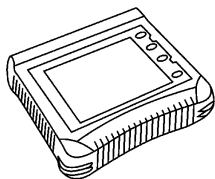

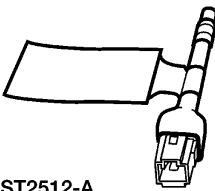


DIAGNOSIS AND TESTING

Instrument Cluster and Panel Illumination

Refer to Wiring Diagrams Cell 71 for schematic and connector information.

Special Tool(s)

 <p>ST2332-A</p>	<p>Worldwide Diagnostics System (WDS) 418-F224, New Generation STAR (NGS) Tester 418-F052, or equivalent diagnostic tool with appropriate adapter cable</p>
 <p>ST1137-A</p>	<p>73III Automotive Meter 105-R0057 or equivalent</p>
 <p>ST2512-A</p>	<p>Diagnostic Tool, Restraint System (2 req'd) 418-F403</p>

Principles of Operation

The instrument cluster and panel lamps illumination is controlled by the lighting control module (LCM). The LCM will illuminate the instrument cluster and panel lamps only when the headlamp switch is in the PARK or ON position.

The LCM controls the brightness of the illumination by both a pulse width modulated voltage and a variable output voltage. By rotating the instrument panel dimmer switch to the left, a battery voltage signal is sent to the LCM to dim all the illumination sources. By rotating the instrument panel dimmer switch to the right, a battery voltage signal is sent to the LCM to brighten all the illumination sources.

Inspection and Verification

1. Verify the customer concern by operating the system.

2. Visually inspect for obvious signs of mechanical and electrical damage.

Visual Inspection Chart

Mechanical	Electrical
<ul style="list-style-type: none"> • Instrument panel dimmer switch 	<ul style="list-style-type: none"> • Central junction box (CJB) fuse 21 (15A) • Bulbs • Circuitry • Lighting control module (LCM)

3. If the concern remains after the inspection, connect the diagnostic tool to the data link connector (DLC) located beneath the instrument panel and select the vehicle to be tested from the diagnostic tool menu. If the diagnostic tool does not communicate with the vehicle:
 - check that the program card is correctly installed.
 - check the connections to the vehicle.
 - check the ignition switch position.
4. If the diagnostic tool still does not communicate with the vehicle, refer to the diagnostic tool manual.
5. Carry out the diagnostic tool data link test. If the diagnostic tool responds with:
 - ISO circuit fault; all electronic control units no response/not equipped, refer to Section 418-00.
 - No response/not equipped for lighting control module (LCM), refer to Section 419-10.
 - System passed, retrieve and record the continuous diagnostic trouble codes (DTCs), erase the continuous DTCs and carry out self-test diagnostics for the LCM.
6. If the DTCs retrieved are related to the concern, go to the LCM Diagnostic Trouble Code (DTC) Index to continue diagnostics. Refer to Section 419-10.
7. If no DTCs related to the concern are retrieved, proceed to Symptom Chart to continue diagnostics.

DIAGNOSIS AND TESTING (Continued)**Lighting Control Module (LCM) Diagnostic Trouble Code (DTC) Index**

DTC	Description	Source	Action
B1342	ECU is Defective	LCM	INSTALL a new LCM. REFER to Section 419-10.

NOTE: For a complete master list of all LCM DTCs, refer to Section 419-10.

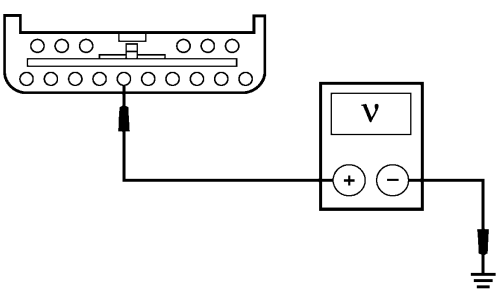
Symptom Chart**Symptom Chart**

Condition	Possible Sources	Action
<ul style="list-style-type: none"> No communication with the lighting control module (LCM) 	<ul style="list-style-type: none"> Circuitry. LCM. 	<ul style="list-style-type: none"> REFER to Section 419-10.
<ul style="list-style-type: none"> The control illumination is inoperative 	<ul style="list-style-type: none"> Circuitry. Lighting control module (LCM). Instrument panel dimmer switch. 	<ul style="list-style-type: none"> GO to Pinpoint Test A.
<ul style="list-style-type: none"> The instrument cluster illumination is inoperative 	<ul style="list-style-type: none"> Circuitry. Bulbs. Instrument cluster. 	<ul style="list-style-type: none"> GO to Pinpoint Test B.
<ul style="list-style-type: none"> The climate control illumination is inoperative 	<ul style="list-style-type: none"> Electronic automatic temperature control (EATC) unit. Manual climate control switch. 	<ul style="list-style-type: none"> GO to Pinpoint Test C.
<ul style="list-style-type: none"> The audio system illumination is inoperative 	<ul style="list-style-type: none"> Circuitry. Audio unit. 	<ul style="list-style-type: none"> GO to Pinpoint Test D.
<ul style="list-style-type: none"> The steering wheel control switch illumination is inoperative 	<ul style="list-style-type: none"> Circuitry. Clockspring. Steering wheel control switch. Horn switch wiring harness. 	<ul style="list-style-type: none"> GO to Pinpoint Test E.
<ul style="list-style-type: none"> The power window switch illumination is inoperative 	<ul style="list-style-type: none"> Power window switch. 	<ul style="list-style-type: none"> CHECK the operation of the power windows. <ul style="list-style-type: none"> If the power windows do not operate correctly, REFER to Section 501-11. If the power windows operate correctly, INSTALL a new power window switch. REFER to Section 501-11.

DIAGNOSIS AND TESTING (Continued)**Symptom Chart (Continued)**

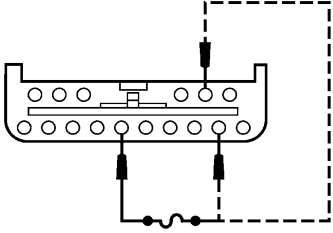
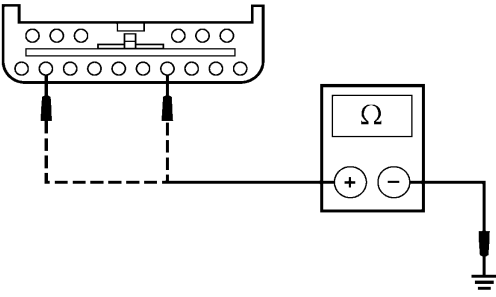
Condition	Possible Sources	Action
<ul style="list-style-type: none"> The power door lock switch illumination is inoperative 	<ul style="list-style-type: none"> Door lock switches. 	<ul style="list-style-type: none"> CHECK the operation of the power door locks. <ul style="list-style-type: none"> If the power door locks do not operate correctly, REFER to Section 501-14. If the door locks operate correctly, INSTALL a new power door lock switch. REFER to Section 501-14.
<ul style="list-style-type: none"> A single illumination source is inoperative 	<ul style="list-style-type: none"> Circuitry. Component. 	<ul style="list-style-type: none"> GO to Pinpoint Test F.
<ul style="list-style-type: none"> The message center illumination is inoperative — with moonroof 	<ul style="list-style-type: none"> Circuitry. Message center. 	<ul style="list-style-type: none"> GO to Pinpoint Test G.
<ul style="list-style-type: none"> The instrument panel illumination does not dim 	<ul style="list-style-type: none"> Instrument panel dimmer switch. Lighting Control Module (LCM). 	<ul style="list-style-type: none"> GO to Pinpoint Test H.

Pinpoint Tests**PINPOINT TEST A: PINPOINT TEST A: THE CONTROL ILLUMINATION IS INOPERATIVE**

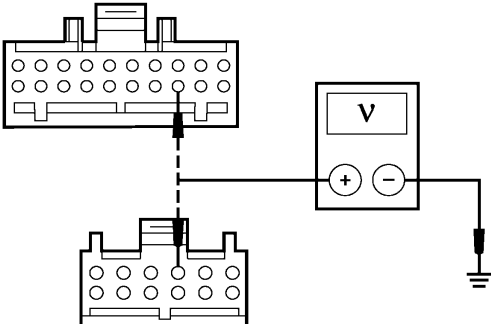
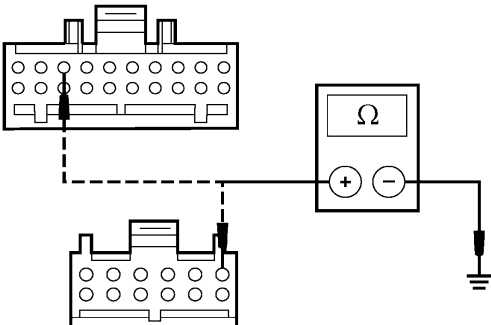
Test Step	Result / Action to Take
A1 CHECK CIRCUIT 195 (TN/WH) FOR AN OPEN <ul style="list-style-type: none"> Key in OFF position. Disconnect: LCM C2145b. Measure the voltage between the LCM C2145b pin 12, circuit 195 (TN/WH), harness side and ground.  <p>A0045355</p> <ul style="list-style-type: none"> Is the voltage greater than 10 volts? 	<p>Yes GO to A2.</p> <p>No REPAIR the circuit. TEST the system for normal operation.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST A: PINPOINT TEST A: THE CONTROL ILLUMINATION IS INOPERATIVE (Continued)**

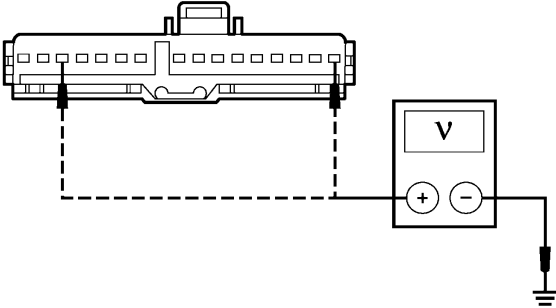
	Test Step	Result / Action to Take
A2	CHECK CIRCUITS 484 (OG/BK) AND 19 (LB/RD) FOR AN OPEN OR SHORT TO GROUND	
	<ul style="list-style-type: none"> Connect a fused jumper wire (15A) between the LCM C2145b pin 12, circuit 195 (TN/WH), harness side and the LCM C2145b pin 2, circuit 484 (OG/BK), harness side; and connect a fused jumper wire (15A) between the LCM C2145b pin 12, circuit 195 (TN/WH), harness side and the LCM C2145b pin 8, circuit 19 (LB/RD), harness side.  <p>A0045356</p> <ul style="list-style-type: none"> Do the instrument panel lamps illuminate? 	<p>Yes GO to A3.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>
A3	CHECK CIRCUITS 57 (BK) AND 676 (PK/OG) FOR AN OPEN	
	<ul style="list-style-type: none"> Measure the resistance between the LCM C2145b pin 10, circuit 57 (BK), harness side and ground; and between the LCM C2145b pin 15, circuit 676 (PK/OG), harness side and ground.  <p>A0045357</p> <ul style="list-style-type: none"> Are the resistances less than 5 ohms? 	<p>Yes GO to A4.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>
A4	CHECK FOR CORRECT LCM OPERATIONS	
	<ul style="list-style-type: none"> Key in OFF position. Disconnect all vehicle LCM connectors. Check for: <ul style="list-style-type: none"> corrosion pushed-out pins Connect all LCM connectors and make sure they seat correctly. Operate the system and verify the concern is still present. Is the concern still present? 	<p>Yes INSTALL a new LCM. REFER to Section 419-10. TEST the system for normal operation.</p> <p>No The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector.</p>

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST B: THE INSTRUMENT CLUSTER ILLUMINATION IS INOPERATIVE**

Test Step		Result / Action to Take
B1	CHECK INSTRUMENT CLUSTER FOR PROPER ILLUMINATION	<p>Yes System is OK.</p> <p>No If a single illumination bulb is inoperative, CHECK the bulb. If the bulb is OK, GO to B6.</p> <p>For electronic cluster, if all instrument cluster bulbs are inoperative, GO to B2.</p> <p>For analog cluster, if all instrument cluster bulbs are inoperative, GO to B4.</p>
	<ul style="list-style-type: none"> Place the headlamp switch in the PARK position. Rotate the instrument panel dimmer switch to maximum brightness level. Does the instrument cluster illuminate correctly? 	
B2	CHECK FOR VOLTAGE TO THE ELECTRONIC CLUSTER	<p>Yes GO to B3.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>
	<ul style="list-style-type: none"> Key in OFF position. Disconnect: Instrument Cluster C220b and C220c. Measure the voltage between the instrument cluster C220b pin 13, circuit 19 (LB/RD), harness side and ground; and between the instrument cluster C220c pin 3, circuit 484 (OG/BK), harness side and ground.  <p>A0045871</p> <ul style="list-style-type: none"> Are the voltages greater than 10 volts? 	
B3	CHECK FOR GROUND TO THE ELECTRONIC CLUSTER	<p>Yes GO to B6.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>
	<ul style="list-style-type: none"> Measure the resistance between the instrument cluster C220b pin 8, circuit 676 (PK/OG), harness side and ground; and between the instrument cluster C220c pin 1, circuit 676 (PK/OG), harness side and ground.  <p>A0045872</p> <ul style="list-style-type: none"> Are the resistances less than 5 ohms? 	
B4	CHECK FOR VOLTAGE TO THE ANALOG CLUSTER	
	<ul style="list-style-type: none"> Key in OFF position. Disconnect: Analog Cluster C2220b. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST B: THE INSTRUMENT CLUSTER ILLUMINATION IS INOPERATIVE (Continued)**

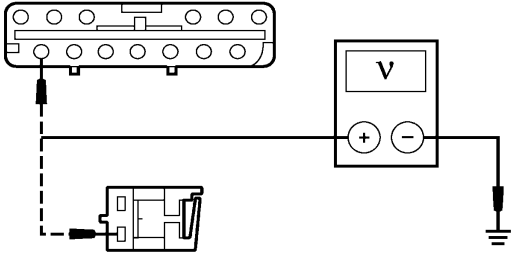
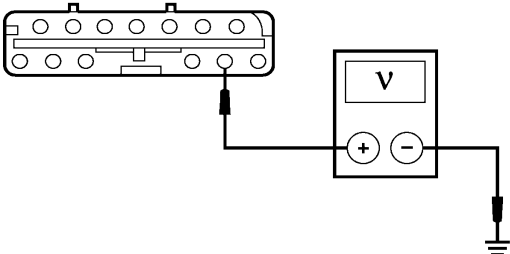
Test Step		Result / Action to Take																																									
B4	CHECK FOR VOLTAGE TO THE ANALOG CLUSTER (Continued) <ul style="list-style-type: none"> Measure the voltage between the analog instrument cluster C2220b pin 16, circuit 484 (OG/BK), harness side and ground; and the analog instrument cluster C2220b pin 3, circuit 484 (OG/BK), (Marauder only), harness side and ground.  <p>A0045873</p> <ul style="list-style-type: none"> Are the voltages greater than 10 volts? 	<p>Yes GO to B5.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>																																									
B5	CHECK FOR GROUND TO THE ANALOG CLUSTER <ul style="list-style-type: none"> Measure the resistance between the instrument cluster and ground as follows: <p>Marauder only</p> <table border="1"> <thead> <tr> <th>Instrument Cluster Connector</th><th>Pin</th><th>Circuit</th></tr> </thead> <tbody> <tr> <td>C2220b</td><td>8</td><td>676 (PK/OG)</td></tr> <tr> <td>C2220b</td><td>15</td><td>57 (BK)</td></tr> <tr> <td>C2220a</td><td>8</td><td>57 (BK)</td></tr> <tr> <td>C2220a</td><td>2</td><td>570 (BK/WH)</td></tr> <tr> <td>C2220a</td><td>4</td><td>676 (PK/OG)</td></tr> <tr> <td>C2220a</td><td>16</td><td>676 (PK/OG)</td></tr> </tbody> </table> <p>Crown Victoria, Grand Marquis</p> <table border="1"> <thead> <tr> <th>Instrument Cluster Connector</th><th>Pin</th><th>Circuit</th></tr> </thead> <tbody> <tr> <td>C2220b</td><td>15</td><td>57 (BK)</td></tr> <tr> <td>C2220b</td><td>9</td><td>676 (PK/OG)</td></tr> <tr> <td>C2220b</td><td>5</td><td>676 (PK/OG)</td></tr> <tr> <td>C2220a</td><td>2</td><td>676 (PK/OG)</td></tr> <tr> <td>C2220a</td><td>6</td><td>57 (BK)</td></tr> <tr> <td>C2220a</td><td>14</td><td>676 (PK/OG)</td></tr> </tbody> </table> <ul style="list-style-type: none"> Are the resistances less than 5 ohms? 		Instrument Cluster Connector	Pin	Circuit	C2220b	8	676 (PK/OG)	C2220b	15	57 (BK)	C2220a	8	57 (BK)	C2220a	2	570 (BK/WH)	C2220a	4	676 (PK/OG)	C2220a	16	676 (PK/OG)	Instrument Cluster Connector	Pin	Circuit	C2220b	15	57 (BK)	C2220b	9	676 (PK/OG)	C2220b	5	676 (PK/OG)	C2220a	2	676 (PK/OG)	C2220a	6	57 (BK)	C2220a	14
Instrument Cluster Connector	Pin	Circuit																																									
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C2220a	2	676 (PK/OG)																																									
C2220a	6	57 (BK)																																									
C2220a	14	676 (PK/OG)																																									

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST B: THE INSTRUMENT CLUSTER ILLUMINATION IS INOPERATIVE (Continued)**

Test Step		Result / Action to Take
B6	CHECK FOR INSTRUMENT CLUSTER ILLUMINATION OPERATION	
	<ul style="list-style-type: none"> • Key in OFF position. • Disconnect all instrument cluster connectors. • Check for: <ul style="list-style-type: none"> • corrosion • pushed-out pins • Connect all instrument cluster connectors and make sure they seat correctly. • Operate the system and verify the concern is still present. • Is the concern still present? 	<p>Yes If equipped with an Analog Cluster, INSTALL a new instrument cluster printed circuit. REFER to Section 413-01A. TEST the system for normal operation.</p> <p>If equipped with an Electronic Cluster, INSTALL a new instrument cluster. REFER to Section 413-01B. TEST the system for normal operation.</p> <p>No The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector.</p>

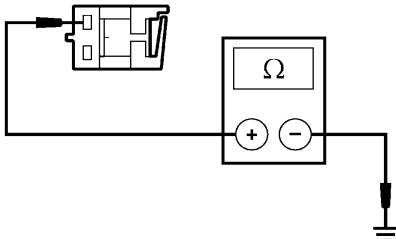
PINPOINT TEST C: THE CLIMATE CONTROL ILLUMINATION IS INOPERATIVE

Test Step		Result / Action to Take
C1	CHECK CIRCUIT 484 (OG/BK) FOR VOLTAGE	
	<ul style="list-style-type: none"> • Disconnect: EATC Unit C228b. • Disconnect: Manual Climate Control C294d. • Place the headlamp switch in the ON position. • Increase the panel dim switch to maximum brightness level. • Measure the voltage between the EATC module C228b pin 14, circuit 484 (OG/BK); or between the manual climate control C294d pin 1, circuit 484 (OG/BK), harness side and ground.  <p>A0045874</p> <ul style="list-style-type: none"> • Is the voltage greater than 10 volts? 	<p>Yes If equipped with the EATC, GO to C2. If equipped with manual climate control, GO to C3.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>
C2	CHECK CIRCUIT 19 (LB/RD) FOR VOLTAGE	
	<ul style="list-style-type: none"> • Measure the voltage between the EATC unit C228a pin 19, circuit 19 (LB/RD), harness side and ground.  <p>A0045875</p> <ul style="list-style-type: none"> • Is the voltage greater than 10 volts? 	<p>Yes INSTALL a new EATC module. REFER to Section 412-04.</p> <p>No REPAIR the circuit. TEST the system for normal operation.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)

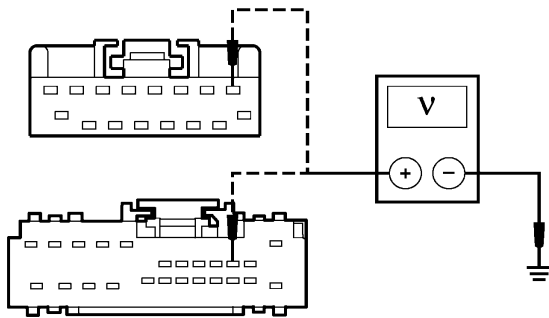
PINPOINT TEST C: THE CLIMATE CONTROL ILLUMINATION IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
C3	CHECK CIRCUIT 57 (BK) FOR AN OPEN	
<ul style="list-style-type: none">Measure the resistance between the manual climate control C294d pin 2, circuit 57 (BK), harness side and ground. <div></div> <p>A0045876</p> <ul style="list-style-type: none">Is the resistance less than 5 ohms?		<p>Yes</p> <p>If a single illumination bulb is inoperative, CHECK the bulb. If the bulb is OK, INSTALL a new manual climate control module. REFER to Section 412-04. TEST the system for normal operation.</p> <p>No</p> <p>REPAIR the circuit. TEST the system for normal operation.</p>

Yes
If a single illumination bulb is inoperative, CHECK the bulb. If the bulb is OK, INSTALL a new manual climate control module. REFER to Section 412-04. TEST the system for normal operation.

No
REPAIR the circuit. TEST the system for normal operation.

PINPOINT TEST D: THE AUDIO SYSTEM ILLUMINATION IS INOPERATIVE

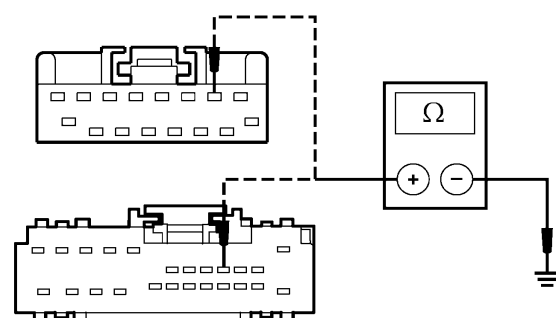
Test Step		Result / Action to Take
D1	CHECK CIRCUIT 19 (LB/RD) FOR VOLTAGE	
<div><ul style="list-style-type: none">• Disconnect: Audio Unit C290c or C240.• Place the headlamp switch to the parking lamps ON position.• Increase the instrument panel dimmer switch to maximum brightness level.• Measure the voltage between the audio unit C290c pin 3, circuit 19 (LB/RD); or between the audio unit C240 pin 1, circuit 19 (LB/RD), harness side and ground.<div></div><p>A0045895</p><ul style="list-style-type: none">• Is the voltage greater than 10 volts?</div>		<div><p>Yes GO to D2.</p><p>No REPAIR the circuit in question. TEST the system for normal operation.</p></div>

Yes
GO to **D2**.

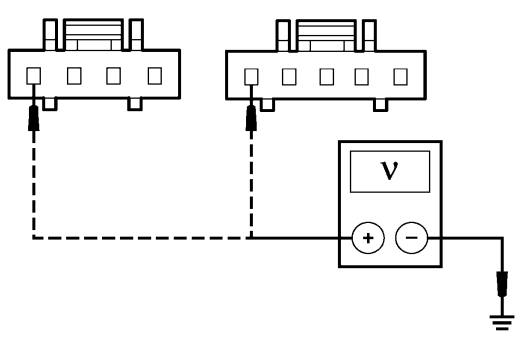
No
REPAIR the circuit in question. TEST the system for normal operation.

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST D: THE AUDIO SYSTEM ILLUMINATION IS INOPERATIVE (Continued)**

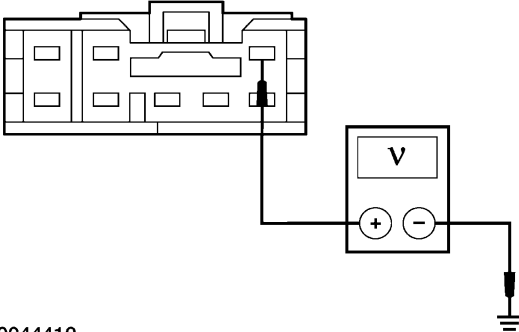
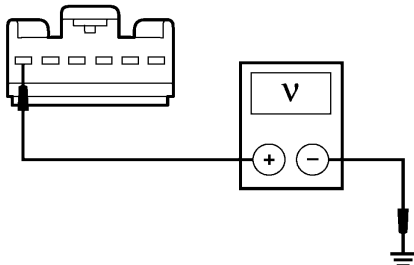
Test Step		Result / Action to Take
D2	CHECK CIRCUIT 57 (BK) FOR AN OPEN	
	<ul style="list-style-type: none"> Measure the resistance between the audio unit C290c pin 4, circuit 57 (BK); or between the audio unit C240 pin 2, circuit 57 (BK), harness side and ground.  <p>A0045896</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohm? 	<p>Yes REMOVE the audio unit and SEND it to an authorized audio system repair facility. TEST the system for normal operation after repair.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>

PINPOINT TEST E: THE STEERING WHEEL CONTROL SWITCH ILLUMINATION IS INOPERATIVE

Test Step		Result / Action to Take
E1	CHECK THE OPERATIONS OF THE STEERING WHEEL CONTROL SWITCH(ES)	
	<ul style="list-style-type: none"> Operate the speed control, remote audio control and climate control switches. Do the speed control, audio and climate controls operate correctly? 	<p>Yes GO to E2.</p> <p>No For speed control, REFER to Section 310-03. For climate control, REFER to Section 412-00. For audio controls, REFER to Section 415-00.</p>
E2	CHECK THE STEERING WHEEL CONTROL SWITCH(ES)	
	<ul style="list-style-type: none"> Key in OFF position. Disconnect: Inoperative Steering Wheel Control Switch. Key in ON position. Turn the headlamp switch to the parking lamps ON position, with the instrument panel dimmer switch rotated to maximum brightness level. Measure the voltage between the speed control switch connector, pin 1 circuit 484 (RD/PK), harness side and ground; or between the remote audio/climate control switch connector, pin 1, circuit 484 (RD/PK), harness side and ground.  <p>A0044929</p> <ul style="list-style-type: none"> Is the voltage greater than 10 volts? 	<p>Yes INSTALL a new switch. TEST the system for normal operation.</p> <p>No GO to E3.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST E: THE STEERING WHEEL CONTROL SWITCH ILLUMINATION IS INOPERATIVE (Continued)**

Test Step		Result / Action to Take
E3	CHECK CIRCUIT 484 (OG/BK) FOR AN OPEN <ul style="list-style-type: none">• Key in OFF position.• Disconnect: Clockspring C218a.• Key in ON position.• Turn the headlamp switch to the parking lamps ON position, with the instrument panel dimmer switch to maximum brightness level.• Measure the voltage between the clockspring C218a pin 3, circuit 484 (OG/BK), harness side and ground. <div></div> <p>A0044412</p> <ul style="list-style-type: none">• Is the voltage greater than 10 volts?	<p>Yes TURN the headlamp switch to the OFF position. GO to E4.</p> <p>REPAIR the circuit. TEST the system for normal operation.</p>
E4	CHECK THE CLOCKSPRING <ul style="list-style-type: none">• Key in OFF position.• Remove the driver side air bag. Refer to Section 501-20B.• Connect: Clockspring C218a.• Disconnect: Top of Clockspring Connector.• Connect: Restraint System Diagnostic Tool 418-F403 (2 req'd) to the Driver Air Bag Module Electrical Connectors.• Connect the battery. Refer to Section 414-01.• Turn the headlamp switch to the parking lamps ON position, with the instrument panel dimmer switch to maximum brightness level.• Measure the voltage between the top of the clockspring connector pin 1, circuit 484 (BN/LB), component side and ground. <div></div> <p>A0044930</p> <ul style="list-style-type: none">• Is the voltage greater than 10 volts?	<p>Yes REPAIR or INSTALL a new horn switch wiring harness. TEST the system for normal operation. DISCONNECT the battery. REFER to Section 414-01. INSTALL the air bag module. REFER to Section 501-20B.</p> <p>No INSTALL a new clockspring. REFER to Section 501-20B. TEST the system for normal operation. DISCONNECT the battery. REFER to Section 414-01. INSTALL the air bag module. REFER to Section 501-20B.</p>

PINPOINT TEST F: A SINGLE ILLUMINATION SOURCE IS INOPERATIVE

Test Step		Result / Action to Take
F1	CHECK FOR VOLTAGE TO THE INOPERATIVE LAMP(S)	
<ul style="list-style-type: none">• Key in OFF position.• Disconnect: Inoperative Lamp.• Key in ON position.		

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST F: A SINGLE ILLUMINATION SOURCE IS INOPERATIVE (Continued)**

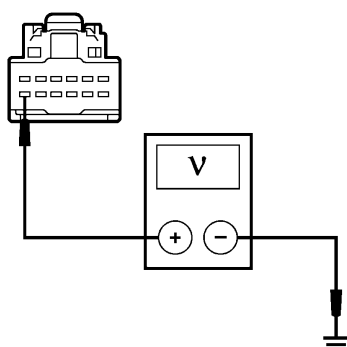
Test Step		Result / Action to Take	
F1	CHECK FOR VOLTAGE TO THE INOPERATIVE LAMP(S) (Continued)	<div>Yes</div> <div>GO to F2.</div> <div>No</div> <div>REPAIR the circuit in question. TEST the system for normal operation.</div>	
<div><div></div><div>• Turn the headlamp switch to the parking lamps ON position. Rotate the instrument panel dimmer switch to maximum brightness level.</div><div>• Measure the voltage between the inoperative illumination source and ground as follows:</div></div>			
Inoperative Lamp			
Inoperative Lamp	Pin		Circuit
Headlamp switch C205a	2		484 (OG/BK)
Adjustable pedal switch C2089	5		484 (OG/BK)
Traction control switch C280	3		484 (OG/BK)
Message center switch C253	7		484 (OG/BK)
Overhead console C930	4		484 (OG/BK)
Heated rear window switch C241	3		484 (OG/BK)
AOD on/off switch C2096	2	484 (OG/BK)	
Voltmeter gauge C2225	1	484 (OG/BK)	
Oil pressure gauge C2226	2	484 (OG/BK)	
• Is the voltage greater than 10 volts?			
F2	CHECK INOPERATIVE ILLUMINATION SOURCE GROUND		
<div><div></div><div>• Key in OFF position.</div><div>• Measure the resistance between inoperative lamp and ground as follows:</div></div>			

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST F: A SINGLE ILLUMINATION SOURCE IS INOPERATIVE (Continued)**

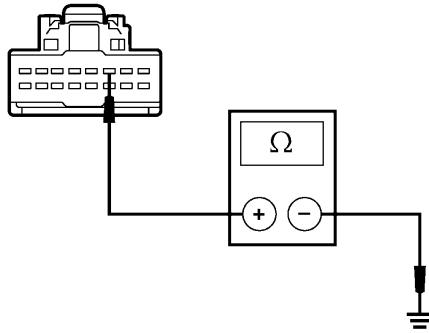
Test Step			Result / Action to Take
F2	CHECK INOPERATIVE ILLUMINATION SOURCE GROUND (Continued)		
Inoperative Lamp			
Inoperative Lamp	Pin	Circuit	
Headlamp switch C205a	1	57 (BK)	
Adjustable pedal switch C2089	6	57 (BK)	
Traction control switch C280	7	57 (BK)	
Message center switch C253	2	57 (BK)	
Overhead console C930	2 and 9	57 (BK) and 676 (PK/OG)	
Heated rear window switch C241	7	57 (BK)	
AOD on/off switch C2096	1	57 (BK)	
Voltmeter gauge C2225	3	57 (BK)	Yes INSTALL a new switch or component in question. TEST the system for normal operation.
Oil pressure gauge C2226	1	57 (BK)	
• Is the resistance less than 5 ohms?			

PINPOINT TEST G: THE MESSAGE CENTER ILLUMINATION SOURCE IS INOPERATIVE — WITH MOONROOF

Test Step		Result / Action to Take
G1	CHECK CIRCUIT 19 (LB/RD) FOR VOLTAGE	<div>Yes GO to G2.</div> <div>No REPAIR the circuit. TEST the system for normal operation.</div>
<div><ul style="list-style-type: none">Disconnect: Message Center C9013a.Place the headlamp switch to the parking lamps ON position.Increase the instrument panel dimmer switch to the maximum brightness level.Measure the voltage between the message center C9013-12, circuit 19 (LB/RD), harness side and ground.</div> <div></div> <div>A0059752</div> <div><ul style="list-style-type: none">Is the voltage greater than 10 volts?</div>		
G2	CHECK CIRCUIT 676 (PK/OG) FOR AN OPEN	
<div><ul style="list-style-type: none">Disconnect: Message Center C9013b.</div>		

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST G: THE MESSAGE CENTER ILLUMINATION SOURCE IS INOPERATIVE — WITH MOONROOF (Continued)**

Test Step		Result / Action to Take
G2	CHECK CIRCUIT 676 (PK/OG) FOR AN OPEN (Continued)	
<div><ul style="list-style-type: none">Measure the resistance between the message center C9013-3, circuit 676 (PK/OG), harness side and ground.<div></div><div>A0059753</div><div><ul style="list-style-type: none">Is the resistance less than 5 ohms?</div></div> <td><div><div>Yes</div><div>INSTALL a new message center. REFER to Section 413-08. TEST the system for normal operation after repair.</div><div>No</div><div>REPAIR the circuit. TEST the system for normal operation.</div></div></td>		<div><div>Yes</div><div>INSTALL a new message center. REFER to Section 413-08. TEST the system for normal operation after repair.</div><div>No</div><div>REPAIR the circuit. TEST the system for normal operation.</div></div>

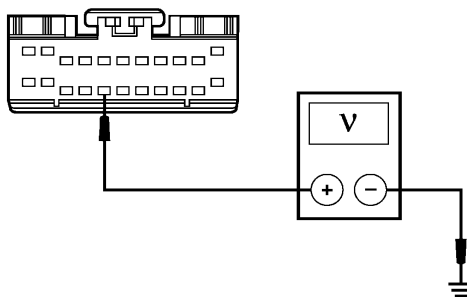
Yes

INSTALL a new message center. REFER to Section 413-08. TEST the system for normal operation after repair.

No

REPAIR the circuit. TEST the system for normal operation.

PINPOINT TEST H: THE INSTRUMENT PANEL ILLUMINATION DOES NOT DIM

Test Step		Result / Action to Take
H1	CHECK CIRCUIT 1036 (BN/WH) FOR SHORT TO POWER <ul style="list-style-type: none">• Key in OFF position.• Disconnect: LCM C2145a.• Key in ON position.• Measure the voltage between LCM C2145a pin 16, circuit 1036 (BN/WH), harness side and ground. <div><p>A0045912</p><ul style="list-style-type: none">• Is any voltage present?</div>	Yes REPAIR the circuit. TEST the system for normal operation. No GO to H2 .
H2	CHECK THE DIMMING CONTROL CIRCUIT <ul style="list-style-type: none">• Key in OFF position.	

Yes

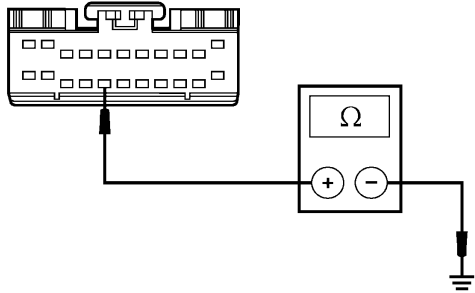
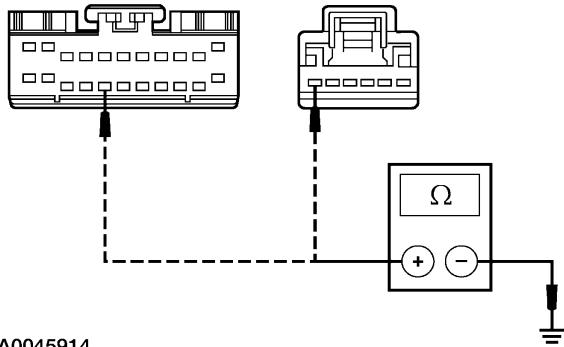
REPAIR the circuit. TEST the system for normal operation.

No

GO to **H2**.

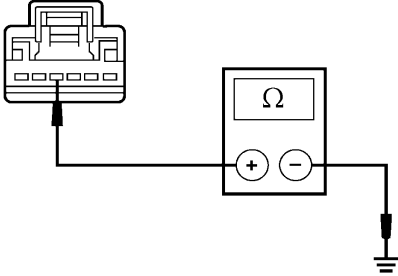
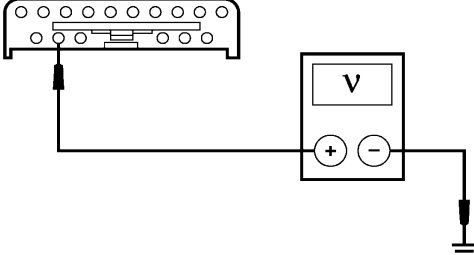
(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST H: THE INSTRUMENT PANEL ILLUMINATION DOES NOT DIM (Continued)**

	Test Step	Result / Action to Take
H2	CHECK THE DIMMING CONTROL CIRCUIT (Continued) <ul style="list-style-type: none"> Measure the resistance between the LCM C2145a pin 16, circuit 1036 (BN/WH), harness side and ground while rotating the instrument panel dimmer switch wheel from minimum setting to maximum setting.  <p>A0045913</p> <ul style="list-style-type: none"> Does the resistance vary between 25 ohms and 545 ohms? 	<p>Yes GO to H5.</p> <p>No GO to H3.</p>
H3	CHECK CIRCUIT 1036 (BN/WH) FOR AN OPEN OR SHORT TO GROUND <ul style="list-style-type: none"> Disconnect: Instrument Panel Dimmer Switch C205b. Measure the resistance between the LCM C2145a pin 16, circuit 1036 (BN/WH), harness side and the instrument panel dimmer switch C205b pin 6, circuit 1036 (BN/WH), harness side; and between the LCM C2145a pin 16, circuit 1036 (BN/WH), harness side and ground.  <p>A0045914</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms between the LCM and instrument panel dimmer switch, and greater than 10,000 ohms between the LCM and ground? 	<p>Yes GO to H4.</p> <p>No REPAIR the circuit. TEST the system for normal operation.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST H: THE INSTRUMENT PANEL ILLUMINATION DOES NOT DIM (Continued)**

	Test Step	Result / Action to Take
H4	CHECK CIRCUIT 57 (BK) FOR AN OPEN <ul style="list-style-type: none"> Measure the resistance between the instrument panel dimmer switch C205b pin 4, circuit 57 (BK), harness side and ground.  <p>A0045915</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes INSTALL a new instrument panel dimmer switch. TEST the system for normal operation.</p> <p>No REPAIR the circuit. TEST the system for normal operation.</p>
H5	CHECK CIRCUIT 484 (OG/BK) FOR SHORT TO POWER <ul style="list-style-type: none"> Key in OFF position. Disconnect: LCM C2145b. Key in ON position. Measure the voltage at the LCM C2145b pin 2, circuit 484 (OG/BK), harness side and ground.  <p>A0045916</p> <ul style="list-style-type: none"> Is any voltage present? 	<p>Yes REPAIR the circuit. TEST the system for normal operation.</p> <p>No GO to H6.</p>
H6	CHECK FOR CORRECT LCM OPERATION <ul style="list-style-type: none"> Key in OFF position. Disconnect all vehicle LCM connectors. Check for: <ul style="list-style-type: none"> corrosion pushed-out pins Connect all LCM connectors and make sure they seat correctly. Operate the system and verify the concern is still present. Is the concern still present? 	<p>Yes INSTALL a new LCM. REFER to Section 419-10. TEST the system for normal operation.</p> <p>No The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector.</p>