

PINPOINT TEST A : THE POWER LIFTGATE DOES NOT UNLATCH

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM B1452:11	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator: Circuit Short To Ground	Sets when the RGTM detects a short to ground from the liftgate latch release actuator output circuit.
RGTM B1452:13	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator: Circuit Open	Sets when the RGTM detects an open from the liftgate latch release actuator output circuit.

Possible Sources

- Fuse
- Wiring, terminals or connectors
- Communication concern
- Liftgate Latch
- BJB
- RGTM

Visual Inspection and Pre-checks

- Verify the BJB fuse 76 (30A) is OK.
- Ensure RGTM is updated to latest software calibration.

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

NOTICE: The following Pinpoint Test uses a test lamp to simulate normal circuit loads. Use only a Rotunda Test Lamp (SGT27000) or 250- 300mA incandescent bulb test lamp. To avoid connector terminal damage, use the Rotunda Flex Probe kit for the test lamp probe connection to the vehicle. Do not use the test lamp probe directly on any connector.

A1 CHECK THE RGTM (REAR GATE TRUNK MODULE) PID (PARAMETER IDENTIFICATION)

- Using a diagnostic scan tool, view the RGTM PID.
 - LIFTG_DECKL_AJAR
- Monitor the PID -
 - Liftgate ajar status must show closed when the liftgate is closed.

Do the Parameter Identifications (PIDs) agree with the liftgate latch status?

Yes	GO to A2
No	Using a diagnostic scan tool, begin the PMI process for the RGTM following the on-screen instructions. REFER to: Module Programming (418-01 Module Configuration, General Procedures).

A2 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE RGTM (REAR GATE TRUNK MODULE)

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to A3
No	REPAIR the circuit.

A3 CHECK THE LIFTGATE LATCH MANUAL RELEASE

- Mechanically unlatch the liftgate.
REFER to: Liftgate Latch Manual Release (501-14 Handles, Locks, Latches and Entry Systems, General Procedures).

Does the liftgate latch release?

Yes	GO to A4
No	INSTALL a new power liftgate latch. REFER to: Liftgate Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

A4 CHECK FOR VOLTAGE TO THE POWER LIFTGATE LATCH RELEASE MOTOR

- Connect RGTM [C4174A](#) .
- Disconnect Power Liftgate Latch [C4223A](#) .
- Unlock the doors using the door lock control switch.
- Connect:

LIFTGATE/LUGGAGE COMPARTMENT LID LATCH	
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Positive Lead	Measurement / Action	Negative Lead
C4223A-2		Ground

- **NOTE:** The RGTM only supplies voltage to the actuator momentarily. It is important to monitor the test lamp while pressing the liftgate release switch

While pressing the liftgate release switch, monitor the test lamp.

Does the test lamp momentarily illuminate?

Yes	GO to A5
No	GO to A6

A5 CHECK THE LIFTGATE LATCH GROUND CIRCUIT FOR AN OPEN

- Connect:

LIFTGATE/LUGGAGE COMPARTMENT LID LATCH
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Positive Lead	Measurement / Action	Negative Lead
C4223A-2		C4223A-5

- **NOTE:** The RGTM only supplies voltage to the actuator momentarily. It is important to monitor the test lamp while pressing the liftgate release switch

While pressing the liftgate release switch, monitor the test lamp.

Does the test lamp momentarily illuminate?

Yes	INSTAL a new power liftgate latch. REFER to: Liftgate Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).
No	REPAIR the circuit.

A6 CHECK THE RGTM (REAR GATE TRUNK MODULE) LIFTGATE LATCH RELEASE OUTPUT CIRCUIT FOR A SHORT TO GROUND

- Disconnect RGTM [C4174A](#) .
- Measure:

REAR GATE TRUNK MODULE (RGTM)	
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Positive Lead	Measurement / Action	Negative Lead
C4174A-9	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to A7
No	REPAIR the circuit.

A7 CHECK THE RGTM (REAR GATE TRUNK MODULE) LIFTGATE LATCH RELEASE OUTPUT CIRCUIT FOR AN OPEN

- Measure:

REAR GATE TRUNK MODULE (RGTM)	LIFTGATE/LUGGAGE COMPARTMENT LID LATCH
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Positive Lead	Measurement / Action	Negative Lead
C4174A-9	Ω	C4223A-2

Is the resistance less than 3 ohms?

Yes	GO to A8
No	REPAIR the circuit.

A8 CHECK FOR CORRECT RGTM (REAR GATE TRUNK MODULE) OPERATION

- Disconnect and inspect all RGTM connectors.
- Repair:
 - corrosion (install new connectors 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 all the RGTM connectors and 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, INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST B : THE LIFTGATE UNLATCHES BUT THE POWER LIFTGATE IS INOPERATIVE

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM B144D:29	Tailgate/Liftgate/Boot/Trunk Position Sensor 1: Signal Invalid	Sets when the RGTM receives no signal from the liftgate motor sensor 1 input or the sensor inputs are out of phase.
RGTM B144E:29	Tailgate/Liftgate/Boot/Trunk Position Sensor 2: Signal Invalid	Sets when the RGTM receives no signal from the liftgate motor sensor 2 input or the sensor inputs are out of phase.
RGTM B144F:11	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Short To Ground	Sets when the RGTM detects a short to ground from the power liftgate motor circuitry.
RGTM B144F:12	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Short To Battery	Sets when the RGTM detects a short to voltage from the power liftgate motor circuitry.
RGTM B144F:13	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Open	Sets when the RGTM detects an open from the power liftgate motor circuitry.
RGTM B144F:79	Tailgate/Liftgate/Boot/Trunk Driver Motor: Mechanical Linkage Failure	Sets when the RGTM detects the power liftgate requires extra effort to open or the hydraulic strut does not keep the liftgate open or the operator manually closes the liftgate at higher speed for more than 5 times.
RGTM C1B14:11	Sensor Supply Voltage A: Circuit Short To Ground	Sets when the RGTM detects a short to ground from the power liftgate motor sensor voltage supply circuit.
RGTM B145D:11	Tailgate/Liftgate/Boot/Trunk Power Cinch Striker Motor: Circuit Short To Ground	Sets when the RGTM detects a short to ground from one of the liftgate latch cinch motor circuits.
RGTM B145D:12	Tailgate/Liftgate/Boot/Trunk Power Cinch Striker Motor: Circuit Short To Battery	Sets when the RGTM detects a short to voltage from one of the liftgate latch cinch motor circuits.
RGTM B145D:13	Tailgate/Liftgate/Boot/Trunk Power Cinch Striker Motor: Circuit Open	Sets when the RGTM detects an open from one of the liftgate latch cinch motor circuits.

Possible Sources

- Wiring, terminals or connectors
- Power liftgate motor
- RGTM

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

B1 CHECK FOR COMMUNICATION TO THE RGTM (REAR GATE TRUNK MODULE)

- Using a diagnostic scan tool, carry out the network test.

Does the RGTM pass the network test?

Yes	GO to B2
No	REFER to: Communications Network (418-00 Module Communications Network) .

B2 CHECK THE RGTM (REAR GATE TRUNK MODULE) PID (PARAMETER IDENTIFICATION)

- Using a diagnostic scan tool, view the RGTM PID.
 - LIFTG_DECKL_AJAR
- Monitor the PID -
 - Liftgate ajar status must change to ajar after unlatching or to closed after latching.

Do the Parameter Identifications (PIDs) agree with the liftgate latch status?

Yes	GO to B3
No	Using a diagnostic scan tool, begin the PMI process for the RGTM following the on-screen instructions. REFER to: Module Programming (418-01 Module Configuration, General Procedures).

B3 CHECK THE POWER LIFTGATE POSITION SENSOR

- Using a diagnostic scan tool, view the RGTM PID.
 - TAILGATE_POS
- Monitor the PID -
 - Position counter must start from 0 when liftgate is closed and increment when opening the liftgate manually.

Does the Parameter Identifications (PIDs) agree with liftgate position sensor status?

Yes	GO to B4
No	GO to B13

B4 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE RGTM (REAR GATE TRUNK MODULE)

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to B5
No	REPAIR the circuit.

B5 CHECK THE LIFTGATE LATCH PRIMARY, SECONDARY AND PAWL SWITCH PARAMETER IDENTIFICATIONS (PIDS)

- Using a diagnostic scan tool, view RGTM Parameter Identifications (PIDs).
- Using a diagnostic scan tool, monitor the following RGTM Parameter Identifications (PIDs):
 - Primary Switch input (LIFTG_PRIM_SW)
 - Tailgate Latch's Secondary Position Signal (LATCH_SECND_SW)
 - Tailgate Latch's Power Close Unit Home Position Switch (LATCH_HOME_SW)
 - Tailgate Latch Pawl Switch (TAILGATE_PWL_SW)
- **NOTE:** The liftgate is in the primary position when the liftgate is in the full closed position. The liftgate is in the unlatch position when the liftgate is open and completely out of the striker.

Begin with the liftgate in the open position, then slowly close the liftgate to the secondary latch (first click) and then primary latch (second click) positions.

Liftgate Latch Position	LIFTG_PRIM_SW	LATCH_SECND_SW	TAILGATE_PWL_SW	LATCH_HOME_SW
Fully unlatched	Active	Active	Active	Inactive
Secondary (first click)	Active	Inactive	Inactive	Inactive
Primary (second click)	Inactive	Inactive	Inactive	Inactive

Do the switch states agree with the table?

Yes	GO to B6
No	GO to B7

B6 CHECK THE OPERATION OF ALL THE POWER LIFTGATE INPUTS

- Ignition ON.
- Select PARK.
- Unlock the doors using the door lock control switch.
- Close the liftgate to the full closed position (manually if necessary).
- Open and close the power liftgate using the front interior power liftgate switch (located on the instrument panel).
- Open and close the power liftgate using a programmed RKE transmitter.
- Open the power liftgate using the exterior liftgate release switch.
- Close the power liftgate using the rear interior power liftgate switch (located on the inside of the liftgate).

Does the power liftgate power open or power close from any input?

Yes	GO to the Symptom Chart and DIAGNOSE the correct symptom.
No	GO to B7

B7 CHECK FOR RGTM (REAR GATE TRUNK MODULE) COMMUNICATION AND VOLTAGE DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, carry out the RGTM self-test.

Is DTC U0101:87, U0140:87, U0294:87, U3003:16 or U3003:17 present?

Yes	For DTC U0101:87, GO to Pinpoint Test K For DTC U0140:87, GO to Pinpoint Test L For DTC U0294:87, GO to Pinpoint Test M For DTC U3003:16, GO to Pinpoint Test N For DTC U3003:17, GO to Pinpoint Test O
No	GO to B8

B8 CHECK FOR POWER LIFTGATE MOTOR DIAGNOSTIC TROUBLE CODES (DTCS)

- View the results from the RGTM self-test.

Is DTC B144F:11, B144F:12, B144F:13 or B144F:79 present?

Yes	For DTC B144F:11 or B144F:12 or B144F:13, GO to B9 For DTC B144F:79, CLEAR the DTC and TEST the system for normal operation. If the concern is still present, CLOSE the liftgate and reopen power liftgate and observe whether liftgate stays in fully open position. If not, check gas strut / power strut for leakage. REFER to: Power Liftgate Motor (501-03 Body Closures, Removal and Installation).
No	GO to B13

B9 CHECK THE POWER LIFTGATE MOTOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect RGTM [C4174B](#).
- Disconnect Power Liftgate Motor [C4332](#).
- Ignition ON.
- Measure:

REAR GATE TRUNK MODULE (RGTM)	
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Positive Lead	Measurement / Action	Negative Lead
C4174B-13		Ground
C4174B-1		Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to B10

B10 CHECK THE POWER LIFTGATE MOTOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

REAR GATE TRUNK MODULE (RGTM)	
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Positive Lead	Measurement / Action	Negative Lead
C4174B-13	Ω	Ground
C4174B-1	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to B11
No	REPAIR the circuit in question.

B11 CHECK THE POWER LIFTGATE MOTOR CIRCUITS FOR A SHORT TOGETHER

- Measure:

REAR GATE TRUNK MODULE (RGTM)

Positive Lead	Measurement / Action	Negative Lead
C4174B-13	Ω	C4174B-1

Is the resistance greater than 10,000 ohms?

Yes	GO to B12
No	REPAIR the circuits.

B12 CHECK THE POWER LIFTGATE MOTOR CIRCUITS FOR AN OPEN

- Measure:

REAR GATE TRUNK MODULE (RGTM)	POWER LIFTGATE MOTOR
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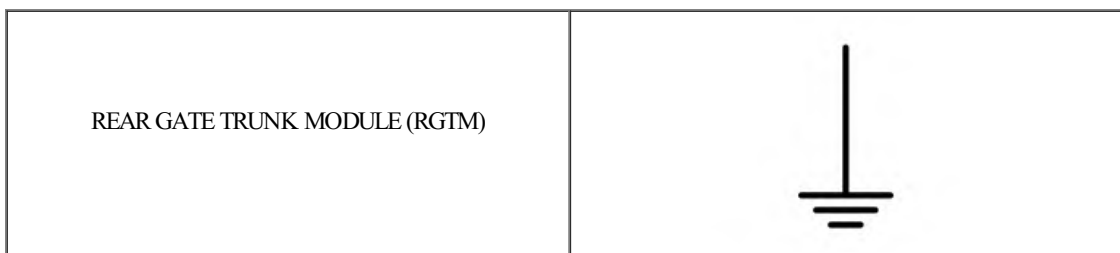
Positive Lead	Measurement / Action	Negative Lead
C4174B-13	Ω	C4332-2
C4174B-1	Ω	C4332-9

Are the resistances less than 3 ohms?

Yes	GO to B13
No	REPAIR the circuit in question.

B13 CHECK THE POWER LIFTGATE MOTOR SENSOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect RGTM [C4174B](#) .
- Disconnect Power Liftgate Motor [C4332](#) .
- Ignition ON.
- Measure:



Positive Lead	Measurement / Action	Negative Lead
C4174B-16	  	Ground
C4174B-17	  	Ground
C4174B-18	  	Ground
C4174B-15	  	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to B14

B14 CHECK THE POWER LIFTGATE MOTOR SENSOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

REAR GATE TRUNK MODULE (RGTM)	
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Positive Lead	Measurement / Action	Negative Lead
C4174B-16	Ω	Ground
C4174B-17	Ω	Ground
C4174B-18	Ω	Ground
C4174B-15	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to B15
No	REPAIR the circuit in question.

B15 CHECK THE POWER LIFTGATE MOTOR SENSOR CIRCUITS FOR A SHORT TOGETHER

- Measure:

REAR GATE TRUNK MODULE (RGTM)

Positive Lead	Measurement / Action	Negative Lead
C4174B-16	Ω	C4174B-17
C4174B-16	Ω	C4174B-18
C4174B-16	Ω	C4174B-15
C4174B-17	Ω	C4174B-18
C4174B-17	Ω	C4174B-15
C4174B-18	Ω	C4174B-15

Are the resistances greater than 10,000 ohms?

Yes	GO to B16
No	REPAIR the circuits in question.

B16 CHECK THE POWER LIFTGATE MOTOR SENSOR CIRCUITS FOR AN OPEN

- Measure:

REAR GATE TRUNK MODULE (RGTM)	POWER LIFTGATE MOTOR
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Positive Lead	Measurement / Action	Negative Lead
C4174B-16	Ω	C4332-6
C4174B-17	Ω	C4332-7
C4174B-18	Ω	C4332-4
C4174B-15	Ω	C4332-5

Are the resistances less than 3 ohms?

Yes	INSTALL a power liftgate motor. REFER to: Power Liftgate Motor (501-03 Body Closures, Removal and Installation). TEST the system for normal operation. If the concern is still present, GO to B18
No	REPAIR the circuit in question.

B17 CHECK FOR OTHER LIFTGATE LATCH MOTOR DIAGNOSTIC TROUBLE CODES (DTCS)

- View the results from the RGTM self-test.

Are any RGTM Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the RGTM DTC chart in this section.
No	GO to Pinpoint Test D

B18 CHECK FOR CORRECT RGTM (REAR GATE TRUNK MODULE) OPERATION

- Disconnect and inspect all RGTM connectors.
- Repair:
 - corrosion (install new connectors 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 all the RGTM connectors and 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, INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST C : THE POWER LIFTGATE IS INOPERATIVE FROM ONE OF THE LIFTGATE CONTROL SWITCHES

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM B11C4:23	Boot/trunk close button: Signal Stuck Low	Sets when the RGTM detects a short to ground from the rear power liftgate release switch input circuit.
RGTM B12E8:23	Liftgate/Tailgate Control/Release Switch: Signal Stuck Low	Sets when the RGTM detects a short to ground from the front power liftgate release switch input circuit.
RGTM B144C:23	Tailgate/Liftgate/Boot/Trunk Outer Handle Switch: Signal Stuck Low	Sets when the RGTM detects a short to ground from the exterior liftgate release switch input circuit.
BCM B12E8:11	Liftgate/Tailgate Control/Release Switch: Circuit Short To Ground	Sets when the BCM detects a short to ground from the exterior liftgate release switch input circuit.
BCM B1219:11	Interior Boot/Trunk Release Switch: Circuit Short To Ground	Sets when the BCM detects a short to ground from the exterior liftgate release switch input circuit.

Possible Sources

- Wiring, terminals or connectors
- Front interior power liftgate switch
- Rear interior power liftgate switch
- Exterior liftgate release switch
- BCM
- RGTM

Visual Inspection and Pre-checks

- Check the power liftgate setting in the message center and make sure the switch is enabled. If disabled, change the setting to enable and re-check the power liftgate operation.

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

NOTE: If the concern is with the exterior liftgate release switch, verify the concern is not passive entry related. If the liftgate opens from the liftgate release switch after the vehicle has been electronically unlocked but does not open from the liftgate release switch when the vehicle is locked, the concern is not with the power liftgate system.

C1 CHECK THE OPERATION OF THE POWER LIFTGATE FROM ALL THE SWITCH INPUTS

- Ignition OFF.
- Select PARK.
- Ignition ON.
- Close the liftgate (manually if necessary).
- Unlock the doors using the door lock control switch.
- Open and close the power liftgate using the front interior power liftgate switch (located on the instrument panel).
- Open the power liftgate using the exterior liftgate release switch.
- Close the power liftgate using the rear power liftgate switch (located on the bottom side of the liftgate trim panel).

Does the power liftgate open or close from any input?

Yes	GO to C2
No	GO to the Symptom Chart and DIAGNOSE the correct symptom.

C2 CHECK THE POWER LIFTGATE SWITCH STATUS

- Using a diagnostic scan tool, view the RGTM PID.
 - TAILGATE_LCK_SW_INP
 - TAILGATE_IP-CS_SW
 - TAILGATE_REL_SW
 - TAILGATE_SHUT_SW

Do the Parameter Identifications (PIDs) indicates switch is pressed?

Yes	GO to C4
No	GO to C3

C3 ISOLATE THE SUSPECT POWER LIFTGATE SWITCH FOR A SHORT TO GROUND USING THE LIFTGATE SWITCH PID (PARAMETER IDENTIFICATION)

- Ignition OFF.
- Disconnect the suspect power liftgate switch.
- Ignition ON.
- Using a diagnostic scan tool, monitor the following RGTM Parameter Identifications (PIDs):
 - TAILGATE_LCK_SW_INP
 - TAILGATE_IP-CS_SW
 - TAILGATE_REL_SW
 - TAILGATE_SHUT_SW

Does the PID in question continue to indicate a switch is pressed?

Yes	For the exterior liftgate release switch, GO to C4 For a front or rear interior power liftgate switch, GO to C5
No	INSTALL a new power liftgate switch in question.

C4 ISOLATE THE BCM (BODY CONTROL MODULE) FOR A SHORT TO GROUND WHILE CHECKING THE RGTM (REAR GATE TRUNK MODULE) TAILGATE_REL_SW PID (PARAMETER IDENTIFICATION)

- Ignition OFF.
- Disconnect BCM [C2280D](#).
- Ignition ON.
- Using a diagnostic scan tool, monitor the RGTM TAILGATE_REL_SW PID.

Does the PID continue to indicate the switch is pressed?

Yes	GO to C5
No	GO to C9

C5 CHECK THE SUSPECT POWER LIFTGATE SWITCH INPUT CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect RGTM [C4174B](#).
- Measure:

REAR GATE TRUNK MODULE (RGTM)	
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Front Interior Power Liftgate Switch

Positive Lead	Measurement / Action	Negative Lead
C4174A-19	Ω	Ground

REAR GATE TRUNK MODULE (RGTM)	
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Rear Interior Power Liftgate Switch

Positive Lead	Measurement / Action	Negative Lead
C4174A-20	Ω	Ground

REAR GATE TRUNK MODULE (RGTM)	
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Exterior Liftgate Release Switch

Positive Lead	Measurement / Action	Negative Lead
C4174A-8	Ω	Ground

C6 BYPASS THE SUSPECT POWER LIFTGATE SWITCH

- Ignition OFF.
- Is the resistance greater than 10,000 ohms?
- Disconnect the suspect power liftgate switch.

- Unlock the doors using the door lock control switch.
- **NOTE:** *The liftgate must be open when carrying out this step if the rear interior power liftgate switch is the suspect component.*

For the suspect power liftgate switch, connect:

FRONT POWER LIFTGATE SWITCH

Front Interior Liftgate Switch

Positive Lead	Measurement / Action	Negative Lead
C2269-6		C2269-2

REAR POWER LIFTGATE SWITCH

Rear Interior Liftgate Control Switch

Positive Lead	Measurement / Action	Negative Lead
C4333-1		C4333-2

LIFTGATE RELEASE SWITCH

Exterior Liftgate Release Switch

Positive Lead	Measurement / Action	Negative Lead
C4216-1		C4216-2

- Remove the fused jumper wire.

Does the liftgate open or close?

Yes	INSTALL a new power liftgate switch in question.
No	GO to C7

C7 CHECK THE POWER LIFTGATE SWITCH GROUND CIRCUIT FOR AN OPEN

- For the suspect power liftgate switch, measure:

FRONT POWER LIFTGATE SWITCH	
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Front Interior Liftgate Switch

Positive Lead	Measurement / Action	Negative Lead
C2269-2	Ω	Ground

REAR POWER LIFTGATE SWITCH	
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Rear Interior Liftgate Control Switch

Positive Lead	Measurement / Action	Negative Lead
C4333-2	Ω	Ground

LIFTGATE RELEASE SWITCH	
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Exterior Liftgate Release Switch

Positive Lead	Measurement / Action	Negative Lead
C4216-2	Ω	Ground

Is the resistance less than 3 ohms?

Yes	GO to C8
No	REPAIR the circuit.

C8 CHECK THE POWER LIFTGATE SWITCH INPUT CIRCUIT FOR AN OPEN

- Disconnect RGTM [C4174B](#).
- For the suspect liftgate switch, measure:

FRONT POWER LIFTGATE SWITCH	REAR GATE TRUNK MODULE (RGTM)
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Front Interior Liftgate Switch

Positive Lead	Measurement / Action	Negative Lead
C2269-5	Ω	C4174A-19

REAR POWER LIFTGATE SWITCH	REAR GATE TRUNK MODULE (RGTM)
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Rear Interior Liftgate Switch

Positive Lead	Measurement / Action	Negative Lead
C4333-1	Ω	C4174A-20

LIFTGATE RELEASE SWITCH	REAR GATE TRUNK MODULE (RGTM)
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Exterior Liftgate Release Switch

Positive Lead	Measurement / Action	Negative Lead
C4216-1	Ω	C4174A-8

Is the resistance less than 3 ohms?

Yes	GO to C10
No	REPAIR the circuit.

C9 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all BCM connectors.
- Repair:
 - corrosion (install new connectors or terminals â€œ clean module pins)
 - damaged or bent pins â€œ install new terminals/pins
 - pushed-out pins â€œ install new pins as necessary
- Reconnect all the BCM connectors and 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. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

C10 CHECK FOR CORRECT RGTM (REAR GATE TRUNK MODULE) OPERATION

- Disconnect and inspect all RGTM connectors.
- Repair:
 - corrosion (install new connectors or terminals & clean module pins)
 - damaged or bent pins & install new terminals/pins
 - pushed-out pins & install new pins as necessary
- Reconnect all the RGTM connectors and 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, INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST D : THE POWER LIFTGATE STOPS IN THE SECONDARY LATCH POSITION OR THE LATCH DOES NOT CINC

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM B1515:78	Tailgate/Liftgate/Boot/Trunk: Alignment Or Adjustment Incorrect	Sets when the RGTM detects the liftgate is unable to fully latch.
RGTM B1451:29	Tailgate/Liftgate/Boot/Trunk Latch Centering Position Switch: Signal Invalid	Sets when the RGTM detects the sector gear switch is not in the correct state at the beginning of self-test.
RGTM B1453:29	Tailgate/Liftgate/Boot/Trunk Latch Position Switch: Signal Invalid	Sets when the RGTM detects the latch is not latched or the inputs received from the latch are incorrect at the beginning of self-test.

Possible Sources

- Liftgate alignment
- Liftgate striker alignment
- Mechanical binding
- Wiring, terminals or connectors
- Power liftgate latch
- RGTM

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

D1 CHECK THE RGTM (REAR GATE TRUNK MODULE) PID (PARAMETER IDENTIFICATION)

- Using a diagnostic scan tool, view the RGTM PID.
 - LIFTG_DECKL_AJAR
- Monitor the PID -
 - Liftgate ajar status must show closed when the liftgate is closed.

Do the Parameter Identifications (PIDs) agree with the liftgate latch status?

Yes	GO to D2
No	Using a diagnostic scan tool, begin the PMI process for the RGTM following the on-screen instructions. REFER to: Module Programming (418-01 Module Configuration, General Procedures).

D2 CHECK THE POWER LIFTGATE POSITION SENSOR

- Using a diagnostic scan tool, view the RGTM PID.
 - TAILGATE_POS
- Monitor the PID -
 - Position counter must read value 0 once the liftgate is closed manually.

Does the Parameter Identifications (PIDs) agree with liftgate position sensor status?

Yes	GO to D3
No	GO to D4

D3 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to D4
No	REPAIR the circuit.

D4 CHECK THE POWER LIFTGATE SELF TEST LEARNING STATUS

- Using a diagnostic scan tool, view the RGTM PID.
 - LIFTG_DECKL_STS

Does power liftgate return learned or complete?

Yes	GO to D5
No	GO to D7

D5 CHECK FOR ANTI-PINCH SWITCH DTC (DIAGNOSTIC TROUBLE CODE) B1454:11, B1454:13, B1455:11 OR B1455:13

- Ignition ON.
- Using a diagnostic scan tool, carry out the RGTM self-test.

Is DTC B1454:11, B1454:13, B1455:11 or B1455:13 present?

Yes	GO to Pinpoint Test G
No	GO to D6

D6 CHECK FOR RGTM (REAR GATE TRUNK MODULE) DTC (DIAGNOSTIC TROUBLE CODE) B145D:11, B145D:12 OR B145D:13

- Review the results from the RGTM self-test.

Is DTC B145D:11, B145D:12 or B145D:13 present?

Yes	GO to D13
No	GO to D7

D7 CHECK THE LIFTGATE LATCH PRIMARY, SECONDARY AND PAWL SWITCH PARAMETER IDENTIFICATIONS (PIDS)

- Using a diagnostic scan tool, view RGTM Parameter Identifications (PIDs).
- Using a diagnostic scan tool, monitor the following RGTM Parameter Identifications (PIDs):
 - Primary Switch input (LIFTG_PRIM_SW)
 - Tailgate Latch's Secondary Position Signal (LATCH_SECND_SW)
 - Tailgate Latch's Power Close Unit Home Position Switch (LATCH_HOME_SW)
 - Tailgate Latch Pawl Switch (TAILGATE_PWL_SW)
- **NOTE:** *The liftgate is in the primary position when the liftgate is in the full closed position. The liftgate is in the unlatch position when the liftgate is open and completely out of the striker.*

Begin with the liftgate in the open position, then slowly close the liftgate to the secondary latch (first click) and then primary latch (second click) positions.

Liftgate Latch Position	LIFTG_PRIM_SW	LATCH_SECND_SW	TAILGATE_PWL_SW	LATCH_HOME_SW
Fully unlatched	Active	Active	Active	Inactive
Secondary (first click)	Active	Inactive	Inactive	Inactive
Primary (second click)	Inactive	Inactive	Inactive	Inactive

Do the switch states agree with the table?

Yes	GO to D8
No	GO to D10

D8 CHECK THE MANUAL OPERATION OF THE LIFTGATE

- Turn the power liftgate off (disable) from the message center.
- While manually opening and closing the liftgate, check the liftgate for:
 - Liftgate/wedge alignment
 - Liftgate assist cylinder operation (cylinder should hold or push liftgate open when beyond half open)
 - Power liftgate motor (should move freely while manually opening and closing liftgate and be securely mounted to the liftgate and bracket)
 - Power liftgate latch (should latch completely)

Does the liftgate open and close correctly?

Yes	GO to D9
No	REPAIR as necessary.

D9 CHECK THE LIFTGATE LATCH AND STRIKER ALIGNMENT

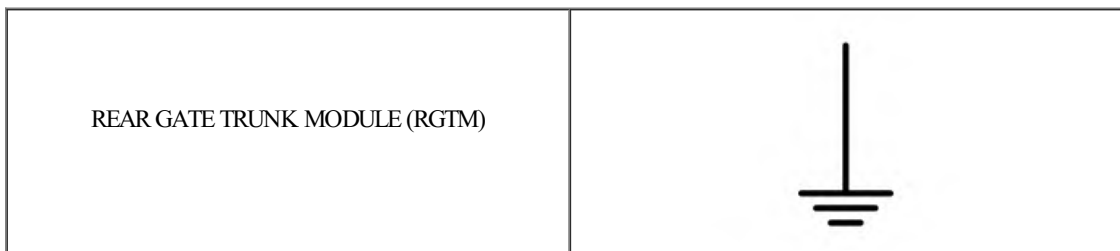
- Inspect the striker and latch for correct alignment.

Is the latch and striker aligned correctly?

Yes	GO to D13
No	ALIGN the liftgate and striker. REFER to: Liftgate Alignment (501-03 Body Closures, General Procedures).

D10 CHECK THE LIFTGATE LATCH INPUT CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect RGTM [C4174A](#) .
- Disconnect Power Liftgate Latch [C4223A](#) .
- Measure:



Positive Lead	Measurement / Action	Negative Lead
C4174A-16	Ω	Ground
C4174A-15	Ω	Ground
C4174A-18	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to D11
No	REPAIR the circuit in question.

D11 CHECK THE LIFTGATE LATCH INPUT CIRCUITS FOR A SHORT TO EACH OTHER

- Measure:



Positive Lead	Measurement / Action	Negative Lead
C4174A-16	Ω	C4174A-15
C4174A-16	Ω	C4174A-18
C4174A-15	Ω	C4174A-18

Are the resistances greater than 10,000 ohms?

Yes	GO to D12
No	REPAIR the circuits in question.

D12 CHECK THE LIFTGATE LATCH INPUT CIRCUITS FOR AN OPEN

- Measure:

REAR GATE TRUNK MODULE (RGTM)	LIFTGATE/LUGGAGE COMPARTMENT LID LATCH
-------------------------------	--

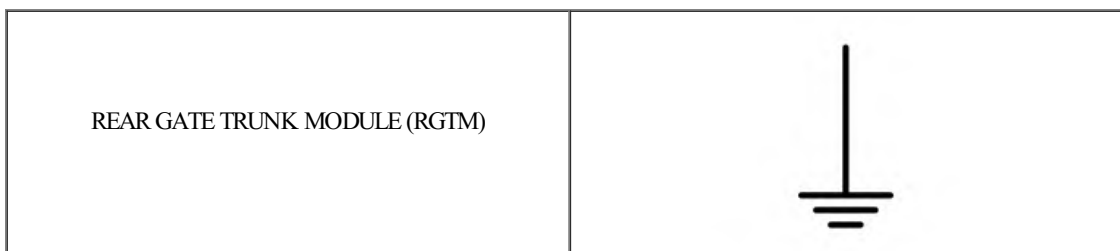
Positive Lead	Measurement / Action	Negative Lead
C4174A-16	Ω	C4223A-1
C4174A-15	Ω	C4223A-4
C4174A-18	Ω	C4223A-3

Are the resistances less than 3 ohms?

Yes	INSTALL a new power liftgate latch. REFER to: Liftgate Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). TEST the system for normal operation. If the concern is still present, GO to D19
No	REPAIR the circuit in question.

D13 CHECK THE LIFTGATE LATCH CINCH MOTOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect RGTM [C4174A](#) .
- Disconnect Power Liftgate Latch [C4223B](#) .
- Ignition ON.
- Measure:



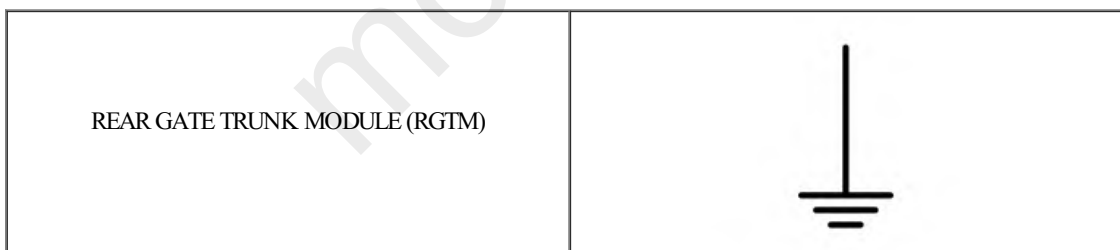
Positive Lead	Measurement / Action	Negative Lead
C4174A-13		Ground
C4174A-1		Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to D14

D14 CHECK THE LIFTGATE LATCH CINCH MOTOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:



Positive Lead	Measurement / Action	Negative Lead
C4174A-13	Ω	Ground
C4174A-1	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to D15
No	REPAIR the circuit in question.

D15 CHECK THE LIFTGATE LATCH CINCH MOTOR CIRCUITS FOR A SHORT TOGETHER

- Measure:

REAR GATE TRUNK MODULE (RGTM)

Positive Lead	Measurement / Action	Negative Lead
C4174A-13	Ω	C4174A-1

Is the resistance greater than 10,000 ohms?

Yes	GO to D16
No	REPAIR the circuits.

D16 CHECK THE LIFTGATE LATCH MOTOR CIRCUITS FOR AN OPEN

- Measure:

REAR GATE TRUNK MODULE (RGTM)

LIFTGATE/LUGGAGE COMPARTMENT LID LATCH
--

Positive Lead	Measurement / Action	Negative Lead
C4174A-13	Ω	C4223B-1
C4174A-1	Ω	C4223B-2

Are the resistances less than 3 ohms?

Yes	GO to D17
No	REPAIR the circuit in question.

D17 CHECK THE LIFTGATE LATCH MOTOR CIRCUITS FOR A SHORT TO THE SECTOR GEAR SWITCH INPUT CIRCUIT

- Disconnect RGTM [C4174B](#) .
- Measure:

LIFTGATE/LUGGAGE COMPARTMENT LID LATCH

Positive Lead	Measurement / Action	Negative Lead
C4223B-1	Ω	C4223B-4
C4223B-2	Ω	C4223B-4

Are the resistances greater than 10,000 ohms?

Yes	GO to D18
No	REPAIR the circuit in question.

D18 CHECK THE SECTOR GEAR SWITCH INPUT CIRCUIT FOR AN OPEN

- Measure:

REAR GATE TRUNK MODULE (RGTM)

LIFTGATE/LUGGAGE COMPARTMENT LID LATCH

Positive Lead	Measurement / Action	Negative Lead
C4174A-17	Ω	C4223B-4

Is the resistances less than 3 ohms?

Yes	INSTALL a new power liftgate latch. REFER to: Liftgate Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). CLEAR the Diagnostic Trouble Codes (DTCs) and TEST the system for normal operation. If the concern is still present, GO to D19
No	REPAIR the circuit.

D19 CHECK FOR CORRECT RGTM (REAR GATE TRUNK MODULE) OPERATION

- Disconnect and inspect all RGTM connectors.
- Repair:
 - corrosion (install new connectors 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 all the RGTM connectors and 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, INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST E : THE POWER LIFTGATE REVERSES DURING A POWER CLOSE OPERATION

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

Possible Sources

- Liftgate alignment
- Liftgate striker alignment
- Mechanical binding

Visual Inspection and Pre-checks

- Check for any obstruction pushing anti pinch strip

E1 CHECK THE POWER LIFTGATE POSITION SENSOR

- Using a diagnostic scan tool, view the RGTM PID.
 - TAILGATE_POS
- Monitor the PID -
 - Position counter must start from 0 when liftgate is closed and increment when opening the liftgate manually.

Does the Parameter Identifications (PIDs) agree with liftgate position sensor status?

Yes	GO to E2
No	GO to E4

E2 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to E3
No	REPAIR the circuit.

E3 CHECK ANTI PINCH SEAL SWITCH STATUS

- Using a diagnostic scan tool, view the RGTM PID.
 - ANTIPNC_SEAL_L
 - ANTIPNC_SEAL_R

Does pinch strip activate during closing operation?

Yes	INSTALL a new liftgate anti-pinch switch for the one in question. REFER to: Liftgate Anti-Pinch Switch (501-03 Body Closures, Removal and Installation).
No	GO to E4

E4 CHECK THE LIFTGATE LATCH PRIMARY, SECONDARY AND PAWL SWITCH PARAMETER IDENTIFICATIONS (PIDS)

- Using a diagnostic scan tool, view RGTM Parameter Identifications (PIDs).
- Using a diagnostic scan tool, monitor the following RGTM Parameter Identifications (PIDs):
 - Primary Switch input (LIFTG_PRIM_SW)
 - Tailgate Latch's Secondary Position Signal (LATCH_SECND_SW)
 - Tailgate Latch's Power Close Unit Home Position Switch (LATCH_HOME_SW)
 - Tailgate Latch Pawl Switch (TAILGATE_PWL_SW)
- **NOTE:** The liftgate is in the primary position when the liftgate is in the full closed position. The liftgate is in the unlatch position when the liftgate is open and completely out of the striker.

Begin with the liftgate in the open position, then slowly close the liftgate to the secondary latch (first click) and then primary latch (second click) positions.

Liftgate Latch Position	LIFTG_PRIM_SW	LATCH_SECND_SW	TAILGATE_PWL_SW	LATCH_HOME_SW
Fully unlatched	Active	Active	Active	Inactive
Secondary (first click)	Active	Inactive	Inactive	Inactive
Primary (second click)	Inactive	Inactive	Inactive	Inactive

Do the switch states agree with the table?

Yes	GO to E5
No	GO to Pinpoint Test D

E5 CHECK THE MANUAL OPERATION OF THE LIFTGATE

- Ignition ON.
- Turn the power liftgate off (disable) from the message center.
- While manually opening and closing the liftgate, check the liftgate for:
 - Liftgate/wedge alignment
 - Liftgate assist cylinder operation (cylinder should hold or push liftgate open)
 - Power liftgate motor (should move freely while manually opening and closing liftgate and be securely mounted to the liftgate and bracket)
 - Power liftgate latch (should latch completely)

Does the liftgate open and close correctly?

Yes	GO to Pinpoint Test D
No	REPAIR as necessary.

PINPOINT TEST F : THE POWER LIFTGATE ANTI-PINCH STRIP DOES NOT STOP OR REVERSE THE LIFTGATE

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

Possible Sources

- Liftgate anti-pinch switch
- RGTM

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

F1 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to F2
No	REPAIR the circuit.

F2 CHECK ANTI PINCH SEAL SWITCH STATUS

- Using a diagnostic scan tool, view the RGTM PID.
 - ANTIPNC_SEAL_L
 - ANTIPNC_SEAL_R

Does pinch strip activate during closing operation?

Yes	GO to F3
No	GO to F4

F3 CHECK FOR ANTI PINCH VOLTAGE

- Using a diagnostic scan tool, view the RGTM PID.
 - L_Pinch_V
 - R_Pinch_V

Is voltage above 6V?

Yes	GO to F4
No	REPAIR the circuit.

F4 CHECK FOR RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

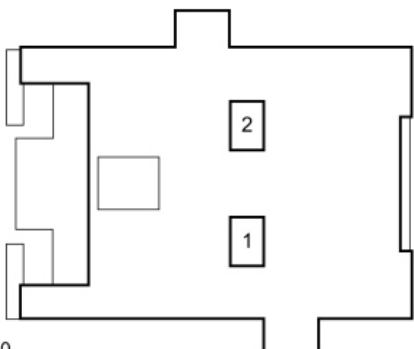
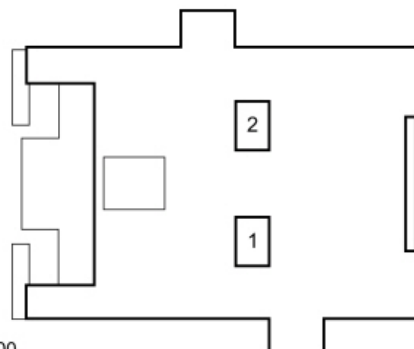
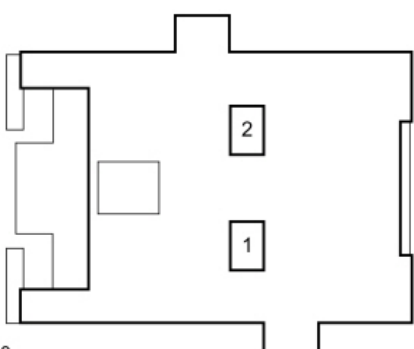
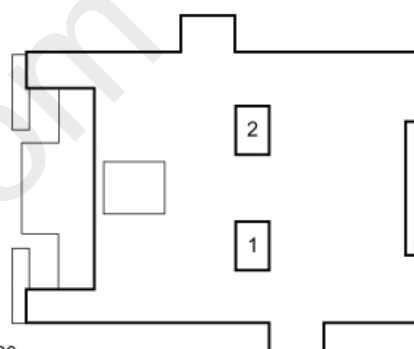
- Ignition ON.
- Using a diagnostic scan tool, carry out the RGTM self-test.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the RGTM DTC Chart in this section.
No	GO to F5

F5 CHECK THE LIFTGATE ANTI-PINCH SWITCH

- Ignition OFF.
- Disconnect the suspect liftgate anti-pinch switch.
- While pressing firmly and releasing the liftgate anti-pinch switch, measure:

Positive Lead	Measurement / Action	Negative Lead
 E200300 C4172, pin 1, component side	Ω	 E200300 C4172, pin 2, component side
 E200300 C4173, pin 1, component side	Ω	 E200300 C4173, pin 2, component side

Is the resistance between 0 to 2000 ohms with the liftgate anti-pinch switch firmly pressed and between 5,700 and 6,700 ohms with the liftgate anti-pinch switch released?

Yes	GO to F6
No	INSTALL a new liftgate anti-pinch switch for the one in question. REFER to: Liftgate Anti-Pinch Switch (501-03 Body Closures, Removal and Installation).

F6 CHECK FOR CORRECT RGTM (REAR GATE TRUNK MODULE) OPERATION

- Disconnect and inspect all RGTM connectors.
- Repair:
 - corrosion (install new connectors 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 all the RGTM connectors and 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, INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST G : THE POWER LIFTGATE DOES NOT POWER CLOSE (POWER OPEN OK)

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM B1454:11	Tailgate/Liftgate/Boot/Trunk Left Pinch Strip: Circuit Short To Ground	Sets when the RGTM detects a short to ground from the left anti-pinch switch input.
RGTM B1454:13	Tailgate/Liftgate/Boot/Trunk Left Pinch Strip: Circuit Open	Sets when the RGTM detects an open from the left anti-pinch switch input.
RGTM B1455:11	Tailgate/Liftgate/Boot/Trunk Right Pinch Strip: Circuit Short To Ground	Sets when the RGTM detects a short to ground from the right anti-pinch switch input.
RGTM B1455:13	Tailgate/Liftgate/Boot/Trunk Right Pinch Strip: Circuit Open	Sets when the RGTM detects an open from the right anti-pinch switch input.

Possible Sources

- Wiring, terminals or connectors
- Liftgate alignment
- Liftgate striker alignment
- Mechanical binding
- Liftgate anti-pinch switch
- RGTM

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

G1 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to G2
No	REPAIR the circuit.

G2 CHECK THE POWER LIFTGATE SELF TEST LEARNING STATUS

- Using a diagnostic scan tool, view the RGTM PID.
 - LIFTG_DECKL_STS

Does power liftgate return learned or complete?

Yes	GO to G2
No	Using a diagnostic scan tool, begin the PMI process for the RGTM following the on-screen instructions. REFER to: Module Programming (418-01 Module Configuration, General Procedures).

G3 CHECK THE POWER LIFTGATE POSITION SENSOR

- Using a diagnostic scan tool, view the RGTM PID.
 - TAILGATE_POS
- Monitor the PID -
 - Position counter must start from 0 when liftgate is closed and increment when opening the liftgate manually.

Does the Parameter Identifications (PIDs) agree with liftgate position sensor status?

Yes	GO to G3
No	GO to G6

G4 CHECK ANTI PINCH SEAL SWITCH STATUS

- Using a diagnostic scan tool, view the RGTM PID.
 - ANTIPNC_SEAL_L
 - ANTIPNC_SEAL_R

Does pinch strip activate during closing operation?

Yes	GO to G5
No	INSTALL a new liftgate anti-pinch switch for the one in question. REFER to: Liftgate Anti-Pinch Switch (501-03 Body Closures, Removal and Installation).

G5 CHECK FOR ANTI PINCH VOLTAGE

- Using a diagnostic scan tool, view the RGTM PID.
 - L_Pinch_V
 - R_Pinch_V

Is voltage above 6V?

Yes	GO to G6
No	REPAIR the circuit.

G6 CHECK FOR RGTM (REAR GATE TRUNK MODULE) LIFTGATE ANTI-PINCH SWITCH DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, carry out the RGTM self-test.

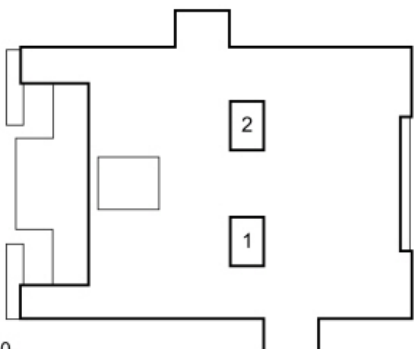
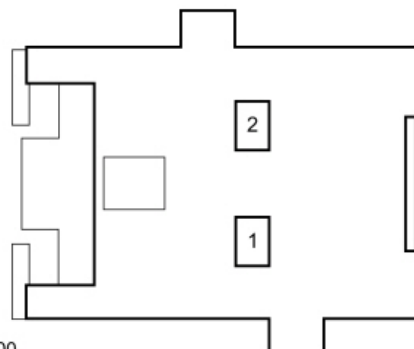
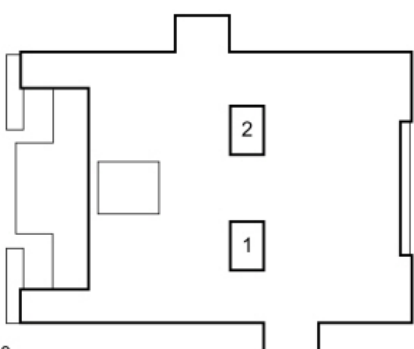
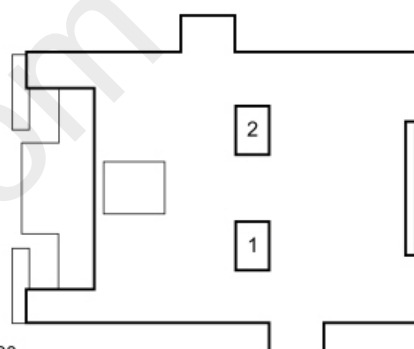
Is DTC B1454:11, B1454:13, B1455:11 or B1455:13 present?

Yes	GO to G7
No	GO to G12

G7 CHECK THE LIFTGATE ANTI-PINCH SWITCH

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- Ignition OFF.
- Disconnect the suspect liftgate anti-pinch switch.
- While pressing firmly and releasing the liftgate anti-pinch switch, measure:

Positive Lead	Measurement / Action	Negative Lead
 E200300 C4172, pin 1, component side	Ω	 E200300 C4172, pin 2, component side
 E200300 C4173, pin 1, component side	Ω	 E200300 C4173, pin 2, component side

Is the resistance between 0 to 2000 ohms with the liftgate anti-pinch switch firmly pressed and between 5,700 and 6,700 ohms with the liftgate anti-pinch switch released?

Yes	GO to G8
No	INSTALL a new liftgate anti-pinch switch for the one in question. REFER to: Liftgate Anti-Pinch Switch (501-03 Body Closures, Removal and Installation).

G8 CHECK THE LIFTGATE ANTI-PINCH SWITCH CIRCUITS FOR A SHORT TO VOLTAGE

- Disconnect RGTM [C4174B](#) .
- Ignition ON.
- Measure:

LIFTGATE ANTI-PINCH SWITCH LH	
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Left Liftgate Anti-Pinch Switch

Positive Lead	Measurement / Action	Negative Lead
C4172-1		Ground
C4172-2		Ground

LIFTGATE ANTI-PINCH SWITCH RH	
-------------------------------	--

Right Liftgate Anti-Pinch Switch

Positive Lead	Measurement / Action	Negative Lead
C4173-1		Ground
C4173-2		Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to G9

G9 CHECK THE LIFTGATE ANTI-PINCH SWITCH CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

LIFTGATE ANTI-PINCH SWITCH LH	
-------------------------------	---

Left Liftgate Anti-Pinch Switch

Positive Lead	Measurement / Action	Negative Lead
C4172-1	Ω	Ground

LIFTGATE ANTI-PINCH SWITCH RH	
-------------------------------	--

Right Liftgate Anti-Pinch Switch

Positive Lead	Measurement / Action	Negative Lead
C4173-1	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to G10
No	REPAIR the circuit.

G10 CHECK THE LIFTGATE ANTI-PINCH SWITCH CIRCUITS FOR A SHORT TOGETHER

- Measure:

LIFTGATE ANTI-PINCH SWITCH LH

Left Liftgate Anti-Pinch Switch

Positive Lead	Measurement / Action	Negative Lead
C4172-1	Ω	C4172-2

LIFTGATE ANTI-PINCH SWITCH RH

Right Liftgate Anti-Pinch Switch

Positive Lead	Measurement / Action	Negative Lead
C4173-1	Ω	C4173-2

Is the resistance greater than 10,000 ohms?

Yes	GO to G11
No	REPAIR the circuits.

G11 CHECK THE LIFTGATE ANTI-PINCH SWITCH CIRCUITS FOR AN OPEN

- Measure:

LIFTGATE ANTI-PINCH SWITCH LH	REAR GATE TRUNK MODULE (RGTM)
-------------------------------	-------------------------------

Left Liftgate Anti-Pinch Switch

Positive Lead	Measurement / Action	Negative Lead
C4172-1	Ω	C4174A-11
C4172-2	Ω	C4174A-22

LIFTGATE ANTI-PINCH SWITCH RH	REAR GATE TRUNK MODULE (RGTM)
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Right Liftgate Anti-Pinch Switch

Positive Lead	Measurement / Action	Negative Lead
C4173-1	Ω	C4174A-12
C4173-2	Ω	C4174A-22

Are the resistances less than 3 ohms?

Yes	GO to G14
No	REPAIR the circuit in question.

- Review the results from the RGTM self-test.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the RGTM DTC Chart in this section.
No	GO to G13

G13 CHECK THE MANUAL OPERATION OF THE LIFTGATE

- Turn the power liftgate off (disable) from the message center.
- While manually opening and closing the liftgate, check the liftgate for:
 - Liftgate/wedge alignment
 - Liftgate assist cylinder operation (cylinder should hold or push liftgate open when beyond half open)
 - Power liftgate motor (should move freely while manually opening and closing liftgate and be securely mounted to the liftgate and bracket)
 - Power liftgate latch (should latch completely)

Does the liftgate open and close correctly?

Yes	GO to Pinpoint Test D
No	REPAIR as necessary.

G14 CHECK FOR CORRECT RGTM (REAR GATE TRUNK MODULE) OPERATION

- Disconnect and inspect all RGTM connectors.
- Repair:
 - corrosion (install new connectors 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 all the RGTM connectors and 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, INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

[PINPOINT TEST H : THE POWER LIFTGATE DOES NOT POWER OPEN \(POWER CLOSE OK\)](#)

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

Possible Sources

- Liftgate alignment
- Liftgate striker alignment
- Mechanical binding

H1 CHECK THE LIFTGATE LATCH PRIMARY, SECONDARY AND PAWL SWITCH PARAMETER IDENTIFICATIONS (PIDS)

- Using a diagnostic scan tool, view RGTM Parameter Identifications (PIDs).
- Using a diagnostic scan tool, monitor the following RGTM Parameter Identifications (PIDs):
 - Primary Switch input (LIFTG_PRIM_SW)
 - Tailgate Latch's Secondary Position Signal (LATCH_SECND_SW)
 - Tailgate Latch's Power Close Unit Home Position Switch (LATCH_HOME_SW)
 - Tailgate Latch Pawl Switch (TAILGATE_PWL_SW)
- **NOTE:** The liftgate is in the primary position when the liftgate is in the full closed position. The liftgate is in the unlatch position when the liftgate is open and completely out of the striker.

Begin with the liftgate in the open position, then slowly close the liftgate to the secondary latch (first click) and then primary latch (second click) positions.

Liftgate Latch Position	LIFTG_PRIM_SW	LATCH_SECND_SW	TAILGATE_PWL_SW	LATCH_HOME_SW
Fully unlatched	Active	Active	Active	Inactive
Secondary (first click)	Active	Inactive	Inactive	Inactive
Primary (second click)	Inactive	Inactive	Inactive	Inactive

Do the switch states agree with the table?

Yes	GO to H2
No	GO to H3

H2 CHECK THE RGTM (REAR GATE TRUNK MODULE) PID (PARAMETER IDENTIFICATION)

- Using a diagnostic scan tool, view the RGTM PID.
 - LIFTG_DECKL_AJAR
- Monitor the PID -
 - Liftgate ajar status must show closed when the liftgate is closed.

Do the Parameter Identifications (PIDs) agree with the liftgate latch status?

Yes	GO to H3
No	INSTALL a new power liftgate latch. REFER to: Liftgate Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

H3 CHECK THE POWER LIFTGATE POSITION SENSOR

- Using a diagnostic scan tool, view the RGTM PID.
 - TAILGATE_POS
- Monitor the PID -
 - Position counter must start from 0 when liftgate is closed and increment when opening the liftgate manually.

Does the Parameter Identifications (PIDs) agree with liftgate position sensor status?

Yes	GO to H4
No	GO to H5

H4 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage value?

Yes	GO to H5
No	REPAIR the circuit.

H5 CHECK FOR RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCs)

- Ignition ON.
- Using a diagnostic scan tool, carry out the RGTM self-test.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the RGTM DTC Chart in this section.
No	GO to H6

H6 CHECK THE LIFTGATE LATCH RELEASE OPERATION

NOTE: Make sure the power liftgate is enabled from the message center.

- Ignition ON.
- Select PARK.
- Unlock the doors using a door lock control switch.
- Press the front interior power liftgate switch.

Does the liftgate latch release?

Yes	GO to H7
No	GO to Pinpoint Test A

H7 CHECK THE MANUAL OPERATION OF THE LIFTGATE

- Turn the power liftgate off (disable) from the message center.
- While manually opening and closing the liftgate, check the liftgate for:
 - Liftgate/wedge alignment
 - Liftgate assist cylinder operation (cylinder should hold or push liftgate open when beyond half open)
 - Power liftgate motor (should move freely while manually opening and closing liftgate and be securely mounted to the liftgate and bracket)
 - Power liftgate latch (should latch completely)

Does the liftgate open and close correctly?

Yes	GO to Pinpoint Test B
No	REPAIR as necessary.

[PINPOINT TEST I : THE POWER LIFTGATE CLOSSES \(WITH A CONTINUOUS CHIME\) IMMEDIATELY AFTER A POWER OPEN](#)

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

Possible Sources

- Excessive weight on the liftgate, such as snow, ice or a bicycle rack
- Liftgate assist cylinder
- Power liftgate initialization

I1 CHECK THE POWER LIFTGATE POSITION SENSOR

- Using a diagnostic scan tool, view the RGTM PID.
 - TAILGATE_POS
- Monitor the PID -
 - Position counter must start from 0 when liftgate is closed and increment when opening the liftgate manually.

Does the Parameter Identifications (PIDs) agree with liftgate position sensor status?

Yes	GO to I2
No	GO to I3

I2 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to I3
No	REPAIR the circuit.

I3 CHECK FOR RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

NOTE: Make sure there is no excessive weight on the liftgate, such as snow, ice or a luggage rack.

- Ignition ON.
- Using a diagnostic scan tool, carry out the RGTM self-test.

Are any Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the RGTM DTC Chart in this section.
No	GO to I4

I4 CHECK THE LIFTGATE ASSIST CYLINDER

- Verify there is no excessive weight on the liftgate, such as snow, ice or a bicycle rack.
- Turn the power liftgate off (disable) from the message center.
- Operate the liftgate manually to verify the liftgate assist cylinder holds the liftgate open in various positions.

Does the liftgate assist cylinder hold the liftgate open correctly?

Yes	GO to 15
No	INSTALL a new liftgate assist cylinder. INITIALIZE the power liftgate. REFER to: Power Liftgate Initialization (501-03 Body Closures, General Procedures).

15 INITIALIZE THE POWER LIFTGATE AND RECHECK THE OPERATION

- Initialize the power liftgate.
REFER to: Power Liftgate Initialization (501-03 Body Closures, General Procedures).
- Operate the power liftgate using the front interior power liftgate switch.

Does the liftgate close with a continuous chime immediately after a power open?

Yes	GO to 16
No	The system is operating correctly. The concern may have been caused by an incorrectly initialized RGTM or weight on the liftgate.

16 CHECK FOR CORRECT RGTM (REAR GATE TRUNK MODULE) OPERATION

- Disconnect and inspect all RGTM connectors.
- Repair:
 - corrosion (install new connectors 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 all the RGTM connectors and 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, INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST J : THE POWER LIFTGATE HANDS-FREE ACTUATION IS INOPERATIVE

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Body Closures - System Operation and Component Description (501-03 Body Closures, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
BCM B1495:11	Hands Free Liftgate/Decklid Input Sensor: Circuit Short To Ground	Sets when the BCM detects a short to ground from the hands-free liftgate actuation module input.

Possible Sources

- Fuse
- Wiring, terminals or connectors
- Hands-free liftgate actuation module
- Hands-free liftgate actuation lower sensor
- Hands-free liftgate actuation upper sensor
- BCM

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

J1 CHECK THE POWER LIFTGATE POSITION SENSOR

- Using a diagnostic scan tool, view the RGTM PID.
 - TAILGATE_POS
- Monitor the PID -
 - Position counter must start from 0 when liftgate is closed and increment when opening the liftgate manually.

Does the Parameter Identifications (PIDs) agree with liftgate position sensor status?

Yes	GO to J2
No	GO to J3

J2 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 volts for unlatching
 - Power voltage supply A and Power voltage supply B must be above 10.5 volts for power operation

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to J3
No	REPAIR the circuit.

J3 CHECK THE POWER LIFTGATE OPERATION FROM THE EXTERIOR LIFTGATE RELEASE SWITCH

NOTE: Make sure the power liftgate is enabled from the message center.

- Ignition ON.
- Unlock the doors from the door lock control switch.
- Press the exterior liftgate release switch on the liftgate.

Does the power liftgate open?

Yes	GO to J4
No	GO to Pinpoint Test C

J4 CHECK THE LIFTGATE PASSIVE ENTRY OPERATION

NOTE: Make sure the passive entry feature is enabled from the message center.

- Ignition OFF.
- Close the liftgate.
- Lock the doors using the RKE transmitter.
- With a valid programmed passive key within 1 meter (3 feet) of the rear bumper, press the exterior liftgate release switch on the liftgate.

Does the power liftgate open?

Yes	GO to J5
No	DIAGNOSE the liftgate passive entry feature. REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems) .

J5 VERIFY THE CONCERN IS PRESENT

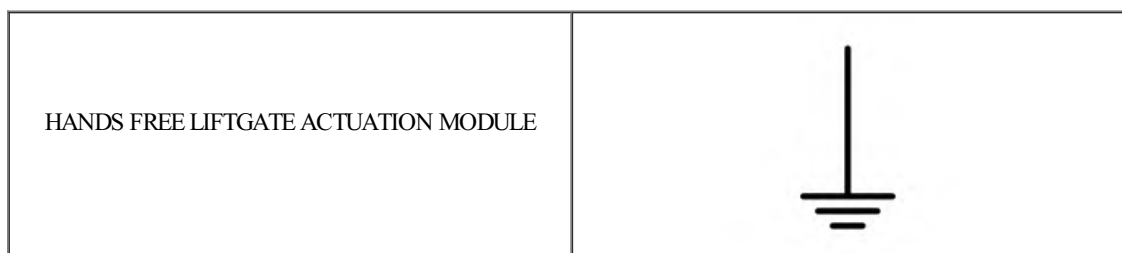
- Close the liftgate.
- With the passive key within 1 meter (3 feet) of the rear bumper, move your foot towards and then away (similar to a kicking motion) near the center of the rear bumper.

Does the power liftgate open?

Yes	The system is operating correctly. INFORM the customer of the operation of the hands-free liftgate actuation.
No	GO to J6

J6 CHECK THE POWER LIFTGATE HANDS-FREE ACTUATION MODULE VOLTAGE SUPPLY CIRCUIT FOR AN OPEN

- Disconnect Hands-Free Liftgate Actuation Module [C4401](#) .
- Measure:



Positive Lead	Measurement / Action	Negative Lead
C4401-2		Ground

Is the voltage greater than 11 volts?

Yes	GO to J7
No	REPAIR the circuit.

J7 CHECK THE POWER LIFTGATE HANDS-FREE ACTUATION MODULE GROUND CIRCUIT FOR AN OPEN

- Measure:



Positive Lead	Measurement / Action	Negative Lead
C4401-2		C4401-3

Is the voltage greater than 11 volts?

Yes	GO to J8
No	REPAIR the circuit.

J8 BYPASS THE HANDS-FREE LIFTGATE ACTUATION MODULE

NOTE: If the fuse in the jumper wire fails, refer to the Wiring Diagrams manual to identify the possible causes of the circuit short.

- Place a programmed passive key within 1 meter (3 feet) of the rear bumper.
- Connect:

HANDS FREE LIFTGATE ACTUATION MODULE

Positive Lead	Measurement / Action	Negative Lead
C4401-1		C4401-3

- Remove the fused jumper wire.

Does the power liftgate open?

Yes	GO to J11
No	GO to J9

J9 CHECK THE BCM (BODY CONTROL MODULE) HANDS-FREE INPUT CIRCUIT FOR A SHORT TO GROUND

- Disconnect BCM [C2280D](#).
- Measure:

HANDS FREE LIFTGATE ACTUATION MODULE	
--------------------------------------	--

Positive Lead	Measurement / Action	Negative Lead
C4401-1	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to J10
No	REPAIR the circuit.

J10 CHECK THE BCM (BODY CONTROL MODULE) HANDS-FREE INPUT CIRCUIT FOR AN OPEN

- Measure:

HANDS FREE LIFTGATE ACTUATION MODULE	BODY CONTROL MODULE (BCM)
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Positive Lead	Measurement / Action	Negative Lead
C4401-1	Ω	C2280D-29

Is the resistance less than 3 ohms?

Yes	GO to J14
No	REPAIR the circuit.

J11 CHECK THE HANDS-FREE LIFTGATE ACTUATION MODULE CONNECTIONS

- Disconnect the hands-free liftgate actuation module sensor connectors.
- Inspect all of the hands-free liftgate actuation module sensor connectors for:
 - corrosion (install new connectors 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 all the hands-free liftgate actuation module connectors and make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Does the hands-free liftgate actuation operate?

Yes	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.
No	GO to J12

J12 CHECK THE HANDS-FREE LIFTGATE ACTUATION LOWER SENSOR

- INSTALL a new hands-free liftgate actuation lower sensor.
REFER to: Hands-Free Liftgate Actuation Lower Sensor (501-03 Body Closures) .
- Check the operation of the hands-free liftgate actuation.

Does the hands-free liftgate actuation operate?

Yes	The system is operating correctly. The concern was caused by the hands-free liftgate actuation lower sensor.
No	GO to J13

J13 CHECK THE HANDS-FREE LIFTGATE ACTUATION UPPER SENSOR

- INSTALL a new hands-free liftgate actuation upper sensor.
REFER to: Hands-Free Liftgate Actuation Upper Sensor (501-03 Body Closures) .
- Check the operation of the hands-free liftgate actuation.

Does the hands-free liftgate actuation operate?

Yes	The system is operating correctly. The concern was caused by the hands-free liftgate actuation upper sensor.
No	INSTALL a new hands-free liftgate actuation module. REFER to: Hands-Free Liftgate Actuation Module (501-03 Body Closures) . TEST the system for normal operation. If the concern is still present, GO to J14

J14 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all BCM connectors.
- Repair:
 - corrosion (install new connectors or terminals & clean module pins)
 - damaged or bent pins & install new terminals/pins
 - pushed-out pins & install new pins as necessary
- Reconnect all the BCM connectors and 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. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

[PINPOINT TEST K : U0101:87](#)

Normal Operation and Fault Conditions

The RGTM and the PCM communicate through the CAN. Messages are exchanged between the modules for the purposes of determining what functions are carried out.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM U0101:87	Lost Communication with TCM: Missing Message	Sets by the RGTM if expected transmission range data messages received from the PCM over the CAN are missing.

Possible Sources

- Network communication concern
- PCM
- RGTM

K1 VERIFY CUSTOMER CONCERN

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

Is an observable symptom present?

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

K2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, carry out the network test.

Does the PCM pass the network test?

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

K3 CARRY OUT THE PCM (POWERTRAIN CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, carry out the PCM KOEO and KOER self-tests.

Are any voltage system related Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the PCM DTC Chart in the appropriate 303-14 section.
No	GO to K4

K4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE RGTM (REAR GATE TRUNK MODULE) SELF-TEST

- Review the results from the RGTM self-test.

Is DTC U3003:16 present?

Yes	GO to Pinpoint Test N
No	GO to K5

K5 RECHECK THE RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

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

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) and repeat the RGTM self-test.

Is DTC U0101:87 still present?

Yes	GO to K6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or intermittent fault condition.

K6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0101 IN OTHER MODULES

- Using a diagnostic scan tool, clear all Continuous Memory Diagnostic Trouble Codes (CMDTCs).
- Ignition OFF.
- Ignition ON.
- Wait 30 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0101 set in other modules?

Yes	INSTALL a new PCM. REFER to the PCM Removal and Installation procedure in the appropriate 303-14 section.
No	INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .

PINPOINT TEST L : U0140:87

Normal Operation and Fault Conditions

The RGTM and the BCM communicate through the CAN. Messages are exchanged between the modules for the purposes of determining what functions are carried out.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM U0140:87	Lost Communication With Body Control Module: Missing Message	Sets by the RGTM if expected data messages received from the BCM over the CAN are missing.

Possible Sources

- Network communication concern
- RGTM
- BCM

L1 VERIFY CUSTOMER CONCERN

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

Is an observable symptom present?

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

L2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, carry out the network test.

Does the BCM pass the network test?

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

L3 CARRY OUT THE BCM (BODY CONTROL MODULE) SELF-TEST

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

Are any voltage system related Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules) .
No	GO to L4

L4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE RGTM (REAR GATE TRUNK MODULE) SELF-TEST

- Review the results from the RGTM self-test.

Is DTC U3003:16 present?

Yes	GO to Pinpoint Test N
No	GO to L5

L5 RECHECK THE RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCs)

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

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) and repeat the RGTM self-test.

Is DTC U0140:87 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 intermittent fault condition.

L6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0140 IN OTHER MODULES

- Using a diagnostic scan tool, clear all Continuous Memory Diagnostic Trouble Codes (CMDTCs).
- Ignition OFF.
- Ignition ON.
- Wait 30 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0140 set in other modules?

Yes	DIAGNOSE the BCM does not communicate with the scan tool. REFER to: Communications Network (418-00 Module Communications Network) .
No	INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .

[PINPOINT TEST M : U0294:87](#)

Normal Operation and Fault Conditions

The RGTM and the PCM communicate through the CAN. Messages are exchanged between the modules for the purposes of determining what functions are carried out.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM U0294:87	Lost Communication With Powertrain Control Monitor Module: Missing Message	Sets by the RGTM if expected data messages received from the PCM over the CAN are missing.

Possible Sources

- Network communication concern
- RGTM
- PCM

M1 VERIFY CUSTOMER CONCERN

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

Is an observable symptom present?

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

M2 CHECK THE COMMUNICATION NETWORK

- Using a diagnostic scan tool, carry out the network test.

Does the PCM pass the network test?

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

M3 CARRY OUT THE PCM (POWERTRAIN CONTROL MODULE) SELF-TEST

- Using a diagnostic scan tool, carry out the PCM KOEO and KOER self-tests.

Are any voltage system related Diagnostic Trouble Codes (DTCs) present?

Yes	REFER to the PCM DTC Chart in the appropriate 303-14 section.
No	GO to M4

M4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCs) FROM THE RGTM (REAR GATE TRUNK MODULE) SELF-TEST

- Review the results from the RGTM self-test.

Is DTC U3003:16 present?

Yes	GO to Pinpoint Test N
No	GO to M5

M5 RECHECK THE RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCs)

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

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) and repeat the RGTM self-test.

Is DTC U0294:87 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 intermittent fault condition.

M6 CHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U0294 IN OTHER MODULES

- Using a diagnostic scan tool, clear all Continuous Memory Diagnostic Trouble Codes (CMDTCs).
- Ignition OFF.
- Ignition ON.
- Wait 30 seconds.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is DTC U0294 set in other modules?

Yes	INSTALL a new PCM. REFER to the PCM Removal and Installation procedure in the appropriate 303-14 section.
No	INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .

[PINPOINT TEST N : U3003:16](#)

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

The RGTM monitors its high current voltage supply circuit. If a fault is detected, the RGTM disables the power liftgate function.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM U3003:16	Battery Voltage: Circuit Voltage Below Threshold	Sets when the RGTM detects the high current voltage supply circuit is less than 8 volts.

Possible Sources

- High circuit resistance
- Charging system concern
- RGTM

NOTICE: Use the correct probe adapter(s) when making measurements. Failure to use the correct probe adapter(s) may damage the connector.

N1 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be above 8.8 Volts

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to N2
No	REPAIR the circuit.

N2 RECHECK THE RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCs)

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs)
- Wait 30 seconds.
- Using a diagnostic scan tool, carry out the RGTM self-test.

Is DTC U3003:16 still present?

Yes	GO to N3
No	The system is operating normally at this time. The DTC may have been set due to a previous low battery voltage condition.

N3 CHECK FOR CHARGING SYSTEM DIAGNOSTIC TROUBLE CODES (DTCs) SET IN OTHER MODULES

- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Is any other battery or charging system related DTC set in other modules?

Yes	Diagnose the charging system concern. REFER to the appropriate diagnostics in section 414-00.
No	GO to N4

N4 CHECK THE BATTERY CONDITION AND STATE OF CHARGE

- Ignition OFF.
- Check the battery condition and verify the battery is fully charged.
REFER to: Battery (414-01 Battery, Mounting and Cables, Diagnosis and Testing).

Is the battery OK and fully charged?

Yes	GO to N5
No	DIAGNOSE the battery. REFER to: Battery (414-01 Battery, Mounting and Cables, Diagnosis and Testing).

N5 CHECK THE RGTM (REAR GATE TRUNK MODULE) POWER_SUPPLY_POWER_VBATT (GATE_PWR_V) PID (PARAMETER IDENTIFICATION)

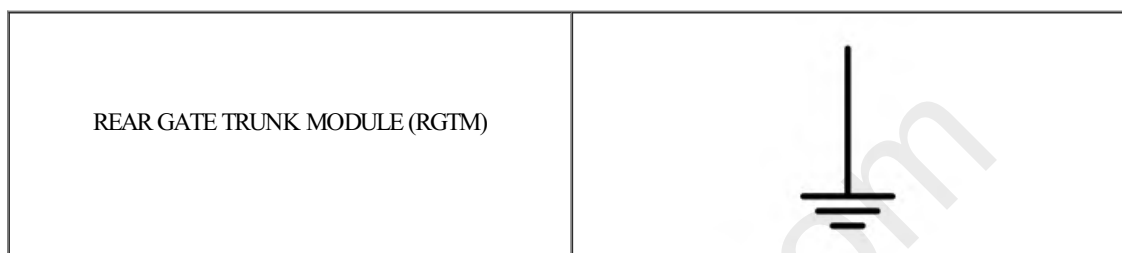
- Ignition ON.
- Measure and record the voltage at the battery.
- Using a diagnostic scan tool, monitor the RGTM Gate_Pwr_V PID.

Is the voltage within 0.2 volt of the recorded battery voltage?

Yes	GO to N8
No	GO to N6

N6 CHECK THE RGTM (REAR GATE TRUNK MODULE) VOLTAGE SUPPLY CIRCUIT FOR HIGH RESISTANCE

- Ignition OFF.
- Disconnect RGTM [C4174A](#).
- Measure:



Positive Lead	Measurement / Action	Negative Lead
C4174A-2		Ground

Is the voltage within 0.2 volt of the recorded battery voltage?

Yes	GO to N7
No	REPAIR the circuit.

N7 CHECK THE RGTM (REAR GATE TRUNK MODULE) GROUND CIRCUIT FOR HIGH RESISTANCE

- Measure:

REAR GATE TRUNK MODULE (RGTM)	
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Positive Lead	Measurement / Action	Negative Lead
C4174A-14	Ω	Ground

Is the resistance less than 3 ohms?

Yes	GO to N8
No	REPAIR the circuit.

N8 CHECK FOR CORRECT RGTM (REAR GATE TRUNK MODULE) OPERATION

- Disconnect and inspect all RGTM connectors.
- Repair:
 - corrosion (install new connectors 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 all the RGTM connectors and 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, INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

[PINPOINT TEST O : U3003:17](#)

Refer to Wiring Diagrams Cell [109](#) for schematic and connector information.

Normal Operation and Fault Conditions

The RGTM monitors its high current voltage supply circuit. If a fault is detected, the RGTM disables the power liftgate function.

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM U3003:17	Battery Voltage: Circuit Voltage Above Threshold	Sets when the RGTM detects the high current voltage supply circuit is more than 16.5 volts.

Possible Sources

- Charging system concern
- RGTM

NOTE: DTC U3003:17 may be stored in the module memory due to previous battery charging or vehicle jump starting event.

O1 CHECK THE SYSTEM BATTERY VOLTAGE INPUT TO THE LIFTGATE LATCH

- Using a diagnostic scan tool, view the RGTM PID.
 - Gate_Lgc_V
 - Gate_Pwr_V
- Monitor the PID -
 - Power voltage supply A and Power voltage supply B must be below 16.5 Volts

Do the Parameter Identifications (PIDs) agree with the required voltage values?

Yes	GO to O2
No	REPAIR the circuit.

O2 CHECK FOR OVER VOLTAGE DIAGNOSTIC TROUBLE CODES (DTCs) SET IN OTHER MODULES

- Ignition ON.
- Using a diagnostic scan tool, retrieve the Continuous Memory Diagnostic Trouble Codes (CMDTCs) from all modules.

Are any over voltage Diagnostic Trouble Codes (DTCs) set in other modules?

Yes	DIAGNOSE an overcharging condition. REFER to the appropriate diagnostics in section 414-00.
No	GO to O3

O3 CHECK THE BATTERY VOLTAGE

- Turn off all interior/exterior lights and accessories.
- Start and run the engine at approximately 2,000 rpm for 3 minutes while monitoring the battery voltage.

Does the battery voltage rise to 15.5 volts or higher?

Yes	DIAGNOSE an overcharging condition. REFER to the appropriate diagnostics in section 414-00.
No	GO to O4

O4 RECHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U3003:17

- Ignition OFF.
- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) and repeat the RGTM self-test.

Is DTC U3003:17 still present?

Yes	INSTALL a new RGTM. REFER to: Rear Gate Trunk Module (RGTM) (501-03 Body Closures) .
No	The system is operating normally at this time. The DTC may have been set previously during battery charging or while jump starting the vehicle.

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General Procedures

Front Door Alignment

Inspection

NOTE: Removal steps in this procedure may contain installation details.

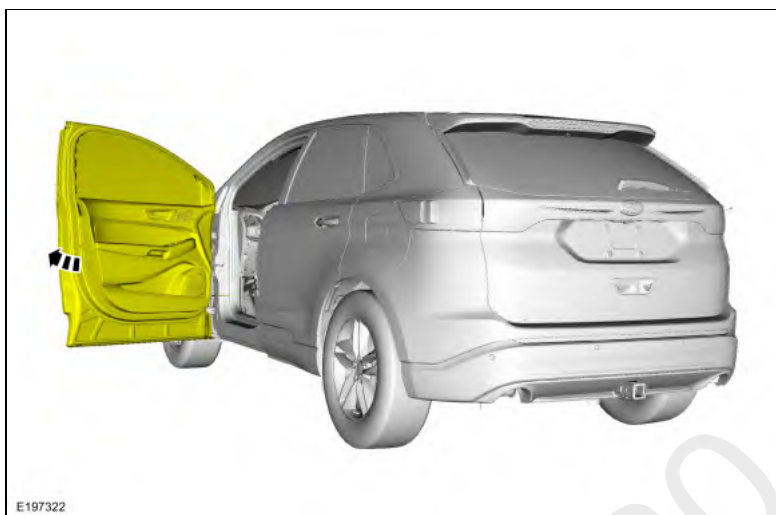
NOTE: LH side shown, RH side similar.

1. Inspect the front door-to-body dimensions.
Refer to: Body and Frame (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation).

Adjustment

All alignments

1. Open the door.



2. Remove the bolts and the striker assembly.
Torque: 18 lb.ft (25 Nm)



Front door in and out, up and down alignment

3. Loosen the bolts to permit movement of the door.
Loosen:
: 2 turn(s)