

# Your Ultimate Source for OEM Repair Manuals

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## 2011 FORD Ranger Regular Cab OEM Service and Repair Workshop Manual

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For all other DDM (driver door module) or PDM (passenger door module) Diagnostic Trouble Codes (DTCs),  
REFER to: [Locks, Latches and Entry Systems](#)  
(501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing).

**No**

If both power folding mirrors are inoperative, GO to [G3](#) If only one power folding mirror is inoperative, GO to [G4](#)

### **G3 CHECK THE LH (LEFT-HAND) FRONT DOOR WINDOW CONTROL SWITCH**

- Operate all windows using the LH (left-hand) front door window control switch.

#### **Do all the power windows operate correctly?**

**Yes**

INSTALL a new LH (left-hand) front door window control switch.  
REFER to: [Driver Door Window Control Switch - Vehicles With: Front Power Windows](#)  
(501-11 Glass, Frames and Mechanisms, Removal and Installation).  
If the concern is still present after switch replacement, GO to [G11](#)

**No**

DIAGNOSE the power windows before continuing diagnostics of the power folding mirrors.  
REFER to: [Glass, Frames and Mechanisms - Vehicles With: One-Touch Open and Close Front Windows](#)  
(501-11 Glass, Frames and Mechanisms, Diagnosis and Testing).

### **G4 CHECK THE FOLD CIRCUIT FOR VOLTAGE AT THE SUSPECT EXTERIOR MIRROR**

#### **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.

- Ignition OFF.
- Disconnect: Suspect Exterior Mirror C521 or C622.
- Connect:

**LH (left-hand) power folding mirror concern**

<b>No</b>	GO to <a href="#">G6</a>
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## G6 CHECK THE EXTERIOR MIRROR FOLD IN CIRCUIT FOR A SHORT TO GROUND

- Ignition OFF.
- Disconnect: DDM (driver door module) C501B ( LH (left-hand) power folding mirror concern) or PDM (passenger door module) C652B ( RH (right-hand) power folding mirror concern).
- Measure:

### LH (left-hand) power folding mirror concern

Positive Lead	Measurement / Action	Negative Lead
C501B-11	$\Omega$	Ground

### RH (right-hand) power folding mirror concern

Positive Lead	Measurement / Action	Negative Lead
C652B-11	$\Omega$	Ground

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

<b>Yes</b>	For a LH (left-hand) concern, GO to <a href="#">G11</a> For a RH (right-hand) concern, GO to <a href="#">G10</a>
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<b>No</b>	REPAIR the circuit.
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## G7 CHECK THE DOOR MODULE DIAGNOSTIC TROUBLE CODES (DTCS) WITH THE FOLD CIRCUITS JUMPED TOGETHER

- Ignition OFF.
- Disconnect: Suspect Exterior Mirror C521 or C622.
- Connect:

C521-18	$\bar{V}$	Ground
C521-4	$\bar{V}$	Ground

**RH (right-hand) power folding mirror concern**

Positive Lead	Measurement / Action	Negative Lead
C622-18	$\bar{V}$	Ground
C622-4	$\bar{V}$	Ground

**Is any voltage present?**

<b>Yes</b>	REPAIR the affected circuit.
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<b>No</b>	GO to <a href="#">G9</a>
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**G9 CHECK THE FOLD CIRCUITS FOR AN OPEN**

- Ignition OFF.
- Measure:

**LH (left-hand) power folding mirror concern**

Positive Lead	Measurement / Action	Negative Lead
C521-18	$\Omega$	C501B-11

this test and FOLLOW the TSB (Technical Service Bulletin) instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new PDM (passenger door module) .

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.

## **G11 CHECK FOR CORRECT DDM (DRIVER DOOR MODULE) OPERATION**

- Disconnect and inspect all DDM (driver door module) connectors and related in-line connectors.
- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals/pins
  - pushed-out pins - install new pins as necessary
- Reconnect the DDM (driver door module) connectors and related in-line connectors. Make sure they seat and latch correctly.
- Operate the system to determine if the concern is still present.

### **Is the concern still present?**

**Yes**

CHECK OASIS (Online Automotive Service Information System) for any applicable Technical Service Bulletins (TSBs). If a TSB (Technical Service Bulletin) exists for this concern, DISCONTINUE this test and FOLLOW the TSB (Technical Service Bulletin) instructions. If no Technical Service Bulletins (TSBs) address this concern, INSTALL a new DDM (driver door module) .

REFER to: [Driver Door Module \(DDM\)](#)  
(419-10 Multifunction Electronic Modules, Removal and Installation).

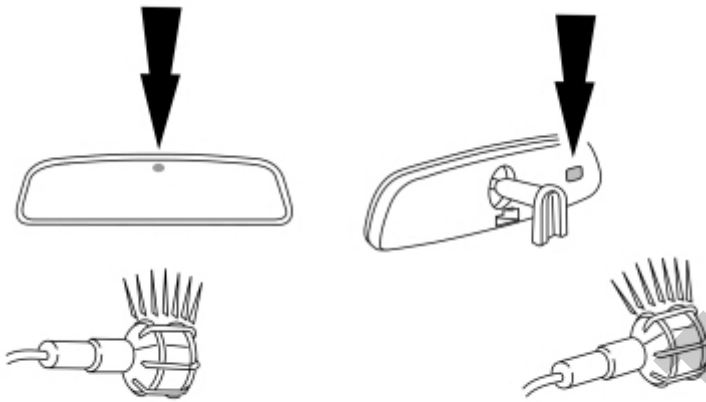
**No**

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.

## **G12 CHECK THE EXTERIOR MIRROR JUMPER HARNESS**

- Inspect the exterior mirror jumper harness between the vehicle harness and the mirror motors for:
  - Open or short circuits
  - Damaged or pushed out pins

- Ignition ON.
- Select PARK.
- Use a bright lamp to illuminate the forward facing sensor and the rearward facing sensor. The mirror should adjust to a high reflectance state (mirror will be clear).



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**Did the interior auto-dimming mirror adjust to a high reflectance (clear) state?**

**Yes**    GO to [H2](#)

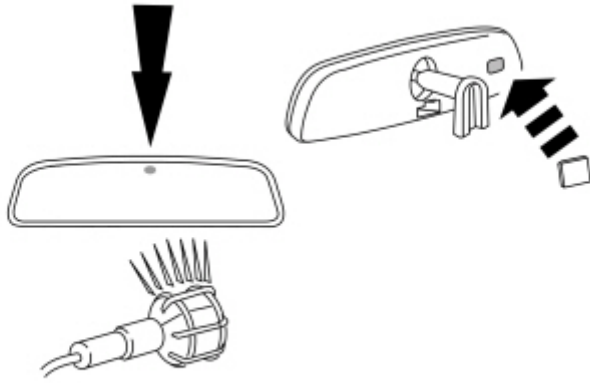
**No**    GO to [Pinpoint Test I](#)

## H2 VERIFY THE OPERATION OF THE INTERIOR AUTO-DIMMING MIRROR - NIGHTTIME CONDITIONS

### NOTE

Covering the sensor(s) with a finger or hand is not adequate for this step.

Cover the forward and rearward facing sensors with black electrical tape or other dark material. The mirror should adjust to a high reflectance state (mirror will be clear).



E149156

- Use a bright light to illuminate the rearward facing sensor. The mirror should adjust to a lower reflectance state (mirror will be dark).

**Did the interior auto-dimming mirror adjust to a low reflectance (dark) state?**

**Yes**    GO to [H4](#)

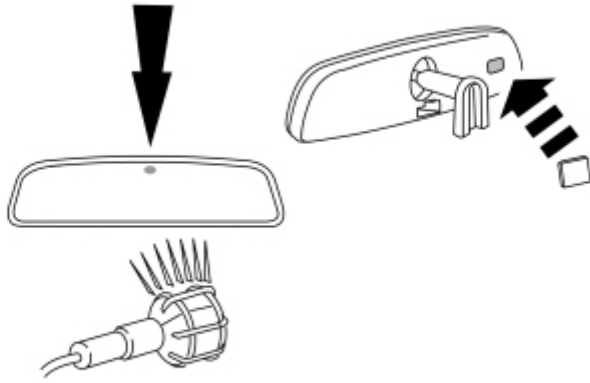
**No**    [GO to Pinpoint Test I](#)

#### **H4 VERIFY THE OPERATION OF THE INTERIOR AUTO-DIMMING MIRROR - VEHICLE IN REVERSE AND NIGHTTIME CONDITIONS WITH GLARE**

• **NOTE**

Covering the sensor(s) with a finger or hand is not adequate for this step.

Continue to illuminate the rearward facing sensor with the forward facing sensor covered.



E149156

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C521-2	$\bar{V}$	C521-6

**Is any voltage present?**

**Yes** GO to [H10](#)

**No** GO to [H6](#)

**H6 CHECK FOR AN OPEN BETWEEN THE LH (LEFT-HAND) EXTERIOR MIRROR AND THE INTERIOR AUTO-DIMMING MIRROR**

- Ignition OFF.
- Disconnect: Interior auto-dimming mirror with camera display C9012.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
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## H8 CHECK THE LH (LEFT-HAND) EXTERIOR AUTO-DIMMING MIRROR CIRCUITS FOR A SHORT TOGETHER

- Measure:

Positive Lead	Measurement / Action	Negative Lead
C521-2	$\Omega$	C521-6

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

<b>Yes</b>	INSTALL a new interior auto-dimming mirror. REFER to: <a href="#">Interior Rear View Mirror</a> (501-09 Rear View Mirrors, Removal and Installation).
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<b>No</b>	REPAIR the circuits.
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## H9 CHECK THE LH (LEFT-HAND) EXTERIOR AUTO-DIMMING MIRROR CIRCUITS FOR VOLTAGE WHILE SIMULATING NIGHTTIME CONDITIONS

- Select PARK.
- Ignition OFF.
- Disconnect: LH (left-hand) Exterior Mirror C521.
- Ignition ON.

### NOTE

Covering the sensor(s) with a finger or hand is not adequate for this step.

Cover the forward and rearward facing sensors with black electrical tape or other dark material. The mirror should adjust to a high reflectance state (mirror will be clear).

C521-2		Ground
C521-6		Ground

**Is any voltage present?**

<b>Yes</b>	REPAIR the affected circuit.
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<b>No</b>	INSTALL a new interior auto-dimming mirror. REFER to: <a href="#">Interior Rear View Mirror</a> (501-09 Rear View Mirrors, Removal and Installation).
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**H11 CHECK THE EXTERIOR MIRROR JUMPER HARNESS**

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