Technical Bulletin #1685

Transmission: *6L Series*
Subject: *Low Line Rise in R, Delayed Reverse Engagement, Slipping, Burnt Clutches*
Application: *GM*
Issue Date: *June, 2015*

6L Series

Low Line Rise in R, Delayed Reverse Engagement, Slipping

While working on a GM vehicle equipped with a 6L series transmission, you may encounter erratic or low line rise in reverse, delayed reverse engagement, slipping or burnt clutches. These concerns may be caused by a worn boost valve and sleeve located in the pump. Replacing the boost valve and sleeve may repair this concern.

Boost Valve & Sleeve

Technical Bulletin #1686

Transmission: *48RE*
Subject: *Transmission Oil Cooler Line Leak*
Application: *05-06 Dodge Ram 2500-5500*
Issue Date: *June, 2015*

48RE
Transmission Oil Cooler Line Leak

While working on a 2005-2006 Dodge Ram R2500-R5500 equipped with a 5.9 D engine and a 48RE transmission, you may notice the transmission converter cooler hose (coolant) resting or rubbing on the transmission converter cooler line (hydraulic) (Figure 1). Allowing the converter cooler hose to rest or rub on the converter cooler line may cause a leak in the cooler line. It would be recommended to reposition the converter cooler hose away from the cooler line and insulate the cooler line to prevent further damage (Figure 2).

Thank you Jeff Funk of Specialty Transmission in Brighton, IL for providing this information

Figure 1

48RE
Transmission Oil Cooler Line Leak

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Figure 2

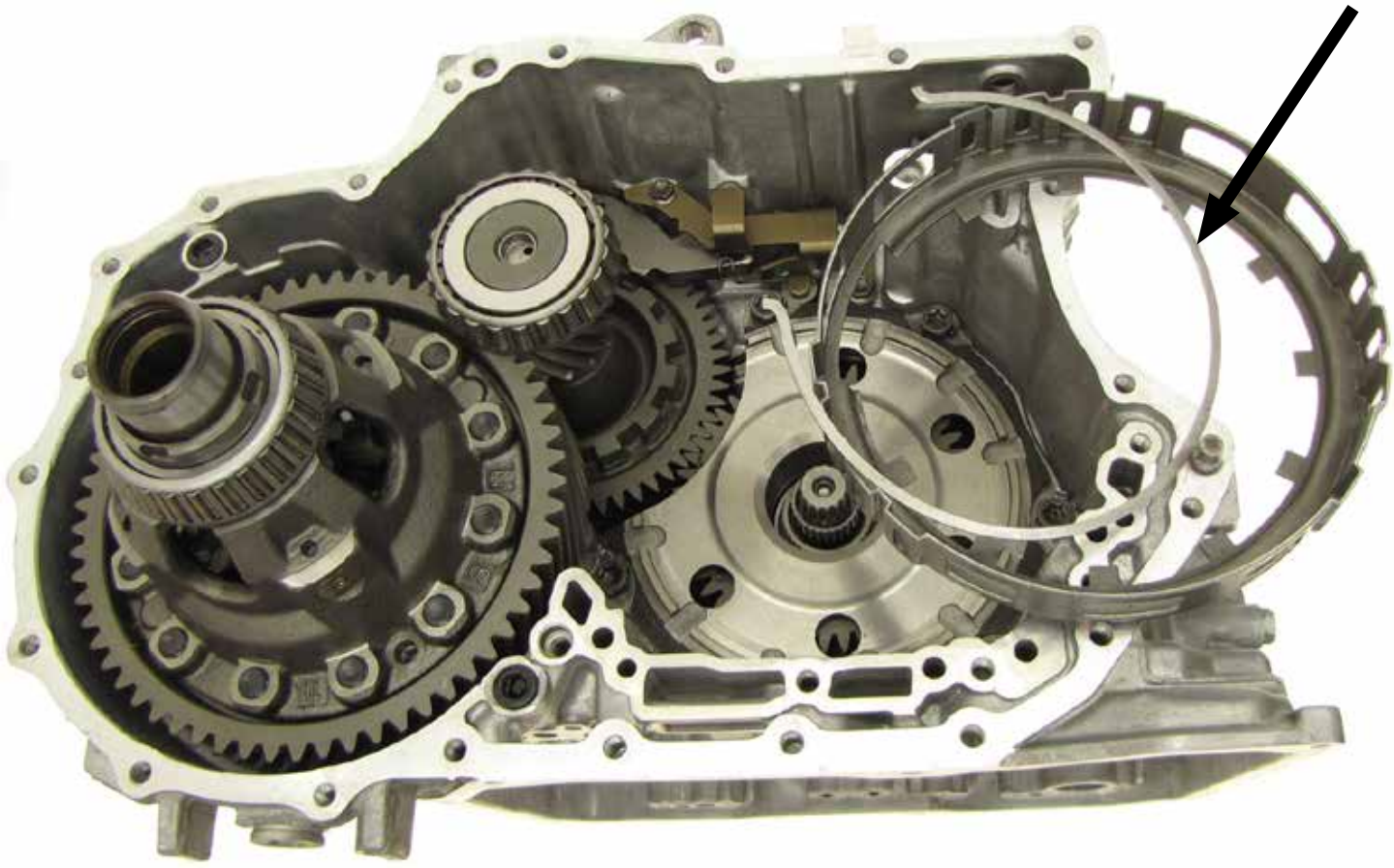
Technical Bulletin #1687

Transmission: *09G*
Subject: *Missing B1 Clutch Housing Retaining Snap Ring*
Application: *VW*
Issue Date: *June, 2015*

09G
Missing B1 Clutch Housing Retaining Snap Ring

In the past there have been a number of inquiries concerning a missing B1 clutch housing retaining snap ring in various Volkswagen models equipped with the 09G transaxle. We have seen a number of these vehicles in shops where upon disassembly there is no B1 clutch housing retaining snap ring.

Upon closer inspection of the B1 clutch housing setup, the technician will notice the snap ring does not effectively retain the B1 clutch housing in the transmission, and is not necessary for normal operation. A good rule of thumb is to reuse the snap ring if it was installed in the transmission and found during disassembly and to leave it out if there was no snap ring installed. Refer to the figure below for identification and location of the B1 clutch housing retaining snap ring.



Technical Bulletin #1688

Transmission: *4AT Version 2 Phase 2*
Subject: *Valve Body Layout and Solenoid Function w/ 2 Blue Connectors*
Application: *Subaru*
Issue Date: *June, 2015*

4AT Version 2 Phase 2

Valve Body Layout and Solenoid Function

This bulletin applies to the following vehicles: 2004 and later Forester Turbo, 2005 and later Forester Non-Turbo, 2005 and later Legacy/Outback, 2006 and later Impreza Turbo and the 2005 and later Impreza Non-Turbo.

Subaru has a few different valve body configurations. The 4AT Version 2 Phase 2 has six solenoids in group and one linear pressure control solenoid that are separate. Many people refer to them as a “six pack” style.

The first step is to ID the valve body by the solenoid main connector. There are three different styles of connectors: single black, 2 blue and 2 red. Special Thanks to Perfection Plus Transmission Parts.

4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

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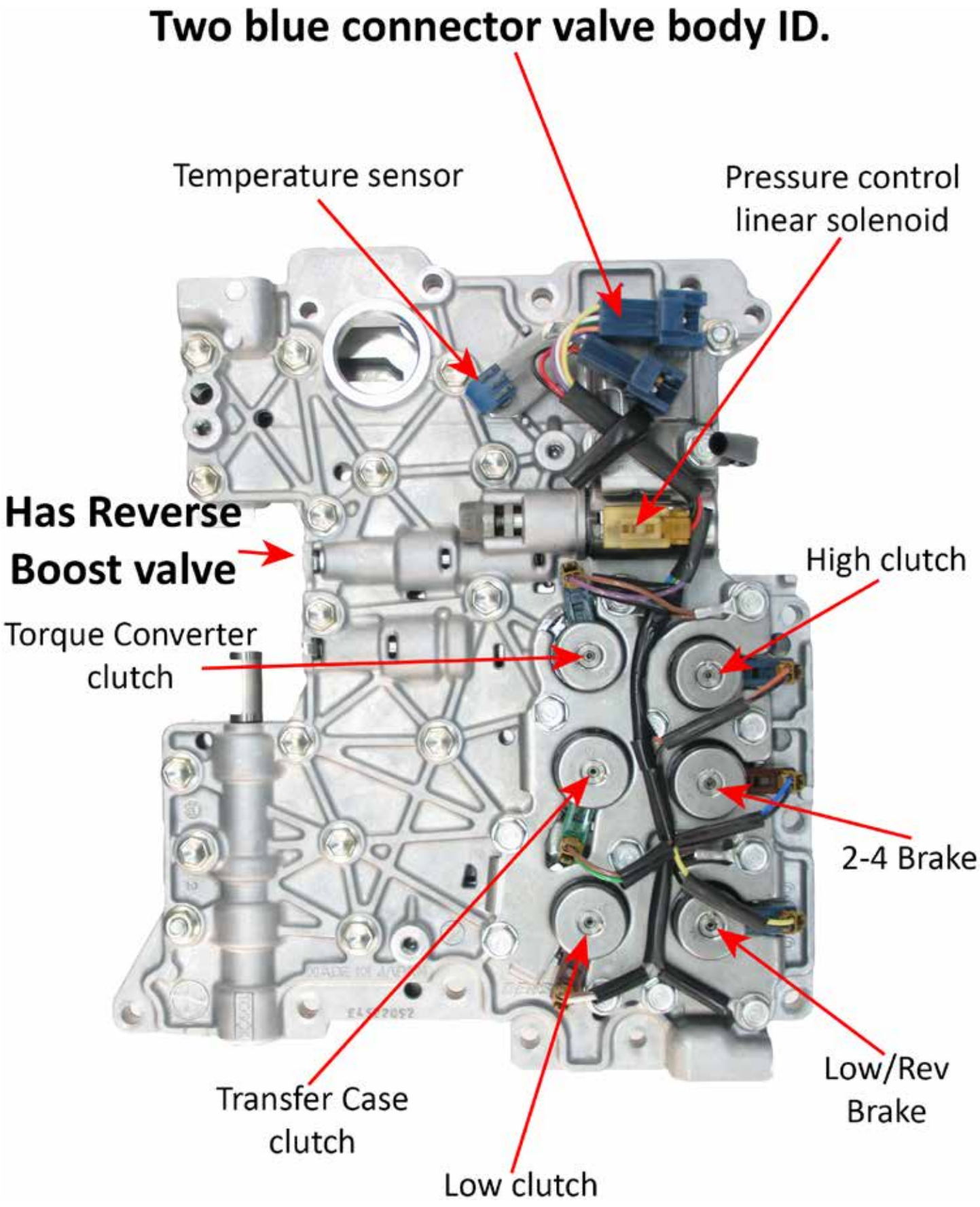
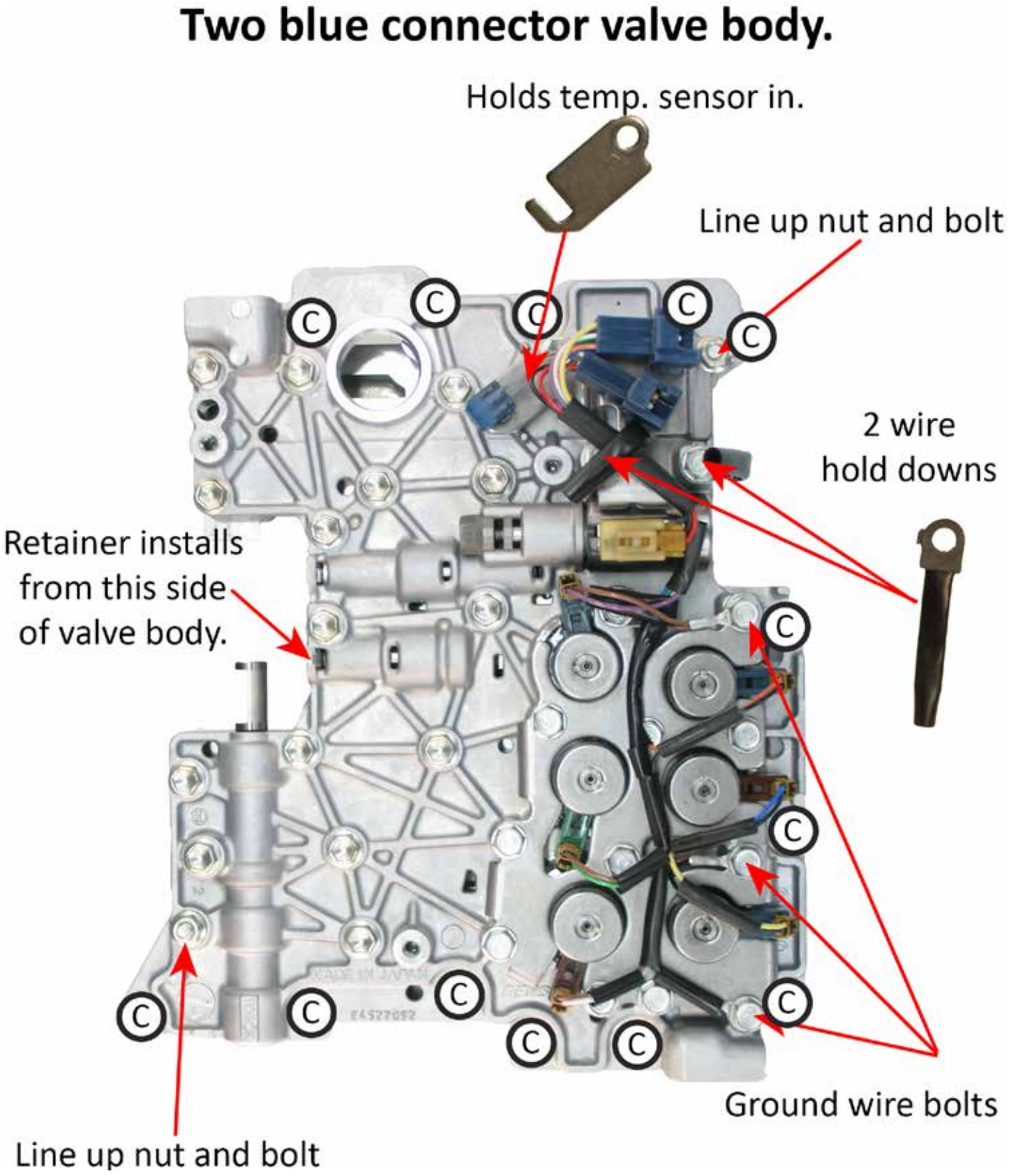


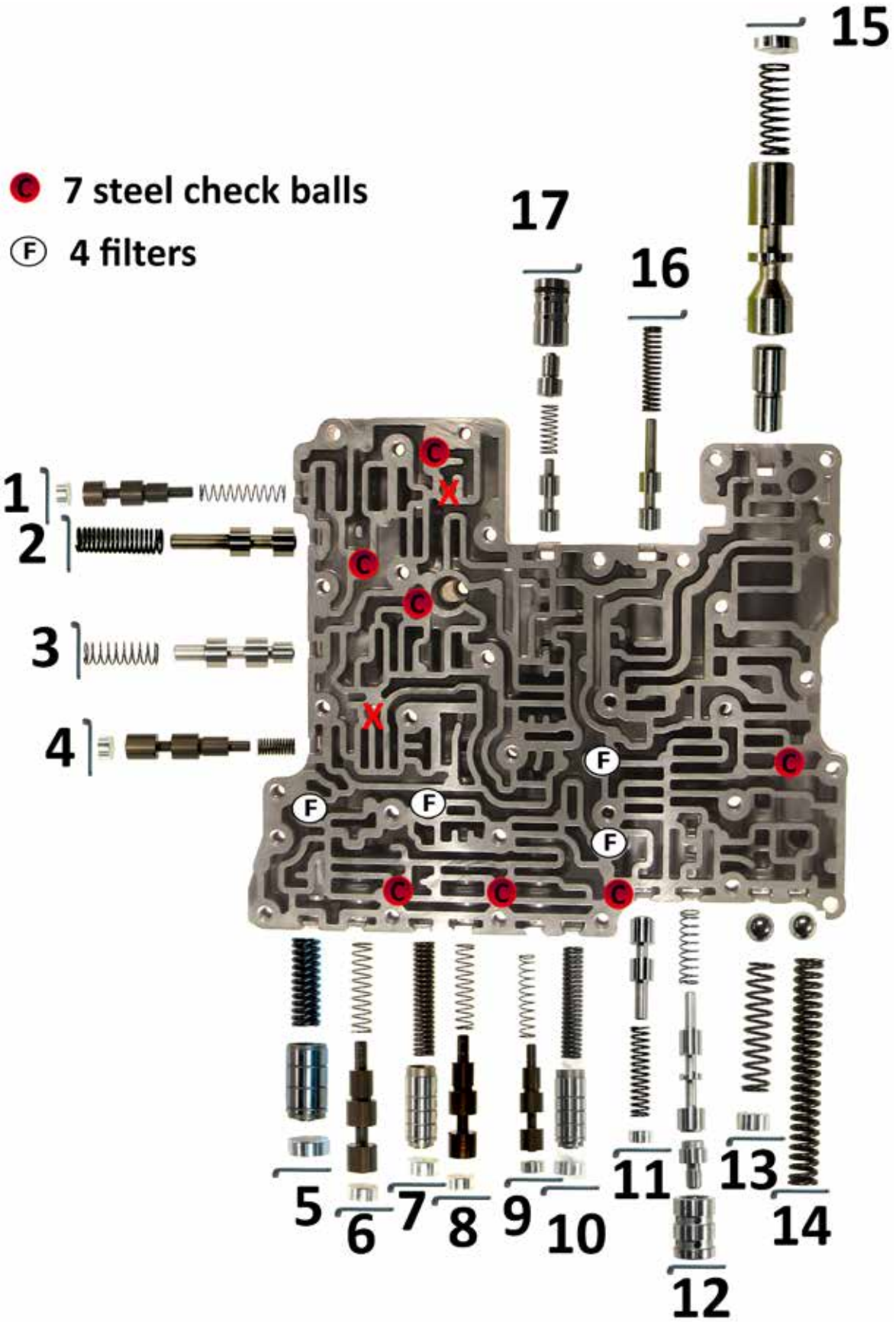
4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

Two blue connector valve body.



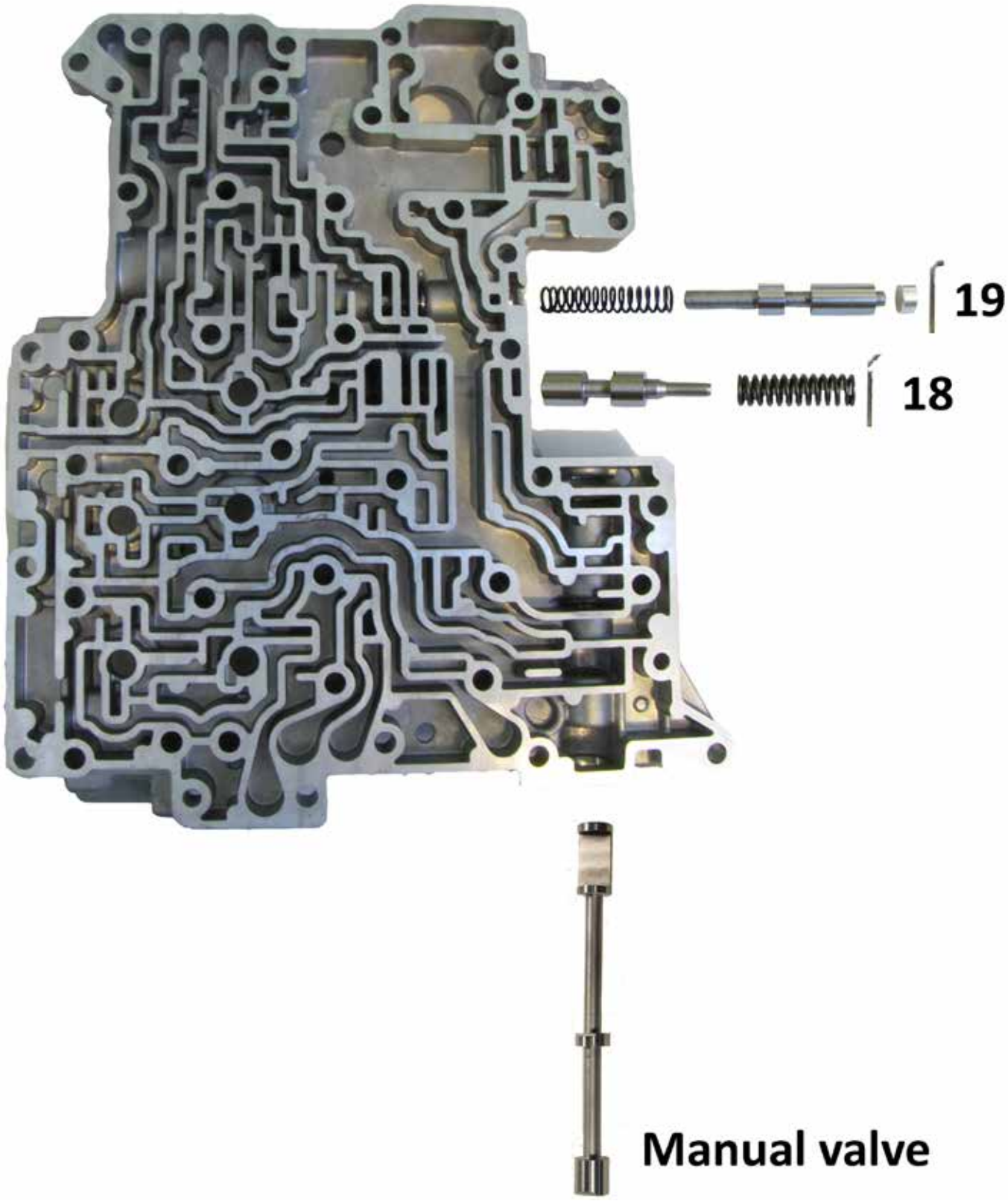
4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

#1688



4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

2 Blue connector lower valve body.



4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

#1688

Bore #	Valve Function	Free Length	Outside Diameter	Wire Size
1	Low/Reverse	1.548"	0.329"	0.021"
2	Low/2-4	1.45"	0.36"	0.045"
3	Low/Reverse	1.258"	0.354"	0.031"
4	Transfer Clutch	0.601"	0.304"	0.026"
5	Low Accumulator	1.142"	0.338"	0.062"
6	Low Clutch	1.35"	0.328"	0.021"
7	2-4 Accumulator	1.645"	0.321"	0.052"
8	2-4 Brake	1.276"	0.326"	0.021"
9	High Clutch	1.55"	0.329"	0.021"
10	High Accumulator	1.648"	0.322"	0.052"
11	Lock-up	1.425"	0.331"	0.034"
12	Lock-up	1.194"	0.354"	0.031"
13	Lube limit (.343 ball)	1.514"	0.354"	0.039"
14	Line limit (.343 ball)	2.693"	0.374"	0.061"
15	Pressure Reulator	1.364"	0.431"	0.046"
16	TCC/Lube	1.665"	0.352"	0.052"
17	2-4 Brake	1.027"	0.35"	0.031"
18	Pilot	1.154"	0.353"	0.045"
19	Reverse boost	1.884"	0.36"	0.041"

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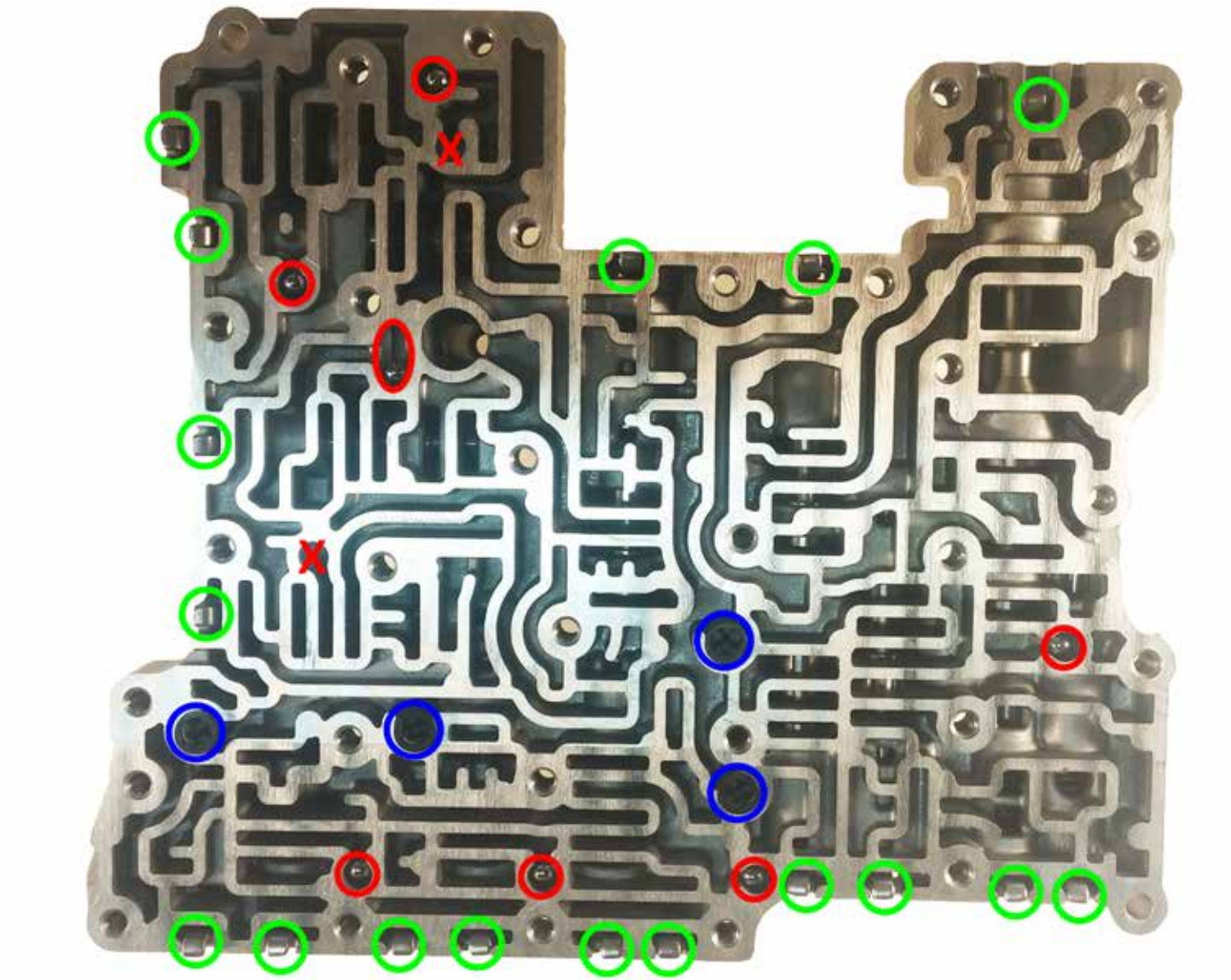
4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function



4 Filter locations

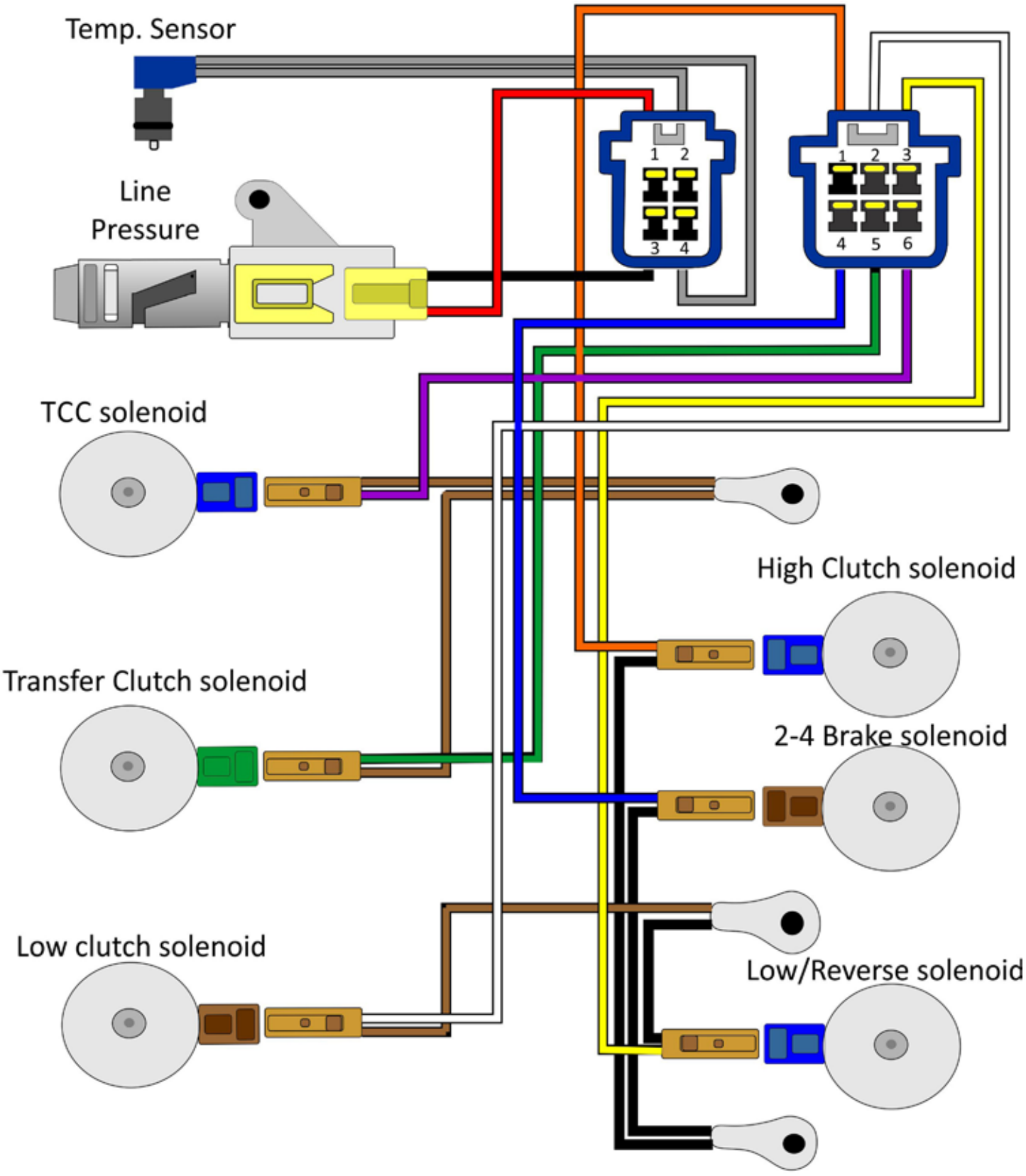
Retainer

.218

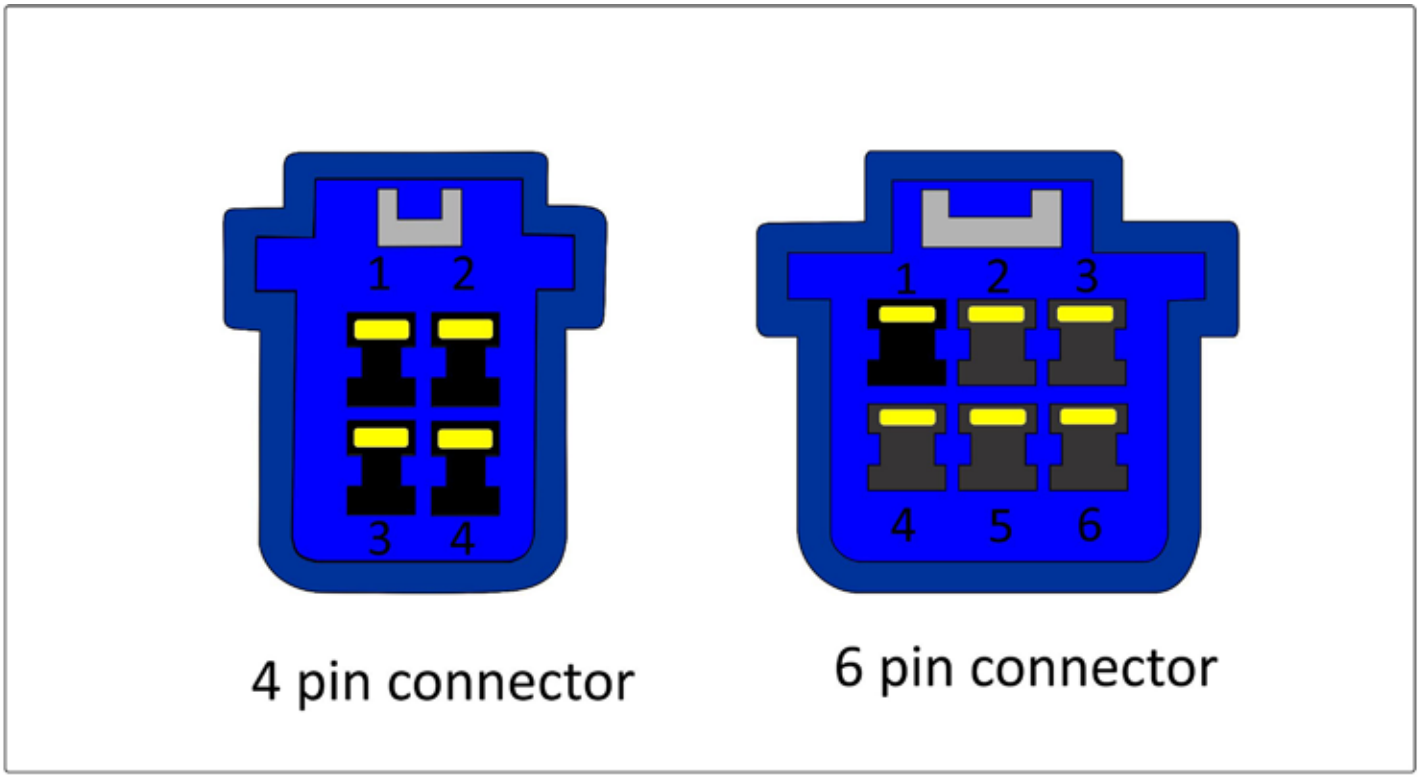
7 Steel checkballs

4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

#1688



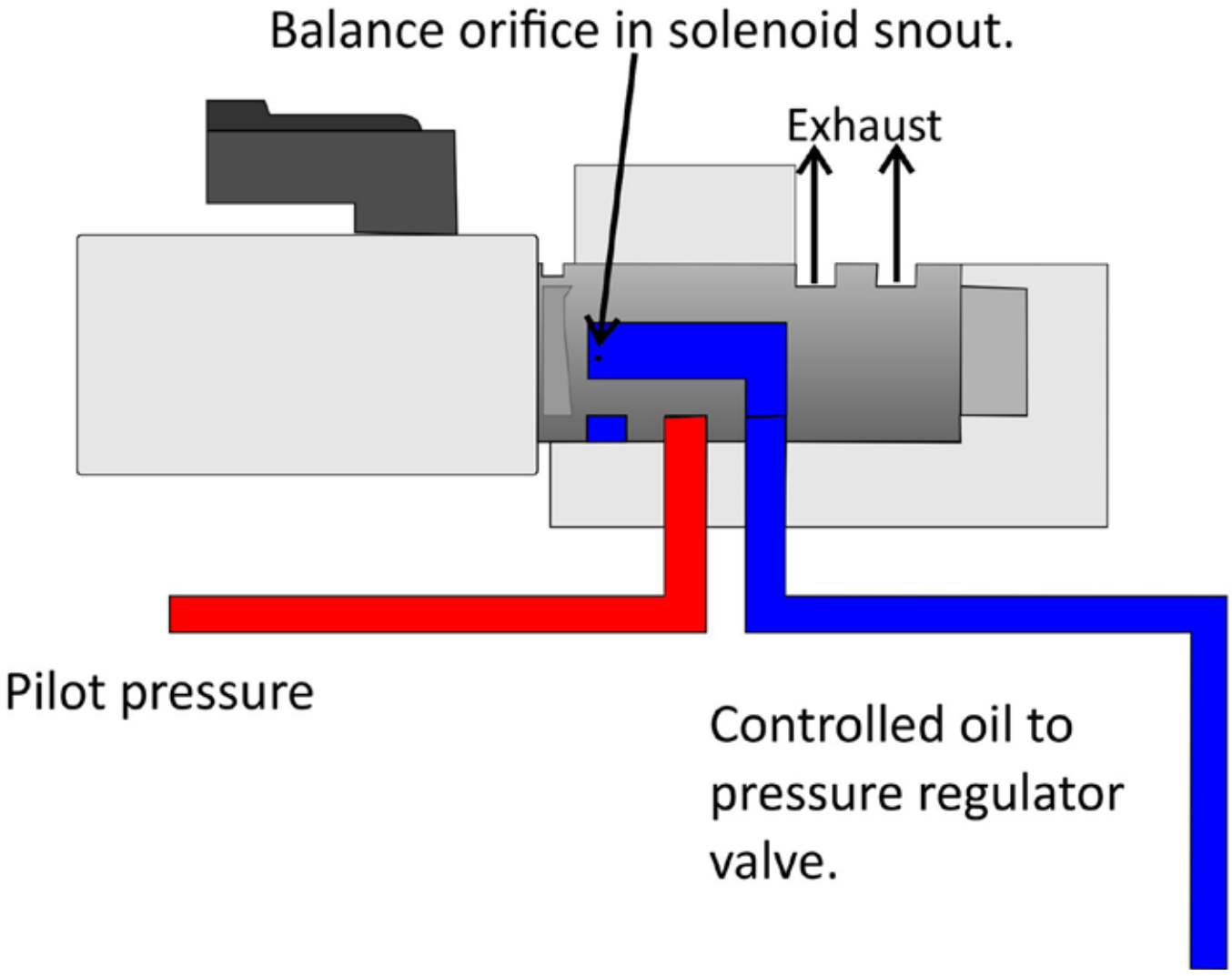
4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function



Solenoid/sensor	Connector	Pins	Ohm's
Temp. sensor	4 pin connector	2 & 4	4.3 @ 70F
Pressure control	4 pin connector	1 & 3	4-8 Ohm's
High clutch	6 pin connector	1 & ground	2-6 Ohm's
Low clutch	6 pin connector	2 & ground	2-6 Ohm's
Low/Rev clutch	6 pin connector	3 & ground	2-6 Ohm's
2-4 Brake	6 pin connector	4 & ground	2-6 Ohm's
Transfer clutch	6 pin connector	5 & ground	2-6 Ohm;s
TCC clutch	6 pin connector	6 & ground	2-6 Ohm's

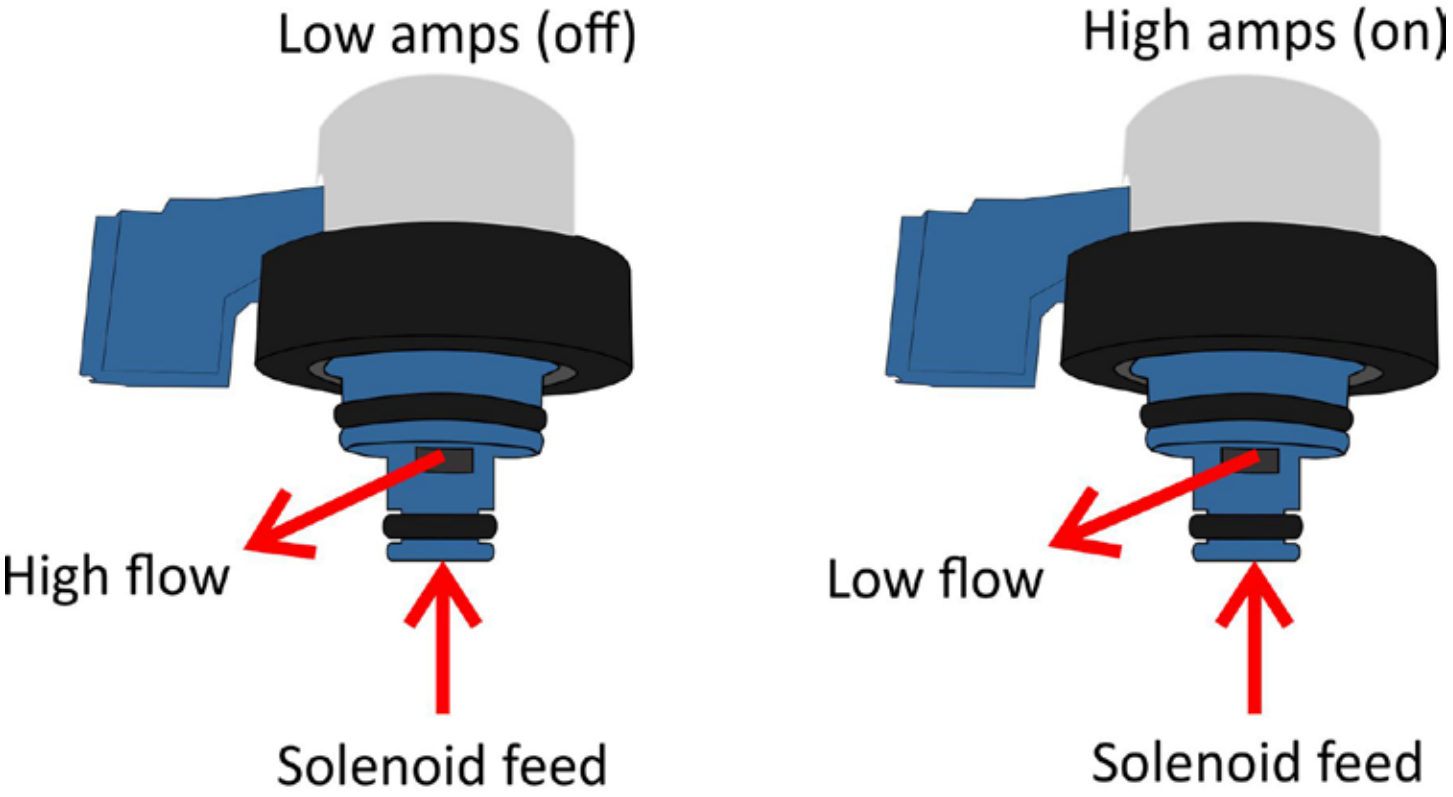
The Pressure Control Linear solenoid controls oil flow and pressure to the spring side of the Pressure Regulator valve to provide line raise.

The Pressure Control Linear solenoid has 4-8 Ohm's.



4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

High Clutch Duty solenoid
Low/Reverse Clutch Duty solenoid
Lock-up Duty solenoid



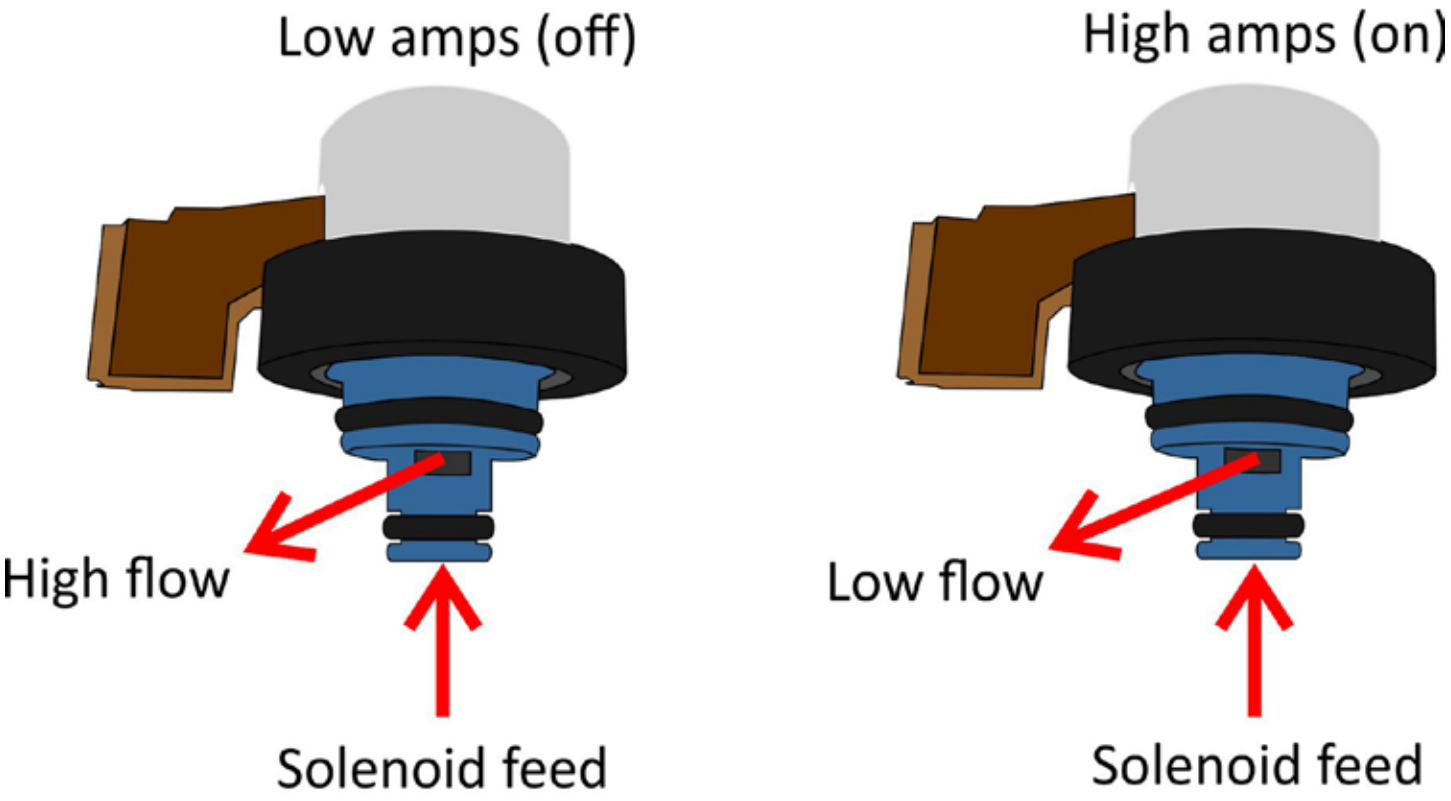
These solenoids are high side driven
and the ground side is connected
to a bolt on the valve body.

Solenoid has 2-6 Ohm's

4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

#1688

2-4 Brake Clutch Duty solenoid
Low Clutch Duty solenoid
Has brown connector on solenoid to ID



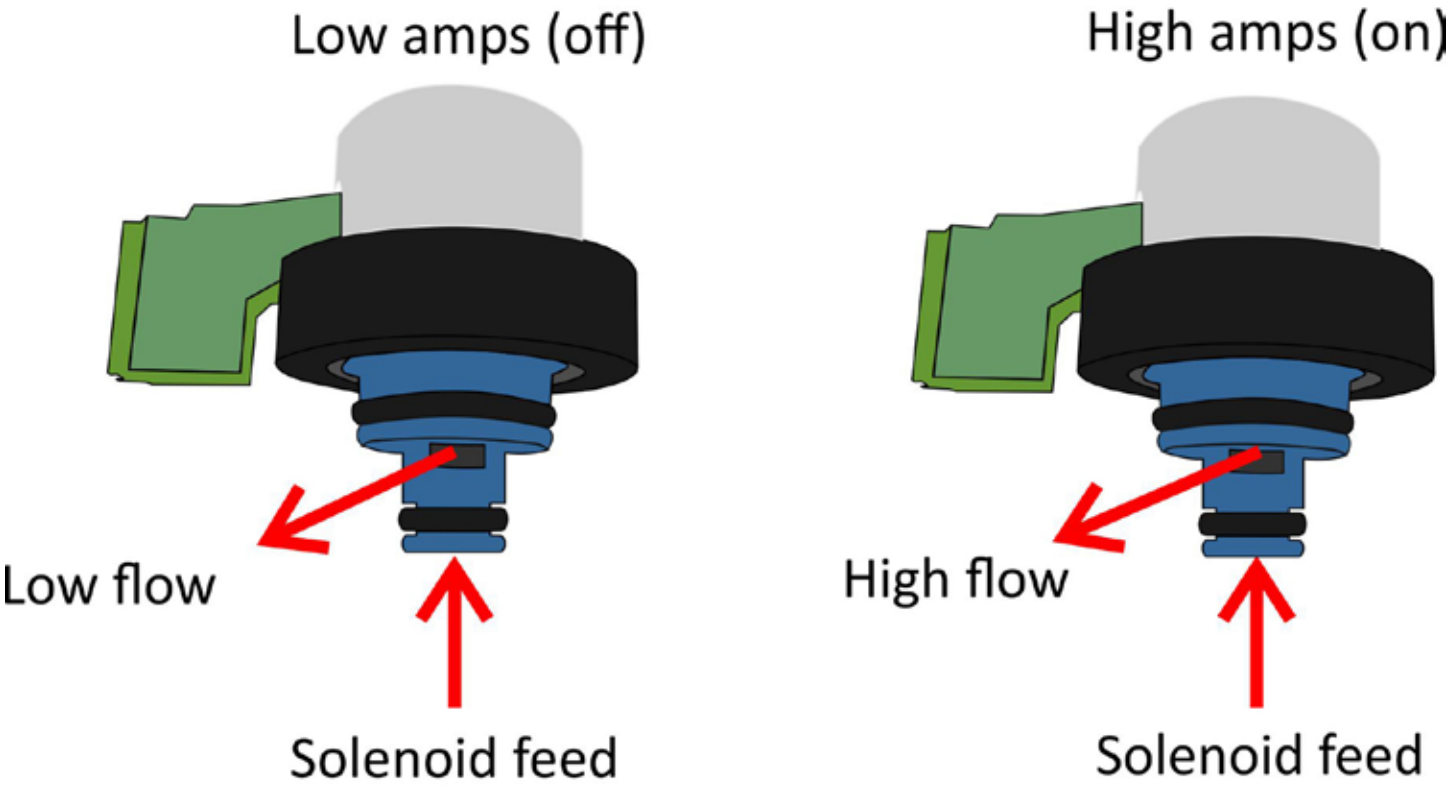
These solenoids are high side driven
and the ground side is connected
to a bolt on the valve body.

Solenoid has 2-6 Ohm's

4AT Version 2 Phase 2
Valve Body Layout and Solenoid Function

Transfer Case Clutch solenoid

Has green connector on solenoid to ID.



These solenoids are high side driven
and the ground side is connected
to a bolt on the valve body.

Solenoid has 2-6 Ohm's

Technical Bulletin #1689

Transmission: *6L Series*
Subject: *Erratic Line Pressure, Slipping, Burnt Clutches, Overheating Concerns*
Application: *GM*
Issue Date: *June, 2015*

6L Series

Erratic Line Pressure, Silpping, Burnt Clutches, Overheating

While working on a G.M. vehicle equipped with a 6L series transmission, you may encounter erratic line pressure, slipping, burnt clutches transmission overheating concerns. These concerns may be caused by a worn pressure regulator valve and bore located in the pump. Replacing the pressure regulator valve & reaming the bore may be needed to repair this concern.