



## Technical Bulletin # 1345

**Transmission:** 4L60E

**Subject:** *Circuit Tests*

**Application:** 1993 to 1996 Model Years

**Issue Date:** October, 2010

---

# 4L60E

## Circuit Tests

1. Cut the EPC solenoid (force motor) high circuit wire.
2. Connect the red lead of the multi-meter (DVOM) to the wire going to the PCM.
3. Place the red lead into the amps jack and set the multi-meter to DC Amps.
4. Connect the black lead to the wire going to the transmission.
5. With the scan tool connected to the vehicles DLC; start the vehicle and compare the EPC desired amps (DES A) and EPC actual amps (ACT A) data pid display to the reading on the multi-meter.

Using the line pressure chart provided, if the reading on the scan tool indicates that the PCM is commanding low line pressure (Approx. 1 amp) and the multi-meter reading display indicates a high pressure command (low amps near zero), the PCM will need to be replaced.

# Technical Bulletin #1345

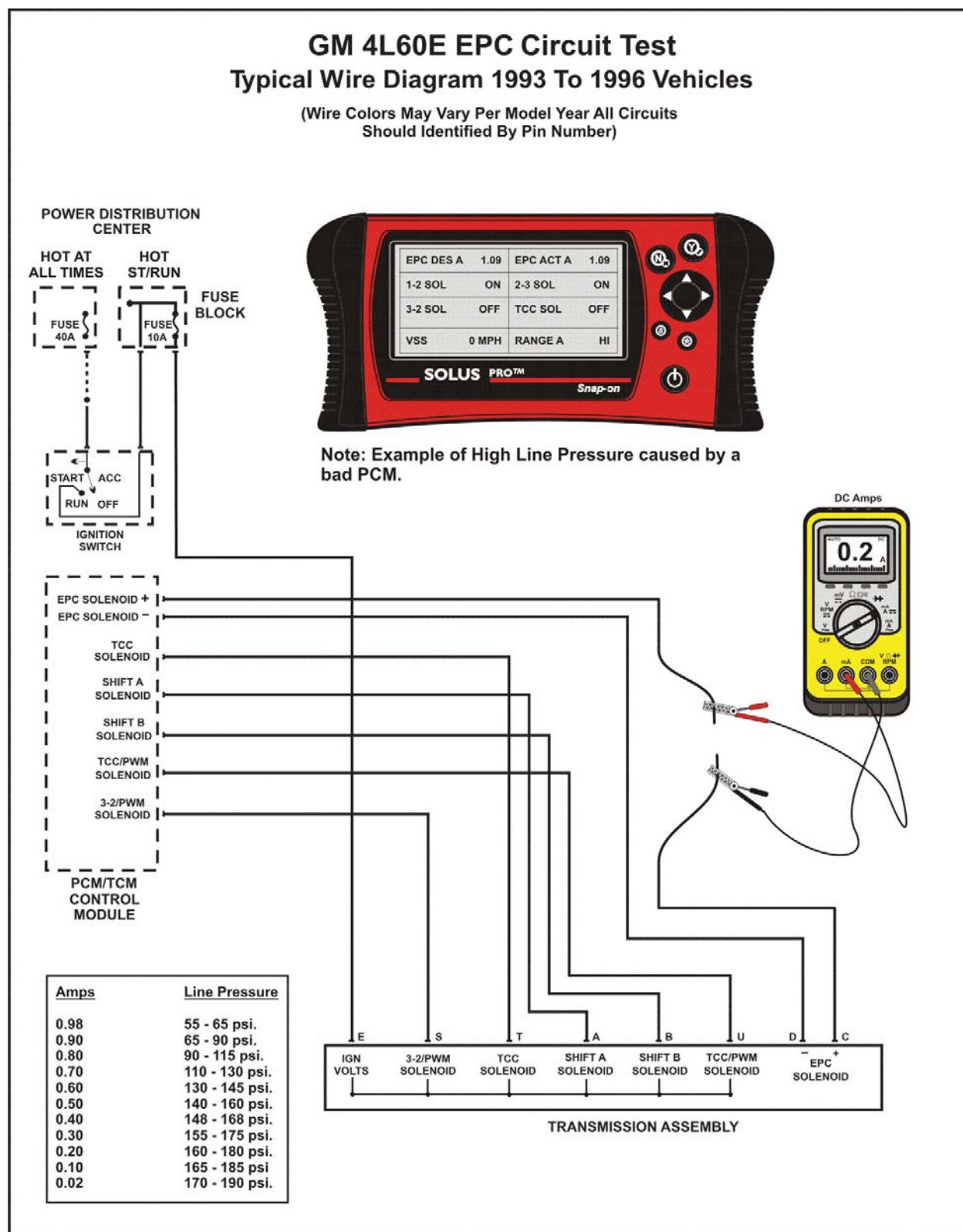
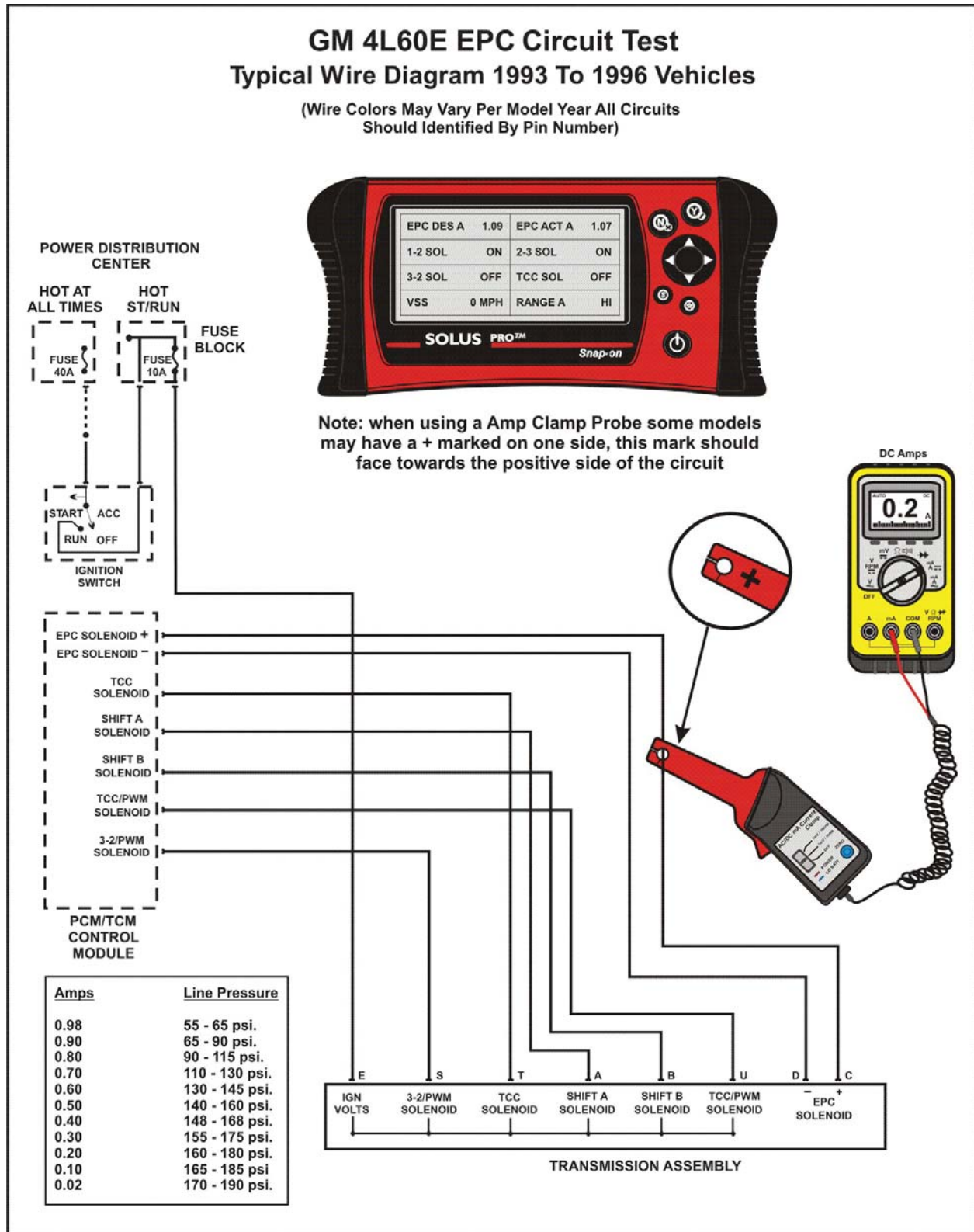


Figure 1 - High Line Pressure

# Technical Bulletin #1345

Same test using an amp clamp adapter or meter, clamped around the high side circuit wire.

**Note: Not necessary to cut EPC wire.** Some amp clamps may have a + sign on one side of the clamp jaws, this mark should face toward the high side power flow. If clamped incorrectly will “only” cause a negative reading on the multi-meter or amp clamp meter.



**Figure 2 - High Line Pressure**

# Technical Bulletin #1345

Solenoid codes that set during start up or when vehicle is being driven. Jump battery voltage through a fusible link to pin E at the transmission connector. Most common cause is a bad Ignition switch.

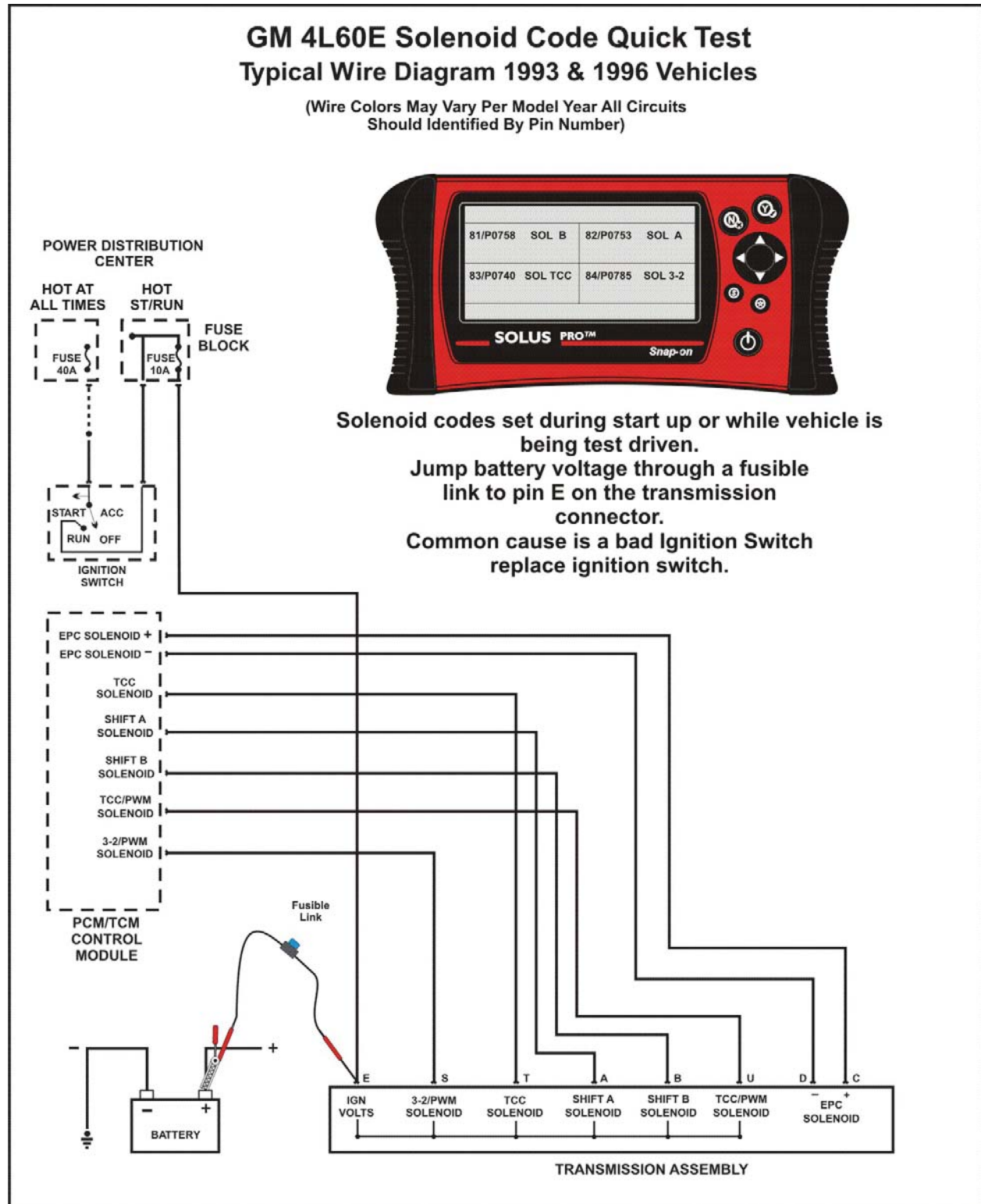


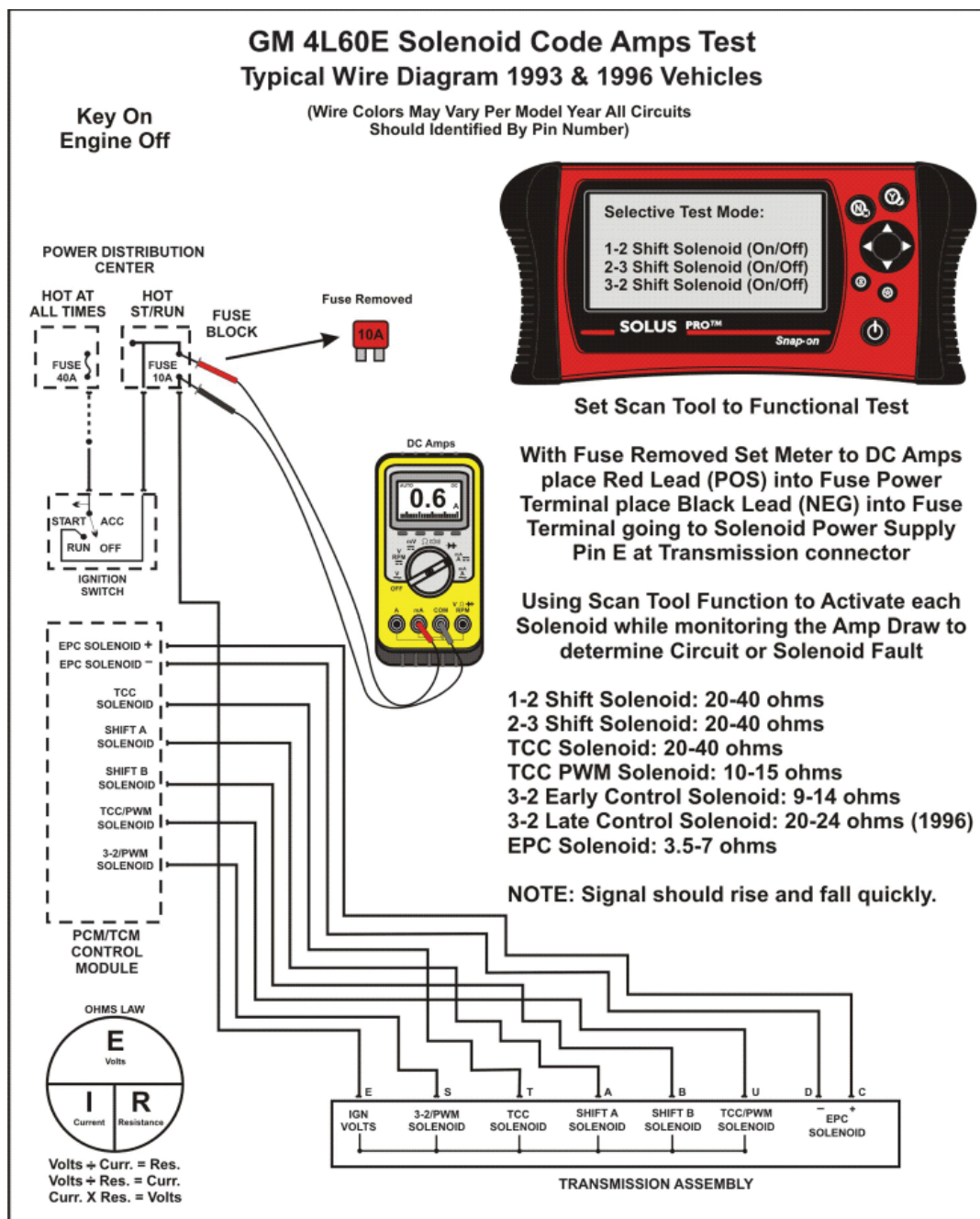
Figure 3 - Solenoid Codes



# Technical Bulletin #1345

1. Remove Power Supply Fuse to Pin E of the transmission connector.
2. With Multi-meter set on DC Amps; connect Red Lead (POS) to the Fuse Power Terminal, connect the Black Lead (NEG) to the Terminal going to the Transmission Connector Pin E.
3. Connect Scan Tool to the DCL, turn key on engine off, go to the scan tool's Functional Test Mode go to Solenoid Test.
4. Activate each Solenoid while monitoring the Amp Draw to determine which solenoid or circuit is at fault.

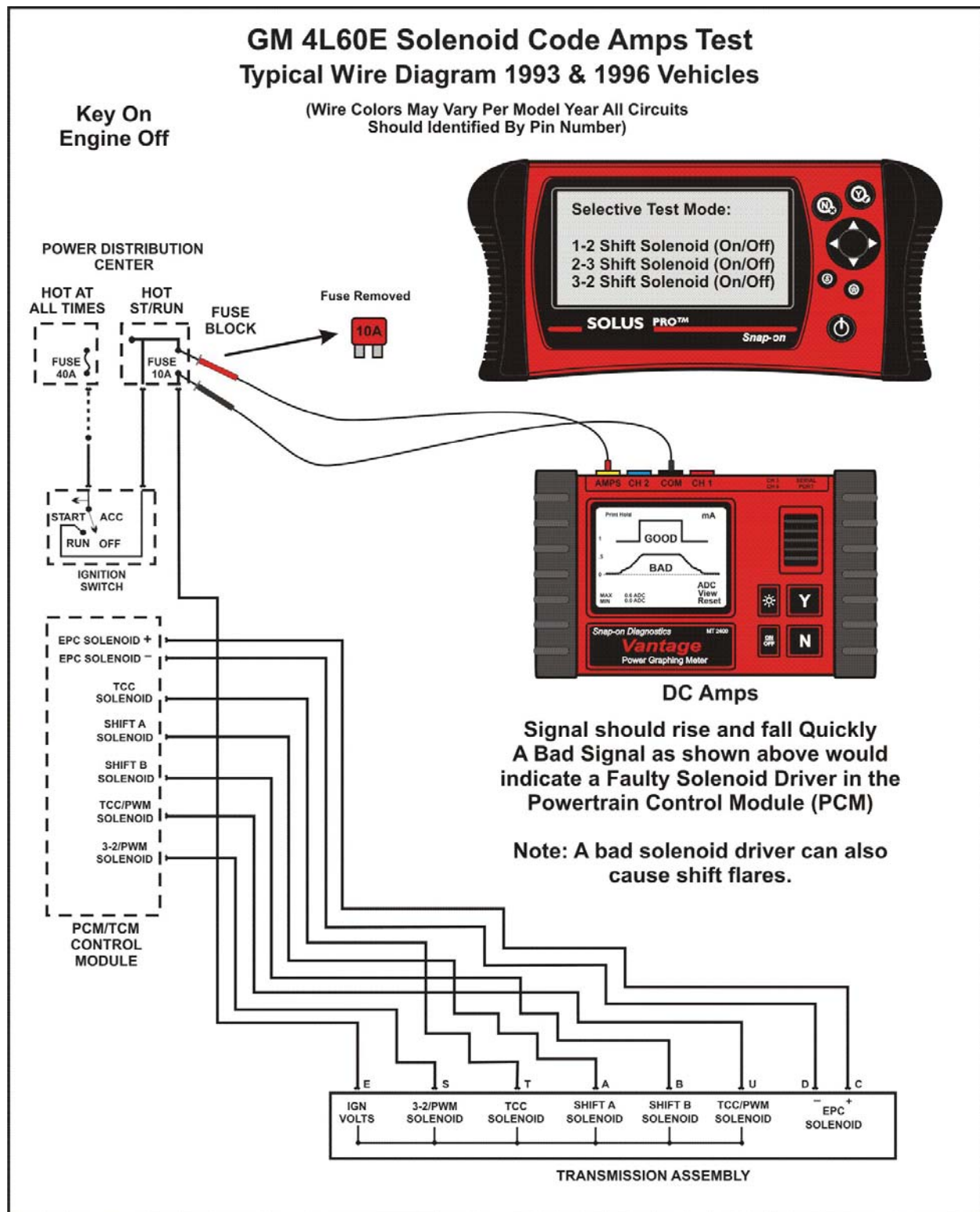
Note: Using the Ohms Law chart along with the solenoid resistance to determine what the correct amperage should be. Important: The Voltage should rise and fall quickly, best if using a Graphing Meter or Oscilloscope (figure 5). A bad signal is caused by a faulty PCM solenoid driver.



**Figure 4 - Solenoid Quick Amp Check**

# Technical Bulletin #1345

**Note:** A bad solenoid driver can cause flared shifts.



**Figure 5 - Solenoid Quick Amp Check with Graphing Meter or Oscilloscope**