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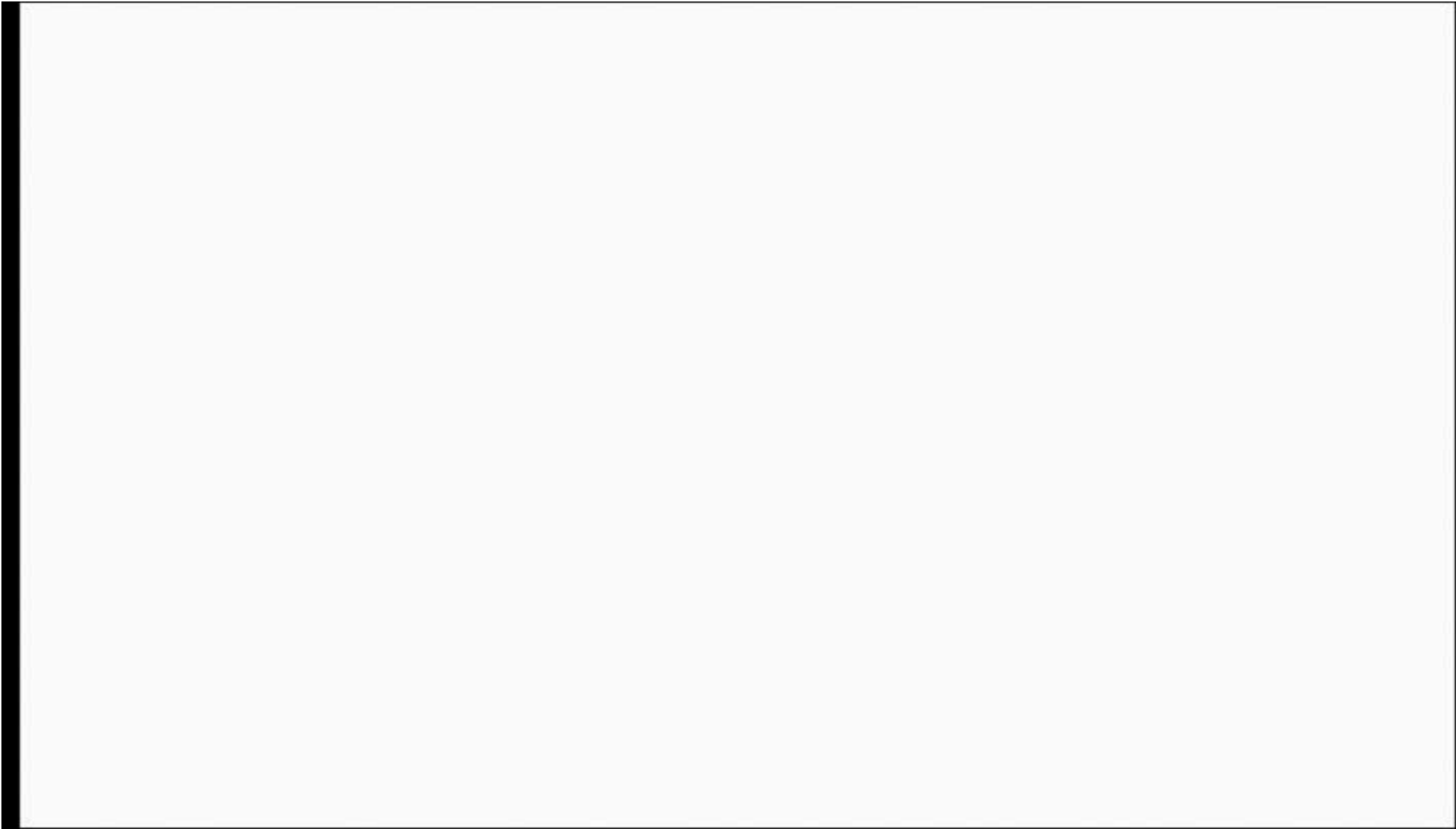


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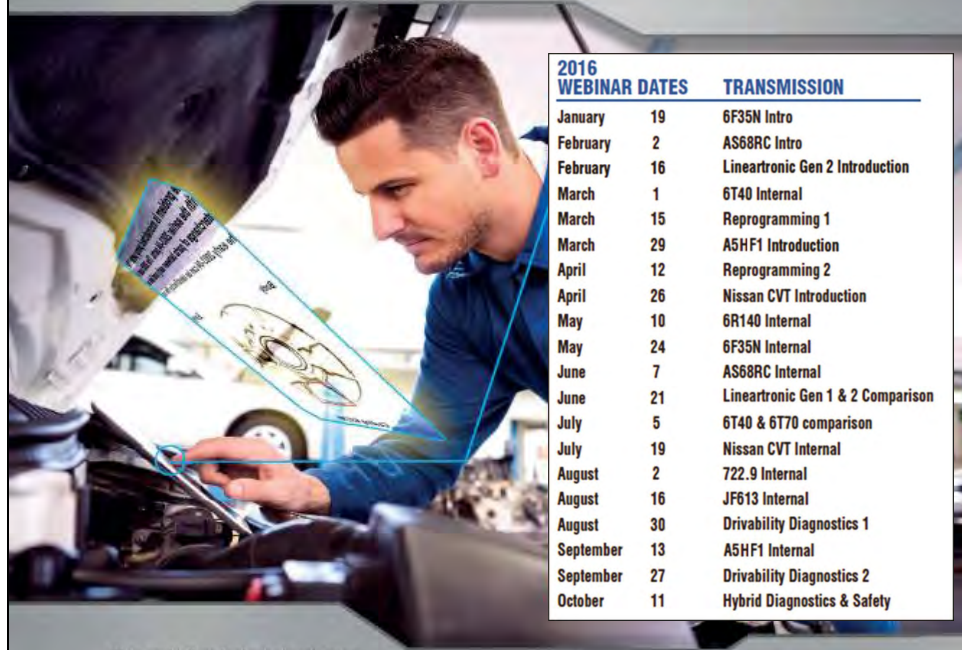


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January 19	6F35N Intro
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March 1	6T40 Internal
March 15	Reprogramming 1
March 29	A5HF1 Introduction
April 12	Reprogramming 2
April 26	Nissan CVT Introduction
May 10	6R140 Internal
May 24	6F35N Internal
June 7	AS68RC Internal
June 21	Lineartronic Gen 1 & 2 Comparison
July 5	6T40 & 6T70 comparison
July 19	Nissan CVT Internal
August 2	722.9 Internal
August 16	JF613 Internal
August 30	Drivability Diagnostics 1
September 13	A5HF1 Internal
September 27	Drivability Diagnostics 2
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Nissan/Jatco CVT Internal

RE0F10D



Presented by:
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ATRA Senior
Research Technician

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Introduction

Jatco/Nissan CVT (Early 1990's & Up)

CVT for small FWD vehicles F06A (RE0F06A) (this is the numeral 0 not the letter O on all CVT's)

CVT for small FWD vehicles JF009E (RE0F08A/B)

CVT for large FWD vehicles JF010E (RE0F09A/B)

CVT for medium FWD vehicles JF011E (RE0F10A/B / D no ratio control motor)

Jatco/Nissan CVT7 "Xtronic"

CVT with an auxiliary gearbox (2 speed) for mini and small FWD vehicles JF015E (RE0F11A)

CVT with an auxiliary gearbox (2 speed) for small (no mini) FWD vehicles JF020E

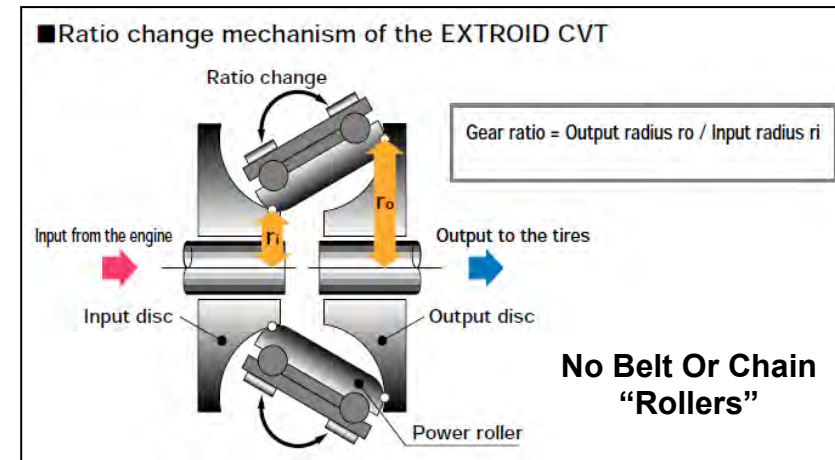
Jatco/Nissan CVT8

CVT for medium and large FWD vehicles JF016E/JF017E (RE0F10E/H/J w/chain)

CVT for Hybrid FWD vehicles JF018E/JF019E

Jatco/Nissan CVT RWD

CVT JR006E "Toroidal CVT" also referred to as "Extroid CVT"





Introduction

Nissan CVT Changes

U.S. Market	ENGINE	ROM	RCM	SOLENOIDS							
				LINE	TCC	TCC SELECT	SELECT	PRIMARY	SECONDARY	LOW BRAKE	H/R BRAKE
06A 1990-06	2.0L	0	X	WDR	X	0	0	0	0	0	0
08A 2007-09	1.8L	X	X	X	X	X	0	0	X	0	0
08B 2009-14		X	X	X	X	X	0	0	X	0	0
09A 2003-07	3.5L	X	X	X	X	X	0	0	X	0	0
09B 2007-14		X	X	X	X	X	0	0	X	0	0
10A 2007-09	2.0L 2.5L	X	X	X	X	X	0	0	X	0	0
10A 2010		X	X	X	X	X	0	0	X	0	0
10A 2011-12		X	X	X	X	X	0	0	X	0	0
10B 2012-16	1.6L	X	X	X	X	X	0	0	X	0	0
10D 2013	1.6L 2.5L 3.5L	0	0	X	X	0	X	X	X	0	0
10D 2014-16		0	0	X	X	0	X	X	X	0	0
10E 2013	3.5L	0	0	X	X	0	X	X	X	0	0
10E 2014-16		0	0	X	X	0	X	X	X	0	0
10H 2015-16	3.5L	0	0	X	X	0	X	X	X	0	0
10J 2015-16	3.5L	0	0	X	X	0	X	X	X	0	0
11A 2012-16	1.5L 1.6L 1.8L	X	0	X	X	0	0	X	0	X	X

ROM: Read Only Memory
RCM: Ratio Control Motor (Stepper Motor)
WDR: With Dropping Resistor in electrical circuit
H/R BRAKE: High & Reverse Brake Clutch Solenoid
HIGH CL: High Clutch Sensor/Switch
N C S/M: Not connected on some Sentra models
N/S WD: Not shown in any factory wire diagram
PNP: Park Neutral Position Sensor (Range Sensor)

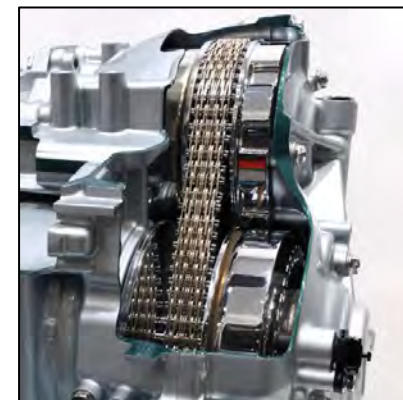


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Introduction



U.S. Market	ENGINE	PRESSURE SENSORS				SPEED SENSORS				PNP	B/C
		LINE	PRIMARY	SECONDARY	HIGH CL	PRIMARY	SECONDARY	INPUT	OUTPUT	Internal	
06A 1990-06	2.0L	X	0	0	0	X	X	0	0	0	Belt
08A 2007-09	1.8L	0	X	X	0	X	X	0	0	X	Belt
08B 2009-14		0	0	X	0	X	X	0	0	0	Belt
09A 2003-07	3.5L	0	X	X	0	X	X	0	0	X	Belt
09B 2007-14		0	X	X	0	X	X	0	0	X	Belt
10A 2007-09	2.0L 2.5L	0	X	X	0	X	X	0	0	0	Belt
10A 2010		0	N C SIM	X	0	X	X	0	0	0	Belt
10A 2011-12		0	0	X	0	X	X	0	0	0	Belt
10B 2012-16	1.6L	0	0	X	0	X	X	0	0	0	Belt
10D 2013	1.6L 2.5L 3.5L	0	X	X	0	X	X	X	0	0	Belt
10D 2014-16		0	X	X	0	X	0	X	X	0	Belt
10E 2013	3.5L	0	X	X	0	X	X	X	0	0	Belt
10E 2014-16		0	X	X	0	X	0	X	X	0	Chain
10H 2015-16	3.5L	0	X	X	0	X	0	X	X	0	Chain
10J 2015-16	3.5L	0	X	X	0	X	0	X	X	0	Chain
11A 2012-16	1.5L 1.6L 1.8L	0	0	X	N/S WD	X	X	0	X	0	Belt



REOF10E/H/J
Chain Driven





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Introduction

The Jatco/Nissan CVT RE0F09A/B seems to be the most popular on the ATRA tech line, although we are now starting to see more calls on the RE0F10A.

These units are very similar as with most Jatco CVT's, with some differences in the pulleys that we will cover in this webinar.

Certain differences you will need to be aware of during disassembly of the pulleys and the tools needed to make the job easier.

We will also cover some of the more common failures as well.

This webinar will also cover more of the internal components of the newest model CVT7 platform.

Parts are coming more available as we speak, but in the meantime we need to do what we did in the past for vehicles with transmissions that had hard to find parts.

Buying cores seems to be something the industry hasn't been doing as much as in the past.

As mentioned before several aftermarket suppliers are working with the manufacturers to obtain more internal hard parts.

More overhaul kits are becoming available as we speak.





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Pulley Assemblies

The Pulley Assemblies are the most important and often overlooked internal component on CVT's.

These pulleys need to be taken apart to check the seals and to clean any debris from other failed internal or external components such as the Torque Converter.

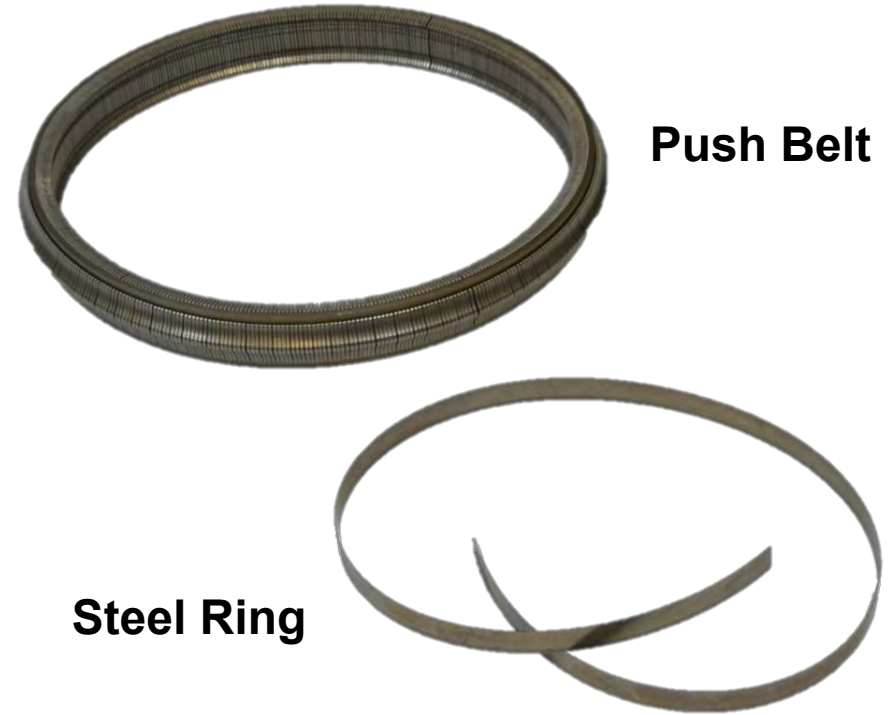
It's not uncommon to have the Torque Converter or Belt/Chain fail causing excessive debris without causing any damage to pulleys or other internal components.

The pulleys may be reused in such cases.

Note: The pulley chains can break as well just not seen as often.

At times we have seen the pump chain breaking too.

Here is an example of only one Steel Ring failing.



Push Belt

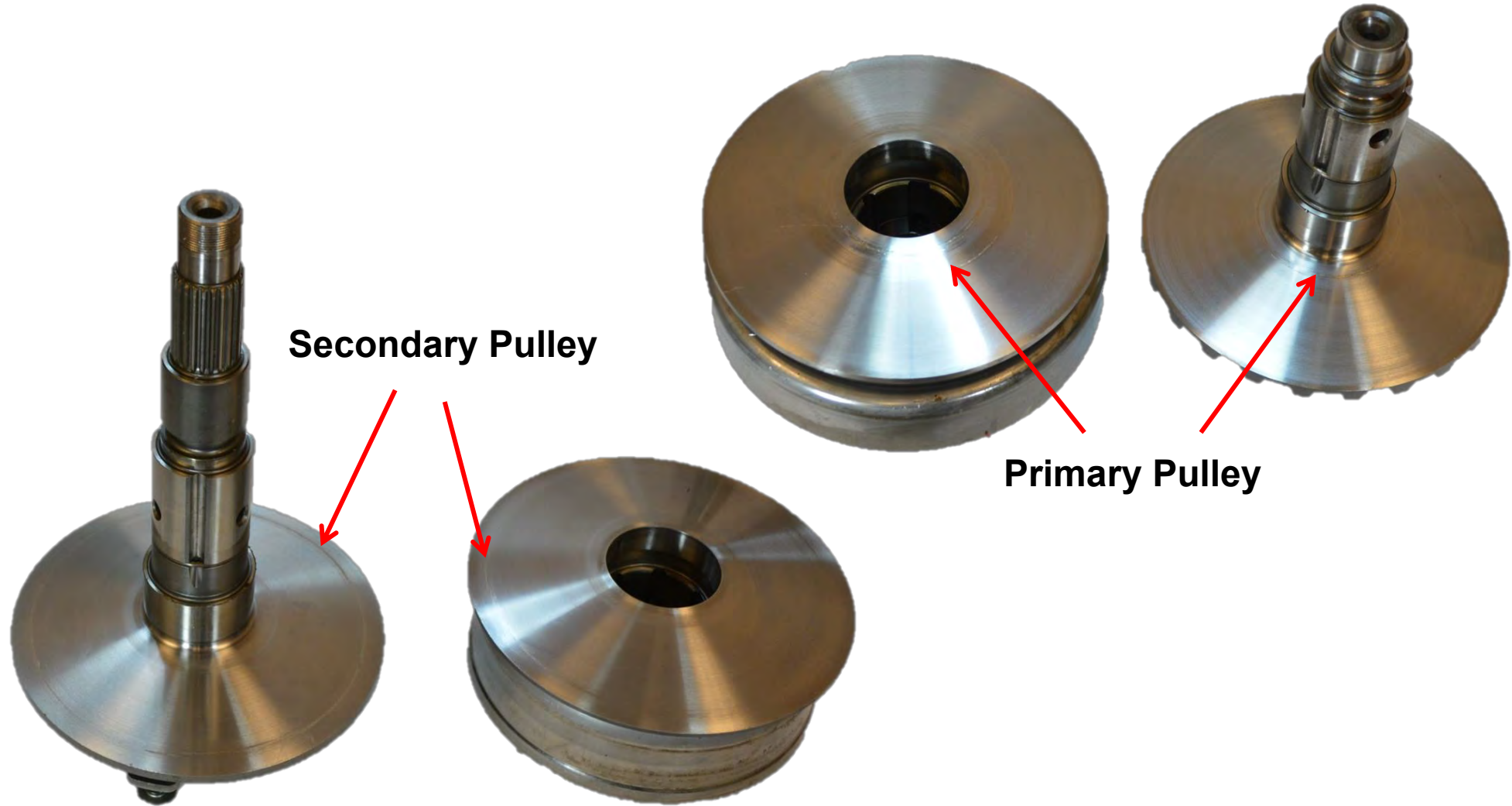
Steel Ring





Pulley Assemblies

The pulleys sustained minimal damage and were reusable.





Pulley Assemblies

This belt came completely apart on this Mini Cooper VT1F CVT without any damage to the pulleys.

The belt is basically the same as some Nissan/Jatco CVTs.



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Pulley Assembly Tools

There are not too many tools needed to disassemble the pulleys that we don't already have in our tool boxes to work on other transmissions.

The only tool necessary that will work on almost all CVT transmissions is a 2 jaw gear puller.

There is also a 3 jaw puller, but the 3rd jaw will not fit in some areas.

This tool can be found on the internet for around \$200-\$300 in some cases.

This tool will work on all Nissan/Jatco CVT units as well as other CVT's.

2 Jaw Puller



Found on eBay
for **\$180.00**
Tool #11054



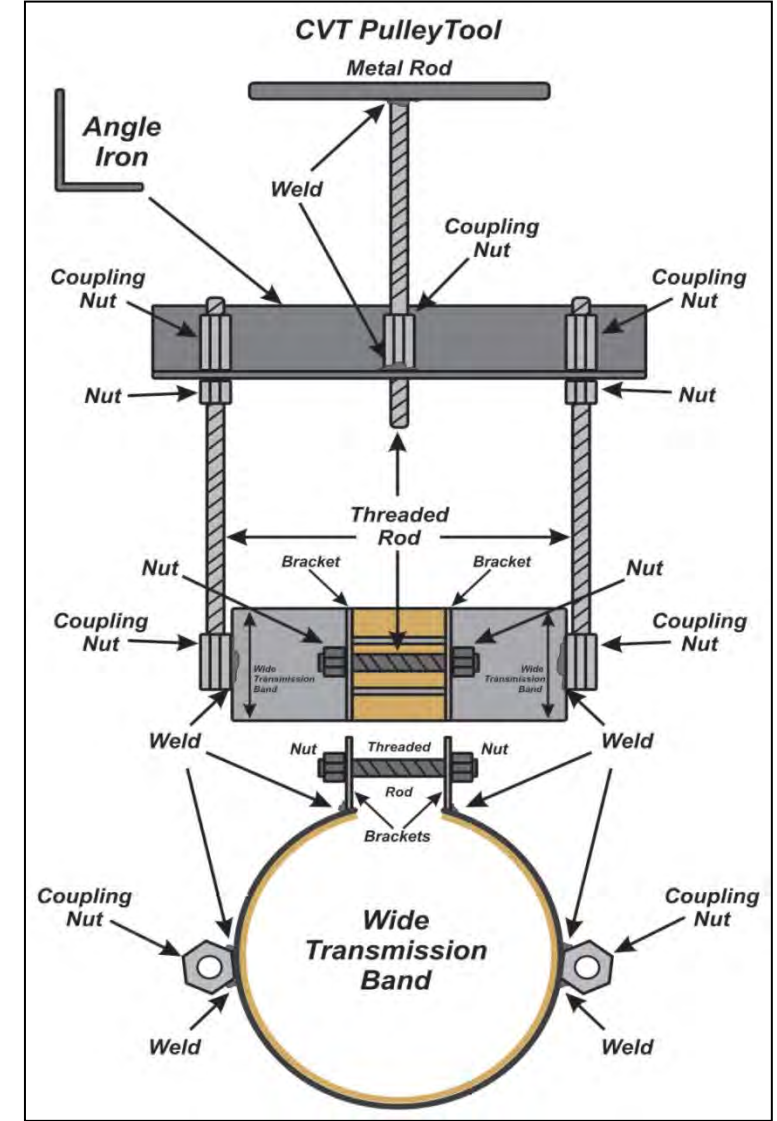
Pulley Assembly Tools



Factory Pullers



Pulley Assembly Tools





Pulley Assembly Removal

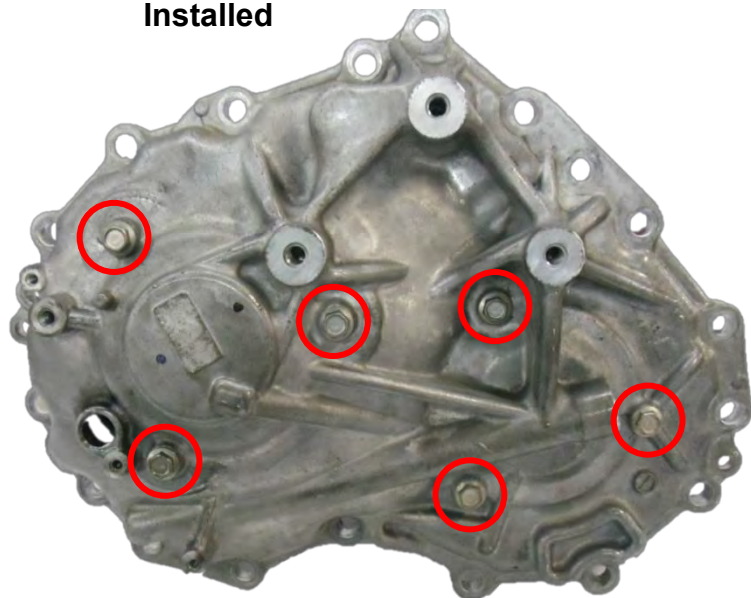
To remove the Pulleys from any Jatco/Nissan CVT simply remove the rear cover. The Pulley assemblies are attached to the rear cover with retainer bolts.

Evenly pry the cover and pulleys out of the case.

Always use at least two Nylon Tie Wraps on the Push Belt before removing the belt from the pulleys.



Retainer Bolts
Installed



RE0F10D



Nylon Ties



Push Belt





Pulley Assemblies

All the Nissan/Jatco Secondary and Primary pulleys are very similar with a few differences in components. The Secondary Pulleys will usually have a strong spring and some Primary pulleys also, just not as strong.



Secondary Pulleys

RE0F09B

RE0F10D

RE0F06A





Pulley Disassembly Secondary

Some Secondary Pulleys will have a very strong spring. You must be careful when disassembling.

There are some models where the Primary Pulley also has a spring (larger engines). Usually not as strong as the Secondary Pulley spring.

The pulleys primarily come apart the same but there are some differences you need to be aware of.

RE0F09A example.

Remove the Retainer Nut, (left hand thread) with the 2 Jaw Puller and a Gear Puller; remove the Idler & Park Gear

Retainer Nut (left hand thread)



Idler Gear



Park Gear



RE0F09B

2 Jaw Puller

Gear Puller



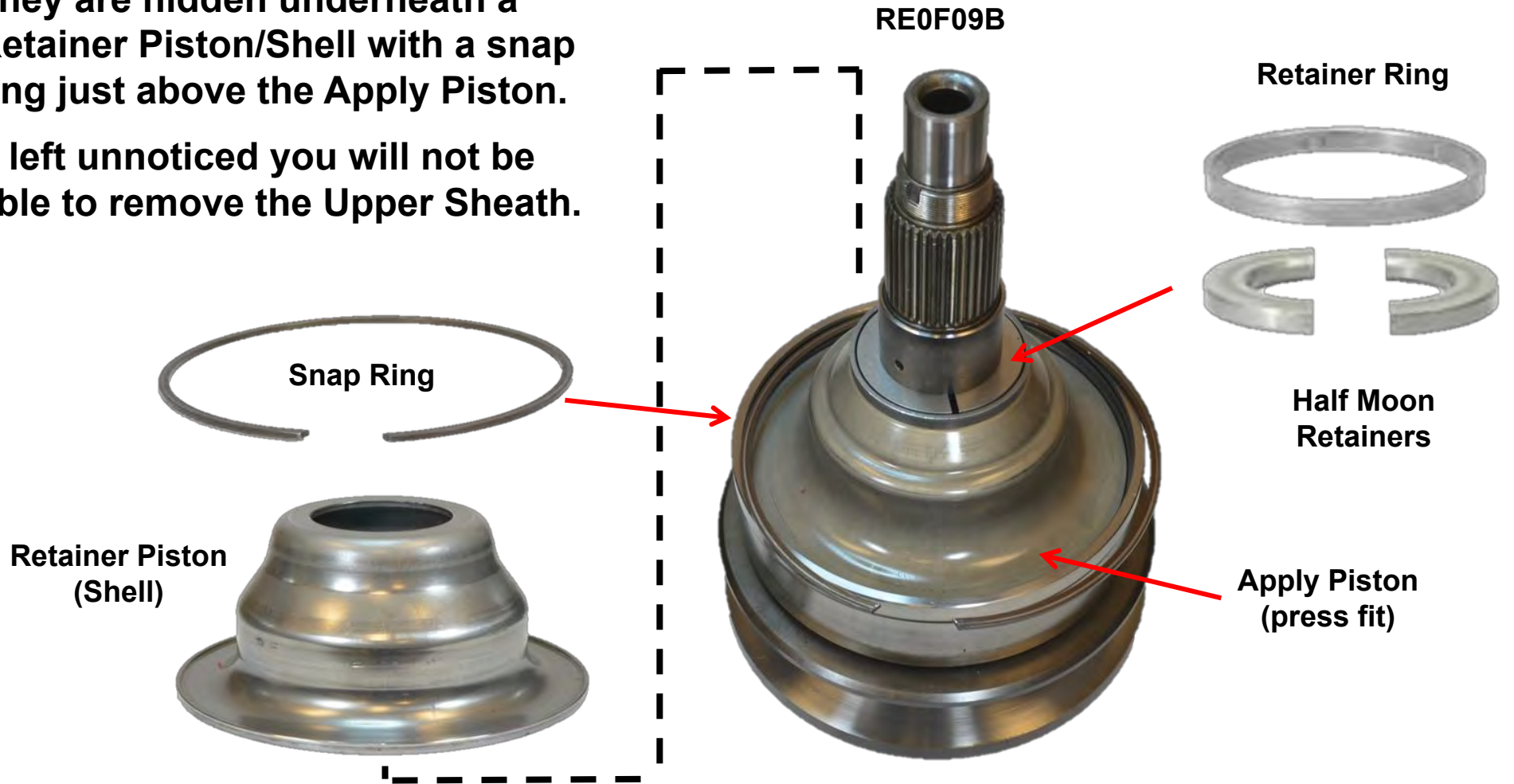


Pulley Disassembly Secondary

Be aware that some pulleys may have some Half Moon Retainers just above the Apply Piston not found in all units.

They are hidden underneath a Retainer Piston/Shell with a snap ring just above the Apply Piston.

If left unnoticed you will not be able to remove the Upper Sheath.





Pulley Disassembly Secondary

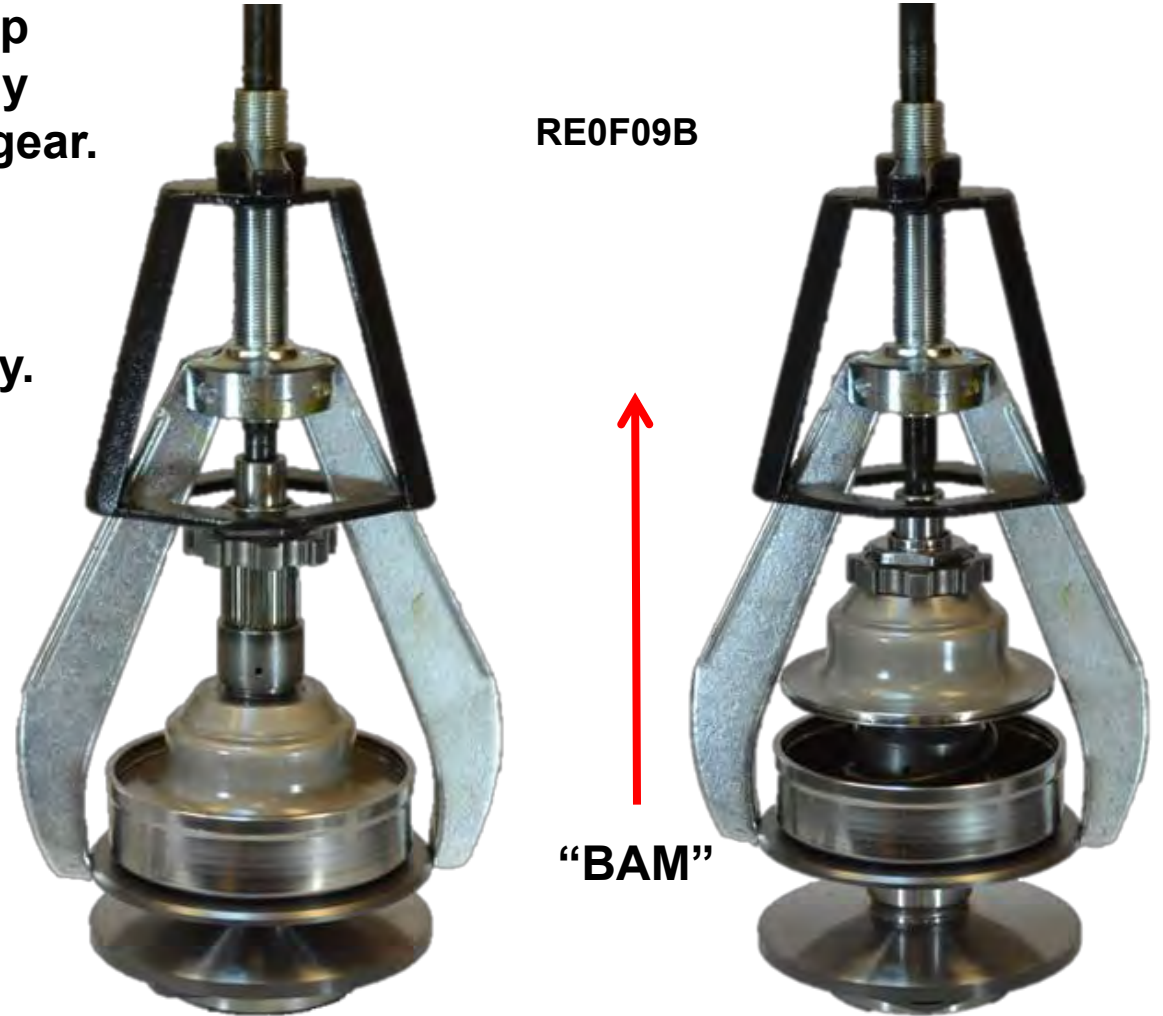
After removing the Retainer Piston/Shell, Half Moon Retainers and Snap Ring; place the Park Gear and Retainer Nut (left hand thread) back onto the pulley.

Now with the two jaw puller pull up on the upper sheath until the apply piston pops up and hits the park gear.

It will be quite a pop due to the strong spring.

Now your done, it's apart that easy.

Just use a press when going back together.



Retainer Nut
(left hand thread)

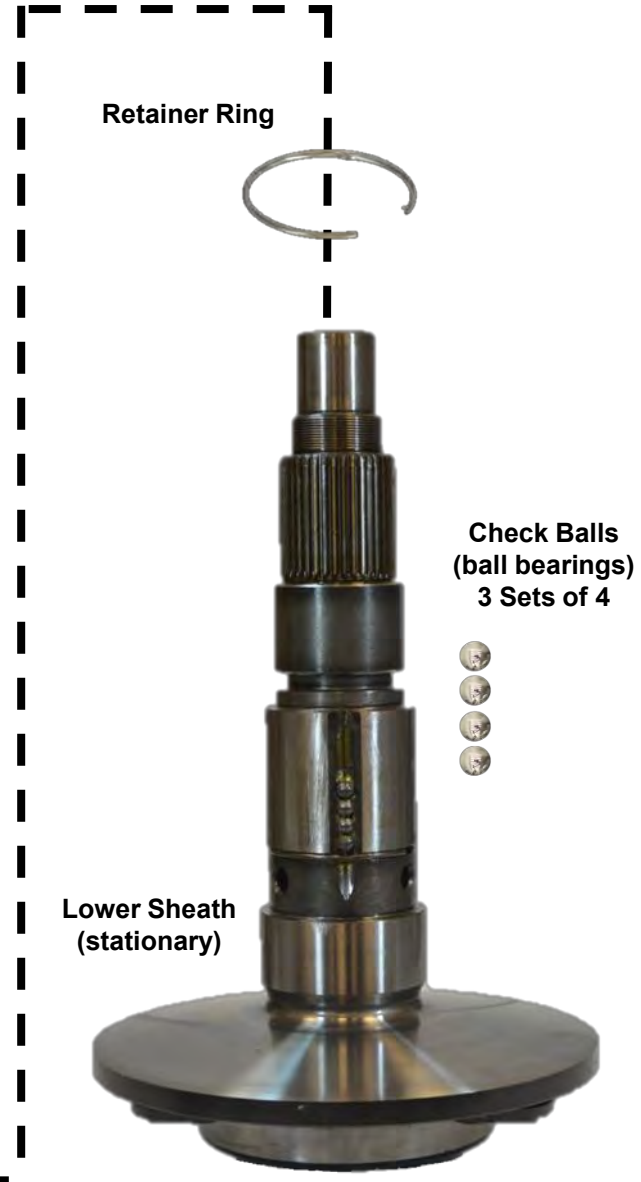
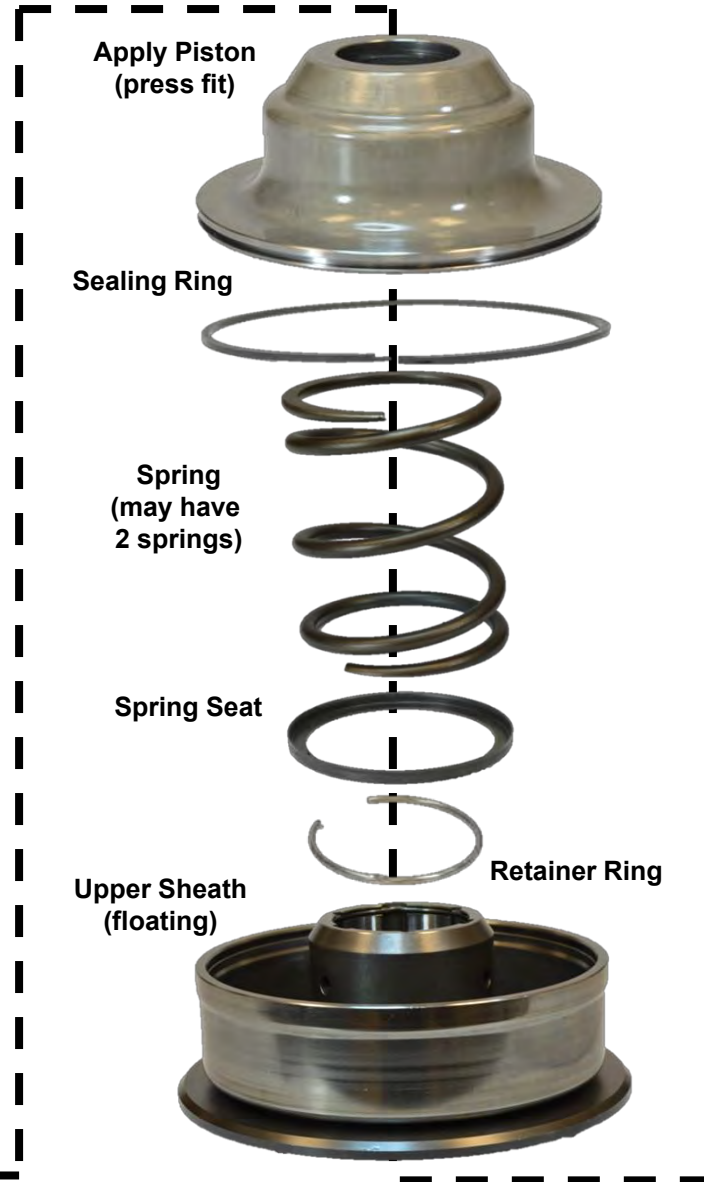


Park Gear





RE0F09B Secondary Pulley





Pulley Disassembly Primary

Here is an example of a typical Primary Pulley assembly.

The Primary Pulley shown here is from an RE0F09B with a Return Spring.

After removing the Retainer Nut (right hand thread) use a 3 Jaw Puller to remove the Bearing and Pulley Retainer.



RE0F09B

Retainer Nut
(right hand thread)



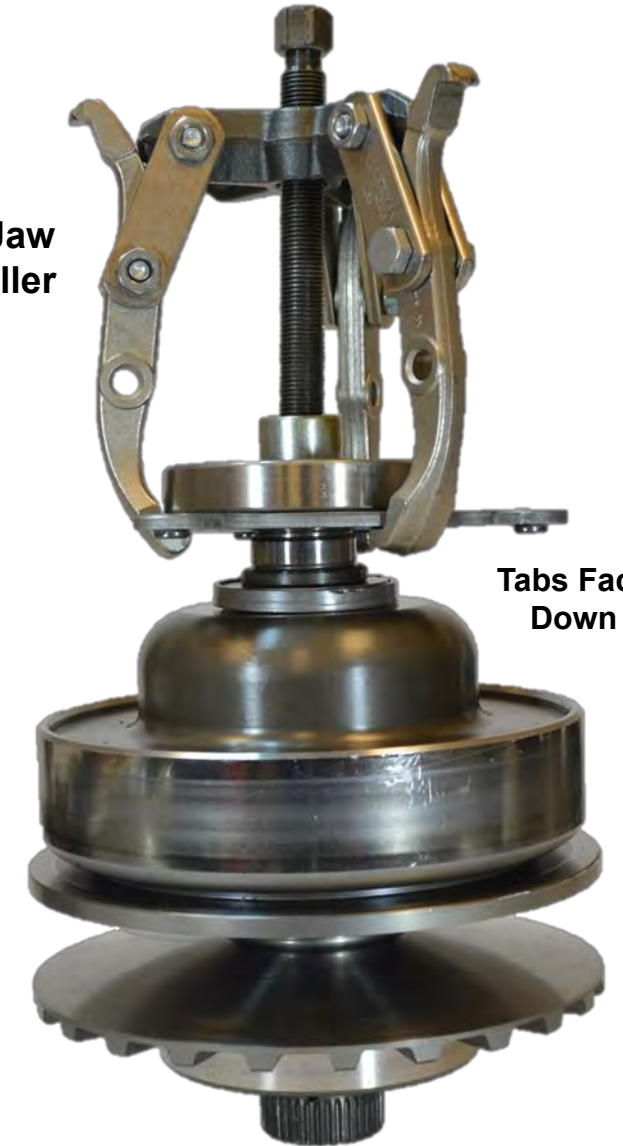
Bearing



Pulley Retainer



3 Jaw Puller



Tabs Face Down

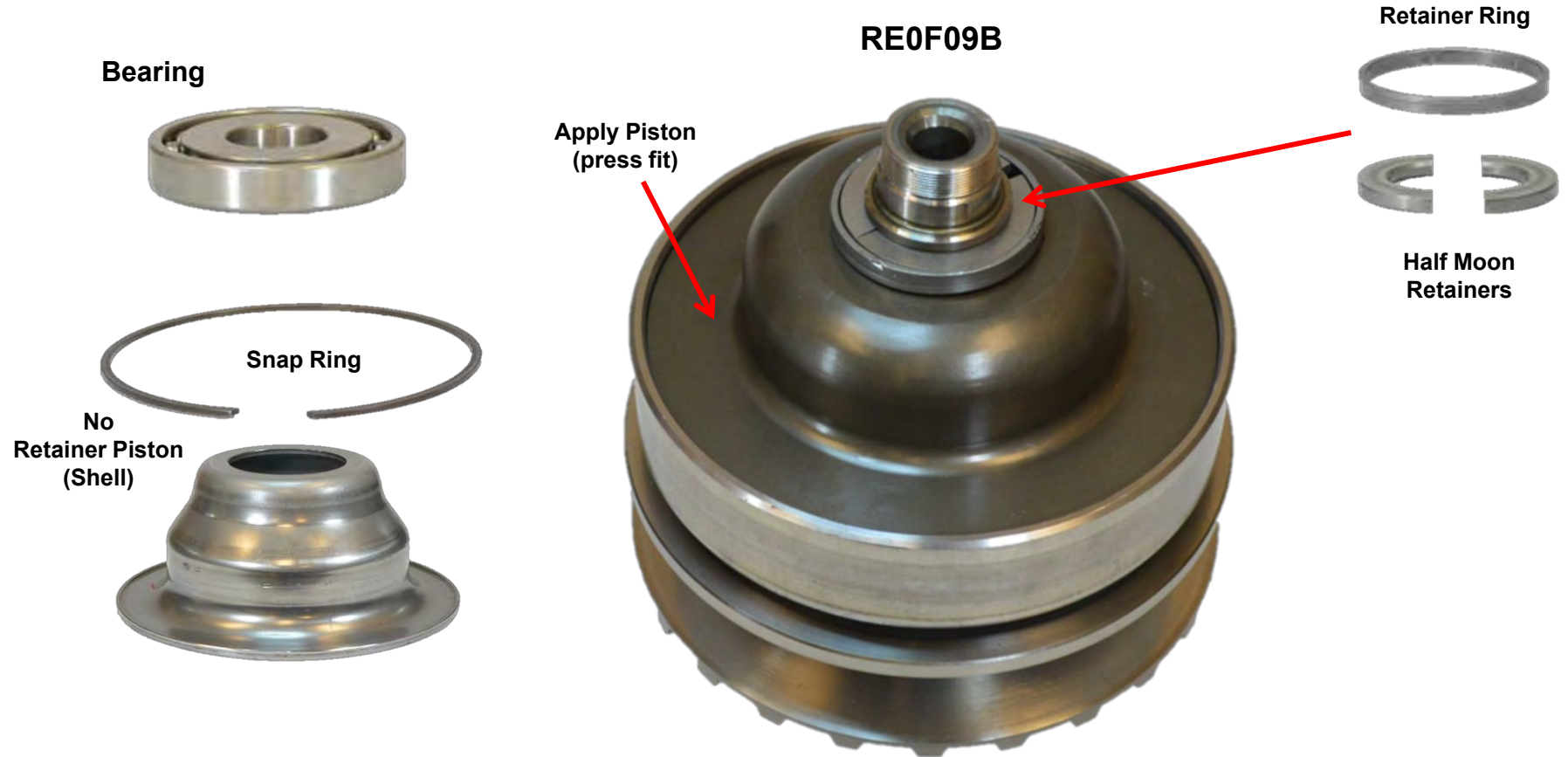




Pulley Disassembly Primary

There is no Retainer Piston or Snap Ring, the Half Moon Retainers are kept in place by the Bearing.

The Apply Piston just like the Secondary Pulley is a press fit.





Pulley Disassembly Primary

The procedure to disassemble the Primary Pulley is the same as the Secondary Pulley.

After removing the Half Moon Retainers, re-install the Retainer Nut and using the 2 Jaw Puller tool pull up until the Apply Piston pops up.

This one will not spring up as abruptly as the Secondary Pulley, the Spring (not found in all units) is weaker.



RE0F09B Retainer Nut (right hand thread)



Retainer Ring



Half Moon Retainers

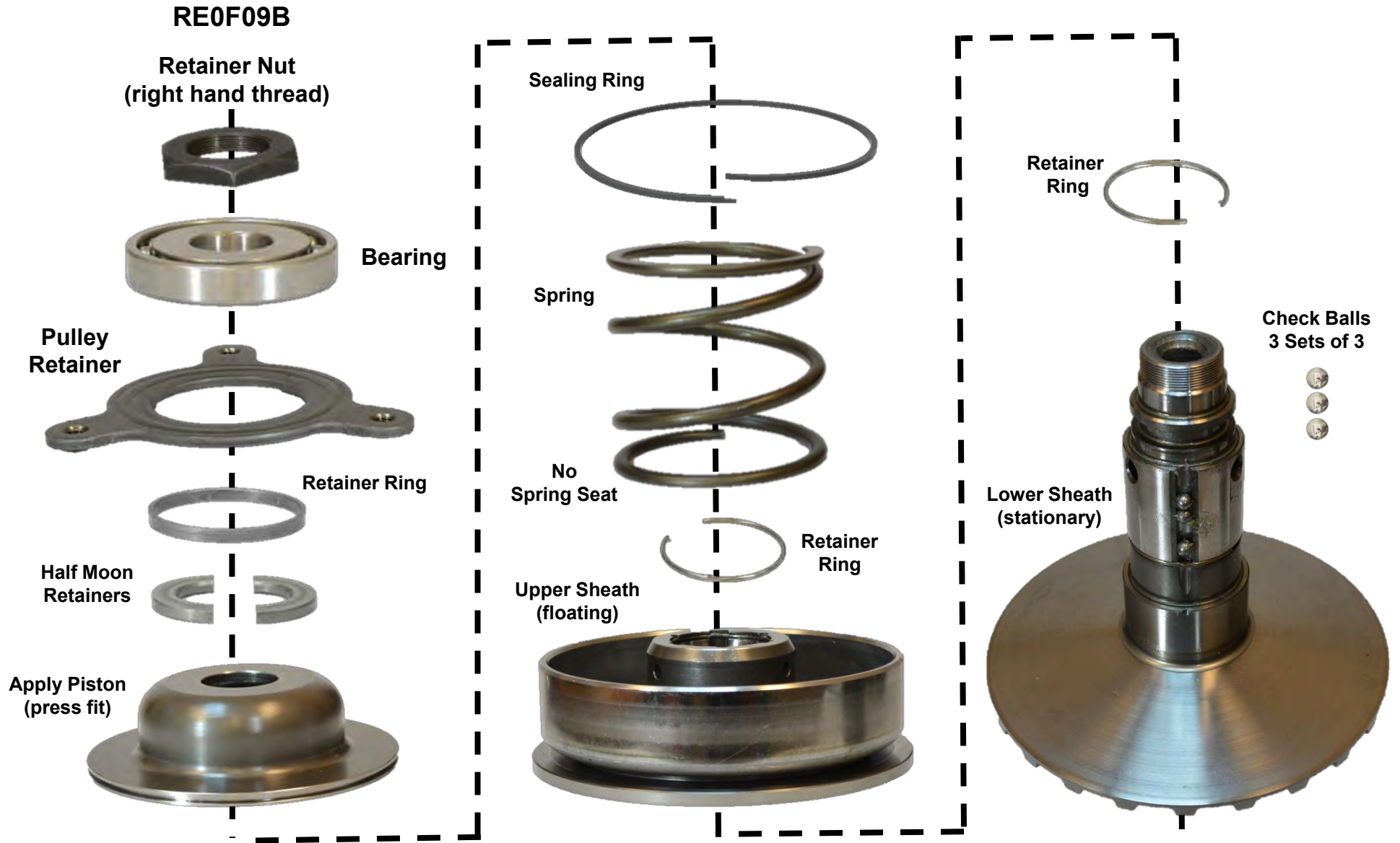


“DING”





RE0F09B Primary Pulley





Pulley Assembly Comparisons

Some models without the half moon retainers have an extended sleeve on one single Apply Piston (no retainer piston/shell).



RE0F09B

RE0F10A

Retainer Ring



Single Apply Piston
(no retainer piston)

Extended
Sleeve

Half Moon
Retainers



Apply Piston
(press fit)





Pulley Assembly Comparisons

Other models will use a roller bearing and square retainer instead of check balls with retainer rings.



Single Roller Bearing With A Square Retainer



There are 3 roller bearings without retainers on the RE0F10D Secondary Pulley

RE0F10D





Pulley Assembly Comparisons

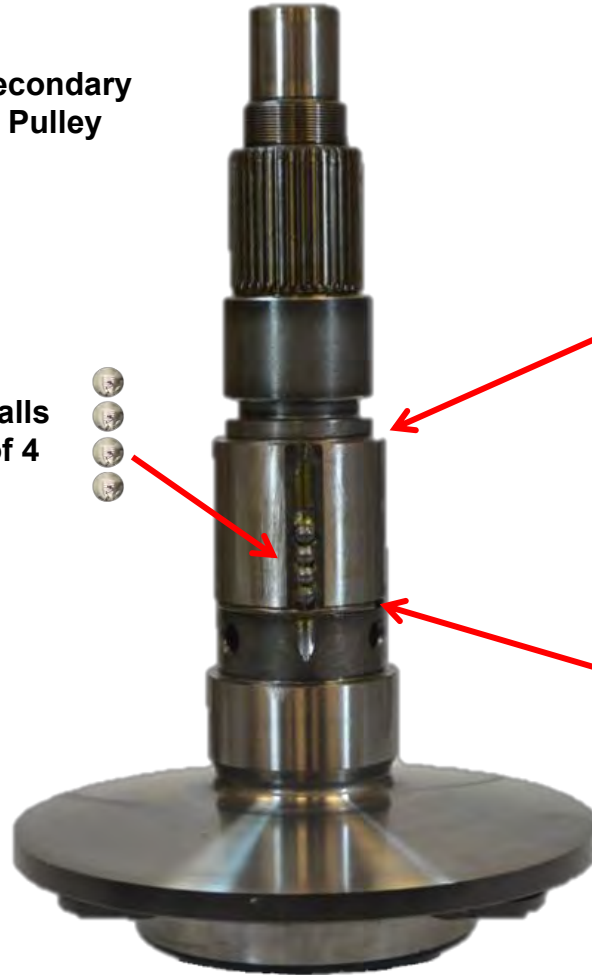
Some Pulleys may have only 1 set of 3 roller bearings without the square retainers. They will have the same type retainer rings used in earlier models.



RE0F09B

Secondary Pulley

Check Balls
3 Sets of 4



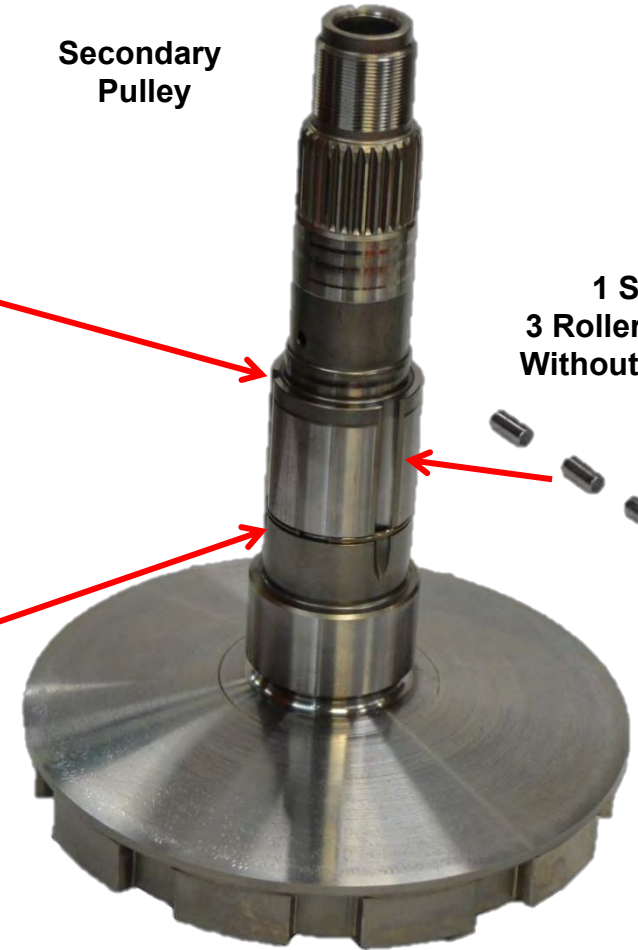
RE0F10D

Secondary Pulley

1 Set Of
3 Roller Bearings
Without Retainers



Retainer Ring

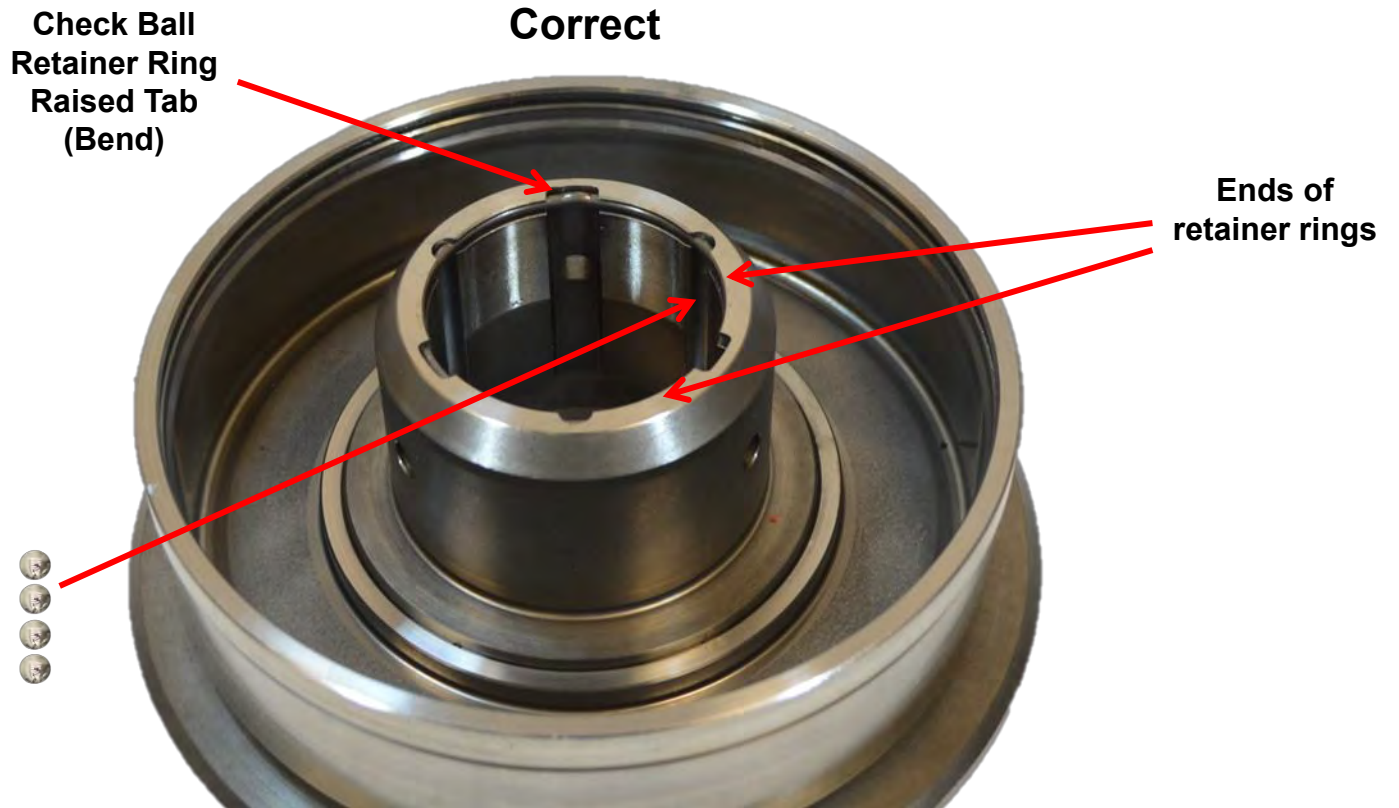




Pulley Assembly Precaution

The raised tab (bend) on the check ball retainer ring must be placed into one of the square grooves in the Primary and Secondary Pulley as shown below.

If not placed into one of the square grooves, one of the round grooves will be left open and allow the check balls to fall out of the pulley (shown on next slide).





Pulley Assembly Precaution

As you can see here the bend in the retainer ring was placed at one of the round grooves leaving one of the other round grooves open without retaining the check balls.

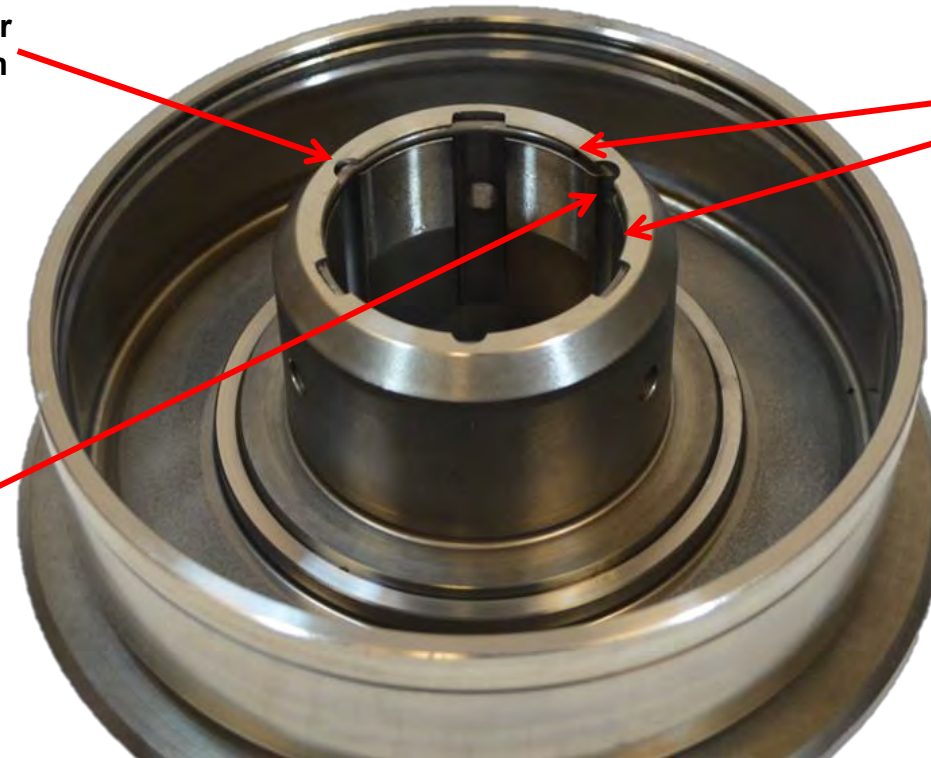


Wrong

Single Roller Bearing With A Square Retainer

Ends of retainer rings

Left Open No Retainer Ring



This is another reason to disassembly the pulleys to check for damage to the check balls and the groove.





RE0F11A Pulley Assemblies

Let's look at the latest JF015E Jatco CVT (RE0F11A) pulleys compared to the earlier models. The pulley assemblies (Variator) are located above the area of the case that holds oil.

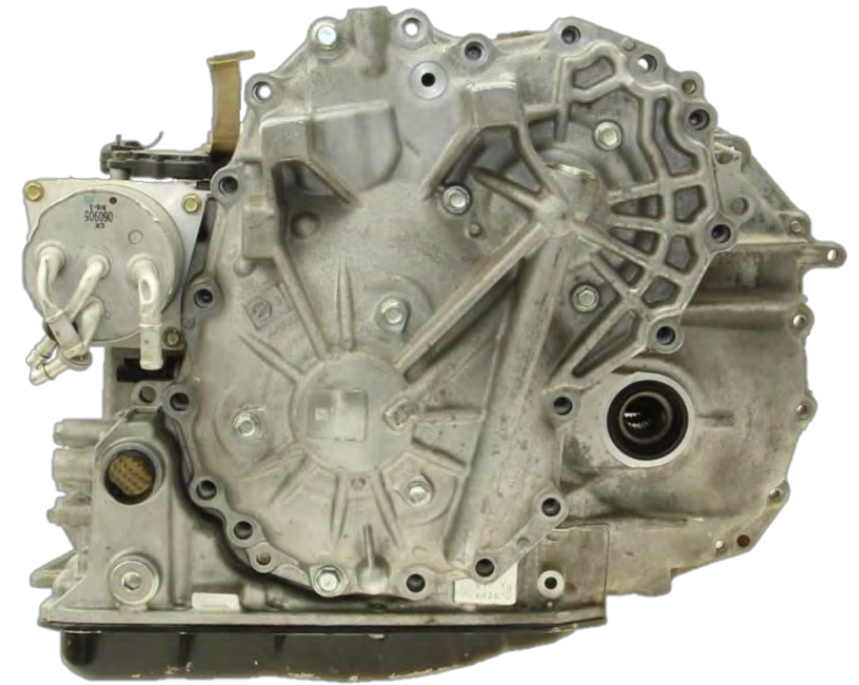
This was designed for less frictional drag on smaller engine vehicles and to help prevent aeration of the fluid.



RE0F11A



RE0F10A

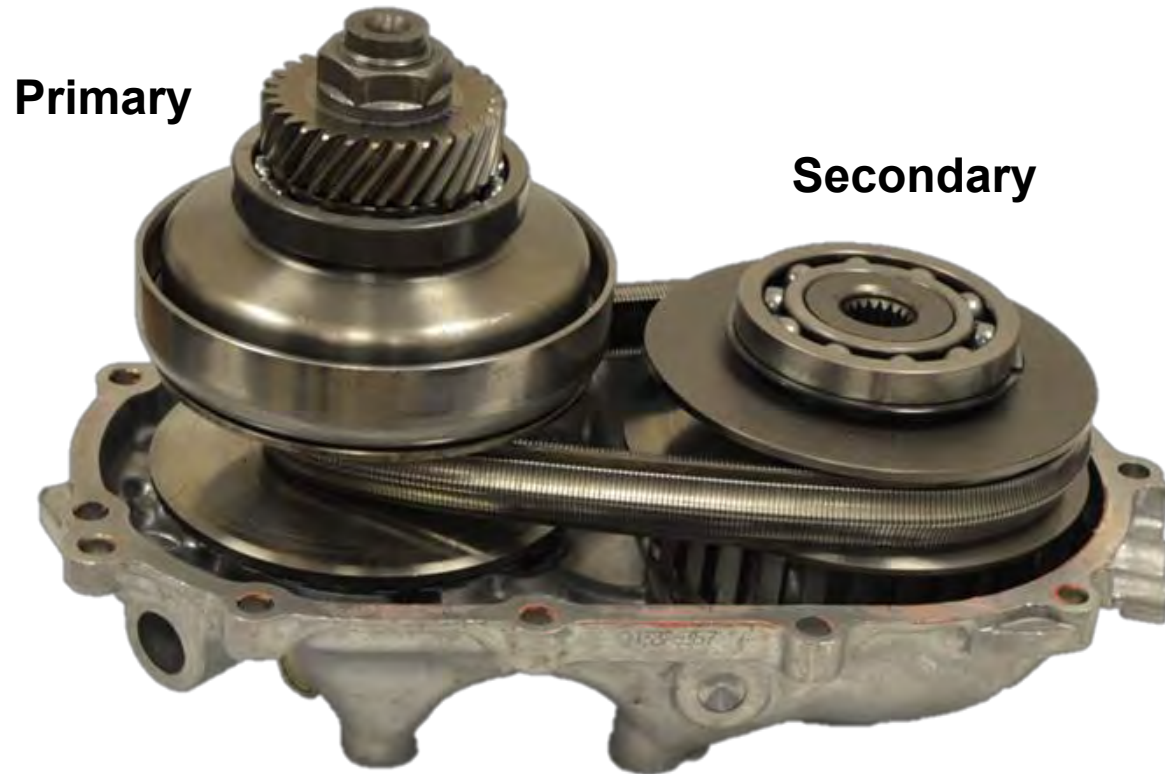




RE0F11A Pulley Assemblies

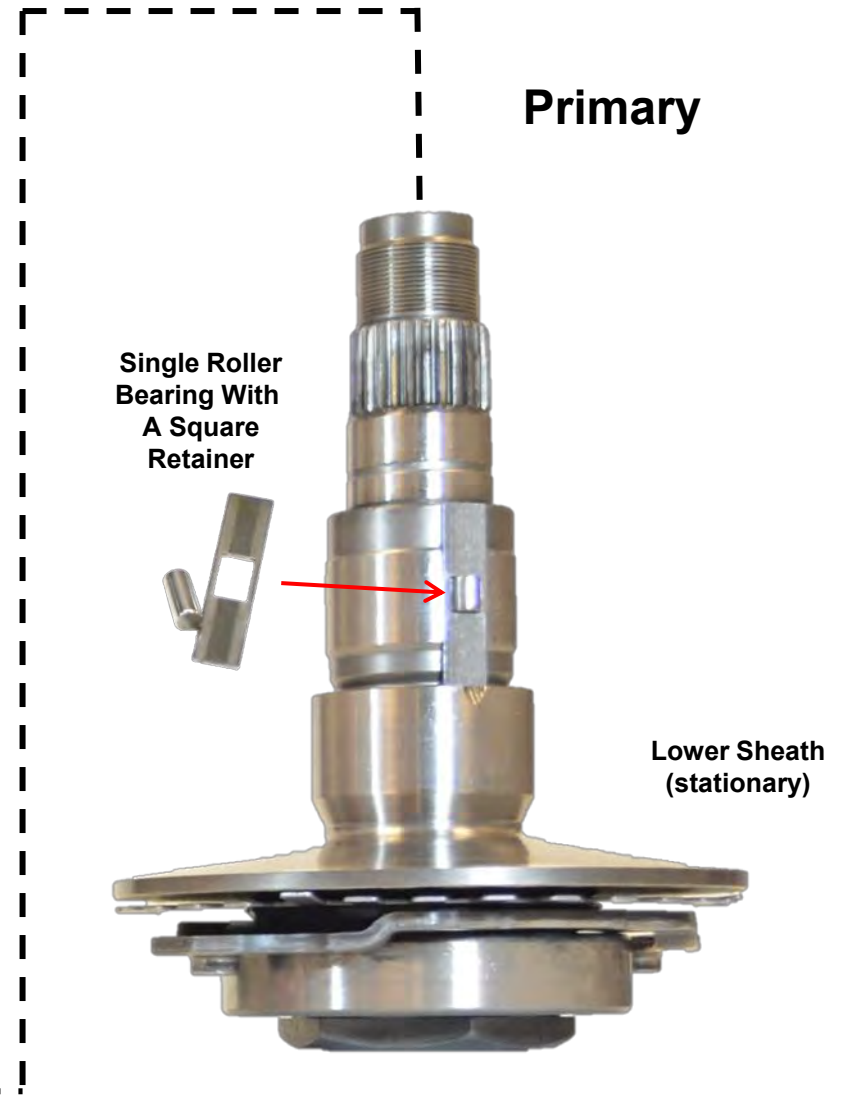
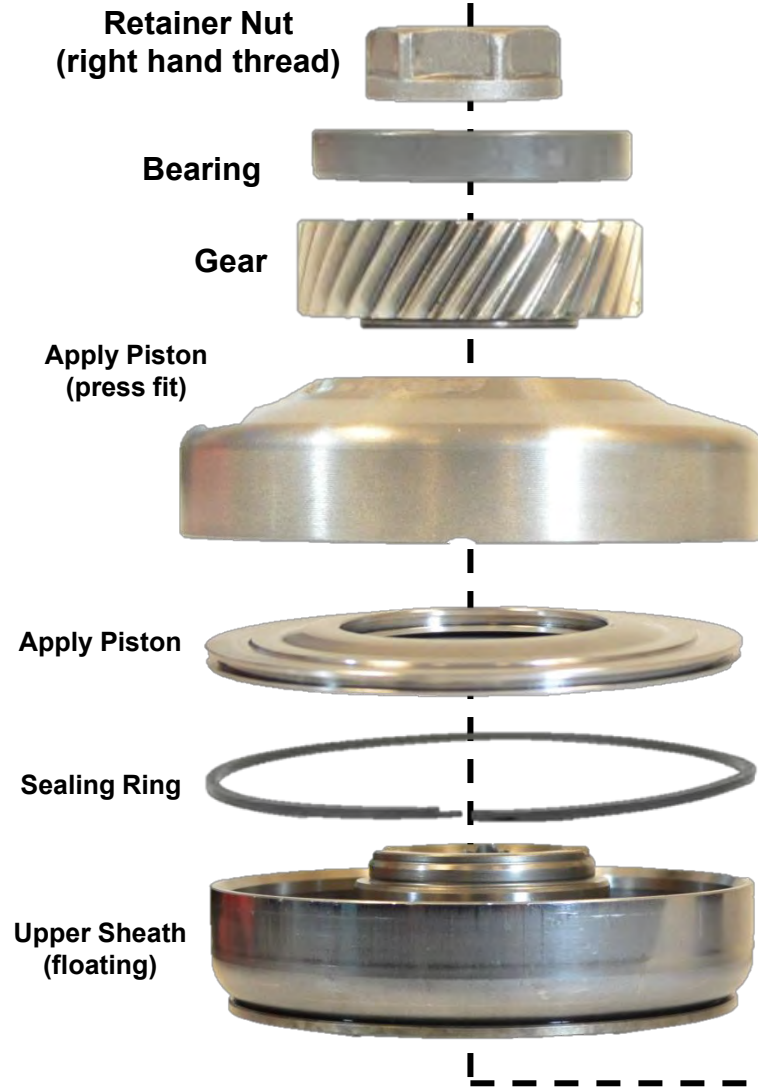
Unlike the other Jatco CVT's the Primary Pulley is taller and has the drive gear attached. The Secondary Pulley is shorter with no gear the opposite of what we've seen previously.

Keep in mind this CVT has the clutches in front of the Secondary pulley not the Primary, which will be covered later in the presentation.

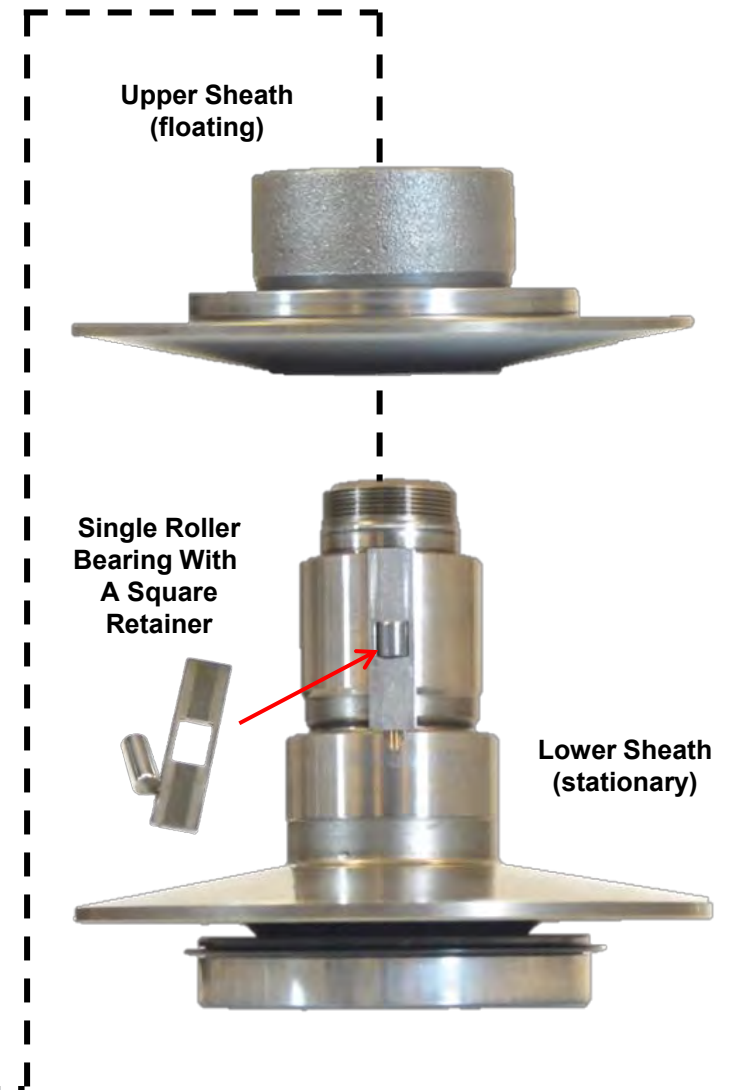
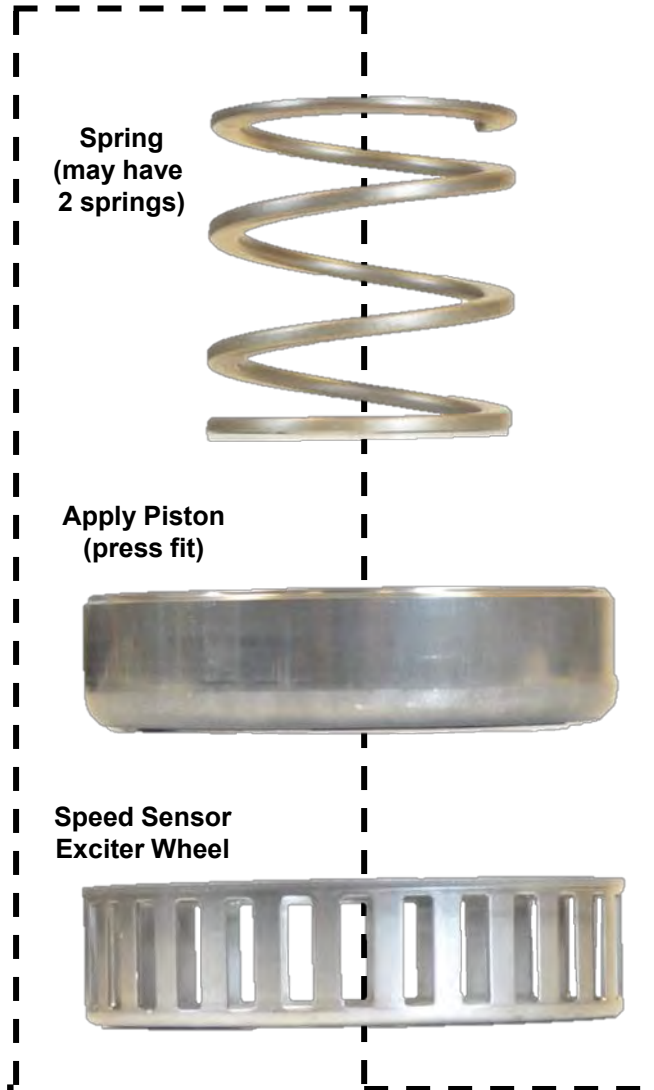
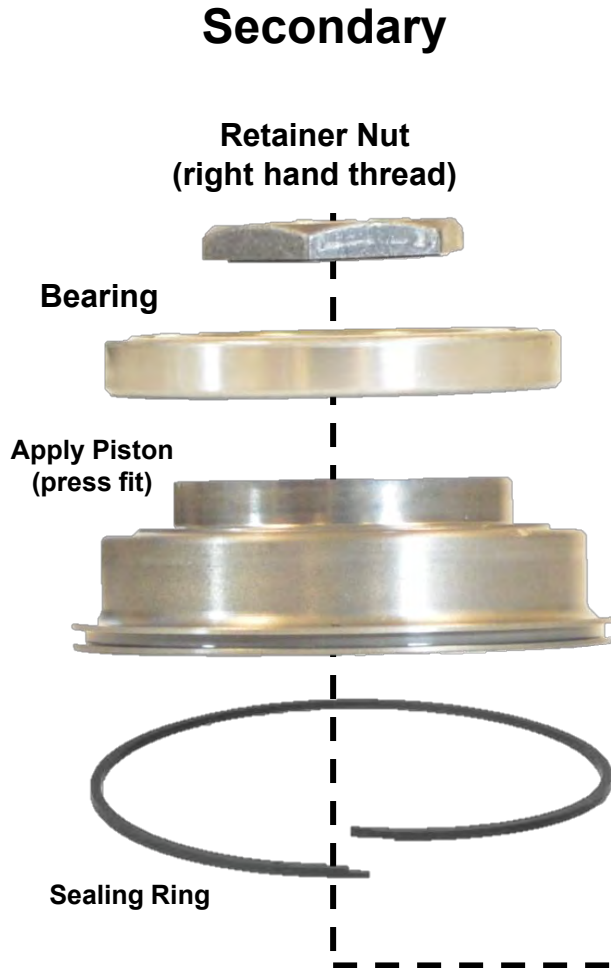




RE0F11A Pulley Assemblies Primary



RE0F11A Pulley Assemblies Secondary





Alternative Primary Pulley Dis-assembly

Since there is no spring on this Primary Pulley (some have a spring), you can take the pulley apart by simply tapping it on something solid (cement floor) to separate it.

The area just above the nut has no threads to damage doing it this way.

The Secondary Pulley has one or two strong springs, so it's still best to use the puller tool with or without the re-installing the nut.

Retainer Nut
(right hand thread)



Bearing



Gear



Primary



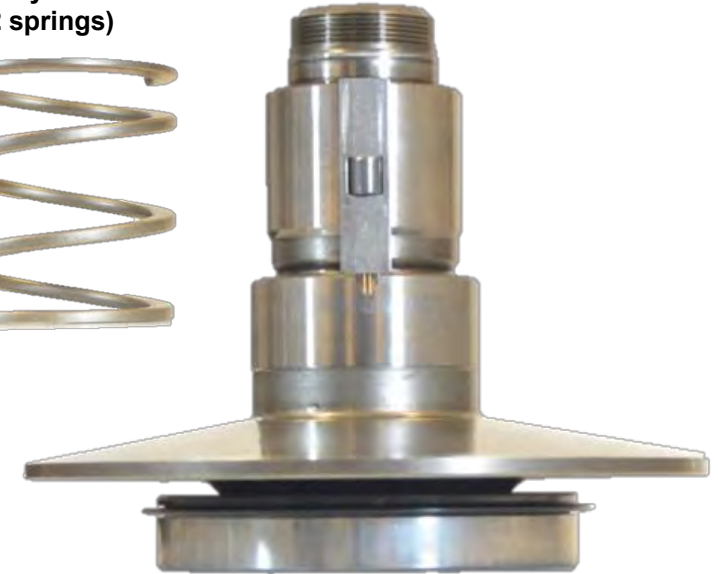
No Threads

RE0F11A (JF015E)

Spring
(may have
2 springs)



Secondary



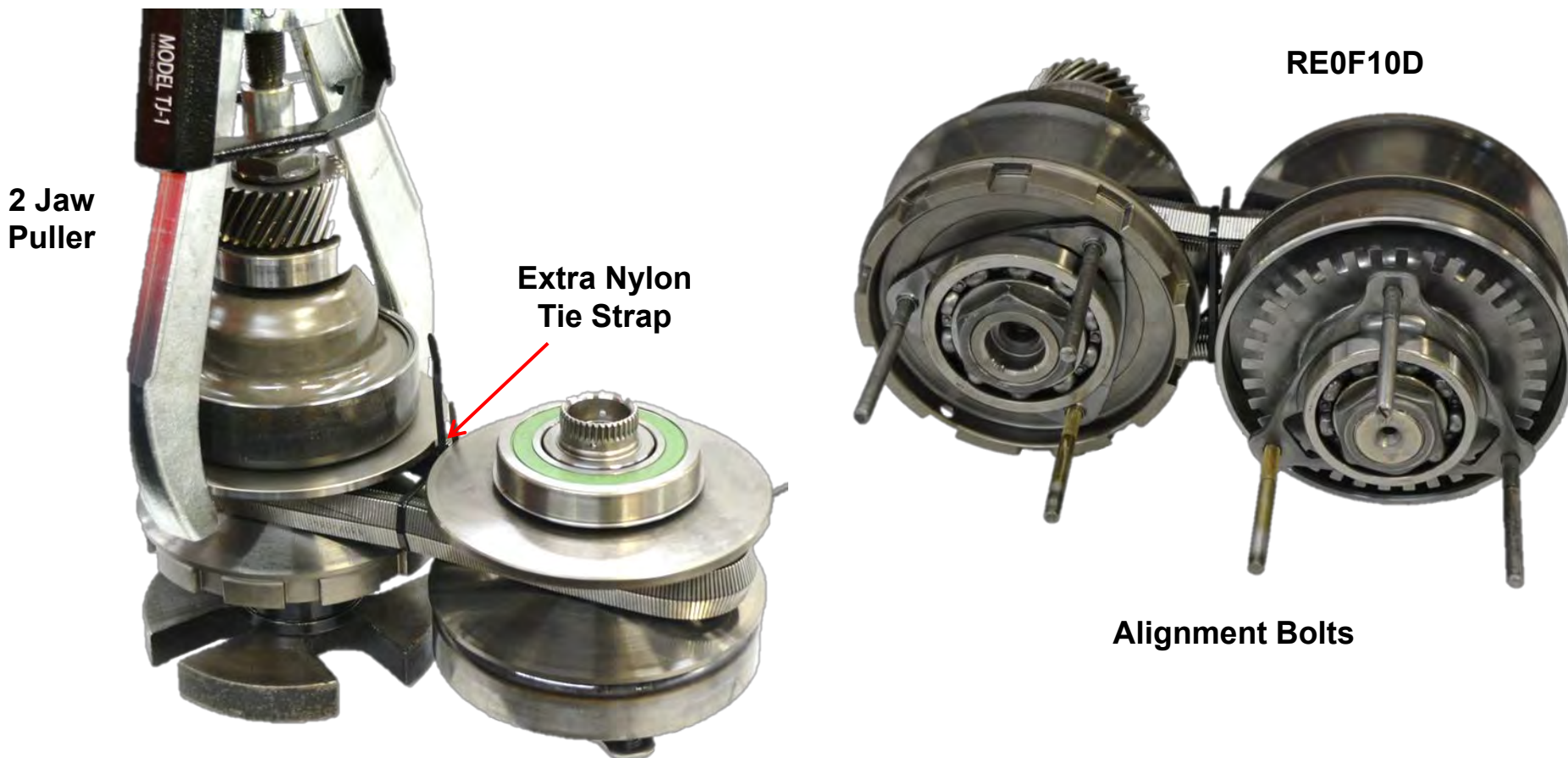


Pulley Assemblies Installed

Using the 2 jaw puller to compress the Secondary Pulley Spring wrap another nylon tie strap across the entire belt. This will keep the Secondary Pulley Spring compressed.

It is now possible to move either pulley during installation into the rear cover without difficulty.

Install some alignment bolts with the head ground off before installing the pulley assemblies into the rear cover.





Pulley Assemblies Installed

Once installed into the rear cover with the retainer bolts in place.

All the nylon ties can be cut allowing the Secondary Pulley Spring to decompress putting tension back onto the Push Belt.

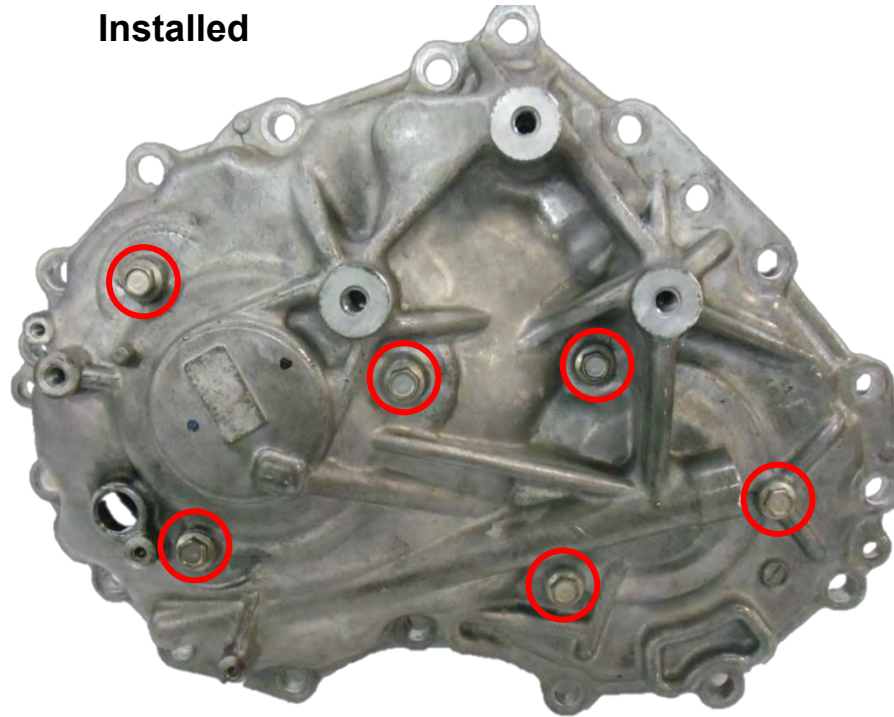


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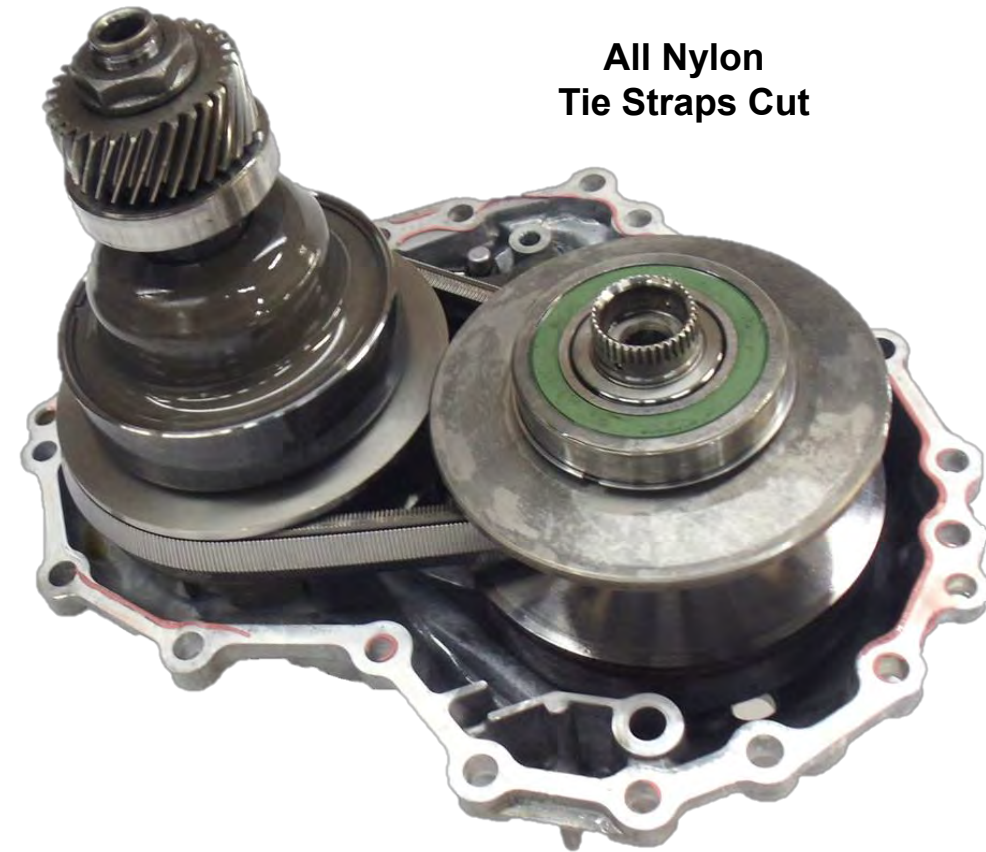


RE0F10D

Retainer Bolts Installed



All Nylon Tie Straps Cut



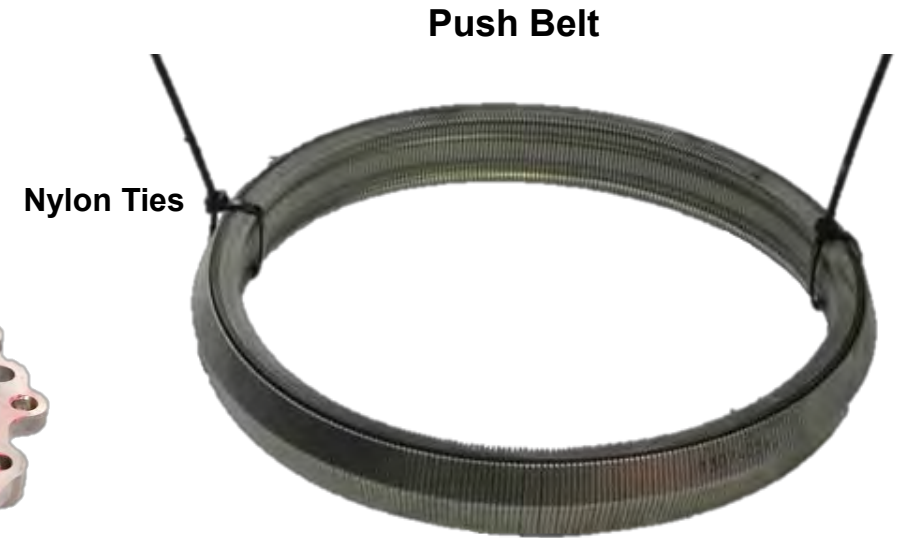
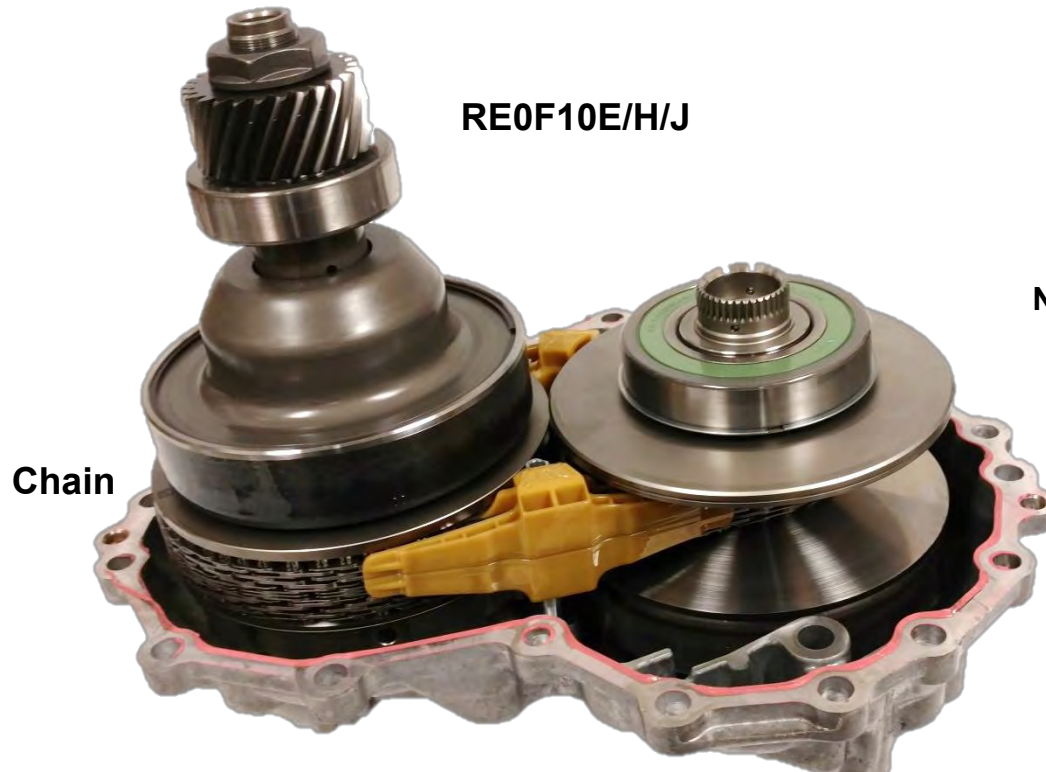


Chain Driven Pulleys

The RE0F10E/H/J use a chain with plastic guides very similar to the Subaru Lineartronic, so it's not necessary to use any tie wraps when removing the chain. It won't come apart like the Push Belt.



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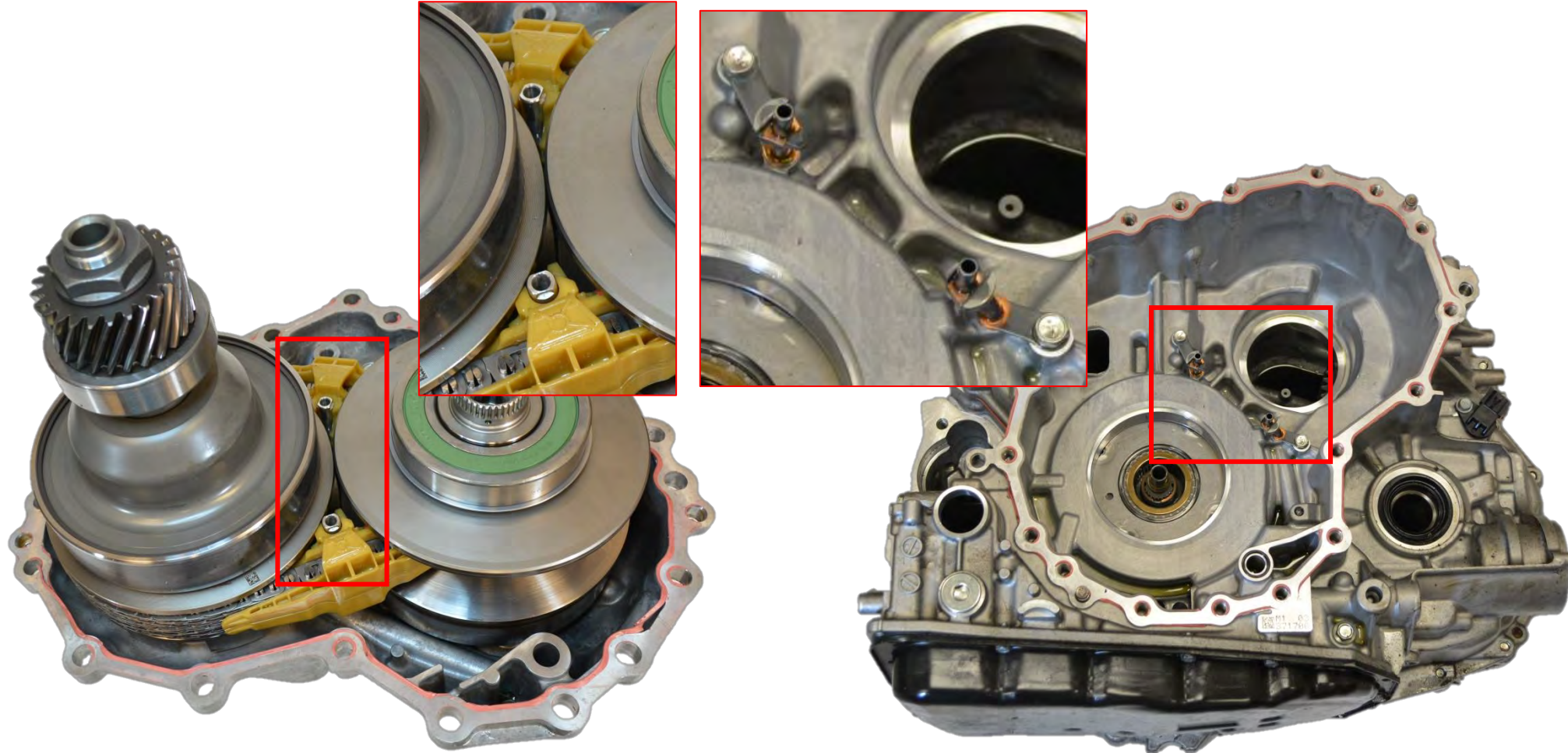




Chain Driven Pulleys

A closer look shows there are two aluminum lube chain guide pins/tubes sitting in the chain guides that fit onto two steel feed tubes inside the case.

Installing these pulleys into the cover first will not work.

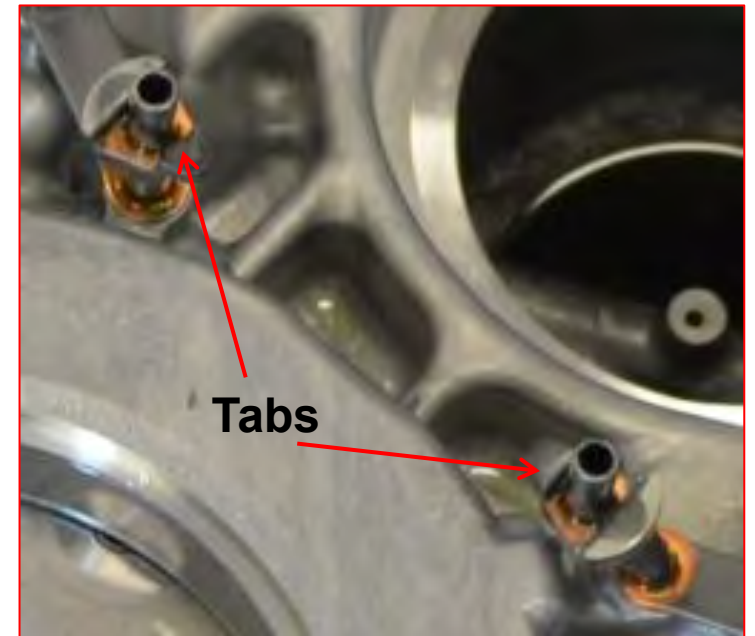
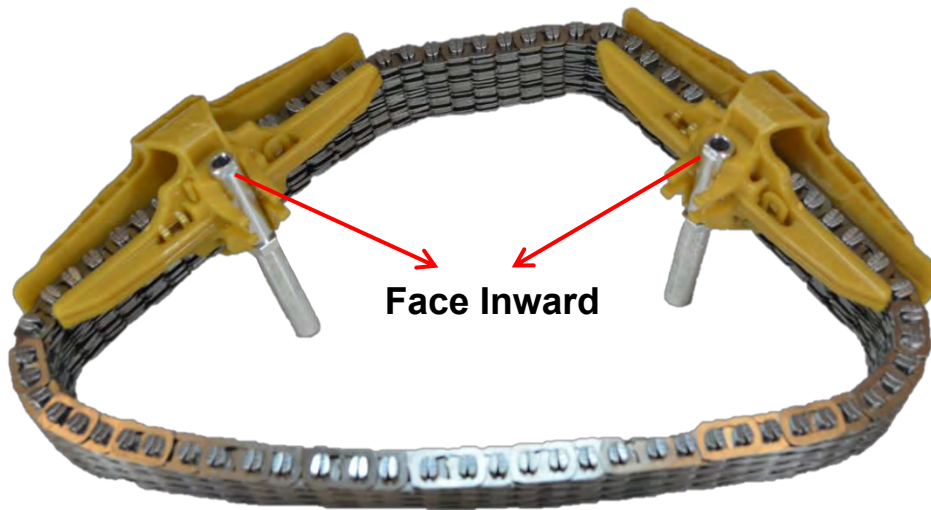
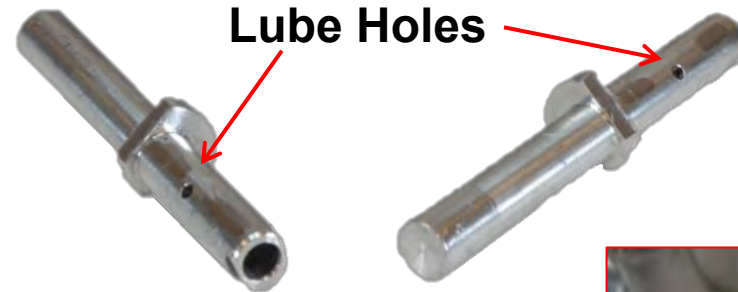
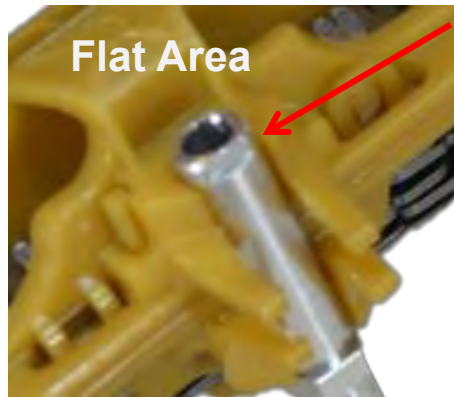




Chain Driven Pulleys

The flat area on both aluminum chain guide pins/tubes must face inward to align with the tabs on the feed tubes in the case to prevent them from rotating.

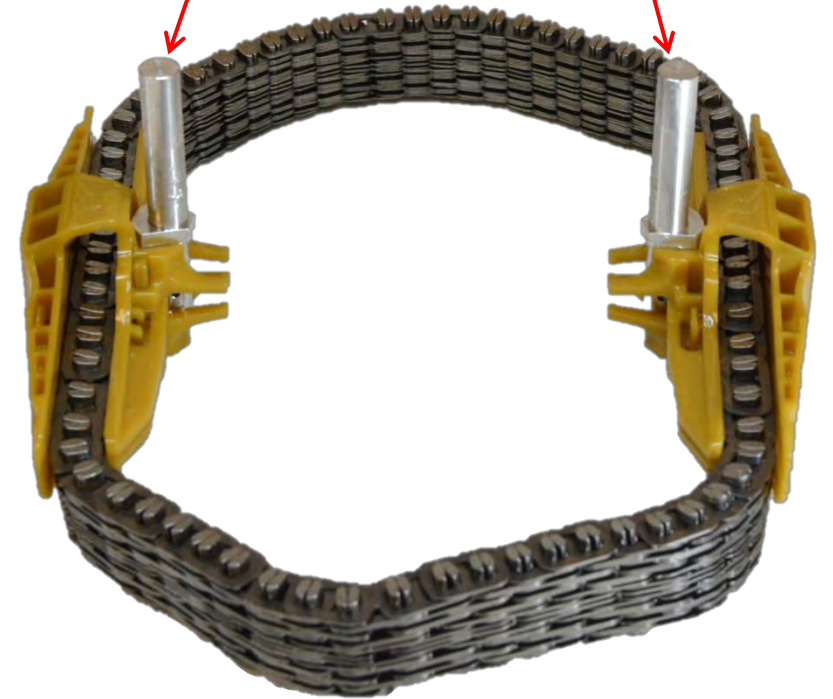
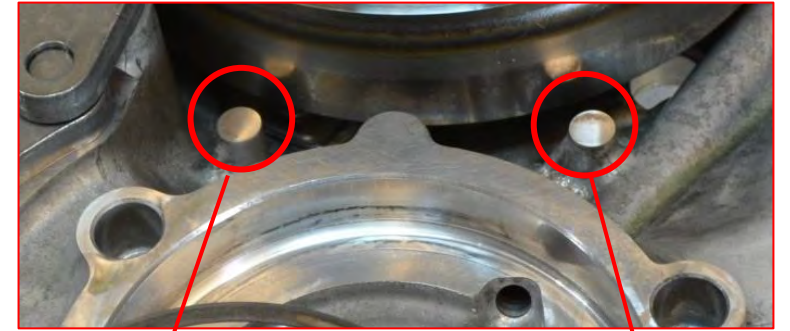
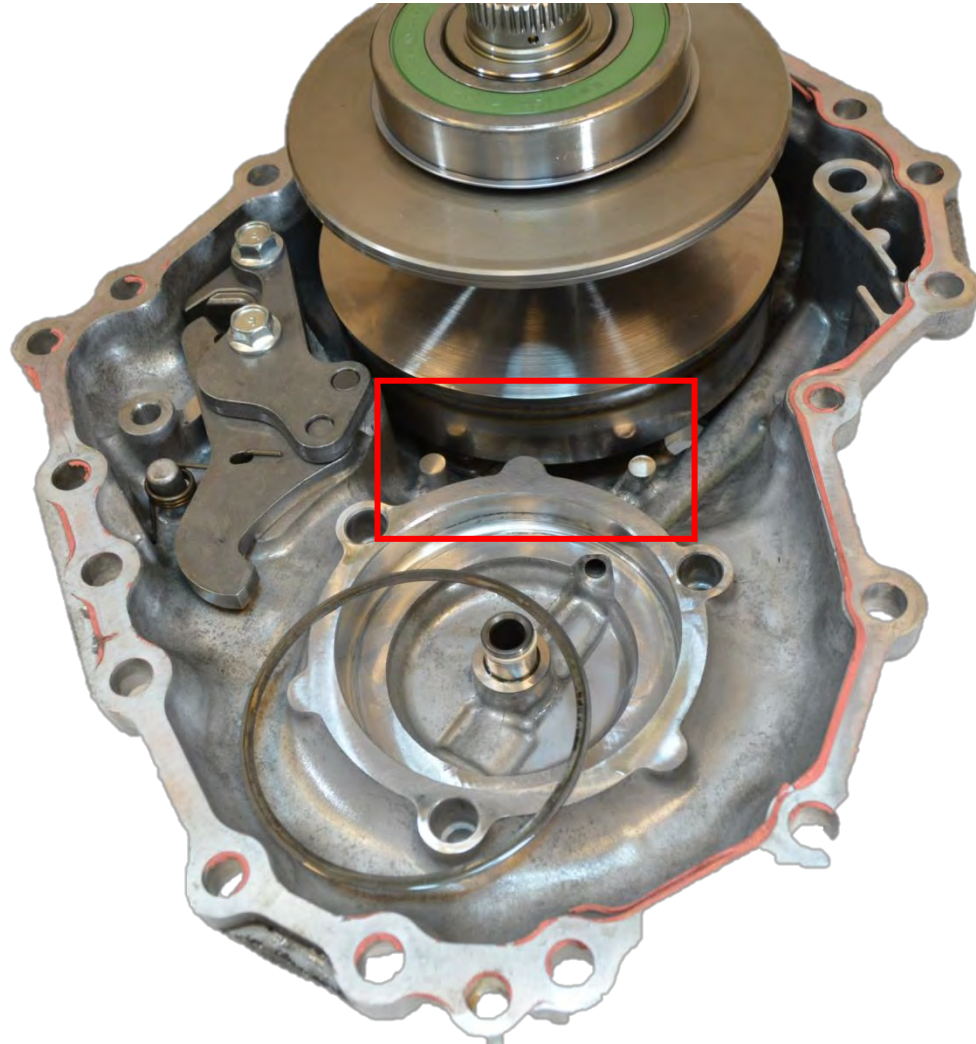
This will keep the lube holes aligned to spray oil onto the chain.





Chain Driven Pulleys

The closed side of the aluminum lube tubes are held down in place by two embossed tabs in the back cover.



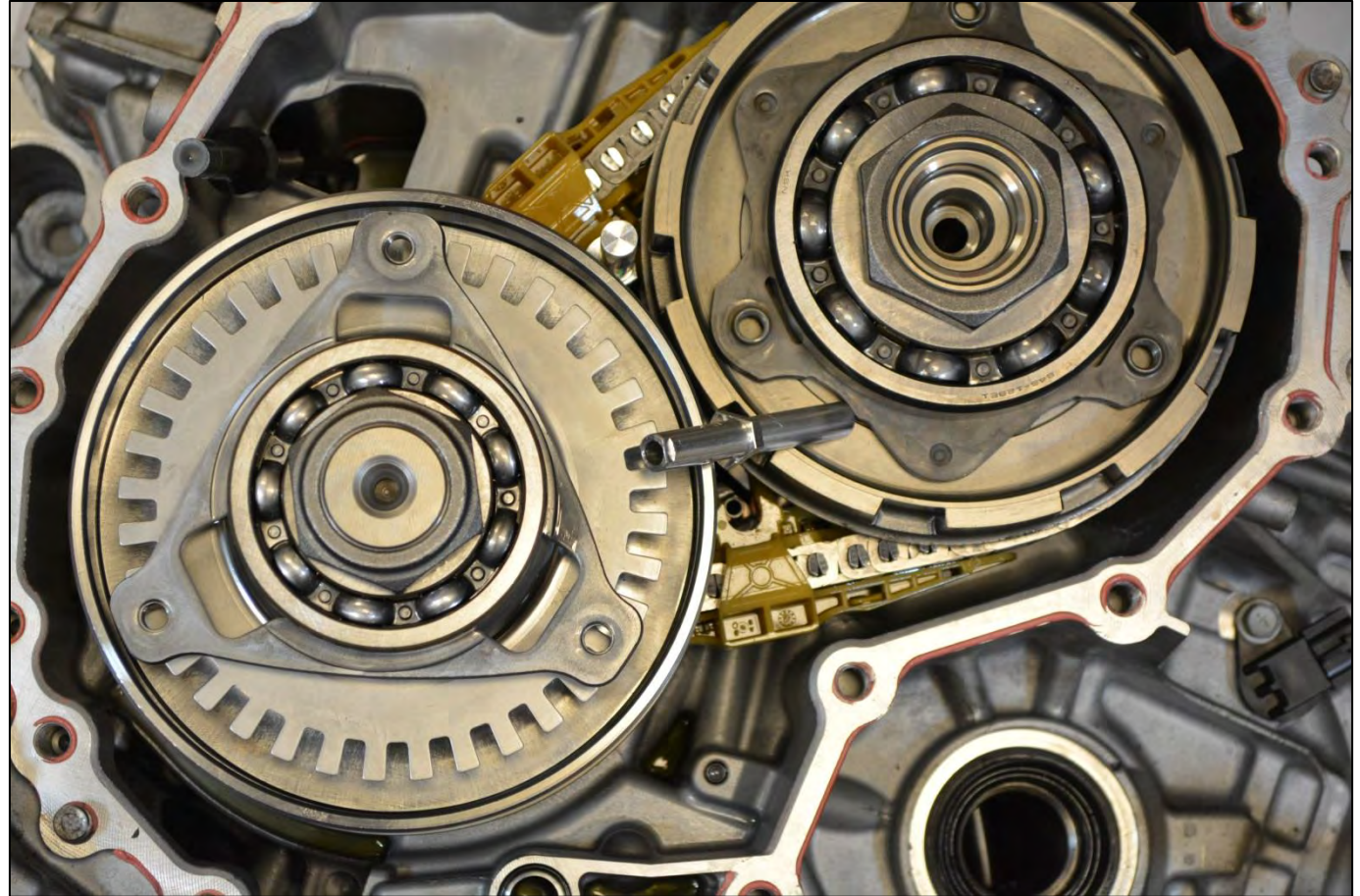


Chain Driven Pulleys Installed

The RE0F10E/H/J pulleys with the chain are installed into the case first instead of the cover.

Now the lube chain guide pins/tubes can be installed onto the feed tubes in main case one at a time making sure the flat area aligns with tab.

RE0F10E/H/J





Chain Driven Pulleys Installed

Now with a couple of alignment bolts on the pulley retainers we can slide the cover onto the pulleys and install the six (6) retainer bolts with seals.

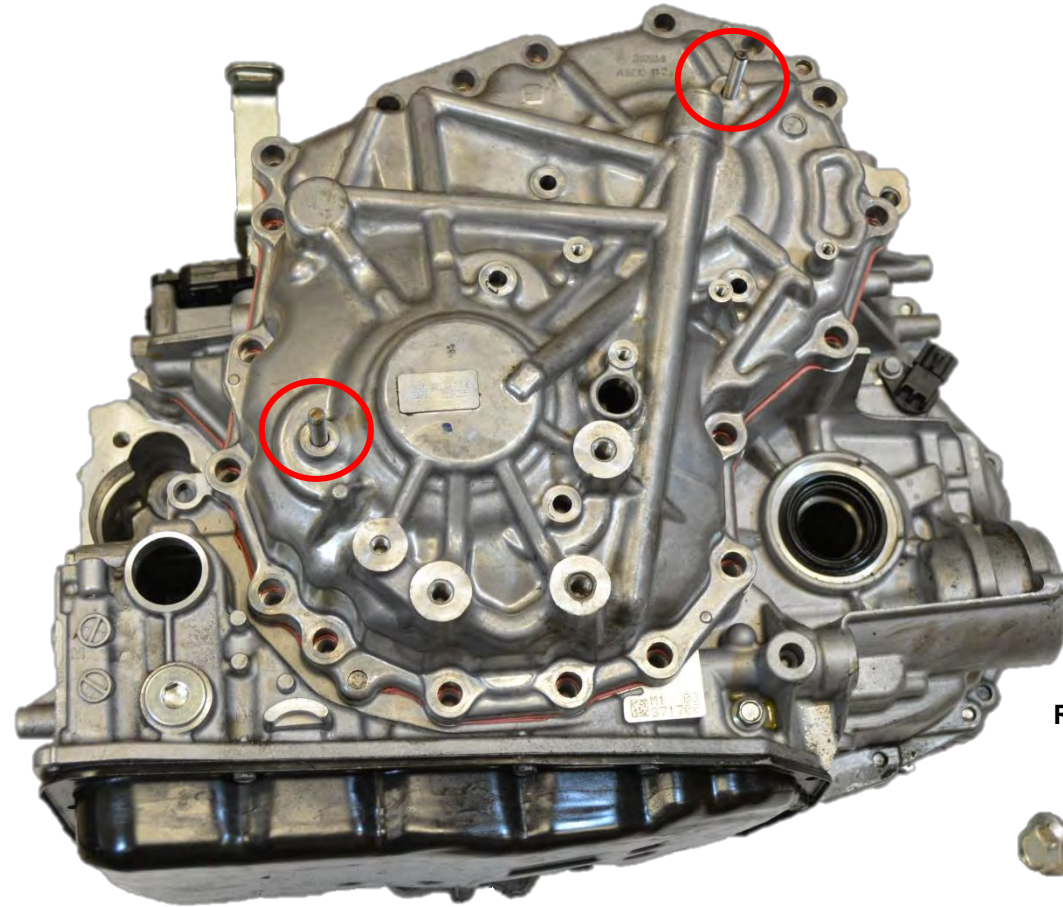
The New Generation units, chain or belt are very easy to assemble.



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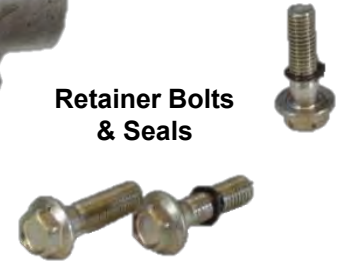
RE0F10E/H/J



Retainer Bolts & Seals



Retainer Bolts & Seals

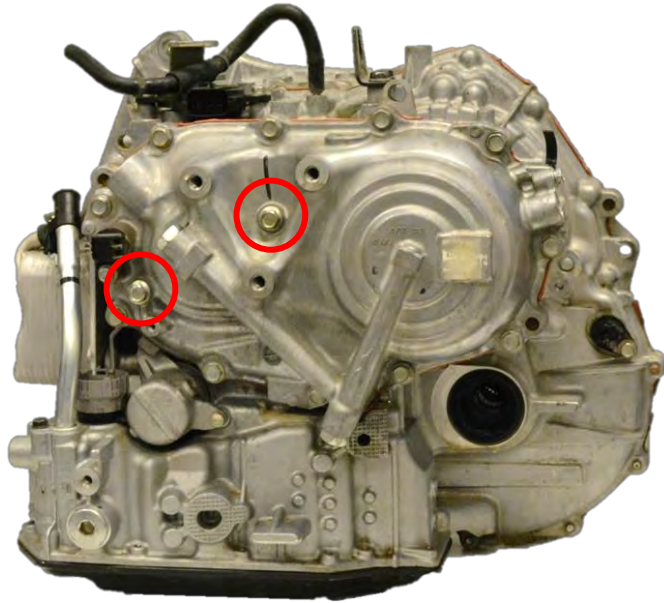




Pulley Assemblies Installed

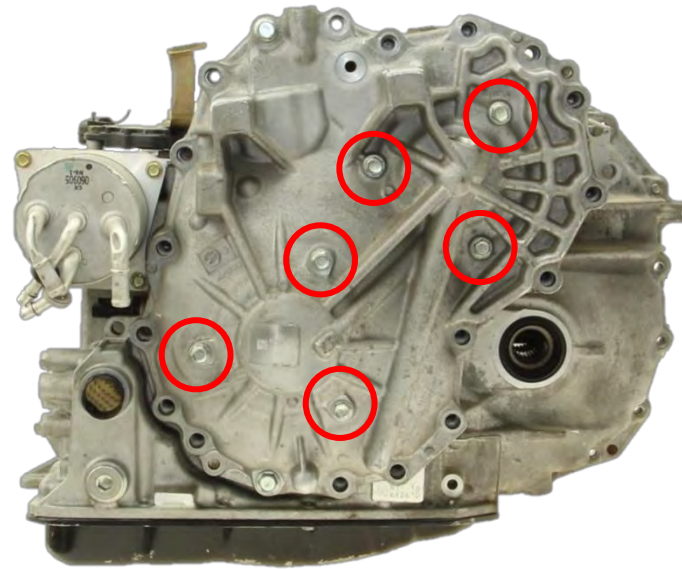
Not all Jatco CVT's will have retainer bolts through the rear cover for both pulleys.

RE0F11A



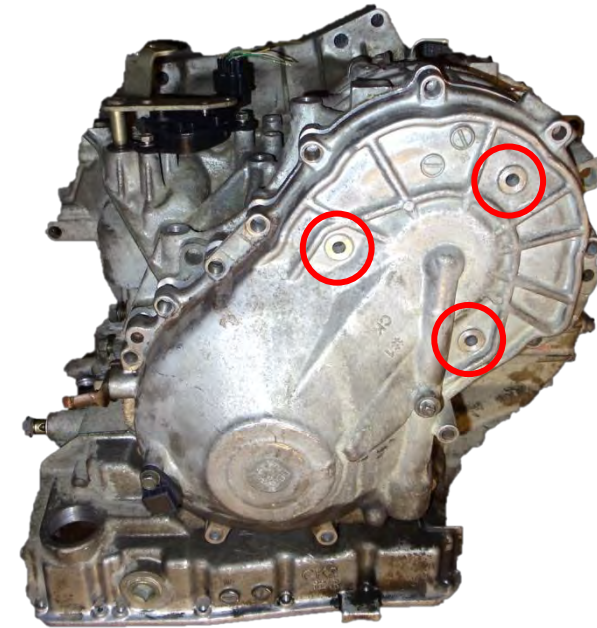
Only 2 Bolts to the Primary Pulley

RE0F10A



Like the later model RE0F10D it has 3 Bolts to both the Primary & Secondary Pulley

RE0F06A



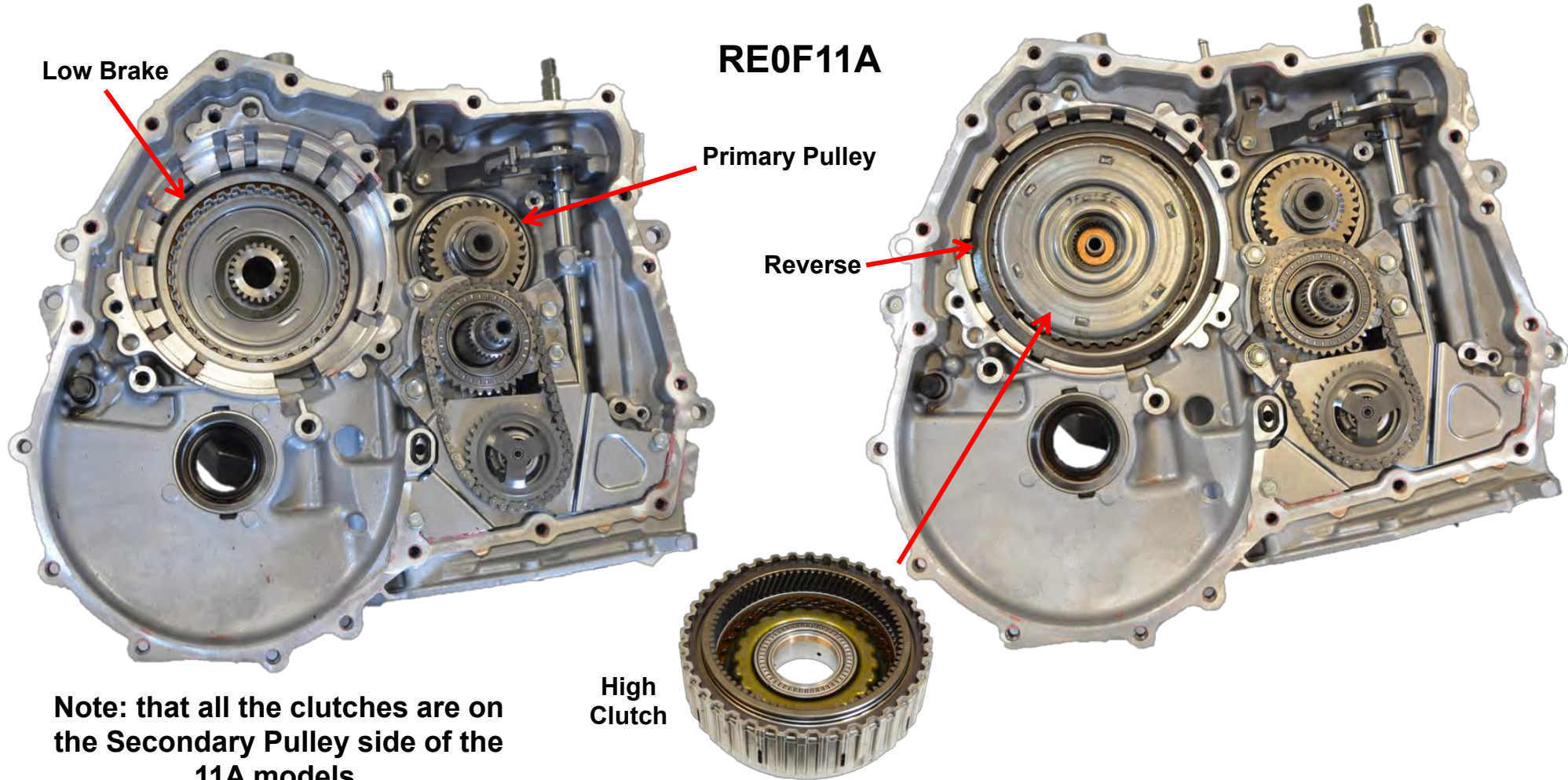
Only 3 Bolts to the Secondary Pulley





Clutch Assembly Comparisons

The RE0F11A (JF015/16E) models use a Low Brake and High Forward and Reverse Brake clutch (2 speed). Other models use only a Forward and Reverse Clutch.



Note: that all the clutches are on the Secondary Pulley side of the 11A models.





Clutch Assembly Comparisons

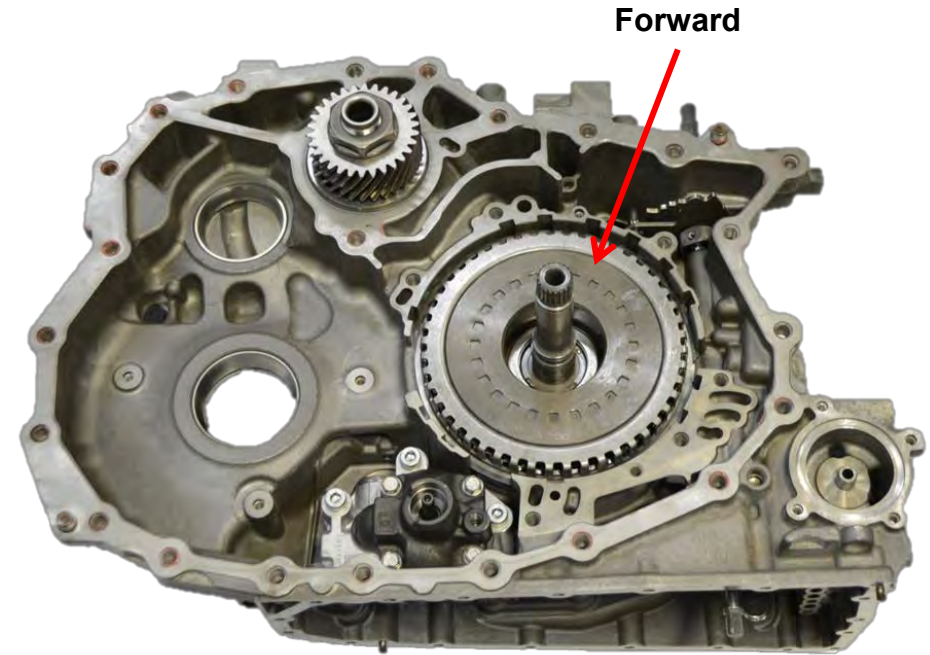
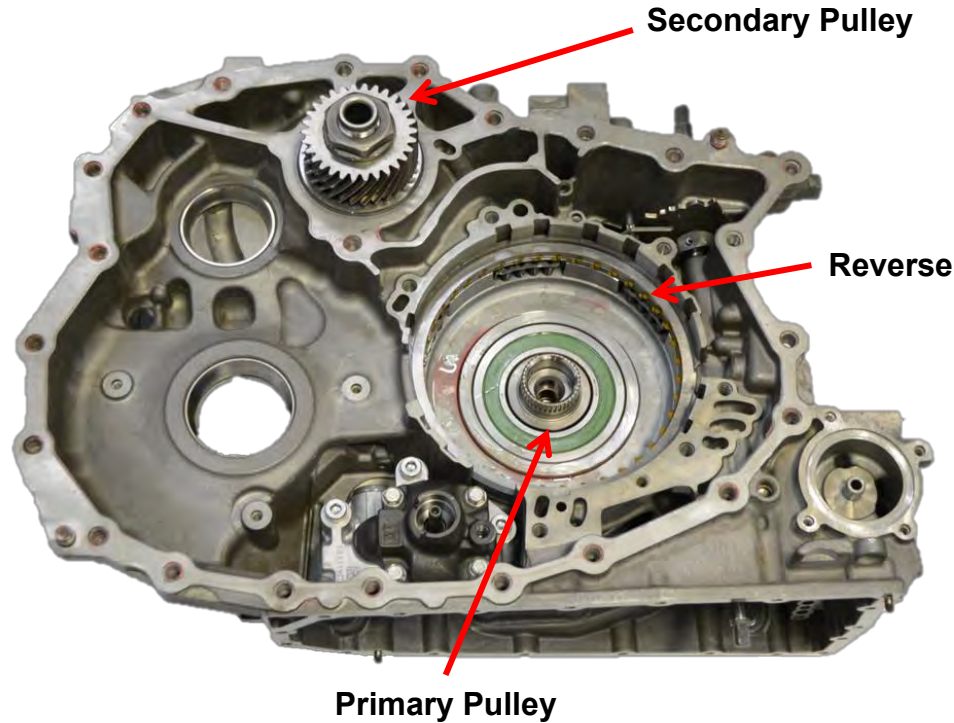
Other Nissan/Jatco CVT's use only a Forward and Reverse Clutch (RE0F10D example).
The clutches are found on the Primary Pulley side on all other models except RE0F11A.



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RE0F10D



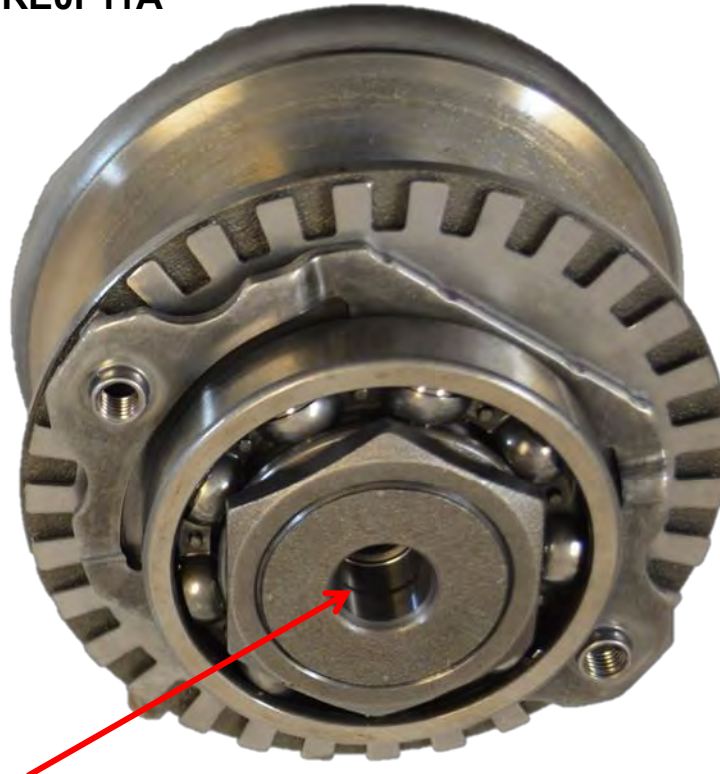


Common Failures

It is not uncommon to find bearing failure on these CVT transmission. If the bearing does not spin extremely smooth by hand with some pressure; check for ring cut inside the pulley shaft.

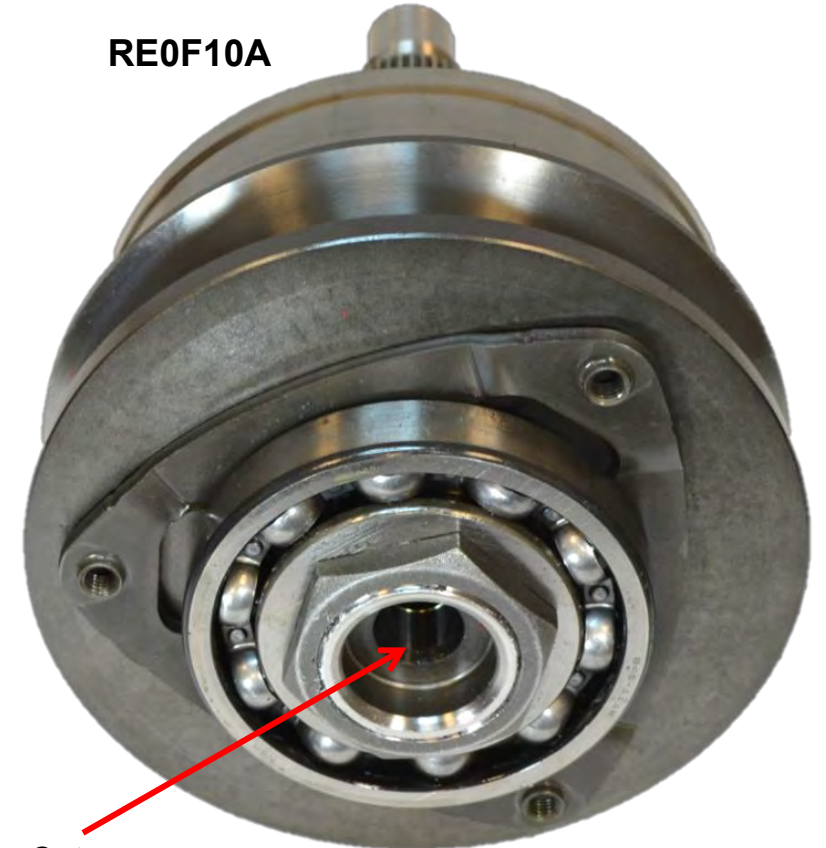


RE0F11A



Ring Cut

RE0F10A



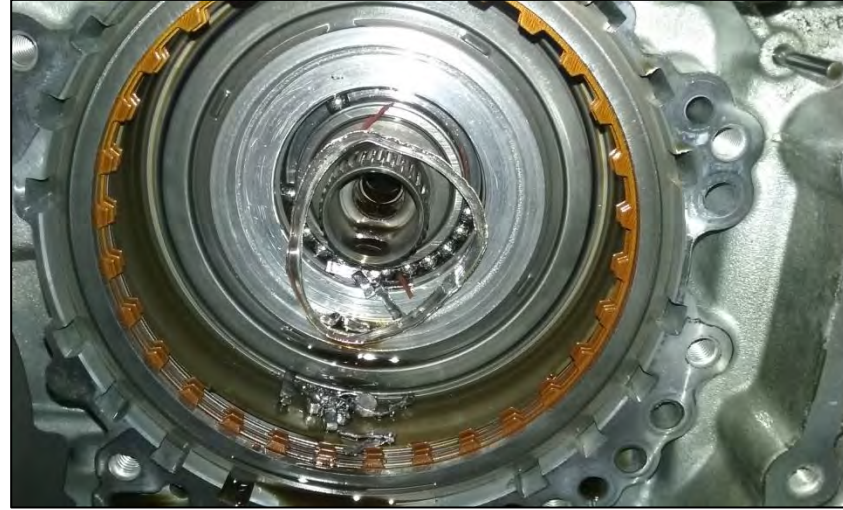
Ring Cut





Common Failures

Here are a couple examples of pulley bearing failures. Most often the Secondary Pulley bearing begins to fail first with the exception of this RE0F08A shown below.





Common Failures

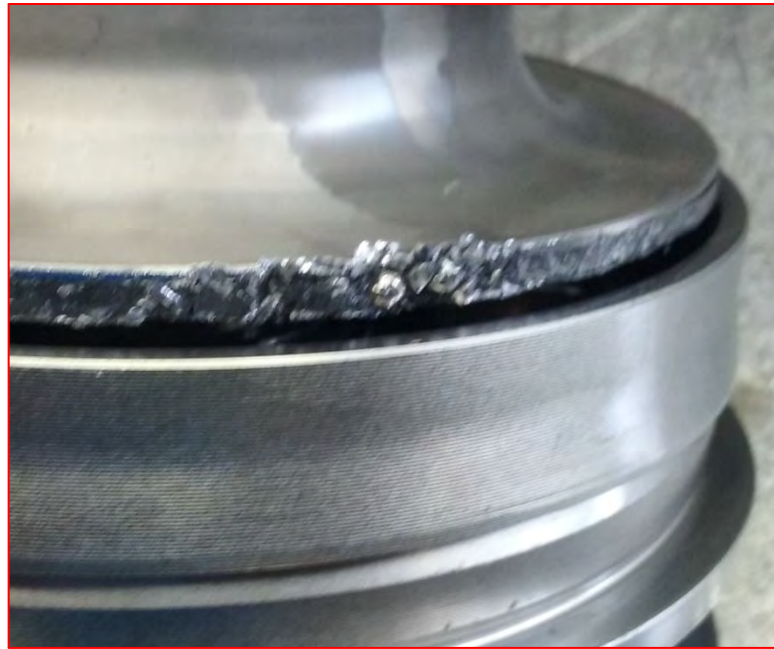
Not only is there an issue with the bearings on the pulleys going bad completely there are times they will cause noise complaints.

There also times when the check balls on the pulley shafts go bad.



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RE0F09B





Common Failures

Pressure sensors commonly fail also setting pressure sensor codes.

Although there can be leaks in the pulley feed or apply piston sealing rings that will also cause pressure sensor and solenoid codes.



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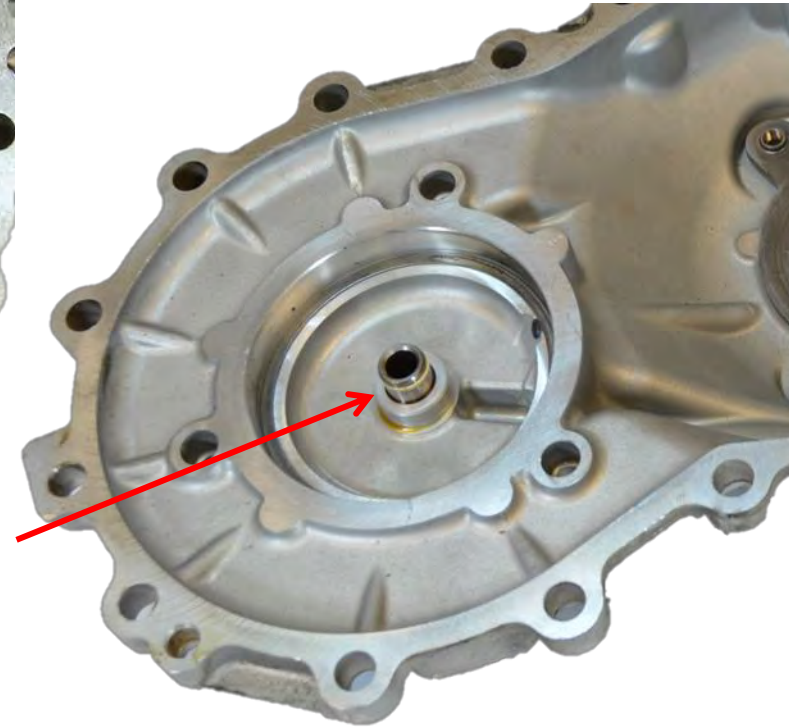
RE0F10A



Apply Piston



Sealing Ring



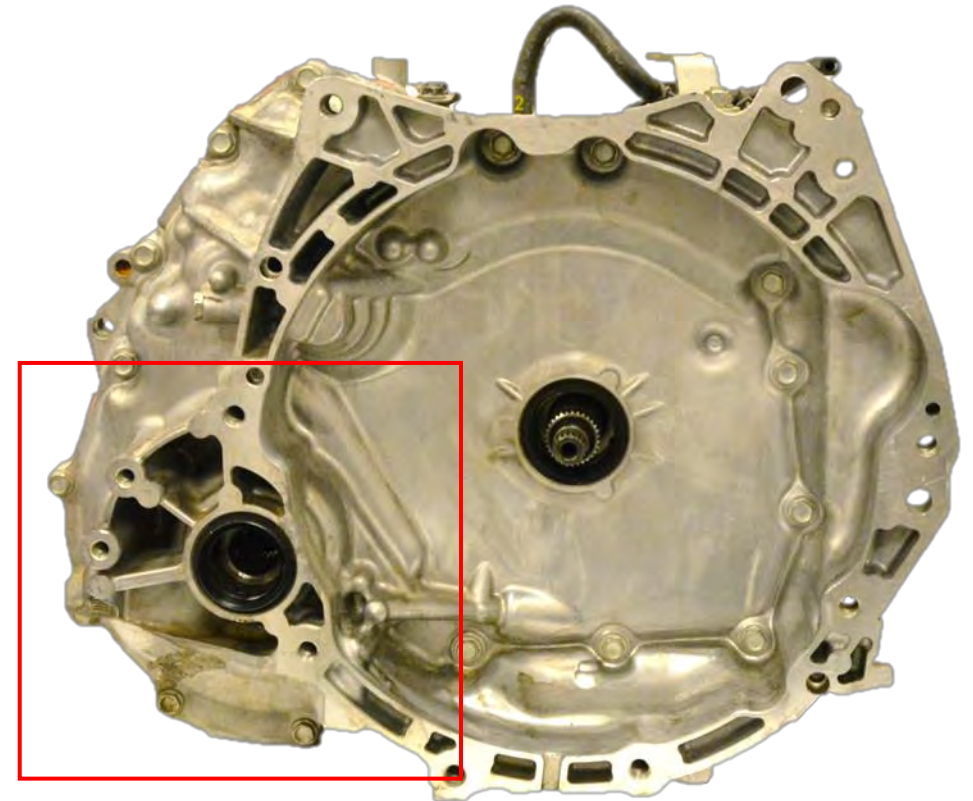
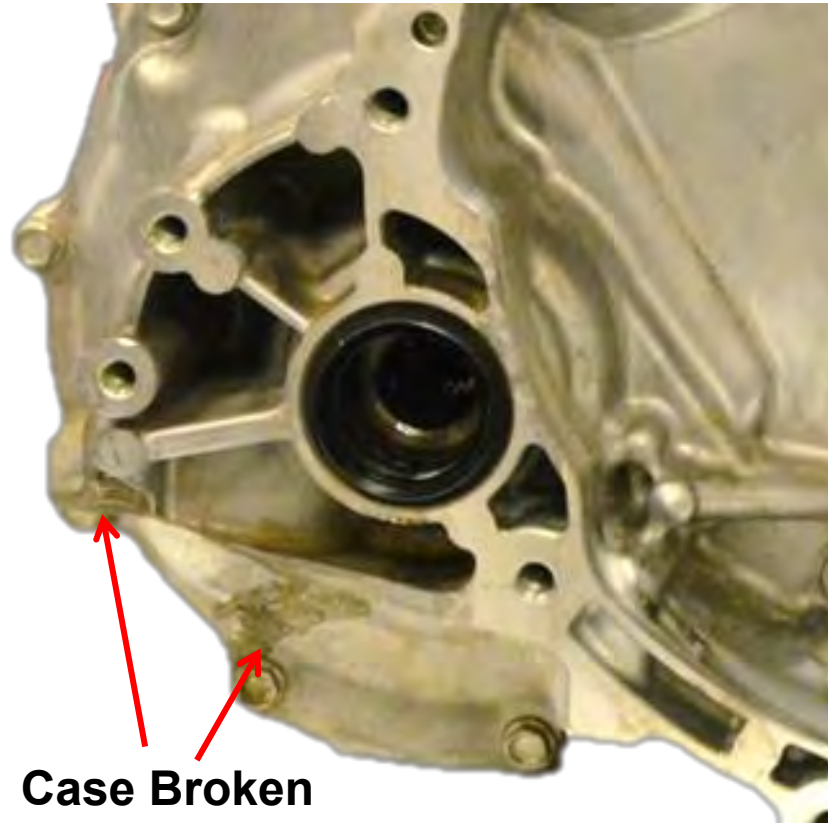
Pulley Feed Sealing Ring





Common Failures

It is not unusual for a later model RE0F11A (JF015E) to arrive at your shop with the section of the case that mounts up to the vehicle to be broken.





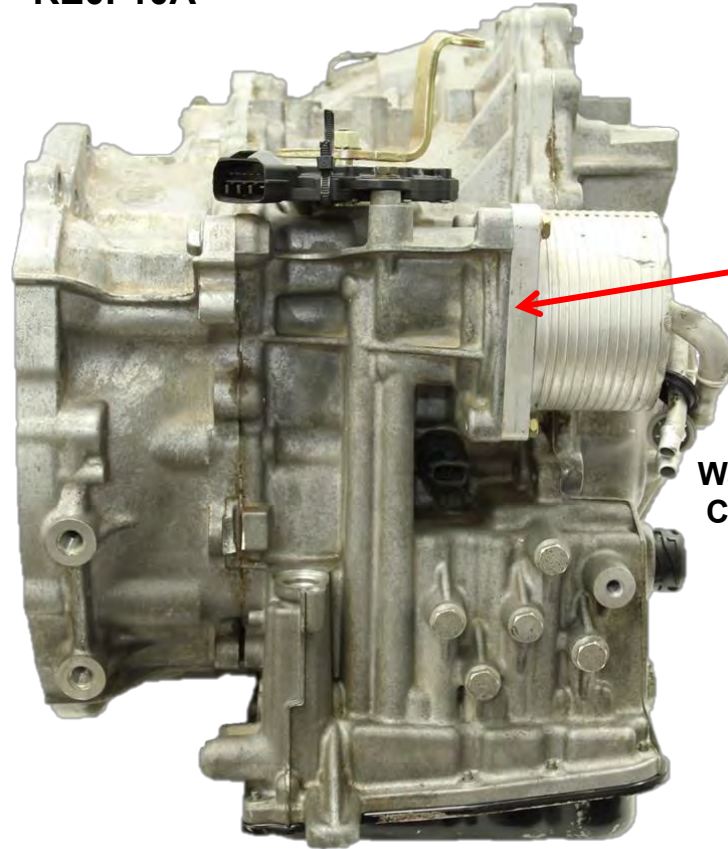
Most Common Complaint

P0218 Transmission Overheat is the most common complaint on the tech line. Caused by a restricted High Pressure Filter. Even if the filter looks new change it.

Be aware some new aftermarket filters will also cause this problem.



RE0F10A



External Filter

Located Behind The Warmer/Cooler



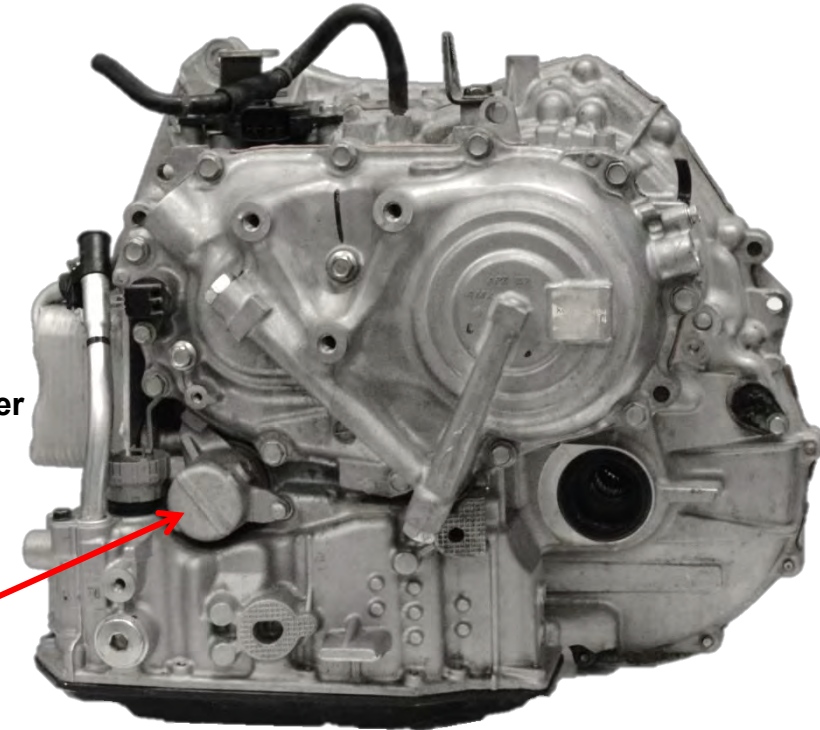
Warmer Cooler

Warmer/Cooler

External Filter



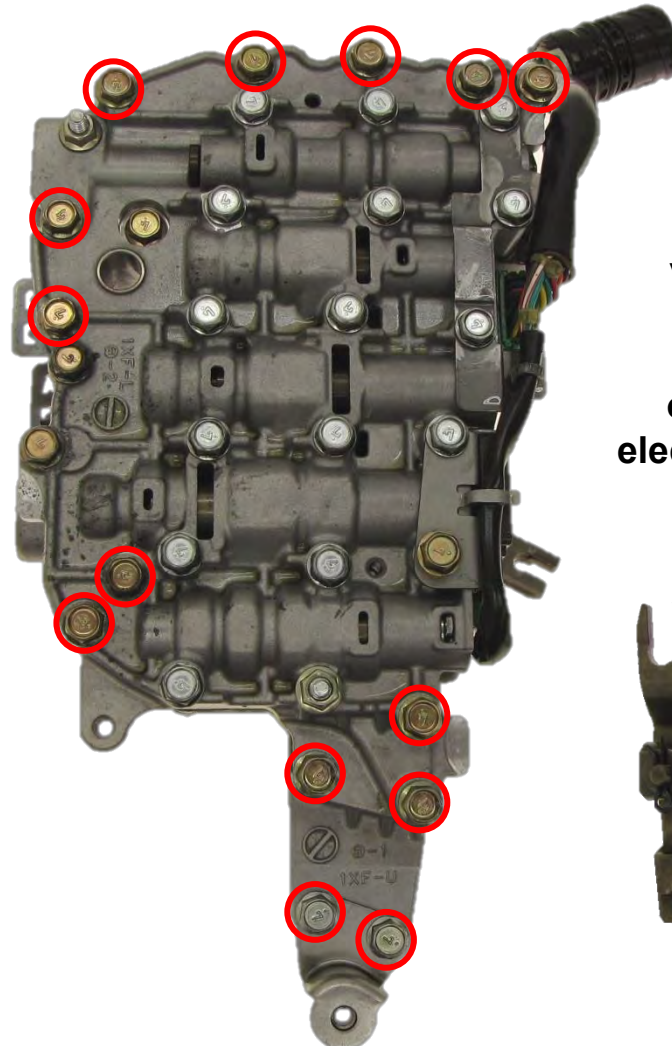
RE0F11A (JF015E)





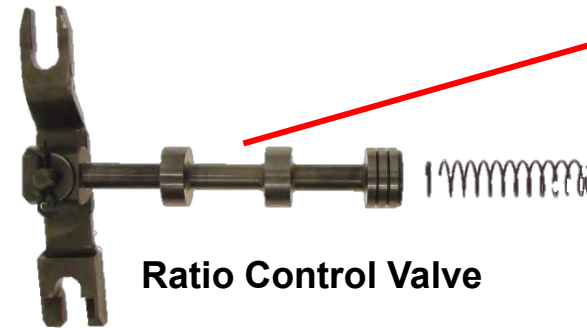
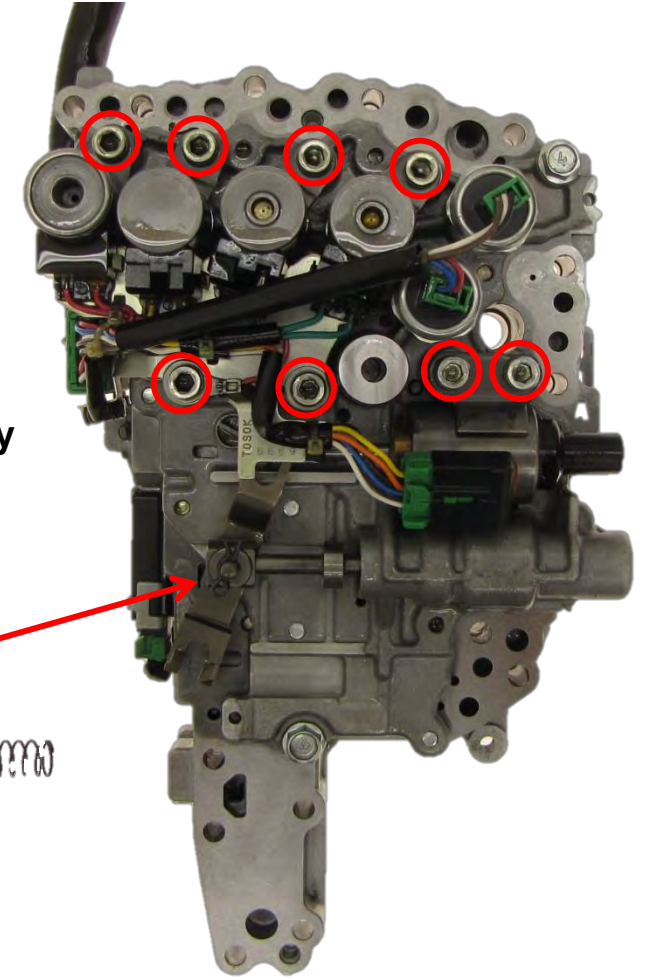
RE0F10A/B Valve Body

We covered the latest valve body in the RE0F11A in the last webinar so we will cover some information on other Jatco CVTs more common to the tech line calls.



Remove the bolts circled on the left to remove the valve body from the case.

Remove the bolts circled on the right to remove the electronics from the valve body



Ratio Control Valve



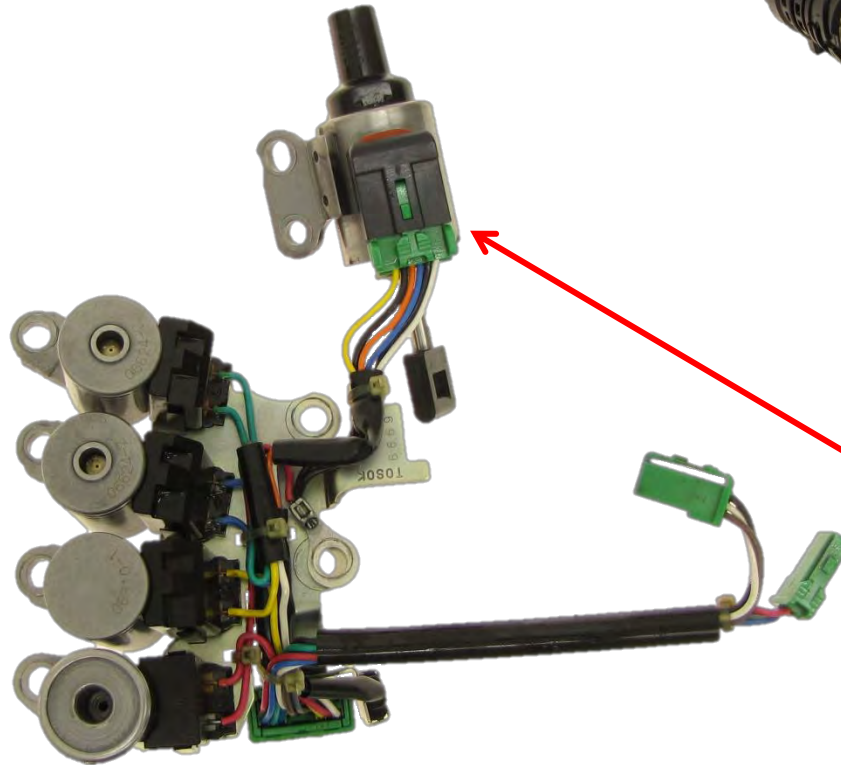
RE0F10A/B Valve Body Electronics



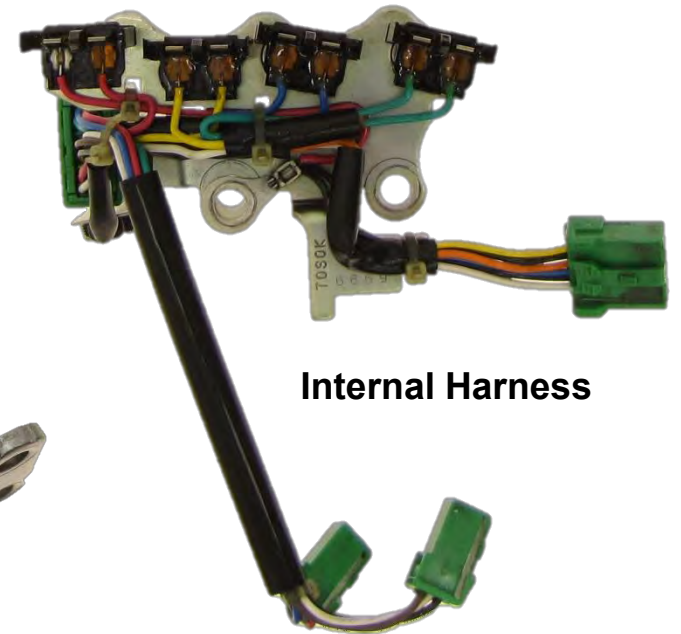
ROM



Solenoids



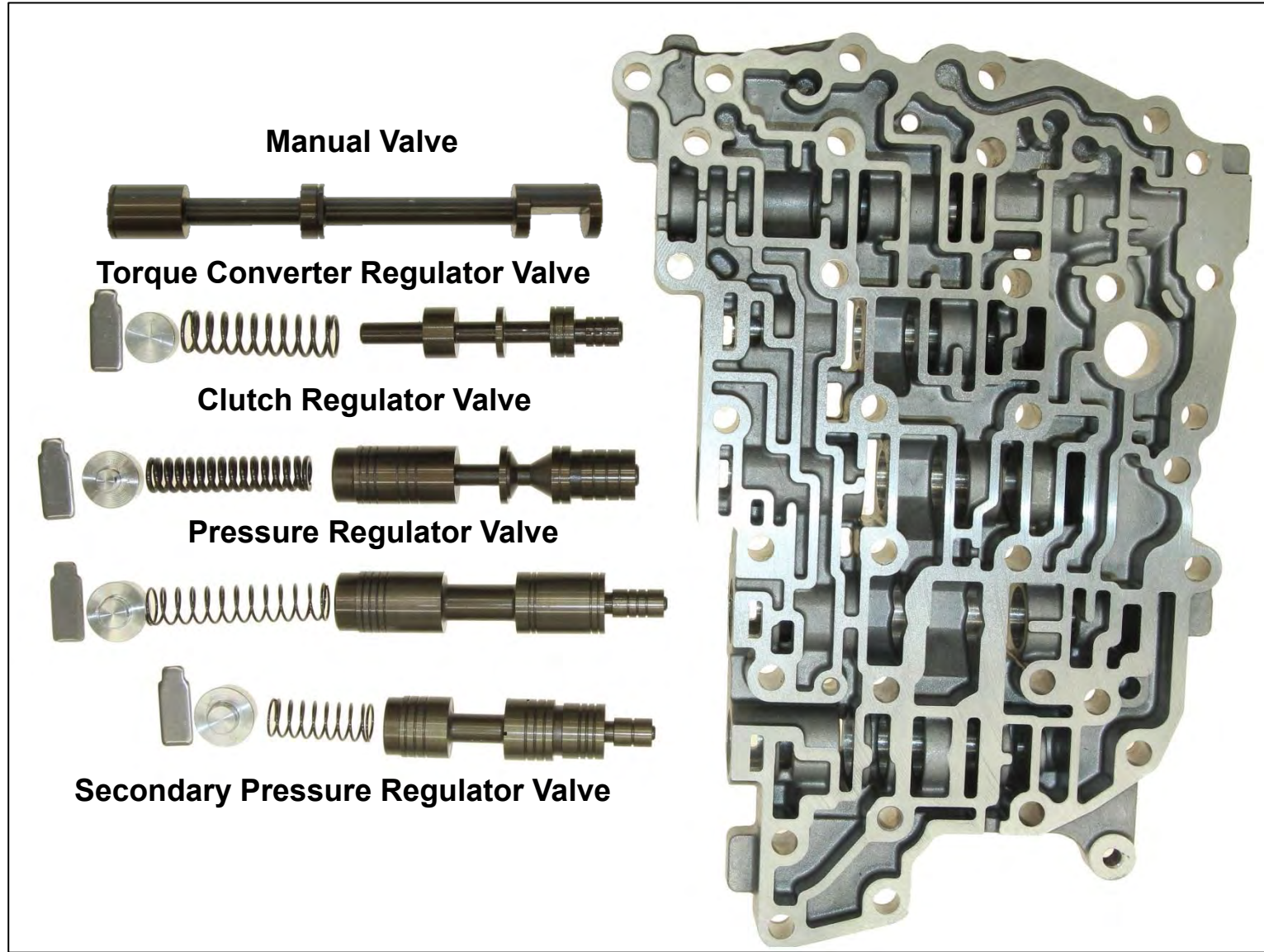
Ratio Control Motor



Internal Harness



RE0F10A/B Upper Valve Body



Manual Valve



Torque Converter Regulator Valve



Clutch Regulator Valve



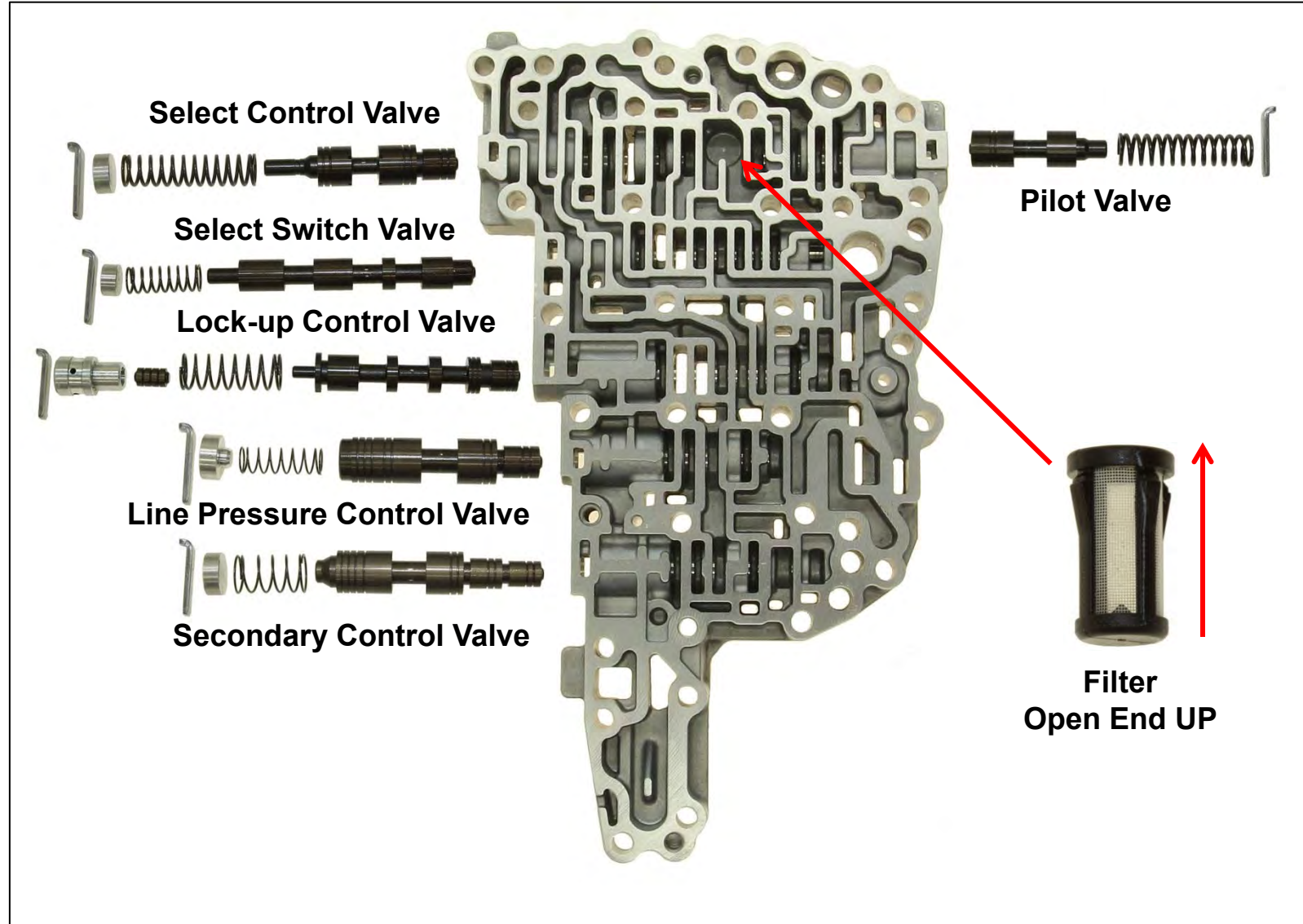
Pressure Regulator Valve



Secondary Pressure Regulator Valve



RE0F10A/B Lower Valve Body



RE0F10A/B Lower Valve Body Small Parts



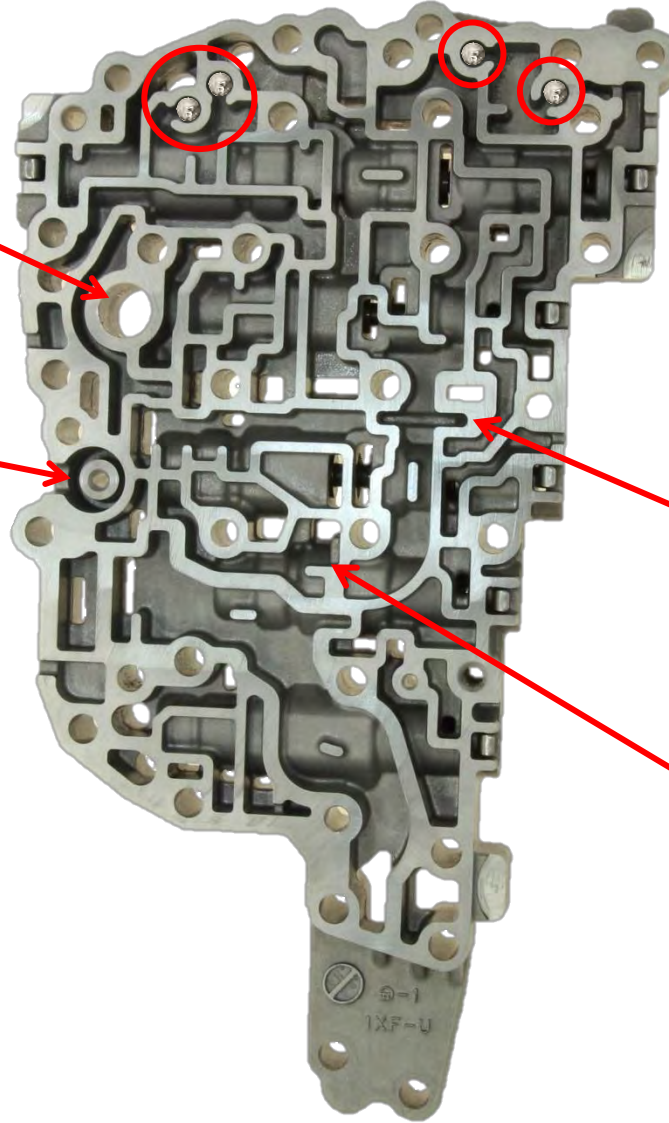
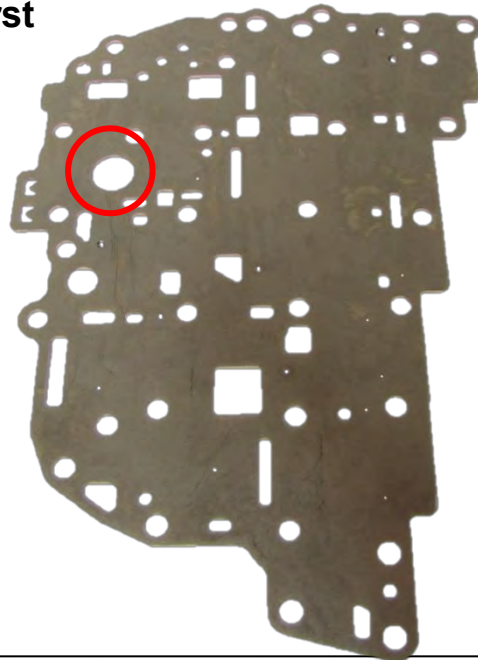
Lube Relief Valve



Spring First



Separator Plate Alignment Dowel



Check Balls (4)



Screen



Screen



Install As Shown





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RE0F09A/B & RE0F08A/B Valve Bodies

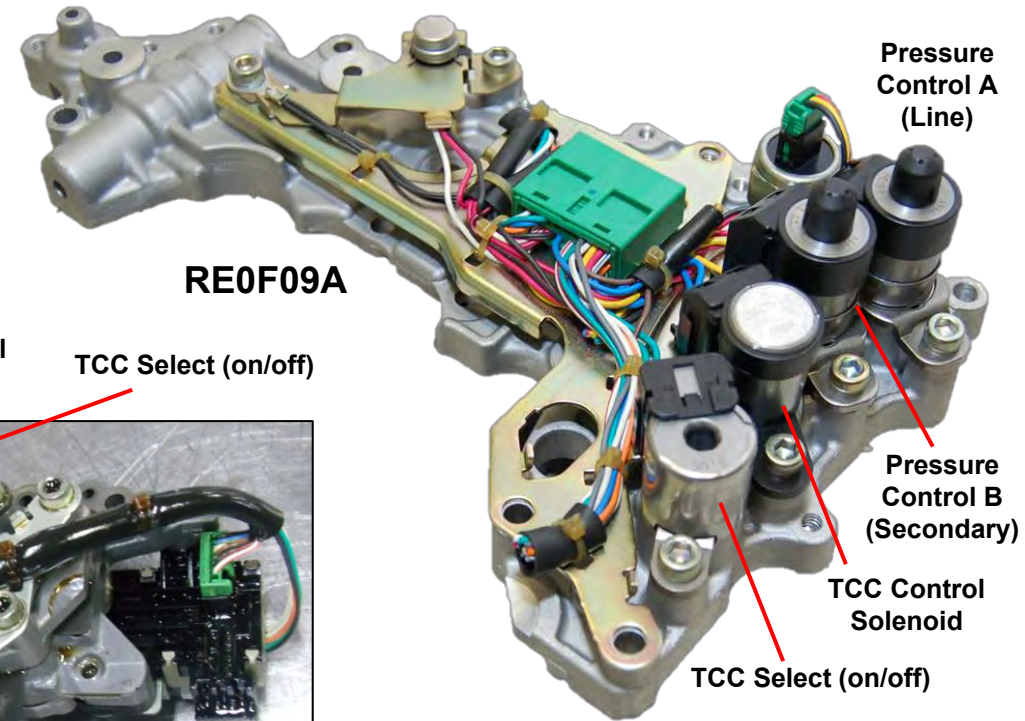
The solenoid identification and function on these two CVT transmissions is basically the same as the RE0F10A-B CVT. Just named differently.

The only major difference between these two valve bodies and solenoids is the Line Pressure Control A and B solenoids. The Flow rate is different on the solenoids and the valve body separator plate is designed for the difference in flow rate.

There are times when an 09 or 08 valve body has to be replaced and not easily found.

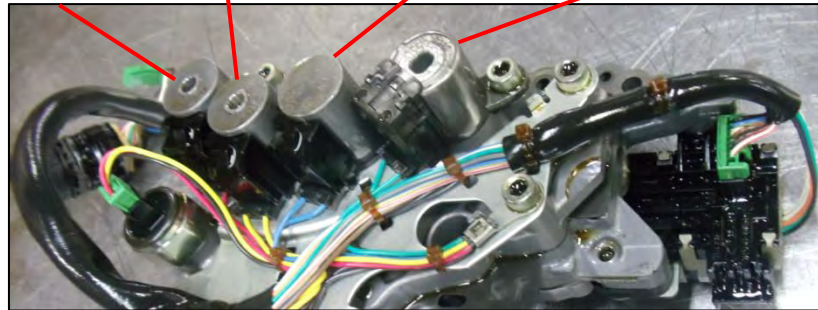
The LPCA and B Solenoids if kept with the original separator plate can be swapped as long as the solenoids are matched to the vehicle TCM.

The TCC Select and the 2007 08A TCC the only On/Off type solenoids the others are Pulse Width Modulated.



Pressure Control A (Line) Pressure Control B (Secondary) TCC Control Solenoid TCC Select (on/off)

RE0F08A

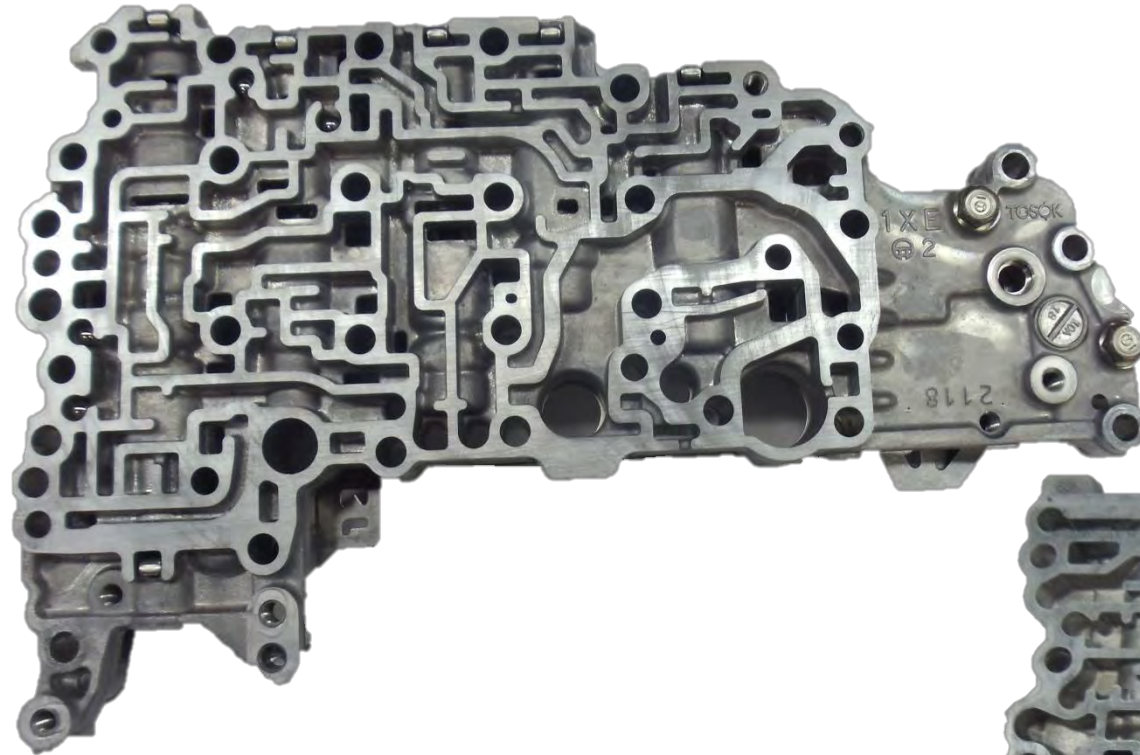


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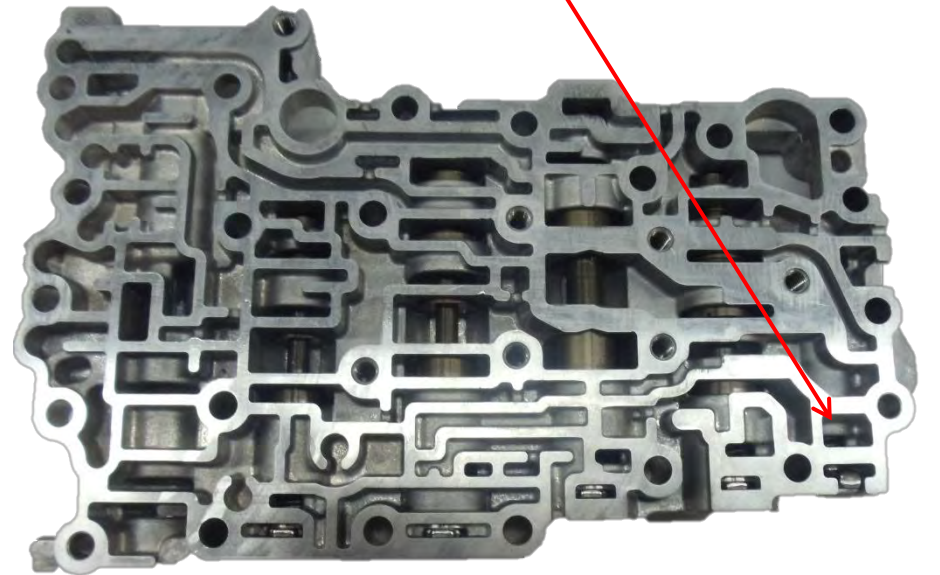


RE0F09A/B & RE0F08A/B Valve Bodies

Although the configuration looks quite different the valve layout is almost the same as the RE0F10A/B series with the exception of one extra plug valve.



Plug Valve



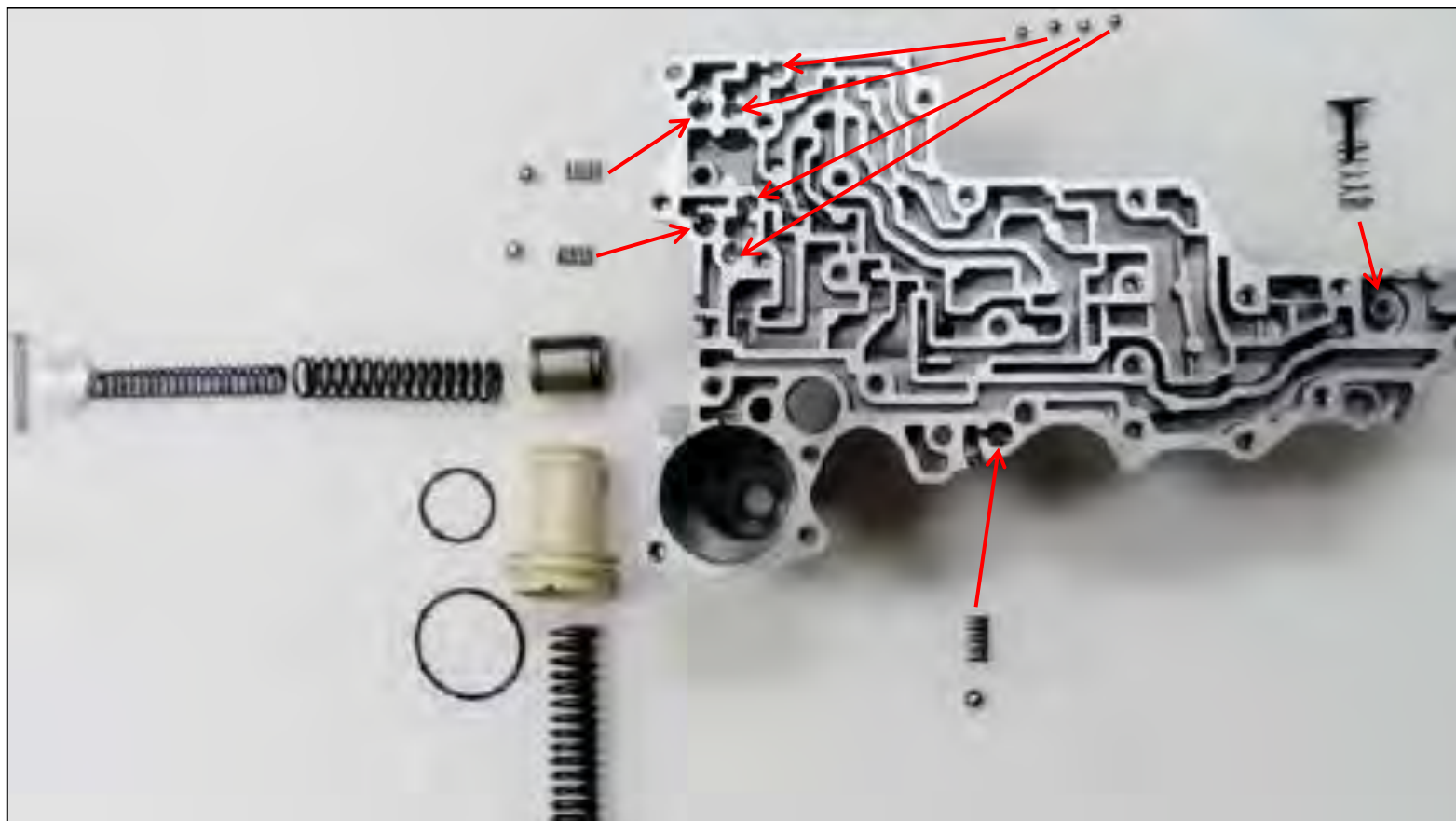
RE0F06A Valve Body

Earlier model RE0F06A units were not found in the U.S. market.



RE0F06A Valve Body

As you can see it's completely different than any of the others.

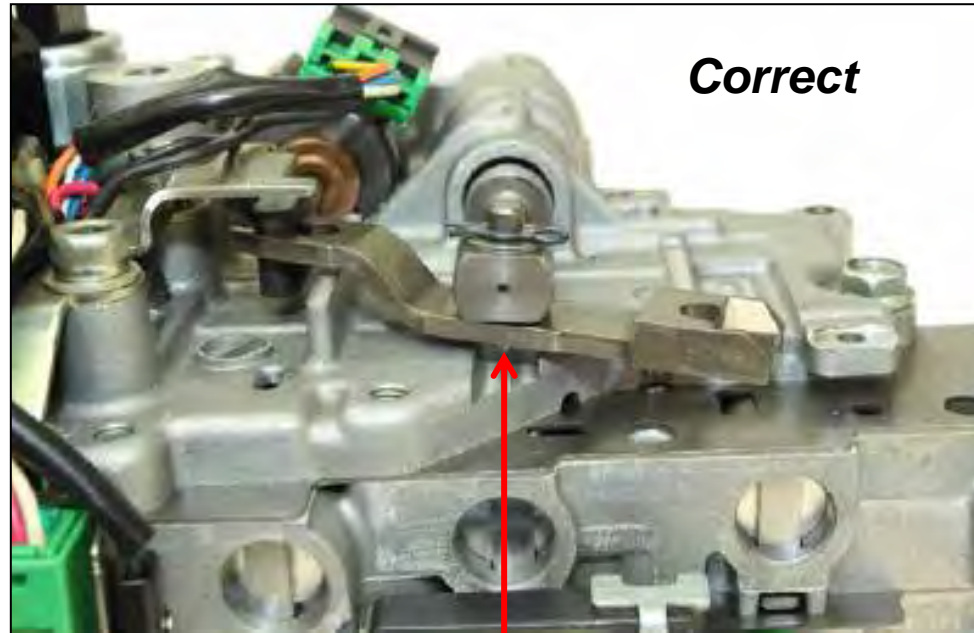




Valve Body Installation With Ratio Control Motor

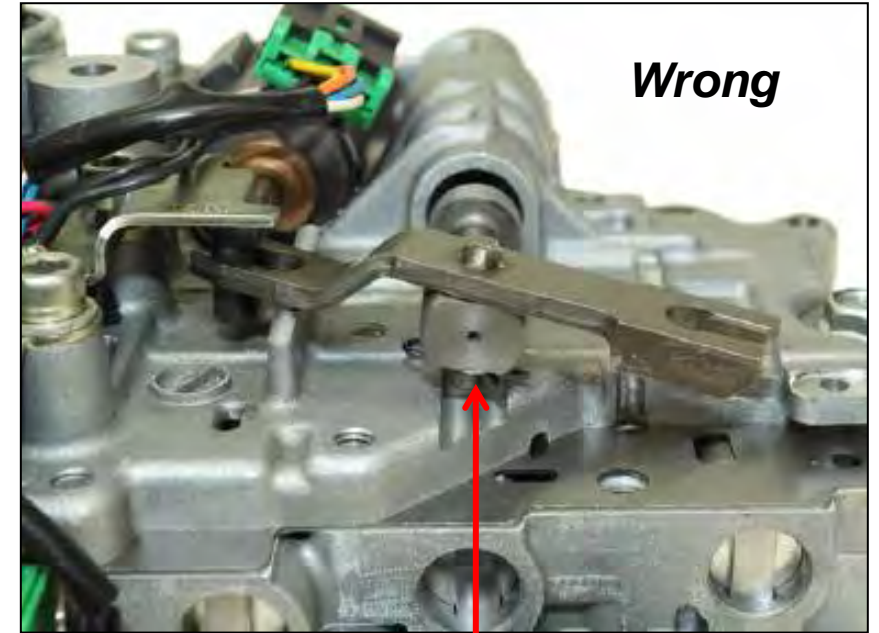
Installing a valve body with a ratio control motor onto the transmission. If not done correctly will cause a no ratio change (shifts) it may stay at a 1:1 ratio only.

First make sure the control arm is facing the correct way (left photo).



Correct

Arm Below The Shaft



Wrong

Arm Above The Shaft



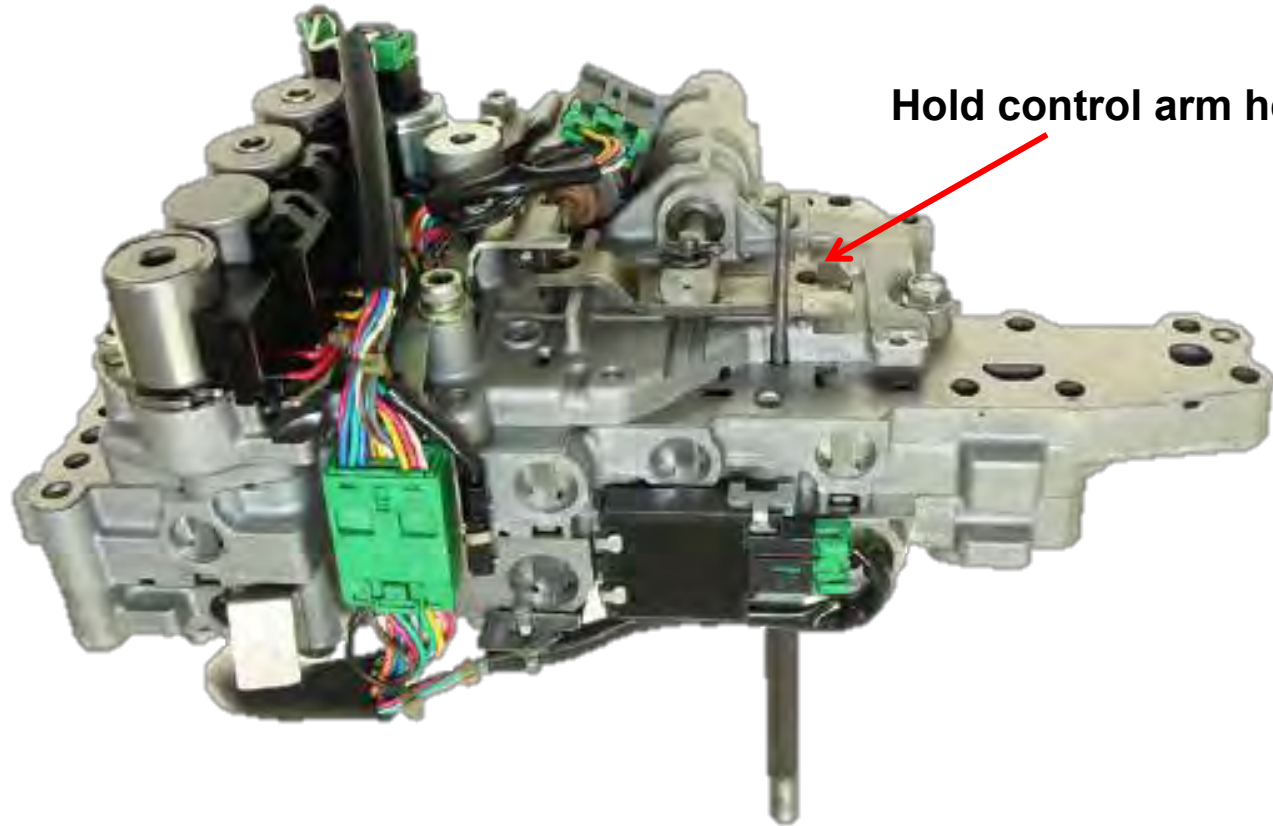


Valve Body Installation With Ratio Control Motor

Then install a thin punch through the valve body to hold the control arm back against the valve body.



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Hold control arm here





Valve Body Installation With Ratio Control Motor

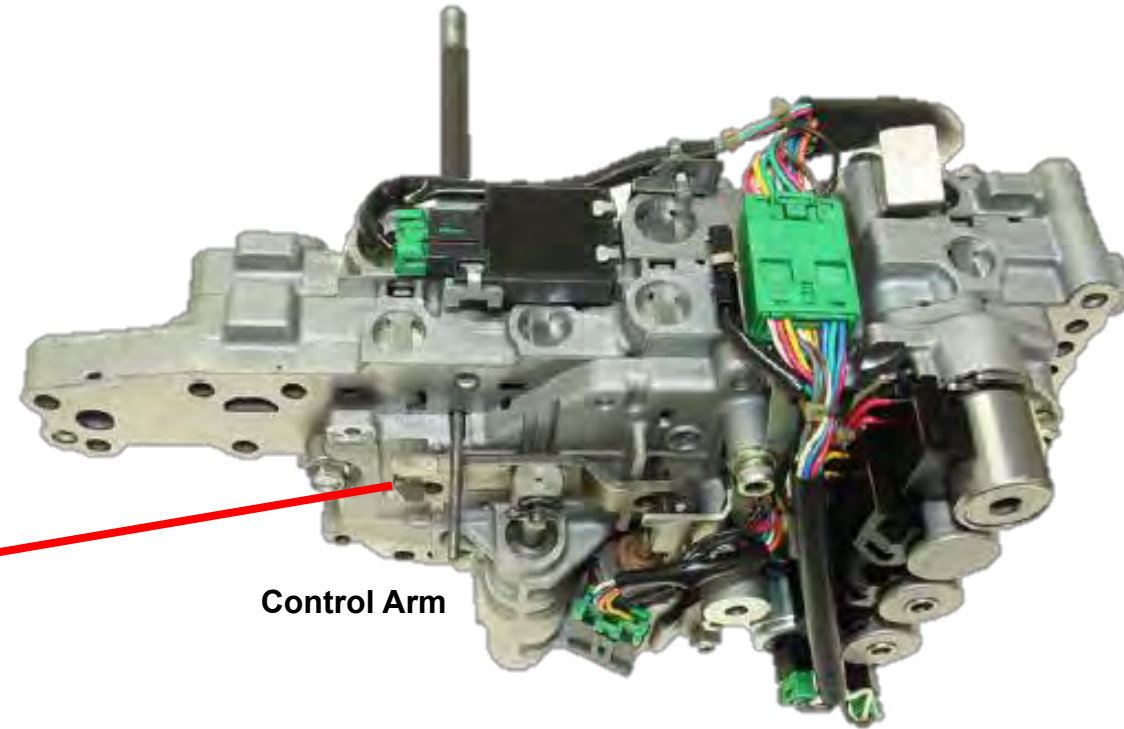
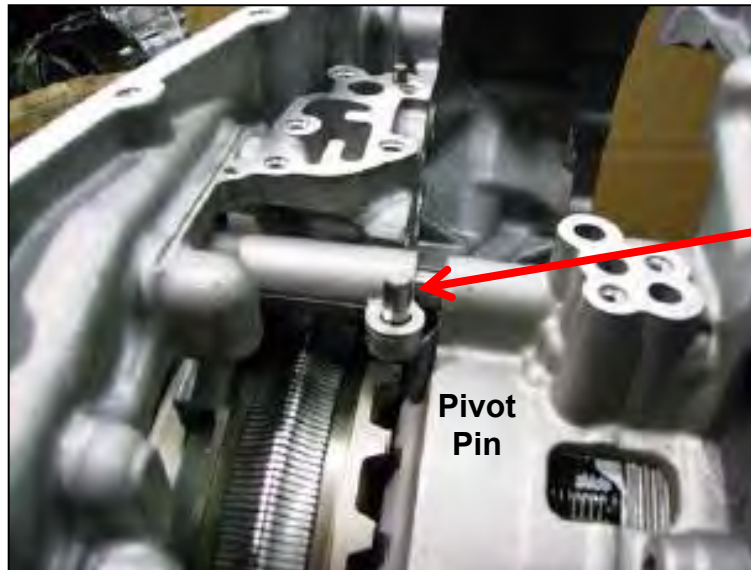
Now turn the valve body over and make sure the control arm aligns onto the pivot pin located in the case.

The pulley has to be turned until the pivot pin is moved all the way to the location shown below.

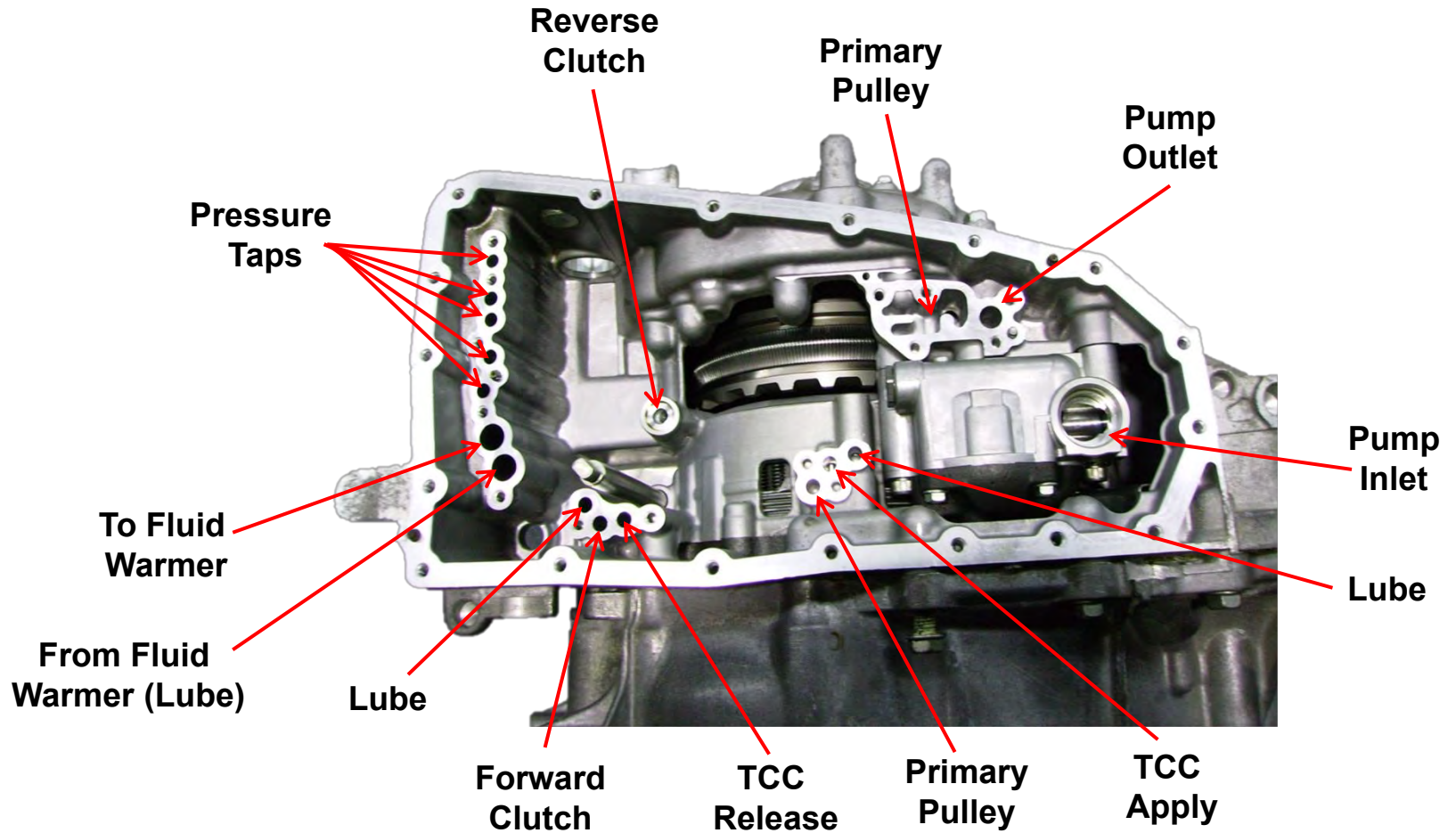
The pulley does not turn very easily.



Turn Pulley Until Pivot Pin Is In This Location



RE0F10A Series Case Air Checks





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Any Questions? Thank You For Attending



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Hi-Per Blue™ pistons are reengineered original equipment design, manufactured with upgraded high performance blue AEM (ethylene acrylic elastomer) for superior thermal and chemical resistance, with better fit and performance. Other aftermarket pistons are made of a less-tolerant alkyl acrylate copolymer (ACM).

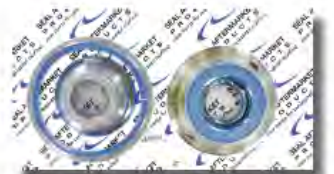
Hi-Per Blue™ pistons are available exclusively through Seal Aftermarket Products.

Hi-Per Blue Features and Benefits:

- Engineered utilizing best-in-class materials
- Meets or exceeds OEM specifications
- Better temperature range
- Higher tear strength
- Better bonding characteristics
- SAP-designed for better seal support
- Available separately, or in kits

PISTON KITS (Individual pistons are also available)

SAP #	Description	Pcs.	Brand
2272	4ITE Axact Cover low and reverse 24 clch 2004hp	3	OE
2271	4ITE Axact Cover low and reverse 24 clch 2004hp	3	OE
4851	45RE 1999Ch	2	OE
4859	645RE 2004hp	5	OE/AM
4854	43TE 2007hp	6	Hi-Per/OE
4860	43RE 2007hp	5	OE/AM
352880	45RE 2005hp	7	OE/AM
758	5210M 2005hp	3	OE
45188	4520N 1999hp	3	Hi-Per/OE
4862	4525 2005hp	5	OE
4867	45RL 4525 2005hp (Bremton D)	5	OE
463859	4638 1999hp	5	OE
4850	4638 4520N 1999hp	5	OE
4850	4638 4638 1999hp	5	Hi-Per/OE
745A	474E 1999hp	3	OE
745B	474E 2005hp	3	OE
32380E	474E 1999hp	7	OE/AM
32380E	474E 2005hp	7	AM/Hi-Per
4861	4750 4750 070 4750 2007hp	5	OE
798	4750 2000 4750 2005hp	4	OE
752	484E 1999hp	3	OE
3408B	484E 1999hp	3	OE
310	475E 1999hp	7	OE
4864	544E 2005hp	9	Hi-Per
347	544E 2005hp	9	OE
4859	544E 5th High Ser 1999hp	3	Hi-Per
4867	485 485 2005hp	5	OE
4858	4850 4850 2006hp	5	Hi-Per
744	5am 1999hp	4	OE
30580	490 495 2002hp	2	AM
794	490/490/2002 2002hp	4	OE
32380E	490E 2005hp	9	AM/Hi-Per
4855	490E 490E 2003hp	7	Hi-Per
21110	490E 2 2005hp	7	OE
1738E	490E 2 2005hp	5	Hi-Per
29090C	494 1999hp	5	AM
25205A	490 491 1999hp	7	Hi-Per
25205BA	490 491 1999hp w/o Seal Rings	5	Hi-Per
24288A	494E 494E 1999hp	16	Hi-Per/OE
24288C	494E 494E 2002hp	16	Hi-Per/OE
24289E-1	494E 494E 2002hp	6	Hi-Per/OE
24289E-2	494E 494E 2002hp	6	Hi-Per/OE
4845	494E 494E 1999hp	3	Hi-Per/OE
4844	494E 494E 1999hp	7	AM
8403	495 495 495 495 495 495	5	AM
8404	495 495 495 495 495 495	7	AM
4871	495 495 2005hp	16	Hi-Per
4862	495 495 2005hp	2	Hi-Per



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62TE Clutch Volume Index

This information can be found on the ATRA website to members in the repair center by typing in 62TE CVI in the search box. If you're a non member take a moment and write these specifications down.

62TE Clutch Volumes	(Preliminary)
UD	26-74
2/4	16-54
OD	42-143
L/R	16-63
LC	16-25
DC	26-34





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