Parking Aid

DTC Chart: Parking Aid Module (PAM)

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.
REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

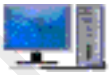
PAM DTC Chart

DTC	Description	Action
B129C:12	Left Front Side Sensor: Shorted to Battery	REFER to: Parking Aid (413-13C Parking Aid - Vehicles With: Active Park Assist, Diagnosis and Testing).
B129C:14	Left Front Side Sensor: Circuit Short To Ground or Open	REFER to: Parking Aid (413-13C Parking Aid - Vehicles With: Active Park Assist, Diagnosis and Testing).
B129C:96	Left Front Side Sensor: Component Internal Failure	REFER to: Parking Aid (413-13C Parking Aid - Vehicles With: Active Park Assist, Diagnosis and Testing).
B129D:12	Right Front Side Sensor: Circuit Short To Battery	REFER to: Parking Aid (413-13C Parking Aid - Vehicles With: Active Park Assist, Diagnosis and Testing).

B129D:14	Right Front Side Sensor: Circuit Short To Ground or Open	REFER to: Parking Aid (413-13C Parking Aid - Vehicles With: Active Park Assist, Diagnosis and Testing).
B129D:96	Right Front Side Sensor: Component Internal Failure	REFER to: Parking Aid (413-13C Parking Aid - Vehicles With: Active Park Assist, Diagnosis and Testing).
B129E:11	Enable/Disable Switch: Semi-automatic Advanced Parallel Park Circuit Short To Ground	REFER to: Parking Aid (413-13C Parking Aid - Vehicles With: Active Park Assist, Diagnosis and Testing).
B1B44:12	Right Rear Outer Sensor: Circuit Short To Battery	GO to Pinpoint Test D
B1B44:14	Right Rear Outer Sensor: Circuit Short To Ground or Open	GO to Pinpoint Test C
B1B44:96	Right Rear Outer Sensor: Component Internal Failure	GO to Pinpoint Test E
B1B46:12	Right Rear Inner Sensor: Circuit Short To Battery	GO to Pinpoint Test D
B1B46:14	Right Rear Inner Sensor: Circuit Short To Ground or Open	GO to Pinpoint Test C
B1B46:96	Right Rear Inner Sensor: Component Internal Failure	GO to Pinpoint Test E
B1B48:12	Left Rear Outer Sensor: Circuit Short To Battery	GO to Pinpoint Test D
B1B48:14	Left Rear Outer Sensor: Circuit Short To Ground or Open	GO to Pinpoint Test C
B1B48:96	Left Rear Outer Sensor: Component Internal Failure	GO to Pinpoint Test E
B1B50:12	Left Rear Inner Sensor: Circuit Short To Battery	GO to Pinpoint Test D
B1B50:14	Left Rear Inner Sensor: Circuit Short To Ground or Open	GO to Pinpoint Test C

B1B50:96	Left Rear Inner Sensor: Component Internal Failure	GO to Pinpoint Test E
B1B58:11	Rear Sensors Power Circuit: Circuit Short To Ground	GO to Pinpoint Test B
U0100:00	Lost Communication With ECM/ PCM "A": No Sub Type Information	GO to Pinpoint Test F
U0101:00	Lost Communication with TCM: No Sub Type Information	GO to Pinpoint Test G
U0121:00	Lost Communication With ABS Control Module: No Sub Type Information	GO to Pinpoint Test H
U0131:00	Lost Communication With PSCM: No Sub Type Information	GO to Pinpoint Test I
U0140 :00	Lost Communication With BCM: No Sub Type Information	GO to Pinpoint Test J
U0146:00	Lost Communication With GWM: No Sub Type Information	GO to Pinpoint Test K
U0155:00	Lost Communication With IPC Control Module: No Sub Type Information	GO to Pinpoint Test L
U0212:00	Lost Communication WithSCCM: No Sub Type Information	GO to Pinpoint Test M
U0253:00	Lost Communication With APIM: No Sub Type Information	GO to Pinpoint Test N
U0256:00	Lost Communication With FCIM "A": No Sub Type Information	GO to Pinpoint Test O
U0257:00	Lost Communication With FCDIM: No Sub-Type Information	GO to Pinpoint Test P
U0401:00	Invalid Data Received From ECM/ PCM A: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the PCM with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.
U0402:00	Invalid Data Received From TCM: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the TCM with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.

U0415:00	Invalid Data Received From ABS Control Module: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the ABS module with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.
U0420:00	Invalid Data Received From PSCM: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the PSCM with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.
U0422:00	Invalid Data Received From BCM: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the BCM with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.
U0423:00	Invalid Data Received from IPC Control Module: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the IPC with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.
U0429:00	Invalid Data Received From SCCM: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the SCCM with a faulted signal data input. RETRIEVE and REPAIR all non-network DTC in other modules on the network.
U0554:00	Invalid Data Received From APIM: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the APIM with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.
U0557:00	Invalid Data Received From FCIM"A": No Sub Type Information	This DTC sets when the PAM receives invalid network data from the FCIM with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.

U0558:00	Invalid Data Received From FCDIM: No Sub Type Information	This DTC sets when the PAM receives invalid network data from the FCDIM with a faulted signal data input. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.
U2024:41	Control Module Cal-Config Data: General Checksum Failure	CLEAR the DTCs and REPEAT the PAM self-test. If DTC U2024:41 is retrieved again, PROGRAM the Parking Aid Module (PAM) REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation). REPEAT the self-test. If DTC U2024:41 is retrieved again,  Click here to access Guided Routine (BCM)..
U2100:00	Initial Configuration Not Complete: No Sub Type Information	CHECK the vehicle service history for recent service actions related to this module. This DTC sets due to incomplete or incorrect PMI procedures. If there have been recent service actions with this module, REPEAT the PMI procedure. REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation). If there have been no recent service actions,  Click here to access Guided Routine (BCM)..
U2101:00	Control Module Configuration Incompatible: No Sub Type Information	CHECK the vehicle service history for recent service actions related to this module. This DTC sets due to incomplete or incorrect PMI procedures. If there have been recent service actions with this module, REPEAT the PMI procedure. REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation).

U3000:45	Control Module: Program Memory Failure	This DTC sets when the PAM receives a Program Memory Failure signal from the ECU. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.
U3000:46	Control Module: Calibration / Parameter Memory Failure	This DTC sets when the PAM receives a Calibration / Parameter Memory Failure signal from the ECU. RETRIEVE and REPAIR all non-network DTCs in other modules on the network.

Symptom Chart(s)

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.
REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

Symptom Chart: Parking Aid - Audible

Condition	Possible Sources	Actions
A module does not communicate with the diagnostic scan tool	• Fuse • Wiring, terminals or connectors • PAM	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
The audible parking aid is inoperative	• Refer to the Pinpoint Test	GO to Pinpoint Test A
Continuous or intermittent tone when no obstacles or fault codes are present	• Dirty or iced over parking aid sensor(s)	CLEAN the rear bumper and sensors with high-pressure water.
	• Ice between parking aid sensor (s) and bezel(s)	ALLOW time for the ice between the parking aid sensor (s) and bezel(s) to melt.

	• Parking aid sensor(s) locked into the rear bumper incorrectly	INSTALL the parking aid sensor (s) into the parking aid sensor bezel(s) correctly.
	• Parking aid sensor(s) are not aligned correctly	CARRY OUT the elevation system check. REFER to: Elevation System Check (413-13A Parking Aid - Vehicles With: Rear Parking Aid, General Procedures).
	• Parking aid sensor(s) isolator ring missing, damaged or misaligned	INSTALL a new parking aid sensor. REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).
The parking aid audio tones are inoperative	• Refer to the Pinpoint Test	GO to Pinpoint Test A
The parking aid menu is not available in the message center and cannot be deactivated	• A MyKey® restricted key is in use	Normal operation.

Pinpoint Test(s)

The Audible Parking Aid Is Inoperative

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

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

Normal Operation and Fault Conditions

REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

NOTE: *If a MyKey restricted key is in use, the parking aid menu is not available in the message center*

and cannot be deactivated.

NOTE: *Before disconnecting the PAM or any of the parking aid sensors, verify the connectors are properly seated and latched.*

Possible Sources

- Parking aid system disabled
- Communication concern
- PAM (integral to the BCM)
- IPC concern
- TR input concern

PINPOINT TEST A : THE AUDIBLE PARKING AID IS INOPERATIVE

A1 PERFORM A NETWORK TEST

- Ignition ON.
- Using a diagnostic scan tool, perform a network test.

Do all modules pass the network test?

Yes	GO to A2
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

A2 CHECK THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE PAM (PARKING ASSIST CONTROL MODULE) SELF-TEST

- Using the diagnostic scan tool, perform the PAM self-test.

Are any PAM DTCs recorded?

Yes	REFER to the PAM DTC Chart in this section.
No	GO to A3

A3 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

- Using the diagnostic scan tool, perform the IPC self-test.

Are any IPC DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).
No	GO to A4

A4 VERIFY THE PARKING AID IS ENABLED

- Verify the parking aid system is enabled in the IPC message center.

Is the parking aid system enabled?

Yes	GO to A5
No	ENABLE the parking aid system.

A5 CHECK FOR CORRECT GEAR INPUT

- Apply the parking brake.
- Ignition ON.
- While monitoring the IPC PRNDL display, briefly select each gear in the entire gear range.

Does the IPC PRNDL indicator match the gear selection throughout the entire range?

Yes	GO to A6
No	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).

A6 CHECK THE AUDIO CHIMES

- Ignition OFF.
- Open the driver door.
- Place the headlamp switch in the ON position.

Does the warning chime operate through the audio system?

Yes	GO to A7
No	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).

A7 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no Technical Service Bulletins (TSBs) TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

B1B58:11

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

Normal Operation and Fault Conditions

The PAM supplies voltage to the rear parking aid sensors via a common circuit.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1B58:11	Rear Sensors Power Circuit: Circuit Short To Ground	A continuous and on-demand DTC that sets when the rear sensor voltage supply circuit is shorted to ground or to the signal return circuit.

Possible Sources

- Wiring, terminals or connectors
- Rear parking aid sensor
- PAM (integral to the BCM)

NOTE: *Before disconnecting the PAM or any of the parking aid sensors, verify the connectors are properly seated and latched.*

PINPOINT TEST B : B1B58:11

B1 CHECK THE BUMPER WIRING HARNESS

- Ignition OFF.
- Inspect the bumper wiring harness for opens, shorts, grounds, or corrosion.

Is the bumper wiring harness OK?

Yes	GO to B2
No	REPAIR or INSTALL a new bumper wiring harness.

B2 CHECK THE LH (LEFT-HAND) REAR OUTER PARKING AID SENSOR FOR AN INTERNAL SHORT

- Disconnect:LHR Outer Parking Aid Sensor C4009.
- Ignition ON.
- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes) and repeat the PAM self-test.

Is DTC B1B58:11 still present?

Yes	GO to B3
No	INSTALL a new LH rear outer parking aid sensor. REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).

B3 CHECK THE LH (LEFT-HAND) REAR INNER PARKING AID SENSOR FOR AN INTERNAL SHORT

- Ignition OFF.
- Disconnect: LH Rear Inner Parking Aid Sensor C4010.
- Ignition ON.
- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes) and repeat the PAM self-test.

Is DTC B1B58:11 still present?

Yes	GO to B4
No	INSTALL a new LH rear inner parking aid sensor. REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).

B4 CHECK THE RH (RIGHT-HAND) REAR INNER PARKING AID SENSOR FOR AN INTERNAL SHORT

- Ignition OFF.
- Disconnect: RH Rear Inner Parking Aid Sensor C4012.
- Ignition ON.
- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes) and repeat the PAM self-test.

Is DTC B1B58:11 still present?

Yes	GO to B5
No	INSTALL a new RH rear inner parking aid sensor. REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).

B5 CHECK THE RH (RIGHT-HAND) REAR OUTER PARKING AID SENSOR FOR AN INTERNAL SHORT

- Ignition OFF.
- Disconnect: RH Rear Outer Parking Aid Sensor C4011.
- Ignition ON.
- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes) and repeat the PAM self-test.

Is DTC B1B58:11 still present?

Yes	GO to B6
No	INSTALL a new RH rear outer parking aid sensor. REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).

B6 CHECK THE PARKING AID SENSOR VOLTAGE SUPPLY CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: BCM C2280D.

Is the resistance greater than 10,000 ohms?

Yes	GO to B7
No	REPAIR the circuit.

B7 CHECK THE PARKING AID SENSOR VOLTAGE SUPPLY CIRCUIT AND GROUND CIRCUIT FOR A SHORT TOGETHER

Is the resistance greater than 10,000 ohms?

Yes	GO to B8
No	REPAIR the circuits.

B8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

B1B44:14, B1B46:14, B1B48:14, B1B50:14

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

Normal Operation and Fault Conditions

REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1B44:14	Right Rear Outer Sensor: Circuit Short To Ground Or Open	A continuous and on-demand DTC that sets when any of the right rear outer parking aid sensor circuits are open or the sensor signal line is shorted to ground.
B1B46:14	Right Rear Inner Sensor: Circuit Short To Ground Or Open	A continuous and on-demand DTC that sets when any of the right rear inner parking aid sensor circuits are open or the sensor signal line is shorted to ground.

B1B48:14	Left Rear Outer Sensor: Circuit Short To Ground Or Open	A continuous and on-demand DTC that sets when any of the left rear outer parking aid sensor circuits are open or the sensor signal line is shorted to ground.
B1B50:14	Left Rear Inner Sensor: Circuit Short To Ground Or Open	A continuous and on-demand DTC that sets when any of the left rear inner parking aid sensor circuits are open or the sensor signal line is shorted to ground.

Possible Sources

- Wiring, terminals or connectors
- Rear parking aid sensor
- PAM (integral to the BCM)

NOTE: *Before disconnecting the PAM or any of the parking aid sensors, verify the connectors are properly seated and latched.*

PINPOINT TEST C : B1B44:14, B1B46:14, B1B48:14, B1B50:14

C1 RETRIEVE THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE PAM (PARKING ASSIST CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the PAM self-test.
- Check the PAM DTCs (diagnostic trouble codes).

Are multiple rear parking aid sensor DTCs (diagnostic trouble codes) recorded?

Yes	GO to C2
No	For DTC B1B44:14, B1B46:14, B1B48:14 or B1B50:14, GO to C3 For all other DTCs (diagnostic trouble codes), REFER to the PAM DTC Chart in this section.

C2 CHECK THE REAR BUMPER WIRING HARNESS

- Ignition OFF.
- Inspect the rear bumper wiring harness for opens, shorts, grounds, or corrosion.

Is the rear bumper wiring harness OK?

Yes	GO to C3
No	REPAIR or INSTALL a new rear bumper wiring harness.

C3 CHECK THE REAR PARKING AID SENSOR CIRCUITRY FOR OPENS

- Disconnect: suspect parking aid sensor.
- Disconnect: BCM C2280D.

Are the resistances of the suspect sensor circuits less than 3 ohms?

Yes	GO to C4
No	REPAIR the circuit in question.

C4 CHECK THE REAR PARKING AID SENSOR CIRCUITRY FOR SHORTS TO GROUND

Is the resistance greater than 10,000 ohms for the sensor circuit in question?

Yes	If all of the parking aid sensors recorded DTCs, GO to C5 If one or more (but not all) parking aid sensor(s) recorded DTCs, INSTALL a new sensor(s) for the one(s) in question. REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).
No	REPAIR the circuit in question.

C5 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

B1B44:12, B1B46:12, B1B48:12, B1B50:12

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

Normal Operation and Fault Conditions

REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1B44:12	Right Rear Outer Sensor: Circuit Short To Battery	A continuous and on-demand DTC that sets when the right rear outer parking aid sensor signal circuit is shorted to battery voltage.
B1B46:12	Right Rear Inner Sensor: Circuit Short To Battery	A continuous and on-demand DTC that sets when the right rear inner parking aid sensor signal circuit is shorted to battery voltage.
B1B48:12	Left Rear Outer Sensor: Circuit Short To Battery	A continuous and on-demand DTC that sets when the left rear outer parking aid sensor signal circuit is shorted to battery voltage.
B1B50:12	Left Rear Inner Sensor: Circuit Short To Battery	A continuous and on-demand DTC that sets when the left rear inner parking aid sensor signal circuit is shorted to battery voltage.

Possible Sources

- Wiring, terminals or connectors
- Rear parking aid sensor
- PAM (integral to the BCM)

NOTE: *Before disconnecting the PAM or any of the parking aid sensors, verify the connectors are properly seated and latched.*

PINPOINT TEST D : B1B44:12, B1B46:12, B1B48:12, B1B50:12

D1 RETRIEVE THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE PAM (PARKING ASSIST CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the PAM self-test.
- Check the PAM DTCs (diagnostic trouble fcodes) from the self-test.

Are multiple rear parking aid sensor DTCs (diagnostic trouble codes) recorded?

Yes	GO to D2
No	For DTCs (diagnostic trouble codes) B1B44:12, B1B46:12, B1B48:12 or B1B50:12, GO to D3 For all other DTCs (diagnostic trouble codes), REFER to the PAM DTC Chart in this section.

D2 CHECK THE REAR BUMPER WIRING HARNESS

- Ignition OFF.
- Inspect the rear bumper wiring harness for opens, shorts, grounds, or corrosion.

Is the rear bumper wiring harness OK?

Yes	GO to D3
No	REPAIR or INSTALL a new rear bumper wiring harness.

D3 CHECK THE REAR PARKING AID SENSOR CIRCUITRY FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: Suspect Parking Aid Sensor(s).
- Disconnect BCM C2280D.
- Ignition ON.

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to D4

D4 CHECK THE REAR PARKING AID SENSOR CIRCUITRY FOR A SHORT TOGETHER

- Ignition OFF.

Is the resistance greater than 10,000 ohms?

Yes	If all the sensors set a DTC, GO to D5 If one or more (but not all) parking aid sensor(s) recorded aDTC, INSTALL a new sensor(s) for the one in question. REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).
No	REPAIR the circuits in question.

D5 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,  Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

B1B44:96, B1B46:96, B1B48:96, B1B50:96

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

Normal Operation and Fault Conditions

REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
B1B44:96	Right Rear Outer Sensor: Component Internal Failure	A continuous and on-demand DTC that sets when the RHR outer parking aid sensor has internally failed or has an incorrect attenuation time.
B1B46:96	Right Rear Inner Sensor: Component Internal Failure	A continuous and on-demand DTC that sets when the RHR inner parking aid sensor has internally failed or has an incorrect attenuation time.
B1B48:96	Left Rear Outer Sensor: Component Internal Failure	A continuous and on-demand DTC that sets when the LHR outer parking aid sensor has internally failed or has an incorrect attenuation time.
B1B50:96	Left Rear Inner Sensor: Component Internal Failure	A continuous and on-demand DTC that sets when the LHRinner parking aid sensor has internally failed or has an incorrect attenuation time.

Possible Sources

- Wiring, terminals or connectors
- Rear parking aid sensor
- PAM (integral to the BCM)

NOTE: *Before disconnecting the PAM or any of the parking aid sensors, verify the connectors are properly seated and latched.*

PINPOINT TEST E : B1B44:96, B1B46:96, B1B48:96, B1B50:96

E1 CHECK THE DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE PAM (PARKING ASSIST CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the PAM self-test.
- Check the PAM DTCs (diagnostic trouble codes) from the self-test.

Are parking aid DTCs (diagnostic trouble codes) other than B1B44:96, B1B46:96, B1B48:96 or B1B50:96 recorded?

Yes	For all other DTCs (diagnostic trouble codes) REFER to the PAM DTC Chart in this section.
No	GO to E2

E2 CHECK THE PARKING AID SENSOR DISTANCE PARAMETER IDENTIFICATIONS (PIDS) WITH NO OBJECTS BEHIND THE VEHICLE

NOTE: *Make sure the area around the vehicle is clear of anything that can activate the parking aid system.*

- Clean the rear bumper and sensors with high-pressure water.
- Make sure the suspect parking aid sensor(s) is flush-mounted in the bezel.
- Ignition ON.
- Using a diagnostic scan tool, monitor the PAM parking aid sensor distance PID(LRI_DIST, LRO_DIST, RRI_DIST, RRO_DIST). The PID reads 2,540 mm (100 in) on a correctly functioning sensor.

Does the PID read 2,540 mm (100 in)?

Yes	GO to E3
No	GO to E4

E3 CHECK THE PARKING AID SENSOR DISTANCE PARAMETER IDENTIFICATIONS (PIDS) WITH A TEST OBJECT BEHIND THE VEHICLE

NOTE: *Make sure the area around the vehicle is clear of anything that can activate the parking aid system.*

- Using a diagnostic scan tool, monitor the PAM parking aid sensor distance PID (LRI_DIST, LRO_DIST, RRI_DIST, RRO_DIST).
- While monitoring the PID move a test object into and out of the detection zone behind each sensor. For an example of a test object,
  REFER to: Azimuth System Check (413-13A Parking Aid - Vehicles With: Rear Parking Aid, General Procedures).

Does the PID approximately match the distance from the test object to the rear bumper of the vehicle?

Yes	GO to E5
No	GO to E4

E4 CHECK THE PARKING AID SENSORS

- Ignition OFF.
- Install a known good sensor for the suspect parking aid sensor.
  REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).
- Ignition ON.
- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes) and repeat the PAM self-test.
- Check the PAM DTCs (diagnostic trouble codes).

Is the concern still present?

Yes	GO to E5

No	INSTALL a new rear parking aid sensor. REFER to: Rear Parking Aid Sensor (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Removal and Installation).

E5 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSB. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,  Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0100:00

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

Normal Operation and Fault Conditions

The PAM communicates with the PCM on the High Speed Controller Area Network 1 (HS1-CAN). REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0100:00	Lost Communication With ECM/ PCM "A": No Sub Type Information	Sets in continuous memory in the PAM if messages received from the PCM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- PAM (integral to the BCM)
- PCM

PINPOINT TEST F : U0100:00

F1 VERIFY THAT A VEHICLE SESSION CAN BE ESTABLISHED USING THE DIAGNOSTIC SCAN TOOL

- Ignition ON.
- Verify that a vehicle session can be established using a diagnostic scan tool.

Can a vehicle session be established?

Yes	GO to F2
No	REFER to: No Communication Between the Integrated Diagnostic System (IDS) and the Vehicle (418-00 Module Communications Network, General Procedures).

F2 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Ignition ON.
- Using a diagnostic scan tool, clear the PAM DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0100:00 still present?

Yes	GO to F3PCM
No	Clear the DTC. The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

F3 RETRIEVE THE RECORDED DTCS (DIAGNOSTIC TROUBLE CODES) FROM THE PCM (POWERTRAIN CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the PCM self-test.

Are any DTCs (diagnostic trouble codes) (recorded?

Yes	Refer to the appropriate section in Group 303 for the procedure.
No	GO to F4

F4 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0100:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0100:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs.
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0100:00 or DTC U0100:87 set in other modules?

Yes	GO to F5
No	GO to F6

F5 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PCM 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 PCM 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 for any applicable TSB. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern, INSTALL a new PCM. Refer to the appropriate section in Group 303 for the procedure.
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

F6 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSB. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0101:00

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

Normal Operation and Fault Conditions

The PAM communicates with the PCM on the HS-CAN1.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0101:00	Lost Communication with TCM: No Sub Type Information	Sets in continuous memory in the PAM if messages received from the PCM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- TCM (integral to the PCM)
- PAM (integral to the BCM)

PINPOINT TEST G : U0101:00

G1 VERIFY THE CUSTOMER CONCERN
• Ignition ON. • Verify there is an observable symptom present. **Is an observable symptom present?**

Yes	GO to G2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

G2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the PCM pass the network test?

Yes	GO to G3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

G3 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0101:00 still present?

Yes	GO to G4
No	Clear the DTC. The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

G4 RETRIEVE THE RECORDED DTCS (DIAGNOSTIC TROUBLE CODES) FROM THE PCM (POWERTRAIN CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the PCM self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	Refer to the appropriate section in Group 303 for the procedure.
No	GO to G5

G5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0101:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0101:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0101:00 or DTC U 101:87 set in other modules?

Yes	GO to G6
No	GO to G7

G6 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PCM 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 PCM and related in-line connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

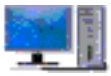
Is the concern still present?

Yes	CHECK OASIS for any applicable TSB. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern, INSTALL a new PCM. Refer to the appropriate section in Group 303 for the procedure.
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

G7 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0121:00

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

Normal Operation and Fault Conditions

The PAM communicates with the ABS module through GWM.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0121:00	Lost Communication With ABS Control Module: No Sub Type Information	Sets in continuous memory in the PAM if messages received from the ABS module through GWM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- ABS module
- GWM concern

- PAM (integral to the BCM)

PINPOINT TEST H : U0121:00

H1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to H2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

H2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the ABS module pass the network test?

Yes	GO to H3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

H3 PERFORM THE ABS (ANTI-LOCK BRAKE SYSTEM) MODULE SELF-TEST

- Using a diagnostic scan tool, perform the ABS module self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Anti-Lock Brake System (ABS) and Stability Control (206-09 Anti-Lock Brake System (ABS) and Stability Control, Diagnosis and Testing).
No	GO to H4

H4 CHECK GWM (GATEWAY MODULE A) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, check GWM CMDTCs (continuous memory diagnostic trouble codes).

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to H5

H5 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0121 still present?

Yes	GO to H6

No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

H6 CHECK FORDTC (DIAGNOSTIC TROUBLE CODE) U0121:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0121:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0121:00 or DTC U0121:87 set in other modules?

Yes	GO to H7
No	GO to H8

H7 CHECK FOR CORRECT ABS (ANTI-LOCK BRAKE SYSTEM) MODULE OPERATION

- Ignition OFF.
- Disconnect and inspect all ABS module 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 ABS module 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 for any applicable TSB. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern, INSTALL a new ABS module. REFER to: Anti-Lock Brake System (ABS) Module (206-09 Anti-Lock Brake System (ABS) and Stability Control, Removal and Installation).
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

H8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSBaddresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0131:00

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

Normal Operation and Fault Conditions

The PAM communicates with the PSCM through GWM.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0131:00	Lost Communication with PSCM: No Sub Type Information	Sets in continuous memory in the PAM if messages received from the PSCM through the GWM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- PSCM
- GWM concern
- PAM (integral to the BCM)

PINPOINT TEST I : U0131:00

I1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to I2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

I2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Do the PSCM and GWM pass the network test?

Yes	GO to I3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

I3 PERFORM THE PSCM (POWER STEERING CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the PSCM self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Power Steering (211-02 Power Steering, Diagnosis and Testing).
No	GO to I4

I4 CHECK GWM (GATEWAY MODULE A) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, check GWM CMDTCs (continuous memory diagnostic trouble codes).

Are any DTCs (diagnostic trouble codes)recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to I5

I5 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0131:00 still present?

Yes	GO to I6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

I6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0131:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0131:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0131:00 or DTC U0131:87 set in other modules?

Yes	GO to I7
No	GO to I8

I7 CHECK FOR CORRECT PSCM (POWER STEERING CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PSCM 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 and related in-line connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

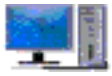
Is the concern still present?

Yes	CHECK OASIS for any applicable TSBs. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern, REFER to the EPAS symptom chart.   Click here to access Guided Routine (EPAS).
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

I8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0140:00

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

Normal Operation and Fault Conditions

The PAM communicates with the BCM through the High Speed Controller Area Network 1 (HS1-CAN).
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0140:00	Lost Communication With BCM: No Sub Type Information	A continuous DTC that sets when the PAM is unable to communicate with the BCM for 5 seconds or more.

Possible Sources

- Communication concern
- BCM
- PAM (integral to the BCM)

PINPOINT TEST J : U0140:00

J1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to J2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

J2 CHECK THE COMMUNICATION NETWORK

- Ignition ON.
- Using a diagnostic scan tool, perform the network test.

Does the BCM pass the network test?

Yes	GO to J3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

J3 PERFORM THE BCM (BODY CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the BCM self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Diagnosis and Testing).
No	GO to J4

J4 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test the system for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0140:00 still present?

Yes	GO to J5
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

J5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0140:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0140:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve CMDTCs (continuous memory diagnostic trouble codes) from all modules.

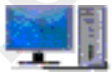
Is DTC U0140:00 or DTC U0140:87 set in other modules?

Yes	GO to J6
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

J6 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0146:00

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

Normal Operation and Fault Conditions

The PAM communicates with GWM through the HS-CAN1.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTCFault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0146:00	Lost Communication With GWM: No Sub Type Information	Sets in continuous memory in the PAM if messages received from GWM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- GWM
- PAM (integral to the BCM)

PINPOINT TEST K : U0146:00

K1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to K2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

K2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the GWM pass the network test?

Yes	GO to K3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

K3 CHECK THE GWM (GATEWAY MODULE A) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, check GWM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0146:00 or DTC U0146:87 set in other modules?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to K4

K4 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES).

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0146:00 still present?

Yes	GO to K5

No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

K5 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0146:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0146:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0146:00 or DTC U0146:87 set in other modules?

Yes	GO to K6
No	GO to K7

K6 CHECK FOR CORRECT GWM (GATEWAY MODULE A) OPERATION

- Ignition OFF.
- Disconnect and inspect all GWM 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 GWM 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 for any applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern, INSTALL a new GWM. REFER to: Gateway Module A (GWM) (418-00 Module Communications Network, Removal and Installation).
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

K7 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0155:00

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

Normal Operation and Fault Conditions

The PAM communicates with the IPC through GWM.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0155:00	Lost Communication With IPC Control Module: No Sub Type Information	Sets in continuous memory in the PAM if messages received from the IPC through GWM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- GWM
- IPC
- PAM (integral to the BCM)

PINPOINT TEST L : U0155:00

L1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to L2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

L2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the IPC pass the network test?

Yes	GO to L3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

L3 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

- Using a diagnostic scan tool, perform the IPC self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).
No	GO to L4

L4 CHECK GWM (GATEWAY MODULE A) CMDTCS (CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, check GWM CMDTCs (continuous memory diagnostic trouble codes).

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to L5

L5 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0155:00 still present?

Yes	GO to L6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

L6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0155:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0155:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes) .
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0155:00 or DTC U0155:87 set in other modules?

Yes	GO to L7
No	GO to L8

L7 CHECK FOR CORRECT IPC (INSTRUMENT PANEL CLUSTER) OPERATION

- Ignition OFF.
- Disconnect and inspect the IPC 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 IPC 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 for any applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (IPC).

No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

L8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0212:00

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

Normal Operation and Fault Conditions

The PAM communicates with the SCCM through the GWM.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0212:00	Lost Communication With SCCM: No Sub Type Information	Sets in continuous memory in the PAM if messages received from the SCCM through the GWM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- GWM
- SCCM
- PAM (integral to the BCM)

PINPOINT TEST M : U0212:00

M1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to M2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

M2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the SCCM pass the network test?

Yes	GO to M3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

M3 PERFORM THE SCCM (STEERING COLUMN CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the SCCM self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Steering Wheel and Column Electrical Components (211-05 Steering Wheel and Column Electrical Components, Diagnosis and Testing).
No	GO to M4

M4 CHECK GWM (GATEWAY MODULE A) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, check the GWM DTCs (diagnostic trouble codes)

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to M5

M5 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0212:00 still present?

Yes	GO to M6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

M6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0212:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0212:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0212:00 or DTC U0212:87 set in other modules?

Yes	GO to M7
No	GO to M8

M7 CHECK FOR CORRECT SCCM (STEERING COLUMN CONTROL MODULE) OPERATION

- Ignition OFF
- Disconnect and the SCCM 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 and the SCCM and related in-line connectors. Make sure they seat and latch correctly.

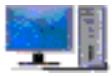
Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern, INSTALL a new SCCM. REFER to: Steering Column Control Module (SCCM) (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

M8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0253:00

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

Normal Operation and Fault Conditions

The PAM communicates with the APIM through the GWM.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0253:00	Lost Communication With the APIM: No Sub Type Information	Sets in continuous memory in the PAM if messages received from the APIM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- GWM concern
- APIM

- PAM (integral to the BCM)

PINPOINT TEST N : U0253:00

N1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to N2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

N2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the APIM pass the network test?

Yes	GO to N3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

N3 PERFORM THE APIM (SYNC MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the APIM self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Information and Entertainment System (415-00B Information and Entertainment System - General Information - Vehicles With: SYNC Without Touchscreen, Diagnosis and Testing).
No	GO to N4

N4 CHECK THE GWM (GATEWAY MODULE A) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, check the GWM CMDTCs (continuous memory diagnostic trouble codes).

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to N5

N5 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0253:00 still present?

Yes	GO to N6

No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

N6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0253:00 OR DTC (DIAGNOSTIC TROUBLE CODE) U0253:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0253:00 or DTC U0253:87 set in other modules?

Yes	GO to N7
No	GO to N8

N7 CHECK FOR CORRECT APIM (SYNC MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the APIM 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 APIM and related in-line connectors. Make sure it seats and latches correctly.
- Wait at least 2 minutes for the APIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no Technical Service Bulletins (TSBs) address this concern install a new APIM. REFER to: SYNC Module [APIM] (415-00B Information and Entertainment System - General Information - Vehicles With: SYNC Without Touchscreen, 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.

N8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0256:00,

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

Normal Operation and Fault Conditions

The PAM communicates with the FCIM through the GWM.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0256:00	Lost Communication With The FCIM: No Sub Type Information	Sets in continuous memory in the PAM if messages received from the FCIM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- GWM concern
- FCIM
- PAM (integral to the BCM)

PINPOINT TEST O : U0256:00

O1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to O2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

O2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Do the FCIM pass the network test?

Yes	GO to O3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

O3 PERFORM THE FCIM (FRONT CONTROLS INTERFACE MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the FCIM self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	Refer to the appropriate section in Group 415 for the procedure.
No	GO to O4

O4 CHECK THE GWM (GATEWAY MODULE A) CMDTCS (CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, check the GWM CMDTCs (continuous memory diagnostic trouble codes).

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to O5

O5 RECHECK THE PAM (PARKING ASSIST CONTROL MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the PAM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0256:00 still present?

Yes	GO to O6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

O6 CHECK FOR DTCS (DIAGNOSTIC TROUBLE CODES) U0256:00 OR U0256:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0256:00 or U0256:87 set in other modules?

Yes	GO to O7
No	GO to O8

O7 CHECK FOR CORRECT FCIM (FRONT CONTROLS INTERFACE MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the FCIM and any 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 FCIM and any in-line connectors. Make sure they seat and latch correctly.
- Wait at least 2 minutes for the FCIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern, Replace the FCIM. REFER to: Front Controls Interface Module (FCIM) (415-00A Information and Entertainment System - General Information - Vehicles Without: SYNC, Removal and Installation). (415-00A Information and Entertainment System - General Information - Vehicles With: AM/FM/CD/SYNC/Touchscreen Display, Removal and Installation).REFER to: Front Controls Interface Module (FCIM) (415-00B Information and Entertainment System - General Information - Vehicles With: SYNC Without Touchscreen, Removal and Installation). (415-00B Information and Entertainment System - General Information - Vehicles With: THX AM/FM/CD/SYNC/Touchscreen Display, 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.

O8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..

No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.

U0257:00,

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

Normal Operation and Fault Conditions

The PAM communicates with the FCDIM through the GWM.
REFER to: Parking Aid - System Operation and Component Description (413-13A Parking Aid - Vehicles With: Rear Parking Aid, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Conditions
U0257:00	Lost Communication With The FCDIM: No Sub Type Information	Sets in continuous memory in the PAM if messages received from the FCDIM are missing for 5 seconds or more.

Possible Sources

- Communication concern
- GWM concern
- FCDIM
- PAM (integral to the BCM)

PINPOINT TEST P : U0257:00

P1 VERIFY THE CUSTOMER CONCERN

- Ignition ON.
- Verify there is an observable symptom present.

Is an observable symptom present?

Yes	GO to P2
No	Clear the DTC. The system is operating normally at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

P2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, perform the network test.

Does the FCDIM pass the network test?

Yes	GO to P3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

P3 PERFORM THE FCDIM (FRONT CONTROL/DISPLAY INTERFACE MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the FCDIM self-test.

Are any DTCs (diagnostic trouble codes) recorded?

Yes	Refer to the appropriate section in Group 415 for the procedure.
No	GO to P4

P4 CHECK THE GWM (GATEWAY MODULE A) CMDTCS (CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, check the GWM CMDTCs (continuous memory diagnostic trouble codes).

Are any DTCs (diagnostic trouble codes) recorded?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to P5

P5 RECHECK THE FCDIM (FRONT CONTROL/DISPLAY INTERFACE MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

- Using a diagnostic scan tool, clear the DTCs (diagnostic trouble codes).
- Operate the system and test for normal operation.
- Check the FCDIM CMDTCs (continuous memory diagnostic trouble codes).

Is DTC U0257:00 still present?

Yes	GO to P6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or an intermittent fault condition.

P6 CHECK FOR DTCS (DIAGNOSTIC TROUBLE CODES) U0257:00 OR U0257:87 SET IN OTHER MODULES

- Using a diagnostic scan tool, clear all DTCs (diagnostic trouble codes).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, retrieve the CMDTCs (continuous memory diagnostic trouble codes) from all modules.

Is DTC U0257:00 or U0257:87 set in other modules?

Yes	GO to P7
No	GO to P8

P7 CHECK FOR CORRECT FCDIM (FRONT CONTROL/DISPLAY INTERFACE MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the FCDIM 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 FCDIM and related in-line connectors. Make sure they seat and latch correctly.
- Wait at least 2 minutes for the FCDIM to re-initialize.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new FCDIM. REFER to: Front Control/Display Interface Module (FCDIM) (415-00B Information and Entertainment System - General Information - Vehicles With: SYNC Without Touchscreen, 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.

P8 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all BCM 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 BCM 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 for any applicable TSBs (technical service bulletins). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no TSB addresses this concern,   Click here to access Guided Routine (BCM)..
No	The system is operating correctly at this time. Concern may have been caused by a loose or corroded connector. ADDRESS the root cause of any connector or pin issues.