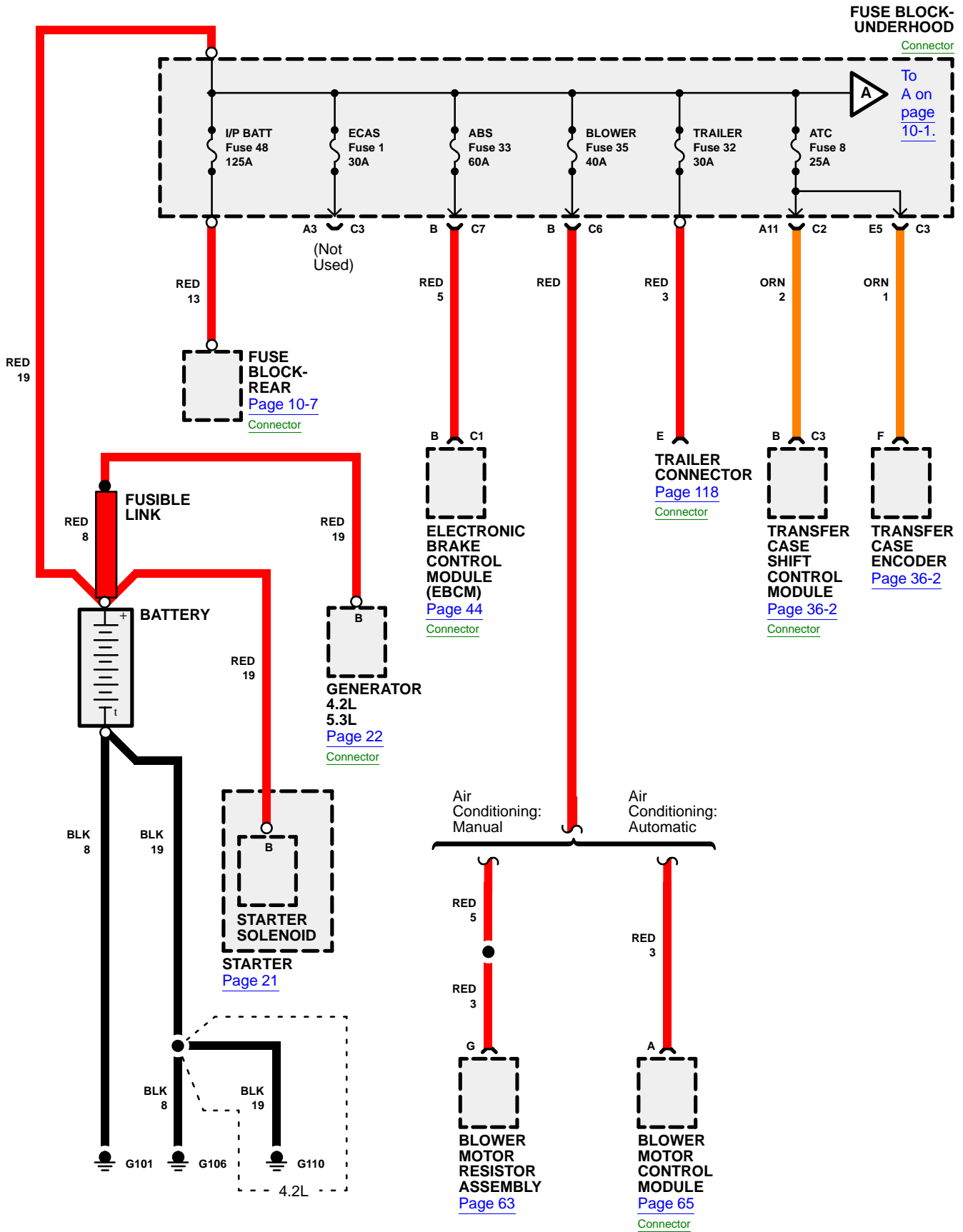


# POWER DISTRIBUTION

## Circuit Schematic



# IGNITION SYSTEM

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## Component Location Index

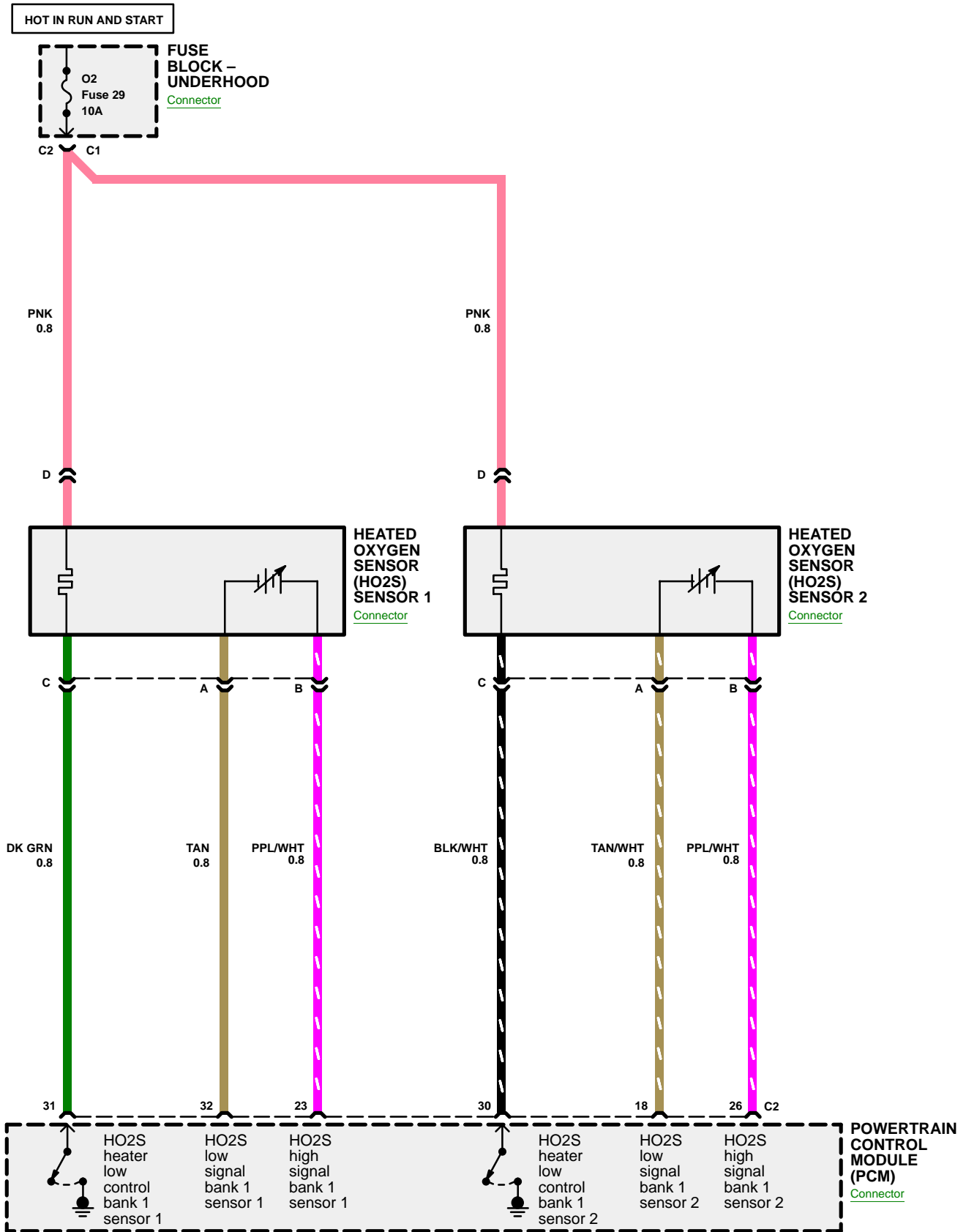
(Refer to Section 201 for photographs.)

<b>Component</b>	<b>Photo No.</b>
Fuse Block-Underhood . . . . .	Left side of engine compartment . . . . . 3
Ignition Coil 1 (4.2L) . . . . .	Top of engine . . . . . 16
Ignition Coil 1 (5.3L) . . . . .	Top left side of engine . . . . . 23
Ignition Coil 2 (4.2L) . . . . .	Top of engine . . . . . 16
Ignition Coil 2 (5.3L) . . . . .	Top right side of engine . . . . . 20
Ignition Coil 3 (4.2L) . . . . .	Top of engine . . . . . 16
Ignition Coil 3 (5.3L) . . . . .	Top left side of engine . . . . . 23
Ignition Coil 4 (4.2L) . . . . .	Top of engine . . . . . 16
Ignition Coil 4 (5.3L) . . . . .	Top right side of engine . . . . . 20
Ignition Coil 5 (4.2L) . . . . .	Top of engine . . . . . 16
Ignition Coil 5 (5.3L) . . . . .	Top left side of engine . . . . . 23
Ignition Coil 6 (4.2L) . . . . .	Top of engine . . . . . 16
Ignition Coil 6 (5.3L) . . . . .	Top right side of engine . . . . . 20
Ignition Coil 7 (5.3L) . . . . .	Top left side of engine . . . . . 23
Ignition Coil 8 (5.3L) . . . . .	Top right side of engine . . . . . 20
Powertrain Control Module (PCM) (4.2L) . . . . .	Left front of engine . . . . . 5
Powertrain Control Module (PCM) (5.3L) . . . . .	Left front of engine compartment . . . . . 25
<b>Connector</b>	
C108 (5.3L) (8-LT GRY) . . . . .	Top right side of engine . . . . . 20
C109 (5.3L) (8-LT GRY) . . . . .	Top left side of engine . . . . . 23
<b>Ground</b>	
G109 (4.2L) . . . . .	Lower left side of engine . . . . . 37
G109 (5.3L) . . . . .	Lower left side of engine . . . . . 38

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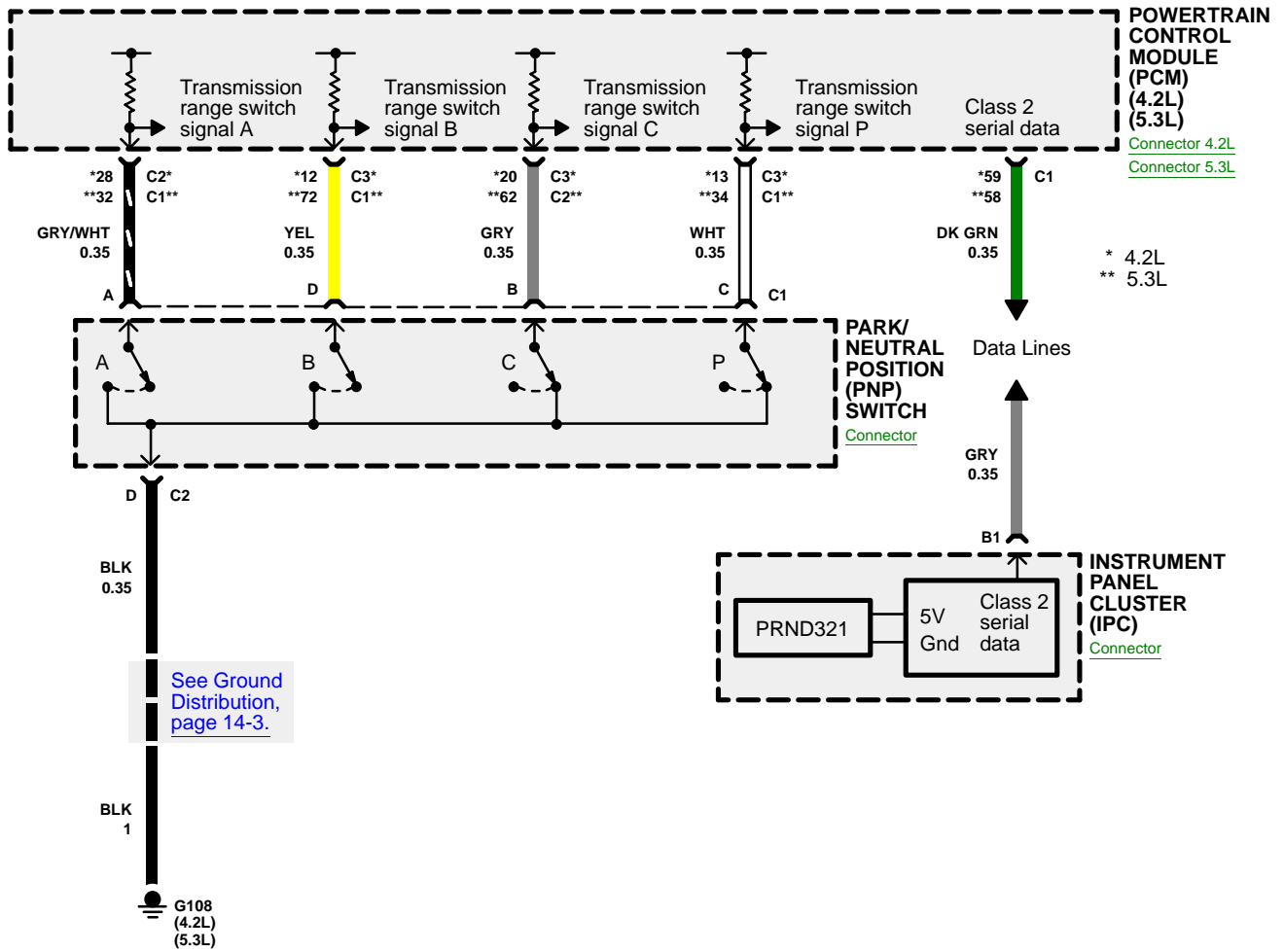
# ENGINE CONTROLS: 4.2L

## Circuit Schematic



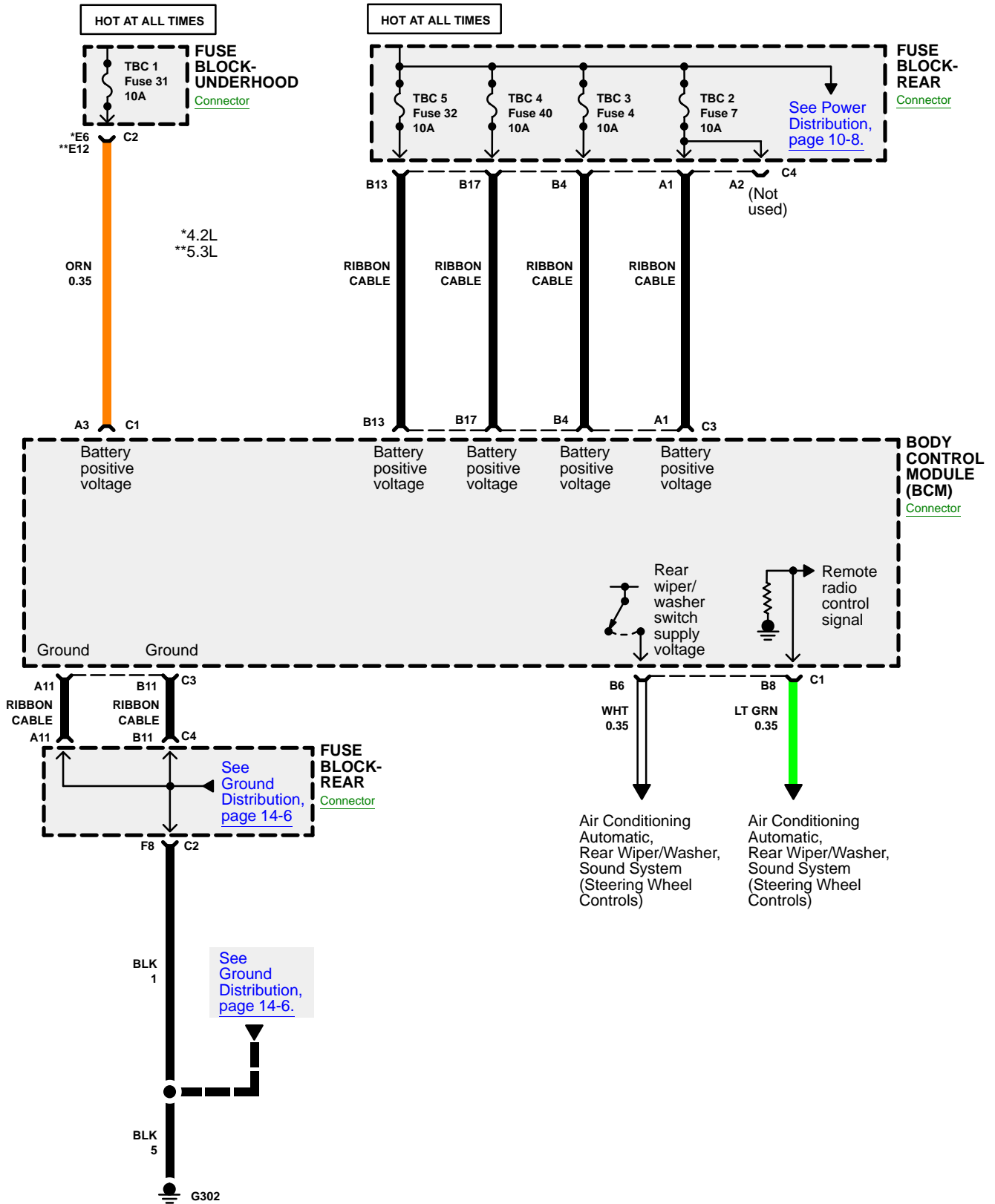
# AUTOMATIC TRANSMISSION CONTROLS

## Circuit Schematic



# BODY CONTROL MODULE SYSTEM

## Circuit Schematic



# **WINDSHIELD WIPER/WASHER: VARIABLE INTERMITTENT**

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## **Circuit Operation**

### **Windshield Wiper/Washer System Components**

The windshield wiper/washer system consists of the following components:

- Windshield wiper/washer switch
- Windshield wiper motor
- Windshield washer pump
- Windshield washer relay
- Outside moisture sensor
- FRT WIPER 25A fuse
- W/S WASH 15A fuse

### **Windshield Wiper/Washer System Operation**

Accessory voltage and ground is supplied to the windshield wiper motor and provides the power for operating the wiper motor and logic power to the wiper motor module. The WASH, MIST, LOW, and DELAY modes are controlled by the windshield wiper/washer switch through a series of internal resistors. The windshield wiper switch supply voltage circuit is a 12-volt reference from the wiper motor module to the wiper/washer switch, and the switch position determines the point on the resistor assembly where the reference voltage is applied. The windshield wiper switch signal 1 circuit supplies the voltage from the resistor assembly to the wiper motor module and the signal voltage determines the operating mode. High speed operation is controlled by the windshield wiper/washer switch through the windshield wiper switch high signal circuit. The windshield wiper switch high signal circuit is supplied 12 volts by the wiper motor module and when the wiper/washer switch is turned to the HIGH position the windshield wiper switch high signal circuit is grounded through the switch ground circuit. The windshield washer pump is controlled through the windshield wash relay. The windshield wash relay coil and switch is supplied battery positive voltage, and during WASH mode the wiper motor module grounds the washer relay control circuit energizing the relay. When the relay is energized battery positive voltage to the switch side of the relay is supplied to the washer pump control circuit. The

windshield wiper switch signal 2 circuit from the wiper motor module is used by the body control module as a signal to turn on the low beam headlamps.

### **Moisture Sensitive Wipers**

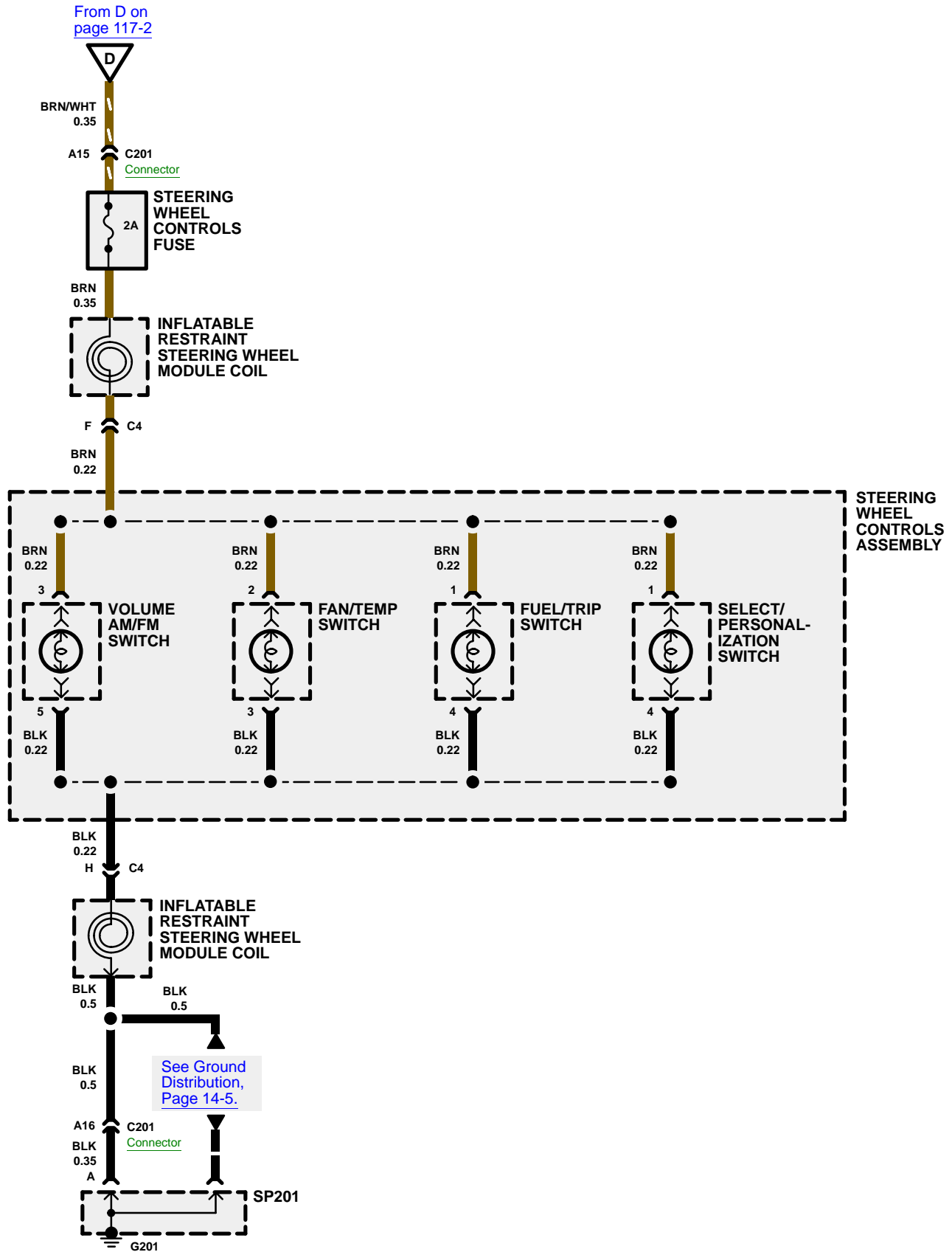
The outside moisture sensor monitors moisture accumulation on the windshield and provides an input to the windshield wiper motor module. If no moisture is detected, the wipers will not operate in the DELAY modes. The windshield wiper switch signal 1 circuit is used to activate the automatic operating mode and to adjust the level of sensitivity to moisture accumulation when commanding a wiper motor wipe cycle. The moisture sensor sends a PWM voltage signal to the wiper motor module through the moisture sensor signal 1 circuit whenever the ignition is in the accessory or run positions. If at anytime the moisture sensor signal 1 circuit PWM voltage signal input to the wiper motor module is lost, the wiper motor module will use the input from the windshield wiper switch signal 1 circuit to operate the wiper motor at continuous variable delay intervals.

### **Check Washer Fluid Message**

The Check Washer Fluid message is controlled by the instrument panel cluster using an input from the washer fluid level switch. The washer fluid level signal circuit is supplied ignition voltage through a resistor then monitored within the instrument cluster. The washer fluid level switch is normally open so the instrument cluster detects ignition voltage on the washer fluid level signal circuit whenever the washer fluid level is not low. When the washer fluid reaches the point where the driver should be informed that the washer fluid is low, the washer fluid level switch closes. When the washer fluid level switch is closed the washer fluid level signal circuit voltage is pulled low, and the instrument panel displays the Check Washer Fluid message on the driver information center. In order to prevent the Check Washer Fluid message from being displayed while sloshing is occurring in the washer fluid container, the instrument cluster is programmed with a 1 minute delay before changing states of the Check Washer Fluid message during an ignition cycle.

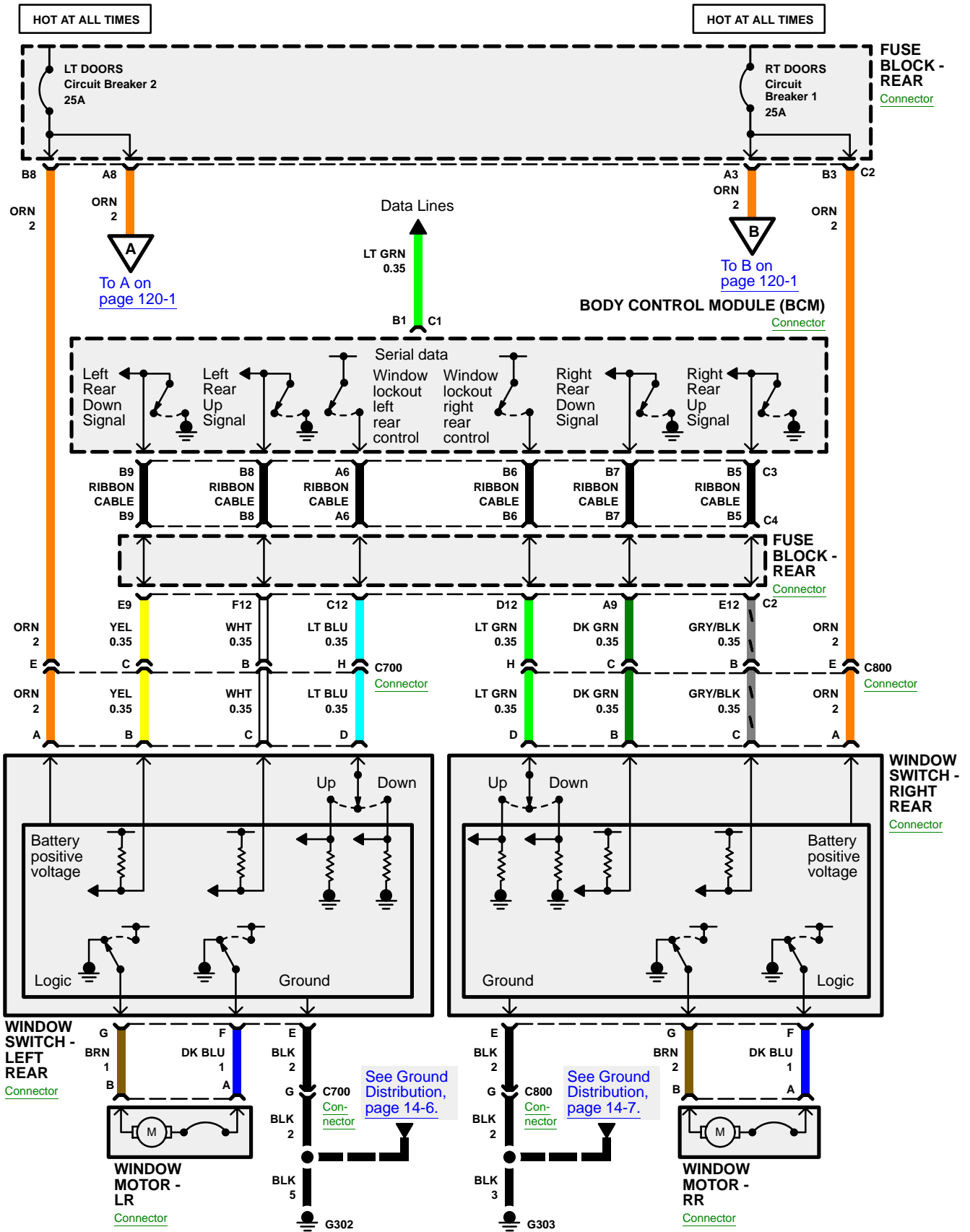
# DASH AND CONSOLE LIGHTS

## Circuit Schematic



# POWER WINDOWS

## Circuit Schematic





# ANTI-THEFT SYSTEM

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## Circuit Operation

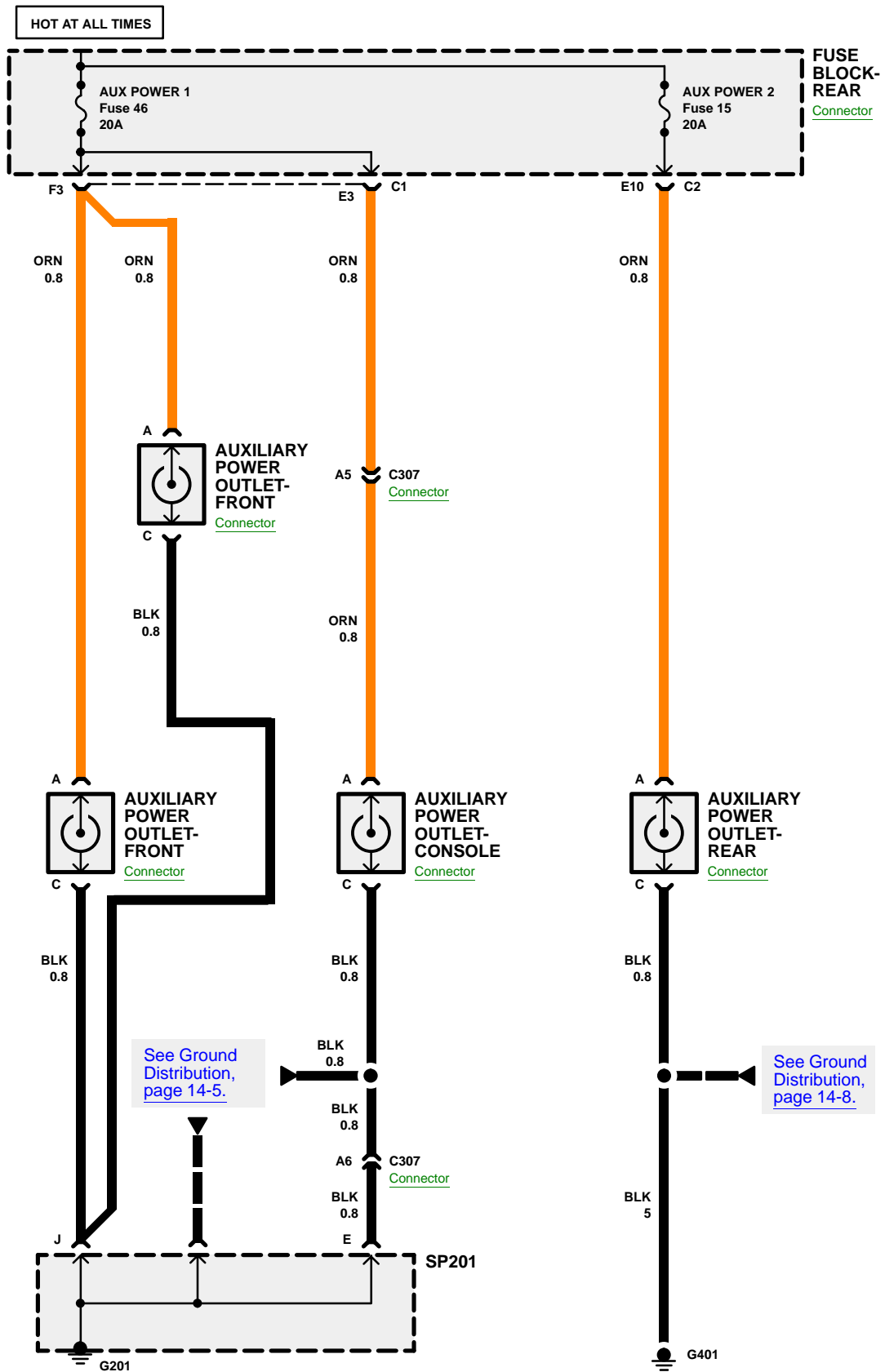
### Circuit Description

The Passlock™ system is provided in order to prevent vehicle theft if the ignition lock cylinder is forced to rotate or the ignition switch is operated while separated from the ignition lock cylinder case. The body control module (BCM) provides security system sensor power and low reference for the Passlock™ sensor. The BCM also measures the security system sensor voltage.

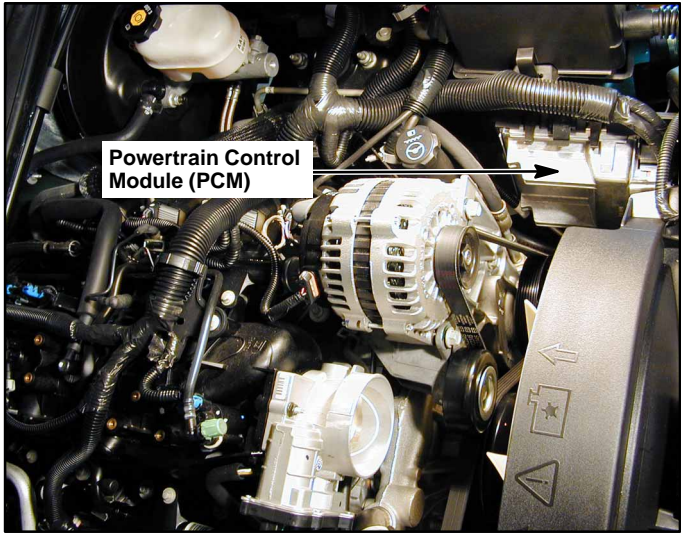
When the correct key is used to start the vehicle, a magnet on the lock cylinder passes close to the Passlock™ sensor within the ignition lock cylinder case. The magnet activates the security hall effect sensor in the Passlock™ sensor which completes a circuit from the security sensor signal circuit through a resistor to the security sensor low reference circuit. The resistance value will vary from vehicle to vehicle. The BCM will measure the voltage on the security sensor signal circuit and compare this voltage to a previously learned voltage. If the voltage measured is within the valid range, the BCM will send a class 2 message to the powertrain control module (PCM) to enable vehicle starting. If the voltage measured is not within the valid range, a class 2 message will be sent to the PCM to disable starting of the vehicle.

# AUXILIARY POWER OUTLETS

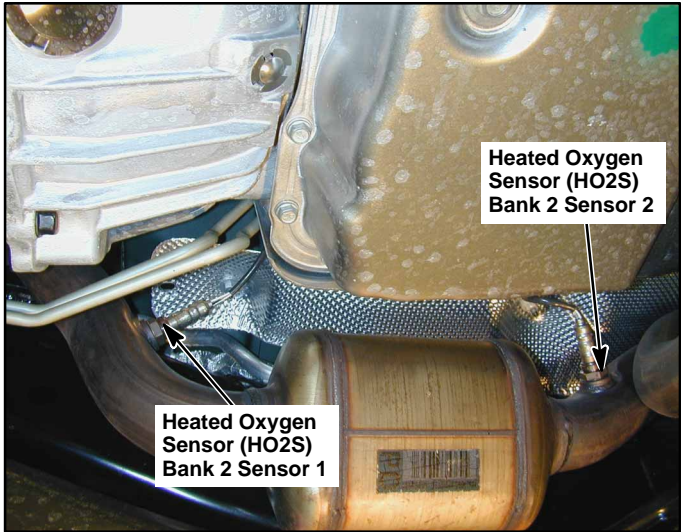
## Circuit Schematic



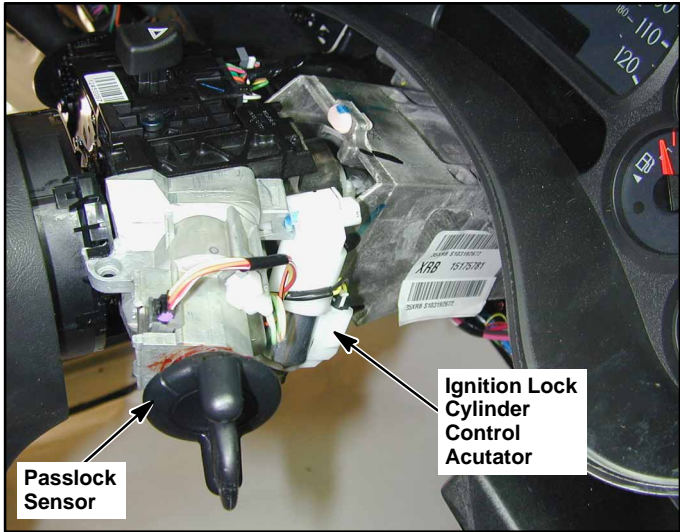
**25. Left Front of Engine Compartment: 5.3L**



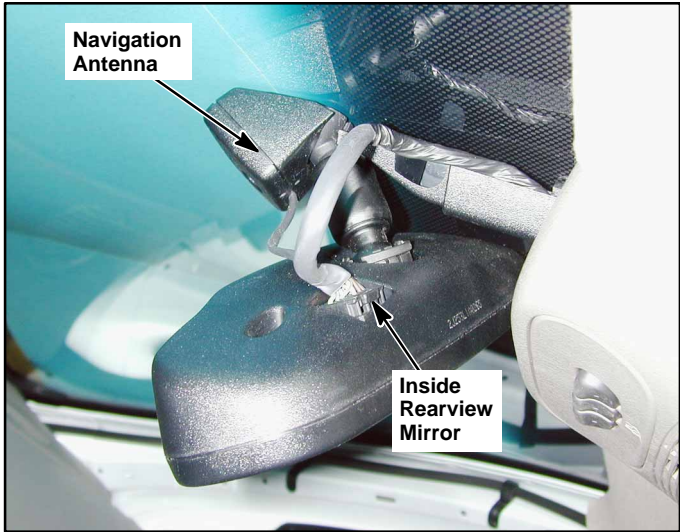
**46. Right Exhaust Downpipe: 5.3L**



## 67. Right Side of Steering Column

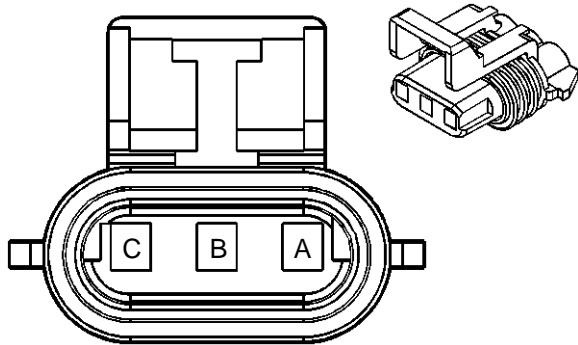


## 88. Center of Windshield



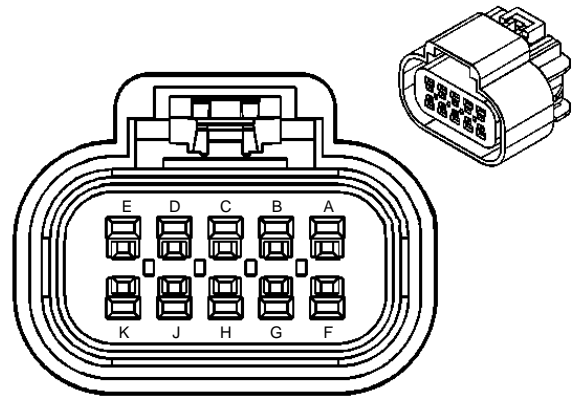
# HARNES CONNECTOR VIEWS

A/C Compressor Clutch Assembly



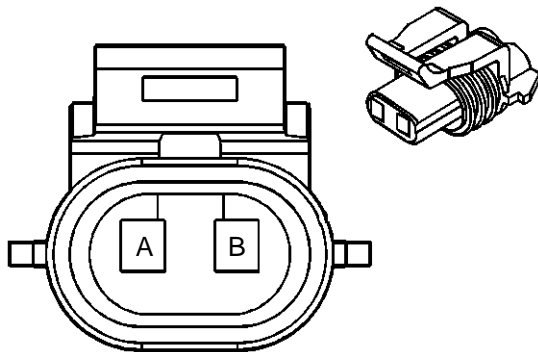
684807

Accelerator Pedal Position (APP) Sensor



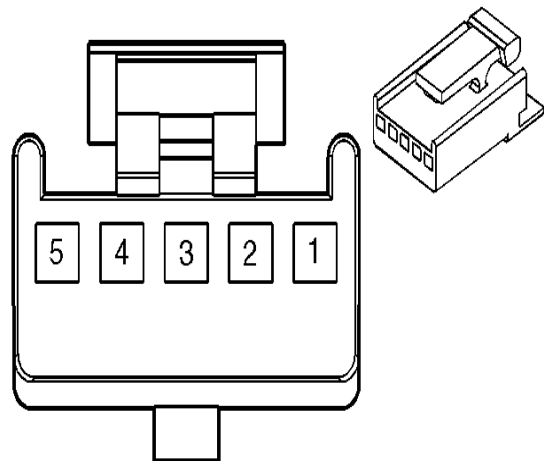
632344

A/C Low Pressure Switch

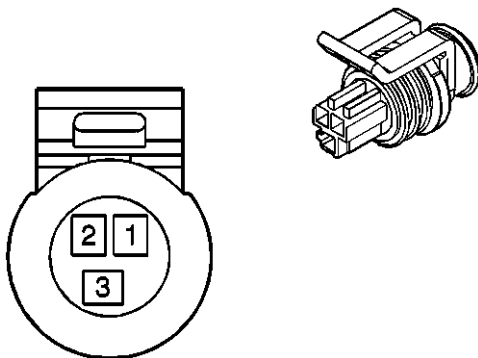


537107

Air Temperature Actuator-Auxilliary

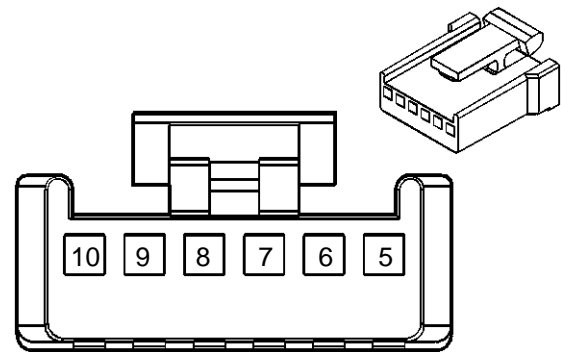


A/C Refrigerant Pressure Sensor



726824

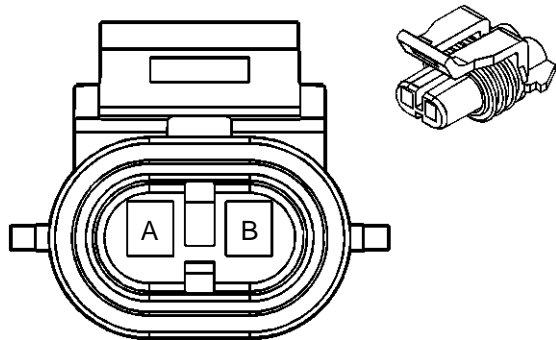
Air Temperature Actuator - Left



281207

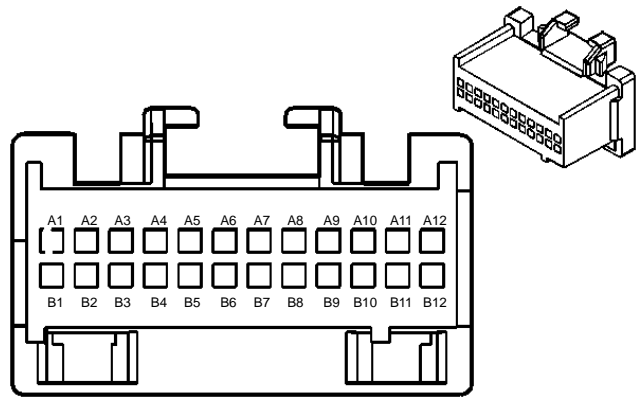
# HARNESS CONNECTOR VIEWS

**Ambient Air Temperature Sensor**



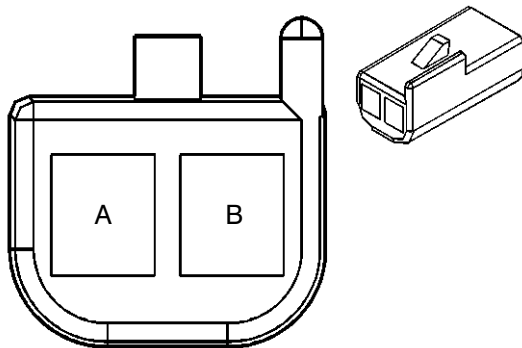
684793

**Audio Amplifier C1 (w/Bose Audio)**



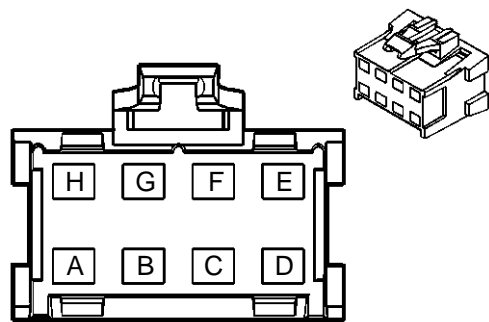
73156

**Ambient Light Sensor**



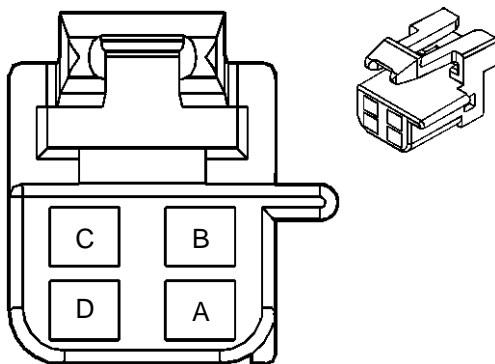
82383

**Audio Amplifier C2 (w/Bose Audio)**



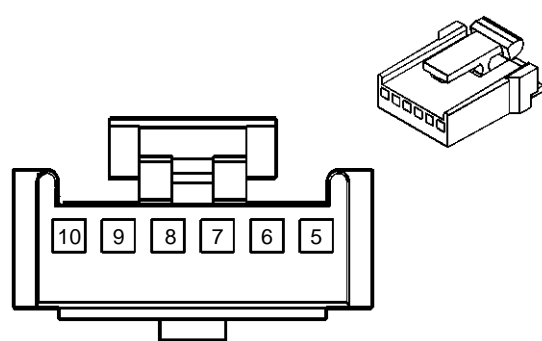
73158

**Ambient Light/Sunload Sensor Assembly**



130637

**Audio Amplifier C6 (w/Bose Audio)**



280764