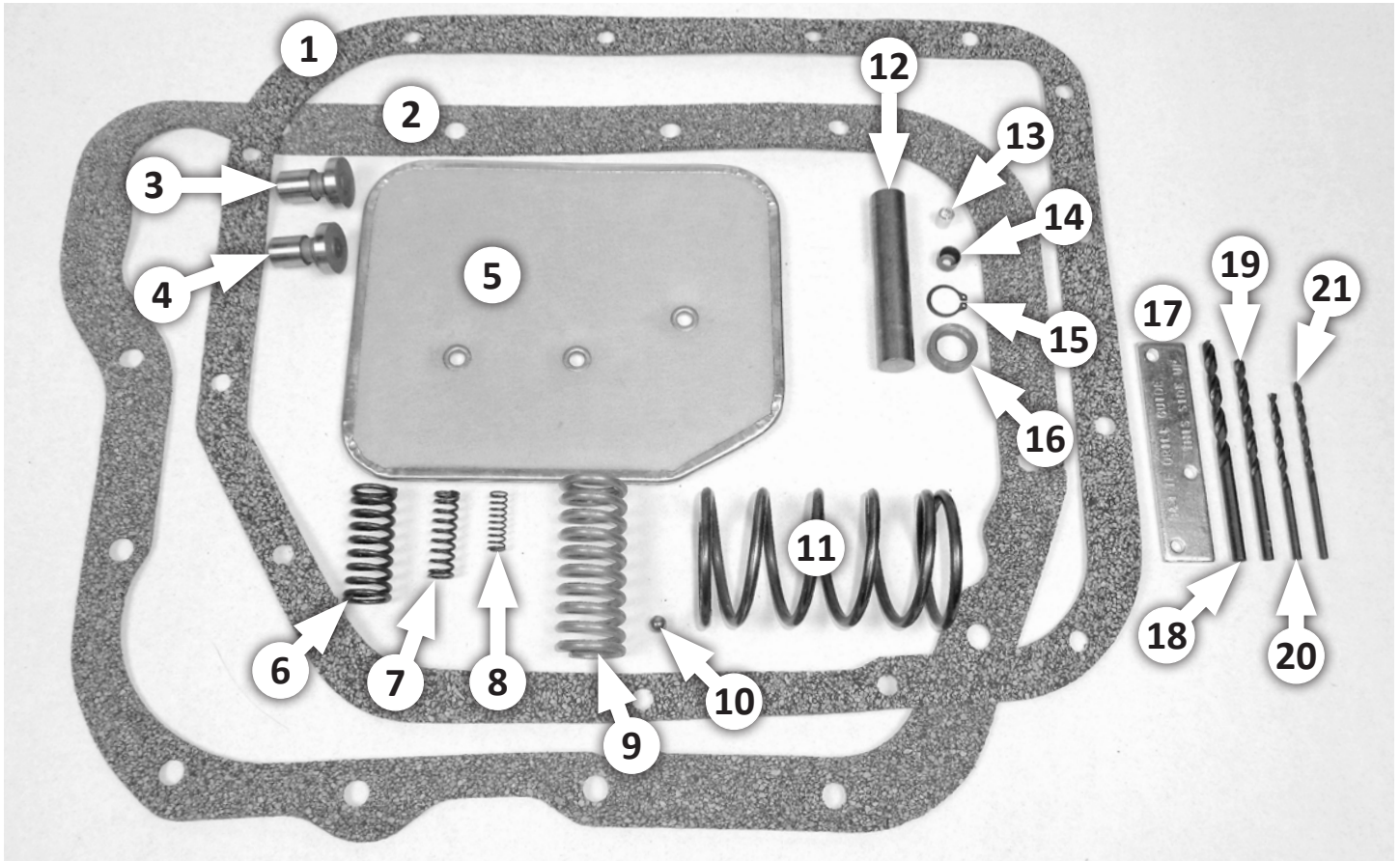


INSTALLATION INSTRUCTIONS

Part No. 10227

TRANSPAK™ for MOPAR 3-SPEED AND
4-SPEED TRANSMISSIONS, 1978-½ - 1996
(see applications table inside)



ITEM	DESCRIPTION
1	PAN GASKET (A904)
2	PAN GASKET (A727)
3	1-2 GOVERNOR PLUG (1979-1996; 2 GROOVES)
4	1-2 GOVERNOR PLUG (1978-½; 1 GROOVE)
5	FLUID FILTER
6	PRESSURE REGULATOR SPRING (1-5/8" × 11/16")
7	THROTTLE PRESSURE VALVE SPRING (1978-1996; GREEN; 1-1/4" × 3/8")
8	LIMIT VALVE SPRING (7/8" × 1/4")
9	SPRING, 3-4 ACCUM (2-1/2" × 1") (4-SPD ONLY)
10	1/4" STEEL CHECK BALL

ITEM	DESCRIPTION
11	REAR SERVO SPRING (3-3/8" × 2")
12	ACCUMULATOR PISTON BLOCKER ROD
13	ALUMINUM ORIFICE PLUG (1/4" OD)
14	STEEL ORIFICE PLUG (3/8" OD)
15	EXTERNAL SNAP RING
16	REAR SERVO BLOCKING RING
17	DRILL GUIDE
18	3/16" (0.188) DRILL BIT
19	5/32" (0.156) DRILL BIT
20	1/8" (0.125) DRILL BIT
21	#32 (0.116) DRILL BIT

INTRODUCTION

This Transpak kit fits the following Mopar 3- and 4-speed Torqueflite transmissions, 1978-½ to 1996.

ORIGINAL MODEL NAME	RENAMED
A904	30RH
A998	31RH
A999	32RH
A500	40RH/RE; 42RH/RE; 44RE
A727	36RH & 37RH
A518	46RH/RE
A618	47RH/RE (Not 48RE)

The Transpak kit is not a cure-all for ailing transmissions. If your transmission is slipping or in poor general shape, installation of a Transpak kit may make these conditions worse. However, on a good operating transmission in average condition, the Transpak will provide the enhanced transmission performance you're looking for.

This kit contains everything necessary to modify your transmission for three levels of performance, depending on intended use:

Heavy Duty: Passenger cars, street rods, towing, campers, motor homes, police, and taxis. Improved transmission performance without harsh shift feel. Automatic shifting in Drive.

Street/Strip: Dual-purpose performance vehicles, both street and track/off-road. Firmer, more positive shift feel, yet still suitable for daily driving. Automatic shifting in Drive.

Competition: Trailered or towed race cars. *Track/off-road only, not for street use.* Maximum shift feel, extremely high shift points. Full manual control if desired.

Before starting, take the time to read and understand these instructions.

Also, use the parts list to verify your kit's contents. In the unlikely event that any parts are missing, please contact **B&M Technical Support** for replacements.

In addition to these instructions, your vehicle's shop service manual is also advised.

We recommend that you retain all factory parts.

NOTES

- Installation requires intermediate mechanical skill. If this job is beyond your abilities, seek the services of a qualified technician.
- Transmission components and valves are precision-fit parts. Burrs and dirt are your biggest concern, so a clean work area is absolutely necessary.
- This kit can be installed with the transmission in the vehicle. But note that most of the instruction photos show a transmission on a work stand, not installed in a vehicle.
- When disassembling the valve body, note the following:
 - A. The **length and location of all fasteners.**
 - B. The **location and orientation of all valve groups (valves, springs, plugs, etc.).** Some valves may or may not have springs, depending on your valve body's model year or prior modifications.
 - C. The **location and size of all check balls** in the valve body and transfer plate castings.

Use a digital camera or notebook to capture these details for reassembly later. Immediately place all removed parts into suitable separate containers (plastic trays, bottles, or reclosable bags) to avoid losing or mixing them up.

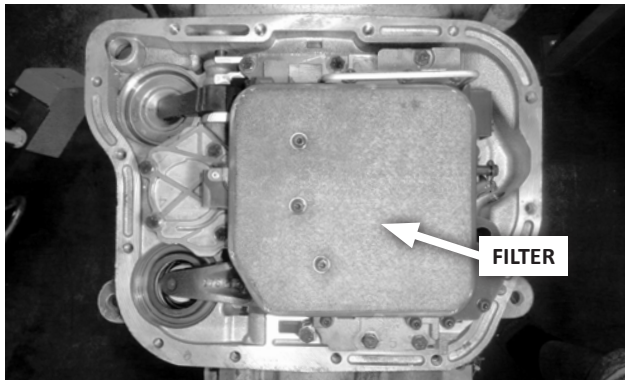
- If you do not understand any part of these instructions, please call **B&M Technical Support** for assistance.
- **WORK SAFELY! Park the vehicle on a clean, level surface.**
- **AVOID SERIOUS INJURY OR DEATH BY CRUSHING! Securely support the vehicle on a lift or jack stands. Use a lift, or jack and jack stands, to raise the vehicle to the height necessary to remove the transmission.**

WARNING: NEVER work under a vehicle that is supported only by jacks!

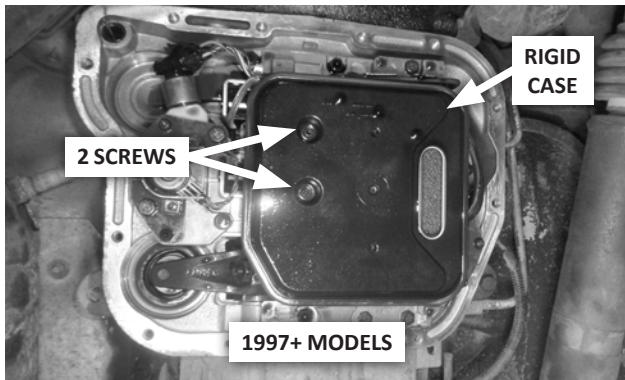
- **AVOID BURNS! Automatic transmissions typically operate at 150–200°F. Allow the transmission to cool down sufficiently before starting work.**

Finally, consider pairing your Transpak-modified transmission with the B&M or Hays torque converter that best matches its performance level. Get more details on suitable torque converters at www.bmracing.com, or by calling B&M Technical Support.

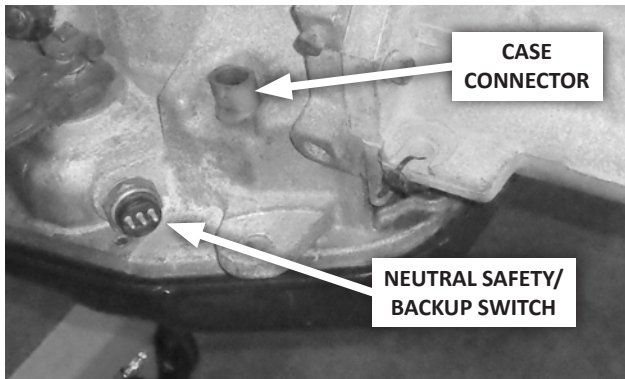
REMOVE AND DISASSEMBLE VALVE BODY



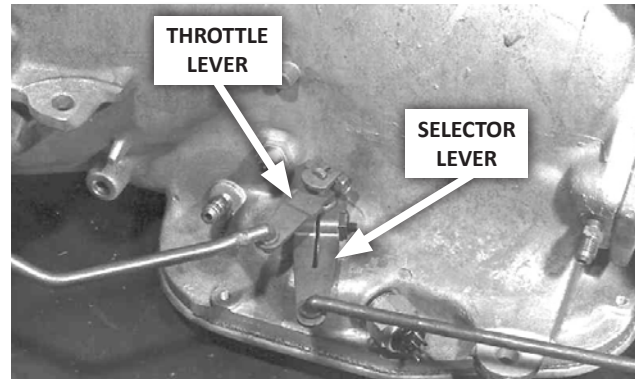
1. Drain and remove the transmission oil pan, then remove and discard the filter (3 screws). If your oil pan does not have a drain plug, consider installing B&M Drain Plug Kit 80250.



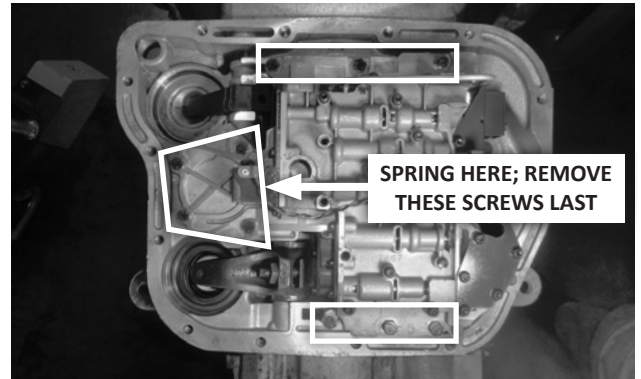
NOTE: If your filter has a rigid case and is attached with 2 screws, your transmission is a 1997 or newer. **STOP, this kit is not compatible!**



2. Disconnect the electrical plug(s) from the neutral safety/backup switch and (if applicable) the case connector. Remove neutral safety/backup switch from the case.
3. Loosen the throttle lever pinch bolt, and remove the lever from its shaft (**Step 4** photo). Carefully move the lever and rod aside, allowing them to hang free.

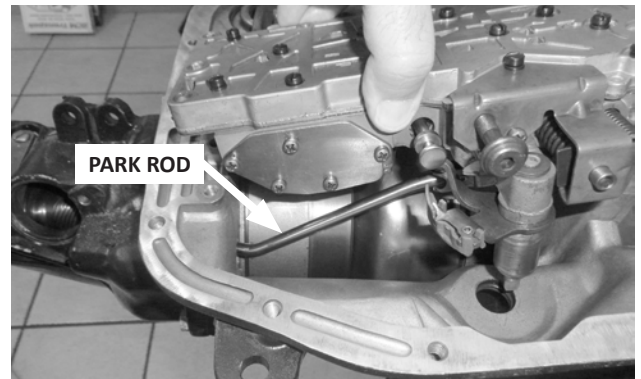


4. Loosen the selector lever pinch bolt, move the vehicle's shifter to **LOW**, and remove the lever from its shaft. Carefully move the lever and shift rod aside, allowing them to hang free.



5. Detach the valve body from the transmission (10 hex screws).

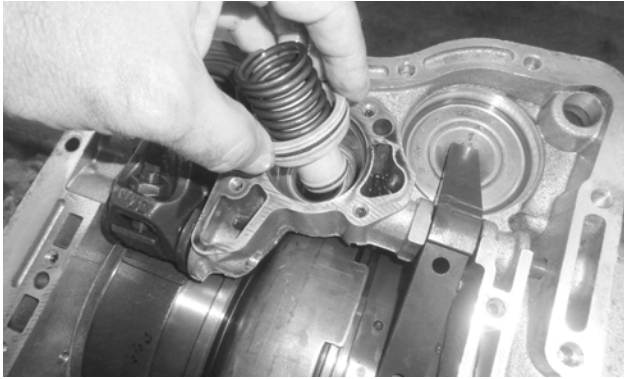
CAUTION: The valve body is under pressure from the accumulator spring. Loosen and remove the last 4 screws slowly, while holding the valve body against the transmission.



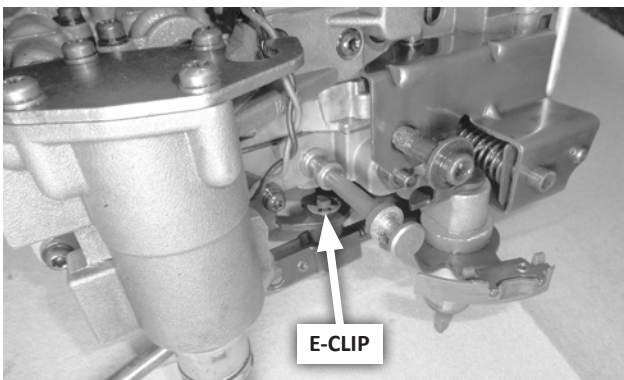
6. Carefully remove the valve body from the transmission, tapping gently on the case connector (if applicable). When the selector shaft and case connector are clear of the case, move the valve body forward to pull the park rod past the park pawl in the tail housing.

NOTES:

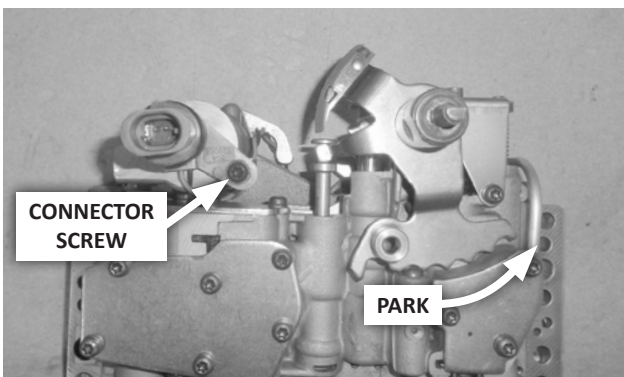
- If the park rod is stuck behind the park pawl, rotate the output shaft slightly (counter-clockwise, viewed from the rear). The pawl will fall into its notch on the park gear, and release the park rod.
- The case connector (if applicable) is fragile. Handle the valve body carefully to avoid breaking its mount lobe.



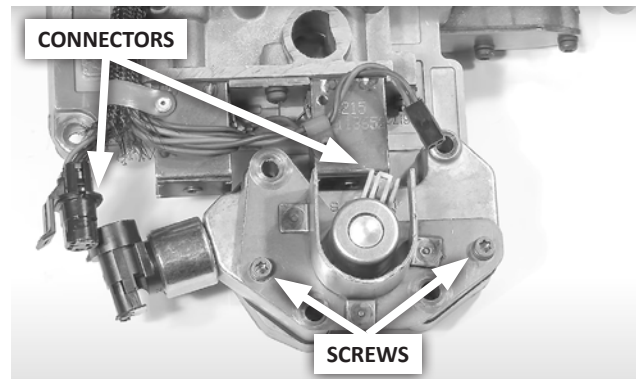
7. Remove the 1-2 accumulator spring and piston, and discard the spring.



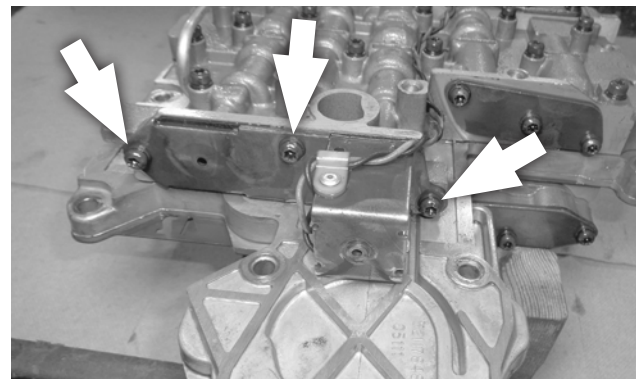
8. Move the valve body to a clean work surface. Remove the e-clip and park rod.



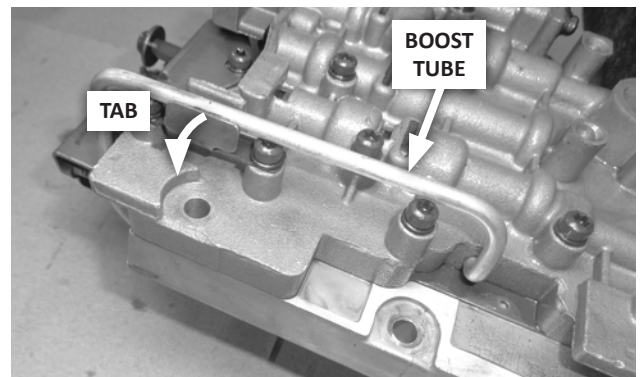
9. Move the selector lever to **PARK** (full counter-clockwise), to protect the manual valve and to avoid losing the detent ball during disassembly. Remove case connector screw (if applicable). Note the screw's unthreaded shank, which permits connector "float."



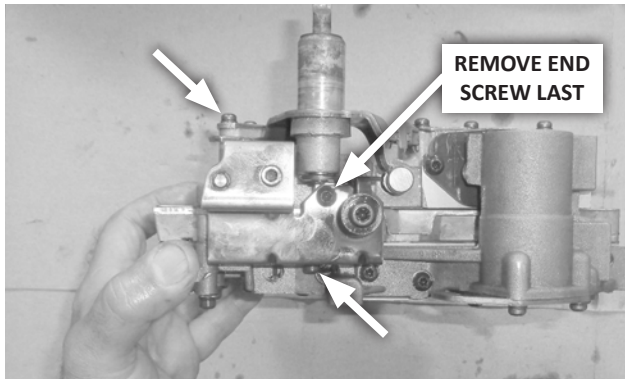
10. **RE MODELS:** Remove the connectors from the governor pressure solenoid and governor pressure sensor. Then remove governor pressure housing, retainer and gasket (2 screws).



11. **4-SPEEDS:** Remove solenoid & harness assembly (3 screws).

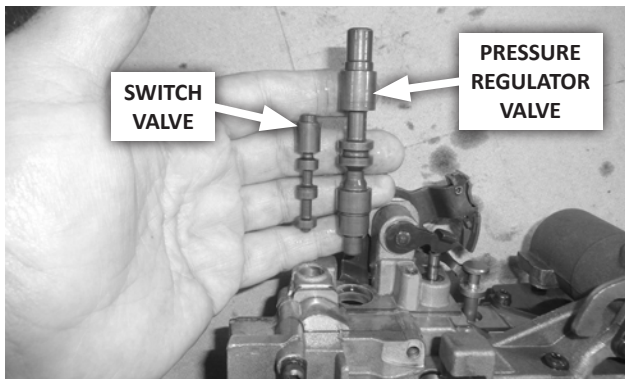


12. **4-SPEEDS:** Bend tab(s) down on boost tube retainer. Then carefully pull the boost tube out of the valve body.



13. Carefully remove the spring retainer & adjusting screw bracket (3 screws), and the 2 springs. Note the location and length of each screw.

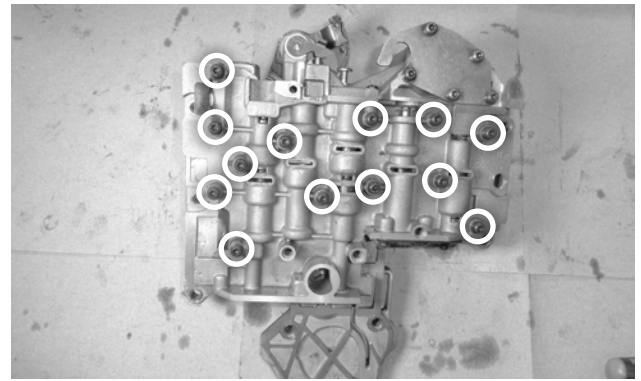
CAUTION: The retainer is under pressure from the 2 springs. Remove the end screw last, while holding the retainer against the springs.



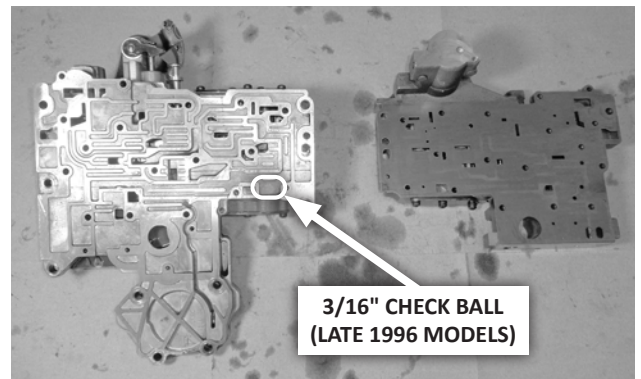
14. Remove the pressure regulator and switch valves. Note the orientation of the switch valve (large spool out).

NOTE: Valves and springs should easily fall out of their bores by turning the valve body on end. Gentle tapping on the valve body with a plastic hammer or screwdriver handle may sometimes be required.

CAUTION: Do not use excessive force when tapping on the valve body! Do not use metal tools on parts or in valve bores! A dented valve body casting, or nicked valves or valve bores, can cause erratic shifting!

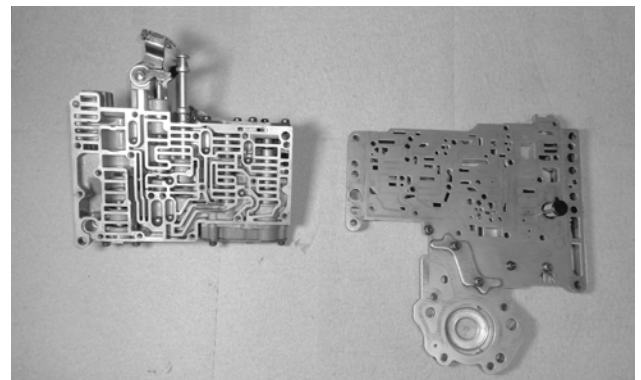


15. Remove the 13 valve body screws (and boost tube retainer, on 4-speeds).



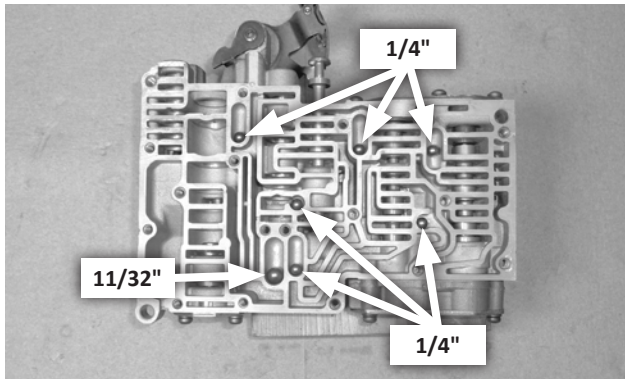
16. 4-SPEEDS: Carefully lift the lower valve body and separator plate off of the transfer plate, and set them aside.

NOTE: If there is a 3/16" check ball in an oval pocket on the transfer plate (late 1996 models only), remove it.

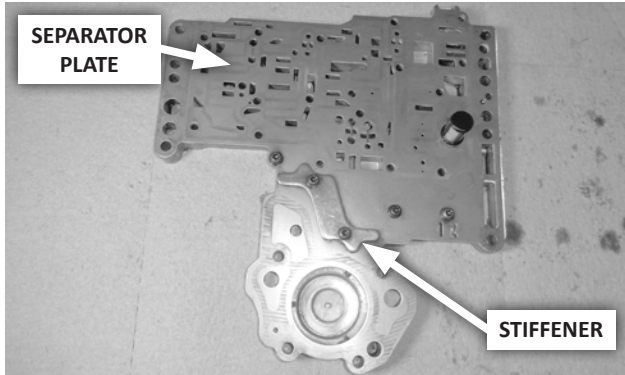


17. ALL: Carefully lift the transfer plate assembly off of the valve body casting, and set it aside with the separator plate facing up.

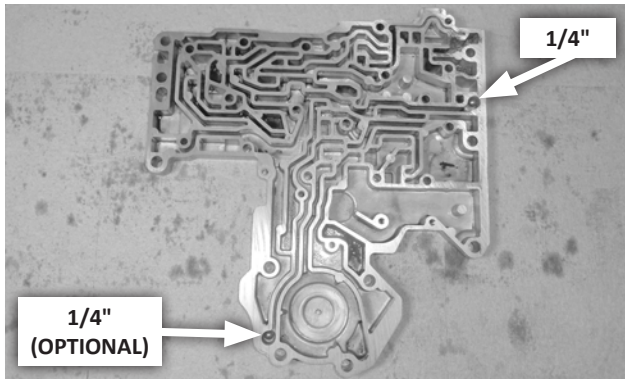
CAUTION: Keep the valve body casting lying flat to avoid losing the check balls and spring.



18. Note the location and size of the 7 check balls in the valve body casting, then remove them.



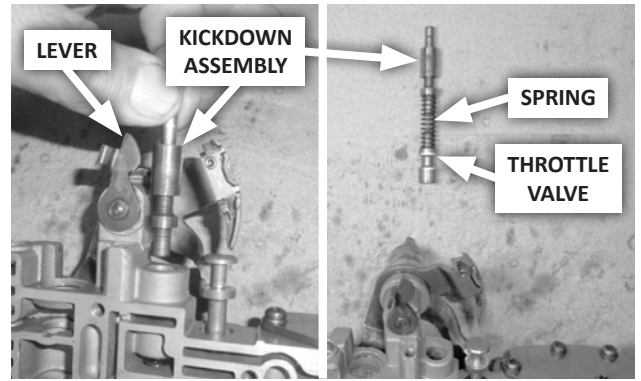
19. Note the orientation of the stiffener, then remove the 4-6 screws (varies by model) attaching the stiffener and separator plate to the transfer plate.



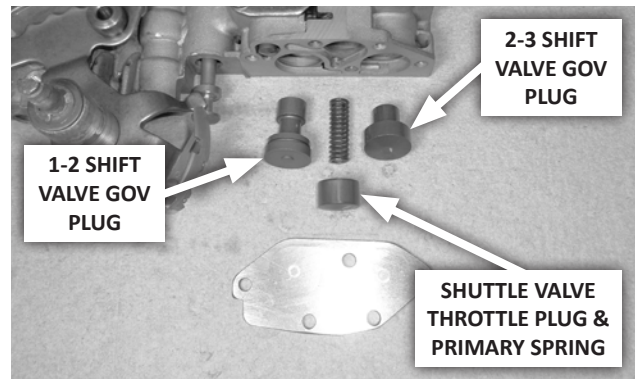
20. Carefully lift the stiffener, separator plate, and filter screen off of the transfer plate.

CAUTION: Keep the transfer plate lying flat to avoid losing check ball(s).

Note the locations of the check ball(s) in the transfer plate, then remove them. (Some valve bodies do not use a check ball at the accumulator pad.) Set the transfer plate components aside.



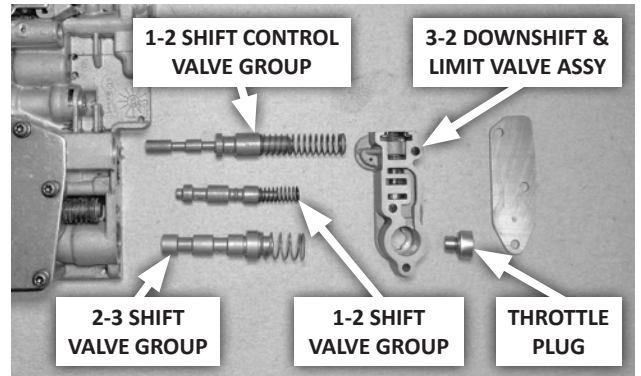
21. Pivot the throttle pressure lever upward, and remove the throttle valve group (kickdown assembly, spring, and throttle valve).



22. Remove the governor plug end plate (5 screws).

CAUTION: Avoid losing the detent ball and spring!
After removing the end plate, do not rotate the selector lever out of the PARK position.

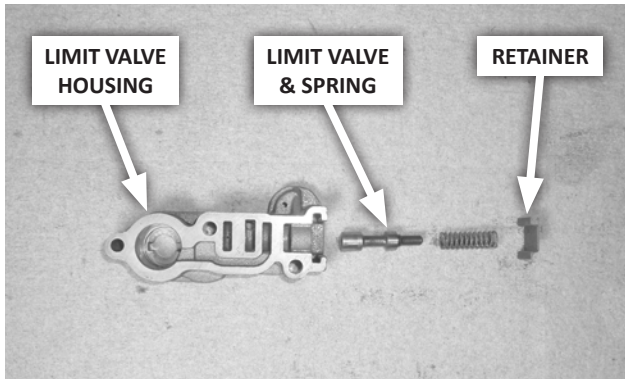
Remove the 2-3 shift valve governor plug, shuttle valve throttle plug & primary spring, and 1-2 shift valve governor plug.



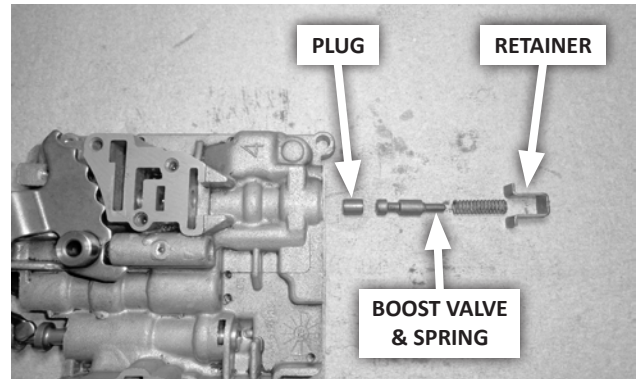
23. Remove the 3-2 downshift & limit valve assembly and end plate (3 screws).

CAUTION: The end plate is under pressure from 3 springs. Loosen and remove the last screw slowly, while holding the end plate against the valve body.

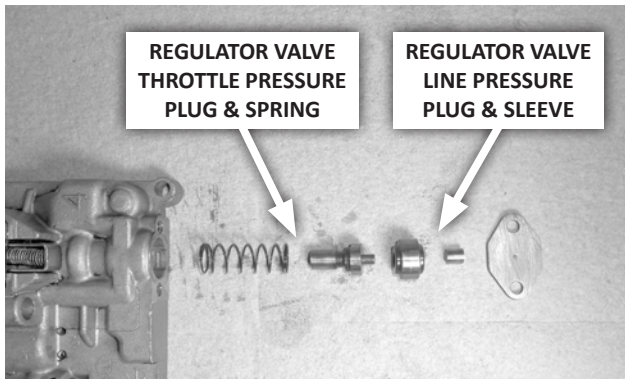
Remove the 2-3 shift valve group, 1-2 shift valve group, and 1-2 shift control valve group.



24. Disassemble the 3-2 downshift & limit valve assembly by removing the throttle plug (Step 23 photo), retainer, and limit valve group from the housing.



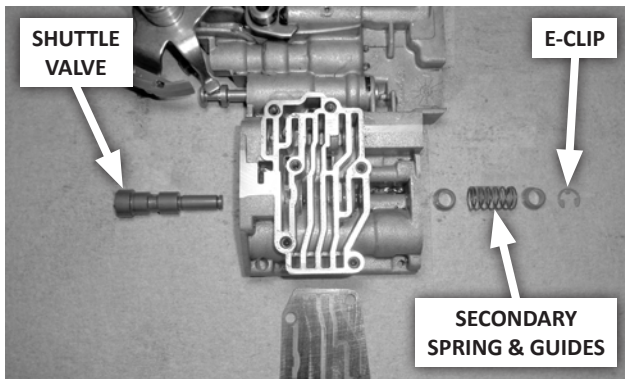
27. 4-SPEEDS: Remove the boost valve cover plate (3 screws), followed by the boost valve group.



25. Remove the regulator valve end plate (2 screws), followed by the regulator valve group.



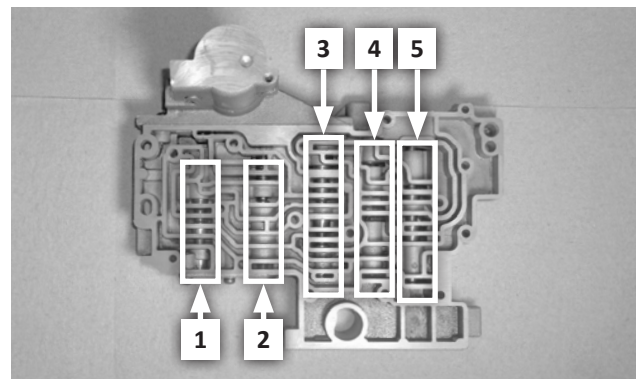
28. 4-SPEEDS: On the lower valve body, remove the 3-4 accumulator cover plate (5 screws), spring, and piston.



26. Remove the shuttle valve cover plate (6 screws), followed by the e-clip, shuttle valve, secondary spring, and spring guides.

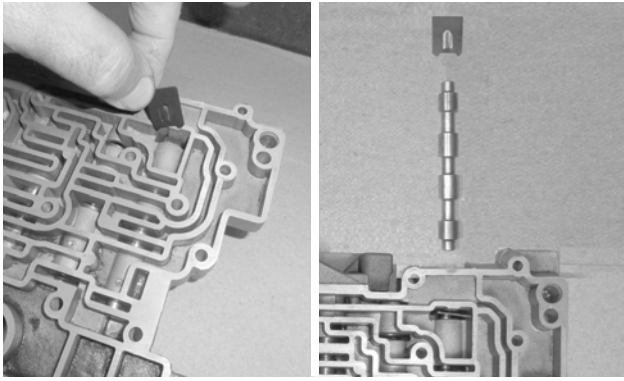
3-SPEEDS: Go to Step 33.

4-SPEEDS: Perform Steps 27-32.

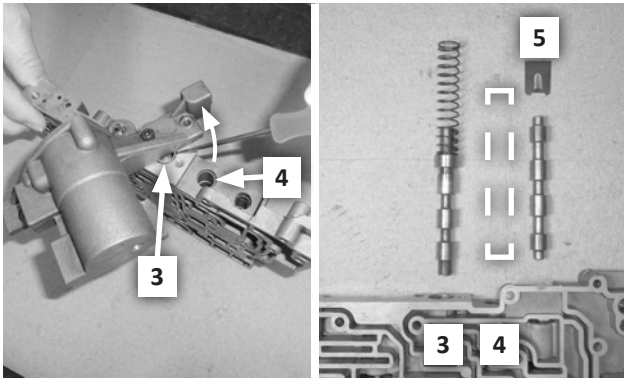


29. 4-SPEEDS: Lay the lower valve body flat with the accumulator housing at the top left corner. Note the 5 valve group locations as shown.

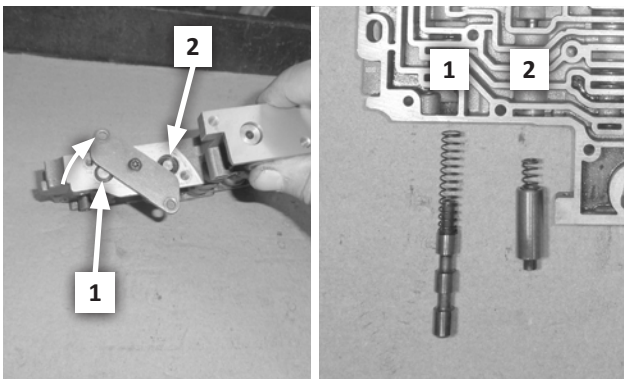
NOTE: Some valve bodies don't include all 5 valve groups. Some valve groups have different components than shown here. When removing the valve groups, lay their components out in the order removed to insure correct reassembly.



30. 4-SPEEDS: Remove retainer and valve group #5, the converter clutch timing valve. (Your valve group may include a spring; photo shows no spring because the transmission is non-lockup.)



31. 4-SPEEDS: At the 3-4 accumulator housing, remove the 2 end screws. Then loosen the center screw, and pivot the housing slowly to release first the #4 valve group (converter clutch valve), then the #3 valve group (3-4 shift valve). (Photo shows no #4 valve group because the transmission is non-lockup.)

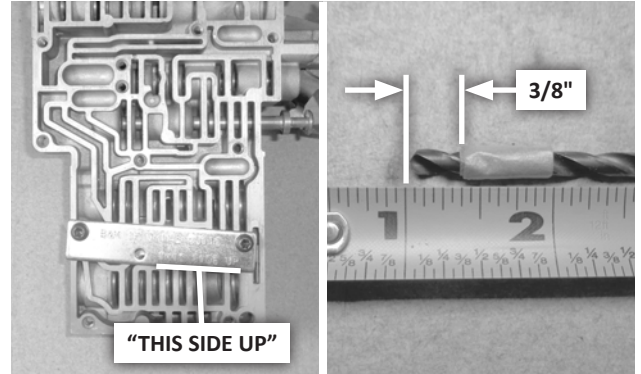


32. 4-SPEEDS: Remove the end plate (3 screws), then remove the #1 (3-4 timing) and #2 (3-4 quick fill) valve groups.

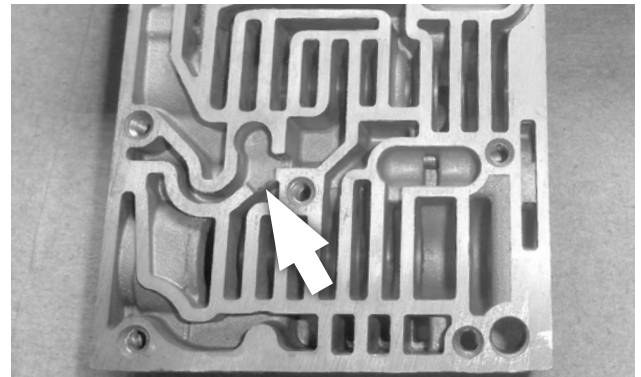
CAUTION: The end plate is under pressure from 2 springs. Remove the end screws first, then slowly loosen and remove the last screw, while holding the end plate against the valve body.

33. **ALL:** Thoroughly clean all parts with a suitable solvent. To stay organized, clean each valve group one at a time, and keep the items of each valve group in their proper order. Inspect parts before reassembly.

MODIFY AND REASSEMBLE VALVE BODY



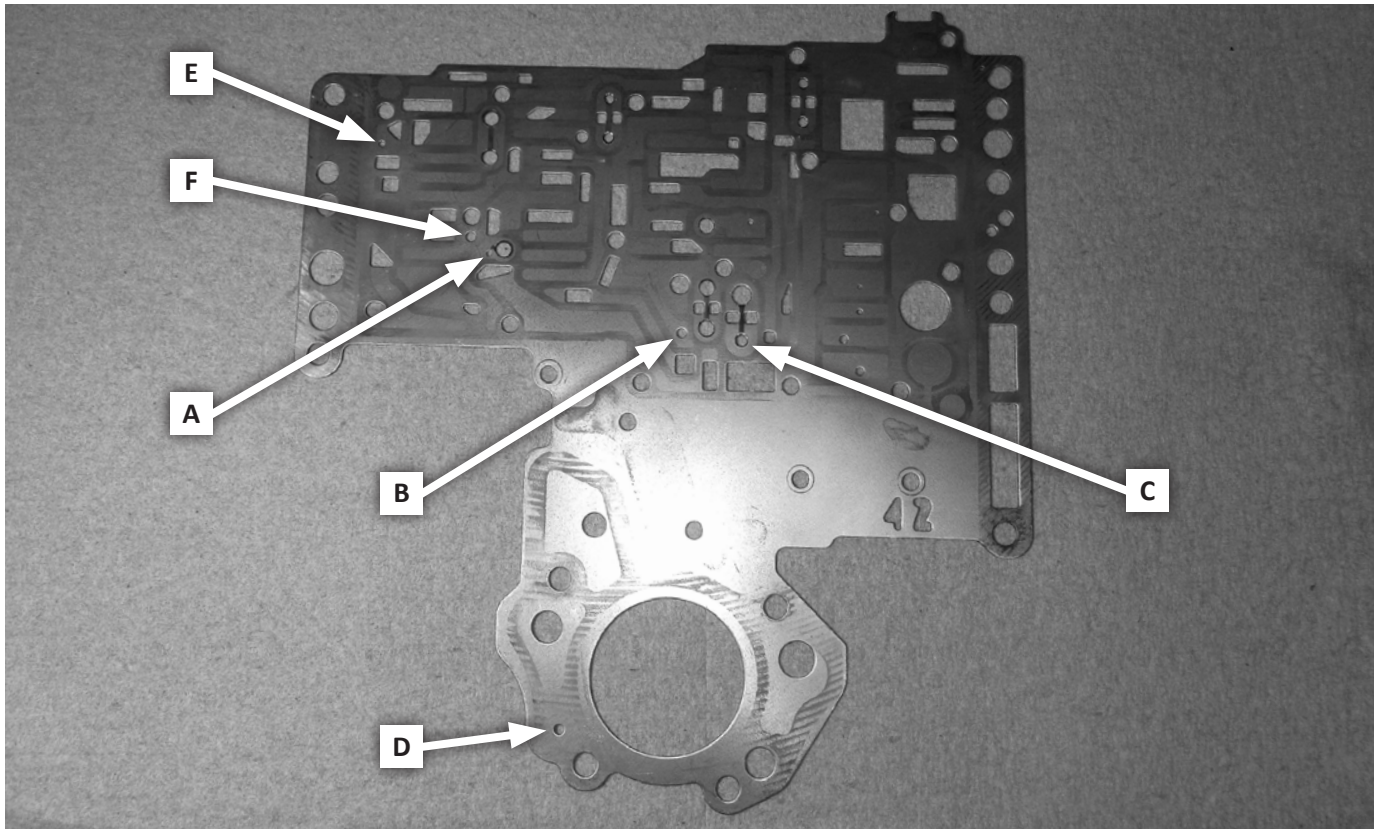
34. Install the B&M drill guide [item 17] on the valve body casting as shown, using 2 end plate screws. Wrap masking tape 3/8" from the tip of the 3/16" drill bit [18] as a depth guide.



35. Remove the section of casting wall as shown by drilling through the hole in the guide.

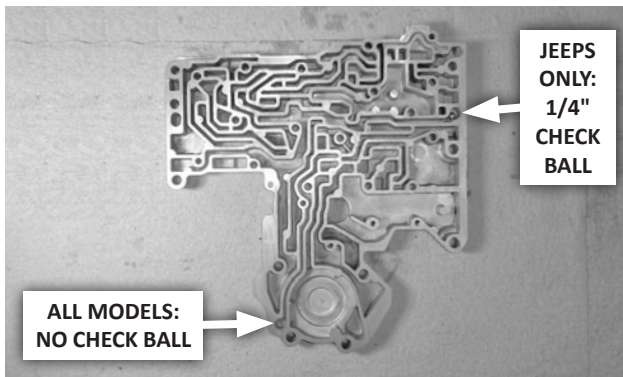
CAUTION: Do not drill through the valve body casting! Drill only until the tape touches the drill guide. The drill tip should not touch the bottom of the passage.

36. Remove the drill guide, then thoroughly flush the valve body with a suitable solvent to remove all chips, and allow to dry.



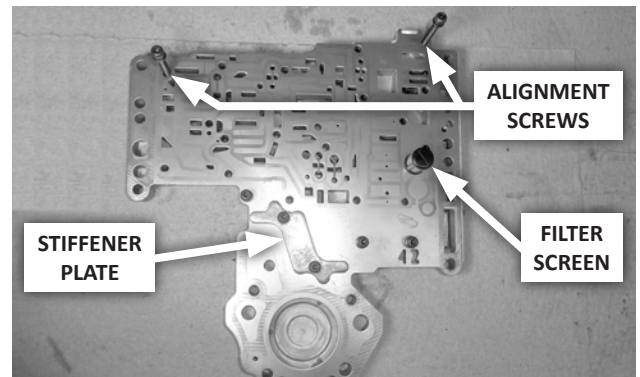
37. Drill the separator plate according to the desired performance level, then deburr and wipe clean with suitable solvent.

HEAVY DUTY	STREET	COMPETITION
A: #32	A: 1/8"	A: Do not drill
B: 1/8"	B: 3/16"	B: 3/16"
C: 3/16" (Jeep: Do not drill)	C: 3/16" (Jeep: Do not drill)	C: 3/16" (Jeep: Do not drill)
D: 5/32" (Jeep: Do not drill)	D: 5/32" (Jeep: Do not drill)	D: 5/32"
E: 5/32" (If triangular, do not drill)	E: 5/32" (If triangular, do not drill)	E: 5/32" (If triangular, do not drill)
F: 1/8"	F: 1/8"	F: 1/8"



38. JEEPS ONLY: Install one 1/4" check ball in the transfer plate as shown.

ALL OTHER APPLICATIONS: DO NOT install either 1/4" check ball.



39. Insert the filter screen in the separator plate, then lay the separator plate on the transfer plate. Temporarily thread 2 valve body screws into the locations shown to align the separator and transfer plates, then attach the stiffener and separator plates to the transfer plate with the screws removed at Step 19. Be sure to orient the stiffener plate the same way as when it was removed. Tighten the screws to 35 in-lbs, then remove the 2 alignment screws.

NOTE: When reassembling the valve body, lubricate all valves with a light coat of transmission fluid.

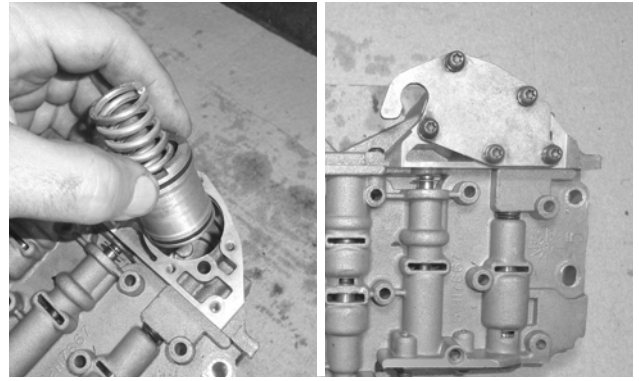
3-SPEEDS: Go to Step 47.

4-SPEEDS: Perform Steps 40-46.

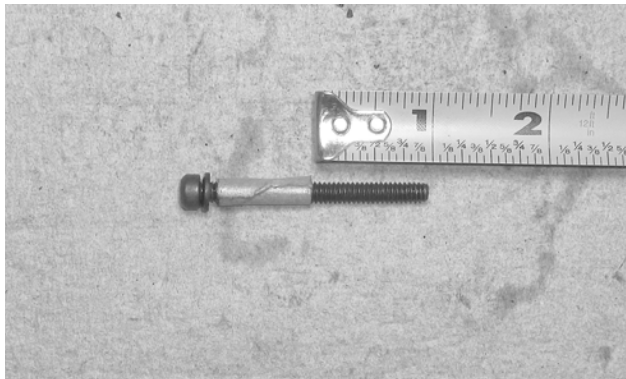
40. 4-SPEEDS: Install the #1 and #2 valve groups, then install the end plate (3 screws). Hold the plate against the casting, and install the center screw first. Tighten the screws to 35 in-lbs.

41. 4-SPEEDS: Install the #3 and #4 valve groups, then install the 3-4 accumulator housing (3 screws). Hold the housing against the casting, and install the center screw first. Tighten the screws to 35 in-lbs.

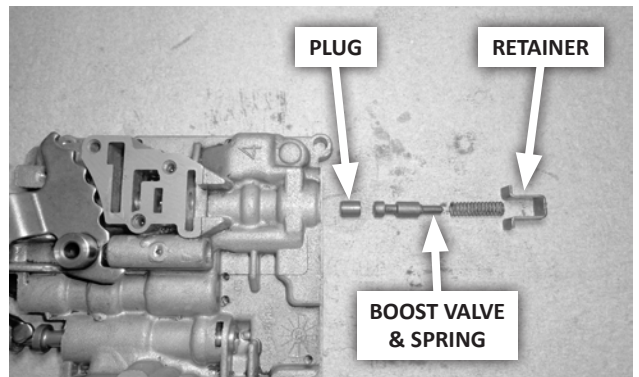
42. 4-SPEEDS: Install the #5 valve group and retainer.



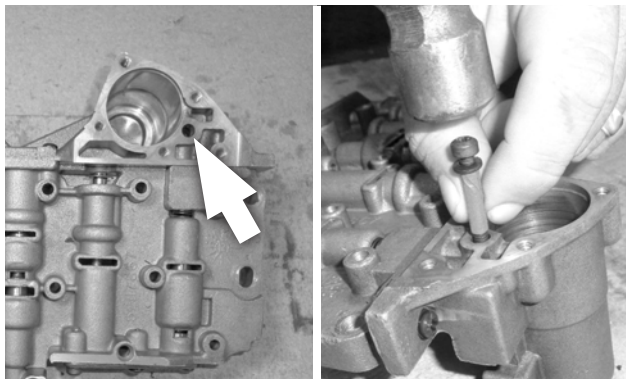
45. 4-SPEEDS: Install the 3-4 accumulator piston and B&M spring [9] in the lower valve body housing. Then install the accumulator cover (5 screws). Tighten the screws to 35 in-lbs.



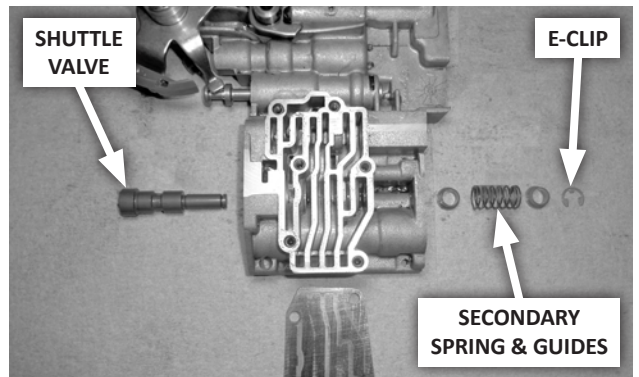
43. 4-SPEEDS: Wrap masking tape 1" from the tip of a valve body screw as a depth guide.



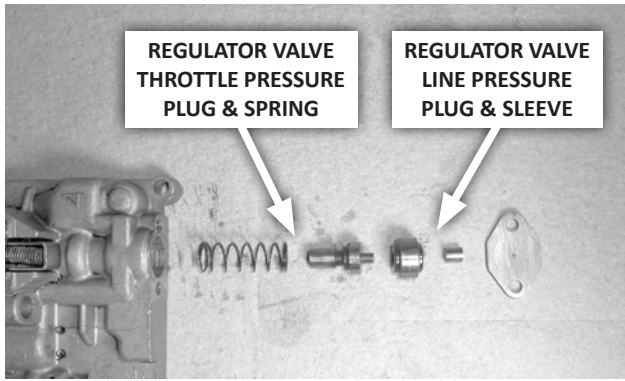
46. 4-SPEEDS: Install the boost valve group, followed by the cover plate (3 screws). Tighten the screws to 35 in-lbs.



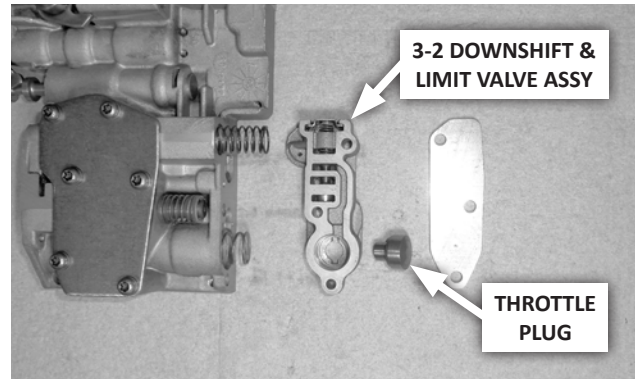
44. 4-SPEEDS: Use the screw to gently tap the B&M aluminum orifice plug [13] into the oil passage next to the 3-4 accumulator bore. Seat the orifice plug 1" below the machined surface.



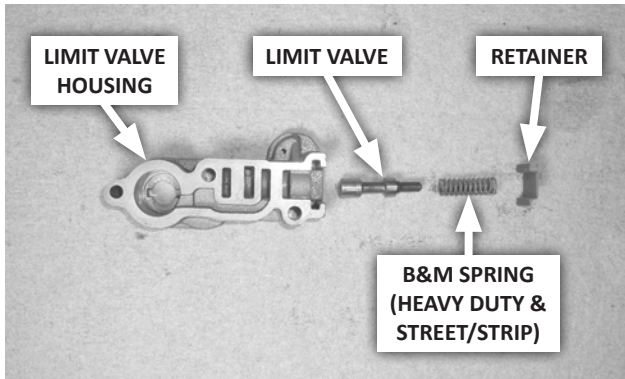
47. ALL: Install the shuttle valve group and e-clip. Verify ease of valve travel, then install its cover plate (6 screws). Tighten the screws to 35 in-lbs.



48. Install the regulator valve group, followed by its end plate (2 screws). Tighten the screws to 35 in-lbs.

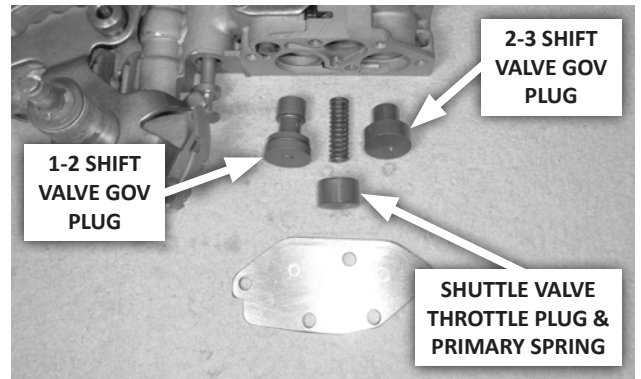


51. Install the throttle plug in the 3-2 downshift & limit valve assembly, then install the valve assembly and end plate on the valve body (3 screws). Tighten the screws to 35 in-lbs.



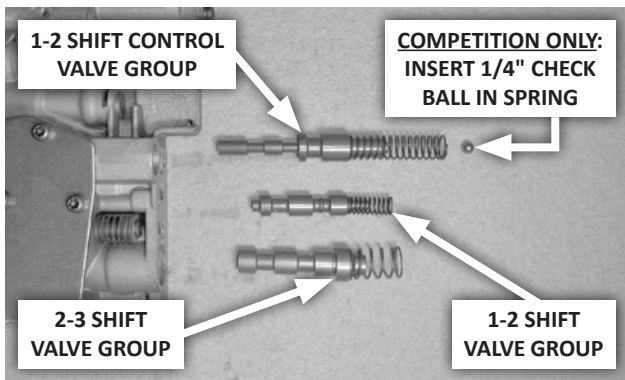
49. Assemble the 3-2 downshift & limit valve assembly.

For HEAVY DUTY and STREET/STRIP applications, replace the stock limit valve spring with the B&M spring [8]. The B&M spring restricts operation of the limit valve to below 35-40 MPH.



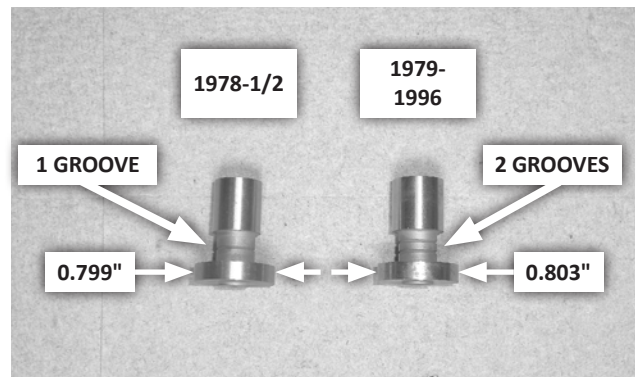
52. Install the 2-3 shift valve governor plug, shuttle valve throttle plug & primary spring, and 1-2 shift valve governor plug, followed by the governor plug end plate (5 screws). Tighten the screws to 35 in-lbs.

COMPETITION APPLICATIONS ONLY: The B&M 1-2 shift valve governor plug in this kit (item [3] or [4]), allows downshifting to LOW at any speed. If you desire this capability, choose the B&M plug which fits the bore most closely.

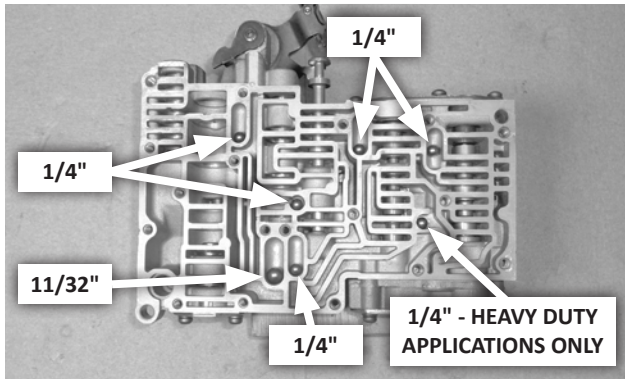


50. Install the 2-3 shift valve group, 1-2 shift valve group, and 1-2 shift control valve group in the valve body.

COMPETITION APPLICATIONS ONLY: Insert the B&M 1/4" steel check ball [10] in the 1-2 shift control valve spring (NOT in the 1-2 shift valve spring).



- The 1978-1/2 plug [4] has 1 groove on its neck, and its face measures 0.799" dia.
- The 1979-1996 plug [3] has 2 grooves on its neck, and its face measures 0.803" dia.



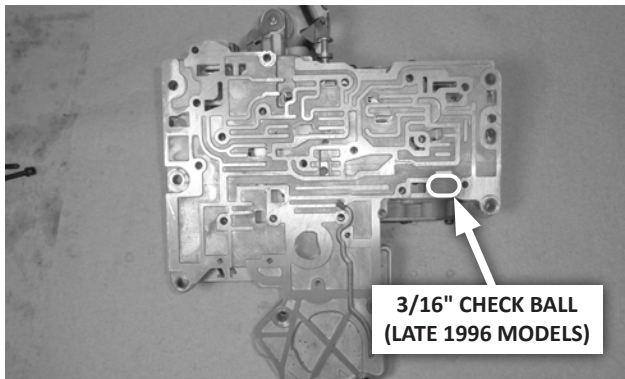
53. Install the steel check balls as shown.

STREET/STRIP AND COMPETITION APPLICATIONS: DO NOT install the 1/4" check ball at the location "Heavy Duty Applications Only."

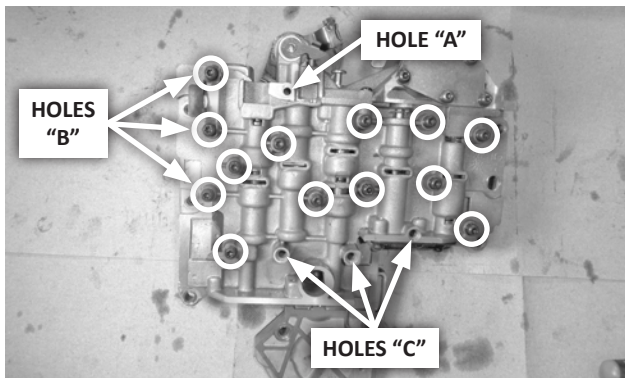
54. With the valve body casting lying flat, carefully place the transfer plate on top of it.

3-SPEEDS: Go to Step 58.

4-SPEEDS: Perform Steps 55-57.



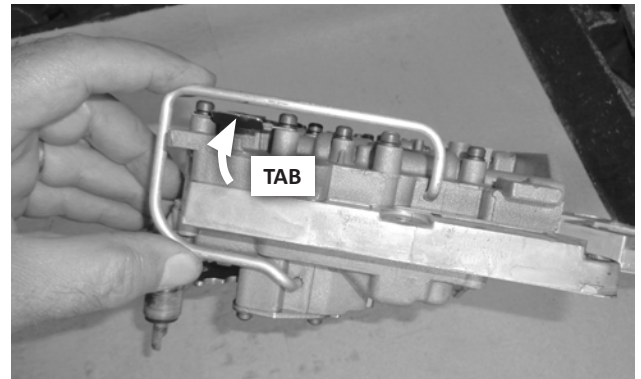
55. 4-SPEEDS: If a 3/16" check ball was removed at Step 17, install it in the oval pocket on the transfer plate as shown.



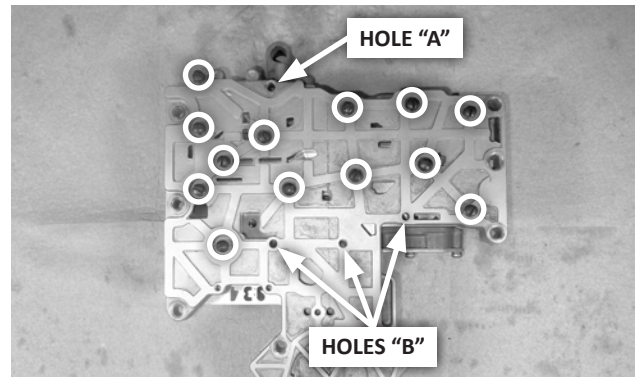
56. 4-SPEEDS: Carefully lay the separator plate and lower valve body on top of the transfer plate. Hand start, then tighten, 13 transfer plate screws. Tighten the screws to 35 in-lbs.

NOTES:

- Do not install a screw at hole "A".
- Install boost tube retainer at 2 or 3 holes "B".
- Do not install screws at 3 filter screw holes "C".



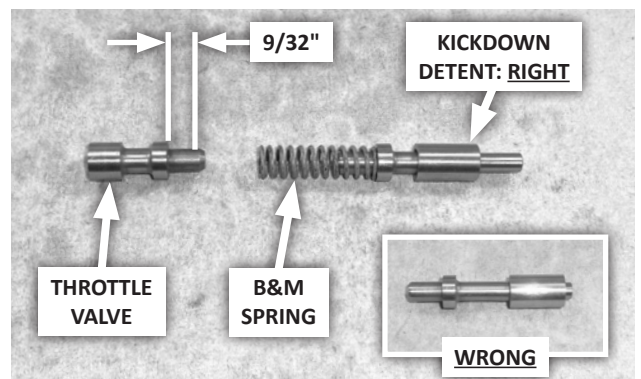
57. 4-SPEEDS: Install the boost tube, then bend the retainer tab(s) back into place against it. Go to Step 59.



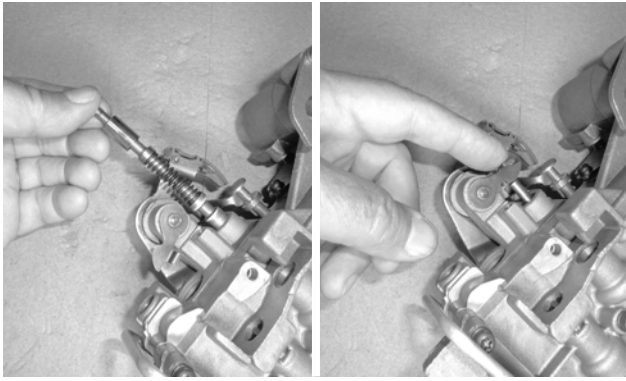
58. 3-SPEEDS: Hand start, then tighten, 13 transfer plate screws. Tighten the screws to 35 in-lbs.

NOTES:

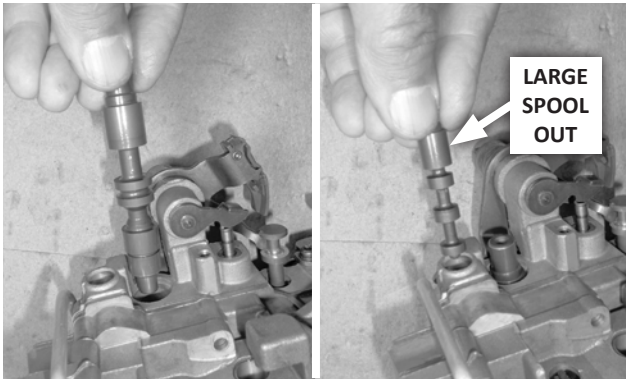
- Do not install a screw at hole "A".
- Do not install screws at 3 filter screw holes "B".



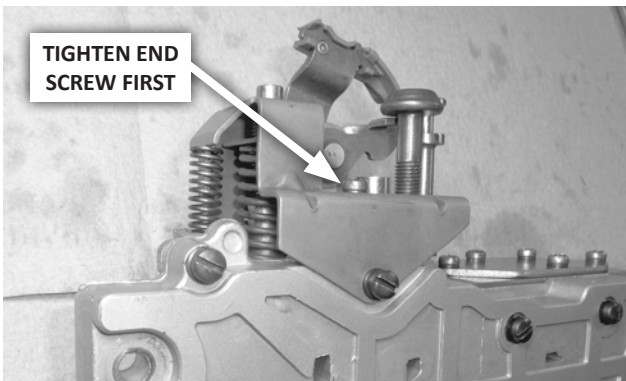
59. ALL: Grind the throttle valve stem to 9/32" long and deburr. Then reassemble the throttle valve group using the B&M throttle pressure spring [7]. Ensure that the kickdown detent is correctly installed on the kickdown valve as shown.



60. Install the throttle valve group in the valve body. Then pivot the throttle pressure lever back into place against the valve.

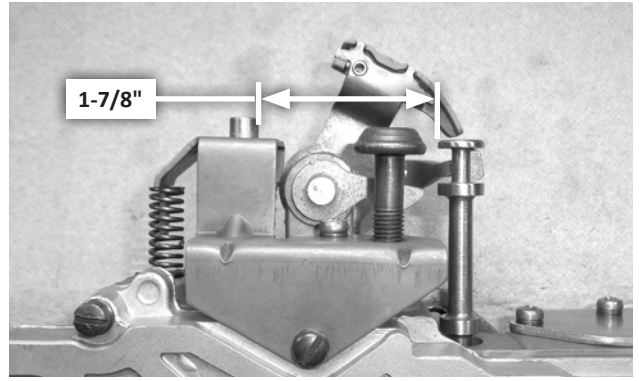


61. Install the pressure regulator valve and B&M spring (6), then the switch valve (large spool out) and spring.

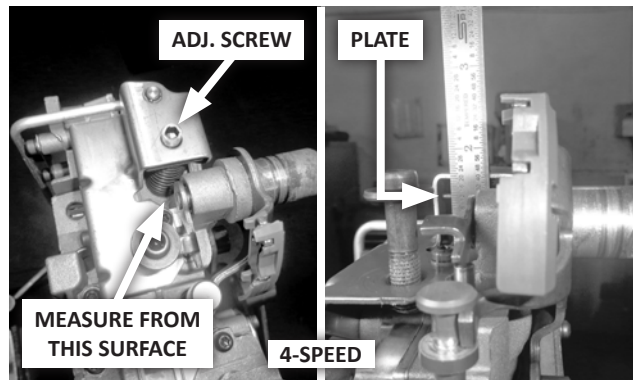
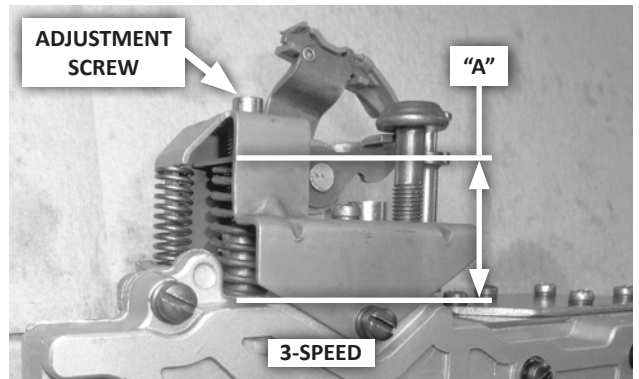


62. Move the spring retainer & adjusting screw bracket into place, capturing both the switch valve and pressure regulator springs. Push the bracket down against the springs, align the screw holes, and hand start all 3 screws. Tighten the end screw first, followed by the 2 side screws (35 in-lbs).

NOTE: Verify proper seating of the springs to their valves, and the location of the throttle lever between the adjustment screw head and the throttle valve.

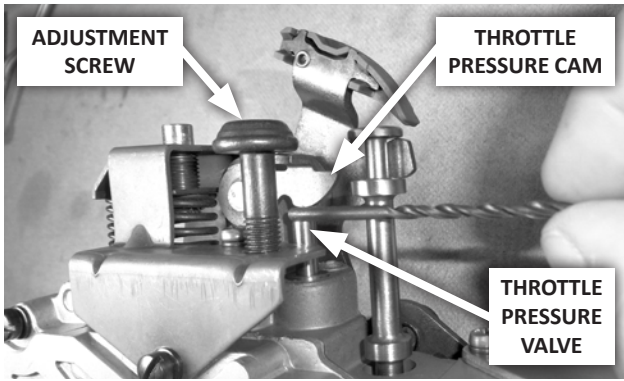


63. Verify bracket alignment: Distance from the edge of the manual selector valve to the pressure adjusting screw must be 1-7/8". If not, loosen the 3 screws, adjust the bracket, re-tighten the screws, and re-measure.

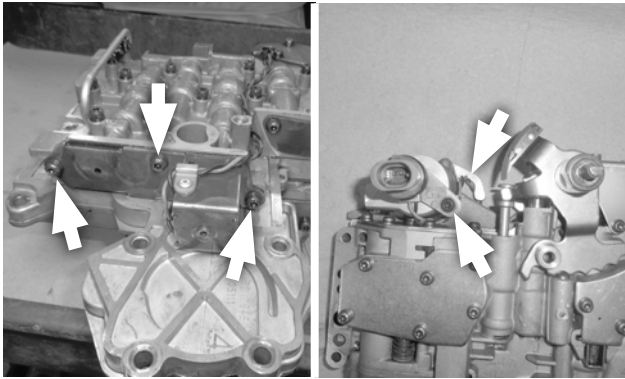


64. Adjust pressure regulator: Set the dimension from the edge of the valve body casting to the inside face of the pressure regulator adjusting plate as follows:

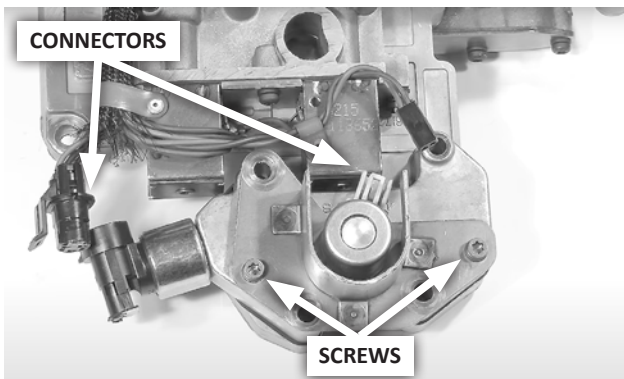
- Heavy Duty: 1-1/4"
- Street/Strip: 1-3/16"
- Competition: 1-1/8"



65. Adjust the throttle pressure screw so that the 1/8" drill bit [20] just fits between the throttle pressure cam and throttle pressure valve.



66. Install the solenoid & harness assembly, if applicable (3 screws; tighten to 35 in-lb). Route the wiring through the 3-4 accumulator cover plate, then attach the case connector with the shoulder screw (tighten to 35 in-lbs).

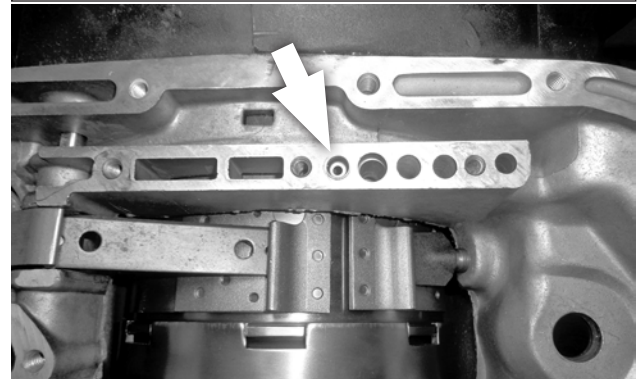
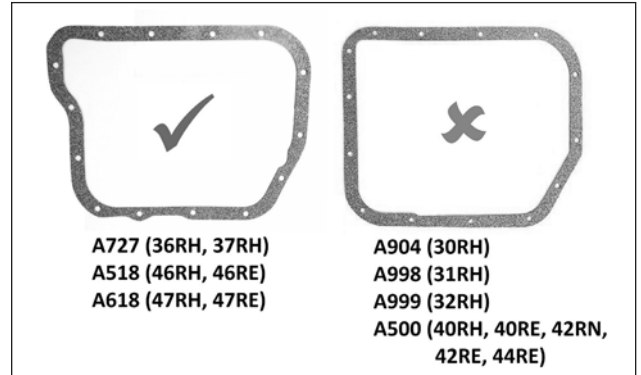


67. If applicable (RE models), install the governor pressure housing, retainer and gasket (2 screws; tighten to 35 in-lbs). Connect the harness to the governor pressure solenoid and sensor.

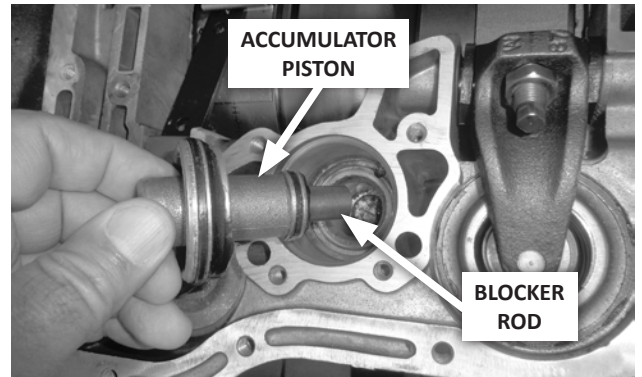
Set the assembled valve body aside.

MODIFY CASE AND TRANSMISSION

68. A727-TYPE CASE ONLY (including A518 and A618):

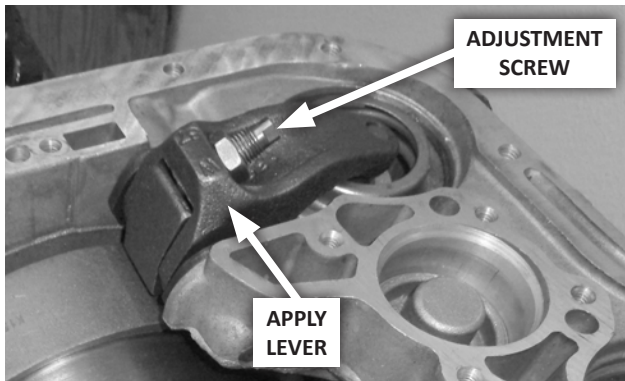


Install the steel orifice plug [14] in the hole indicated. The edge of the plug must sit just below the case surface.

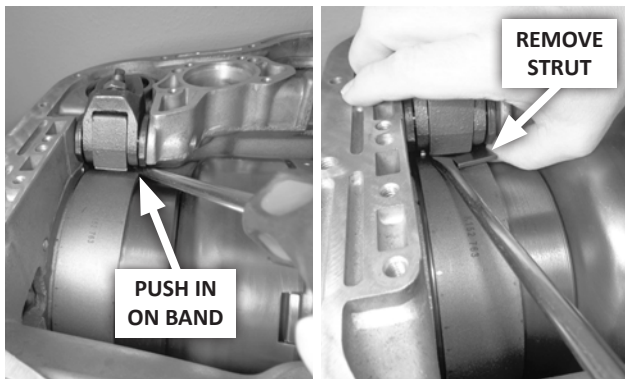


69. ALL: Remove the accumulator piston from the case, and insert the blocker rod [12] in the middle of the piston. Then install the piston and blocker rod in the case.

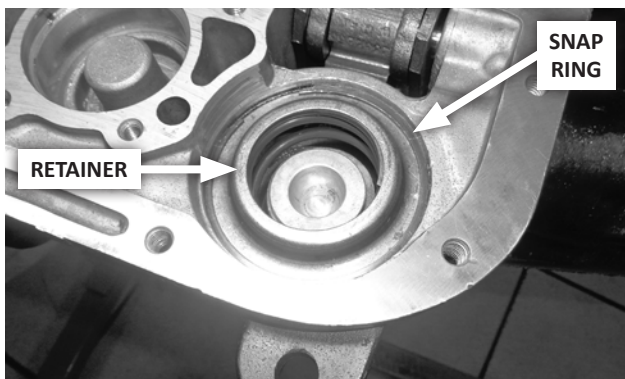
PERFORM STEPS 70-76 FOR COMPETITION APPLICATIONS ONLY. Allows manual downshifts to low gear at any speed; not recommended for street use.



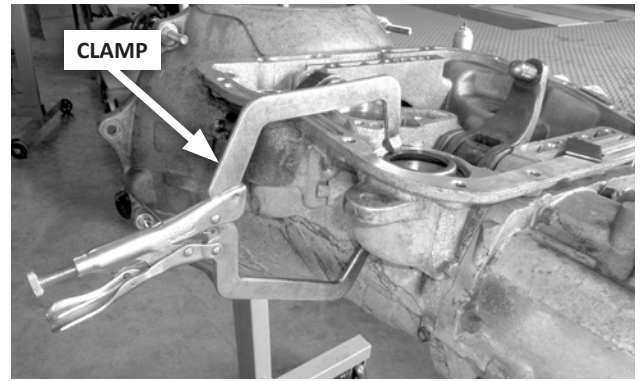
70. Loosen the rear (low/reverse) servo band adjuster locknut, then back the adjustment screw out until the tip is flush inside the apply lever (typically 3-4 turns).



71. Use a long thin screwdriver to push in on the rear band. The band apply strut will pop out. Use a second screwdriver to remove the strut, then swing the apply lever clear of the servo.



72. Compress the spring retainer, then remove the snap ring and retainer, followed by the spring and piston assembly underneath.



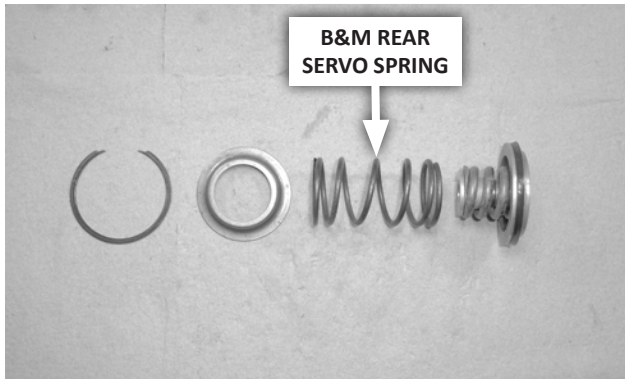
CAUTION: Avoid injury or lost parts! The rear servo piston spring is very strong. The spring retainer must be compressed until the snap ring is fully removed from its groove. A jack or clamp is recommended for both disassembly and reassembly.



73. Use a vise to compress the spring slightly. Remove and discard the snap ring, then disassemble the piston.

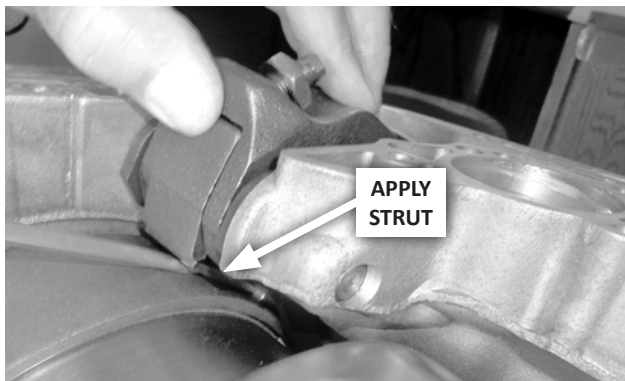


74. Install the servo blocking ring [16] over the servo shaft, then reassemble the piston, using the **B&M external snap ring [15]**.



75. Install the rear servo piston in the case, taking care not to damage its rubber lip seal. Then install the **B&M rear servo spring [11]**, compress the spring retainer (a jack or clamp is recommended), and install the snap ring.

CAUTION: Avoid injury or lost parts! Be sure the snap ring is fully seated in its groove before releasing the retainer.



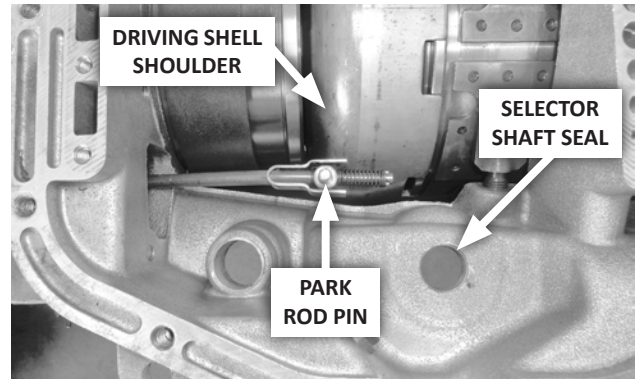
76. Rotate the rear band apply lever back into place, then use a screwdriver to install the apply strut between the lever and the band. Tighten the adjuster screw to 72 in-lbs (snug), then back it off as follows:

- **A727 (all):** Back off 3 turns
- **A904 w/single-wrap band:** Back off 3-1/4 turns
- **A904, A998 & A999 w/double-wrap band:** Back off 4 turns

Finally, tighten the locknut while holding the adjuster screw stationary.

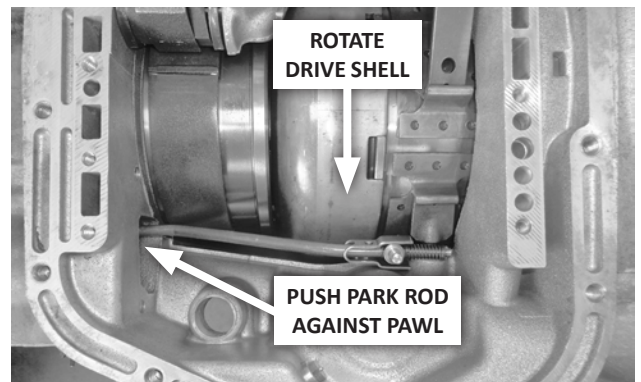
REINSTALL VALVE BODY & REASSEMBLE TRANSMISSION

77. Inspect the selector shaft seal (Step 78 photo), and replace if necessary.

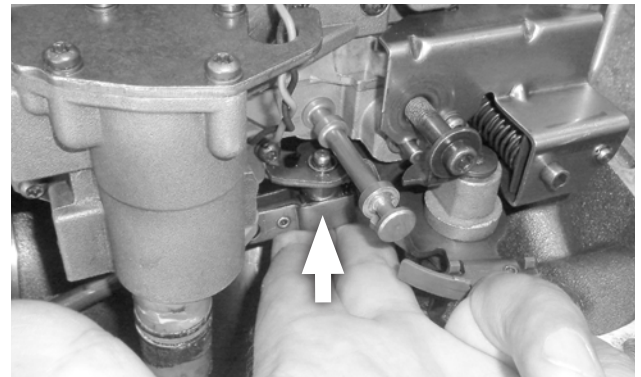


78. Insert the park rod through the case opening and past the park pawl. The pin at the front of the rod should be about even with the shoulder of the sun gear driving shell.

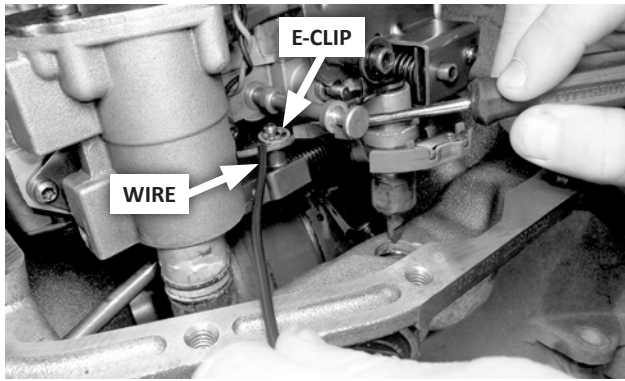
CAUTION: Case edges can be sharp! Wear protective gloves.



NOTE: If the transmission hasn't been rotated since removal of the valve body, the park rod should easily slip past the park pawl. If it doesn't, rotate the drive shell counter-clockwise (viewed from the front) while pushing the park rod against the pawl, until the rod is fully inserted.

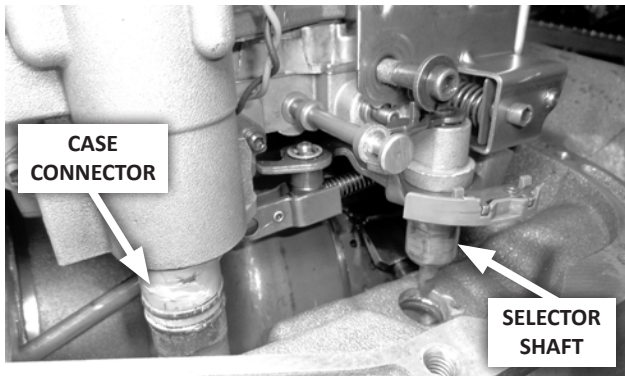


79. Lubricate the selector shaft, case connector o-rings (if applicable), and their case bores with assembly grease or transmission fluid. Move the selector lever to LOW (fully clockwise) so it will reach the park rod. Move the valve body close to the transmission, then insert the park rod pin into the selector lever hole. **Do not insert the selector shaft or case connector into their bores yet.**



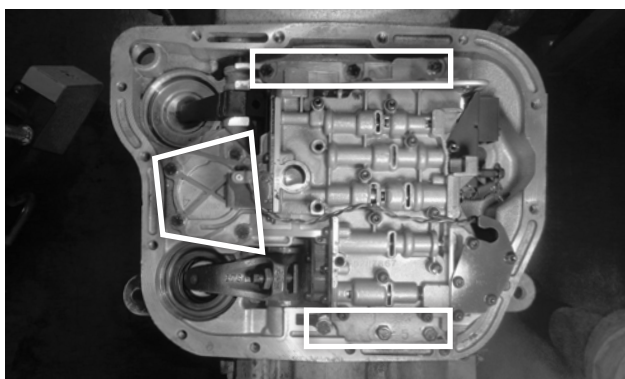
80. Secure the park rod pin to the selector lever with the e-clip.

CAUTION: Avoid dropping the e-clip into the transmission! Attach it to the end of a piece of stranded wire with a loop formed from a single strand. Use the wire to hold the e-clip in place until you push it onto the pin, then twist the wire to release the loop.

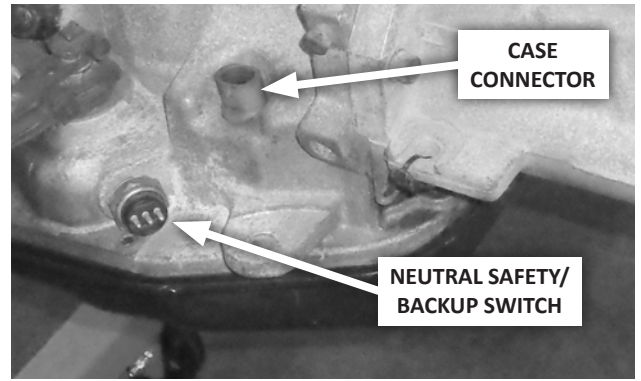


81. Carefully work the valve body the rest of the way into the transmission, paying special attention to selector shaft and case connector (if applicable) and their bores.

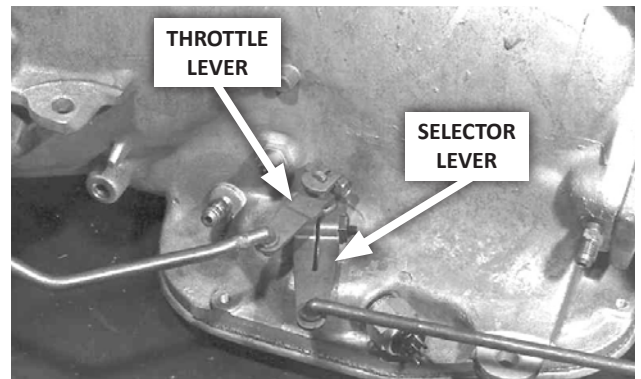
CAUTION: Prevent valve body damage! It must sit flat against the case with no interference! Anything that prevents the valve body from making even contact with the case must be corrected.



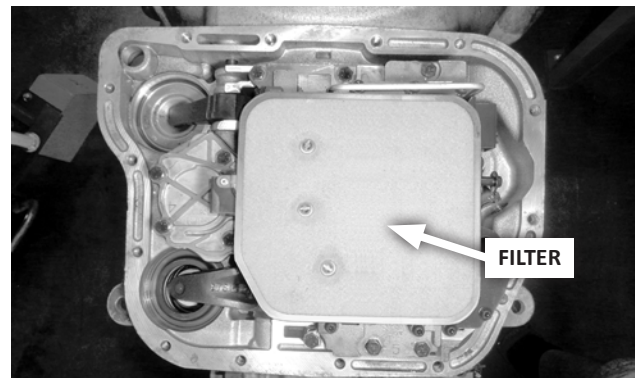
82. Secure the valve body to the transmission (10 screws). First run the screws in finger-tight, and verify the valve body sits flat against the case. Then tighten the screws in an alternating pattern to 100 in-lbs.



83. Install neutral safety/backup switch and tighten to 25 ft-lbs. Connect harness plug(s) to neutral safety/backup switch and case connector (if applicable).



84. Connect the shift linkage and throttle linkage to the transmission (reverse of Steps 3 & 4).



85. Install the new B&M filter [5] (3 screws). Tighten the screws to 25 in-lbs.

86. Install the oil pan and new gasket [1] or [2] with 14 pan screws. Tighten screws in an alternating pattern to 150 in-lbs.

CAUTION: Prevent oil pan leaks! Do not over-tighten the pan screws.

87. Throttle Pressure Adjustment: Verify the carburetor is off the fast idle cam so that throttle is in the normal idle (hot idle) position. Have a helper push the throttle lever on the transmission all the way forward. Adjust the throttle pressure rod so there is no back lash between the operating stud on the carburetor and the back of the slot on the throttle pressure linkage.

CAUTION: All vehicles must have throttle pressure linkage regardless of intended use! Running the transmission without the throttle pressure linkage will damage it.

SERVICE TRANSMISSION WITH FLUID

CAUTION: Do not overfill! This will cause foaming and overheating.

1. With the vehicle sitting on level ground, add 5 quarts of transmission fluid.
2. Start the engine, and run the shifter slowly through the entire gear range and back. With the engine still running and the shifter in NEUTRAL, check the fluid level.
3. Each time you add fluid, run the shifter slowly through the entire gear range, then recheck the fluid level in NEUTRAL.
4. Add fluid as needed to bring the level to the COLD LOW mark on the dipstick.
5. Take the vehicle for a short drive (5-10 mins.) to bring it up to operating temperature.
6. Stop the vehicle on level ground, and run the shifter slowly through the entire gear range.
7. Fluid level should be between the HOT LOW and HOT FULL marks with the transmission at operating temperature, the vehicle on level ground, and the shifter in NEUTRAL.
8. If not, gradually add fluid, run the shifter through its range, and recheck until the fluid level is between the HOT LOW and HOT FULL marks.

Minor adjustments in shift points can be made once filling is complete. Shortening the throttle pressure rod will lower the shift points; lengthening the rod will raise them.

TROUBLESHOOTING GUIDE

1. Slipping (general)

- Low fluid level (starvation).
 - Valve body screws loose.
 - Servo piston lip seals cut.
 - Check balls improperly installed.
 - Throttle pressure linkage disconnected or improperly adjusted.
-

2. 1-2 shift slipping

- Check #1 items first.
 - Front (kickdown) servo seal rings damaged.
 - Front servo bore damaged.
 - Front band assembly strut bent.
-

3. No drive in "D" range

- Low fluid level (starvation).
 - Shifter misadjusted.
 - Manual valve disengaged from manual lever on valve body.
-

4. No upshift (general)

- Throttle pressure linkage adjusted too high.
 - 1-2 and/or 2-3 shift valves burred, sticking, or improperly assembled.
 - Loose valve body screws.
 - 1/4" steel ball installed behind 1-2 shift valve instead of 1-2 shift control valve.
-

5. No 1-2 upshift

- Check #4 items first.
 - Front (kickdown) servo damaged.
 - Front band linkage disengaged or broken.
-

6. No 3-2 downshift (no engine braking)

- Check #5 items first.
 - Check balls improperly installed in valve body.
-

7. No 2-1 downshift (no engine braking)

- Rear (low reverse) servo seal damaged or missing.
 - Rear band broken, misadjusted, or not engaged in apply lever.
 - Valve body assembled improperly.
-

8. No reverse

- Check #7 items first.
 - Shifter misadjusted.
-

9. Late / hard shifts

- Throttle pressure linkage misadjusted.
 - Kickdown valve stuck.
 - Kickdown detent sleeve installed backwards.
 - Track modifications being driven on the street.
-

10. Early shifts

- Throttle pressure linkage misadjusted.
-

11. Erratic shifting

- Low fluid level (starvation).
 - High fluid level (foaming).
 - Throttle pressure link sloppy, loose or misadjusted.
 - Shifter misadjusted.
 - Valve body screws or end plates loose.
-

12. Soft shifts under power

- Throttle pressure linkage adjusted too high.
 - Low fluid level (starvation).
 - High fluid level (foaming).
 - Pressure regulator valve stuck.
-

13. Engine revs on 2-3 shift

- Check band adjustment.
 - Remove cupped orifice plug.
-

14. Overheating, foaming oil at dipstick or bellhousing/breather

- High fluid level.
 - Clogged or blocked cooler.
 - Insufficient cooler capacity
-

15. No movement

- On 1978, reversed torque converter valve.
 - Restricted or plugged cooler lines.
-

16. Pump buzz or whine

- Low fluid level (starvation).
 - High fluid level (foaming).
 - Filter defective or restricted.
 - Oil pan crushing filter.
-

17. Leaks

- Clean transmission first and observe; check pan gasket and screw torque.
-

Congratulations, your B&M Transpak kit is now installed and ready to enjoy!

KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE

B&M Performance maintains a highly-trained technical service department to answer your technical questions, provide additional product information and offer various recommendations.

B&M TECHNICAL SUPPORT: (866) 464-6553

