

Autolamps

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>
B1A85:11	Ambient Light Sensor: Circuit Short To Ground	GO to Pinpoint Test A
B1A85:13	Ambient Light Sensor: Circuit Open	GO to Pinpoint Test A

Symptom Charts

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

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/do not operate correctly	Refer to the Pinpoint Test	GO to Pinpoint Test A

Pinpoint Tests

☐ [PINPOINT TEST A : THE AUTOLAMPS ARE INOPERATIVE OR DO NOT OPERATE CORRECTLY](#)

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 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.
BCM B1A85:13	Ambient Light Sensor: Circuit Open	An on-demand DTC that sets when the BCM detects an open from the light sensor input circuit.

Possible Sources

- Light sensor
- Wiring, terminals or connectors
- BCM

Visual Inspection and Pre-checks

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

A1 CHECK THE MANUAL HEADLAMP OPERATION

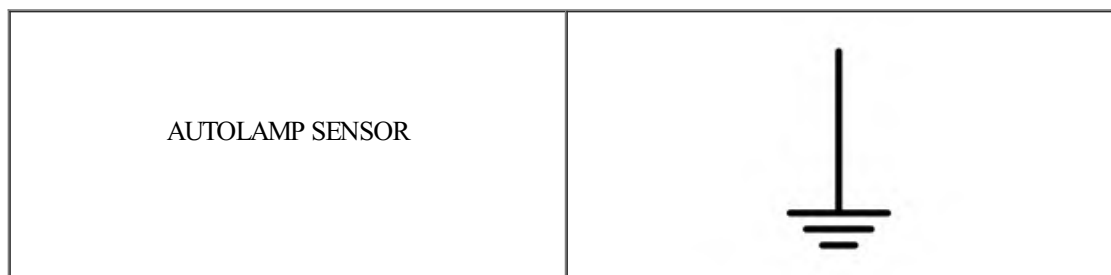
- Place the headlamp switch in the HEADLAMPS and then OFF positions.

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 ATC).
- Ignition ON.
- Place the headlamp switch in the AUTOLAMPS position.
- Measure:



Vehicles With EMTC

Positive Lead	Measurement / Action	Negative Lead
C287-2		Ground

AUTOLAMP SENSOR	
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Vehicles With ATC

Positive Lead	Measurement / Action	Negative Lead
C286-2		Ground

Is the voltage approximately 5 volts?

Yes	GO to A3
No	If the voltage is low, GO to A5 If the voltage is high, GO to A7

A3 CHECK THE LIGHT SENSOR FOR GROUND

- Measure:

AUTOLAMP SENSOR

Vehicles With EMTC

Positive Lead	Measurement / Action	Negative Lead
C287-2		C287-4

AUTOLAMP SENSOR

Vehicles With ATC

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 A4

A4 CHECK THE LIGHT SENSOR GROUND CIRCUIT FOR AN OPEN

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

AUTOLAMP SENSOR	BODY CONTROL MODULE (BCM)
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Vehicles With EMTC

Positive Lead	Measurement / Action	Negative Lead
C287-4	Ω	C2280B-22

AUTOLAMP SENSOR	BODY CONTROL MODULE (BCM)
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Vehicles With ATC

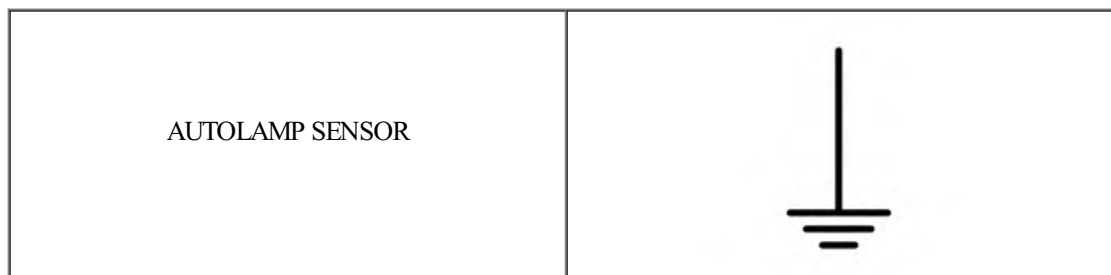
Positive Lead	Measurement / Action	Negative Lead
C286-4	Ω	C2280B-22

Is the resistance less than 3 ohms?

Yes	GO to A8
No	REPAIR the circuit.

A5 CHECK THE LIGHT SENSOR INPUT CIRCUIT FOR A SHORT TO GROUND

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



Vehicles With EMTC

Positive Lead	Measurement / Action	Negative Lead
C287-2	Ω	Ground



Vehicles With ATC

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

Is the resistance greater than 10,000 ohms?

Yes	GO to A6
No	REPAIR the circuit.

A6 CHECK THE LIGHT SENSOR INPUT CIRCUIT FOR AN OPEN

- Measure:

AUTOLAMP SENSOR	BODY CONTROL MODULE (BCM)
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Vehicles With EMTC

Positive Lead	Measurement / Action	Negative Lead
C287-2	Ω	C2280B-24

AUTOLAMP SENSOR	BODY CONTROL MODULE (BCM)
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Vehicles With ATC

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

Is the resistance less than 3 ohms?

Yes	GO to A8
No	REPAIR the circuit.

A7 CHECK THE LIGHT SENSOR INPUT CIRCUIT FOR A SHORT TO VOLTAGE

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

AUTOLAMP SENSOR	
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Vehicles With EMTC

Positive Lead	Measurement / Action	Negative Lead
C287-2		Ground

AUTOLAMP SENSOR	
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Vehicles With ATC

Positive Lead	Measurement / Action	Negative Lead
C286-2		Ground

Is any voltage present?

Yes	REPAIR the circuit.
No	GO to A8

A8 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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