

2008 Ford Mustang

2008 ACCESSORIES & BODY, CAB Handles, Locks, Latches & Entry Systems - Mustang

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Handles, Locks, Latches & Entry Systems - Mustang

SPECIFICATIONS

GENERAL SPECIFICATIONS

Item	Specification
Lubricants	
Multi-Purpose Grease Spray XL-5	ESB-M1C93B
Penetrating and Lock Lubricant XL-1	-

LOCK REPAIR/REPLACEMENT SPECIFICATIONS

Part Number	Lock Repair Package Name
F85Z-11582-AA	Ignition Cylinder
F8ZZ-6321990-AA	Door Lock
XR32-6343262-BA	Luggage Compartment Lid
F8DZ-5406082-AA	Glove Box
F8DZ-5421970-AA	Lock Lever Kit

TORQUE SPECIFICATIONS

Description	Nm	lb-ft	lb-in
Door latch bolts	12	9	-
Door lock cylinder bolt	9	-	80
Exterior door handle studs	9	-	80
Hood latch bolts	12	9	-
Luggage compartment lid latch nuts	9	-	80
Luggage compartment lid lock cylinder bolts	9	-	80

DESCRIPTION AND OPERATION

HANDLES, LOCKS, LATCHES AND ENTRY SYSTEMS

NOTE: The smart junction box (SJB) is also known as the generic electronic module (GEM).

Lock Cylinders

Individual lock cylinders are repaired by discarding the inoperative lock cylinder and building a new lock cylinder using the appropriate lock repair package. The lock repair package includes a detailed instruction sheet to build the new lock cylinder to the current key code of the vehicle.

Hood Latch

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The hood latch consists of the following components:

- Hood latch
- Hood latch release handle and cable

Doors

The door consists of the following components:

- Door ajar switch
- Door latch
- Door latch striker plate
- Door lock actuator
- Door lock control switch
- Door lock cylinder
- Door lock cylinder actuating rod
- Exterior door handle
- Exterior door handle actuating rod
- Interior door handle
- Interior door handle actuating cable
- Manual lock rod

Luggage Compartment

The luggage compartment consists of the following components:

- Luggage compartment lid ajar switch (early build)
- Luggage compartment lid latch with mechanical interior release handle and cable
- Luggage compartment lid lock cylinder

Power Lock/Unlock

The power lock/unlock feature requests both of the vehicle doors locked or unlocked upon customer request from either interior door lock switch in the vehicle. The power door locking system functions independently of ignition status or vehicle speed.

Autolock

NOTE: **Manual transmission vehicles are not equipped with an autolock feature.**

On vehicles equipped with an automatic transmission, the autolock feature can be enabled/disabled. For more information on enabling/disabling the autolock feature, refer to **Autolock and Horn Chirp Programming**.

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The autolock feature automatically and conditionally locks both doors as a convenience to the customer.

Autolock occurs when both doors are closed, the brake pedal is applied while the speed is less than 8 km/h (5 mph), and then the speed increases to 8 km/h (5 mph) or greater.

Relock is dependent on an autolock event happening first.

Relock occurs after a door is opened, the brake pedal is applied while the speed is less than 8 km/h (5 mph), all the doors are closed again, and the speed increases to 8 km/h (5 mph) or greater.

Smart Unlock

NOTE: It is possible to lock the vehicle with the key in the ignition lock cylinder if the doors are locked with the remote keyless entry (RKE) transmitter, manually locked with the manual push buttons or with the key in the door lock cylinder.

The smart unlock feature prevents the driver door from locking with the key in the ignition lock cylinder. When the SJB receives a LOCK command from a door lock control switch, and the key is in the ignition lock cylinder with the driver door open, the SJB commands the driver door to unlock.

Power Door Trim Switch Inhibit

The power door trim switch inhibit feature disables the power door lock control switches if all the doors are locked and the perimeter alarm system (if equipped) becomes armed. The door lock control switches will be enabled if a valid unlock command is received from a RKE transmitter or when the key is turned to the RUN position.

Deactivating/Activating The Power Door Trim Switch Inhibit Feature

NOTE: Both of the doors must be closed during the inhibit programming procedure.

1. Turn the key to RUN.
2. Press the door lock control switch UNLOCK button 3 times.
3. Turn the key to OFF.
4. Press the door lock control switch UNLOCK button 3 times.
5. Turn the key to RUN.
6. Press the door lock control switch LOCK button 2 times. The horn chirps once if the inhibit feature was just deactivated or it chirps twice (1 short chirp and 1 long chirp) if the unlock inhibit feature was just activated.
7. Turn the key to OFF. The horn chirps to confirm the procedure is complete.

Remote Keyless Entry (RKE) System

The electronic door lock system has 3 main components:

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- RKE transmitter
- SJB
- Tire pressure monitoring system (TPMS)/RKE antenna (external, but part of the SJB)



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Fig. 1: Identifying Remote Transmitter
Courtesy of FORD MOTOR CO.

The RKE transmitter initiates the following electronic system functions:

- Unlocks the driver door
- Unlocks both doors
- Locks both doors
- Releases the luggage compartment lid
- Locks both doors and flashes the turn signal lamps if all doors (hood and luggage compartment if equipped with alarm) are closed
- Activates/deactivates the panic alarm
- Commands the interior lamps on when unlocking and off when locking
- Sounds the horn once and flashes the turn signals twice when LOCK is pressed twice within 3 seconds, and the doors (hood and luggage compartment if equipped with alarm) are closed
- Sounds the horn twice when LOCK is pressed within 3 seconds if any door (hood and luggage compartment if equipped with alarm) is ajar
- Arms/disarms the alarm system (if equipped)

The RKE transmitter has a maximum operating range of 10 m (33 ft).

Remote Keyless Entry (RKE) Transmitter Lock/Unlock Control - Unlock

The RKE transmitter feature provides lock/unlock functions independently of key position, vehicle speed, or transmission position. The RKE transmitter feature provides a 2-step process for unlocking the doors. Upon receipt of the first request for unlocking the doors, the SJB unlocks the driver door only. If another unlock command is received within 3 seconds of the first, the SJB unlocks both the doors.

Remote Keyless Entry (RKE) Transmitter Lock/Unlock Control - Lock

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The RKE transmitter feature requests that both the doors be locked when the lock button on the RKE transmitter is pressed. On any press of the LOCK button with both the doors closed, the RKE transmitter feature commands one flash of the turn signal lamps. If any door (luggage compartment lid or hood, if equipped with perimeter alarm) is ajar, no flash occurs, indicating that both the doors were locked, but one or more closures are ajar. As soon as the last closure is closed, the turn signal lamps flash once. If 2 presses of the LOCK button are received within 3 seconds, the horn chirps once and the turn signal lamps flash twice to indicate that all the closures are closed and locked. If any door (luggage compartment lid or hood, if equipped with perimeter alarm) is ajar when the second lock command is received within 3 seconds of the first, the RKE transmitter feature commands the horn chirp twice without flashing the turn signal lamps to indicate that both the doors were locked, but one or more closures are ajar. When the key is in the RUN or START position, no turn signal lamp flashes or horn chirp confirmations occur.

Remote Keyless Entry (RKE) Transmitter Luggage Compartment Lid Release

The RKE transmitter feature releases the luggage compartment lid when the luggage compartment release button is pressed on the RKE transmitter. The feature will operate in any ignition key position, but does become disabled after the vehicle reaches a speed of 5 km/h (3 mph) or greater.

Panic Alarm

The panic alarm feature provides audible and visual alarms that are evident from the exterior of the vehicle. The panic alarm feature commands the turn signal lamps to flash and the horn to sound until deactivation. These outputs occur simultaneously. Activation of the panic alarm is accomplished by pressing the PANIC button on the RKE transmitter whenever the key is in the OFF position. The feature is disabled when the key is in any position other than OFF. Deactivation of an active panic alarm is accomplished by: 1) a second press of the RKE transmitter PANIC button, 2) switching the key out of the OFF position or, 3) a period of 2 minutes and 45 seconds has elapsed since the initial activation.

Perimeter Lighting Feature

The perimeter lighting feature illuminates the exterior of the vehicle in order to provide better visibility to the customer when entering the vehicle.

Vehicles equipped with perimeter lighting can have this feature activated or deactivated. Refer to **Perimeter Lighting Feature Programming** for programming information.

The following items illuminate when the unlock button on the remote transmitter is pressed or the vehicle is unlocked, by using the driver door lock cylinder:

- Headlamps
- Parklamps

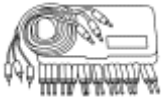
The lamps turn off:

- When the lock control on the remote transmitter is pressed
- If the ignition switch is turned to the RUN position
- After 25 seconds have elapsed since the perimeter lighting was activated

DIAGNOSTIC TESTS

LOCKS, LATCHES AND ENTRY SYSTEMS

Special Tools

Illustration	Tool Name	Tool Number
 ST1137-A	73III Automotive Meter	105-R0057 or equivalent
 ST1138-A	Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool	
 ST2834-A	Flex Probe Kit	105-R025C or equivalent

Principles of Operation

NOTE: The smart junction box (SJB) is also known as the generic electronic module (GEM).

Power Locks

The power lock/unlock feature commands both of the vehicle doors to lock or unlock upon a command from the door lock control switch or remote keyless entry (RKE) transmitter. Power locking and unlocking of the doors functions independently of the key position, vehicle speed, or transmission position. The SJB activates the power door lock relays to supply the correct power and grounds for the door lock actuators.

Remote Keyless Entry (RKE)

The SJB receives input from a programmed RKE transmitter, through the tire pressure monitoring system/remote keyless entry (TPMS/RKE) antenna. The antenna is located externally on the SJB and is not serviceable. Based on the input from the RKE transmitter, the SJB:

- Unlocks the driver door
- Unlocks both doors
- Locks both doors
- Releases the luggage compartment lid

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- Locks both doors and flashes the turn signal lamps if all doors (hood and luggage compartment lid if equipped with alarm) are closed
- Activates/deactivates the panic alarm
- Commands the interior lamps on when unlocking and off when locking
- Sounds the horn once and flashes the turn signals when LOCK is pressed twice within 3 seconds, and the doors (hood and luggage compartment lid if equipped with alarm) are closed
- Sounds the horn twice when LOCK is pressed within 3 seconds if any door (hood and luggage compartment lid if equipped with alarm) is ajar
- Arms/disarms the alarm system (if equipped)

Inspection and Verification

1. Verify the customer concern.
2. Visually inspect for obvious signs of mechanical or electrical damage.

VISUAL INSPECTION CHART

Mechanical	Electrical
• Latches	• Bussed electrical center (BEC) fuse(s): ○ 57 (20A) ○ 62 (20A) • Wiring, terminals or connectors • Remote keyless entry (RKE) transmitter • Door lock control switch(es) • Smart junction box (SJB)

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

NOTE: **Make sure to use the latest scan tool software release.**

4. If the cause is not visually evident, connect the scan tool to the data link connector (DLC).

NOTE: **The vehicle communication module (VCM) LED prove-out confirms power and ground from the DLC are provided to the VCM.**

5. If the scan tool does not communicate with the VCM:
 - Check the VCM connection to the vehicle.

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- Check the scan tool connection to the VCM.
 - Refer to **MODULE COMMUNICATIONS NETWORK** article, No Power To The Scan Tool, to diagnose no communication with the scan tool.
6. If the scan tool does not communicate with the vehicle:
- Verify the ignition key is in the ON position.
 - Verify the scan tool operation with a known good vehicle.
 - Refer to **MODULE COMMUNICATIONS NETWORK** article to diagnose no response from the PCM.
7. Carry out the network test.
- If the scan tool responds with no communication for one or more modules, refer to **MODULE COMMUNICATIONS NETWORK** article.
 - If the network test passes, retrieve and record the continuous memory DTCs.
8. Clear the continuous DTCs and carry out the self-test diagnostics for the SJB.
9. If the DTCs retrieved are related to the concern, go to DTC Charts. For all other DTCs, refer to the Diagnostic Trouble Code (DTC) chart in **MULTIFUNCTION ELECTRONIC MODULES** article.
10. If no DTCs related to the concern are retrieved, go to **Symptom Chart**.

DTC Charts

SMART JUNCTION BOX (SJB) DTC CHART

DTC	Description	Action
B1300	Power Door Lock Circuit Failure	Go to <u>Pinpoint Test F</u> .
B1301	Power Door Lock Circuit Open	Go to <u>Pinpoint Test A</u> .
B1309	Power Door Lock Circuit Short to Ground	Go to <u>Pinpoint Test E</u> .
B1310	Power Door Unlock Circuit Failure	Go to <u>Pinpoint Test F</u> .
B1341	Power Door Unlock Circuit Short To Ground	Go to <u>Pinpoint Test E</u> .
B1551	Latch/Decklid Release Circuit Failure	Go to <u>Pinpoint Test G</u> .
B1982	Driver's Door Unlock Relay Circuit Failure	Go to <u>Pinpoint Test F</u> .
B2276	Less Than 2 Transmitters Programmed	PROGRAM the remote keyless entry (RKE) transmitters. REFER to <u>Remote Keyless Entry Transmitter Programming</u> .
B2425	Remote Keyless Entry Out of Synchronization	Go to <u>Pinpoint Test H</u> .
B2474	Passenger Door Lock Switch CKT Short to Ground	Go to <u>Pinpoint Test E</u> .
B2475	Passenger Door Unlock Switch Circuit Short to Ground	Go to <u>Pinpoint Test E</u> .
All other DTCs -		REFER to <u>MULTIFUNCTION ELECTRONIC MODULES</u> article.

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Symptom Chart

Symptom Chart

Condition	Possible Sources	Action
No communication with the smart junction box (SJB)	- Fuse(s) - Wiring, terminals or connectors - SJB	REFER to <u>MODULE COMMUNICATIONS NETWORK</u> article.
All door locks are inoperative	- Wiring, terminals or connectors - SJB	Go to <u>Pinpoint Test A.</u>
A single door lock is inoperative	- Wiring, terminals or connectors - Door lock actuator - SJB	Go to <u>Pinpoint Test B.</u>
The door locks operate only one way	- Wiring, terminals or connectors - Door lock control switch - SJB	Go to <u>Pinpoint Test C.</u>
All door locks are inoperative from one switch	- Wiring, terminals or connectors - Door lock control switch	Go to <u>Pinpoint Test D.</u>
The luggage compartment lid release is inoperative/does not operate correctly	- Fuse - Wiring, terminals or connectors - Remote keyless entry (RKE) transmitter - Luggage compartment lid release relay - Luggage compartment lid release solenoid - Vehicle speed signal - Bussed electrical center (BEC) - SJB	Go to <u>Pinpoint Test G.</u>
	RKE transmitter	

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The remote keyless entry (RKE) transmitter is inoperative	- battery - RKE transmitter - RKE transmitter button pressed a substantial amount of times while outside the range of the vehicle - RKE transmitter programming - SJB	Go to <u>Pinpoint Test H.</u>
An individual button/feature is inoperative from the remote keyless entry (RKE) transmitter	- All door locks - Horn system - Luggage compartment lid latch - Turn signals - RKE transmitter	Go to <u>Pinpoint Test I.</u>
The remote keyless entry (RKE) transmitter has poor range performance	- Aftermarket systems - High power devices - RKE transmitter - RKE transmitter battery - Tire pressure monitoring system (TPMS)/RKE antenna - TV/radio transmission towers - SJB	Go to <u>Pinpoint Test J.</u>
The autolock does not operate correctly	SJB	Go to <u>Pinpoint Test K.</u>
The smart unlock does not operate correctly	SJB	Go to <u>Pinpoint Test L.</u>
The power door unlock inhibit feature is inoperative	- Unlock inhibit deactivated - SJB	ACTIVATE unlock inhibit. CARRY OUT the <u>Autolock and Horn Chirp Programming.</u> If the concern is still present, INSTALL a new SJB. REFER to <u>MULTIFUNCTION ELECTRONIC MODULES</u> article. TEST the system for normal operation.

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Pinpoint Tests

Pinpoint Test A: All Door Locks are Inoperative

Refer to appropriate SYSTEM WIRING DIAGRAM ARTICLE, Power Door Locks for schematic and connector information.

Normal Operation

The bussed electrical center (BEC) fuse 62 (20A) provides voltage for the power lock/unlock system. Ground for the power lock/unlock system is provided by circuit 1205 (BK) to the smart junction box (SJB). The SJB contains internal relays that are energized depending on input received.

When the SJB receives a door lock control switch lock command, the door lock relay is energized, supplying voltage to the door lock actuators through circuits 1328 (RD/OG) and 1383 (RD). The actuators are grounded through circuits 1329 (YE) and 1384 (LB). When the SJB receives an unlock request, the unlock relays are energized, and voltage and ground are reversed on the previously listed circuits.

- DTC B1301 (Power Door Lock Circuit Open) - is a continuous or on-demand DTC that sets if the SJB detects an open on ground circuit 1205 (BK).

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- SJB

PINPOINT TEST A: ALL DOOR LOCKS ARE INOPERATIVE

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

A1 RETRIEVE THE RECORDED DTCs FROM BOTH THE CONTINUOUS AND ON-DEMAND SJB SELF-TESTS

- Check for recorded SJB DTCs from the continuous and on-demand self-tests.
- **Are any DTCs recorded?**

YES : For DTC B1301, go to A3.

For DTCs B1300, B1310 and B1982, go to **Pinpoint Test F**.

For all other DTCs, REFER to **DTC Charts**.

NO : Go to A2.

A2 VERIFY THE OPERATION OF THE LEFT AND RIGHT DOOR LOCK CONTROL SWITCHES

- Press the lock and unlock button of both the left and the right door lock control switches while

observing the door lock operation.

- **Are the door locks inoperative from both switches?**

YES : Go to A3.

NO : Go to **Pinpoint Test D.**

A3 CHECK CIRCUIT 1205 (BK) FOR AN OPEN

- Key in OFF position.
- Disconnect: SJB C2280a

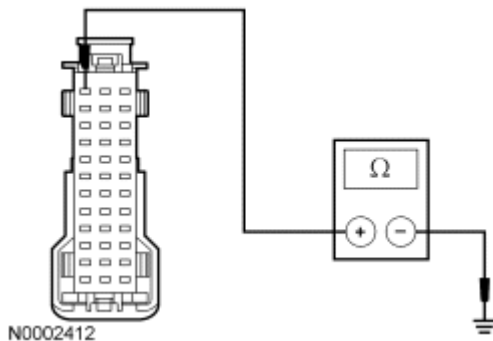


Fig. 2: Measuring Resistance Between SJB C2280A-1 Harness Side And Ground
Courtesy of FORD MOTOR CO.

- Measure the resistance between the SJB C2280a-1, circuit 1205 (BK), harness side and ground.
- **Is the resistance less than 5 ohms?**

YES : Go to A4.

NO : REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

A4 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test B: A Single Door Lock is Inoperative

Refer to appropriate SYSTEM WIRING DIAGRAM ARTICLE, Power Door Locks for schematic and

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connector information.

Normal Operation

The bussed electrical center (BEC) fuse 62 (20A) provides voltage for the power lock/unlock system. Ground for the power lock/unlock system is provided by circuit 1205 (BK) to the smart junction box (SJB). The SJB contains internal relays that are energized depending on input received.

When the SJB receives a door lock control switch lock command, the door lock relay is energized, supplying voltage to the door lock actuators through circuits 1328 (RD/OG) and 1383 (RD). The actuators are grounded through circuits 1329 (YE) and 1384 (LB). When the SJB receives an unlock request, the unlock relays are energized, supplying voltage and ground are reversed on the previously listed circuits.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- Door lock actuator
- SJB

PINPOINT TEST B: A SINGLE DOOR LOCK IS INOPERATIVE

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

B1 RETRIEVE THE RECORDED DTCs FROM BOTH THE CONTINUOUS AND ON-DEMAND SJB SELF-TESTS

- Check for recorded SJB DTCs from the continuous and on-demand self-tests.
- **Are any DTCs recorded?**

YES : For DTCs B1300, B1310 and B1982, go to **Pinpoint Test F**.

For all other DTCs, REFER to **DTC Charts**.

NO : Go to B2.

B2 CHECK THE DOOR LATCH FOR BINDING

- LOCK and UNLOCK the inoperative door lock using the door lock rod.
- **Does the door LOCK and UNLOCK?**

YES : Go to B3.

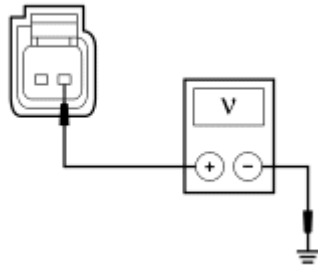
NO : INSTALL a new door latch. REFER to **Door Latch**.

B3 CHECK CIRCUITS 1328 (RD/OG) AND 1383 (RD) FOR VOLTAGE

- Key in OFF position.
- Disconnect: Inoperative Door Lock Actuator

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Fig. 3: Checking Circuits 1328 (RD/OG) & 1383 (RD) For Voltage
Courtesy of FORD MOTOR CO.

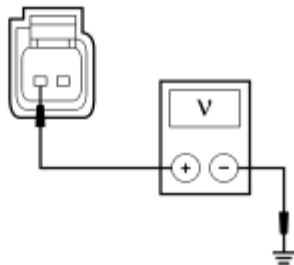
NOTE: The SJB only supplies voltage to the actuator momentarily. It is important to monitor the meter while pressing the door lock control switch.

- While pressing the door lock control switch in the LOCK position, measure the voltage between the LH door lock actuator C525-1, circuit 1328 (RD/OG), harness side and ground; or between the RH door lock actuator C603-1, circuit 1383 (RD), harness side and ground.
- **Is the voltage momentarily greater than 10 volts?**

YES : Go to B4.

NO : Go to B5.

B4 CHECK CIRCUITS 1329 (YE) AND 1384 (LB) FOR VOLTAGE



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Fig. 4: Checking Circuits 1329 (YE) & 1384 (LB) For Voltage
Courtesy of FORD MOTOR CO.

NOTE: The SJB only supplies voltage to the actuator momentarily. It is important to monitor the meter while pressing the door lock control switch.

- While pressing the door lock control switch in the UNLOCK position, measure the voltage between the LH door lock actuator C525-2, circuit 1329 (YE), harness side and ground; or between the RH door lock actuator C603-2, circuit 1384 (LB), harness side and ground.

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- **Is the voltage momentarily greater than 10 volts?**

YES : INSTALL a new door lock actuator. REFER to **Door Lock Actuator**. TEST the system for normal operation.

NO : Go to B5.

B5 CHECK THE DOOR LOCK ACTUATOR CIRCUITS FOR AN OPEN

- Disconnect: SJB C2280g (LH door inoperative)
- Disconnect: SJB C2280h (RH door inoperative)
- Measure the resistance between inoperative door lock actuator harness side and the SJB, harness side as follows:

Door Lock Actuator Connector-Pin	SJB Connector-Pin	Circuit
LH C525-1	C2280g-3	1328 (RD/OG)
LH C525-2	C2280g-1	1329 (YE)
RH C603-1	C2280h-27	1383 (RD)
RH C603-2	C2280h-14	1384 (LB)

- **Are the resistances less than 5 ohms?**

YES : Go to B6.

NO : REPAIR the circuit in question. TEST the system for normal operation.

B6 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

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Refer to appropriate SYSTEM WIRING DIAGRAM ARTICLE, Power Door Locks for schematic and connector information.

Normal Operation

The smart junction box (SJB) sends voltage signals to the door lock control switches through circuits 1296 (OG/BK) and 1316 (WH/VT) for the lock requests, and through circuits 1297 (YE/RD) and 1317 (DB/LG) for the unlock requests. The door lock control switches receive ground through circuit 1205 (BK). When the lock or unlock switch is pressed, the voltage signal is routed to ground.

The SJB contains internal relays that are energized depending on input received. When the SJB receives a lock or unlock request from the door lock control switch, the SJB energizes the appropriate relay(s) to lock or unlock the doors.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- Door lock control switch
- SJB

PINPOINT TEST C: THE DOOR LOCKS OPERATE ONLY ONE WAY

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

C1 RETRIEVE THE RECORDED DTCs FROM THE SJB SELF-TEST

- Check for recorded SJB DTCs from the self-test.
- **Are any DTCs recorded?**

YES : For DTC B1309, B1341, B2474, or B2475, go to **Pinpoint Test E**.

For all other DTCs, REFER to **DTC Charts**.

NO : Go to C2.

C2 CHECK THE DOOR LOCK CONTROL SWITCH

- Disconnect: Suspect Door Lock Control Switch
- Carry out the driver or passenger door lock control switch component test. Refer to COMPONENT TESTING.
- **Is the door lock control switch OK?**

YES : Go to C3.

NO : INSTALL a new door lock control switch. REFER to **Door Lock Control Switch**. TEST the system for normal operation.

C3 CHECK THE DOOR LOCK CONTROL SWITCH CIRCUITS FOR AN OPEN

- Key in OFF position.

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- Disconnect: SJB C2280e
- Measure the resistance between the inoperative door lock control switch, harness side and the SJB, harness side as follows:

Door Control Switch Connector-Pin	SJB Connector-Pin	Circuit
LH C505-2	C2280e-1	1317 (DB/LG)
LH C505-4	C2280e-3	1316 (WH/VT)
RH C605-2	C2280e-5	1297 (YE/RD)
RH C605-4	C2280e-8	1296 (OG/BK)

- **Are the resistances less than 5 ohms?**

YES : Go to C4.

NO : REPAIR the circuit in question. TEST the system for normal operation.

C4 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test D: All Door Locks Are Inoperative From One Switch

Refer to appropriate SYSTEM WIRING DIAGRAM ARTICLE, Power Door Locks for schematic and connector information.

Normal Operation

The smart junction box (SJB) sends voltage signals to the door lock control switches through circuits 1296

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(OG/BK) and 1316 (WH/VT) for the lock requests, and through circuits 1297 (YE/RD) and 1317 (DB/LG) for the unlock requests. The door lock control switches receive ground through circuit 1205 (BK). When the lock or unlock switch is pressed, the voltage signal is routed to ground.

The SJB contains internal relays that are energized depending on input received. When the SJB receives a lock or unlock request from the door lock control switch, the SJB energizes the appropriate relay(s) to lock or unlock the doors.

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- Door lock control switch

PINPOINT TEST D: ALL DOOR LOCKS ARE INOPERATIVE FROM ONE SWITCH

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

D1 CHECK CIRCUIT 1205 (BK) FOR AN OPEN

- Disconnect: Inoperative Door Lock Control Switch

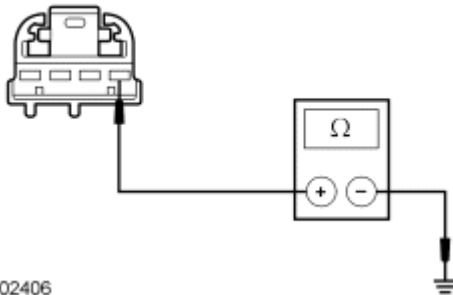


Fig. 5: Checking Circuit 1205 (BK) For Open
Courtesy of FORD MOTOR CO.

- Measure the resistance between the LH door lock control switch C505-1, circuit 1205 (BK), harness side and ground; or between the RH door lock control switch C605-1, circuit 1205 (BK), harness side and ground.
- **Is the resistance less than 5 ohms?**
YES : INSTALL a new door lock control switch. REFER to **Door Lock Control Switch**. TEST the system for normal operation.
NO : REPAIR the circuit in question. TEST the system for normal operation.

Pinpoint Test E: DTC B1309, B1341, B2474 or B2475: Door Lock Control Switch Circuit Short To Ground

Refer to appropriate SYSTEM WIRING DIAGRAM ARTICLE, Power Door Locks for schematic and connector information.

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Normal Operation

The smart junction box (SJB) sends voltage signals to the door lock control switches through circuits 1296 (OG/BK) and 1316 (WH/VT) for the lock requests, and through circuits 1297 (YE/RD) and 1317 (DB/LG) for the unlock requests. The door lock control switches receive ground through circuit 1205 (BK). When the lock or unlock switch is pressed, the voltage signal is routed to ground.

DTC Description	Fault Trigger Conditions
B1309 - Power Door Lock Circuit Short to Ground	An on-demand DTC that sets if the SJB detects a short to ground on circuit 1316 (WH/VT).
B1341 - Power Door Unlock Circuit Short to Ground	An on-demand DTC that sets if the SJB detects a short to ground on circuit 1317 (DB/LG).
B2474 - Passenger Door Lock Switch Circuit Short to Ground	An on-demand DTC that sets if the SJB detects a short to ground on circuit 1296 (OG/BK).
B2475 - Passenger Door Unlock Switch Circuit Short to Ground	An on-demand DTC that sets if the SJB detects a short to ground on circuit 1297 (YE/RD).

This pinpoint test is intended to diagnose the following:

- Wiring, terminals or connectors
- Door lock control switch(es)
- SJB

PINPOINT TEST E: DTC B1309, B1341, B2474, OR B2475: DOOR LOCK CONTROL SWITCH CIRCUIT SHORT TO GROUND

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

E1 RETRIEVE THE RECORDED DTCs FROM THE SJB SELF-TEST

- Check for recorded SJB DTCs from the self-test.
- **Are DTCs B1309, B1341, B2474 or B2475 recorded?**

YES : Go to E2.

NO : Go to Symptom Chart.

E2 CHECK THE DOOR LOCK CONTROL SWITCH

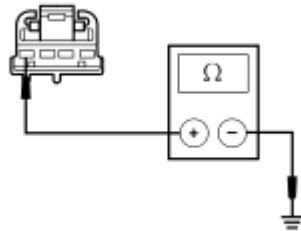
- Disconnect: LH Door Lock Control Switch C505 (For DTCs B1309 or B1341)
- Disconnect: RH Door Lock Control Switch C605 (For DTCs B2474 or B2475)
- Repeat the SJB self-test.
- **Are DTCs B1309, B1341, B2474, or B2475 retrieved again?**

YES : Go to E3.

NO : INSTALL a new door lock control switch. REFER to Door Lock Control Switch. TEST the system for normal operation.

E3 CHECK THE DOOR LOCK CONTROL SWITCH CIRCUITS FOR A SHORT TO GROUND

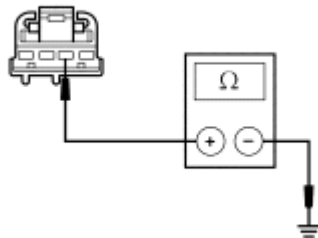
- Key in OFF position.
- Disconnect: SJB C2280e



N0058783

Fig. 6: Measuring Resistance Between LH Door Lock Control Switch C505-4 (DTC B1309), Circuit 1316 (WH/VT)
Courtesy of FORD MOTOR CO.

- Measure the resistance between the LH door lock control switch C505-4 (DTC B1309), circuit 1316 (WH/VT) harness side and ground; or between the RH door lock control switch C605-4 (DTC B2474), circuit 1296 (OG/BK), harness side and ground.



N0072817

Fig. 7: Measuring Resistance Between LH Door Lock Control Switch C505-2 (DTC B1341), Circuit 1317 (DB/LG)
Courtesy of FORD MOTOR CO.

- Measure the resistance between the LH door lock control switch C505-2 (DTC B1341), circuit 1317 (DB/LG) harness side and ground; or between the RH door lock control switch C605-2 (DTC B2475), circuit 1297 (YE/RD), harness side and ground.

- **Are the resistances greater than 10,000 ohms?**

YES : Go to E4.

NO : REPAIR the circuit in question. CLEAR the DTCs. REPEAT the self-test.

E4 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:

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- corrosion
- damaged pins
- pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test F: DTC B1300, B1310 or B1982: Door Lock Actuator Relay Circuit Failure

Refer to appropriate SYSTEM WIRING DIAGRAM ARTICLE, Power Door Locks for schematic and connector information.

Normal Operation

The smart junction box (SJB) contains the all lock, passenger unlock, and the driver unlock relays. They are all non-serviceable relays. All 3 relays receive voltage through the bussed electrical center (BEC) fuse 62 (20A) and circuit 1679 (WH/YE). Ground for the relays is provided through circuit 1205 (BK). Based on input from the door lock control switches or remote keyless entry (RKE) transmitter, the SJB grounds the coil side of the relays, which in turn energizes the relay, and sends voltage to the appropriate output.

If the BEC fuse 62 (20A) has failed or is removed, all three DTCs will be present.

- DTC B1300 (Power Door Lock Circuit Failure) - is a continuous and on-demand DTC that sets when the SJB detects no voltage output from the door lock relay, when the relay is energized.
- DTC B1310 (Power Door Unlock Circuit Failure) - is a continuous and on-demand DTC that sets when the SJB detects no voltage output from the passenger door unlock relay, when the relay is energized.
- DTC B1982 (Driver's Door Unlock Relay Circuit Failure) - is a continuous and on-demand DTC that sets when the SJB detects no voltage output from the driver door unlock relay, when the relay is energized.

This pinpoint test is intended to diagnose the following:

- Fuse
- Wiring, terminals or connectors
- Lock actuators
- SJB

PINPOINT TEST F: DTC B1300, B1310, OR B1982: DOOR LOCK ACTUATOR RELAY CIRCUIT FAILURE

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

F1 RETRIEVE THE RECORDED SJB DTCs FROM THE SELF-TEST

- Check for recorded SJB DTCs from the self-test.
- **Are all three DTCs B1300, B1310, and B1982 present?**

YES : Go to F2.

NO : Go to F5.

F2 CHECK CIRCUIT 1679 (WH/YE) FOR VOLTAGE

- Key in OFF position.
- Disconnect: SJB C2280h

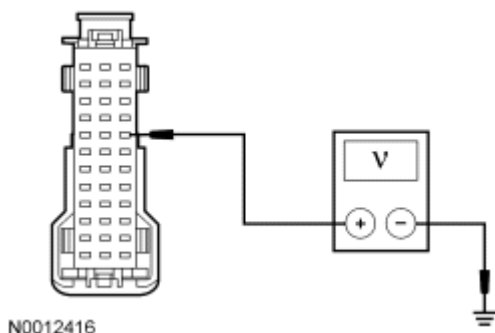


Fig. 8: Measuring Voltage Between SJB C2280H-29 And Ground
Courtesy of FORD MOTOR CO.

- Measure the voltage between the SJB C2280h-29, circuit 1679 (WH/YE), harness side and ground.
- **Is the voltage greater than 10 volts?**

YES : Go to F5.

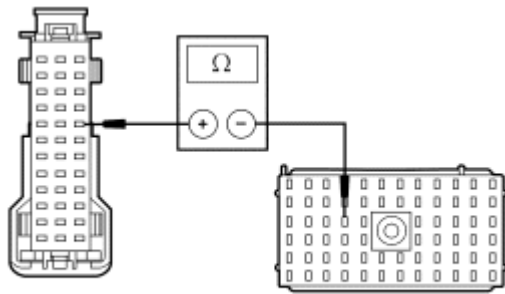
NO : VERIFY the BEC fuse 62 (20A) is OK.

If OK, go to F3.

If not OK, go to F4.

F3 CHECK CIRCUIT 1679 (WH/YE) FOR AN OPEN

- Disconnect: BEC C1035a



N0072818

Fig. 9: Checking Circuit 1679 (WH/YE) For An Open
Courtesy of FORD MOTOR CO.

- Measure the resistance between the SJB C2280h-29, circuit 1679 (WH/YE) harness side, and the BEC C1035a-D9, circuit 1679 (WH/YE) harness side.
- **Is the resistance less than 5 ohms?**
YES : INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.
NO : REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

F4 CHECK CIRCUITS 1328 (RD/OG) AND 1383 (RD) FOR A SHORT TO GROUND

NOTE: If the BEC fuse 62 (20A) fails immediately, repair circuit 1679 (WH/YE) for a short to ground.

- Install a new BEC fuse 62 (20A).
- Connect: SJB C2280h
- Operate the door lock actuators by pressing LOCK on the door lock control switch.
- **Is the BEC fuse 62 (20A) OK?**
YES : REPAIR circuit 1329 (YE) or circuit 1384 (LB) for a short to ground. CLEAR the DTCs. REPEAT the self-test.
NO : REPAIR circuit 1328 (RD/OG) or circuit 1383 (RD) for a short to ground. CLEAR the DTCs. REPEAT the self-test.

F5 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

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NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test G: The Luggage Compartment Lid Release is Inoperative/Does Not Operate Correctly

Refer to appropriate SYSTEM WIRING DIAGRAM ARTICLE, Luggage Compartment for schematic and connector information.

Normal Operation

When the smart junction box (SJB) receives an open command from the remote keyless entry (RKE) transmitter, the SJB grounds the luggage compartment lid release relay control circuit 26 (WH/VT). The luggage compartment lid release relay is located in the bussed electrical center (BEC) and receives voltage from the BEC fuse 57 (20A). When the control circuit is grounded, the relay closes and supplies voltage to circuit 1092 (PK/OG) which energizes the luggage compartment lid release solenoid, releasing the luggage compartment lid. The luggage compartment lid release solenoid is grounded through circuit 1205 (BK).

The SJB will not release the luggage compartment lid if the vehicle is traveling faster than 5 km/h (3 mph).

NOTE: **The SJB releases the luggage compartment lid regardless of vehicle speed when a short to ground is detected on the luggage compartment lid disarm switch circuit 1350 (WH/PK).**

- DTC B1551 (Latch/Decklid Release Circuit Failure) - is a continuous or on-demand DTC that sets if the SJB detects an open or short to ground on the trunk release output circuit 26 (WH/VT).

This pinpoint test is intended to diagnose the following:

- Fuse
- Wiring, terminals or connectors
- RKE transmitter
- Luggage compartment lid release relay
- Luggage compartment lid release solenoid (part of the luggage compartment lid latch)
- Vehicle speed signal
- BEC
- SJB

PINPOINT TEST G: THE LUGGAGE COMPARTMENT LID RELEASE IS INOPERATIVE/DOES NOT OPERATE CORRECTLY

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

G1 CHECK FOR COMPLETE FUNCTIONALITY OF THE RKE TRANSMITTER(S)

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- Check the RKE transmitter buttons LOCK, UNLOCK, and PANIC for correct operation.
- **Do the RKE transmitter LOCK, UNLOCK, and PANIC buttons operate correctly?**

YES : Go to G2.

NO : Go to **Pinpoint Test H**.

G2 CHECK THE VEHICLE SPEED SIGNAL IN THE SJB

- Enter the following diagnostic mode on the diagnostic tool: SJB DataLogger
- Select the SJB PID (VSS_GEM) and monitor while the vehicle is stationary.
- **Does the PID indicate any vehicle speed?**

YES : REFER to **INSTRUMENT CLUSTER (IC), MESSAGE CENTER, AND WARNING CHIMES** article.

NO : Go to G3.

G3 CARRY OUT THE SJB TRUNK RELEASE ACTIVE COMMAND

- Key in ON position.
- Enter the following diagnostic mode on the diagnostic tool: SJB DataLogger
- Select the SJB PID (TRUNK_REL) and command the luggage compartment lid release relay ON.
- **Does the luggage compartment lid release operate?**

YES : REPLACE the inoperative RKE transmitter. PROGRAM all RKE transmitters. REFER to **Remote Keyless Entry Transmitter Programming**. INFORM the customer that any RKE transmitters not present need to be programmed. TEST the system for normal operation.

NO : Go to G4.

G4 CHECK THE LUGGAGE COMPARTMENT LID RELEASE RELAY

- Install a known good relay in the luggage compartment lid release relay location.
- Enter the following diagnostic mode on the diagnostic tool: SJB DataLogger
- Select the SJB PID (TRUNK_REL) and command the luggage compartment lid release relay ON.
- **Does the luggage compartment lid release operate?**

YES : INSTALL a new luggage compartment lid release relay. TEST the system for normal operation.

NO : Go to G5.

G5 CHECK THE LUGGAGE COMPARTMENT LID RELEASE RELAY INPUT CIRCUITS FOR VOLTAGE

- Disconnect: Luggage Compartment Lid Release Relay
- Key in OFF position.

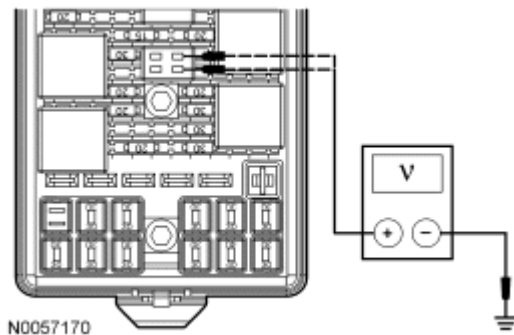


Fig. 10: Checking Luggage Compartment Lid Release Relay Input Circuits For Voltage
Courtesy of FORD MOTOR CO.

- Measure the voltage between the luggage compartment lid release relay pin 86, BEC face side and ground, and between the luggage compartment lid release relay pin 87, BEC face side and ground.
- **Are the voltages greater than 10 volts?**

YES : Go to G6.

NO : VERIFY the BEC fuse 57 (20A) is OK. If OK, INSTALL a new BEC. If not OK, REFER to the appropriate SYSTEM WIRING DIAGRAM ARTICLE to identify the possible causes of the circuit short. TEST the system for normal operation.

G6 CHECK CIRCUIT 1092 (PK/OG) FOR A SHORT TO VOLTAGE

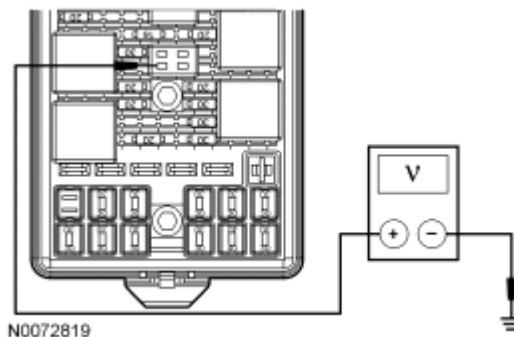


Fig. 11: Checking Circuit 1092 (PK/OG) For A Short To Voltage
Courtesy of FORD MOTOR CO.

- Measure the voltage between the luggage compartment lid release relay pin 30, circuit 1092 (PK/OG), BEC face side and ground.
- **Is the voltage greater than 10 volts?**

YES : REPAIR the circuit. TEST the system for normal operation.

NO : Go to G7.

G7 BYPASS THE LUGGAGE COMPARTMENT LID RELEASE RELAY

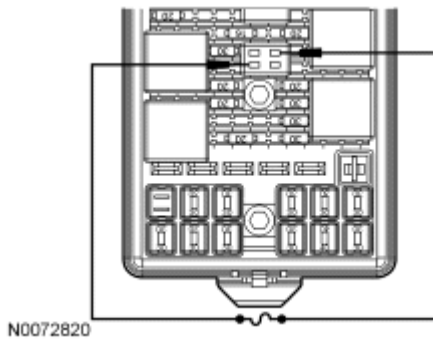


Fig. 12: Bypassing Luggage Compartment Lid Release Relay
Courtesy of FORD MOTOR CO.

- Connect a fused jumper wire between the luggage compartment lid release relay pin 87, BEC face side and the luggage compartment lid release relay pin 30, circuit 1092 (PK/OG), BEC face side.
- **Does the luggage compartment lid release?**
YES : REMOVE the jumper wire. Go to G11.
NO : LEAVE the jumper wire connected. Go to G8.

G8 CHECK CIRCUIT 1092 (PK/OG) FOR VOLTAGE

- Disconnect: Luggage Compartment Lid Release Solenoid C430

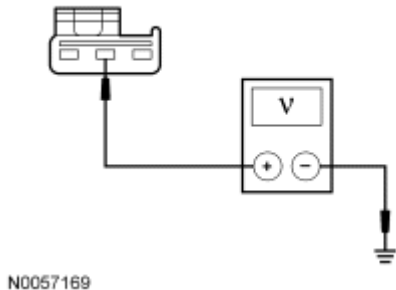


Fig. 13: Measuring Voltage Between Luggage Compartment Lid Release Solenoid C430-2, 1092 (PK/OG) & Ground
Courtesy of FORD MOTOR CO.

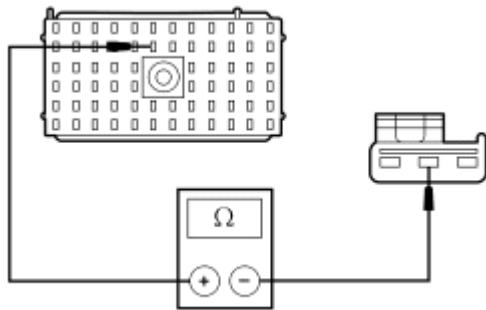
- Measure the voltage between the luggage compartment lid release solenoid C430-2, circuit 1092 (PK/OG), harness side and ground.
- **Is the voltage greater than 10 volts?**
YES : REMOVE the jumper wire. Go to G10.
NO : REMOVE the jumper wire. Go to G9.

G9 CHECK CIRCUIT 1092 (PK/OG) FOR AN OPEN

- Disconnect: BEC C1035a

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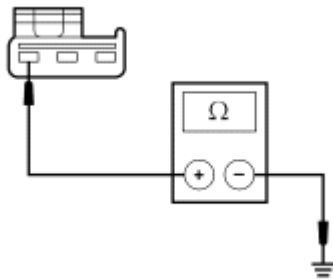


N0002419

Fig. 14: Measuring Resistance Between BEC C1035A-E7 & Luggage Compartment Lid Release Solenoid C430-2
Courtesy of FORD MOTOR CO.

- Measure the resistance between the BEC C1035a-E7, circuit 1092 (PK/OG), harness side and the luggage compartment lid release solenoid C430-2, circuit 1092 (PK/OG), harness side.
- **Is the resistance less than 5 ohms?**
YES : INSTALL a new BEC. TEST the system for normal operation.
NO : REPAIR the circuit. TEST the system for normal operation.

G10 CHECK CIRCUIT 1205 (BK) FOR AN OPEN



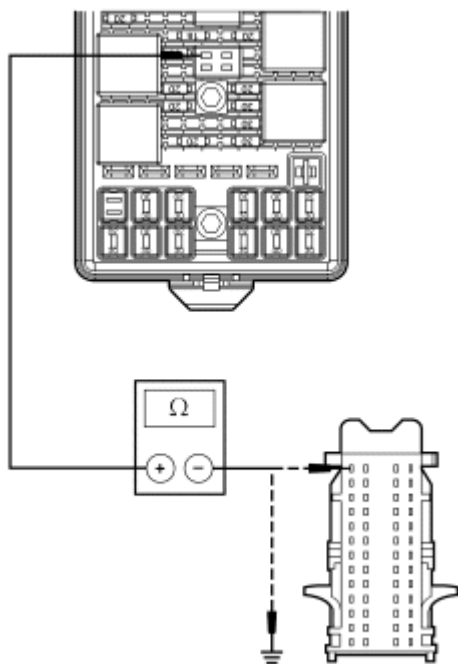
N0002418

Fig. 15: Measuring Voltage Between Luggage Compartment Lid Release Solenoid C430-3, 1205 (BK) & Ground
Courtesy of FORD MOTOR CO.

- Measure the resistance between the luggage compartment lid release solenoid C430-3, circuit 1205 (BK), harness side and ground.
- **Is the resistance less than 5 ohms?**
YES : INSTALL a new luggage compartment lid latch. REFER to **Luggage Compartment Lid Latch**.
NO : REPAIR the circuit. TEST the system for normal operation.

G11 CHECK THE BEC AND CIRCUIT 26 (WH/VT) FOR AN OPEN OR SHORT TO GROUND

- Disconnect: SJB C2280c



N0075643

Fig. 16: Checking BEC & Circuit 26 (WH/VT) For An Open Or Short To Ground
Courtesy of FORD MOTOR CO.

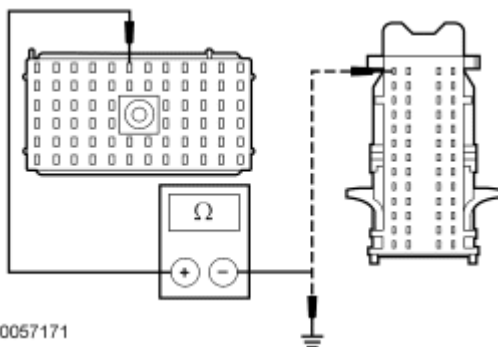
- Measure the resistance between the luggage compartment lid release relay pin 85, circuit 26 (WH/VT), BEC face side and the SJB C2280c-13, circuit 26 (WH/VT), harness side; and between the luggage compartment lid release relay pin 85, circuit 26 (WH/VT), BEC face side and ground.
- **Is the resistance less than 5 ohms between the relay and the SJB, and greater than 10,000 ohms between the relay and ground?**

YES : Go to G13.

NO : Go to G12.

G12 CHECK CIRCUIT 26 (WH/VT) FOR AN OPEN OR SHORT TO GROUND

- Disconnect: BEC C1035a



N0057171

Fig. 17: Measuring Resistance Between BEC C1035A-F7 & SJB C2280C-13, Circuit 26 (WH/VT)

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Courtesy of FORD MOTOR CO.

- Measure the resistance between the BEC C1035a-F7, circuit 26 (WH/VT), harness side and the SJB C2280c-13, circuit 26 (WH/VT), harness side; and between the BEC C1035a-F7, circuit 26 (WH/VT), harness side and ground.
- **Is the resistance less than 5 ohms between the BEC and the SJB, and greater than 10,000 ohms between the BEC and ground?**

YES : INSTALL a new BEC. CLEAR the DTCs. REPEAT the self-test.

NO : REPAIR the circuit. CLEAR the DTCs. REPEAT the self-test.

G13 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test H: The Remote Keyless Entry (RKE) Transmitter Is Inoperative

Normal Operation

Remote locking and unlocking of the doors, activating the panic alarm, and releasing the luggage compartment lid latch is accomplished by the smart junction box (SJB) receiving a command message from the RKE transmitter through the tire pressure monitoring system/remote keyless entry (TPMS/RKE) antenna. The SJB processes the command and provides the appropriate output. The RKE transmitters and SJB also utilize a rolling code to prevent the code from being "captured" by a code grabber. The system advances the counter in the RKE transmitter and SJB every time an RKE transmitter button is pressed.

The TPMS/RKE antenna is located externally on the SJB.

- DTC B2425 (Remote Keyless Entry Out of Synchronization) - is a continuous DTC that sets when the SJB detects the rolling counter received from an RKE transmitter is 1,024 times or greater than the rolling counter stored in the module.

This pinpoint test is intended to diagnose the following:

- RKE transmitter battery

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- RKE transmitter programming
- RKE transmitter
- RKE transmitter button pressed a substantial amount of times while outside the range of the vehicle
- SJB

PINPOINT TEST H: THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER IS INOPERATIVE

NOTE: All RKE transmitters must be present to begin diagnosis of the RKE system.

NOTE: Aftermarket or dealer-installed systems may adversely affect the RKE system operation. These systems should be disconnected before diagnosing any RKE concerns.

H1 CHECK FOR THE CORRECT RKE TRANSMITTERS

NOTE: Make sure the RKE transmitters are those provided with the original equipment manufacturer (OEM) system and not from an aftermarket or a dealer-installed system that may have been installed on the vehicle.

- Check that the correct RKE transmitters are used with the vehicle.
- **Are all the correct RKE transmitters present?**

YES : Go to H2.

NO : The system cannot be tested without the correct RKE transmitters. INFORM the customer that all the correct RKE transmitters must be present to proceed with diagnosis of the system.

H2 CHECK IF THE RKE TRANSMITTER IS OUT OF SYNCHRONIZATION WITH THE SJB

- Check the recorded results from the SJB self-test.
- **Is continuous DTC B2425 present?**

YES : Go to H3.

NO : Go to H7.

H3 RESYNCHRONIZE THE INOPERATIVE RKE TRANSMITTER

- Key in OFF position.
- Press any button on the inoperative RKE transmitter 4 times consecutively within 30 seconds.
- **Does the RKE transmitter operate correctly now?**

YES : The transmitter is now synchronized. CLEAR the DTCs. REPEAT the self-test.

NO : Go to H4.

H4 CHECK FOR A SECOND RKE TRANSMITTER

- Check for another RKE transmitter that operates with the vehicle.
- **Is there another RKE transmitter that operates with the vehicle?**

YES : Go to H5.

NO : Go to H6.

H5 RESYNCHRONIZE THE INOPERATIVE RKE TRANSMITTER USING THE SECOND RKE TRANSMITTER

- Press any button on the operational RKE transmitter.
- Within 30 seconds, press a button on the inoperative RKE transmitter.
- Check the inoperative RKE transmitter for correct operation.
- **Does the inoperative RKE transmitter operate now?**
YES : The transmitter is now synchronized. CLEAR the DTCs. REPEAT the self-test.
NO : Go to H6.

H6 PROGRAM THE INOPERATIVE RKE TRANSMITTER OR ALL THE RKE TRANSMITTERS

- Program the inoperative RKE transmitter individually using a scan tool or program all RKE transmitters using the manual key cycle method. Refer to **Remote Keyless Entry Transmitter Programming**.
- **Does the inoperative RKE transmitter(s) operate now?**
YES : The transmitter(s) is now synchronized. INFORM the customer that any RKE transmitters not present need to be programmed. CLEAR the DTCs. REPEAT the self-test.
NO : Go to H7.

H7 MAKE SURE THE RKE TRANSMITTER SIGNAL IS BEING RECEIVED

- Enter the following diagnostic mode on the diagnostic tool: Remote Keyless Entry

NOTE: **The remote keyless entry test is accessed through the scan tool by selecting Tool box, Body, Security.**

- Monitor the RKE transmitter identification code (TIC) through the scan tool menus.
- Verify the RKE transmitter signal is being received. Press a button on the RKE transmitter while observing the scan tool.
- **Does the TIC show up on the scan tool screen when a button is pressed?**
YES : Go to H8.
NO : Go to H9.

H8 DETERMINE IF THE RKE TRANSMITTERS ARE PROGRAMMED

- Enter the following diagnostic mode on the diagnostic tool: Remote Keyless Entry
- Monitor the RKE transmitter TIC/DATA through the scan tool menus.
- Verify the RKE transmitters are programmed to the vehicle.
- **Does the TIC displayed under RKE transmitter match any of the TICs stored in memory?**
YES : Go to H10.
NO : PROGRAM all the RKE transmitters. REFER to **Remote Keyless Entry Transmitter Programming**. INFORM the customer that any RKE transmitters not present need to be programmed. TEST the system for normal operation.

H9 CHECK THE RKE TRANSMITTER BATTERY

- Using a thin coin, open the RKE transmitter.

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- Do not clean off any grease from the battery terminal on the back surface of the circuit board.
- Verify the correct battery is being used (CR2032).
- Remove the RKE transmitter battery and measure the voltage.

- **Is the voltage greater than 2.5 volts?**

YES : Go to H10.

NO : INSTALL a new battery. Do not program the RKE transmitters (damaged or dead batteries do not erase TICs from memory). TEST the system for normal operation.

H10 CHECK FOR NORMAL OPERATION WITH A KNOWN GOOD RKE TRANSMITTER

- Enter the following diagnostic mode on the diagnostic tool: Remote Keyless Entry
- Monitor the RKE transmitter TIC/DATA through the scan tool menus.
- Using the customer's second RKE transmitter or a known good RKE transmitter that is correct for the vehicle (and programmed to the vehicle), verify the RKE transmitter signal is being received.

- **Does the TIC show up on the scan tool when a button is pressed on the RKE transmitter?**

YES : REPLACE the inoperative RKE transmitter. PROGRAM all the RKE transmitter(s). REFER to **Remote Keyless Entry Transmitter Programming**. INFORM the customer that any RKE transmitters not present need to be programmed. CLEAR the DTCs. REPEAT the self-test.

NO : Go to H11.

H11 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test I: An Individual Button/Feature Is Inoperative From The Remote Keyless Entry (RKE) Transmitter

Normal Operation

Remote locking and unlocking of the doors, activating the panic alarm, and releasing the luggage compartment latch is accomplished by the smart junction box (SJB) receiving a command message from the remote keyless entry (RKE) transmitter through the tire pressure monitoring system/remote keyless entry (TPMS/RKE) external antenna. The SJB processes the command and provides the appropriate output.

The SJB will disable the PANIC feature if the ignition key is in any position other than OFF or LOCK.

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The SJB will disable the luggage compartment lid release if the vehicle is moving faster than 5 km/h (3 mph) or faster.

This pinpoint test is intended to diagnose the following:

- All door locks
- Horn system
- Luggage compartment lid latch
- Turn signals
- RKE transmitter

PINPOINT TEST I: AN INDIVIDUAL BUTTON/FEATURE IS INOPERATIVE FROM THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER

I1 VERIFY THE DOOR LOCK OPERATION

- Press the lock and unlock button from the driver door lock control switch while observing the door lock operation.
- **Do the door locks operate correctly?**

YES : Go to I2.

NO : Go to Symptom Chart.

I2 VERIFY THE HAZARD LAMP OPERATION

- Place the hazard switch in the ON position.
- **Do the hazard lamps operate correctly?**

YES : Go to I3.

NO : REFER to EXTERIOR LIGHTING article.

I3 VERIFY THE HORN OPERATION

- Enter the following diagnostic mode on the diagnostic tool: SJB DataLogger
- Select the SJB PID (HORN) and active command the horn on.
- **Does the horn sound when commanded on?**

YES : Go to I4.

NO : REFER to HORN article.

I4 VERIFY THE LUGGAGE COMPARTMENT LID RELEASE OPERATION

- Enter the following diagnostic mode on the diagnostic tool: SJB DataLogger
- Select the SJB PID (TRUNK_REL) and active command the luggage compartment lid latch to release.
- **Does the luggage compartment lid latch release?**

YES : REPLACE the inoperative RKE transmitter. PROGRAM all of the RKE transmitter(s). REFER to Remote Keyless Entry Transmitter Programming. INFORM the customer that any RKE transmitters not present need to be programmed. TEST the system for normal operation.

NO : Go to Pinpoint Test G.

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Pinpoint Test J: The Remote Keyless Entry (RKE) Transmitter Has Poor Range Performance

Normal Operation

Remote locking and unlocking of the doors, activating the panic alarm, and releasing the luggage compartment lid latch is accomplished by the smart junction box (SJB) receiving a command message from the remote keyless entry (RKE) transmitter through the tire pressure monitoring system/remote keyless entry (TPMS/RKE) antenna. The SJB processes the command and provides the appropriate output. The RKE transmitter has a normal operating range of 10 m (33 ft).

The TPMS/RKE antenna is located externally on the SJB.

This pinpoint test is intended to diagnose the following:

- Aftermarket systems
- High power devices
- RKE transmitter
- RKE transmitter battery
- TPMS/RKE antenna
- TV/radio transmission towers
- SJB

PINPOINT TEST J: THE REMOTE KEYLESS ENTRY (RKE) TRANSMITTER HAS POOR RANGE PERFORMANCE

NOTE: All RKE transmitters must be present to begin diagnosis of the RKE system.

NOTE: Aftermarket or dealer-installed systems may adversely affect the RKE system operation. These systems should be disconnected before diagnosing any RKE concerns.

J1 CHECK FOR THE CORRECT RKE TRANSMITTERS

NOTE: Make sure the RKE transmitters are those provided with the original equipment manufacturer (OEM) system and not from an aftermarket or a dealer installed system that may have been installed on the vehicle.

- Check that the correct RKE transmitters are used with the vehicle.
- **Are all the correct RKE transmitters present?**

YES : Go to J2.

NO : The system cannot be tested without the correct RKE transmitters. INFORM the customer that all the correct RKE transmitters must be present to proceed with diagnosis of the system.

J2 CHECK ALL RKE TRANSMITTERS FOR POOR RANGE PERFORMANCE

NOTE: The 3 m (10 ft) measurement of range is not the standard but is a guideline that clearly indicates a vehicle is experiencing poor range performance.

- Check all RKE transmitters for poor range performance (less than 3 m [10 ft]).
- **Do all RKE transmitters experience poor range?**
YES : Go to J4.
NO : Go to J3.

J3 CHECK THE RKE TRANSMITTER BATTERY

- Using a thin coin, open the RKE transmitter.
- Do not clean off any grease from the battery terminals on the back surface of the circuit board.
- Verify the correct battery is used (CR2032).
- Remove the RKE transmitter battery and measure the voltage.
- **Is the voltage greater than 2.5 volts?**

YES : REPLACE the inoperative RKE transmitter and PROGRAM all RKE transmitters. REFER to **Remote Keyless Entry Transmitter Programming**. INFORM the customer that any RKE transmitters not present need to be programmed. TEST the system for normal operation.

NO : INSTALL a new battery (make sure the battery is seated correctly). DO NOT reprogram the RKE transmitters (weak or dead batteries do not erase TICs from memory). TEST the system for normal operation.

J4 CHECK THE LOCATION OF THE VEHICLE AND THE APPROACH ANGLES AROUND THE VEHICLE

- Make sure the poor performance is consistent in nature and is not from one approaching angle.
- The RKE transmitter range performance may be degraded in certain locations. For example, if the vehicle is within 0.8 km (0.5 mile) of high power devices or radio/TV towers, the operating distance of the RKE transmitters may be reduced.
- **Is the poor range performance consistent around the vehicle?**
YES : Go to J5.

NO : The system is operating correctly at this time. TEST the system for normal operation.

J5 CHECK THE TPMS/RKE ANTENNA

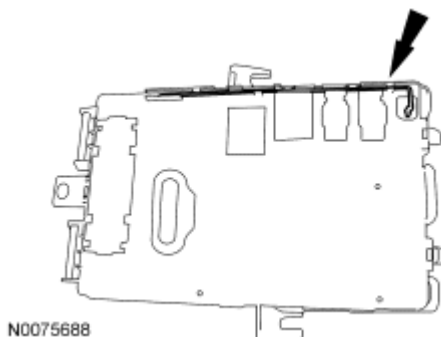


Fig. 18: Checking TPMS/RKE Antenna

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Courtesy of FORD MOTOR CO.

- Verify the TPMS/RKE antenna is connected and not damaged.
- **Is the antenna OK?**

YES : Go to J6.

NO : If the antenna is disconnected, CONNECT the antenna correctly. TEST the system for normal operation.

If the antenna is damaged, INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

J6 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test K: The Autolock Does Not Operate Correctly

NOTE: **The autolock feature is not available on manual transmission equipped vehicles.**

Normal Operation

The autolocking function causes the vehicle to automatically lock all the doors when the following conditions are all concurrently met during the current key cycle:

- All doors are closed
- Autolocking function is active
- Key in ON position
- Brake pedal is applied and vehicle speed is less than 8 km/h (5 mph)
- Vehicle speed exceeds 8 km/h (5 mph)

Relock occurs after a door is opened, the brake pedal is applied while the vehicle speed is less than 8 km/h (5

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mph), all the doors are closed again, and the vehicle speed increases to 8 km/h (5 mph) or greater.

This pinpoint test is intended to diagnose the following:

- Smart junction box (SJB)

PINPOINT TEST K: THE AUTOLOCK DOES NOT OPERATE CORRECTLY

K1 VERIFY THE AUTOLOCK FEATURE IS ENABLED

- Verify the autolock feature is enabled.
- **Is the autolock feature enabled?**

YES : Go to K2.

NO : PROGRAM the autolock feature. REFER to **Autolock and Horn Chirp Programming**.

K2 CHECK COURTESY LAMPS

- Open the driver door.
- **Do the courtesy lamps illuminate?**

YES : Go to K3.

NO : REFER to **INTERIOR LIGHTING** article.

K3 CHECK THE SJB VEHICLE SPEED, IGNITION SWITCH STATUS AND BRAKE PEDAL POSITION (BPP) PIDs

- Key in ON position.
- Enter the following diagnostic mode on the diagnostic tool: SJB DataLogger
- Monitor the SJB vehicle speed PID, ignition switch status PID and brake ON/OFF PID.
- **Are the correct PID values received?**

YES : Go to K4.

NO : REFER to **INSTRUMENT CLUSTER (IC), MESSAGE CENTER, AND WARNING CHIMES** article to continue diagnosis of the vehicle speed.

REFER to **STEERING COLUMN SWITCHES** article to continue diagnosis of the ignition switch status.

REFER to **EXTERIOR LIGHTING** article to continue diagnosis of the stoplamp switch.

K4 CHECK FOR CORRECT SJB OPERATION

- Disconnect all the SJB connectors.
- Check for:
 - corrosion
 - damaged pins
 - pushed-out pins
- Connect all the SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.

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- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

Pinpoint Test L: The Smart Unlock Does Not Operate Correctly

NOTE: It is possible to lock the vehicle with the keys in the ignition lock cylinder if the doors are locked with the remote keyless entry (RKE) transmitter, manually locked with the lock button on the door, or by locking the driver door with a key.

Normal Operation

The smart unlock feature unlocks the driver door if the key is in the ignition lock cylinder and the driver door is open when the vehicle is locked with the door lock control switch. The smart unlock feature requests the driver door be unlocked one second after these conditions occur. The smart unlock feature unlocks the driver door only if the transmitter identification code (TIC) programming modes are not active.

This pinpoint test is intended to diagnose the following:

- Smart junction box (SJB)

PINPOINT TEST L: THE SMART UNLOCK DOES NOT OPERATE CORRECTLY

L1 CHECK THE COURTESY LAMP OPERATION

- Open and close the driver door.
- **Do the courtesy lamps operate correctly?**

YES : Go to L2.

NO : REFER to **INTERIOR LIGHTING** article.

L2 CHECK THE KEY-IN-IGNITION WARNING CHIME

- Insert the key in the ignition switch.
- Open the driver door.
- **Does the key-in-ignition warning chime work correctly?**

YES : Go to L3.

NO : REFER to **INSTRUMENT CLUSTER (IC), MESSAGE CENTER, AND WARNING CHIMES** article.

L3 CHECK FOR CORRECT SJB OPERATION

- Disconnect all SJB connectors.
- Check for:
 - corrosion
 - damaged pins

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- pushed-out pins
- Connect all SJB connectors and make sure they seat correctly.
- Operate the system and verify the concern is still present.
- **Is the concern still present?**

YES : INSTALL a new SJB. REFER to **MULTIFUNCTION ELECTRONIC MODULES** article. TEST the system for normal operation.

NO : The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.

GENERAL PROCEDURES

REMOTE KEYLESS ENTRY TRANSMITTER PROGRAMMING

CAUTION: All remote keyless entry (RKE) transmitters must be programmed at the same time.

1. The vehicle must be electronically unlocked before entering program mode, via the RKE transmitter or the door lock control switch while the driver door is open.
2. Turn the key from the OFF to the RUN position 8 times within 10 seconds, with the eighth turn ending in the RUN position. If the module has successfully entered program mode, it locks and then unlocks all the doors.
3. Within 20 seconds, press any button on an RKE transmitter, and the doors lock and then unlock to confirm that the RKE transmitter has been programmed. Repeat this step for each RKE transmitter.
4. If the door locks do not respond for any RKE transmitter, wait several seconds and press the button again. If the door locks still fail to respond, refer to Inspection and Verification. Make sure that no more than the maximum number of RKE transmitters are attempted to be programmed.
5. Exiting the programming mode is accomplished if one of the following occurs:
 - Turning the key to the OFF position.
 - 20 seconds have passed since entering programming mode or since the last RKE transmitter was programmed.
 - The maximum number of RKE transmitters have been programmed.

AUTOLOCK AND HORN CHIRP PROGRAMMING

NOTE: Manual transmission vehicles are not equipped with an autolock feature.

1. Electronically unlock the vehicle using the remote keyless entry (RKE) transmitter or the power lock control switch.
2. Close all doors.
3. Confirm the key is in the OFF position.
4. Turn the key from OFF to ON.

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NOTE: Steps 4 through 8 must be carried out within 30 seconds.

5. Press the door lock control switch UNLOCK button 3 times.
6. Turn the key from ON to OFF.
7. Press the door lock control switch UNLOCK button 3 times.
8. Turn the key from OFF to ON.
9. Verify that the horn chirps. This indicates the system is in the enable/disable mode and is ready to accept program changes.
10. Press the door lock control switch UNLOCK then LOCK button once to toggle the autolock/relock feature OFF.
11. Verify that the horn chirps 1 time. There should be only 1 chirp indicating that autolock/relock feature is disabled. If 1 chirp is heard, followed by a longer sound of the horn, the autolock/relock feature is enabled. Return to Step 9.
12. Turn the key to the OFF position to exit the enable/disable mode.
13. Verify that the horn chirps once to indicate that a feature has been changed.

PERIMETER LIGHTING FEATURE PROGRAMMING

Programming the Perimeter Lighting Feature Using the Door Lock Control Switch

NOTE: The following steps must be carried out within 30 seconds or the procedure will need to be repeated. If the procedure needs to be repeated, wait 30 seconds between programming sessions.

1. Turn the ignition switch from the OFF to the RUN position.
2. Press the unlock button on the door unlock control 3 times.
3. Turn the ignition switch from the RUN to the OFF position.
4. Press the unlock button on the door unlock control switch 3 times.
5. Turn the ignition switch to the RUN position. The horn chirps one time to indicate that programming mode is entered.

NOTE: The unlock button must be pressed twice within 5 seconds.

6. Within 30 seconds of entering the programming mode, press the unlock button on the door lock control switch twice to enable/disable the perimeter lighting feature. The horn chirps once if the perimeter lighting is disabled or a chirp followed by a honk if the perimeter lighting is enabled.
7. Programming ends when the ignition switch state changes or times out after 2 minutes.

REMOVAL AND INSTALLATION

HOOD LATCH AND COMPONENTS - EXPLODED VIEW

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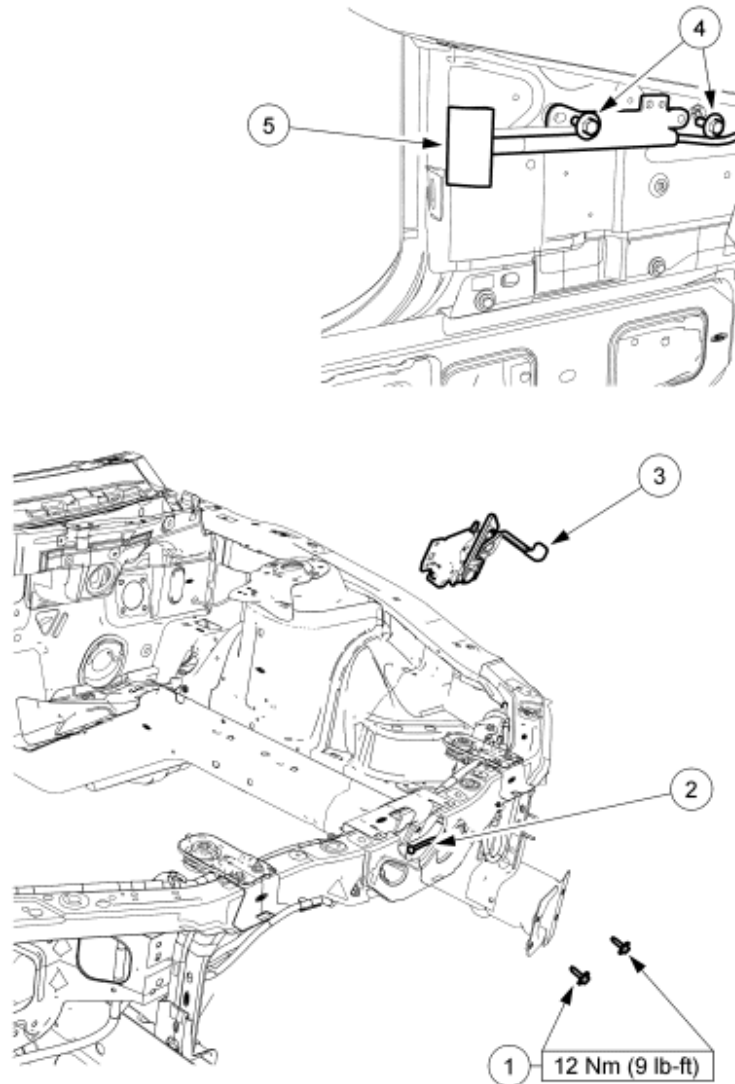


Fig. 19: Exploded View Of Hood Latch & Components With Torque Specification
Courtesy of FORD MOTOR CO.

Item	Part Number	Description
1	W611103	Hood latch bolts (2 required)
2	-	Hood latch release cable (part of 16916)
3	16700	Hood latch
4	N808727	Hood latch release handle screws (2 required)
5	16916	Hood latch release handle

1. For additional information, refer to the procedures.

HOOD LATCH

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Material

Item	Specification
Multi-Purpose Grease Spray XL-5	ESB-M1C93B

REMOVAL AND INSTALLATION

1. Remove the 6 pin-type retainers and the upper radiator sight shield.
2. Remove the front bumper cover. For additional information, refer to **BUMPERS** article.

NOTE: Mark the location of the hood latch to aid installation.

3. Remove the 2 hood latch bolts.
 - To install, tighten to 12 Nm (9 lb-ft).
4. Disconnect the hood latch release cable.
5. Remove the hood latch.
6. To install, reverse the removal procedure.
 - Adjust the hood latch for correct engagement after installation.
 - Lubricate the hood latch after installation.

HOOD LATCH RELEASE HANDLE

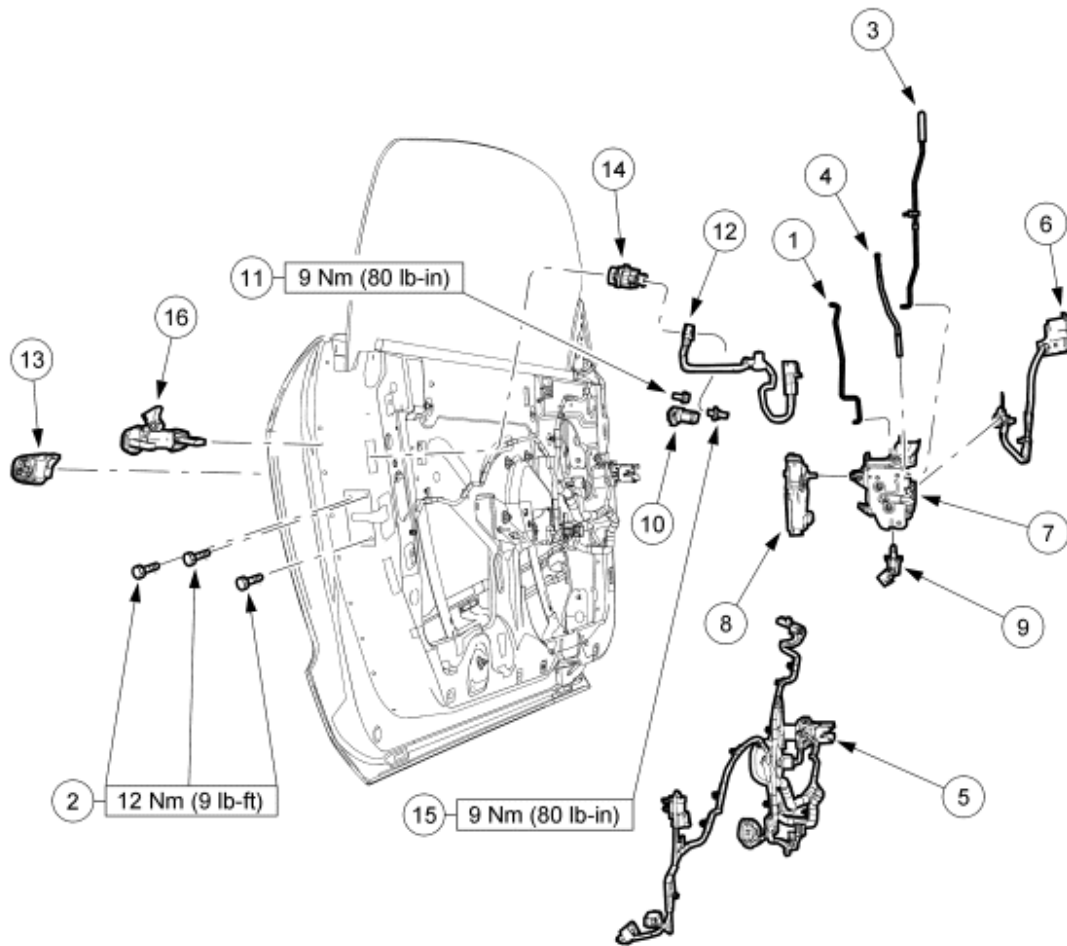
REMOVAL AND INSTALLATION

1. Remove the hood latch. For additional information, refer to **Hood Latch**.
2. Disconnect the hood latch release cable guides.
3. Remove the LH scuff plate.
4. Remove the LH A-pillar lower trim panel.
5. Remove the 2 hood latch release handle screws.
6. Remove the hood release latch handle and cable.
 - Release the grommet from the dash panel.
7. To install, reverse the removal procedure.

FRONT DOOR HANDLES, LOCKS AND LATCHES - EXPLODED VIEW

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N0009423

Fig. 20: Exploded View Of Front Door Handles, Locks & Latches With Torque Specifications
Courtesy of FORD MOTOR CO.

Item	Part Number	Description
1	22152/22153	Exterior door handle actuating rod (RH/LH)
2	W707400	Door latch bolts (3 required)
3	63218A01	Manual lock rod
4	6322135	Door lock cylinder actuating rod (if equipped)
5	14630/14631	Wiring harness (RH/LH)
6	6322600/ 6322601	Interior door handle (RH/LH)
7	21812/21813	Front door latch (RH/LH)
8	218A42/ 218A423	Door lock actuator (RH/LH)

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9	10B997	Door ajar switch
10	-	Door lock cylinder actuating pawl
11	632191	Door lock cylinder bolt (LH only)
12	6321991	Door disarm switch (if equipped)
13	422405	Door lock cylinder cover (if equipped)
14	7821991	Door lock cylinder (if equipped)
15	W709892	Exterior door handle studs (2 required RH)
16	22404/22405	Exterior door handle (RH/LH)

1. For additional information, refer to the procedures.

INTERIOR DOOR HANDLE

REMOVAL AND INSTALLATION

1. Remove the door trim panel. For additional information, refer to **INTERIOR TRIM AND ORNAMENTATION** article.
2. Remove the interior door handle from the door trim panel.
3. To install, reverse the removal procedure.

DOOR LATCH

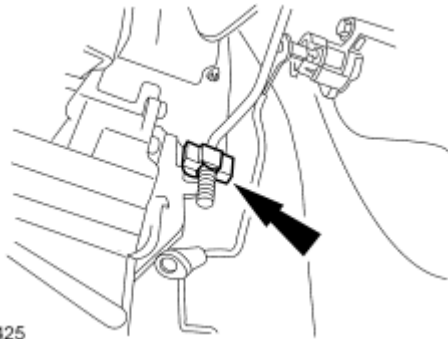
Material

Item	Specification
Multi-Purpose Grease Spray XL-5	ESB-M1C93B

REMOVAL

NOTE: LH side shown, RH side similar.

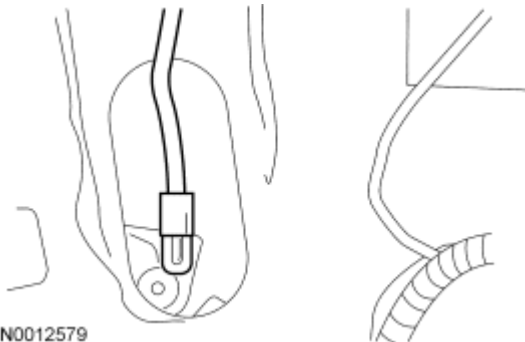
1. Remove the door trim panel. For additional information, refer to **INTERIOR TRIM AND ORNAMENTATION** article.
2. Position the watershield aside.
3. Disconnect the exterior door handle actuating rod.



N0009425

Fig. 21: Locating Exterior Door Handle Actuating Rod
Courtesy of FORD MOTOR CO.

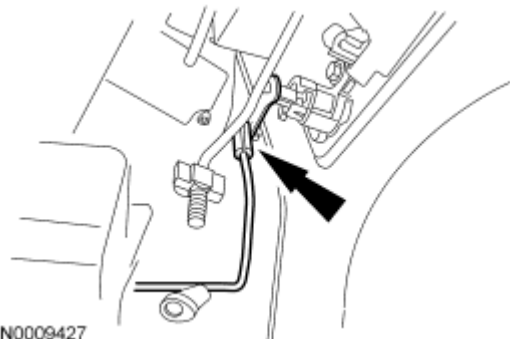
4. Remove the 3 door latch bolts.
5. Disconnect the manual lock rod.



N0012579

Fig. 22: Identifying Manual Lock Rod
Courtesy of FORD MOTOR CO.

6. If equipped, disconnect the door lock cylinder actuating rod.



N0009427

Fig. 23: Locating Door Lock Cylinder Actuating Rod
Courtesy of FORD MOTOR CO.

7. Disconnect the 2 wiring harness electrical connectors.

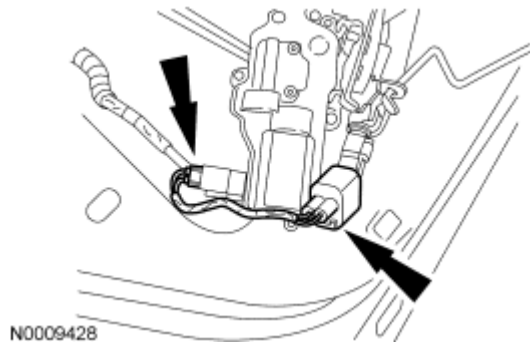


Fig. 24: Locating Wiring Harness Electrical Connectors
Courtesy of FORD MOTOR CO.

8. Remove the cable cover.
 - Release the clip.
 - Remove the pin-type retainer.

CAUTION: Make sure the interior door handle actuating cable does not kink or damage to the cable may occur.

9. Disconnect the interior door handle actuating cable.

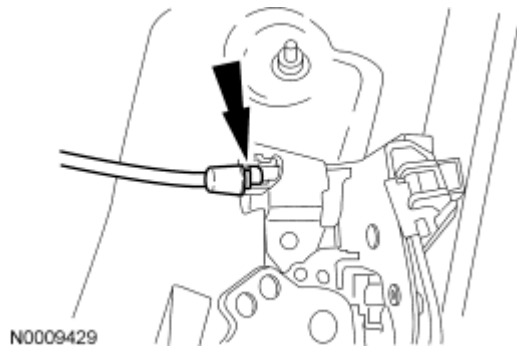
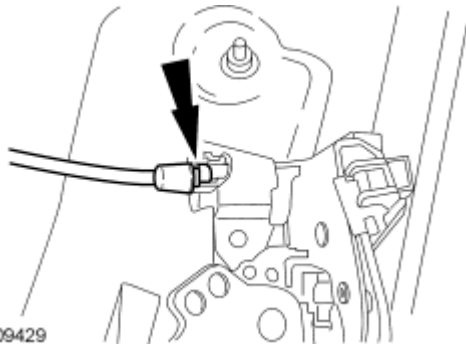


Fig. 25: Locating Interior Door Handle Actuating Cable
Courtesy of FORD MOTOR CO.

10. Remove the door latch.

INSTALLATION

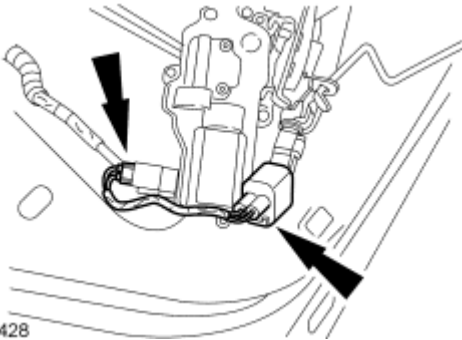
1. Position the door latch inside the door.
2. Connect the interior door handle actuating cable.



N0009429

Fig. 26: Locating Interior Door Handle Actuating Cable
Courtesy of FORD MOTOR CO.

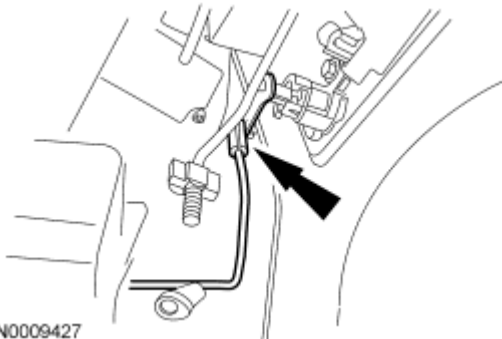
3. Connect the cable cover.
4. Connect the 2 wiring harness electrical connectors.



N0009428

Fig. 27: Locating Wiring Harness Electrical Connectors
Courtesy of FORD MOTOR CO.

5. If equipped, connect the door lock cylinder actuating rod.



N0009427

Fig. 28: Locating Door Lock Cylinder Actuating Rod
Courtesy of FORD MOTOR CO.

6. Connect the manual lock rod.

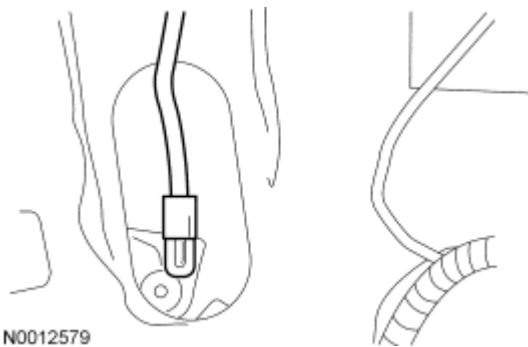


Fig. 29: Identifying Manual Lock Rod
Courtesy of FORD MOTOR CO.

7. Install the 3 door latch bolts.
 - Tighten to 12 Nm (9 lb-ft).

NOTE: Push upward on the exterior door handle actuating rod and make sure the door latch is in a neutral position when installing the rod into the retaining clip to make sure the exterior door handle is correctly positioned.

8. Connect the exterior door handle actuating rod into the clip.

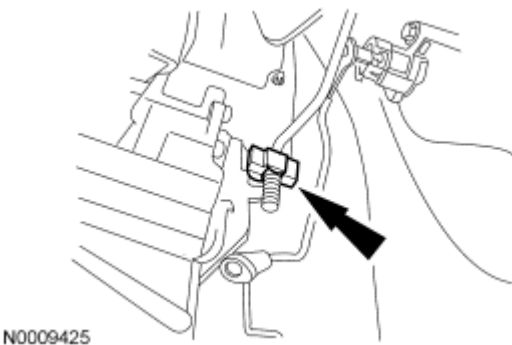


Fig. 30: Locating Exterior Door Handle Actuating Rod
Courtesy of FORD MOTOR CO.

9. Reseal the watershield.
10. Install the door trim panel. For additional information, refer to **INTERIOR TRIM AND ORNAMENTATION** article.

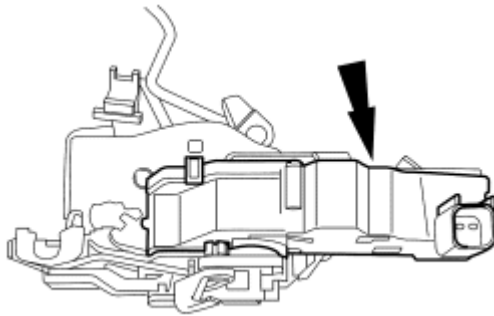
DOOR LOCK ACTUATOR

REMOVAL AND INSTALLATION

1. Remove the door latch. For additional information, refer to **Door Latch**.
2. Remove the door lock actuator.

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N0009430

Fig. 31: Locating Door Lock Actuator
Courtesy of FORD MOTOR CO.

3. To install, reverse the removal procedure.

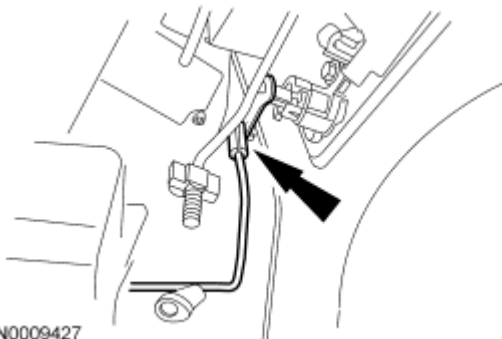
DOOR LOCK CYLINDER

Material

Item	Specification
Penetrating and Lock Lubricant XL-1	-

REMOVAL AND INSTALLATION

1. Remove the door trim panel. For additional information, refer to **INTERIOR TRIM AND ORNAMENTATION** article.
2. Position the watershield aside.
3. Disconnect the door lock cylinder actuating rod.



N0009427

Fig. 32: Locating Door Lock Cylinder Actuating Rod
Courtesy of FORD MOTOR CO.

4. If equipped, disconnect the door disarm switch wiring harness electrical connector.
5. Remove the bolt and the door lock cylinder.
 - To install, tighten to 9 Nm (80 lb-in).

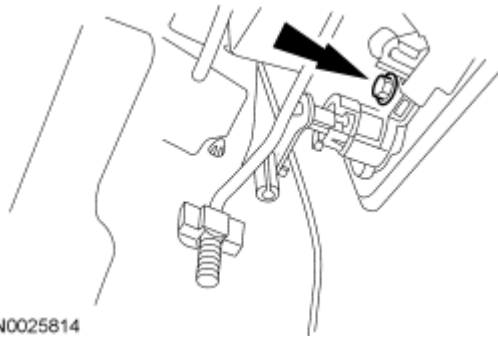


Fig. 33: Locating Door Lock Cylinder And Bolt
Courtesy of FORD MOTOR CO.

6. To install, reverse the removal procedure.
 - Lubricate the door lock cylinder after installation.

EXTERIOR DOOR HANDLE

REMOVAL

1. Raise the door window glass to the full-up position.
2. Remove the door trim panel. For additional information, refer to **INTERIOR TRIM AND ORNAMENTATION** article.
3. If equipped, remove the door lock cylinder. For additional information, refer to **Door Lock Cylinder**.

NOTE: Push upward on the exterior door handle actuating rod when installing the rod into the retaining clip.

4. Open the exterior door handle actuating clip and disconnect the actuating rod.

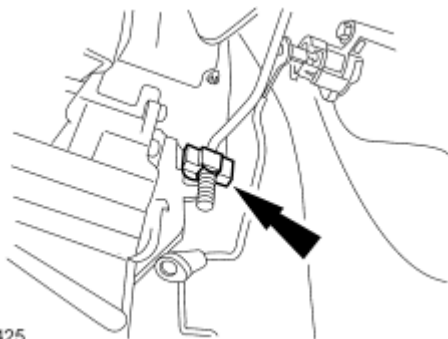
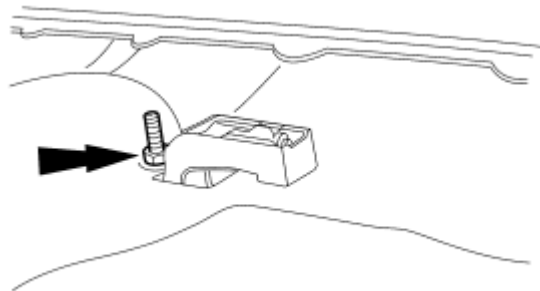


Fig. 34: Locating Exterior Door Handle Actuating Rod
Courtesy of FORD MOTOR CO.

NOTE: Two exterior door handle studs must be removed on the RH side.

5. Remove the exterior door handle studs.



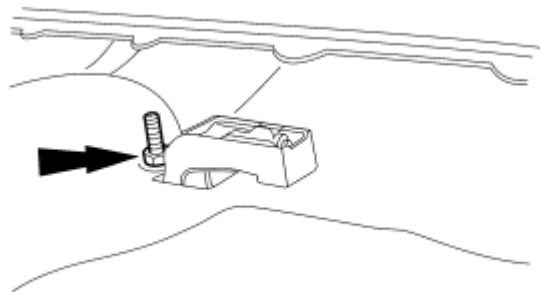
N0025815

Fig. 35: Locating Exterior Door Handle Studs
Courtesy of FORD MOTOR CO.

6. Slide the exterior door handle rearward and remove.

INSTALLATION

1. Insert the exterior door handle through the door panel to engage the bellcrank and then slide it forward.
2. Install the exterior door handle studs.
 - Tighten to 9 Nm (80 lb-in).



N0025815

Fig. 36: Locating Exterior Door Handle Studs
Courtesy of FORD MOTOR CO.

NOTE: Push upward on the exterior door handle actuating rod and make sure the door latch is in a neutral position when installing the rod into the retaining clip to make sure the exterior door handle is correctly positioned.

3. Connect the exterior door handle actuating rod into the clip.

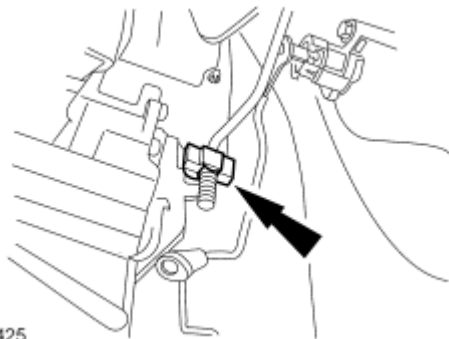


Fig. 37: Locating Exterior Door Handle Actuating Rod
Courtesy of FORD MOTOR CO.

4. If equipped, install the door lock cylinder. For additional information, refer to **Door Lock Cylinder**.
5. Install the door trim panel. For additional information, refer to **INTERIOR TRIM AND ORNAMENTATION** article.

DOOR AJAR SWITCH

REMOVAL AND INSTALLATION

1. Remove the door latch. For additional information, refer to **Door Latch**.
2. Remove the door ajar switch.

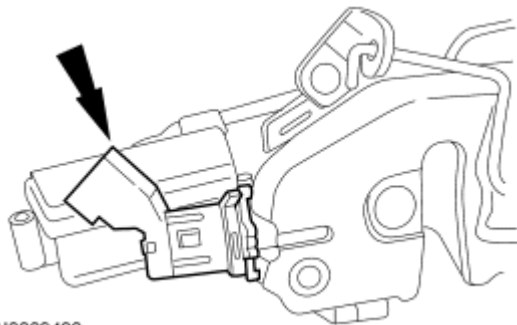


Fig. 38: Locating Door Ajar Switch
Courtesy of FORD MOTOR CO.

3. To install, reverse the removal procedure.

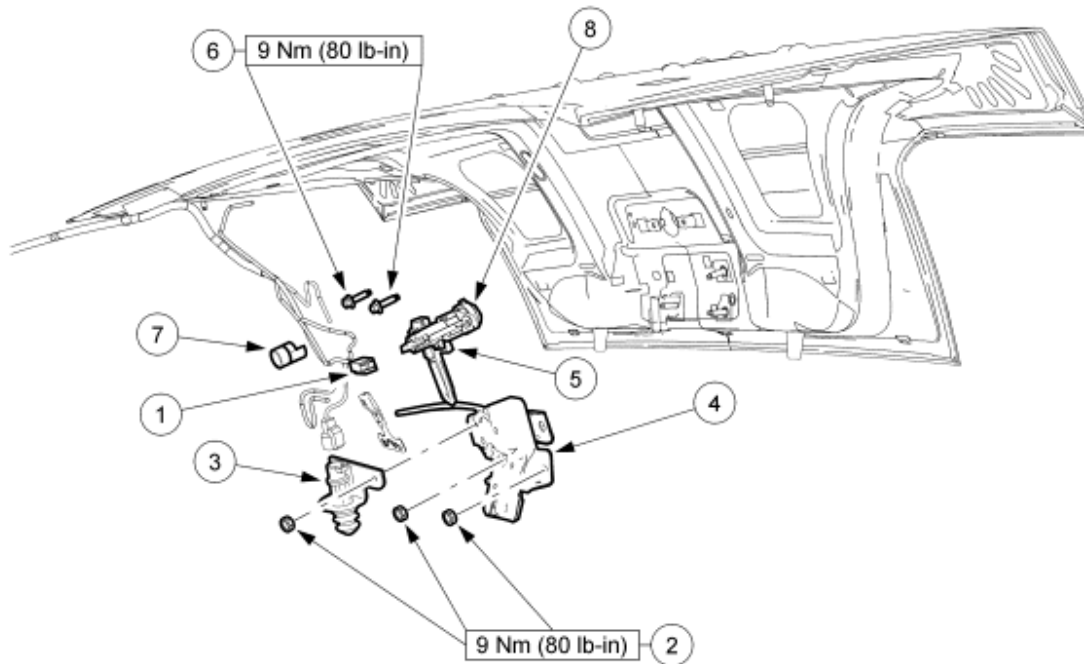
LUGGAGE COMPARTMENT LID LATCH

Material

Item	Specification
Multi-Purpose Grease Spray XL-5	ESB-M1C93B

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N0012580

Fig. 39: Exploded View Of Luggage Compartment Lid With Torque Specifications
Courtesy of FORD MOTOR CO.

Item	Part Number	Description
1	-	Luggage compartment lid latch electrical connector (part of 19B516)
2	N807260	Luggage compartment lid latch nuts (3 required)
3	19A434	Luggage compartment lid ajar switch (early build)
4	43200	Luggage compartment lid latch
5	-	Luggage compartment lid anti-theft inhibit switch electrical harness (if equipped) (part of 6343262)
6	W500614	Luggage compartment lid lock cylinder bolts (2 required)
7	-	Luggage compartment lid release cable (part of 43200)
8	43262	Luggage compartment lid lock cylinder

REMOVAL AND INSTALLATION

1. Remove the luggage compartment lid trim panel.
2. Disconnect the luggage compartment lid latch actuator cable from the luggage compartment lid lock cylinder.
3. Disconnect the luggage compartment lid latch electrical connector.

NOTE: Mark the location of the luggage compartment lid latch to aid installation.

4. Remove the 3 luggage compartment lid latch nuts.

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- To install, tighten to 9 Nm (80 lb-in).

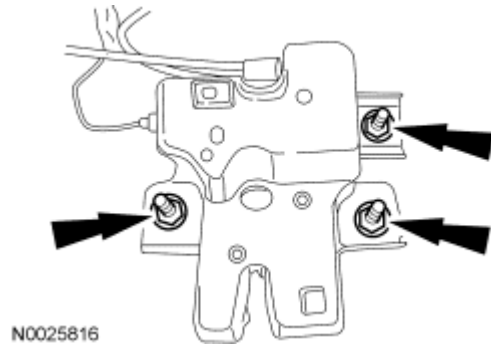


Fig. 40: Locating Luggage Compartment Lid Latch Nuts
Courtesy of FORD MOTOR CO.

5. Position the luggage compartment lid ajar switch aside (early build).
6. Remove the luggage compartment lid latch.
7. To install, reverse the removal procedure.
 - Lubricate the luggage compartment lid latch after installation.

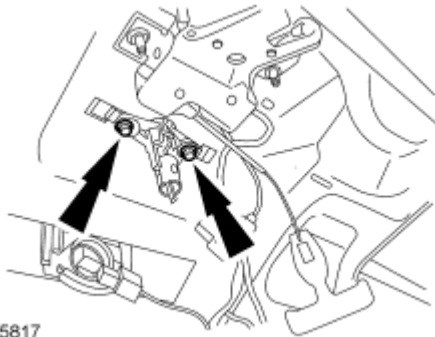
LUGGAGE COMPARTMENT LID LOCK CYLINDER

Material

Item	Specification
Penetrating and Lock Lubricant XL-1	-

REMOVAL AND INSTALLATION

1. Remove the luggage compartment lid trim panel.
2. Disconnect the luggage compartment lid latch actuator cable from the luggage compartment lid lock cylinder.
3. If equipped, disconnect the luggage compartment lid lock cylinder electrical connector.
4. Remove the 2 bolts and the luggage compartment lid lock cylinder.
 - To install, tighten to 9 Nm (80 lb-in).



N0025817

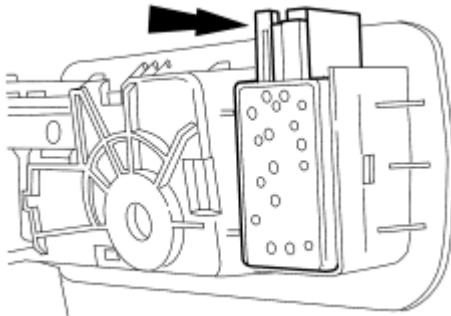
Fig. 41: Locating Luggage Compartment Lid Lock Cylinder And Bolts
Courtesy of FORD MOTOR CO.

5. To install, reverse the removal procedure.
 - Lubricate the luggage compartment lid lock cylinder after installation.

DOOR LOCK CONTROL SWITCH

REMOVAL AND INSTALLATION

1. Remove the interior door handle. For additional information, refer to **Interior Door Handle**.
2. Remove the door lock control switch from the interior door handle.



N0009437

Fig. 42: Locating Door Lock Control Switch
Courtesy of FORD MOTOR CO.

3. To install, reverse the removal procedure.

IGNITION LOCK CYLINDER

Material

Item	Specification
Penetrating and Lock Lubricant XL-1	-

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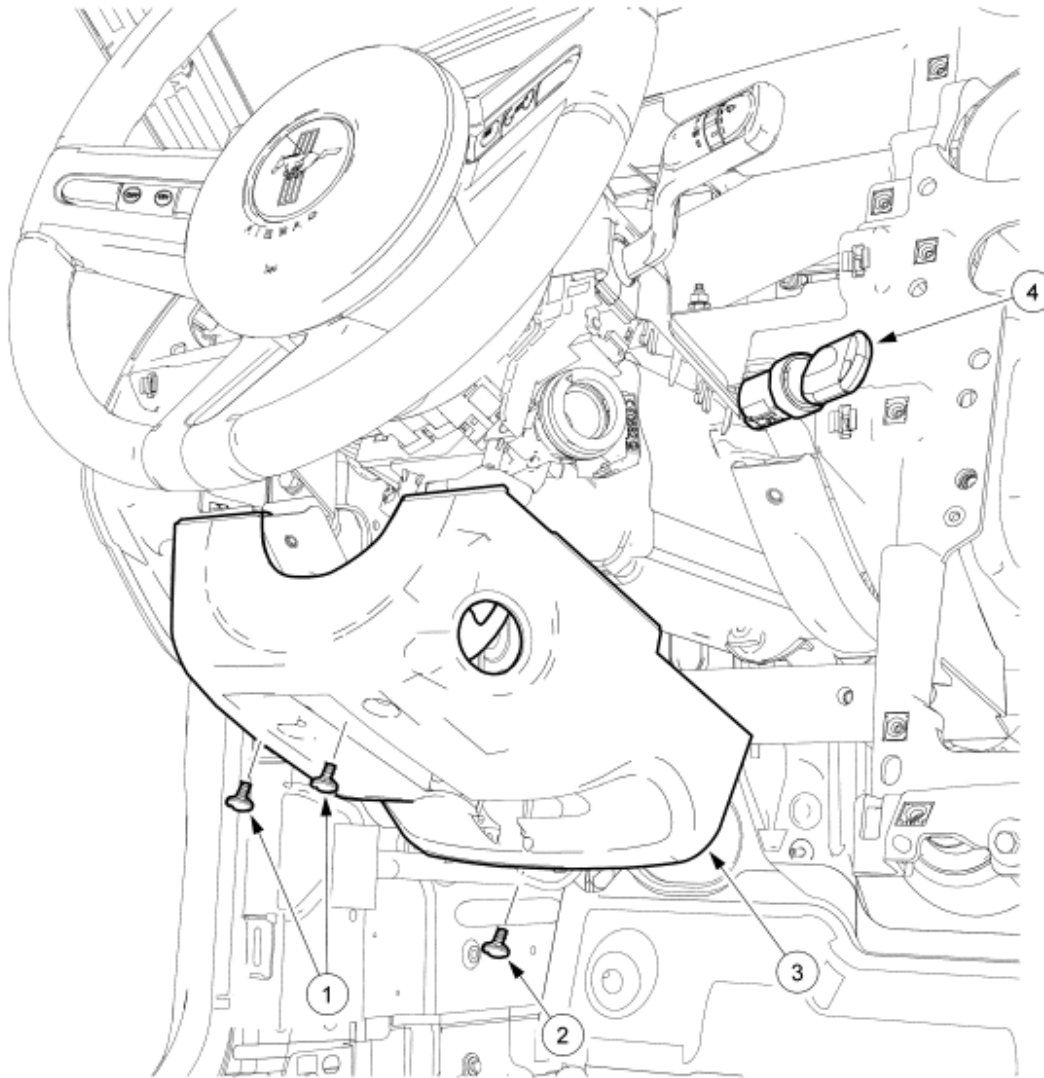


Fig. 43: Exploded View Of Ignition Lock Cylinder
Courtesy of FORD MOTOR CO.

Item	Part Number	Description
1	W702110	Lower steering column shroud screws (2 required)
2	W706731	Lower steering column shroud screw
3	3533	Lower steering column shroud
4	11582	Ignition lock cylinder

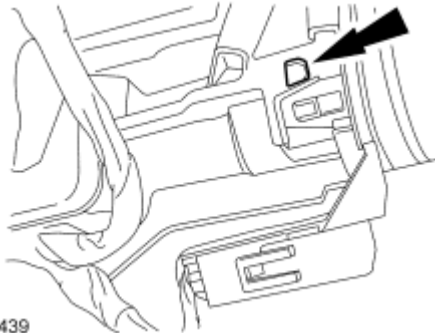
REMOVAL AND INSTALLATION

1. Remove the steering column cover.
2. Remove the 3 screws and the lower steering column shroud.

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3. Turn the key to the RUN position.
4. Insert a small punch into the hole and remove the ignition lock cylinder.



N0009439

Fig. 44: Locating Ignition Lock Cylinder
Courtesy of FORD MOTOR CO.

5. To install, reverse the removal procedure.
 - Lubricate the ignition lock cylinder after installation.