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## 1991 FORD Fiesta 5 Doors OEM Service and Repair Workshop Manual

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- Ignition OFF.
- Place the headlamp switch in the OFF position.
- Disconnect: BCM (body control module) C2280G.
- Measure:

#### LH (left-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1284-1	$\Omega$	Ground

#### RH (right-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1285-1	$\Omega$	Ground

**Is the resistance greater than 10,000 ohms?**

<b>Yes</b>	GO to <a href="#">B20</a>
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<b>No</b>	<p>REPAIR the circuit. After the repair:</p> <p>If no Diagnostic Trouble Codes (DTCs) are present, TEST the system for normal operation.</p> <p>If any BCM (body control module) Diagnostic Trouble Codes (DTCs) other than DTC (diagnostic trouble code) U3000:49 are present, CLEAR the Diagnostic Trouble Codes (DTCs), REPEAT the self-test (required to enable the lamp output driver) and cycle the ignition OFF and ON. TEST the system for normal operation.</p> <p>If DTC (diagnostic trouble code) U3000:49 is present, INSTALL a new BCM (body control module)</p> <p>.</p> <p>REFER to: <a href="#">Body Control Module (BCM)</a> (419-10 Multifunction Electronic Modules, Removal and Installation).</p>
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**B20 CHECK THE LOW BEAM CIRCUIT FOR AN OPEN**



C1285-1		C1285-10
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- For high series LED (light emitting diode) headlamps, measure:

#### LH (left-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1284-1		C1284-10
C1284-1		C1284-15

#### RH (right-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1285-1		C1285-10
C1285-1		C1285-15

**Is the voltage greater than 11 volts?**

<b>Yes</b>	GO to <a href="#">B22</a>
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<b>No</b>	REPAIR the circuit in question.
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#### B22 CHECK THE HEADLAMP

- Place the headlamp switch in the OFF position.

<b>Yes</b>	<p>REMOVE the known good LED (light emitting diode) control module. INSTALL a new headlamp assembly.</p> <p>REFER to: <a href="#">Headlamp Assembly</a> (417-01 Exterior Lighting, Removal and Installation).</p>
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<b>No</b>	<p>REMOVE the known good LED (light emitting diode) control module. INSTALL a new LED (light emitting diode) control module.</p> <p>REFER to: <a href="#">Light Emitting Diode (LED) Control Module</a> (417-01 Exterior Lighting, Removal and Installation).</p>
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## **B24 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION**

- Disconnect and inspect all BCM (body control module) 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 (body control module) 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?**

<b>Yes</b>	<p>CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . 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 (body control module) .</p> <p>REFER to: <a href="#">Body Control Module (BCM)</a> (419-10 Multifunction Electronic Modules, Removal and Installation).</p>
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<b>No</b>	<p>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.</p>
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BCM (body control module) B1D03:11	Right High Beam Circuit: Circuit Short To Ground	A continuous memory and on-demand DTC (diagnostic trouble code) that sets when the BCM (body control module) detects a short to ground from the RH (right-hand) high beam output circuit.
BCM (body control module) B1D03:15	Right High Beam Circuit: Circuit Short To Battery Or Open	A continuous memory and on-demand DTC (diagnostic trouble code) that sets when the BCM (body control module) detects an open from the RH (right-hand) high beam output circuit.

### Possible Sources

- Wiring, terminals or connectors
- LH (left-hand) steering column multifunction switch
- Bulb
- SCCM (steering column control module)
- BCM (body control module)

### Visual Inspection and Pre-checks

- Inspect the headlamp assembly for damage.

## C1 CHECK THE LOW BEAM OPERATION

- Ignition ON.
- Place the headlamp switch in the HEADLAMPS position.
- Place the LH (left-hand) steering column multifunction switch in the high beam position and observe the headlamps.
- Place the LH (left-hand) steering column multifunction switch in the low beam position and observe the headlamps.

### Do the low beams illuminate?

<b>Yes</b>	If an individual high beam is inoperative, GO to <a href="#">C4</a> If an individual high beam is always on, GO to <a href="#">C2</a> If both high beams are inoperative or always on, GO to <a href="#">C3</a>
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<b>No</b>	<a href="#">GO to Pinpoint Test A</a>
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## C2 CHECK HIGH BEAM VOLTAGE SUPPLY CIRCUITS FOR A SHORT TO VOLTAGE


- Ignition OFF.

<b>No</b>	INSTALL a new LH (left-hand) steering column multifunction switch. REFER to: <a href="#">Steering Column Multifunction Switch LH</a> (211-05 Steering Wheel and Column Electrical Components, Removal and Installation). TEST the system for normal operation. If the concern still exists, GO to <a href="#">C9</a>
<b>C4 CHECK FOR VOLTAGE FROM THE HEADLAMP HIGH BEAM CIRCUIT</b>	


Sample

- Ignition OFF.
- Ignition ON.
- Place the headlamp switch in the HEADLAMPS position and the LH (left-hand) steering column multifunction switch in the HIGH BEAM position.
- Measure:

#### LH (left-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1021-2		Ground

#### RH (right-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1041-2		Ground

#### Is the voltage greater than 11 volts?

<b>Yes</b>	INSTALL a new high beam headlamp bulb. REFER to: <a href="#">Headlamp Bulb</a> (417-01 Exterior Lighting, Removal and Installation).
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<b>No</b>	GO to <a href="#">C6</a>
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#### C6 CHECK THE HIGH BEAM CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Place the headlamp switch in the OFF position.
- Disconnect: BCM (body control module) C2280G.
- Measure:

#### LH (left-hand) Headlamp

C1021-2	$\Omega$	C2280G-11
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#### RH (right-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1041-2	$\Omega$	C2280G-6

Is the resistance less than 3 ohms?

<b>Yes</b>	GO to <a href="#">C10</a>
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<b>No</b>	REPAIR the circuit.
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#### C8 CHECK THE HEADLAMP GROUND CIRCUIT FOR AN OPEN

- Measure:

#### LH (left-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1021-2	$\overline{\text{V}}$	C1021-4

#### RH (right-hand) Headlamp

Positive Lead	Measurement / Action	Negative Lead
C1041-2	$\overline{\text{V}}$	C1041-4

Is the voltage greater than 11 volts?



- Disconnect and inspect all BCM (body control module) 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 (body control module) 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?**

<b>Yes</b>	<p>CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . 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 (body control module) .</p> <p>REFER to: <a href="#">Body Control Module (BCM)</a> (419-10 Multifunction Electronic Modules, Removal and Installation).</p>
<b>No</b>	<p>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.</p>

**PINPOINT TEST D : ONE OR BOTH HIGH BEAMS IS INOPERATIVE OR ALWAYS ON - LOW SERIES LED (LIGHT EMITTING DIODE) HEADLAMPS**

Refer to Wiring Diagrams Cell 85 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 (diagnostic trouble code)	Description	Fault Trigger Condition
BCM (body control module)	Left Front Enhanced Exterior Lighting System: General	A continuous memory and on-demand DTC (diagnostic trouble code) that sets when the BCM (body control

BCM (body control module) B14E7:1C	Right Front Enhanced Exterior Lighting System: Circuit Voltage Out Of Range	An on-demand DTC (diagnostic trouble code) that sets when the BCM (body control module) detects a an internal failure from the RH (right-hand) headlamp LED (light emitting diode) control module.
BCM (body control module) B14E7:49	Right Front Enhanced Exterior Lighting System: Internal Electronic Failure	A continuous memory and on-demand DTC (diagnostic trouble code) that sets when the BCM (body control module) detects a an internal failure from the RH (right-hand) headlamp LED (light emitting diode) control module.
BCM (body control module) B14E7:55	Right Front Enhanced Exterior Lighting System: Not Configured	A continuous memory and on-demand DTC (diagnostic trouble code) that sets when the BCM (body control module) detects the RH (right-hand) headlamp LED (light emitting diode) control module is not configured.
BCM (body control module) B14E7:61	Right Front Enhanced Exterior Lighting System: Signal Calculation Failure	An on-demand DTC (diagnostic trouble code) that sets when the BCM (body control module) detects a an internal failure from the RH (right-hand) headlamp LED (light emitting diode) control module.

#### Possible Sources

- Wiring, terminals or connectors
- LH (left-hand) steering column multifunction switch
- LED (light emitting diode) control module
- Headlamp assembly
- SCCM (steering column control module)
- BCM (body control module)

#### Visual Inspection and Pre-checks

- Inspect the headlamp assembly for damage.

#### D1 CHECK THE LOW BEAM OPERATION

- Ignition ON.
- Place the headlamp switch in the HEADLAMPS position.
- Place the LH (left-hand) steering column multifunction switch in the high beam position and observe the headlamps.
- Place the LH (left-hand) steering column multifunction switch in the low beam position and observe the headlamps.

#### Do the low beams illuminate?