SK® AODE Shift Kit

1991-on also fits 4R70W&E & 4R75W&E

Correct/Reduce/Prevent
Neutrals on Start Off--Converter Slip
2nd Roller Failure--4th Band Failure
2nd Clutch Burn Up--Kickdown Runaway

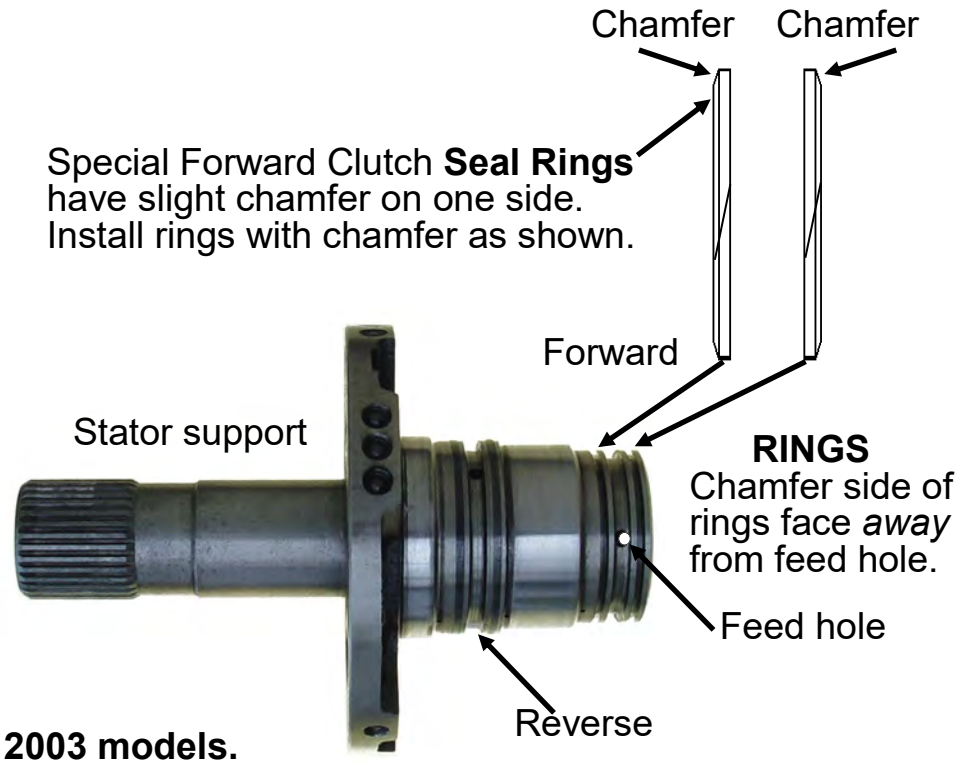
Upgrade Explanation

Main complaint with this trans is not shift quality. It's friction durability and internal parts breakage. This kit focuses on cushioning the engine run-up that whacks against the driveline, shafts & sprags during kick down and high throttle up shifts.
During road test: Notice a 55 to 70 mph 4-2 KD is now a 4-3-2 KD, and completes before the engine and converter have time for a runaway that BREAKS the 2nd roller, diode, and/or shafts.

4th Band Failure: Kit fixes forward clutch oil loss that burns band and forward clutch.
2nd Roller Failure: A high or low pressure run away during 4-2 kickdown, allows engine and converter to have up to a 4000 RPM free run at 2nd roller which crashes 2nd roller or mid-shaft. Installing this kit fixes both high and low pressure causes. And much more.

While trans is apart

Installing **Special Rings** reduces band and forward clutch failure. This will help prevent a kick-down run away **BANG** breaking 2nd roller, diode or mid-shaft.



Supplied rings fit 1991 to 2003 models.
If equipped with factory plastic type rings (2004 up), reuse original rings. Late stator has narrower ring grooves.

Additional Information

Check fluid level like this

1. Pull dip stick and wipe it clean.
2. Run engine in “P” at twice idle speed [12-1500 RPM] while you count to ten.
3. Turn off engine and quickly stab stick. Fluid level should be at top of full mark when cold and no more than 1/4" above cross hatch hot.

Small OD Servo
Uses a Sleeve

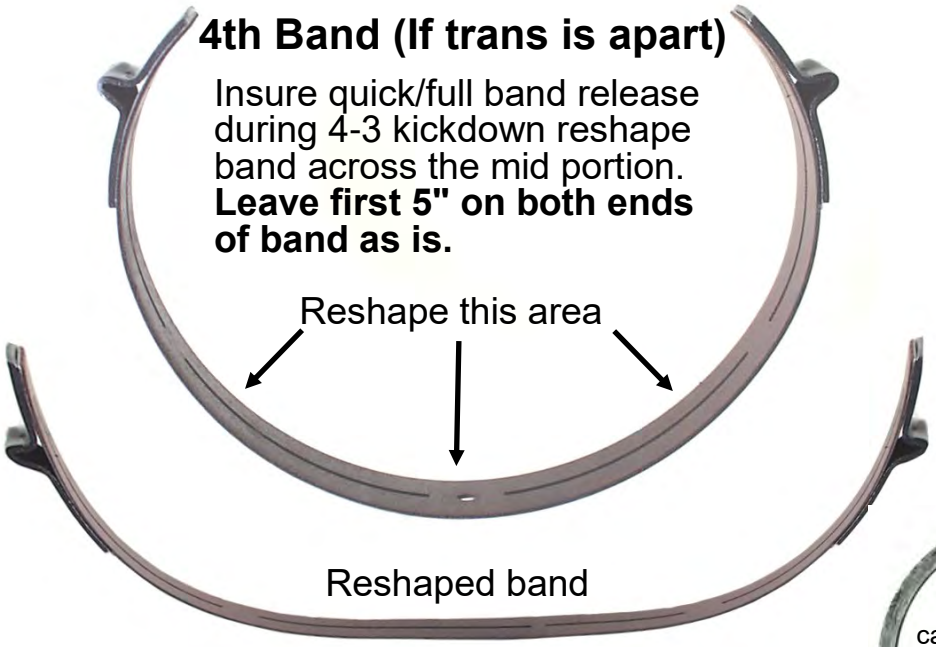
Large OD Servo
Uses NO Sleeve

LOOK!

Removing Servo while trans is in the vehicle should only be done by an experienced Trans Tech. No 4th gear can be the result if the band is not kept from moving out of place *before* servo is removed.

4th Band (If trans is apart)

Insure quick/full band release during 4-3 kickdown reshape band across the mid portion. **Leave first 5" on both ends of band as is.**



If the old band is severely burned or worn check OD band pin bore wear. See: **LOOK on Page 3**.

Disassemble Servo and use pin to check piston and case bore for wear!

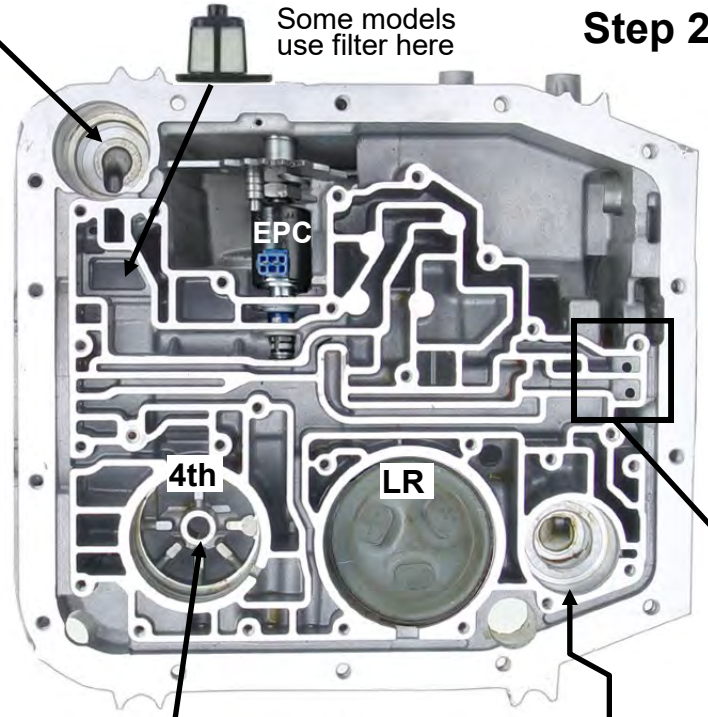
Step 1: 2nd Accumulator Choice

See page 4 if your separator plate has Hole 4 **first!** Then select matching accumulator setup.

For Models with NO hole "4" in Separator plate.

OR

For Models that have hole "4".



LOOK: 4th Band Pin Bore

Inspect bore for wear. If bore is worn, BIG forward clutch leak.

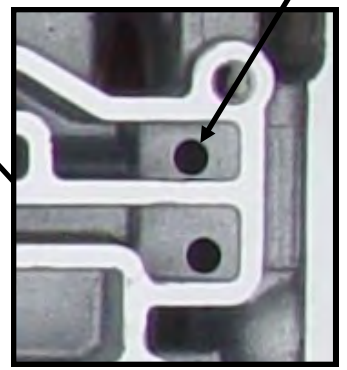
Repair kit is available
www.servobore.com
Or call 715-458-2617
FAX 715-458-2611

Alum 2nd Accum: Not Recommended due to high **failure** rate on seals! **Replace** with **STEEL PISTON**

If you are stuck using Alum piston over, re-use original springs.

Step 2

Discard the thimble filter. Two sizes **Tapered Orifice** are furnished. Using a VB bolt or punch install **one** that fits tight into the hole.



Alum Type: Better to upgrade to **Steel type** Ford #F7AZ-7H292-AB Save Alum for AOD's!

Re-Install original Accum spring if its not broken. *Spring Broken?* Order:
OE part # 1L3Z-7F285-AA
Fits: 2001-13 Keep them in stock!
Different designs were used to try and fix the spring breakage issue but we failed to make one any better than the factory.

Step 3

If point of 3rd retainer **directly** touches VB **separator plate**, install **New Spacer.**
Use assembly gel to "stick" it to the retainer.

Step 1

Drill hole **2X** .194 to .203 [13/64", #10, 9 or 8 drill]. By *hand* use 5/16" or bigger drill chamfer both sides of plate. Place plate on *hard* surface. Insert **Orifice Plug** in hole. Hit plug with light hammer. File flush. ***Re-drill*** hole with .055 drill furnished.

Orifice Plug

Listen up! Models **without** a bolt-down plate here, can develop a small crack in the separator plate in shaded area below. Our **new spacer** fits pointed end of 3rd accumulator retainer & makes it ok to re-use the plate.

Step 2 Plate Hole Sizes

ID Plate First: Do you have hole 4 in **your** plate? Yes or No?

If Yes:

Drill Hole 2: Passenger = .067
Police/Taxi/HD = .076

If No:

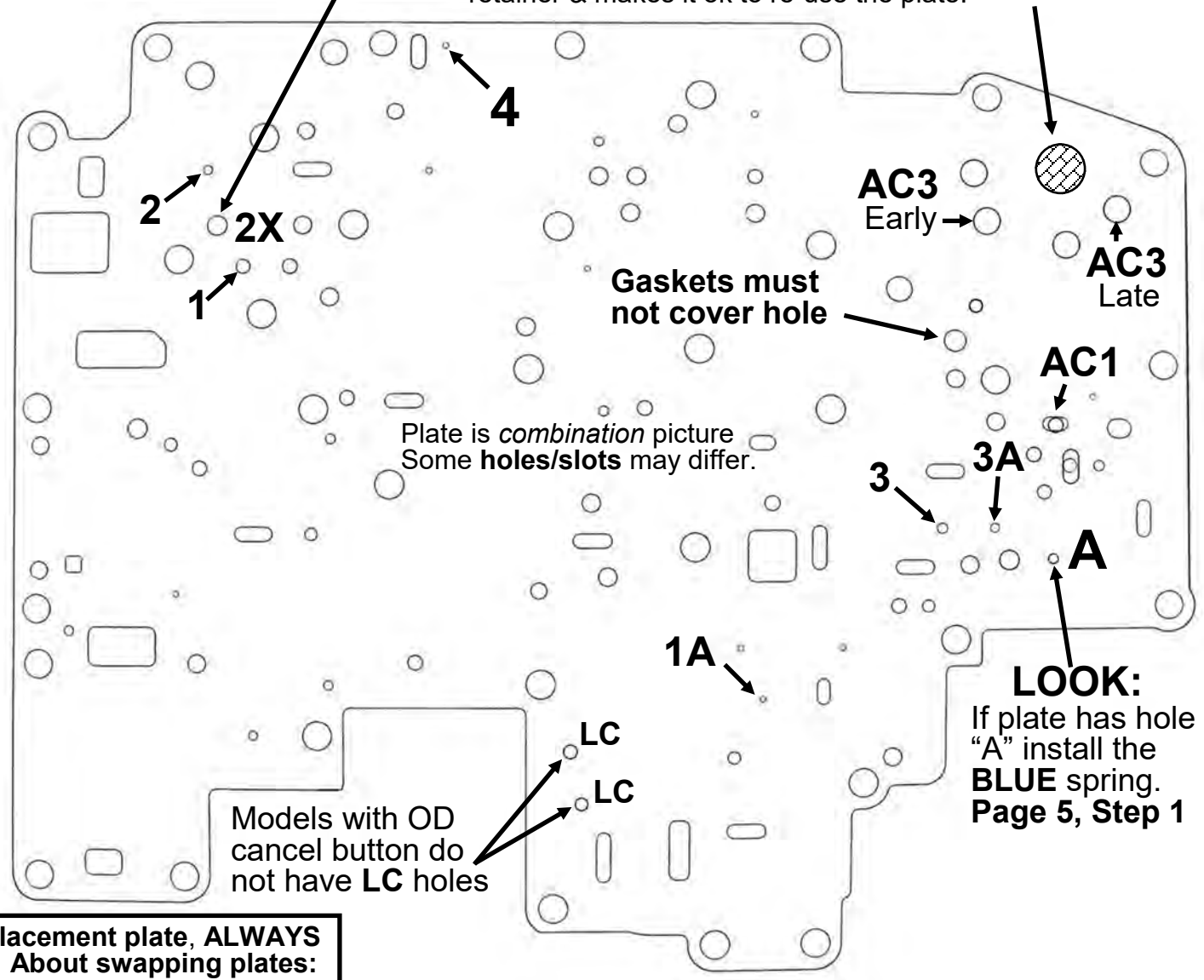
Drill Hole 2: Passenger = .055
Police/Taxi/HD = .063
Need it Firmer = .076-.086

1&1A: .055 Ok if already bigger.

3&3A: Passenger = .063-.076
[Ok if already bigger or 1 hole is missing.]
Taxi/HD/Police = .086-.094

AC1&AC3: = .187 [3/16"]
OK if already bigger
OK if hole(s) is a slot.

Hole 4: =.055 If plate has it.

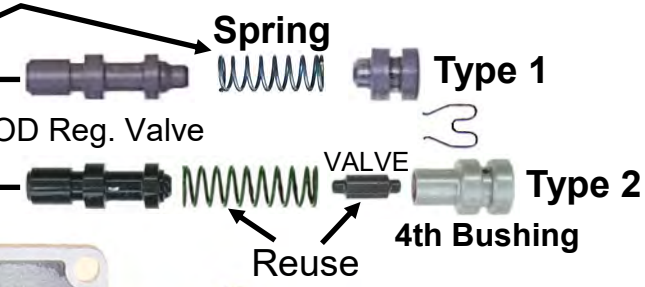


LISTEN UP: Even IF your using a **replacement plate**, **ALWAYS MAKE** holes in plate **MATCH** Step 2! **About swapping plates:** Separator plates **match VB with Computer**. Do not mix systems!

1. Overdrive Regulator Valve

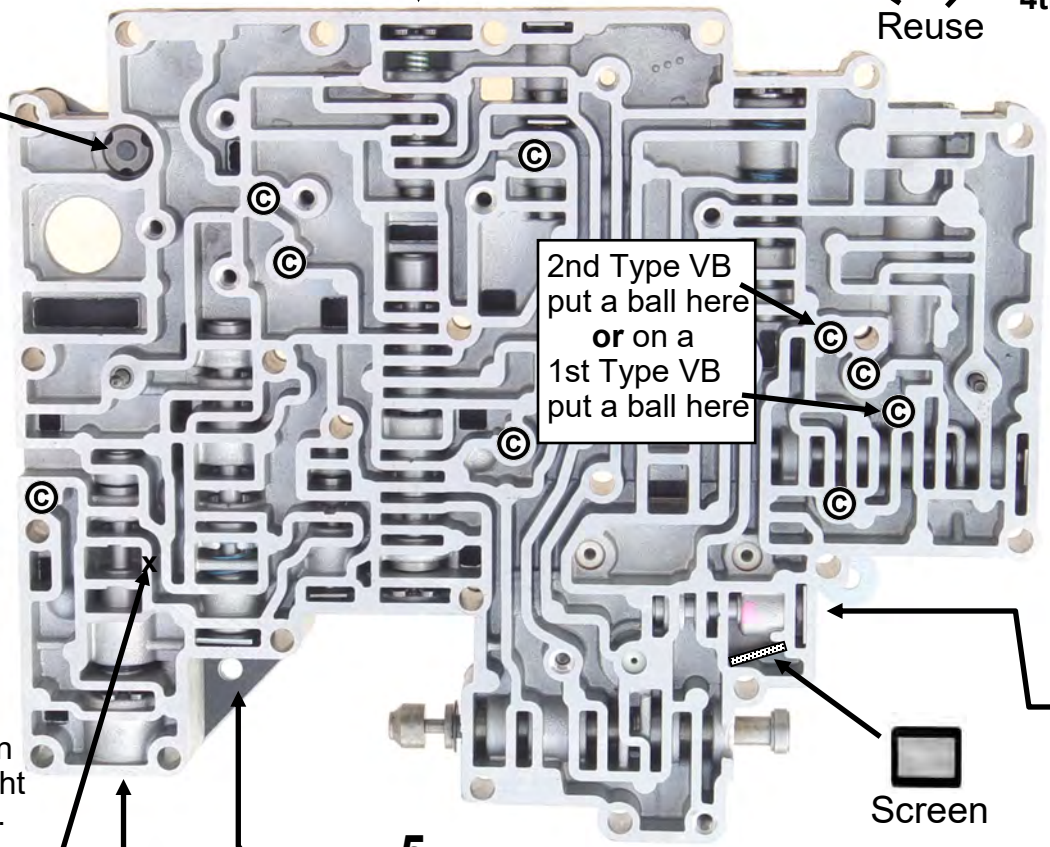
Type1: No Hole "**A**" on **Page 4**
Reuse ***original*** **Spring**.
Has Hole "**A**" **Page 4**, Install **BLUE**.

Type 2: Install new **4th Bushing,** the original valve & original spring.



© Checkballs
8 plastic 1/4" [.250]

Drainback Valve



LISTEN UP:

Don't drill two .125 holes on this side of valve body.
See **Page 6.**

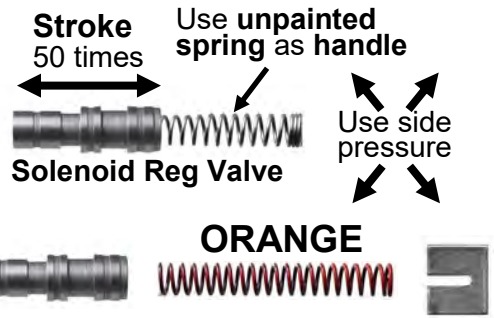
7. Solenoid Reg Valve

Twist ***unpainted spring*** into open end of new **Solenoid Reg Valve**.

Use spring as **handle** *stroke* valve in and out of bore **about 50 times** with slight *side* pressure.

Valve must fall in and out of bore.

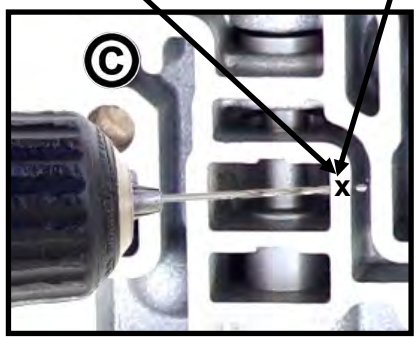
Discard the ***unpainted spring***, then install **Valve** with **ORANGE** spring.



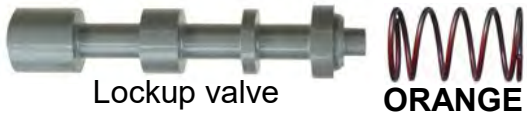
Install **Solenoid Reg Valve** with the **ORANGE** spring.

2. At prox angle shown ***Drill one*** hole left to right ***thru*** partition under "**X**".

Use .043 to .055 drill.



5. **1996up** reuse original spring. **1991-95** install **ORANGE.**



6. **All Models.** Install the new **Lockup Bushing.**

3. **If your PR Valve has a step here Install New PR Valve provided. All others Re-use original Valve.**

4. **WHITE** PR Spring

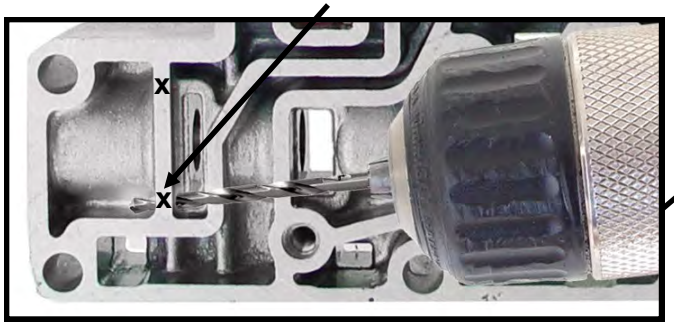
Police/Truck/Taxi ONLY

WHITE idle boost spring.

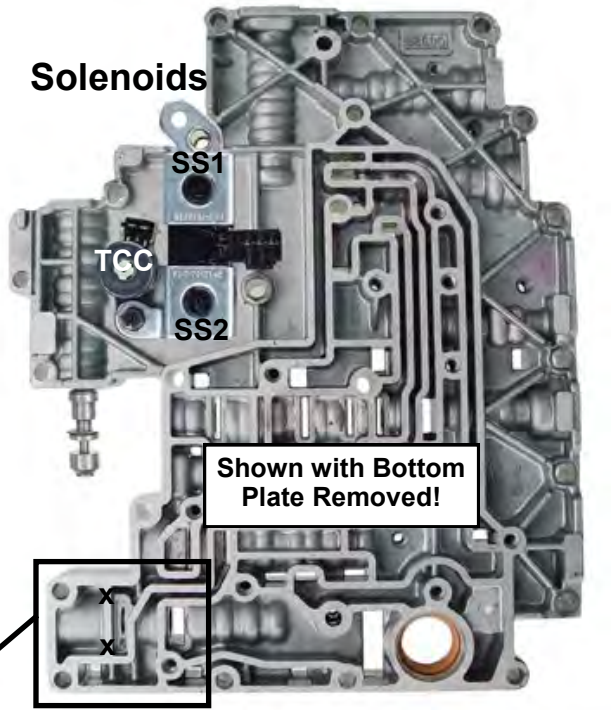
EPC Relief Valve

Corrects uncontrolled line pressure due to electrical malfunction, stuck EPC valve, or cross leaks. Reduces the accidental neutral condition [Run-Away] and brutal 2nd clutch re-apply that breaks 2nd roller or mid shaft.

Step 1 Remove Thick Bottom Plate. Drill two .125" [1/8"] holes thru this partition from right to left under "**X**'s". Do not allow the side of the drill to contact any partitions!



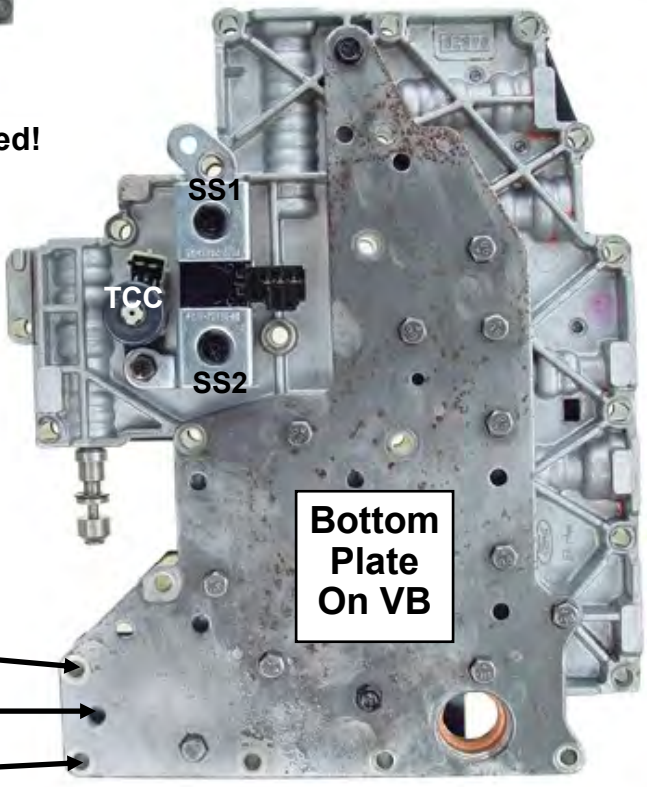
Pan side of VB, Bottom Plate Removed!



Pan side of VB, Bottom Plate removed!

Read This: A main goal of this kit is to reduce and cushion sudden inertial and torque loads against driveline and internal parts during kick-downs and up shifts. Sudden loads distort internal parts causing them to come apart, break or wear quickly. Kick-downs will be different to reduce engine and converter run-up against sprags.

POLICE/TAXI: During jack rabbit stops and starts, start off will be 2nd, not 1st, for about one turn of the wheels. This takes the fast throttle "WHACK" off the driveline and reduces the 3-1 KD engine run-up and whack against the low roller.



Step 2 Install **PURPLE** spring on valve. Push stem end of **Valve** thru hole in **Bracket**. Install paper clip in the stem hole. Install onto valve body. ***REMOVE PAPER CLIP.***