SUBARU 4-ATAXLE - PHASE II

NO REVERSE

COMPLAINT: The transmission may exhibit a slight delayed forward engagement and will also have a no reverse condition. When the engine is shut off the vehicle lurches backward.

CAUSE: The Low Clutch Timing and Pressure Control Solenoid connectors have been switched.

CORRECTION: Because the Pressure Control and Low Clutch Timing Solenoids are in close proximity of each other, it is easy to switch their connectors. The connector ends are all the same color and are interchangeable, however, **the wire color should match the solenoid connector,** Refer to Figure 1 for solenoid identification.

The no reverse condition is a result of the Low Clutch Timing Solenoid running all the time due to the Pressure control Solenoid connector that is plugged into it. This causes oil to stroke the Reverse Inhibit Valve as seen in the hydraulic schematic in Figure 2. When the shift lever is in the reverse position and the engine is turned off, The Low Clutch Timing Solenoid is also turned off thereby draining the reverse inhibit circuit at which time the valve spring strokes the reverse inhibit valve in the opposite direction which will now momentarily charge the Low/Reverse clutch circuit causing momentary reverse engagement.

SERVICE INFORMATION:

The combination of the Low Clutch Timing Solenoid and the Reverse Inhibit Valve is what constitutes the Reverse Inhibit System in these vehicles.
In order to prevent an accidental shift into reverse at a speed above 6 MPH (10km/h), the Low Clutch Timing Solenoid is turned on to stroke the reverse inhibit valve. When the reverse inhibit valve strokes the Low/Reverse Clutch passage is blocked.

NO REVERSE & DELAYED FORWARD ENGAGMENT

SOLENOID & TCM GROUND LOCATION

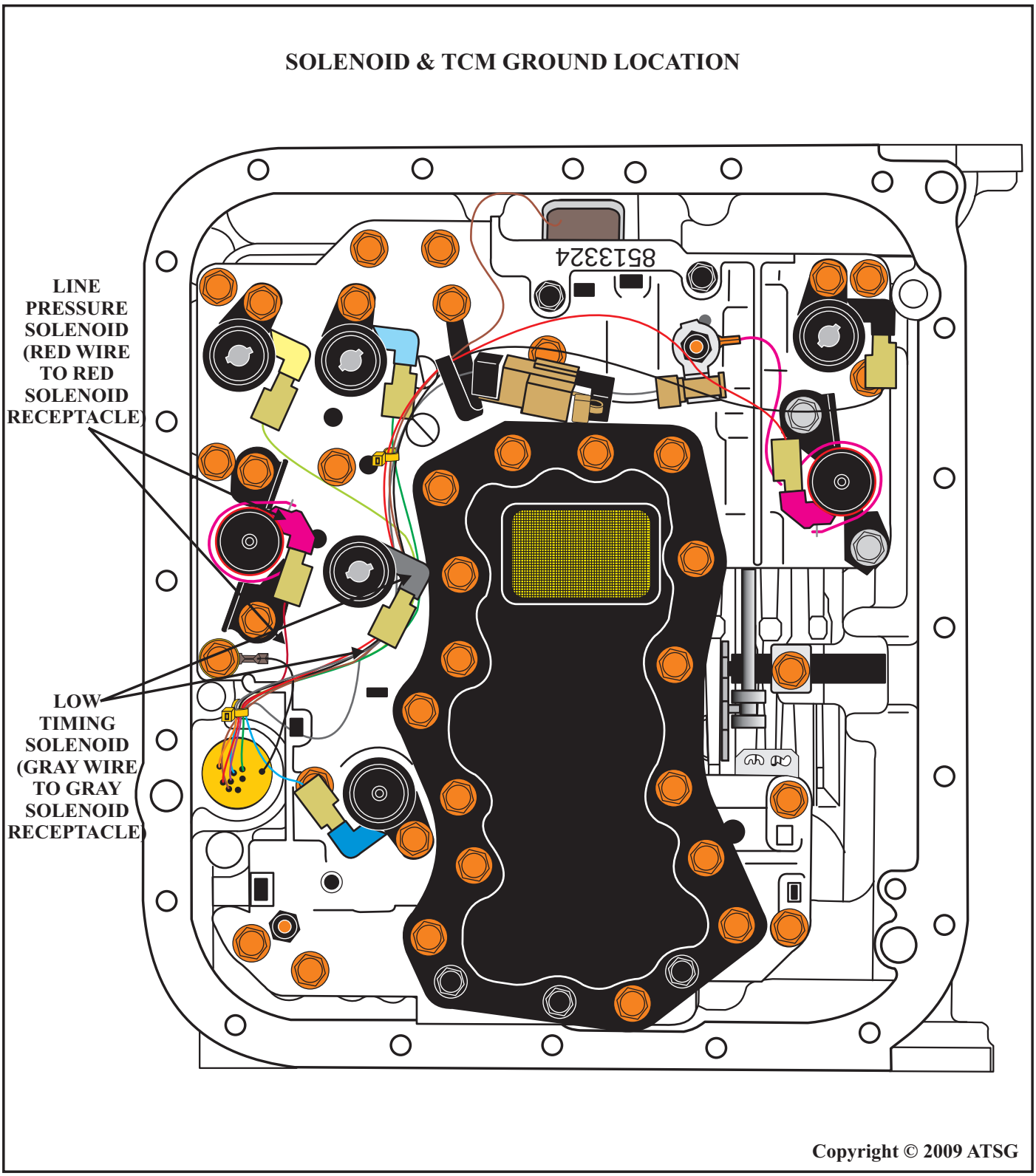

Figure 1

NO REVERSE & DELAYED FORWARD ENGAGMENT

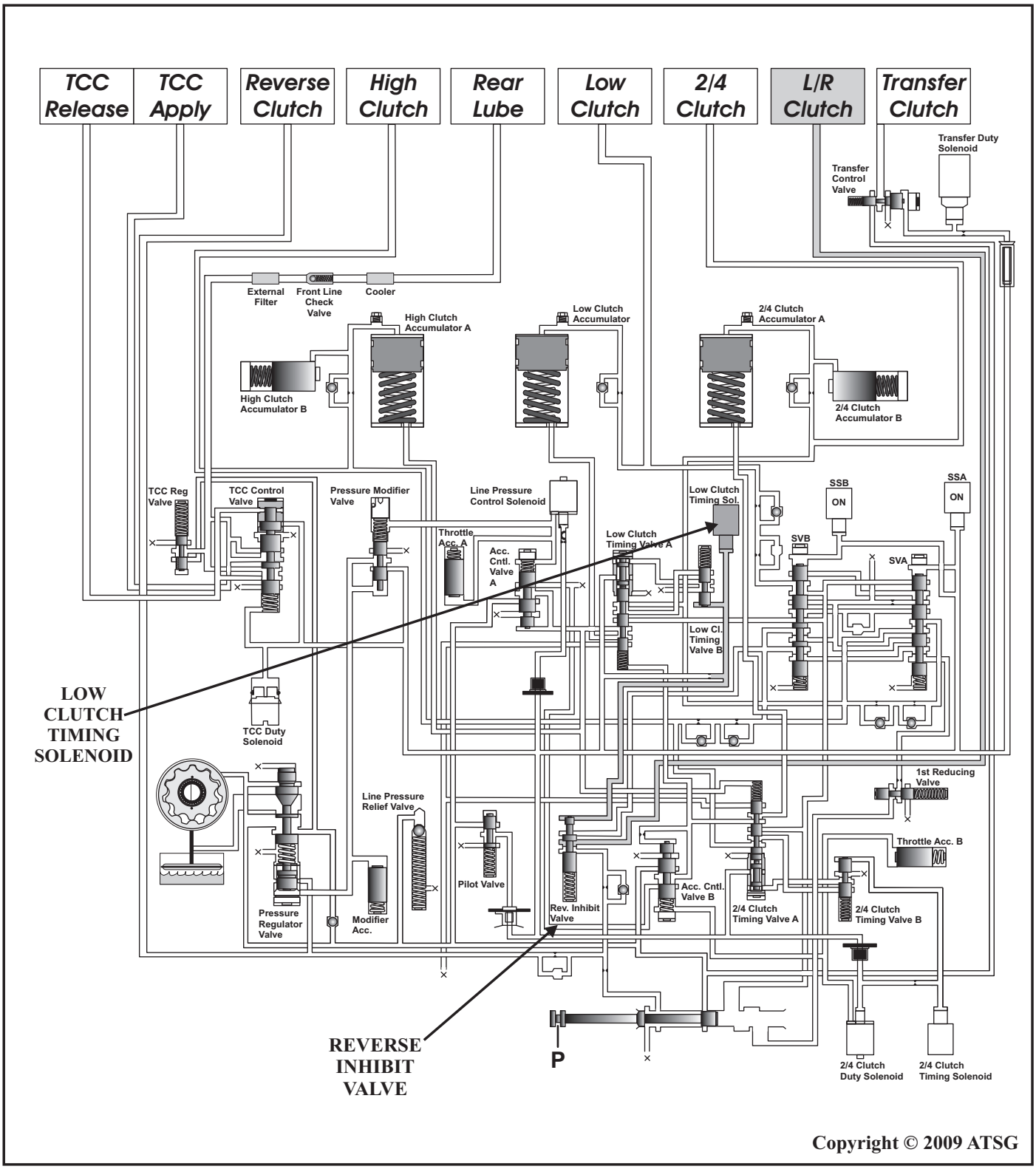

Figure 2