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2017		
Webinar Dates		Transmission
February	21	RE0F10A/B (CVT) Internal
March	7	RE0F10D/E (CVT) Internal
March	21	845RE Intro
April	4	Hydraulics T & C
April	18	<b>Fundamentals of Electricity</b>
May	2	6R80 Intro
May	16	LCT 1000 Update
May	30	6R80 Diagnostics
June	13	A761E/960E/AB60E Internal
June	27	845RE Internal
July	11	REOF11A (CVT) Intro
July	25	6L80/90 Diagnostics
August	8	09G
August	22	RE0F10A/B (CVT) Intro
September	5	68RFE Diagnostics
September	19	6R80 Updates
October	3	RE0F08/09A/B Internal
October	17	6T70/75 T & C





















































# RE0F10D/E Internal

RE0F10D (JF016E)



Presented by: Mike Souza ATRA Senior Research Technician

























### Introduction

In the previous webinar we covered the internal components of the RE0F10A/B CVT.

In this webinar we would like to cover as much of the internal components of the RE0F10D/E CVT possible within the amount of space & time we have for this webinar.

We will go over some of the disassembly and reassembly while covering the major differences between all the RE0F10D/E CVTs. The RE0F10H/J models are very similar.

Keep in mind Jatco designed these CVTs for Nissan as well as other manufacturers. There are some slight differences in other car makers that will not be covered in this webinar.

The differences in other vehicle models will obviously be seen in the design of the case for the different engines as well as some slight differences in the electronics and valve bodies.

There will be future webinars to cover other Jatco CVT models that are available in Nissan and other vehicles.

The information found in this webinar will show internal components that are common to all the Jatco CVTs.















### External Differences

With the cases sitting side by side you can see a difference in the bell housings to fit the different engine sizes. Although different models may fit behind the same engine size.







































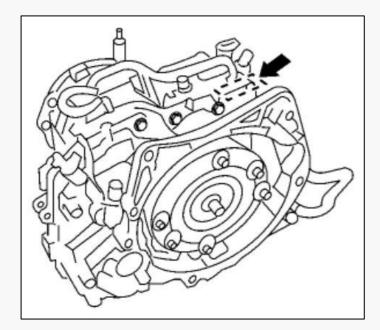


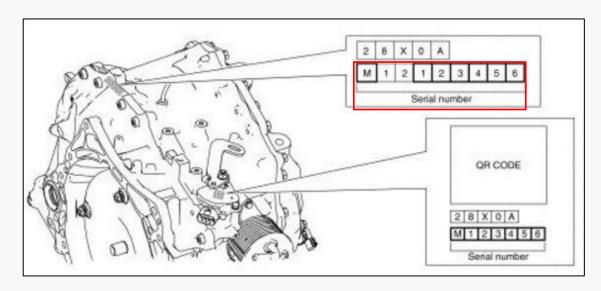


# Identification

To identify the unit you are working with, find the transmission serial number located on the top of the case (shown here) or label on the range sensor.

To verify that this is the correct unit for the vehicle, check the model code found in factory manuals, Mitchells, Alldata or Identifix.





General Specification  Engine model		INFOID:0000000008139	
		QR25DE	
Drive type		2WD	
Transaxle model		RE0F10D	
Transaxle model code number		3VX0A	
Transaxle gear ratio	D position	2.648 – 0.380	
	R position	0.745	
	Final drive	4.828	
Recommended fluid		Genuine NISSAN CVT Fluid NS-3*1	
Fluid capacity liter (US qt, Imp qt)		Approx. 7.4 (7-7/8, 6-1/2)*2	
CAUTION:	I		



- Use only Genuine NISSAN CVT Fluid NS-3. Never mix with other fluid.
- Using CVT fluid other than Genuine NISSAN CVT Fluid NS-3 will deteriorate in driveability and CVT durability, and may damage the CVT, which is not covered by the NISSAN new vehicle limited warranty.













## Identification

This unit is out of a 2013 Altima (3VX0A) 2WD QR25DE (L4 2.5L) D= 2.648 - 0.380 R=0.745 FD=4.828

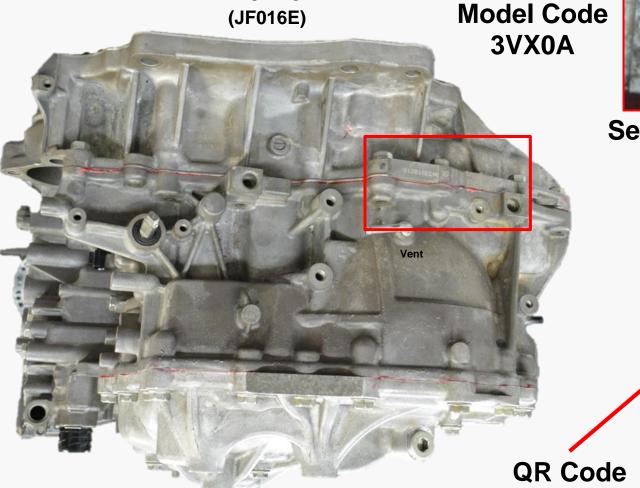












RE0F10D



Serial Number M13300550



























### **RE0F10D (JF016E)**

2013 Altima

2014 Altima

2015-16 Altima

2015-16 Juke

2014-15 Rogue

2016 Rogue

2015-16 NV200

**RE0F10E (JF017E) (chain)** 

**2013 Altima** 

2014 Altima

2013-14 Pathfinder

2015 Pathfinder

Infiniti

2014 QX60

2015 QX60

2014 QX70

RE0F10H (JF018E) (chain)

2015-16 Altima

2016 Maxima

**RE0F10J (JF019E) (chain)** 

2015-16 Murano

2015-16 Pathfinder

**2015 Quest** 

Infiniti

2014-15 QX60

### Identification

Model / Axle / Engine / Ratio

3VX0A 2WD QR25DE (L4 2.5L) D= 2.648 - 0.380 R=0.745 FD=4.828

(N/A) 2WD QR25DE (L4 2.5L) D= 2.648 - 0.380 R=0.745 FD=4.828

(N/A) 2WD QR25DE (L4 2.5L) D= 2.631 - 0.378 R=1.960 FD=4.828

(N/A) 2WD/AWD MR16DDT (L4 1.6L) D=2.631 - 0.378 R=1.960 FD=5.694

(N/A) FWD/AWD QR25DE (L4 2.5L) D= 2.648 - 0.380 R=0.745 FD=5.694

(N/A) FWD/AWD QR25DE (L4 2.5L) D= 2.648 - 0.380 R=1.973 FD=5.694

(N/A) 2WD MR20DE (L4 2.0L) D=2.631 - 0.378 R=1.960 R=0.745 FD=4.828

Model / Axle / Engine / Ratio (Chain)

3WX0A 2WD VQ35DE (V6 3.5L) D=2.436 - 0.384 R=0.745 FD=4.677

(N/A) 2WD VQ35DE (V6 3.5L) D=2.436 - 0.384 R=0.745 FD=4.677

3WX0B/D 2WD / 3WX0C/E 4WD VQ35DE (V6 3.5L) D=2.413 - 0.383 R=0.745 FD=5.577

(N/A) 2WD/4WD VQ35DE (V6 3.5L) D=2.413 - 0.383 R=1.798 FD=5.577

Model / Axle / Engine / Ratio (Chain

3WX0B/D FWD / 3WX0C/E AWD VQ35DE (V6 3.5L) ) D=2.413 - 0.383 R=0.745 FD=5.577

(N/A) FWD/AWD VQ35DE (V6 3.5L) D=2.413 - 0.383 R=0.745 FD=5.577

3WX0B/D FWD / 3WX0C/E AWD VQ35DE (V6 3.5L) D=2.413 - 0.383 R=0.745 FD=5.577

Model / Axle / Engine / Ratio (Chain)

(N/A) 2WD VQ35DE (V6 3.5L) D= 2.436 - 0.384 R=1.815 FD=4.602

(N/A) 2WD VQ35DE (V6 3.5L) D= 2.413 - 0.383 R=1.798 FD=5.250

Model / Axle / Engine / Ratio (Chain)

(N/A) FWD/4WD VQ35DE (V6 3.5L) D= 2.413 - 0.383 R=2.312 FD=5.250

(N/A) 2WD/4WD VQ35DE (V6 3.5L) D= 2.413 - 0.383 R=2.312 FD=5.250

(N/A) 2WD VQ35DE (V6 3.5L) D= 2.436 - 0.384 R=1.815 FD=4.602

Model / Axle / Engine / Ratio (Chain

(N/A) FWD/AWD VQ35DE (V6 3.5L) D= 2.413 - 0.383 R=2.312 FD=5.250















# **External Components**

The Output Speed Sensor is also referred to as Secondary Speed on the RE0F10D/E models in the 2013.

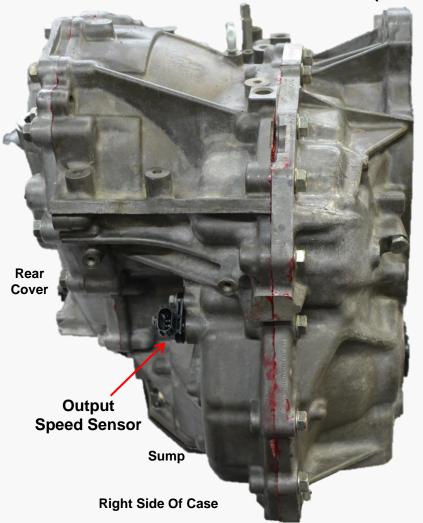


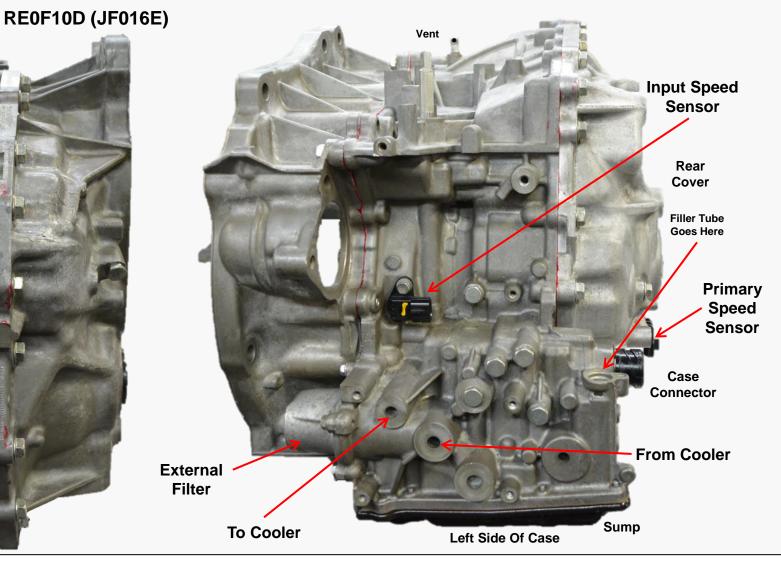






























THE BEST FOR THE BEST

Toledo







Up to this point everything we discussed in the last webinar on the RE0F10/B CVT is basically the same under the bellhousing and pan (sump);

- **Differential / Idler Gear**
- **Stator Support**
- **Forward Drum Assembly**
- **Reverse Clutch Assembly**
- **Pump Assembly**
- Valve Body Removal

Any differences with individual components will be covered in this webinar also.

As we have stated in previous articles, seminars and webinars there are quite a few similarities between Nissan/Jatco CVT models. We will skip some of the subtle differences like the shield is slightly larger underneath the 10D differential and no shield in the 10A bellhousing.

10D Large Shield



10A Small Shield



10D Large Shield



10A No Shield

















# Forward Clutch Comparison

The 10A/B as well as the 10D/E have 3 clutches except the 10D/E has an exciter ring for the Input Speed Sensor not found on the 10A/B models. The clutches and steels are the same on all 10 series models. The 10A/B uses a beveled cushion plate and the 10D/E uses a waved.



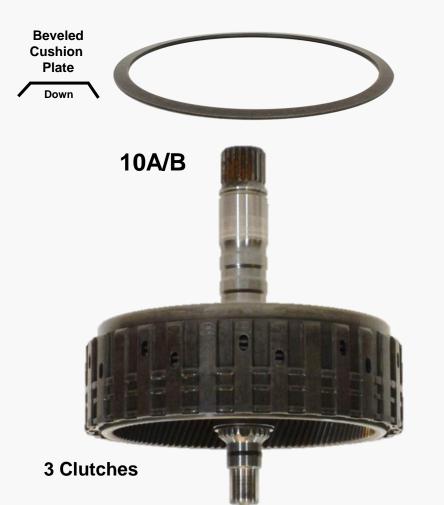


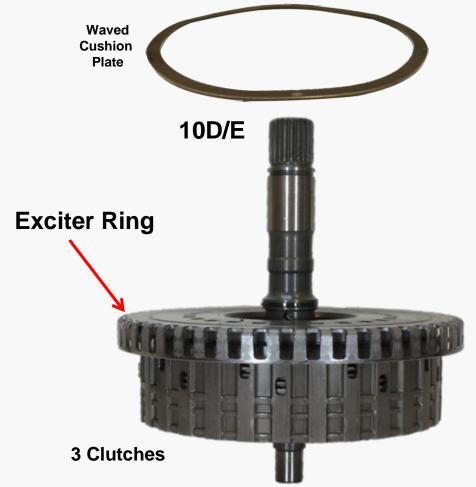
























# Reverse Clutch Comparison

Unlike the 10A/B with a beveled plate these models use a waved cushion plate. The 10D has only 2 clutches where as the 10E has 3. The clutches and steels are the same on all 10 series models. There are no clutch clearances listed by Nissan.













10D 2 Reverse Clutches



















# Reverse Clutch Comparison

There is also a difference between the 10D & 10E apply pistons and return springs.

The 10E piston has a different configuration and the snap ring goes on the inside edge of the return spring. The 10D snap ring goes on the outside.





























### **Drain & Fill**

This transmission has a typical drain plug on the pan (sump) like the 10A/B CVT. The 10D/E also uses the same type fluid charge pipe (filler tube) as the RE0F10A/B/11A with a plug (no dipstick like the 10A/B) located next to the internal harness connector.

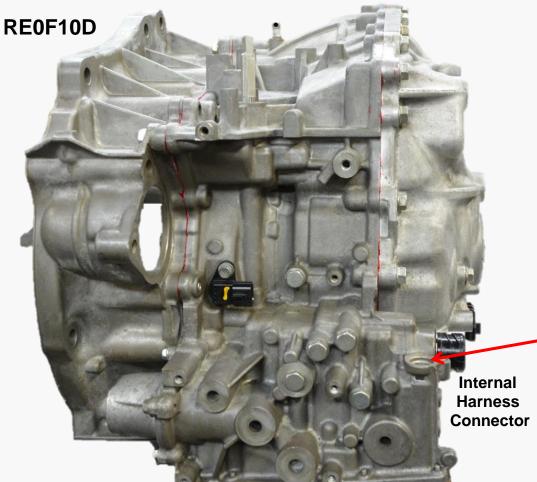


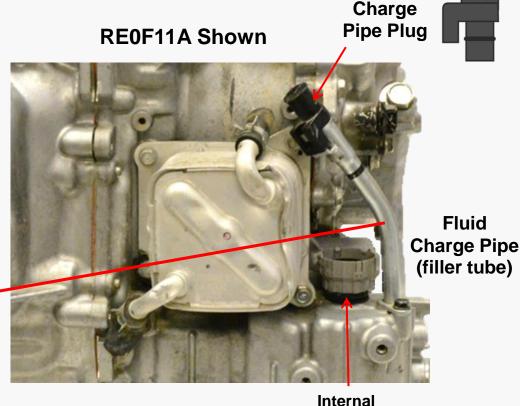
























Harness

Connector



# Drain & Fill

Except on these models, there is a special service tool to fill and check fluid level using the fluid level check plug (overfill plug) located on the lower front case (bellhousing) near the pan rail. The 10A/B models use a dipstick (no fluid level check plug).



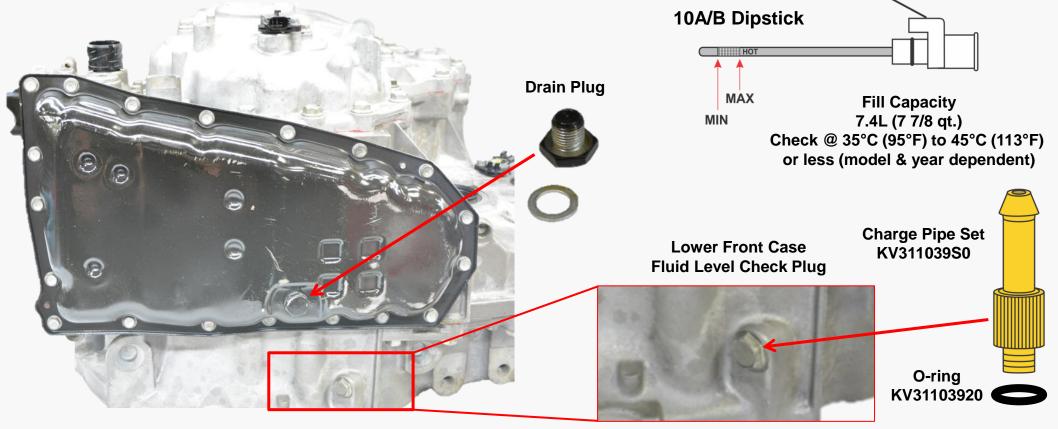
Always verify fluid capacity at the correct temperature setting with factory information for the vehicle your working on (model & year dependent).























Fluid Level Gauge



# Pan & Filter Comparison

The bolt pattern on both the 10D & 10E are the same. The pan is much deeper on the 10E and the filter has a longer pickup. The 10D pan & filter is the same on the 10A.































# Pan & Filter Comparison

The 10B pan has a different bolt pattern similar to Chrysler & Mitsubishi except the 10B & Mitsubishi both have a drain plug Chrysler does not.

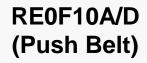
















Step by step service procedures can be found in ProDemand (Mitchells) and Alldata.















### External Filter

Like the 10A there is an external lube filter (to cooler) that can be serviced on the outside of the RE0F10D model transmissions.

Except on the RE0F10D models it uses a metal clad gasket and oring seal.































# Rear Cover / Pulley Removal

Because the 10D CVT <u>does not</u> have a ratio control motor and ratio/pulley guide we found it easier to remove the rear cover along <u>with</u> the pulleys.

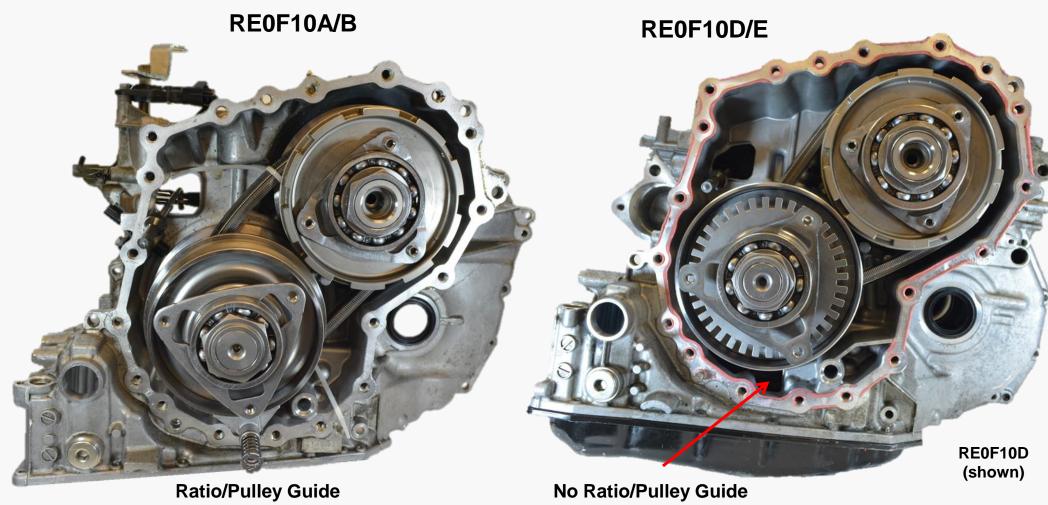


























# Rear Cover / Pulley Removal

The 6 bolts (with orings) holding the pulleys <u>do not</u> have to be removed at this point.

The belt can be removed and installed right in the back cover using it as stand.

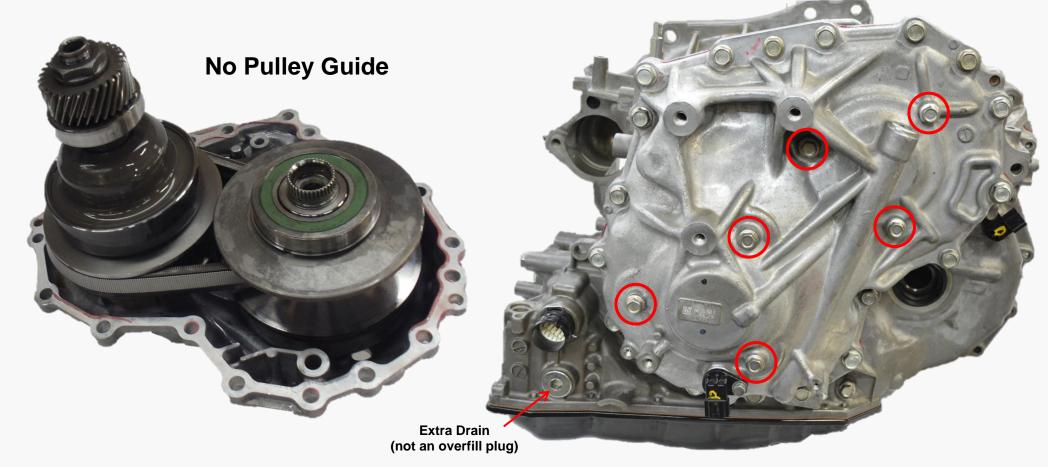






























There is a major difference between the belt used on the 10A models compared to the 10D models. The 10D is a stronger more heavy duty style push belt.

The Belt should be laid on one side at a time (cut the nylon ties) and remove the steel bands for inspection. The bands are a common failure.

Being careful to not let the belt come apart (about 400 steel plates).



























### Common Failure

Here is an example of RE0F09A Push Belt with only one Steel Band broken.

You can see it did not damage the pulley Sheaths too badly and were reused.

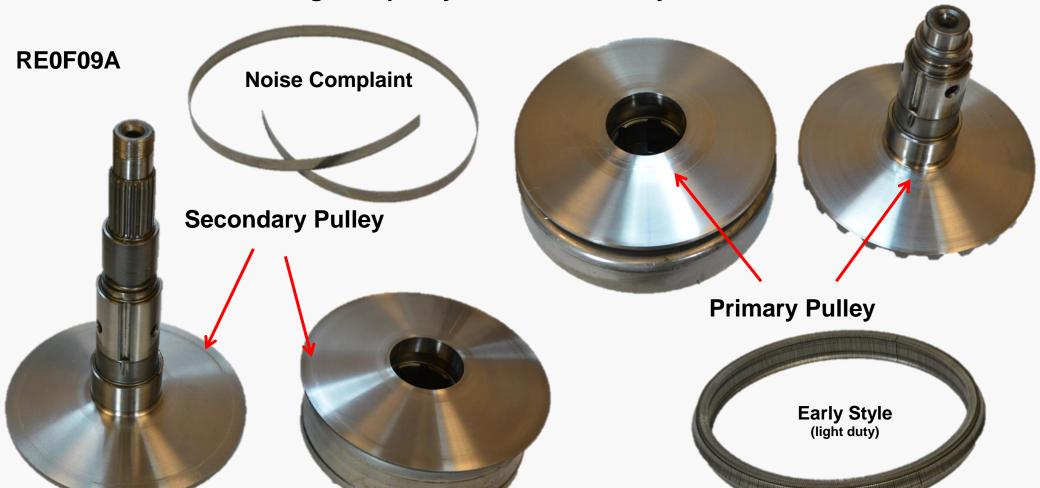


































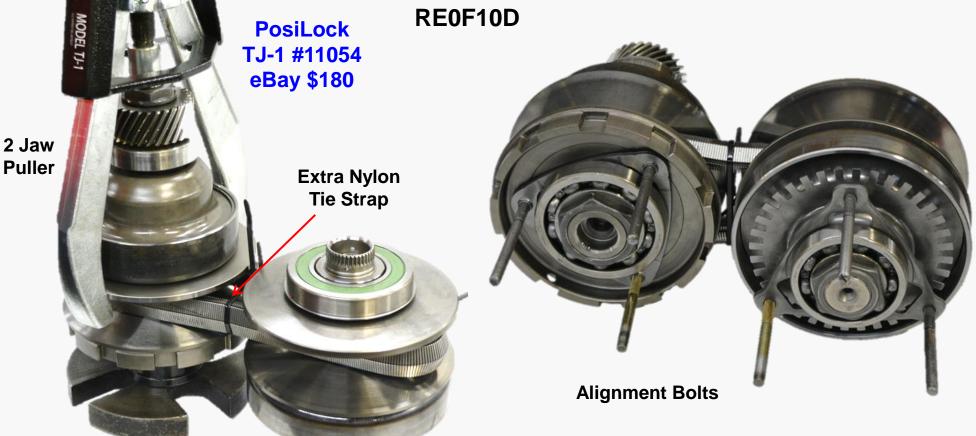


# **Pulley Assemblies Installed**

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.





















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.

Then simply install the entire assembly onto the back of the main case.

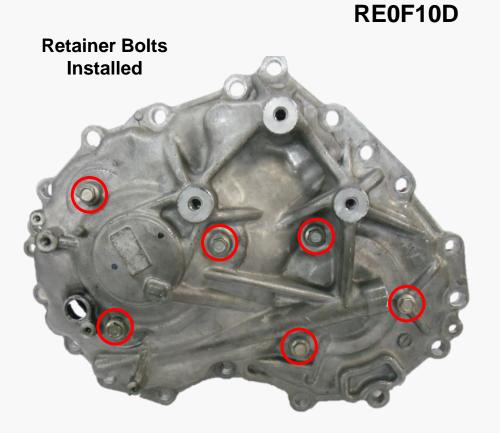




























# Chain Driven Pulley Removal

The RE0F10E/H/J models 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.



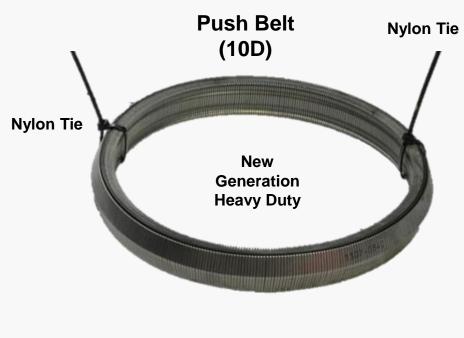


























# Chain Driven Pulleys

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. There is nothing to hold the tubes in place they

just sit on the chain guides.

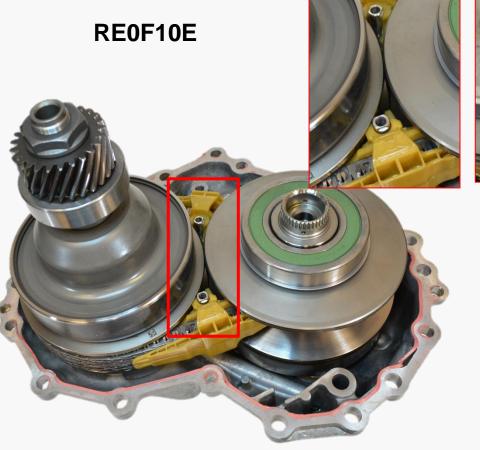


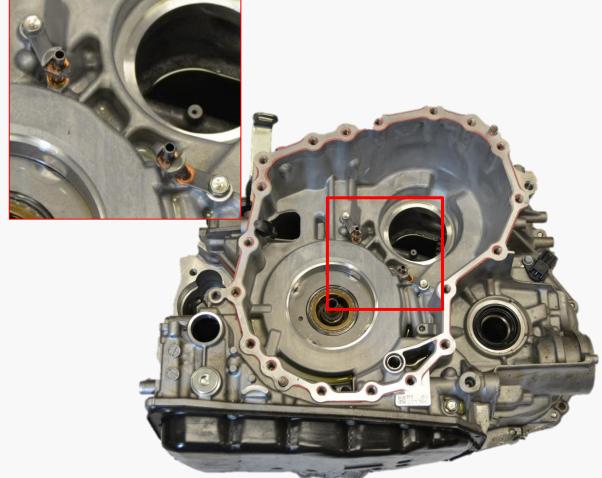


































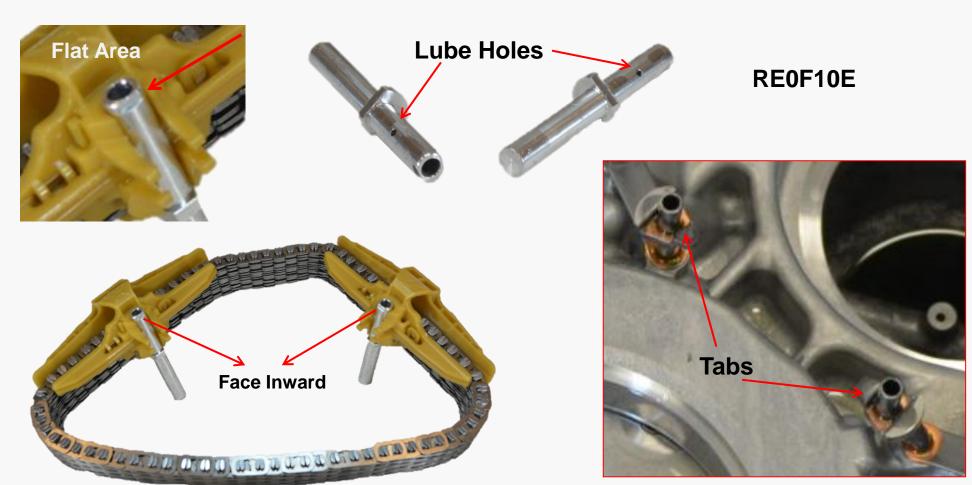




# Chain Driven Pulleys

The flat area on both aluminum tubes musts 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 end of the aluminum lube tubes are held down in place by two embossed tabs in the back cover.

RE0F10E

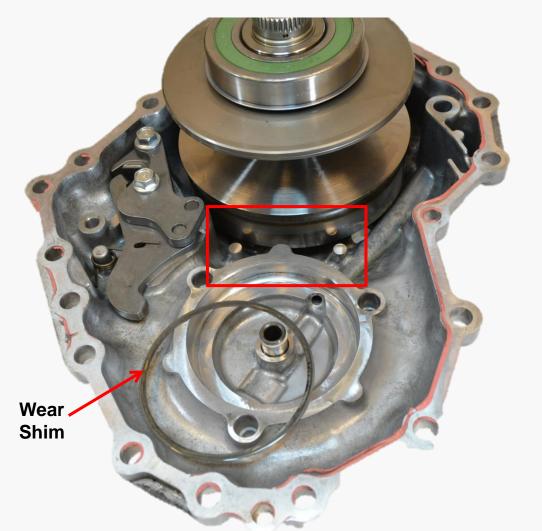






























### Chain Removal / Installation

The chain is removed and installed just as if it were a belt.

Once it is installed onto the pulleys use a couple of nylon ties to keep Secondary Pulley Spring compressed and the pulleys spread when the tool is removed.





































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

With no tension on the pulleys they can be aligned and installed into the case much easier.

Now cut the nylon ties.





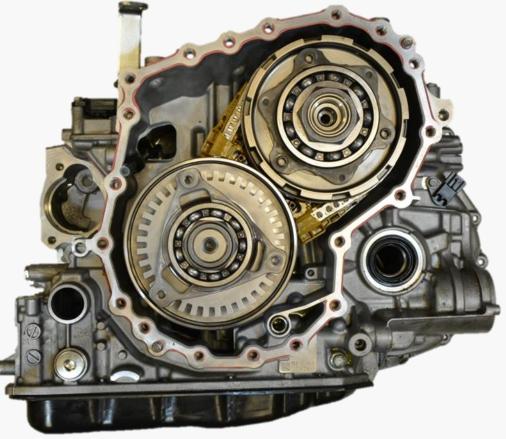


























# Chain Driven Pulley Installation

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



























# Chain Driven Pulley Installation

With the tubes installed make sure both tubes have the flats facing inward.

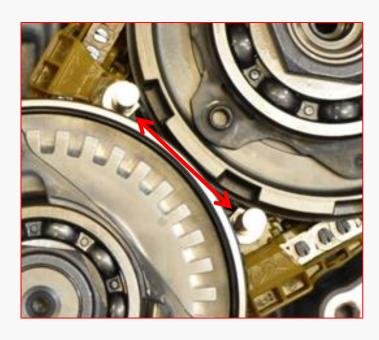




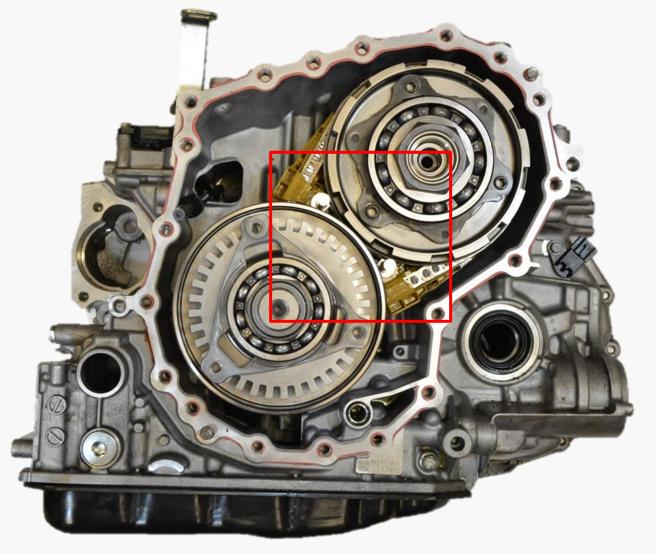








RE0F10E



























# Chain Driven Pulley Installation

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.

All CVT transmissions, chain or belt are very easy to assemble.

Final note; we found it much easier (as an alternative) to disassemble the pulleys on both

the chain or belt type while still in the back cover.

Using the cover as a stand.

After the pulleys are assembled on the bench, install them into the case after all the other internal components are assembled into the unit first.

Then install the back cover.



















**Retainer Bolts** 



# Secondary Pulley Disassembly

The first step to disassemble the secondary pulley will be to remove the gear and bearing with a 3 jaw puller after removing the retainer nut. With the gear and bearing off install the retainer nut back onto the shaft. Remove the piston retainer snap ring and with the same 2 jaw puller pull up on the pulley until the piston pops up off the shaft. There is a strong spring in the secondary pulley so it will be quite a pop.

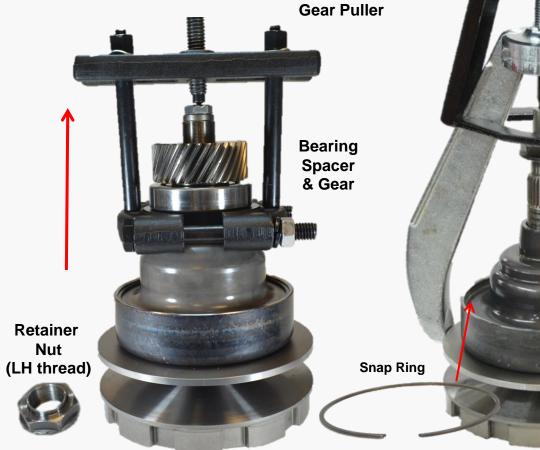


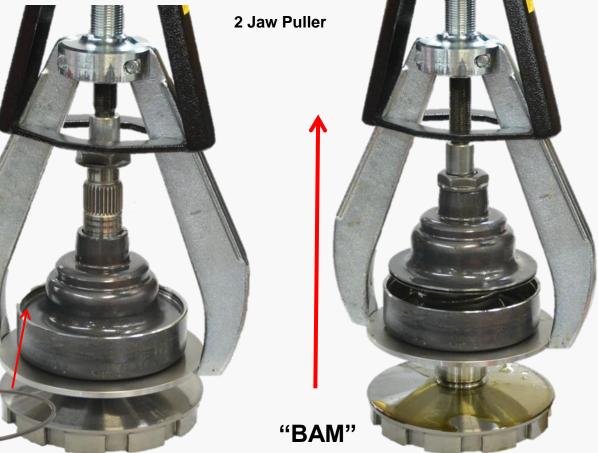




























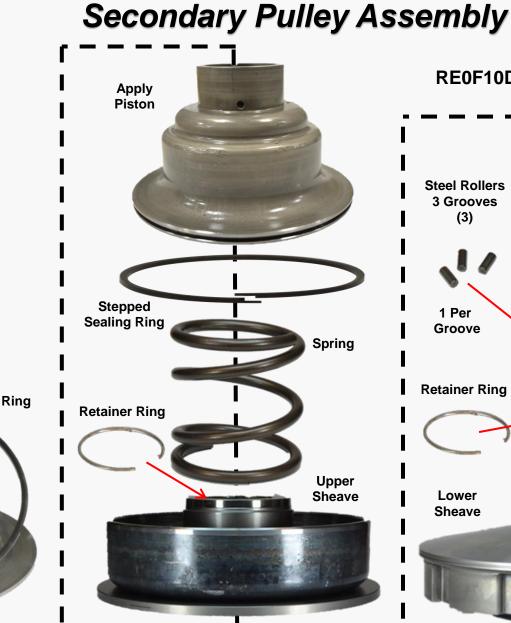




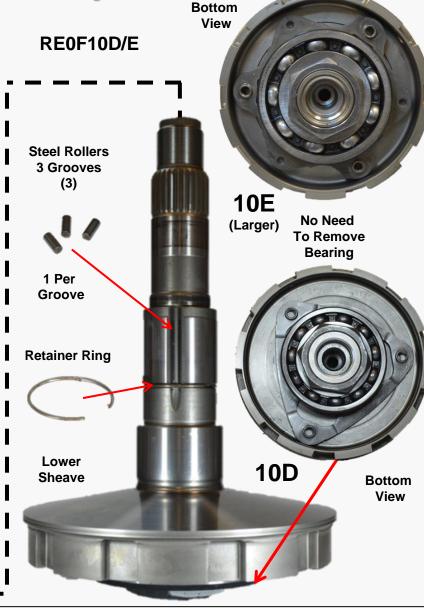


























# Secondary Pulley Comparison

The only noticeable difference from the outside of the secondary pulleys from a 10D/E and a 10A/B would be the outer surface of the upper sheave. The 10E is larger than the 10D model.













RE0F10A/B

















# Secondary Pulley Comparisons

Some Pulleys may have only 1 or 3 sets of 3 roller bearings without the square retainers.

They will have the same type retainer rings used in earlier models.





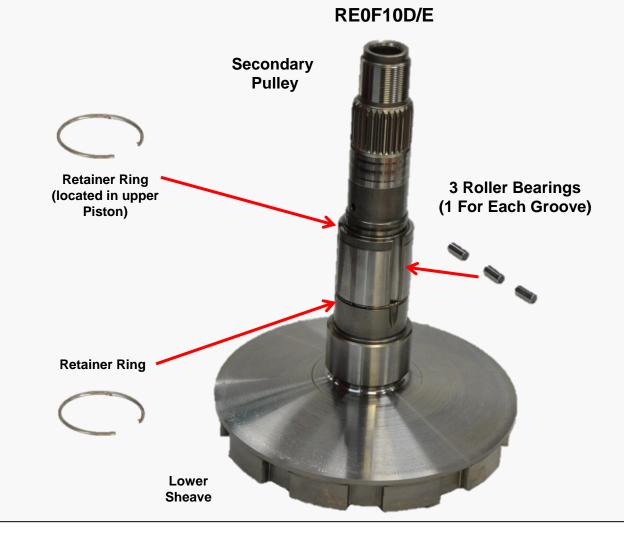








RE0F10A/B

















# Primary Pulley Disassembly

With the retainer nut removed use a 3 jaw puller to remove the bearing and pulley retainer.

An alternative method with retainer nut loosened, use the 2 jaw puller and remove the upper sheave with the bearing and pulley retainer altogether. Take care to not damage the exciter ring it's made of a soft material. Bent teeth will cause an erratic speed sensor signal.

2 Jaw Puller

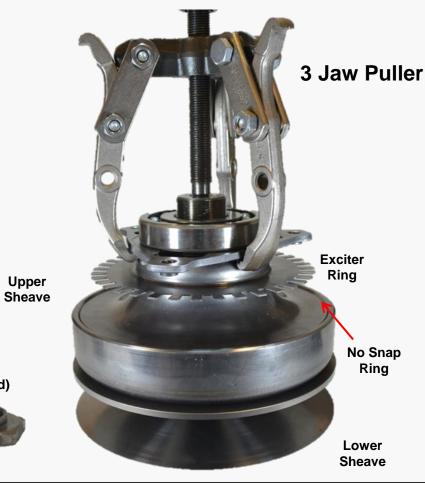


















Retainer Nut

(RH thread)











# Primary Pulley Disassembly

Another method with the retainer nut removed would be to simply tap the shaft on something solid (floor) and the parts will simply fall off. Even with a lighter spring found in some models.

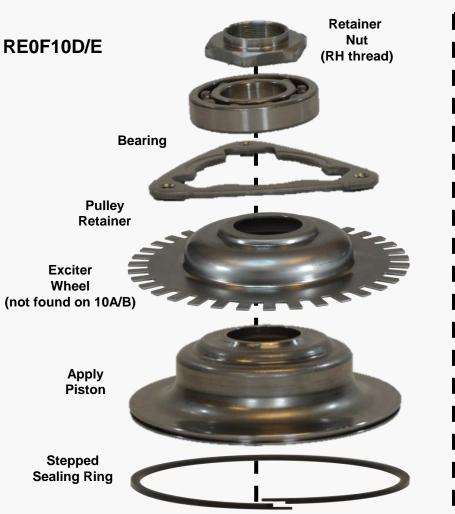


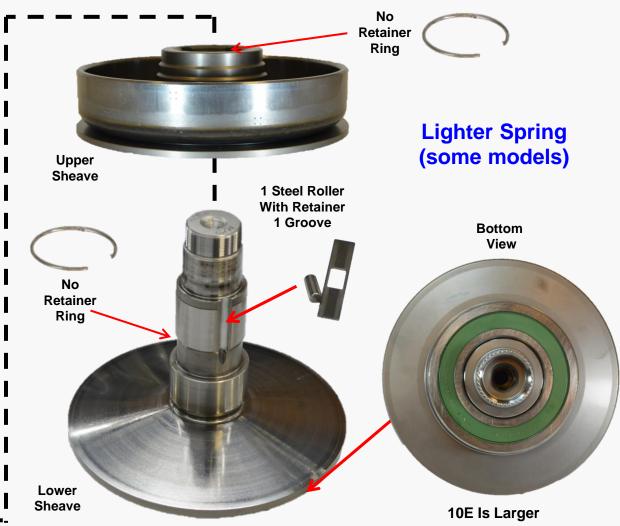


























# **Primary Pulley Comparison**

The only noticeable difference from the outside of the primary pulleys from a 10E and a 10A/B is the same as the secondary pulley, the outer surface of the upper sheave.















#### RE0F10A/B

















# **Primary Pulley Comparisons**

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

It is much easier to assemble than the bearing type.

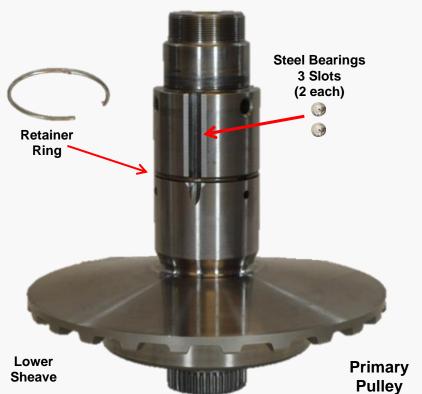








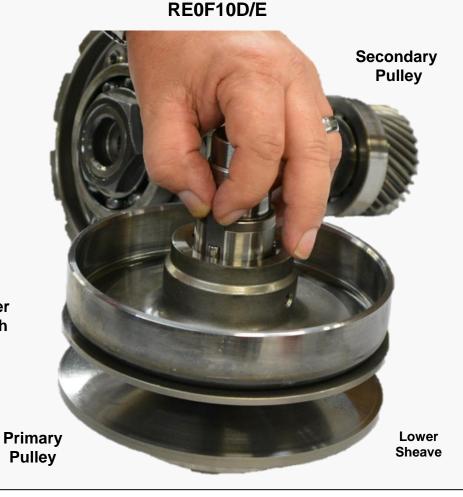




RE0F10A/B



Single Roller Bearing With A Square Retainer



















#### Common Failure

It is very common to see groove damage on the earlier 10A models without any damage to the sheave surface. The complaint will be no ratio change because the upper sheave will be jammed and not move. The later models now use steel roller bearings as shown previously.













#### **Groove Damage**



No Damage to Sheave Surface



**May Cause A Whining Noise** 

Special thanks to Art Landeck of Consumer Transmissions in Poughkeepsie NY for the damaged pulley pictures

















#### Common Failure

If not repaired in time the bearings will move out of the shaft area into the pulley piston and cause major damage to the entire pulley piston area as well.



At this point you're replacing the entire assembly.

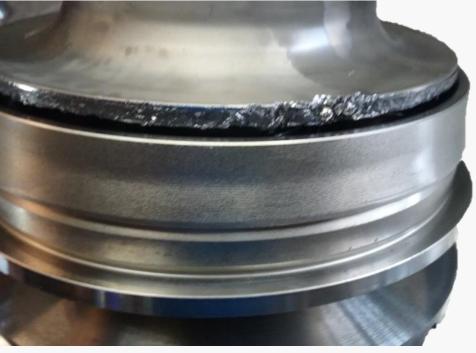


























# Valve Body Removal Is The Same As 10A/B

Along with the filter bracket, there is only 1 bolt slightly shorter than the rest and 10 longer bolts left to remove. Then the valve body can be lifted off the case along with the internal harness after removing the retainer clip. It's easy to identify where the shorter bolt goes.

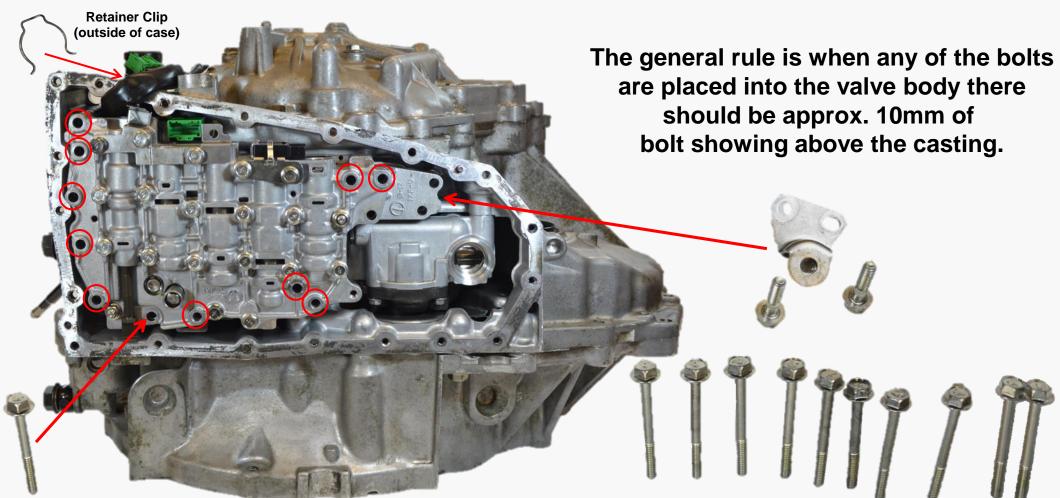


























# Valve Body Assembly

The solenoid part numbers are different so they are not interchangeable due to possible differences in solenoid flow rate. They are marked Normally High (NH) and Low (NL) on the solenoid.













**The Secondary Pressure** Sensor may be White, Yellow or Grey model dependent



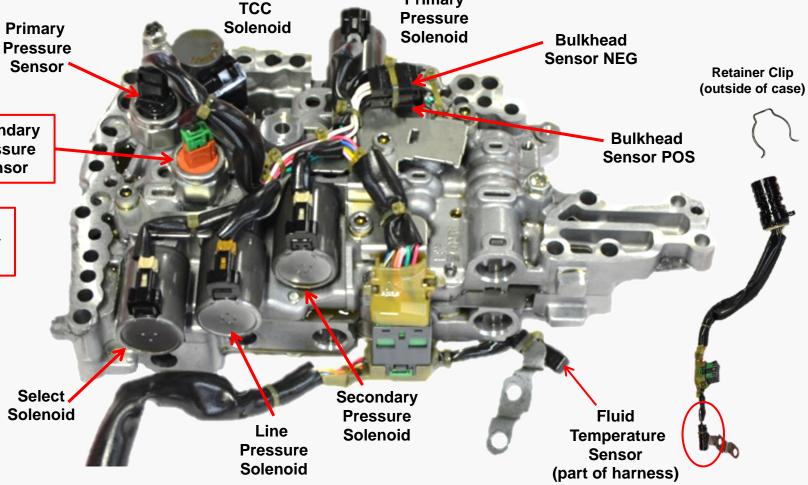




Secondary

**Pressure** 

Sensor



**Primary** 



















Toledo





#### Solenoid Identification & Function

The Line Pressure Solenoid (N/H) (PWM) regulates the pressure from the pump.

The Secondary Pressure Control Solenoid (N/H) (PWM) along with the Line Pressure Solenoid controls the pressure throughout the CVT.

The Torque Converter Clutch Solenoid (N/L) (PWM) controls the pressure for the Lockup Clutch.

The Torque Converter Clutch Select Solenoid (N/L) (On/Off) controls pressure to the torque converter clutch control valve to engage or release the torque converter clutch piston when the vehicle is driving down the road.

The TCC Select Solenoid also controls apply pressure to the forward clutch and reverse brake clutch pressure when shifting from neutral or park to drive or reverse. Problems with this solenoid may cause an issue during engagements.

When controlling lock-up clutch, the valve is turned OFF. When controlling forward clutch, it is turned ON.

2= Line Pressure Solenoid 3-9 $\Omega$ 

3= Secondary Pressure Solenoid 3-9 $\Omega$ 

12= TCC Solenoid 3-9Ω

13= TCC Select Solenoid 17-38Ω

Note: always verify connector pin identification with factory information.















#### Solenoid Removal

Unlike the 10A/B models, the solenoids are held in the valve body with a nail shape pin. Not as likely to misplace during rebuild.

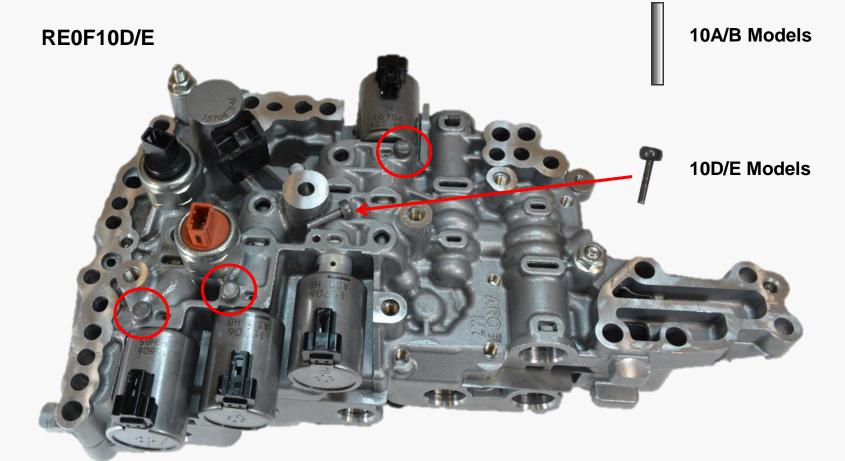




























#### Valve Body Disassembly

These are the names of the valves found in the factory manual.



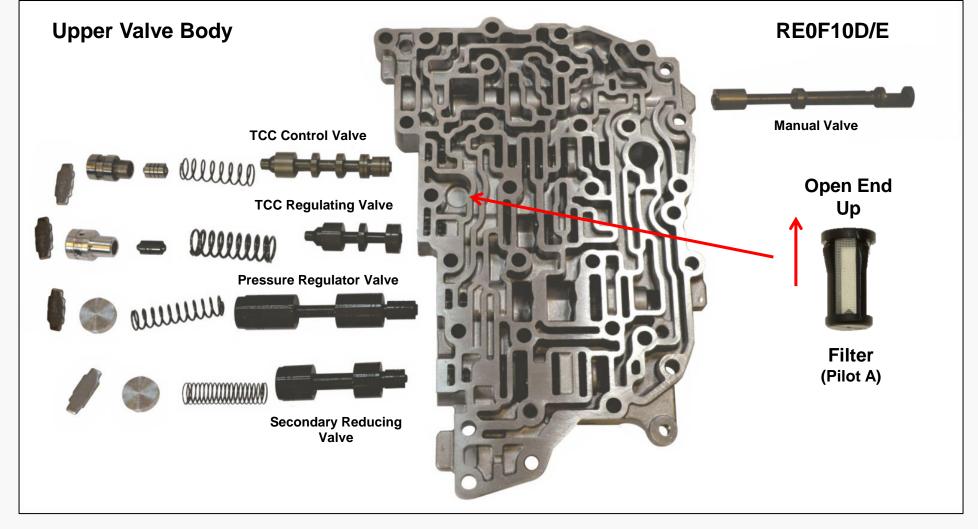




























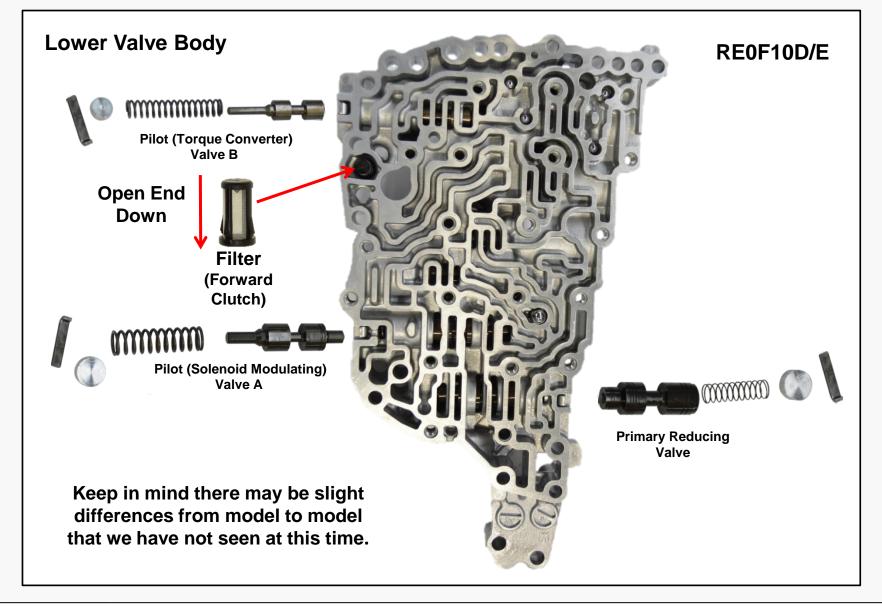








# Valve Body Disassembly

























#### Valve Function

- Torque converter regulator valve: Adjusts the feed pressure to the torque converter to the optimum pressure corresponding to the driving condition.
- Pressure regulator valve: Adjusts the discharge pressure from the oil pump to the optimum pressure (line pressure) corresponding to the driving condition.
- Torque converter clutch control valve: Adjusts the torque converter engage and disengage pressures.
- Manual valve: Distributes the clutch operation pressure to each circuit according to the selector lever position.
- Secondary reducing valve: Reduces line pressure and adjusts secondary pressure.
- Primary reducing valve: Reduces line pressure and adjusts primary pressure.
- Pilot valve A: Reduces line pressure and adjusts pilot pressure to the solenoid valves listed below.
  - Primary pressure solenoid valve
  - Secondary pressure solenoid valve
  - Select solenoid valve
  - Line pressure solenoid valve
- Pilot valve B: Reduces pilot pressure and adjusts pilot pressure to the torque converter clutch solenoid valve.















# Valve Body Disassembly

There are 4 small check balls and 1 large check ball to be aware of. The large check ball has a spring underneath.

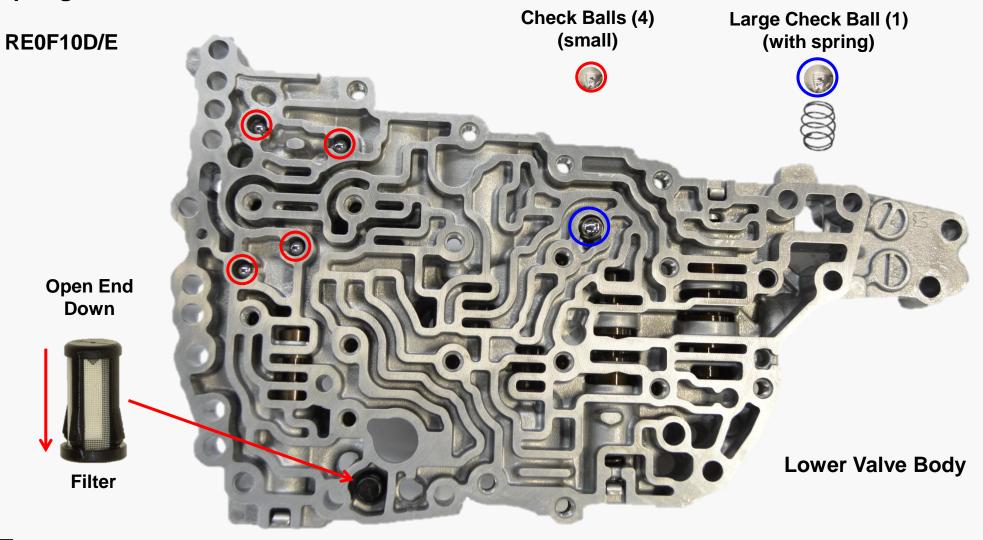






























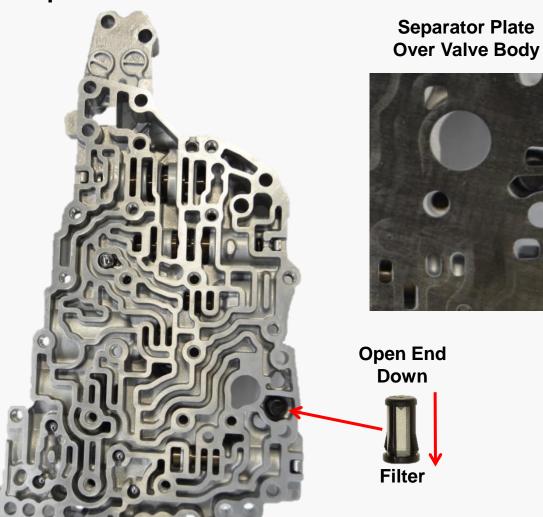






# Valve Body Disassembly

The filter open end faces down because the is no round opening in the separator plate for the open end.



















#### **Pressure Test**

Check pressure at operating temperature, pressures vary by model always verify with factory information. Use a pressure transducer and meter, pressures can rise up to 800 psi of more.

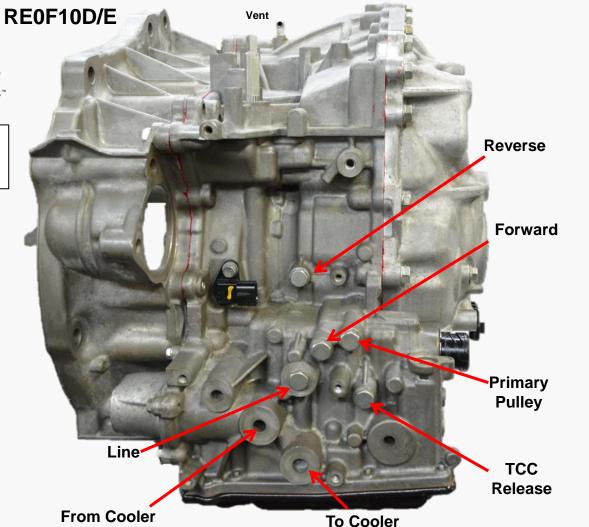


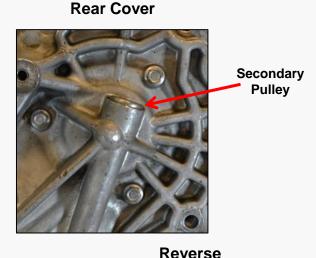


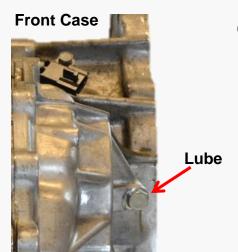


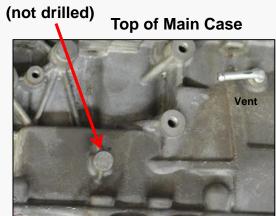




























#### Case Air Checks

Air checks should be performed with 30 psi of regulated air. Pulleys can be pressure checked with full shop air pressure.



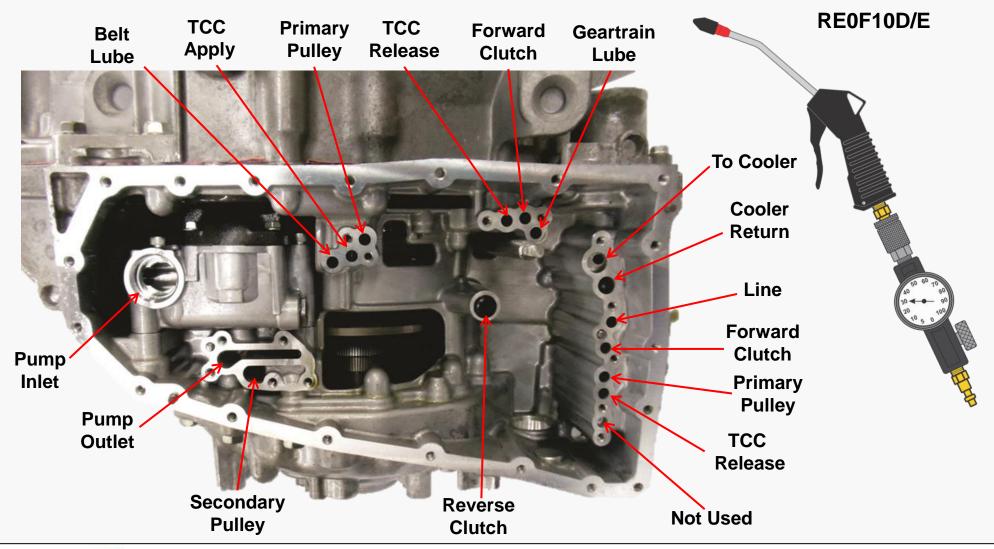


























# 10D Torque Converter Problems

The washers at the end of the damper springs move out of place or become missing altogether on the 10D converters.

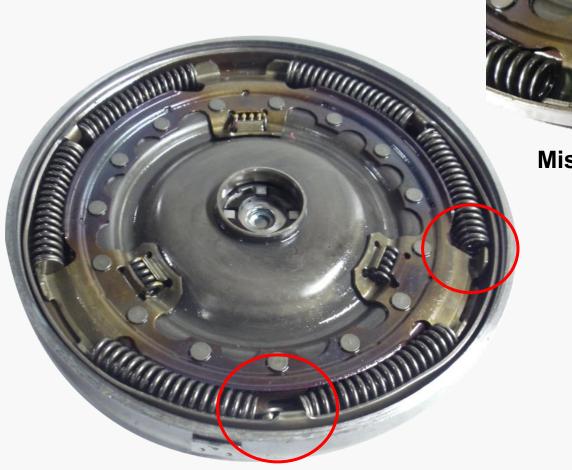












Moved Out Of Place
Missing Altogether

















## 10D Torque Converter Problems

The tabs like to break off and at times the entire part breaks into several pieces.



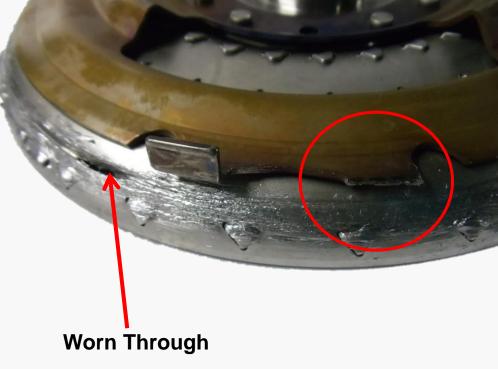


























# 10E Torque Converter







































# Nissan CVT Changes

Mod	lel/Year	ENGINE	ROM	RCM	SOLENOIDS								
					LINE	TCC	TCC SELECT	SELECT	PRIMARY	SECONDARY	LOW BRAKE	H/R BRAKE	
06A	1990-06	2.0L	0	X	W/DR	X	0	0	0	0	0	0	
08A	2007-09	1.8L	X	X	X	Χ	Χ	0	0	Χ	0	0	
08B	2009-14	1.0L	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	3.JL	X	X	X	X	X	0	0	X	0	0	
10A	2007-09		X	X	X	X	X	0	0	X	0	0	
10/	A 2010	2.0L 2.5L	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	
100	2013	1.6L 2.5L 3.5L	0	0	X	X	0	X	X	X	0	0	
10D	2014-16	1.0L 2.3L 3.3L	0	0	X	X	0	X	X	X	0	0	
10E	<b>E 2013</b>	3.5L	0	0	X	X	0	X	X	X	0	0	
10E	2014-16	3.JL	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 2	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	
B/C: E	Belt / Chai	in											
ROM:	Read Onl	y Memory											
RCM:	Ratio Con	itrol Motor (Step	per Mo	tor)									
W/DR:	W/DR: With Dropping Resistor in electrical circuit												
H/R BI	H/R BRAKE: High & Reverse Brake Clutch Solenoid												
HIGH (	HIGH CL: High Clutch Sensor/Switch												
N C S/	N C S/M: Not connected on some Sentra models												
N/S W	N/S WD: Not shown in any factory wire diagram												
PNP: Park Neutral Position Sensor (Range Sensor)													

























## Nissan CVT Changes

Model/Year		PRESS	URE SENSORS		SPEED SENSORS				PNP	B/C	PUMP
	LINE	PRIMARY	SECONDARY	HIGH CL	PRIMARY	SECONDARY	INPUT	OUTPUT	Internal		Driven
06A 1990-06	X	0	0	0	Х	Х	0	0	0	Belt	Converter
08A 2007-09	0	Х	Х	0	X	Х	0	0	Х	Belt	Converter
08B 2009-14	0	0	Х	0	Х	Х	0	0	0	Belt	Converter
09A 2003-07	0	Х	X	0	X	Х	0	0	Х	Belt	Converter
09B 2007-14	0	Х	X	0	X	Х	0	0	Χ	Belt	Converter
10A 2007-09	0	Х	Х	0	X	Х	0	0	0	Belt	Chain
10A 2010	0	N C S/M	Х	0	Х	Х	0	0	0	Belt	Chain
10A 2011-12	0	0	X	0	Х	Х	0	0	0	Belt	Chain
10B 2012-16	0	0	X	0	X	X	0	0	0	Belt	Chain
10D 2013	0	Х	X	0	X	X	Х	0	0	Belt	Chain
10D 2014-16	0	Х	Х	0	X	0	Х	Х	0	Belt	Chain
10E 2013	0	Х	Х	0	X	Х	X	0	0	Chain	Chain
10E 2014-16	0	Х	X	0	Х	0	X	Х	0	Chain	Chain
10H 2015-16	0	Х	X	0	Х	0	X	Х	0	Chain	Chain
10J 2015-16	0	Х	X	0	Х	0	X	Χ	0	Chain	Chain
11A 2012-16	0	0	Х	N/S WD	Х	Х	0	Х	0	Belt	Chain
B/C: Belt / Cha	in										

ROM: Read Only Memory

RCM: Ratio Control Motor (Stepper Motor)

W/DR: 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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SAP #		Description	Pcs.	Brand
	222	ACTE Azam, Gover low and revense 24 dath 2004/lip	3	0E
	221	41TE Azam, Gover low and revense 24 dath 2004(b)	3	0E
Chrysler	4851	450E 1999On	2	0E
Chrysler	4859	5450FE 2004Up	- 5	OE/AM
	4856	67E 2007-sp	6	Hi-Per/OE
	4860	689F 20074b	- 5	OE/AM
	32388D	4F27E 2000Np	7	OE/AM
	788	58110W 2005Ub	8	ÓE
	45188	5859N 1999402	3	Hi-Per/OE
	4863	8F35 2009Hb	- 5	0É
	4867	6Pi0 6Pi5 6E0 2008lb (Greenin 1)	- 5	0E
Ford	463888	AVAN 199498	- 5	0E
	4850	JOSEPH 4F50N 1999Hz	- 5	0E
	4850	AX45 AX4N 1999Hb	- 5	Hi-Per/OE
	765A	D4E 1994lb	3	0É
	7658	(D4E 2003/lb	3	0E
	32388E	FHAIL 1999/b	7	OE/AM
	32388F	B85 200509	9	AM/IIi-Por
Ford/GM	4861	6F50 6F55 6T/0 6T/5 20074lb	5	0E
	798	1000/2000 Alion 2006lb	4	0E
	732	4LACE 1997-Up	3	0E
	34088	4030 403E 1997Up	3	0E
	310	4PICE 1995lb	7	0E
	4864	940E 20074b	9	Hi-Per
General	247	940E 20024b	9	0E
Motors	4869	940E 2nd Clieth Set 199901	3	Hi-Per
	4857	445 450 2007Ub	- 5	0E
	4858	430 450 2006lb	- 5	Hi-Per
	764	Salam 1991-lb	4	0E
	20588	VI20 VI25 2002Nb	2	AM
	796	#m1000/2000 200005	4	0E
Mazda	323886	FSSAEL 200509	9	AM/IIi-Por
	4855	RC4WEL JIMDSE 2000-11	2	Hi-Per
Mitsubishi	21110	NANF1 /2 20059lb		0E
Nissan	17388	RESROSA 2002-16	3	Hi-Per
	29080C	AR4 19884b	5	AM.
Renault	252088	DFO AL4 19984b	7	Hi-Per
	252088A	DPO AL4 1998 No wo/o Servo Fistors	- 5	Hi-Per
	26288A	UTACE UTACE 1999Ab		Hi-Per/OE
	26288C	Ú151E Ú151F 2002Nb		Hi-Per/OE
T	26288C-1	U151E U151F 2002Nb	6	Hi-Per/OE
Toyota	262888	U240E U241E 20004b		
	26288F	U250E 20054b- indaing Direct Clash Fisters	7	AM/Hi-Per
	4865	U340E U341E U341F 1999Hb	3	Hi-Per/OE
	8404	OTAL OTAL OTP 1995/db	7	AM
v-II	8403	095/096/097/098 8994	5	AM
Volkswagen -	8404	095/096/097/098 8994	7	AM
	4871	098 TF-625N 2005Up		Hi-Per
ZF	4862	2F4H716 20024b	2	Hi-Per

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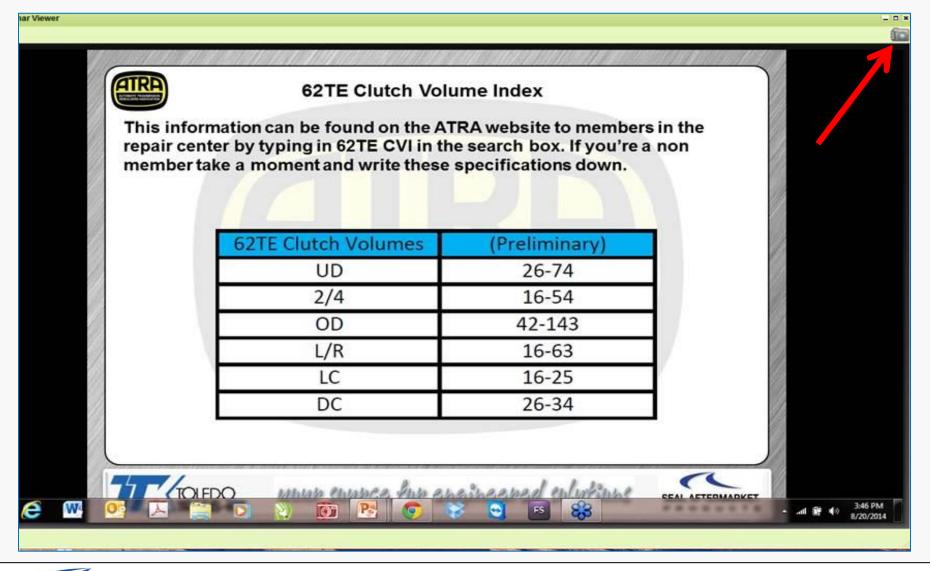








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