

RE4R01A Shift Kit®

Nissan/Infinity--RE4R01A--RL4R01A

Subaru--ATAXLE--R4AXEL--XT 4Sp

Mazda--R4AEL

Also fits Large Geartrain Units

Infinity V8--RE4R03A & Isuzu JR403

Reduces/Corrects/Prevents

Direct clutch [3rd] burnup -- 2-3 Cutloose
Long soft 3rd. Planet burnup -- Long, soft or
slide 1-2 -- band failure -- Long 3-4
Lube failure, overheat and total burnup.

Listen Shop Owner: Even with a new radiator, this trans does not have adequate cooling or flow. Install at least a 14,000 lb GVW **multilayer or multitube** cooler and forget the radiator.

Planetary sets aren't FREE.

Each day your key tech person spends working on one that won't ship or is back for rework, reduces shop volume about \$1000, plus the parts.

TECHNICIAN: Start on page 2 then come back to this page when trans is apart on the bench.

This is a Coordinated Upgrade. Please do not do any other "Tech" you've heard about.

SUBARU-- Front Seal Leak or Blowout: Enlarge drainback hole under front seal with .180 to .196 [3/16"] drill. Follow the passage to the cast iron pump support and enlarge the casted hole on the rear side of the support with 1/4" drill. Install the seal just deep enough to make four small stakes to hold it in. Best to use NOK seal.

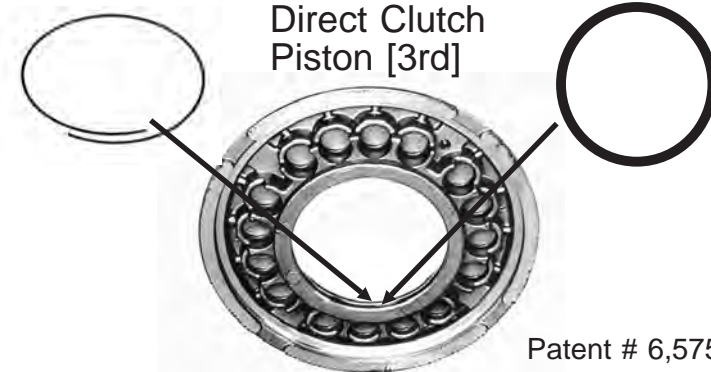


Direct Clutch Seals

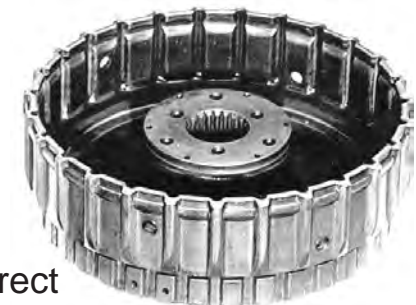
LISTEN UP: Two size seals furnished.

1. Insert the overlap part of the wire into groove at 6 o'clock.

2. Start seal into the groove at 6 o'clock.



Cast **iron** drum use larger solid seal & wire.

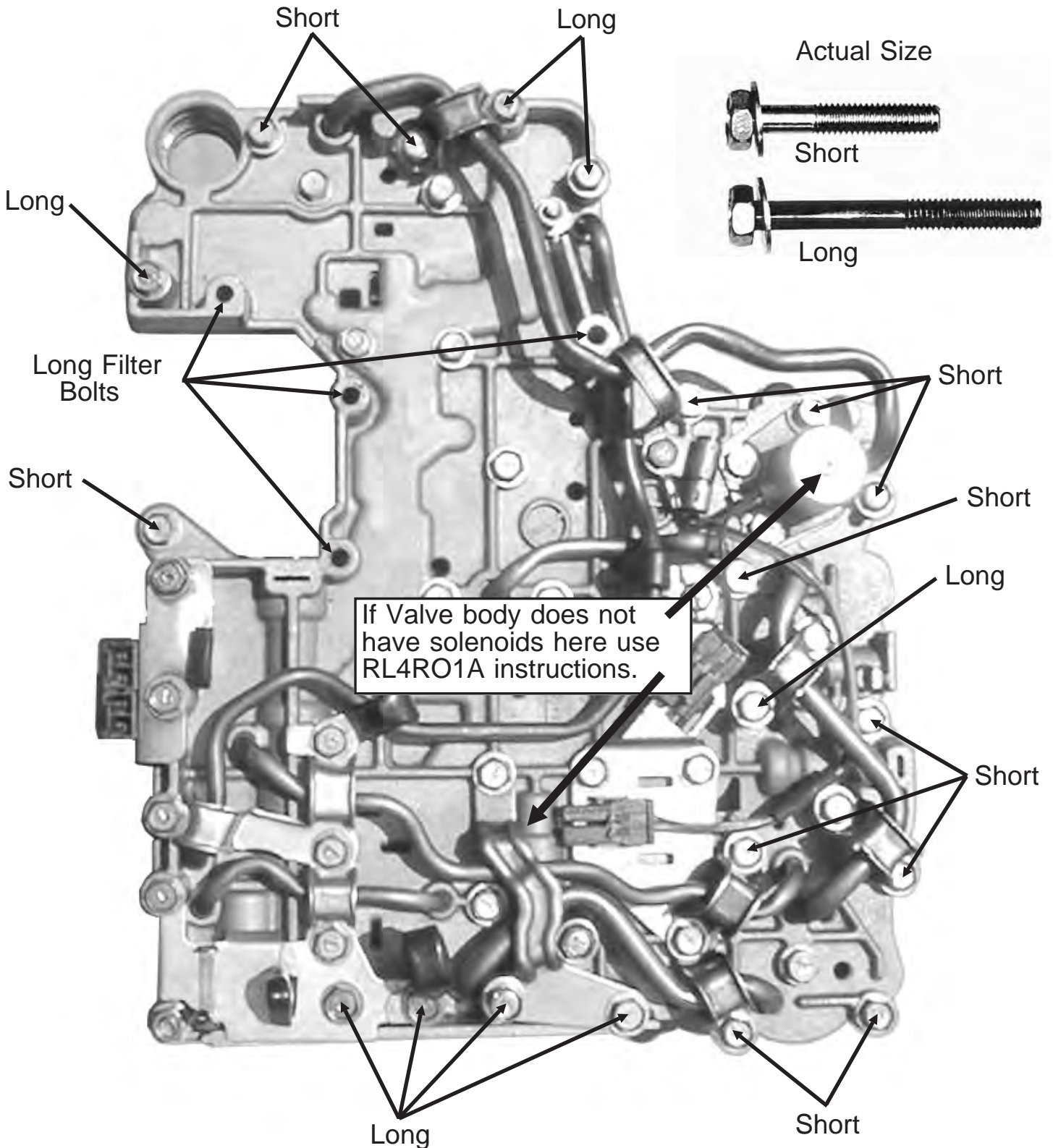


Stamped **steel** drum use the smaller solid seal & wire.

RE4R01A Valve Body Removal and Installation

Save a big headache:

There is no need to remove the tubes at any time. Only remove the bolts shown on this page to remove valve body. When going back together use this photo for bracket locations and bolt lengths.

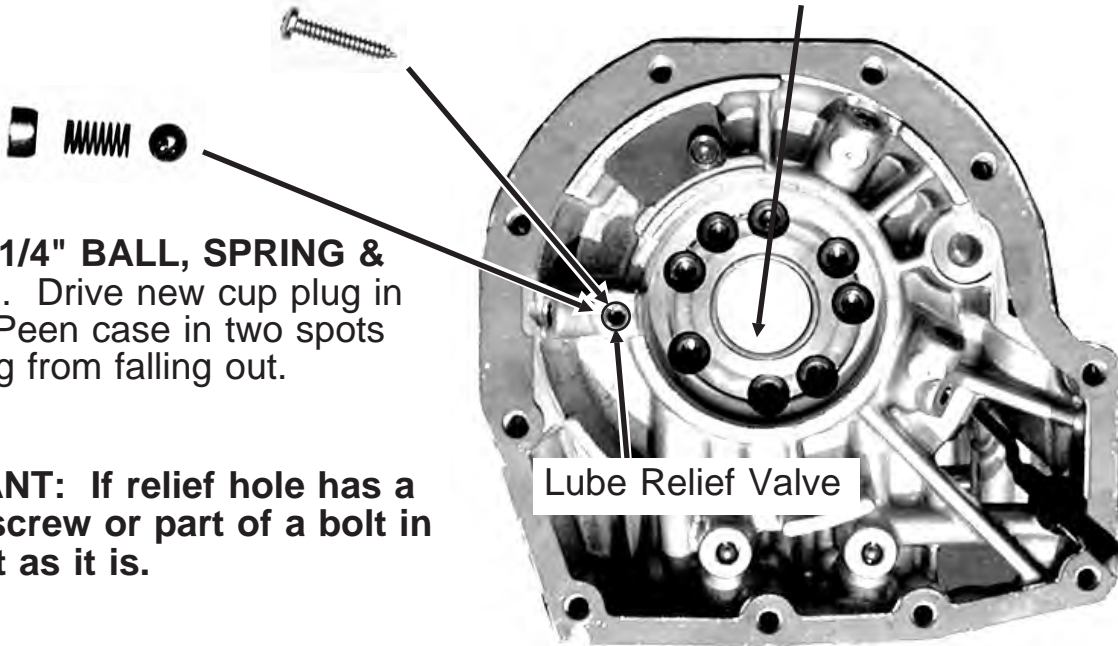


All EXCEPT Subaru.

Install sheet metal screw into cup plug 3 turns. With side cutter grab the screw and lever the plug out. Remove spring and ball. Clean and blow dry the hole.

Rear Case Bushings

Rear bushings often move and shut off the lube hole. Make sure case is clean and dry and install bushings with Loctite. Or stake the bore.

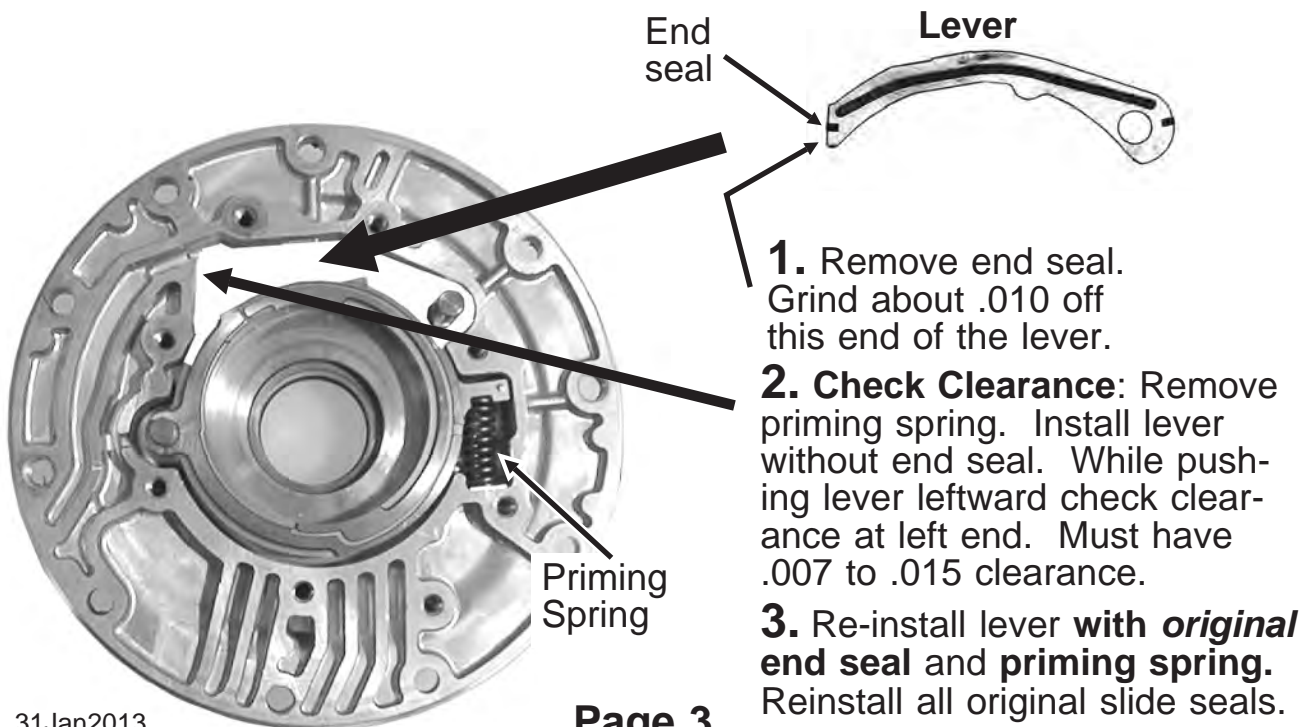


Install new 1/4" BALL, SPRING & CUP PLUG. Drive new cup plug in just flush. Peen case in two spots to keep plug from falling out.

IMPORTANT: If relief hole has a ball, set screw or part of a bolt in it, leave it as it is.

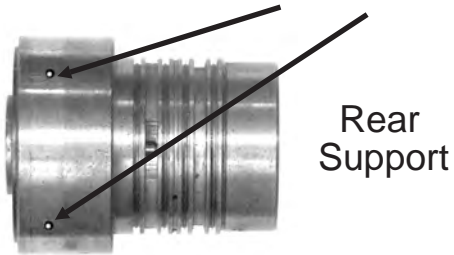
Pump Lever Function

It is recommended to *reuse* all of the *original* lever and pump slide seals.

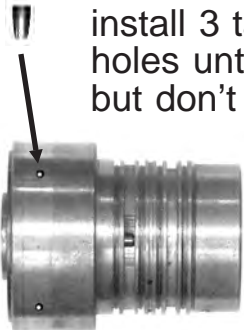


More Lube for Planet All Except Subaru

Early models had 4 lube holes to the sprag. Plug 3.

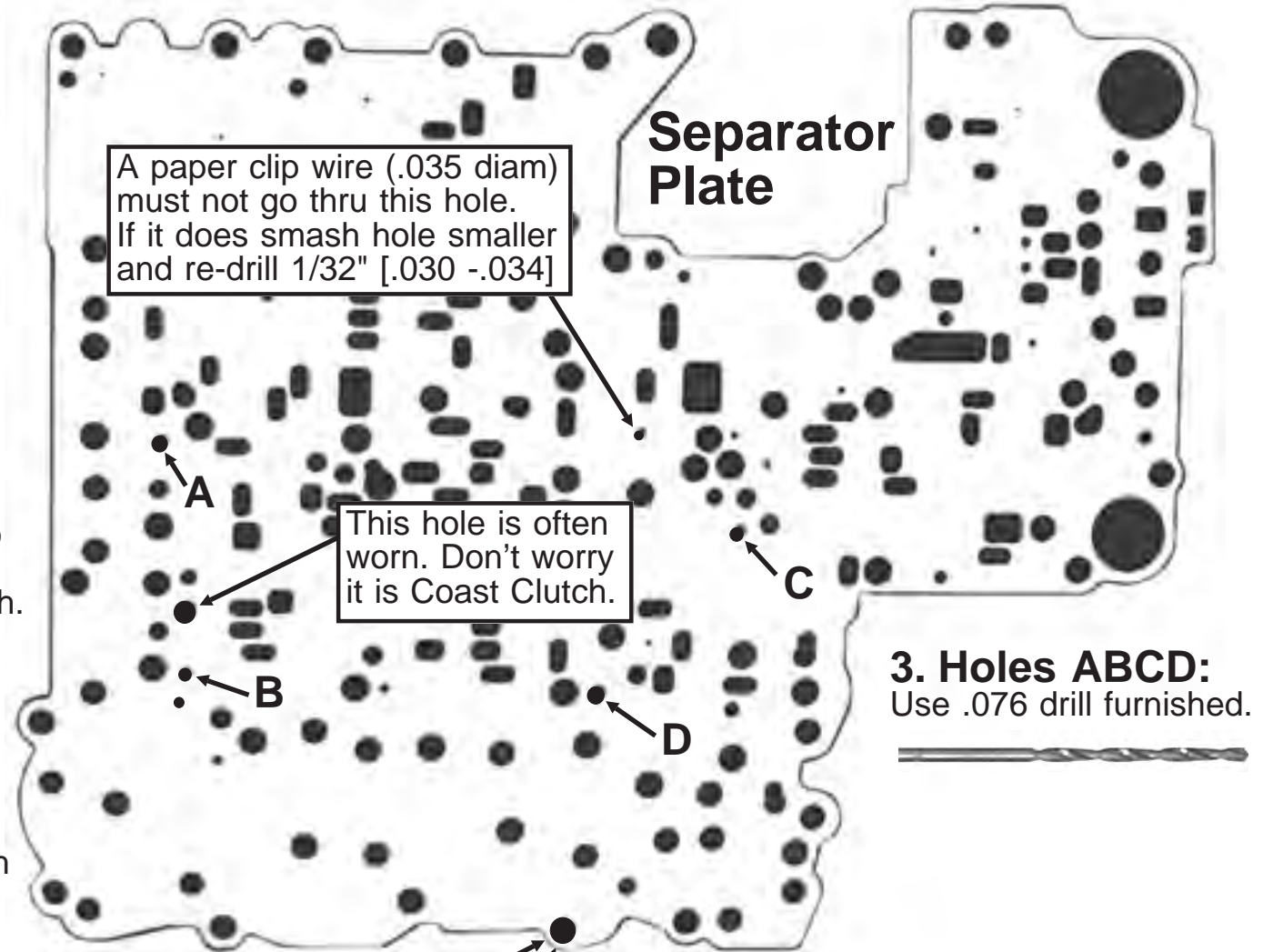


1. With light hammer install 3 tapered pins into holes until close to flush, but don't make them flush.



2. Then with a center punch tap them in to below flush. The sprag runs here, so be sure plugs are **below** flush.

If a checkball hole in plate is worn, use a 1/4" steel ball at that location in valve body.



3. Holes ABCD:
Use .076 drill furnished.



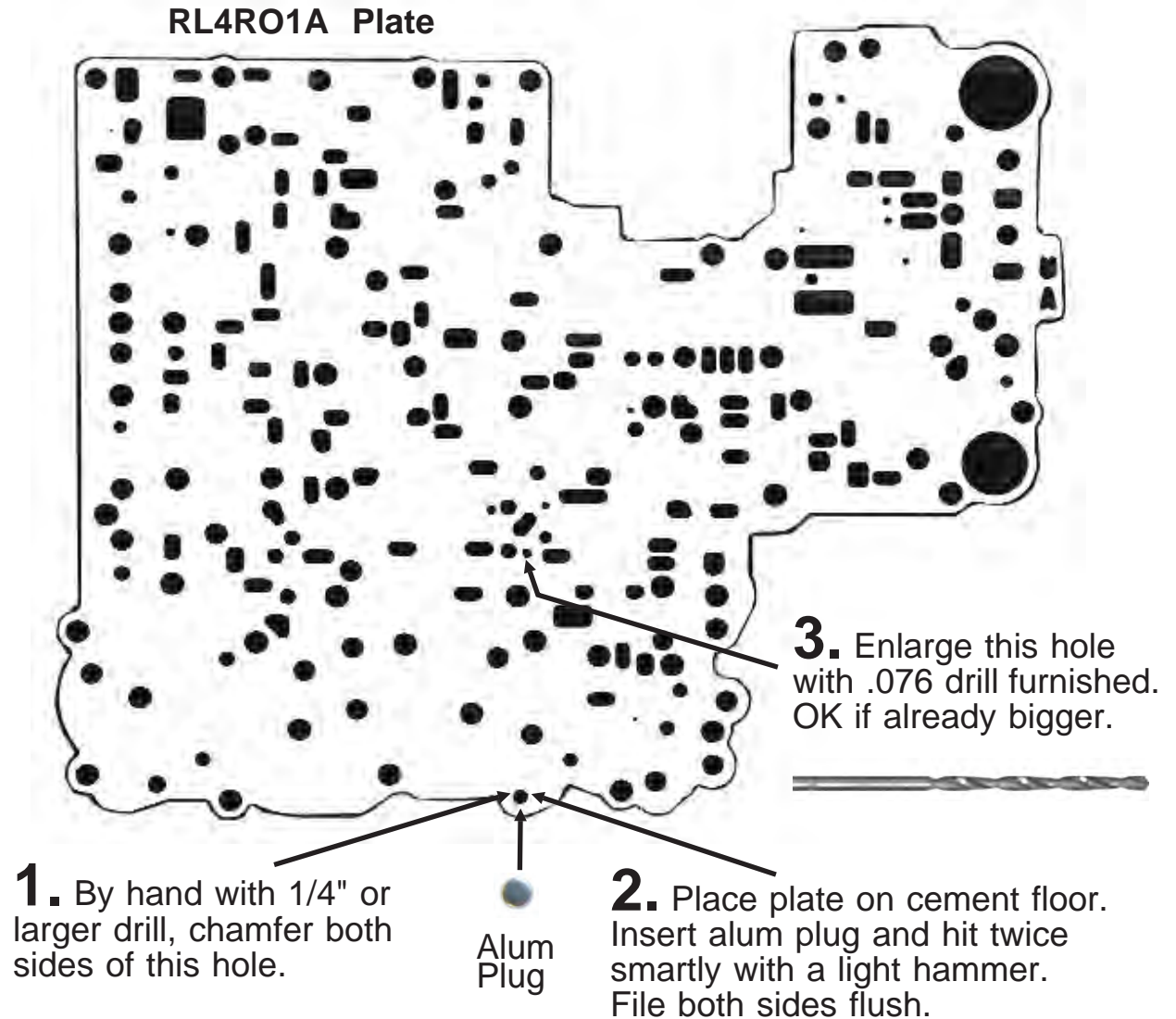
LISTEN UP: All Subaru, Isuzu JR403 and Infinity V8 RE4RO3A skip Step 4. Do NOT install the Aluminum Plug in these models.

4. **All Others:** By hand with 1/4 or larger drill, chamfer both sides of this hole. Place plate on cement floor. Insert alum plug and hit twice smartly with a light hammer. File both sides flush.

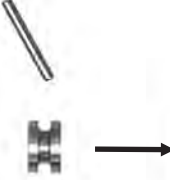
**TO install this kit in:
RL4RO1A 1990up 2.4L 4 Cyl
Nissan Pickup and Pathfinder
Follow these instructions:**

**RL4RO1A Trans has TV cable and
Governor. VB doesn't use gaskets.**

- A.** Install direct clutch inner seal as shown on page 1.
- B. Skip page 2**
- C.** Do all of page 3.
- D.** Page 4. **Steps 1&2 only.**
- E. Skip page 5.**
- F.** Do all of page 6.
- G.** This page, **Steps 1, 2 & 3.**
- H.** Do the valve body changes on the backside of this page.

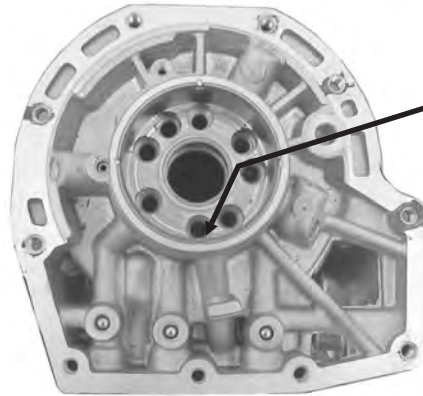
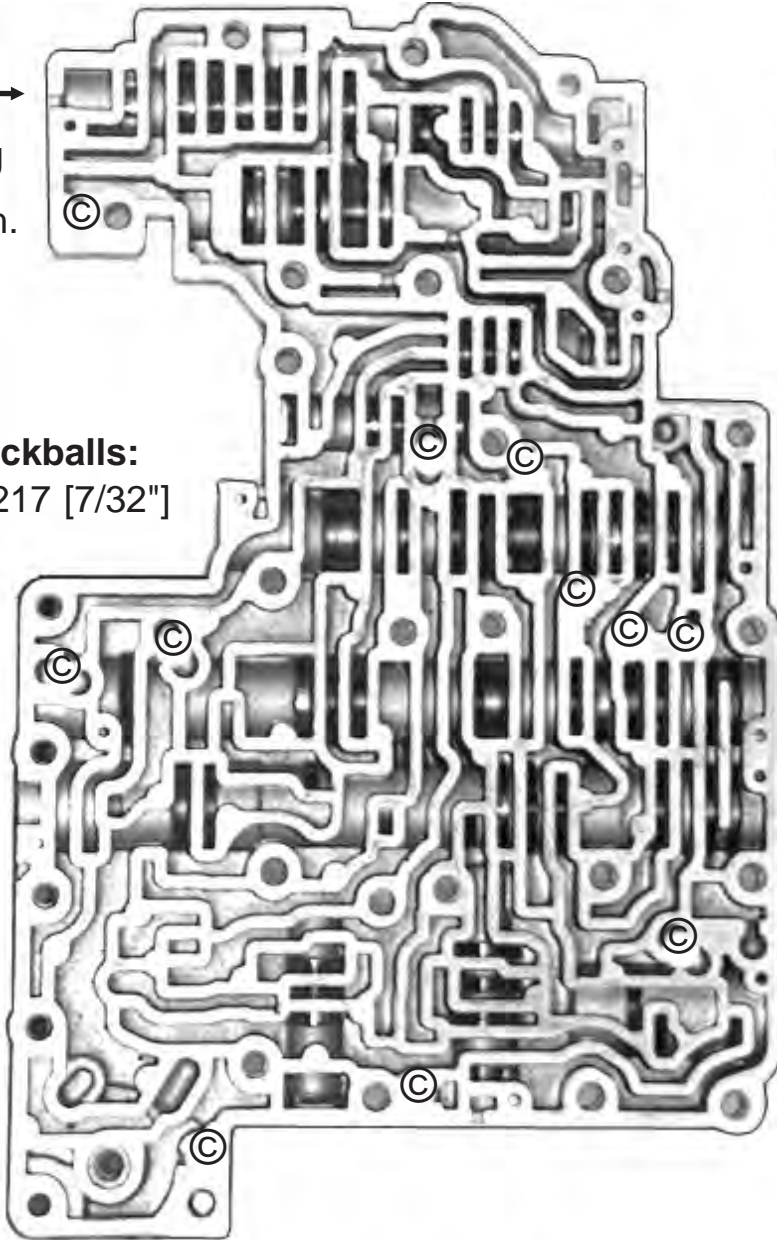


RL4R01A Valve Body



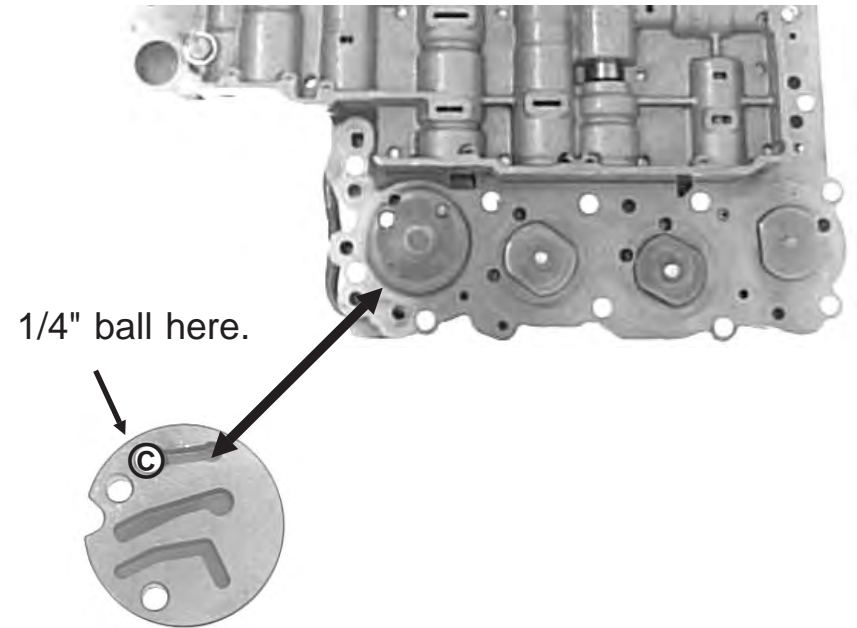
New Plug
prevents
loss of 4th.

© Checkballs:
Eleven .217 [7/32"]



TECH DATA

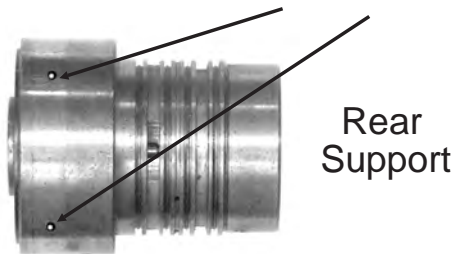
Steel gov ring sleeve tends to work up and out of the case. Tap it down flush and peen a few places around it to hold it into the case.
Can cause no shifts or wrong gear starts.



RE4R03A & JR403: Use this sheet for pages 4 and 6. Nissan V8's and Izusu Diesel

More Lube for Planet All Except Subaru

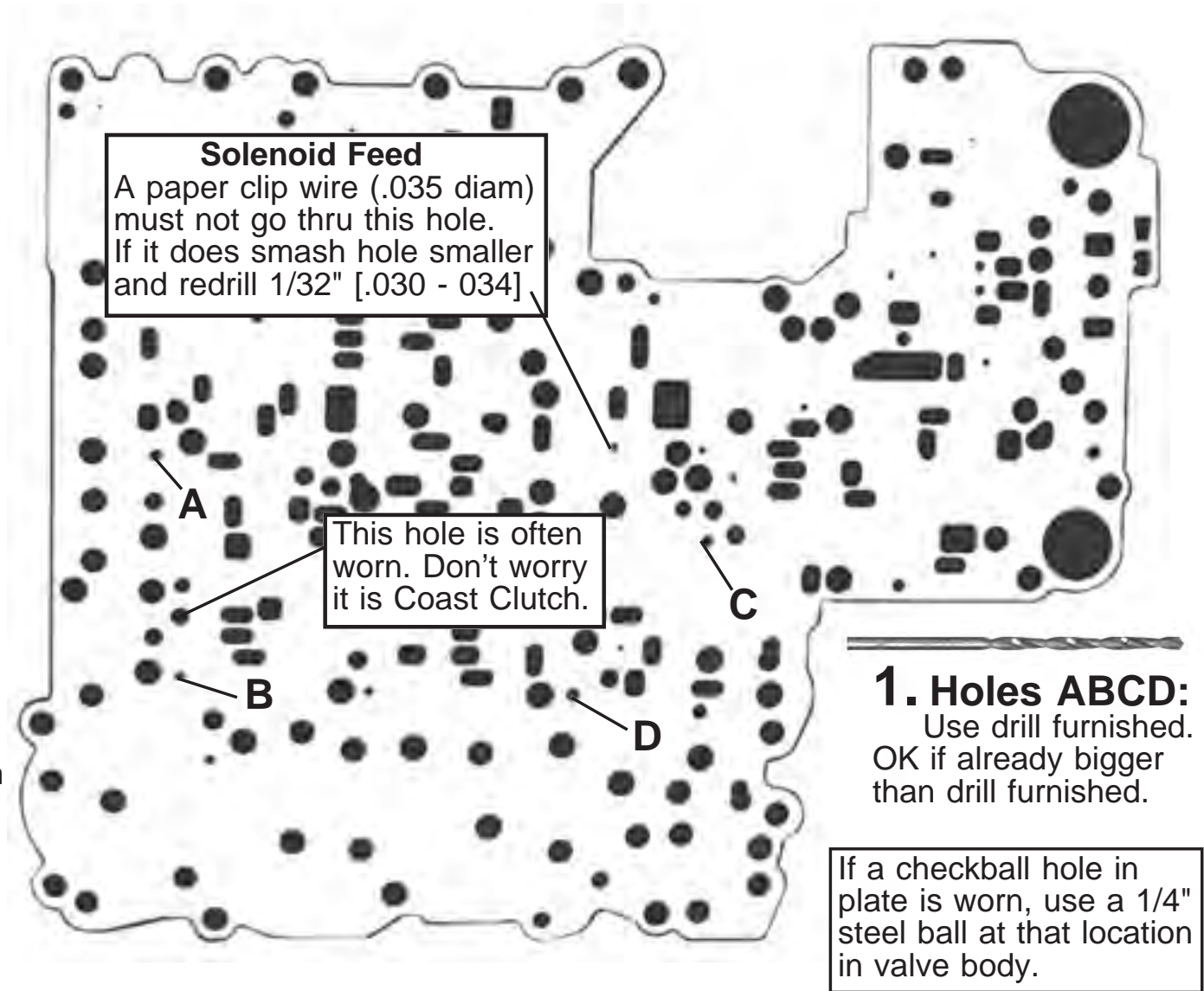
Early models had 4 lube holes to the sprag. Plug 3.



1. With light hammer install 3 tapered pins into holes until close to flush, but don't make them flush.



2. Then with a center punch tap them in to below flush. The sprag runs here, so be sure plugs are below flush.



Install M & S bolts first.

Main Valve Body

Actual Size

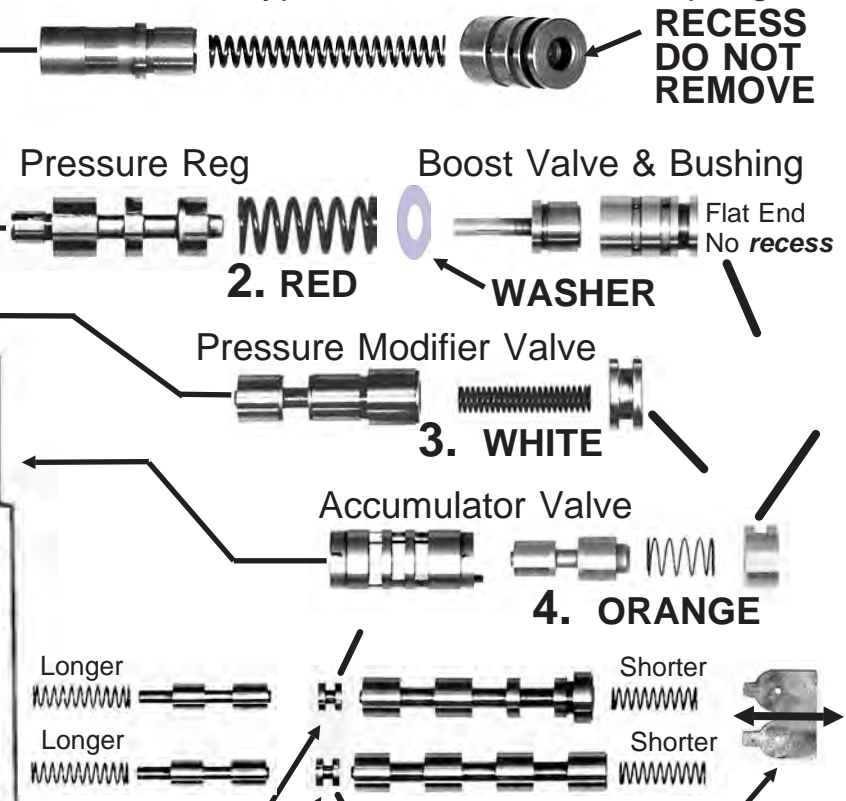
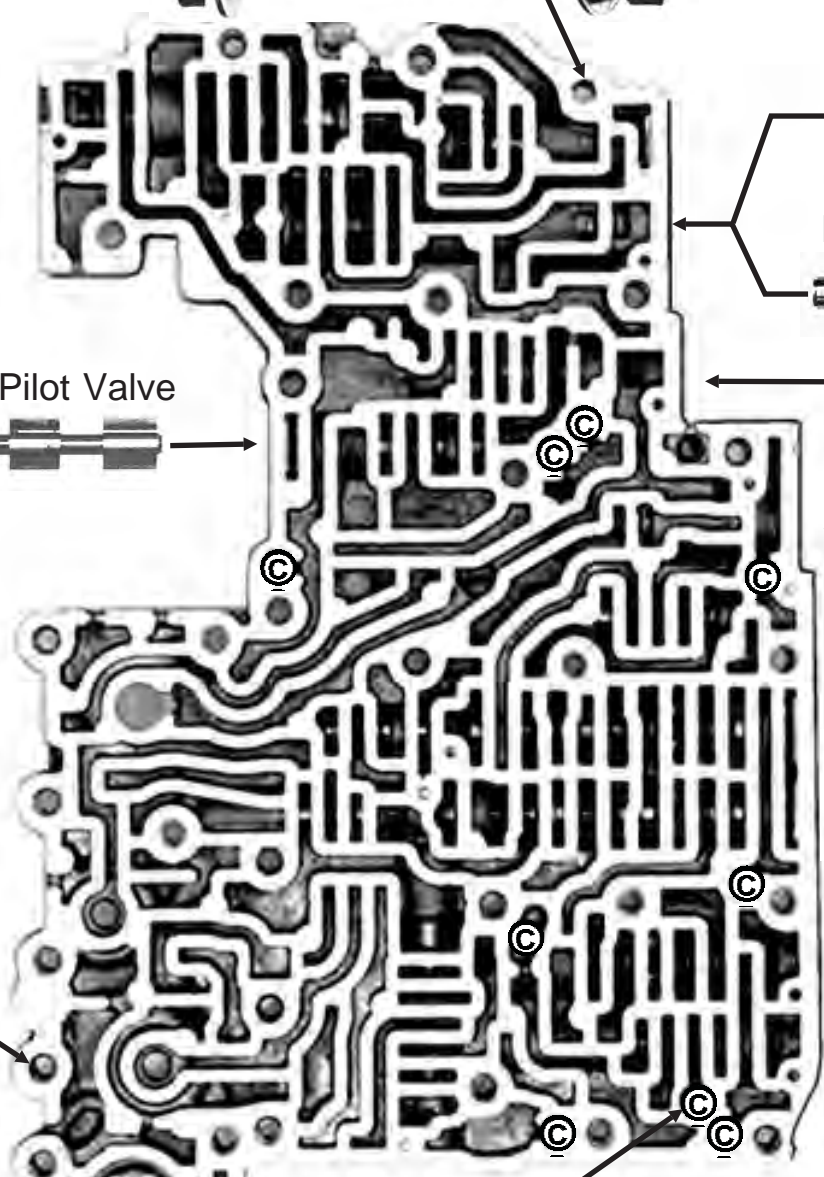
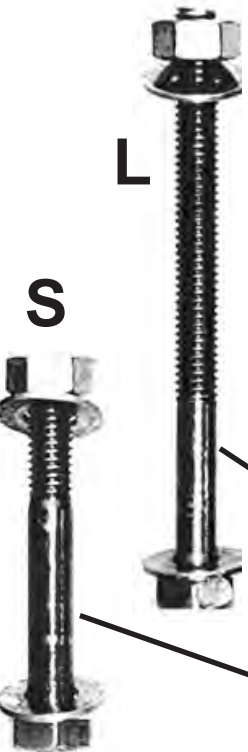
M

Give careful attention here:

Look at the PR Boost bushing. If it has recess DO NOT REMOVE IT. Recess type does not use RED spring.

RECESS DO NOT REMOVE

1. ORANGE Pilot Valve



2. RED

WASHER

3. WHITE

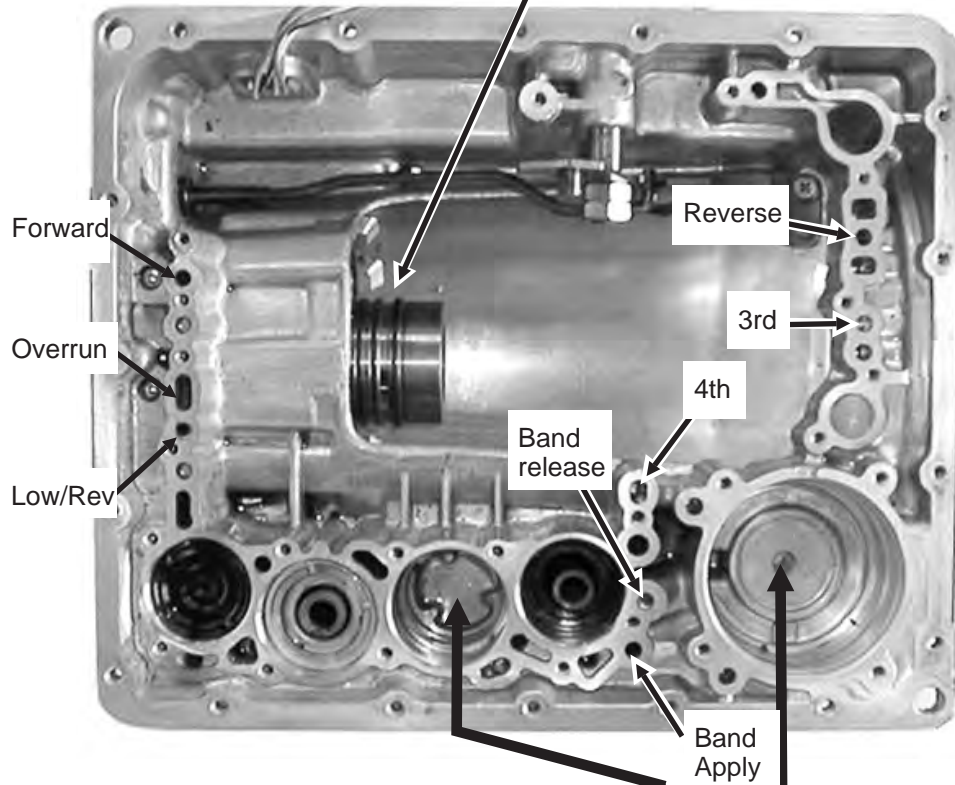
4. ORANGE

5. Install the New Steel Plugs
Alum ones break

Have double type retainer? For easy installation place retainer in vise and break it into two pieces.

© One 1/4" Steel ball [.250] here.
Eight 7/32" Steel balls [.215 to .219]

Custom Rings & 1-2 Accumulator



LISTEN UP: Subaru, Isuzu JR403, Infinity V8 RE4RO3A skip Step B. Reuse *original* springs & Don't discard seal.

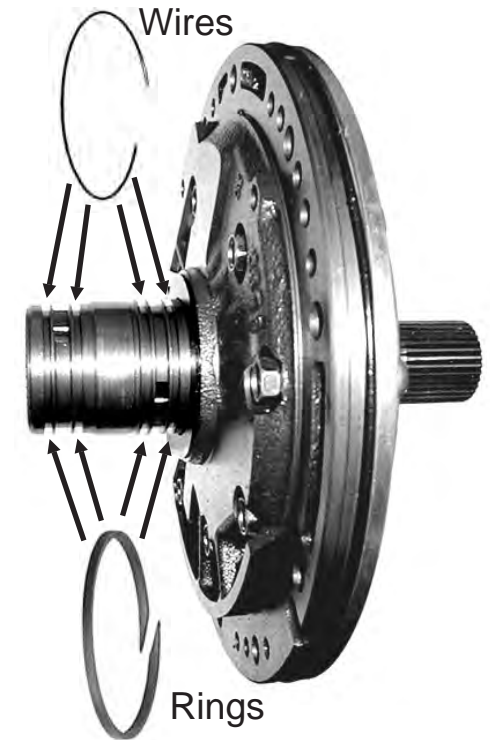
B. All Other Models. Discard the smaller 1-2 accm seal. Discard original spring. Install two springs furnished.

1-2 Accumulator

A. Install 4 rear support rings with Vaseline or Trans Jel. No expander wires.

Stator Rings--Pat Pending

- C.** Sort the slightly smaller 3rd rings & wire expanders to one side. They go on last.
- D.** Put some Trans Jel into each groove in 3 or 4 places. Install the larger, then the smaller expander wires.
- E.** Install the larger, then smaller, plastic rings into the grooves with Trans Jel.



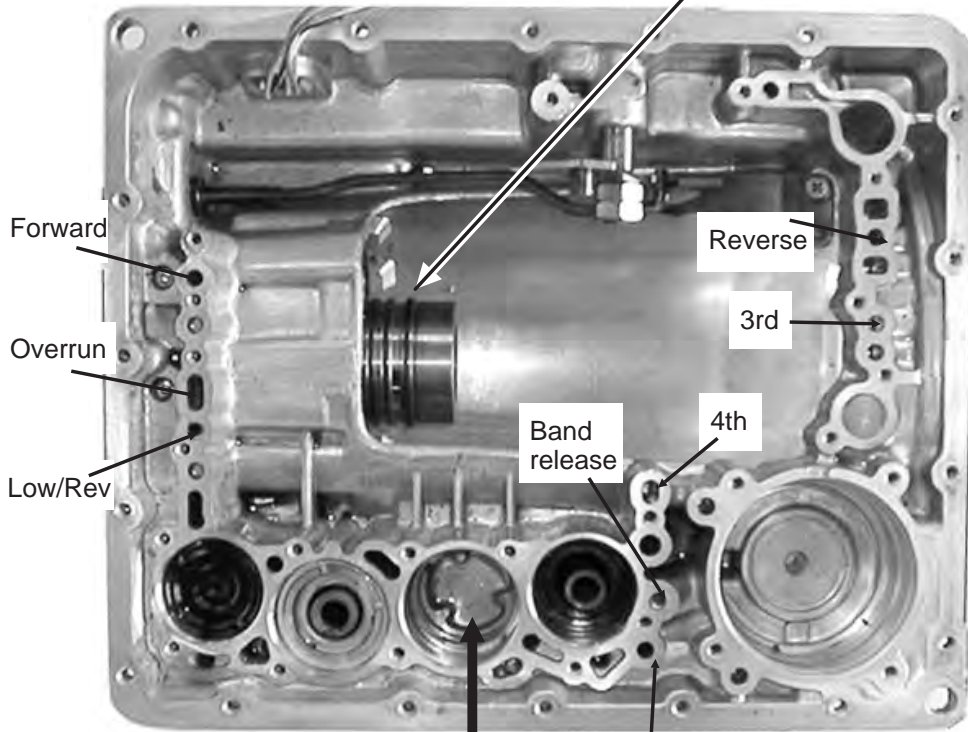
2nd and 4th Piston Assembly



Band Adjust: Tighten just snug with a short wrench. Then back off 1-1/2 turns.

RE4R03A and JR403 Nissan V8 and Izusu Diesel

A. Install 4 rear support rings with Vaseline or Trans Jel. No expander wires.



Rubber Seals
Not furnished

Re-use the original spring

1-2 Accumulator



2nd and 4th Piston Assembly

Stands go inboard

Band Adjust

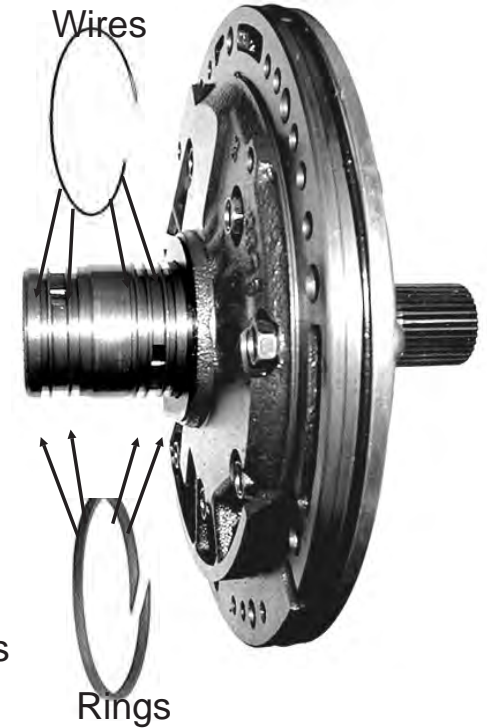
Tighten just snug with a short wrench. Then back off 1-1/2 turns.

Stator Rings Pat Pending

C. Sort the slightly smaller 3rd rings and wire expanders to one side. They go on last.

D. Put blob of Vaseline or Trans Jel into each groove in 3 or 4 places. Install the larger, then the smaller expander wires.

E. Install the larger, then smaller, plastic rings into the grooves with Trans Jel.



LISTEN UP: This setup may not air check very well, but it works great in the vehicle. "You're going to love the road test. Your customer will KNOW you FIXED it." "Thanks for listening."

Gil

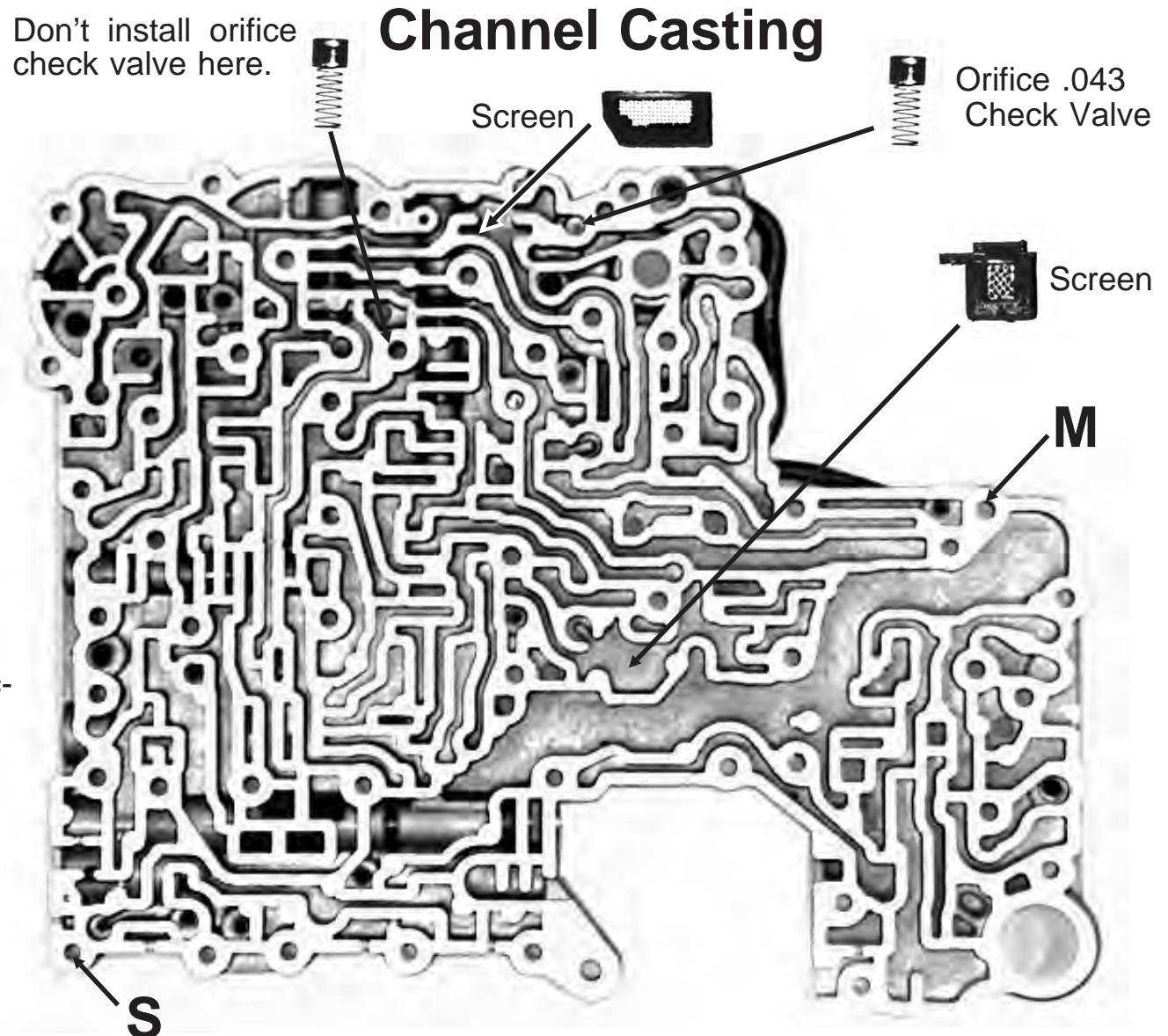
Additional Info

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 **multi-tube cooler** and forget the radiator.



Assembly: Insert bolts at M and S. Stick channel gasket & VB gasket to the separator plate with some oil. While holding the separator plate and gaskets against the channel casting, turn it over carefully, set it on valve body.