

# Critical Wear Areas & Vacuum Test Locations

**ZIP** Drop-In Zip Valve™ Parts Available



8L45-8L90-SHIFT-ZIP  
8L45-8L90-TCC-ZIP  
Zip Kits® Available

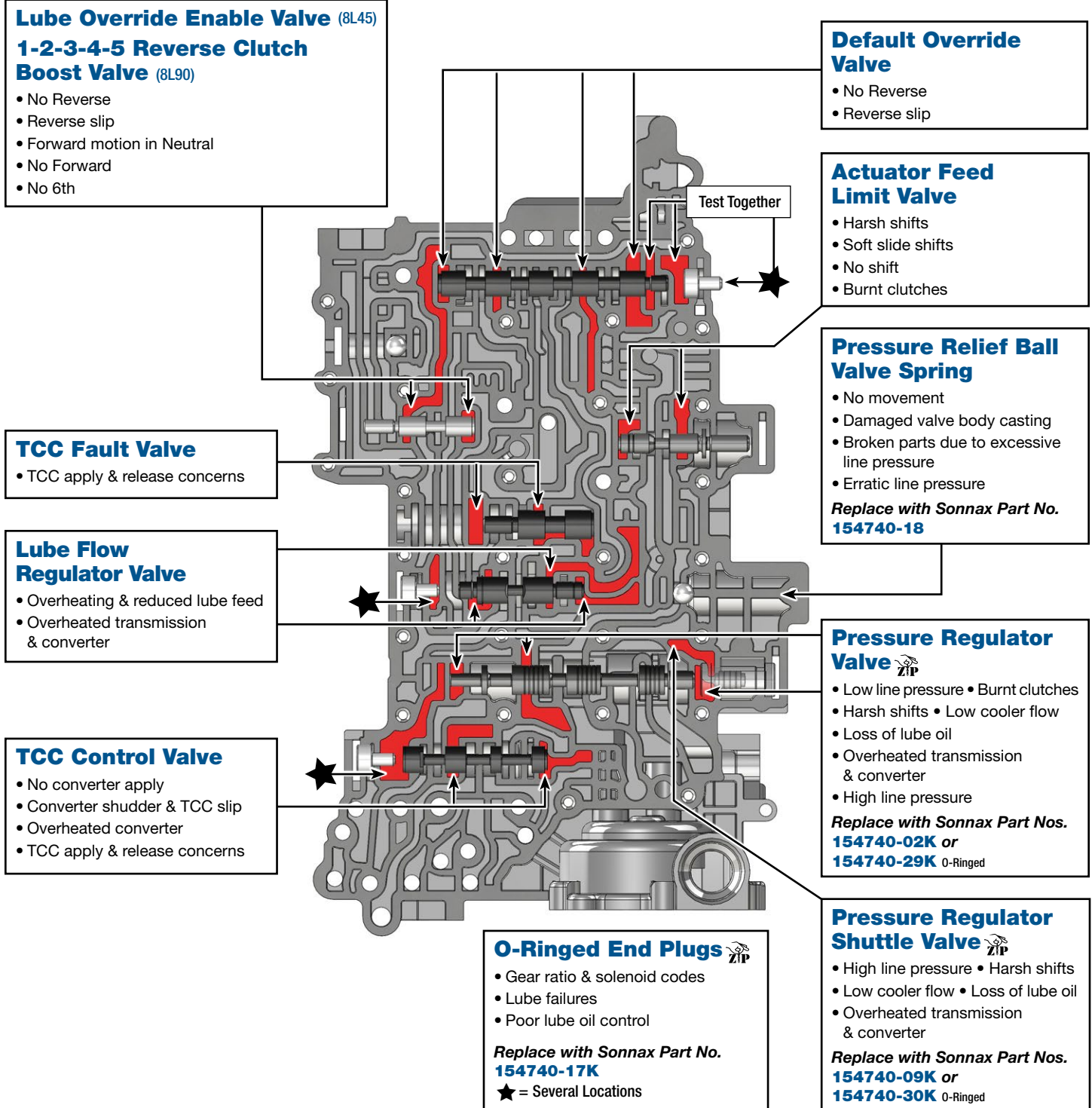
**NOTE:** OE valves are shown in rest position and should be tested in rest position unless otherwise indicated. Test locations are pointed to with an arrow. Springs are not shown for visual clarity. Low vacuum reading indicates wear and Sonnax parts are noted for replacement.

## Upper Valve Body • 8L90 Shown



For specific vacuum test information, refer to individual part instructions included in kits and available at [www.sonnax.com](http://www.sonnax.com).

Click on Sonnax part numbers to see more information.



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## Control Solenoid Body • 8L90 Front Shown



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**1-2-3-4-5 Reverse Low Control Valve (S2)**

- Burnt clutches • Pressure loss
- Poor shift quality • Burnt converter
- TCC apply & release concerns

Replace with **Sonnax Part No. 154740-11K**

154740-TL11 Recommends Vacuum Test Tool  
154740-BST11 Recommends Bore Sizing Tool

**Lube Regulator Valve (8L45)**  
**1-2-3-4-5 Reverse Clutch Boost Valve (8L90)**

- 5-6 Bind-up • Burnt clutches

**1-2-7-8 Reverse Control Valve (S1)**

- Burnt clutches • Pressure loss
- Poor shift quality

Replace with **Sonnax Part No. 154740-13K**

154740-TL11 Recommends Vacuum Test Tool  
154740-BST13 Recommends Bore Sizing Tool

**4-5-6-7-8 Reverse Control Valve (S5)**

- Burnt clutches • Pressure loss
- Poor shift quality

Replace with **Sonnax Part No. 154740-13K**

154740-TL11 Recommends Vacuum Test Tool  
154740-BST13 Recommends Bore Sizing Tool

**1-3-5-6-7 Control Valve (S3)**

- Burnt clutches • Pressure loss
- Poor shift quality • Burnt converter
- TCC apply & release concerns

Replace with **Sonnax Part No. 154740-11K**

154740-TL11 Recommends Vacuum Test Tool  
154740-BST11 Recommends Bore Sizing Tool

**2-3-4-6-8 Control Valve (S4)**

No converter apply

- Converter shudder & TCC slip
- Overheated converter

Replace with **Sonnax Part Nos. 154740-11K\*** 2018–Earlier or **154740-24K** 2019–Later or **154740-26K\*\*** 2019–Later

154740-TL11 \*Recommends Vacuum Test Tool  
154740-BST11 \*Recommends Bore Sizing Tool  
F-154740-TL26 & VB-FIX \*\*Requires Tool Kits

**TCC Control Valve (TCC)**

No converter apply

- Converter shudder & TCC slip
- Overheated converter

Replace with **Sonnax Part No. 154740-11K**

154740-TL11 Recommends Vacuum Test Tool  
154740-BST11 Recommends Bore Sizing Tool

**Converter Feed Limit Valve**

- Codes P0218, P0741
- Overheated converter
- Inadequate lubrication
- Excess converter pressure
- High TCC slip RPM

Replace with **Sonnax Part Nos. 154740-19K or 154740-22K\***

F-154740-TL22 & VB-FIX \*Requires 154740-TL22 Recommends Vacuum Test Tool

**1-3-5-6-7 Accumulator Piston**

- Clutch slippage
- Burnt clutches
- Flare shifts
- Ratio codes

Replace with **Sonnax Part No. 154740-15K**

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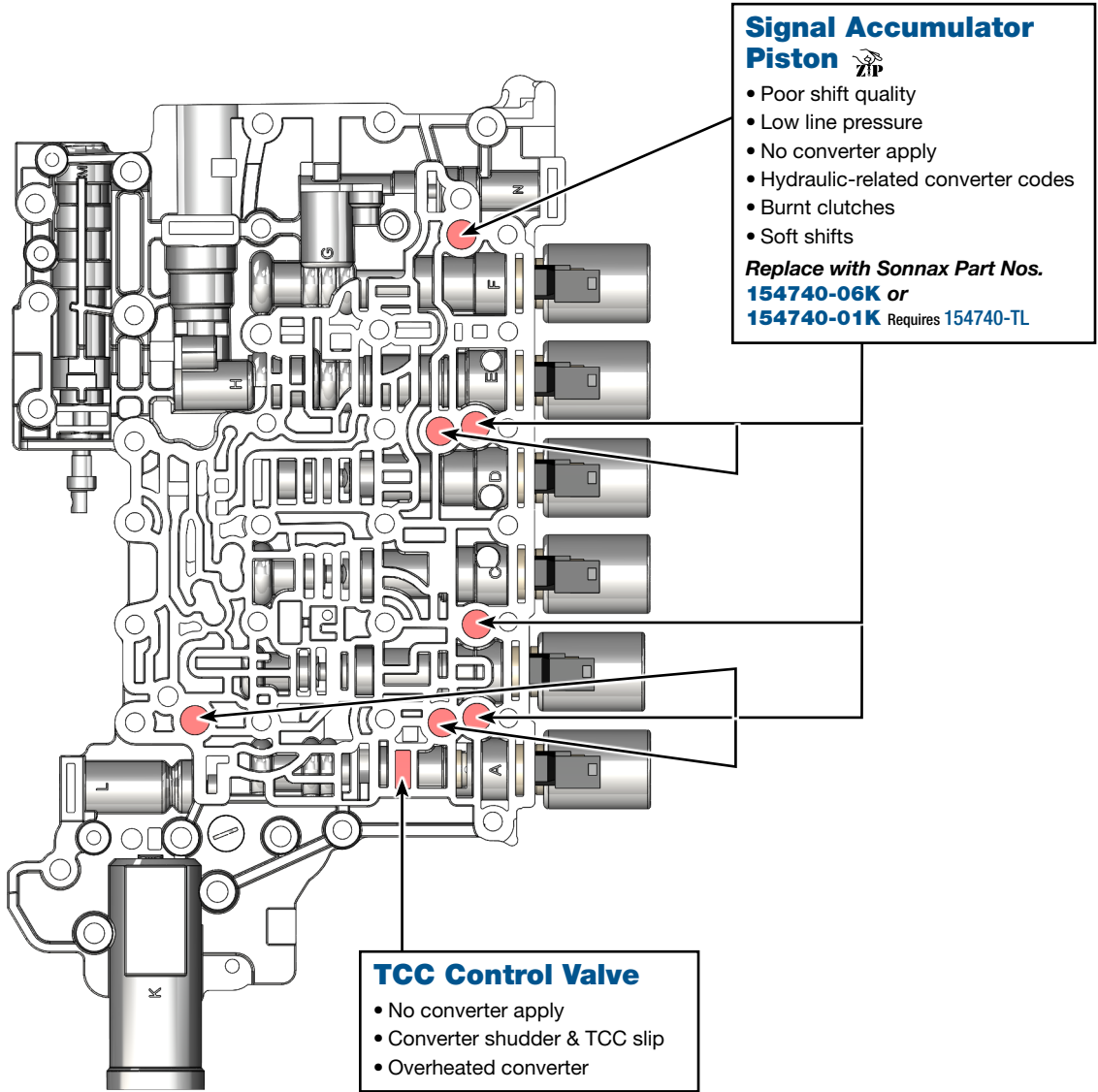
**NOTE:** OE valves are shown in rest position and should be tested in rest position unless otherwise indicated. Test locations are pointed to with an arrow. Springs are not shown for visual clarity. Low vacuum reading indicates wear and Sonnax parts are noted for replacement.

## Control Solenoid Body • 8L90 Back Shown



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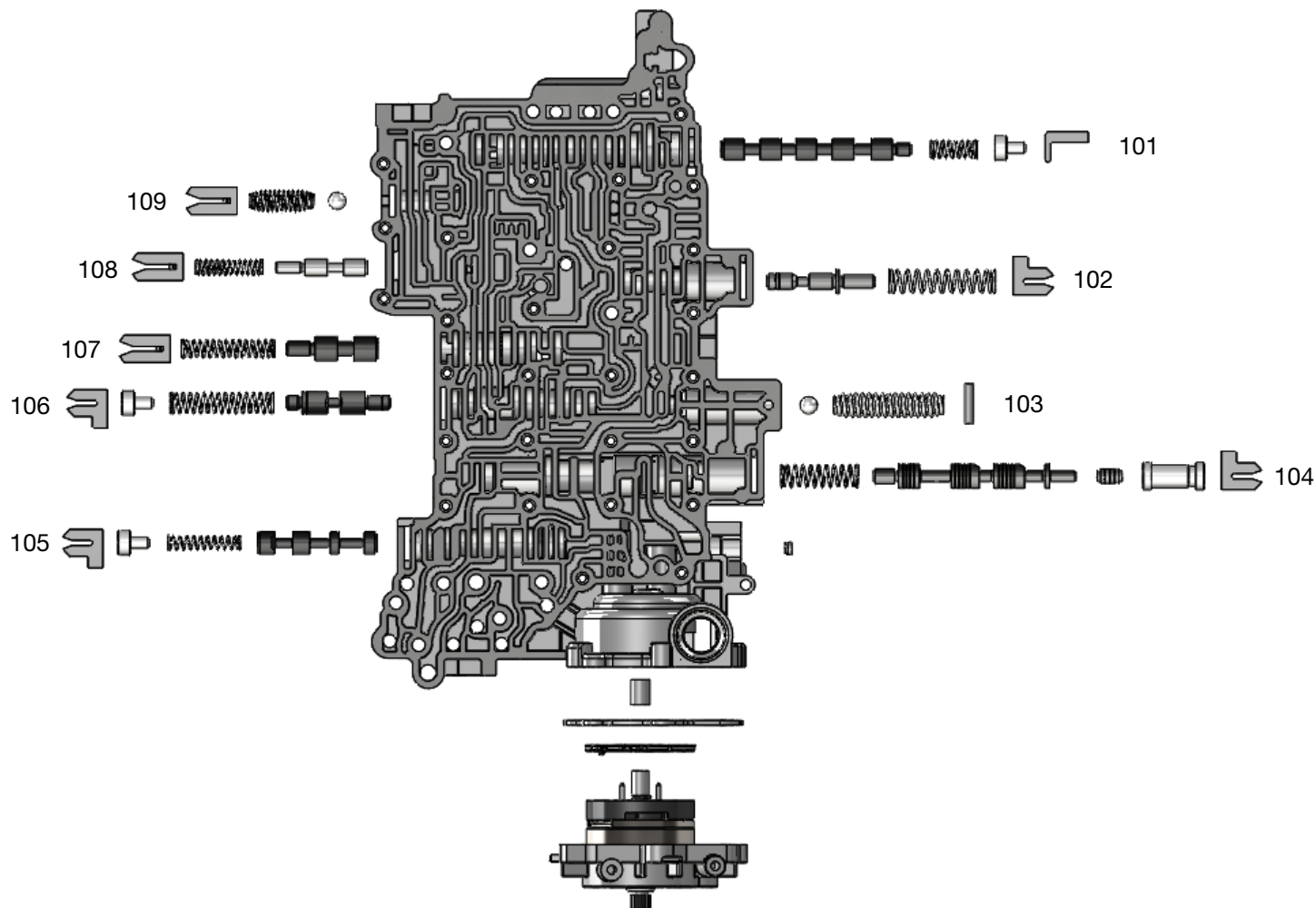
Click on Sonnax part numbers to see more information.



## OE Exploded View

### Upper Valve Body • 8L90 Shown

**NOTE:** Depending upon vehicle application, the OE springs shown may not be present.



#### Upper Valve Body 8L45 & 8L90 Descriptions

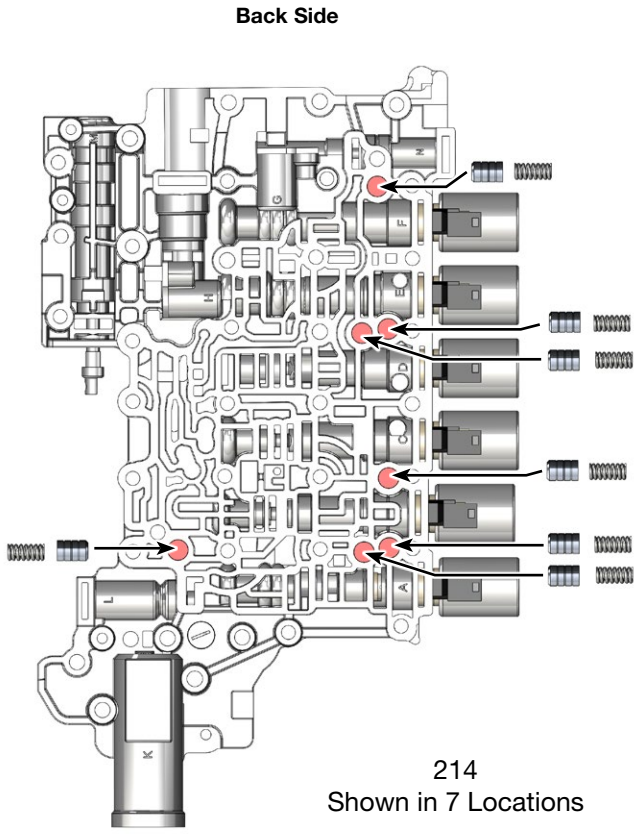
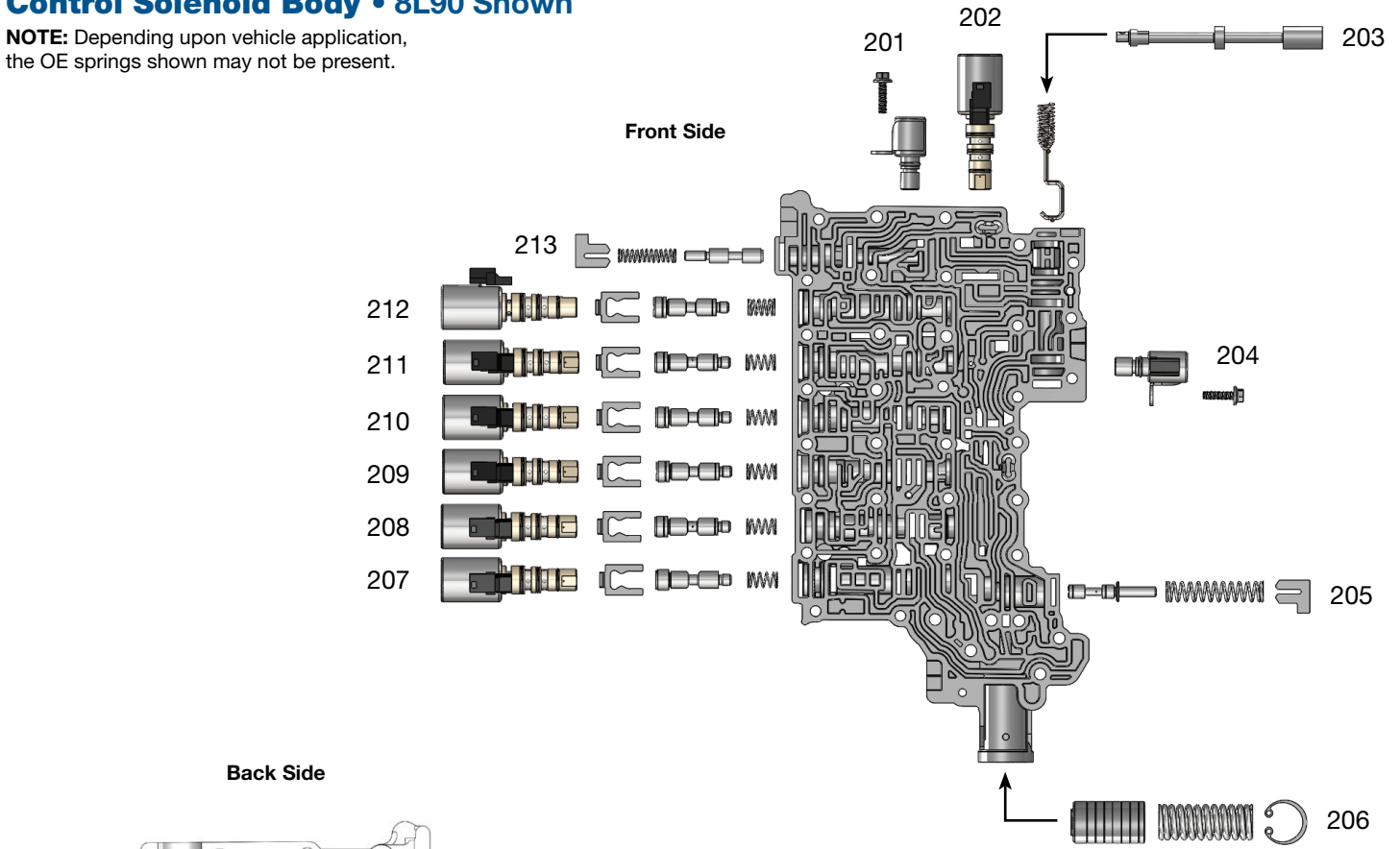
I.D. No.	Description
101	Default Override Valve
102	Actuator Feed Limit Valve
103	Line Pressure Blowoff Ball Valve
104	Pressure Regulator Valve (Inboard) & Shuttle Valve (Outboard)
105	TCC Control Valve
106	Lube Flow Regulator Valve
107	TCC Fault Valve
108	Lube Override Enable Valve (8L45), 1-2-3-4-5 Reverse Clutch Boost Valve (8L90)
109	Clutch Piston Exhaust Blowoff Ball Valve



# OE Exploded View

## Control Solenoid Body • 8L90 Shown

**NOTE:** Depending upon vehicle application, the OE springs shown may not be present.



214  
Shown in 7 Locations

Control Solenoid Valve Body 8L45 & 8L90 Descriptions	
I.D. No.	Description
201	Default Control Solenoid
202	Line Pressure Control Solenoid
203	Manual Valve
204	1-2-3-4-5 Reverse Boost Solenoid
205	Converter Feed Limit Valve
206	1-3-5-6-7 Accumulator Piston
207	TCC Control Solenoid & Valve (TCC)
208	2-3-4-6-8 Control Solenoid & Valve (S4)
209	1-3-5-6-7 Control Solenoid & Valve (S3)
210	4-5-6-7-8 Reverse Control Solenoid & Valve (S5)
211	1-2-7-8 Reverse Control Solenoid & Valve (S1)
212	1-2-3-4-5 Reverse Low Control Solenoid & Valve (S2)
213	Lube Regulator Valve (8L45), 1-2-3-4-5 Reverse Clutch Boost Valve (8L90)
214	Signal Accumulator Piston