Power Tailgate

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
RGTM	B12E8:23	Liftgate/Tailgate Control/Release: Signal Stuck Low	GO to Pinpoint Test C
RGTM	B144B:11	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Short To Ground	GO to Pinpoint Test B
RGTM	B144B:13	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Open	GO to Pinpoint Test B
RGTM	B144C:23	Tailgate/Liftgate/Boot/Trunk Outer: Signal Stuck Low	GO to Pinpoint Test C
RGTM	B144D:29	Tailgate/Liftgate/Boot/Trunk Position Sensor 1: Signal Invalid	GO to Pinpoint Test B
RGTM	B144E:29	Tailgate/Liftgate/Boot/Trunk Position Sensor 2: Signal Invalid	GO to Pinpoint Test B
RGTM	B144F:11	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Short To Ground	GO to Pinpoint Test B
RGTM	B144F:12	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Short To Battery	GO to Pinpoint Test B
RGTM	B144F:13	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Open	GO to Pinpoint Test B
RGTM	B1451:29	Tailgate/Liftgate/Boot/Trunk Latch Centering Position Switch: Signal Invalid	GO to Pinpoint Test D
RGTM	B1452:11	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator: Circuit Short To Ground	GO to Pinpoint Test A
RGTM	B1452:12	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator: Circuit Short To Battery	GO to Pinpoint Test A
RGTM	B1452:13	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator: Circuit Open	GO to Pinpoint Test A
RGTM	B1453:29	Tailgate/Liftgate/Boot/Trunk Latch Position Switch: Signal Invalid	GO to Pinpoint Test D
RGTM	B1515:68	Tailgate/Liftgate/Boot/Trunk - Event Information: Event Information	GO to Pinpoint Test B
RGTM	B1515:77	Tailgate/Liftgate/Boot/Trunk: Commanded Position Not Reachable	GO to Pinpoint Test B

RGTM	B1515:97	Tailgate/Liftgate/Boot/Trunk: Component Or System Operation Obstructed Or Blocked	GO to Pinpoint Test B
RGTM	B1556:31	Tailgate/Liftgate/Boot/Trunk Position Sensor 3: No Signal	GO to Pinpoint Test B
RGTM	B15E7:29	Tailgate Step Detect Fault Indicator: Signal Invalid	GO to Pinpoint Test F
RGTM	B15E8:11	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator 2: Circuit Short To Ground	GO to Pinpoint Test A
RGTM	B15E8:12	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator 2: Circuit Short To Battery	GO to Pinpoint Test A
RGTM	B15E8:13	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator 2: Circuit Short To Open	GO to Pinpoint Test A
RGTM	B15E9:29	Tailgate/Liftgate/Boot/Trunk Latch Position Switch: Signal Invalid	GO to Pinpoint Test D
RGTM	B15EA:29	Tailgate/Liftgate/Boot/Trunk Latch Position Switch: Signal Invalid	GO to Pinpoint Test D
RGTM	C1B14:11	Sensor Supply Voltage A: Circuit Short To Ground	GO to Pinpoint Test B
RGTM	C1B14:12	Sensor Supply Voltage A: Circuit Short To Battery	GO to Pinpoint Test B
RGTM	P0A2F:4B	Drive Motor "A" Over Temperature: Over Temperature	GO to Pinpoint Test B
RGTM	P0A35:4B	Drive Motor "B" Over Temperature: Over Temperature	GO to Pinpoint Test B
RGTM	U0101:87	Lost Communication With TCM: Missing Message	GO to Pinpoint Test J
RGTM	U0140:87	Lost Communication With Body Control Module: Missing Message	GO to Pinpoint Test K
RGTM	U0294:87	Lost Communication With Powertrain Control Monitor Module: Missing Message	GO to Pinpoint Test L
RGTM	U2200:00	Control Module Configuration Memory Corrupt: No Sub Type Information	GO to Pinpoint Test O
RGTM	U3000:44	Control Module: Data Memory Failure	GO to Pinpoint Test I
RGTM	U3000:45	Control Module: Program Memory Failure	GO to Pinpoint Test I
RGTM	U3000:49	Control Module: Internal Electronic Failure	GO to Pinpoint Test P
RGTM	U3003:16	Battery Voltage: Circuit Voltage Below Threshold	GO to Pinpoint Test M
RGTM	U3003:17	Battery Voltage: Circuit Voltage Above Threshold	GO to Pinpoint Test N

Global Customer Symptom Code (GCSC) 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).

Global Customer Symptom Code Chart

Customer Symptom	Action
Safe & Secure > Latches/Locks > Tailgate > Difficult to Close	GO to Pinpoint Test B
Safe & Secure > Latches/Locks > Tailgate > Difficult to Close	GO to Pinpoint Test C
Safe & Secure > Latches/Locks > Tailgate > Difficult to Close	GO to Pinpoint Test D
Safe & Secure > Latches/Locks > Tailgate > Difficult to Close	GO to Pinpoint Test E
Safe & Secure > Latches/Locks > Tailgate > Difficult to Close	GO to Pinpoint Test I
Safe & Secure > Latches/Locks > Tailgate > Difficult to Close	GO to Pinpoint Test O
Safe & Secure > Latches/Locks > Tailgate > Difficult to Open	GO to Pinpoint Test A
Safe & Secure > Latches/Locks > Tailgate > Difficult to Open	GO to Pinpoint Test B
Safe & Secure > Latches/Locks > Tailgate > Difficult to Open	GO to Pinpoint Test C
Safe & Secure > Latches/Locks > Tailgate > Difficult to Open	GO to Pinpoint Test D
Safe & Secure > Latches/Locks > Tailgate > Difficult to Open	GO to Pinpoint Test G
Safe & Secure > Latches/Locks > Tailgate > Difficult to Open	GO to Pinpoint Test I
Safe & Secure > Latches/Locks > Tailgate > Difficult to Open	GO to Pinpoint Test O
Safe & Secure > Latches/Locks > Tailgate > Difficult to Open	GO to Pinpoint Test Q
Safe & Secure > Latches/Locks > Tailgate > Loose/Attachment	GO to Pinpoint Test H
Safe & Secure > Latches/Locks > Tailgate > Loose/Attachment	GO to Pinpoint Test R
Safe & Secure > Latches/Locks > Tailgate > Manual Function	GO to Pinpoint Test A
Safe & Secure > Latches/Locks > Tailgate > Manual Function	GO to Pinpoint Test E
Safe & Secure > Latches/Locks > Tailgate > Manual Function	GO to Pinpoint Test F
Safe & Secure > Latches/Locks > Tailgate > Manual Function	GO to Pinpoint Test G
Safe & Secure > Latches/Locks > Tailgate > Manual Function	GO to Pinpoint Test H
Safe & Secure > Latches/Locks > Tailgate > Manual Function	GO to Pinpoint Test R
Safe & Secure > Latches/Locks > Tailgate > Sticks/Binds	GO to Pinpoint Test B
Safe & Secure > Latches/Locks > Tailgate > Sticks/Binds	GO to Pinpoint Test D
Safe & Secure > Latches/Locks > Tailgate > Sticks/Binds	GO to Pinpoint Test F
Safe & Secure > Latches/Locks > Tailgate > Sticks/Binds	GO to Pinpoint Test G
Safe & Secure > Latches/Locks > Tailgate > Sticks/Binds	GO to Pinpoint Test I
Safe & Secure > Latches/Locks > Tailgate > Sticks/Binds	GO to Pinpoint Test R
Safe & Secure > Latches/Locks > Work Solutions > Power Function	GO to Pinpoint Test E
Safe & Secure > Latches/Locks > Work Solutions > Power Function	GO to Pinpoint Test H
Safe & Secure > Latches/Locks > Work Solutions > Power Function	GO to Pinpoint Test I
Safe & Secure > Remote Entry > Control > Inoperative	GO to Pinpoint Test S
Safe & Secure > Remote Entry > Control > Inoperative	GO to Pinpoint Test T

Symptom Chart

Symptom Chart: Power Tailgate

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).

Condition	Actions
• The power tailgate does not operate from a RKE transmitter	• GO to Pinpoint Test S
• The power tailgate passive entry feature is inoperative	• GO to Pinpoint Test T
• The power tailgate does not unlatch	• GO to Pinpoint Test A
• The tailgate unlatches but the power tailgate is inoperative	• GO to Pinpoint Test B
• The power tailgate is inoperative from one of the power tailgate control switches	• GO to Pinpoint Test C
• The power tailgate stops in the secondary latch position	• GO to Pinpoint Test D
• The power tailgate reverses during power open operation	• GO to Pinpoint Test Q
• The power tailgate reverses during a power close operation	• GO to Pinpoint Test E
• The power tailgate does not power close (power open OK)	• GO to Pinpoint Test F
• The power tailgate does not power open (power close OK)	• GO to Pinpoint Test H
• The power tailgate closes (with a continuous chime) immediately after a power open	• GO to Pinpoint Test H
• The power tailgate actuation is inoperative	• GO to Pinpoint Test I
• The power tailgate has excessive noise during operation	• GO to Pinpoint Test R

Pinpoint Tests

PINPOINT TEST A : THE POWER TAILGATE DOES NOT UNLATCH

Refer to Wiring Diagrams Cell 109 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, 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 RH tailgate latch release actuator output circuit.
RGTM B1452:12	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator: Circuit Short To Battery	Sets when the RGTM detects a short to battery from the RH tailgate 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 RH tailgate latch release actuator output circuit.
RGTM B15E8:11	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator 2: Circuit Short To Ground	Sets when the RGTM detects a short to ground from the LH tailgate latch release actuator output circuit.
RGTM B15E8:12	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator 2: Circuit Short To Battery	Sets when the RGTM detects a short to battery from the LH tailgate latch release actuator output circuit.
RGTM B15E8:13	Tailgate/Liftgate/Boot/Trunk Latch Release Actuator 2: Circuit Open	Sets when the RGTM detects an open from the LH tailgate latch release actuator output circuit.

Possible Sources

- Fuse
- Wiring, terminals or connectors
- Communication concern
- Tailgate Latch RH
- Tailgate Latch LH
- BJB
- RGTM
- Undervoltage / Overvoltage

Visual Inspection and Pre-checks

- Verify the BJB fuse 37 (30A) is OK
- Verify the power tailgate mode is ON (enable) from the message center

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 TAILGATE IS IN MANUAL MODE

- Check if the tailgate is in manual mode.

Does the tailgate is in manual mode?

Yes	Open the tailgate by using tailgate release button. Change the vehicle setting in touchscreen.
No	GO to A2

A2 CHECK THE TAILGATE LATCH MANUAL RELEASE

- Mechanically unlatch the tailgate from the exterior release handle.

Do the both RH and LH tailgate latches release?

Yes	GO to A3
No	INSTALL a new RH or LH power tailgate latch. REFER to: Tailgate Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

A3 CHECK FOR COMMUNICATION TO THE RGTM (REAR GATE TRUNK MODULE)

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

Does the RGTM pass the network test?

Yes	GO to A4
No	REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

A4 CHECK FOR VOLTAGE TO THE POWER TAILGATE LATCH RELEASE MOTOR

- Ignition OFF.
- Disconnect suspect Power Tailgate Latch connector RH C4626 or LH C4627.
- Press the tailgate release switch on the instrument panel or the exterior door handle release switch.
- Connect:

Power Tailgate RH Latch Switch

Positive Lead	Measurement / Action	Negative Lead
C4626-1		C4626-5

Power Tailgate LH Latch Switch

Positive Lead	Measurement / Action	Negative Lead

C4627-4		C4627-8

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

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

Does the test lamp momentarily illuminate?

Yes	Install new RH or LH Power Tailgate latch, REFER to: Tailgate Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).
No	GO to A5

A5 CHECK THE TAILGATE LATCH CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect RGTM C4623.
- Ignition ON.
- Measure:

Tailgate Cinch Latch RH

Positive Lead	Measurement / Action	Negative Lead
C4626-1	V	Ground
C4626-5	V	Ground

Tailgate Cinch Latch LH

Positive Lead	Measurement / Action	Negative Lead
C4627-4	V	Ground
C4627-8	V	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to A6

A6 CHECK THE RGTM (REAR GATE TRUNK MODULE) TAILGATE LATCH OUTPUT CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.

- Measure:

Tailgate Latch RH Switch

Positive Lead	Measurement / Action	Negative Lead
C4626-1	Ω	Ground
C4626-5	Ω	Ground

Tailgate Latch LH Switch

Positive Lead	Measurement / Action	Negative Lead
C4627-4	Ω	Ground
C4627-8	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to A7
No	REPAIR the circuit in question.

A7 CHECK THE TAILGATE LATCH CIRCUITS FOR AN OPEN

- Connect:

Tailgate Cinch Latch Switch RH

Positive Lead	Measurement / Action	Negative Lead
C4626-1	Ω	C4623-29
C4626-5	Ω	C4623-31

Tailgate Cinch Latch Switch LH

Positive Lead	Measurement / Action	Negative Lead
C4627-4	Ω	C4623-34
C4627-8	Ω	C4623-36

Are the resistances 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 – 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 TSB . If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

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

Refer to Wiring Diagrams Cell 109 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM P0A2F:4B	Drive Motor 'A' Over Temperature: Over Temperature	This DTC sets when RGTM detects excessive internal heat inside the power tailgate motor.
RGTM P0A35:4B	Drive Motor 'B' Over Temperature: Over Temperature	This DTC sets when RGTM detects excessive internal heat inside the Power tailgate motor.
RGTM B1515:77	Tailgate/Liftgate/Boot/Trunk: Commanded Position Not Reachable	This DTC sets when RGTM detects an obstacle during a power open operation.
RGTM B1515:97	Tailgate/Liftgate/Boot/Trunk: Component Or System Operation Obstructed Or Blocked	This DTC sets when RGTM detects an obstacle during a power close operation.

RGTM C1B14:11	Sensor Supply Voltage A: Circuit Short To Ground	Sets when the RGTM detects a short to ground from the power tailgate motor sensor voltage supply circuit.
RGTM C1B14:12	Sensor Supply Voltage A: Circuit Short To Battery	Sets when the RGTM detects a short to battery from the power tailgate motor sensor voltage supply circuit.
RGTM B144D:29	Tailgate/Liftgate/Boot/Trunk Position Sensor 1: Signal Invalid	Sets when the difference in sensor count between sensor 1 and 2 is 20 pulses or more.
RGTM B144E:29	Tailgate/Liftgate/Boot/Trunk Position Sensor 2: Signal Invalid	Sets when the difference in sensor count between sensor 1 and 2 is 20 pulses or more.
RGTM B1515:68	Tailgate/Liftgate/Boot/Trunk: Event Information	Sets when the RGTM receives no signal from the right power tailgate motor sensor 3 input or the sensor inputs are out of phase.
RGTM B1556:31	Tailgate/Liftgate/Boot/Trunk Position Sensor 3: No Signal	Sets when the RGTM does not receives any pulses from either sensor 1 or sensor 2.
RGTM B144F:11	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Short To Ground	This DTC sets when RGTM detects a short to ground from the power tailgate motor circuitry.
RGTM B144F:12	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Short To Battery	This DTC sets when RGTM detects a short to voltage from the power tailgate motor circuitry.
RGTM B144F:13	Tailgate/Liftgate/Boot/Trunk Driver Motor: Circuit Open	This DTC sets when RGTM detects an open from the power tailgate motor circuitry.
RGTM B144B:11	Tailgate/Liftgate/Boot/Trunk Driver Motor Clutch: Circuit Short To Ground	This DTC sets when RGTM detects a short to ground from the power tailgate motor circuitry.
RGTM B144B:13	Tailgate/Liftgate/Boot/Trunk Driver Motor Clutch: Circuit Open	This DTC sets when RGTM detects an open from the power tailgate motor circuitry.

Possible Sources

- Wiring, terminals or connectors
- Tailgate Latch RH
- Tailgate Latch LH
- Power tailgate motor
- RGTM

Visual Inspection and Pre-checks

- Verify the power tailgate mode is ON (enable) from the message center

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

B1 CHECK THE TAILGATE IS IN MANUAL MODE

- Check if the tailgate is in manual mode.

Does the tailgate is in manual mode?

Yes	Open the tailgate by using tailgate release button. Change the vehicle setting in touchscreen.
No	GO to B2

B2 CHECK THE OPERATION OF ALL THE POWER TAILGATE INPUTS

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

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

Yes	GO to the Symptom Chart and DIAGNOSE the correct symptom.
No	GO to B3

B3 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 B4
No	REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

B4 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 J For DTC U0140:87, GO to Pinpoint Test K For DTC U0294:87, GO to Pinpoint Test L For DTC U3003:16, GO to Pinpoint Test M For DTC U3003:17, GO to Pinpoint Test N
No	GO to B5

B5 CHECK FOR POWER TAILGATE MOTOR DIAGNOSTIC TROUBLE CODES (DTCS)

- View the results from the RGTM self-test.

Is DTC B144B:11, B144B:13, B144F:11, B144F:12, B144F:13, B144D:29, B144E:29, B1515:68, B1556:31, B1515:77, B1515:97, C1B14:11, C1B14:12, P0A2F:4B or P0A35:4B present?

Yes	For DTC B1515:68, B1515:77 or B1515:97, DIAGNOSE all other DTC first. If no other DTC is present, manually OPERATE the Tailgate and CHECK for mechanical binding, If mechanical binding exists, REPAIR as necessary. For DTC P0A2F:4B or P0A35:4B, INSTALL a new power tailgate motor. REFER to: Power Tailgate Motor (501-04 Pickup Bed and Platform Body, Removal and Installation). For DTC B144D:29, B144E:29 or B1556:31, GO to B10 For DTC B144B:11 or B144B:13 GO to B15
No	GO to B6

B6 CHECK THE POWER TAILGATE MOTOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect RGTM C4623.
- Disconnect Power Tailgate Motor C4625.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-5	V⎓	Ground
C4625-1	V⎓	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to B7

B7 CHECK THE POWER TAILGATE MOTOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-5	Ω	Ground
C4625-1	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to B8
No	REPAIR the circuit in question.

B8 CHECK THE POWER TAILGATE MOTOR CIRCUITS FOR A SHORT TOGETHER

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-5	Ω	C4625-1

Is the resistance greater than 10,000 ohms?

Yes	GO to B9
No	REPAIR the circuits.

B9 CHECK THE POWER TAILGATE MOTOR CIRCUITS FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-5	Ω	C4623-38
C4625-1	Ω	C4623-25

Are the resistances less than 3 ohms?

Yes	GO to B11
No	REPAIR the circuit in question.

B10 CHECK FOR POWER TAILGATE MOTOR SENSOR DIAGNOSTIC TROUBLE CODES (DTCS)

- View the results from the RGTM self-test.

Is DTC B144D:29, B144E:29 or B1556:31 present?

Yes	GO to B11
No	GO to B15

B11 CHECK THE POWER TAILGATE MOTOR SENSOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: RGTM C4623.
- Disconnect Power Tailgate Motor C4625.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-4	V	Ground
C4625-7	V	Ground
C4625-8	V	Ground
C4625-6	V	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to B12

B12 CHECK THE POWER TAILGATE MOTOR SENSOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-4	Ω	Ground
C4625-7	Ω	Ground
C4625-8	Ω	Ground
C4625-6	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to B13
No	REPAIR the circuit in question.

B13 CHECK THE POWER TAILGATE MOTOR SENSOR CIRCUITS FOR A SHORT TOGETHER

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-8	Ω	C4625-7
C4625-8	Ω	C4625-4
C4625-8	Ω	C4625-6
C4625-6	Ω	C4625-4
C4625-6	Ω	C4625-7
C4625-4	Ω	C4625-7

Are the resistances greater than 10,000 ohms?

Yes	GO to B14
No	REPAIR the circuits in question.

B14 CHECK THE POWER TAILGATE MOTOR SENSOR CIRCUITS FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-4	Ω	C4623-18
C4625-7	Ω	C4623-19
C4625-8	Ω	C4623-22
C4625-6	Ω	C4623-21

Are the resistances less than 3 ohms?

Yes	INSTALL a power tailgate motor in question. REFER to: Power Tailgate Motor (501-04 Pickup Bed and Platform Body, Removal and Installation). TEST the system for normal operation.GO to B20
No	REPAIR the circuit in question.

B15 CHECK THE POWER TAILGATE MOTOR CLUTCH CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect: RGTM C4623.
- Disconnect Power tailgate motor C4625.
- Ignition ON.

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-3	V	Ground
C4625-2	V	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to B16

B16 CHECK THE POWER TAILGATE MOTOR CLUTCH CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-3	Ω	Ground
C4625-2	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to B17
No	REPAIR the circuit in question.

B17 CHECK THE POWER TAILGATE MOTOR CLUTCH CIRCUITS FOR A SHORT TOGETHER

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4625-2	Ω	C4625-3

Is the resistance greater than 10,000 ohms?

Yes	GO to B18
No	REPAIR the circuit.

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4623-35	Ω	C4625-2
C4623-37	Ω	C4623-3

Are the resistances less than 3 ohms?

Yes	GO to B19
No	REPAIR the circuit in question.

B19 CHECK FOR OTHER TAILGATE LATCH DIAGNOSTIC TROUBLE CODES (DTCS)

- View the results from the RGTM self-test.

Are any other RGTM DTC s present?

Yes	For all other DTC s, REFER to the DTC chart in this section.
No	For DTC B1451:29 or B1453:29, GO to Pinpoint Test D

B20 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

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

Refer to Wiring Diagrams Cell 109 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM B12E8:23	Liftgate/Tailgate Control/Release Switch: Signal Stuck Low	Sets when the RGTM detects a short to ground from the front power tailgate 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 tailgate release switch input circuit.

Possible Sources

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

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

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

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

Does the power tailgate open or close from any input?

Yes	GO to C2
No	GO to Pinpoint Test B

C2 CHECK THE RGTM (REAR GATE TRUNK MODULE) POWER TAILGATE SWITCH PARAMETER IDENTIFICATIONS (PIDS)

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

- Using a diagnostic scan tool, monitor the following RGTM PID :
  - Access the RGTM and monitor the TAILGATE_LCK_SW_INP PID
  - Access the RGTM and monitor the TAILGATE_REL_SW PID
- Using a diagnostic scan tool, monitor the following RGTM PID :

Do any of the PID s indicate a switch is pressed?

Yes	GO to C3
No	GO to C6

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

- Ignition OFF.
- Disconnect: the suspect power tailgate switch.
- Ignition ON.
- Using a diagnostic scan tool, monitor the following RGTM PID :
  - Access the RGTM and monitor the TAILGATE_LCK_SW_INP PID
  - Access the RGTM and monitor the TAILGATE_REL_SW PID

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

Yes	GO to C4
No	INSTALL a new power tailgate switch in question. REFER to: Tailgate Release Switch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

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

- Ignition OFF.
- Disconnect: BCM connector C2280B (interior switch) or C2280E (exterior switch).
- Ignition ON.
- Using a diagnostic scan tool, monitor the RGTM .
  - Access the RGTM and monitor the TAILGATE_LCK_SW_INP PID
  - Access the RGTM and monitor the TAILGATE_REL_SW PID

Does the PID continue to indicate the switch is pressed?

Yes	GO to C5
No	GO to C9

GROUND

- Ignition OFF.
- Disconnect: RGTM C4623.
- Measure:

Front Interior Power Tailgate Switch

Positive Lead	Measurement / Action	Negative Lead
C4623-12	Ω	Ground

Exterior Tailgate Release Switch

Positive Lead	Measurement / Action	Negative Lead
C4623-10	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to C10
No	REPAIR the circuit.

C6 BYPASS THE SUSPECT POWER TAILGATE SWITCH

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

For the suspect power tailgate switch, connect:

Front Interior Tailgate Switch

Positive Lead	Measurement / Action	Negative Lead
C2834-2		C2834-3

Exterior Tailgate Release Switch

Positive Lead	Measurement / Action	Negative Lead
C4499-1		C4499-2

- Remove the fused jumper wire.

Does the tailgate open or close?

Yes	INSTALL a new power tailgate switch in question. REFER to: Tailgate Release Switch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).
No	GO to C7

C7 CHECK THE POWER TAILGATE SWITCH GROUND CIRCUIT FOR AN OPEN

- For the suspect power tailgate switch, connect:

Front Interior Tailgate Switch

Positive Lead	Measurement / Action	Negative Lead
C2834-2		C4623-12

Exterior Tailgate Release Switch

Positive Lead	Measurement / Action	Negative Lead
C4499-1		C4623-10

- Remove the fused jumper wire.

Does the tailgate open or close?

Yes	REPAIR the circuit.
No	GO to C8

C8 CHECK THE POWER TAILGATE SWITCH INPUT CIRCUIT FOR AN OPEN

- Disconnect: RGTM C4623.
- For the suspect tailgate switch, measure:

Front Interior Tailgate Switch

Positive Lead	Measurement / Action	Negative Lead
C2834-2	Ω	C4623-12

Exterior Tailgate Release Switch

Positive Lead	Measurement / Action	Negative Lead
C4499-1	Ω	C4623-10

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 – 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST D : THE POWER TAILGATE STOPS IN THE SECONDARY LATCH POSITION

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM B1451:29	Tailgate/Liftgate/Boot/Trunk Latch Centering Position Switch: Signal Invalid	Sets when the RGTM detects the RH latch home open/close switch(es) are not in the correct state at the beginning of self-test, or no home switch transition during releasing/cinching.
RGTM B1453:29	Tailgate/Liftgate/Boot/Trunk Latch Position Switch: Signal Invalid	Sets when the RGTM detects the RH latch home open/close switch(es) are not in the correct state at the beginning of self-test, or no home switch transition during releasing/cinching.
RGTM B15E9:29	Tailgate/Liftgate/Boot/Trunk Latch Centering Position Switch 2: Signal Invalid	Sets when the RGTM detects the LH latch home open/close switch(es) are not in the correct state at the beginning of self-test, or no home switch transition during releasing/cinching.
RGTM B15EA:29	Tailgate/Liftgate/Boot/Trunk Latch Position Switch 2: Signal Invalid	Sets when the RGTM detects the LH latch home open/close switch(es) are not in the correct state at the beginning of self-test, or no home switch transition during releasing/cinching.

Possible Sources

- Tailgate alignment
- Tailgate striker alignment
- Mechanical binding

D1 CHECK THE RGTM (REAR GATE TRUNK MODULE) LATCH AND PAWL SWITCHES PARAMETER IDENTIFICATIONS (PIDS)

- Ignition ON
- Using a diagnostic scan tool, view RGTM PID s.
- Using a diagnostic scan tool, monitor the following RGTM PID s for RH latch:
  - Access the RGTM and monitor the TAILGATE_LCK_SW_INP PID
  - Access the RGTM and monitor the TAILGATE_PWL_SW PID
- Using a diagnostic scan tool, monitor the following RGTM PID s for LH latch:
  - Access the RGTM and monitor the TAILGATE_LCK_SW_INP PID
  - Access the RGTM and monitor the TAILGATE_PWL_SW PID
- **NOTE:** *The tailgate is in the primary position when the tailgate is in the full closed position. The tailgate is in the unlatch position when the tailgate is open and completely out of the striker.*

  Begin with the tailgate in the open position, then slowly close the tailgate to the secondary latch (first

click) and then primary latch (second click) positions.

Tailgate Latch State/Position	Forkbolt Secondary Switch (FB1)	Forkbolt Primary Switch (FB2)	Tailgate Pawl Switch	Home/Neutral Switch
	Normally Open Circuit	Normally Closed Circuit	Normally Open Circuit	Normally Open Circuit
Fully unlatched	Closed (Compressed)	Open (Compressed)	Closed (Compressed)	Open
Secondary	Open	Open (Compressed)	Open	Open
Primary	Open	Closed	Open	Open

Do the switch states agree with the table?

Yes	GO to D2
No	GO to D4

D2 CHECK THE MANUAL OPERATION OF THE TAILGATE

- Turn the power tailgate off (disable) from the message center.
- While manually opening and closing the tailgate, check the tailgate for:
  - Power tailgate motor (should move freely while manually opening and closing tailgate and be securely mounted to the tailgate)
  - Check the suspect RH or LH Power tailgate latch (should latch completely)

Does the tailgate open and close correctly?

Yes	GO to D3
No	REPAIR as necessary.

D3 CHECK THE TAILGATE LATCH AND STRIKER ALIGNMENT

- Inspect the striker and suspect latch for correct alignment.

Is the latch and striker aligned correctly?

Yes	GO to D7
No	ALIGN the tailgate latch and striker.

D4 CHECK THE TAILGATE LATCH INPUT CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: RGTM C4623.
- Disconnect: tailgate Latch RH C4626 or LH C4627.

- Measure:

Tailgate Cinch Latch RH

Positive Lead	Measurement / Action	Negative Lead
C4626-7	Ω	Ground
C4626-3	Ω	Ground
C4626-6	Ω	Ground
C4626-2	Ω	Ground
C4626-8	Ω	Ground

Tailgate Cinch Latch LH

Positive Lead	Measurement / Action	Negative Lead
C4627-6	Ω	Ground
C4627-2	Ω	Ground
C4627-7	Ω	Ground
C4627-5	Ω	Ground
C4627-3	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to D5
No	REPAIR the circuit in question.

D5 CHECK THE TAILGATE LATCH INPUT CIRCUITS FOR A SHORT TO EACH OTHER

- Measure:

Tailgate Cinch Latch RH

Positive Lead	Measurement / Action	Negative Lead
C4626-2	Ω	C4626-3
C4626-2	Ω	C4626-6
C4626-2	Ω	C4626-7
C4626-2	Ω	C4626-8
C4626-3		C4626-6

	Ω	
C4626-3	Ω	C4626-7
C4626-3	Ω	C4626-8
C4626-6	Ω	C4626-7
C4626-6	Ω	C4626-8
C4626-7	Ω	C4626-8

Tailgate Cinch Latch LH

Positive Lead	Measurement / Action	Negative Lead
C4627-6	Ω	C4627-2
C4627-6	Ω	C4627-3
C4627-6	Ω	C4627-5
C4627-6	Ω	C4627-7
C4627-3	Ω	C4627-2
C4627-3	Ω	C4627-5
C4627-3	Ω	C4627-7
C4627-2	Ω	C4627-5
C4627-2	Ω	C4627-7
C4627-5	Ω	C4627-7

Are the resistances greater than 10,000 ohms?

Yes	GO to D6
No	REPAIR the circuits in question.

D6 CHECK THE TAILGATE LATCH CIRCUITS FOR AN OPEN

- Measure:

Tailgate Cinch Latch RH

Positive Lead	Measurement / Action	Negative Lead
C4626-7	Ω	C4623-16
C4626-3	Ω	C4623-23

C4626-6	Ω	C4623-24
C4626-2	Ω	C4623-26
C4626-8	Ω	C4623-27

Tailgate Cinch Latch LH

Positive Lead	Measurement / Action	Negative Lead
C4627-6	Ω	C4623-8
C4627-2	Ω	C4623-5
C4627-7	Ω	C4623-6
C4627-5	Ω	C4623-28
C4627-3	Ω	C4623-7

Are the resistances less than 3 ohms?

Yes	INSTALL a new RH or LH tailgate latch. REFER to: Tailgate 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 D11
No	REPAIR the circuit in question.

D7 CHECK THE TAILGATE LATCH MOTOR CIRCUITS FOR A SHORT TO VOLTAGE

- Ignition OFF.
- Disconnect RGTM C4623.
- Disconnect suspect Power Tailgate Latch C4626 RH or C4627 LH .
- Ignition ON.
- Measure:

Tailgate Cinch Latch RH

Positive Lead	Measurement / Action	Negative Lead
C4623-31	V	Ground
C4623-29	V	Ground

Tailgate Cinch Latch LH

Positive Lead	Measurement / Action	Negative Lead
C4623-36	V	Ground
C4623-34	V	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to D8

D8 CHECK THE TAILGATE LATCH MOTOR CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Tailgate Cinch Latch RH

Positive Lead	Measurement / Action	Negative Lead
C4623-29	Ω	Ground
C4623-31	Ω	Ground

Tailgate Cinch Latch LH

Positive Lead	Measurement / Action	Negative Lead
C4623-34	Ω	Ground
C4623-36	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to D9
No	REPAIR the circuit in question.

D9 CHECK THE TAILGATE LATCH MOTOR CIRCUITS FOR A SHORT TOGETHER

- Ignition OFF.
- Measure:

Tailgate Cinch Latch RH

Positive Lead	Measurement / Action	Negative Lead
C4623-29	Ω	C4623-31

Tailgate Cinch Latch LH

Positive Lead	Measurement / Action	Negative Lead
C4623-34	Ω	C4623-36

Is the resistance greater than 10,000 ohms?

Yes	GO to D10
No	REPAIR the circuits.

D10 CHECK THE TAILGATE LATCH MOTOR CIRCUITS FOR AN OPEN

- Ignition OFF.
- Measure:

Tailgate Cinch Latch RH

Positive Lead	Measurement / Action	Negative Lead
C4623-29	Ω	C4627-1
C4623-31	Ω	C4627-5

Tailgate Cinch Latch LH

Positive Lead	Measurement / Action	Negative Lead
C4623-34	Ω	C4627-4
C4623-36	Ω	C4627-8

Are the resistances less than 10,000 ohms?

Yes	INSTALL a new RH or LH power tailgate latch. REFER to: Tailgate Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). CLEAR the DTC s and TEST the system for normal operation. If the concern is still

	present, GO to D11
No	REPAIR the circuit in question.

D11 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

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

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

Possible Sources

- Tailgate alignment
- Tailgate striker alignment
- Mechanical binding

E1 CHECK THE RGTM (REAR GATE TRUNK MODULE) LATCH AND PAWL SWITCH PARAMETER IDENTIFICATIONS (PIDS)

- Using a diagnostic scan tool, view RGTM PID s.
- Using a diagnostic scan tool, monitor the following RGTM PID s for RH latch:
  - Access the RGTM and monitor the TAILGATE_LCK_SW_INP PID
  - Access the RGTM and monitor the TAILGATE_PWL_SW PID
- Using a diagnostic scan tool, monitor the following RGTM PID s for LH latch:
  - Access the RGTM and monitor the TAILGATE_LCK_SW_INP PID
  - Access the RGTM and monitor the TAILGATE_PWL_SW PID
- **NOTE:** *The tailgate is in the primary position when the tailgate is in the full closed position. The*

tailgate is in the unlatch position when the tailgate is open and completely out of the striker.

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

Tailgate Latch State/Position	Forkbolt Secondary Switch (FB1)	Forkbolt Primary Switch (FB2)	Tailgate Pawl Switch	Home/Neutral Switch
	Normally Open Circuit	Normally Closed Circuit	Normally Open Circuit	Normally Open Circuit
Fully unlatched	Closed (Compressed)	Open (Compressed)	Closed (Compressed)	Open
Secondary	Open	Open (Compressed)	Open	Open
Primary	Open	Closed	Open	Open

Do the switch states agree with the table?

Yes	GO to E2
No	GO to Pinpoint Test D

E2 CHECK THE MANUAL OPERATION OF THE TAILGATE

- Ignition ON.
- Turn the power tailgate off (disable) from the message center.
- While manually opening and closing the tailgate, check the tailgate for:
  - Power tailgate motor (should move freely while manually opening and closing tailgate and be securely mounted to the tailgate)
  - Check the suspect RH or LH power tailgate latch (should latch completely)

Does the tailgate open and close correctly?

Yes	GO to Pinpoint Test D
No	REPAIR as necessary.

PINPOINT TEST F : THE POWER TAILGATE STEP DETECT STATUS DOES NOT WORK

Refer to Wiring Diagrams Cell 109 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM B15E7:29	Tailgate Step Detect Fault Indicator: Signal Invalid	Sets when the RGTM detects the home open/close switch(es) are not in the correct state at the beginning of self-test, or no home switch transition during releasing/cinching.

Possible Sources

- Tailgate step status
- 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 FOR RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

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

Is DTC B15E7:29 present?

Yes	GO to F3
No	DIAGNOSE any other DTC s first. REFER to DTC Chart. If no other DTC s are present, GO to F2

F2 CHECK THE TAILGATE STEP STATUS

- Using diagnostic scan tool to observe Tailgate Step Switch status while deploying and storing the step with the tailgate in the fully open position.
  - Access the RGTM and monitor the TAILGATE_LCK_SW_INP PID
  - Access the RGTM and monitor the TAILGATE_PWL_SW PID

Does the PID correctly indicate the step status?

Yes	Check the manual operation of the tailgate and correct any manual binding issues as necessary.
No	GO to F3

F3 CHECK FOR SHORT TO VOLTAGE ON TAILGATE STEP STATUS SENSOR CIRCUIT

- Ignition OFF.
- Disconnect RGTM C4623.
- Disconnect Tailgate step status sensor C4624.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4624-2	V	Ground

Is any voltage present?

Yes	REPAIR the circuit.
No	GO to F4

F4 CHECK FOR A SHORT TO GROUND ON THE TAILGATE STEP STATUS CIRCUIT

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4624-2	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to F5
No	REPAIR the circuit.

F5 CHECK FOR AN OPEN IN THE TAILGATE STEP STATUS CIRCUITS

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4624-2	Ω	C4623-17
C4624-1	Ω	C4623-11

Are the resistances less than 3 ohms?

Yes	GO to F6
No	REPAIR the circuit in question.

F6 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new a new tailgate step status sensor. REFER to: Tailgate Step (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

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

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

Possible Sources

- Tailgate alignment
- Tailgate striker alignment
- Mechanical binding

G1 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 DTC present?

Yes	REFER to the DTC Chart in this section.
No	GO to G2

G2 CHECK THE TAILGATE LATCH RELEASE OPERATION

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

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

Do the tailgate latches release?

Yes	GO to G3
No	GO to Pinpoint Test B

G3 CHECK THE MANUAL OPERATION OF THE TAILGATE

- Turn the power tailgate off (disable) from the message center.
- While manually opening and closing the tailgate, check the tailgate for:
  - Power tailgate motor (should move freely while manually opening and closing tailgate and be securely mounted to the tailgate and bracket)
  - Check the suspect RH or LH Power tailgate latch (should latch completely)

Does the tailgate open and close correctly?

Yes	GO to Pinpoint Test B
No	REPAIR as necessary.

PINPOINT TEST H : THE POWER TAILGATE CLOSES (WITH A CONTINUOUS CHIME) IMMEDIATELY AFTER A POWER OPEN

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

Possible Sources

- Excessive weight on the tailgate, such as snow, ice or a bicycle rack
- Tailgate damper

H1 CHECK FOR RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

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

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

Are any DTC present?

Yes	REFER to the DTC Chart in this section.
No	GO to H2

H2 CHECK THE TAILGATE DAMPER

- Verify there is no excessive weight on the tailgate, such as snow, ice or a bicycle rack.
- Turn the power tailgate off (disable) from the message center.
- Operate the tailgate manually to verify the tailgate damper is working correctly.

Does the tailgate damper work correctly?

Yes	GO to H3
No	INSTALL a new tailgate damper. REFER to: Tailgate Damper (501-04 Pickup Bed and Platform Body, Removal and Installation).

H3 CHECK THE TAILGATE TORSION ROD

- Verify there is no excessive weight on the tailgate, such as snow, ice or a bicycle rack.
- Turn the power tailgate off (disable) from the message center.
- Operate the tailgate manually to verify the tailgate torsion rod is working correctly.

Does the tailgate torsion rod work correctly?

Yes	GO to H4
No	INSTALL a new tailgate torsion rod. REFER to: Tailgate Torsion Rod (501-04 Pickup Bed and Platform Body, Removal and Installation).

H4 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST I : THE POWER TAILGATE ACTUATION IS INOPERATIVE

Refer to Wiring Diagrams Cell 109 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM U3000:44	Control Module: Data Memory Failure	Sets in the RGTM when an internal memory failure is detected.
RGTM	Control Module: Program	Sets in the RGTM when an internal failure is

U3000:45	Memory Failure	detected.

Possible Sources

- RGTM

Visual Inspection and Pre-checks

- Verify the power tailgate mode is ON (enable) from the message center

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

I1 CHECK THE TAILGATE IS IN MANUAL MODE

- Check if the tailgate is in manual mode.

Does the tailgate is in manual mode?

Yes	Open the tailgate by using tailgate release button. Change the vehicle setting in touchscreen.
No	GO to I2

I2 RETRIEVE RGTM (REAR GATE TRUNK MODULE) DTCS (DIAGNOSTIC TROUBLE CODES)

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

- Ignition ON.
- Using a diagnostic scan tool, CLEAR the RGTM DTC s.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the RGTM self-test.

Is DTC U3000:44 or U3000:45 recorded?

Yes	INSTALL a new RGTM , REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time.

I3 CHECK THE TAILGATE PASSIVE ENTRY OPERATION

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

- Ignition OFF.
- Close the tailgate.
- 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 tailgate release switch on the tailgate.

Does the power tailgate open?

Yes	GO to I4

No	DIAGNOSE the tailgate passive entry feature. REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).

I4 VERIFY THE CONCERN IS PRESENT

- Close the tailgate.
- With the passive key within 1 meter (3 feet) of the rear bumper, press the exterior tailgate release switch on tailgate.

Does the power tailgate open?

Yes	The system is operating correctly.
No	GO to I5

I5 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new BCM REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST J : U0101:87

Normal Operation and Fault Conditions

The RGTM and the TCM 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 TCM over the CAN are missing.

Possible Sources

- Network communication concern
- TCM
- RGTM

J1 VERIFY THE CUSTOMER CONCERN

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

Is an observable symptom present?

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

J2 CHECK THE COMMUNICATION NETWORK

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

Does the TCM pass the network test?

Yes	GO to J3
No	REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

J3 CARRY OUT THE TCM (TRANSMISSION CONTROL MODULE) SELF-TEST

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

Are any non-network DTC s present?

Yes	DIAGNOSE all non-network DTC s. REFER to the TCM DTC Chart in the appropriate 307-01 section.
No	GO to J4

J4 RETRIEVE THE RECORDED DIAGNOSTIC TROUBLE CODES (DTCS) FROM THE RGTM (REAR GATE TRUNK MODULE) SELF-TEST

- Review the results from the RGTM self-test.

Are any non-network DTC s present?

Yes	DIAGNOSE all non-network Diagnostic Trouble Codes (DTCs). REFER to the RGTM DTC Chart in this section.

No	GO to J5

J5 RECHECK THE RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

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

Is DTC U0101:87 still present?

Yes	GO to J6
No	The system is operating correctly at this time. The DTC may have been set due to high network traffic or intermittent fault condition.

J6 CHECK FOR CORRECT TCM (TRANSMISSION CONTROL MODULE) OPERATION

- Disconnect and inspect all TCM 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 TCM 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB address this concern, INSTALL a new TCM , REFER to: Transmission Control Module (TCM) (307-01A Automatic Transmission - 10-Speed Automatic Transmission – 10R80, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST K : 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

K1 VERIFY THE CUSTOMER CONCERN

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

Is an observable symptom present?

Yes	GO to K2
No	CLEAR the DTC . The system is operating 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 BCM pass the network test?

Yes	GO to K3
No	REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

K3 CARRY OUT THE BCM (BODY CONTROL MODULE) SELF-TEST

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

Are any non-network DTC s present?

Yes	DIAGNOSE all non-network DTC s. REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Diagnosis and Testing).
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.

Are any non-network DTC s present?

Yes	DIAGNOSE all non-network DTC s. REFER to the RGTM DTC Chart in this section.
No	GO to K5

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

- Using a diagnostic scan tool, clear the RGTM DTC s.
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, carry out the continuous memory self-test.
- Check the RGTM DTC s.

Is DTC U0140:87 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 OTHER CAUSES OF COMMUNICATION NETWORK CONCERN

- Check the vehicle service history for recent service actions related to the BCM . If recent service history is found:
  - verify correct replacement module was installed
    - HVBOM may be used to verify correct part number
  - 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
- Operate the system and determine if the observable symptom is still present.

Is the observable symptom still present?

Yes	GO to K7
No	The system is operating correctly at this time. The concern may have been due to incorrect parts replacement procedures or incorrect module configuration.

K7 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new BCM , REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST L : 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

L1 VERIFY THE CUSTOMER CONCERN

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

Is an observable symptom present?

Yes	GO to L2
No	CLEAR the DTC . The system is operating 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 PCM pass the network test?

Yes	GO to L3
No	REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and

	Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

L3 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 non-network DTC s present?

Yes	DIAGNOSE all non-network DTC s. REFER to the PCM DTC Chart in the appropriate 303-14 section.
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.

Are any non-network DTC s present?

Yes	DIAGNOSE all non-network DTC s. REFER to the DTC Chart in this section.
No	GO to L5

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

- Using a diagnostic scan tool, clear the RGTM DTC s.
- Ignition OFF.
- Ignition ON.
- Wait 10 seconds.
- Using a diagnostic scan tool, carry out the continuous memory self-test.
- Check the RGTM DTC s.

Is DTC U0294:87 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 CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Disconnect and inspect all PCM 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 PCM 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new PCM REFER to: Powertrain Control Module (PCM) (303-14A Electronic Engine Controls - 2.7L EcoBoost (238kW/324PS), Removal and Installation). REFER to: Powertrain Control Module (PCM) (303-14B Electronic Engine Controls - 3.3L Duratec-V6, Removal and Installation). REFER to: Powertrain Control Module (PCM) (303-14C Electronic Engine Controls - 3.5L EcoBoost (BM), Removal and Installation). REFER to: Powertrain Control Module (PCM) (303-14D Electronic Engine Controls - 3.5L V6 PowerBoost (CN), Removal and Installation). REFER to: Powertrain Control Module (PCM) (303-14E Electronic Engine Controls - 5.0L 32V Ti-VCT, Removal and Installation). REFER to: Powertrain Control Module (PCM) (303-14A Electronic Engine Controls - 2.7L EcoBoost (238kW/324PS), Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST M : 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 tailgate 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 8.8 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.

M1 RECHECK THE RGTM (REAR GATE TRUNK MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Using a diagnostic scan tool, clear the DTC s.
- Wait 30 seconds.
- Using a diagnostic scan tool, carry out the RGTM self-test.

Is DTC U3003:16 still present?

Yes	GO to M2
No	The system is operating normally at this time. The DTC may have been set due to a previous low battery voltage condition.

M2 CHECK FOR CHARGING SYSTEM DIAGNOSTIC TROUBLE CODES (DTCS) SET IN OTHER MODULES

- Using a diagnostic scan tool, retrieve the CMDTC s 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 Diagnosis and Testing in section 414-00.
No	GO to M3

M3 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 M4
No	DIAGNOSE the battery. REFER to: Battery (414-01 Battery, Mounting and Cables, Diagnosis and Testing).

M4 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 M7
No	GO to M5

M5 CHECK THE RGTM (REAR GATE TRUNK MODULE) VOLTAGE SUPPLY CIRCUIT FOR HIGH RESISTANCE

- Ignition OFF.
- Disconnect: RGTM C4623.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4623-13	V	Ground

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

Yes	GO to M6
No	REPAIR the circuit.

M6 CHECK THE RGTM (REAR GATE TRUNK MODULE) GROUND CIRCUIT FOR HIGH RESISTANCE

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4623-13	V	C4623-1

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

Yes	GO to M7
No	REPAIR the circuit.

M7 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 TSB s. If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST N : 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 tailgate 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 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.*

N1 CHECK FOR OVER VOLTAGE DIAGNOSTIC TROUBLE CODES (DTCS) SET IN OTHER MODULES

- Ignition ON.
- Using a diagnostic scan tool, retrieve the CMDTC s from all modules.

Are any over voltage DTC s set in other modules?

Yes	DIAGNOSE an overcharging condition. REFER to the appropriate Diagnosis and Testing in section 414-00.
No	GO to N2

N2 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 Diagnosis and Testing in section 414-00.
No	GO to N3

N3 RECHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U3003:17

- Ignition OFF.
- Ignition ON.

- Using a diagnostic scan tool, clear the DTC s and repeat the RGTM self-test.

Is DTC U3003:17 still present?

Yes	INSTALL a new RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
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.

PINPOINT TEST O : U2200:00

Normal Operation and Fault Conditions

INSTALL a new RGTM REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM U2200:00	Control Module Configuration Memory Corrupt: No Sub Type Information	This DTC sets when the RGTM memory is corrupted.

Possible Sources

- RGTM

Diagnostic steps are not provided for this symptom or DTC. REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

PINPOINT TEST P : U3000:49

Normal Operation and Fault Conditions

INSTALL a new RGTM REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).

DTC Fault Trigger Conditions

DTC	Description	Fault Trigger Condition
RGTM U3000:49	Control Module: Internal Electronic Failure	This DTC sets when RGTM detects an internal failure.

Possible Sources

- RGTM

Diagnostic steps are not provided for this symptom or DTC. REFER to: Diagnostic Methods (100-00 General Information, Description and Operation).

PINPOINT TEST Q : THE POWER TAILGATE REVERSES DURING POWER OPEN OPERATION

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

Possible Sources

- Mechanical binding
- The vehicle was started or taken out of park during a power open operation

Q1 MANUALLY OPERATE THE TAILGATE AND CHECK FOR MECHANICAL BINDING

- Manually operate the tailgate and check for mechanical binding.

Was mechanical binding present?

Yes	REPAIR as necessary.
No	GO to Q2

Q2 THE VEHICLE WAS STARTED OR TAKEN OUT OF PARK DURING A POWER OPEN OPERATION

- Ask customer if the power tailgate was open while vehicle started or taken out of park during power open operation.

Was the vehicle started or taken out of park during power operation?

Yes	REPAIR as necessary.
No	The power tailgate is operating correctly.

Q3 CHECK FOR POWER TAILGATE SELF TEST AND ANY DTC DETECTED DURING POWER OPEN

- Check for any obstacle is detected during power open.
- Using a diagnostic scan tool, carry out the RGTM self-test.

Is any DTC present?

Yes	For B1515:77, GO to Pinpoint Test B
No	Operate the tailgate to see if the concern is still present. If OK, the system is operating correctly at this time. The concern may have been caused by the vehicle taken out of park during a power open operation.

PINPOINT TEST R : THE POWER TAILGATE HAS EXCESSIVE NOISE DURING OPERATION

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

Possible Sources

- Mechanical binding
- Tailgate alignment

R1 MANUALLY OPERATE THE TAILGATE AND CHECK FOR MECHANICAL BINDING

- Manually operate the tailgate and check for mechanical binding.

Was any mechanical binding present?

Yes	REPAIR as necessary.
No	ALIGN the tailgate.

PINPOINT TEST S : THE POWER TAILGATE DOES NOT OPERATE FROM RKE (REMOTE KEY ENTRY)

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

Possible Sources

- Remote key / keyfob
- RKE
- Power tailgate latch and actuator
- Power tailgate latch release system concern
- Power tailgate system concern
- Wiring, terminals or connectors
- RGTM
- Network communication concern

S1 CHECK FOR REMOTE KEY OPERATION

- Check the operation of power tailgate with fob key.

Does the power tailgate actuate when commanded from the key fob?

Yes	Check the locks and latches are correctly operated. REFER to: Locks, Latches and Entry Systems (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).
No	GO to S2

S2 CHECK FOR POWER TAILGATE OPERATION WITH SWAPPING THE REMOTE KEY

- Check the power tailgate operation with swapping the key from like vehicle with no concern exist.

- Check if the issue is duplicated with duplicate key.

Does the power tailgate actuate when commanded from swapping the key fob?

Yes	Check with the spare key from the customer having same vehicle to verify this is not a key related issue. If the concern does not happen with spare key. REPLACE the suspect key and program the new key. If the same issue is present with the spare key, if able to do so, compare this concern to like vehicles, to see if this exhibits the similar concerns. If multiple units exhibit the same issue, please report a vehicle concern to Ford Hotline.
No	GO to S3

S3 CHECK FOR TIME-OUT FEATURE

- Check if the time-out feature or parameter that have to be met the tailgate to open and close with remote.
- Check for the following items:
  - if lights flash to respond to the fob but the RGTM will not chim and unlatch the motors
  - if the concern get resolved after the door is opened or if the scan tool is connected to DLC
  - if tailgate is open with switch
  - tailgate won't open after allowing to sit the tailgate for some time

Does the tailgate not open intermittently with the key fob?

Yes	REPAIR as necessary.
No	GO to S4

S4 CHECK THE POWER TAILGATE LATCH ACTUATOR OPERATION

-

Does the concern still present?

Yes	REPLACE the tailgate latch actuator. REFER to: Tailgate Latch Actuator (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).
No	GO to S5

S5 CHECK THE WIRING HARNESS, CONNECTORS AND PINS

- Check the wiring harness for damage, connectors for corrosion and pins for damage.

Is the fault found?

Yes	REPLACE the suspect power tailgate harness or connectors.
No	GO to S6

S6 CHECK FOR THE TAILGATE CORRECT OPERATION

- Check if lights flush to respond to fob but RGTM will not chim and unlatch the motors.
- Check if tailgate operates when the door is open or if scan tool is connected to the DLC .
- Operate the power tailgate with switch.

Is the concern still present?

Yes	Swap the RGTM with other like-unit If the concern is no longer present then REPLACE the RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation). Swap the power tailgate with other like-unit If the concern is no longer present then REPLACE the power tailgate. REFER to: Power Tailgate (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	GO to S7

S7 CHECK FOR COMMUNICATION TO THE RGTM (REAR GATE TRUNK MODULE)

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

Does the RGTM pass the network test?

Yes	GO to S8
No	REFER to: Controller Area Network (CAN) Module Communications Network (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Controller Area Network (CAN) Module Communications Network - Electric (418-00A Controller Area Network (CAN) Module Communications Network, Diagnosis and Testing). REFER to: Ethernet Module Communications Network (418-00C Ethernet Module Communications Network, Diagnosis and Testing).

S8 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 TSB 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 TSB . If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no TSB s address this concern, INSTALL a new RGTM . REFER to: Rear Gate Trunk Module (RGTM) (501-04 Pickup Bed and Platform Body, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST T : THE POWER TAILGATE PASSIVE ENTRY FEATURE IS INOPERATIVE

Refer to Wiring Diagrams Cell 117 for schematic and connector information.

Normal Operation and Fault Conditions

REFER to: Power Tailgate - System Operation and Component Description (501-04 Pickup Bed and Platform Body, Description and Operation).

Possible Sources

- Wiring, terminals or connectors
- Keyless entry rear antenna
- BCM

T1 CHECK THE DOOR PASSIVE ENTRY FUNCTION

- Ignition OFF.
- Lock the doors.
- Check the passive entry feature at the driver front door

Does the door passive entry operate?

Yes	GO to T2
No	REPAIR as necessary.

T2 CHECK THE TAILGATE RELEASE SWITCH INPUT

- Close the tailgate.
- Ignition ON.
- Unlock the doors using the door lock control switch.
- Press the tailgate release button located at the rear of the vehicle.

Does the tailgate latch release (manual tailgate) or power open (power tailgate)?

Yes	GO to T3
No	For vehicle with a remote tailgate, GO to Pinpoint Test A . For vehicle with power tailgate, REFER the diagnosis in this section.

T3 CHECK THE KEYLESS ENTRY REAR ANTENNA

- Ignition OFF.
- Disconnect Keyless Entry Rear Antenna C4321.
- Measure the component side:

Positive Lead	Measurement / Action	Negative Lead
C4321-1	Ω	C4321-2

Is the resistance between 1 and 3 ohms?

Yes	GO to T4
No	INSTALL a new keyless entry rear antenna. REFER to: Keyless Entry Rear Antenna (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Keyless Entry Rear Antenna - Vehicles With: Tailgate Step with Light Bar (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

T4 CHECK THE KEYLESS ENTRY REAR ANTENNA CIRCUITS FOR A SHORT TO VOLTAGE

- Disconnect BCM C2280D.
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4321-1	V⎓	Ground
C4321-2	V⎓	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to T5

T5 CHECK THE KEYLESS ENTRY REAR ANTENNA CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4321-1	Ω	Ground
C4321-2	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to T6
No	REPAIR the circuit in question.

T6 CHECK THE KEYLESS ENTRY REAR ANTENNA CIRCUIT FOR AN OPEN

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4321-1	Ω	C2280D-30
C4321-2	Ω	C2280D-32

Are the resistances less than 3 ohms?

Yes	GO to T7
No	REPAIR the circuit in question.

T7 CHECK FOR CORRECT BCM OPERATION

- Disconnect and inspect all the BCM connectors.
- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals pins
  - pushed-out pins - install new pins as necessary
- Reconnect the BCM 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 service articles: TSB , GSB , SSM or FSA . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new BCM . REFER to: Body Control Module (BCM) (419-10 Multifunction Electronic Modules, Removal and Installation).
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.