

## Vehicle: All Technical Service Bulletins

### Passive Struts - Use on Ride Control Equipped Vehicle

File In Section: 03 - Suspension

Bulletin No.: 00-03-11-001A

Date: August, 2000

#### INFORMATION

##### Subject:

Procedure to Disable Illumination of Service Indicator AFTER the Installation of Passive Struts/Shocks

##### Models:

1992-94 Buick Skylark  
1993-96 Buick Park Avenue  
1989-92 Cadillac Allante  
1991-93 Cadillac Eldorado, Seville  
1991-95 Cadillac DeVille  
1991-95 Oldsmobile Ninety Eight  
1992-93 Oldsmobile Achieva  
1994-99 Pontiac Bonneville

This bulletin is being revised to clarify when this bulletin may be used to turn the service suspension lamp off. Also, a step has been added to the 1991 Cadillac Eldorado and Seville repair. Please discard Corporate Bulletin Number 00-03-11-001 (Section 3 - Suspension).

Some owners may bring their vehicles in for service with an illuminated service suspension light. The service suspension indicator lamp is telling the owner that the vehicle is due for strut/shock replacement, a maintenance item. The customer may elect to have passive struts installed in their vehicles due to repair cost savings and/or parts availability. The installation of passive shock/struts will result in handling characteristics which are the equal to a like vehicle without the computer controlled ride, with all other components such as tires, tire pressure, springs, etc. being equal. The installation of (4) new passive struts will cause the continued illumination of the service suspension indicator. If desired by the customer, the service indicator may be disabled AFTER THE INSTALLATION OF THE (4) NEW PASSIVE STRUTS, using the appropriate service procedure listed below. This bulletin DOES NOT authorize this procedure unless (4) NEW PASSIVE STRUTS WERE INSTALLED ON THE VEHICLE.

The wiring harness going to each strut and or shock assembly should be cut and taped back to clean-up the appearance both under the hood and under the vehicle. In addition, each specific vehicle will require a modification as outlined below.

1989-1992 Allante with Speed Dependent Damping (SDD)

**ALLANTÉ**

**COMPUTER SYSTEM DIAGNOSIS 8D-13**

will no longer alternate to "--". Touching the "WARM" button increases the value while the "COOL" button decreases the value. Upon release of the button, the display may either remain at the overridden value or automatically return to normal program control. This depends on which function is being overridden at the time. If the display remains at the override value, normal program control can be resumed in one of three ways:

1. Selection of another override test will cancel the current override.
2. Selection of another system will cancel the current override.
3. Overriding the value beyond either extreme (0 or 99) will display "--" momentarily and then jump to the opposite extreme. If the button is released while "--" is displayed, normal program control will resume and the display will again alternate.

The override test type is unique in that any other test type (except OUTPUT CYCLING) within the selected system may be active at the same time. After selecting an override test touching the "OFF" button will allow selection of another test type, however, the ECC panel will continue to display the selected override. By selecting another test type and test while at the same time touching the "WARM" or "COOL" button, it is possible to monitor the effect of the override on different vehicle parameters.

**ECM Override Displays:** Refer to section 6E for a description of ECM override displays.

**BCM Override Displays:**

- BS00 This test will display "none" as no overrides are active at this point
- BS01 The PROGRAM NUMBER override can be controlled from "0" (Max A/C) to "98" (Max heat). The display will hold the override value upon release of the buttons. (See Section 1C for detail on program number.)
- BS02 The LIQUID CRYSTAL DISPLAY (LCD) DIMMING override can be controlled from "0" (Max dim) to "99" (Max bright). The display will hold the override value upon release of the buttons.
- BS03 The INCANDESCENT BULB DIMMING override can be controlled from "0" (Max dim) to "99" (Max bright) if the park lamps have been turned on. The display will hold the override value upon release of the buttons.
- BS04 The COOLING FANS override will control to "0" (fan off) or "99" (Max fans) as long as the button is held. Normal control will resume upon release of the button.
- BS06 The GENERATOR DISABLE override will control to "0" (Gen. on) or "99" (Gen. disabled) as long as the button is held. Normal control will resume upon release of the buttons.
- BS07 The "OPTION 1" override allows the ability to change the vehicle option content information stored in the BCM EEPROM. The BCM uses this option information to determine how to operate the displays and other electronic

devices. Incorrect option content information in the EEPROM may cause many different problems. Upon selection of this override the option content information will be displayed as a number. To determine the proper OPTION 1 number, calculate the sum of the applicable numbers from the following table:

<u>If vehicle is equipped with</u>	<u>Add</u>
Non-French Canadian Displays .....	128
Domestic Displays(U.S. CARS ONLY) .....	64
Japanese Displays .....	1
Oil Level Sensor .....	32
Output Switch Module #13(ALL CARS) .....	16
Only Two Filaments in each Tail Lamp .....	2
Canadian Daytime Running Lights .....	8
Sweden/Norway Daytime Running Lights .....	4

If necessary, the "WARMER" and "COOLER" buttons can be used to increase and decrease the OPTION 1 number. When the correct number is reached, simultaneously press and hold the "ELAPSED TIME" and "FUEL USED" buttons for three seconds to permanently store the correct value in the EEPROM. The display will blank momentarily and then display the newly stored number.

BS08 The "OPTION 2" override allows the ability to change the vehicle option content information stored in the BCM EEPROM. The BCM uses this option information to determine how to operate the displays and other electronic devices. Incorrect option content information in the EEPROM may cause many different problems. Upon selection of this override the option content information will be displayed as a number. To determine the proper OPTION 2 number, calculate the sum of the applicable numbers from the following table:

<u>If vehicle is equipped with</u>	<u>Add</u>
Low Coolant Sensor .....	1
Speed Dependent Damping .....	2

If necessary, the "WARMER" and "COOLER" buttons can be used to increase and decrease the OPTION 2 number. When the correct number is reached, simultaneously press and hold the "ELAPSED TIME" and "FUEL USED" buttons for three seconds to permanently store the correct value in the EEPROM. The display will blank momentarily and then display the newly stored number.

**ABS Displays**

To select the ABS System Level, press the "HI" Button while the "Anti-Lock Brakes?" question is displayed. Once the ABS Level is entered, the display will instruct "KEEP BRAKE DEPRESSED". While this is on the display, holding the service brake will cause the BCM to request EBCM Codes. The display will request "COUNT LAMP FLASHES", the EBCM will flash the ABS Codes out on the IPC "BRAKE" telltale. Refer to Section 5E for ABS Code Diagnosis.

**8D-14 COMPUTER SYSTEM DIAGNOSIS****ALLANTÉ****BCM Override Displays:****BS00 NO OVERRIDES**

BS00 will display "none" as no overrides are active at this point

**BS01 PROGRAM NUMBER**

BS01 can be controlled from "0" (Max A/C) to "99" (Max heat). The display will hold the override value upon release of the buttons. (See Section 1C for detail on program number.)

**BS02 LCD DIMMING (DISPLAY)**

BS02 can be controlled from "0" (Max dim) to "99" (Max bright). The display will hold the override value upon release of the buttons.

**BS03 INCANDESCENT BULB DIMMING (BACKLIGHTING)**

BS03 can be controlled from "0" (Max dim) to "99" (Max bright) if the park lamps have been turned on. The display will hold the override value upon release of the buttons.

**BS05 TCS ENABLE**

BS05 shows the current state of circuit 856, the TCS ENABLE output. The system operates normally with the output alternating between "HI" and "LO". Pressing the warmer button disables the TCS system by forcing the output to the "HI" state.

**BS06 GENERATOR DISABLE**

BS06 will control to "0" (Gen. on) or "99" (Gen. disabled) as long as the cool or warm button is held. Normal control will resume upon release of the buttons.

**BS07 OPTION 1**

BS07 allows the ability to change the vehicle option content information stored in the BCM EEPROM. The BCM uses this option information to determine how to operate the displays and other electronic devices. Incorrect option content information in the EEPROM may cause many different problems. Upon selection of this override the option content information will be displayed as a number on the DIC. To

determine the proper OPTION 1 number, calculate the sum of the applicable numbers from the following table:

<u>If vehicle is equipped with</u>	<u>Add</u>
Non-French Canadian Displays	128
Domestic Displays (U.S. CARS ONLY)	64
Japanese Displays	1
Oil Level Sensor	32
Output Switch Module #13 (ALL CARS)	16
Two Filaments in each Tail Lamp (ALL CARS)	2
Canadian Daytime Running Lights	8
Sweden/Norway Daytime Running Lights	4

If necessary, the "WARMER" and "COOLER" buttons can be used to increase and decrease the OPTION 1 number. When the correct number is reached, simultaneously press and hold the "ELAPSED TIME" and "FUEL USED" buttons for three seconds to permanently store the correct value in the EEPROM. The display will blank momentarily and then display the newly stored number.

**BS08 OPTION 2**

BS08 allows the ability to change the vehicle option content information stored in the BCM EEPROM. The BCM uses this option information to determine how to operate the displays and other electronic devices. Incorrect option content information in the EEPROM may cause many different problems. Upon selection of this override the option content information will be displayed as a number on the DIC. To determine the proper OPTION 2 number, calculate the sum of the applicable numbers from the following table:

<u>If vehicle is equipped with</u>	<u>Add</u>
Low Coolant Sensor	1
Speed Dependent Damping	2
Great Britain Daytime Running Lights (NO CARS)	4

If necessary, the "WARMER" and "COOLER" buttons can be used to increase and decrease the OPTION 2 number. When the correct number is reached, simultaneously press and hold the "ELAPSED TIME" and "FUEL USED" buttons for three seconds to permanently store the correct value in the EEPROM. The display will blank momentarily and then display the newly stored number.

**OE Page 8d-014**

Refer to the Service Manual page 8D-13 (1989) or 8D-14 (1990-1992). On these vehicles, adjust the BCM Override value "BS08". To do this, use the warmer/cooler button on the CCDIC to decrease the BCM override value "BS08" which is displayed when you enter the system by two (2). When the desired number is displayed on the CCDIC, it must be stored by holding the "Elapsed Time" and "Fuel Used" buttons until the new value flashes on and off. When it flashes on and off, the new value has been stored.

1991 Eldorado and Seville with Computer Command Ride (CCR)

**8D-12 COMPUTER SYSTEM DIAGNOSIS****ELDORADO/SEVILLE****OUTPUT DISPLAYS**

Output displays are operated as defined under 'Selecting the Test' under the heading 'How to Operate Service Mode'. When troubleshooting a malfunction, the ECM and BCM output cycling can be used to determine if the output tests can be actuated regardless of the inputs and normal program instructions. Once a test in outputs has been selected, the test will display HI and LO for three seconds in each state to indicate the command and output terminal voltage. A brief summary of each output is provided below:

**ECM:**

Refer to Section 6E for a description of the ECM Output Displays.

**BCM:****BO00 No Outputs**

The 'CYCLE NONE' display will not display 'HI' or 'LO' as this is a resting spot where no outputs will be cycled.

**BO03 Retained Accessory Power (RAP) Relays**

The RETAINED ACCESSORY POWER (RAP) relays display is 'LO' when the relays are on (energized).

**BO04 Courtesy Lamp Relay**

The COURTESY RELAY display is 'LO' when the relay is on (energized).

**BO05 Twilight Relays**

The TWILIGHT RELAYS display is 'LO' when the relays are on (energized).

**BO06 HI/Lo Beam Relays**

The HI/LO RELAYS display is 'LO' when the relays are on (energized).

**BO07 Daytime Running Light Relay (DRL)**

The DAYTIME RUNNING LIGHT RELAY display is 'LO' when the relays are on (energized).

**OVERRIDE DISPLAYS**

Override displays are operated as defined under 'Selecting the Test' under the heading 'How to Operate Service Mode.' When troubleshooting a malfunction, the BCM override feature allows testing of certain system functions regardless of normal program instructions.

Upon selecting a test that function's current operation will be represented as a percentage of its full range and this value will be displayed on the ECC panel. The display will alternate between '--' for 1 second followed by the normal program value for 10 seconds. This alternating display is a reminder that the function is not currently being overridden.

Touching the 'WARM' or 'COOL' buttons on the ECC panel begins the override at which time the display will no longer alternate to '--'. Touching the 'WARM' button increases the value while the 'COOL' button decreases the value. Upon release of the button, the

display may either remain at the overridden value or automatically return to normal program control. This depends on which function is being overridden at the time. If the display remains at the override value, normal program control can be resumed in one of three ways:

1. Selection of another override test will cancel the current override.
2. Selection of another system will cancel the current override.
3. Overriding the value beyond either extreme (0 or 99) will display '--' momentarily and then jump to the opposite extreme. If the button is released while '--' is displayed, normal program control will resume and the display will again alternate.

The override test type is unique in that any other test type within the selected system may be active at the same time. After selecting an override test touching the 'OFF' button will allow selection of another test type, however, the ECC panel will continue to display the selected override. By selecting another test type and test while at the same time touching the 'WARM' or 'COOL' button, it is possible to monitor the effect of the override on different vehicle parameters.

**ECM:**

Refer to Section 6E for a description of the ECM Override Displays.

**BCM:****BS00 None**

BS00 will display 'NONE' as no overrides are active at this point

**BS01 ECC Program Number**

The PROGRAM NUMBER override can be controlled from '0' (Max A/C) to '98' (Max heat). The display will hold the override value upon release of the buttons. (See Section 1C for detail on program number.)

**BS02 Vacuum Fluorescent (VF) Dimming**

The VACUUM FLUORESCENT (VF) DIMMING override can be controlled from '0' (Max dim) to '99' (Max bright). The display will hold the override value upon release of the buttons.

**BS03 Incandescent Bulb Dimming**

The INCANDESCENT BULB DIMMING override can be controlled from '0' (Max dim) to '99' (Max bright) if the park lamps have been turned on. The display will hold the override value upon release of the buttons.

**BS08 Option 1**

The OPTION 1 override will control option status bits according to the chart below listed in BD90.

To override, press 'Warmer' to increase or 'Cooler' to decrease the value. To overwrite the value in the EEPROM, hold the 'Econ' (Climate Control) and the 'Inst Econ' buttons for 3 seconds.

**BS09 Option 2**

The OPTION 2 override will be '2' for all cars.

**OE Page 8d-12**

Refer to the Service Manual page, 8D-12. Set the BCM override value "BS09" to "0" by using the warmer and cooler buttons. Store this value by pressing the "Econ" button on the Climate Control Panel and the "Instant Econ" button on the Fuel Data/Drivers Information Center for about five seconds. The new value will be stored even though the indicator does not flash. Remove the key from the ignition. Disconnect both battery cables from the battery. When both cables have been disconnected, touch the ends of the cables together and hold for five seconds. This will discharge the capacitors in the system and allow the system to perform properly when the battery cables are reconnected. Advise the customer they will have to reset all radio stations and the clock.

**ELDORADO/SEVILLE****INSTRUMENT PANEL CLUSTER 8C1-11****IPC DIAGNOSTIC PARAMETERS****IPC Data Displays:**

- ID40** The FUEL LEVEL is read from the fuel sender unit in gallons between 0.0 and 24.7.
- ID42** The DIMMING POT PWM is read as a PWM between 0 and 100%. Typical range of 24 (max dim) to 95 (full bright). ID42 only updates while parklamps or headlamps are 'On'.
- ID50** The BATTERY VOLTS is read in volts between 0.0 and 18.0, at pin C13 - Ignition 1.
- ID60** The VEHICLE SPEED is read in miles per hour between 0 and 255.
- ID90** The OPTION 1 is the decimal equivalent of an 8 bit binary code specifying vehicle option content. The value is set between 0 and 255. Refer to IS08 for complete option details.
- ID91** The OPTION 2 is the decimal equivalent of an 8 bit binary code specifying vehicle option content. The value is set between 0 and 255. Refer to IS09 for complete details.
- ID97** The IGNITION CYCLE COUNTER value is the number of times that the IPC has been turned 'off' since a IPC trouble code was last detected. After 100 ignition cycles without any malfunction being detected, all IPC codes are cleared.
- ID98** The IDC SOFTWARE VERSION is software ID for one of the IPC microprocessors.
- ID99** The VSM SOFTWARE VERSION is software ID for the second IPC microprocessors.

**IPC Input Displays:**

- II07**The TRUNK SWITCH display reads 'HI' with the trunk closed.
- II09**The WASHER FLUID LEVEL SWITCH display is 'LO' when the vehicle is low on washer fluid.
- II10**The GENERATOR FEEDBACK display is 'LO' when there is a GENERATOR problem or engine not running.
- II11**The METAL TEMPERATURE switch input reads 'LO' when the metal temp switch is closed (hot engine condition).
- II12**The RIDE CONTROL FAULT display reads the state of the CCR input. Normal operation is 'LO' below 5 MPH and 'HI' above 15 MPH.
- II65**OIL PRESSURE SWITCH will indicate 'HI' with proper oil pressure.
- II90**LEFT TURN SWITCH will indicate 'LO' with left turn signal not selected, and toggle 'LO/HI' while directional is active.
- II91**RIGHT TURN SWITCH will indicate 'LO' with right turn signal not selected, and toggle 'LO/HI' while directional is active.
- II93**HIGH BEAM SWITCH will indicate 'HI' with highbeams ON
- II94**PARKLAMP INPUT will read 'HI' with parklamps, low beams, or high beams ON.

**IPC Override Displays:**

- IS00** This test will display 'none' as no overrides are active at this point
- IS08** The 'OPTION 1' override allows the ability to change the vehicle option content information stored in the IPC. The IPC uses this option information to determine how to operate the displays and other electronic devices. Incorrect option content information in the IPC may cause many different problems. Upon selection of this override the option content information will be displayed as a number. To determine the proper OPTION 1 number, calculate the sum of the applicable numbers from the following table:

<b>IF VEHICLE IS EQUIPPED WITH</b>	<b>ADD</b>
French/Canadian Displays (Canadian Only) . . . . .	128
Ride Control (All Cars) . . . . .	8
*European Economic Community (EEC) . . . . .	64
*Japanese Displays . . . . .	32
*Saudi Arabia . . . . .	16
*Disable Premium Fuel Display (NMB, MAJ) . . . . .	2
**Suppress Low Fuel Warning . . . . .	1

- \*Export only - Not for North American Vehicles  
\*\* Options not currently used

**Normal North American vehicles IS08 value is 8.**

If necessary, the 'WARMER' and 'COOLER' buttons can be used to increase and decrease the OPTION 1 number. When the correct number is reached, simultaneously press and hold the 'ECON' and 'FRONT DEFROST' buttons for three seconds to permanently store the correct value in the EEPROM. The display will blank momentarily and then display the newly stored number.

- IS09** The 'OPTION 2' override allows the ability to change the vehicle option content information stored in the IPC. The IPC uses this option information to determine how to operate the displays and other electronic devices. Incorrect option content information in the IPC may cause many different problems. Upon selection of this override the option content information will be displayed as a number. To determine the proper OPTION 2 number, calculate the sum of the applicable numbers from the following table:

<b>IF VEHICLE IS EQUIPPED WITH</b>	<b>ADD</b>
Heated Windshield (CS0) . . . . .	128
Enable BTSI Message (All Cars) . . . . .	1

**Normal North American vehicles, IS09 value is 1 and with heated windshield is 129.**

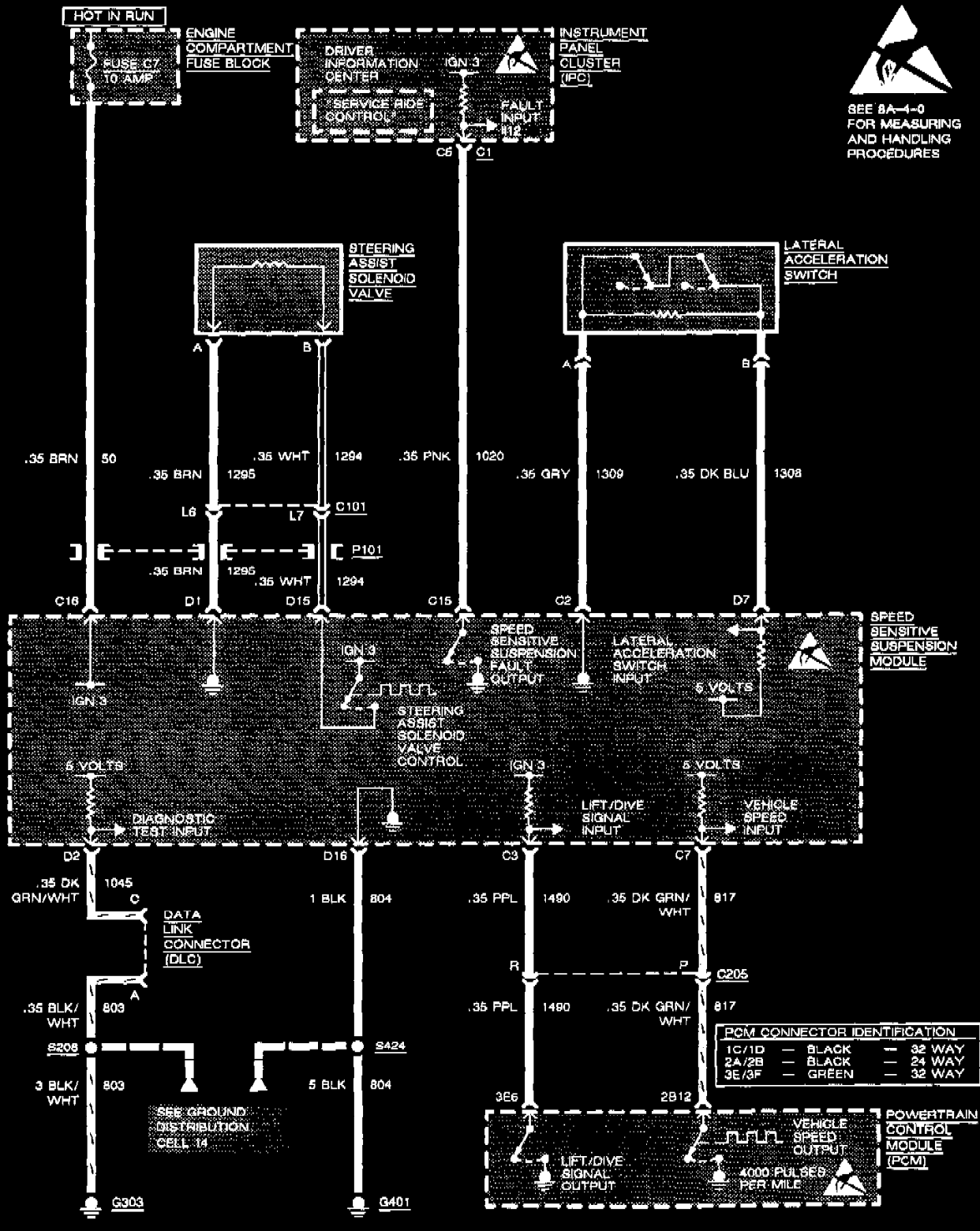
If necessary, the 'WARMER' and 'COOLER' buttons can be used to increase and decrease the OPTION 1 number. When the correct number is reached, simultaneously press and hold the 'ECON' and 'FRONT DEFROST' buttons for three seconds to permanently store the correct value in the EEPROM. The display will blank momentarily and then display the newly stored number.

- IS45** The VACUUM FLUORESCENT DIMMING override will control IPC and Radio VF displays from '0' (Max dim) to '99' (Max bright). The display will hold the override value upon release of the buttons.

**OE Page 8c1-11**

Refer to the Service Manual page, 8C1-11. Observe and record the IPC override "IS08" displayed value. Use the climate control "cooler" button to decrease the value displayed for "IS08" by "8". To store the new value, press and hold the "ECON" and "FRONT DEFROST" keys until the new value flashes on and off.

**ELECTRONIC SUSPENSION  
SPEED SENSITIVE SUSPENSION**



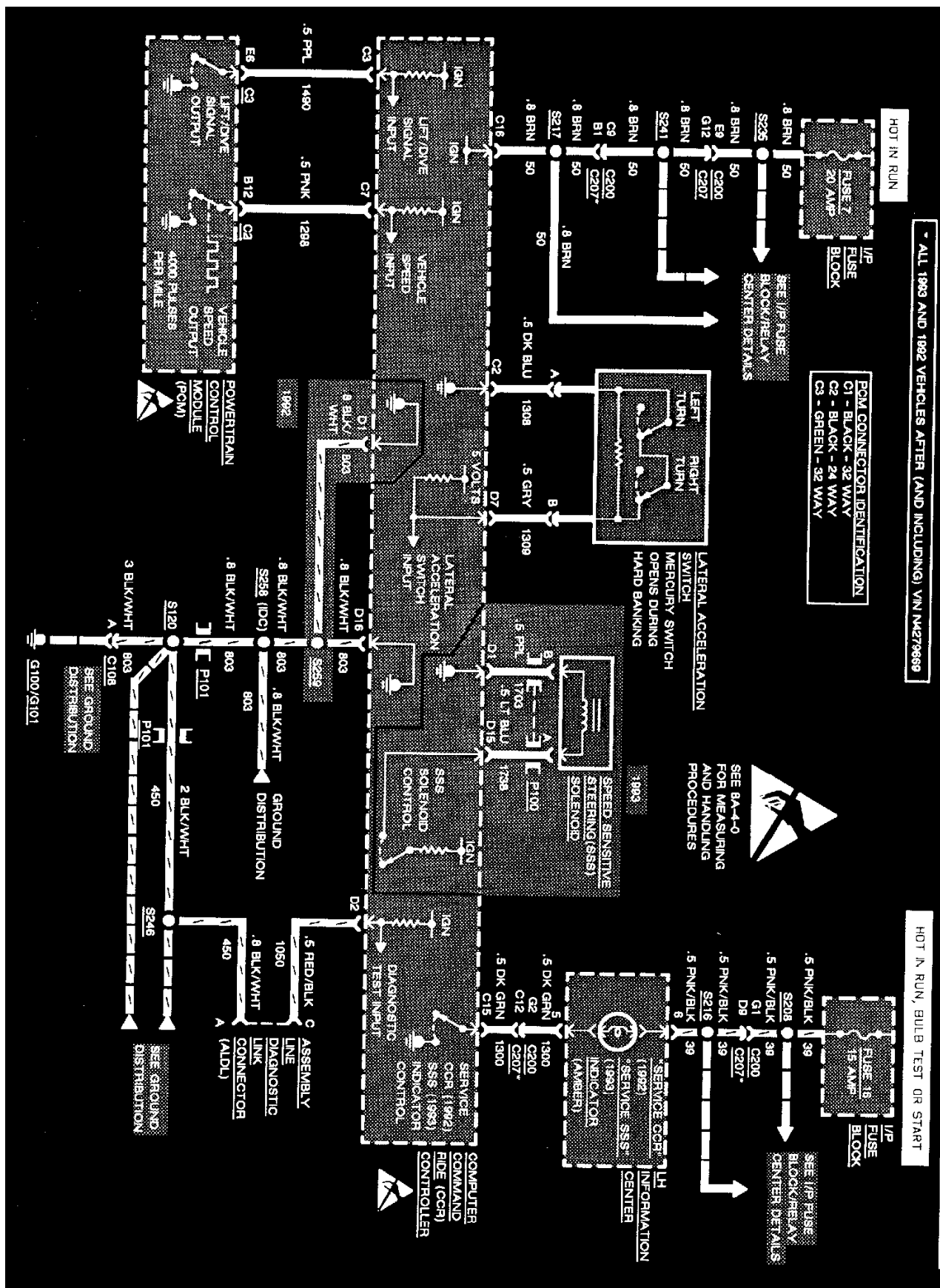
OE Page 8a-43-6

Refer to page 8A-43-6 in the 1992 Eldorado Seville Service Manual.

1. Cut circuit 1020 (PINK).
2. Attach the IPC side of circuit 1020 to relay pin 87A.
3. Attach the module side of circuit 1020 to relay pin 86.
4. Run a ground wire to relay pin 30.

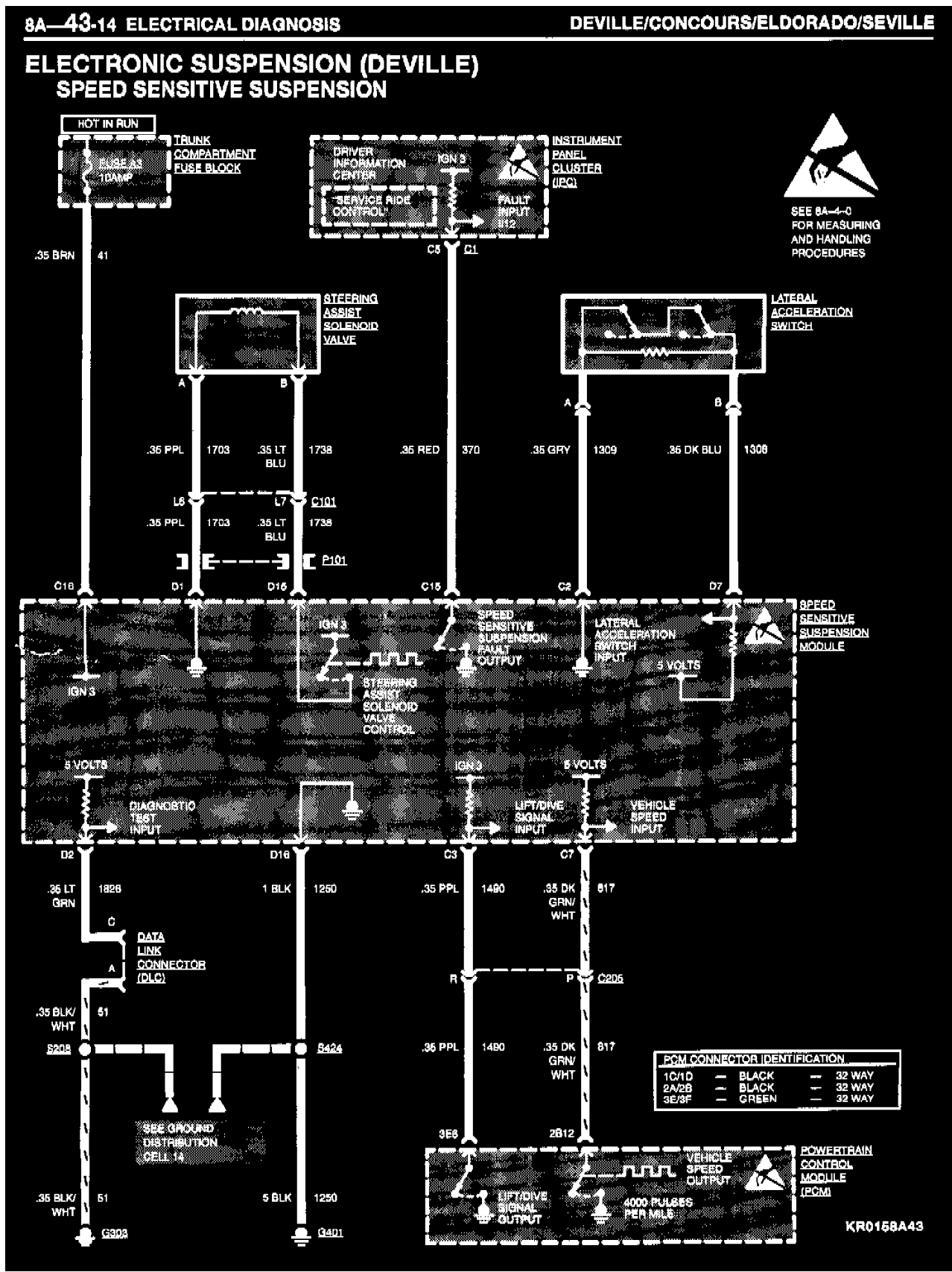
5. Run a wire from a switched ignition (hot in Run) source to relay pin 85.

1991-1993 DeVille with Computer Command Ride (CCR)



Computer Command Ride Control (Part 1 Of 2)

Refer to the Service Manual, page 8A-43-0. Cut Circuit 1300 (Dark Green wire) at the CCR module (Pin C15) to disable the indicator lamp. Tape the wires back into the harness to prevent shorting to other components.



OE Page 8a-43-14

Refer to the 1994 Eldorado, Seville, DeVille Service Manual, page 8A-43-14.

1. Locate and cut circuit 370 (RED).
2. Attach the IPC side of circuit 370 to pin 87A of the relay.
3. Attach the module side of circuit 370 to pin 86 of the relay.
4. Run a ground wire to relay pin 30.



5. Run a wire from a switched ignition (hot in Run) source to relay pin 85.

#### 1992-1993 Oldsmobile Achieva with Computer Command Ride (CCR)

This is a stand alone system. Remove the CCR module which is attached to the back side of the right (passenger side) sound insulator panel. Follow the wiring harness up under the dash assembly and then cut and tape the wiring harness.

#### 1992-1994 Buick Skylark with Computer Command Ride (CCR)

This is a stand alone system. Remove the CCR module which is attached to the back side of the right (passenger side) sound insulator panel. Follow the wiring harness up under the dash assembly and then cut and tape the wiring harness.

#### 1993-1996 Buick Park Avenue with Computer Command Ride (CCR)

This is a stand alone system. Remove the CCR module, which is located under the carpeting beneath the driver's seat.

#### 1991-1995 Oldsmobile Ninety Eight with Computer Command Ride (CCR)

This is a stand alone system. Remove the CCR module, which is located under the carpeting beneath the driver's seat.

#### 1994-1999 Pontiac Bonneville with Computer Command Ride (CCR)

The feedback strut/shock assemblies are still available for these vehicles. However, if the customer desires to reduce the repair expense, the following steps may be taken to allow installation of non-feedback assemblies and the disabling of the malfunction indicator lamps.

This is a stand alone system. Remove the CCR module, which is located under the carpeting beneath the driver's seat.

Part Number	Description	Qty
12193601	Relay	1
15306045	Connector	1

#### Parts Information

The following parts are required to make the correction on the 1993 Eldorado/Seville and the 1994-1995 DeVille.

Parts are currently available from GMSPO.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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