



RE4R01A-HD2 *Reprogramming Kit*[™]

Short-Crisp high throttle upshifts with
“Class” Performance & Durability.

**Nissan/Infinity RE4R01A--Subaru ATAXLE, R4AXEL, XT 4Sp--Mazda R4AEL
Also fits Large Geartrain Units Infinity V8--RE4R03A & Isuzu JR403**

**This is not a “do it yourself” kit. This is for the
experienced, professional *TRANS MECHANIC* only.**

If trans is removed do pages 10,11 & 12 first.

About This Trans:

This kit does a lot, but there are other things that need your care.
ORIGINAL FAILURE and COMEBACKS are, gear train burnup, and 3rd
or Forward clutch failure.

CAUSES:

1. Lockup plate shreds and plugs up radiator, filter and/or screens.
2. Cooler return relief valve stuck or plugged off [kit fixes].
3. Inner 3-4 clutch seal leaks. Burns clutch, clogs filter and screens and radiator cooler tube.
4. Shrunken rings have same result as clutch seal leak. Burns friction, then stops up filter, screens or radiator. Oops to planet gears.
5. Listen up: This trans will not stand clutch plate or lockup plate shedding or fuzz. It plugs, filter and screens causing low line and complete burnup, including the planetary gears.
6. Even with a new radiator this trans does not have enough cooling--and it stops up way too easy.

ALWAYS add a multitube cooler and forget the radiator.

Valve Body to Case Bolts and Brackets



Actual size



Actual size



Some models use temp sensor here



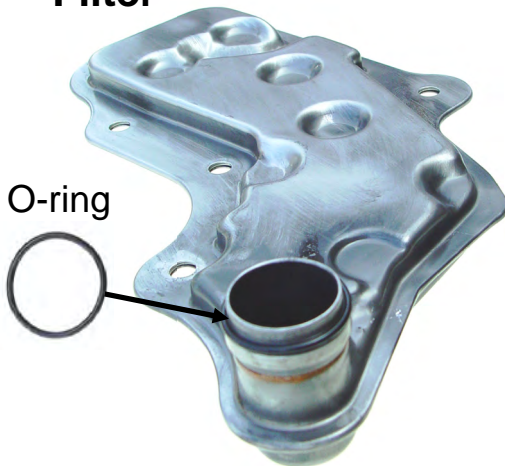
Actual size

Actual size

1. If trans has tube here, remove it.
Do not remove any other tubes.

2. Remove Filter. Take off bolts & brackets shown to remove the valve body.

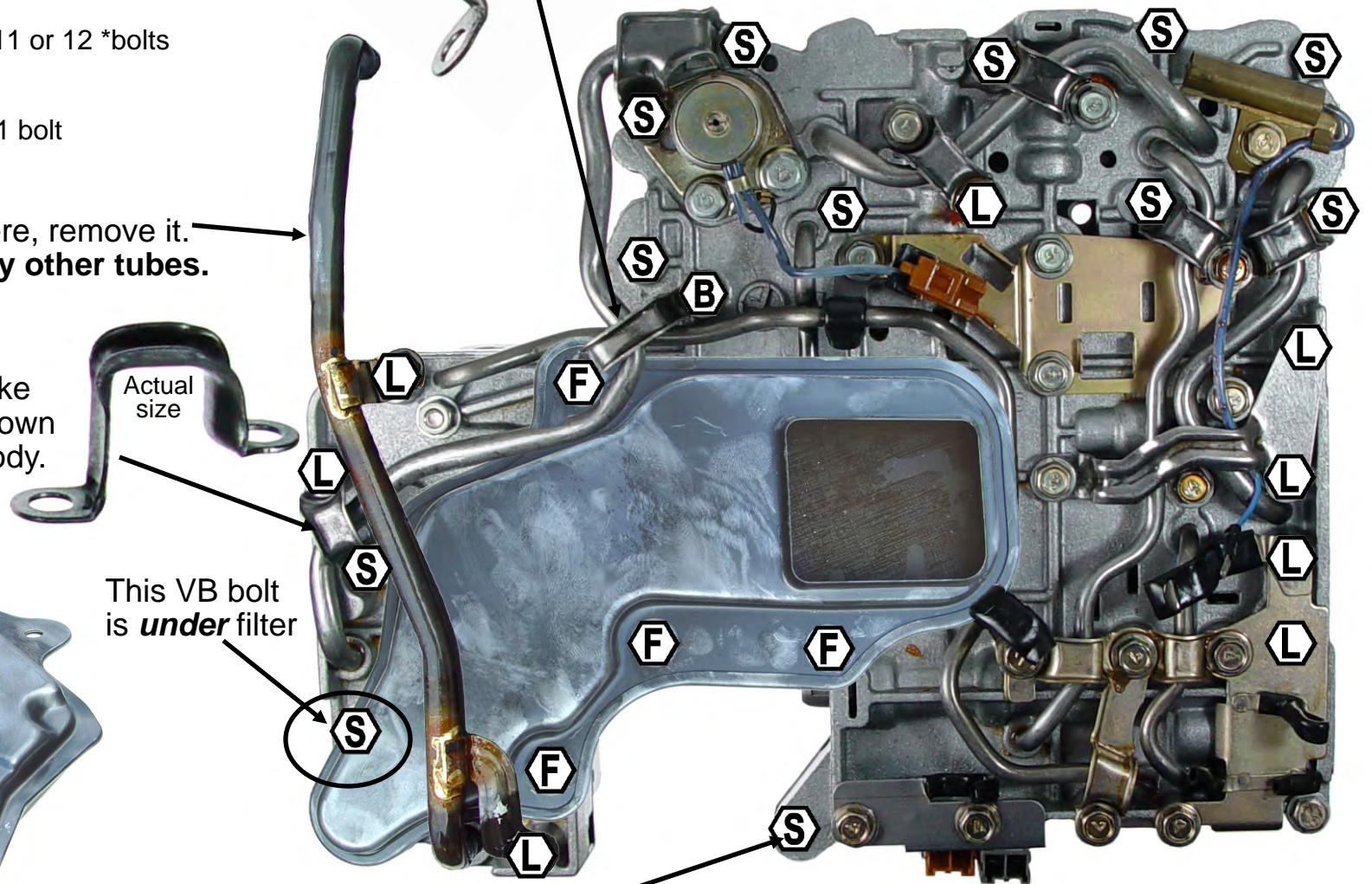
Filter



This VB bolt is *under* filter



*Some models don't have this bolt here.



Valve Body Bolts & Brackets

Bolts actual size
2.125" (6) bolts



A

Tighten bolts to 65-70 in lb

1.454" (14) bolts



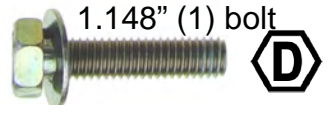
B

1.236" (2) bolts

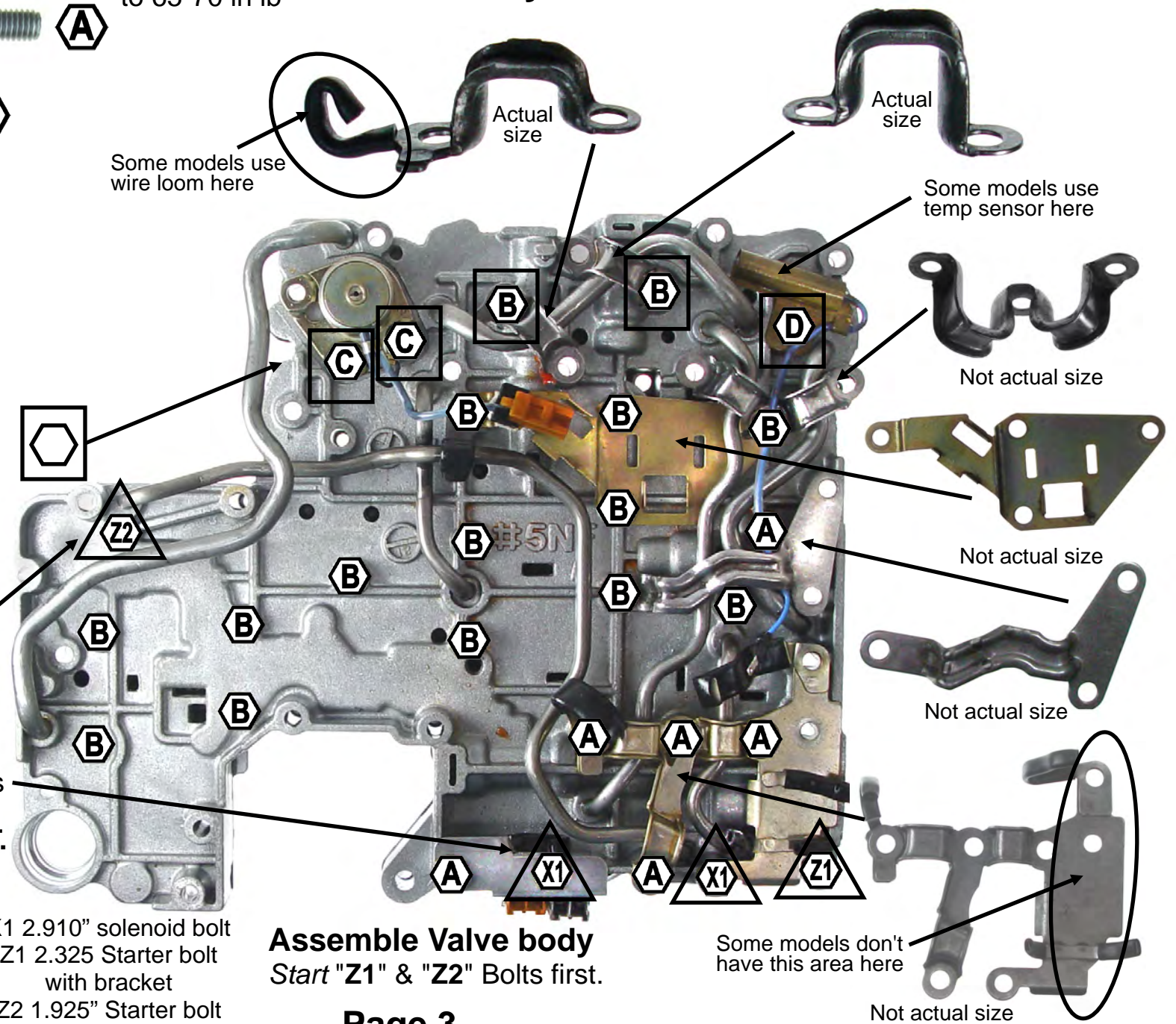


C

1.148" (1) bolt



D



Some models use wire loom here

Actual size

Actual size

Some models use temp sensor here

Not actual size

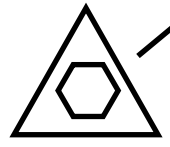
Not actual size

Not actual size

Not actual size

Bolts in boxes thread into hold down plates. See Page 3

LISTEN UP:



These bolts go into nuts on other side of the VB. Take **NUTS OFF FIRST.**



Identify Bolts and nuts

- X1 2.910" solenoid bolt
- Z1 2.325" Starter bolt with bracket
- Z2 1.925" Starter bolt

Assemble Valve body
Start "Z1" & "Z2" Bolts first.

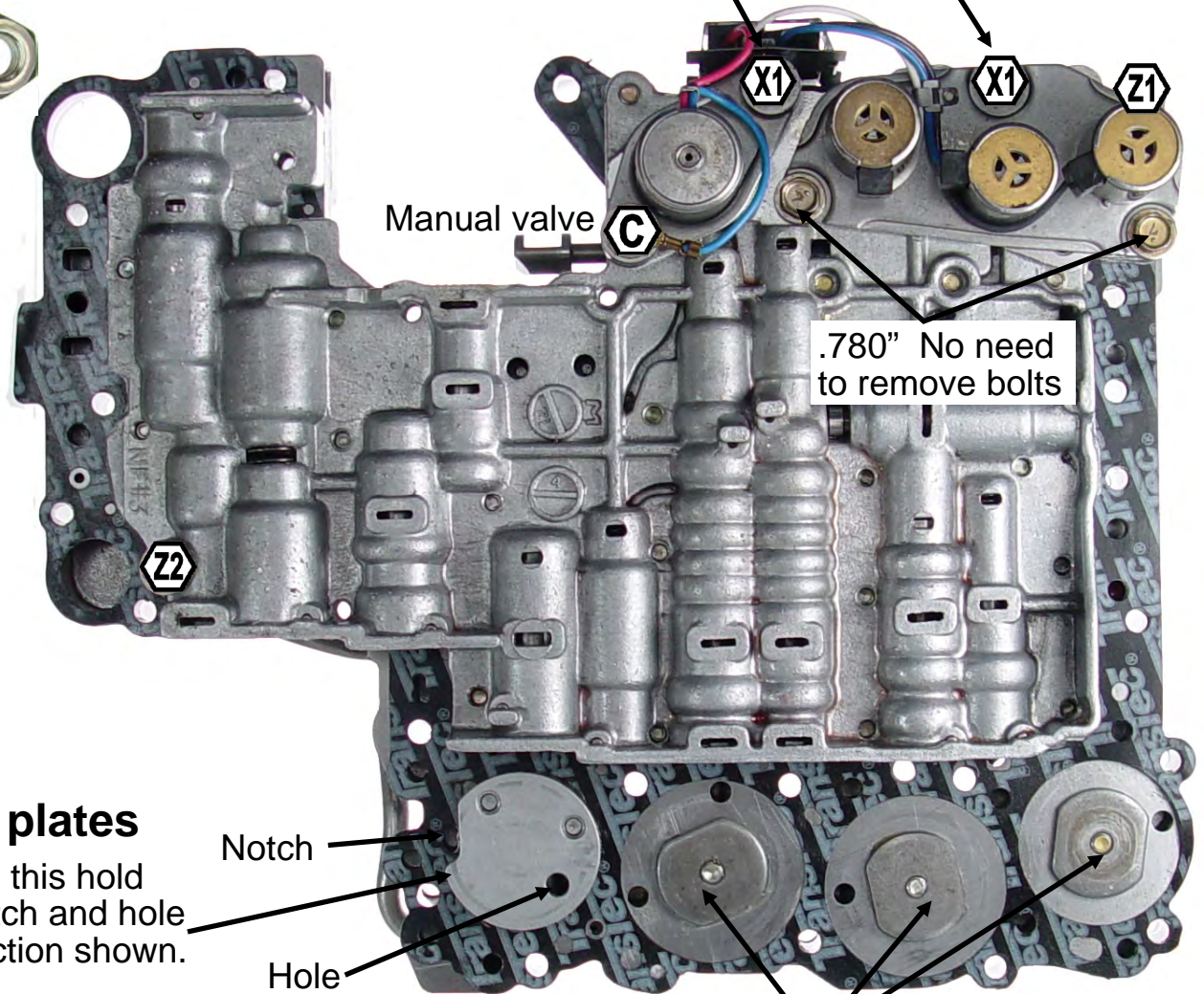
Some models don't have this area here



Assemble Valve body
Start "Z1" & "Z2" Bolts first.

Tighten bolts to 65-70 in lb

LISTEN UP:
Remove **NUTS** before taking these bolts out from the **other side** of VB.



Hold down plates

When installing this hold down plate, notch and hole **Must** face direction shown.

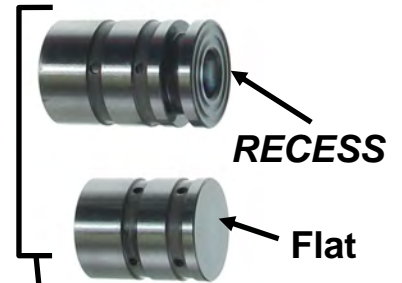
These plates are not fussy.

1. Drill .063 hole straight down into this passage thru bottom of valve body.



Main Valve Body

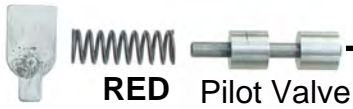
LOOK: If end of boost bushing has **Recess** **DO NOT** take apart. Reuse original, **DON'T** install Red.



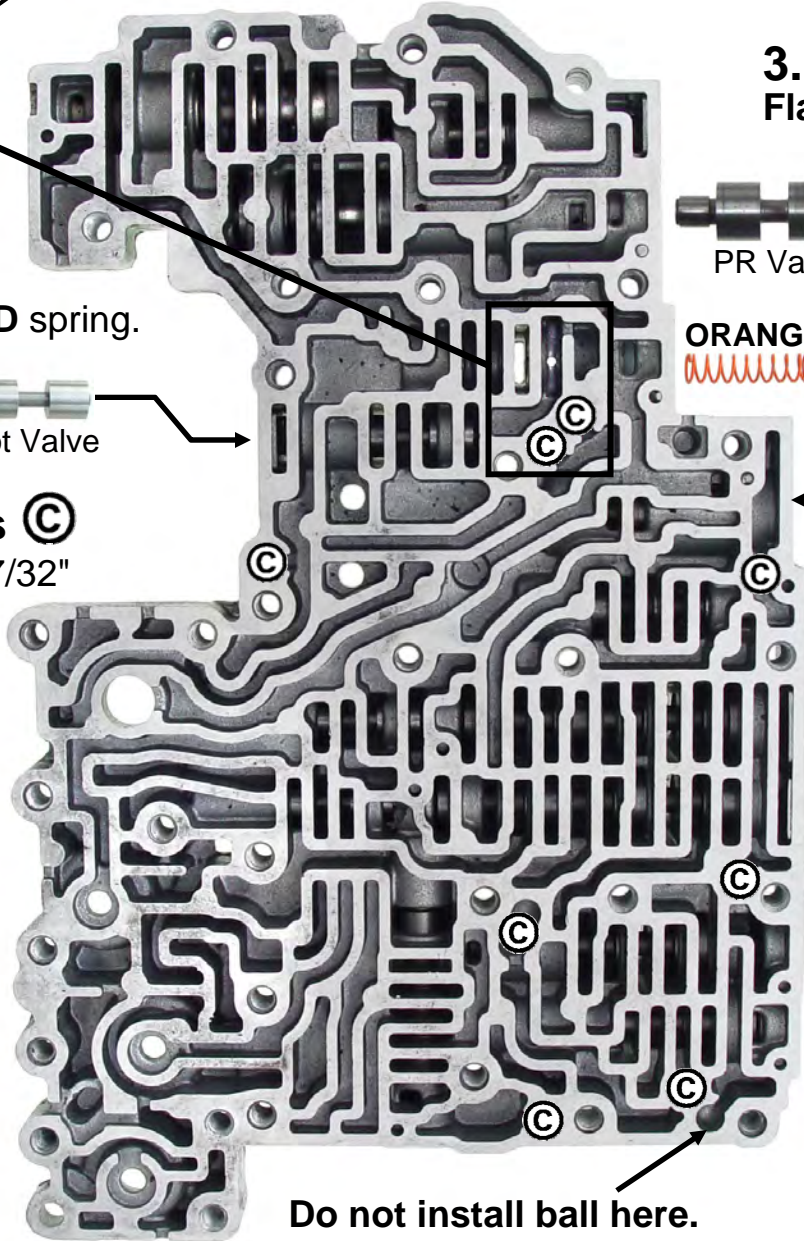
3. If the Boost Bushing has Flat End install RED



2. Install RED spring.

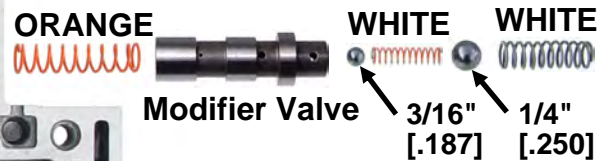


Checkballs ©
Eight Steel 7/32"



Do not install ball here.

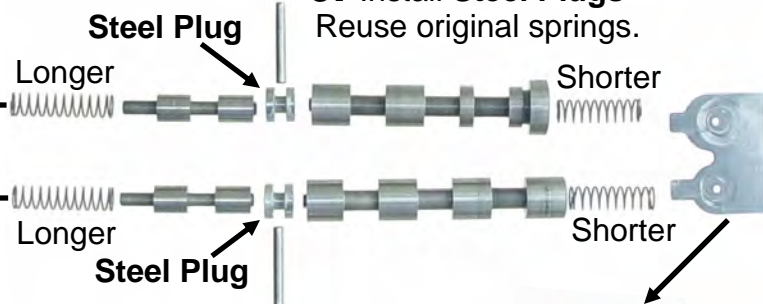
4. Modifier Valve
Install balls and springs into valve, then spring & valve into Valve Body.



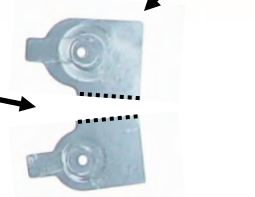
5. Install ORANGE spring.



6. Install Steel Plugs
Reuse original springs.



Have double type retainer?
For **easier** installation clamp retainer in vise and break it into two pieces.



Separator Plate

1. By **hand** use 1/4" or larger drill, *chamfer* hole on both sides of plate. Place the plate on cement floor. Insert the **Alum Plug**. Smack twice smartly with a light hammer. File plug flush with plate.

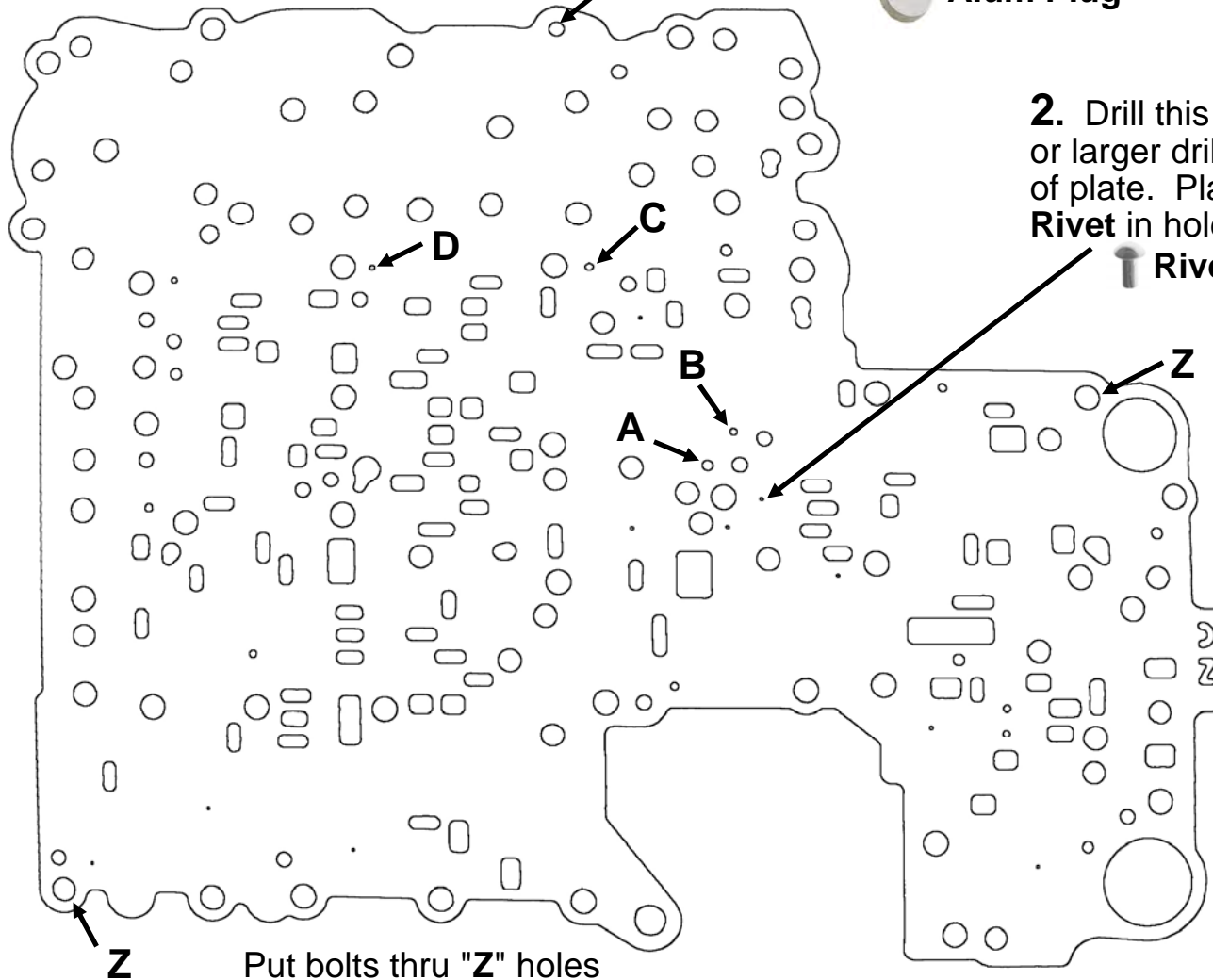


2. Drill this hole to .063. By **hand** use .110 or larger drill to *chamfer* hole on both sides of plate. Place plate on cement floor. Install **Rivet** in hole. Hit **Rivet** with *light* hammer.

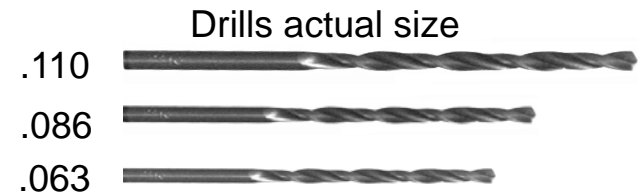


3. Enlarge holes **A, B, C & D** with .086 drill furnished.

For racing, nitrous, turbo or supercharged use .110 drill



Put bolts thru "Z" holes to align Channel Casting Plate and Gaskets.
See Page 7



Channel Casting

Step 1

Install the **Allen Screw** with some Locktite into this hole in channel casting.

Allen Screw

Some models screen here.

Small hole toward plate

Orifice check valve. Some models use two piece valve (*not shown*) and/or no spring. Reinstall as it came apart.

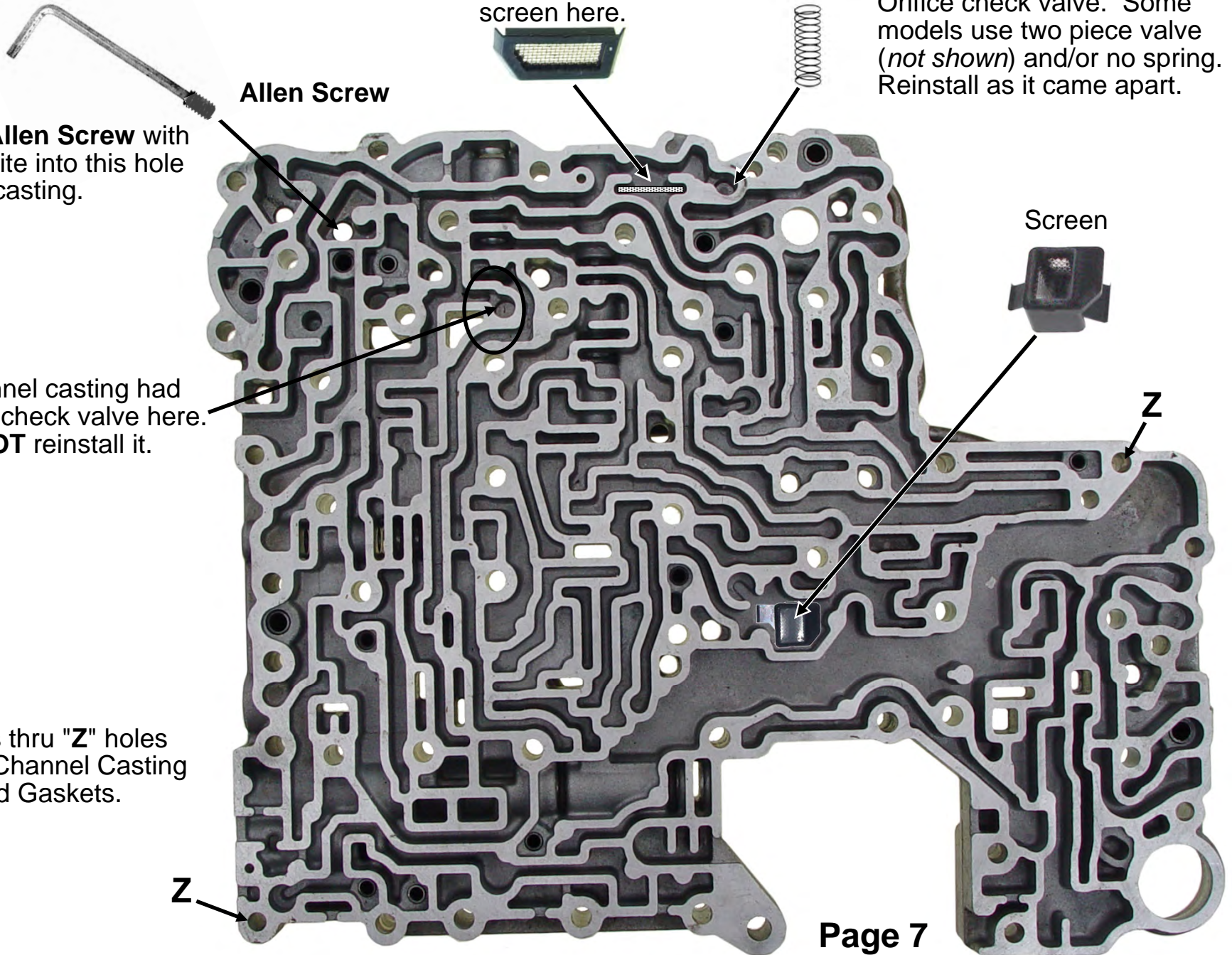
Screen

If channel casting had orifice check valve here. **DO NOT** reinstall it.

Put bolts thru "Z" holes to align Channel Casting Plate and Gaskets.

Z

Z



Separator Plate

LISTEN UP: Two sets of Valve Body and Channel Casting to Plate Gaskets are furnished. Use Gaskets that **DO NOT cover holes** in circled area of Plate.

Put bolts thru "Z" holes to align Channel Casting Plate and Gaskets.

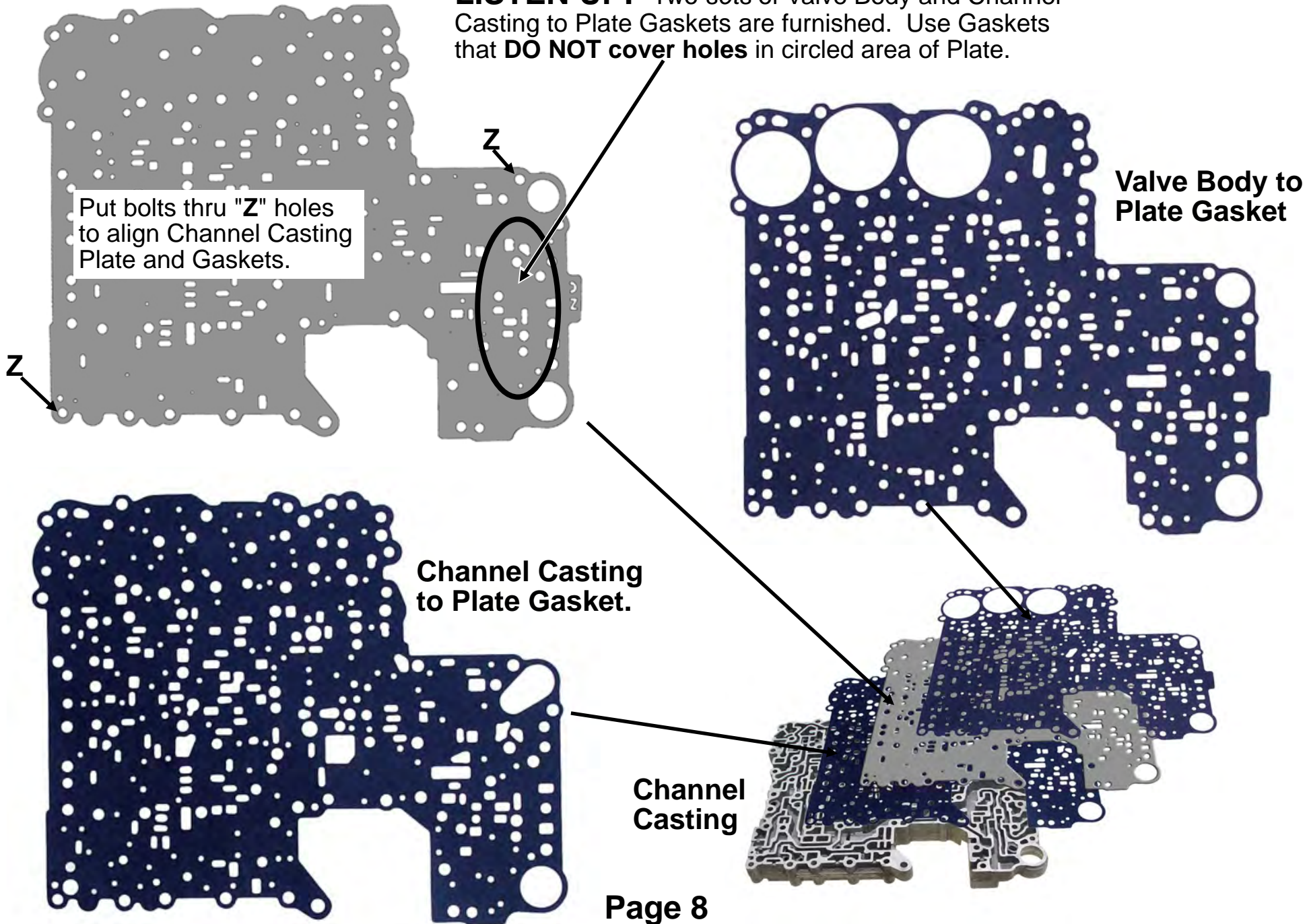
Z

Z

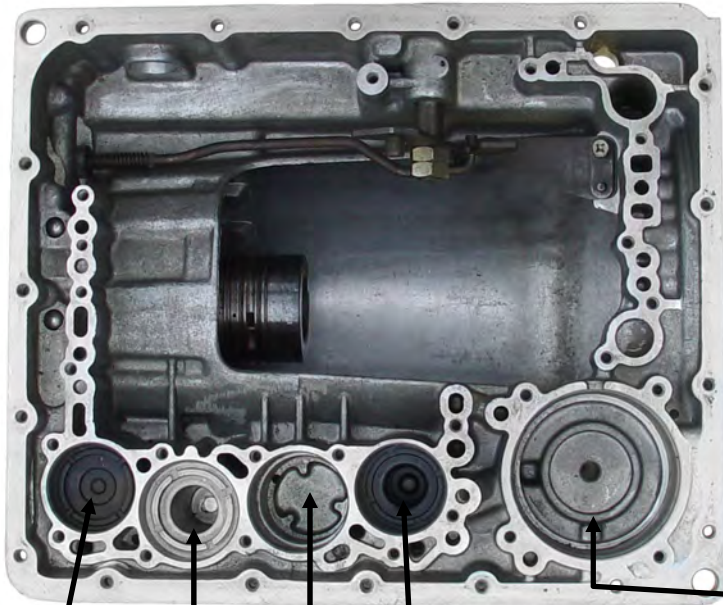
Valve Body to Plate Gasket

Channel Casting to Plate Gasket.

Channel Casting



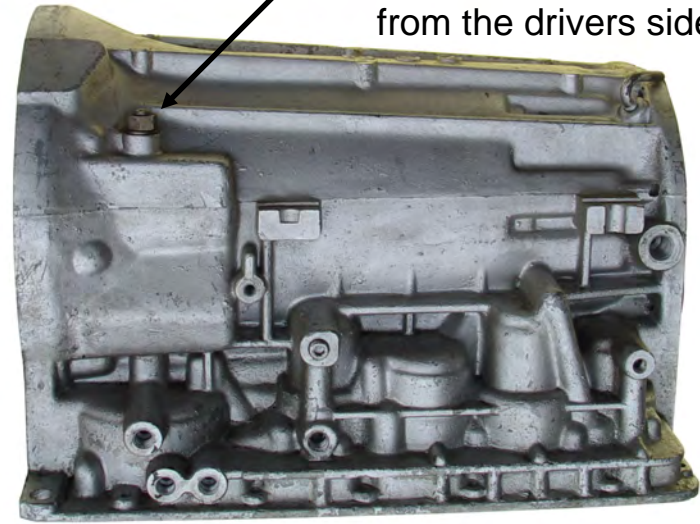
Accumulators in the Case



Band adjustment:

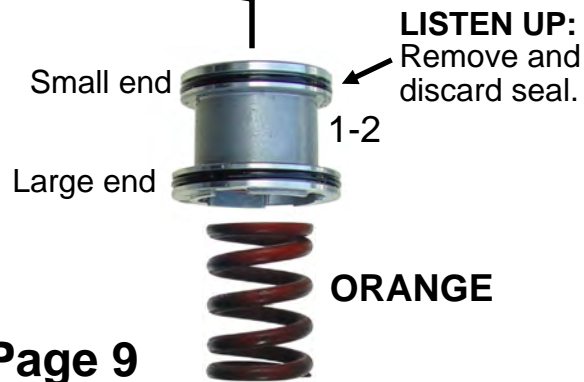
Tighten adjuster snug with short wrench.
Back off 1-1/2 turns, then tighten lock nut.

Case view in vehicle
from the drivers side.



Step 1 1-2 Accumulator

Remove and discard seal from
small end of 1-2 accum piston.
Install **ORANGE** spring.



2nd-4th Piston EXCEPT Subaru

LOOK: Make sure the
gasket isn't blown out.

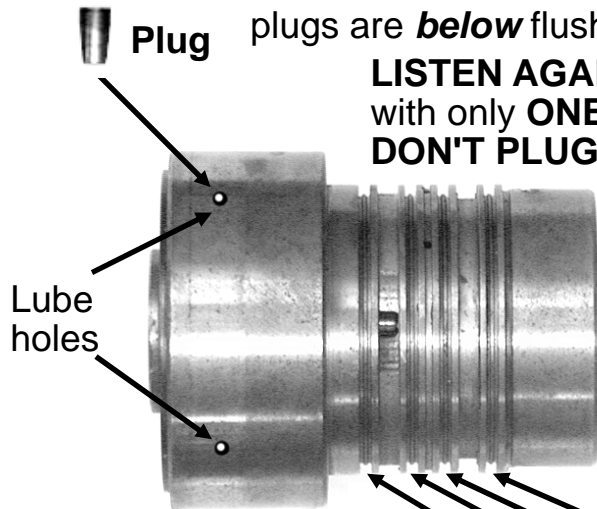
If Trans is in vehicle skip this page.

1. Rear Support

If rear support has **Four lube holes**, install **Plugs** in **three** of them. Tap the **Plugs** in **almost flush** with hammer. Use **Center Punch** to tap **Plugs** below flush.

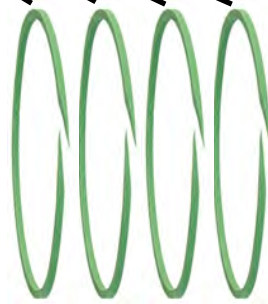
LISTEN UP: Sprag rides here. Make sure plugs are **below** flush.

LISTEN AGAIN: Support with only **ONE Lube hole** **DON'T PLUG** any holes.



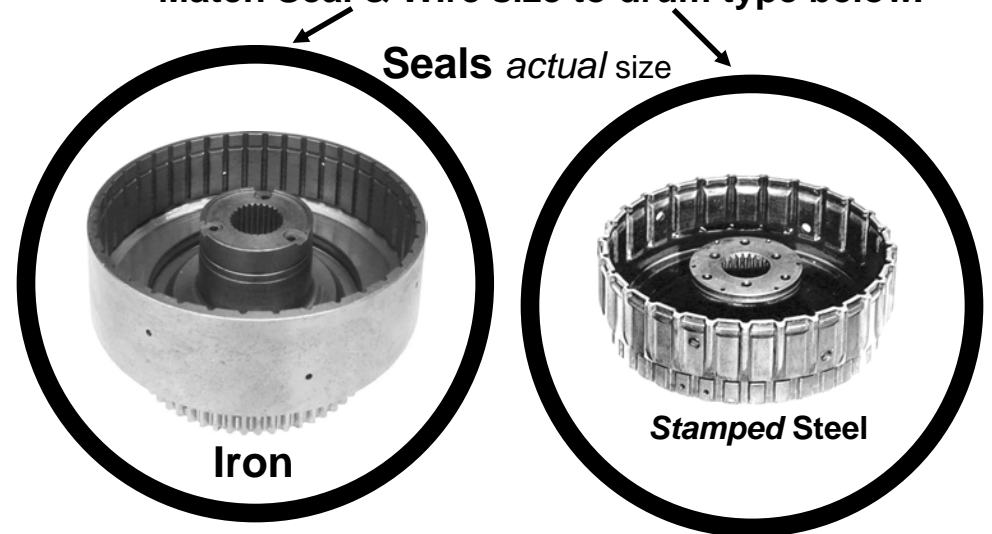
2. Install Rings on rear support.

4 Rings
(no wires)



Rear Support installed in case.

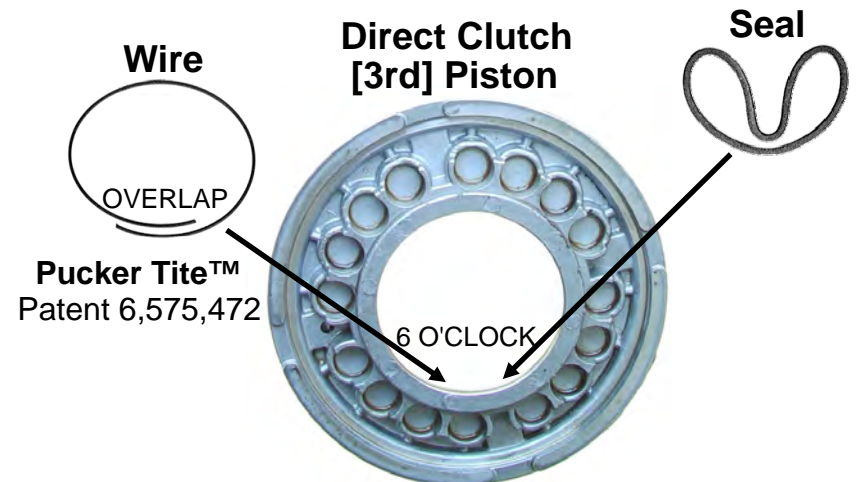
3. Identify Direct Drum Type. Open pack with Large and Small, Seals and Wires. Match Seal & Wire size to drum type below.



Cast Iron Drum
LARGE Seal & Wire

Stamped Steel Drum
SMALL Seal & Wire

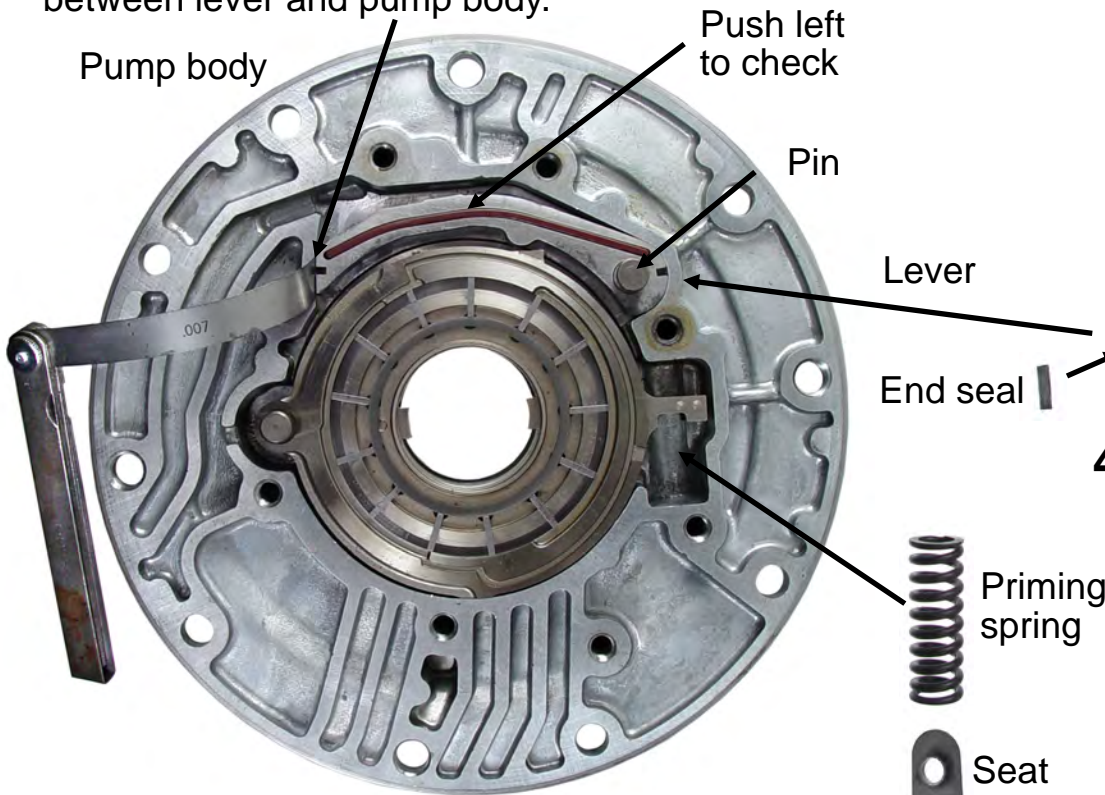
4. Insert overlap part of Wire into groove at 6 O'clock. Then shape Seal as shown and install into piston groove.



If Trans is still in the vehicle skip this page.

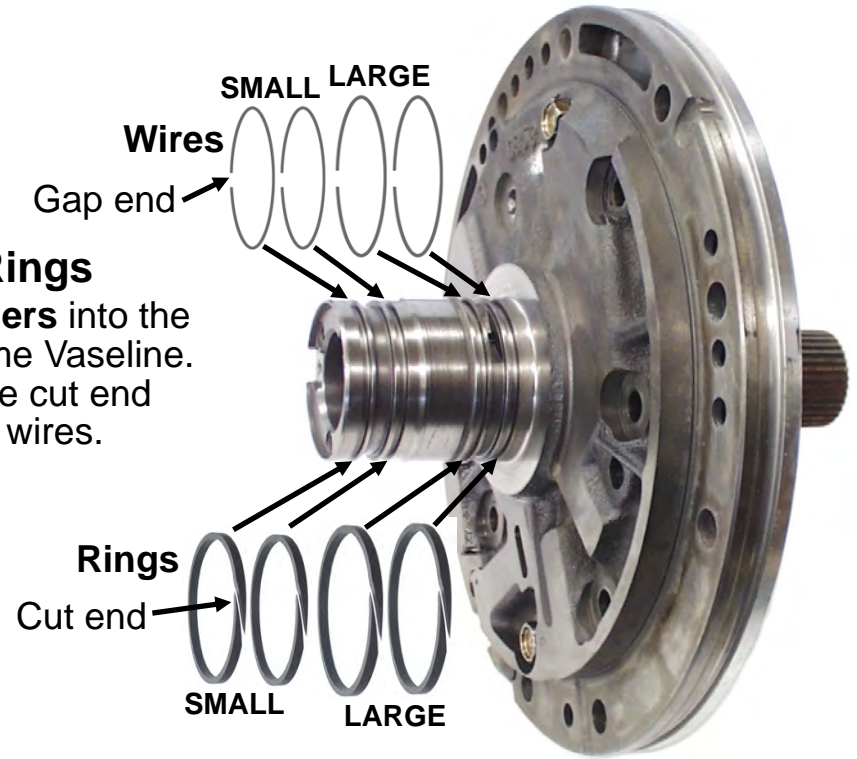
1. Pump Lever Function

Install lever *without* end seal and priming spring. While pushing the lever leftward, must have at least .007" to .015" clearance between lever and pump body.

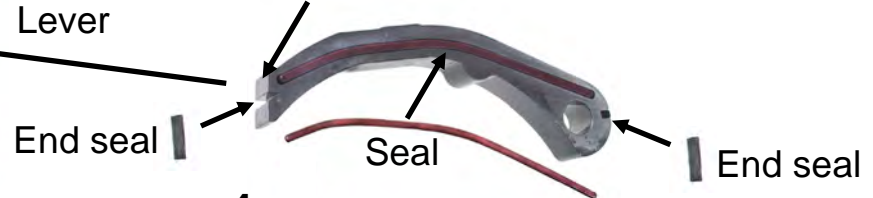


2. Pump Stator Rings

Install **Wire Expanders** into the ring groove with some Vaseline. Install **Rings** with the cut end *opposite* gap end of wires.



3. Grind end of lever for more clearance.



4. Reinstall the lever with original seals.

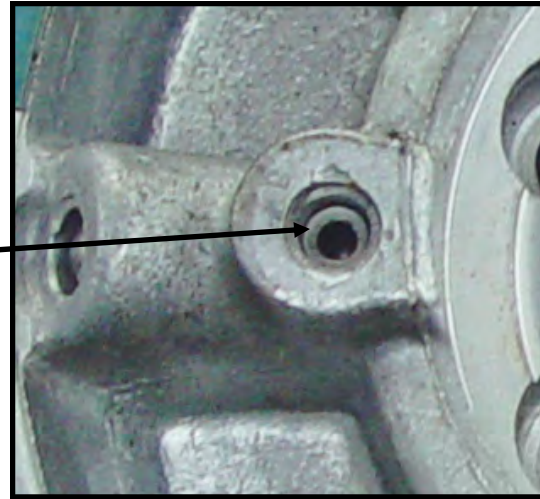
5. Reinstall the priming spring & spring seat

If Trans is in vehicle skip this page.

Lube Relief Valve

LISTEN UP:

All models EXCEPT Subaru. Do **Step 1 & 2** if original cup plug looks like this. If relief hole has ball, set screw or part of bolt in it, leave it as is.



Additional Information

LOOK: Rear Case Bushings

Inspect bushings. They often move which shuts off lube hole. If replacing, make sure case is clean and dry. Install bushings with Locktite or stake them into bore.

1. Install a sheet metal screw into cup plug three turns. With side cutter grab screw and pry plug out. Remove spring & ball. Clean and blow dry the hole.

Screw not furnished



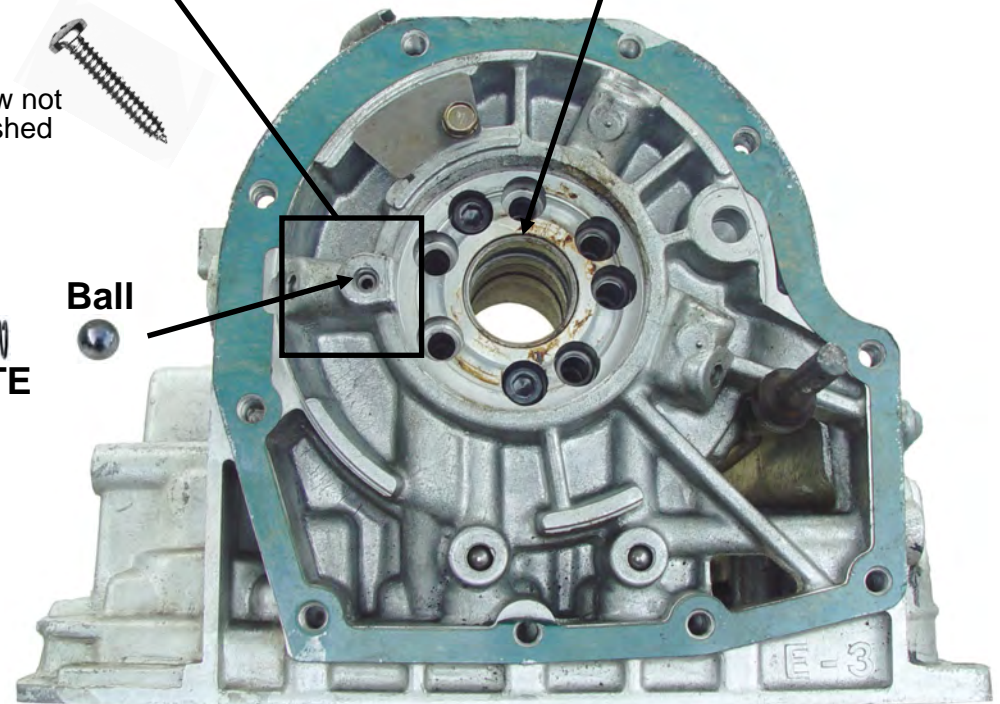
2. Install 1/4" Ball, WHITE spring and Cup Plug. Drive new cup plug in *just flush*. Peen case in a couple spots to keep plug from falling out.

Cup Plug



WHITE

Ball



Oil Coolers

Even with new radiator, this trans does not have adequate cooling or oil flow. Install a 14,000 lb GVW (or larger) multi-layer/tube oil cooler and forget the radiator.

Planetary sets aren't FREE.