Blind Spot Information System

Diagnostic Trouble Code (DTC) Chart

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).

Diagnostic Trouble Code Chart

Module	DTC	Description	Action **New:** *hover over Pinpoint Test links to show title*
DDM	B118C:11	Left Blind Spot Warning Indicator: Circuit Short To Ground	GO to Pinpoint Test D
DDM	B118C:15	Left Blind Spot Warning Indicator: Circuit Short To Battery Or Open	GO to Pinpoint Test C
DDM	B118C:15	Left Blind Spot Warning Indicator: Circuit Short To Battery Or Open	GO to Pinpoint Test D
PDM	B118D:11	Right Blind Spot Warning Indicator: Circuit Short To Ground	GO to Pinpoint Test D
PDM	B118D:15	Right Blind Spot Warning Indicator: Circuit Short To Battery Or Open	GO to Pinpoint Test C
PDM	B118D:15	Right Blind Spot Warning Indicator: Circuit Short To Battery Or Open	GO to Pinpoint Test D
SODL or SODR	U0100:00	Lost Communication With ECM/PCM "A": No Sub Type Information	GO to Pinpoint Test L
SODL or SODR	U0101:00	Lost Communication with TCM: No Sub Type Information	GO to Pinpoint Test L
SODL or SODR	U0146:00	Lost Communication With Serial Data Gateway "A": No Sub Type Information	GO to Pinpoint Test M
SODL	U0199:00	Lost Communication With "Door Control Module A": No Sub Type Information	GO to Pinpoint Test N
SODL or SODR	U0401:86	Invalid Data Received from ECM/PCM A: Signal Invalid	GO to Pinpoint Test P
SODL or SODR	U0402:86	Invalid Data Received from TCM: Signal Invalid	GO to Pinpoint Test Q
SODL	U049A:86	Invalid Data Received From "Door Control Module A": Signal Invalid	GO to Pinpoint Test R
SODR	U0501:86	Invalid Data Received From "Door Control Module B": Signal Invalid	GO to Pinpoint Test S
SODL or SODR	U2100:00	Initial Configuration Not Complete: No Sub Type Information	GO to Pinpoint Test T
SODL or SODR	U2300:55	Central Configuration: Not Configured	GO to Pinpoint Test U
SODL or SODR	U3000:44	Control Module: Data Memory Failure	GO to Pinpoint Test V
SODL or SODR	U3000:45	Control Module: Program Memory Failure	GO to Pinpoint Test V
SODL or SODR	U3000:46	Control Module: Calibration/Parameter Memory Failure	GO to Pinpoint Test V
SODL or SODR	U3000:49	Control Module: Internal Electronic Failure	GO to Pinpoint Test V

Module	DTC	Description	Action **New:** *hover over Pinpoint Test links to show title*
SODL or SODR	U3002:62	Vehicle Identification Number: Signal Compare Failure	GO to Pinpoint Test W
SODR	U0200:00	Lost Communication With "Door Control Module B": No Sub Type Information	GO to Pinpoint Test O

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 - BLISÂ®

Condition	Possible Sources	Action New: *hover over Pinpoint Test links to show title*
A module does not respond to the diagnostic scan tool	• Fuse • Communication concern • Wiring, terminals or connectors • Module	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
The BLISÂ® is inoperative or does not function correctly	Refer to the Pinpoint Test	GO to Pinpoint Test A
The BLISÂ® has poor or inconsistent performance	Refer to the Pinpoint Test	GO to Pinpoint Test A
The BLISÂ® message center warnings are not displayed and the exterior mirror BLISÂ®/ CTA LED does not illuminate	Refer to the Pinpoint Test	GO to Pinpoint Test A
An exterior mirror BLISÂ®/ CTA LED is always on	Refer to the Pinpoint Test	GO to Pinpoint Test C
An exterior mirror BLISÂ®/ CTA LED does not illuminate	Refer to the Pinpoint Test	GO to Pinpoint Test D
The IPC message center displays a blocked sensor message	Refer to the Pinpoint Test	GO to Pinpoint Test E
The BLISÂ® cannot be turned off in the message center	Refer to the Pinpoint Test	GO to Pinpoint Test F

Symptom Chart - CTA

Condition	Possible Sources	Action New: *hover over Pinpoint Test links to show title*

A module does not respond to the diagnostic scan tool	• Fuse • Communication concern • Wiring, terminals or connectors • Module	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
The CTA system is inoperative or does not function correctly	Refer to the Pinpoint Test	GO to Pinpoint Test B
The CTA system has poor or inconsistent performance	Refer to the Pinpoint Test	GO to Pinpoint Test B
The CTA system message center warnings are not displayed and the exterior mirror BLISÂ®/ CTA LED does not illuminate	Refer to the Pinpoint Test	GO to Pinpoint Test B
An exterior mirror BLISÂ®/ CTA LED does not illuminate when the audio tone sounds for the CTA system	Refer to the Pinpoint Test	GO to Pinpoint Test B
An exterior mirror BLISÂ®/ CTA LED is always on	Refer to the Pinpoint Test	GO to Pinpoint Test C
An exterior mirror BLISÂ®/ CTA LED does not illuminate	Refer to the Pinpoint Test	GO to Pinpoint Test D
The IPC message center displays a blocked sensor message	Refer to the Pinpoint Test	GO to Pinpoint Test E
The CTA system cannot be turned off in the message center	Refer to the Pinpoint Test	GO to Pinpoint Test F

Symptom Chart - BLISÂ® with Trailer Tow (BTT)

Condition	Possible Sources	Action New: *hover over Pinpoint Test links to show title*
A module does not respond to the diagnostic scan tool	• Fuse • Communication concern • Wiring, terminals or connectors • Module	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
The BLISÂ® With Trailer Tow system is inoperative (when a trailer is connected BLISÂ® and CTA automatically shut off)	Refer to the Pinpoint Test	GO to Pinpoint Test G
The BLISÂ® With Trailer Tow receives late alerts. (no alerting alongside trailer, only when target is alongside vehicle)	Refer to the Pinpoint Test	GO to Pinpoint Test H
The BLISÂ® With Trailer Tow receives early alerts. (alerting when target is far behind the BLISÂ® With Trailer Tow blind spot zone)	Refer to the Pinpoint Test	GO to Pinpoint Test I
The BLISÂ® With Trailer Tow system receives false alerts.	Refer to the Pinpoint Test	GO to Pinpoint Test J
The BLISÂ® With Trailer Tow is missing target vehicles.	Refer to the Pinpoint Test	GO to Pinpoint Test K

Pinpoint Tests

PINPOINT TEST A : THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® IS INOPERATIVE OR DOES NOT FUNCTION CORRECTLY

Refer to Wiring Diagrams Cell 146 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- Communication network concern
- Obstruction or damage to the rear lamp assemblies or surrounding body panels
- Configuration concern
- Trailer isn't identified in the message center
- SODL
- SODR
- IPC concern
- PCM concern
- GWM concern
- DDM concern
- PDM concern
- TRM concern

Visual Inspection and Pre-checks

- Verify a trailer is not electrically connected to the vehicle.
- For vehicles with BLIS with Trailer Tow verify a trailer is set up in the message center.
- Check for damage to the rear lamp assemblies and surrounding body panels.

A1 VERIFY THE LH (LEFT-HAND) AND RH (RIGHT-HAND) EXTERIOR MIRROR BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) OPERATION

- Ignition OFF.
- Observe the LH and RH exterior mirror BLISÂ®/ CTA Light Emitting Diodes (LEDs).
- Start the engine.

Do the LH and RH exterior mirror BLISÂ®/ CTA Light Emitting Diodes (LEDs) illuminate and turn off after approximately 3 seconds?

Yes	GO to A2
No	If either LED is inoperative, GO to Pinpoint Test D If either LED is always on, GO to Pinpoint Test C

A2 VERIFY THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® OPERATION

- Verify the operation of the BLISÂ®.

Does the BLISÂ® operate correctly?

Yes	The concern may have been caused by an intermittent condition such as poor weather conditions or the customer's perception of proper BLISÂ® operation. REVIEW the normal system operation with the customer. REFER to the Owner's Literature.
No	For vehicles without BLIS with Trailer Tow, GO to A4 For vehicles with BLIS with Trailer Tow, GO to A3

A3 VERIFY THAT A TRAILER IS SET UP IN THE MESSAGE CENTER

- Ignition ON.
- Using the Message Center check to see if there is a trailer configured.

Is there a trailer configured in the Message Center?

Yes	GO to A4
No	The concern is caused by the trailer not being set up in the message center.

A4 CHECK FOR SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) OBSTRUCTIONS

- Ignition OFF.
- Inspect the rear lamp assemblies for a build-up of dirt, debris or any obstruction.

Are any obstructions present?

Yes	CLEAN and REMOVE all obstructions from the rear lamp assemblies.
No	GO to A5

A5 INSPECT THE REAR LAMP ASSEMBLIES AND SURROUNDING BODY PANELS FOR DAMAGE

- Perform a visual inspection of the rear lamp assemblies and surrounding body panels.

Is any damage present?

Yes	REPAIR or INSTALL new parts as necessary. REFER to: Rear Lamp Assembly (417-01 Exterior Lighting, Removal and Installation). REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, Removal and Installation).
No	GO to A6

A6 VERIFY THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) PASS THE NETWORK TEST

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

Do the SODL and SODR pass the network test?

Yes	GO to A7
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

A7 CHECK THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from the SODL and SODR.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the SODL and SODR DTC chart in this section.
No	GO to A8

A8 VERIFY THE MESSAGE CENTER FUNCTIONALITY

- Verify the message center functions correctly.

Does the message center function correctly?

Yes	GO to A9
No	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).

A9 VERIFY THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® IS ENABLED IN THE MESSAGE CENTER

- **NOTE:** *Verify a MyKeyÂ® is NOT in use.*

  Navigate to the BLISÂ® menu in the message center and verify the BLISÂ® is ON.

Is the BLISÂ® ON?

Yes	GO to A10
No	ACTIVATE the BLISÂ®. If the system cannot be activated, GO to A11

A10 CHECK FOR CORRECT GEAR INPUT

- Apply the parking brake.
- While monitoring the reversing lamps, move the selector lever through the entire range.

Do the reversing lamps illuminate only in reverse?

Yes	GO to A11
No	REFER to: Reversing Lamps (417-01 Exterior Lighting, Diagnosis and Testing).

A11 PERFORM THE PCM (POWERTRAIN CONTROL MODULE) KOEO (KEY ON, ENGINE OFF) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	Refer to the appropriate section in Group 303 for the procedure.
No	GO to A12

A12 PERFORM THE DDM (DRIVER DOOR MODULE) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	For DTC B118C:11 or DTC B118C:15, REFER to the DDM DTC chart in this section. For all other Diagnostic Trouble Codes (DTCs), REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).
No	GO to A13

A13 PERFORM THE PDM (PASSENGER DOOR MODULE) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	For DTC B118D:11 or DTC B118D:15, REFER to the PDM DTC chart in this section. For all other Diagnostic Trouble Codes (DTCs), REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).
No	GO to A14

A14 PERFORM THE TRM (TRAILER MODULE) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to: Trailer Lamps (417-01 Exterior Lighting, Diagnosis and Testing).
No	GO to A15

A15 CHECK THE GWM (GATEWAY MODULE A) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, check the GWM Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to A16

A16 VERIFY THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) CONFIGURATION

- Check the vehicle service history for recent service action related to the SODL and SODR.

Have there been any recent service actions related to the SODL or SODR?

Yes	INSTALL As-Built data into the SODL **and** SODR from Professional Technician Society (PTS) following diagnostic scan tool instructions under Module Programming>As-Built.
No	For a SODL concern, GO to A17 For a SODR concern, GO to A18

A17 CHECK FOR CORRECT SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) OPERATION

- Ignition OFF.
- Disconnect and inspect the SODL connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the SODL connector and related in-line connectors. Make sure the connectors 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, INSTALL a new SODL. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, 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.

A18 CHECK FOR CORRECT SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) OPERATION

- Ignition OFF.
- Disconnect and inspect the SODR connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the SODR connector and related in-line connectors. Make sure the connectors 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, INSTALL a new SODR. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, 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.

PINPOINT TEST B : THE CTA (CROSS TRAFFIC ALERT) SYSTEM IS INOPERATIVE OR DOES NOT FUNCTION CORRECTLY

Refer to Wiring Diagrams Cell 146 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- Communication network concern
- Obstruction or damage to the rear lamp assemblies or surrounding body panels
- Configuration concern
- SODL
- SODR
- IPC concern
- PCM concern
- GWM concern
- PAM concern (internal to the BCM)
- TRM concern
- DDM concern
- PDM concern

Visual Inspection and Pre-checks

- Verify a trailer is not electrically connected to the vehicle.
- Check for damage to the rear lamp assemblies and surrounding body panels.

B1 VERIFY THE LH (LEFT-HAND) AND RH (RIGHT-HAND) EXTERIOR MIRROR BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) OPERATION

- Ignition OFF.
- Observe the LH and RH exterior mirror BLISÂ®/ CTA Light Emitting Diodes (LEDs).
- Start the engine.

Do the LH and RH exterior mirror BLISÂ®/ CTA Light Emitting Diodes (LEDs) illuminate and turn off after approximately 3 seconds?

Yes	GO to B2
No	If either LED is inoperative, GO to Pinpoint Test D If either LED is always on, GO to Pinpoint Test C

B2 VERIFY THE CTA (CROSS TRAFFIC ALERT) SYSTEM OPERATION

- Verify the operation of the CTA system.

Does the CTA operate correctly?

Yes	The concern may have been caused by an intermittent condition such as poor weather conditions or the customer's perception of proper CTA system operation. REVIEW proper system operation with the customer. REFER to the Owner's Literature.
No	GO to B3

B3 CHECK FOR SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) OBSTRUCTIONS

- Ignition OFF.
- Inspect the rear lamp assemblies for a build-up of dirt, debris or any obstruction.

Are any obstructions present?

Yes	CLEAN and REMOVE all obstructions from the rear lamp assemblies.
No	GO to B4

B4 INSPECT THE REAR LAMP ASSEMBLIES AND SURROUNDING BODY PANELS FOR DAMAGE

- Perform a visual inspection of the rear lamp assemblies and surrounding body panels.

Is any damage present?

Yes	REPAIR or INSTALL new parts as necessary. REFER to: Rear Lamp Assembly (417-01 Exterior Lighting, Removal and Installation). REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, Removal and Installation).
No	GO to B5

B5 VERIFY THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) PASS THE NETWORK TEST

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

Do the SODL and SODR pass the network test?

Yes	GO to B6
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

B6 CHECK THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, retrieve all Diagnostic Trouble Codes (DTCs) from the SODL and SODR.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the SODL and SODR DTC chart in this section.
No	GO to B7

B7 VERIFY THE MESSAGE CENTER FUNCTIONALITY

- Verify the message center functions correctly.

Does the message center function correctly?

Yes	GO to B8
No	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).

B8 VERIFY THE CTA (CROSS TRAFFIC ALERT) IS ENABLED IN THE MESSAGE CENTER

- **NOTE:** *Verify a MyKeyÂ® is NOT in use.*

  Navigate to the CTA menu in the message center and verify the CTA system is ON.

Is the CTA system ON?

Yes	GO to B9
No	ACTIVATE the CTA system. If the system cannot be activated, GO to B10

B9 CHECK FOR CORRECT GEAR INPUT

- Apply the parking brake.
- While monitoring the reversing lamps, move the selector lever through the entire gear range.

Do the reversing lamps illuminate only in reverse?

Yes	GO to B10
No	REFER to: Reversing Lamps (417-01 Exterior Lighting, Diagnosis and Testing).

B10 PERFORM THE PCM (POWERTRAIN CONTROL MODULE) KOEO (KEY ON, ENGINE OFF) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	Refer to the appropriate section in Group 303 for the procedure.
No	GO to B11

B11 PERFORM THE DDM (DRIVER DOOR MODULE) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	For DTC B118C:11 or DTC B118C:15, REFER to the DDM DTC chart in this section. For all other Diagnostic Trouble Codes (DTCs), REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).
No	GO to B12

B12 PERFORM THE PDM (PASSENGER DOOR MODULE) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	For DTC B118D:11 or DTC B118D:15, REFER to the PDM DTC chart in this section. For all other Diagnostic Trouble Codes (DTCs), REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).
No	GO to B13

B13 PERFORM THE TRM (TRAILER MODULE) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to: Trailer Lamps (417-01 Exterior Lighting, Diagnosis and Testing).
No	GO to B14

B14 PERFORM THE PAM (PARKING ASSIST CONTROL MODULE) SELF-TEST

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

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to: Parking Aid (413-13A Parking Aid, Diagnosis and Testing).
No	GO to B15

B15 CHECK THE GWM (GATEWAY MODULE A) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Using a diagnostic scan tool, check the GWM Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
No	GO to B16

B16 VERIFY THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) CONFIGURATION

- Check the vehicle service history for recent service action related to the SODL and SODR.

Have there been any recent service actions related to the SODL or SODR?

Yes	INSTALL As-Built data into the SODL **and** SODR from Professional Technician Society (PTS) following diagnostic scan tool instructions under Module Programming>As-Built.
No	For a SODL concern, GO to B17 For a SODR concern, GO to B18

B17 CHECK FOR CORRECT SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) OPERATION

- Ignition OFF.
- Disconnect and inspect the SODL connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the SODL connector and related in-line connectors. Make sure the connectors 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, INSTALL a new SODL. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, 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.

B18 CHECK FOR CORRECT SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) OPERATION

- Ignition OFF.
- Disconnect and inspect the SODR connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the SODR connector and related in-line connectors. Make sure the connectors 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, INSTALL a new SODR. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, 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.

PINPOINT TEST C : AN EXTERIOR MIRROR BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) IS ALWAYS ON

Refer to Wiring Diagrams Cell 146 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
DDM B118C:15	Left Blind Spot Warning Indicator: Circuit Short To Battery Or Open	This DTC sets in continuous memory and on-demand in the DDM when a lower than expected current draw (such as a short to voltage) is detected on the LH exterior mirror BLISÂ®/ CTA LED output circuit.
PDM B118D:15	Right Blind Spot Warning Indicator: Circuit Short To Battery Or Open	This DTC sets in continuous memory and on-demand in the PDM when a lower than expected current draw (such as a short to voltage) is detected on the RH exterior mirror BLISÂ®/ CTA LED output circuit.

Possible Sources

- Wiring, terminals or connectors
- DDM
- PDM

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may cause damage to the connector. Use only Rotunda Flex Probes (NUD105-R025D)

C1 VERIFY THE EXTERIOR MIRROR BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) OPERATION

- Start the engine.
- Observe the exterior mirror BLISÂ®/ CTALight Emitting Diodes (LEDs) for 10 seconds.

Is the always on condition still present?

Yes	If the LH LED is always on, GO to C2 If the RH LED is always on, GO to C4
No	The system is operating correctly at this time. The concern may have been caused by an intermittent condition.

C2 CHECK THE LH (LEFT-HAND) EXTERIOR MIRROR BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) OUTPUT CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect DDM C510B .
- Ignition ON.

Does the BLISÂ®/ CTA LED turn off?

Yes	GO to C6
No	GO to C3

C3 CHECK FOR A SHORT BETWEEN THE LH (LEFT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) OUTPUT CIRCUIT AND THE MEMORY POSITION SENSOR SUPPLY CIRCUIT

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C501B-5	Ω	C501B-19

Is the resistance greater than 10,000 ohms?

Yes	GO to C6
No	REPAIR the circuits.

C4 CHECK THE RH (RIGHT-HAND) EXTERIOR MIRROR BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) OUTPUT CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect PDM C652B .
- Ignition ON.

Does the BLISÂ®/ CTA LED turn off?

Yes	GO to C7
No	GO to C5

C5 CHECK FOR A SHORT BETWEEN THE RH (RIGHT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) OUTPUT CIRCUIT AND THE MEMORY POSITION SENSOR SUPPLY CIRCUIT

- Ignition OFF.
- Measure:

Measure:	Measurement / Action	Negative Lead
C652B-5	Ω	C652B-19

Is the resistance greater than 10,000 ohms?

Yes	GO to C7
No	REPAIR the circuits.

C6 CHECK FOR CORRECT DDM (DRIVER DOOR MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the DDM connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the DDM connector and related in-line connectors. Make sure the connectors 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, INSTALL a new DDM. REFER to: Driver Door Module (DDM) (419-10 Multifunction Electronic Modules, 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.

C7 CHECK FOR CORRECT PDM (PASSENGER DOOR MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the PDM connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the PDM connector and related in-line connectors. Make sure the connectors 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, INSTALL a new PDM. REFER to: Passenger Door Module (PDM) (419-10 Multifunction Electronic Modules, 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.

PINPOINT TEST D : AN EXTERIOR MIRROR BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) IS INOPERATIVE

Refer to Wiring Diagrams Cell 146 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
DDM B118C:11	Left Blind Spot Warning Indicator: Circuit Short To Ground	This DTC sets in continuous memory and on-demand in the DDM when a higher than expected current draw is detected on the LH exterior mirror BLISÂ®/ CTA LED output circuit.
DDM B118C:15	Left Blind Spot Warning Indicator: Circuit Short To Battery Or Open	This DTC sets in continuous memory and on-demand in the DDM when an open circuit is detected on the LH exterior mirror BLISÂ®/ CTA LED output circuit.
PDM B118D:11	Right Blind Spot Warning Indicator: Circuit Short To Ground	This DTC sets in continuous memory and on-demand in the PDM when a higher than expected current draw is detected on the RH exterior mirror BLISÂ®/ CTA LED output circuit.
PDM B118D:15	Right Blind Spot Warning Indicator: Circuit Short To Battery Or Open	This DTC sets in continuous memory and on-demand in the PDM when an open circuit is detected on the RH exterior mirror BLISÂ®/ CTA LED output circuit.

Possible Sources

- Wiring, terminals or connectors
- Communication network concern
- Exterior mirror
- DDM
- PDM
- Exterior mirror BLISÂ®/ CTA LED (part of the exterior mirror glass)

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may cause damage to the connector. Use only Rotunda Flex Probes (NUD105-R025D)

D1 CHECK THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) OPERATION

- Start the engine.
- Observe the left and right exterior mirror BLISÂ®/ CTA Light Emitting Diodes (LEDs).

Do the left and right BLISÂ®/ CTA Light Emitting Diodes (LEDs) illuminate and turn off after 3 seconds?

Yes	The system is operating correctly at this time. The concern may have been caused by an intermittent fault condition. VERIFY the operation of the BLISÂ® and CTA system.
No	GO to D2

D2 PERFORM A NETWORK TEST

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

Do the DDM and PDM pass the network test?

Yes	GO to D3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

D3 CHECK FOR RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE DDM (DRIVER DOOR MODULE) OR PDM (PASSENGER DOOR MODULE) SELF-TEST

- Using a diagnostic scan tool, perform the DDM (LH LED concern) or PDM (RH LED concern) self-tests.

Is DDM DTC B118C:11 or PDM DTC B118D:11 present?

Yes	For DTC B118C:11, GO to D4 For DTC B118D:11, GO to D10
No	If the LH BLISÂ®/ CTA LED is inoperative, GO to D7 If the RH BLISÂ®/ CTA LED is inoperative, GO to D13

D4 CHECK THE DDM (DRIVER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS) WITH THE LH (LEFT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) DISCONNECTED

- Using the diagnostic scan tool, clear the DDM Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Disconnect: LH BLISÂ®/ CTA LED C576
- Ignition ON. **NOTE:** *DTC B118C:11 may be set during this step, it can be ignored.*
- Using the diagnostic scan tool, perform the DDM self-test.

Is DTC B118C:15 present?

Yes	INSTALL a new LH exterior mirror glass. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	GO to D5

D5 CHECK THE EXTERIOR MIRROR HARNESS FOR A SHORT TO GROUND

- Using the diagnostic scan tool, clear the DDM Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Disconnect: LH Exterior Mirror C521.
- Ignition ON. **NOTE:** *DTC B118C:11 may set during this step, it can be ignored.*
- Using the diagnostic scan tool, perform the DDM self-test.

Is DTC B118C:15 present?

Yes	REPAIR the exterior mirror jumper harness as necessary. If the harness cannot be repaired, INSTALL a new exterior mirror. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	GO to D6

D6 CHECK THE LH (LEFT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: DDM C501B.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C501B-19	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to D16
No	REPAIR the circuit.

D7 CHECK THE DDM (DRIVER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS) WITH THE LH (LEFT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) CIRCUITS JUMPED TOGETHER

- Ignition OFF.
- Disconnect: LH BLISÂ®/ CTA LED C576.
- Connect:

Positive Lead	Measurement / Action	Negative Lead
C576-1		C576-2

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

Is DTC B118C:11 present?

Yes	REMOVE the fused jumper wire. INSTALL a new LH exterior mirror glass. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	REMOVE the fused jumper wire. GO to D8

D8 CHECK THE DDM (DRIVER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS) WITH THE LH (LEFT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) CIRCUITS JUMPED TOGETHER AT THE LH (LEFT-HAND) EXTERIOR MIRROR

- Ignition OFF.
- Disconnect: LH Exterior Mirror C521.
- Connect

Positive Lead	Measurement / Action	Negative Lead
C521-13		C521-20

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

Is DTC B118C:11 present?

Yes	REPAIR the exterior mirror jumper harness as necessary. If the harness cannot be repaired, INSTALL a new exterior mirror. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	REMOVE the fused jumper wire. GO to D9

D9 CHECK THE LH (LEFT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) CIRCUITS FOR AN OPEN BETWEEN THE DDM (DRIVER DOOR MODULE) AND THE LH (LEFT-HAND) EXTERIOR MIRROR.

- Ignition OFF.
- Disconnect: DDM C501B.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C521-13	Ω	C501B-19
C521-20	Ω	C501B-15

Is the resistance less than 3 ohms?

Yes	GO to D16
No	REPAIR the affected circuit.

D10 CHECK THE PDM (PASSENGER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS) WITH THE RH (RIGHT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) DISCONNECTED

- Using the diagnostic scan tool, clear the PDM Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Disconnect: RH BLISÂ®/ CTA LED C676.
- Ignition ON. **NOTE:** *DTC B118D:11 may set during this step, it can be ignored.*
- Using the diagnostic scan tool, perform the PDM self-test.

Is DTC B118D:15 present?

Yes	INSTALL a new RH exterior mirror glass. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	GO to D11

D11 CHECK THE EXTERIOR MIRROR HARNESS FOR A SHORT TO GROUND

- Using the diagnostic scan tool, clear the PDM Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Disconnect: RH Exterior Mirror C622.
- Ignition ON. **NOTE:** *DTC B118D:11 may set during this step, it can be ignored.*
- Using the diagnostic scan tool, perform the PDM self-test.

Is DTC B118D:15 present?

Yes	REPAIR the exterior mirror jumper harness as necessary. If the harness cannot be repaired, INSTALL a new exterior mirror. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	GO to D12

D12 CHECK THE RH (RIGHT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: PDM C652B.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C652B-19	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to D17
No	REPAIR the circuit.

D13 CHECK THE PDM (PASSENGER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS) WITH THE RH (RIGHT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) CIRCUITS JUMPED TOGETHER

- Ignition OFF.
- Disconnect: RH BLISÂ®/ CTA LED C676.
- Connect:

Positive Lead	Measurement / Action	Negative Lead
C676-1		C676-2

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

Is DTC B118D:11 present?

Yes	REMOVE the fused jumper wire. INSTALL a new RH exterior mirror glass. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	REMOVE the fused jumper wire. GO to D14

D14 CHECK THE PDM (PASSENGER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS) WITH THE RH (RIGHT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) CIRCUITS JUMPED TOGETHER AT THE LH (LEFT-HAND) EXTERIOR MIRROR

- Ignition OFF.
- Disconnect: RH Exterior Mirror C622.
- Connect

Positive Lead	Measurement / Action	Negative Lead
C622-13		C622-20

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

Is DTC B118D:11 present?

Yes	REPAIR the exterior mirror jumper harness as necessary. If the harness cannot be repaired, INSTALL a new exterior mirror. REFER to: Exterior Mirror (501-09 Rear View Mirrors, Removal and Installation).
No	REMOVE the fused jumper wire. GO to D15

D15 CHECK THE RH (RIGHT-HAND) BLIS (BLIND SPOT INFORMATION SYSTEM) Â®/ CTA (CROSS TRAFFIC ALERT) LED (LIGHT EMITTING DIODE) CIRCUITS FOR AN OPEN BETWEEN THE PDM (PASSENGER DOOR MODULE) AND THE RH (RIGHT-HAND) EXTERIOR MIRROR.

- Ignition OFF.
- Disconnect: PDM C652B.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C622-13	Ω	C652B-19
C622-20	Ω	C652B-15

Is the resistance less than 3 ohms?

Yes	GO to D17
No	REPAIR the affected circuit.

D16 CHECK FOR CORRECT DDM (DRIVER DOOR MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all DDM connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the DDM connector and related in-line connectors. Make sure all connectors 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, INSTALL a new DDM . REFER to: Driver Door Module (DDM) (419-10 Multifunction Electronic Modules, 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.

D17 CHECK FOR CORRECT PDM (PASSENGER DOOR MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PDM connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the PDM connector and related in-line connectors. Make sure all connectors 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, INSTALL a new PDM. REFER to: Passenger Door Module (PDM) (419-10 Multifunction Electronic Modules, 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.

PINPOINT TEST E : THE IPC (INSTRUMENT PANEL CLUSTER) MESSAGE CENTER DISPLAYS A BLOCKED SENSOR MESSAGE

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- Build-up of dirt or debris on the rear lamp assemblies.
- Damage to the rear lamp assemblies.
- SODL
- SODR

E1 INSPECT THE REAR LAMP ASSEMBLIES FOR DEBRIS, MUD, SNOW OR ICE

- Inspect the rear lamp assemblies for any debris, mud, snow or ice that may be present.

Are the rear lamp assemblies covered with debris, mud, snow or ice?

Yes	CLEAN the rear lamp assemblies. Once the repair is complete, PERFORM one key cycle and DRIVE the vehicle. The SODL and SODR needs to detect 2 good targets while the vehicle is being driven to clear the blocked condition.
No	GO to E2

E2 INSPECT THE REAR LAMP ASSEMBLIES, SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) FOR DAMAGE

- Thoroughly inspect the rear lamp assemblies, SODL, SODR and the SODL and SODR cover for damage.

Is any damage present?

Yes	REPAIR or INSTALL new parts as necessary. REFER to: Rear Lamp Assembly (417-01 Exterior Lighting, Removal and Installation). REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, Removal and Installation).
No	For a SODL concern, GO to E3 For a SODR concern, GO to E4

E3 CHECK FOR CORRECT SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) OPERATION

- Ignition OFF.
- Disconnect and inspect all SODL connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the SODL connector and related in-line connectors. Make sure all connectors 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, INSTALL a new SODL. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, 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.

E4 CHECK FOR CORRECT SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) OPERATION

- Ignition OFF.
- Disconnect and inspect all SODR connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the SODR connector and related in-line connectors. Make sure all connectors 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, INSTALL a new SODR. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, 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.

PINPOINT TEST F : THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® AND CTA (CROSS TRAFFIC ALERT) SYSTEM CANNOT BE TURNED OFF IN THE MESSAGE CENTER

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- MyKeyÂ® in use
- Communication network concern
- Message center concern
- SODL concern
- SODR concern

Visual Inspection and Pre-checks

- Determine if a MyKeyÂ® restricted key is in use. If a restricted key is in use, the BLISÂ® or the CTA system cannot be turned off in the message center.
-

F1 VERIFY WHETHER A MYKEYÂ® RESTRICTED KEY IS IN USE

- Verify whether a MyKeyÂ® restricted key is in use.

Is a MyKeyÂ® restricted key in use?

Yes	The system is operating correctly at this time. INFORM the customer of normal operation. REFER to the Owner's Literature.
No	GO to F2

F2 PERFORM A NETWORK TEST

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

Do the IPC, SODL and SODR pass the network test?

Yes	GO to F3
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

F3 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) AND SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) SELF-TESTS

- Using a diagnostic scan tool, perform the SODL and SODR self-tests.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the DTC chart in this section.
No	GO to F4

F4 CHECK THE MESSAGE CENTER FOR CORRECT OPERATION

- Check the message center for correct operation while turning the BLISÂ® and CTA system on and off.

Does the message center function correctly?

Yes	The system is operating correctly at this time. The concern may have been caused by an intermittent fault condition.
No	REFER to: Instrumentation, Message Center and Warning Chimes (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).

PINPOINT TEST G : THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® WITH TRAILER TOW SYSTEM IS INOPERATIVE (WHEN A TRAILER IS CONNECTED BLIS (BLIND SPOT INFORMATION SYSTEM) Â® AND CTA (CROSS TRAFFIC ALERT) AUTOMATICALLY SHUT OFF)

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- The BLISÂ® and the BLISÂ® With Trailer Tow are disabled in the IPC
- There is no trailer stored in the cluster
- An incompatible BLISÂ® With Trailer Tow compatible trailer is selected
- Trailer connect diagnostics concern

G1 CHECK THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® WITH TRAILER TOW SYSTEM IS INOPERATIVE (WHEN A TRAILER IS CONNECTED BLIS (BLIND SPOT INFORMATION SYSTEM) Â® AND CTA (CROSS TRAFFIC ALERT) AUTOMATICALLY SHUT OFF)

- Verify the BLISÂ® with trailer tow system is inoperative.
- Possible cause:
  - The BLISÂ® and the BLISÂ® With Trailer Tow are disabled in the IPC
  - There is no trailer stored in the cluster
  - An incompatible BLISÂ® With Trailer Tow compatible trailer is selected
  - Trailer connect diagnostics concern
- Repair:
  - Enable the BLISÂ® and the BLISÂ® With Trailer Tow in the IPC.
  - Add a valid trailer that permits BLISÂ® With Trailer Tow.
  - REFER to the Owner's Literature for a list of BLISÂ® With Trailer Tow compatible trailers.
  - Perform the trailer connect diagnostics. REFER to the Owner's Literature.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REFER to the Owner's Literature.
No	The system is operating correctly at this time.

PINPOINT TEST H : THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® WITH TRAILER TOW RECEIVES LATE ALERTS. (NO ALERTING ALONGSIDE TRAILER, ONLY WHEN TARGET IS ALONGSIDE VEHICLE)

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- Incorrect trailer setup
- Target vehicle is passing at a high relative speed

H1 CHECK THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® WITH TRAILER TOW RECEIVES LATE ALERTS. (NO ALERTING ALONGSIDE TRAILER, ONLY WHEN TARGET IS ALONGSIDE VEHICLE)

- Verify the BLISÂ® with trailer tow receives late alerts.
- Possible cause:
  - Incorrect trailer setup
  - Target vehicle is passing at a high relative speed
- Repair:
  - Verify the trailer setup measurements. REFER to the Owner's Literature.
  - No action required, the system is operating correctly at this time.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REFER to the Owner's Literature.
No	The system is operating correctly at this time.

PINPOINT TEST I : THE BLISÂ® WITH TRAILER TOW RECEIVES EARLY ALERTS. (ALERTING WHEN TARGET IS FAR BEHIND THE BLISÂ® WITH TRAILER TOW BLIND SPOT ZONE)

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- Incorrect trailer setup

I1 CHECK THE BLISÂ® WITH TRAILER TOW RECEIVES EARLY ALERTS. (ALERTING WHEN TARGET IS FAR BEHIND THE BLISÂ® WITH TRAILER TOW BLIND SPOT ZONE)

- Verify the BLISÂ® with trailer tow receives early alerts.
- Possible cause:
  - Incorrect trailer setup.
- Repair:
  - Verify the trailer setup measurements. REFER to the Owner's Literature.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REFER to the Owner's Literature.
No	The system is operating correctly at this time.

PINPOINT TEST J : THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® WITH TRAILER TOW SYSTEM RECEIVES FALSE ALERTS.

NOTE: *Attaching a trailer can cause additional false alerts. False alerts should not be in excess of 5% of total alerts.*

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- False alerts

J1 CHECK THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® WITH TRAILER TOW SYSTEM RECEIVES FALSE ALERTS.

- Verify the BLISÂ® with trailer tow system receives false alerts.

Test drive vehicle with trailer to verify if alerts are continuously occurring. If continuously alerting ?

Yes	GO to Pinpoint Test A
No	The system is operating correctly at this time.

PINPOINT TEST K : THE BLIS (BLIND SPOT INFORMATION SYSTEM) Â® WITH TRAILER TOW IS MISSING TARGET VEHICLES.

NOTE: *The BLISÂ® With Trailer Tow may miss up to 3% of targets.*

Normal Operation and Fault Conditions

REFER to: Blind Spot Information System - System Operation and Component Description (419-04 Side and Rear Vision, Description and Operation).

Possible Sources

- Incorrect trailer setup
- Target vehicle is passing at a high relative speed
- Missed targets

K1 CHECK BLIS (BLIND SPOT INFORMATION SYSTEM) Â® WITH TRAILER TOW IS MISSING TARGET VEHICLES.

- Verify the BLISÂ® with trailer tow is missing target vehicles.
- Possible cause:
  - Incorrect trailer setup
  - Target vehicle is passing at a high relative speed
  - Missed targets
- Repair:
  - Verify the trailer setup measurements. REFER to the Owner's Literature.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	REFER to the Owner's Literature.
No	The system is operating correctly at this time.

PINPOINT TEST L : DTC (DIAGNOSTIC TROUBLE CODE) U0100:00, DTC (DIAGNOSTIC TROUBLE CODE) U0101:00

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

Normal Operation and Fault Conditions

The SODL and SODR communicate with the PCM through the GWM. The TCM is contained inside the PCM and cannot be serviced separately.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U0100:00	Lost Communication With ECM/PCM "A": No Sub Type Information	A continuous memory DTC that sets in the SODL and SODR when messages received from the PCM over the HS-CAN1 through the GWM are missing for 2 seconds or more.
SODL U0101:00	Lost Communication with TCM: No Sub Type Information	A continuous memory DTC that sets in the SODL and SODR when messages received from the PCM over the HS-CAN1 through the GWM are missing for 2 seconds or more.

Possible Sources

- Communication network concern
- GWM concern
- PCM

L1 VERIFY THE SCAN TOOL CAN COMMUNICATE WITH THE PCM (POWERTRAIN CONTROL MODULE)

- Connect a diagnostic scan tool.
- Check that a vehicle session can be established using the diagnostic scan tool.

Can a vehicle session be established?

Yes	GO to L2
No	REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

L2 CHECK THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) OR SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) CONTINUOUS MEMORY DIAGNOSTIC TROUBLE CODES (CMDTCS)

- Ignition ON.
- Using a diagnostic scan tool, perform the SODL and SODR self-test.
- Clear the Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Repeat the SODL and SODR self-test.

Are any non-network Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to DTC Chart: SODL or SODR, in this section.
No	GO to L3

L3 PERFORM THE PCM (POWERTRAIN CONTROL MODULE) SELF-TEST

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

Are any non-network Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). Refer to the appropriate section in Group 303 for the procedure.
No	GO to L4

L4 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

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

Are any Diagnostic Trouble Codes (DTCs) present?

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

L5 RECHECK THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) OR SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, clear the SODL or SODR Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the continuous memory self-test.
- Check the SODL or SODR Diagnostic Trouble Codes (DTCs).

Is DTC U0100:00 or U0101:00 present?

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

L6 CHECK FOR OTHER CAUSES OF COMMUNICATION NETWORK CONCERN

NOTE: *If new modules were installed prior to the DTC being set, the module configuration may be incorrectly set during the PMI, or the PMI may not have been carried out.*

- CHECK the vehicle service history for recent service actions related to the PCM, SODL, SODR, or GWM. If recent service history is found:
  - verify correct replacement module was installed
    - HVBOM may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into customer vehicle
    - return the swapped module to source vehicle and obtain new replacement module
    - if a new replacement module is installed, PERFORM PMI using as-built data
- Operate the system and determine if the observable symptom is still present.

Is the observable symptom still present?

Yes	GO to L7
No	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

L7 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all PCM connectors and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the PCM connectors and related in-line connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS 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, Click here to access Guided Routine (PCM).
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.

PINPOINT TEST M : DTC (DIAGNOSTIC TROUBLE CODE) U0146:00

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

Normal Operation and Fault Conditions

The SODL and SODR communicate with the GWM through the MS-CAN.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U0146:00	Lost Communication With Serial Data Gateway "A": No Sub Type Information	A continuous memory DTC that sets in the SODL and SODR when messages received through the GWM are missing for 2 seconds or more.

Possible Sources

- Communication network concern
- GWM concern
- GWM

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 correctly 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 a network test.

Does the GWM pass the network test?

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

M3 PERFORM THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) OR SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) SELF-TEST

- Using a diagnostic scan tool, check the SODL or SODR Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to the SODL and SODR, in this section.
No	GO to M4

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

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

Are any Diagnostic Trouble Codes (DTCs) present?

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

M5 RECHECK THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) OR SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, clear the SODL or SODR Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the continuous memory self-test.
- Check the SODL or SODR Diagnostic Trouble Codes (DTCs).

Is DTC U0146:00 present?

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

M6 CHECK FOR OTHER CAUSES OF COMMUNICATION NETWORK CONCERN

NOTE: *If new modules were installed prior to the DTC being set, the module configuration may be incorrectly set during the PMI , or the PMI may not have been carried out.*

- CHECK the vehicle service history for recent service actions related to the SODL, SODR, or GWM. If recent service history is found:
  - verify correct replacement module was installed
    - HVBOM may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into customer vehicle
    - return the swapped module to source vehicle and obtain new replacement module
    - if a new replacement module is installed, PERFORM PMI using as-built data
- Operate the system and determine if the observable symptom is still present.

Is the observable symptom still present?

Yes	GO to M7
No	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

M7 CHECK FOR CORRECT GWM (GATEWAY MODULE A) OPERATION

- Ignition OFF.
- Disconnect and inspect the GWM and all related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the GWM and all 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) address 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.

PINPOINT TEST N : DTC (DIAGNOSTIC TROUBLE CODE) U0199:00

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

Normal Operation and Fault Conditions

The SODL communicates with the DDM through the MS-CAN.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U0199:00	Lost Communication With "Door Control Module A": No Sub Type Information	A continuous memory DTC that sets in the SODL when expected messages from the DDM are missing for 2 seconds or more.

Possible Sources

- Communication network concern
- DDM

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 correctly 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 a network test.

Does the DDM pass the network test?

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

N3 PERFORM THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) SELF-TEST

- Using a diagnostic scan tool, check the SODL Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any non-network Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to DTC Chart: SODL in this section.
No	GO to N4

N4 CHECK THE DDM (DRIVER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

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

Are any non-network Diagnostic Trouble Codes (DTCs) present?

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

N5 RECHECK THE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, clear the SODL Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the continuous memory self-test.
- Check the SODL Diagnostic Trouble Codes (DTCs).

Is DTC U0199:00 still present?

Yes	GO to N6
No	The system is operating correctly at this time. The DTC may have set due to high network traffic or an intermittent fault condition.

N6 CHECK FOR OTHER CAUSES OF COMMUNICATION NETWORK CONCERN

NOTE: *If new modules were installed prior to the DTC being set, the module configuration may be incorrectly set during the PMI, or the PMI may not have been carried out.*

- CHECK the vehicle service history for recent service actions related to the DDM, SODL or SODR. If recent service history is found:
  - verify correct replacement module was installed
    - HVBOM may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into customer vehicle
    - return the swapped module to source vehicle and obtain new replacement module
    - if a new replacement module is installed, PERFORM PMI using as-built data
- Operate the system and determine if the observable symptom is still present.

Is the observable symptom still present?

Yes	GO to N7
No	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

N7 CHECK FOR CORRECT DDM (DRIVER DOOR MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect all DDM connectors and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the DDM connectors and related in-line connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS 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 DDM. REFER to: Driver Door Module (DDM) (419-10 Multifunction Electronic Modules, 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.

PINPOINT TEST O : DTC (DIAGNOSTIC TROUBLE CODE) U0200:00

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

Normal Operation and Fault Conditions

The SODR communicates with the PDM through the MS-CAN.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODR U0200:00	Lost Communication With "Door Control Module B": No Sub Type Information	A continuous memory DTC that sets in the SODR when expected messages from the PDM are missing for 2 seconds or more.

Possible Sources

- Communication network concern
- PDM

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 correctly 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 a network test.

Does the PDM pass the network test?

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

O3 PERFORM THE SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) SELF-TEST

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

Are any non-network Diagnostic Trouble Codes (DTCs) present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to the SODR, in this section.
No	GO to O4

O4 CHECK THE PDM (PASSENGER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

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

Are any non-network Diagnostic Trouble Codes (DTCs) present?

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

O5 RECHECK THE SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, clear the SODR Diagnostic Trouble Codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the continuous memory self-test.
- Check the SODR Diagnostic Trouble Codes (DTCs).

Is DTC U0200:00 present?

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

O6 CHECK FOR OTHER CAUSES OF COMMUNICATION NETWORK CONCERN

NOTE: *If new modules were installed prior to the DTC being set, the module configuration may be incorrectly set during the PMI, or the PMI may not have been carried out.*

- CHECK the vehicle service history for recent service actions related to the PDM or SODR. If recent service history is found:
  - verify correct replacement module was installed
    - HVBOM may be used to verify correct part fitment
  - verify the configuration of replacement module was correct
    - re-configure module using as-built data if prior configuration is suspect
  - verify the module was not obtained from a like vehicle and installed into customer vehicle
    - return the swapped module to source vehicle and obtain new replacement module
    - if a new replacement module is installed, PERFORM PMI using as-built data
- Operate the system and determine if the observable symptom is still present.

Is the observable symptom still present?

Yes	GO to O7
No	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

O7 CHECK FOR CORRECT PDM (PASSENGER DOOR MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the PDM connector and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals â€“ clean module pins)
  - damaged or bent pins â€“ install new terminals/pins
  - pushed-out pins â€“ install new pins as necessary
- Reconnect the PDM connector and related in-line connectors. Make sure the connectors 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) address this concern, INSTALL a new PDM. REFER to: Passenger Door Module (PDM) (419-10 Multifunction Electronic Modules, 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.

PINPOINT TEST P : DTC (DIAGNOSTIC TROUBLE CODE) U0401:86

Normal Operation and Fault Conditions

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U0401:86	Invalid Data Received from ECM/PCM A: Signal Invalid	This continuous memory DTC sets when the SODL or SODR receives invalid network data from the PCM.

Possible Sources

- PCM concern

P1 RETRIEVE PCM (POWERTRAIN CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question.

Is DTC U0401:86 still present?

Yes	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the PCM REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - 6.2L V8, Diagnosis and Testing). REFER to: Electronic Engine Controls (303-14B Electronic Engine Controls - 6.7L Power Stroke Diesel, Diagnosis and Testing). REFER to: Electronic Engine Controls (303-14C Electronic Engine Controls - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Diagnosis and Testing).
No	DIAGNOSE the observable symptom.

PINPOINT TEST Q : DTC (DIAGNOSTIC TROUBLE CODE) U0402:86

Normal Operation and Fault Conditions

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U0402:86	Invalid Data Received from TCM: Signal Invalid	This continuous memory DTC sets when the SODL or SODR receives invalid transmission range network data from the PCM.

Possible Sources

- TCM concern

Q1 RETRIEVE TCM (TRANSMISSION CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question.

Is DTC U0402:86 still present?

Yes	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the TCM REFER to: Diagnostic Trouble Code (DTC) Charts and Pinpoint Tests - 6.2L V8 (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Diagnosis and Testing). REFER to: Diagnostic Trouble Code (DTC) Charts and Pinpoint Tests - 6.2L V8 (307-01B Automatic Transmission, Transfer Case and Power Transfer Unit - 10-Speed Automatic Transmission â€“ 10R140, Diagnosis and Testing). REFER to: Diagnostic Trouble Code (DTC) Charts and Pinpoint Tests - 6.7L Power Stroke Diesel (307-01B Automatic Transmission, Transfer Case and Power Transfer Unit - 10-Speed Automatic Transmission â€“ 10R140, Diagnosis and Testing). REFER to: Diagnostic Trouble Code (DTC) Charts and Pinpoint Tests - 7.3L 2V DEVCT V8 (239kW/320PS) (J0) (307-01B Automatic Transmission, Transfer Case and Power Transfer Unit - 10-Speed Automatic Transmission â€“ 10R140, Diagnosis and Testing).
No	DIAGNOSE the observable symptom.

PINPOINT TEST R : DTC (DIAGNOSTIC TROUBLE CODE) U049A:86

Normal Operation and Fault Conditions

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U049A:86	Invalid Data Received From "Door Control Module A": Signal Invalid	This continuous memory DTC sets when the SODL receives invalid network data from the DDM.

Possible Sources

- DDM concern

R1 RETRIEVE DDM (DRIVER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question.

Is DTC U049A:86 still present?

Yes	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the DDM REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).
No	DIAGNOSE the observable symptom.

PINPOINT TEST S : DTC (DIAGNOSTIC TROUBLE CODE) U0501:86

Normal Operation and Fault Conditions

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODR U0501:86	Invalid Data Received From "Door Control Module B": Signal Invalid	This continuous memory DTC sets when the SODR receives invalid network data from the PDM.

Possible Sources

- PDM concern

S1 RETRIEVE PDM (PASSENGER DOOR MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question.

Is DTC U0501:86 still present?

Yes	RETRIEVE and FOLLOW non-network Diagnostic Trouble Codes (DTCs) from the PDM REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).
No	DIAGNOSE the observable symptom.

PINPOINT TEST T : DTC (DIAGNOSTIC TROUBLE CODE) U2100:00

Normal Operation and Fault Conditions

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U2100:00	Initial Configuration Not Complete: No Sub Type Information	This continuous memory DTC sets due to incomplete or incorrect PMI procedures.

Possible Sources

- Incomplete or incorrect module PMI procedures

T1 CHECK FOR THE CORRECT PMI PROCEDURE

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question.

Is DTC U2100:00 still present?

Yes	CHECK the vehicle service history for recent service actions related to this module. If there have been recent service actions with this module, INSTALL as-built data from PTS following diagnostic scan tool instructions under Module Programming>As-Built. REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation).
No	If there have been no recent service actions, INSTALL a new module to correct the failure to retain configuration data. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, Removal and Installation).

PINPOINT TEST U : DTC (DIAGNOSTIC TROUBLE CODE) U2300:55

Normal Operation and Fault Conditions

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U2300:55	Central Configuration: Not Configured	This continuous memory DTC sets when the SODL or SODR does not detect the VIN on the MS-CAN.

Possible Sources

- VIN Information
- MS-CAN

U1 CHECK FOR THE CORRECT VIN INFORMATION

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question.
  REFER to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).

Is DTC U2300:55 still present?

Yes	RETRIEVE and REPAIR all non-network Diagnostic Trouble Codes (DTCs) in all other modules.
No	The system is operating correctly at this time.

PINPOINT TEST V : DTC (DIAGNOSTIC TROUBLE CODE) U3000:44, U3000:45, U3000:46, U3000:49

Normal Operation and Fault Conditions

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U3000:44	Control Module: Data Memory Failure	Sets when the SODL or SODR detects an internal fault.
SODL U3000:45	Control Module: Program Memory Failure	Sets when the SODL or SODR detects an internal fault.
SODL U3000:46	Control Module: Calibration/Parameter Memory Failure	Sets when the SODL or SODR detects an internal fault.
SODL U3000:49	Control Module: Internal Electronic Failure	Sets when the SODL or SODR detects an internal fault.

Possible Sources

- SODL
- SODR

V1 RETRIEVE SODL (SIDE OBSTACLE DETECTION CONTROL MODULE LH) OR SODR (SIDE OBSTACLE DETECTION CONTROL MODULE RH) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs).
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the SODL and SODR self-test.

Is U3000:44, U3000:45, U3000:46 or U3000:49 recorded?

Yes	INSTALL a new SODL or SODR. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, Removal and Installation).
No	The system is operating correctly at this time.

PINPOINT TEST W : DTC (DIAGNOSTIC TROUBLE CODE) U3002:62

Normal Operation and Fault Conditions

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
SODL U3002:62	Vehicle Identification Number: Signal Compare Failure	This continuous memory DTC sets when the VIN stored in the SODL or SODR does not match the VIN that is broadcast on the network.

Possible Sources

- VIN Information

W1 IF THERE HAVE BEEN NO RECENT SERVICE ACTIONS, INSTALL A NEW MODULE TO CORRECT THE FAILURE TO RETAIN CONFIGURATION DATA.

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the module in question.

Is DTC U3002:62 still present?

Yes	CHECK the vehicle service history for recent service actions related to this module. If there have been recent service actions with this module, REPEAT the PMI procedure as directed by the diagnostic scan tool. REFER to: Module Configuration - System Operation and Component Description (418-01 Module Configuration, Description and Operation).
No	If there have been no recent service actions, INSTALL a new module to correct the failure to retain configuration data. REFER to: Side Obstacle Detection Control Module (419-04 Side and Rear Vision, Removal and Installation).