Countries:	BAHAMAS, BOLIVIA, BELIZE, CANADA, CHILE, TAIWAN, COLOMBIA, COSTA RICA, DOMINICAN REPUBLIC, ECUADOR, EL SALVADOR, TRINIDAD AND TOBAGO, UNITED STATES, URUGUAY, VENEZUELA, MEXICO, ARUBA, NICARAGUA, PERU, PUERTO RICO, Curaçao, GUAM, GUATEMALA, GUYANA, HAITI, HONDURAS, JAMAICA, KOREA, SOUTH KOREA, PANAMA	**Document ID**:	IK0800092
Availability:	ISIS, Bus ISIS, FleetISIS, Body Builder	**Revision**:	9
Major System:	ELECTRICAL SYSTEM	**Created**:	8/22/2007
Current Language:	English	**Last Modified**:	12/14/2015
Other Languages:	Français, Español,	**Author**:	David Smith
Viewed:	36353		

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Title: The First Check to make when Troubleshooting any Body Controller or ESC Issue

Applies To: All Vehicles with ESCs or Body Controllers

Change Log

Please refer to the change log text box below for recent changes to this article:

12/14/2015 - Added Gen4 BCM information.
04/01/2015 - Updated link to ProStar Circuit Diagram.

Description

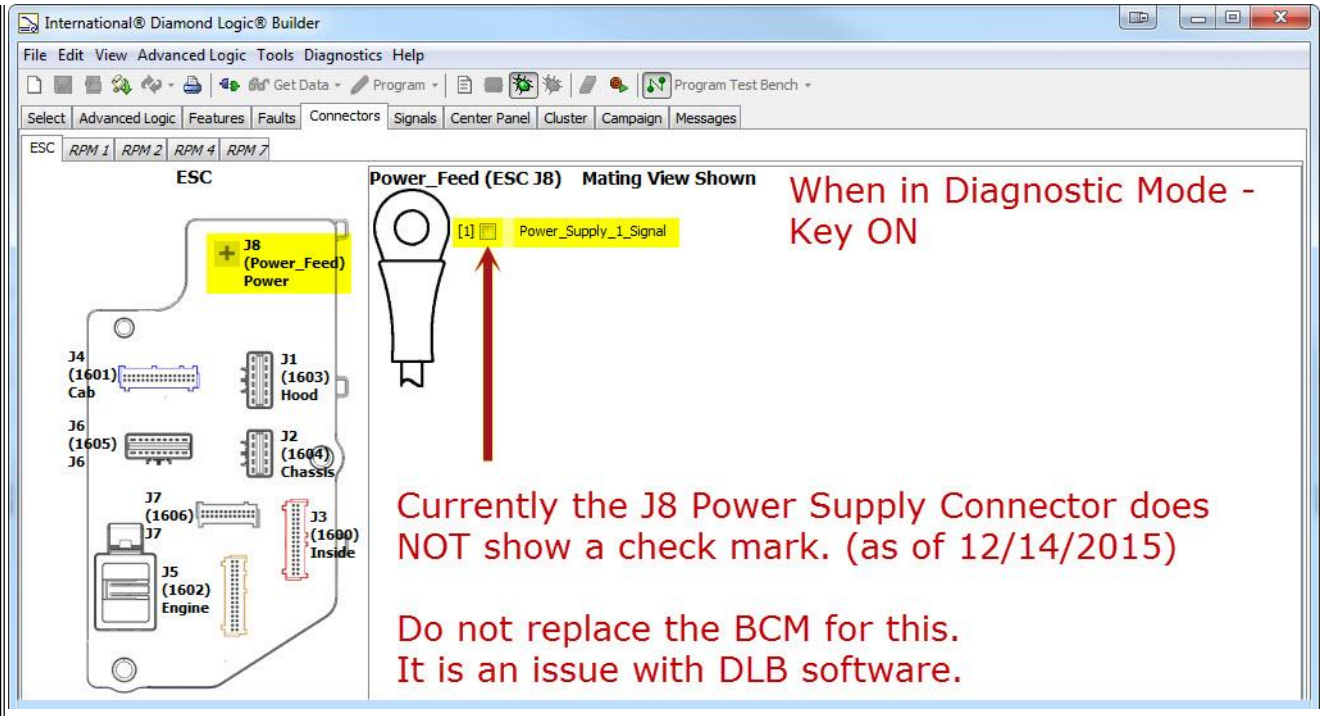
This outlines how to verify the 2015-Current Body controller, the 2007-2015 Body Controller, and pre-2007 ESC is receiving proper voltage and ground inputs to power up properly.

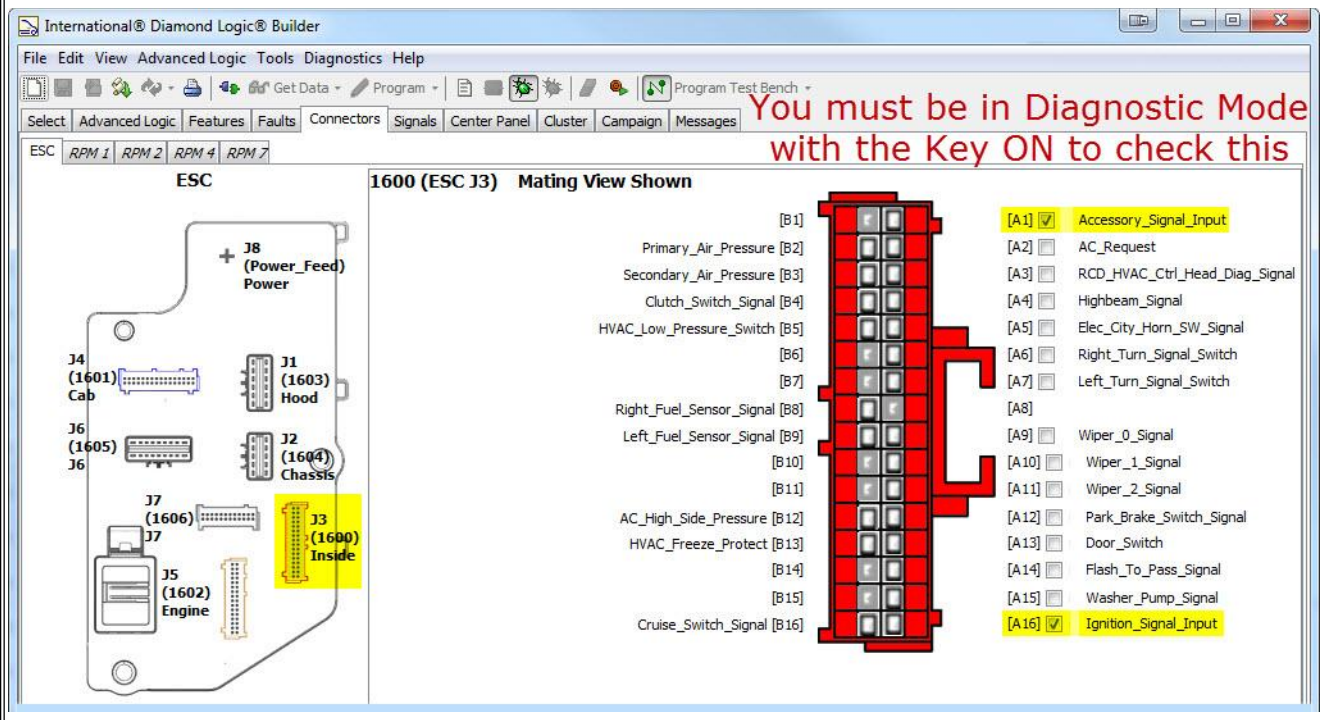
Troubleshooting

1. Hook up DLB and monitor these pins in DLB. There should be a check mark next to both the **ignition**, **accessory** and **power feed** signals. Don't go by the voltage number reading in DLB, it isn't accurate. Only look for the check marks. You will probably see that one of these three signals is not getting a check mark beside it.
2. Hook up your break out box to the 1600 connector of the Body Controller and check the voltage on all 3 power pins with a multimeter. For pin numbers, see below.
3. If both 1600 connector pins have voltage, but the problem persists, then you need to load test the two 1600 connector pins through the breakout box with a headlamp using the Body Controller ground circuits.
4. Load test the main battery circuit to the Body Controller J8 (Gen 4 BCM) or J6 (Gen II BCM or ESC) power feed stud.
5. Remove Mega-Fuse. Clean it thoroughly and inspect for cracks. Ohm the fuse end to end to insure it is not cracked internally as this has been known to be a problem.

Body Controller Signals to Watch

Figure 1 - 2015 - Present Gen 4 Body Controller


International® Diamond Logic® Builder
File Edit View Advanced Logic Tools Diagnostics Help
Get Data Program Program Test Bench
Select Advanced Logic Features Faults Connectors Signals Center Panel Cluster Campaign Messages
ESC RPM 1 RPM 2 RPM 4 RPM 7
ESC
J8 (Power_Feed) Power
J4 (1601) Cab
J1 (1603) Hood
J6 (1605) J6
J2 (1604) Chassis
J7 (1606) J7
J3 (1600) Inside
J5 (1602) Engine
Power_Feed (ESC J8) Mating View Shown
[1] Power_Supply_1_Signal
When in Diagnostic Mode - Key ON
Currently the J8 Power Supply Connector does NOT show a check mark. (as of 12/14/2015)
Do not replace the BCM for this.
It is an issue with DLB software.


International® Diamond Logic® Builder
File Edit View Advanced Logic Tools Diagnostics Help
Get Data Program Program Test Bench
Select Advanced Logic Features Faults Connectors Signals Center Panel Cluster Campaign Messages
ESC RPM 1 RPM 2 RPM 4 RPM 7
You must be in Diagnostic Mode with the Key ON to check this
ESC
J8 (Power_Feed) Power
J4 (1601) Cab
J1 (1603) Hood
J6 (1605) J6
J2 (1604) Chassis
J7 (1606) J7
J3 (1600) Inside
J5 (1602) Engine
1600 (ESC J3) Mating View Shown
[B1]
Primary_Air_Pressure [B2]
Secondary_Air_Pressure [B3]
Clutch_Switch_Signal [B4]
HVAC_Low_Pressure_Switch [B5]
[B6]
[B7]
Right_Fuel_Sensor_Signal [B8]
Left_Fuel_Sensor_Signal [B9]
[B10]
[B11]
AC_High_Side_Pressure [B12]
HVAC_Freeze_Protect [B13]
[B14]
[B15]
Cruise_Switch_Signal [B16]
[A1] Accessory_Signal_Input
[A2] AC_Request
[A3] RCD_HVAC_Ctrl_Head_Diag_Signal
[A4] Highbeam_Signal
[A5] Elec_City_Horn_SW_Signal
[A6] Right_Turn_Signal_Switch
[A7] Left_Turn_Signal_Switch
[A8]
[A9] Wiper_0_Signal
[A10] Wiper_1_Signal
[A11] Wiper_2_Signal
[A12] Park_Brake_Switch_Signal
[A13] Door_Switch
[A14] Flash_To_Pass_Signal
[A15] Washer_Pump_Signal
[A16] Ignition_Signal_Input

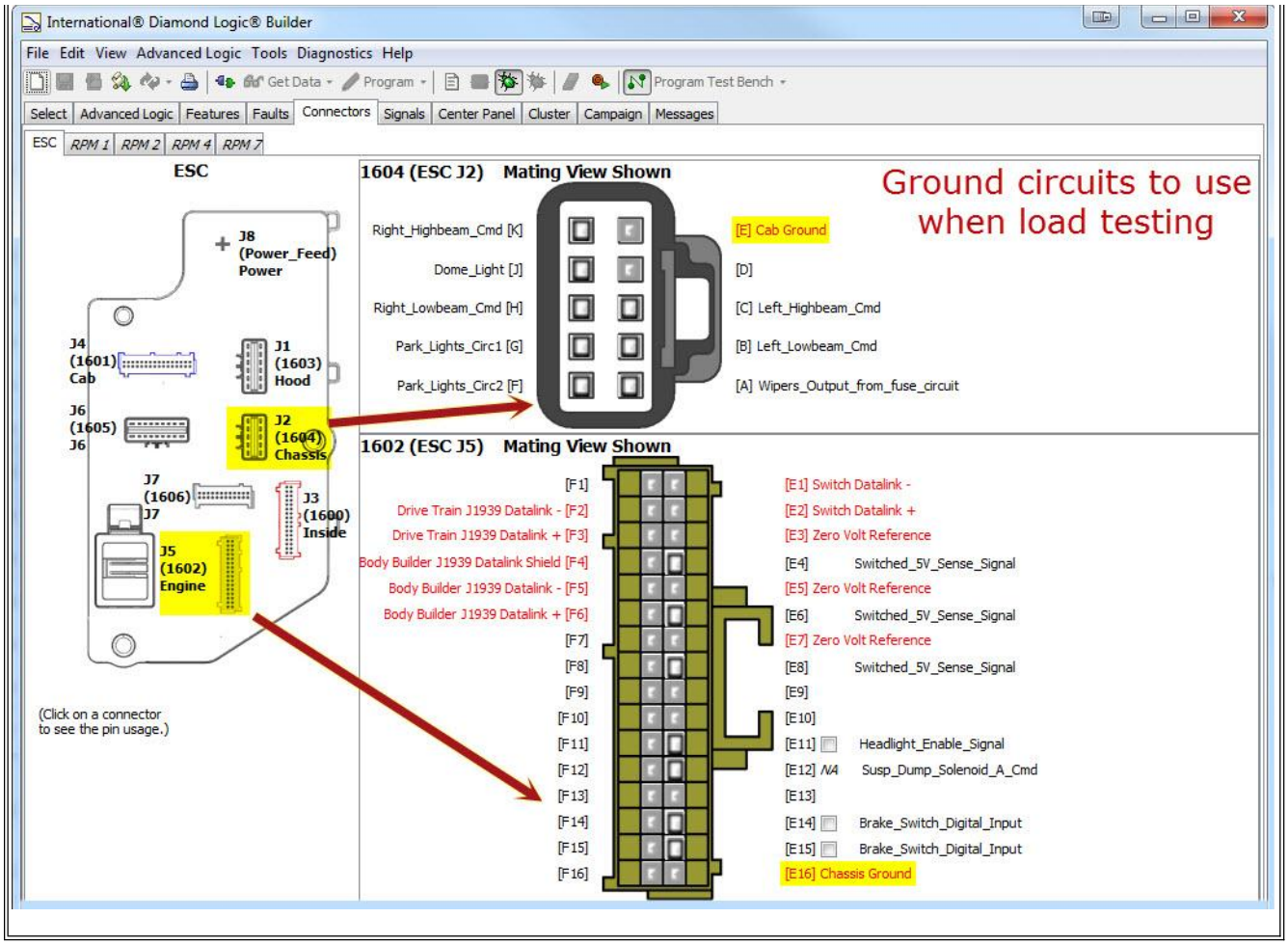
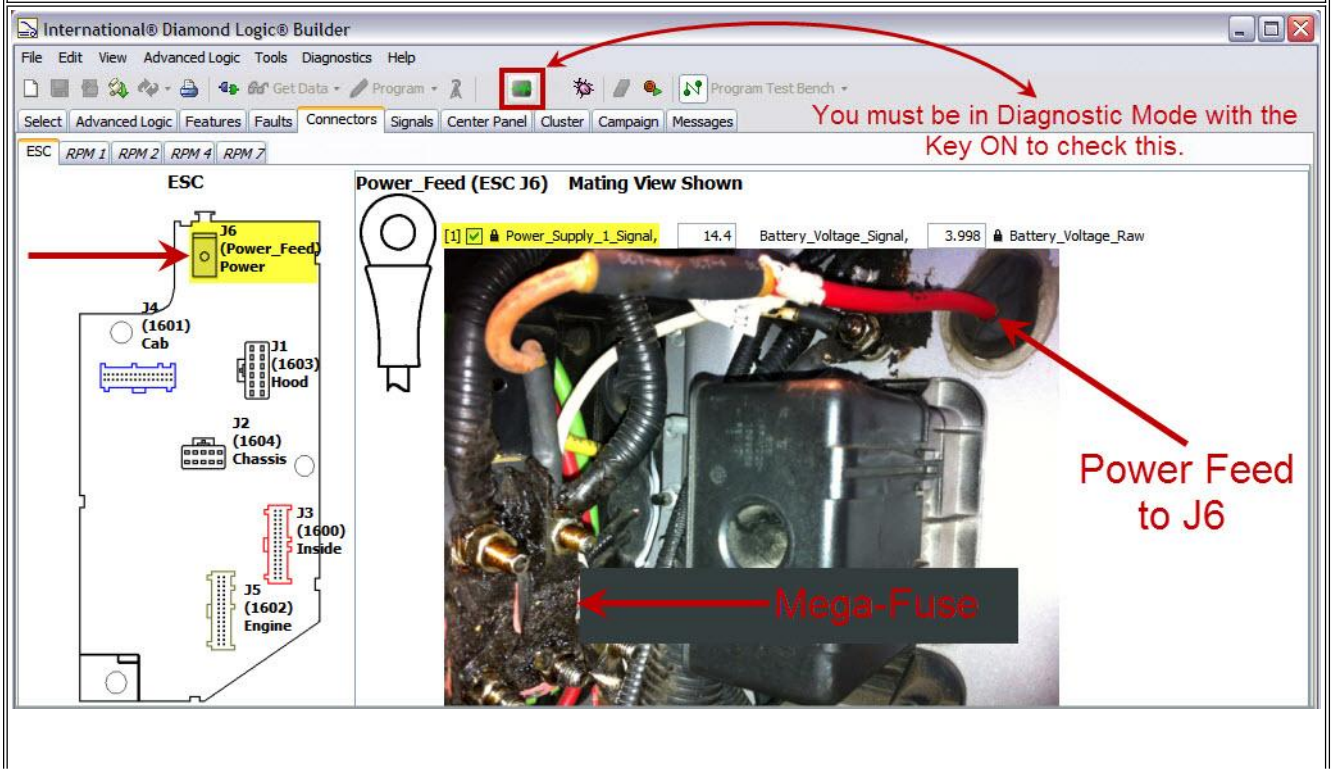
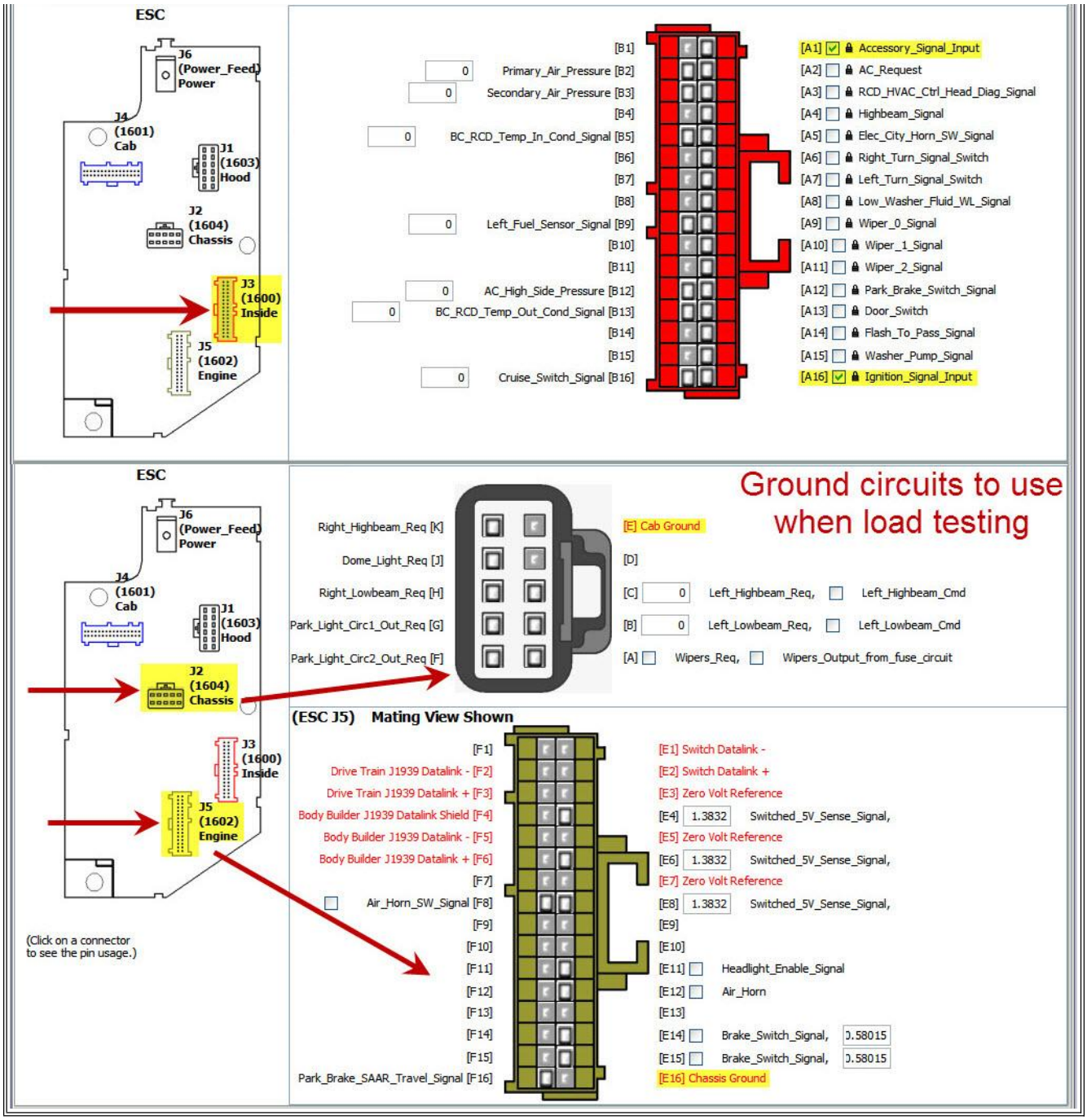


Figure 2 - 2007-2015 Gen II Body Controller





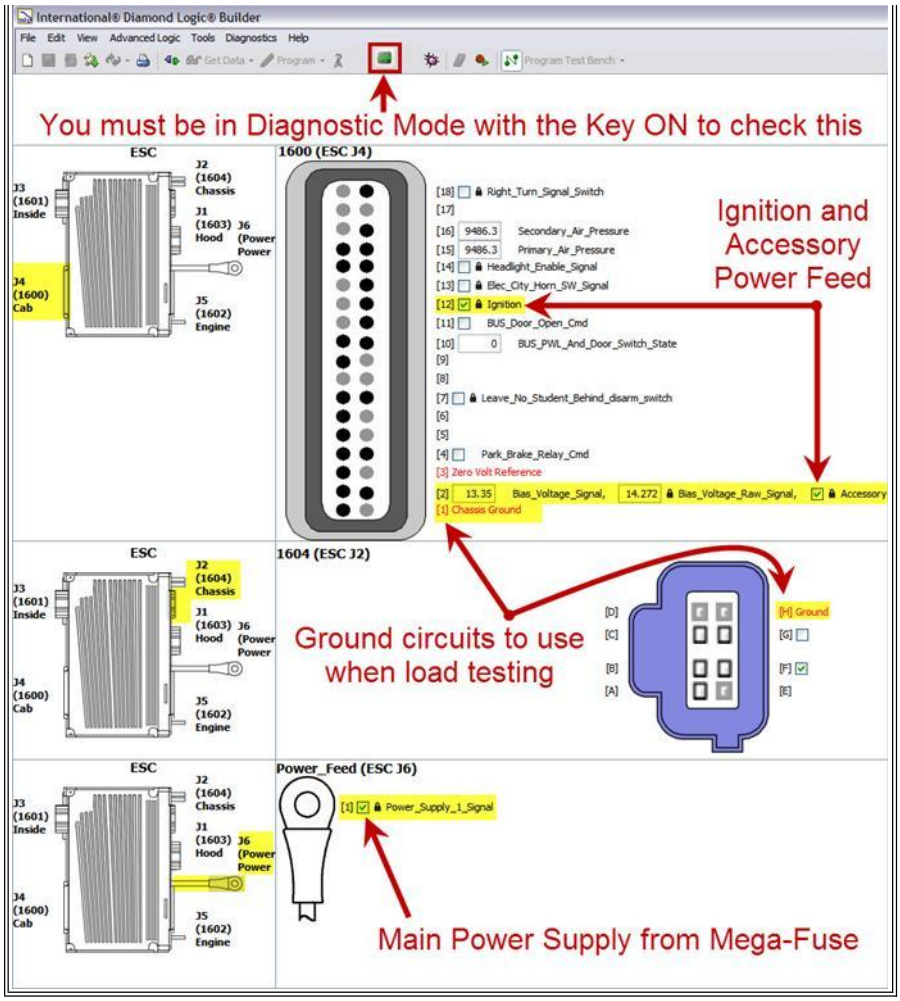
Body Controller Circuit Diagrams

- ProStar / LoneStar
- DuraStar / WorkStar / TranStar
- TerraStar

ESC Signals to Watch

- The ESC works the same way as the Body Controller. Here are the Connector and Pin locations for the ESC

Figure 3 - Pre-2007 ESC



ESC Circuit Diagrams

- All Models with ESC

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