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## 1998 FORD Puma OEM Service and Repair Workshop Manual

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## NOTE

This pinpoint test does not diagnose dealer installed remote start systems.

### R1 CHECK THE REMOTE START FEATURE ENABLE/DISABLE SETTING

- Ignition ON.
- Check the remote start feature setting in the Sync screen.

#### Is the remote start feature enabled?

<b>Yes</b>	GO to <a href="#">R2</a>
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<b>No</b>	ENABLE the remote start feature.
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### R2 CHECK THE PARK DETECT SWITCH INPUT

- Ignition ON.
- Verify the PRNDL displays correctly in the IPC (instrument panel cluster) . When the vehicle is in PARK, the P should be highlighted or displayed prominently.

#### Does the PRNDL display correctly?

<b>Yes</b>	GO to <a href="#">R3</a>
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<b>No</b>	DIAGNOSE the PRNDL display. REFER to: <a href="#">Instrumentation, Message Center and Warning Chimes</a> (413-01 Instrumentation, Message Center and Warning Chimes, Diagnosis and Testing).
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### R3 CHECK FOR BCM (BODY CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, carry out the BCM (body control module) self-test.

#### Are any BCM (body control module) Diagnostic Trouble Codes (DTCs) present?

<b>Yes</b>	REFER to the DTC (diagnostic trouble code) Chart in this section.
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- Measure:

### 2.7L

Positive Lead	Measurement / Action	Negative Lead
C1232B-73	$\bar{V}$	Ground

### 3.3L

Positive Lead	Measurement / Action	Negative Lead
C1551B-73	$\bar{V}$	Ground

### 3.5L

Positive Lead	Measurement / Action	Negative Lead
C175B-73	$\bar{V}$	Ground

### 5.0L

Positive Lead	Measurement / Action	Negative Lead
C1381B-73	$\bar{V}$	Ground

### 3.0L DIESEL

Positive Lead	Measurement / Action	Negative Lead
C1233B-7	$\bar{V}$	Ground

- Connect PCM (powertrain control module) B connector and SOBDMC (secondary on-board diagnostic control module C) connector (if equipped).
- Close all the doors, the hood and the tailgate.
- Using the key:
  - Press the door lock button.
  - Press the remote start button twice.

**Does the vehicle remotely start?**

<b>Yes</b>	The system is operating correctly. INFORM the customer of the correct vehicle remote start operation.
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<b>No</b>	<p>REPLACE the suspect key. PROGRAM the new key. For an IKT (integrated keyhead transmitter) , REFER to: <a href="#">Anti-Theft Key Programming - Scan Tool</a> (419-01C Passive Anti-Theft System (PATS) - Vehicles With: Push Button Start, General Procedures).</p> <p>For a passive key, REFER to: <a href="#">Anti-Theft Key Programming - Scan Tool</a> (419-01C Passive Anti-Theft System (PATS) - Vehicles With: Push Button Start, General Procedures).</p>
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**R9 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION**

- Disconnect and inspect all the BCM (body 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 BCM (body 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?**

<b>Yes</b>	<p>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 BCM (body control module) .</p> <p>REFER to: <a href="#">Body Control Module (BCM)</a></p>
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BCM (body control module) B1382:11	Right Front Door Handle Proximity Sensor: Circuit Short To Ground	Sets continuous when the BCM (body control module) detects a fault from one of the circuits to the right front exterior door handle.
BCM (body control module) B1382:15	Right Front Door Handle Proximity Sensor: Circuit Short To Battery Or Open	Sets continuous when the BCM (body control module) detects a fault from one of the circuits to the right front exterior door handle.
BCM (body control module) B1382:29	Right Front Door Handle Proximity Sensor: Signal Invalid	Set continuous when the BCM (body control module) detects an activated touch sensor for more than 5 minutes.
BCM (body control module) B1383:11	Left Rear Door Handle Proximity Sensor: Circuit Short To Ground	Sets continuous when the BCM (body control module) detects a fault from one of the circuits to the left rear exterior door handle.
BCM (body control module) B1383:15	Left Rear Door Handle Proximity Sensor: Circuit Short To Battery Or Open	Sets continuous when the BCM (body control module) detects a fault from one of the circuits to the left rear exterior door handle.
BCM (body control module) B1383:29	Left Rear Door Handle Proximity Sensor: Signal Invalid	Set continuous when the BCM (body control module) detects an activated touch sensor for more than 5 minutes.
BCM (body control module) B1384:11	Right Rear Door Handle Proximity Sensor: Circuit Short To Ground	Sets continuous when the BCM (body control module) detects a fault from one of the circuits to the right rear exterior door handle.
BCM (body control module) B1384:15	Right Rear Door Handle Proximity Sensor: Circuit Short To Battery Or Open	Sets continuous when the BCM (body control module) detects a fault from one of the circuits to the right rear exterior door handle.
BCM (body control module) B1384:29	Right Rear Door Handle Proximity Sensor: Signal Invalid	Set continuous when the BCM (body control module) detects an activated touch sensor for more than 5 minutes.

### Possible Sources

- Wiring, terminals or connectors
- Door lock system concern
- RKE (remote keyless entry) system concern

- Operate the passive entry feature from the doors.


**Is the passive entry feature inoperative from the doors?**

<b>Yes</b>	GO to <a href="#">S4</a>
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<b>No</b>	GO to <a href="#">S7</a>
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**S4 CHECK THE EXTERIOR DOOR HANDLE GROUND CIRCUIT FOR A SHORT TO VOLTAGE**

- Ignition OFF.
- Disconnect BCM (body control module) C2280D .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2280D-20		Ground

**Is any voltage present?**

<b>Yes</b>	REPAIR the circuit.
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<b>No</b>	GO to <a href="#">S5</a>
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**S5 CHECK THE EXTERIOR DOOR HANDLE GROUND CIRCUIT FOR A SHORT TO GROUND**


- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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## S7 CHECK FOR VOLTAGE TO THE EXTERIOR DOOR HANDLE

- Ignition OFF.
- Disconnect the suspect exterior door handle.
- Measure:


### Left Front Exterior Door Handle (without phone as a key)

Positive Lead	Measurement / Action	Negative Lead
C543-1		Ground


### Right Front Exterior Door Handle (without phone as a key)

Positive Lead	Measurement / Action	Negative Lead
C634-1		Ground

### Left Front Exterior Door Handle (with phone as a key)

Positive Lead	Measurement / Action	Negative Lead
C551-1		Ground

### Right Front Exterior Door Handle (with phone as a key)

Positive Lead	Measurement / Action	Negative Lead
C693-1		Ground

### Left Rear Door Exterior Handle (with phone as a key)

Positive Lead	Measurement / Action	Negative Lead
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**Left Front Exterior Door Handle (with phone as a key)**

Positive Lead	Measurement / Action	Negative Lead
C551-1	$\Omega$	Ground

**Right Front Exterior Door Handle (with phone as a key)**

Positive Lead	Measurement / Action	Negative Lead
C693-1	$\Omega$	Ground

**Left Rear Exterior Door Handle (with phone as a key)**

Positive Lead	Measurement / Action	Negative Lead
C729-1	$\Omega$	Ground

**Right Rear Exterior Door Handle (with phone as a key)**

Positive Lead	Measurement / Action	Negative Lead
C852-1	$\Omega$	Ground

**Is the resistance greater than 10,000 ohms?**

<b>Yes</b>	GO to <a href="#">S9</a>
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<b>No</b>	REPAIR the circuit.
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C729-1	$\Omega$	C2280D-22
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**Right Rear Exterior Door Handle (with phone as a key)**

Positive Lead	Measurement / Action	Negative Lead
C852-1	$\Omega$	C2280D-4

**Is the resistance less than 3 ohms?**

<b>Yes</b>	GO to <a href="#">S16</a>
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<b>No</b>	REPAIR the circuit.
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**S10 CHECK THE EXTERIOR DOOR HANDLE GROUND CIRCUIT FOR AN OPEN**

- Disconnect BCM (body control module) C2280D .
- Measure:

**Left Front Exterior Door Handle (without phone as a key)**

Positive Lead	Measurement / Action	Negative Lead
C543-4	$\Omega$	C2280D-20

**Right Front Exterior Door Handle (without phone as a key)**

Positive Lead	Measurement / Action	Negative Lead
C634-4	$\Omega$	C2280D-20

**No** REPAIR the circuit.

## S11 CHECK THE EXTERIOR DOOR HANDLE/APPROACH DETECTION INTERNAL ANTENNA

- Measure component side:

### Front Exterior Door Handle (gas/hybrid vehicles)

Positive Lead	Measurement / Action	Negative Lead
C543-3	$\Omega$	C543-2
C634-3	$\Omega$	C634-2

### Front Approach Detection Antennas (electric vehicles)

Positive Lead	Measurement / Action	Negative Lead
C1797-2	$\Omega$	C1797-1
C1796-2	$\Omega$	C1796-1

**Is the resistance between 1 and 3 ohms?**

**Yes** GO to [S12](#)(gas/hybrid vehicle),GO to [S13](#)(for electric vehicles)

**No** INSTALL a new front exterior handle (gas/hybrid vehicle) or approach detection antenna (electric vehicle).

REFER to: [Exterior Front Door Handle](#)

(501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

REFER to: [Approach Detection Antenna - Electric](#)