SK® U140
Patent Pending

Corrects/Prevents/Reduces
Shuttle Shifts, Neutrals on 2-3, TCC Slip Code.

Fits:

Toyota U140 E&F 4 speeds:
Camry 02-03 3.0L
Matrix 09 2.4L
Highlander 2.4 & 3.0L 01-03, 04-07 2.4L
Rav-4 2.0 & 2.4L 00-08

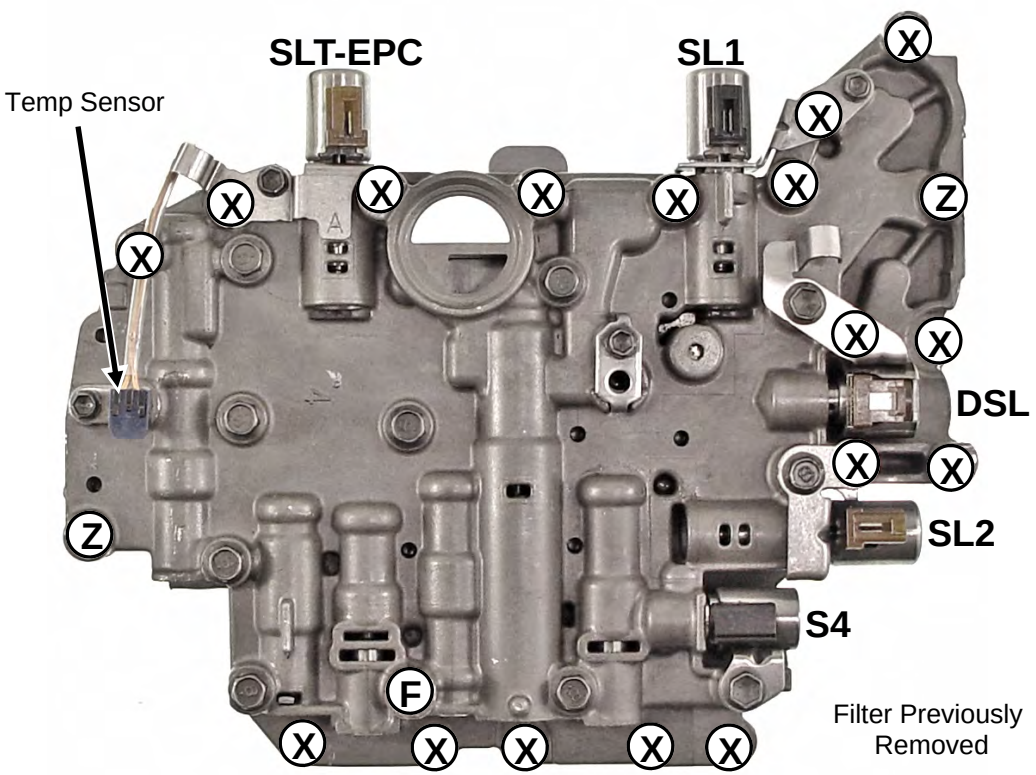
Toyota U240 & U241 4 speeds:
Celica GTS 1.8L U240E
Highlander 2.4L 01-07 U241E
Matrix 1.8L 03-06 U240E
Rav4 2.0 & 2.4L 00-08 U241E
Solara 2.4L 02-05 U241E

Lexus U140 E&F 4 speeds:
ES300 99-01 3.0L
RX300 98-03 3.0L

Heads UP!
Some U140's develop a problem in the computer that gets worse the more it heats up. Symptoms include partial high gear start, bind-up in manual low, harsh shift or bind-up on the 2-3 shift. Check it like this: Using **2 digital volt-meters,** watch the voltage on **SL1+** and **SL2+**. In Drive, 1st gear, at a stop, **should show** 6.5 to 8 volts on both of the meters. On the 1-2 shift, SL1 will smoothly modulate down to 0 volts. On the 2-3 Shift, SL2 will smoothly modulate down to 0 Volts **and** SL1 may briefly modulate up but then drop to 0 again. Come to a stop SL1 & SL2 should return to 6.5 to 8 volts. If voltage drop is not smooth during 2-3 and / or voltage does not return to 6.5-8 Volts on SL2 when you come to a stop, suspect a bad computer. Dealer price is approx $700-900.00 but may be under an extended warranty. Check with Dealer.

Tech Notes:
Always mark the current locations of check balls, retainers etc. to insure they are returned to their original locations even if they differ from what is shown here. What is shown is a typical layout of this valve body. Use care in disassembling.
Planetary Failure always REQUIRES a complete strip and cleaning of the valvebody!

Step 1
Remove the "X" & "Z" bolts that hold the VB to the case. When reinstalling VB, install "Z" bolts first. They align the VB to the case. Disconnect wiring. The "F" Bolt holds filter to VB. Remove it & Filter as well.
Keep these bolts separate from the rest of the VB bolts.



SL1, SL2 & EPC 5-5.5 Ohms between pins
S4 & DSL 11-15 Ohms between pins
From Either Pin to Body of Solenoid must be open!

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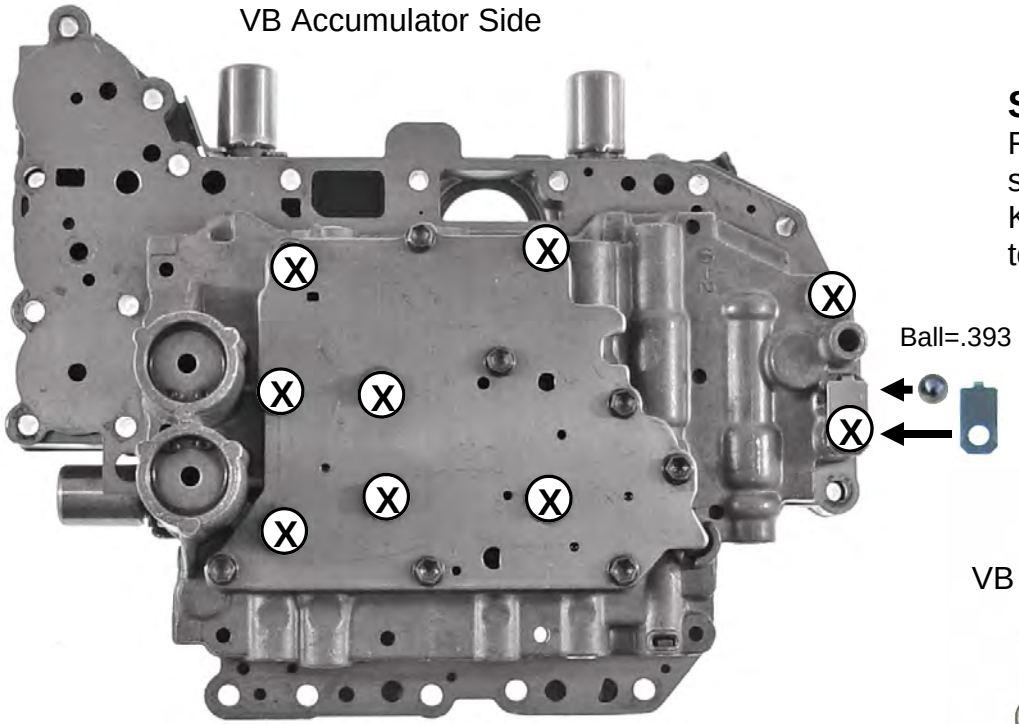
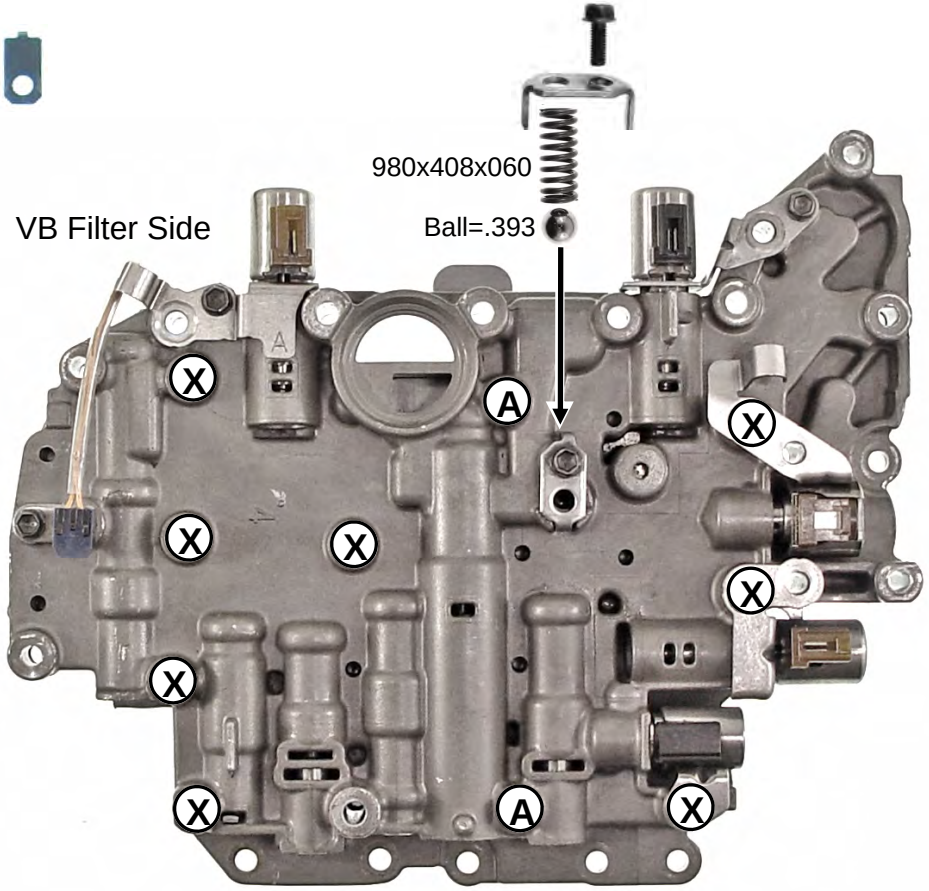
Separating Valve Body Halves.



Step 1

Flip the VB over so the accumulator side is facing up as shown at left. Remove the bolts marked with an "**X**". Keep bolts from each side separated to make it easier to reinstall them later.



Step 2

After removing the Accumulator body "**X**" bolts shown above, flip the VB over again and remove the "**X**" bolts shown at right. Finally, remove the 2 "**A**" bolts and lift the lower body AND the separator plate together as an assembly off the accumulator body. Flip Lower VB assembly over with separator plate facing up at you. Remove plate and mark the locations of any small parts on both VB halves such as check balls, filters, retainers etc. just in case they differ from what is shown in this instruction. **Always reinstall them back in their original locations!**

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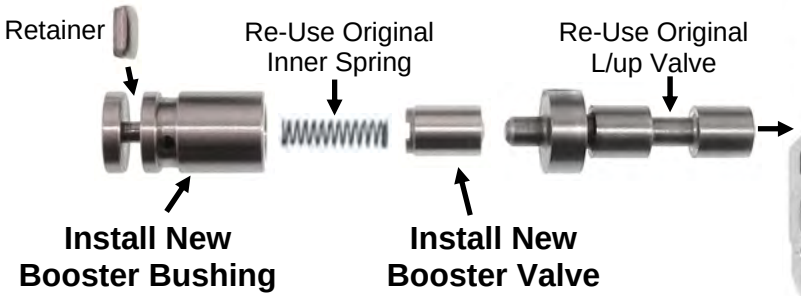
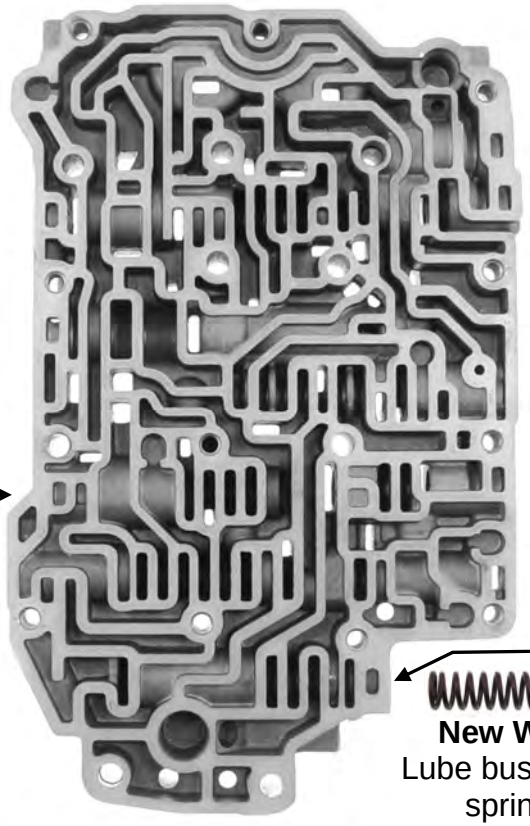
Accumulator Body Repair

Step 1 Remove and discard original Booster Bushing and Booster valve but SAVE the small inner spring! Clean & install original Lockup Valve, New Booster Bushing, original inner spring, New Booster Valve & retainer as shown.


Discard Original Bushing and Inner Booster Valve



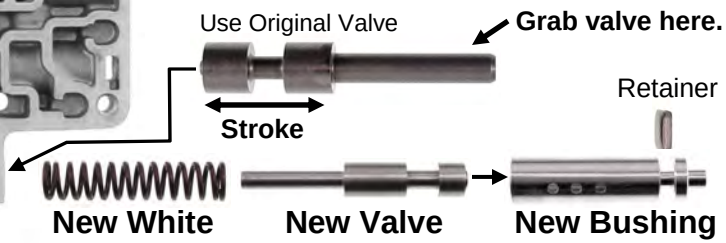


Step 2 Remove Solenoid Reg. Valve & Spring. **The bore needs to be cleaned of any ridge** that will cause the New Bushing to bind during installation. Prepare the bore for the New Bushing by taking the original valve and inserting it into the bore backwards. (Stem end outward.) Using the stem end as a handle, stroke the valve back and forth until any ridge or burr that you feel is gone.

Don't skip this step!

IF BUSHING BINDS— STOP!
Bore **still** has a ridge or burr!

Preassembly Check– Clean new valve and bushing. Insert new valve into bushing and look for chips in drilled holes. Clean as necessary. We have gone to great lengths to remove them but occasionally one sneaks by.



Lube bushing, insert valve into bushing, then White spring onto valve. Inserts as an assembly.


New Bushing, Valve & Spring replaces these parts.

Mr. Shift

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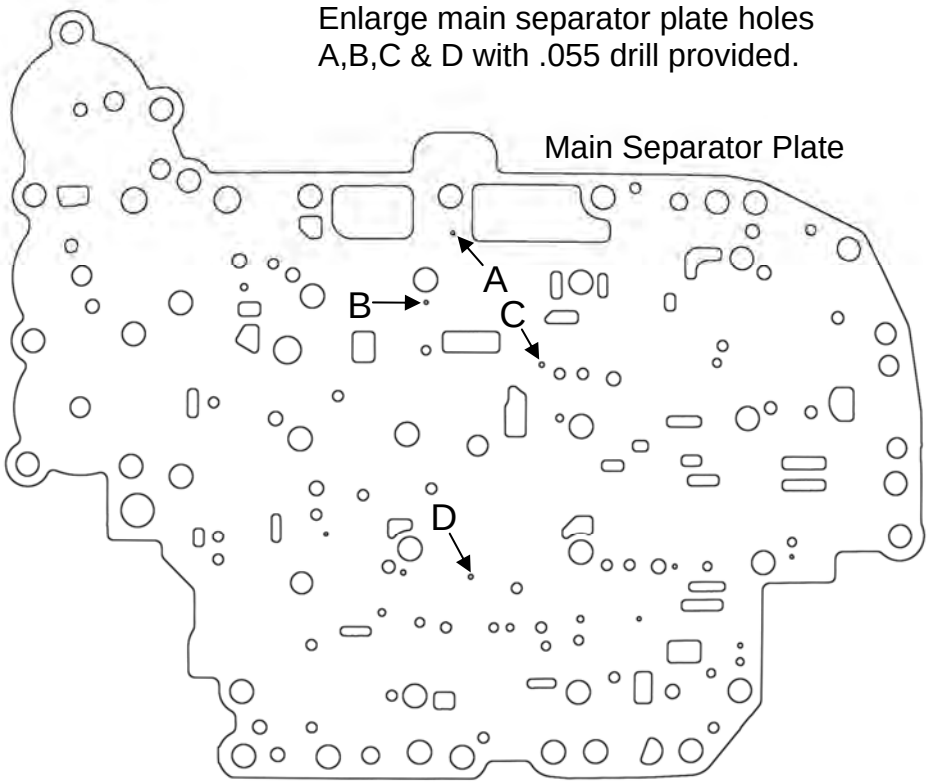
Lube Upgrade Repair

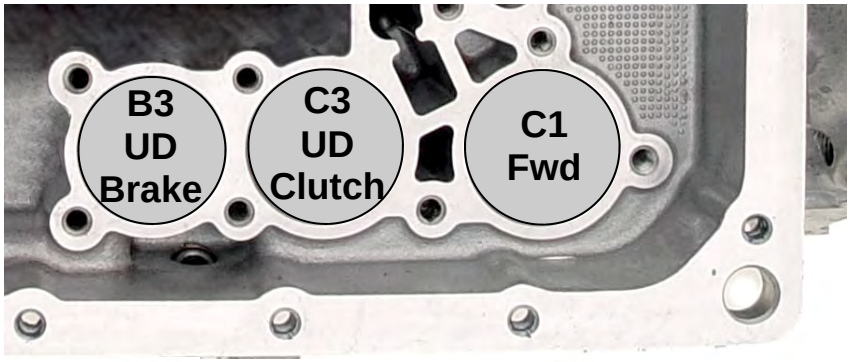
Step 1
Enlarge main separator plate holes A,B,C & D with .055 drill provided.

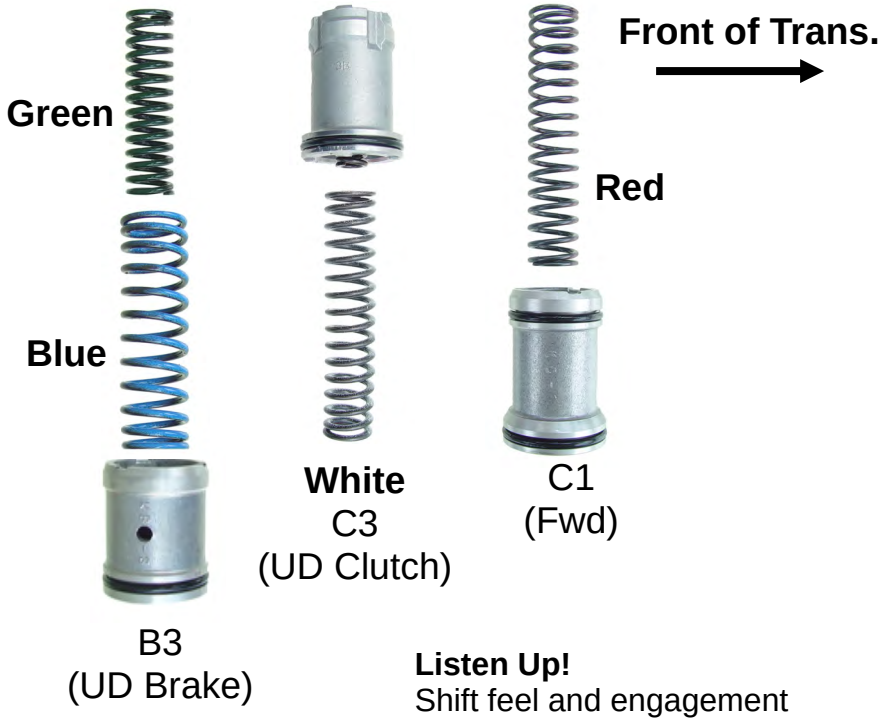


Help This Trans Stay Cool!
Do this step!

This page ends the repair work. The following pages are for reference only and may differ from your model. Always reassemble any loose small parts the way you found them.

Typical Layout of Case Accumulators (No Changes)





Listen Up!
Shift feel and engagement concerns can be caused by accumulators that are not assembled correctly.

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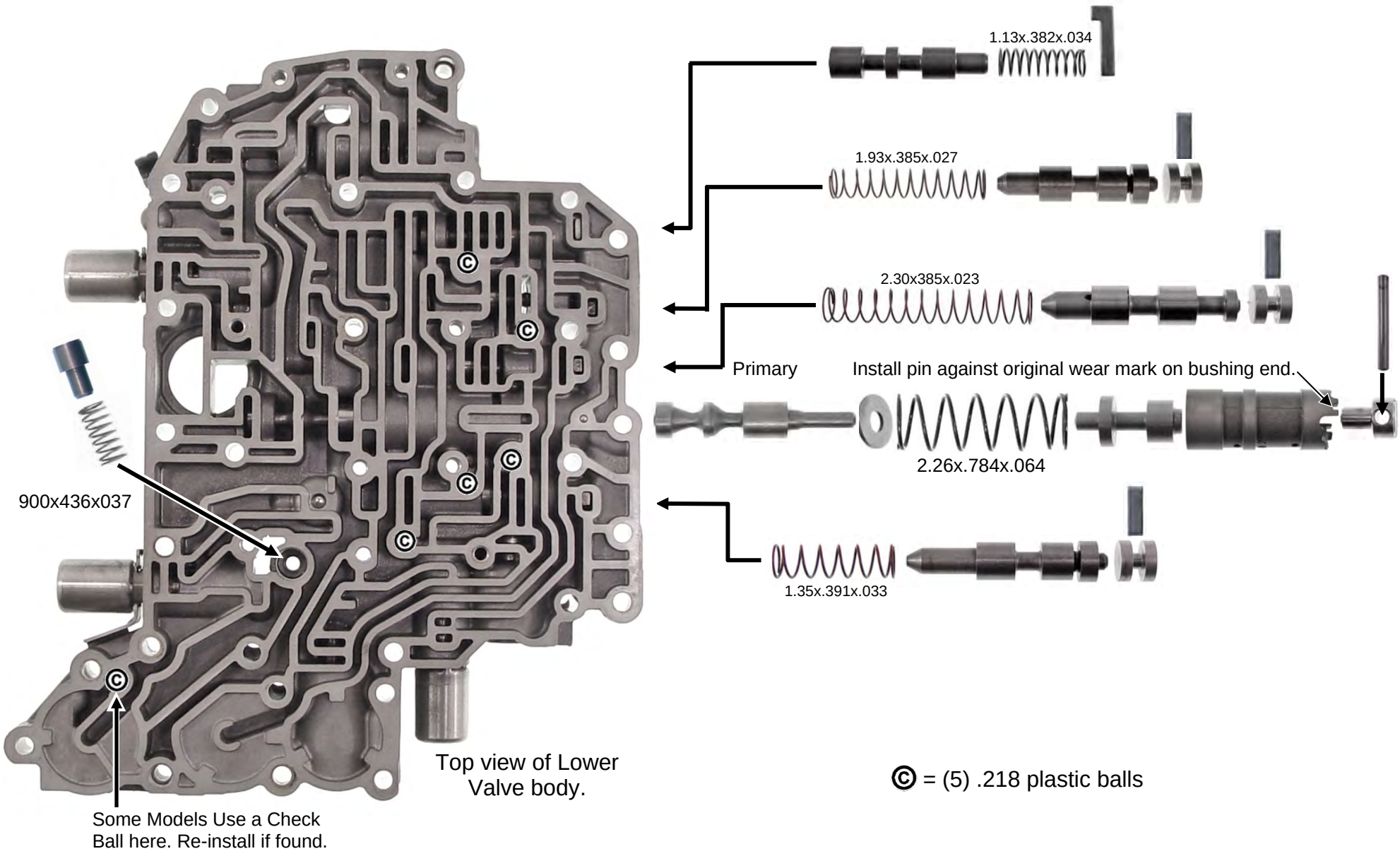
Typical O.E. VB shown for reference only.



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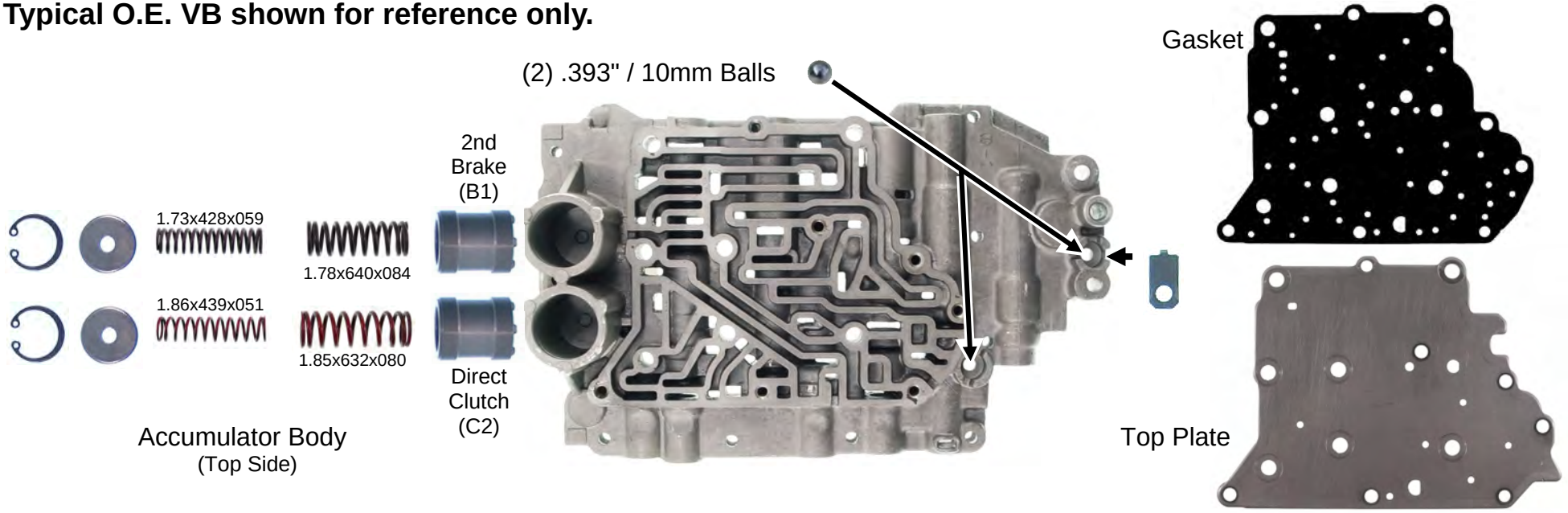
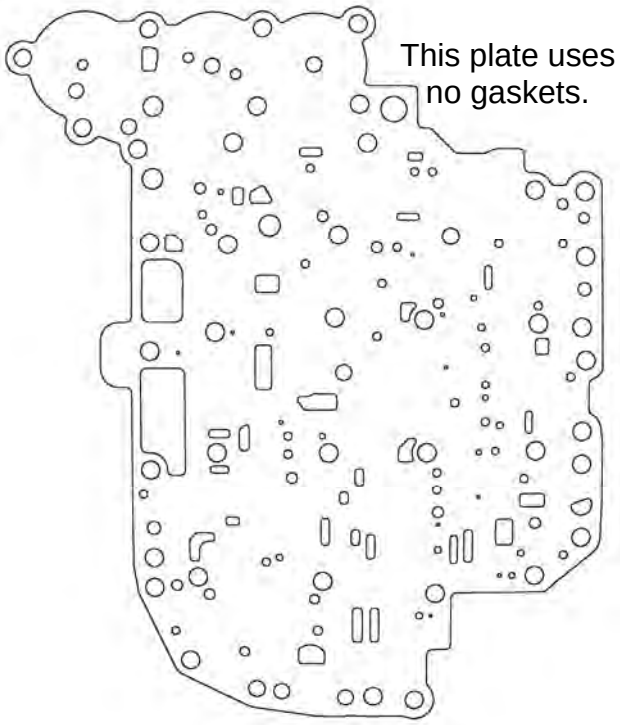
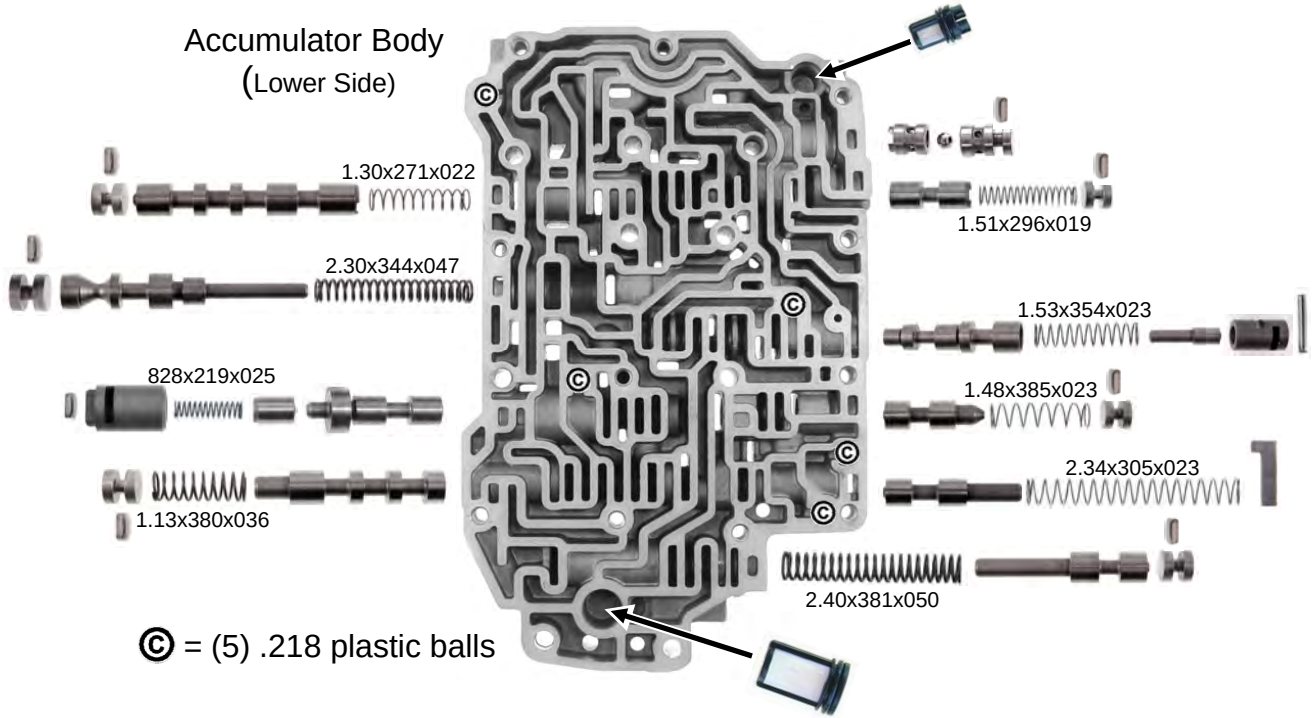
Typical O.E. VB shown for reference only.







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