

# 350-3 Reprogramming Kit™

## Turbo Hydra-Matic 350

## Manual Control Stick Shift Kit



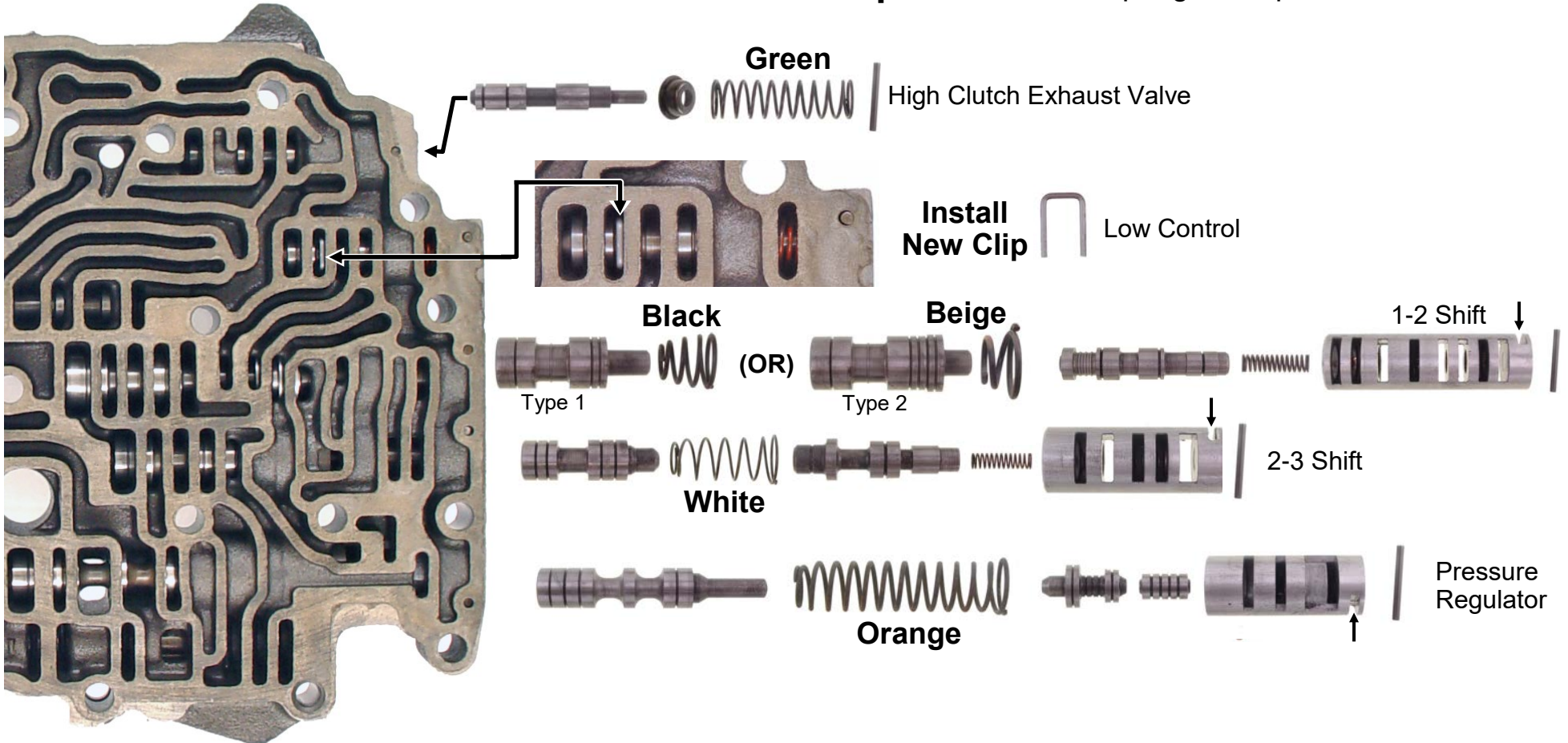
**This Kit Fits: THM 350 non-Lockup Only.**  
There are three transmissions that look alike.

**Identify trans BEFORE starting kit installation.**

**Fast Trans ID:** A lockup trans has auxiliary VB, with a solenoid, in front of main VB.  
A 250 Trans has a band adjustment on passenger side of case above the pan rail.

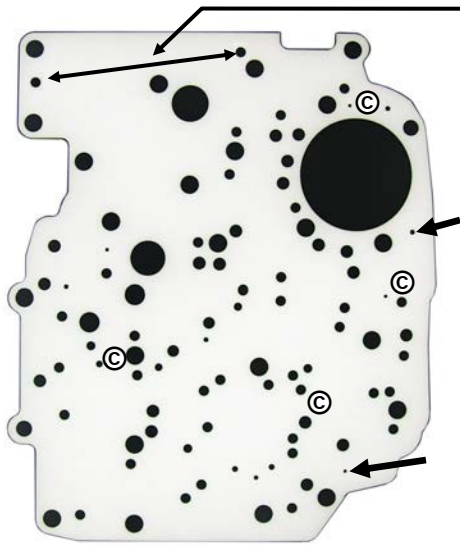
**Note:** There are two types of inner 1-2 shift valves shown below. Compare your 1-2 shift valve to the photo and install the black or beige spring that matches your valve, discard the other spring.

**Step 1.** Install New springs & Clip as shown.

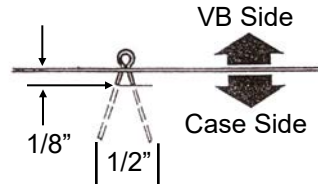


© Check-ball locations trans in vehicle.

Note: If using a case gasket that blocks these 2 plate holes, use plate as a guide & cut holes in gasket. Our gasket has these two holes.

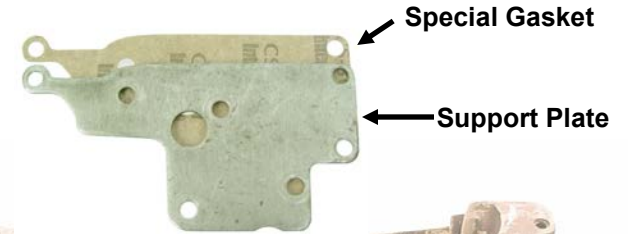


**Step 1.** Position the new separator plate as shown install the two 1/16 cotter pins furnished up through the plate at holes marked with arrows. Spread ends of cotter keys about 1/2" then cut off to 1/8" as shown.

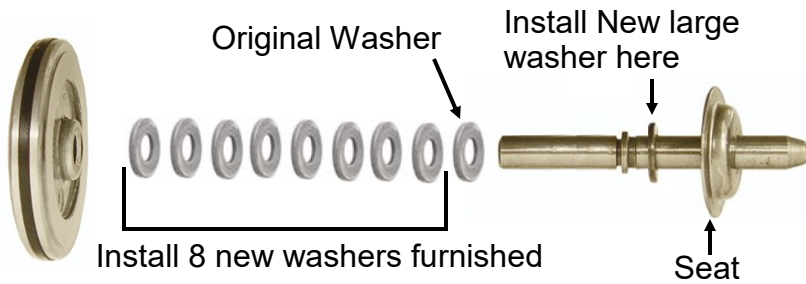


Be sure the cotter pins do not hang up on the edge of VB or case passages when install plate and VB.

**Step 4.** New special gasket under support plate stops high clutch failure. Install support plate and gasket after installing checkballs, new TransGo® main plate with welded transfer plate & main plate gaskets.



**Step 2.** Adjusting Intermediate servo

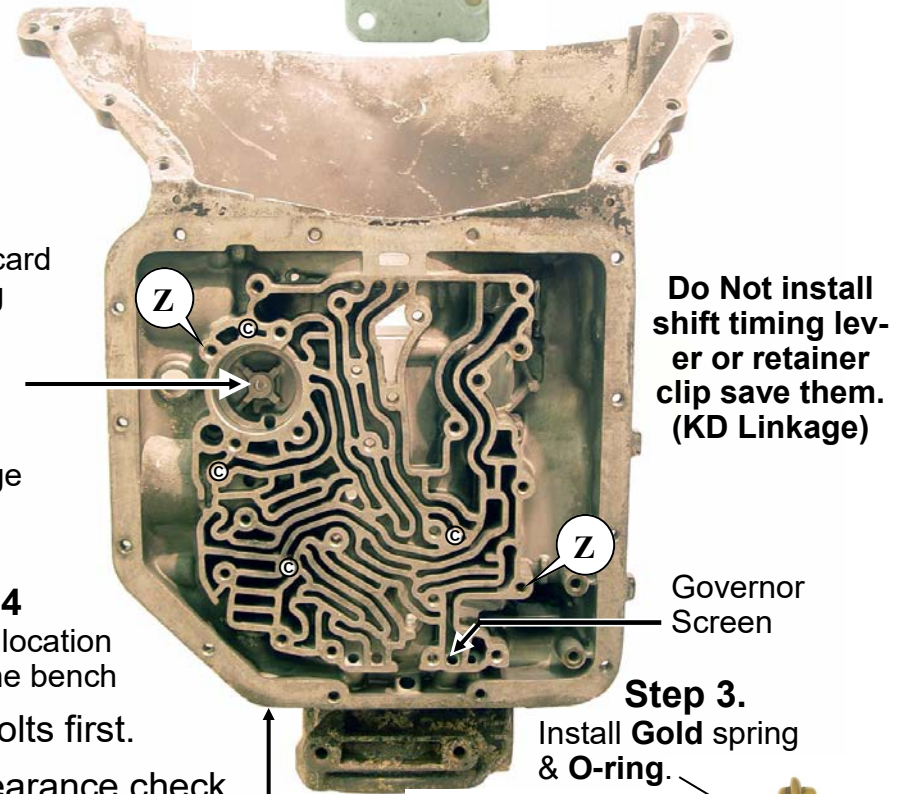


- Remove and disassemble intermediate servo assembly and discard servo spring.
- Install 8 of the washers furnished on pin between piston and original washer.
- Install servo pin piston into case without spring and spring seat.
- Install case gasket and new plate on case. Position valve body without the lower gasket as though installing it, and push it up hard until servo pin bottoms out. Remove shims one at a time until VB will push flat against plate.
- Remove two additional washers to obtain band clearance.
- Do Final Band Clearance Check.
- Install LARGE FLAT WASHER furnished onto tapered end of pin. Now install spring seat and New Large Gold Spring furnished. Reinstall servo assembly.

© = 4  
Checkball location trans on the bench

Install Z bolts first.

**Final band clearance check**  
(Do this after Step 2 Part E)  
With VB bolted on band should be free to move front to back on the drum 1/16" to 1/8" check with screwdriver through opening in case below manual valve.



Do Not install shift timing lever or retainer clip save them. (KD Linkage)

Governor Screen

**Step 3.**  
Install Gold spring & O-ring.



Trans will live 10 times longer if vacuum is hooked to modulator. Never use a plug.



## STEP 1. INSTALLING GOVERNOR CLIP

- A. Governor is located on drivers side of transmission towards rear of case. Remove 4 bolts (use 1/2" socket). Remove wire retainer use flat blade screwdriver and hammer to gently tap cover flange outward to remove from case.
- B. Remove governor from case.
- C. Install the spring type CLIP furnished in kit as shown in figure 3A, 3B, and 3C.
- D. Reinstall governor and cover using new rubber seal furnished in kit. Use flat punch to tap the flange of cover to reinstall. Reinstall wire retainer.

### IMPORTANT OPERATING INSTRUCTIONS

Do not attempt to make rolling reverse "Wheelie" or start a burnout while moving backwards. The entire force of changing directions goes to the low roller (Sprag).  
Always use the brakes to stop then select forward gear.

### AUTOMATIC SHIFTS

To convert back to automatic shifts See steps below.

TransGo

2621 Merced Ave, El Monte, CA 91733-1997  
Product Support (626) 443-7451

## To convert back to automatic shifts

- A. Remove clip from governor.
- B. Remove 1-2 shift valve splitter spring.
- C. Installing original shift timing and new retaining clip.
- D. Remove two cotter keys from separator plate this does not require removing separator plate from transmission. While holding separator plate up against case pull cotter keys out using pliers.



New Retaining Clip for  
Shift Timing Lever.  
(Kick-Down)



LOCATE CLIP FURNISHED IN  
KIT AS SHOWN

**FIGURE 3A**



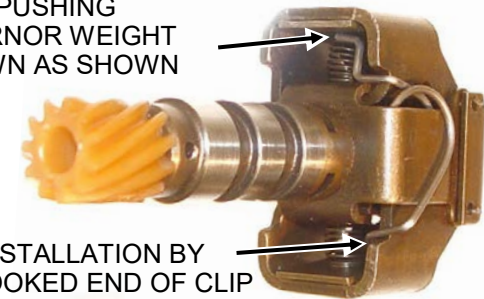
GOVERNOR ASSEMBLY

**FIGURE 3B**



TWIST CLIP  
INTO POSITION MAKING  
SURE END IS PUSHING  
INNER GOVERNOR WEIGHT  
OUT AS SHOWN AS SHOWN

**FIGURE 3C**



COMPLETE INSTALLATION BY  
SNAPPING HOOKED END OF CLIP  
OVER OUTER GOVERNOR WEIGHT