

# 400-1&2 REPROGRAMMING KIT

## Heavy Duty & High Performance Valve Body Calibration & Internal Upgrades

This TransGo Reprogramming Kit™ was a very intelligent decision. Your transmission will love you for it. This kit transforms a good working “stock” automatic transmission into a rugged, responsive, heavy duty or high performance unit.

The TransGo Reprogramming Kit™ will more than double the life of your transmission under high load conditions. There’s no reason to lose precious efficiency with soft shifts that generate heat and consume horsepower.

TransGo brings automatic transmission performance out of the dark ages into the space age, in one giant step. Installed in your transmission, it recalibrates it to hi-performance specifications. It controls shift timing and “shift feel” for instant response and racing performance.

### UPSHIFTS

How much time a shift takes from when the valve moves until the shift is completed is a prime and critical function. It’s the most important thing to be considered and adjusted.

A too-short shift creates a bang, audible noise and chirps tires. That’s great for showing off, if that is what your customer wants. However, a too-firm shift may not be the best choice for uses that call for long term performance, drive ability, economy, and durability. A too-short shift can also attract rough shift complaints.

A too-long shift subtracts performance, drivability, economy, durability, and attracts complaints of slipping, slide, runaway, or slide-bump.

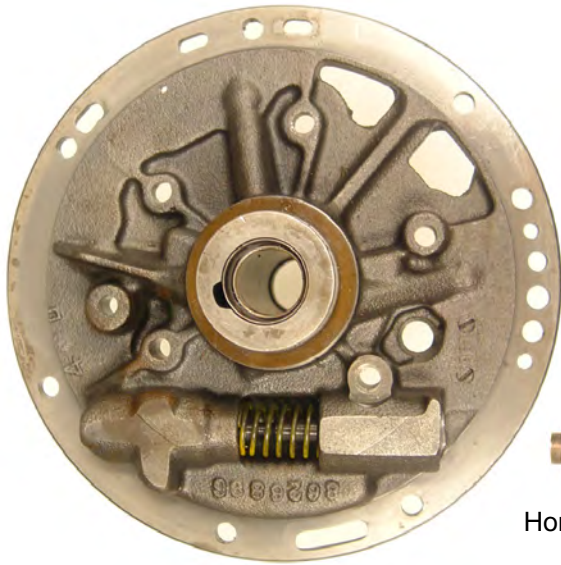
A perfect gear change (shift) has no “feelable” features to talk about, except how long or short it is. Anything else you’d say about a shift, other than the engine slows down and the car speeds up, describes something less than perfection.

### SOFT AND FIRM

More than engine power and size the axle ratio, converter size and vehicle weight control shift softness/firmness. Even carb size affects the shift a great deal. Late shifts or over-revving will make the shift feel softer because there isn’t any engine torque left by the time the shift happens.

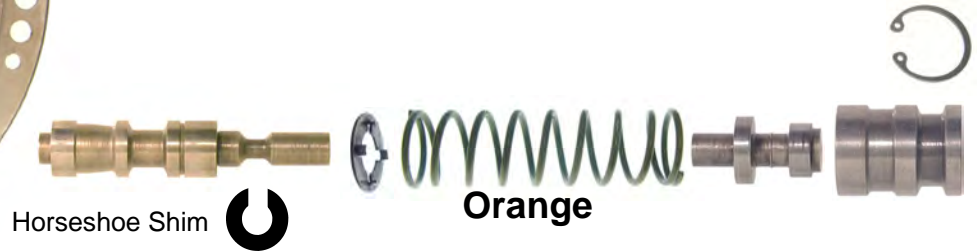
It is easy to get firm shifts in light vehicles with 3:43 or lower axle ratios. It is not in the cards to get really hard shifts in vehicles with 2:43 to 3:08 axles or with high-stall converters or huge tires.

Parts and instructions needed to adjust shift firmness is included in this kit. The durability weakness in this trans (direct clutch) is corrected with a smart Pat’d dual feed delivery system that triples the holding power of the direct clutch.



## 1. Pressure Regulator **ONLY** for Full Race with over 450 HP

Remove & discard any Horseshoe shim(s).  
Install **Orange** Spring furnished.  
All others: NO change needed, leave as is.



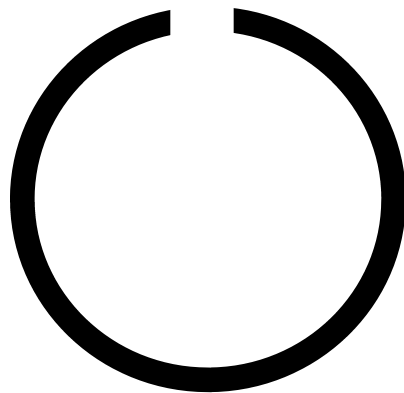
## DURING MAJOR REPAIR

**If trans is apart, these items will improve quality and durability:**

1. Install a waved plate in all the clutch packs, (Fwd, 2nd, & direct) even if it didn't have them. This will reduce the light throttle clangs and bangs but still give short and firm shifts with hard throttle.
2. Hand sand or tumble 2nd and direct steel plates for fast break-in and cooler operation.
3. Use high quality frictions—OE type smooth tan Borg-Warner work great.
4. Install 2nd clutch snap ring included with this kit, to reduce risk of snap ring pop-out and broken case lugs. (Step 2 below).
5. Install direct clutch return springs furnished in this kit to reduce accidental clutch drag and burnout. (Step 3 below).

## 2. Heavy Duty Snap Ring:

Intermediate [2nd] pressure plate snap ring.  
This is the last snap ring that installs in case.

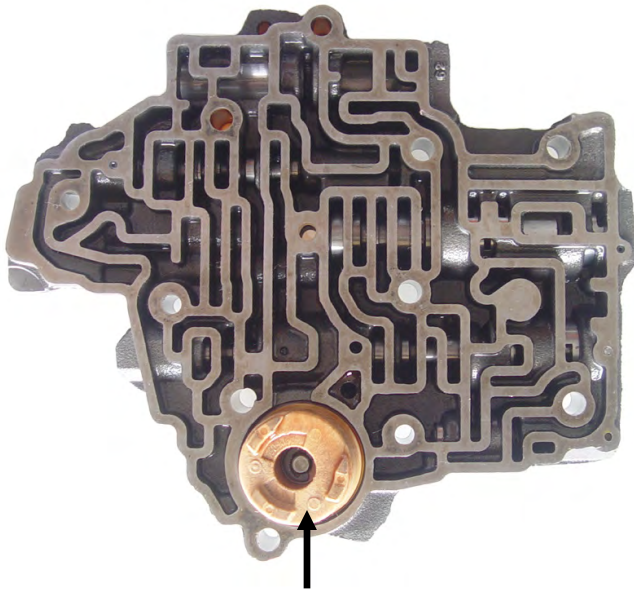


## 3. Direct Clutch—High Rate Return Springs:

Install ALL 16 new springs in direct clutch.  
(When installing these springs it is not necessary to put any special bleed holes in the piston or drum unless engine RPM is to exceed 7500 RPM).

## Shift Command:

Installing the new 1-2 shift valve and the new plug gives "Shift Command" control of 1st gear. With this feature installed, the trans will not upshift in the manual "1" position, and will shift back to low gear whenever the lever is moved to the "1" position. This means the trans will shift back to low at ANY speed & will not upshift out of low when the "1" position is selected. If you do not want these features, **Skip this page.**



Plastic 2-3 accumulator piston break, aluminum ones don't.

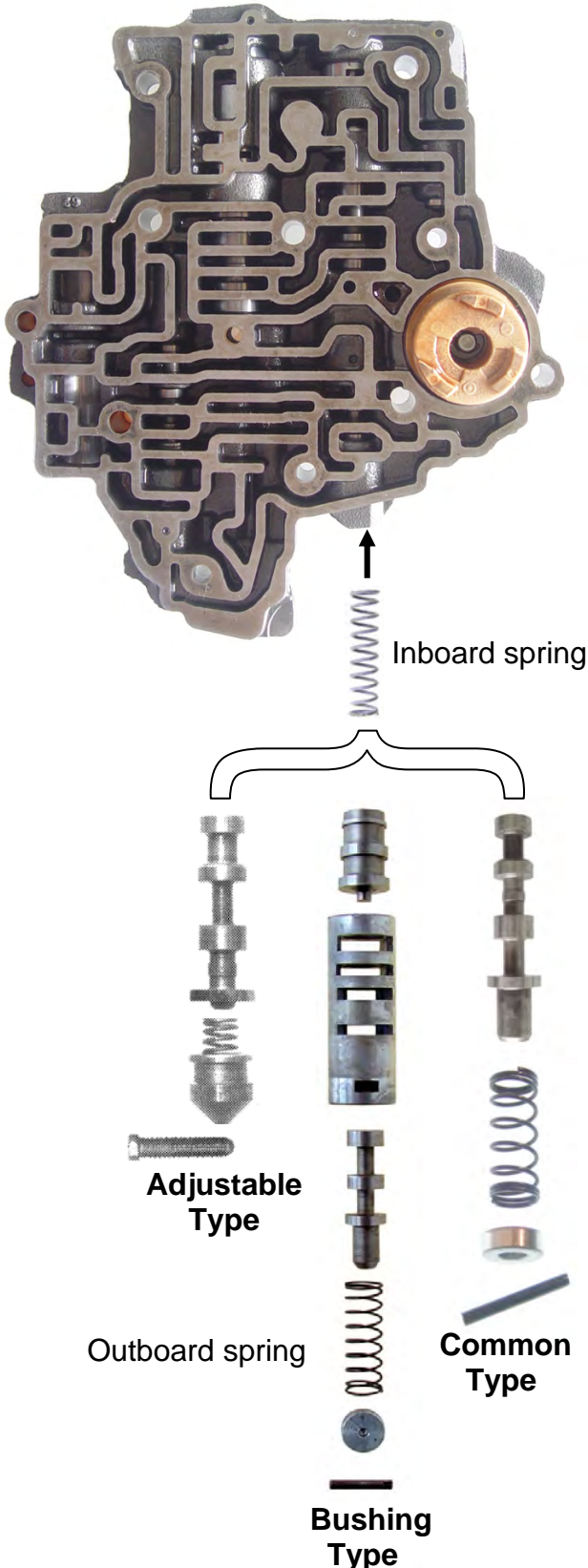
1. Discard original 1-2 shift valve. Install the NEW 1-2 Valve that is the same diameter as the original.



2. Install **PLUG** with small hammer

## 2nd Accumulator Valve

Changing accumulator pressure is the best way to control the length and feel of 1-2 shift. Springs are furnished for a wide range of adjustment. All three original setups shown may have springs inboard, outboard or both.



### Tuning 1-2 shift feel

#### Common & Bushing Types:

Stronger inboard spring makes shift shorter (FRIMER).

Stronger spring outboard spring makes it longer (SOFTER).

If the vehicle had a brutal 1-2 shift before installation of kit, see \*\* below.

Otherwise, install kit and road test w/o fiddling with accumulator valve. After road test drop the pan, remove the pin and change the springs as needed for more or less 1-2 shift feel.

Comfort (Softer) shifts are listed first. Shorter (Firmer) shifts are listed last.

Red spring outboard.

Blue inboard/Red outboard.

Orange inboard/Red outboard.

No springs.

Orange inboard only.

Blue inboard only.

**Adjustable Type:** Blue inboard, Original outboard spring.

Turn screw in for longer (Softer) ) 1-2 Shift.

Turn screw out for shorter (Firmer) 1-2 Shift.

Want more firmness remove outer spring.

**\*\*Got A Short/Hard 1-2 Shift Common Type:**

Brutal 1-2 shift at 1/8 to 5/8 throttle while the very minimum and max throttle shifts are OK.

Valve with inboard end diameter over .425:  
Install Red outer no inner to prevent rough 1-2.

With .400 - .425 Diameter:  
Start with Red outer / Orange inner.

With .315 - .375 Diameter:  
Start with no springs.



# Selecting Shift Firmness

**Choosing feed hole size:** Be conservative. It's easier to produce a tight even feeling shift with some "class" if the feed hole is not too big.

## Hole A: 2nd feed hole size

**Range #1:** Passenger, police, taxis, van, limo, and light trucks: leave as is or .082

**Range #2:** Motor homes, heavy trucks, street rods, & huge tires .093 - Comfort at light throttle and shorter at heavy throttle.

**Range #3:** .110 Hot Rods Starts getting short above 1/4 throttle. Takes careful accumulator adjustment to get comfort.

**Range #4:** .156 Race/Competition only.

## Hole B: 3rd feed hole size

3rd clutch holding power has been tripled, so be conservative with hole size. After a road test you can always make it bigger. Extra gaskets are furnished for changes.

**Range #1** Passenger, police, taxis, van, limo, and light trucks: Don't drill 3rd hole.

**Range #2** Motor homes, heavy trucks, street rods, & huge tires: Don't drill 3rd.

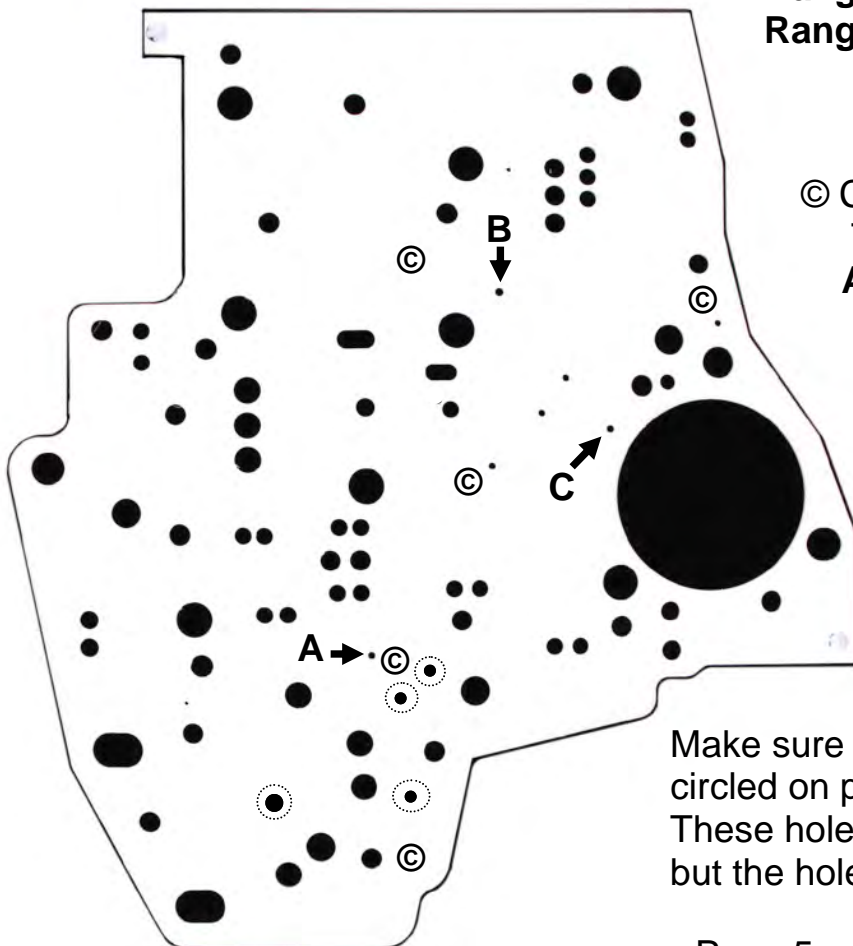
**Range #3** Hot Rods You want it firm: .082

**Range #4** .156 Race/Competition only.

## Hole C: 3rd Accm feed size

**Range #1,** Drill feed .125 - .140

**Range # 2, 3, 4:** Don't enlarge accm feed.



© Checkball locations  
Trans in vehicle  
**ALL MODELS!!!**

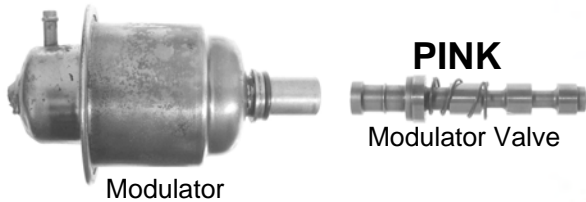
Supplied Case Gasket:  
Must be used with TransGo®  
Triple plate. Two sets are provided  
for your convenience.

Make sure the case gasket has the four holes circled on plate. ○  
These holes don't go through all three plates but the holes must be in the case gasket.

**Always install a Vacuum Modulator: Connected to manifold vacuum**  
 No modulator, or no vacuum over-pressurizes transmission, causing unnecessary ring and pump wear.

**Z** Use 2 bolts to Align VB plate and gaskets!

Modulator Valve Spring:  
 Install **PINK** spring.  
 After road test, if later/shorter  
 3/8 throttle shifts are needed,  
 remove PINK spring.



Install Five 1/4 Balls ©  
 as shown  
**ALL MODELS!!!**  
**Including models**  
**with 7 Ball Case!**

7 Ball Late case has  
 this check-ball pocket.  
 Do NOT install this ball!

This end to  
 case first.

The correct  
 O-ring.  
 Is the one that  
 doesn't need  
 stretched to go  
 over the tube.

No Ball Here!

**Z**

**Z**

For hard launching high RPM  
 drag applications an Allison  
 type filter is recommended.



Allison Type Filter  
 has a bronze screen  
 visible in the pipe  
 hole. It does not use  
 a fiber element.

Start Z bolts first.  
 To align VB, Plate,  
 Gaskets and Case.