

Fog Lamps

DTC Charts

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>
B1046:11	Front Fog Lamp Control Switch: Circuit Short To Ground	GO to Pinpoint Test A
B1147:11	Left Front Fog Lamps: Circuit Short To Ground	GO to Pinpoint Test B
B1147:15	Left Front Fog Lamps: Circuit Short To Battery or Open	GO to Pinpoint Test B
B1148:11	Right Front Fog Lamps: Circuit Short To Ground	GO to Pinpoint Test B
B1148:15	Right Front Fog Lamps: Circuit Short To Battery or Open	GO to Pinpoint Test B
B1499:11	Exterior Lamps Power Supply "A": Circuit Short To Ground	GO to Pinpoint Test B
B1499:15	Exterior Lamps Power Supply "A": Circuit Short To Battery or Open	GO to Pinpoint Test B
B149D:11	Exterior Lamps Power Supply "B": Circuit Short To Ground	GO to Pinpoint Test B
B149D:15	Exterior Lamps Power Supply "B": Circuit Short To Battery or Open	GO to Pinpoint Test B
For other BCM Diagnostic Trouble Codes (DTCs)	-	REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Diagnosis and Testing).

Symptom Charts

Symptom Chart: Fog 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).

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 front fog lamps are inoperative or always on	Refer to the Pinpoint Test	GO to Pinpoint Test A

Condition	Possible Sources	Actions
An individual front fog lamp is inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test B

Pinpoint Tests

PINPOINT TEST A : BOTH FRONT FOG LAMPS ARE INOPERATIVE

Refer to Wiring Diagrams Cell [86](#) 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
- Headlamp switch
- BCM

Visual Inspection and Pre-checks

- Inspect the headlamp switch for damage.

A1 CHECK THE HEADLAMP SWITCH

- Ignition OFF.
- Disconnect Headlamp Switch [C205](#) .
- Carry out the headlamp switch component test.
Refer to Wiring Diagrams Cell [149](#) for schematic and connector information.

Does the headlamp switch pass the component test?

Yes	If the fog lamps are inoperative, GO to A4 If the fog lamps are always on, GO to A2
No	INSTALL a new headlamp switch. REFER to: Headlamp Switch (417-01 Exterior Lighting, Removal and Installation).

A2 CHECK THE FOG LAMP VOLTAGE SUPPLY CIRCUITS FOR A SHORT TO VOLTAGE

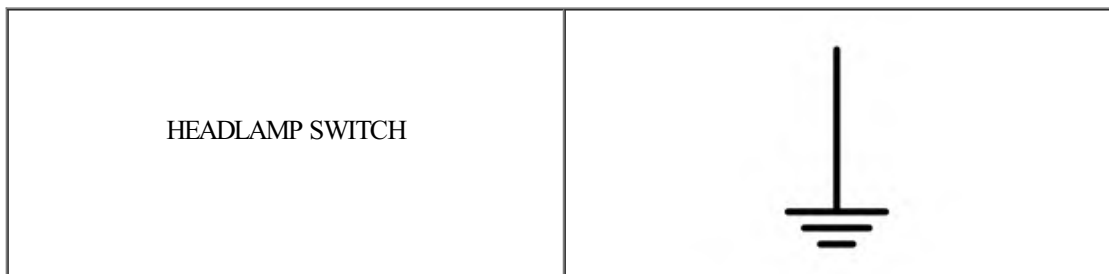
- Ignition OFF.
- Disconnect BCM [C2280G](#) .
- Ignition ON.
- Place the headlamp switch in the AUTOLAMPS position.

Do the fog lamps continue to illuminate?

Yes	GO to A3
No	REPAIR the circuits.

A3 CHECK THE BCM (BODY CONTROL MODULE) FOG LAMP SWITCH INPUT CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect BCM [C2280B](#) .
- Measure:



Positive Lead	Measurement / Action	Negative Lead
C205-14	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to A5
No	REPAIR the circuit.

A4 CHECK THE BCM (BODY CONTROL MODULE) FOG LAMP SWITCH INPUT CIRCUIT FOR AN OPEN

- Ignition OFF.
- Disconnect BCM [C2280B](#).
- Measure:

HEADLAMP SWITCH	BODY CONTROL MODULE (BCM)
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Positive Lead	Measurement / Action	Negative Lead
C205-14	Ω	C2280B-20

Is the resistance less than 3 ohms?

Yes	GO to A5
No	REPAIR the circuit.

A5 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all BCM and all related in-line 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 and all related in-line 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 FRONT FOG LAMP IS INOPERATIVE

Refer to Wiring Diagrams Cell [86](#) 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 B1046:11	Front Fog Lamp Control Switch: Circuit Short To Ground	A continuous and on-demand DTC that sets when the BCM detects a short to ground on the headlamp switch input circuits.
BCM B1147:11	Left Front Fog Lamps: Circuit Short To Ground	A continuous memory and on-demand DTC that sets when the BCM detects a short to ground from the LH fog lamp output circuit.
BCM B1147:15	Left Front Fog Lamps: Circuit Short To Battery Or Open	A continuous memory and on-demand DTC that sets when the BCM detects an open from the LH fog lamp output circuit.
BCM B1148:11	Right Front Fog Lamps: Circuit Short To Ground	A continuous memory and on-demand DTC that sets when the BCM detects a short to ground from the RH fog lamp output circuit.
BCM B1148:15	Right Front Fog Lamps: Circuit Short To Battery Or Open	A continuous memory and on-demand DTC that sets when the BCM detects an open from the RH fog lamp output circuit.
BCM B1499:11	Exterior Lamps Power Supply "A": Circuit Short To Ground	A continuous memory and on-demand DTC that sets when the BCM detects a short to ground from the LH fog lamp output circuit.
BCM B1499:15	Exterior Lamps Power Supply "A": Circuit Short To Battery Or Open	A continuous memory and on-demand DTC that sets when the BCM detects an open from the LH fog lamp output circuit.
BCM B149D:11	Exterior Lamps Power Supply "B": Circuit Short To Ground	A continuous memory and on-demand DTC that sets when the BCM detects a short to ground from the RH fog lamp output circuit.
BCM B149D:15	Exterior Lamps Power Supply "B": Circuit Short To Battery Or Open	A continuous memory and on-demand DTC that sets when the BCM detects an open from the RH fog lamp output circuit.

Possible Sources

- Fog lamp assembly
- Wiring, terminals or connectors
- BCM

Visual Inspection and Pre-checks

- Inspect the fog lamp assembly for damage.

B1 CHECK FOR VOLTAGE TO THE INOPERATIVE FOG LAMP

- Ignition OFF.
- Disconnect Inoperative LH Fog Lamp [C152](#) or RH Fog Lamp [C162](#) .
- Ignition ON.
- Place the headlamp switch in the PARKLAMPS position and engage the front fog lamp switch.
- Measure:

FOG LAMP, LEFT	
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LH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C152-B		Ground

FOG LAMP, RIGHT	
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RH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C162-B		Ground

Is the voltage greater than 11 volts?

Yes	GO to B3
No	GO to B2

B2 REPEAT THE ON-DEMAND SELF-TEST AND CHECK FOR VOLTAGE TO THE FOG LAMP

- Disengage the front fog lamp switch and 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).
- Ignition OFF.
- Ignition ON.
- Place the headlamp switch in the PARKLAMPS position and engage the front fog lamp switch.
- Measure:

FOG LAMP, LEFT	
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LH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C152-B		Ground

FOG LAMP, RIGHT	
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RH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C162-B		Ground

Is the voltage greater than 11 volts?

Yes	INSTALL a new front fog lamp. REFER to: Front Fog Lamp (417-01 Exterior Lighting, Removal and Installation).
No	GO to B4

B3 CHECK THE INOPERATIVE FOG LAMP GROUND CIRCUIT FOR AN OPEN

- Measure:

FOG LAMP, LEFT

LH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C152-B		C152-A

FOG LAMP, RIGHT

RH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C162-B		C162-A

Is the voltage greater than 11 volts?

Yes	INSTALL a new front fog lamp. REFER to: Front Fog Lamp (417-01 Exterior Lighting, Removal and Installation).
No	REPAIR the circuit.

B4 CHECK FOG LAMP VOLTAGE SUPPLY CIRCUIT FOR A SHORT TO GROUND

- Place the headlamp switch in the OFF position.

- Ignition OFF.
- Disconnect BCM [C2280G](#) .
- Measure:

FOG LAMP, LEFT	
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LH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C152-B	Ω	Ground

FOG LAMP, RIGHT	
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RH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C162-B	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to B5
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).

B5 CHECK FOG LAMP VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

- Measure:

FOG LAMP, LEFT	BODY CONTROL MODULE (BCM)
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LH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C152-B	Ω	C2280G-12

FOG LAMP, RIGHT	BODY CONTROL MODULE (BCM)
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RH Front Fog Lamp

Positive Lead	Measurement / Action	Negative Lead
C162-B	Ω	C2280G-5

Is the resistance less than 3 ohms?

Yes	GO to B6
No	REPAIR the circuit.

B6 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all BCM and all related in-line 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 and all related in-line 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.

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