

**2000-01 ACCESSORIES & EQUIPMENT****Power Mirrors - Catera****DESCRIPTION & OPERATION**

**WARNING:** Vehicles are equipped with air bag supplemental restraint system. Before attempting any repairs involving steering column, instrument panel or related components, see SERVICE PRECAUTIONS and DISABLING & ACTIVATING AIR BAG SYSTEM in appropriate AIR BAG RESTRAINT SYSTEMS article.

One mirror control switch adjusts both left (driver's side) and right (passenger's side) mirrors. Left side of mirror switch is for driver's side mirror and right side of mirror switch is for passenger's side mirror. Use control pad below mirror switch to adjust mirror. Heated and memory mirrors are available as an option.

Each power mirror assembly contains 2 reversible motors: an up/down motor and a left/right motor. Mirror control switch reverses polarity of motor circuit to change direction of mirror movement. Each motor contains a self-resetting circuit breaker, which opens when mirror reaches its mechanical limit of travel. On vehicles with memory seat/mirror systems, each power mirror assembly contains potentiometers that are used to determine mirror position.

Rearview mirror contains two reversible DC motors and two position sensors. One motor adjusts mirror to UP/DOWN or vertical position. Another motor adjusts mirror to LEFT/RIGHT or horizontal position. Memory Seat Module (MSM) controls mirror direction by changing polarity of voltage applied to motors. This monitors signal circuits of position sensors to determine position of mirror. When a memory function is requested, MSM stores position of mirror into memory. For additional testing information not included in this article, see appropriate AUTOMATIC DAY/NIGHT MIRRORS article.

**TROUBLE SHOOTING****PRELIMINARY INSPECTION**

Check O/S MIRROR fuse No. 13 (10-amp). O/S MIRROR fuse is located in instrument panel fuse block. If blown, replace and retest system.

Check for broken or partially broken wire inside insulation which could cause system malfunction, but prove good in a continuity/voltage check with system disconnected. These circuits may be intermittent or resistive when loaded, and if possible, should be checked by monitoring voltage drop with system operational (under load). Check and ensure grounds are clean and tight. Check for proper installation of aftermarket electronic equipment. Correct any obvious problems before continuing testing. If problem still exists, perform diagnostic check. See **DOOR SYSTEMS DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM.

**SELF-DIAGNOSTIC SYSTEM**

**NOTE:** Diagnostic trouble code tests are written specifically for use with GM Tech 1 or 2 scan tools. Generic scan tool can be used, but may have limited functions.

**DOOR SYSTEMS DIAGNOSTIC SYSTEM CHECK**

1. Connect scan tool to Data Link Connector (DLC). DLC is located below left side of instrument panel, to right of steering column. If scan tool powers up, go to next step. If scan tool does not power up, perform appropriate diagnostic procedure. See BODY CONTROL MODULES - CATERA article.
2. Turn ignition switch to RUN position. Using scan tool, attempt to establish communication with Body

Control Module (BCM). If communication with BCM is established, go to next step. If communication with BCM is not established, diagnose communication concern. See BODY CONTROL MODULES - CATERA article.

3. Turn ignition switch to RUN position Using scan tool, attempt to establish communication with Memory Seat Module (MSM). If communication with MSM is established, go to next step. If communication with MSM is not established, diagnose communication concern. See BODY CONTROL MODULES - CATERA article.
4. Using scan tool, select display DTC function for BCM and MSM. Record all displayed DTCs and status of displayed DTCs. If DTCs are displayed, go to next step. If DTCs are not displayed, repair power mirrors by symptom. See **POWER MIRRORS INOPERATIVE** under SYMPTOM TESTS.
5. If scan tool does not display any DTC which begin with "U", go to next step. If scan tool displays any DTCs which begin with "U", perform appropriate test in accordance with DTC retrieved. See BODY CONTROL MODULES - CATERA article.
6. If scan tool does not display DTCs B1552, B1556 or B1558, go to next step. If scan tool displays DTCs B1552, B1556 or B1558, perform appropriate test in accordance with DTC retrieved. See BODY CONTROL MODULES - CATERA article.
7. If scan tool does not display DTCs B1973, B1982 or B1983, go to next step. If scan tool displays DTCs B1973, B1982 or B1983, perform appropriate test in accordance with DTC retrieved. See BODY CONTROL MODULES - CATERA article.
8. If scan tool does not display any DTCs which begin with "P", go to next step. If scan tool displays any DTCs which begin with "P", perform appropriate test in accordance with DTC retrieved. See appropriate SELF-DIAGNOSTIC article in ENGINE PERFORMANCE.
9. If scan tool displays DTCs B18 or B20, perform appropriate test in accordance with DTC retrieved. See **DIAGNOSTIC TROUBLE CODE DEFINITIONS** . If scan tool does not display DTCs B18 or B20, repair power mirrors by symptom. See **POWER MIRRORS INOPERATIVE** under SYMPTOM TESTS.

**DIAGNOSTIC TROUBLE CODE DEFINITIONS**

**DIAGNOSTIC TROUBLE CODE DEFINITIONS**

DTC	Description
<u>18</u>	Left Mirror Circuit
<u>20</u>	Right Mirror Circuit

**DIAGNOSTIC TESTS**

**DTC 18: LEFT MIRROR CIRCUIT**

**Circuit Description**

Memory Seat Module (MSM) monitors voltage of left power mirror motor potentiometer circuits using terminals No. 10 (Gray/Green wire) and 11 (Gray wire) of MSM connector C2. Normal voltage should be 0.16-4.60 volts. DTC 18 will set if a short to voltage, open or short to ground in any related circuit occurs, left power mirror potentiometer fails or MSM fails causing voltage to fall out of valid operating range. No driver warning will be displayed. MSM will store DTC 18 in memory. Automatic function of left power mirror will be blocked. Adjustment speed and end stops are no longer monitored and position cannot be set to memory. DTC 18 will clear when conditions for setting DTC no longer exist or is cleared using scan tool.

**Code Enable Criteria**

The following must occur for DTC to be stored:

- No mirror movement detected by MSM during a memory recall command.
- Voltage on horizontal or vertical signal circuits of left outside rearview mirror is less than 0.16 volts or 4.6

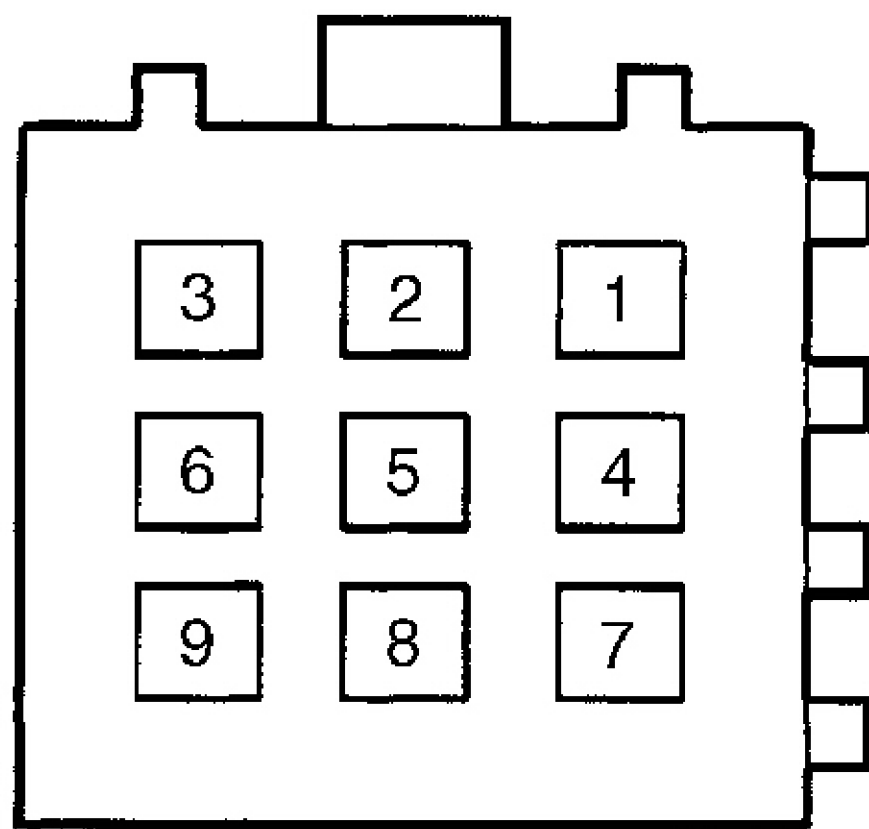
volts or more.

#### Diagnostic Procedure

1. Perform **DOOR SYSTEMS DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Install scan tool. Turn ignition switch to RUN position. Using scan tool, command left outside rearview mirror up and down. If mirror moves up and down, go to next step. If mirror does not move up and down, go to step 4 .
3. Using scan tool, command left outside rearview mirror left and right. If mirror moves left and right, go to step 8 . If mirror does not move left and right, go to step 6 .
4. Turn ignition switch to OFF position. Disconnect left outside mirror 9-pin harness connector. Connect a test light between terminal No. 2 (Green wire) of left outside mirror connector and ground. See **Fig. 1** . Turn ignition switch to RUN position. Using scan tool, command left mirror down. If test light is on, go to next step. If test light is off, go to step 16 .
5. Connect test light between terminals No. 2 (Green wire) and 3 (Black/Red wire) of left outside mirror connector. See **Fig. 1** . Using scan tool, command left outside mirror up. If test light is on, go to step 24 . If test light is off, go to step 18 .
6. Turn ignition switch to OFF position. Disconnect left outside mirror 9-pin harness connector. Connect a test light between terminal No. 1 (Yellow wire) of left outside mirror connector and ground. See **Fig. 1** . Turn ignition switch to RUN position. Using scan tool, command left mirror left. If test light is on, go to next step. If test light is off, go to step 17 .
7. Connect test light between terminals No. 1 (Yellow wire) and 3 (Black/Red wire) of left outside mirror connector. See **Fig. 1** . Using scan tool, command left outside mirror right. If test light is on, go to step 24 . If test light is off, go to step 18 .
8. Using scan tool, observe driver mirror horizontal position data parameter in MSM data list. If voltage is 0.16-4.60 volts, go to next step. If voltage is not 0.16-4.60 volts, go to step 10 .
9. Using scan tool, observe driver mirror vertical position data parameter in MSM data list. If voltage is 0.16-4.60 volts, test wiring system for intermittent and poor connections. If voltage is not 0.16-4.60 volts, go to step 13 .
10. Turn ignition switch to OFF position. Disconnect left outside mirror 9-pin harness connector. Turn ignition switch to RUN position. Using scan tool, observe left mirror horizontal position data parameter. If voltage is greater than 4.60 volts, go to next step. If voltage is not greater than 4.60 volts, go to step 21 .
11. Turn ignition switch to OFF position. Connect fused jumper (3-amp) between horizontal signal circuit and low reference circuit terminal No. 5 (Black/Brown wire) of left outside mirror connector. See **WIRING DIAGRAMS** . Turn ignition switch to RUN position. Using scan tool, observe horizontal position data parameter. If voltage is less than 0.16 volt, go to next step. If voltage is not less than 0.16 volt, go to step 22 .
12. Turn ignition switch to OFF position. Disconnect fused jumper. Connect fused jumper (3-amp) between 5-volt reference circuit terminal No. 4 (Brown wire) and horizontal signal circuit of left outside mirror connector. See **WIRING DIAGRAMS** . Turn ignition switch to RUN position. Using scan tool, observe horizontal position data parameter. If voltage is greater than 4.60 volts, go to step 20 . If voltage is not greater than 4.60 volts, go to step 19 .
13. Turn ignition switch to OFF position. Disconnect left outside mirror 9-pin harness connector. Turn ignition switch to RUN position. Using scan tool, observe left mirror vertical position data parameter. If voltage is greater than 4.60 volts, go to next step. If voltage is not greater than 4.60 volts, go to step 21 .
14. Turn ignition switch to OFF position. Connect fused jumper (3-amp) between vertical signal circuit and low reference circuit terminal No. 5 (Black/Brown wire) of left outside mirror connector. See **WIRING DIAGRAMS** . Turn ignition switch to RUN position. Using scan tool, observe vertical position data parameter. If voltage is less than 0.16 volt, go to next step. If voltage is not less than 0.16 volt, go to step 22 .
15. Turn ignition switch to OFF position. Disconnect fused jumper wire. Connect fused jumper (3-amp) between

5-volt reference circuit terminal No. 4 (Brown wire) and vertical signal circuit of left outside mirror connector. See [WIRING DIAGRAMS](#) . Turn ignition switch to RUN position. Using scan tool, observe vertical position data parameter. If voltage is greater than 4.60 volts, go to step 20 . If voltage is not greater than 4.60 volts, go to step 19 .

16. Test mirror down circuit terminal No. 2 (Green wire) of left outside mirror for open or short to ground. See [WIRING DIAGRAMS](#) . If problem was found and corrected, go to step 28 . If problem was not found, go to step 25 .
17. Test mirror right circuit terminal No. 1 (Yellow wire) of left outside mirror for open or short to ground. See [WIRING DIAGRAMS](#) . If problem was found and corrected, go to step 28 . If problem was not found, go to step 25 .
18. Test mirror control circuit terminal No. 3 (Black/Red wire) of left outside mirror for open or short to ground. See [WIRING DIAGRAMS](#) . If problem was found and corrected, go to step 28 . If problem was not found, go to step 25 .
19. Test 5-volt reference circuit terminal No. 4 (Brown wire) to left outside mirror for short to ground. See [WIRING DIAGRAMS](#) . If short is found and corrected, go to step 28 . If no short is found, go to step 25 .
20. Test 5-volt reference circuit terminal No. 4 (Brown wire) to left outside mirror for short to voltage, high resistance or open. See [WIRING DIAGRAMS](#) . If problem is found and corrected, go to step 28 . If no problem is found, go to step 24 .
21. Test signal circuit to left outside mirror for short to ground. See [WIRING DIAGRAMS](#) . If short is found and corrected, go to step 28 . If no short is found, go to step 25 .
22. Test signal circuit to left outside mirror for short to voltage, high resistance or open. See [WIRING DIAGRAMS](#) . If problem is found and corrected, go to step 28 . If no problem is found, go to next step.
23. Test low reference circuit terminal No. 5 (Black/Brown wire) to left outside mirror for high resistance or open. See [WIRING DIAGRAMS](#) . If problem is found and corrected, go to step 28 . If no problem is found, go to step 25 .
24. Inspect for poor connections at left outside mirror connector. If problem is found and corrected, go to step 28 . If no problem is found, go to step 26 .
25. Inspect for poor connections at MSM connector. If problem is found and corrected, go to step 28 . If no problem is found, go to step 27 .
26. Replace left outside mirror. See [POWER MIRROR ASSEMBLY](#) under REMOVAL & INSTALLATION. After repair, go to step 28 .
27. Replace MSM. See POWER SEATS - CATERA article. Perform set up procedure for MSM. After repair, go to next step.
28. Use scan tool to clear DTCs. Operate vehicle to verify repair. If DTC resets, repeat test beginning at step 2 .



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**Fig. 1: Identifying Outside Mirror Connector Terminals**  
 Courtesy of GENERAL MOTORS CORP.

#### DTC 20: RIGHT MIRROR CIRCUIT

##### Circuit Description

Memory Seat Module (MSM) monitors voltage of right power mirror motor potentiometer circuits using terminals No. 6 (Gray/Green wire) and 7 (Gray wire) of MSM connector C2. Normal voltage should be 0.16-4.60 volts. DTC 20 will set if a short to voltage, open or short to ground in any related circuit occurs, right power mirror potentiometer fails or MSM fails causing voltage to fall out of valid operating range. No driver warning will be displayed. MSM will store DTC 20 in memory. Automatic function of right power mirror will be blocked. Adjustment speed and end stops are no longer monitored and position cannot be set to memory. DTC 20 will clear when conditions for setting DTC no longer exist or is cleared using scan tool.

##### Diagnostic Procedure

1. Perform **DOOR SYSTEMS DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Install scan tool. Turn ignition switch to RUN position. Using scan tool, command right outside mirror up and down. If mirror moves up and down, go to next step. If mirror does not move up and down, go to step 4 .
3. Using scan tool, command right outside mirror left and right. If mirror moves left and right, go to step 8 . If mirror does not move left and right, go to step 6 .
4. Turn ignition switch to OFF position. Disconnect right outside mirror connector. Connect a test light between terminal No. 2 (Blue wire) of right outside mirror connector and ground. See **Fig. 1** . Using scan tool,

- command right mirror down. If test light is on, go to next step. If test light is off, go to step 16 .
5. Connect test light between terminals No. 2 (Blue wire) and 3 (Black/Red wire) of right outside mirror connector. See **Fig. 1** . Using scan tool, command right outside mirror up. If test light is on, go to step 24 . If test light is off, go to step 18 .
  6. Turn ignition switch to OFF position. Disconnect right outside mirror connector. Connect a test light between terminal No. 1 (Gray wire) of right outside mirror connector and ground. See **Fig. 1** . Using scan tool, command right outside mirror left. If test light is on, go to next step. If test light is off, go to step 17 .
  7. Connect test light between terminals 1 (Gray wire) and 3 (Black/Red wire) of right outside mirror connector. See **Fig. 1** . Using scan tool, command right outside mirror right. If test light is on, go to step 24 . If test light is off, go to step 18 .
  8. Using scan tool, observe passenger door horizontal position data parameter in Memory Seat Module (MSM) data list. If voltage is 0.16-4.60 volts, go to next step. If voltage is not 0.16-4.60 volts, go to step 10 .
  9. Using scan tool, observe passenger door vertical position data parameter in MSM data list. If voltage is 0.16-4.60 volts, test wiring system for intermittent and poor connections. If voltage is not 0.16-4.60 volts, go to step 13 .
  10. Turn ignition switch to OFF position. Disconnect right outside mirror connector. Turn ignition switch to RUN position. Using scan tool, observe right mirror horizontal position data parameter. If voltage is greater than 4.60 volts, go to next step. If voltage is not greater than 4.60 volts, go to step 21 .
  11. Turn ignition switch to OFF position. Connect fused jumper (3-amp) between horizontal signal circuit and low reference circuit terminal No. 5 (Black/Brown wire) of right outside mirror connector. See **WIRING DIAGRAMS** . Turn ignition switch to RUN position. Using scan tool, observe horizontal position data parameter. If voltage is less than 0.16 volt, go to next step. If voltage is not less than 0.16 volt, go to step 22 .
  12. Turn ignition switch to OFF position. Disconnect fused jumper. Connect fused jumper (3-amp) between 5-volt reference circuit terminal No. 4 (Brown wire) and horizontal signal circuit of right outside mirror connector. See **WIRING DIAGRAMS** . Turn ignition switch to RUN position. Using scan tool, observe horizontal position data parameter. If voltage is greater than 4.60 volts, go to step 20 . If voltage is not greater than 4.60 volts, go to step 19 .
  13. Turn ignition switch to OFF position. Disconnect right outside mirror connector. Turn ignition switch to RUN position. Using scan tool, observe right mirror vertical position data parameter. If voltage is greater than 4.60 volts, go to next step. If voltage is not greater than 4.60 volts, go to step 21 .
  14. Turn ignition switch to OFF position. Connect fused jumper (3-amp) between vertical signal circuit and low reference circuit terminal No. 5 (Black/Brown wire) of right outside mirror connector. See **WIRING DIAGRAMS** . Turn ignition switch to RUN position. Using scan tool, observe vertical position data parameter. If voltage is less than 0.16 volt, go to next step. If voltage is not less than 0.16 volt, go to step 22 .
  15. Turn ignition switch to OFF position. Disconnect fused jumper. Connect fused jumper (3-amp) between 5-volt reference circuit terminal No. 4 (Brown wire) and vertical signal circuit of right outside mirror connector. See **WIRING DIAGRAMS** . Turn ignition switch to RUN position. Using scan tool, observe vertical position data parameter. If voltage is greater than 4.60 volts, go to step 20 . If voltage is not greater than 4.60 volts, go to step 19 .
  16. Test mirror down circuit terminal No. 2 (Blue wire) of right outside mirror for open or short to ground. See **WIRING DIAGRAMS** . If problem was found and corrected, go to step 28 . If problem was not found, go to step 25 .
  17. Test mirror right circuit terminal No. 1 (Gray wire) of right outside mirror for open or short to ground. See **WIRING DIAGRAMS** . If problem was found and corrected, go to step 28 . If problem was not found, go to step 25 .
  18. Test mirror control circuit terminal No. 3 (Black/Red wire) of right outside mirror for open or short to ground. See **WIRING DIAGRAMS** . If problem was found and corrected, go to step 28 . If problem was not found, go to step 25 .
  19. Test 5-volt reference circuit terminal No. 4 (Brown wire) to right outside mirror for short to ground. See

- WIRING DIAGRAMS** . If short is found and corrected, go to step 28 . If no short is found, go to step 25 .
20. Test 5-volt reference circuit terminal No. 4 (Brown wire) to right outside mirror for short to voltage, high resistance or open. See **WIRING DIAGRAMS** . If problem is found and corrected, go to step 28 . If no problem is found, go to step 24 .
  21. Test signal circuit to right outside mirror for short to ground. See **WIRING DIAGRAMS** . If short is found and corrected, go to step 28 . If no short is found, go to step 25 .
  22. Test signal circuit to right outside mirror for short to voltage, high resistance or open. See **WIRING DIAGRAMS** . If problem is found and corrected, go to step 28 . If no problem is found, go to next step.
  23. Test low reference circuit terminal No. 5 (Black/Brown wire) to right outside mirror for high resistance or open. See **WIRING DIAGRAMS** . If problem is found and corrected, go to step 28 . If no problem is found, go to step 25 .
  24. Inspect for poor connections at harness connector of right outside mirror. If problem is found and corrected, go to step 28 . If no problem is found, go to step 26 .
  25. Inspect for poor connections at harness connector of MSM. If problem is found and corrected, go to step 28 . If no problem is found, go to step 27 .
  26. Replace right outside mirror. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION. After repair, go to step 28 .
  27. Replace MSM. See POWER SEATS - CATERA article. Perform set up procedure for MSM. After repair, go to next step.
  28. Use scan tool to clear DTCs. Operate vehicle to verify repair. If DTC resets, repeat test beginning at step 2 .

## SYSTEM TESTS

**CAUTION:** To prevent damage to terminals, Connector Test Adapter Kit (J-35616-A) must be used whenever a diagnostic procedure requires checking or probing terminals. To locate and identify terminals, see **WIRING DIAGRAMS** .

**NOTE:** Before performing following tests, perform **PRELIMINARY INSPECTION** under TROUBLE SHOOTING.

**NOTE:** For testing of heated mirrors, see appropriate REAR WINDOW & MIRROR DEFOGGERS article.

## POWER MIRRORS INOPERATIVE

1. Review operation of power mirrors. See **DESCRIPTION & OPERATION** . After review, go to next step.
2. Place left side door window/mirror switch to LEFT position. Activate to UP, DOWN, LEFT and RIGHT positions. Place left side door window/mirror switch to RIGHT position. Activate to UP, DOWN, LEFT and RIGHT positions. If both mirrors operate, test wiring system for intermittent and poor connections. If both mirrors do not operate, go to next step.
3. If both left and right mirrors are inoperative, go to next step. If either left or right mirror operates, go to step 6 .
4. Disconnect left side door window/mirror switch harness connector. Connect a test light between ground and left side door window/mirror switch harness connector terminal No. 11 (Brown wire). If test light illuminates, go to next step. If test light does not illuminate, go to step 7 .
5. Connect a test light between left side door window/mirror switch harness connector terminals No. 6 (Black wire) and 11 (Brown wire). If test light illuminates, go to step 9 . If test light does not illuminate, go to step 15 .
6. Disconnect suspect power mirror harness connector. Connect a test light between suspect power mirror

harness connector motor control circuits. See **WIRING DIAGRAMS** . Place left side door window/mirror switch to suspect power mirror. Activate suspect power mirror in all positions. If test light does not illuminate in all positions, go to step 8 . If test light illuminates in all positions, go to step 12 .

7. Inspect Brown wire for an open or short to ground. If problem is not found, go to step 9 . If problem is found and corrected, go to step 18 .
8. Inspect mirror motor control circuits for an open. See **WIRING DIAGRAMS** . If problem is not found, go to next step. If problem is found and corrected, go to step 18 .
9. Connect power mirror harness connectors, if previously disconnected. Disconnect left side door window/mirror switch harness connector, if not already disconnected. Connect a test light between battery voltage and left side door window/mirror switch harness connector motor control circuits. See **WIRING DIAGRAMS** . If test light does not illuminate at any terminal, go to next step. If test light illuminates at all terminals, go to step 13 .
10. Connect a test light between ground and left side door window/mirror switch harness connector motor control circuits. If test light does not illuminate at any terminal, go to next step. If test light illuminates at all terminals, go to step 14 .
11. Inspect left side door window/mirror switch harness connector for poor connections. If problem is not found, go to step 16 . If problem is found and corrected, go to step 18 .
12. Inspect power mirror harness connectors for poor connections. If problem is not found, go to step 17 . If problem is found and corrected, go to step 18 .
13. Repair short to ground in mirror motor control circuit. After repair, go to step 18 .
14. Repair short to voltage in mirror motor control circuit. After repair, go to step 18 .
15. Repair open in Black wire between ground and left side door window/mirror switch. Ground point is located at base of left "A" pillar. After repair, go to step 18 .
16. Replace left side door window/mirror switch. After repair, go to step 18 .
17. Replace power mirror motor, then go to next step.
18. Operate system to verify repair. If system is not operating correctly, repeat test beginning at step 2 .

## REMOVAL & INSTALLATION

**WARNING:** Vehicles are equipped with air bag supplemental restraint system. Before attempting any repairs involving steering column, instrument panel or related components, see SERVICE PRECAUTIONS and DISABLING & ACTIVATING AIR BAG SYSTEM in appropriate AIR BAG RESTRAINT SYSTEMS article.

**CAUTION:** When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See COMPUTER RELEARN PROCEDURES article in GENERAL INFORMATION before disconnecting battery.

**CAUTION:** Momentary actuation of power window switch can cause window to move directly to fully open position. When working inside door, leave ignition off whenever possible.

### INSIDE MIRROR

**CAUTION:** DO NOT pry mirror support or inside mirror away from windshield, or mirror support or windshield may be damaged.



1. Rock mirror from side to side, and pull mirror down firmly. DO NOT pull rearward on mirror, or mirror support or windshield may be damaged. Disconnect mirror electrical connector. Unsnap mirror base cover.
2. To install, center bottom of mirror to lower part of support. Using a circular motion from side to side, push mirror up firmly. When mirror is fully seated, a click should be heard. Snap on mirror base cover.

## **POWER MIRROR ASSEMBLY**

### **Removal & Installation**

1. Twist and pull off radio front side door tweeter speaker from door pillar. Disconnect speaker connector and remove speaker. Pry off assist handle front molding using a flat-blade plastic tool. Remove inside door handle bezel by unsnapping. Remove front screw trim cap and assist handle screws. Remove power accessory switch panel. See **POWER MIRROR SWITCH** . Remove assist handle.
2. Remove mirror screws. Remove mirror from door and disconnect electrical connector. To install, reverse removal procedure. Tighten power mirror screw to 89 INCH lbs. (10 N.m).

## **POWER MIRROR DRIVE MOTOR**

### **Removal & Installation**

Remove power mirror glass. See **POWER MIRROR FACE/GLASS** . Disengage 2 adjuster arms from mirror motor. Disconnect mirror and motor harness connectors. Remove screws and mirror motor. To install, reverse removal procedure.

## **POWER MIRROR FACE/GLASS**

### **Removal & Installation**

Tilt glass inboard and pull backward. Disengage 2 adjuster arms from mirror motor. Remove mirror glass and disconnect electrical connector. To install, reverse removal procedure.

## **POWER MIRROR SWITCH**

### **Removal & Installation**

Disconnect negative battery cable. Using a rag to protect trim panel, insert flat-blade tool between switch plate and trim panel, and disengage spring clip. Disconnect power mirror control switch harness connector(s). To install, reverse removal procedure.

## **WIRING DIAGRAMS**

**2001 Cadillac Catera**

2000-01 ACCESSORIES & EQUIPMENT Power Mirrors - Catera

**Fig. 2: Power Mirror System Wiring Diagram (2000-01 Catera)**

**2001 Cadillac Catera**

2000-01 ACCESSORIES & EQUIPMENT Power Mirrors - Catera

**Fig. 3: Power Memory Mirror System Wiring Diagram (2000 Catera)**  
**Courtesy of GENERAL MOTORS CORP.**

**2001 Cadillac Catera**

2000-01 ACCESSORIES & EQUIPMENT Power Mirrors - Catera

**Fig. 4: Power Memory Mirror System Wiring Diagram (2001 Catera)**  
**Courtesy of GENERAL MOTORS CORP.**

**2001 Cadillac Catera**

2000-01 ACCESSORIES & EQUIPMENT Power Mirrors - Catera

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