Rear View Mirrors

Refer to Wiring Diagrams Cell 124, Power Mirrors for schematic and connector information.

Special Tool(s)

 ST1137-A	73 Digital Multimeter 105-R0051 or equivalent

Inspection and Verification

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

Visual Inspection Chart

Mechanical	Electrical
• Exterior rear view mirrors. • Interior rear view mirror.	• Central junction box (CJB) Fuse 19 (15A). • Wiring harness. • Loose or corroded connections. • Exterior rear view mirror control. • Exterior rear view mirror motor.

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
4. If the concern is not visually evident, verify the symptom and refer to the Symptom Chart.

Symptom Chart

Refer to the Wiring Diagrams for connector numbers stated in the Pinpoint Tests.

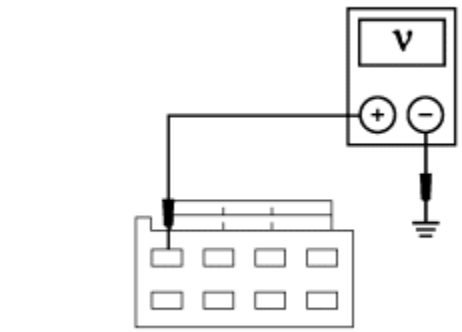
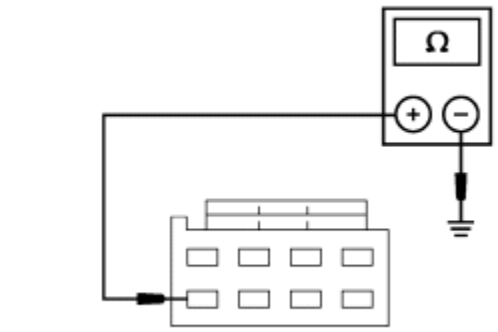
SYMPTOM CHART

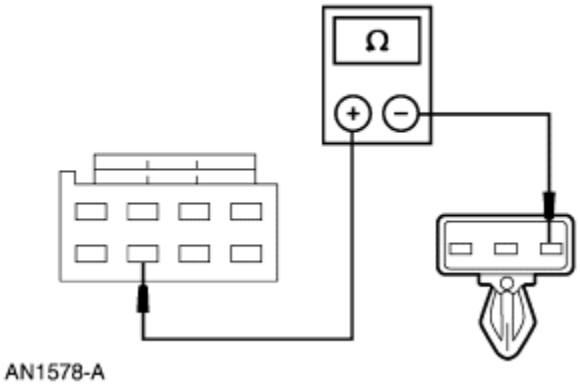
Condition	Possible Sources	Action
• The mirrors are inoperative	• Exterior rear view mirror control. • CJB Fuse 19 (15A). • Circuitry.	• GO to Pinpoint Test A.
• A single mirror is inoperative	• Exterior rear view mirror control. • Exterior rear view mirror motor. • Circuitry.	• GO to Pinpoint Test B.
• A single mirror does not function with switch logic	• Exterior rear view mirror control. • Exterior rear view mirror motor.	• GO to Pinpoint Test C.

	• Circuitry.	

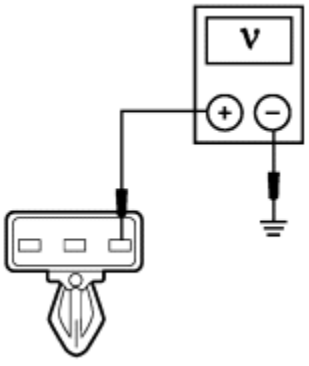
Pinpoint Tests

PINPOINT TEST A: THE MIRRORS ARE INOPERATIVE

CONDITIONS	DETAILS/RESULTS/ACTIONS
A1 CHECK CIRCUIT 326 (WH/VT)	
1  Exterior Rear View Mirror Control C501 2  AN1574-A	2 Measure the voltage between exterior rear view mirror control C501 Pin 1, Circuit 326 (WH/VT), harness side and ground. • **Is the voltage greater than 10 volts?** → **Yes** GO to A2. → **No** REPAIR the circuit. TEST the system for normal operation.
A2 CHECK CIRCUIT 1205 (BK) FOR AN OPEN	
1  AN1577-A	1 Measure the resistance between exterior rear view mirror control C501 Pin 5, Circuit 1205 (BK), harness side and ground. • **Is the resistance less than 5 ohms?**

	→ **Yes** GO to A3. → **No** REPAIR the circuit. TEST the system for normal operation.
A3 CHECK CIRCUIT 542 (YE) FOR AN OPEN	
1  AN1578-A	1 Measure the resistance between passenger exterior rear view mirror C610, Circuit 542 (YE), harness side and exterior rear view mirror control C501 Pin 6, Circuit 542 (YE), harness side. • **Is the resistance less than 5 ohms?** → **Yes** INSTALL a new exterior rear view mirror control. REFER to Switch—Exterior Rear View Mirror Control. → **No** REPAIR the circuit. TEST the system for normal operation.

PINPOINT TEST B: A SINGLE MIRROR IS INOPERATIVE

CONDITIONS	DETAILS/RESULTS/ACTIONS
B1 CHECK THE COMMON FEED INPUT	
1  2  AN1579-A	1 Disconnect the inoperative exterior rear view mirror C510 driver side or C610 passenger side. 2 Measure the voltage between driver exterior rear view mirror C510, Circuit 542 (YE), harness side and ground; or between passenger exterior rear view mirror C610, Circuit 542 (YE), harness side and ground. 3 Select the inoperative side and actuate the exterior rear view mirror control to the down position, then the right position.

- **Are the voltages greater than 10 volts?**

→ **Yes**
GO to B3.

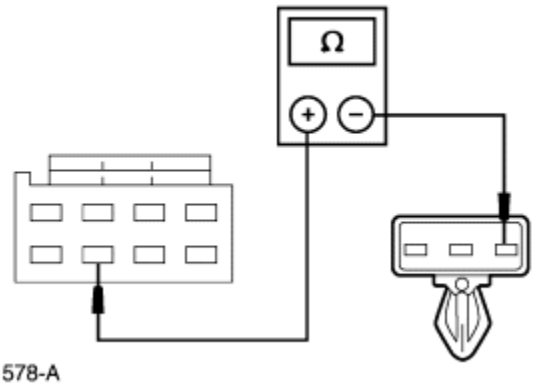
→ **No**
GO to B2.

B2 CHECK CIRCUIT 542 (YE) FOR AN OPEN

1

Exterior Rear View Mirror Control C501

2



AN1578-A

2 Measure the resistance between exterior rear view mirror control C501 Pin 6, Circuit 542 (YE), harness side and driver exterior rear view mirror C510, Circuit 542 (YE), harness side; or between exterior rear view mirror control C501 Pin 6, Circuit 542 (YE), harness side and passenger exterior rear view mirror C610, Circuit 542 (YE), harness side.

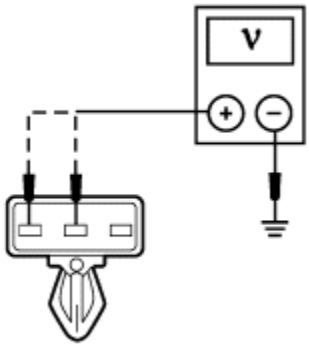
- **Is the resistance less than 5 ohms?**

→ **Yes**
INSTALL a new exterior rear view mirror control. REFER to Switch—Exterior Rear View Mirror Control. TEST the system for normal operation.

→ **No**
REPAIR the circuit. TEST the system for normal operation.

B3 CHECK THE UP/DOWN INPUT

1

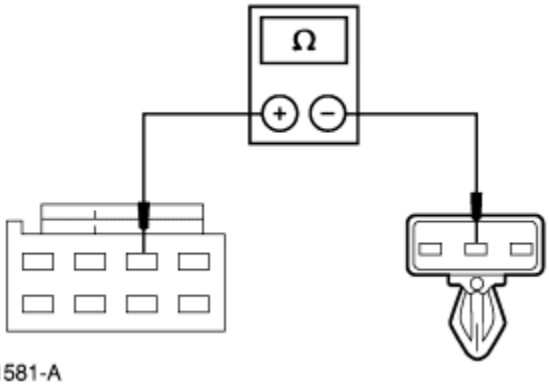
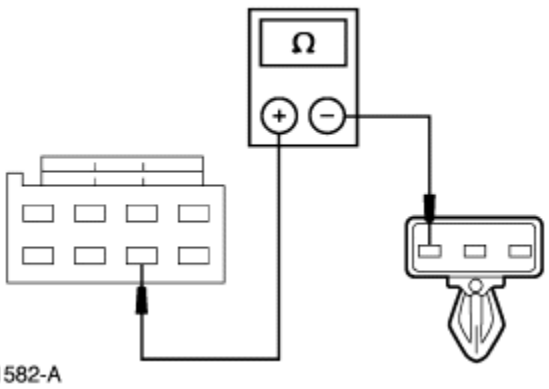


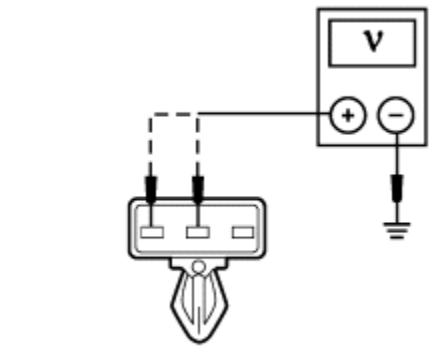
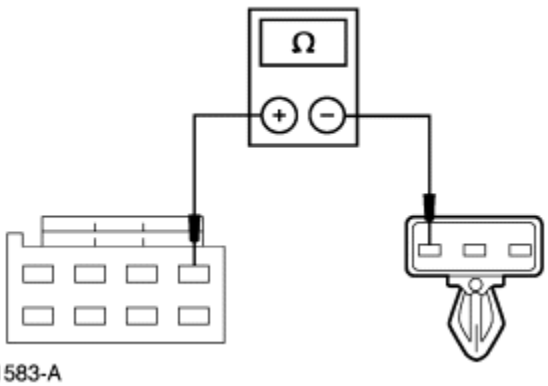
AN1580-A

1 Measure the voltage between driver exterior rear view mirror C510, Circuit 541(DB/YE), harness side and ground; or between passenger exterior rear view mirror C610, Circuit 544 (VT), harness side and ground.

2 Actuate the exterior rear view mirror control to the up position.

- **Are the voltages greater than 10 volts?**

	→ **Yes** GO to B6. → **No** GO to B4 for driver inoperative or GO to B5 for passenger inoperative.
B4 CHECK CIRCUIT 541 (DB/YE) FOR AN OPEN	
1  Exterior Rear View Mirror Control C501 2  AN1581-A	2 Measure the resistance between exterior rear view mirror control C501 Pin 3, Circuit 541 (DB/YE), harness side and driver exterior rear view mirror C510, Circuit 541 (DB/YE), harness side. • **Is the resistance less than 5 ohms?** → **Yes** INSTALL a new exterior rear view mirror control. REFER to Switch—Exterior Rear View Mirror Control. TEST the system for normal operation. → **No** REPAIR the circuit. TEST the system for normal operation.
B5 CHECK CIRCUIT 544 (VT) FOR AN OPEN	
1  Exterior Rear View Mirror Control C501 2  AN1582-A	2 Measure the resistance between exterior rear view mirror control C501 Pin 7, Circuit 544 (VT), harness side and passenger exterior rear view mirror C610, Circuit 544 (VT), harness side.

	• **Is the resistance less than 5 ohms?** → **Yes** INSTALL a new exterior rear view mirror control. REFER to Switch—Exterior Rear View Mirror Control. TEST the system for normal operation. → **No** REPAIR the circuit. TEST the system for normal operation.
B6 CHECK THE LEFT/RIGHT INPUT	
1  AN1580-A	1 Measure the voltage between driver exterior rear view mirror C510, Circuit 540 (RD), harness side and ground; or between passenger exterior rear view mirror C610, Circuit 543 (DG), harness side and ground. 2 Actuate the exterior rear view mirror control to the left position. • **Is the voltage greater than 10 volts?** → **Yes** INSTALL a new mirror motor. REFER to Mirror—Motor. TEST the system for normal operation. → **No** GO to B7 for driver inoperative or GO to B8 for passenger inoperative.
B7 CHECK CIRCUIT 540 (RD) FOR AN OPEN	
1  Exterior Rear View Mirror Control C501 2  AN1583-A	2 Measure the resistance between exterior rear view mirror control C501 Pin 4, Circuit 540 (RD), harness side and driver exterior rear view mirror C510, Circuit 540 (RD), harness side.

- **Is the resistance less than 5 ohms?**

→ **Yes**
INSTALL a new exterior rear view mirror control. REFER to Switch—Exterior Rear View Mirror Control. TEST the system for normal operation.

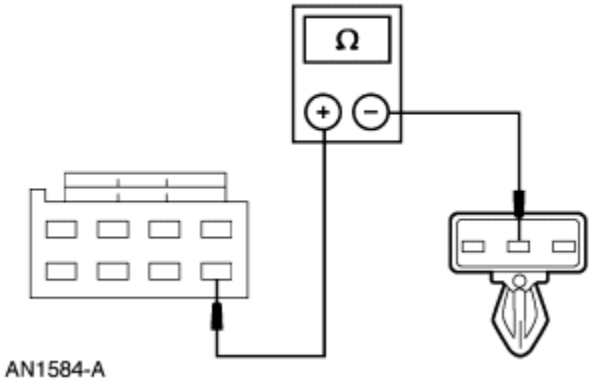
→ **No**
REPAIR the circuit. TEST the system for normal operation.

B8 CHECK CIRCUIT 543 (DG) FOR AN OPEN

1

Exterior Rear View Mirror Control C501

2



2 Measure the resistance between exterior rear view mirror control C501 Pin 8, Circuit 543 (DG), harness side and passenger exterior rear view mirror C610, Circuit 543 (DG), harness side.

- **Is the resistance less than 5 ohms?**

→ **Yes**
INSTALL a new exterior rear view mirror control. REFER to Switch—Exterior Rear View Mirror Control. TEST the system for normal operation.

→ **No**
REPAIR the circuit. TEST the system for normal operation.

PINPOINT TEST C: A SINGLE MIRROR DOES NOT FUNCTION WITH SWITCH LOGIC

CONDITIONS	DETAILS/RESULTS/ACTIONS
C1 CHECK THE EXTERIOR REAR VIEW MIRROR LOGIC	

1

1 Disconnect the suspect exterior rear view mirror C510 driver or C610 passenger.

2 Measure for voltage or resistance at the suspect exterior rear view mirror while actuating the exterior rear view mirror control according to the following chart.

Circuit	Exterior rear view mirror control position	Measure for voltage or resistance
Driver		
540 (RD)	Left	Greater than 10 volts
540 (RD)	Right	Less than 5 ohms

541 (DB/YE)	Up	Greater than 10 volts
541 (DB/YE)	Down	Less than 5 ohms
542 (YE)	Left	Less than 5 ohms
542 (YE)	Right	Greater than 10 volts
542 (YE)	Up	Less than 5 ohms
542 (YE)	Down	Greater than 10 volts
Passenger		
543 (DG)	Left	Greater than 10 volts
543 (DG)	Right	Less than 5 ohms
544 (VT)	Up	Greater than 10 volts
544 (VT)	Down	Less than 5 ohms
542 (YE)	Left	Less than 5 ohms
542 (YE)	Right	Greater than 10 volts
542 (YE)	Up	Less than 5 ohms
542 (YE)	Down	Greater than 10 volts

- **Is the circuit logic OK?**

→ **Yes**
INSTALL a new exterior rear view mirror motor. REFER to Mirror—Motor. TEST the system for normal operation.

→ **No**
GO to C2.

C2 CHECK THE EXTERIOR REAR VIEW MIRROR CONTROL

1. Remove the exterior rear view mirror control. Leave the harness connected.
2. Measure for voltage or resistance at exterior rear view mirror control C501 while actuating the exterior rear view mirror control according to the following chart.

Pin	Circuit	Exterior rear view mirror control position	Measure for resist or voltage
6	542 (YE)	Left	Less than 5 ohms
6	542 (YE)	Right	Greater than 10 volts
6	542 (YE)	Up	Less than 5 ohms
6	542 (YE)	Down	Greater than 10 volts
Driver side selected			
4	540 (RD)	Left	Greater than 10 volts
4	540 (RD)	Right	Less than 5 ohms
3	541 (DB/YE)	Up	Greater than 10 volts
3	541 (DB/YE)	Down	Less than 5 ohms
Passenger side selected			
8	543 (DG)	Left	Greater than 10 volts
8	543 (DG)	Right	Less than 5 ohms
7	544 (VT)	Up	Greater than 10 volts
7	544 (VT)	Down	Less than 5 ohms

	• **Is the circuit logic OK?** → **Yes** REPAIR the circuits. TEST the system for normal operation. → **No** INSTALL a new exterior rear view mirror control. REFER to Switch—Exterior Rear View Mirror Control in this section. TEST the system for normal operation.