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2002 FORD Puma OEM Service and Repair Workshop Manual

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Yes	GO to D2

No	INSTALL a new exterior door handle reinforcement. REFER to: Exterior Front Door Handle Reinforcement (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Exterior Rear Door Handle Reinforcement - SuperCrew (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

D2 CHECK THE EXTERIOR DOOR HANDLE AND LINKAGE OPERATION

- Operate the exterior door handle while observing the linkage.

Are any of the exterior door handle components or linkages binding?

Yes	REPAIR as necessary.

No	INSTALL a new door latch. REFER to: Front Door Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Rear Door Lower Latch - SuperCab (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Rear Door Upper Latch - SuperCab (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Rear Door Latch - SuperCrew (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

PINPOINT TEST E : THE INTERIOR DOOR RELEASE HANDLE STICKS

Normal Operation and Fault Conditions

The interior door handle is connected to the door latch by an actuating cable. When the interior door handle is pulled, the cable pulls on the latch lever. When the latch lever is moved, the door latch releases, allowing the door to open. The handle has a return spring to make sure the handle returns to a closed position.

Possible Sources

- Binding cable
- Broken handle return spring

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

No	INSTALL a new interior door handle cable.

PINPOINT TEST F : SQUEAK-RATTLE-CHUCKING NOISE FROM DOOR

Possible Sources

- Door alignment
- Door latch

F1 CHECK FOR ANY LOOSE COMPONENTS

- Remove the door trim panel.
- Inspect inside the door for any loose components.

Are there any loose components inside the door?

Yes	REPAIR as necessary.

No	GO to F2

F2 CHECK THE DOOR ALIGNMENT

- Check the alignment of the door.

Is the door aligned correctly?

Yes	GO to F3

No	ADJUST the door as necessary. REFER to: Front Door Alignment - Regular Cab/SuperCrew (501-03 Body Closures, General Procedures). REFER to: Front Door Alignment - SuperCab (501-03 Body Closures, General Procedures). REFER to: Rear Door Alignment - SuperCab (501-03 Body Closures, General Procedures).

- Insert a key into the lock cylinder and rotate the lock cylinder to the lock and unlock positions.

Does the door lock cylinder freely rotate without locking and unlocking the door?

Yes	GO to G2
No	GO to G4

G2 CHECK THE DOOR LOCK CYLINDER (FREE-SPIN)

- Remove the door lock cylinder.
  REFER to: Door Lock Cylinder(501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).
- Operate the door lock cylinder with the key while holding the lever on the lock cylinder.

Does the key in the door lock cylinder rotate freely while the lever is stationary?

Yes	INSTALL a new door lock cylinder. REFER to: Door Lock Cylinder (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).
No	GO to G3

G3 CHECK THE DOOR LOCK CYLINDER LINKAGE CONNECTION

- Inspect the door lock cylinder linkage.

Is the door lock cylinder rod and lever disconnected?

Yes	CONNECT the door lock cylinder rod and lever.
No	INSTALL a new door latch. REFER to: Front Door Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Rear Door Lower Latch - SuperCab (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Rear Door Upper Latch - SuperCab

- Operate the door lock cylinder with the key.

Is the door lock cylinder rod and lever binding, damaged or disconnected?

Yes	REPAIR as necessary.

No	INSTALL a new door latch. REFER to: Front Door Latch (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Rear Door Lower Latch - SuperCab (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Rear Door Upper Latch - SuperCab (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation). REFER to: Rear Door Latch - SuperCrew (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).

PINPOINT TEST H : THE IGNITION LOCK CYLINDER IS DIFFICULT TO TURN

Normal Operation and Fault Conditions

The ignition lock cylinder mechanically rotates the ignition switch within the ignition lock cylinder housing. Insertion and extraction of the key and rotation of the lock cylinder using a correctly cut key should be smooth and require minimal effort.

Possible Sources

- Key
- Ignition switch
- Ignition lock cylinder

H1 CHECK THE KEY

- Inspect the key for an incorrect cut, burrs or damage.

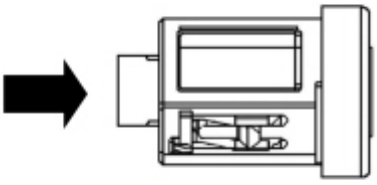
Is the key correctly cut and free of burrs and damage?

Yes	GO to H2

No	REPLACE and, if equipped with a PATS (passive anti-theft system) , PROGRAM a new key. REFER to: Anti-Theft Key Programming - Scan Tool

	(211-05 Steering Wheel and Column Electrical Components, Removal and Installation).

H4 CHECK THE IGNITION LOCK CYLINDER FOR BINDING ROTATION

-
- 

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Does the ignition lock cylinder rotate freely?

Yes	INSTALL a new ignition switch. REFER to: Ignition Switch - Vehicles With: Keyed Ignition (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).
No	INSTALL a new ignition lock cylinder. REFER to: Steering Column Control Switch (211-05 Steering Wheel and Column Electrical Components, Removal and Installation).

PINPOINT TEST I : ALL DOOR LOCKS ARE INOPERATIVE (IF EQUIPPED WITH ONE-TOUCH OPEN AND CLOSE FRONT WINDOWS)

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).

No	GO to Pinpoint Test K

I4 CHECK THE BCM (BODY CONTROL MODULE) DOOR LOCK GROUND CIRCUIT FOR AN OPEN

- Ignition OFF.
- Disconnect BCM (body control module) C2280C .
- Measure

Positive Lead	Measurement / Action	Negative Lead
C2280C-10	Ω	Ground

Is the resistance less than 3 ohms?

Yes	GO to I5

No	REPAIR the circuit.

I5 CHECK THE ALL DOOR LOCK CIRCUIT FOR AN OPEN

- Disconnect Left Front Door Lock Actuator C525A .
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C2280C-35	Ω	C525A-1

Is the resistance less than 3 ohms?

Yes	GO to I6

BCM (body control module) B1585:11	Central Lock Output: Circuit Short To Ground	Sets when the BCM (body control module) detects a short to ground from one of the door lock actuator output circuits.
BCM (body control module) B1585:12	Central Lock Output: Circuit Short To Battery	Sets when the BCM (body control module) detects a short to battery from one of the door lock actuator output circuits.
BCM (body control module) B1585:13	Central Lock Output: Circuit Open	Sets when the BCM (body control module) detects an open from one of the door lock actuator output circuits.
BCM (body control module) B1586:11	Central Unlock Output: Circuit Short To Ground	Sets when the BCM (body control module) detects a short to ground from one of the door unlock actuator output circuits.
BCM (body control module) B1586:12	Central Unlock Output: Circuit Short To Battery	Sets when the BCM (body control module) detects a short to battery from one of the door unlock actuator output circuits.
BCM (body control module) B1586:13	Central Unlock Output: Circuit Open	Sets when the BCM (body control module) detects an open on one of the door unlock output circuits.
BCM (body control module) B1587:11	Driver Door Unlock Output: Circuit Short To Ground	Sets when the BCM (body control module) detects a short to ground on the driver door unlock output circuits.
BCM (body control module) B1587:12	Driver Door Unlock Output: Circuit Short To Battery	Sets when the BCM (body control module) detects a short to ground on the driver door unlock output circuits.
BCM (body control module) B1587:13	Driver Door Unlock Output: Circuit Open	Sets when the BCM (body control module) detects a short to battery on the driver door unlock output circuits.
BCM (body control module) B15D5:12	Passenger Door Unlock Output: Circuit Short To Battery	Sets when the BCM (body control module) detects an open on the passenger door unlock output circuits.

Possible Sources

No	GO to J7

J3 CHECK THE DOOR ACTUATORS

- Disconnect suspect door lock actuator.
- Measure component side:

Front Door Lock Actuator LH (left-hand)

Positive Lead	Measurement / Action	Negative Lead
C525A-1	Ω	C525A-2

Door Lock Actuator RH (right-hand)

Positive Lead	Measurement / Action	Negative Lead
C603-5	Ω	C603-6

Rear Door Lock Actuator LH (left-hand)

Positive Lead	Measurement / Action	Negative Lead
C704-1	Ω	C704-2

Rear Door Lock Actuator RH (right-hand)

Positive Lead	Measurement / Action	Negative Lead
C804-6	Ω	C804-5

Positive Lead	Measurement / Action	Negative Lead
C603-5	V	Ground

Rear Door Lock Actuator LH (left-hand)

Positive Lead	Measurement / Action	Negative Lead
C704-2	V	Ground

Rear Door Lock Actuator RH (right-hand)

Positive Lead	Measurement / Action	Negative Lead
C804-6	V	Ground

Tailgate Lock Actuator

Positive Lead	Measurement / Action	Negative Lead
C4498-1	V	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.

No	GO to J5

J5 CHECK THE SUSPECT DOOR LOCK ACTUATOR LOCK CIRCUIT FOR A SHORT TO GROUND