

# RFE-5B-HP

Patent No. US 11,105,415 B2



## Reprogramming Kit™

**Fits:** RFE's 45-68 2011-18 Gas & Diesel.

All with 5-Ball Valve-Body

### Prevents-Corrects-Reduces

Converter drain back.

Allows use of Pump Cover with worn TC limit bore.

HD Accumulator Cover Plate Replacement

**Features:** ADDS 30% More Line Pressure at all throttle openings without the need of computer software.

Perfect for Performance & Hard Worked Trucks

### Transmission Removal Required

**Please start with Separate pages: Read 1st-  
Part Selection, Drum Data & Important Information**

*Upgrade for the OD Clutch!*



**New Design OD/Reverse Pressure Plate Allows:**

14 single sided OD frictions (Diesel) 15 % Gain

or 5 double sided OD Friction (Gas) 25 % Gain

A Cost Effective Upgrade

See Drum Data in **Read 1st** pages for more info.

**Short, Clean Shifts  
That Hold The Power!**

**Calibration that Relearns Quickly.**



**Mr. Shift**

© TransGo 2020

**These next two steps create a converter pressure limit system to prevent the converter from being overcharged in lockup.**

**Step 1.** With this valve lineup removed.

Use two Pump bolts to tighten drill jig down, with the notch in the lower right hand corner as shown. Use the .093" drill go thru the jigs pilot hole & drill thru the pump cover just enough to enter the accumulator piston bore. **Do Not drill out the other side of pump cover!** Remove jig, use de-burring tool to deburr the bore.

Drill Jig shown bolted to pump cover.

Pilot Hole

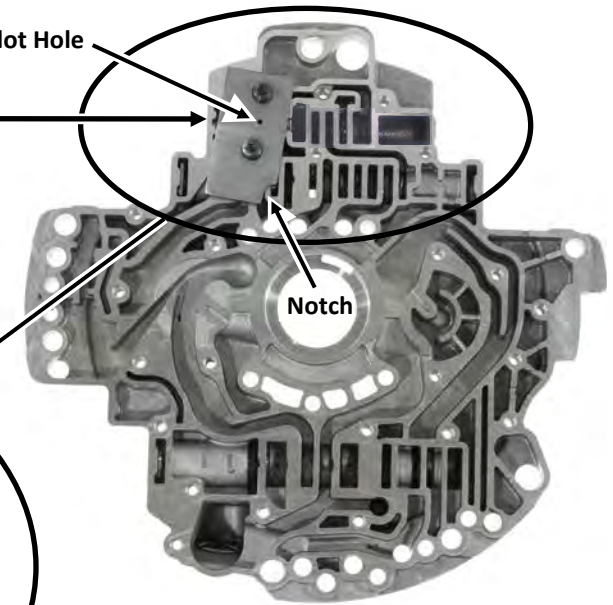
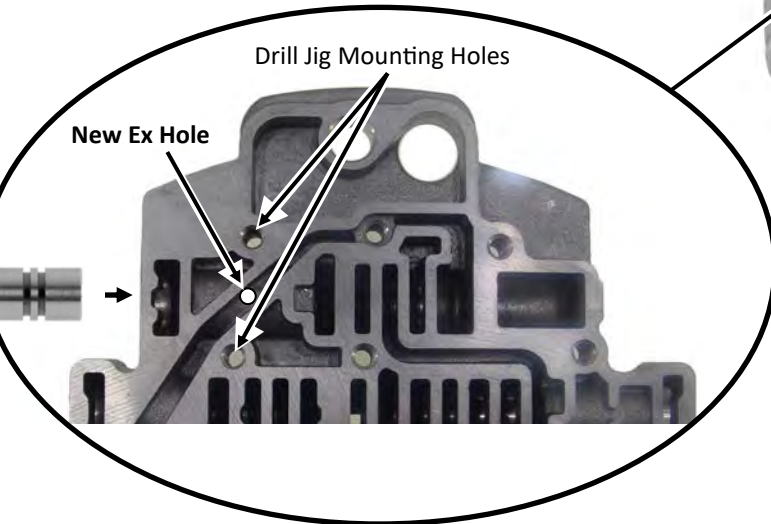
Notch

Stroke the de-burring tool several times in bore & blow with air to ensure all chips and burrs have been removed from drilling the new Ex hole.

New Ex Hole

Drill Jig Mounting Holes

De-burring Tool

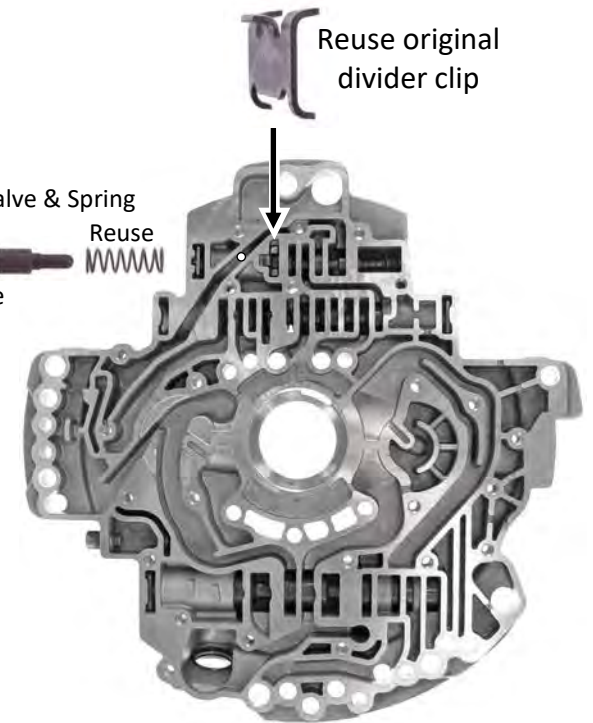


**Step 2.**

**New Slotted Retainer**

Reinstall original CC Reg Valve, Spring & Divider Clip. Discard the original Accum spring & **Place the Three New plain Springs** into open end of Accumulator Piston, install into pump cover & use the **new slotted Retainer** as shown.

The above two steps creates a converter max pressure limit system when in lockup. It does not affect the apply feel of TCC. If using a Triple Disk Converter & want a smother TCC Apply, open the optional pack containing New TransGo **RFE-TCC-3D** valve & install as shown. **RFE-TCC-3D** is not needed or wanted if using a factory type twin disk converter.



## Step 1.

Remove & ID which Type TC Valve the pump has:  
If it has **TYPE 1** Valve, use **NEW Type 1** Bushing!

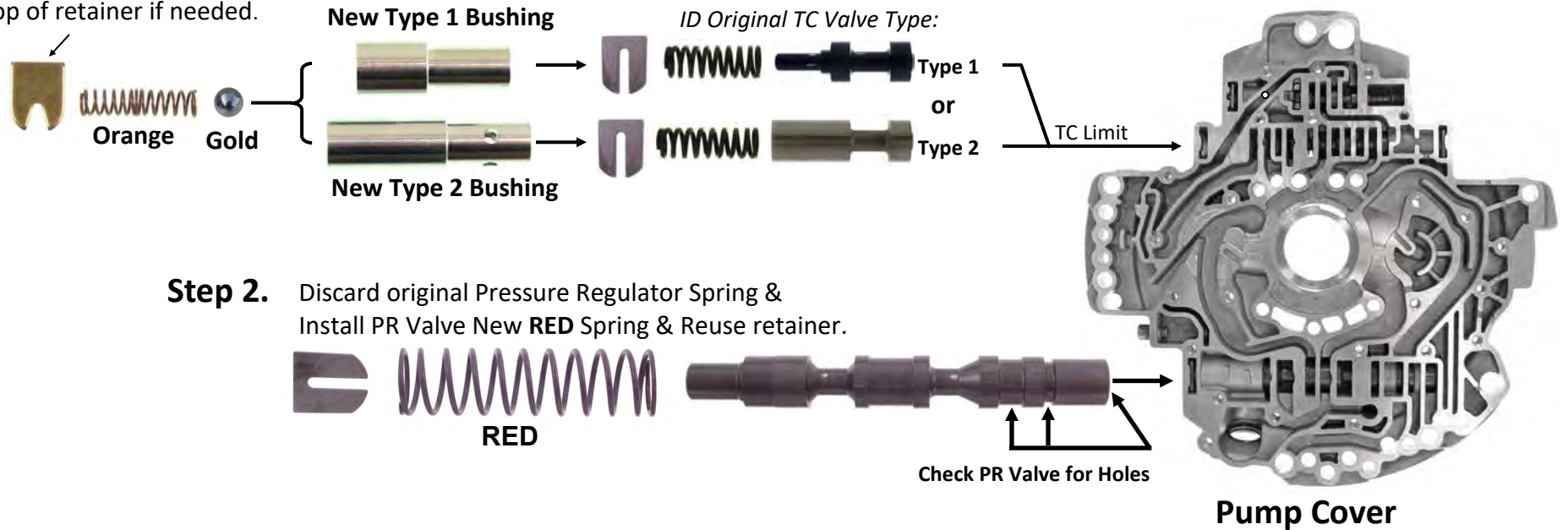
Discard original TC Limit Valve, Spring & Retainer.

**Install new Bushing, GOLD ball, ORANGE Spring & V-Notch retainer**

It is correctly installed when the bushing is inserted far enough to install the retainer.

Now Regardless of the amount of bore wear this system works perfectly!

**V-Notch Retainer** must install below flush on pump. Grind the top of retainer if needed.



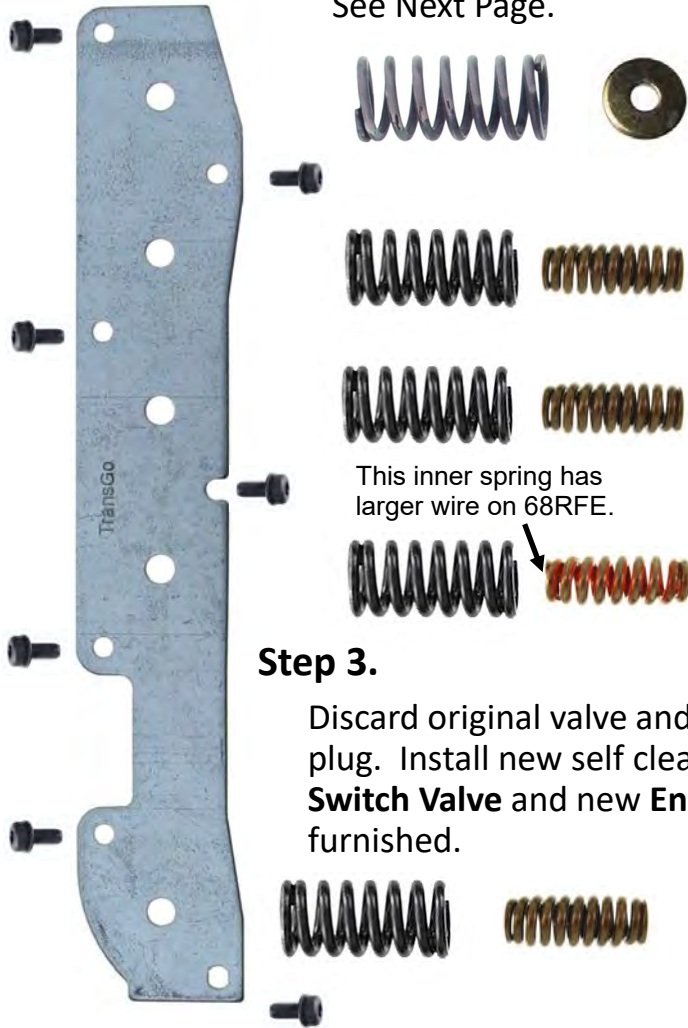
**Step 2.** Discard original Pressure Regulator Spring & Install PR Valve New **RED** Spring & Reuse retainer.

**Please take a minute and look the pressure regulator valve over,** there should be no holes drilled anywhere with a stock valve if there is, plug them or a replacement valve/pump cover will be necessary. **Never use this kit with a Modified PR Valve.**

# Valve Body

## Step 2.

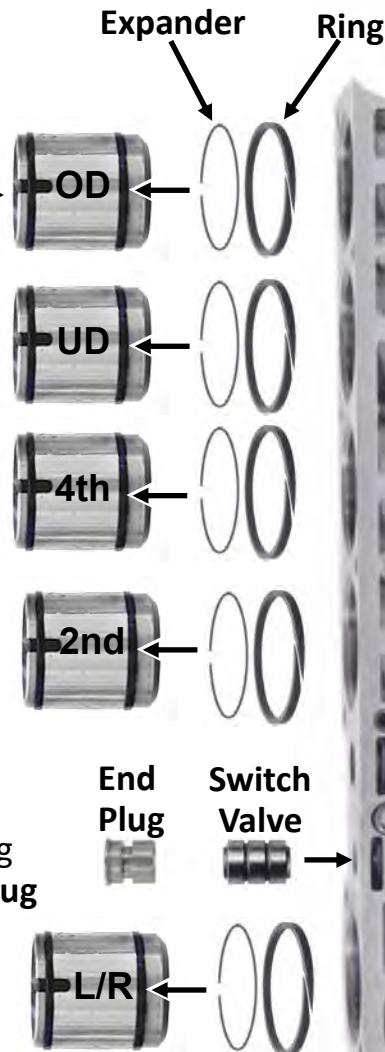
OD Accumulator: Use **New Washer?**  
Spring **White** or **Plain?**  
See Next Page.



## Step 1.

**Aluminum** Pistons Only: Install wire expander and new ring into inner ring groove as shown.

**Plastic** Pistons: Skip step 1.



## © 5 Checkballs

Install 5-Balls as shown

## Hold it!

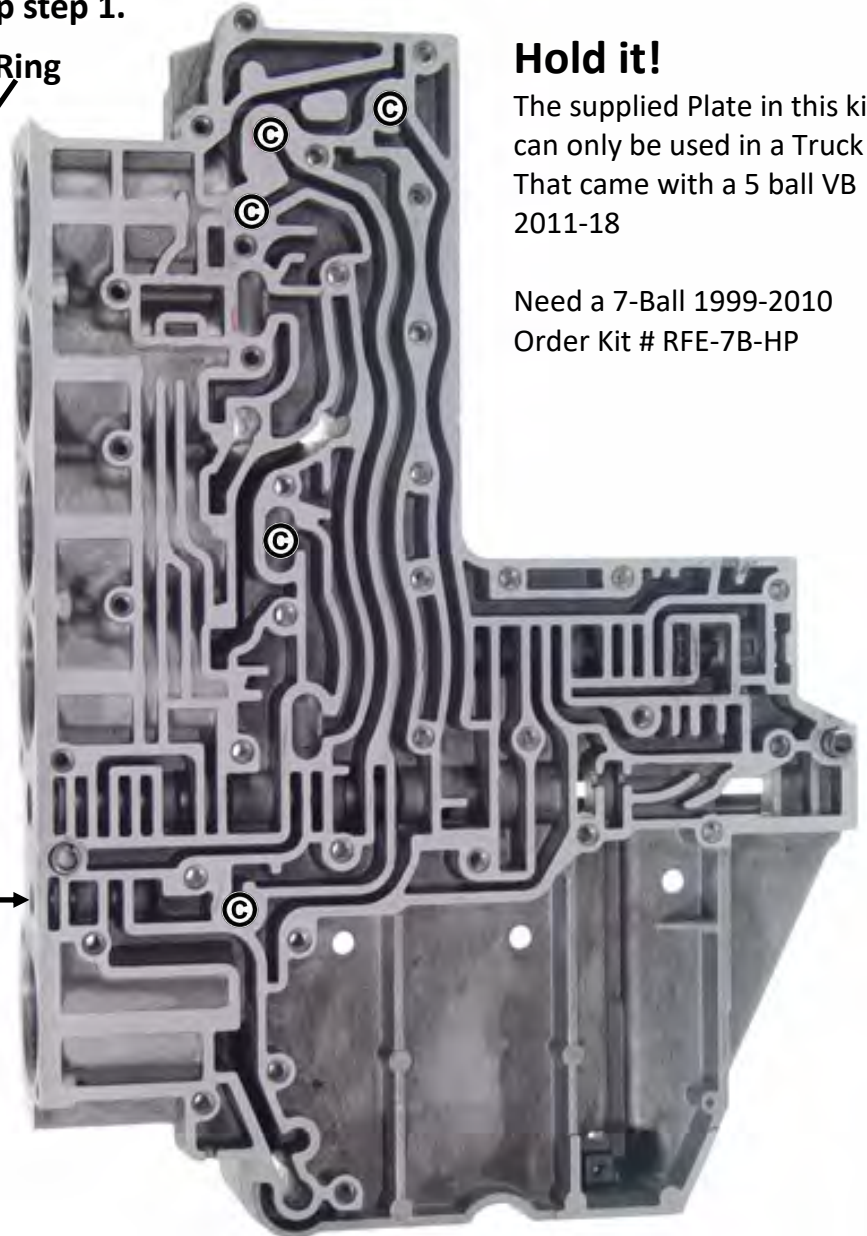
The supplied Plate in this kit can only be used in a Truck That came with a 5 ball VB 2011-18

Need a 7-Ball 1999-2010  
Order Kit # RFE-7B-HP

## Step 3.

Discard original valve and plug. Install new self cleaning **Switch Valve** and new **End Plug** furnished.

**Step 4.** Install **NEW HD Cover** Using Loctite on the screws



## OD Accumulator choices: From page 4 New Washer? Spring White or Plain?

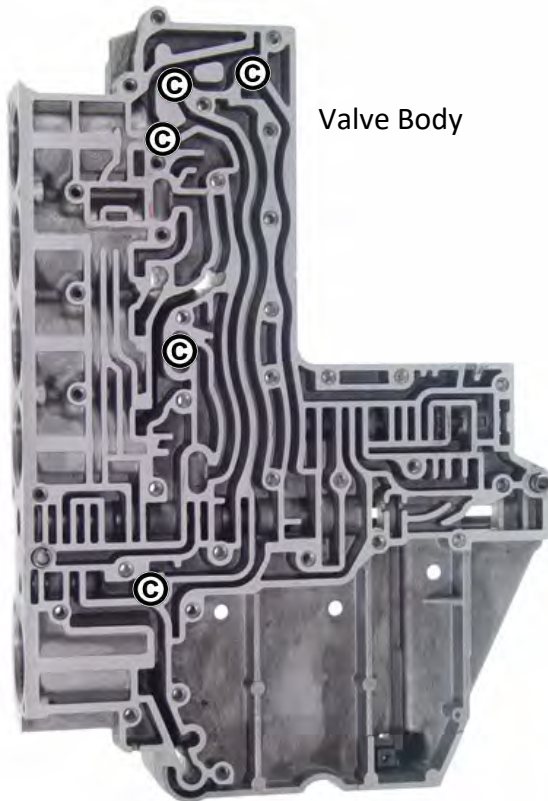
1. Stock OD Drum with 12 single sided frictions (Diesel), or 4 double sided Friction (Gas): **Use Plain Spring & the Washer.**
2. Stock Drum with thinner TransGo p/n RFE-PP-ODHP OD/REV pressure plate & 14 single sided frictions (Diesel), or 5 double sided Friction (Gas): **Use White Spring & No Washer.**
3. After-market OD Drum with increased apply area with any friction combo use **White Spring & No Washer.**

Clutch Tips: O.E. BW **OD friction plates** & good oil minimize the chance of a *squawk* on the shift.

Clutch thickness's may vary with different manufacturers and can effect clearances especially on single sided clutches due to number of plates!

The New PR spring and matching triple separator plate adds 30% more line across the entire curve to all clutch packs and keeps the transducer circuit from seeing the increased line. Individual clutch ports is the only place to see the increase. Adding two plates to the OD clutch gains another 15% bringing the total to 45% plus in holding capacity of the OD clutch and 30% of all other clutch packs.

The new TCC Limit System on page 2 keeps the increased line from ballooning or stretching the converter.



Valve Body

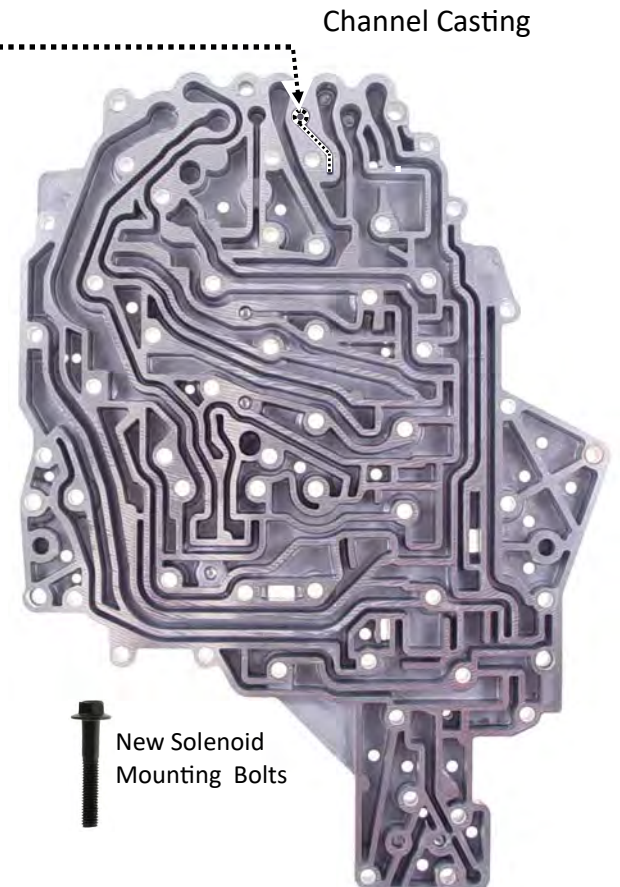
### Take time to look over the channel casting

for any previous modifications there should be no holes drilled in the passage shown. Plug or replace casting as necessary.

### Assembling Valve Body

1. Install 5 check balls as shown.
2. Smaller gasket installs first against the VB.
3. Next install New Triple Separator Plate.
4. Larger gasket on top of triple plate and lastly install the channel casting, using the factory dowels to line it all up.
5. Use the 15 New Longer bolts supplied for mounting solenoid body to channel.

Valve-body half's & Solenoid body **Torque 60 IN-LB's** Valve-body to case bolts 105 IN-LB's. go around all bolts two or three times with at least 1/2 hour between torqueing's. This gives the gaskets some time to compress.



Channel Casting

New Solenoid Mounting Bolts

## Using Aftermarket Billet Channel Please Read.

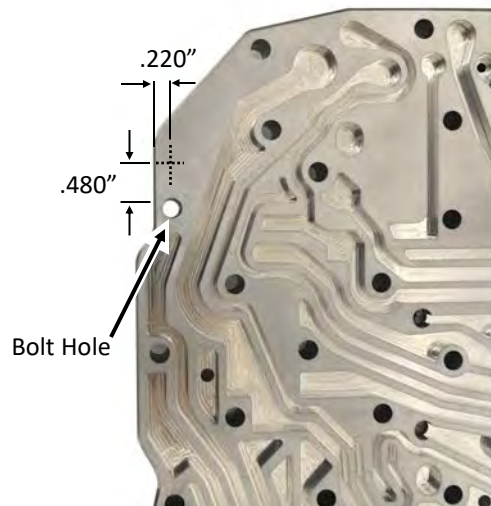
Both rivets in the Triple plate clear the factory castings.  
Rivet #1 hits the after market billet channel.  
A 5/16 hole must be drilled 3/16 deep in billet channel to clear rivet # 1.

Scribe a line .220" in from the outside edge of billet.  
Scribe a line .480" up from the edge of the bolt hole just below the rivet hole.

Where the two lines meet drill a 5/16 hole 3/16 deep in the billet channel.

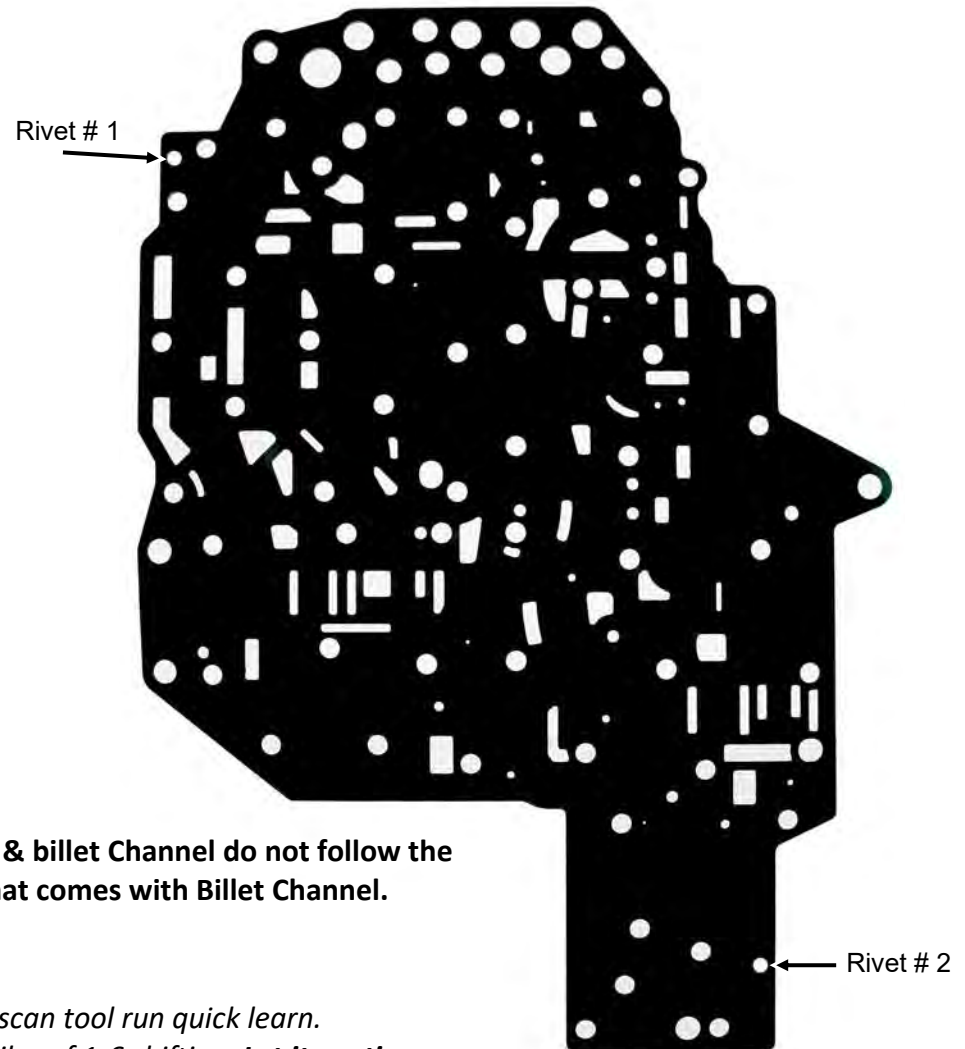
Double check. Lay triple plate on to billet channel lining up dowel pin holes in the plate to billet. Checking that the plate will lay flush and the rivet head drops in to the new hole.

Future runs of the Billet Channels will come pre drilled.  
3/16/19



Partial View of Billet Channel

The New Triple plate has some holes that are not in all three plates this is ok & normal. The smaller Gasket supplied has one extra hole over any other gasket out there so use the gaskets supplied with this kit.



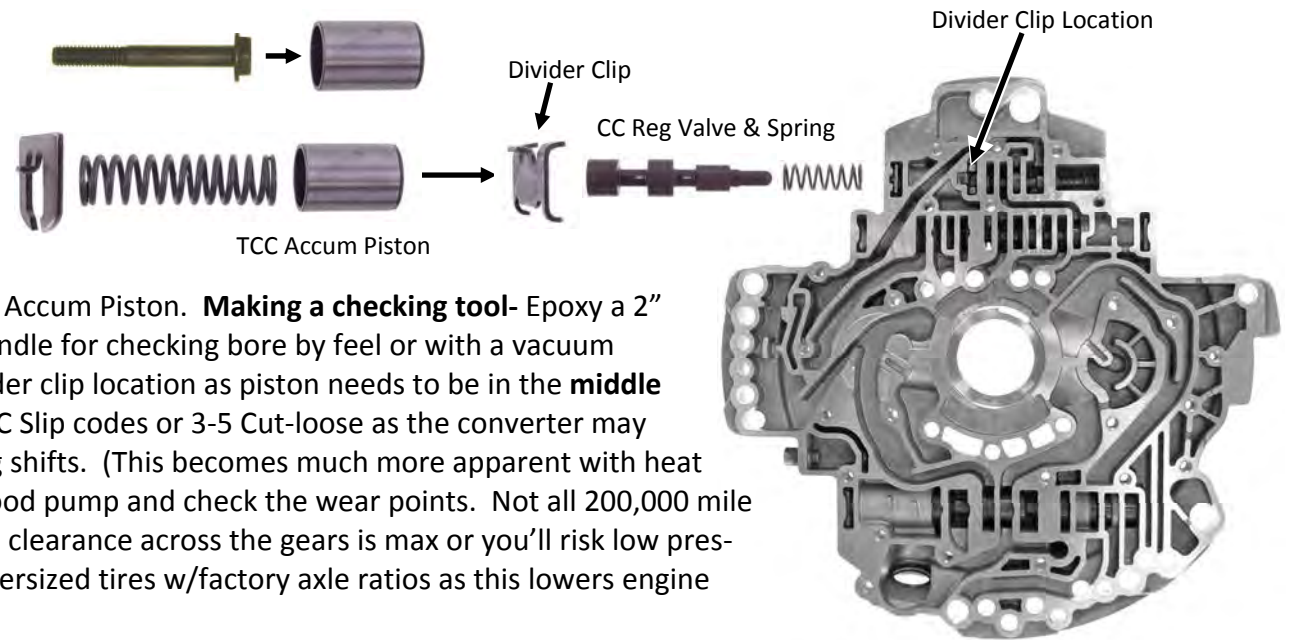
**When Installing this Kit & billet Channel do not follow the pressure Mod option that comes with Billet Channel.**

*After installation using a scan tool run quick learn.  
Drive it easy for 15-20 miles of 1-6 shifting. Let it continue learning a day or two of normal driving before adding power.*

# Read First

## Part Selection, Important Information & Drum Data

Yes, we know. It's a lot to read and yeah you could just skip it and roll the dice **BUT** before you do, understand this data is the result of some very switched on guys burning through truckloads of money in parts and labor learning what is painfully important to pay attention to and what actually works to be successful! Please read it!

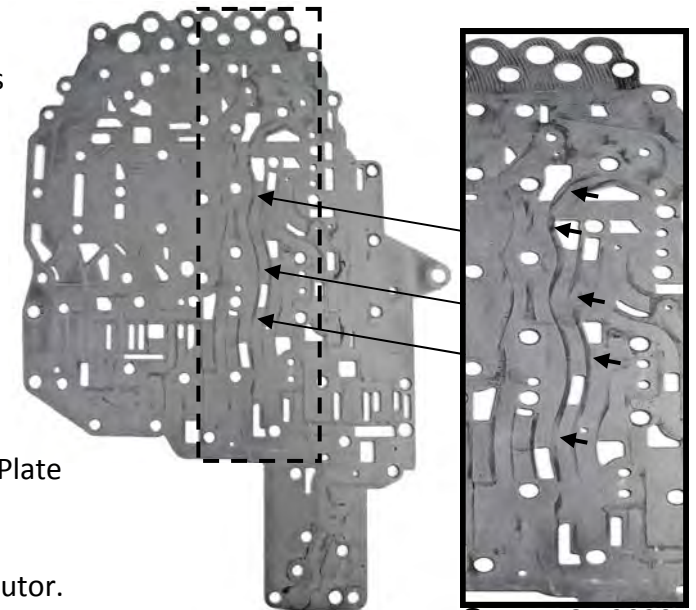
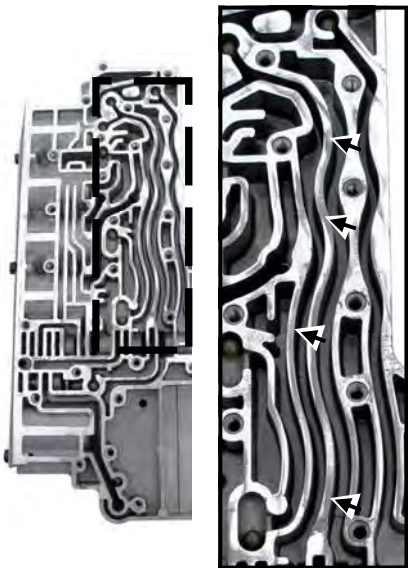


### Pump Checkup

High Mileage Stators can wear the bore at the TCC Accum Piston. **Making a checking tool-** Epoxy a 2" long bolt inside an old Accum piston to use as a handle for checking bore by feel or with a vacuum system. **Don't assume** its ok by Vac checking divider clip location as piston needs to be in the **middle of its travel** to find the leak. Worn Bore causes TCC Slip codes or 3-5 Cut-loose as the converter may not hold when ramped back to partial apply during shifts. (This becomes much more apparent with heat & added horsepower.) The point is, start with a good pump and check the wear points. Not all 200,000 mile pumps are a good candidate for HP use. .003 inch clearance across the gears is max or you'll risk low pressure, hot, at low rpm. Problem gets worse with oversized tires w/factory axle ratios as this lowers engine rpm.

### VB Checkup

Pressure, time & heat induce flexing of the channel walls. This movement scrubs the separator plate leaving a mark and erodes the aluminum casting causing cross-leaks. **Visible factory machining marks worn away & a dull look on top of casting webs is what you are looking out for all over both half's.** Often seen in high mileage 68RFE Diesels due to higher pressure and heat. Repeated OD Clutch failure is common. This condition is not easily solved by surfacing the VB. Gaskets do help if the partition walls are not worn to badly or weakened. It's a good idea for long term durability to **replace the VB.** 45RFE VB's have been used to replace 68RFE VB's. Just swap over the accumulator springs, Sol Pack, Range Sensor Plate & Manual Valve on 5B models. Keep springs in order. Using a VB over? Fix the solenoid switch valve bore. P/N RFE-SV420-WT or RFE-SV453-WT available from your distributor.



## Important Information regarding Computer Tuning before starting.

The New TransGo Tuneless RFE kits are designed to be a standalone transmission modification used **ONLY WITH OEM-TCM** Transmission Tuning. If the truck has the DPF, EGR or CAT deletes, re-flashing the PCM back to stock is no easy task as the deleted components-systems must be reinstalled before the truck will run on a factory engine tune. Some tuners may require the program to be uninstalled & reinstalled choosing **NO** Transmission Modifications.

### Verify stock line pressure commands are installed.

Line pressure values are listed below & can be used to verify the line pressure programming is at OE calibration.

Grab a scan tool and monitor desired line pressure. In the drive range make sure the actual pressure is the same or within a few pounds of desired. If the DESIRED line pressure values are higher than listed below, the ECM/TCM does not have stock trans tuning, consult the tuner for stock transmission program files! If the desired Max pressure is 170-250 PSI the software has been altered.

### Checking line pressure: In drive idling, at a stop. **Desired=60 PSI** Briefly power brake above 1/2 throttle. **Desired = 160 PSI**

Driving in 5th or 6th at 50% or more throttle **Desired 160PSI**. Even if pressures are the same as listed this does not prove that the correct year calibration is installed. With this kit installed with the correct year and factory trans files there will be no clunks or bangs just clean short shifts that hold the power with nothing else to say.

If the truck has any aftermarket electronic transmission pressure enhancing devices **REMOVE THEM**.

Anytime an engine tune is flashed on a 2010 and later RAM Truck with a 68RFE, the transmission program is automatically overwritten with whatever trans program the tuner has provided, even if it was sold as an engine only tuner. The program files from almost any year Ram will install, but there can be negative side effects if a different year file is used. As of 11/2018 we have seen at least 6 distinct versions of PCM/TCM calibration, 2007-2009, 2010, 2011-2012, 2013-2016, **2017, 2018** & there maybe more.

We strongly recommend running the correct year program file for the vehicle and **ONLY** with unmodified transmission tables when installing this kit. Running the incorrect year program file, or poorly modified engine programs with the TransGo tuneless calibration can result in harsh shifting rough lock-up apply, shift timing and or lock-up timing issues, along with shuttle shifting & unexpected downshift complaints. The newer the truck is, the more critical this becomes. We have found no universal program file that fits all years and works correctly. If you are having trouble with one and need help with your Program Identification it can be found on the main menu of your scan tool under miscellaneous functions and PCM information. Once you have located it on your scan tool give us a call. Please note: We can only identify what year and model the file came from. We will not be able to identify what has or has not been modified.

If the aftermarket program is running "code setting suppression or limp-in mode delete", any troubles at highway speed can lead to unwanted downshifts to 2nd or 1st gear at abnormally high speed causing tire skid or parts breakage. One great function of limp-in mode is to put the trans in neutral above 35 or 40 MPH if a problem is detected and keep it there until the truck slows down to a safe enough speed. Letting a truck leave with loss of communication codes or with code suppression is risky business.



**A special warning about loss of communication codes.** Codes may be stored in PCM,TCM, Instrument Cluster or ABS modules. These codes are often associated with the instrument cluster losing gear display and the UD/OD clutch hub shafts splitting, twisting or breaking.

**Oversize tires without compensating axle ratio changes creates real headaches. Add a hot engine tune and you are now playing with fire.** For example, With taller tires a light throttle 5-6 shift with TCC on at 50 MPH can leave the engine lugging at 1020 RPM's. The Hot tune has the load/torque tables jacked up for line pressure command only and not the shift speed. The PCM/TCM commands 160 PSI plus with the engine at 1020 RPM and the pump cannot produce 160 PSI at that RPM. The check valve in the pump now opens and you now have 2 pumps working and line PSI spikes up and the flapper closes, then line drops again because one pump still can not make 160 at 1020 RPM's. This 50 to 60 psi spike or oscillation will continue until the engine RPM is somewhere above 1300 RPM's. This can kill converter or OD clutches & flex/crack alum VB parts.

**We have been involved with 100's of 68RFE trucks running around with the pump check valve removed since December of 2018.** This has proven to be a big help with delivering extra volume at lower RPM's with no known side affects reported as of 7/13/2019. With the check valve removed both sides of the pump feed the trans all the time. Removing the check valve has also helped with Hot operation-Converter Clutch dragging coming to a stop.

## Overheating Concerns

We have had numerous complaints on 68RFE transmissions with overheating issues. One of the causes may be a stuck cooler bypass valve. 2011 up trucks have an in-line cooler bypass to allow the fluid to bypass the cooler when the vehicle is cold. This function warms up the transmission quickly in cold weather. When the fluid temperature warms up sufficiently, the thermal valve opens up and routes fluid thru the transmission cooler. The overheating problem is a result of the valve in the thermal bypass sticking in "bypass" position and fails to route fluid thru the transmission cooler. Replacement is the best solution.

52014523AA Thermal bypass with lines 2011-12 List price \$259

68186711AB Thermal Bypass Block 2013-17 - List price \$81.70

**Remember!** When flushing these units the valve does not open up until the fluid gets hot.

**IF cooler flow** is good, the cause may be the **Viscous** Cooling Fan not coming up to the correct RPM. Example: Fan RPM on one truck was only reaching 850, it should have reached 2230 RPM with the engine RPM at 2500. Fixing the fan fixed the truck. **Note:** There were **no** engine cooling concerns while the trans was overheating.

**Tip:** You can control the fan with the a scanner or ground it and it should come up to 2230 Fan RPM at 2500 Engine RPM.

**The Next several pages are input drum assembly diagrams and instructions for adding an extra clutch to the OD pack.**

# ALL MODELS: Drum ID & New Underdrive Snap Ring

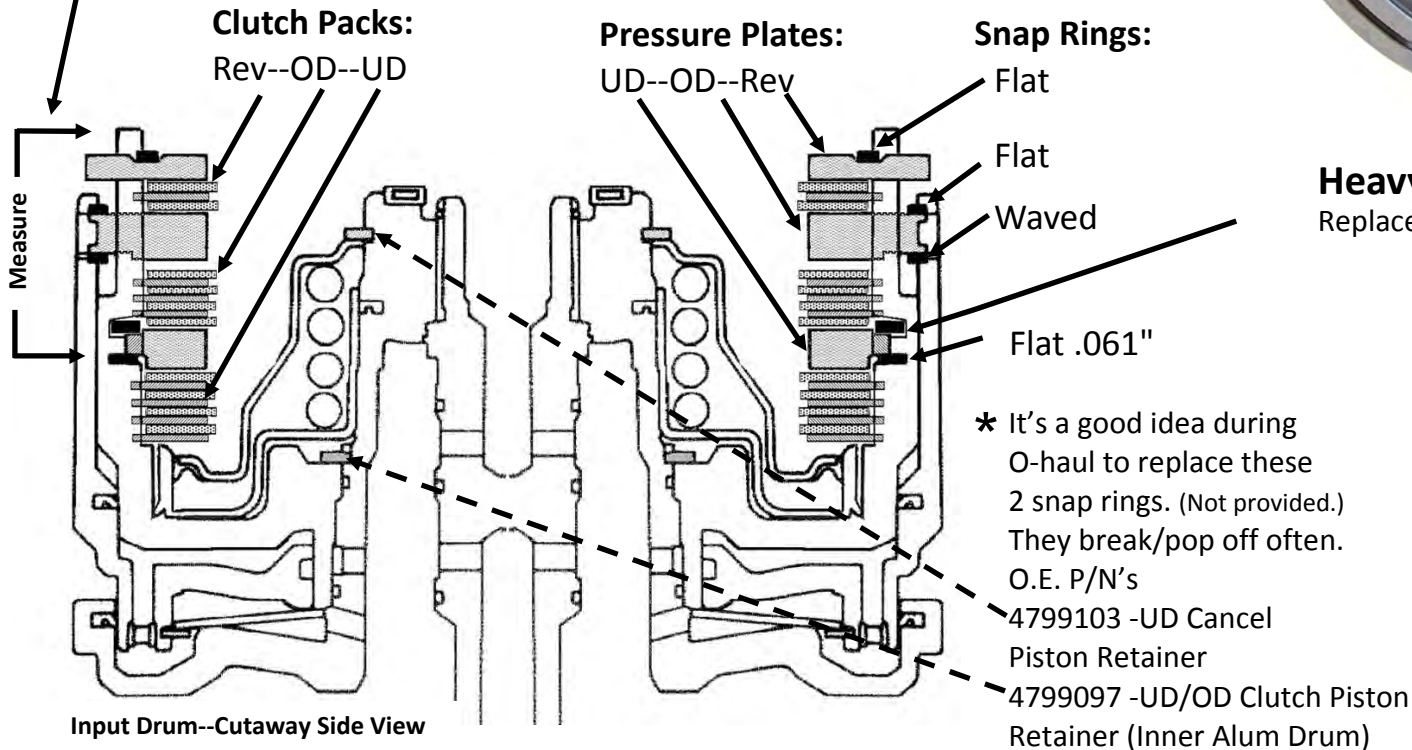
## Identify Your Drum First:

Then turn to the page that matches both Transmission Model and Drum ID for stack-up information.

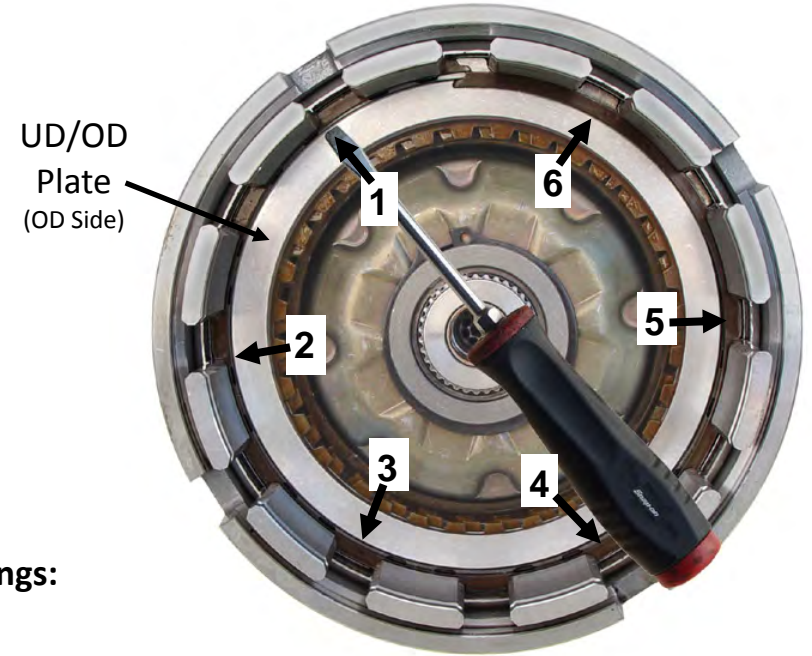
Measure from top of drum to top of .061" flat snap ring:

- Drum I.D.    □ 1999-06 = 1.907"  
                   □ 2007up = 1.960"

### Typical Input Drum--Cutaway Side View



Tip: Tap new snap ring into place as shown. It should be tight!



**Heavy Duty Underdrive Snap Ring**  
 Replaces tapered ring that breaks and pops out.



# All 68RFE with 1.960" Input Drum & Factory Stackup:

**Heads Up! All 68RFE's UD & OD clutch friction surfaces face UP!**

**UD clutch** has ten .058" frictions.

**OD clutch** has twelve .050" frictions.

**Reverse clutch** has two double sided .075" frictions & one .068" steel.

**UD stack-** Start with .058" friction plate with external lugs, alternate with internal lug plates. The stack will end with a friction plate with internal lugs. Install thin snap-ring, UD/OD Pressure plate then replace tapered snap-ring with new .091 to .094" flat snap-ring.

**OD stack-** Start with .050" friction plate with external lugs, alternate with internal lug plates. The stack will end with a friction plate with internal lugs. Install waved snap-ring, OD/Rev Pressure Plate **\*If plate has a step, (ID #'s 1 & 2) the stepped side faces down**, then install flat snap-ring.

**Rev stack-** Start with double sided friction, steel, double sided friction, Pressure plate and flat snap-ring.

UD Outer Lug .058" (Qty=5)    OD Outer Lug .050" (Qty=6)    REV FRICTION .075" (Qty=2)  
 UD Inner Lug .058" (Qty=5)    OD Inner Lug .050" (Qty=6)    REV STEEL .068" (Qty=1)

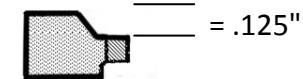
**OD Clearance** adjustment not necessary **WITH** correct parts usage.  
 (Uses OD/Rev Plate p/n **68323984AA** 9.62-9.85mm)

**Rev Press Plate Snap Ring** is selective to adjust **Rev Clearance**.

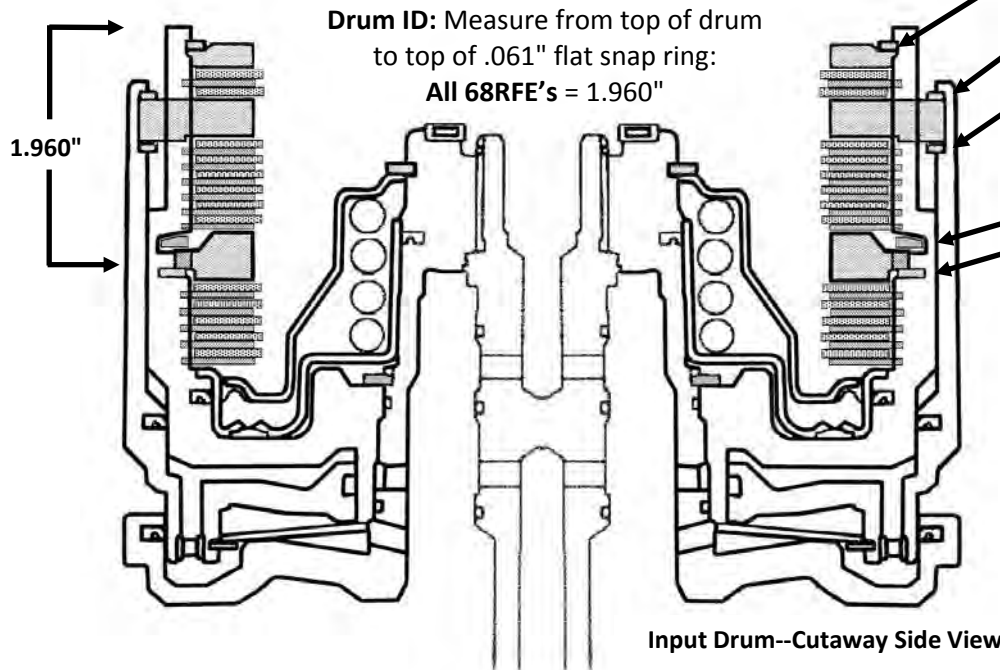
**UD Clearance** adjustment not necessary **WITH** correct parts usage.  
 (It should already be within spec's.)

**UD/OD Press Plate** has approx **.125"** offset  
 on **OD side** p/n **52119658AD**

Measure OD  
 Side Offset



**Snap Rings:**  
 Flat Selective



Flat  
 Waved

**Install New Flat**  
 Flat .061"

**Clutch Clearances**  
 UD .038 - .068"  
 OD .040 - .063"  
 Rev .032 - .049"

L/R .045-.081"  
 4C .030-.053"  
 2C .038-.066"

If using TransGo® p/n **RFE-PP-ODHP** OD/Rev Pressure Plate sold separately, go to page 5A for clutch parts stack up.

# All 68RFE with 1.960" Input Drum & Modified Stackup using New TransGo® OD/REV Plate:

Order from your distributor p/n **RFE-PP-ODHP** (sold separately). Makes it easy to add **MORE** Clutch to the OD Stack!

**Heads Up! All 68RFE's UD & OD** clutch friction surfaces face **UP!**

**UD clutch** has ten .058" frictions.

**OD clutch** uses **fourteen** .050" frictions **with NEW OD/REV pressure plate**.

**Reverse clutch** has two double sided .075" frictions & one .068" steel.

**UD stack-** Start with .058" friction plate with external lugs, alternate with internal lug plates. The stack will end with a friction plate with internal lugs. Install thin snap-ring, UD/OD Pressure plate then replace tapered snap-ring with new .091 to .094" flat snap-ring.

**OD stack-** Start with .050" friction plate with external lugs, alternate with internal lug plates. The stack will end with a friction plate with internal lugs. Install waved snap-ring, **NEW OD/Rev Pressure Plate**, flat snap-ring.

**\*New plate** has a step and allows **14 single sided** plates to be installed.

**Rev stack-** Start with double sided friction, steel, double sided friction, Pressure plate and flat snap-ring.

**OD Clearance** adjustment usually not necessary\* when using **NEW** TransGo® OD/REV Pressure Plate with suggested OD stackup.

**Rev Press Plate Snap Ring** is selective to adjust **Rev Clearance**.

**UD Clearance** adjustment not necessary **WITH** correct parts usage. (It should already be within spec's.)

Clutch Clearances

UD .038 - .068"

OD .040 - .063"

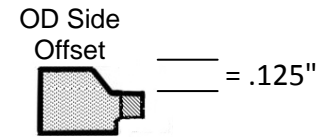
Rev .032 - .049"

L/R .045-.081"

4C .030-.053"

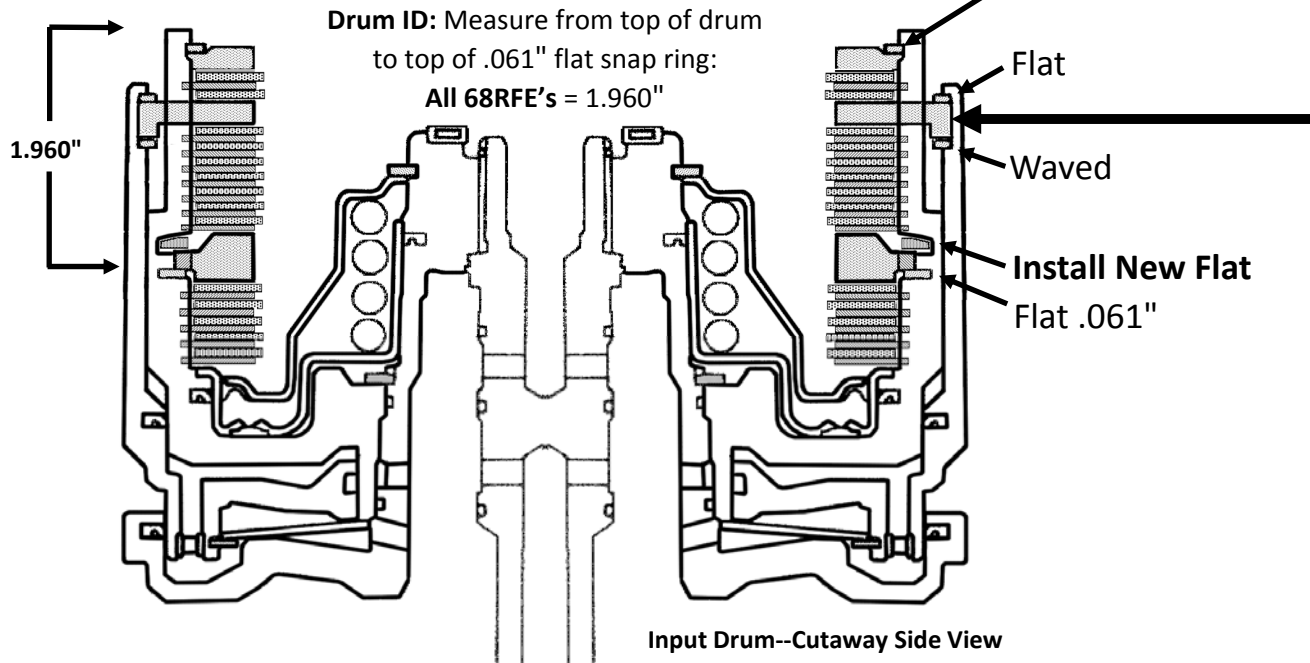
2C .038-.066"

**UD/OD Press Plate** has approx **.125"** offset on OD side p/n **52119658AD**



- UD Outer Lug .058" (Qty=5)
- UD Inner Lug .058" (Qty=5)
- OD Outer Lug .050" (Qty=7)
- OD Inner Lug .050" (Qty=7)
- REV FRICTION .075" (Qty=2)
- REV STEEL .068" (Qty=1)

**Snap Rings:**  
Flat Selective



Order **NEW** OD/REV Pressure Plate  
**TransGo®** p/n **RFE-PP-ODHP**



**Replaces O.E. OD/REV** pressure plate.  
Use OD stackup suggested.

**\*Note:** O.E. Friction tolerances are held very tightly. Other friction products may not be exactly the same thickness. **Example-** A .002 inch difference per friction on a 14 plate stackup can cause a clutch clearance issue. Always **measure** clutch clearances!

# 2014up 66RFE with 1.960" Input Drum & Factory Stackup:

**Heads Up! 2014up 66RFE OD Clutches are thinner & the Steels are thicker** than UD and Rev.

The UD/OD & OD/Rev Pressure plates were also changed at the same time from the previous 2012 & 2013 models.

**OD Clearance adjustment not necessary WITH correct parts usage.**  
(Uses OD/Rev Plate p/n **52119929AB** 8.79-9.01mm)

**Rev Press Plate Snap Ring is selective to adjust Rev Clearance.**

**UD Clearance adjustment not necessary WITH correct parts usage.**  
(It should already be within spec's.)

UD FRICTION .075" (Qty=4)

UD STEEL .068" (Qty=4)

OD FRICTION .070" (Qty=4)

OD STEEL .120" (Qty=4)

REV FRICTION .075" (Qty=2)

REV STEEL .068" (Qty=1)

Clutch Clearances

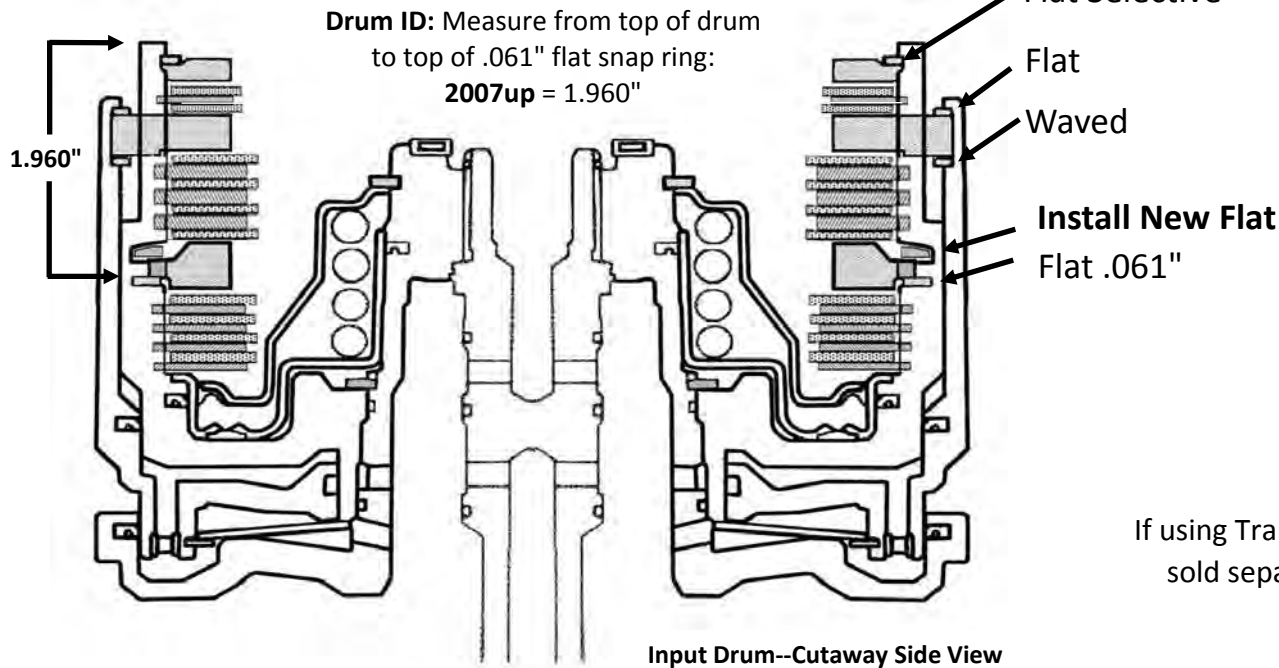
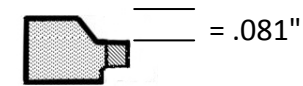
UD .030 - .063"

OD .040 - .063"

Rev .023 - .058"

**UD/OD Press Plate has approx .081" offset on OD side p/n 68186197AA**

Measure OD  
Side Offset



If using TransGo® p/n **RFE-PP-ODHP** OD/Rev Pressure Plate, sold separately, go to page 6A for clutch parts stack up.

# 2014up 66RFE with 1.960" Input Drum & Modified Stackup using New TransGo® OD/REV Plate:

Order from your distributor p/n **RFE-PP-ODHP** (sold separately). Makes it easy to add **1 MORE** Clutch to the OD Stack!

**Heads Up!** 2014up 66RFE Factory OD Clutches are **thinner** & the **Steels** are **thicker** than UD and Rev. The UD/OD Pressure plate was also changed from the previous 2012 & 2013 models.

To **add** a clutch and steel to the OD Stackup using the **NEW OD/REV** Pressure Plate requires changing the **OD frictions** to .075" thick and **OD Steels** to .087" *Save any original OD parts for future stock repairs.*

**OD** Clearance adjustment often not necessary when using **NEW** TransGo® OD/REV Pressure Plate with suggested OD stackup.  
**Rev** Press Plate Snap Ring is selective to adjust **Rev Clearance**.  
**UD** Clearance adjustment not necessary **WITH** correct parts usage. (It should already be within spec's.)

UD FRICTION .075" (Qty=4)  
 UD STEEL .068" (Qty=4)

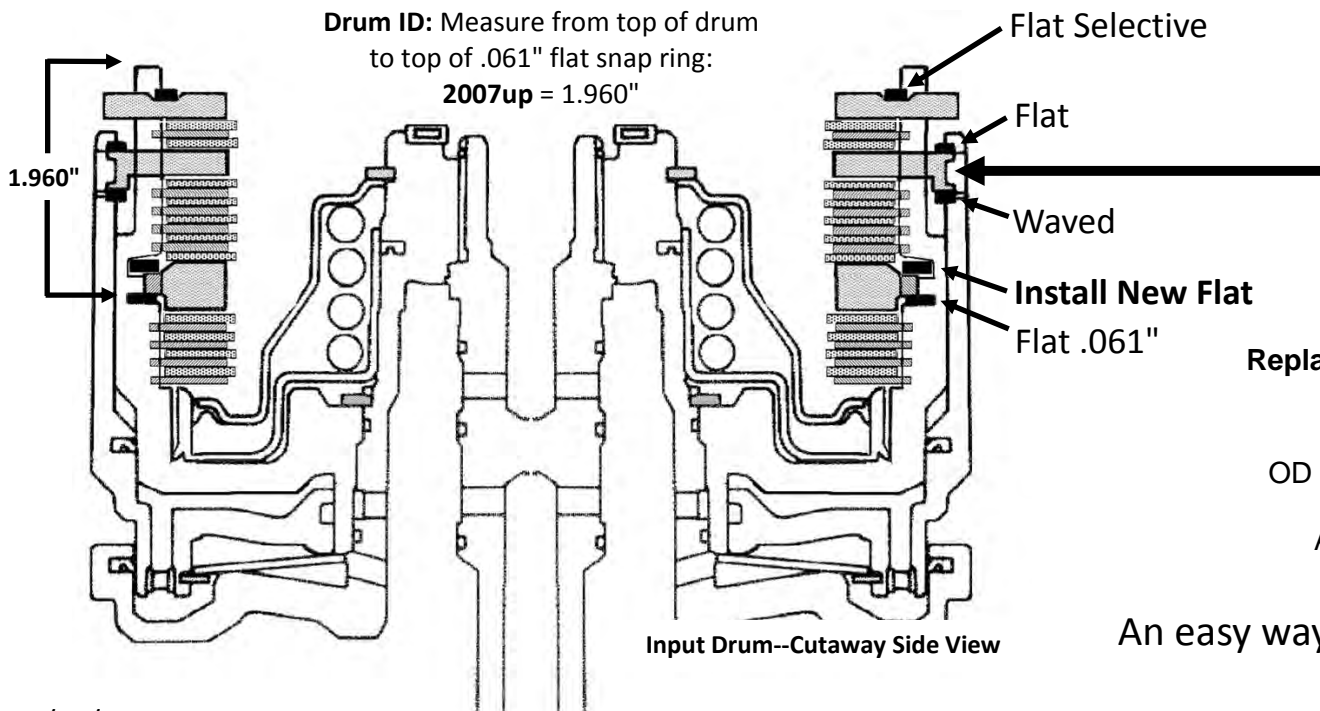
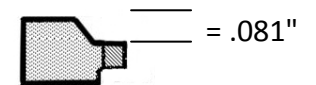
**OD FRICTION .075" (Qty=5)**  
**OD STEEL .087" (Qty=4)**

REV FRICTION .075" (Qty=2)  
 REV STEEL .068" (Qty=1)

Clutch Clearances  
 UD .030 - .063"  
 OD .040 - .063"  
 Rev .023 - .058"

**UD/OD Press Plate** has approx **.081"** offset on **OD** side p/n **68186197AA**

Measure OD  
 Side Offset



**NEW OD/REV Pressure Plate**  
 TransGo® p/n **RFE-PP-ODHP**



**Replace OE OD/REV** pressure plate with **NEW OD/REV** Pressure Plate. (Sold separately.)  
 Use OD stackup suggested to start.

OD clearance can be adjusted using thick or thin clutches and/or steels as needed.  
 All frictions and steels available from your distributor by thickness.

An easy way to add an **Extra Clutch** to the OD!

# ALL 45/545/65RFE & 2012-13 66RFE\* with 1.960" Input Drum & Factory Stackup:

\*Watch out for this: 2012-13 66RFE's may have been repaired with 2014up Input drum parts, see pg6.

## Heads Up! 45/545/65RFE & 2012-2013 66RFE

OD Clutches & Steels are **thicker** than  
UD and Rev.

UD FRICTION .075" (Qty=4)

UD STEEL .068" (Qty=4)

OD FRICTION .090" (Qty=4)

OD STEEL .087" (Qty=4)

REV FRICTION .075" (Qty=2)

REV STEEL .068" (Qty=1)

Clutch Clearances

UD .030 - .063"

OD .043 - .065"

Rev .023 - .058"

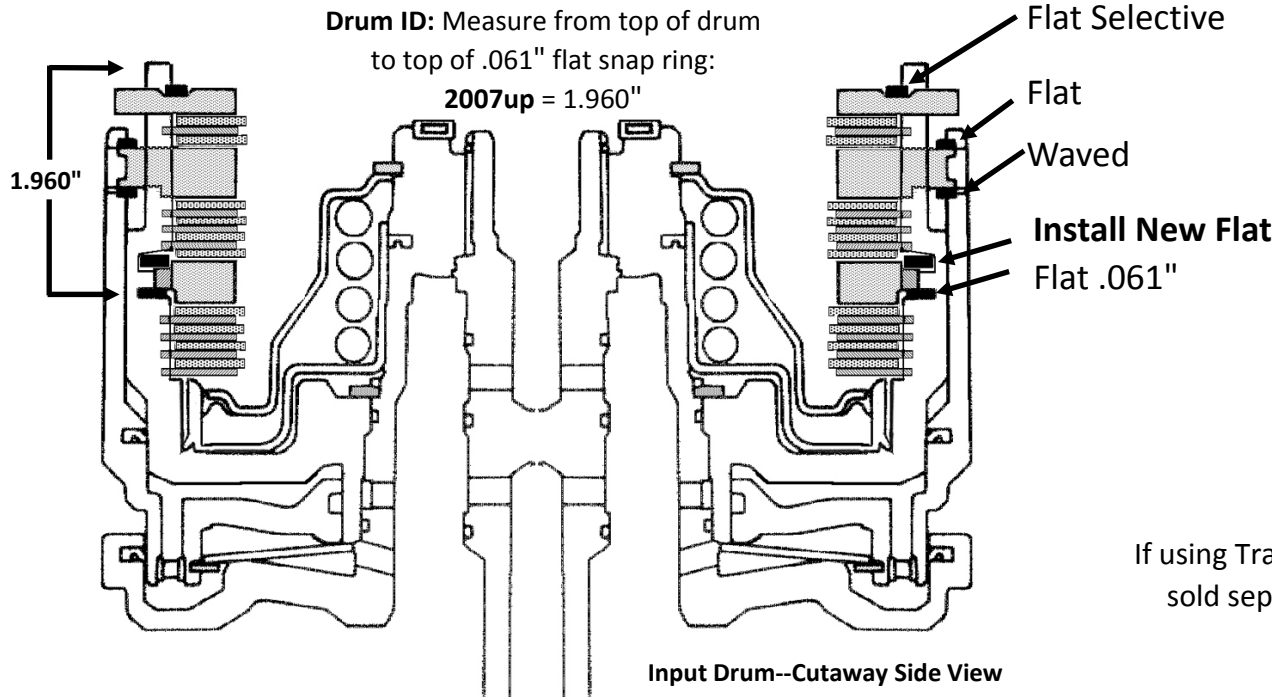
OD Clearance adjustment not necessary **WITH** correct parts usage.  
(Uses OD/Rev Plate p/n **68323984AA** 9.62-9.85mm)

Rev Press Plate Snap Ring is selective to adjust **Rev Clearance**.

UD Clearance adjustment not necessary **WITH** correct parts usage.  
(It should already be within spec's.)

**UD/OD Press Plate** has approx **.065"** offset  
on **OD** side p/n **68009902AC**

Measure OD  
Side Offset



Input Drum--Cutaway Side View

If using TransGo® p/n **RFE-PP-ODHP** OD/Rev Pressure Plate, sold separately, go to page 7A for clutch parts stack up.

**ALL 45/545/65RFE & 2012-13 66RFE\* with 1.960" Input Drum & Modified Stackup using **New TransGo® OD/REV Plate**:**

Order from your distributor p/n **RFE-PP-ODHP** (sold separately). Makes it easy to add **1 MORE** Clutch to the OD Stack!

*\*Watch out for this:* 2012-13 66RFE's may have been repaired with 2014up Input drum parts, see page 6

**Heads Up! 45/545/65RFE & 2012-2013 66RFE**  
 Use this modified stackup **if you purchased the NEW TransGo® Pressure Plate**: p/n **RFE-PP-ODHP**  
 The **first 2 frictions of the OD stack must be .090" thick!**

UD FRICTION .075" (Qty=4)

UD STEEL .068" (Qty=4)

OD FRICTION .090" (Qty=2)

OD FRICTION .075" (Qty=3)

OD STEEL .087" (Qty=4)

REV FRICTION .075" (Qty=2)

REV STEEL .068" (Qty=1)

Clutch Clearances

UD .030 - .063"

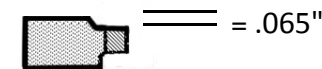
OD .043 - .065"

Rev .023 - .058"

OD Clearance adjustment often not necessary when using **NEW** TransGo® OD/REV Pressure Plate with suggested OD stackup.  
**Rev** Press Plate Snap Ring is selective to adjust **Rev Clearance**.  
 UD Clearance adjustment not necessary **WITH** correct parts usage.  
 (It should already be within spec's.)

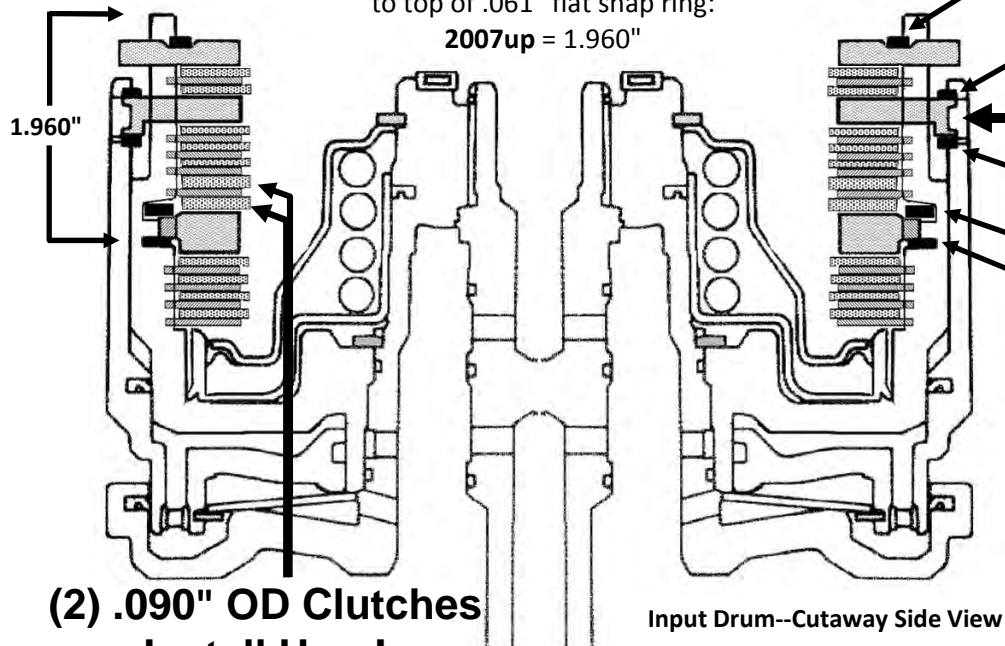
UD/OD Press Plate has approx .065" offset on OD side p/n **68009902AC**

Measure OD Side Offset



Pre-soak new frictions in genuine Mopar® ATF + 4 before installing. BW High Energy Frictions and ATF+4 have proven to be a great combo for the OD at preventing squawk noises during OD apply under load.

Drum ID: Measure from top of drum to top of .061" flat snap ring:  
 2007up = 1.960"



**(2) .090" OD Clutches Install Here!**

Input Drum--Cutaway Side View

**Snap Rings:**

Flat Selective

Flat

Waved

Install New Flat

Flat .061"

**NEW OD/REV Pressure Plate TransGo® p/n RFE-PP-ODHP**



Stepped Side Faces OD Clutch

Replace **OE OD/REV** pressure plate with **NEW** OD/REV Pressure Plate. (Sold separately.) Use OD stackup suggested to start.

OD clearance can be adjusted using thick or thin clutches and/or steels as needed. All frictions and steels available from your distributor by thickness.

An easy way to add an **Extra Clutch** to the OD!



# ALL 45/545 1999-2006 with 1.907" Input Drum & Factory Stackup:

**Heads Up!** 1999-06 Trans's may have been repaired with 2007up Input drums. Measure drum first to ID. Use a stackup that agrees with your drum and UD/OD plate measurements!

**OD Clearance** adjustment not necessary **WITH** correct parts usage. (Uses OD/Rev Plate p/n **04799116AB** 9.62-9.85mm)

**Rev Press Plate Snap Ring** is selective to adjust **Rev Clearance**.

**UD Clearance** adjustment not necessary **WITH** correct parts usage. (It should already be within spec's.)

UD FRICTION .075" (Qty=4)  
UD STEEL .068" (Qty=4)

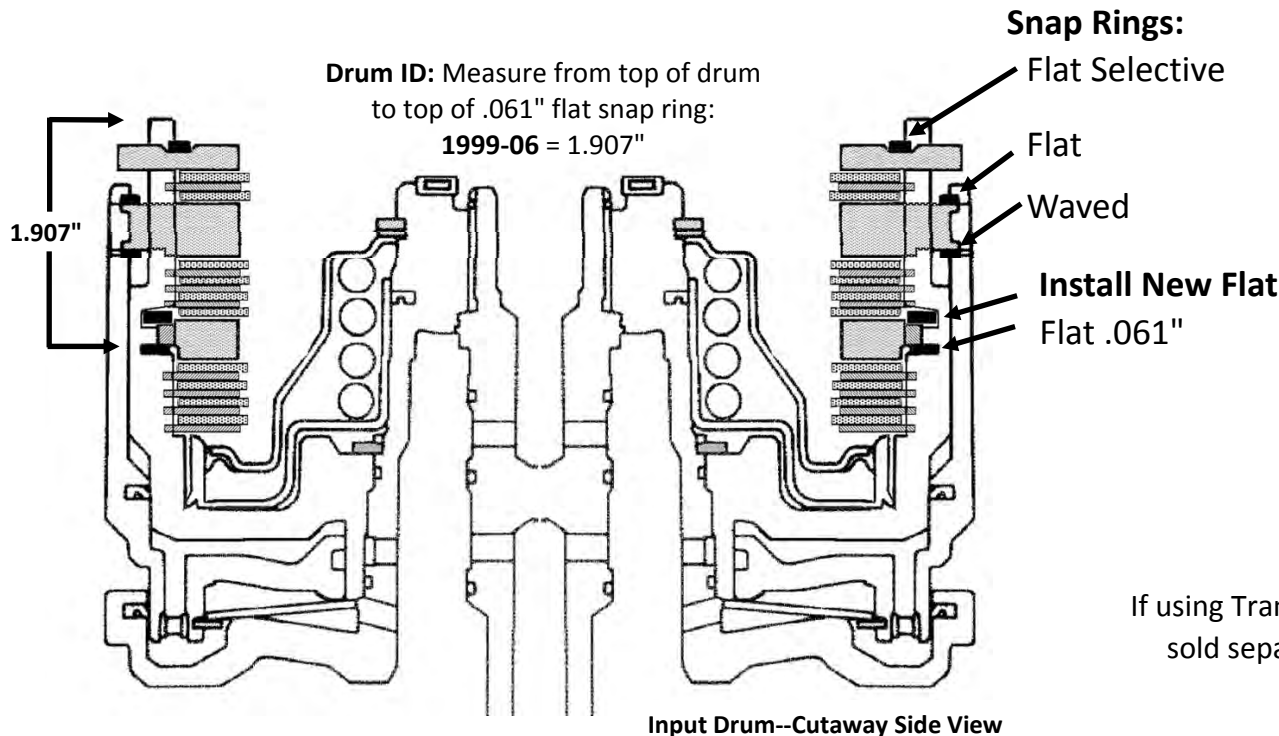
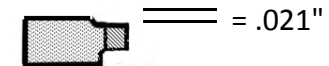
OD FRICTION .090" (Qty=4)  
OD STEEL .087" (Qty=4)

REV FRICTION .075" (Qty=2)  
REV STEEL .068" (Qty=1)

Clutch Clearances  
UD .030 - .063"  
OD .043 - .065"  
Rev .023 - .058"

**UD/OD Press Plate** has approx **.021"** offset on **OD** side p/n **04799107AB** (supersedes p/n **68009108AA**)

Measure OD  
Side Offset



If using TransGo® p/n **RFE-PP-ODHP** OD/Rev Pressure Plate, sold separately, go to page 8A for clutch parts stack up.

**ALL 45/545 1999-2006 with 1.907" Input Drum & Modified Stackup using New TransGo® OD/REV Plate:**

Order from your distributor p/n **RFE-PP-ODHP** (sold separately). Makes it easy to add **1 MORE** Clutch to the OD Stack!

**Heads Up!** 1999-06 Trans's may have been repaired with 2007up Input drums. Measure drum first to ID.

**45/545RFE 1999-06**

Use this modified stackup **if you purchased the NEW TransGo® Pressure Plate**: p/n RFE-PP-ODHP  
 The first friction of the **OD stack must be .090" thick!**

UD FRICTION .075" (Qty=4)  
 UD STEEL .068" (Qty=4)

OD FRICTION **.090"** (Qty=1)  
 OD FRICTION .075" (Qty=4)  
 OD STEEL .087" (Qty=4)

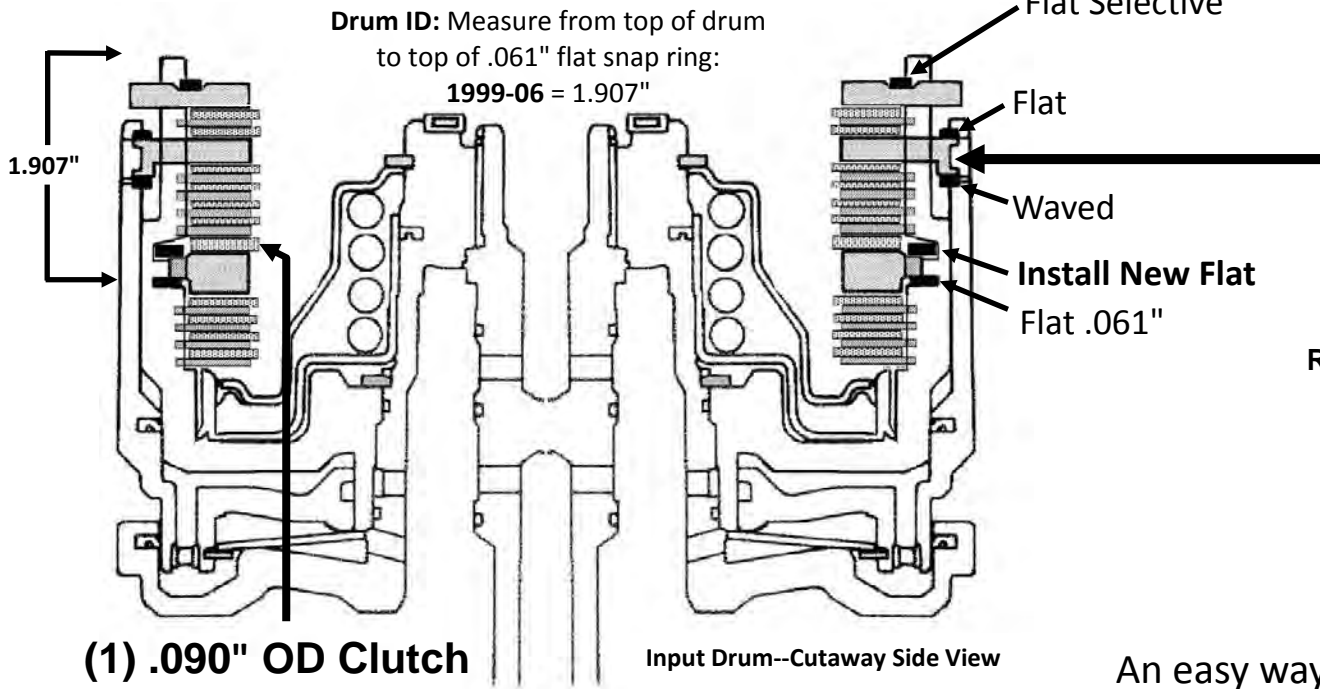
REV FRICTION .075" (Qty=2)  
 REV STEEL .068" (Qty=1)

Clutch Clearances  
 UD .030 - .063"  
 OD .043 - .065"  
 Rev .023 - .058"

OD Clearance adjustment often not necessary when using our p/n **RFE-PP-ODHP** OD/REV Pressure Plate with suggested OD stackup.  
**Rev** Press Plate Snap Ring is selective to adjust **Rev Clearance**.  
 UD Clearance adjustment not necessary **WITH** correct parts usage.  
 (It should already be within spec's.)

UD/OD Press Plate has approx **.021"** offset on OD side p/n **04799107AB (68009108AA)**

Measure OD Side Offset



**(1) .090" OD Clutch Installs Here!**

**NEW OD/REV Pressure Plate TransGo® p/n RFE-PP-ODHP**



**Replace OE OD/REV** pressure plate with **NEW** OD/REV Pressure Plate. (Sold separately.)  
 Use OD stackup suggested to start.  
 OD clearance can be adjusted using thick or thin clutches and/or steels as needed.  
 All frictions and steels available from your distributor by thickness.

An easy way to add an **Extra Clutch** to the OD!

## RFE-TCC-3D Triple-Disc Converter Calibration Valve.

(It is not needed or wanted if using factory type twin friction converter.)

Only Use this Valve when using a triple-disc converter & want a smooth TCC apply. TCC Apply with a triple-disc converter in a 68RFE can often be very aggressive or harsh. This valve slows down the TCC apply to reduce the aggressiveness or harshness with no change to holding capacity.



**Step 1** Discard original TCC Switch Valve



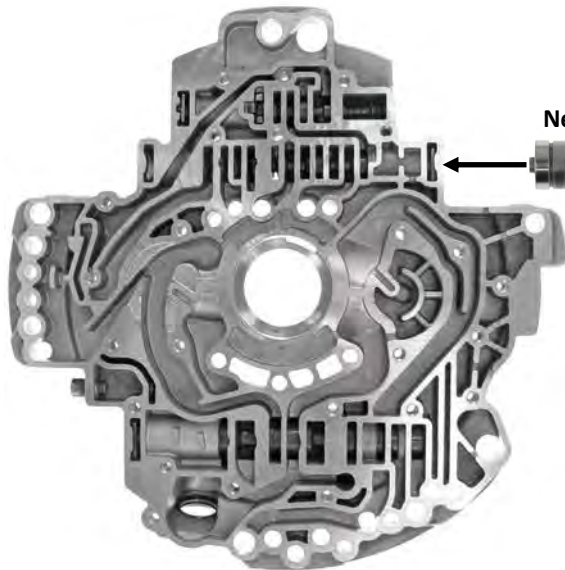
**New TCC Switch Valve**

Reuse Original Spring & Retainer



**Step 2**

Install New TCC Switch Valve.



**Patent No. US 11,105,415 B2**