

SK® U151

Patent Pending

For Professional Use Only!



Corrects/Prevents/Reduces

Shuttle, bind-up or flare on 2-3 shift, slips with throttle in 3rd and/or 4th, TCC slip codes.

Fits:

Toyota: U151 E&F 5 speeds:

Avalon 06-07, Camry 3.0 & 3.3L 04-06
Highlander 3.3 & 3.5L 04-08, Rav-4 3.5L 07-08
Sienna 3.3 & 3.5L 04-08, Solara 3.3L 04-08

Lexus: U150 & 151 E&F 5 speeds:

ES330 3.3L 04-06, RX330 3.3L 04-06, RX350 3.5L 07-09
ES300 3.0L 02-03-(U150E)

Toyota: U250E 5 speeds:

05-09 2.4L Camry
09 2.4L Corolla
09 2.4L Matrix
06-08 2.4L Solara

Tech Notes: If shuttle, bind-up or flare on the 2-3 shift is the only complaint, it may be possible to correct the complaint just by installing this repair package. However, if the clutches are already damaged, an overhaul will be necessary.

The following pages show you how to remove & split the valve body to install the repair package. Due to the model and year changes, it's important to disassemble the valve body in a manner that won't disturb the current location of loose small parts.

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. This is a typical layout of this valve body. Use care in disassembling. **Planetary failure always REQUIRES a complete strip and cleaning of the valve-body!**

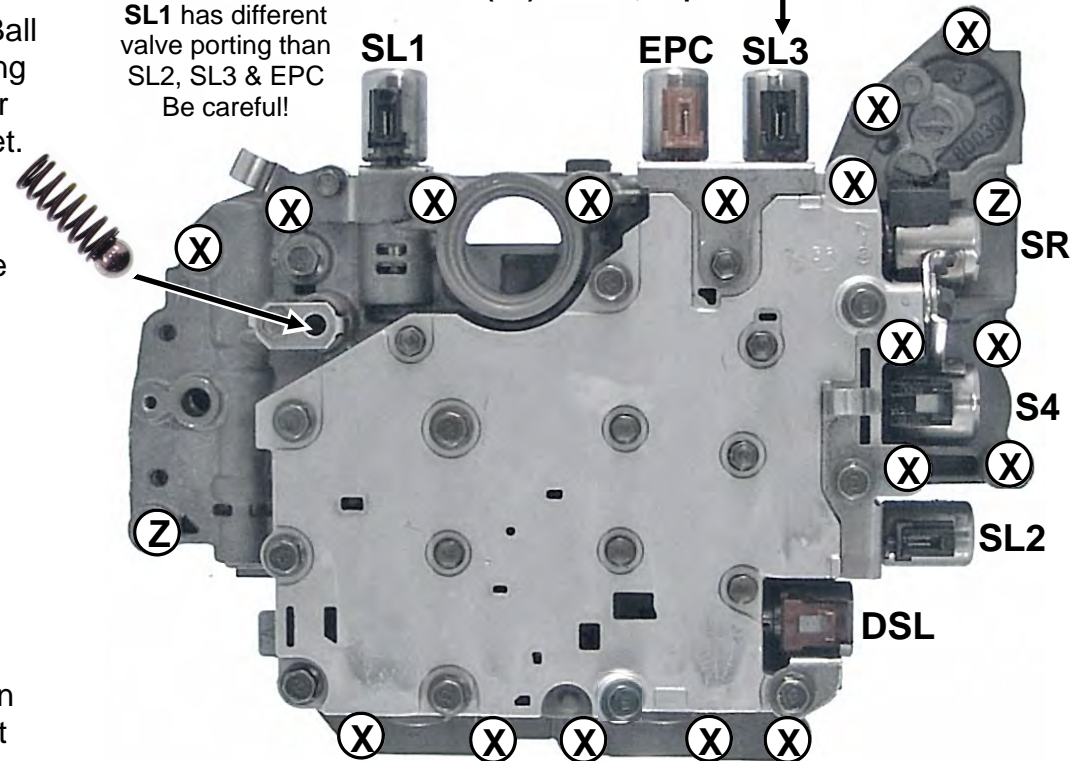
Step 1

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. Keep bolts separate from the rest of the VB bolts.

Tip: Bind on 3-4 or Burned Forward (C1) Clutch, Replace SL3 Solenoid.

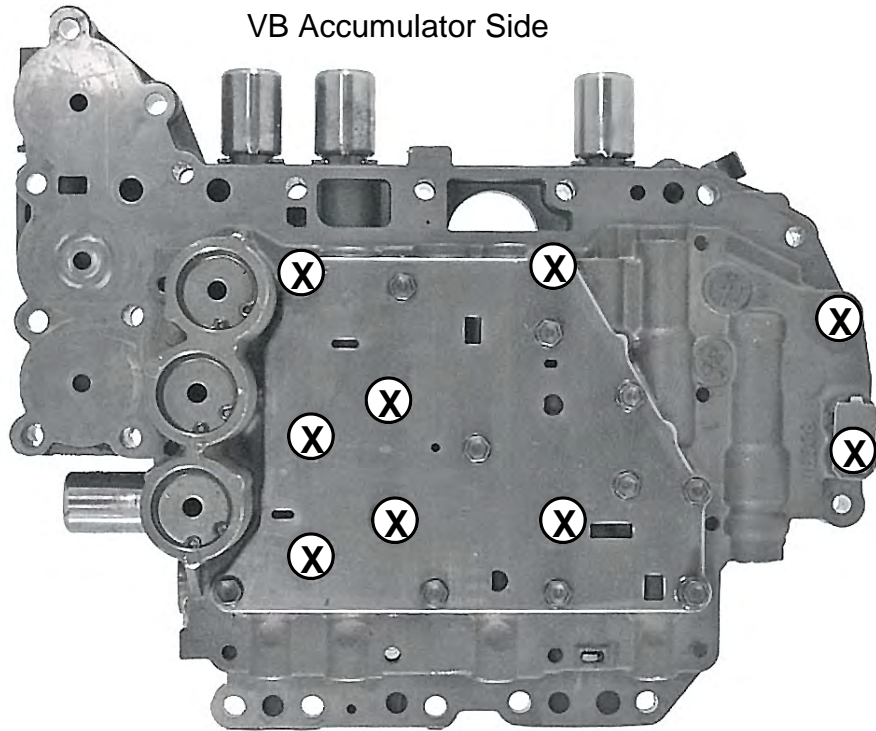
Relief Ball & Spring Under Bracket.

SL1 has different valve porting than SL2, SL3 & EPC
Be careful!



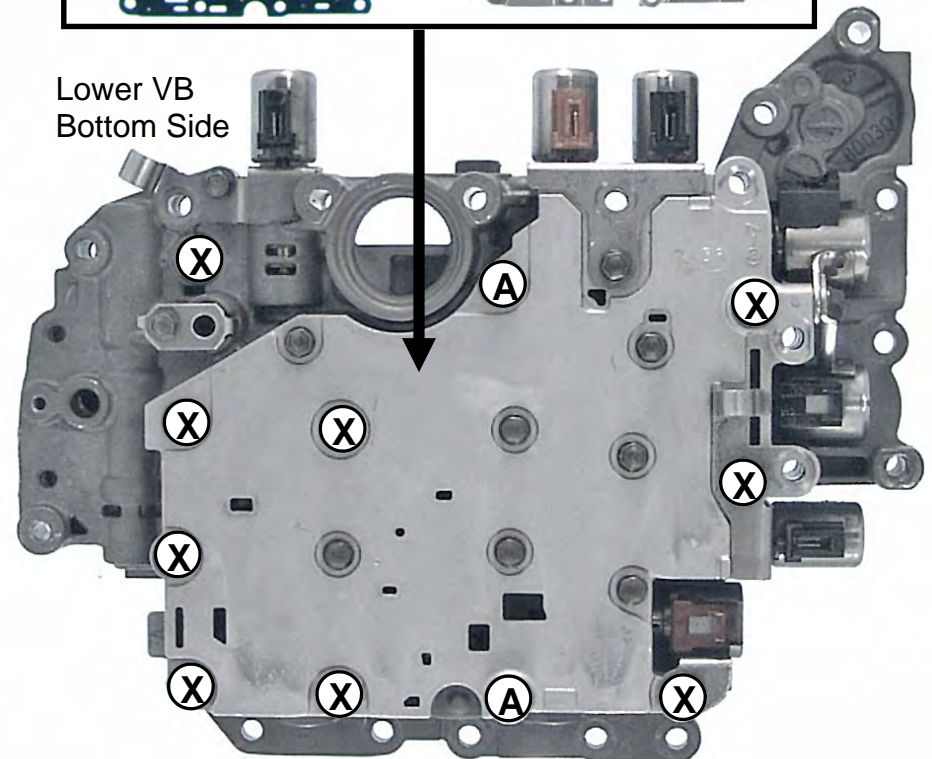
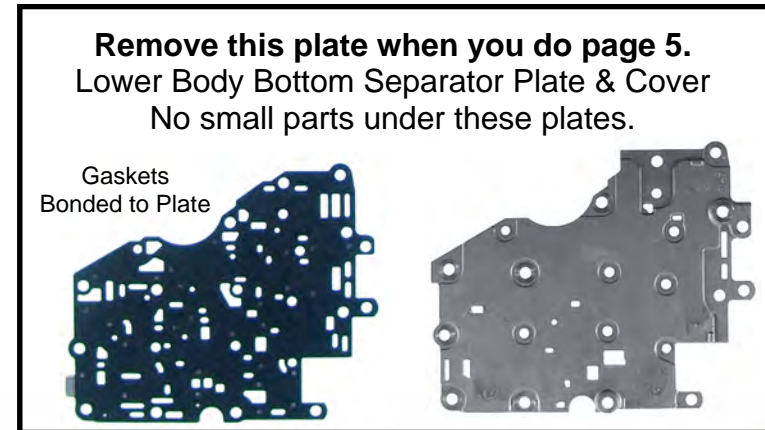
SL1,2,3 & EPC 4-6.6 Ohms between pins
SR,S4 & DSL 11-15 Ohms between pins
From Either Pin to Body of Solenoid must be open!

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.

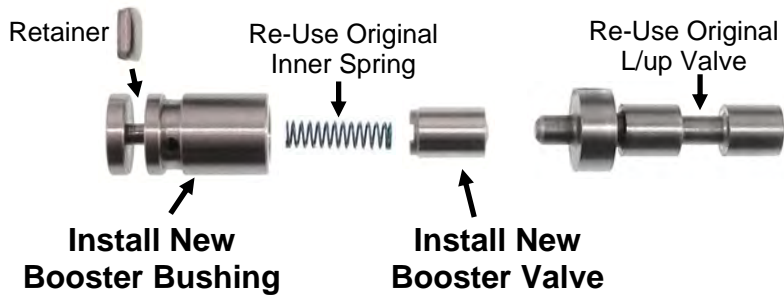


Step 2

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.

Accumulator Body Repair (Upper Body)

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.

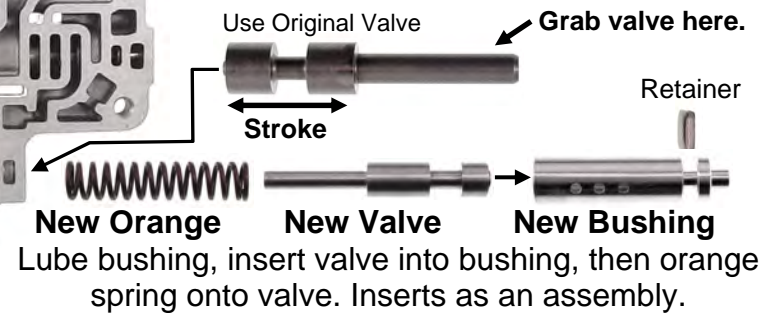


Step 2 Remove Solenoid Reg. Valve & Spring. **The bore needs to be cleaned of any ridge** that will cause the New Bushing to bind during installation. Prepare the bore for the New Bushing by taking the original valve and inserting it into the bore backwards. (Stem end outward.) Using the stem end as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

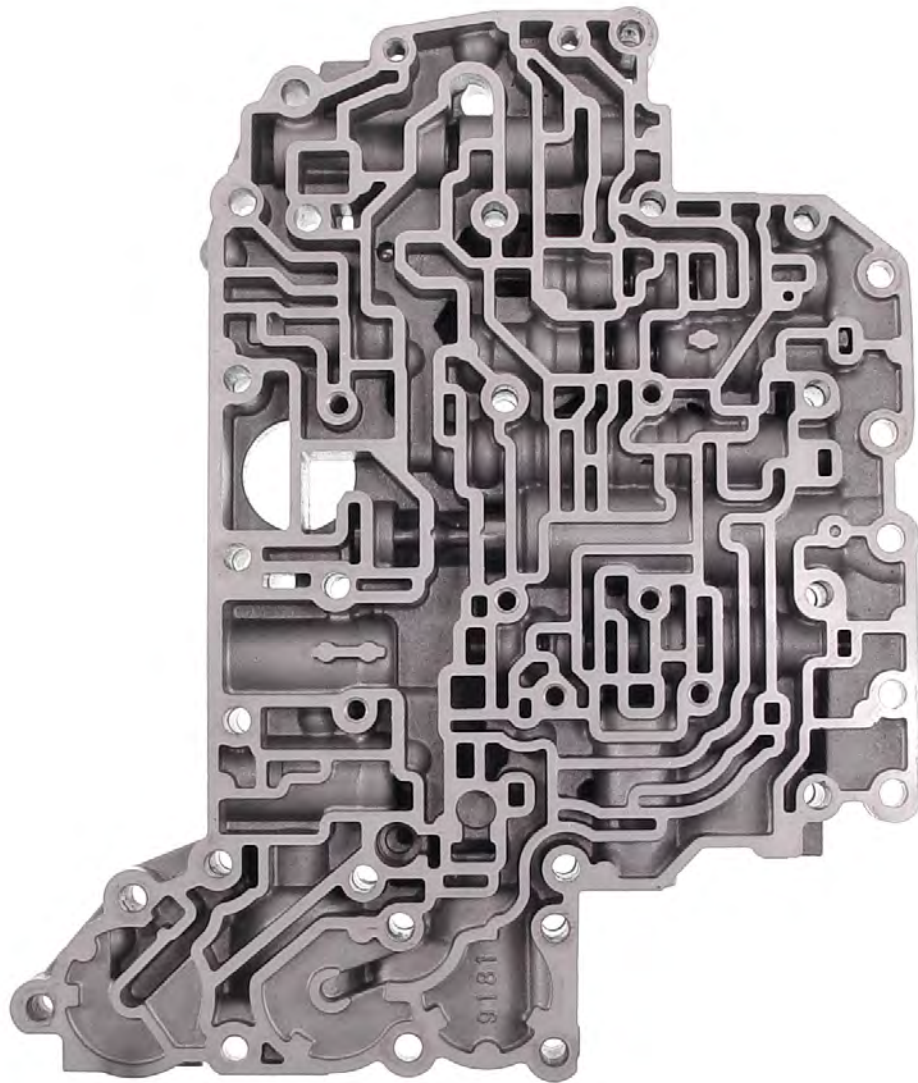
Don't skip this step!

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 the drilled holes. Clean as necessary. We have gone to great lengths to remove them but occasionally one sneaks by.



Lower Valve Body Repair



Top view of Lower Valve body.

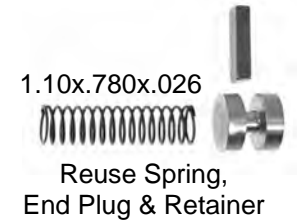
Step 1. Remove and discard original Direct Clutch Control Valve.



Use Screwdriver on Grooved Areas ONLY!



New Direct Clutch Control Valve



1.10x.780x.026

Reuse Spring,
End Plug & Retainer

Step 2.

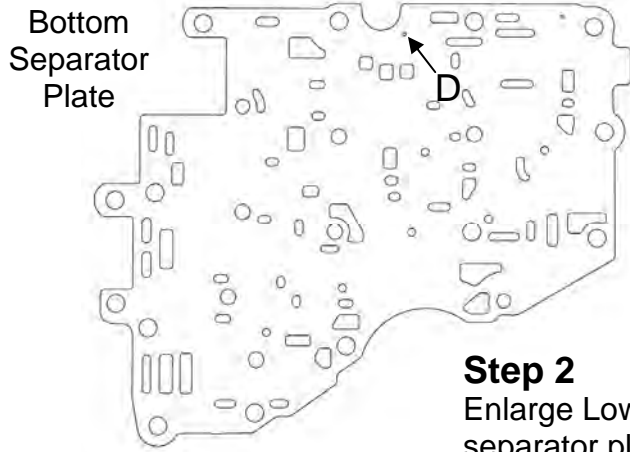
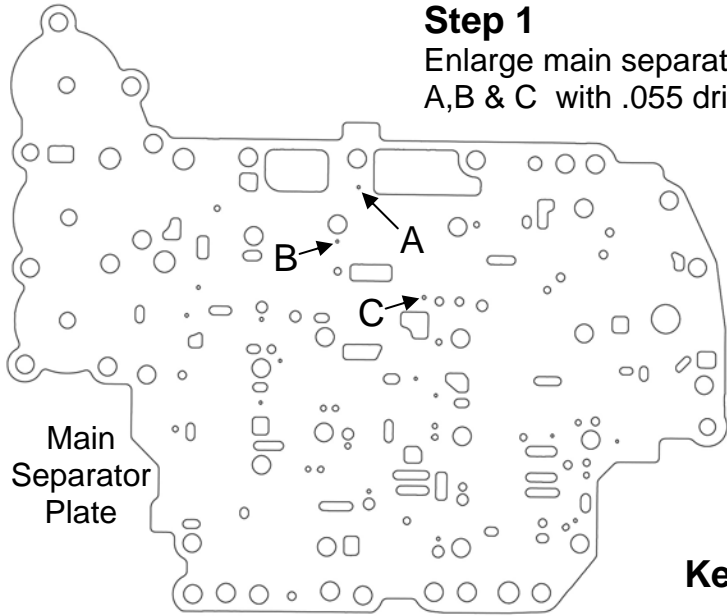
Insert **NEW** Steel Direct Clutch Control Valve. The valve must **freely** slide back and forth in the bore.

A tight spot may be fixed by locating valve onto a tight spot and tapping on the side of the valve in the grooved area using a small flat blade screwdriver and 9/16 wrench. (Do Not tap on the polished lands!) Once free, **RE-Use** original spring, end plug and retainer. Clean and reassemble the valve body.

Lube Corrections

Step 1

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



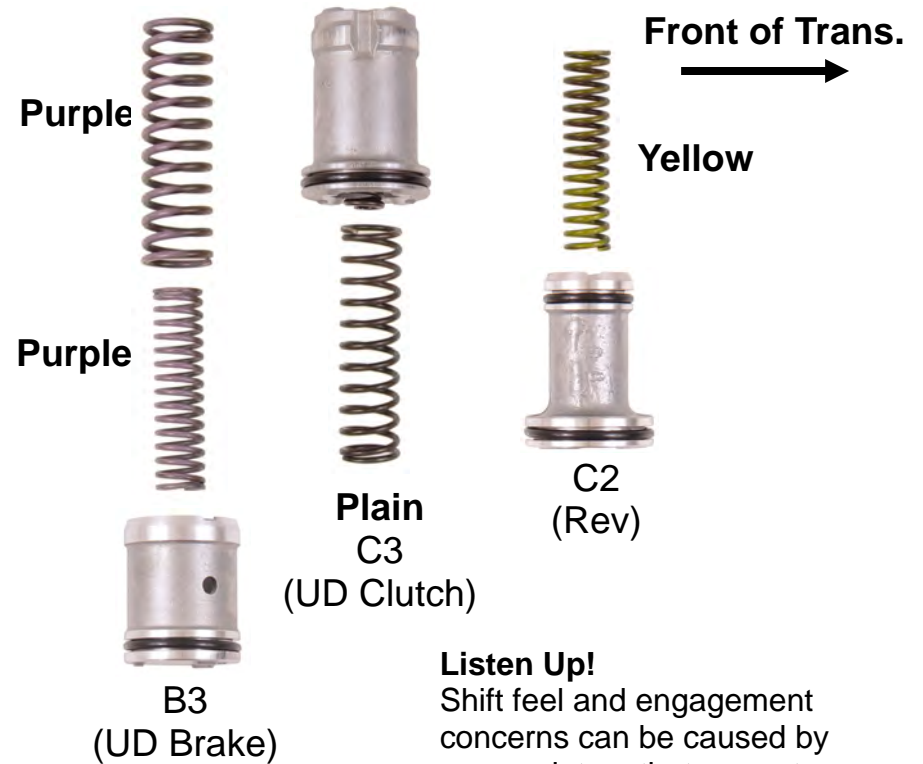
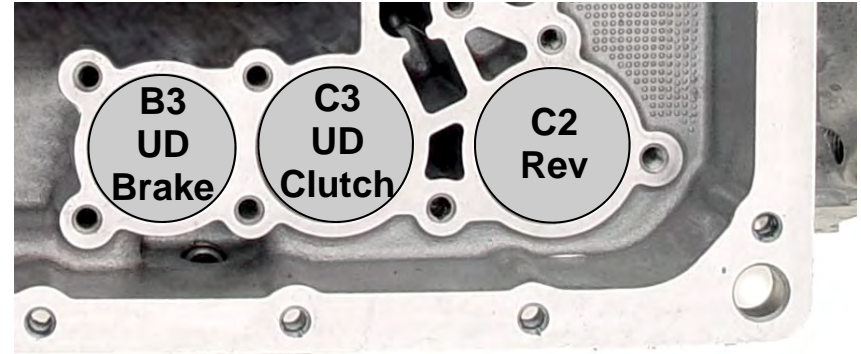
Step 2

Enlarge Lower Body bottom separator plate hole "D" with .055 drill provided.

Keep Trans Cool!
Do These Steps!

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.

U151 Linear Solenoid ID and Placement

SL1

SLT / EPC

SL3

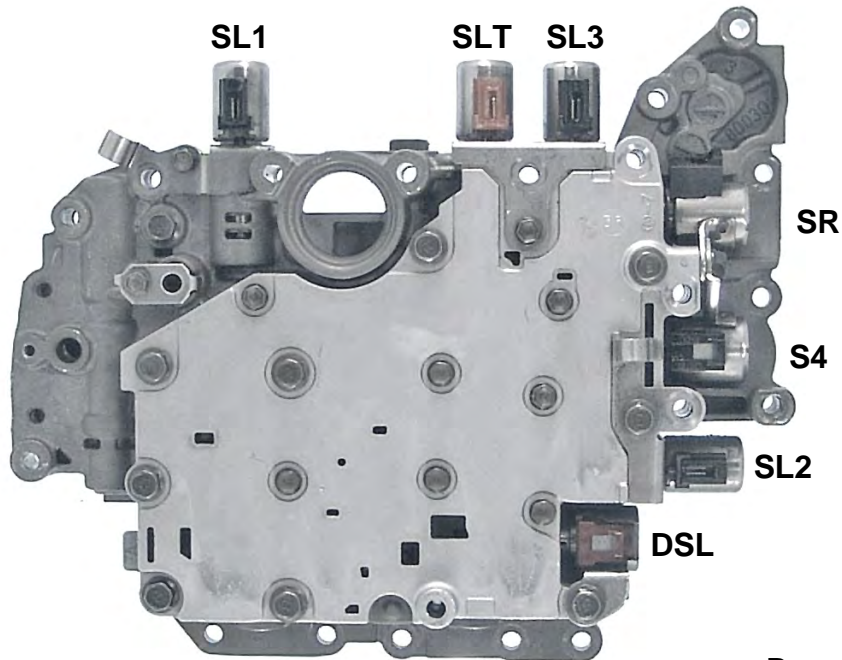


Linear Solenoids
Use the PORTING for ID!
NOT the color of the
electrical connector!
All are 5-5.6Ω

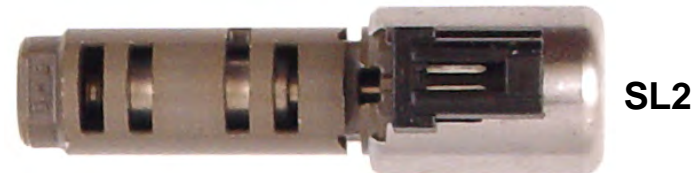
SL1

SLT

SL3

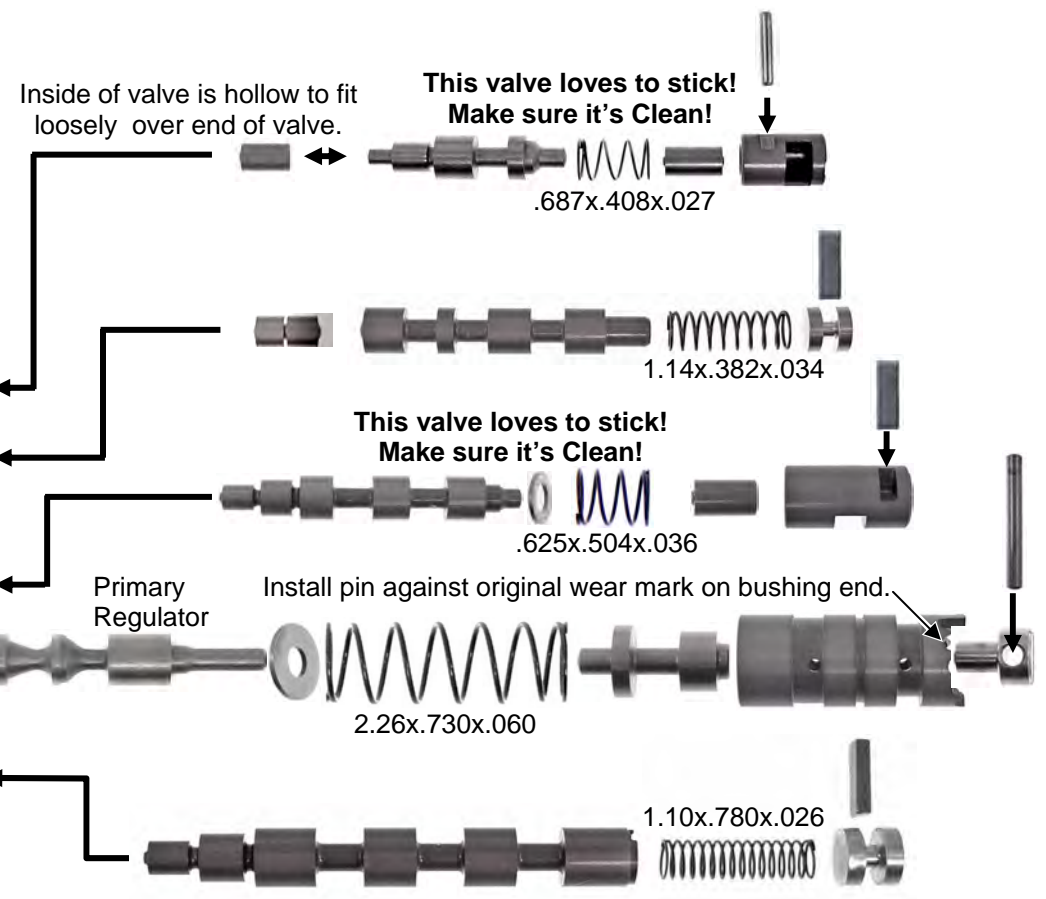
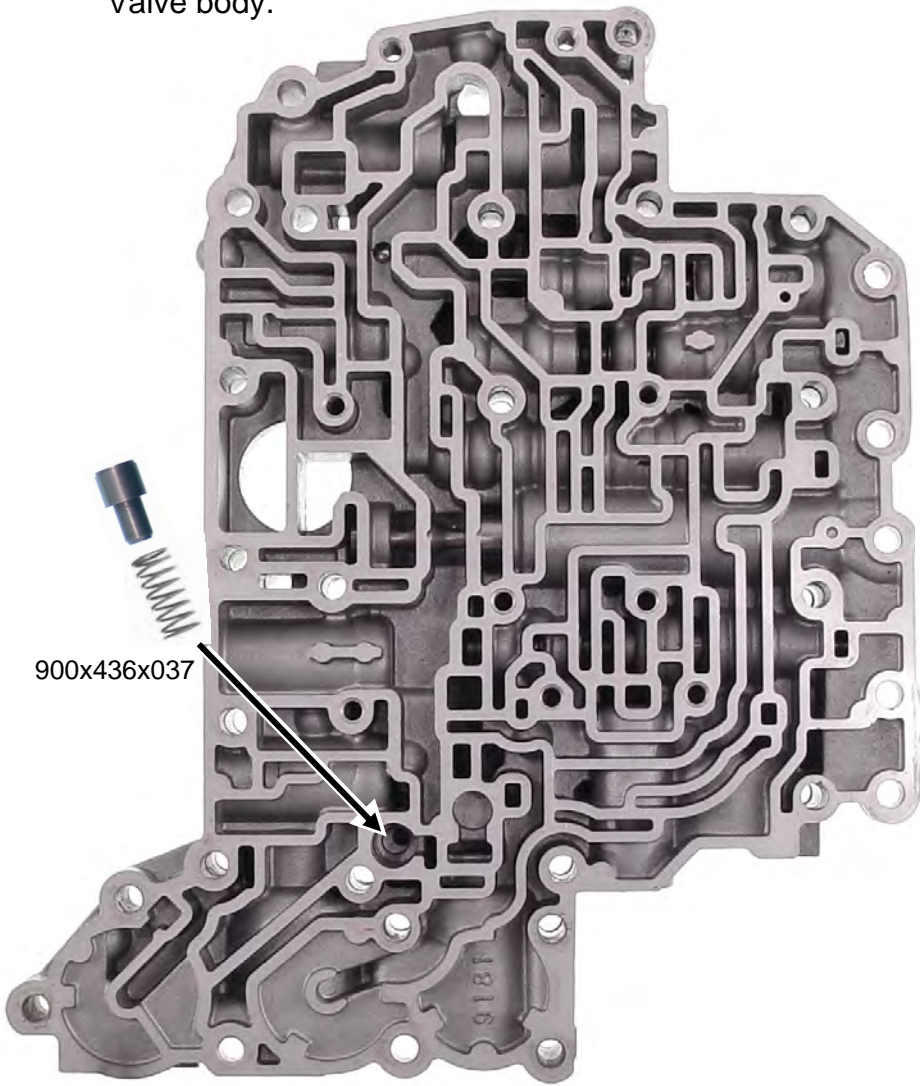


Small On/Off Solenoids.
SR, S4, DSL
All are 11-15Ω



Typical VB shown for reference only.

Top view of Lower Valve body.



Typical VB shown for reference only.

