



# 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 it's operation and potential failures.*

*Refer to Figure 2 for a cross-sectional view of the Clutch Apply Control Valve and a brief description of it's 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 it's 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*

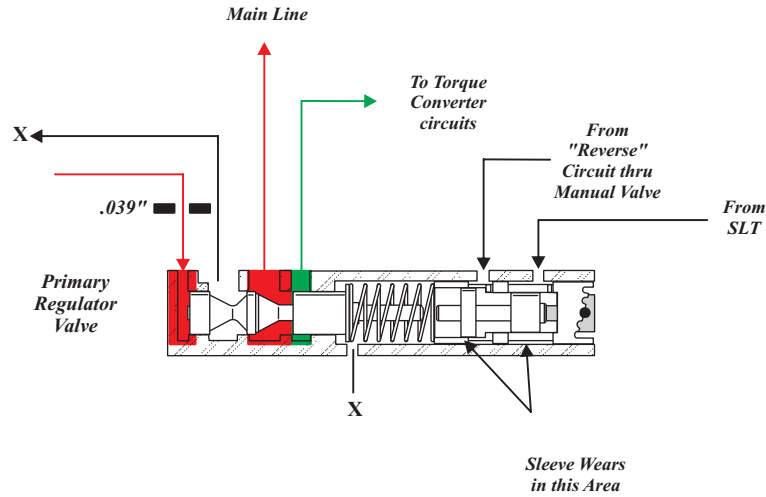
*Refer to Figure 9 for the location of the B1 and C2 Accumulators. Check the pistons and the bores in the Upper Valve Body for wear, repair as necessary.*

### 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

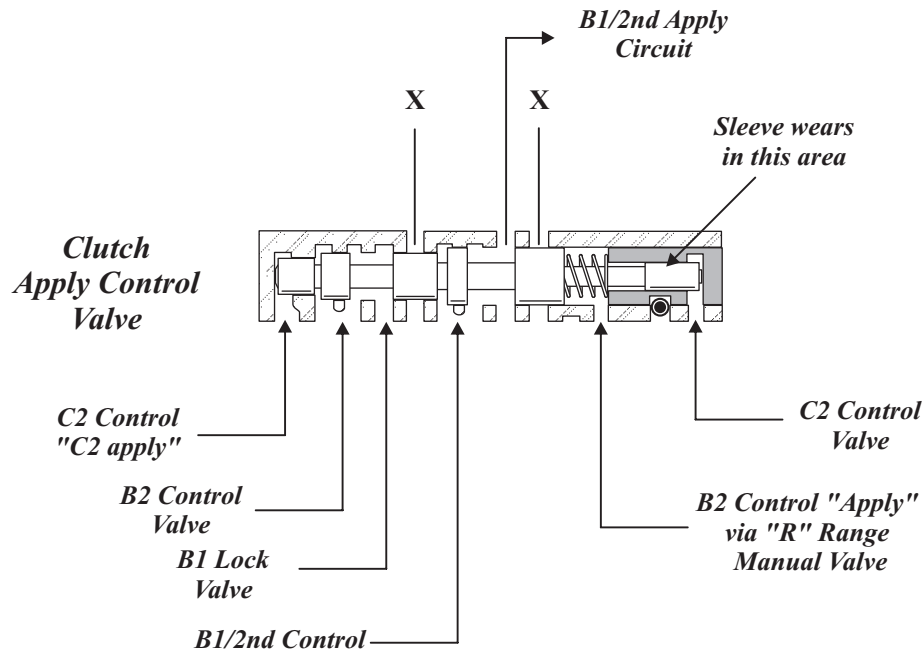


*Wear in the Boost Sleeve may cause pressure loss in Reverse and or insufficient line pressure rise*

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Figure 1

## CLUTCH APPLY CONTROL VALVE SLEEVE

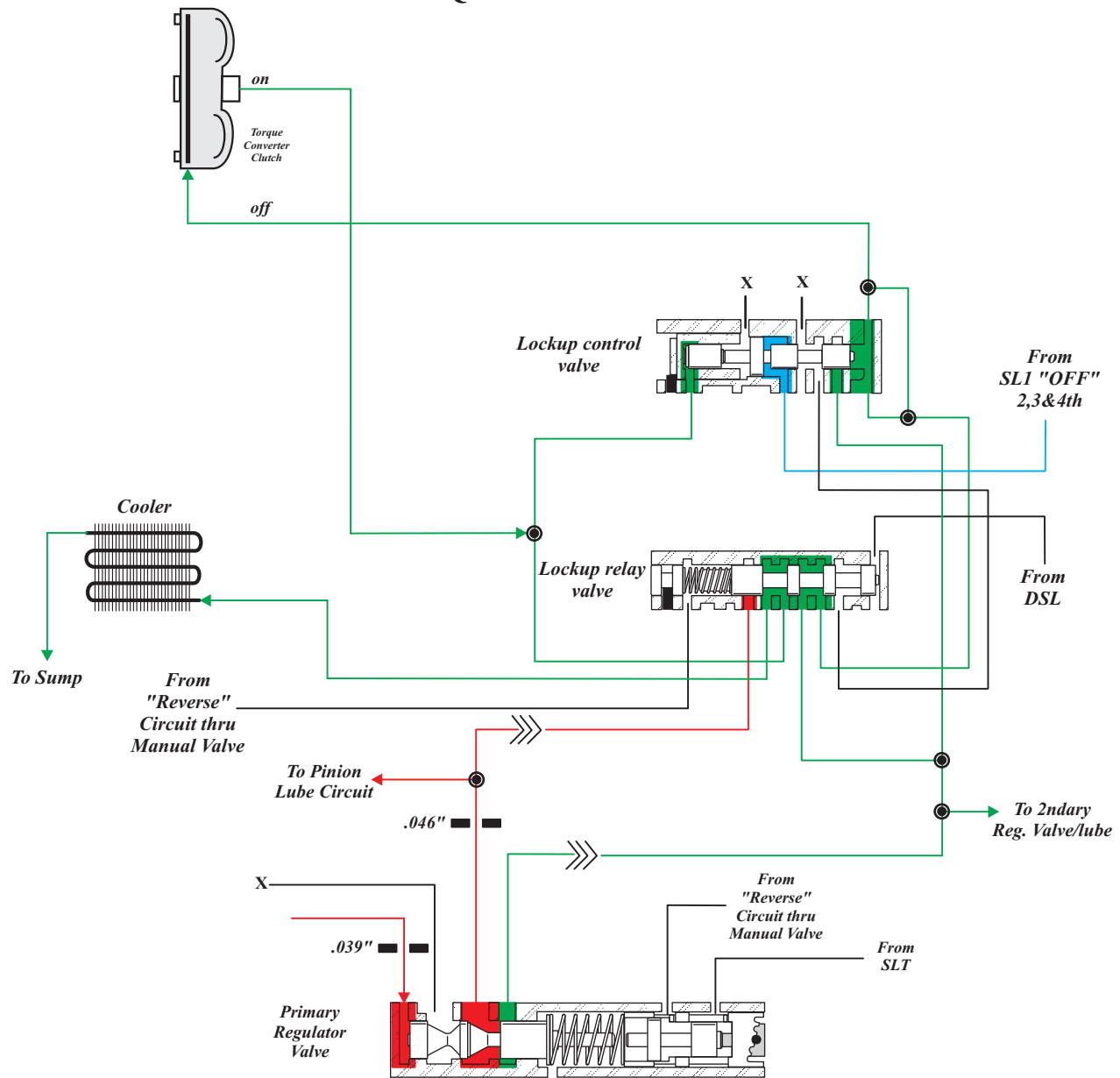


*Wear in the Clutch Apply Control Valve Sleeve may cause problems with the sequencing of Clutch apply and Clutch release, which may lead to a flared or bind on a up or downshift.*

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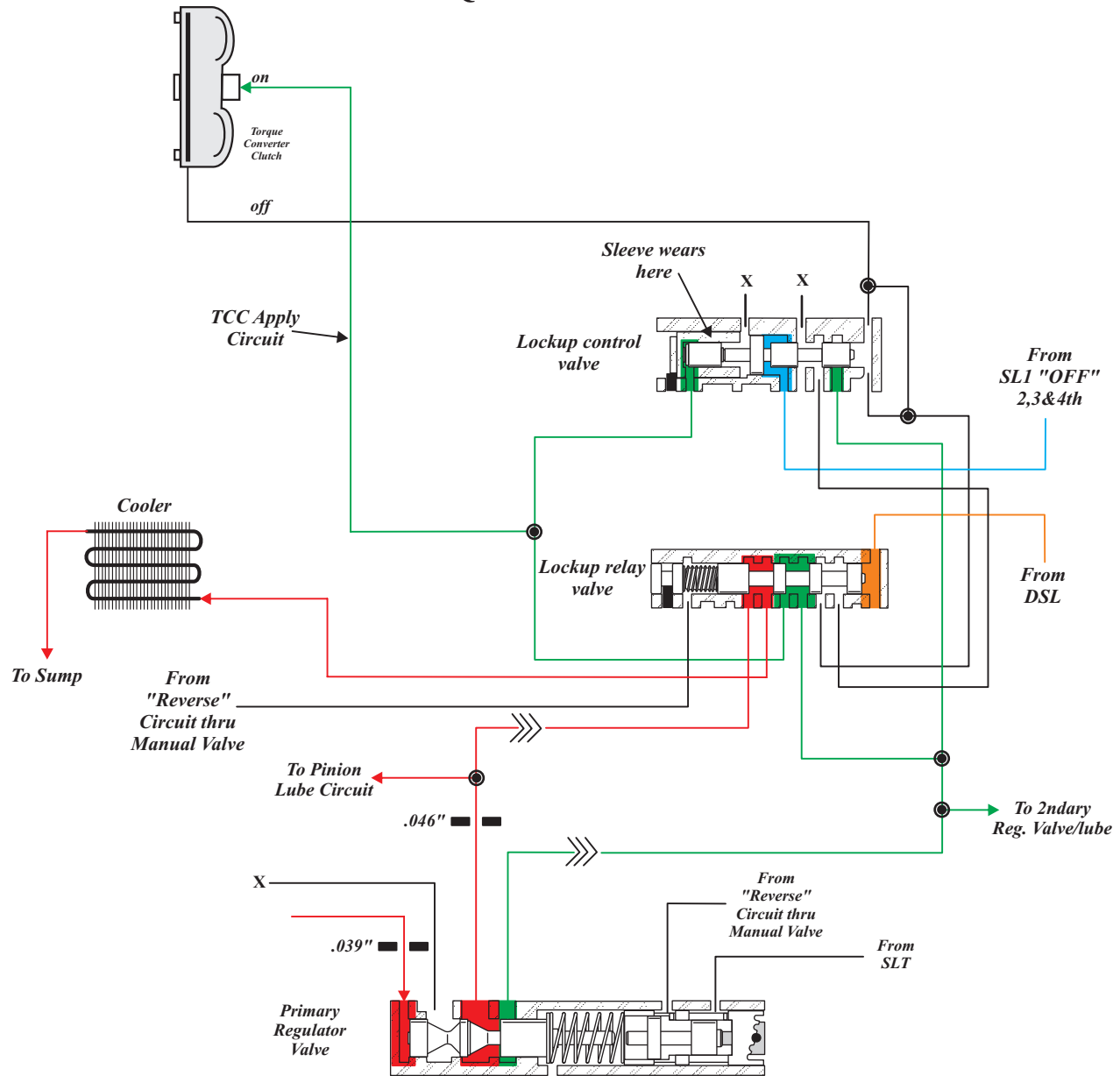
Figure 2

## 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.

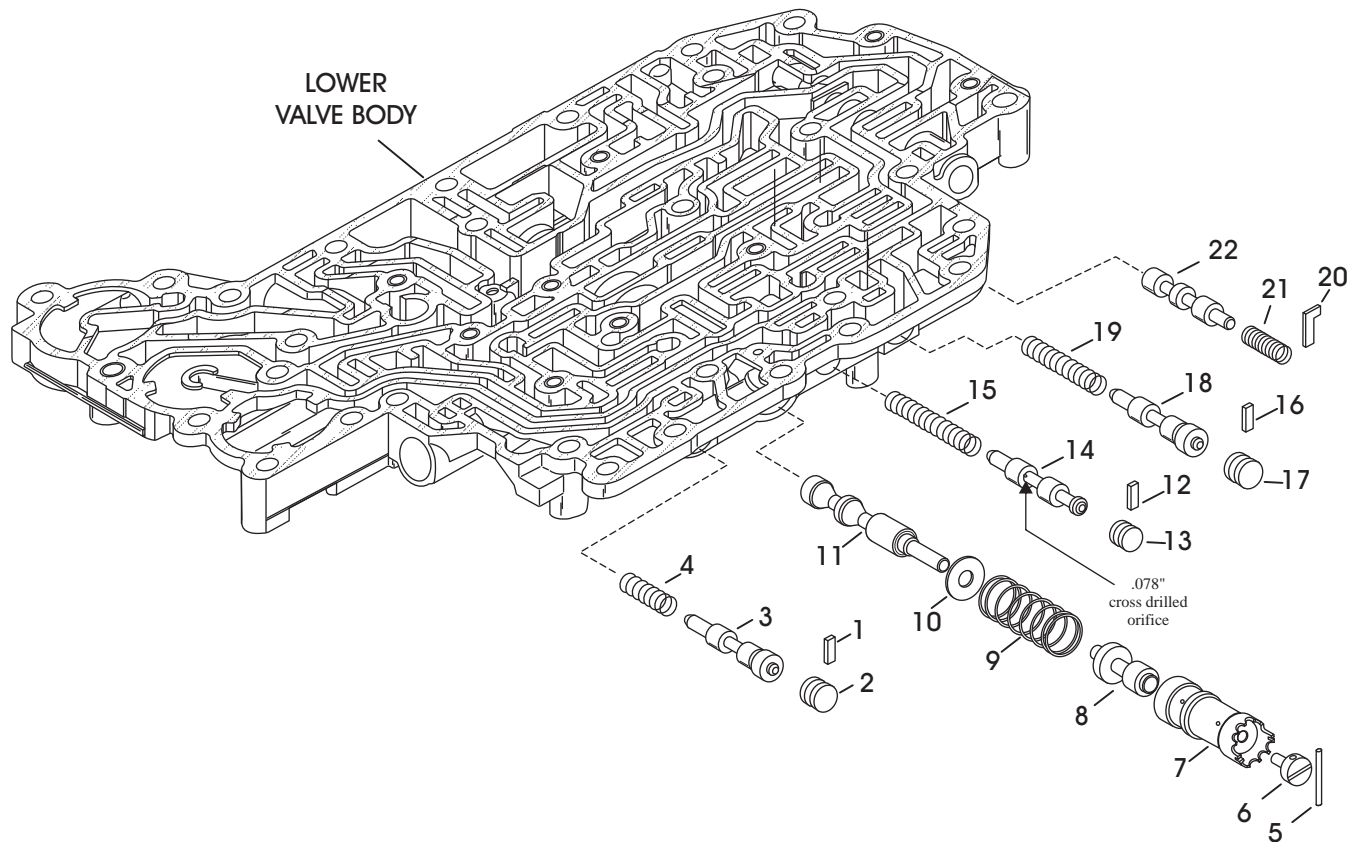
## TORQUE CONVERTER ON



**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



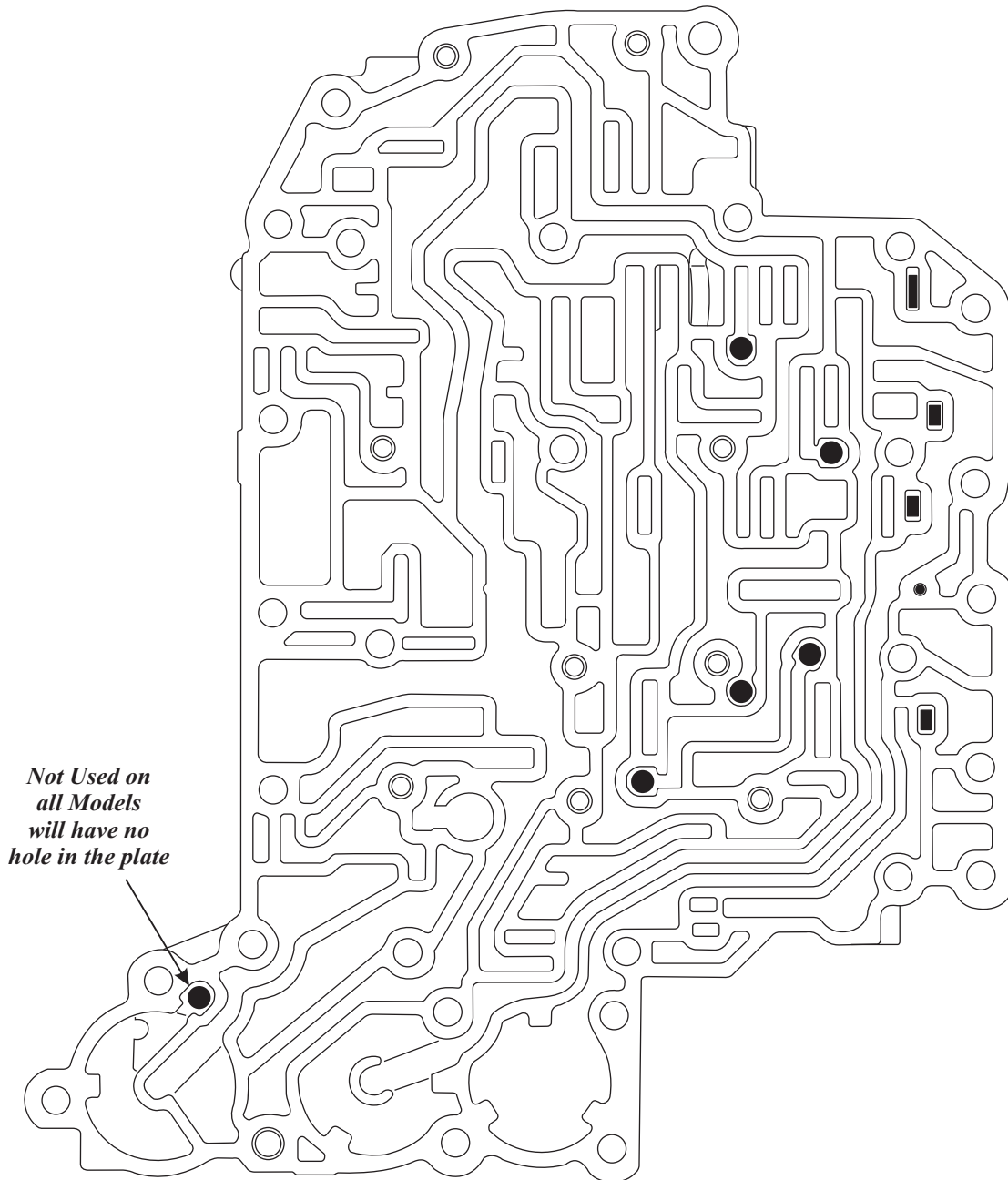
### LOWER VALVEBODY LEGEND

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| 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             |

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Figure 5

## LOWER VALVE BODY RETAINER AND CHECKBALL LOCATIONS

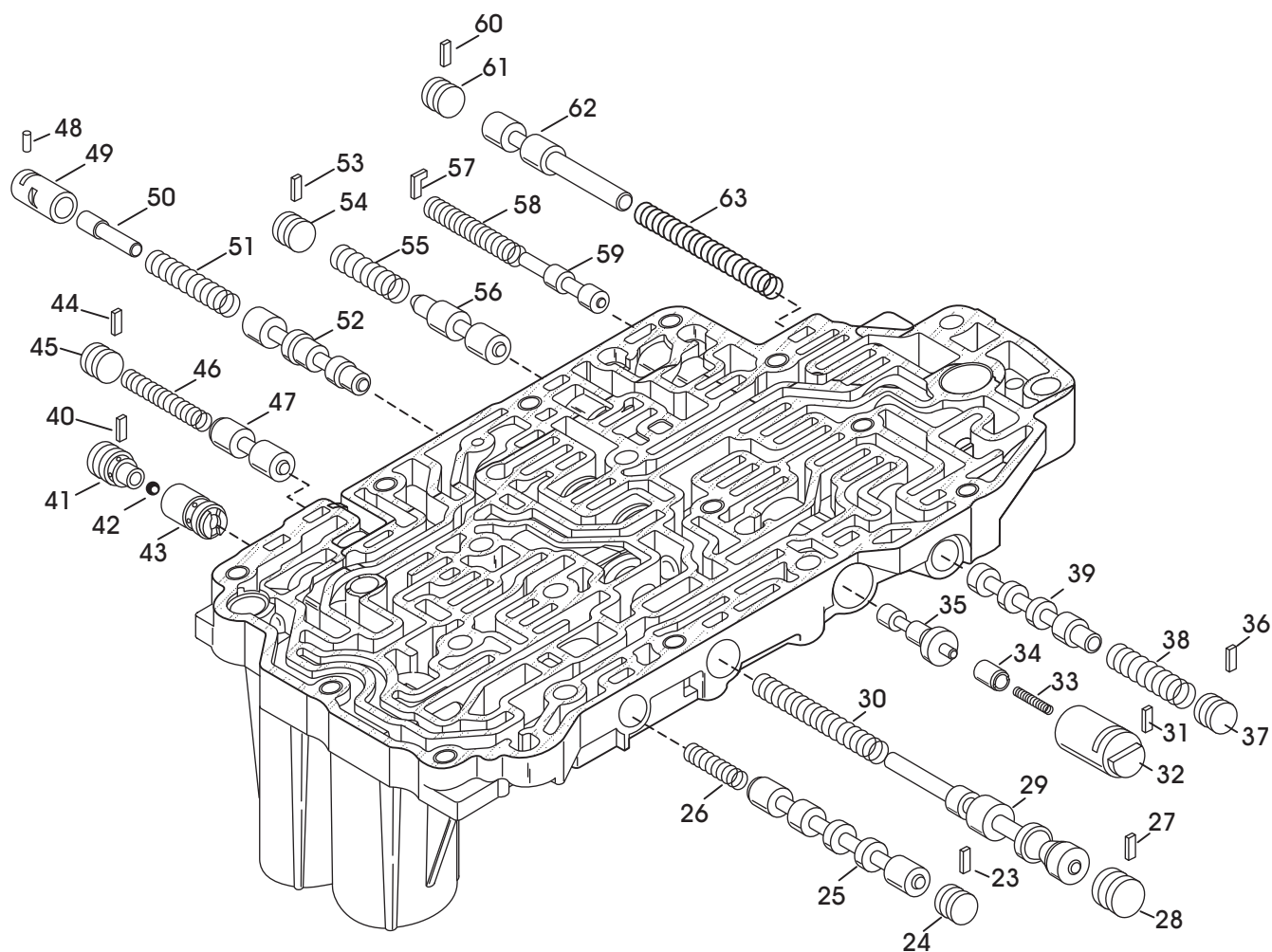


**Note: All Checkballs are 5.5 mm / .217"**

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Figure 6

## UPPER VALVE BODY



## UPPER VALVEBODY LEGEND

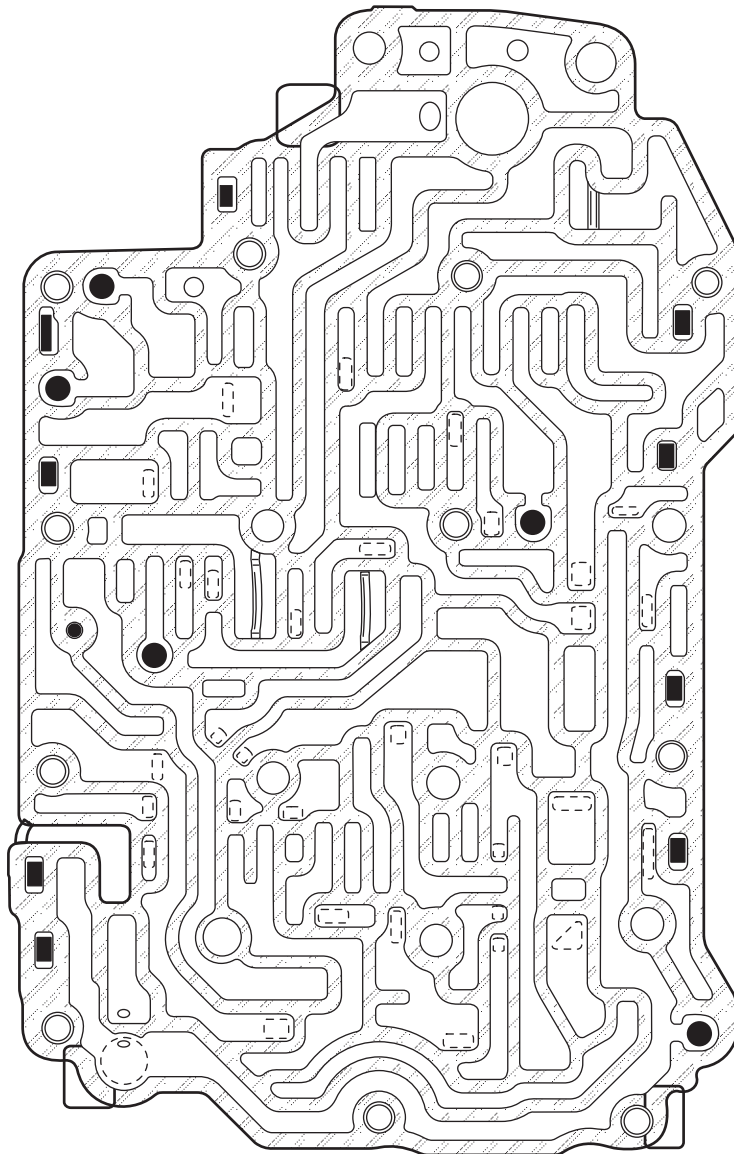
- 23. C2 Lock Valve retainer
- 24. C2 Lock Valve bore plug
- 25. C2 Lock Valve
- 26. C2 Lock Valve Spring
- 27. Secondary Regulator Valve retainer
- 28. Secondary Regulator Valve bore plug
- 29. Secondary Regulator Valve
- 30. Secondary Spring
- 31. Lock-up Control Valve retainer
- 32. Lock-up Control Valve Sleeve
- 33. Lock-up Control Valve Spring
- 34. Lock-up Control Valve Plunger
- 35. Lock-up Control Valve
- 36. Lock-up Relay Valve retainer
- 37. Lock-up Relay Valve bore plug
- 38. Lock-up Relay Valve Spring
- 39. Lock-up Relay Valve
- 40. 3 Way Check Valve
- 41. 3 Way Check Valve outer ball seat
- 42. 3 Way Check Valve .250" steel ball
- 43. 3 Way Check Valve inner ball seat

- 44. C2 Exhaust Valve retainer
- 45. C2 Exhaust Valve bore plug
- 46. C2 Exhaust Valve Spring
- 47. C2 Exhaust Valve
- 48. Clutch Apply Control Valve retainer
- 49. Clutch Apply Control Valve Sleeve
- 50. Clutch Apply Control Valve plunger
- 51. Clutch Apply Control Valve Spring
- 52. Clutch Apply Control Valve
- 53. B-1 Lock Valve retainer
- 54. B-1 Lock Valve bore plug
- 55. B-1 Lock Valve Spring
- 56. B-1 Lock Valve
- 57. B-3 Orifice Control Valve retainer
- 58. B-3 Orifice Control Valve Spring
- 59. B-3 Orifice Control Valve
- 60. Solenoid Modulator Valve retainer
- 61. Solenoid Modulator Valve bore plug
- 62. Solenoid Modulator Valve
- 63. Solenoid Modulator Spring

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Figure 7

## UPPER VALVE BODY RETAINER AND CHECKBALL LOCATION



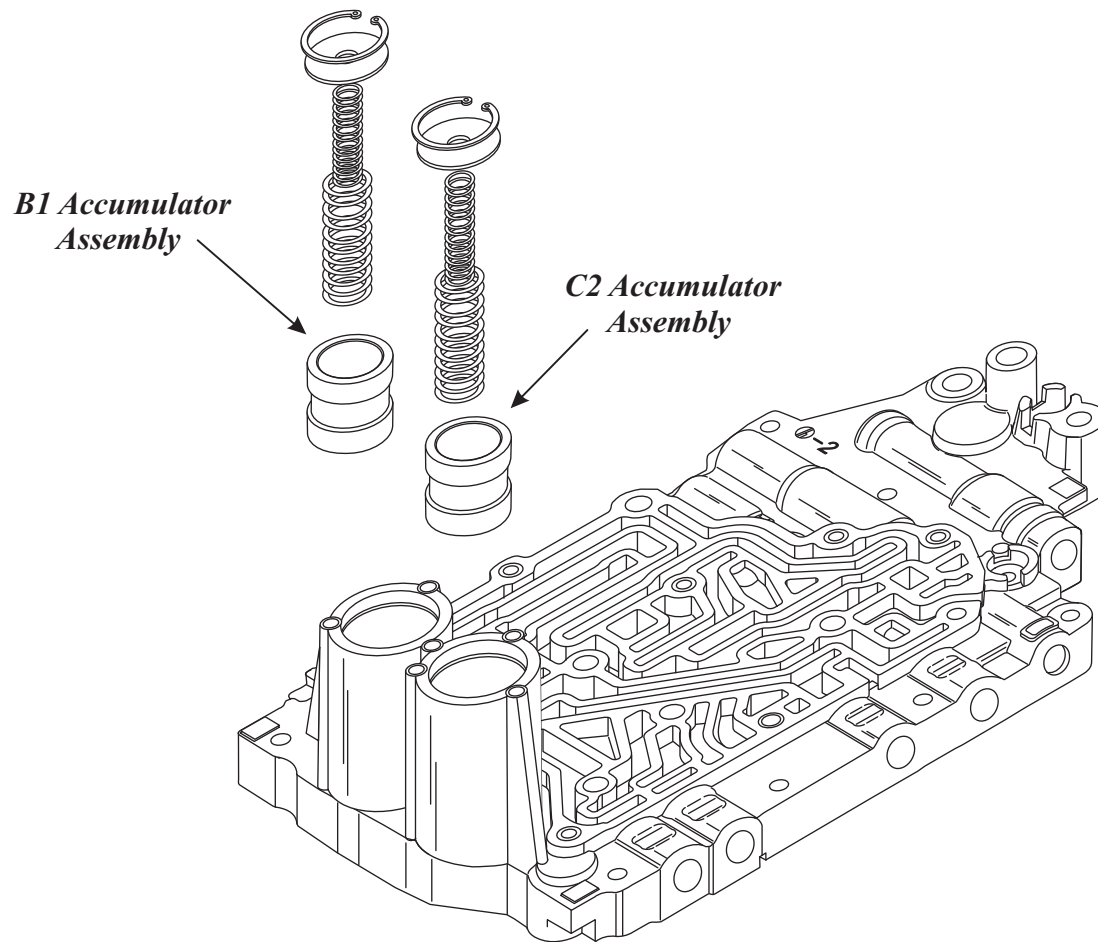
*Note: All Checkballs are 5.5 mm / .217"*

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Figure 8



### UPPER VALVE BODY ACCUMULATOR PISTONS



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

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Figure 9