TFRE-PRO Patent # 10,724,628

Heavy Duty and High Performance Applications

Fits: all 1996-up 46RE & 47RE with 3/16 ball in lower side of channel casting. Also fits all 48RE Valve Bodies.

Does Not fit 1995 Type RE VB's **without** 3/16 check-ball in side lower side of channel casting.

Features

Quicker line rise to better match torque rise. Expands Max line pressure to 185 PSI for increase holding capacity in all forward ranges. Short Clean Shifts that hold the power. Full Control Of TCC Apply In 2nd, 3rd & 4th Gears & Optional 1st Gear lockup. Can be shifted thru all gears up & down with TCC ON. (Requires manual control of solenoid electrical signals.) Not provided.

If you are new to the high pressure torque-flight world it is highly Recommend running a billet front Servo Arm, stronger front servo strut & a ridged front Band. This kit doubles max factory apply pressure 1st-3rd, with a 70% increase in 4th on 46RE & 47RE's & a 45% increase in 4th on 48RE's



Step 1. If trans is apart, install Seal Rings.



High Clutch Clearance less than .085" can cause a 2-3 Bind-up! .085" to .095" is perfect. Adding plates by reducing clearance is a step in the wrong direction. Its been this way for 57 years!

Step 1. Optional Rear Servo parts:

Only if maximum 1-2 shift firmness is desired. Not for Towing or Work Trucks.

With double wrapped rear band & matching smaller rear servo, install the New Orange Tapered Return Spring with Large OD end of spring into servo piston and install new spacer inside cushion spring as shown.

With a single wrapped rear band & matching larger rear servo, Install New Plain Servo Return Spring and install new spacer inside cushion spring as shown.

New Plain Return Spring

Also see Page 7 Step 4.

Step 2. Stock Front Servo piston with all Reuse apply levers, Install **new** Thick washer as shown reuse original Return spring. Only If Using aftermarket oversized Front Servo with apply lever greater than 4.2— **Reuse Original** Discard original servo return spring and use or New White **new** White spring without new Thick washer. Reuse < Front Band Adjustment snug with a short wrench & back off 1 1/4 turns. New Thick Washer Reuse Step 3. 2nd Accumulator Install new short plain lower 1-2 Accum spring as shown. Some models use upper spring-reuse if it had one. **New Short lower Plain Spring here** Reuse **New Orange Tapered Return Spring** Reuse this upper spring if equipped. Cushion Large End Spring Spacer Rear Servo

Step 1. Borrow 2 short screws from the VB, & mount drill guide plate to VB with the word "UP" facing **UP** and on the upper right hand side as shown. You will be removing a small portion of the VB wall with a drill bit and a drill "depth-stop" spacer.



Tighten the screws to prevent plate from moving while drilling.





Step 2. Using Wound **Spacer** furnished, adjust 3/16" drill into drill chuck until only .435" of drill is sticking out of spacer. This will stop the drill from going too deep. Do not drill thru the VB.

Step 3. Using **Spacer** as a stop, drill **straight down** into this hole with the 3/16" drill. Your done when the drill stop spacer hits the guide.



Drilling completed showing wall removed.



Installing Multi-Disc Converter? If so, SKIP Step 1.

Step 1. Drill one or two .073 -.083 holes down through the bottom of the most outboard passage. One Hole = Slightly firmer lockup Two Holes = Much firmer Lockup

Step 2. Turn the valve body over. Using the edge of a large file, file a notch about *halfway* thru the thickness of this partition. Clean VB of all drill & filing debris.

File a notch *across* bore, side to side. It's not fussy. Tip: Large counter sink bit in a cordless drill works well also and looks a little nicer if you prefer. Do not go past 1/2 the casting Web thickness. DO NOT use a drill bit in place of a countersink! NEW Step 3. Install the new Plug **Boost & Spring** Lockup Bracket. **Reuse all** Step 4. Enlarge this hole to .082, ok if hole is already bigger.

Step 1. Remove Rooster Comb. Discard original manual valve, detent ball & spring. Test fit new bullet & spring in VB for free movement. If necessary, remove any burr inside bore created by wear from original ball. Insert New **Orange** Spring and Bullet into VB bore using the *Mumbly Peg* to hold the bullet in place. Insert New Manual Valve and reassemble the Rooster Comb. Make sure Arm Tip is indexed into manual valve. Remove Mumbly peg tool.

Note. The new Orange spring for the detent bullet is **much stronger** than the Orange spring on page 6 Step 3 they are packed separately please don't mix them up.



Step 2. Manual Valve Position.

With valve all the way inboard (Park Position) the *right edge* of the Tapered land **must be** flush with *right edge* of partition "**A**". (.030" from flush either way is ok.) **To Adjust:** Bend **Arm Tip** with pliers.



Tapered Land flush with right edge of Partition "A".



Step 1. Remove and Discard original Boost Valves & Spring saving the bushing on both types.



Step 2. Install **SMALL** end of tapered **Orange** spring onto **New Boost Valve** & install into VB. Reuse original bushing & **New Boost Plug.** Install bushing with the notches facing the end plate **if** original bushing has them.



between Cover and part throttle body. Transfer plate does NOT go on spring side! **Step 6.** Using a pick and small hammer, taper the top of this hole to help start the pin. Install pin furnished into this hole, using needle nose pliers and small hammer. File flush if needed. PT Body must sit flush against VB. *If this hole is already plugged from a previous TransGo Kit Skip This Step.*



Step 4. Optional 1-2 firmness 2nd gear feed ball.

Only if maximum 1-2 firmness is desired & rear servo parts are installed on page 2 step 1. Remove this ball. **Not for Towing or Work Trucks.**

Step 3. Install **CHERRYBOMB** Careful to align stem UP through hole in plate when putting VB together.

One CHERRYBOMB Five or Six Check-balls



Four or Five 1/4" (.250) One 11/32" (.343)



Step 1. Plate Stack-up, Use all three in this order.

0

Plate #1 goes against channel casting. (Thin Plate No Slot.)
Plate #2 is the middle plate. (Thin Plate With Slot.)
Plate #3 goes against the Main Valve Body. (Thick Plate)
No plate drilling necessary.



If you wish to enable control of lock-up in 1st gear. Follow Steps 1 & 2 Now, in Sub-pack titled Optional 1st Gear Lockup.

Step 2.

Use the 4 new longer screws and washers supplied here for hold down plate. Make sure **all three** main plates are **lined up** using Plate Line up Locations shown **before** tightening any screws.



Step 3. Install new spring here.White 12 Valve DieselsAll others install Orange.



Step 4. With small punch drive **tapered plug** just below flush into the hole. *If this hole is already plugged from a previous TransGo Kit, skip this step.*

Step 1. With small punch drive aluminum **Plug** into hole just below flush. *If this hole is already drilled thru & plugged from a previous TransGo Kit, skip this step.*

Step 5. Note: Following parts are different from other TransGo Kits. Install New O-ring on small end of **Limit Bushing**, **3/16 Ball** and **White** or **Plain** spring as shown. O-ring is not to seal, it just acts as a shim & makes up for casting variations.



Step 7. Remove TCC Timing Valve Retainer, Spring and Valve. Reverse the assembly order as shown by installing the spring into the body first then small end of valve into spring! Now install original retainer. Yes, this is completely backwards from factory.



Step 2. Discard original spring Install new **Red** Springs.

Plug



Accumulator

Housing

Step 3. Install the new Vented cover provided.



Step 4. Install New shim and spring seat on PR valve before installing new inner and outer PR springs.



Optional 1st Gear Lockup Only do this page IF you wish to have control of Lockup In 1st Gear

(Remember: A solenoid command is required for this function.)

Step 1

With .110 drill bit, cross-drill (sideways) thru the **side** of the partition wall under the X. Rinse and blow clean any drilling chips out of the body after drilling.



Step 2

We need to plug a hole in the new TransGo[®] plate. Insert the Rivet supplied into the hole shown below, turn plate over and on a hard surface smack Rivet with a light hammer to plug the hole.

