

Autolamps

DTC Chart: Body Control Module (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).

BCM DTC Chart

DTC	Description	Action
B1A85:11	Ambient Light Sensor: Circuit Short To Ground	GO to Pinpoint Test B
B1A85:13	Ambient Light Sensor: Circuit 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 Chart(s)

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: Autolamps

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).
The autolamps are inoperative	Refer to the Pinpoint Test	GO to Pinpoint Test A
The autolamps are on continuously	Refer to the Pinpoint Test	GO to Pinpoint Test B

Pinpoint Tests

The Autolamps Are Inoperative

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

Normal Operation and Fault Conditions

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

Possible Sources

- Headlamp concern
- Light sensor
- BCM

PINPOINT TEST A : THE AUTOLAMPS ARE INOPERATIVE

A1 CHECK THE MANUAL HEADLAMP OPERATION

- Place the headlamp switch in the HEADLAMPS and then OFF positions.

Do the headlamps operate correctly?

Yes	GO to A2
No	REFER to: Headlamps (417-01 Exterior Lighting, Diagnosis and Testing).

A2 CHECK FOR VOLTAGE TO THE LIGHT SENSOR

- Ignition OFF.
- Disconnect: Autolamp Sensor C287 (vehicles with EMTC).
- Disconnect: Autolamp/Sunload Sensor C286 (vehicles with DATC).
- Ignition ON.
- Place the headlamp switch in the AUTOLAMPS position.
- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2		Ground

Is the voltage approximately 5 volts?

Yes	INSTALL a new autolamp or autolamp/sunload sensor. REFER to: Light Sensor (417-01 Exterior Lighting, Removal and Installation).
No	GO to A3

A3 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 Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern,  Click here to access Guided Routine (BCM).
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.

The Autolamps Are On Continuously

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

Normal Operation and Fault Conditions

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

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1A85:11	Ambient Light Sensor: Circuit Short To Ground	A continuous memory and on-demand DTC that sets when the BCM detects a short to ground from the light sensor input circuit.
B1A85:13	Ambient Light Sensor: Circuit Open	An on-demand DTC that sets when the BCM detects an open or short to voltage from the light sensor input circuit.

Possible Sources

- Wiring, terminals or connectors
- Light sensor
- BCM

Visual Inspection and Diagnostic Pre-checks

- Inspect the headlamp switch for damage.
- Inspect the light sensor for damage.

PINPOINT TEST B : THE AUTOLAMPS ARE ON CONTINUOUSLY

B1 CHECK FOR BCM (BODY CONTROL MODULE) DIAGNOSTIC TROUBLE CODE (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, perform the BCM self-test.

Is DTC B1A85:11 or B1A85:13 present?

Yes	For DTC B1A85:11, GO to B3 For DTC B1A85:13, GO to B6
No	GO to B2

B2 CHECK FOR VOLTAGE TO THE LIGHT SENSOR (NO DTC (DIAGNOSTIC TROUBLE CODE))

- Ignition OFF.
- Disconnect: Autolamp Sensor C287 (vehicles with EMTC).
- Disconnect: Autolamp/Sunload Sensor C286 (vehicles with DATC).
- Ignition ON.
- Place the headlamp switch in the AUTOLAMPS position.
- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2		Ground

Is the voltage approximately 5 volts?

Yes	INSTALL a new autolamp or autolamp/sunload sensor. REFER to: Light Sensor (417-01 Exterior Lighting, Removal and Installation).
No	GO to B11

B3 CHECK FOR VOLTAGE TO THE LIGHT SENSOR (DTC (DIAGNOSTIC TROUBLE CODE) B1A85:11)

- Ignition OFF.
- Disconnect: Autolamp Sensor C287 (vehicles with EMTC).
- Disconnect: Autolamp/Sunload Sensor C286 (vehicles with DATC).
- Ignition ON.
- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2		Ground

Is the voltage approximately 5 volts?

Yes	INSTALL a new autolamp or autolamp/sunload sensor. REFER to: Light Sensor (417-01 Exterior Lighting, Removal and Installation).
No	GO to B4

B4 CHECK THE LIGHT SENSOR INPUT CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: BCM C2280B.
- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to B5
No	REPAIR the circuit.

B5 CHECK THE LIGHT SENSOR INPUT CIRCUIT FOR A SHORT TO THE GROUND CIRCUIT

- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2	Ω	C286-4

Is the resistance greater than 10,000 ohms?

Yes	GO to B10
No	REPAIR the circuit.

B6 CHECK FOR VOLTAGE TO THE LIGHT SENSOR (DTC (DIAGNOSTIC TROUBLE CODE) B1A85:13)

- Ignition OFF.
- Disconnect: Autolamp Sensor C287 (vehicles with EMTC).
- Disconnect: Autolamp/Sunload Sensor C286 (vehicles with DATC).
- Ignition ON.
- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2		Ground

Is the voltage approximately 5 volts?

Yes	GO to B7
No	GO to B9

B7 CHECK THE LIGHT SENSOR FOR GROUND

- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2		C286-4

Is the voltage approximately 5 volts?

Yes	INSTALL a new autolamp or autolamp/sunload sensor. REFER to: Light Sensor (417-01 Exterior Lighting, Removal and Installation).
No	GO to B8

B8 CHECK THE LIGHT SENSOR GROUND CIRCUIT FOR AN OPEN

- Ignition OFF.
- Disconnect: BCM C2280B.
- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-4	Ω	C2280B-22

Is the resistance less than 3 ohms?

Yes	GO to B11
No	REPAIR the circuit.

B9 CHECK THE LIGHT SENSOR INPUT CIRCUIT FOR A SHORT TO VOLTAGE

- Disconnect: BCM C2280B.
- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2		Ground

Is any voltage present?

Yes	REPAIR the circuit.
No	GO to B10

B10 CHECK THE LIGHT SENSOR INPUT CIRCUIT FOR AN OPEN

- Measure:

Click to display connectors

Vehicles With DATC

Positive Lead	Measurement / Action	Negative Lead
C286-2	Ω	C2280B-24

Is the resistance less than 3 ohms?

Yes	GO to B11
No	REPAIR the circuit.

B11 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all BCM connectors.
- Repair:
 - corrosion (install new connector or terminals – clean module pins)
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- Reconnect the BCM connectors. Make sure they seat and latch correctly.
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