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2014 FORD Figo OEM Service and Repair Workshop Manual

Go to manual page

#### Are the resistances greater than 1,000 ohms?

Yes	GO to	B28

**No** REPAIR the circuit in question.

### B8 CHECK THE FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) TERMINATION RESISTOR ( PSCM (POWER STEERING CONTROL MODULE) ) WITH THE GWM (GATEWAY MODULE A) DISCONNECTED

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

Positive Lead	Measurement / Action	Negative Lead
C2431A-4	Ω	C2431A-17

#### Is the resistance between 108 and 132 ohms?

Yes GO to B9

No

If the resistance is greater than 132 ohms, GO to B12 If the resistance is less than 108 ohms, GO to B13

### B9 CHECK THE FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) (+) AND FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) (-) CIRCUITS FOR A SHORT TO GROUND

- Connect the negative battery cable.
- Measure:

Positive Lead Measurement / Action Neg	gative Lead
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#### B11 CHECK THE GWM (GATEWAY MODULE A) TERMINATION RESISTOR (COMPONENT SIDE)

#### • Measure:

Positive Lead	Measurement / Action	Negative Lead
E342878	Ω	E342878
C2431A-4 (Component Side)		C2431A-17 (Component Side)

#### Is the resistance between 108 ohms and 132 ohms?

Yes	GO to	B28

INSTALL a new GWM (gateway module A).

If equipped with 8-inch center display screen/12.3-inch center display screen,

REFER to: Gateway Module A (GWM) - Electric, Vehicles With: 8 Inch Center Display Screen/12 Inch Center Display Screen

No

(418-00A Controller Area Network (CAN) Module Communications Network, Removal and Installation).

If equipped with 15-inch center display screen,

REFER to: Gateway Module A (GWM) - Electric, Vehicles With: 15.5 Inch Center Display Screen (418-00A Controller Area Network (CAN) Module Communications Network, Removal and Installation).

### B12 CHECK THE FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) CIRCUITS BETWEEN THE PSCM (POWER STEERING CONTROL MODULE) AND THE GWM (GATEWAY MODULE A) FOR AN OPEN

- Disconnect PSCM (power steering control module) C1463A.
- Measure:

• VDM (vehicle dynamics control module) C3672 (if equipped)

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

CONNECT all disconnected connectors.

Yes

For the ABS (anti-lock brake system) module, GO to B26 For the CMR (Camera Module - Rear), GO to B27 For the HCM (headlamp control module), GO to B29 For the IPMA (image processing module A), GO to B30 For the PCM (powertrain control module), GO to B31 For the PSCM (power steering control module), GO to B32 For the SOBDMC (secondary on-board diagnostic control module C), GO to B33 For the VDM (vehicle dynamics control module), GO to B34

No

REPAIR the circuit in question. CONNECT all modules.

## B14 CHECK THE FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) (+) AND FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) (-) CIRCUITS FOR A SHORT TO GROUND WITH THE MODULES DISCONNECTED

• Measure:

Positive Lead	Measurement / Action	Negative Lead
C2431A-4	Ω	Ground
C2431A-17	Ω	Ground

- Disconnect modules one at a time until the resistance to ground is greater than 1,000 ohms.
  - ABS (anti-lock brake system) module C135
  - CMR (Camera Module Rear) C2826A (if equipped)
  - HCM (headlamp control module) C2514
  - IPMA (image processing module A) C242B
  - PCM (powertrain control module) C1915B
  - PSCM (power steering control module) C1463A
  - SOBDMC (secondary on-board diagnostic control module C) C3471C

Yes	INSTALL the removed fuses. GO to B17
No	INSTALL the removed fuses. GO to B18

### B17 CHECK FOR RESTORED COMMUNICATION WITH THE SOBDMC (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE C) 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: SOBDMC (secondary on-board diagnostic control module C) C3471C.

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

Do all other FD-CAN (Flexible Data Rate Controller Area Network) modules pass the network test?

Yes	CONNECT the module.	GO to Pinpoint Test AS
No	CONNECT the module	GO to Pinnoint Test AG

### B18 CHECK FOR RESTORED NETWORK COMMUNICATION WITH THE ABS (ANTI-LOCK BRAKE SYSTEM) MODULE DISABLED

#### 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: BCMC (body control module C) [BJB (battery junction box)] fuses 23 (10A), 28 (50A) and 29 (50A).
- Using a diagnostic scan tool, carry out the network test.

Do all other FD-CAN (Flexible Data Rate Controller Area Network) modules pass the network test?

Yes	INSTALL the removed fuses.	GO to Pinpoint Test I

No	GO to	B23

### B22 CHECK FOR RESTORED NETWORK COMMUNICATION WITH THE VDM (VEHICLE DYNAMICS CONTROL MODULE) DISABLED

#### **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: BCMC (body control module C) [BJB (battery junction box)] fuse 178 (10A) is OK.
- Using a diagnostic scan tool, carry out the network test.

Do all other FD-CAN (Flexible Data Rate Controller Area Network) modules pass the network test?

Yes INSTALL the removed fuse. GO to Pinpoint Test AV

**No** INSTALL the removed fuse. GO to B23

#### **B23 VERIFY VEHICLE EQUIPMENT - HCM (HEADLAMP CONTROL MODULE)**

• Inspect the vehicle for a HCM (headlamp control module).

Is the vehicle equipped with a HCM (headlamp control module)?

Yes GO to B24

No GO to B25

### B24 CHECK FOR RESTORED NETWORK COMMUNICATION WITH THE HCM (HEADLAMP CONTROL MODULE) DISABLED

#### NOTE

- Disconnect and inspect the ABS (anti-lock brake system) 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
- Reconnect the ABS (anti-lock brake system) 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?

Yes

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,

REFER to: Anti-Lock Brake System (ABS) and Stability Control - Electric

(206-09 Anti-Lock Brake System (ABS) and Stability Control, Diagnosis and Testing).

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.

#### **B27 CHECK FOR CORRECT CMR (CAMERA MODULE - REAR) OPERATION**

- Ignition OFF.
- Disconnect and inspect the CMR (Camera Module Rear) 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 CMR (Camera Module Rear) connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

#### Is the concern still present?

Yes

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 service article instructions. If no service articles address this concern, INSTALL a new CMR (Camera Module - Rear).

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.

#### **B29 CHECK FOR CORRECT HCM (HEADLAMP CONTROL MODULE) OPERATION**

- Ignition OFF.
- Disconnect and inspect the HCM (headlamp 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
- Reconnect the HCM (headlamp control 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?

Yes

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 HCM (headlamp control module).

REFER to: Lighting Driver Control Module - Electric (417-01 Exterior Lighting, 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.

#### **B30 CHECK FOR CORRECT IPMA (IMAGE PROCESSING MODULE A) OPERATION**

- Ignition OFF.
- Disconnect and inspect all the IPMA (image processing module A) 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 IPMA (image processing module A) connectors. Make sure they seat and latch correctly.

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.

#### **B32 CHECK FOR CORRECT PSCM (POWER STEERING CONTROL MODULE) OPERATION**

- · Ignition OFF.
- Disconnect and inspect all the PSCM (power steering control module) connectors 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 PSCM (power steering control module) connectors 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?

Yes

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,

REFER to: Power Steering

(211-02 Power Steering, Diagnosis and Testing).

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.

### B33 CHECK FOR CORRECT SOBDMC (SECONDARY ON-BOARD DIAGNOSTIC CONTROL MODULE C) OPERATION

- Ignition OFF.
- Disconnect and inspect the SOBDMC (secondary on-board diagnostic control module C) connector.
- Repair:
  - corrosion (install new connector or terminals clean module pins)
  - damaged or bent pins install new terminals/pins

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 C : NO HS-CAN1 (HIGH-SPEED CONTROLLER AREA NETWORK 1) COMMUNICATION, ALL MODULES ARE NOT RESPONDING

#### **NOTE**

Failure to disconnect the battery when instructed will result in false resistance readings.

Refer to Wiring Diagrams Cell 14for schematic and connector information.

**Normal Operation and Fault Conditions** The HS-CAN1 (high-speed controller area network 1) modules communicate with the diagnostic scan tool through the remote DLC (data link connector) DIAG 1 circuits.

REFER to: Controller Area Network (CAN) Module Communications Network - Electric - System Operation and Component Description

(418-00A Controller Area Network (CAN) Module Communications Network, Description and Operation).

#### **Possible Sources**

- Fuse
- Wiring, terminals or connectors
- Remote DLC (data link connector)
- ACCM (air conditioning control module)
- ACCMB (Air Conditioining Compressor Control Module B) (if equipped)
- BCM (body control module)
- BCMC (body control module C) [BJB (battery junction box)]
- BECM (battery energy control module)
- DCACA (Direct Current/Alternating Current Converter Module A)
- DCACB (Direct Current/Alternating Current Converter Module B) (if equipped)
- DCDC (direct current/direct current converter control module)
- FHCM (Front Hatch Control Module)
- GWM (gateway module A)
- OBCC (Off-Board Charger Controller)
- PACM (pedestrian alert control module)
- SOBDM (secondary on-board diagnostic control module A) (Battery Charging Control Module [BCCM])
- SOBDMB (Secondary On-Board Diagnostic Control Module B (SOBDMB)) (All Wheel Drive Control [AWDC])