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2011 FORD Focus RS OEM Service and Repair Workshop Manual

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- Ignition OFF.
- Measure and record the voltage at the battery.
- Disconnect the door module setting DTC (diagnostic trouble code) U3003:16.
- Ignition ON.
- Measure the voltage between the module setting DTC (diagnostic trouble code) U3003:16 and ground.
- For the DDM (driver door module) / PDM (passenger door module) , measure:

Positive Lead	Measurement / Action	Negative Lead
C501A-1, DDM (driver door module)	V⎓	Ground

Positive Lead	Measurement / Action	Negative Lead
C652A-1, PDM (passenger door module)	V⎓	Ground

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

Yes	GO to AE5

No	REPAIR the circuit for high resistance.

AE5 CHECK THE SUSPECT MODULE GROUND CIRCUIT

- Measure the voltage at the suspect module.
- For the DDM (driver door module) / PDM (passenger door module) , measure:

Positive Lead	Measurement / Action	Negative Lead
C501A-1, DDM (driver door module)	V⎓	C501A-2, DDM (driver door module)

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 AF : U3003:17

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

Normal Operation and Fault Conditions REFER to: Handles, Locks, Latches and Entry Systems - System Operation and Component Description (501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
DDM (driver door module) U3003:17	Battery Voltage: Circuit Voltage Above Threshold	Set by the DDM (driver door module) when the supply voltage is more than 15.8 volts for more than 250 milliseconds during normal operation or the self-test.
PDM (passenger door module) U3003:17	Battery Voltage: Circuit Voltage Above Threshold	Set by the PDM (passenger door module) when the supply voltage is more than 15.8 volts for more than 250 milliseconds during normal operation or the self-test.

Possible Sources

- Previous high battery voltage
- Wiring, terminals, or connectors
- DDM (driver door module)
- PDM (passenger door module)

AF1 RECHECK FOR DTC (DIAGNOSTIC TROUBLE CODE) U3003:17

- Ignition ON.
- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs) for the door module in question.
- Wait at least 10 seconds.
- Using a diagnostic scan tool, perform the self-test for the door module in question.

Is DTC (diagnostic trouble code) U3003:17 present?

No	GO to AF4

AF4 CHECK FOR CORRECT DDM (DRIVER DOOR MODULE) / PDM (PASSENGER DOOR MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the door module connector in question.
- Repair:
  - Corrosion (clean module pins or install new connectors or terminals)
  - Damaged or bent pins (install new terminals or pins)
  - Pushed-out pins (install new pins as necessary)
- Reconnect the door module connector. 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 (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) , or FSA (Field Service Action) . 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 DDM (driver door module) / PDM (passenger door module) . REFER to: Driver Door Module (DDM) (419-10 Multifunction Electronic Modules, Removal and Installation). REFER to: Passenger Door Module (PDM) (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 AG : U2200:00, U3000:49

Normal Operation and Fault Conditions

REFER to: Handles, Locks, Latches and Entry Systems - System Operation and Component Description(501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).

DTC Fault Trigger Conditions

No	The system is operating correctly at this time.

PINPOINT TEST AH : THE FUEL FILLER DOOR RELEASE IS INOPERATIVE (HYBRID VEHICLES)

Refer to Wiring Diagrams Cell 24for schematic and connector information.
Refer to Wiring Diagrams Cell 85for schematic and connector information.
Normal Operation and Fault Conditions REFER to: Handles, Locks, Latches and Entry Systems - System Operation and Component Description
(501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).
DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PCM (powertrain control module) P04C2:00	Fuel Fill Door Unlock Control Circuit High: No Sub Type Information	Sets when the PCM (powertrain control module) detects a short to voltage or an open from the fuel filler door release relay control circuit.
PCM (powertrain control module) P04C9:00	Fuel Fill Door Open Request Sensor/Switch Performance/Stuck Off: No Sub Type Information	Sets when the PCM (powertrain control module) receives no request to open the fuel filler door and the vehicle experienced a refueling event.
PCM (powertrain control module) P04CA:00	Fuel Fill Door Open Request Sensor/Switch Circuit Low: No Sub Type Information	Sets when the PCM (powertrain control module) detects a request to open the fuel filler door during the self-test.
PCM (powertrain control module) P04CB:00	Fuel Fill Door Open Request Sensor/Switch Circuit High: No Sub Type Information	Sets when the PCM (powertrain control module) detects an open from the fuel filler door input.
PCM (powertrain control module) P04CD:00	Fuel Fill Door Open Request Sensor/Switch Stuck On: No Sub Type Information	Sets when the PCM (powertrain control module) detects a constant request from the fuel filler door release switch (short to ground from the fuel filler door release switch input circuit).

Possible Sources

- Wiring, terminals or connectors

- Ignition ON.
- Access the PCM (powertrain control module) and monitor the FUELDR_REQ (The Customer Is Requesting Or Has Recently Requested To Open Or Unlock The Fuel Fill Door) (none) PID (parameter identification)
- Monitor the PCM (powertrain control module) FUELDR_REQ PID (parameter identification) while pressing and releasing the fuel filler door release button.

Does the PID (parameter identification) correspond with the fuel filler door release button press?

Yes	GO to AH8

No	GO to AH3

AH3 BYPASS THE FUEL FILLER DOOR RELEASE SWITCH

- Ignition OFF.
- Disconnect Headlamp Switch C205 .
- Ignition ON.
- Connect:

Positive Lead	Measurement / Action	Negative Lead
C205-2		C205-4

- **NOTE**

  It may take up to 30 seconds for the fuel filler door to release after the jumper wire is removed.

  Remove the fused jumper wire.

Does the fuel filler door latch release?

Yes	INSTALL a new headlamp switch. REFER to: Headlamp Switch (417-01 Exterior Lighting, Removal and Installation).

Yes	GO to AH6

No	REPAIR the circuit.

AH6 CHECK THE FUEL FILLER RELEASE SWITCH RETURN CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C205-4	Ω	Ground

Is any voltage present?

Yes	REPAIR the circuit.

No	GO to AH7

AH7 CHECK THE FUEL FILLER RELEASE SWITCH INPUT AND RETURN CIRCUITS FOR AN OPEN

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C205-2	Ω	C175B-3
C205-4	Ω	C175B-31

C4089-1		Ground

Does the test lamp illuminate?

Yes	DISCONNECT the test lamp. GO to AH10

No	REPAIR the circuit.

AH10 CHECK THE FUEL FILLER DOOR RELEASE RELAY OUTPUT USING THE PCM (POWERTRAIN CONTROL MODULE) FUEL FILL DOOR UNLOCK CONTROL OUTPUT IS COMMANDED TO ENABLE STATE (FUELDR_UNLOCK) PID (PARAMETER IDENTIFICATION)

NOTICE

The following step 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.

- Connect:

Positive Lead	Measurement / Action	Negative Lead
C4089-1		C4089-4

- **NOTE**

  The PCM (powertrain control module) only activates the relay momentarily. It is important to monitor the test lamp while commanding the fuel filler door latch to release.

  Using a diagnostic scan tool, command the PCM (powertrain control module) FUELDR_UNLOCK PID (parameter identification) On.

Does the test lamp momentarily illuminate?

No	GO to Pinpoint Test AJ

AH13 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Disconnect and inspect all the PCM (powertrain control module) 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 the PCM (powertrain control module) 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 (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) , or FSA (Field Service Action) . 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 PCM.
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 AI : THE FUEL FILLER DOOR DOES NOT LATCH (HYBRID VEHICLES)

Refer to Wiring Diagrams Cell 24for schematic and connector information.
Refer to Wiring Diagrams Cell 85for schematic and connector information.
Normal Operation and Fault Conditions REFER to: Handles, Locks, Latches and Entry Systems - System Operation and Component Description
(501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).
DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition

No	INSTALL a new fuel filler door housing.

AI3 CHECK THE PCM (POWERTRAIN CONTROL MODULE) FUEL FILLER DOOR RELEASE CONTROL CIRCUIT FOR A SHORT TO GROUND

- Disconnect Fuel Filler Door Latch C4089 .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C4089-4	Ω	Ground

Is the resistance greater than 10,000 ohms?

Yes	GO to AI4

No	REPAIR the circuit.

AI4 CHECK FOR CORRECT PCM (POWERTRAIN CONTROL MODULE) OPERATION

- Disconnect and inspect all the PCM (powertrain control module) 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 the PCM (powertrain control module) 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 (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) , or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and