

Spot Lamps

DTC Chart: BCM

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.
REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

DTC	Description	Action <i>New: hover over Pinpoint Test links to show title</i>
B14AB:11	Spotlight Mirror Output: Circuit Short To Ground	GO to Pinpoint Test A

Symptom Chart

Symptom Chart: Spot Lamps

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.
REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

Symptom Chart

Condition	Possible Sources	Actions
A module does not respond to the diagnostic scan tool	• Fuse • Wiring, terminals or connectors • Module	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
Both spot lamps are inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test A
An individual spot lamp is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test B
One or both spot lamps are on continuously	Refer to the Pinpoint Test	GO to Pinpoint Test C
A spot lamp switch indicator is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test D

Pinpoint Tests

[PINPOINT TEST A : BOTH SPOT LAMPS ARE INOPERATIVE](#)

Refer to Wiring Diagrams Cell [124](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Exterior Lighting - Overview (417-01 Exterior Lighting, Description and Operation).

REFER to: Exterior Lighting - System Operation and Component Description (417-01 Exterior Lighting, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
BCM B14AB:11	Spotlight Mirror Output: Circuit Short To Ground	A continuous memory and on-demand DTC that sets when the BCM detects a short to ground from the spot lamp output circuit.

Possible Sources

- Fuse
- Wiring, terminals or connectors
- Spot lamp switch
- Spot lamp module
- BCM

Visual Inspection and Pre-checks

- Verify the BJB fuse 40 (10A) is OK.
- Inspect the spot lamp switch for damage.

A1 CHECK THE LOW BEAM OPERATION

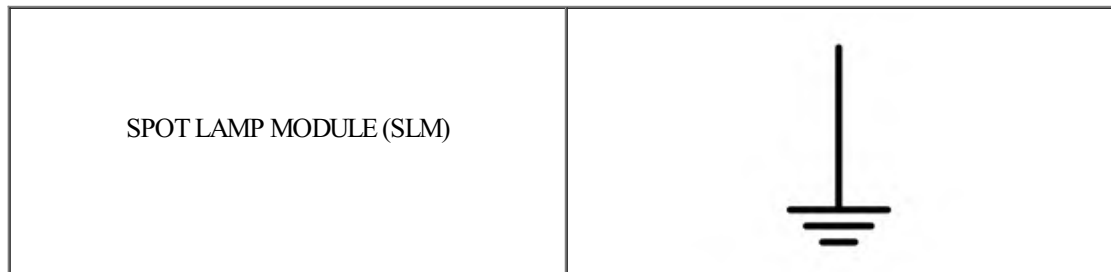
- Ignition ON.
- Place the headlamp switch in the PARKLAMPS position.
- Using the spot lamp switch, enable the LH and RH spot lamp.

Do the spot lamps illuminate?

Yes	The system is operating correctly at this time. INFORM the customer of the conditions under which the spot lamps operate. REFER to: Exterior Lighting - Overview (417-01 Exterior Lighting, Description and Operation).
No	GO to A2

A2 CHECK FOR VOLTAGE TO THE SPOT LAMP MODULE

- Place the headlamp switch in the OFF position.
- Ignition OFF.
- Disconnect Spot Lamp Module [C2506B](#) .
- Ignition ON.
- Measure:



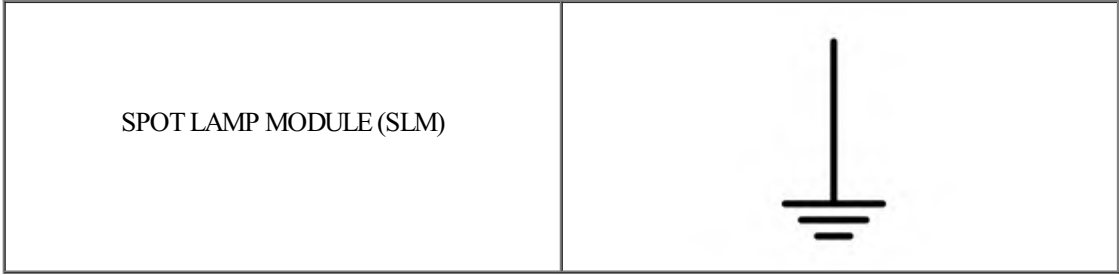
Positive Lead	Measurement / Action	Negative Lead
C2506B-1		Ground
C2506B-3		Ground

Is the voltage greater than 11 volts?

Yes	GO to A3
No	VERIFY the BJB fuse 40 (10A) is OK. If OK, REPAIR the circuit. If not OK, REFER to the Wiring Diagrams manual to identify the possible causes of the circuit short.

A3 CHECK FOR ENABLE VOLTAGE TO THE SPOT LAMP MODULE

- Place the headlamp switch in the PARKLAMPS position.
- Measure:



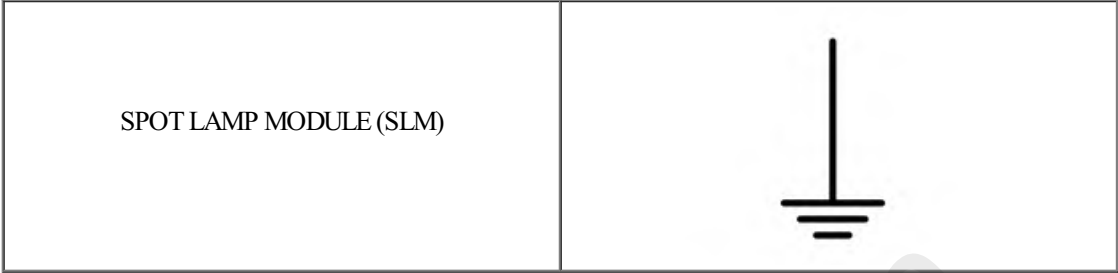
Positive Lead	Measurement / Action	Negative Lead
C2506B-2		Ground

Is the voltage greater than 11 volts?

Yes	GO to A7
No	GO to A4

A4 REPEAT THE ON-DEMAND SELF-TEST AND CHECK FOR ENABLE VOLTAGE TO THE SPOT LAMP MODULE

- Place the headlamp switch in the OFF position.
- Using a diagnostic scan tool, perform the BCM self-test.
- Clear the Diagnostic Trouble Codes (DTCs) and repeat the self-test (required to enable the lamp output driver if DTC U1000:00 is present).
- Ignition OFF.
- Ignition ON.
- Place the headlamp switch in the PARKLAMPS position.
- Measure:



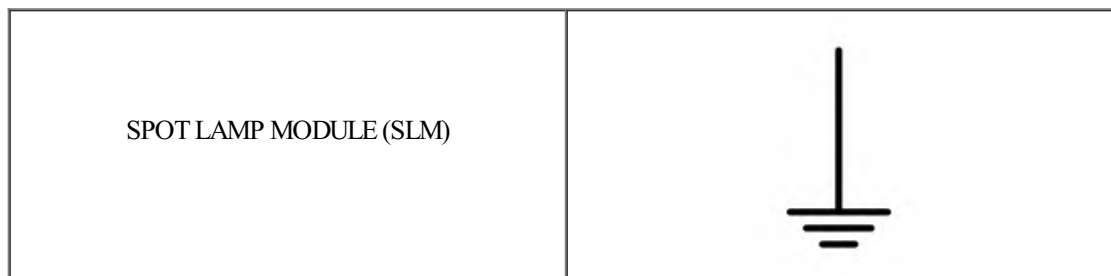
Positive Lead	Measurement / Action	Negative Lead
C2506B-2		Ground

Is the voltage greater than 11 volts?

Yes	INSTALL a new spot lamp module. REFER to: Spot Lamp Control Module (417-01 Exterior Lighting, Removal and Installation).
No	GO to A5

A5 CHECK THE SPOT LAMP MODULE ENABLE VOLTAGE CIRCUIT FOR A SHORT TO GROUND

- Place the headlamp switch in the OFF position.
- Ignition OFF.
- Disconnect BCM [C2280E](#) .
- Measure:



Positive Lead	Measurement / Action	Negative Lead
C2506B-2	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to A6
No	REPAIR the circuit. After the repair: If no Diagnostic Trouble Codes (DTCs) are present, TEST the system for normal operation. If DTC U1000:00 is present, CLEAR the Diagnostic Trouble Codes (DTCs) and REPEAT the self-test (required to enable the lamp output driver if DTC U1000:00 is present). If DTC U3000:49 is present, INSTALL a new BCM. REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).

A6 CHECK THE SPOT LAMP MODULE ENABLE VOLTAGE CIRCUIT FOR AN OPEN

- Measure:

SPOT LAMP MODULE (SLM)	BODY CONTROL MODULE (BCM)
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Positive Lead	Measurement / Action	Negative Lead
C2506B-2	Ω	C2280E-11

Is the resistance less than 3 ohms?

Yes	GO to A10
No	REPAIR the circuit.

A7 CHECK THE SPOT LAMP MODULE GROUND CIRCUIT

- Measure:

SPOT LAMP MODULE (SLM)

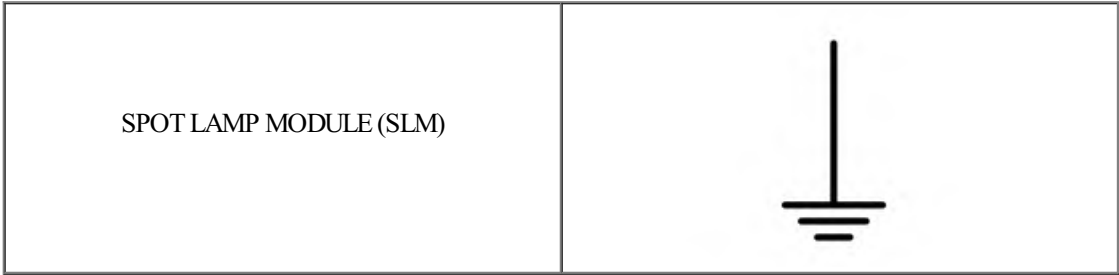
Positive Lead	Measurement / Action	Negative Lead
C2506B-2		C2506B-5

Is the voltage greater than 11 volts?

Yes	GO to A8
No	REPAIR the circuit.

A8 CHECK THE SPOT LAMP SWITCH INPUT

- Place the headlamp switch in the OFF position.
- Ignition OFF.
- Disconnect Spot Lamp Module [C2506A](#) .
- While pressing the LH spot lamp switch, measure:



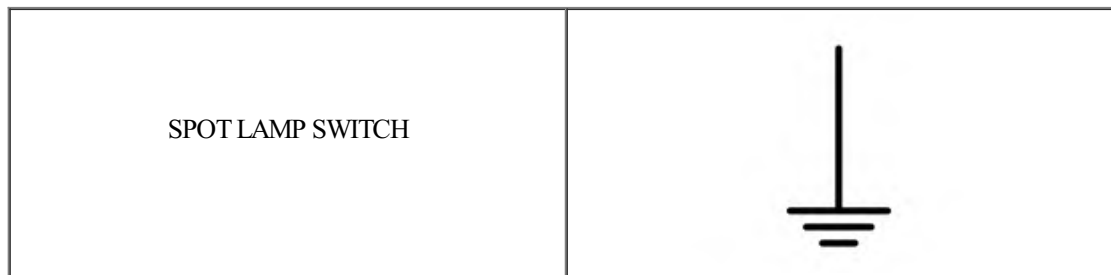
Positive Lead	Measurement / Action	Negative Lead
C2506A-1	Ω	Ground

Is the resistance less than 3 ohms while pressing the LH spot lamp switch?

Yes	INSTALL a new spot lamp module. REFER to: Spot Lamp Control Module (417-01 Exterior Lighting, Removal and Installation).
No	GO to A9

A9 CHECK THE SPOT LAMP SWITCH GROUND CIRCUIT FOR AN OPEN

- Disconnect Spot Lamp Switch [C2507](#) .
- Measure:



Positive Lead	Measurement / Action	Negative Lead
C2507-3	Ω	Ground

Is the resistance less than 3 ohms?

Yes	INSTALL a new spot lamp module. REFER to: Spot Lamp Control Module (417-01 Exterior Lighting, Removal and Installation).
No	REPAIR the circuit.

A10 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all BCM connectors.
- Repair:
 - corrosion (install new connector or terminals “clean module pins)
 - damaged or bent pins “install new terminals/pins
 - pushed-out pins “install new pins as necessary
- Reconnect the BCM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new BCM. REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST B : AN INDIVIDUAL SPOT LAMP IS INOPERATIVE

Refer to Wiring Diagrams Cell [124](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Exterior Lighting - Overview (417-01 Exterior Lighting, Description and Operation).

REFER to: Exterior Lighting - System Operation and Component Description (417-01 Exterior Lighting, Description and Operation).

Possible Sources

- Wiring, terminals or connectors
- Spot lamp (integrated into the exterior mirror turn lamp)
- Spot lamp switch
- Spot lamp module
- Exterior mirror

Visual Inspection and Pre-checks

- Inspect the exterior mirrors for damage.

B1 CHECK THE SPOT LAMP SWITCH INDICATOR

- Ignition ON.
- Place the headlamp switch in the PARKLAMPS position.
- Using the spot lamp switch, enable the inoperative LH and RH spot lamp.

Does the inoperative spot lamp switch indicator illuminate?

Yes	GO to B5
No	GO to B2

B2 CHECK FOR VOLTAGE TO THE SPOT LAMP MODULE

- Place the headlamp switch in the OFF position.
- Ignition OFF.
- Disconnect Spot Lamp Module [C2506B](#).
- Ignition ON.
- Measure:

SPOT LAMP MODULE (SLM)	
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LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506B-1		Ground

SPOT LAMP MODULE (SLM)	
------------------------	--

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506B-3		Ground

Is the voltage greater than 11 volts?

Yes	GO to B3
No	REPAIR the circuit.

B3 CHECK THE SPOT LAMP SWITCH INPUT

- Ignition OFF.
- Disconnect Spot Lamp Module [C2506A](#) .
- While pressing the inoperative LH or RH spot lamp switch, measure:

SPOT LAMP MODULE (SLM)	
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LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-1	Ω	Ground

SPOT LAMP MODULE (SLM)	
------------------------	--

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-7	Ω	Ground

Is the resistance less than 3 ohms while pressing the inoperative LH or RH spot lamp switch?

Yes	INSTALL a new spot lamp module. REFER to: Spot Lamp Control Module (417-01 Exterior Lighting, Removal and Installation).
No	GO to B4

B4 CHECK THE SPOT LAMP SWITCH INPUT CIRCUITS FOR AN OPEN

- Disconnect Spot Lamp Switch [C2507](#) .
- Measure:

SPOT LAMP MODULE (SLM)	SPOT LAMP SWITCH
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LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-1	Ω	C2507-2

SPOT LAMP MODULE (SLM)	SPOT LAMP SWITCH
------------------------	------------------

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-7	Ω	C2507-4

Is the resistance less than 3 ohms?

Yes	INSTALL a new spot lamp switch. REFER to: Spot Lamp Switch (417-01 Exterior Lighting, Removal and Installation).
No	REPAIR the circuit.

B5 CHECK FOR VOLTAGE TO THE INOPERATIVE SPOT LAMP

- Place the headlamp switch in the OFF position.
- Ignition OFF.
- Disconnect LH Exterior Mirror [C521](#) or RH Exterior Mirror [C622](#) .

- Ignition ON.
- Place the headlamp switch in the PARKLAMPS position and engage the inoperative spot lamp switch.
- Measure:

EXTERIOR MIRROR LH	
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LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C521-15		Ground

EXTERIOR MIRROR RH	
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RH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C622-15		Ground

Is the voltage greater than 11 volts?

Yes	GO to B6
No	GO to B7

B6 CHECK THE INOPERATIVE SPOT LAMP GROUND CIRCUIT FOR AN OPEN

- Measure:

EXTERIOR MIRROR LH

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C521-15		C521-22

EXTERIOR MIRROR RH

RH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C622-15		C622-22

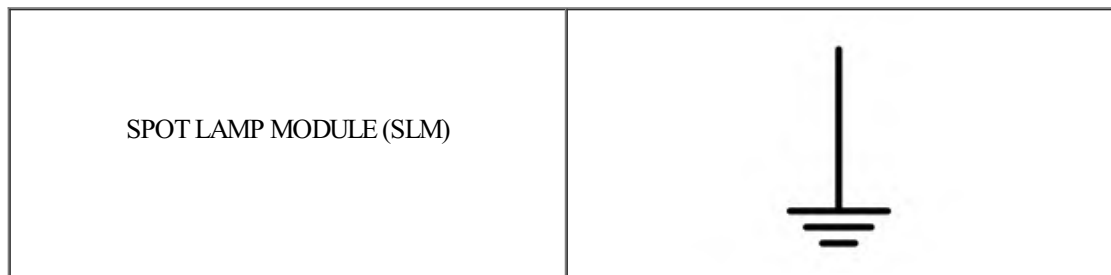
Is the voltage greater than 11 volts?

Yes	CHECK the exterior mirror jumper harness between the vehicle harness and the lamp for open circuits and damaged or pushed-out pins. If the jumper harness is OK, INSTALL a new spot lamp (integrated into the exterior mirror turn lamp). REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation). If the jumper harness is not OK, REPAIR the jumper harness. If the harness can not be repaired, INSTALL a new exterior mirror. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	REPAIR the circuit.

B7 CHECK SPOT LAMP VOLTAGE SUPPLY CIRCUIT FOR A SHORT TO GROUND

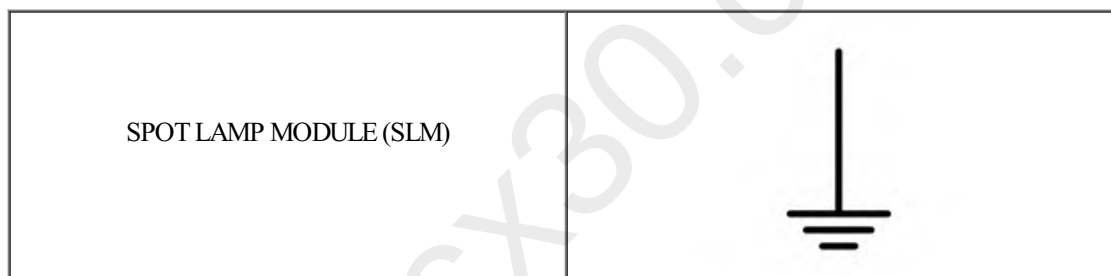
- Place the headlamp switch in the OFF position.

- Ignition OFF.
- Disconnect Spot Lamp Module [C2506B](#) .
- Measure:



LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506B-4	Ω	Ground



LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506B-6	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to B8
No	REPAIR the circuit.

B8 CHECK SPOT LAMP VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

- Measure:

SPOT LAMP MODULE (SLM)	EXTERIOR MIRROR LH
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LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506B-4	Ω	C521-15

SPOT LAMP MODULE (SLM)	EXTERIOR MIRROR RH
------------------------	--------------------

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506B-6	Ω	C622-15

Is the resistance less than 3 ohms?

Yes	GO to B9
No	REPAIR the circuit.

B9 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all BCM connectors.
- Repair:
 - corrosion (install new connector or terminals â€“ clean module pins)
 - damaged or bent pins â€“ install new terminals/pins
 - pushed-out pins â€“ install new pins as necessary
- Reconnect the BCM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable service articles: TSB, GSB, SSM or FSA. If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new BCM. REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST C : ONE OR BOTH SPOT LAMPS ARE ON CONTINUOUSLY

Refer to Wiring Diagrams Cell [124](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Exterior Lighting - Overview (417-01 Exterior Lighting, Description and Operation).

REFER to: Exterior Lighting - System Operation and Component Description (417-01 Exterior Lighting, Description and Operation).

Possible Sources

- Wiring, terminals or connectors
- Spot lamp switch
- Spot lamp module

Visual Inspection and Pre-checks

- Inspect the spot lamp switch for damage.

C1 CHECK THE SPOT LAMP SWITCH

- Ignition OFF.
- Disconnect Spot Lamp Switch [C2507](#) .
- Ignition ON.
- Place the headlamp switch in the PARKLAMPS position.

Is any spot lamp illuminated?

Yes	If both spot lamps are illuminated, INSTALL a new spot lamp module. REFER to: Spot Lamp Control Module (417-01 Exterior Lighting, Removal and Installation). If a single spot lamp is illuminated, GO to C2
No	INSTALL a new spot lamp switch. REFER to: Spot Lamp Switch (417-01 Exterior Lighting, Removal and Installation).

C2 CHECK THE SPOT LAMP VOLTAGE SUPPLY CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect Spot Lamp Module [C2506B](#) .
- Ignition ON.

Does the spot lamp continue to illuminate?

Yes	REPAIR the circuit.
No	GO to C3

C3 CHECK THE SPOT LAMP SWITCH INPUT CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect Spot Lamp Module [C2506A](#).
- Measure:

SPOT LAMP MODULE (SLM)	
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LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-1	Ω	Ground

SPOT LAMP MODULE (SLM)	
------------------------	--

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-7	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	INSTALL a new spot lamp module. REFER to: Spot Lamp Control Module (417-01 Exterior Lighting, Removal and Installation).
No	REPAIR the circuit.

Refer to Wiring Diagrams Cell [124](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Exterior Lighting - Overview (417-01 Exterior Lighting, Description and Operation).

REFER to: Exterior Lighting - System Operation and Component Description (417-01 Exterior Lighting, Description and Operation).

Possible Sources

- Wiring, terminals or connectors
- Spot lamp switch
- Spot lamp module

Visual Inspection and Pre-checks

- Inspect the spot lamp switch for damage.

D1 CHECK THE SPOT LAMP SWITCH

NOTE: If the jumper wire fails, refer to the Wiring Diagrams manual to identify the possible causes of the circuit short.

- Disconnect Spot Lamp Module [C2506A](#) .
- Disconnect Spot Lamp Module [C2506B](#) .
- Ignition ON.
- Connect a fused jumper:

SPOT LAMP MODULE (SLM)	SPOT LAMP MODULE (SLM)
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LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-4		C2506B-1

SPOT LAMP MODULE (SLM)	SPOT LAMP MODULE (SLM)
------------------------	------------------------

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-10		C2506B-1

Does the inoperative spot lamp switch indicator illuminate?

Yes	REMOVE the fused jumper wire. INSTALL a new spot lamp module. REFER to: Spot Lamp Control Module (417-01 Exterior Lighting, Removal and Installation).
No	REMOVE the fused jumper wire. GO to D2

D2 CHECK THE SPOT LAMP SWITCH INDICATOR CIRCUITS FOR AN OPEN

- Ignition OFF.
- Disconnect Spot Lamp Switch [C2507](#) .
- Measure:

SPOT LAMP MODULE (SLM)	SPOT LAMP SWITCH
------------------------	------------------

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-4	Ω	C2507-1

SPOT LAMP MODULE (SLM)	SPOT LAMP SWITCH
------------------------	------------------

LH Spot Lamp

Positive Lead	Measurement / Action	Negative Lead
C2506A-10	Ω	C2507-6

Is the resistance less than 3 ohms?

Yes	INSTALL a new spot lamp switch. REFER to: Spot Lamp Switch (417-01 Exterior Lighting, Removal and Installation).
No	REPAIR the circuit.

