



Technical Bulletin #1841

Transmission: 6R140/Torqshift 6

Subject: Valve Body Breakdown/Check Ball Location/
Solenoid ID

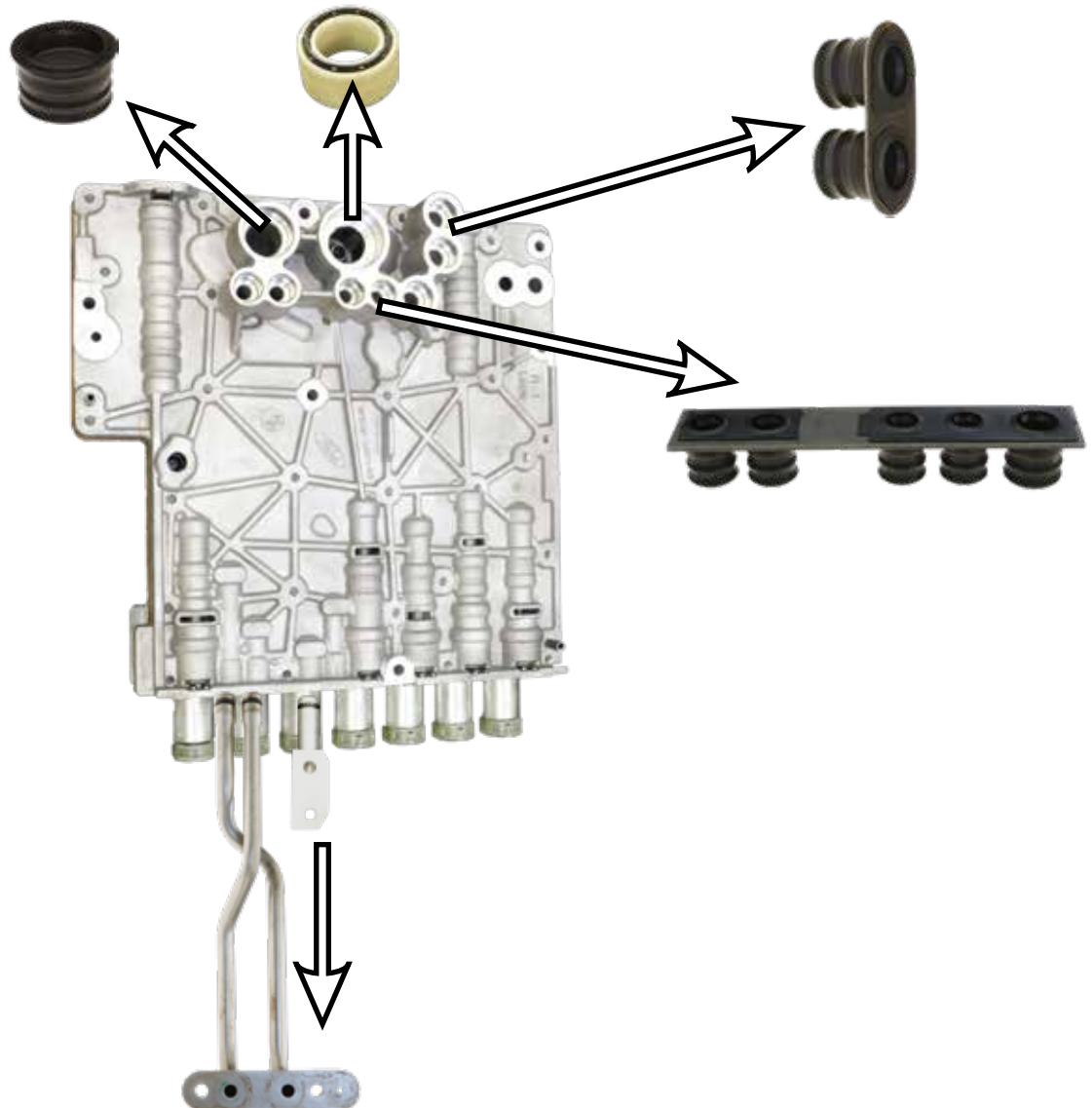
Application: Ford

Issue Date: February, 2018

6R140/Torqshift 6 Valve Body Breakdown

Refer to the illustrations to identify the valve, damper and check ball locations for valvebody service.

1. Remove four (4) case to valve body seals
2. Remove the lube tubes and the 2-6 clutch feed pipe.



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- Use a scribe or electric engraver to mark the solenoids. This will ensure the proper placement after removal.



Solenoid Description	
1	Shift Solenoid E (SSE) Overdrive Clutch (4,5,6) Clutch, Normally Open
2	Shift Solenoid C (SSC) Intermediate (2,6) Clutch, Normally Closed
3	Shift Solenoid A (SSA) Forward (1,2,3,4) Clutch, Normally Closed
4	Shift Solenoid B (SSB) Direct (3,5,R) Clutch, Normally Open
5	Torque Converter Clutch (TCC) Solenoid, Normally Closed
6	Line Pressure Control (LPC) Solenoid, Normally Open
7	Shift Solenoid D (SSD) Low/Reverse (L,R) Clutch, Normally Closed

- Remove seven (7) #30 torx bolts and remove the solenoids.

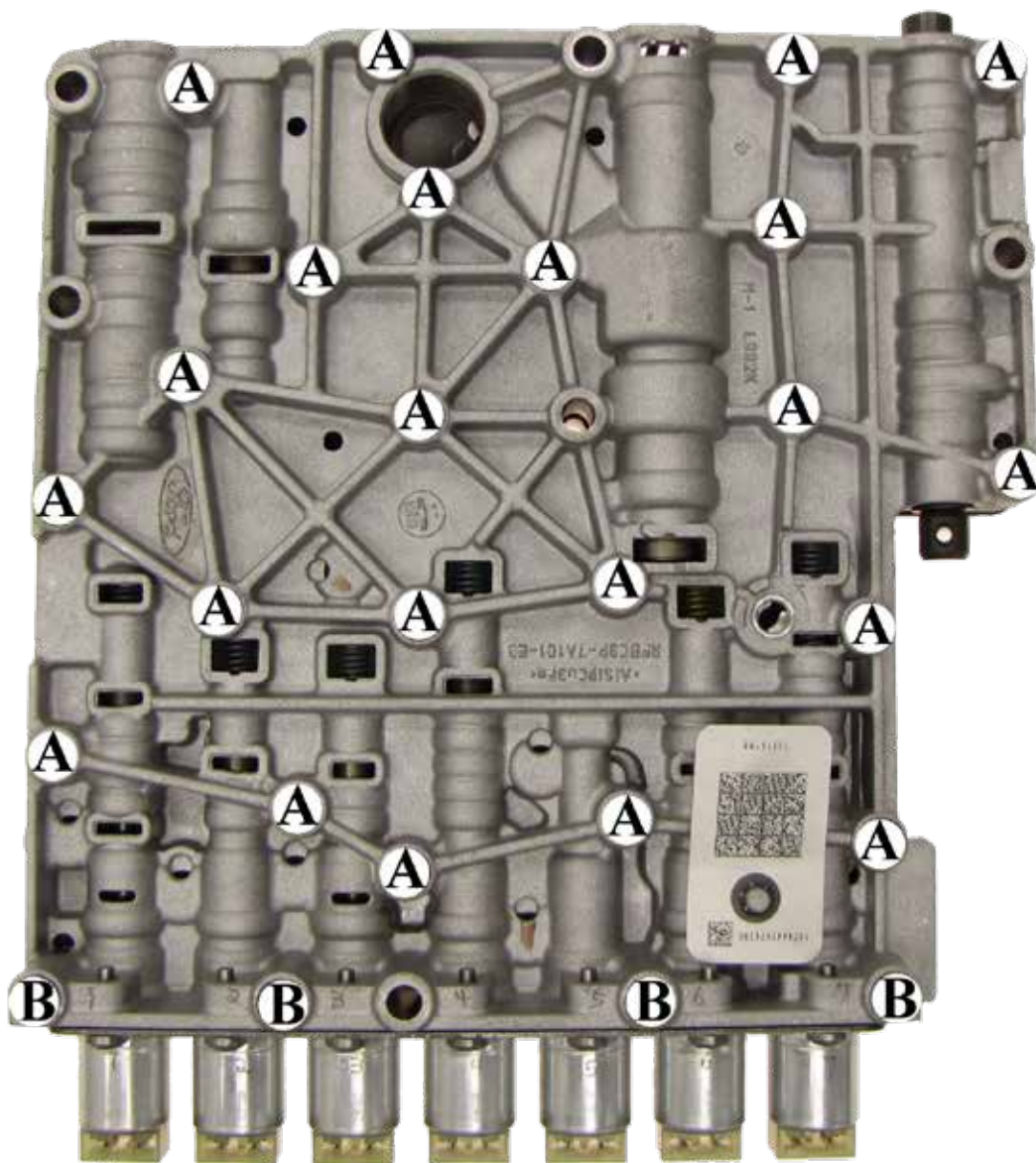


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5. Remove twenty six (26) valve body bolts to split the valve body halves.

A = 47mm
B = 63mm



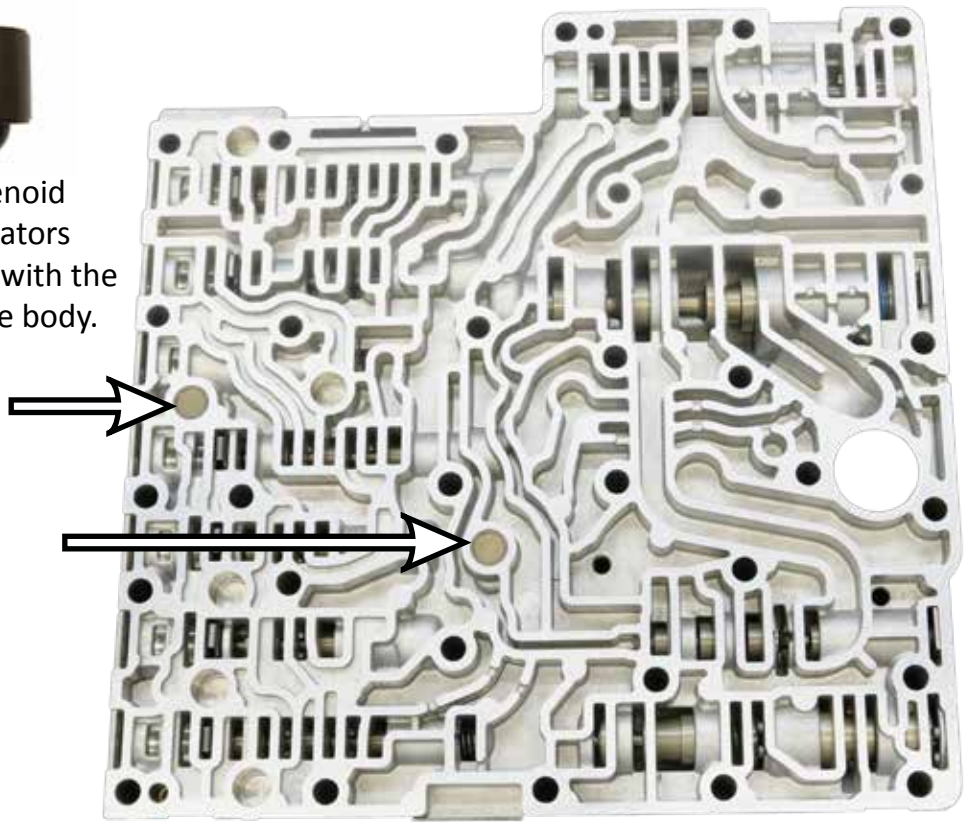
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6. Carefully lift the lower valve body from the upper valve body.



The solenoid accumulators should stay with the lower valve body.



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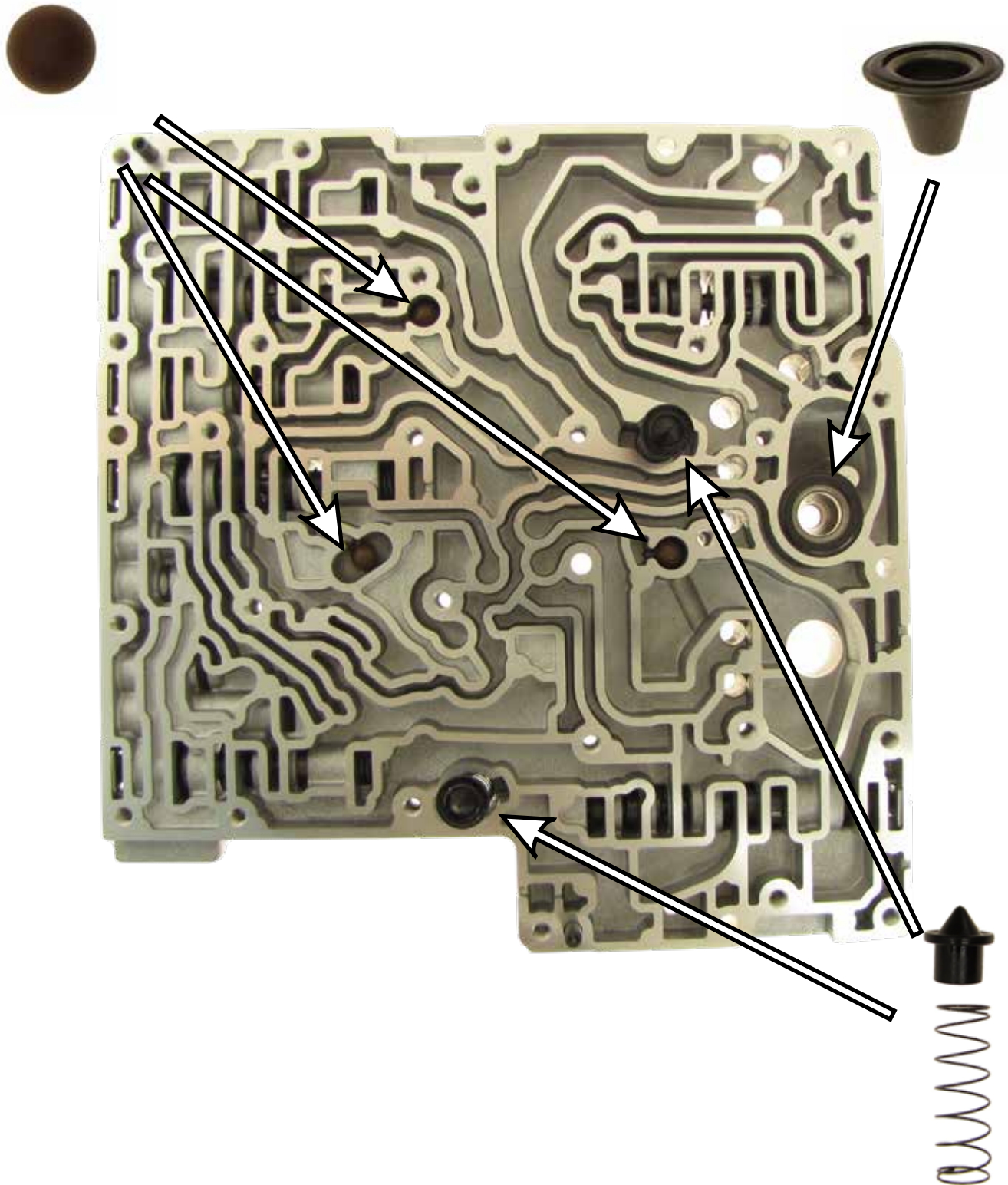
7. Remove two (2) #30 torx bolts and remove the separator plate from the upper valve body.



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8. Note the location of the (3) check balls, the relief valves and the control valve inlet nozzle for assembly. Remove the (3) check balls, the (2) relief valves and the pump inlet nozzle.



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9. Remove and clean all valves from the upper valve body. Inspect bores for wear. If any of the valves are worn the valve body must be replaced.

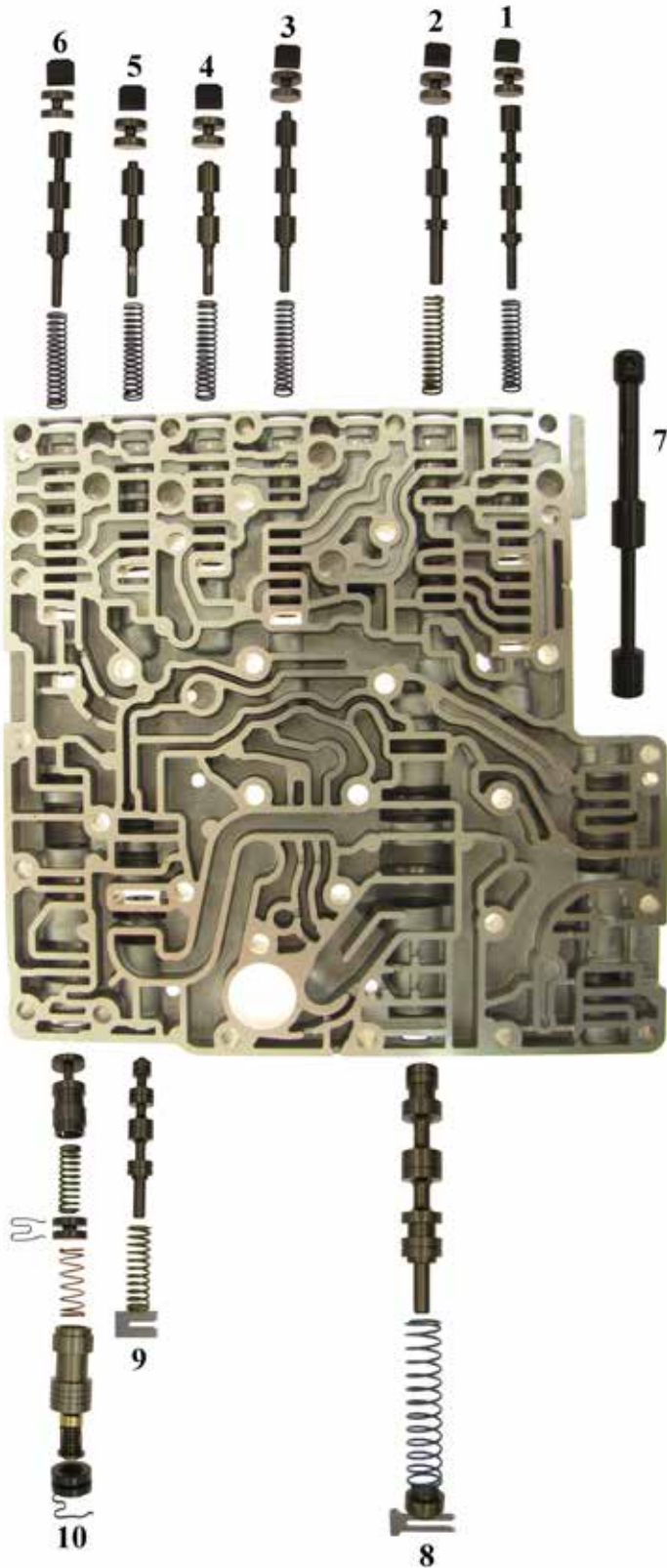


Upper Valve Body Valve Identification (Spring Dimension)	
1	Overdrive (4,5,6) Clutch Regulator Valve (1.352" X .355" X .028")
2	Intermediate (2,6) Clutch Regulator Valve (1.352" X .355" X .028")
3	Forward (1,2,3,4) Clutch Regulator Valve (1.352" X .355" X .028")
4	Direct (3,5,R) Clutch Regulator Valve (1.352" X .355" X .028")
5	Low/Reverse Clutch Regulator Valve (1.352" X .355" X .028")
6	Torque Converter Clutch (TCC) Regulator Valve (1.356" X .442" X .034")
7	TCC Apply Regulator Valve (1.707" X .485" X .033")

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10. Remove and clean all valves from the lower valve body. Inspect bores for wear. If any of the valves are worn the valve body must be replaced.

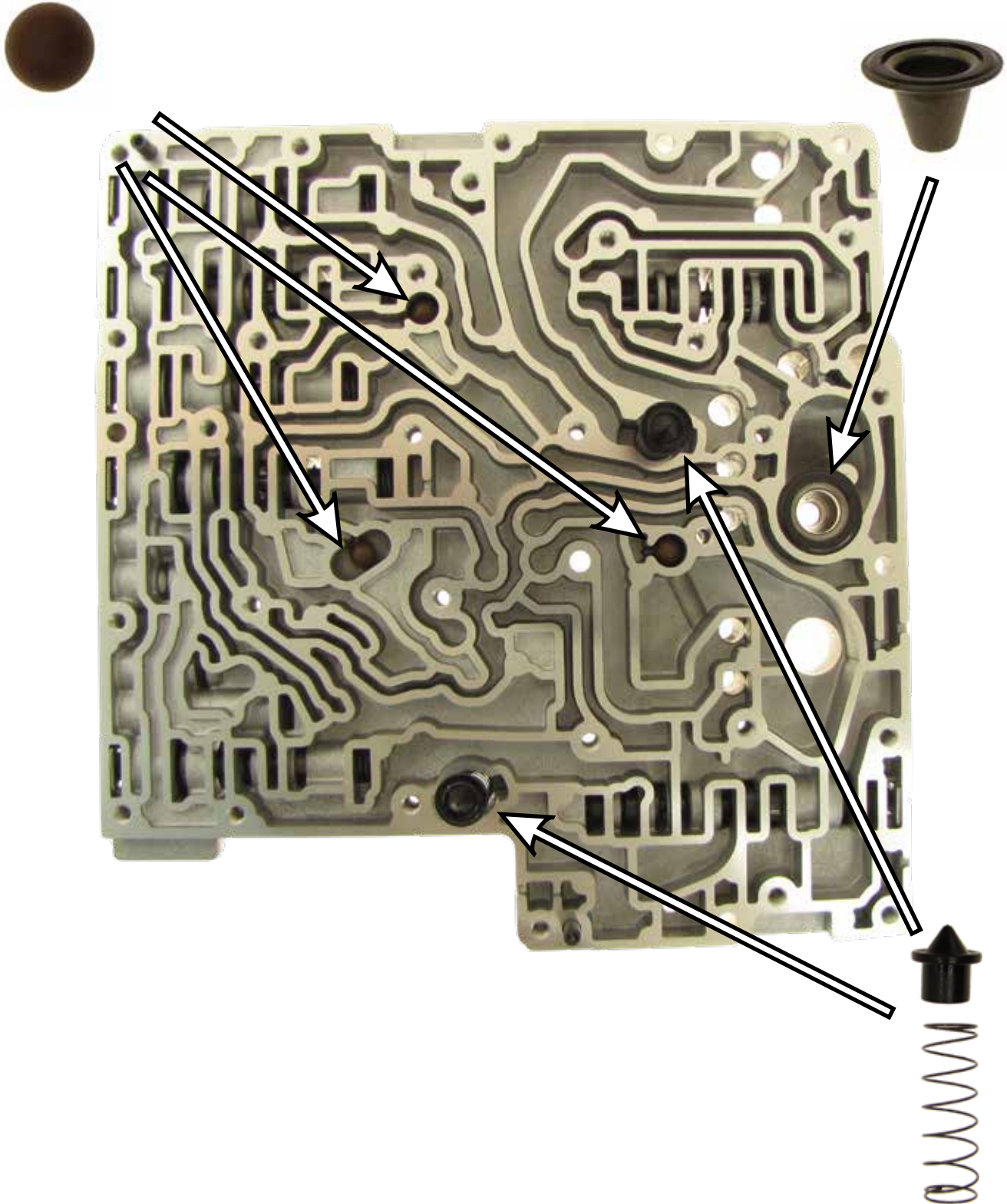


Lower Valve Body Identification (Spring Dimensions)	
1	Low/Reverse Latch Valve (1.626" X .363" X .043")
2	Solenoid Feed Pressure Regulator Valve (1.608" X .365" X .048")
3	Direct (3,5,R) Clutch Latch Valve (1.626" X .363" X .043")
4	Forward (1,2,3,4) Clutch Latch Valve (1.626" X .363" X .043")
5	Intermediate (2,6) Clutch Latch Valve (1.626" X .363" X .043")
6	Overdrive (4,5,6) Clutch Latch Valve (1.626" X .363" X .043")
7	Manual Valve
8	Line Pressure Regulator Valve (3.114" X .719" X .057")
9	TCC Charge Limit Valve (1.163" X .481" X .056")
10	Cooler Bypass Valve Orange Spring (1.267" X .492" X .038") Yellow Spring (1.263" X .433" X .038")

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11. Install the three (3) check balls, the two (2) relief valves and the pump inlet nozzle.



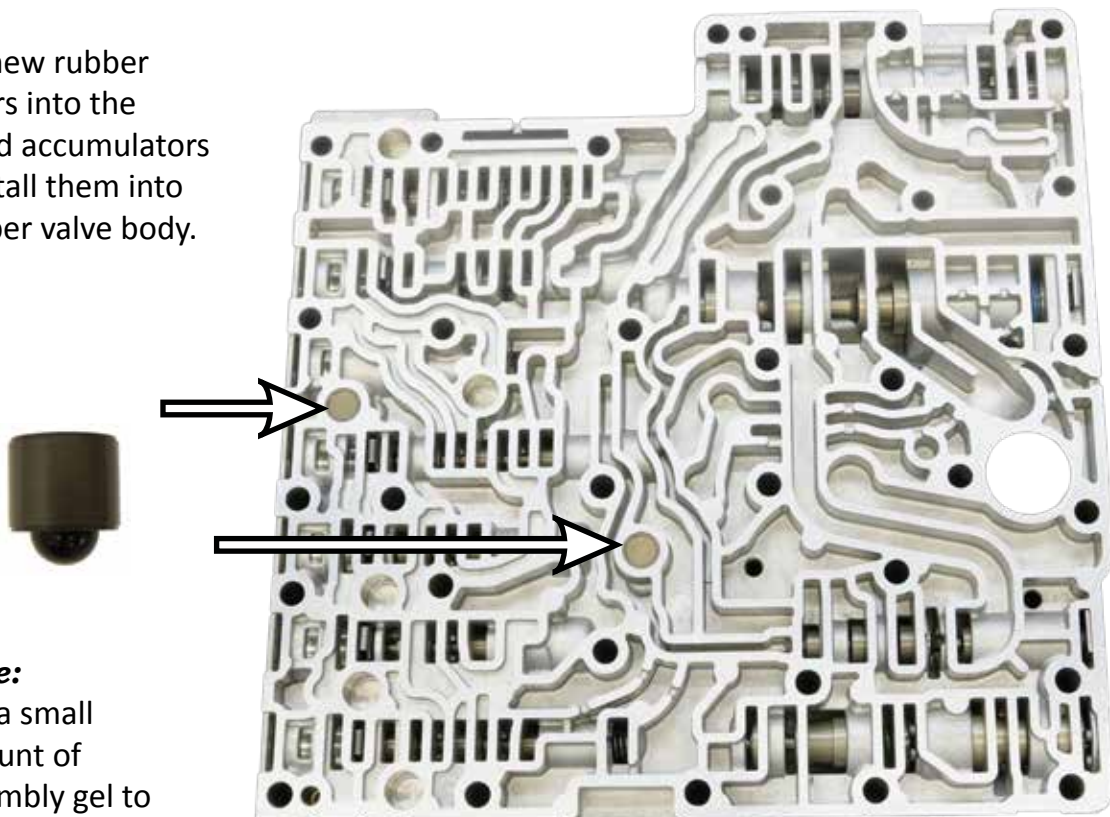
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12. Using a new separator plate or an old plate with new gaskets, install the plate onto the dowel pins. Torque the #30 torx bolts to 85-95 in.lbs.



13. Install new rubber bumpers into the solenoid accumulators and install them into the upper valve body.



Note:

Use a small amount of assembly gel to hold these in the valve body.

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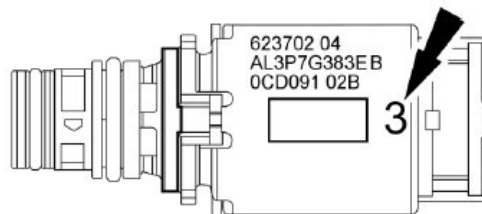
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14. Install the solenoids and the retaining bracket and bolts. Torque the #30 torx bolts to 85-95 in. lbs.



Solenoid Replacement

The solenoids are calibrated from the factory and are not all the same. There are (2) types of solenoids, normally high and normally low solenoids. The solenoids can be replaced separately, but only with the same type of solenoid. The replacement solenoid band number must match the band number of the solenoid being replaced. The band number is printed on the side of the solenoid and will be a 2, 3, 4 or 5.

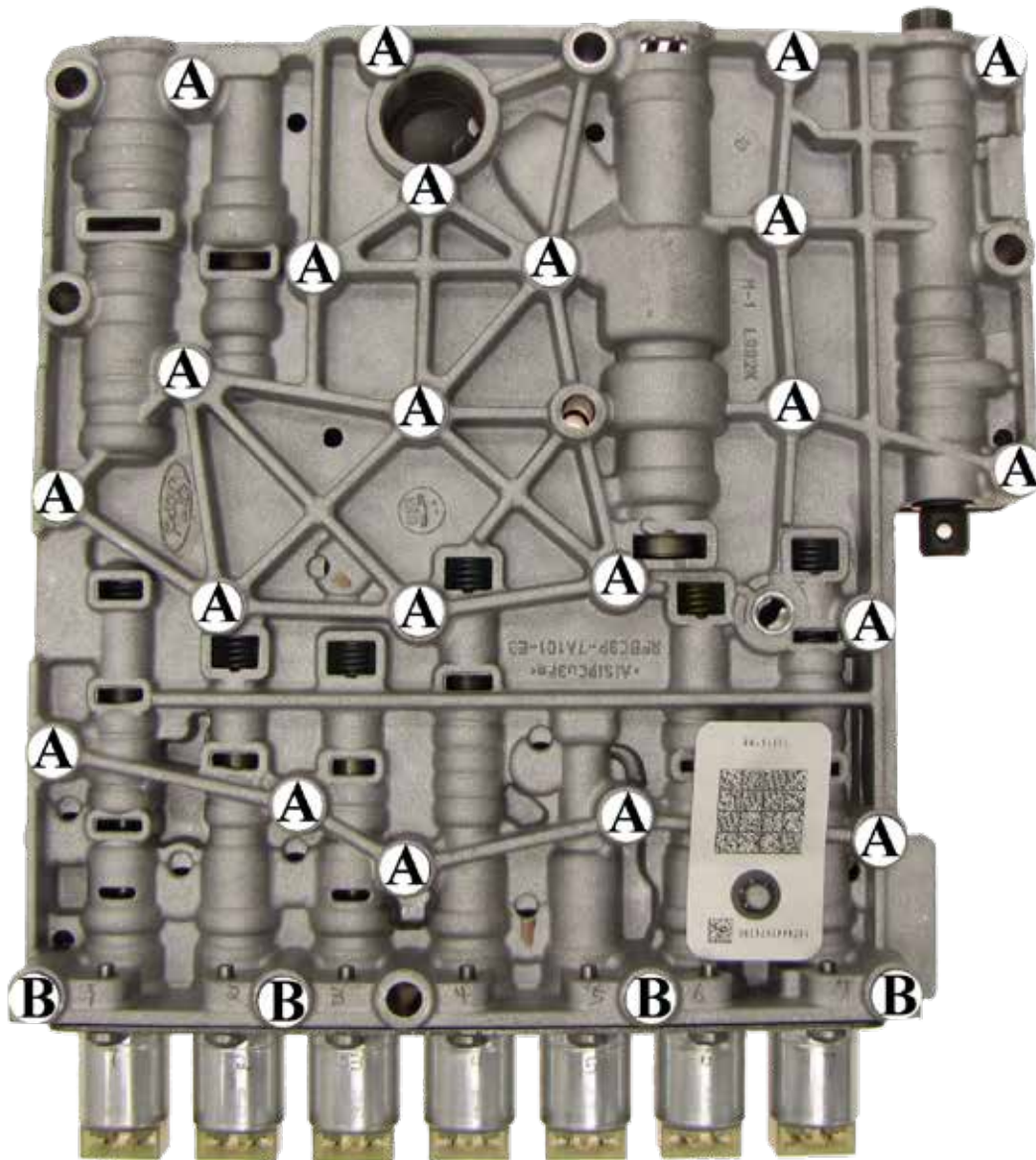


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- 15. Place the lower valve body onto the upper valve body.
- 16. Install (26) valve body bolts and torque them to 85-95 in.lbs.

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17. Install (4) case to valve body seals.

18. Install new O-rings onto the lube tubes and the 2-6 clutch feed pipe and install the pipes into the valve body.

