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2017 FORD Figo OEM Service and Repair Workshop Manual

Go to manual page

- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2431A-9	₩	Ground
C2431A-22	₩	Ground

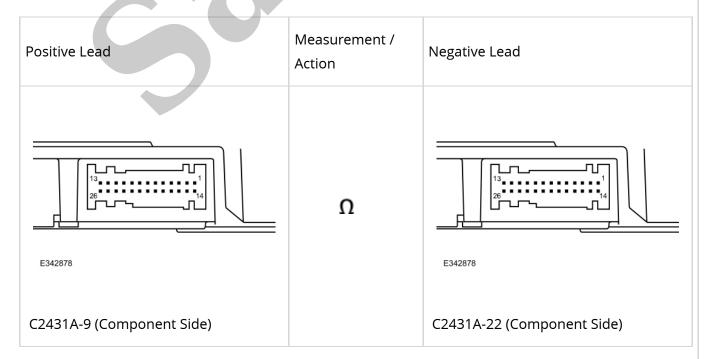
#### Are the voltages greater than 6 volts?

**Yes** REPAIR the circuit in question.

No GO to E5

### E5 CHECK THE GWM (GATEWAY MODULE A) HS-CAN3 (HIGH-SPEED CONTROLLER AREA NETWORK 3) TERMINATION RESISTOR (COMPONENT SIDE)

• Measure:



## E7 CHECK THE HS-CAN3 (HIGH-SPEED CONTROLLER AREA NETWORK 3) (+) AND HS-CAN3 (HIGH-SPEED CONTROLLER AREA NETWORK 3) (-) CIRCUITS FOR A SHORT TOGETHER WITH THE MODULES DISCONNECTED

#### • Measure:

Positive Lead	Measurement / Action	Negative Lead
C2431A-9	Ω	C2431A-22

- Disconnect modules one at a time until the resistance is greater than 3 ohms.
  - ACM (audio front control module) C240A
  - APIM (SYNC module) C2383A
  - DSP (audio digital signal processing module) C3154A (mid-level) or C3155A (high-level) (if equipped)
  - IPC (instrument panel cluster) C220A
  - TRM (trailer module) / TBM (trailer brake control module) C2498C (if equipped)
  - WACM (wireless accessory charging module) C390 (if equipped)

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

CONNECT all disconnected connectors.

Yes

For the ACM (audio front control module), GO to E18 For the APIM (SYNC module), GO to E19 For the DSP (audio digital signal processing module), GO to E20 For the IPC (instrument panel cluster), GO to E22 For the TRM (trailer module) / TBM (trailer brake control module), GO to E23 For the WACM (wireless accessory charging module), GO to E24

**No** REPAIR the circuits in question. CONNECT all modules.

#### **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: IPC (instrument panel cluster) C220A.
- Using a diagnostic scan tool, carry out the network test.

Do all other HS-CAN3 (high-speed controller area network 3) modules pass the network test?

Yes	CONNECT the module.	GO to Pinpoint Test AB
162	CONNECT the module.	do to Piripoliti Test Ab

**No** CONNECT the module. GO to E10

#### E10 CHECK FOR RESTORED COMMUNICATION WITH THE APIM (SYNC 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: BCM (body control module) 3-blade fuse 15 (15A).
- Using a diagnostic scan tool, carry out the network test.

Do all other HS-CAN3 (high-speed controller area network 3) modules pass the network test?

Yes	INSTALL the removed fuse.	GO to Pinpoint Test M
		·

**No** INSTALL the removed fuse. GO to E11

### E11 CHECK FOR RESTORED COMMUNICATION WITH THE ACM (AUDIO FRONT CONTROL MODULE) DISABLED

#### NOTE

No

INSTALL the removed fuse. GO to E14

#### E14 VERIFY VEHICLE EQUIPMENT - TRM (TRAILER MODULE) / TBM (TRAILER BRAKE CONTROL MODULE)

• Inspect the vehicle for a TRM (trailer module) / TBM (trailer brake control module) .

Is the vehicle equipped with a TRM (trailer module) / TBM (trailer brake control module)?

Yes	GO to	E15

### E15 CHECK FOR RESTORED NETWORK COMMUNICATION WITH THE TRM (TRAILER MODULE) / TBM (TRAILER BRAKE 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)] fuses 42 (30A), 91 (20A) and 107 (30A).
- Using a diagnostic scan tool, carry out the network test.

Do all other HS-CAN3 (high-speed controller area network 3) modules pass the network test?

Yes	INSTALL the removed fuses.	GO to Pinpoint Test AU
		•

**No** INSTALL the removed fuses. GO to E16

#### E16 VERIFY VEHICLE EQUIPMENT - WACM (WIRELESS ACCESSORY CHARGING MODULE)

• Inspect the vehicle for a WACM (wireless accessory charging module) .

Is the vehicle equipped with a WACM (wireless accessory charging module)?

- Reconnect the ACM (audio front 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?

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.

#### **E19 CHECK THE APIM (SYNC MODULE) FOR CORRECT 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 FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new APIM (SYNC module).

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

- 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?

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).

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

Yes

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

(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).

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.

#### **E22 CHECK THE IPC (INSTRUMENT PANEL CLUSTER) FOR CORRECT OPERATION**

- Ignition OFF.
- Disconnect and inspect the IPC (instrument panel cluster) 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

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.

#### **E24 CHECK THE WACM (WIRELESS ACCESSORY CHARGING MODULE) FOR CORRECT OPERATION**

- Ignition OFF.
- Disconnect and inspect the WACM (wireless accessory charging 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 WACM (wireless accessory charging 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?

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 WACM (wireless accessory charging module).

Yes

REFER to: Wireless Accessory Charging Module (WACM) - Vehicles With: 15.5 Inch Center Display Screen

(414-06 Accessory Charging, 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 F: NO HS-CAN4 (HIGH-SPEED CONTROLLER AREA NETWORK 4) COMMUNICATION, ALL MODULES ARE NOT RESPONDING

NOTE

No GO to F2

### F2 CHECK THE HS-CAN4 (HIGH-SPEED CONTROLLER AREA NETWORK 4) ( TCU (TELEMATIC CONTROL UNIT MODULE) ) TERMINATION RESISTANCE

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

Positive Lead	Measurement / Action	Negative Lead
C2431A-10	Ω	C2431A-23

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

Yes GO to F3

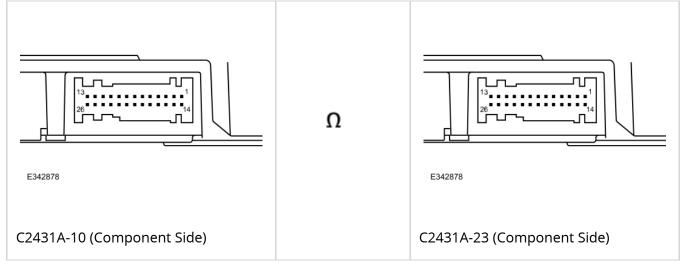
No

If the resistance is greater than 132 ohms, GO to F6 If the resistance is less than 108 ohms, GO to F7

### F3 CHECK THE HS-CAN4 (HIGH-SPEED CONTROLLER AREA NETWORK 4) (+) AND HS-CAN4 (HIGH-SPEED CONTROLLER AREA NETWORK 4) (-) CIRCUITS FOR A SHORT TO GROUND

- Connect negative battery cable.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2431A-10	Ω	Ground
C2431A-23	Ω	Ground



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

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).

### F6 CHECK THE HS-CAN4 (HIGH-SPEED CONTROLLER AREA NETWORK 4) CIRCUITS BETWEEN THE TCU (TELEMATIC CONTROL UNIT MODULE) AND THE GWM (GATEWAY MODULE A) FOR AN OPEN

- Disconnect: TCU (telematic control unit module) C4803A.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4803A-10	Ω	C2431A-10