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2018 FORD Figo OEM Service and Repair Workshop Manual

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- Fuse
- Wiring, terminals and connector
- ACM (audio front control module)

#### **Visual Inspection and Pre-checks**

• Verify BCM (body control module) fuse 32 (20A) is OK.

#### L1 CHECK THE ACM (AUDIO FRONT CONTROL MODULE) VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

- Ignition OFF.
- Disconnect: ACM (audio front control module) C240A.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C240A-1	⊽	Ground

## Is the voltage greater than 11 volts?



No

VERIFY BCM (body control module) fuse 32 (20A) is OK. If OK, REPAIR the circuit. If not OK, REFER to the Wiring Diagrams manual to identify the possible causes of the circuit short.

#### L2 CHECK THE ACM (AUDIO FRONT CONTROL MODULE) GROUND CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C240A-4	Ω	Ground

Is the resistance less than 3 ohms?

• Operate the system and determine if the concern is still present.

#### Is the concern still present?

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 ACM (audio front control module).

Yes

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

REFER to: Audio Front Control Module (ACM) - Vehicles With: 8 Inch Center Display Screen/12 Inch Center Display Screen

(415-00 Information and Entertainment System - General Information, Removal and Installation). If equipped with 15-inch center display screen,

REFER to: Audio Front Control Module (ACM) - Vehicles With: 15.5 Inch Center Display Screen (415-00 Information and Entertainment System - General Information, 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.

#### PINPOINT TEST M: THE APIM (SYNC MODULE) DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL

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

Refer to Wiring Diagrams Cell 131for schematic and connector information.

**Normal Operation and Fault Conditions** The APIM (SYNC module) communicates on the HS-CAN3 (high-speed controller area network 3). REFER to: Controller Area Network (CAN) Module Communications Network - System Operation and Component Description

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

#### **Possible Sources**

- Fuse
- Wiring, terminals and connector
- APIM (SYNC module)

#### **Visual Inspection and Pre-checks**

• Verify BCM (body control module) fuse 15 (15A) is OK. BCM (body control module) fuse 15 is a 3-blade fuse containing fuse 14.

## M1 CHECK THE APIM (SYNC MODULE) VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

• Ignition OFF.

# M3 CHECK THE HS-CAN3 (HIGH-SPEED CONTROLLER AREA NETWORK 3) CIRCUITS BETWEEN THE APIM (SYNC MODULE) AND THE GWM (GATEWAY MODULE A) FOR AN OPEN

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

Positive Lead	Measurement / Action	Negative Lead
C2383A-19	Ω	C2431A-9
C2383A-20	Ω	C2431A-22



Yes	CONNECT all disconnected connectors. GO to	M4
		1

No	REPAIR the circuit in question.
NO	REPAIR the circuit in question.

## M4 CHECK FOR CORRECT APIM (SYNC MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM (SYNC 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 APIM (SYNC 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

Positive Lead	Measurement / Action	Negative Lead
C2280H-1	₩	Ground

## Is the voltage greater than 11 volts?

Yes	Connect BCM (body control module) C2280H. GO to N2
103	Connect Belli (Body Control Module) C220011. Go to 112

No

VERIFY BCMC (body control module C) [BJB (battery junction box)] fuse 202 (60A) is OK. If OK, repair the circuit. If not OK, REFER to the Wiring Diagrams Manual to identify the possible causes of the circuit short.

# N2 CHECK THE BCM (BODY CONTROL MODULE) GROUND CIRCUITS FOR AN OPEN

- Ignition OFF.
- Disconnect: BCM (body control module) C2280C.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2280C-6	U	Ground
C2280C-7	Ω	Ground
C2280C-10	Ω	Ground

#### Are the resistances less than 3 ohms?

Yes	GO to	N3

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).

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.

# PINPOINT TEST O: THE BCMC (BODY CONTROL MODULE C) [ BJB (BATTERY JUNCTION BOX) ] DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL

Refer to Wiring Diagrams Cell 13for schematic and connector information.

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

**Normal Operation and Fault Conditions** The BCMC (body control module C) [BJB (battery junction box)] communicates on the HS-CAN1 (high-speed controller area network 1). 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**

- Wiring, terminals and connector
- BCMC (body control module C) [BJB (battery junction box)]

#### O1 CHECK THE HS-CAN1 (HIGH-SPEED CONTROLLER AREA NETWORK 1) TERMINATION RESISTANCE

- Ignition OFF.
- Disconnect negative battery cable.
- Disconnect the diagnostic scan tool cable from the remote DLC (data link connector).
- Disconnect: GWM (gateway module A) C2431A.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2431A-7	Ω	C2431A-20

- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C1617A-1	₩	Ground

# Is the voltage greater than 11 volts?

Yes	GO to	04

**No** Repair the circuit.

# O4 CHECK THE BCMC (BODY CONTROL MODULE C) [ BJB (BATTERY JUNCTION BOX) ] GROUND CIRCUITS FOR AN OPEN

- Ignition OFF.
- Disconnect negative battery cable.
- Disconnect: BCMC (body control module C) [ BJB (battery junction box) ] C1035C and C1035E.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C1035C-1	Ω	Ground

Positive Lead	Measurement / Action	Negative Lead
C1035E-4	Ω	Ground

Are the resistances less than 3 ohms?

**Normal Operation and Fault Conditions** The BECM (battery energy control module) communicates on the HS-CAN1 (high-speed controller area network 1). 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 and connectors

#### **Visual Inspection and Pre-checks**

• Verify BCMC (body control module C) [BJB (battery junction box)] fuse 146 (15A) is OK.

#### P1 CHECK THE HIGH VOLTAGE BATTERY 12V SUPPLY CIRCUITS FOR AN OPEN

- Ignition OFF.
- Disconnect: high voltage battery C4238.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4238-5	₩	Ground
C4238-6	Ÿ	Ground

#### Are the voltages greater than 11 volts?

Yes	GO to	P2

No

VERIFY BCMC (body control module C) [BJB (battery junction box)] fuse 146 (15A) is OK. If OK, REPAIR the circuit in question. If not OK, REFER to the Wiring Diagrams manual to identify the possible causes of the circuit short.

#### P2 CHECK THE HIGH VOLTAGE BATTERY WAKE-UP CIRCUIT

Measure:

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

Positive Lead	Measurement / Action	Negative Lead
C4238-16	Ω	C2431A-7
C4238-15	Ω	C2431A-20

#### Are the resistances less than 3 ohms?

Yes CONNECT all disconnected connectors. GO to F	P5
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**No** REPAIR the circuit in question.

## P5 CHECK FOR CORRECT HIGH VOLTAGE BATTERY OPERATION

- Ignition OFF.
- Disconnect and inspect the high voltage battery 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 high voltage battery 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 High Voltage Battery.

REFER to: High Voltage Battery - Electric

No

VERIFY BCM (body control module) fuse 31 (10A) is OK. If OK, REPAIR the circuit. If not OK, REFER to the Wiring Diagrams manual to identify the possible causes of the circuit short.

#### Q2 CHECK THE CMR (CAMERA MODULE - REAR) GROUND CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead	
C2826A-12	Ω	Ground	

#### Is the resistance less than 3 ohms?

Yes GO to Q3

**No** REPAIR the circuit.

# Q3 CHECK THE FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) CIRCUITS BETWEEN THE CMR (CAMERA MODULE - REAR) AND THE GWM (GATEWAY MODULE A) FOR AN OPEN

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

Positive Lead	Measurement / Action	Negative Lead
C2826A-3	Ω	C2431A-4
C2826A-4	Ω	C2431A-17