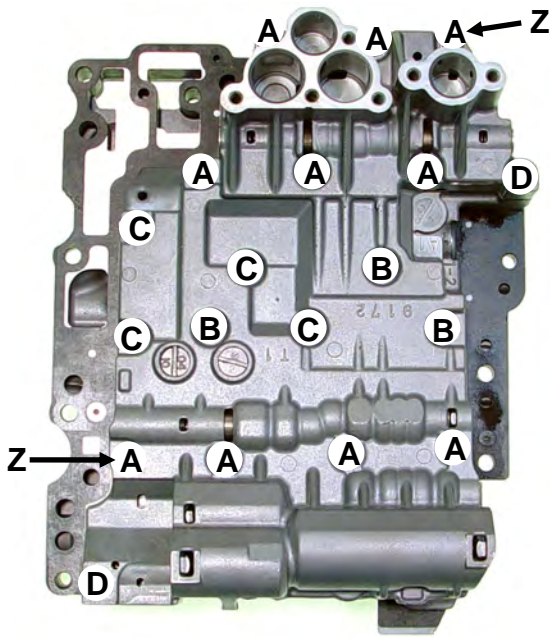


ORANGE

C3 Clutch Reg

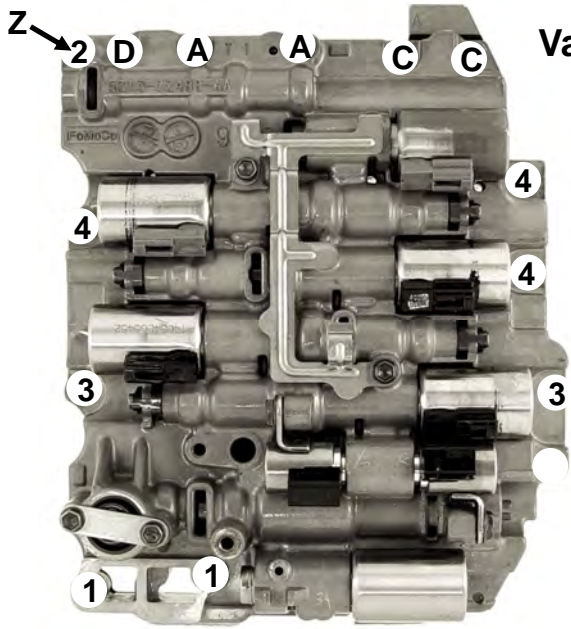


This completes the actual repair work on the Valve body and solenoids. Use the following pages as a guide only. There may be slight differences between application models. If there are any differences in small part locations re-install them as you found them and let us know what model you were working on.

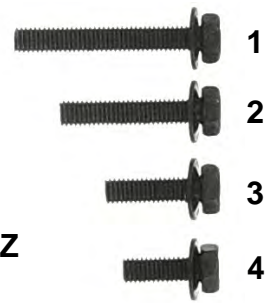


Valve Body Bolts

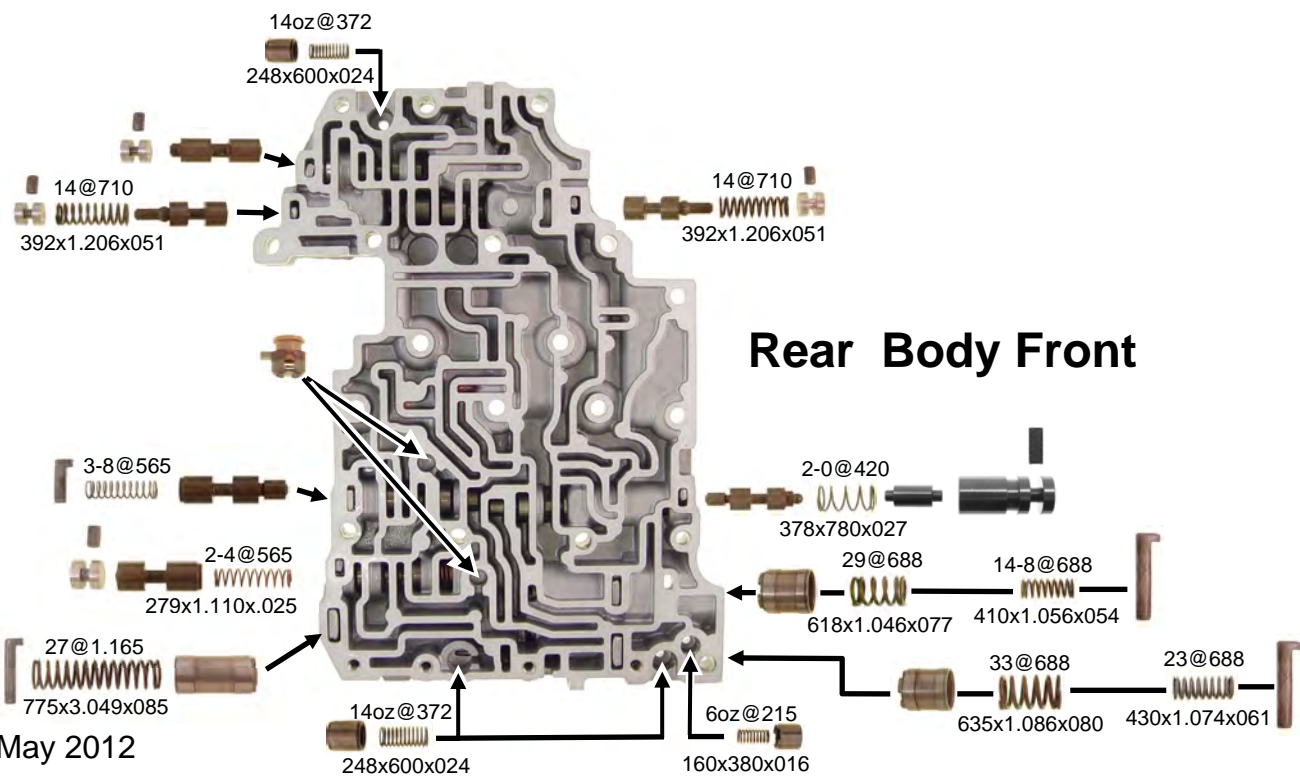
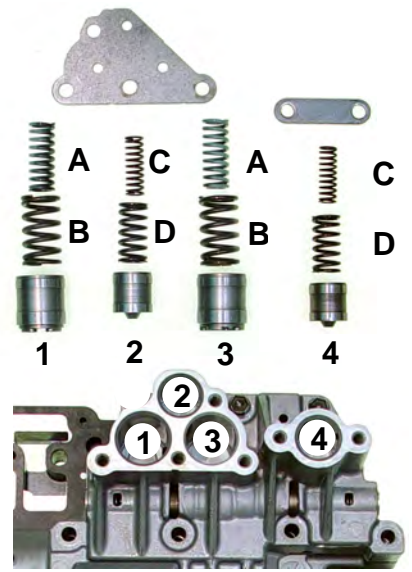
Z bolts are alignment Bolts, start them first. Tighten VB Bolts from center outward. Bolts are not actual size.



Valve Body to Case Bolts

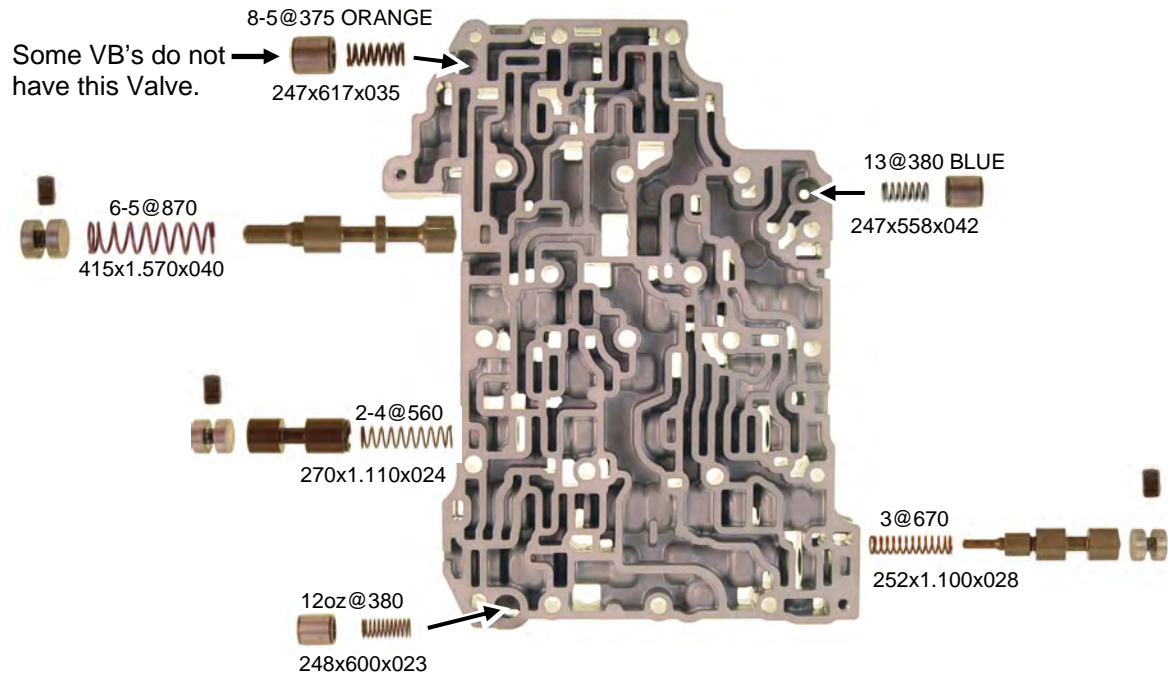


Accum Spring Spec's
 A= 1.088x425x061 24@686
 B= 1.088x630x081 36@686
 C= 930x475x062 10@530
 D= 930x475x062 24@530



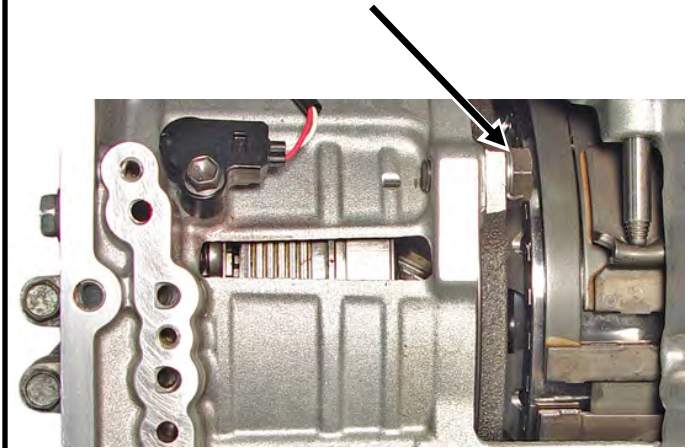
Rear Body Front

Middle Body Front View

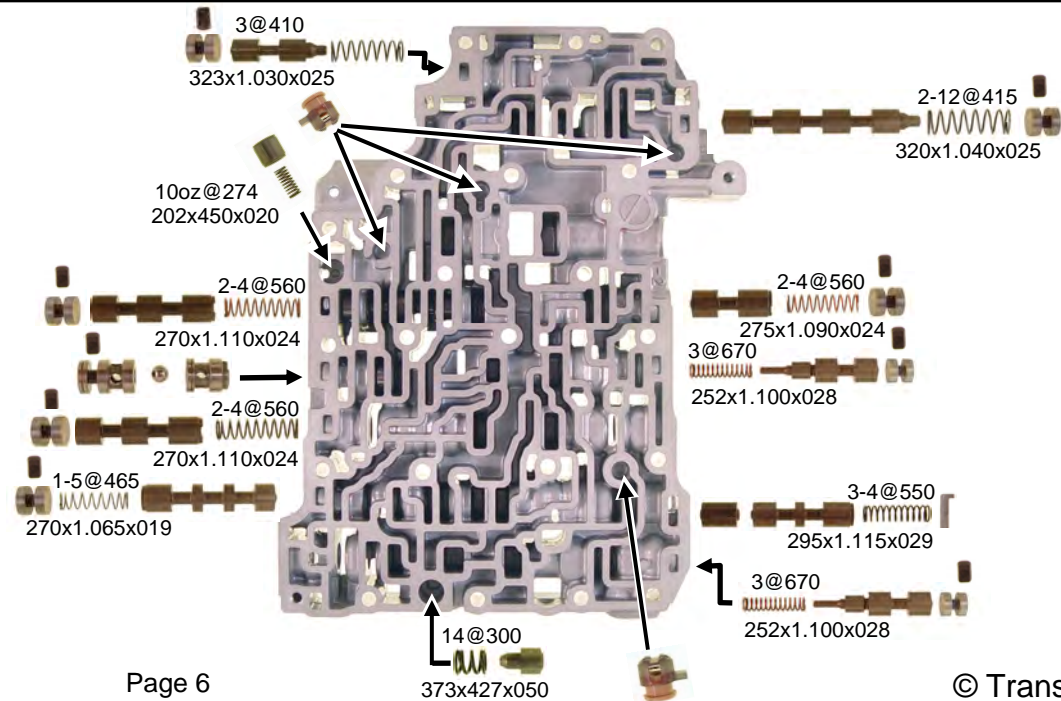


Watch Out!

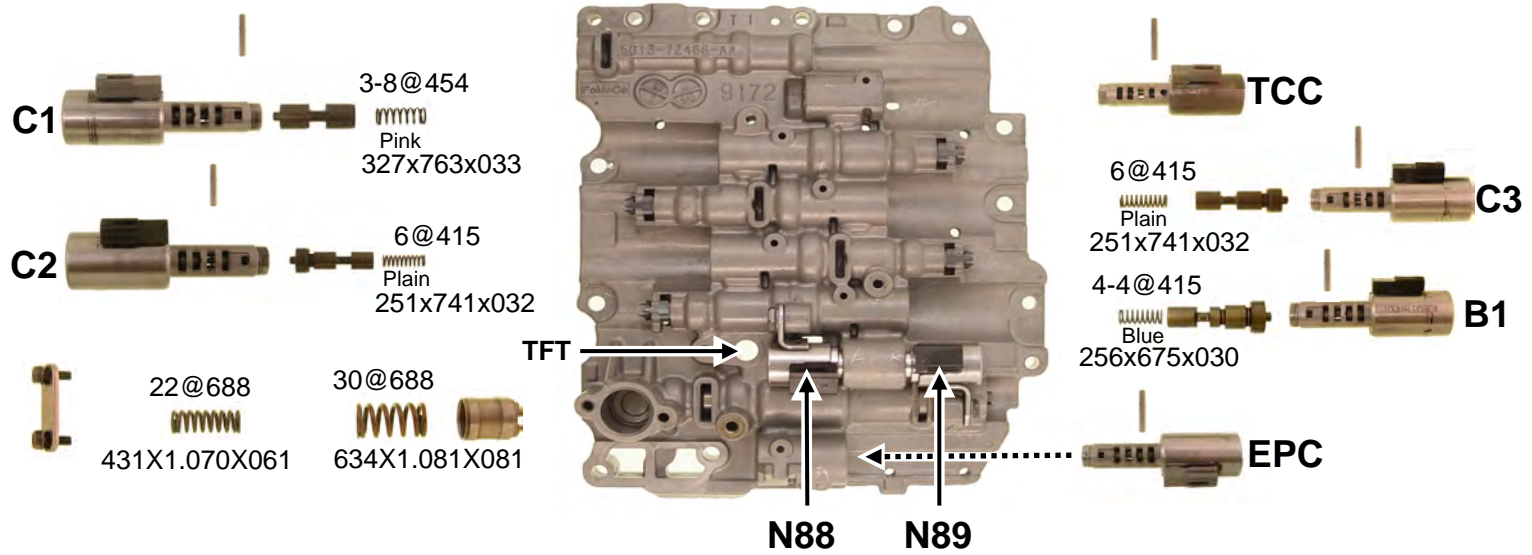
Installing a long support Bolt here will prevent Valve Body from laying flat against the Case causing a leak in the B2 Brake. Delay or slipping Reverse will be the result.



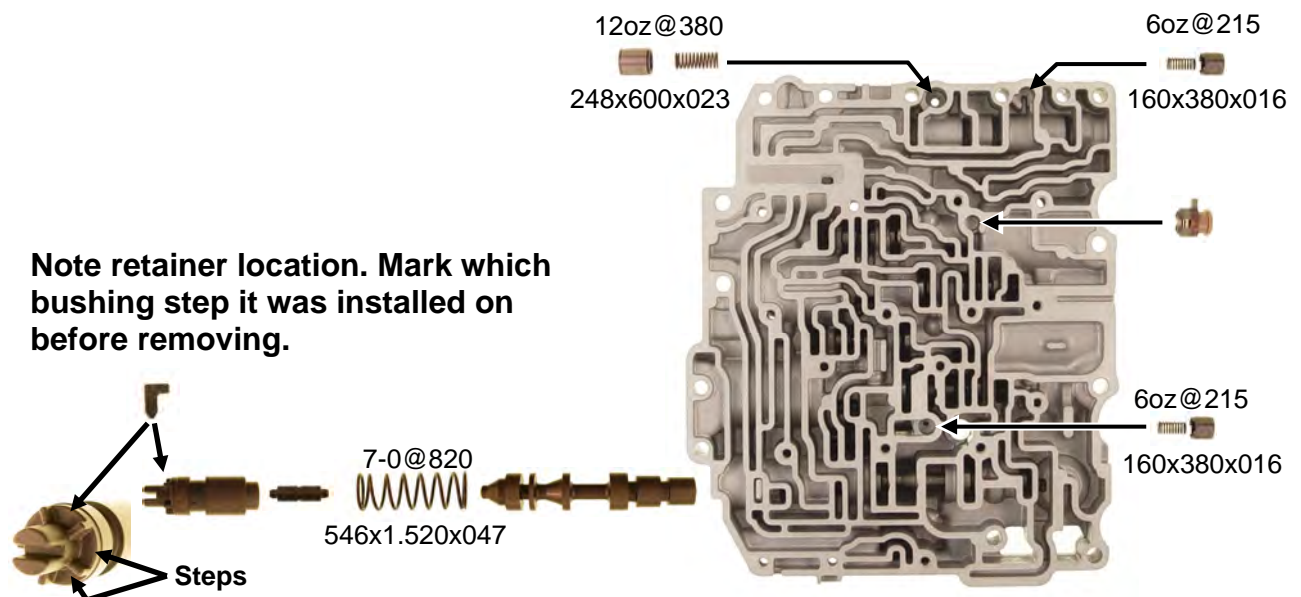
Middle Body Rear View



Front Body Front View

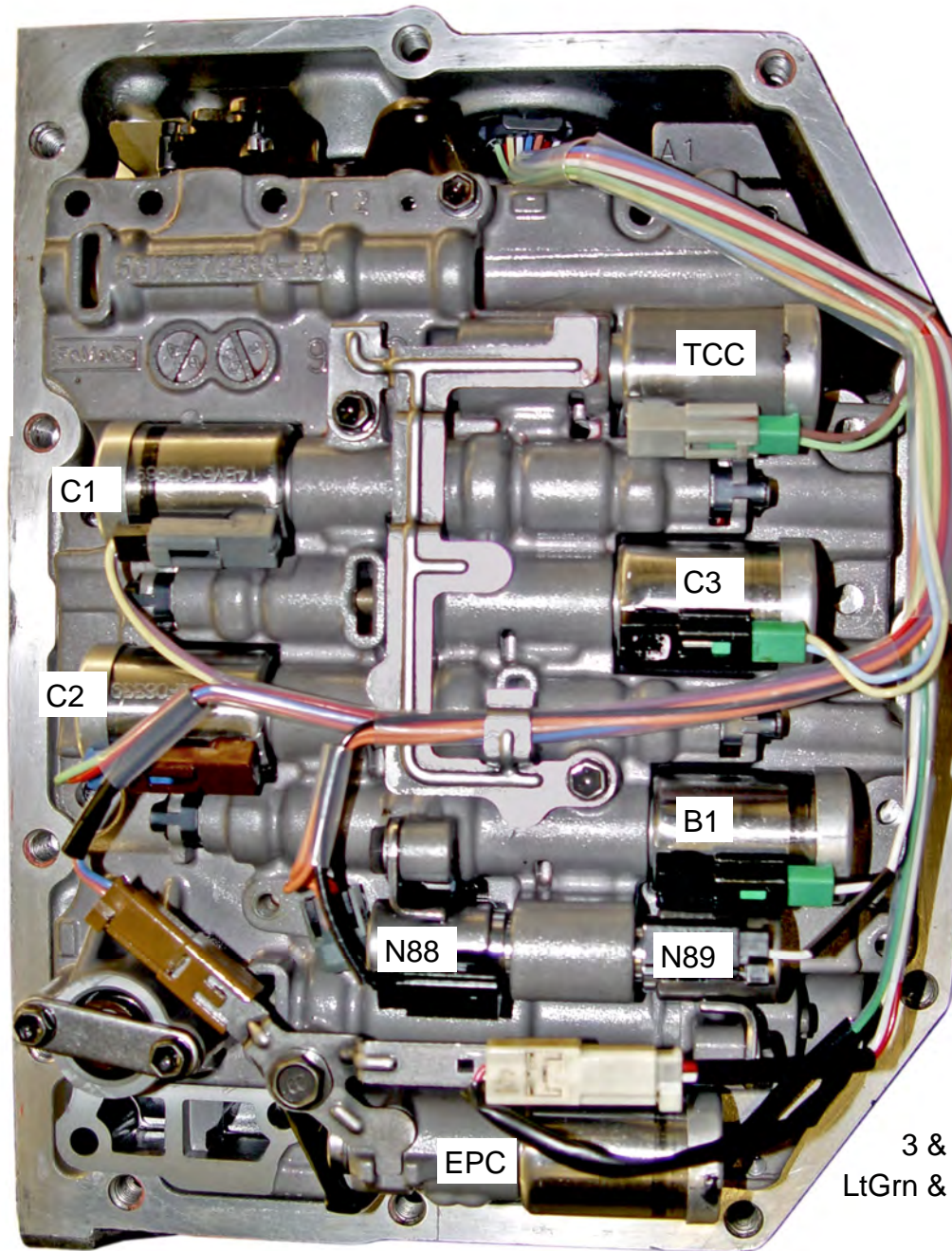
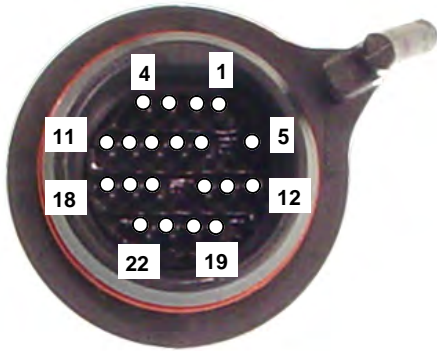


Front Body Rear View



AWF-21 Internal Wiring

Case Conn View
Pins 6 & 15 not used.



New Internal wiring harness from
Ford P/N 5G1Z-7G276-A
2005-2011 prox \$95.00

Linear Sol Resistance 5-7Ω
N88 & N89 12.5Ω

11 & 10
C1 Yel & Ppl

17 & 18
C2 Red & LtGrn

Temp Sensor 7 & 8 3.86k Ω @ 70°F
Org & Org

N88 2 Blk only

TSS 20 & 19 LtBlu & Pnk

9 & 4
LtGrn & Brn TCC

14 & 22
LtBlu & Yel C3

21 & 16
Wht & Blk B1

5
Wht only N89

12 & 13
Wht & Red OSS

3 & 1
LtGrn & Gry EPC