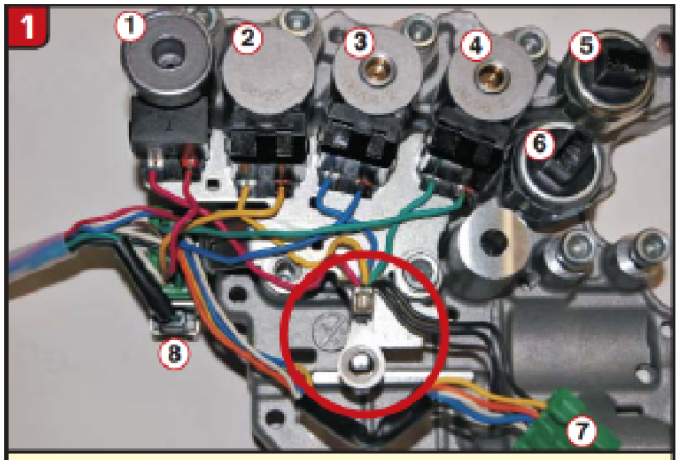
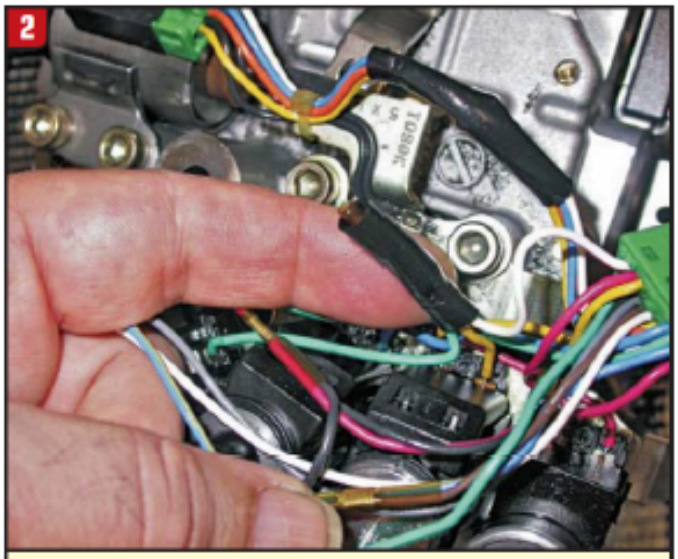
RE0F10A/JF011-E

Checking the solenoid resistance through the case connector. There are two points to address this concern that will clear up confusion when you're doing solenoid resistance checks.



Nissan and Mitsubishi use a common internal ground for all the solenoids and the stepper motor.

1. Lockup-selection solenoid (LSS)
2. Lockup-control solenoid (LCS)
3. Secondary pressure-control solenoid (SPCS)
4. Pressure-control solenoid (PCS)
5. Primary pressure sensor
6. Secondary pressure sensor
7. Ratio-control (stepper) motor
8. TFT sensor



Dodge splices together the grounds for 3 solenoids:

1. Pressure-control solenoid
2. Secondary pressure-control solenoid
3. Lockup-control solenoid

This splice runs one wire through terminal 6 to an eyelet ground mounted on the driver-side firewall in the engine compartment called the G301 ground.

The first point is to know is that there are two different types of internal wiring harnesses among Dodge, Mitsubishi and Nissan vehicles. Mitsubishi and Nissan provide an internal ground for all their solenoids and the stepper motor (Figure 1); Dodge provides an external ground for three solenoids (Figure 2).

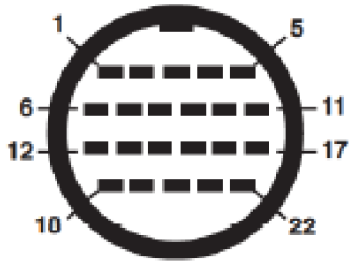
Dodge accomplishes this by internally splicing together the ground wires for the pressure-control solenoid, the secondary pressure-control solenoid and the lockup solenoid. This splice is joined to one wire that exits the transmission through pin 6 in the case connector. It is then routed to the left side of the engine compartment, where it is fastened to the firewall by a bolt and eyelet called the G301 ground.

By understanding this difference you can use terminal 6 in the case connector as a ground path with a meter when checking the resistance of these three solenoids in Dodge vehicles (Figure 3). In Nissan and Mitsubishi, the negative lead of your meter will need to be fastened to the transmission for ground.

The second point is to know that Nissan numbers the case-connector terminals differently from Dodge and Mitsubishi. The actual pin functions remain the same as Mitsubishi, and you could use the pin-out provided in (Figure 3) for Mitsubishi. But if you are going to use a Nissan wiring diagram then you will need to refer to (Figure 4), which numbers the terminals accordingly

3

Dodge and Mitsubishi



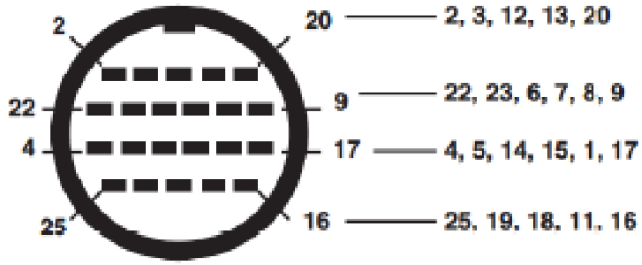
Dodge:
PCS – 1 & 6 = 6.5 ohms
SPCS – 2 & 6 = 6.5 ohms
LCS – 3 & 6 = 6.5 ohms
LSS – 4 & case ground = 28 ohms

Mitsubishi
PCS – 1 & case ground = 6.5 ohms
SPCS – 2 & case ground = 6.5 ohms
LCS – 3 & case ground = 6.5 ohms
LSS – 4 & case ground = 28 ohms

1. Pressure-control solenoid
2. Secondary pressure-control solenoid
3. Lockup-control solenoid
4. Lockup-selection solenoid
5. + for pressure switches and ROM
6. Dodge only - ground (G301) for PCS, SPCS & LCS
7. Secondary pressure-sensor signal
8. Stepper motor
9. Stepper motor
10. Stepper motor
11. Stepper motor
12. Not used
13. Not used
14. Not used
15. Not used
16. ROM
17. TFT signal
18. Primary pressure-sensor signal
19. Ground pressure sensors, ROM, TFT
20. Not used
21. ROM
22. ROM

4

Nissan



Nissan
PCS – 2 & case ground = 6.5 ohms
SPCS – 3 & case ground = 6.5 ohms
LCS – 12 & case ground = 6.5 ohms
LSS – 13 & case ground = 28 ohms

2. Pressure-control solenoid
3. Secondary pressure-control solenoid
12. Lockup-control solenoid
13. Lockup-selection solenoid
20. + for pressure switches and ROM
22. Not used
23. Secondary pressure-sensor signal
6. Stepper motor
7. Stepper motor
8. Stepper motor
9. Stepper motor
4. Not used
5. Not used
14. Not used
15. Not used
1. ROM
17. TFT signal
25. Primary pressure-sensor signal
19. Ground pressure sensors, ROM, TFT
18. Not used
11. ROM
16. ROM