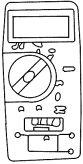
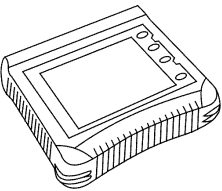
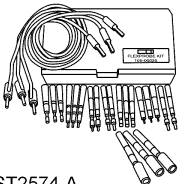


DIAGNOSIS AND TESTING

Headlamps

Refer to Wiring Diagrams Cell 85 for schematic and connector information.

Special Tool(s)

 <p>ST1137-A</p>	73III Automotive Meter 105-R0057 or equivalent
 <p>ST2332-A</p>	Worldwide Diagnostic System (WDS) Vehicle Communication Module (VCM) with appropriate adapters, or equivalent diagnostic tool
 <p>ST2574-A</p>	Flex Probe Kit 105-R025B or equivalent

Principles of Operation

The smart junction box (SJB) monitors the headlamp switch position by sending multiple voltage reference signals to the headlamp switch. When the headlamp switch is in any given position, that input signal is routed to ground.

The SJB also monitors the multifunction switch for a flash-to-pass or high beam request. There are 2 voltage reference circuits which monitor this. When the multifunction switch is in the FLASH-TO-PASS or HIGH BEAM position, the voltage signal is routed to ground.

NOTE: The flash-to-pass feature does not require any input from the headlamp switch.

When the SJB receives an input requesting the headlamps on, the SJB supplies voltage to the low beam and high beam bulbs as necessary.

Inspection and Verification

1. Verify the customer concern.
2. Visually inspect the following for obvious signs of mechanical or electrical damage.

Visual Inspection Chart

Mechanical	Electrical
<ul style="list-style-type: none"> • Headlamp switch 	<ul style="list-style-type: none"> • Bussed electrical center (BEC) fuse 50 (15A) (high beams) • Smart junction box (SJB) fuse 67 (30A) • Circuitry • Bulbs • SJB

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

NOTE: Make sure the headlamp switch is in the OFF position.

NOTE: Make sure the multifunction switch is in the LOW BEAM position.

4. If the cause is not visually evident, connect the diagnostic tool to the data link connector (DLC) 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.
5. If the diagnostic tool still does not communicate with the vehicle, refer to the diagnostic tool operating manual.
6. Carry out the diagnostic tool data link test. If the diagnostic tool responds with:
 - CAN circuit fault; all electronic control units no response/not equipped, refer to Section 418-00.
 - No response/not equipped for SJB, refer to Section 419-10.
 - System passed, retrieve and record the continuous diagnostic trouble codes (DTCs), erase the continuous DTCs and carry out the self-test diagnostics for the SJB.
7. If the DTCs retrieved are related to the concern, go to the Smart Junction Box (SJB) Diagnostic Trouble Code (DTC) Index.
8. If no DTCs related to the concern are retrieved, GO to [Symptom Chart](#).

DIAGNOSIS AND TESTING (Continued)**Smart Junction Box (SJB) Diagnostic Trouble Code (DTC) Index**

DTC	Description	Action
B1342	ECU is Faulted	CLEAR the DTCs. RETRIEVE the DTCs. If DTC B1342 is retrieved again, INSTALL a new SJB. REFER to Section 419-10. TEST the system for normal operation.
B1470	Lamp Headlamp Input Circuit Failure	GO to Pinpoint Test E.
B2501	LF Lamp Low Beam Circuit Failure	If the low beam is inoperative, GO to Pinpoint Test C. If the low beam is always on, GO to Pinpoint Test E.
B2503	RF Lamp Low Beam Circuit Failure	If the low beam is inoperative, GO to Pinpoint Test C. If the low beam is always on, GO to Pinpoint Test E.
B2586	Headlamp Mode Select Circuit Failure	GO to Pinpoint Test E.
B2598	Headlamp Relay Circuit Failure	If the high beams are inoperative, GO to Pinpoint Test B. If the high beams are always on, GO to Pinpoint Test E.
All other DTCs	—	REFER to Section 419-10.

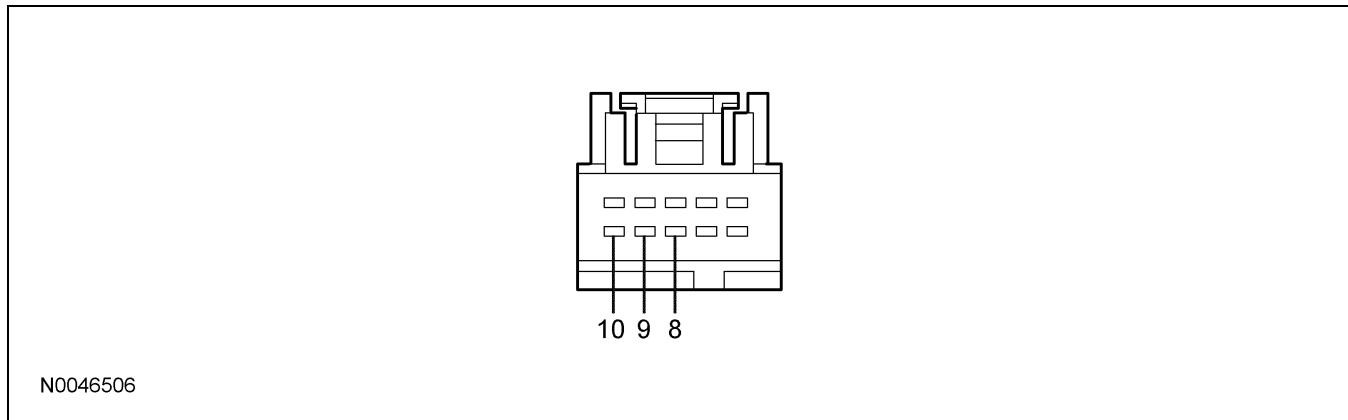
Symptom Chart**Symptom Chart**

Condition	Possible Sources	Action
<ul style="list-style-type: none"> No communication with the smart junction box (SJB) 	<ul style="list-style-type: none"> Circuitry SJB 	<ul style="list-style-type: none"> REFER to Section 419-10.
<ul style="list-style-type: none"> The low beams are inoperative 	<ul style="list-style-type: none"> Fuse Circuitry Bussed electrical center (BEC) SJB 	<ul style="list-style-type: none"> GO to Pinpoint Test A.
<ul style="list-style-type: none"> The high beams are inoperative 	<ul style="list-style-type: none"> Fuse Circuitry High beam relay Multifunction switch BEC SJB 	<ul style="list-style-type: none"> GO to Pinpoint Test B.
<ul style="list-style-type: none"> One low beam headlamp is inoperative 	<ul style="list-style-type: none"> Circuitry BEC SJB 	<ul style="list-style-type: none"> GO to Pinpoint Test C.
<ul style="list-style-type: none"> One high beam headlamp is inoperative 	<ul style="list-style-type: none"> Circuitry BEC 	<ul style="list-style-type: none"> GO to Pinpoint Test D.
<ul style="list-style-type: none"> The headlamps are on continuously 	<ul style="list-style-type: none"> Circuitry High beam relay Headlamp switch Multifunction switch BEC SJB 	<ul style="list-style-type: none"> GO to Pinpoint Test E.
<ul style="list-style-type: none"> The flash-to-pass feature is inoperative 	<ul style="list-style-type: none"> Circuitry Multifunction switch SJB 	<ul style="list-style-type: none"> GO to Pinpoint Test F.

DIAGNOSIS AND TESTING (Continued)

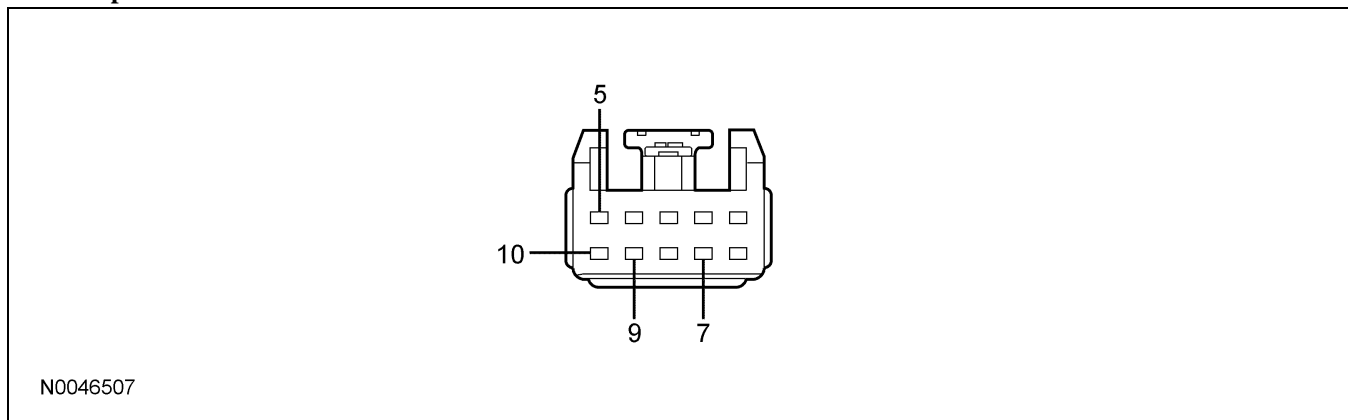
Connector Circuit Reference

Multifunction Switch C202



Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
8	1394 (WH/RD) high beam request	Less than 5 ohms between the multifunction switch and the smart junction box (SJB). Greater than 10,000 ohms between the multifunction switch and ground.
9	1395 (RD/PK) flash-to-pass request	Less than 5 ohms between the multifunction switch and the SJB. Greater than 10,000 ohms between the multifunction switch and ground.
10	1396 (VT/WH) multifunction switch return circuit	Less than 5 ohms between the multifunction switch and the SJB.

Headlamp Switch C205

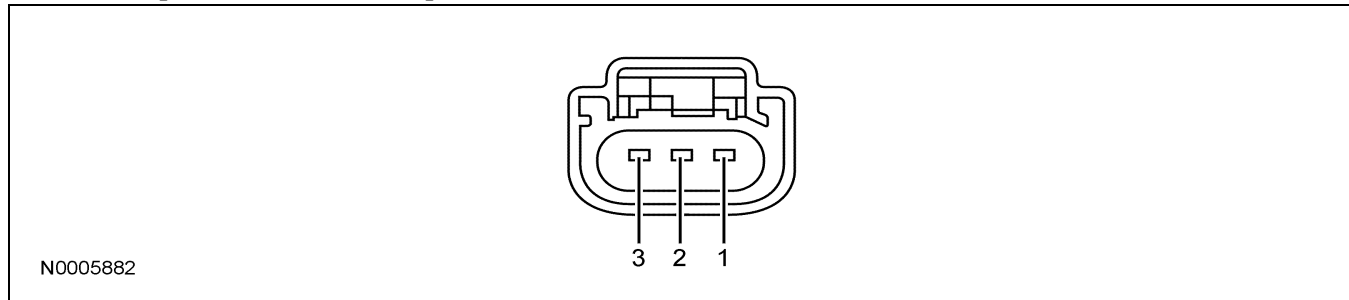


Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
5	1401 (BK/LG) parking lamp request	Less than 5 ohms between the headlamp switch and the SJB. Greater than 10,000 ohms between the headlamp switch and ground.
7	1205 (BK) headlamp switch ground	Less than 5 ohms between the headlamp switch and ground.

DIAGNOSIS AND TESTING (Continued)

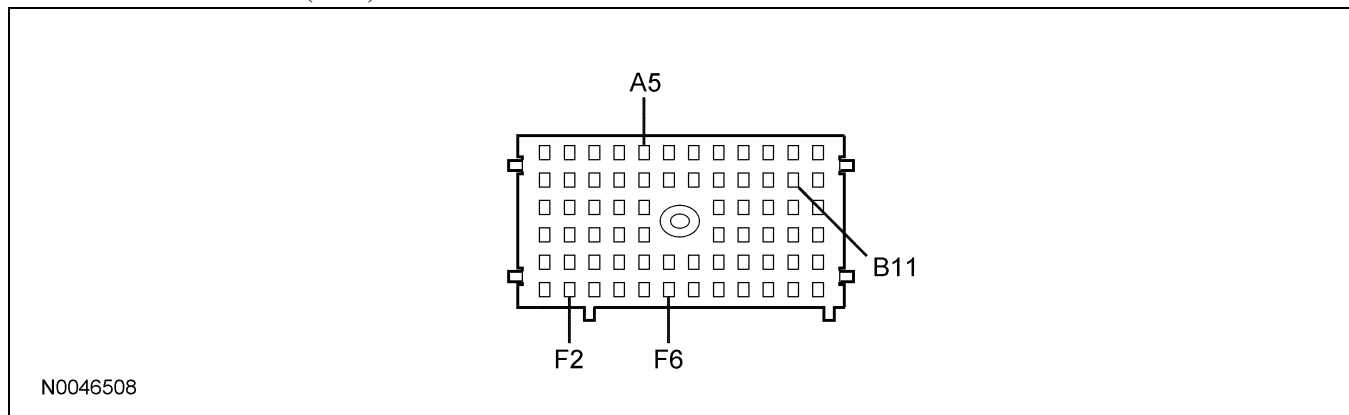
Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
9	1400 (TN/WH) headlamp off request	Less than 5 ohms between the headlamp switch and the SJB. Greater than 10,000 ohms between the headlamp switch and ground.
10	1402 (RD/WH) headlamps on request	Less than 5 ohms between the headlamp switch and the SJB. Greater than 10,000 ohms between the headlamp switch and ground.

LH Headlamp C1021, RH Headlamp C1041



Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
1 (C1021)	1338 (WH) low beam voltage feed	Greater than 10 volts when the headlamp switch is in the HEADLAMPS ON position.
1 (C1041)	1336 (LG/WH) low beam voltage feed	Greater than 10 volts when the headlamp switch is in the HEADLAMPS ON position.
2	1205 (BK) headlamp ground circuit	Less than 5 ohms between the headlamp and ground.
3 (C1021)	1337 (VT/YE) high beam voltage feed circuit	Greater than 10 volts when the headlamp switch is in the HEADLAMPS ON position and the multifunction switch is in the HIGH BEAM position.
3 (C1041)	1335 (YE/WH) high beam voltage feed circuit	Greater than 10 volts when the headlamp switch is in the HEADLAMPS ON position and the multifunction switch is in the HIGH BEAM position.

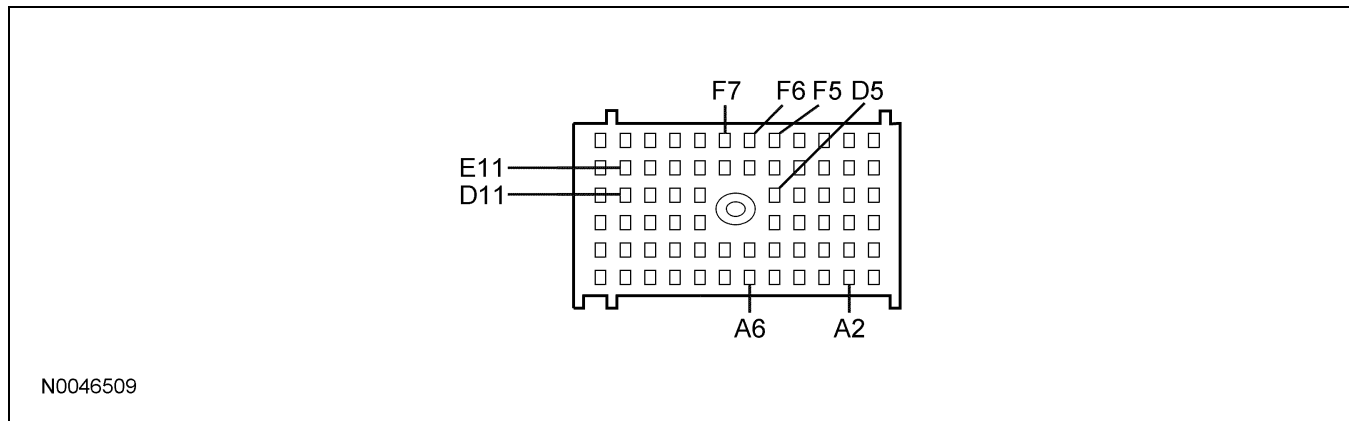
Bussed Electrical Center (BEC) C1035a



DIAGNOSIS AND TESTING (Continued)

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
A5	1052 (LG/BK) SJB voltage supply circuit	Less than 5 ohms between the BEC and the SJB.
B11	1708 (LG/BK) high beam relay coil control circuit	0 volts, less than 5 ohms between the BEC and the SJB.
F2	1336 (LG/WH) RH low beam voltage feed	Greater than 10 volts when the headlamp switch is in the HEADLAMPS ON position. Less than 5 ohms between the BEC and the SJB.
F6	1338 (WH) LH low beam voltage feed	Greater than 10 volts when the headlamp switch is in the HEADLAMPS ON position. Less than 5 ohms between the BEC and the SJB.

BEC C1035c

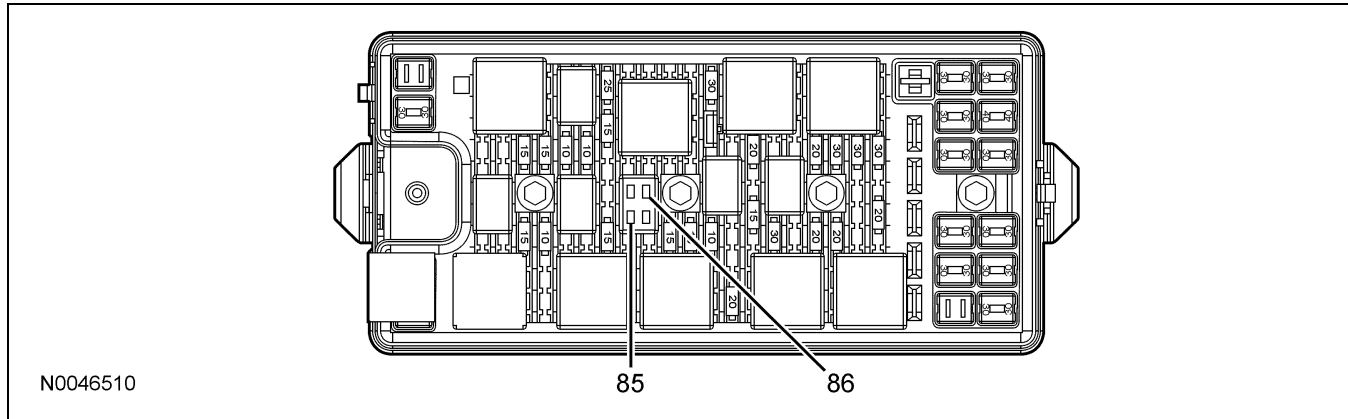


N0046509

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
A2	1336 (LG/WH) RH low beam voltage feed	Less than 5 ohms between the BEC and the headlamp.
A6	1338 (WH) LH low beam voltage feed	Less than 5 ohms between the BEC and the headlamp.
D5	1205 (BK) LH headlamp ground circuit	Less than 5 ohms between the BEC and the headlamp.
D11	1205 (BK) RH headlamp ground circuit	Less than 5 ohms between the BEC and the headlamp.
E11	1205 (BK) RH headlamp ground circuit	Less than 5 ohms between the BEC and ground.
F5	1205 (BK) LH headlamp ground circuit	Less than 5 ohms between the BEC and ground.
F6	1337 (VT/YE) LH high beam voltage feed	Less than 5 ohms between the BEC and the headlamp.
F7	1335 (YE/WH) RH high beam voltage feed	Less than 5 ohms between the BEC and the headlamp.

DIAGNOSIS AND TESTING (Continued)

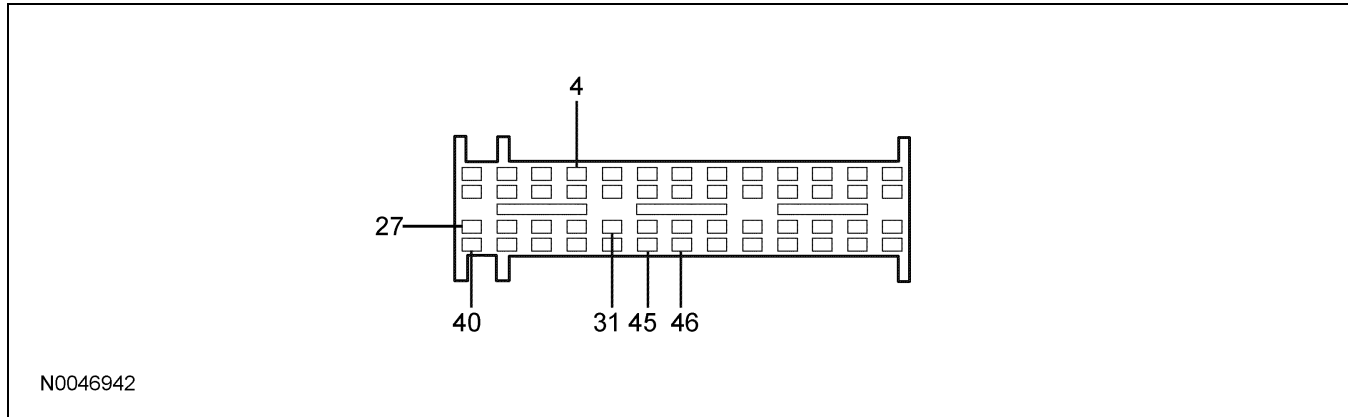
High Beam Relay C1050



N0046510

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
85	Battery voltage feed circuit	Greater than 10 volts at all times.
86	1708 (LG/BK) high beam relay coil control ground circuit	Less than 5 ohms between the high beam relay and the SJB.

SJB C2280b

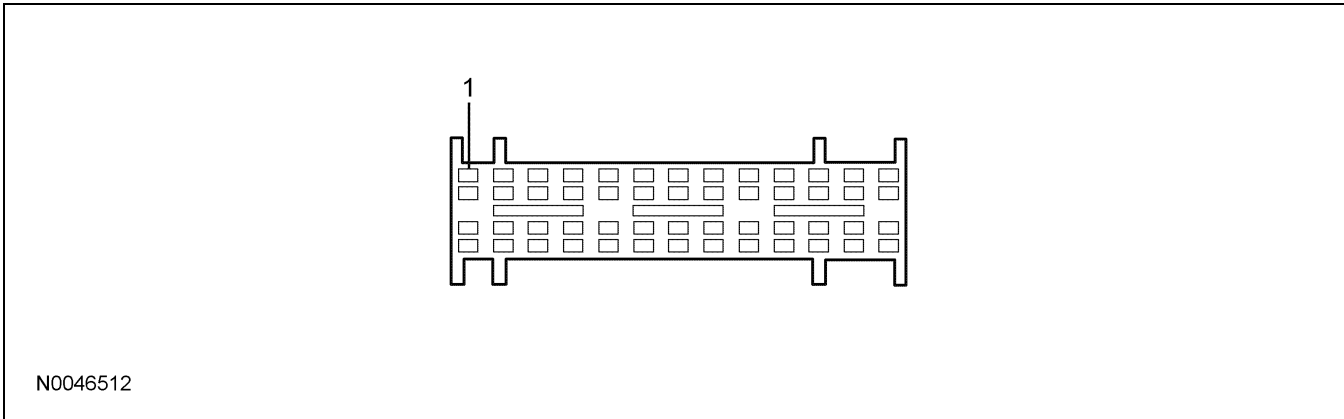


N0046942

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
4	1396 (VT/WH) multifunction switch return circuit	0 volts, less than 5 ohms between the SJB and the multifunction switch.
27	1400 (TN/WH) headlamp off request circuit	0 volts, less than 5 ohms between the SJB and the headlamp switch.
31	1401 (BK/LG) parking lamps on request circuit	0 volts, less than 5 ohms between the SJB and the headlamp switch.
40	1395 (RD/PK) flash-to-pass request circuit	0 volts, less than 5 ohms between the SJB and the multifunction switch.
45	1394 (WH/RD) high beam request circuit	0 volts, less than 5 ohms between the SJB and the multifunction switch.
46	1402 (RD/WH) headlamps on request circuit	0 volts, less than 5 ohms between the SJB and the headlamp switch.

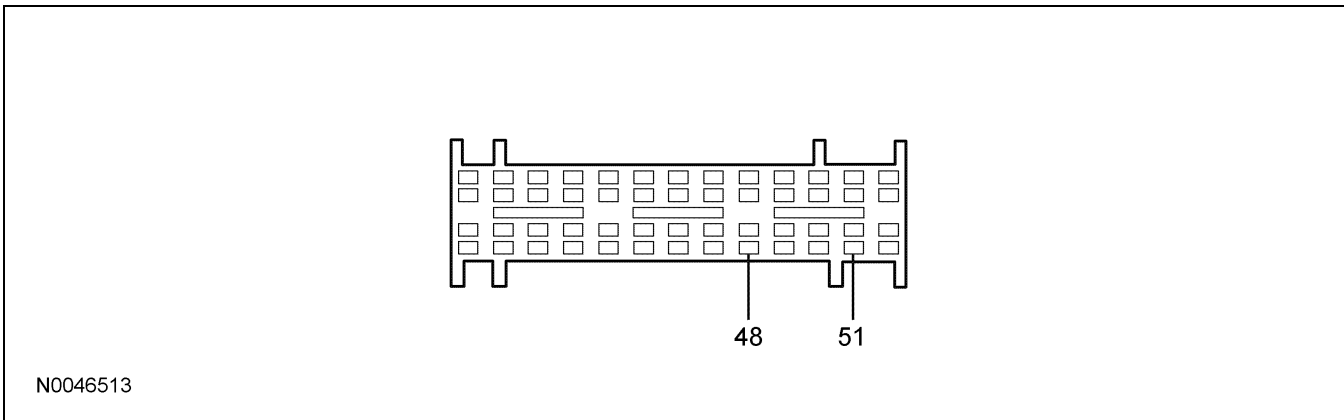
DIAGNOSIS AND TESTING (Continued)

SJB C2280c



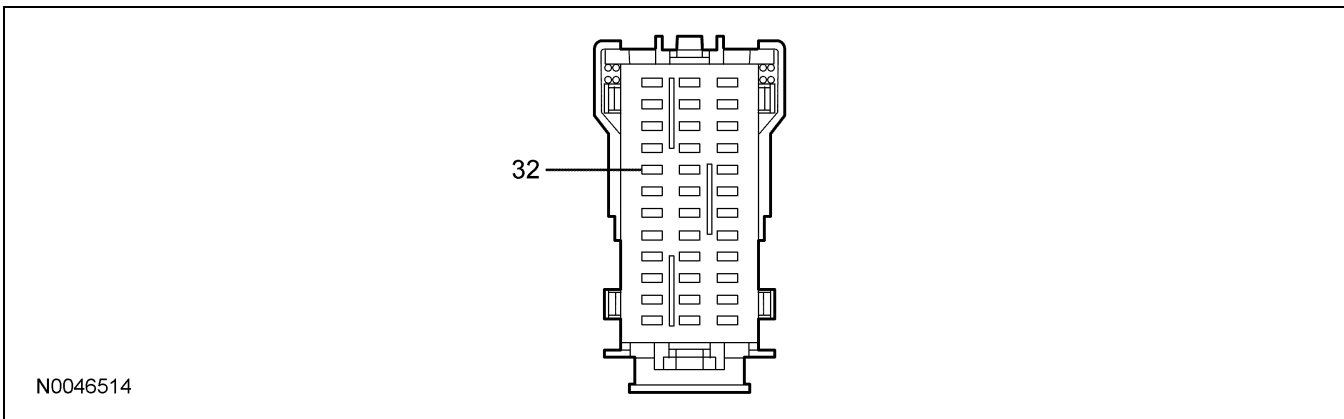
Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
1	1708 (LG/BK) high beam relay coil control circuit	Greater than 10 volts at all times.

SJB C2280d



Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
48	1336 (LG/WH) RH low beam voltage feed	Less than 5 ohms between the SJB and the headlamp.
51	1338 (WH) LH low beam voltage feed	Less than 5 ohms between the SJB and the headlamp.

SJB C2280h



DIAGNOSIS AND TESTING (Continued)

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
32	1052 (TN/BK) SJB voltage supply	Greater than 10 volts at all times.

Pinpoint Tests

Pinpoint Test A: The Low Beams Are Inoperative

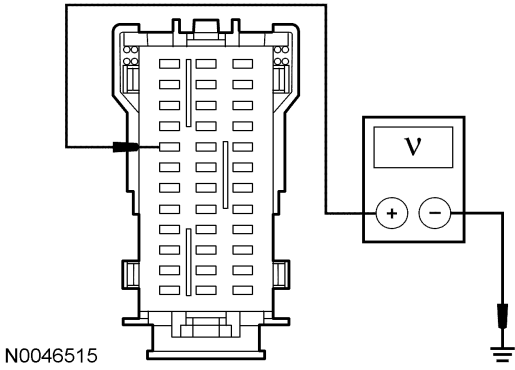
Normal Operation

The smart junction box (SJB) is supplied voltage for the low beams through circuit 1052 (TN/BK) from the bussed electrical center (BEC). When a request for the low beams is detected, the SJB provides voltage to the low beams. The headlamps share a common ground through circuit 1205 (BK).

Possible Causes

- Fuse
- Circuit 1052 (TN/BK) open
- Circuit 1205 (BK) open
- BEC
- SJB

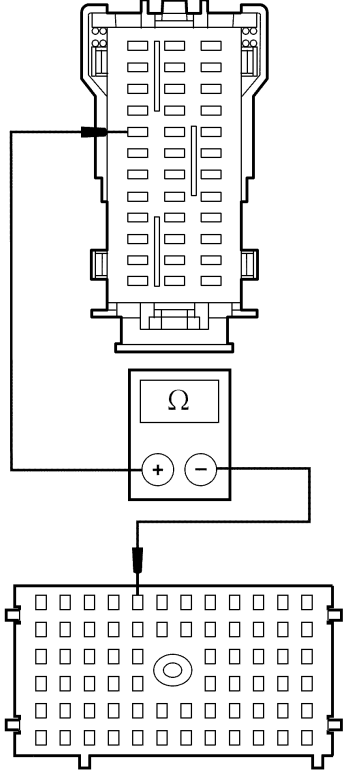
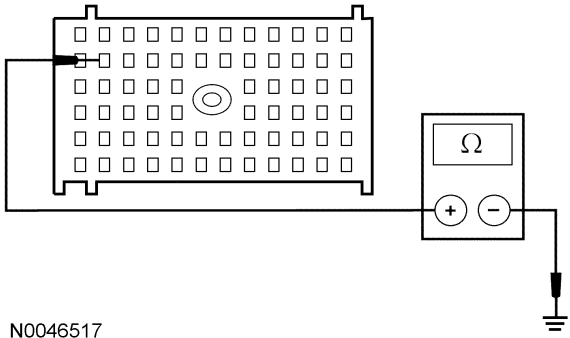
PINPOINT TEST A: THE LOW BEAMS ARE INOPERATIVE

Test Step		Result / Action to Take
A1	<p>CHECK CIRCUIT 1052 (TN/BK) FOR A VOLTAGE</p> <ul style="list-style-type: none"> • Key in OFF position. • Disconnect: SJB C2280h. • Measure the voltage between the SJB C2280h-32, circuit 1052 (TN/BK), harness side and ground.  <p>N0046515</p> <ul style="list-style-type: none"> • Is the voltage greater than 10 volts? 	<p>Yes GO to A3.</p> <p>No VERIFY the BEC fuse 67 (30A) is OK. If OK, GO to A2.</p>
A2	<p>CHECK CIRCUIT 1052 (TN/BK) FOR AN OPEN</p> <ul style="list-style-type: none"> • Disconnect: BEC C1035a. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST A: THE LOW BEAMS ARE INOPERATIVE (Continued)

Test Step	Result / Action to Take
<p>A2 CHECK CIRCUIT 1052 (TN/BK) FOR AN OPEN (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between the SJB C2280h-32, circuit 1052 (TN/BK), harness side and the BEC C1035a-A5, circuit 1052 (TN/BK), harness side.  <p>N0046516</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes INSTALL a new BEC. TEST the system for normal operation.</p> <p>No REPAIR the circuit. TEST the system for normal operation.</p>
<p>A3 CHECK CIRCUIT 1205 (BK) FOR AN OPEN</p> <ul style="list-style-type: none"> Disconnect: BEC C1035c. Measure the resistance between the BEC C1035c-E11, circuit 1205 (BK), harness side and ground.  <p>N0046517</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes GO to A4.</p> <p>No REPAIR the circuit. TEST the system for normal operation.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST A: THE LOW BEAMS ARE INOPERATIVE (Continued)**

Test Step		Result / Action to Take
A4	CHECK FOR CORRECT SJB OPERATION	Yes INSTALL a new SJB. REFER to Section 419-10. TEST the system for normal operation. No The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.
	<ul style="list-style-type: none"> • Key in OFF position. • Disconnect all the SJB connectors. • Check for: <ul style="list-style-type: none"> — corrosion — pushed-out pins • Connect all the SJB connectors and make sure they seat correctly. • Operate the system and verify the concern is still present. • Is the concern still present? 	

Pinpoint Test B: The High Beams Are Inoperative**Normal Operation**

When the headlamp switch is placed in the HEADLAMPS ON position, the smart junction box (SJB) monitors the multifunction switch by sending a voltage reference signal through circuit 1394 (WH/RD). When the multifunction switch is placed in the HIGH BEAM position, the signal is routed to an internal ground within the SJB through circuit 1396 (VT/WH). The SJB then supplies ground for the high beam relay coil through circuit 1708 (LG/BK). The high beam relay is supplied voltage at all times from the bussed electrical center (BEC). When the high beam relay is energized, voltage is routed to the high beams.

Possible Causes

- Fuse
- Circuit 1394 (WH/RD) open
- Circuit 1396 (VT/WH) open
- Circuit 1708 (LG/BK) open or short to voltage
- High beam relay
- Multifunction switch
- BEC
- SJB

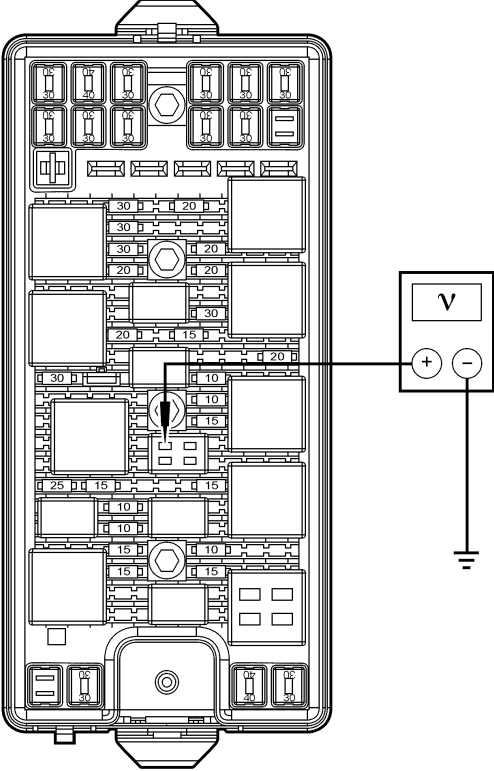
PINPOINT TEST B: THE HIGH BEAMS ARE INOPERATIVE

Test Step		Result / Action to Take
B1	CHECK THE LOW BEAMS	Yes GO to B2 . No GO to Pinpoint Test A.
	<ul style="list-style-type: none"> • Key in OFF position. • NOTE: Make sure the multifunction switch is in the LOW BEAM position. Place the headlamp switch in the HEADLAMPS ON position. • Do the low beams illuminate? 	
B2	USE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE SJB SELF-TEST	Yes GO to B3 . No GO to B9 .
	<ul style="list-style-type: none"> • Place the headlamp switch in the OFF position. • Using the recorded results from the SJB self-test: • Was DTC B2598 present? 	
B3	CHECK THE HIGH BEAM RELAY (DTC B2598)	Yes GO to B4 . No INSTALL a new high beam relay. CLEAR the DTCs. REPEAT the self-test.
	<ul style="list-style-type: none"> • Disconnect: High Beam Relay C1050. • Carry out the high beam relay component test. Refer to Wiring Diagrams Cell 149 for component testing. • Is the high beam relay OK? 	
B4	CHECK THE HIGH BEAM RELAY CONTROL CIRCUIT FOR A SHORT TO VOLTAGE	
	<ul style="list-style-type: none"> • Key in ON position. • Disconnect: SJB C2280c. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

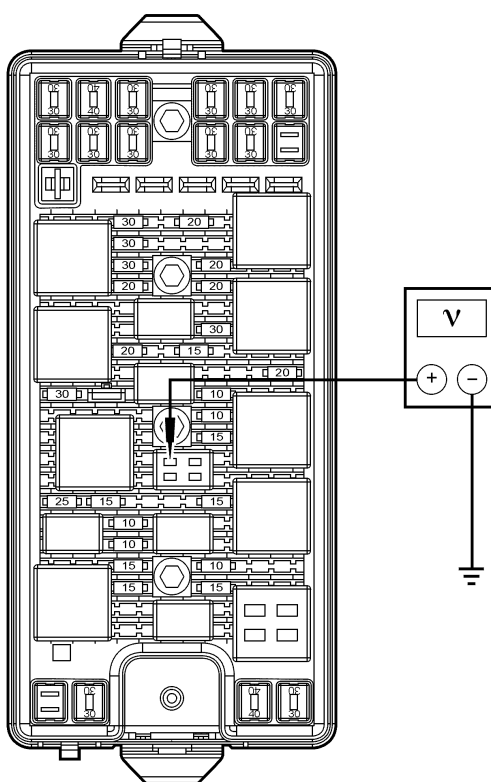
PINPOINT TEST B: THE HIGH BEAMS ARE INOPERATIVE (Continued)

Test Step	Result / Action to Take
<p>B4 CHECK THE HIGH BEAM RELAY CONTROL CIRCUIT FOR A SHORT TO VOLTAGE (Continued)</p>	
<ul style="list-style-type: none"> Measure the voltage between the high beam relay C1050-86, circuit 1708 (LG/BK), harness side and ground.  <p>N0014615</p> <ul style="list-style-type: none"> Is any voltage present? 	<p>Yes GO to B5.</p> <p>No GO to B6.</p>
<p>B5 CHECK CIRCUIT 1708 (LG/BK) FOR A SHORT TO VOLTAGE</p> <ul style="list-style-type: none"> Key in OFF position. Disconnect: BEC C1035a. Key in ON position. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

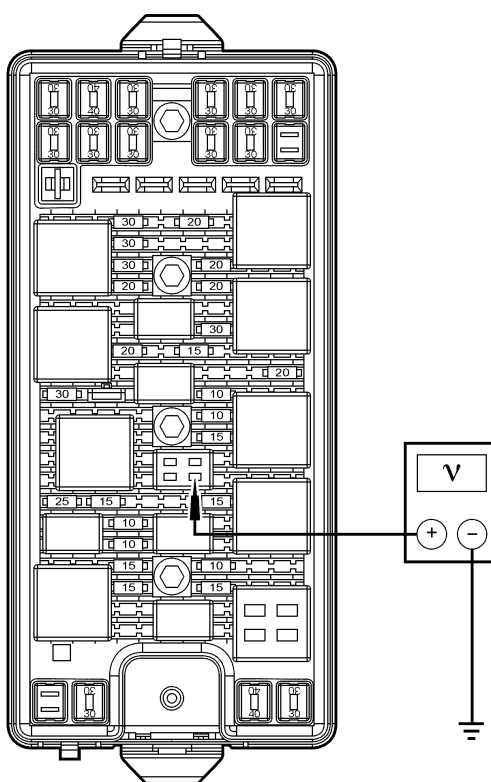
PINPOINT TEST B: THE HIGH BEAMS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
B5	<p>CHECK CIRCUIT 1708 (LG/BK) FOR A SHORT TO VOLTAGE (Continued)</p> <ul style="list-style-type: none"> Measure the voltage between the high beam relay C1050-86, circuit 1708 (LG/BK), harness side and ground.  <p>N0014615</p> <ul style="list-style-type: none"> Is any voltage present? 	<p>Yes INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.</p> <p>No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.</p>
B6	<p>CHECK THE VOLTAGE FEED TO THE HIGH BEAM RELAY COIL</p> <ul style="list-style-type: none"> Key in OFF position. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

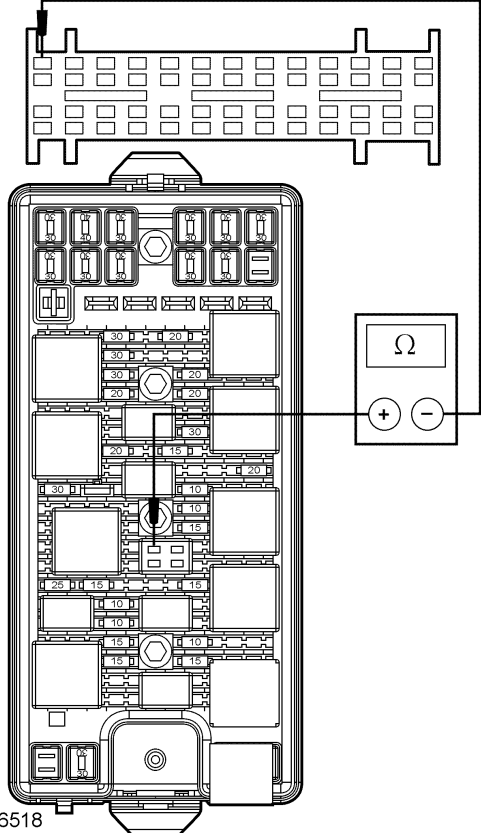
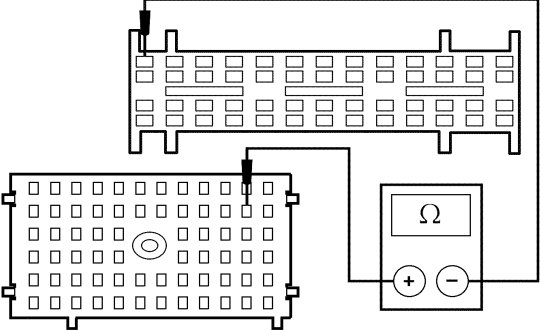
PINPOINT TEST B: THE HIGH BEAMS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
B6	<p>CHECK THE VOLTAGE FEED TO THE HIGH BEAM RELAY COIL (Continued)</p> <ul style="list-style-type: none"> Measure the voltage between the high beam relay C1050-85, harness side and ground.  <p>N0014616-</p> <ul style="list-style-type: none"> Is the voltage greater than 10 volts? 	<p>Yes GO to B7.</p> <p>No VERIFY the BEC fuse 50 (15A) is OK. If OK, INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.</p>
B7	<p>CHECK THE HIGH BEAM RELAY CONTROL CIRCUIT FOR AN OPEN</p> <ul style="list-style-type: none"> Disconnect: SJB C2280c. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

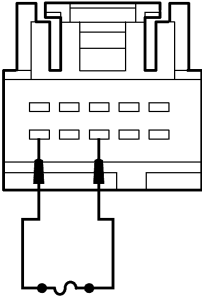
PINPOINT TEST B: THE HIGH BEAMS ARE INOPERATIVE (Continued)

Test Step	Result / Action to Take
<p>B7 CHECK THE HIGH BEAM RELAY CONTROL CIRCUIT FOR AN OPEN (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between the high beam relay C1050-86, circuit 1708 (LG/BK), harness side and the SJB C2280c-1, circuit 1708 (LG/BK), harness side.  <p>N0046518</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes GO to B13.</p> <p>No GO to B8.</p>
<p>B8 CHECK CIRCUIT 1708 (LG/BK) FOR AN OPEN</p> <ul style="list-style-type: none"> Disconnect: BEC C1035a. Measure the resistance between the BEC C1035a-B11, circuit 1708 (LG/BK), harness side and the SJB C2280c-1, circuit 1708 (LG/BK), harness side.  <p>N0046519</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.</p> <p>No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.</p>
<p>B9 CHECK THE HIGH BEAM SWITCH INPUT</p> <ul style="list-style-type: none"> Key in ON position. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

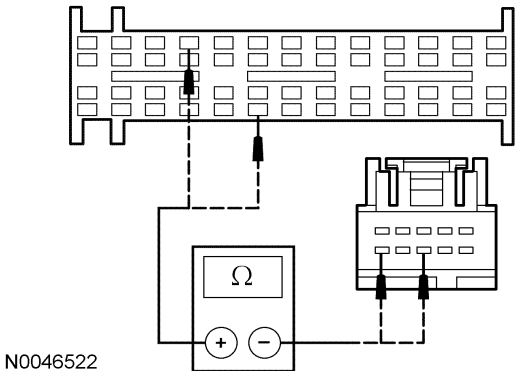
PINPOINT TEST B: THE HIGH BEAMS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
B9	CHECK THE HIGH BEAM SWITCH INPUT (Continued)	<p>Yes GO to B10.</p> <p>No GO to B11.</p>
	<ul style="list-style-type: none"> Enter the following diagnostic mode on the diagnostic tool: SJB Multifunction Switch PID. Monitor the SJB multifunction switch status PID while placing the multifunction switch in the HIGH BEAM position. Does the PID indicate HIGH BEAM position is active? 	
B10	CHECK THE HIGH BEAM RELAY (NO DTCs)	<p>Yes INSTALL a new BEC. TEST the system for normal operation.</p> <p>No INSTALL a new high beam relay. TEST the system for normal operation.</p>
	<ul style="list-style-type: none"> Key in OFF position. Place the headlamp switch in the OFF position. Disconnect: High Beam Relay C1050. Carry out the high beam relay component test. Refer to Wiring Diagrams Cell 149 for component testing. Is the high beam relay OK? 	
B11	CHECK THE MULTIFUNCTION SWITCH	<p>Yes INSTALL a new multifunction switch. REFER to Section 211-05. TEST the system for normal operation.</p> <p>No REMOVE the jumper wire. GO to B12.</p>
	<ul style="list-style-type: none"> Key in OFF position. Place the headlamp switch in the OFF position. Disconnect: Multifunction Switch C202. Connect a fused (5A) jumper wire between the multifunction switch C202-8, circuit 1394 (WH/RD), harness side and the multifunction switch C202-10, circuit 1396 (VT/WH), harness side. <div style="text-align: center;">  <p>N0046520</p> </div> <ul style="list-style-type: none"> Key in ON position. Place the headlamp switch in the HEADLAMPS ON position. Is the high beam indicator illuminated? 	
B12	CHECK CIRCUITS 1394 (WH/RD) AND 1396 (VT/WH) FOR AN OPEN	
	<ul style="list-style-type: none"> Key in OFF position. Place the headlamp switch in the OFF position. Disconnect: SJB C2280b. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST B: THE HIGH BEAMS ARE INOPERATIVE (Continued)

Test Step		Result / Action to Take
B12	CHECK CIRCUITS 1394 (WH/RD) AND 1396 (VT/WH) FOR AN OPEN (Continued)	
	<ul style="list-style-type: none"> Measure the resistance between the SJB C2280b-45, circuit 1394 (WH/RD), harness side and the multifunction switch C202-8, circuit 1394 (WH/RD), harness side; and between the SJB C2280b-4, circuit 1396 (VT/WH) and the multifunction switch C202-10, circuit 1396 (VT/WH).  <p>N0046522</p> <ul style="list-style-type: none"> Are the resistances less than 5 ohms? 	<p>Yes GO to B13.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>
B13	CHECK FOR CORRECT SJB OPERATION	
	<ul style="list-style-type: none"> Disconnect all the SJB connectors. Check for: <ul style="list-style-type: none"> corrosion pushed-out pins Connect all the SJB 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 SJB. REFER to Section 419-10. TEST the system for normal operation.</p> <p>No The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.</p>

Pinpoint Test C: One Low Beam Headlamp Is Inoperative

Normal Operation

When the smart junction box (SJB) receives a request for the low beams, the SJB provides voltage through circuits 1338 (WH) and 1336 (LG/WH) to the bussed electrical center (BEC). The BEC then routes the voltage to the LH and RH low beams. Ground for the low beams is provided through circuit 1205 (BK) which is routed through the BEC.

Possible Causes

- Circuit 1205 (BK) open
- Circuit 1336 (LG/WH) open or short to ground
- Circuit 1338 (WH) open or short to ground
- BEC
- SJB

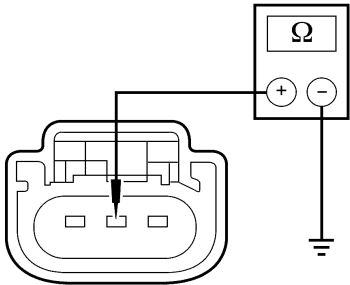
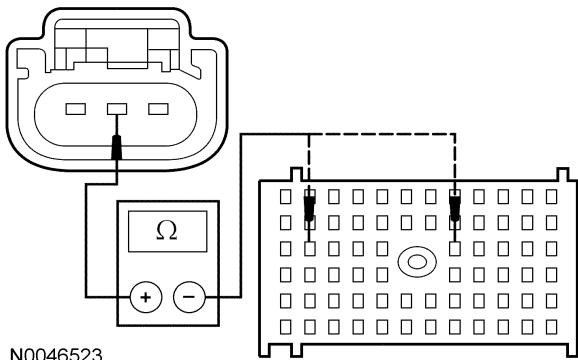
PINPOINT TEST C: ONE LOW BEAM HEADLAMP IS INOPERATIVE

Test Step		Result / Action to Take
C1	CHECK THE HEADLAMP GROUND CIRCUIT	
	<ul style="list-style-type: none"> Key in OFF position. Disconnect: Inoperative Headlamp. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

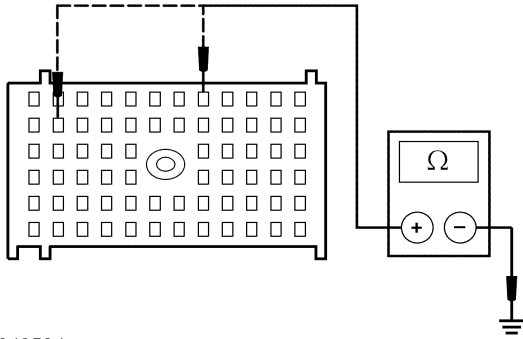
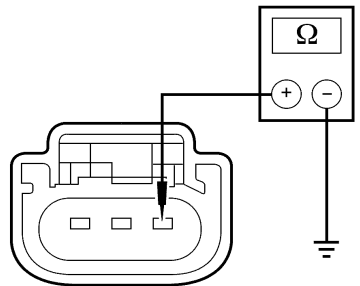
PINPOINT TEST C: ONE LOW BEAM HEADLAMP IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
C1	<p>CHECK THE HEADLAMP GROUND CIRCUIT (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between the LH headlamp C1021-2, circuit 1205 (BK), harness side and ground; or between the RH headlamp C1041-2, circuit 1205 (BK), harness side and ground.  <p>N0010865</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes GO to C4.</p> <p>No GO to C2.</p>
C2	<p>CHECK CIRCUIT 1205 (BK) FOR AN OPEN (HEADLAMP TO BEC)</p> <ul style="list-style-type: none"> Disconnect: BEC C1035c. Measure the resistance between the LH headlamp C1021-2, circuit 1205 (BK), harness side and the BEC C1035c-D5, circuit 1205 (BK), harness side; or between the RH headlamp C1041-2, circuit 1205 (BK), harness side and the BEC C1035c-D11, circuit 1205 (BK), harness side.  <p>N0046523</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes GO to C3.</p> <p>No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)

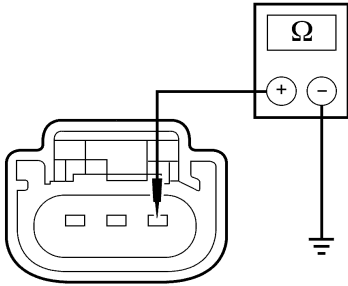
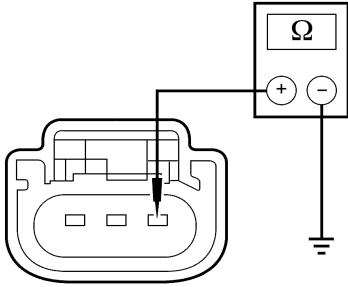
PINPOINT TEST C: ONE LOW BEAM HEADLAMP IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
C3	<p>CHECK CIRCUIT 1205 (BK) FOR AN OPEN (BEC TO GROUND)</p> <ul style="list-style-type: none"> Measure the resistance between the BEC C1035c-F5 (LH headlamp), circuit 1205 (BK), harness side and ground; or between the BEC C1035c-E11 (RH headlamp), circuit 1205 (BK), harness side and ground.  <p>N0046524</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.</p> <p>No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.</p>
C4	<p>CHECK CIRCUIT 1336 (LG/WH) OR CIRCUIT 1338 (WH) FOR A SHORT TO GROUND</p> <ul style="list-style-type: none"> Disconnect: SJB C2280d. Measure the resistance between the LH headlamp C1021-1, circuit 1338 (WH), harness side and ground; or between the RH headlamp C1041-1, circuit 1336 (LG/WH), harness side and ground.  <p>N0010866</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes GO to C7.</p> <p>No GO to C5.</p>
C5	<p>CHECK CIRCUIT 1336 (LG/WH) OR CIRCUIT 1338 (WH) FOR A SHORT TO GROUND (SJB TO BEC)</p> <ul style="list-style-type: none"> Disconnect: BEC C1035a. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

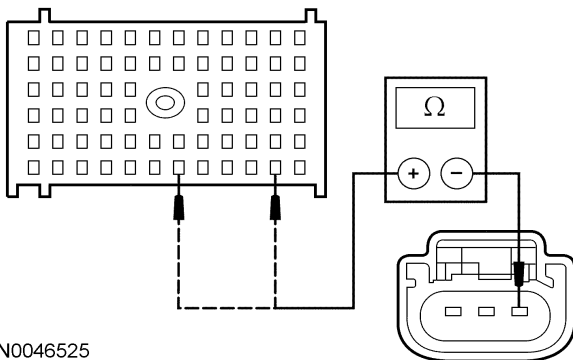
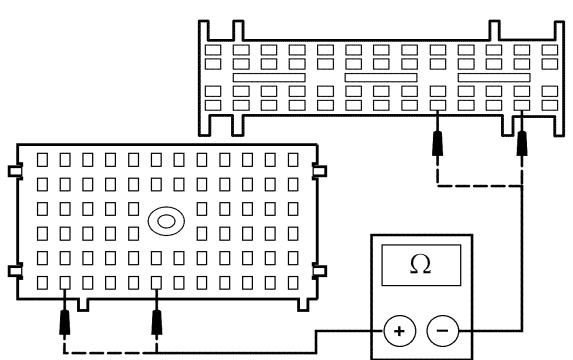
PINPOINT TEST C: ONE LOW BEAM HEADLAMP IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
C5	<p>CHECK CIRCUIT 1336 (LG/WH) OR CIRCUIT 1338 (WH) FOR A SHORT TO GROUND (SJB TO BEC) (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between the LH headlamp C1021-1, circuit 1338 (WH), harness side and ground; or between the RH headlamp C1041-1, circuit 1336 (LG/WH), harness side and ground.  <p>N0010866</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.</p> <p>No GO to C6.</p>
C6	<p>CHECK CIRCUIT 1336 (LG/WH) OR CIRCUIT 1338 (WH) FOR A SHORT TO GROUND (BEC TO HEADLAMP)</p> <ul style="list-style-type: none"> Disconnect: BEC C1035c. Measure the resistance between the LH headlamp C1021-1, circuit 1338 (WH), harness side and ground; or between the RH headlamp C1041-1, circuit 1336 (LG/WH), harness side and ground.  <p>N0010866</p> <ul style="list-style-type: none"> Is the resistance greater than 10,000 ohms? 	<p>Yes INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.</p> <p>No REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.</p>
C7	<p>CHECK CIRCUIT 1336 (LG/WH) OR CIRCUIT 1338 (WH) FOR AN OPEN (BEC TO HEADLAMP)</p> <ul style="list-style-type: none"> Disconnect: BEC C1035c. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

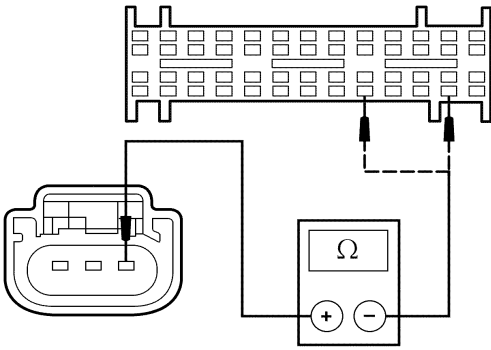
PINPOINT TEST C: ONE LOW BEAM HEADLAMP IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
C7	CHECK CIRCUIT 1336 (LG/WH) OR CIRCUIT 1338 (WH) FOR AN OPEN (BEC TO HEADLAMP) (Continued)	
	<ul style="list-style-type: none"> Measure the resistance between the LH headlamp C1021-1, circuit 1338 (WH), harness side and the BEC C1035c-A6, circuit 1338 (WH), harness side; or between the RH headlamp C1041-1, circuit 1336 (LG/WH), harness side and the BEC C1035c-A2, circuit 1336 (LG/WH), harness side.  <p>N0046525</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes GO to C8.</p> <p>No REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.</p>
C8	CHECK CIRCUIT 1336 (LG/WH) OR CIRCUIT 1338 (WH) FOR AN OPEN (SJB TO BEC)	
	<ul style="list-style-type: none"> Disconnect: BEC C1035a. Disconnect: SJB C2280d. Measure the resistance between the BEC C1035a-F6 (LH headlamp), circuit 1338 (WH), harness side and the SJB C2280d-51, circuit 1338 (WH), harness side; or between the BEC C1035a-F2 (RH headlamp), circuit 1336 (LG/WH), harness side and the SJB C2280d-48, circuit 1336 (LG/WH), harness side.  <p>N0046526</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes GO to C9.</p> <p>No REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.</p>
C9	CHECK THE BEC	
	<ul style="list-style-type: none"> Connect: BEC C1035a. Connect: BEC C1035c. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST C: ONE LOW BEAM HEADLAMP IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
C9	<p>CHECK THE BEC (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between the LH headlamp C1021-1, circuit 1338 (WH), harness side and the SJB C2280d-51, circuit 1338 (WH), harness side; or between the RH headlamp C1041-1, circuit 1336 (LG/WH), harness side and the SJB C2280d-48, circuit 1336 (LG/WH), harness side.  <p>N0046527</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 	<p>Yes GO to C10.</p> <p>No INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.</p>
C10	<p>CHECK FOR CORRECT SJB OPERATION</p> <ul style="list-style-type: none"> Disconnect all the SJB connectors. Check for: <ul style="list-style-type: none"> — corrosion — pushed-out pins Connect all the SJB 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 SJB. REFER to Section 419-10. TEST the system for normal operation.</p> <p>No The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.</p>

Pinpoint Test D: One High Beam Headlamp Is Inoperative

Normal Operation

When the high beam relay is energized, voltage is provided through circuits 1337 (VT/YE) and 1335 (YE/WH) to the LH and RH high beams, respectively.

Possible Causes

- Circuit 1335 (YE/WH) open
- Circuit 1337 (VT/YE) open
- BEC

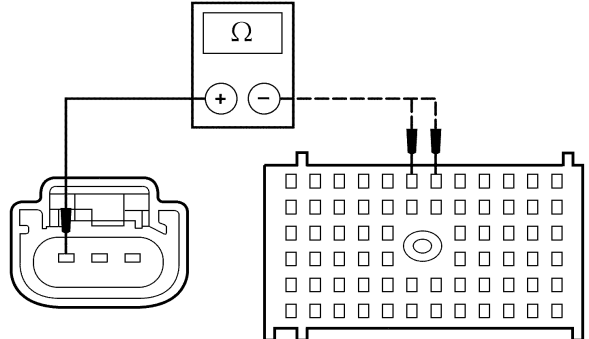
PINPOINT TEST D: ONE HIGH BEAM HEADLAMP IS INOPERATIVE

Test Step		Result / Action to Take
D1	<p>CHECK THE LOW BEAMS</p> <ul style="list-style-type: none"> Key in OFF position. NOTE: Make sure the multifunction switch is in the LOW BEAM position. Place the headlamp switch in the HEADLAMPS ON position. Does the low beam illuminate? 	<p>Yes GO to D2.</p> <p>No GO to Pinpoint Test C.</p>
D2	<p>CHECK CIRCUIT 1335 (YE/WH) OR CIRCUIT 1337 (VT/YE) FOR AN OPEN</p> <ul style="list-style-type: none"> Place the headlamp switch in the OFF position Disconnect: Inoperative Headlamp. Disconnect: BEC C1035c. 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST D: ONE HIGH BEAM HEADLAMP IS INOPERATIVE (Continued)

Test Step		Result / Action to Take
D2	CHECK CIRCUIT 1335 (YE/WH) OR CIRCUIT 1337 (VT/YE) FOR AN OPEN (Continued)	
<ul style="list-style-type: none"> Measure the resistance between the LH headlamp C1021-3, circuit 1337 (VT/YE), harness side and the BEC C1035c-F6, circuit 1337 (VT/YE), harness side; or between the RH headlamp C1041-3, circuit 1335 (YE/WH), harness side and the BEC C1035c-F7, circuit 1335 (YE/WH), harness side.  <p>N0046528</p> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 		<p>Yes INSTALL a new BEC. TEST the system for normal operation.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>

Pinpoint Test E: The Headlamps Are On Continuously

Normal Operation

The smart junction box (SJB) sends reference signals to the headlamp switch through circuits 1400 (TN/WH), 1401 (BK/LG), and 1402 (RD/WH). At any given time, the headlamp switch routes one of the input circuits to ground through circuit 1205 (BK).

When the SJB detects the headlamp switch in the HEADLAMPS ON position and the multifunction switch in the LOW BEAM position, the SJB sends voltage through circuit 1338 (WH) and circuit 1336 (LG/WH) to the LH and RH low beams, respectively.

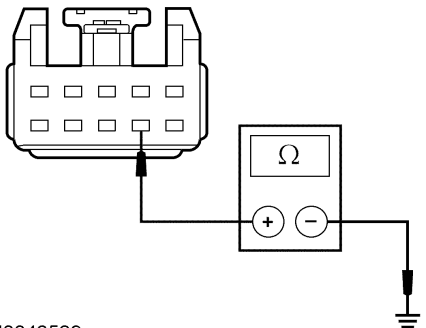
The SJB sends a reference signal to the multifunction switch through circuits 1394 (WH/RD) and 1395 (RD/PK). When the multifunction switch is placed in the FLASH-TO-PASS or HIGH BEAM position, the voltage signal is routed back to ground, internal to the SJB. When the SJB detects a request for flash-to-pass or high beams, the SJB provides ground to the high beam relay through circuit 1708 (LG/BK). When the high beam relay is energized, voltage is provided through circuits 1337 (VT/YE) and 1335 (YE/WH) to the LH and RH high beams, respectively.

Possible Causes

- Circuit 1205 (BK) open
- Circuit 1335 (YE/WH) short to voltage
- Circuit 1336 (LG/WH) short to voltage
- Circuit 1337 (VT/YE) short to voltage
- Circuit 1338 (WH) short to voltage
- Circuit 1394 (WH/RD) short to ground
- Circuit 1395 (RD/PK) short to ground
- Circuit 1400 (TN/WH) open
- Circuit 1401 (BK/LG) open
- Circuit 1402 (RD/WH) short to ground
- Circuit 1708 (LG/BK) short to ground
- High beam relay
- Headlamp switch
- Multifunction switch
- BEC
- SJB

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST E: THE HEADLAMPS ARE ON CONTINUOUSLY

Test Step		Result / Action to Take							
E1	DETERMINE IF THE HIGH BEAMS ARE ALWAYS ON	Yes GO to E2 . No GO to E10 .							
	<ul style="list-style-type: none"> Key in ON position. While observing the headlamps, engage the flash-to-pass feature. Does the headlamp brightness increase? 								
E2	USE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE SJB SELF-TEST (LOW BEAMS ALWAYS ON)	Yes GO to E3 . No GO to E7 .							
	<ul style="list-style-type: none"> Key in OFF position. Using the recorded results from the SJB self-test: Was DTC B1470 recorded? 								
E3	CHECK CIRCUIT 1205 (BK) FOR AN OPEN	Yes GO to E4 . No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.							
	<ul style="list-style-type: none"> Disconnect: Headlamp Switch C205. Measure the resistance between the headlamp switch C205-7, circuit 1205 (BK), harness side and ground. <div style="text-align: center;">  <p>N0046529</p> </div> <ul style="list-style-type: none"> Is the resistance less than 5 ohms? 								
E4	CHECK THE HEADLAMP SWITCH	Yes GO to E5 . No INSTALL a new headlamp switch. CLEAR the DTCs. REPEAT the self-test.							
	<ul style="list-style-type: none"> Carry out the headlamp switch component test. Refer to Wiring Diagrams Cell 149 for component testing. Is the headlamp switch OK? 								
E5	CHECK THE HEADLAMP SWITCH INPUT CIRCUITS FOR A SHORT TO GROUND	Yes GO to E6 . No REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.							
	<ul style="list-style-type: none"> Disconnect: SJB C2280b. Measure the resistance between the headlamp switch, harness side and ground as follows: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Headlamp Switch Connector-Pin</th> <th style="text-align: center;">Circuit</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">C205-9</td> <td style="text-align: center;">1400 (TN/WH)</td> </tr> <tr> <td style="text-align: center;">C205-5</td> <td style="text-align: center;">1401 (BK/LG)</td> </tr> <tr> <td style="text-align: center;">C205-10</td> <td style="text-align: center;">1402 (RD/WH)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Are the resistances greater than 10,000 ohms? 		Headlamp Switch Connector-Pin	Circuit	C205-9	1400 (TN/WH)	C205-5	1401 (BK/LG)	C205-10
Headlamp Switch Connector-Pin	Circuit								
C205-9	1400 (TN/WH)								
C205-5	1401 (BK/LG)								
C205-10	1402 (RD/WH)								
E6	CHECK THE HEADLAMP SWITCH INPUT CIRCUITS FOR AN OPEN								
	<ul style="list-style-type: none"> Measure the resistance between the headlamp switch, harness side and the SJB, harness side as follows: 								

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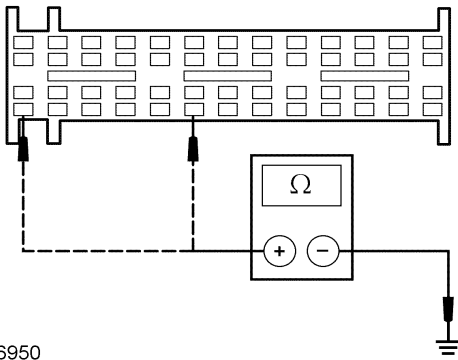
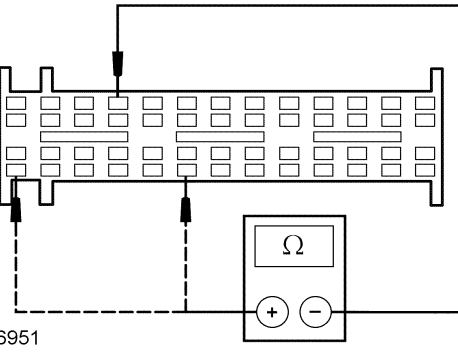
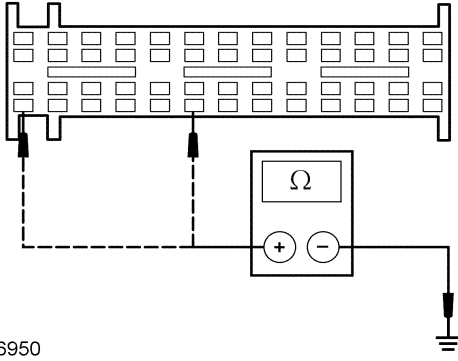
DIAGNOSIS AND TESTING (Continued)**PINPOINT TEST E: THE HEADLAMPS ARE ON CONTINUOUSLY (Continued)**

Test Step			Result / Action to Take	
E6	CHECK THE HEADLAMP SWITCH INPUT CIRCUITS FOR AN OPEN (Continued)		<p>Yes GO to E17.</p> <p>No REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.</p>	
	Headlamp Switch Connector-Pin	SJB Connector-Pin		Circuit
	C205-9	C2280b-27		1400 (TN/WH)
	C205-5	C2280b-31		1401 (BK/LG)
	C205-10	C2280b-46	1402 (RD/WH)	
	<ul style="list-style-type: none"> Are the resistances less than 5 ohms? 			
E7	CHECK THE SJB		<p>Yes GO to E8.</p> <p>No GO to E17.</p>	
	<ul style="list-style-type: none"> Key in OFF position. Disconnect: SJB C2280d. Key in ON position. Does either headlamp continue to illuminate? 			
E8	CHECK CIRCUITS 1336 (LG/WH) AND 1338 (WH) FOR A SHORT TO VOLTAGE (SJB TO BEC)		<p>Yes GO to E9.</p> <p>No REPAIR circuit 1338 (WH) (LH headlamp) or circuit 1336 (LG/WH) (RH headlamp). CLEAR the DTCs. REPEAT the self-test.</p>	
	<ul style="list-style-type: none"> Key in OFF position. Disconnect: BEC C1035a. Key in ON position. Does either headlamp continue to illuminate? 			
E9	CHECK CIRCUITS 1336 (LG/WH) AND 1338 (WH) FOR A SHORT TO VOLTAGE (BEC TO HEADLAMP)		<p>Yes REPAIR circuit 1338 (WH) (LH headlamp) or circuit 1336 (LG/WH) (RH headlamp). CLEAR the DTCs. REPEAT the self-test.</p> <p>No INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.</p>	
	<ul style="list-style-type: none"> Key in OFF position. Disconnect: BEC C1035c. Key in ON position. Does either headlamp continue to illuminate? 			
E10	USE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE SJB SELF-TEST (HIGH BEAMS ALWAYS ON)		<p>Yes For DTC B2586, GO to E11. For DTC B2598, GO to E13.</p> <p>No GO to E15.</p>	
	<ul style="list-style-type: none"> Key in OFF position. Using the recorded results from the SJB self-test: Was DTC B2586 or B2598 recorded? 			
E11	VERIFY DTC B2586			
	<p>NOTE: Make sure the multifunction switch is in the LOW BEAM position.</p> <ul style="list-style-type: none"> Disconnect: SJB C2280b. 			

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST E: THE HEADLAMPS ARE ON CONTINUOUSLY (Continued)

	Test Step	Result / Action to Take
E11	<p>VERIFY DTC B2586 (Continued)</p> <ul style="list-style-type: none"> Measure the resistance between the SJB C2280b-45, circuit 1394 (WH/RD), harness side and ground; and between the SJB C2280b-40, circuit 1395 (RD/PK), harness side and ground.  <p>N0046950</p> <ul style="list-style-type: none"> Measure the resistance between the SJB C2280b-45, circuit 1394 (WH/RD), harness side and the SJB C2280b-4, circuit 1396 (VT/WH), harness side; and between the SJB C2280b-40, circuit 1395 (RD/PK), harness side and the SJB C2280b-4, circuit 1396 (VT/WH), harness side.  <p>N0046951</p> <ul style="list-style-type: none"> Are the resistances greater than 10,000 ohms? 	<p>Yes GO to E17.</p> <p>No GO to E12.</p>
E12	<p>CHECK CIRCUITS 1394 (WH/RD) AND 1395 (RD/PK) FOR A SHORT TO GROUND</p> <ul style="list-style-type: none"> Disconnect: Multifunction Switch C202. Measure the resistance between the SJB C2280b-45, circuit 1394 (WH/RD), harness side and ground; and between the SJB C2280b-40, circuit 1395 (RD/PK), harness side and ground.  <p>N0046950</p> <ul style="list-style-type: none"> Are the resistances greater than 10,000 ohms? 	<p>Yes INSTALL a new multifunction switch. REFER to Section 211-05. CLEAR the DTCs. REPEAT the self-test.</p> <p>No REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST E: THE HEADLAMPS ARE ON CONTINUOUSLY (Continued)

Test Step		Result / Action to Take
E13	CHECK THE SJB HIGH BEAM CONTROL	Yes GO to E14 . No GO to E17 .
	<ul style="list-style-type: none"> • Disconnect: SJB C2280c. • Key in ON position. • Do the headlamps continue to illuminate? 	
E14	CHECK CIRCUIT 1708 (LG/BK) FOR A SHORT TO GROUND	Yes INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test. No REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.
	<ul style="list-style-type: none"> • Key in OFF position. • Disconnect: BEC C1035a. • Key in ON position. • Do the headlamps continue to illuminate? 	
E15	CHECK THE HIGH BEAM RELAY	Yes GO to E16 . No INSTALL a new high beam relay. TEST the system for normal operation.
	<ul style="list-style-type: none"> • Disconnect: High Beam Relay C1050. • Key in ON position. • Do the headlamps continue to illuminate? 	
E16	CHECK CIRCUITS 1335 (YE/WH) AND 1337 (VT/YE) FOR A SHORT TO VOLTAGE	Yes REPAIR circuit 1337 (VT/YE) (LH headlamp) or circuit 1335 (YE/WH) (RH headlamp). TEST the system for normal operation. No INSTALL a new BEC. TEST the system for normal operation.
	<ul style="list-style-type: none"> • Key in OFF position. • Disconnect: BEC C1035c. • Key in ON position. • Does either headlamp continue to illuminate? 	
E17	CHECK FOR CORRECT SJB OPERATION	Yes INSTALL a new SJB. REFER to Section 419-10. TEST the system for normal operation. No The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector. CLEAR the DTCs. REPEAT the self-test.
	<ul style="list-style-type: none"> • Key in OFF position. • Disconnect all the SJB connectors. • Check for: <ul style="list-style-type: none"> — corrosion — pushed-out pins • Connect all the SJB connectors and make sure they seat correctly. • Operate the system and verify the concern is still present. • Is the concern still present? 	

Pinpoint Test F: The Flash-to-Pass Feature is Inoperative

Normal Operation

The smart junction box (SJB) sends a voltage reference signal to the multifunction switch through circuit 1395 (RD/PK). When the flash-to-pass feature is activated, the multifunction switch routes the signal back to the SJB. The SJB then provides voltage to the high beams.

Possible Causes

- Circuit 1395 (RD/PK) open
- Multifunction switch
- SJB

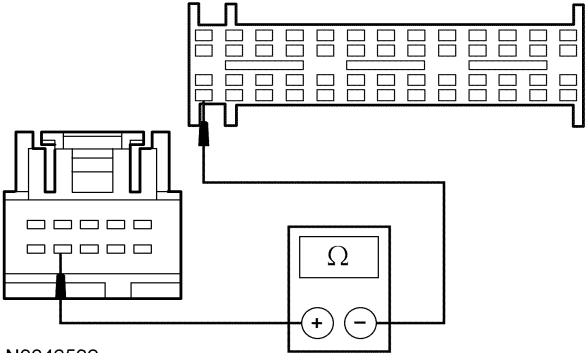
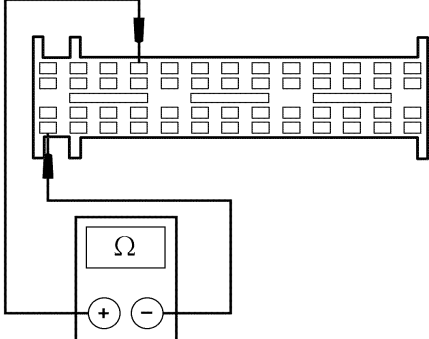
PINPOINT TEST F: THE FLASH-TO-PASS FEATURE IS INOPERATIVE

Test Step		Result / Action to Take
F1	CHECK THE HIGH BEAM OPERATION	Yes GO to F2 . No GO to Pinpoint Test B .
	<ul style="list-style-type: none"> • Key in OFF position. • Place the headlamp switch in the HEADLAMPS ON position. • Place the multifunction switch in the HIGH BEAM position. • Do the high beams illuminate? 	

(Continued)

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST F: THE FLASH-TO-PASS FEATURE IS INOPERATIVE (Continued)

	Test Step	Result / Action to Take
F2	<p>CHECK CIRCUIT 1395 (RD/PK) FOR AN OPEN</p> <ul style="list-style-type: none"> • Disconnect: SJB C2280b. • Disconnect: Multifunction Switch C202. • Measure the resistance between the multifunction switch C202-9, circuit 1395 (RD/PK), harness side and the SJB C2280b-40, circuit 1395 (RD/PK), harness side.  <p>N0046532</p> <ul style="list-style-type: none"> • Is the resistance less than 5 ohms? 	<p>Yes GO to F3.</p> <p>No REPAIR the circuit. TEST the system for normal operation.</p>
F3	<p>CHECK THE MULTIFUNCTION SWITCH</p> <ul style="list-style-type: none"> • Connect: Multifunction Switch C202. • While placing the multifunction switch in the FLASH-TO-PASS position, measure the resistance between the SJB C2280b-40, circuit 1395 (RD/PK), harness side and the SJB C2280b-4, circuit 1396 (VT/WH), harness side.  <p>N0046533</p> <ul style="list-style-type: none"> • Is the resistance less than 5 ohms? 	<p>Yes GO to F4.</p> <p>No INSTALL a new multifunction switch. REFER to Section 211-05. TEST the system for normal operation.</p>
F4	<p>CHECK FOR CORRECT SJB OPERATION</p> <ul style="list-style-type: none"> • Disconnect all the SJB connectors. • Check for: <ul style="list-style-type: none"> — corrosion — pushed-out pins • Connect all the SJB 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 SJB. REFER to Section 419-10. TEST the system for normal operation.</p> <p>No The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.</p>