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2018 FORD GT OEM Service and Repair Workshop Manual

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Refer to Wiring Diagrams Cell 145 for schematic and connector information.

Normal Operation and Fault Conditions The IPMA (image processing module A) communicates on the FD-CAN (Flexible Data Rate Controller Area Network). 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
- IPMA (image processing module A)

Visual Inspection and Pre-checks

- Verify BCM (body control module) fuse 37 (20A) is OK.

Z1 CHECK THE IPMA (IMAGE PROCESSING MODULE A) VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

- Ignition OFF.
- Disconnect: IPMA (image processing module A) C242A.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C242A-1		Ground

Is the voltage greater than 11 volts?

Yes GO to [Z2](#)

No VERIFY BCM (body control module) fuse 37 (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.

Z2 CHECK THE IPMA (IMAGE PROCESSING MODULE A) GROUND CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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- 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.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	<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 IPMA (image processing module A) .</p> <p>REFER to: Image Processing Module A (IPMA) (419-07 Lane Keeping System, Removal and Installation).</p>
No	<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 AA : THE OCS (OCCUPANT CLASSIFICATION SYSTEM) MODULE DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL

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

Refer to Wiring Diagrams Cell 46for schematic and connector information.

Normal Operation and Fault Conditions The OCS (occupant classification system) module communicates on the HS-CAN2 (high-speed controller area network 2) . 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

- Wiring, terminals and connectors
- BCM (body control module)
- OCS (occupant classification system) module

AA1 CHECK FOR BCM (BODY CONTROL MODULE) NETWORK CONNECTION

- Ignition ON.

Yes	GO to AA4
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No	REPAIR the circuit in question.
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AA4 CHECK THE OCS (OCCUPANT CLASSIFICATION SYSTEM) MODULE GROUND CIRCUIT FOR AN OPEN

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C3285-4	Ω	Ground

Is the resistance less than 3 ohms?

Yes	GO to AA5
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No	REPAIR the circuit.
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AA5 CHECK THE HS-CAN2 (HIGH-SPEED CONTROLLER AREA NETWORK 2) CIRCUITS BETWEEN THE OCS (OCCUPANT CLASSIFICATION SYSTEM) MODULE AND THE GWM (GATEWAY MODULE A) FOR AN OPEN

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

Positive Lead	Measurement / Action	Negative Lead
C3285-2	Ω	C2431A-8

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 AB : THE PACM (PEDESTRIAN ALERT CONTROL MODULE) DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL

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

Refer to Wiring Diagrams Cell 66 for schematic and connector information.

Normal Operation and Fault Conditions The PACM (pedestrian alert control module) communicates on the HS-CAN1 (high-speed controller area network 1) . 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
- PACM (pedestrian alert control module)

Visual Inspection and Pre-checks

- Verify BCMC (body control module C) [BJB (battery junction box)] fuse 170 (10A) is OK.

AB1 CHECK THE PACM (PEDESTRIAN ALERT CONTROL MODULE) VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

- Ignition OFF.
- Disconnect: PACM (pedestrian alert control module) C2828.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2828-6		Ground

Is the voltage greater than 11 volts?

Yes

GO to [AB2](#)

Are the resistances less than 3 ohms?

Yes	CONNECT all disconnected connectors. GO to AB4
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No	REPAIR the circuit in question.
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AB4 CHECK FOR CORRECT PACM (PEDESTRIAN ALERT CONTROL MODULE) OPERATION

- Disconnect and inspect the PACM (pedestrian alert 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 PACM (pedestrian alert 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	<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 PACM (pedestrian alert control module) .</p> <p>REFER to: Pedestrian Alert Control Module (PACM) (413-22 Pedestrian Alert System, Removal and Installation).</p>
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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.
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PINPOINT TEST AC : THE PCM (POWERTRAIN CONTROL MODULE) DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL

Refer to Wiring Diagrams Cell 14 for schematic and connector information.
Refer to Wiring Diagrams Cell 22 for schematic and connector information.

Yes	GO to AC3
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No	<p>Refer to section 303-14 Electronic Engine Control D&T pinpoint test QA: UNABLE TO ACTIVATE SELF-TEST/NETWORK COMMUNICATION ERROR. If equipped with 2.7L EcoBoost, REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - 2.7L EcoBoost (238kW/324PS), Diagnosis and Testing).</p> <p>If equipped with 3.3L Duratec-V6, REFER to: Electronic Engine Controls (303-14B Electronic Engine Controls - 3.3L Duratec-V6, Diagnosis and Testing).</p> <p>If equipped with 3.5L EcoBoost, REFER to: Electronic Engine Controls (303-14C Electronic Engine Controls - 3.5L EcoBoost (BM), Diagnosis and Testing).</p> <p>If equipped with 3.5L V6 PowerBoost, REFER to: Electronic Engine Controls (303-14E Electronic Engine Controls - 3.5L V6 PowerBoost (CN), Diagnosis and Testing).</p> <p>If equipped with 5.0L 32V Ti-VCT, REFER to: Electronic Engine Controls (303-14D Electronic Engine Controls - 5.0L 32V Ti-VCT, Diagnosis and Testing).</p> <p>If equipped with 3.0L Power Stroke Diesel,</p>
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AC3 CHECK THE FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) CIRCUITS BETWEEN THE PCM (POWERTRAIN CONTROL MODULE) AND THE GWM (GATEWAY MODULE A) FOR AN OPEN

- Disconnect: GWM (gateway module A) C2431A.
- Disconnect PCM (powertrain control module) C1232B (2.7L EcoBoost), C1233B (3.0L Diesel), C1551B (3.3L Duratec), C175B (3.5L EcoBoost/PowerBoost) or C1381B (5.0L 32V Ti-VCT) .
- Measure:

2.7L EcoBoost

Positive Lead	Measurement / Action	Negative Lead
C1232B-48	Ω	C2431A-4
C1232B-33	Ω	C2431A-17

3.0L Diesel

C1381B-33	Ω	C2431A-17
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Are the resistances less than 3 ohms?

Yes	CONNECT all disconnected connectors. GO to AC4
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No	REPAIR the circuit in question.
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AC4 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all the PCM (powertrain control module) 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 PCM (powertrain control module) 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	<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,</p>  <p>Guided Routine available in the on-line Workshop Manual.</p>
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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.
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- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C652A-2	Ω	Ground

Is the resistance less than 3 ohms?

Yes	GO to AD3
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No	REPAIR the circuit.
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AD3 CHECK THE MS-CAN (MEDIUM SPEED-CONTROLLER AREA NETWORK) 1 CIRCUITS BETWEEN THE PDM (PASSENGER DOOR MODULE) AND THE GWM (GATEWAY MODULE A) FOR AN OPEN

(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 AE : THE PSCM (POWER STEERING CONTROL MODULE) DOES NOT RESPOND TO THE DIAGNOSTIC SCAN TOOL

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

Refer to Wiring Diagrams Cell 43 for schematic and connector information.

Normal Operation and Fault Conditions The PSCM (power steering control module) communicates on the FD-CAN (Flexible Data Rate Controller Area Network) . 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 connectors
- PSCM (power steering control module)

Visual Inspection and Pre-checks

- Verify BCMC (body control module C) [BJB (battery junction box)] fuse 22 (10A), 204 (50A) and 213 (50A) are OK.

AE1 CHECK THE FD-CAN (FLEXIBLE DATA RATE CONTROLLER AREA NETWORK) 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-4	Ω	C2431A-17