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## 2012 FORD Figo OEM Service and Repair Workshop Manual

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- Ignition OFF.
- Disconnect and inspect the GWM (gateway module A) connector.
- 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 GWM (gateway module A) connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

**Is the concern still present?**

<p><b>Yes</b></p>	<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 GWM (gateway module A) .</p> <p>If equipped with 8-inch center display screen/12.3-inch center display screen,          REFER to: <a href="#">Gateway Module A (GWM) - Electric, Vehicles With: 8 Inch Center Display Screen/12 Inch Center Display Screen</a>          (418-00A Controller Area Network (CAN) Module Communications Network, Removal and Installation).</p> <p>If equipped with 15-inch center display screen,          REFER to: <a href="#">Gateway Module A (GWM) - Electric, Vehicles With: 15.5 Inch Center Display Screen</a>          (418-00A Controller Area Network (CAN) Module Communications Network, Removal and Installation).</p>
<p><b>No</b></p>	<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>

**C32 CHECK FOR CORRECT OBCC (OFF-BOARD CHARGER CONTROLLER) MODULE OPERATION**

- Ignition OFF.
- Disconnect and inspect the OBCC (Off-Board Charger Controller) module connector.
- 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

<b>No</b>	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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**C34 CHECK FOR CORRECT SOBDM (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE A) (BATTERY CHARGING CONTROL MODULE [BCCM]) OPERATION**

- Ignition OFF.
- Disconnect and inspect the SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM]) connector.
- 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 SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM]) connector. Make sure it seats and latches 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 SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM]).</p> <p>REFER to: <a href="#">Secondary On-Board Diagnostic Control Module A (SOBDM) - Electric</a> (414-03B High Voltage Battery Charging System, Removal and Installation).</p>
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<b>No</b>	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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**C35 CHECK FOR CORRECT SOBDMB (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE B (SOBDMB)) (ALL WHEEL DRIVE CONTROL [AWDC]) OPERATION**

- Ignition OFF.
- Disconnect and inspect the SOBDMB (Secondary On-Board Diagnostic Control Module B (SOBDMB)) (All Wheel Drive Control [AWDC]) connector.

- Fuse
- Wiring, terminals or connectors
- Remote DLC (data link connector)
- GSM (gear shift module)
- GWM (gateway module A)
- OCS (occupant classification system) module
- RCM (restraints control module)
- SCCM (steering column control module)

## NOTE

Various modules set network DTCs during this test procedure. Clear DTCs from all modules after completing the diagnostic procedure.

### D1 CHECK THE REMOTE DLC (DATA LINK CONNECTOR) PINS FOR DAMAGE

- Ignition OFF.
- Disconnect the diagnostic scan tool cable from the remote DLC (data link connector) .
- Inspect the remote DLC (data link connector) pins 4, 5, 6, 14 and 16 for spreading or damage using a Rotunda flex probe with the dimensions: 1.5mm width x 0.80mm thickness.
  - Refer to the Rotunda flex probe or probe kit documentation to confirm the dimensions, if not printed on the probe.

**Are any pin fit concerns or damage observed with remote DLC (data link connector) pins 4, 5, 6, 14 and 16?**

<b>Yes</b>	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 remote DLC (data link connector) .
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<b>No</b>	GO to <a href="#">D2</a>
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### D2 CHECK THE HS-CAN2 (HIGH-SPEED CONTROLLER AREA NETWORK 2) ( SCCM (STEERING COLUMN CONTROL MODULE) ) TERMINATION RESISTANCE

- Ignition OFF.

<b>No</b>	GO to <a href="#">D8</a>
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**D4 CHECK THE HS-CAN2 (HIGH-SPEED CONTROLLER AREA NETWORK 2) (+) AND HS-CAN2 (HIGH-SPEED CONTROLLER AREA NETWORK 2) (-) CIRCUITS FOR A SHORT TO VOLTAGE**

- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2431A-8		Ground
C2431A-21		Ground

**Are the voltages greater than 6 volts?**

<b>Yes</b>	REPAIR the circuit in question.
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<b>No</b>	GO to <a href="#">D5</a>
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**D5 CHECK THE GWM (GATEWAY MODULE A) HS-CAN2 (HIGH-SPEED CONTROLLER AREA NETWORK 2) TERMINATION RESISTOR (COMPONENT SIDE)**

- Measure:

Positive Lead	Measurement / Action	Negative Lead

C226A-6	$\Omega$	C2431A-21
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**Are the resistances less than 3 ohms?**

<b>Yes</b>	CONNECT all disconnected connectors. GO to <a href="#">D9</a>
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<b>No</b>	REPAIR the circuit in question.
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**D7 CHECK THE HS-CAN2 (HIGH-SPEED CONTROLLER AREA NETWORK 2) (+) AND HS-CAN2 (HIGH-SPEED CONTROLLER AREA NETWORK 2) (-) CIRCUITS FOR A SHORT TOGETHER WITH THE MODULES DISCONNECTED**

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2431A-8	$\Omega$	C2431A-21

- Disconnect modules one at a time until the resistance is greater than 3 ohms.
  - GSM (gear shift module) C3245
  - OCS (occupant classification system) module C3285
  - RCM (restraints control module) C310B
  - SCCM (steering column control module) C226A

**Did the resistance change to greater than 3 ohms with one of the modules disconnected?**

<b>Yes</b>	CONNECT all disconnected connectors. For the GSM (gear shift module) , GO to <a href="#">D13</a> For the OCS (occupant classification system) module, GO to <a href="#">D15</a> For the RCM (restraints control module) , GO to <a href="#">D16</a> For the SCCM (steering column control module) , GO to <a href="#">D17</a>
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• **NOTE**

When re-running the network test, close the network test application first or the screen display reverts back to the prior network test results.

Disconnect: SCCM (steering column control module) C226A.

- Using a diagnostic scan tool, carry out the network test.

**Do all other HS-CAN2 (high-speed controller area network 2) modules pass the network test?**

<b>Yes</b>	CONNECT the module. <a href="#">GO to Pinpoint Test AN</a>
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<b>No</b>	CONNECT the module. GO to <a href="#">D10</a>
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**D10 CHECK FOR RESTORED NETWORK COMMUNICATION WITH THE OCS (OCCUPANT CLASSIFICATION SYSTEM) MODULE DISCONNECTED**

**NOTE**

When re-running the network test, close the network test application first or the screen display reverts back to the prior network test results.

- Disconnect: OCS (occupant classification system) module C3285.
- Using a diagnostic scan tool, carry out the network test.

**Do all other HS-CAN2 (high-speed controller area network 2) modules pass the network test?**

<b>Yes</b>	CONNECT the module. <a href="#">GO to Pinpoint Test AE</a>
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<b>No</b>	CONNECT the module. GO to <a href="#">D11</a>
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**D11 CHECK FOR RESTORED NETWORK COMMUNICATION WITH THE GSM (GEAR SHIFT MODULE) DISABLED**

**NOTE**

- 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 GSM (gear shift module) connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

**Is the concern still present?**

<p><b>Yes</b></p>	<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 GSM (gear shift module) .</p> <p>REFER to: <a href="#">Gear Shift Module (GSM)</a> (307-05A Automatic Transmission External Controls - 1-Speed Automatic Transmission, Removal and Installation).</p>
<p><b>No</b></p>	<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>

**D14 CHECK FOR CORRECT GWM (GATEWAY MODULE A) OPERATION**

- Ignition OFF.
- Disconnect and inspect the GWM (gateway module A) connector.
- 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 GWM (gateway module A) connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

**Is the concern still present?**

<p><b>Yes</b></p>	<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 GWM (gateway module A) .</p> <p>If equipped with 8-inch center display screen/12.3-inch center display screen,</p>
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<b>No</b>	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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### D16 CHECK FOR CORRECT RCM (RESTRAINTS CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the RCM (restraints control module) connector and 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 RCM (restraints control module) connector and 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 RCM (restraints control module) .</p> <p>REFER to: <a href="#">Restraints Control Module (RCM)</a> (501-20B Supplemental Restraint System, Removal and Installation).</p>
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<b>No</b>	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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### D17 CHECK FOR CORRECT SCCM (STEERING COLUMN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the SCCM (steering column control module) connector.
- 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

- TRM (trailer module) / TBM (trailer brake control module) (if equipped)
- GWM (gateway module A)
- WACM (wireless accessory charging module) (if equipped)

## NOTE

Various modules set network DTCs during this test procedure. Clear DTCs from all modules after completing the diagnostic procedure.

### E1 CHECK THE REMOTE DLC (DATA LINK CONNECTOR) PINS FOR DAMAGE

- Ignition OFF.
- Disconnect the diagnostic scan tool cable from the remote DLC (data link connector) .
- Inspect the remote DLC (data link connector) pins 4, 5, 6, 14 and 16 for spreading or damage using a Rotunda flex probe with the dimensions: 1.5mm width x 0.80mm thickness.
  - Refer to the Rotunda flex probe or probe kit documentation to confirm the dimensions, if not printed on the probe.

**Are any pin fit concerns or damage observed with remote DLC (data link connector) pins 4, 5, 6, 14 and 16?**

<b>Yes</b>	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 remote DLC (data link connector) .
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<b>No</b>	GO to <a href="#">E2</a>
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### E2 CHECK THE HS-CAN3 (HIGH-SPEED CONTROLLER AREA NETWORK 3) ( IPC (INSTRUMENT PANEL CLUSTER) ) TERMINATION RESISTANCE

- Disconnect negative battery cable.
- Disconnect GWM (gateway module A) C2431A .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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