ATI PERFORMANCE PRODUCTS

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Installation Instructions

TF COMPU-FLOW VALVE BODY

Part # 723100, # 723110, 903100, 903110

PACKING LIST

- ☐ 1 Compu-Flow Valve Body
- ☐ ATI Compu-Flow Valve Body Decals (2)
- ☐ Instruction Sheet

Packed by: _____

NOTE! This valve body fits all 1966 to 1977 TF 727, 904, 998 and 999 non-lock up transmissions. This valve body is NOT compatible with lock-up transmissions

VALVE BODY INSTALLATION

1. Raise the vehicle and support with jack stands or in an automotive lift. Make sure that the vehicle is properly supported! Place a drain pan under the transmission.

2. Place the transmission in "PARK". Remove the stock throttle pressure linkage that connects the carburetor to the transmission throttle control lever. Remove the throttle control lever from the transmission. Also remove the gear selector lever from the transmission. Remove each lever by loosening the pinch bolt and prying the lever upwards off of the transmission with a flat blade screwdriver or similar prying device. Set the gear selector aside for use after your new valve body has been installed.

3. If your transmission is equipped with a drain plug, remove the plug and allow the fluid to drain. If your unit does not have a drain plug, remove all pan bolts except the 2 at the front of the transmission. Remove bolts one at a time, working back to front. Exercise caution as transmission fluid will splatter erratically during oil pan removal. You might need to reposition the transmission cross member in order to remove the rear oil pan bolts. If this becomes necessary, support the rear of the transmission to prevent the transmission / engine assembly from moving down and causing damage to the distributor cap and /or engine mounts. As you remove the bolts along the sides of the oil pan, the weight of the fluid will usually cause the oil pan to separate from the transmission case, allowing the fluid to drain from the rear of the oil pan. However, if the pan does not readily separate from the transmission case, insert a screwdriver between the oil pan and the case and pry gently to begin the draining process. Remove the two from oil bolts slowly (about one turn at a time) and fluid will drain at a steady rate from the rear of the oil pan. Drain the oil pan completely and keep it to hold bolts and small bolts and small parts.

4. Remove ten valve body retaining bolts using a 7/16" socket. Hold the valve body as you remove the last bolt. Additional oil will usually be trapped between the valve body and the case, so watch out for splattering fluid as the valve body is removed. Also, an accumulator spring is usually found between the valve body and the transmission case and the spring will fall our as the valve body is lowered. The long rod attached to the valve body is the park lock rod and should pull out of the parking mechanism easily and remained attached to the valve body. Pull valve body down and forward to disengage park rod from the back of the case. Rotate the driveshaft slightly to facilitate removal if necessary. Now you are able to remove the park lock rod from your old valve body and secure it to the ATI valve body using the stock retaining clip.

5. Adjust front band: The adjustor is located on the driver side on the outside of the transmission case. Use a 3/4" wrench to loosen locknut. Holding the locknut, use a 5/16" open end wrench and turn the square lug in the center of the locknut clockwise until the wrench becomes snug or torque to 72 in. lbs. or 6 ft. lbs. Make sure that you lock nut is not impeding the movement of the adjustor. Now carefully turn the 5/16" counterclockwise 1 and 3/4 turns. Hold the adjustor lug with your 5/16" wrench and tighten the lock nut securely (35 ft. lbs.) Do not allow the adjustor lug to move while tightening the locknut.

   Adjust rear band: Perform same as front band, but back adjuster out 2 turns and tighten lock nut.

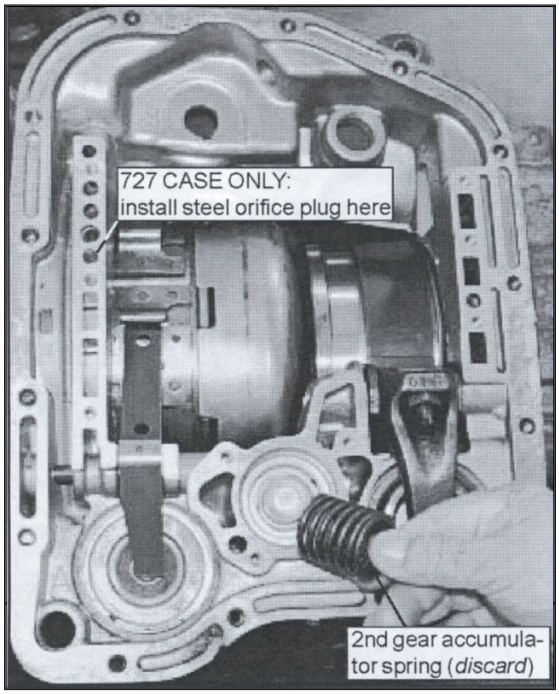

Figure 1

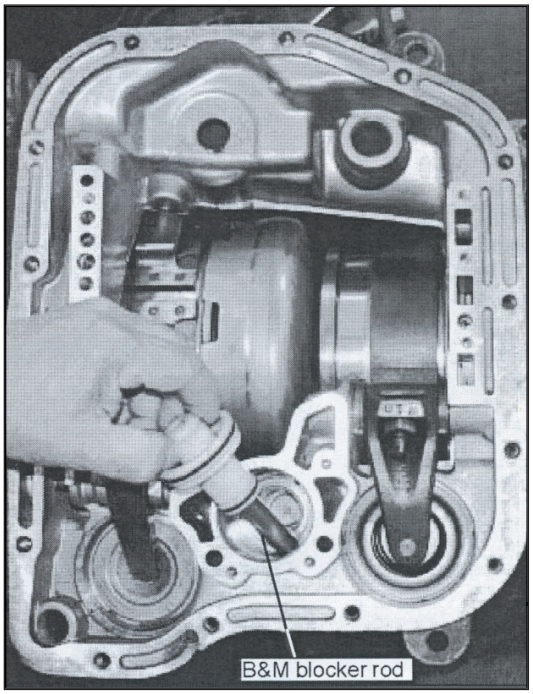

Figure 2

6. Remove 2nd gear accumulator spring (Figure 1) and discard. FOR 727 CASE ONLY: Install steel orifice plug just below the surface in the indicated hole, using a flat nose punch.

7. Install the blocker rod as shown below rod as shown below (Figure 2).

8. **For 1966 through 1969 transmissions -** Loosen the front servo adjusting screw, band anchor and front band apply strut. Remove the front servo. (Figure 3).

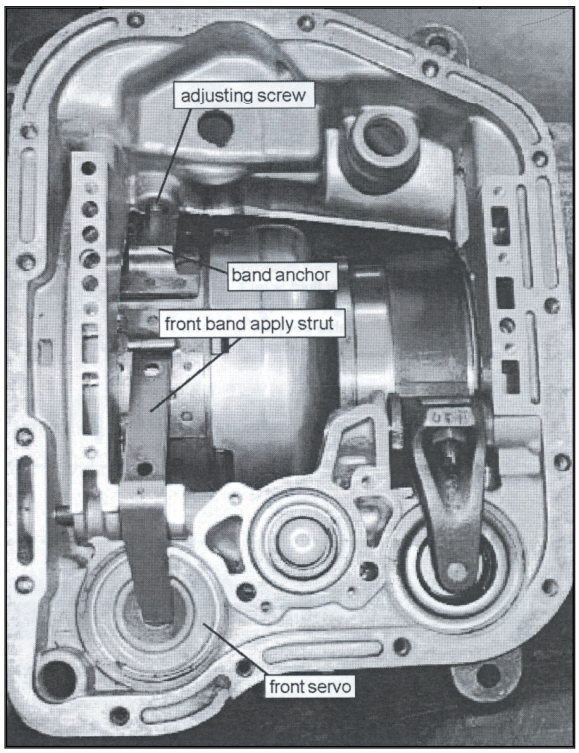

Figure 3

9. **For 1966 through 1969 transmissions -**
Install the supplied front servo inner return spring if not already equipped Later model transmissions do not require any front servo modification (Figure 4). The later model front servo piston has a larger (over 1/2") diameter center pin and does not require any disassembly or modification.

10. Reassemble in reverse order as disassembled.

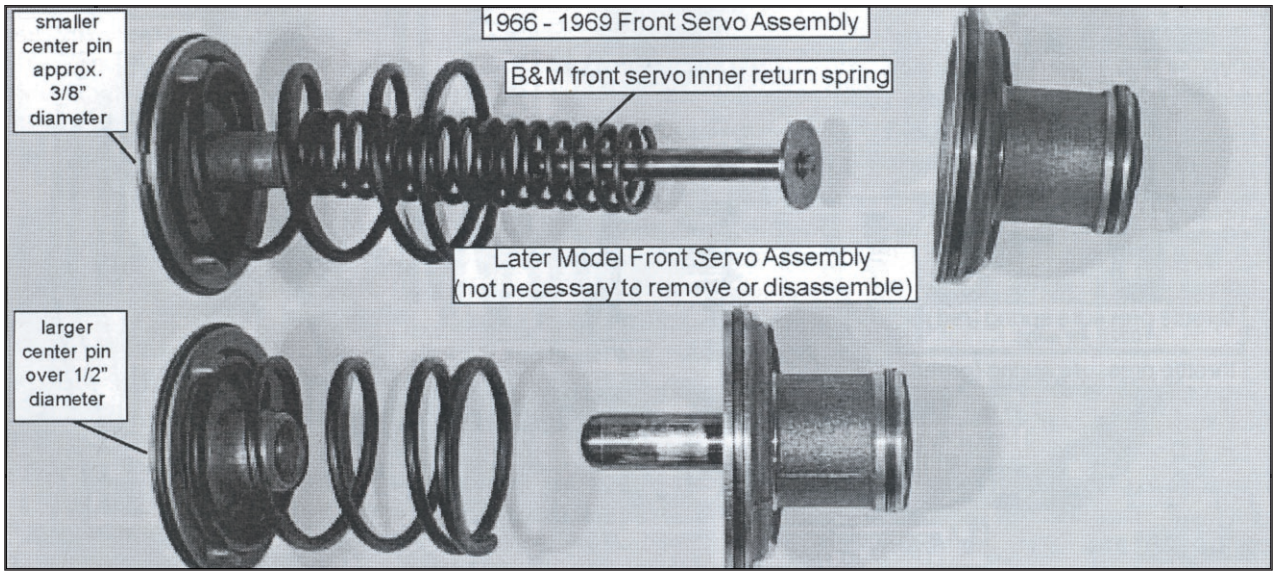

Figure 4

11. Before installing your ATI valve body note the plastic half ball shaped neutral safety switch actuator on the driver side of the transmission inside the transmission case. When installing the valve body, use care so that you do not damage the switch. Either remove the switch assembly or push the actuator in towards the case as you slide the valve body assembly into place. Make sure that the small accumulator piston remains in the transmission case bore.

12. Carefully install the ATI Compu-Flow Valve Body. Insert the park lock rod into the park locking mechanism of the transmission and push firmly into position. Once the park lock rod is engaged properly the valve body should easily mate flush with the transmission case. Valve body must sit flat against the case with no effort. Any interference that is preventing the valve body from contacting the case evenly must be corrected or damage to the valve body will result. Insert the park rod and rotate the drive shaft until the rod engages the park pawl, if necessary. While holding the valve body flush against the case, install and hand tighten the ten attaching bolts. Torque all valve body attaching bolts to 100 in. lbs. or 8 ft. lbs.

13. Remove any pieces of old pan gasket from the transmission case and oil pan. Clean oil pan and install using a new pan gasket. Secure all pan bolts evenly and then torque all pan bolts to 150 in. lbs. or 12 ft. lbs. If you have removed a drain plug, install it now and tighten securely. If you removed the neutral safety switch, install it now and tighten securely. Install the gear selector lever and tighten pinch bolt securely.

14. Always check shifter adjustment after installation. Never adjust shifter linkage or cable in "PARK" position. Always start adjustment / alignment with shifter and transmission in high gear. After setting the cable or linkage in high gear, make sure that your linkage or cable aligns perfectly with the transmission lever in all other gear positions. Proper shifter adjustment is vital and critical to proper operation of the transmission. Do not operate without verifying proper shifter adjustment! Secure your linkage or cable appropriately when finished.

Note! The factory throttle linkage must be hooked up and properly adjusted for proper operation. There are many variations of the factory linkage. Consult a factory service manual for your particular application.

15. Lower the vehicle. Keep the rear wheels off the ground if possible. Pour in four (4) quarts of automatic transmission fluid. ATI recommends using a quality brand of Type F fluid. Start the engine with the transmission in NEUTRAL. Check the fluid level with the dipstick and continue adding until it has reached the ADD mark on the dipstick. With brakes on, select each gear position for several seconds each in order to fill all oil circuits. Select the neutral position again and recheck the fluid level. If the level is at the ADD mark when the fluid is cold, it will probable reach the FULL mark after the transmission has reached operating temperature. DO NOT OVERFILL!

PLEASE NOTE!

- **Never attempt to NEUTRAL the transmission during a shutdown. Keep the transmission in high gear while slowing the car.**
- **Burnout procedure: never start the burnout in first gear!. Drive the car out of the water under power and lift before the tire hooks. The 1-2 shift in the water will knock the sprag rollers out of position every time. Always start the burnout in 2nd gear and then shift to 3rd gear. Never allow the tires to hook while the engine is under power!**
- **A broken drive shaft or U-joint, a broken rear end or axle, or possibly oil or water on the track where the tires hook - spin - and rehook, for example, can send enough of a jolt through the driveline to dislocate sprag rollers. It is always a good idea to inspect the sprag rather than to be sorry later.**
- **For your own protection, never operate without an approved transmission shield. (Order ATI Part # 726610)**