



Technical Service Information

TOYOTA U240-E VALVE BODY REPAIR INFORMATION

The Toyota U240-E has numerous sleeves that are prone to wear. The information listed below will show how the sleeve wear can create premature Transmission failure if these sleeves are not replaced. There is also information showing valve and spring locations as well as checkballs and retainers.

Refer to Figure 1 for a cross-sectional view of the Primary Regulator Valve and a brief description of its operation and potential failures.

Refer to Figure 2 for a cross-sectional view of the Clutch Apply Control Valve and a brief description of its operation and the potential failures that may be caused by a worn sleeve.

Refer to Figures 3 and 4 for a cross-sectional view of the Lock-up Control Valve and a partial hydraulic schematic of its operation with the TCC Off and TCC On , and the potential failures that may be caused by a worn sleeve.

Refer to Figure 5 For the location of the Main Regulator Valve and Sleeve.

Refer to Figure 6 For the Lower Valve body retainer and Checkball locations

Refer to Figure 7 For the location of the Clutch Apply Control Valve and Sleeve, and the Lock-up Control Valve and Sleeve.

Refer to Figure 8 For the Upper Valve body retainer and Checkball locations

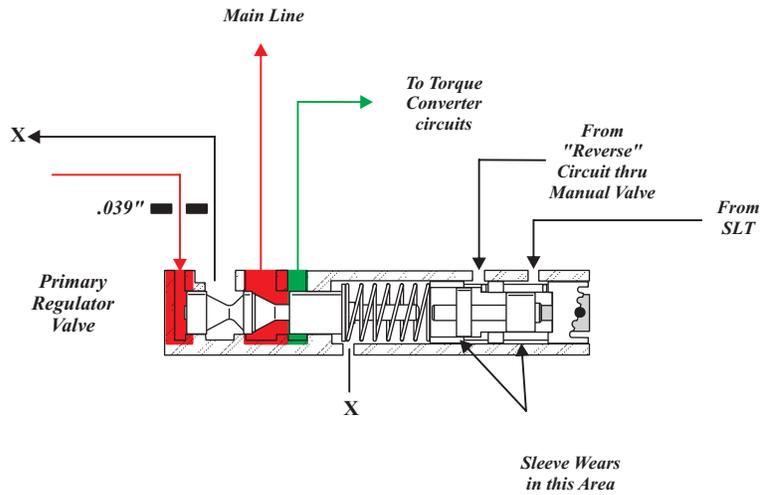
Refer to Figure 9 for the location of the B1 and C2 Accumulators. Check the pistons and the bores in the Upper Valve Body for wear, repair as necessary.

SERVICE INFORMATION:

MAIN REGULATOR BOOST SLEEVE RAV4 (Toyota part number).....	35417-28030
MAIN REGULATOR BOOST SLEEVE CAMRY (Toyota part number).....	35417-21010
CLUTCH APPLY CONTROL VALVE SLEEVE (Toyota part number).....	35492-21010
TORQUE CONVERTER CONTROL VALVE SLEEVE (Toyota part number).....	35211-21010

NOTE: VALVES AND SLEEVES ARE NOW AVAILABLE THRU SONNAX AS WELL AS O.E.

PRIMARY REGULATOR BOOST SLEEVE

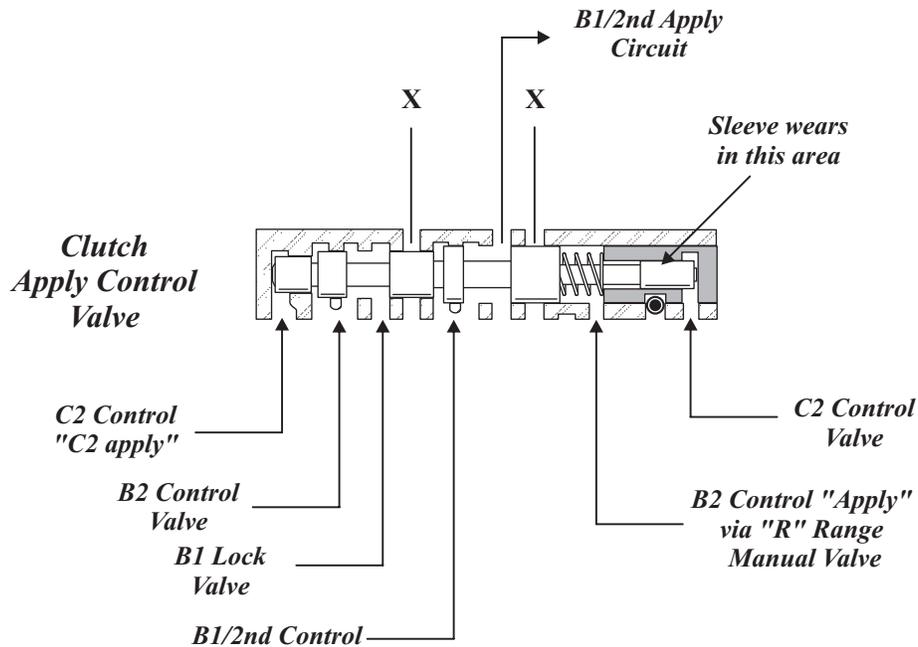


Wear in the Boost Sleeve may cause pressure loss in Reverse and or insufficient line pressure rise

Copyright © 2009 ATSG

Figure 1

CLUTCH APPLY CONTROL VALVE SLEEVE

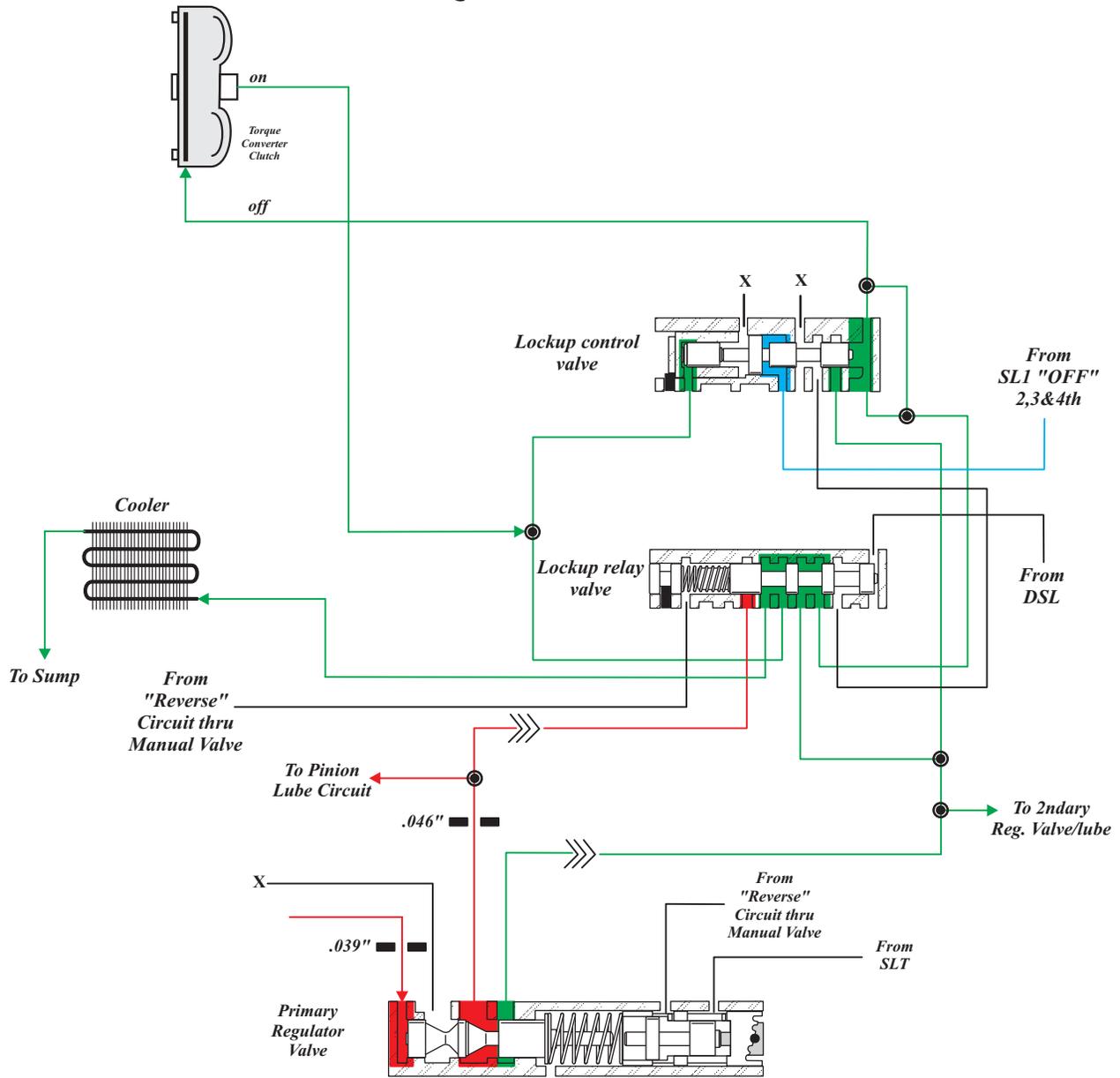


Wear in the Clutch Apply Control Valve Sleeve may cause problems with the sequencing of Clutch apply and Clutch release, which may lead to a flared or bind on a up or downshift.

Copyright © 2009 ATSG

Figure 2

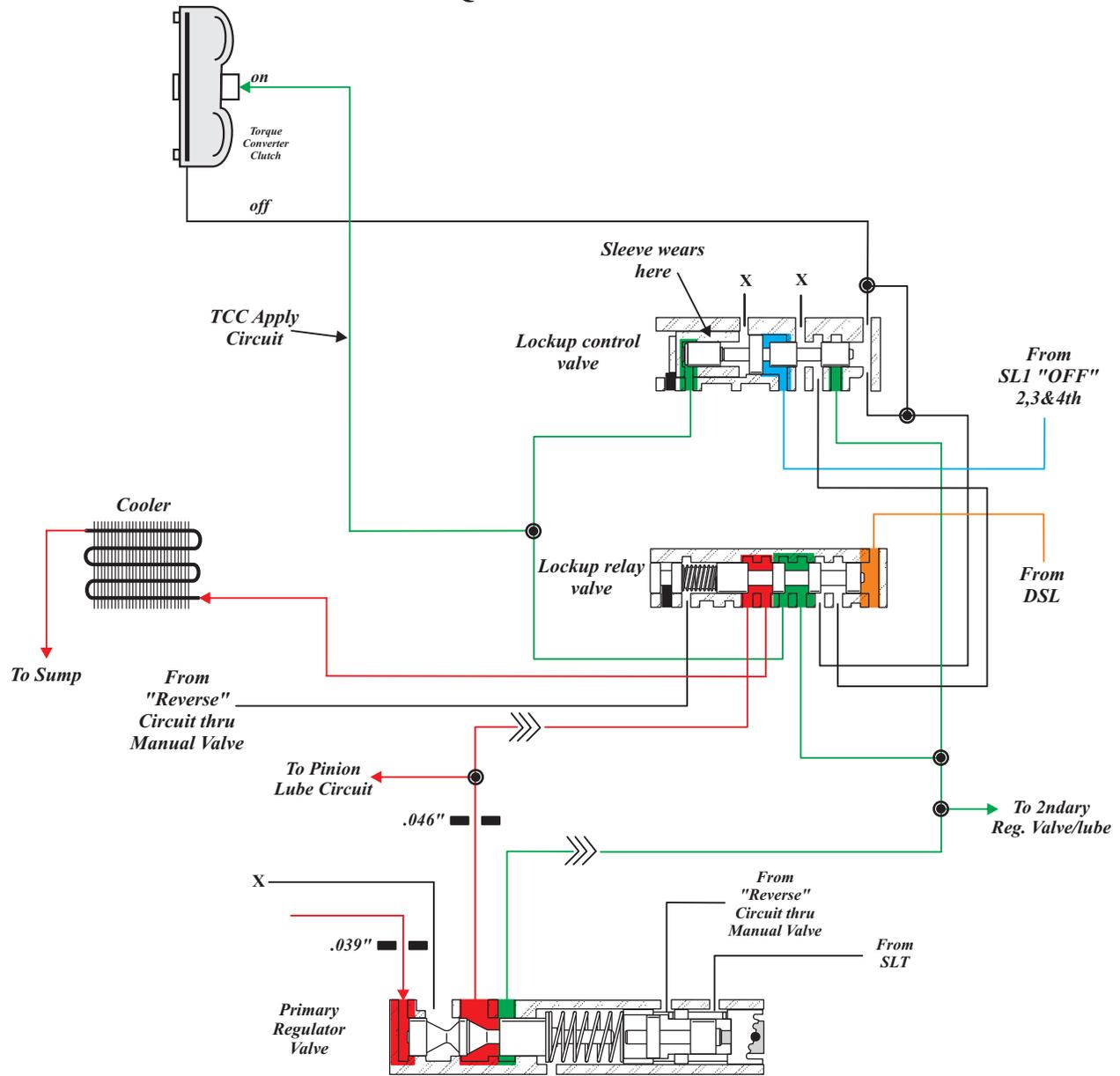
TORQUE CONVERTER OFF



Summary: When the Torque Converter is OFF, the Lockup relay valve is to the right and Torque Converter Off pressure feeds the cooler circuit.

Figure 3

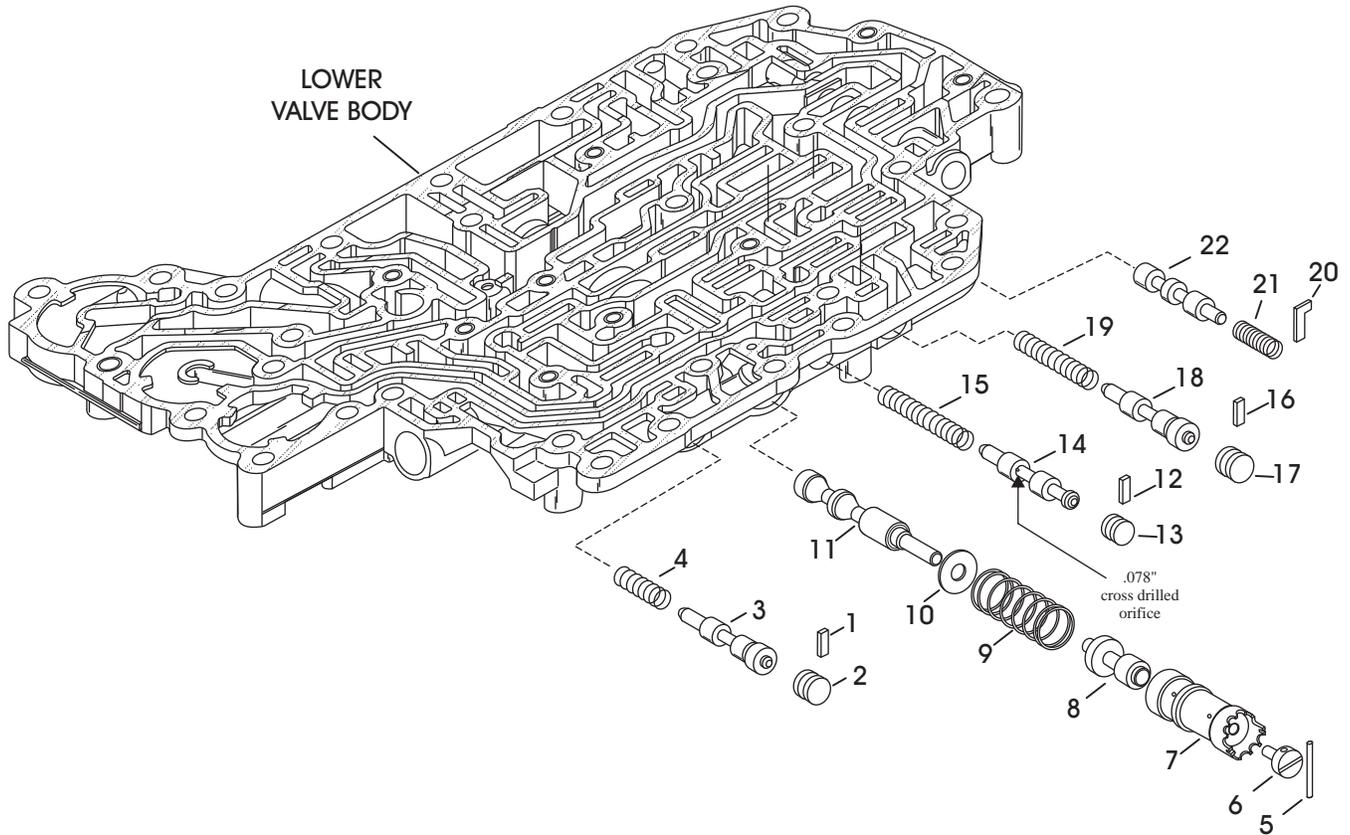
TORQUE CONVERTER ON



Summary: When the Torque Converter is ON, the Lockup relay valve is stroked to the left and orificed line pressure is fed to the cooler circuit. Note: when the Lockup control valve sleeve wears, the TCC Apply circuit can leak past the valve and sleeve, to an exhaust, and cause a pressure loss in the TCC Apply Circuit.

Figure 4

LOWER VALVE BODY



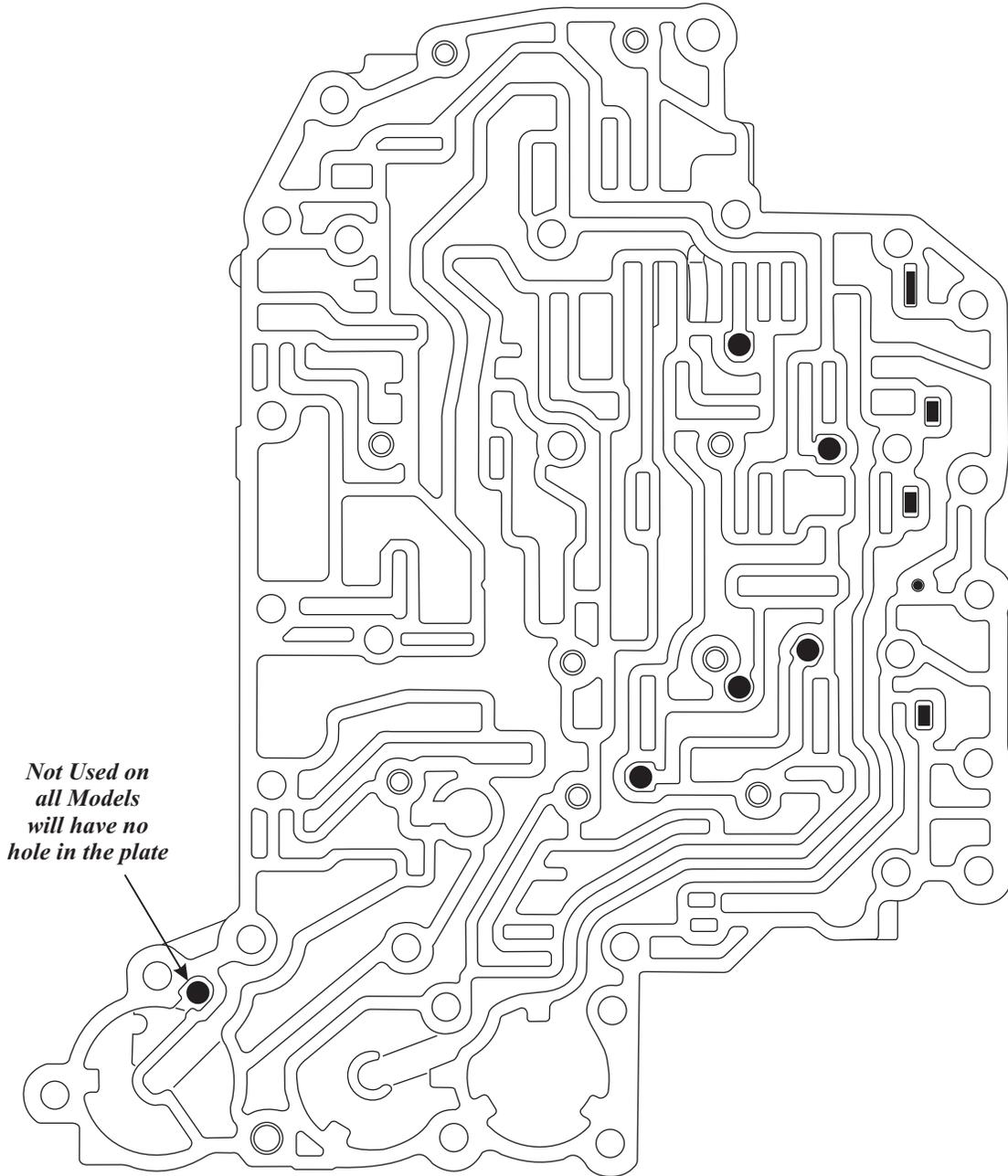
LOWER VALVEBODY LEGEND

- | | |
|--------------------------------------|---------------------------------|
| 1. C2 Control Valve retainer | 12. B-2 Control Valve retainer |
| 2. C2 Control Valve bore plug | 13. B-2 Control Valve bore plug |
| 3. C2 Control Valve | 14. B-2 Control Valve |
| 4. C2 Control Valve spring | 15. B-2 Control Valve Spring |
| 5. Main Regulator Valve retainer | 16. B-1 Control Valve retainer |
| 6. Main Regulator Valve Plug | 17. B-1 Control Valve bore plug |
| 7. Main Regulator Valve Boost Sleeve | 18. B-1 Control Valve |
| 8. Main Regulator Valve Boost Valve | 19. B-1 Control Valve spring |
| 9. Main Regulator Valve Spring | 20. 3-4 Shift Valve retainer |
| 10. Main Regulator Valve Spring Seat | 21. 3-4 Shift Valve spring |
| 11. Main Regulator Valve | 22. 3-4 Shift Valve |

Copyright © 2009 ATSG

Figure 5

**LOWER VALVE BODY RETAINER
AND CHECKBALL LOCATIONS**



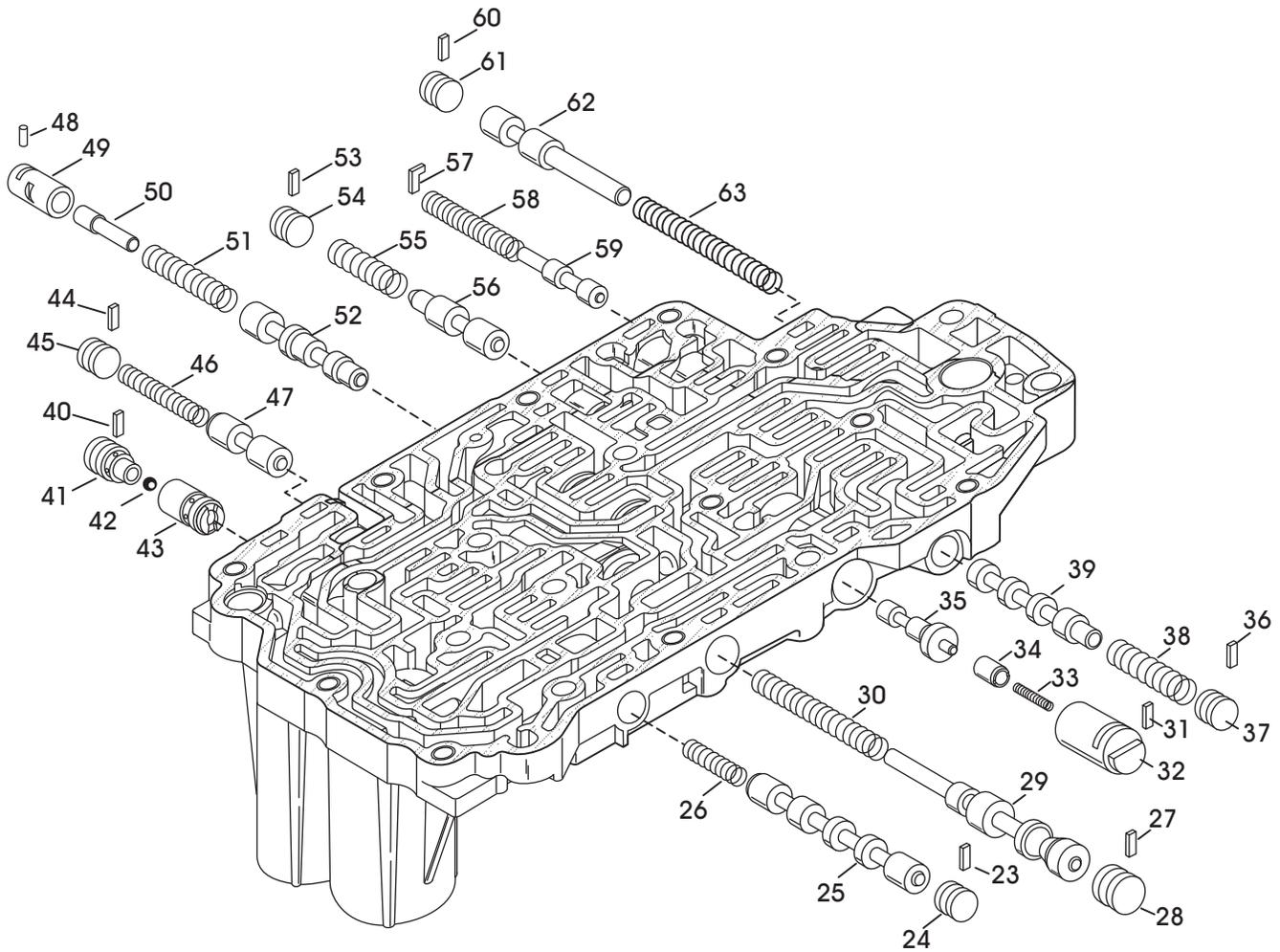
*Not Used on
all Models
will have no
hole in the plate*

Note: All Checkballs are 5.5 mm / .217"

Copyright © 2009 ATSG

Figure 6

UPPER VALVE BODY



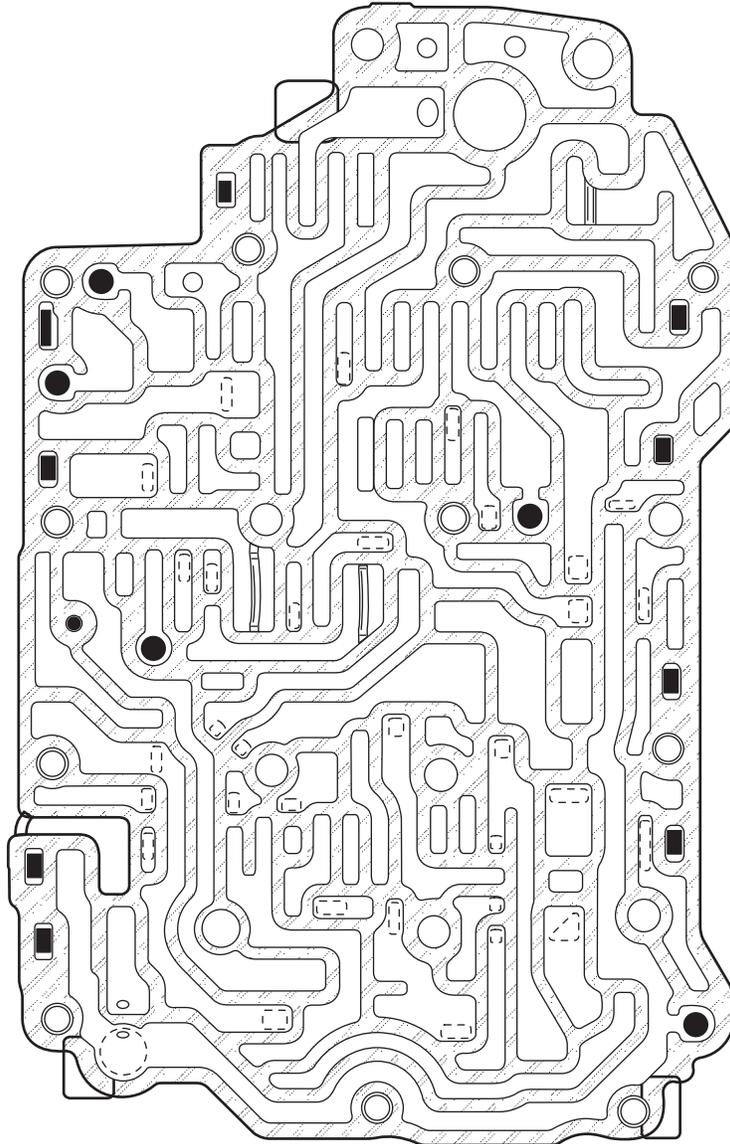
UPPER VALVEBODY LEGEND

- | | |
|---|---|
| 23. C2 Lock Valve retainer | 44. C2 Exhaust Valve retainer |
| 24. C2 Lock Valve bore plug | 45. C2 Exhaust Valve bore plug |
| 25. C2 Lock Valve | 46. C2 Exhaust Valve Spring |
| 26. C2 Lock Valve Spring | 47. C2 Exhaust Valve |
| 27. Secondary Regulator Valve retainer | 48. Clutch Apply Control Valve retainer |
| 28. Secondary Regulator Valve bore plug | 49. Clutch Apply Control Valve Sleeve |
| 29. Secondary Regulator Valve | 50. Clutch Apply Control Valve plunger |
| 30. Secondary Spring | 51. Clutch Apply Control Valve Spring |
| 31. Lock-up Control Valve retainer | 52. Clutch Apply Control Valve |
| 32. Lock-up Control Valve Sleeve | 53. B-1 Lock Valve retainer |
| 33. Lock-up Control Valve Spring | 54. B-1 Lock Valve bore plug |
| 34. Lock-up Control Valve Plunger | 55. B-1 Lock Valve Spring |
| 35. Lock-up Control Valve | 56. B-1 Lock Valve |
| 36. Lock-up Relay Valve retainer | 57. B-3 Orifice Control Valve retainer |
| 37. Lock-up Relay Valve bore plug | 58. B-3 Orifice Control Valve Spring |
| 38. Lock-up Relay Valve Spring | 59. B-3 Orifice Control Valve |
| 39. Lock-up Relay Valve | 60. Solenoid Modulator Valve retainer |
| 40. 3 Way Check Valve | 61. Solenoid Modulator Valve bore plug |
| 41. 3 Way Check Valve outer ball seat | 62. Solenoid Modulator Valve |
| 42. 3 Way Check Valve .250" steel ball | 63. Solenoid Modulator Spring |
| 43. 3 Way Check Valve inner ball seat | |

Copyright © 2009 ATSG

Figure 7

**UPPER VALVE BODY
RETAINER AND CHECKBALL LOCATION**

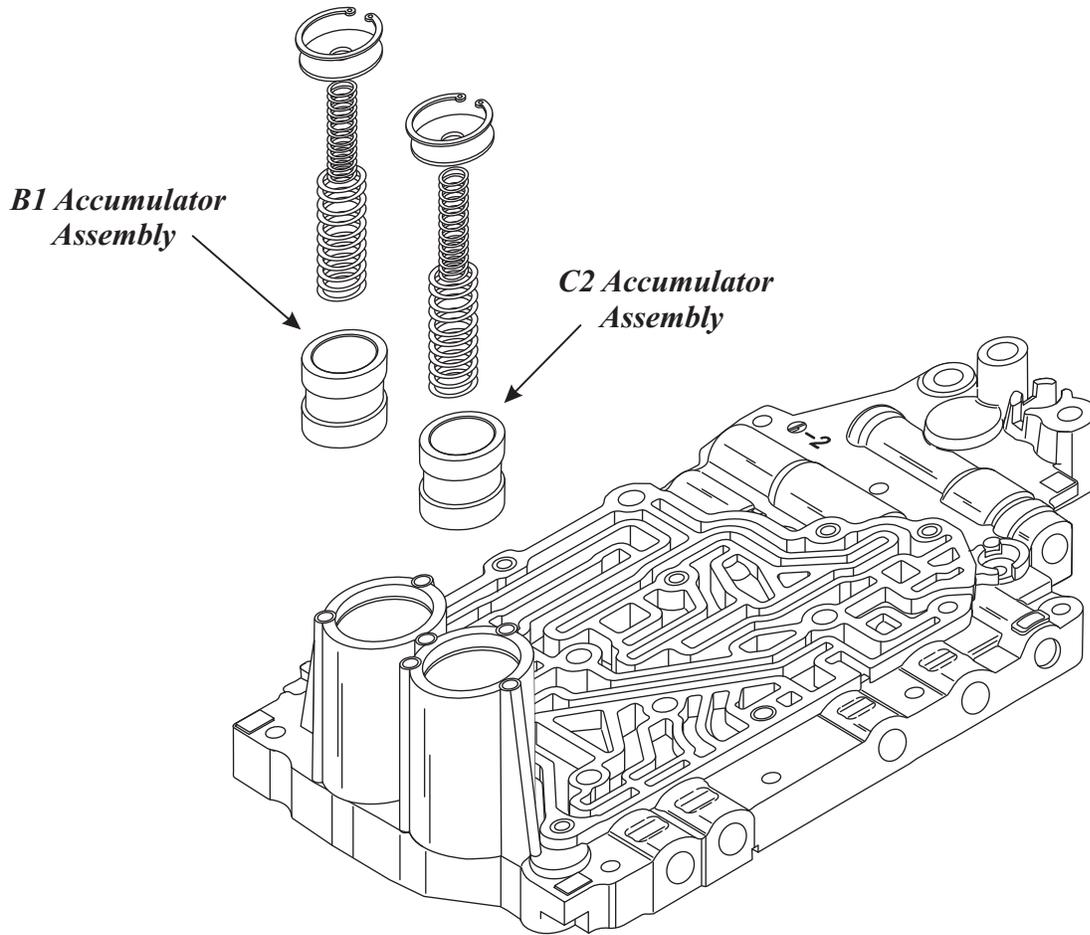


Note: All Checkballs are 5.5 mm / .217"

Copyright © 2009 ATSG

Figure 8

UPPER VALVE BODY ACCUMULATOR PISTONS



NOTE: Inspect the Accumulator Pistons and bores in the Upper Valve Body for wear, replace as necessary.

Copyright © 2009 ATSG

Figure 9