# Power Mirrors - Corvette

## DESCRIPTION

One mirror control switch adjusts both left (driver's side) and right (passenger's side) mirrors. Press left side of mirror select switch for driver's mirror or press right side of switch for passenger's mirror. Press arrows on switch pad to adjust mirror. Vehicle is equipped with heated and memory mirrors.

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. Each power mirror assembly contains potentiometers that are used to determine mirror position.

## COMPONENT LOCATIONS

**COMPONENT LOCATIONS**

| Component | Location |
|---|---|
| Door Control Module | Bottom Center Of Respective Door |
| Door Switch | In Door Trim Panel |
| Instrument Panel Electrical Center | Top Of Footwell, Behind Carpet |

## PROGRAMMING

On hardtop models, when a Door Control Module (DCM) is replaced, the DCM must be reprogrammed. Using scan tool, select RH DCM for right DCM or LH DCM for left DCM. Select DCM REPROGRAM and follow scan tool instructions.

## TROUBLE SHOOTING

### PRELIMINARY INSPECTION

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 power mirror system related fuses. Check and ensure grounds are clean and tight. See **WIRING DIAGRAMS** . Check for proper installation of aftermarket electronic equipment. Correct any obvious problems before continuing testing. If problem still exists, perform diagnostic system check. See **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM.

### SYSTEM OPERATION CHECK

1. Move mirror select switch to left mirror position. Operate left mirror to left, right, up and down positions. Mirror should operate as commanded in all positions.

2. Move mirror select switch to right mirror position. Operate right mirror to left, right, up and down positions. Mirror should operate as commanded in all positions.
3. To check memory mirror function, press memory No. 1 button. A single beep should be heard, and both mirrors should move to positions programmed for memory No. 1 button.
4. Press memory No. 2 button. A single beep should be heard, and both mirrors should move to positions programmed for memory No. 2 button.
5. If mirror system does not function properly, repair by symptom. See **SYMPTOM INDEX** table under SYMPTOM TESTS.

## SELF-DIAGNOSTIC SYSTEM

**NOTE: Diagnostic Trouble Code (DTC) 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.**

DTCs may be retrieved and cleared by using a scan tool or by using the Driver Information Center (DIC) located on Instrument Panel Cluster (IPC). When using the DIC to retrieve DTCs, if a DTC exists display will indicate whether DTC is current (with a "C") or history (with an "H"). When E/M button (switch 5) on DIC is pressed at any time, IPC will exit diagnostics mode. On-board diagnostics will also be exited automatically if no DIC buttons are pressed for longer than 60 seconds.

**NOTE: For more information on Driver Information Center (DIC), see ANALOG INSTRUMENT PANELS - CORVETTE article.**

### DIAGNOSTIC SYSTEM CHECK

#### Using Scan Tool

**NOTE: If scan tool is not available, see USING ON-BOARD DIAGNOSTICS .**

1. Install scan tool. If scan tool powers up, go to next step. If scan tool does not power up, perform appropriate diagnostic procedure. See SELF-DIAGNOSTIC SYSTEM in appropriate BODY CONTROL MODULES article.
2. Turn ignition on, engine off. Following scan tool manufacturer's instructions, attempt to establish communication with Left Driver Control Module (LDCM) and Right Door Control Module (RDCM). If communication with LDCM and RDCM is established, go to next step. If communication with LDCM and RDCM is not established, diagnose communication problem with class 2 device. See SELF-DIAGNOSTIC SYSTEM in appropriate BODY CONTROL MODULES article.
3. Select display DTC function for LDCM and RDCM. Record all displayed DTCs, status of displayed DTCs and module that set the DTC. If DTCs are displayed, perform appropriate test. See **DIAGNOSTIC TROUBLE CODE INDEX** table. If no DTCs are displayed, perform system operation check. See **SYSTEM OPERATION CHECK** under TROUBLE SHOOTING.

### DIAGNOSTIC TROUBLE CODE INDEX

| DTC | Description |
|---|---|
| **B2222** | Left Mirror Select Switch Fault |
| **B2224** | Right Mirror Select Switch Fault |
| **B2226** | Mirror Right Switch Fault |
| **B2228** | Mirror Left Switch Fault |
| **B2232** | Mirror Up Switch Fault |
| **B2234** | Mirror Down Switch Fault |
| **B2262** | Left Mirror Horizontal Position Sensor Fault |
| **B2263** | Right Mirror Horizontal Position Sensor Fault |
| **B2264** | Left Mirror Vertical Position Sensor Fault |
| **B2265** | Right Mirror Vertical Position Sensor Fault |
| **B2272** | Left Mirror Motor Fault |
| **B2273** | Right Mirror Motor Fault |
| UXXXX | (1) |

(1) For any DTC beginning with the letter "U", diagnose communication problem with class 2 device. See SELF-DIAGNOSTIC SYSTEM in appropriate BODY CONTROL MODULES article.

**Using On-Board Diagnostics**

Turn ignition on, engine off. Press RESET button to acknowledge any warning messages that may be present. Press OPTIONS button (switch 4) on Driver Information Center (DIC) and hold. While holding OPTIONS button, press FUEL button (switch 1) 4 times within 10 seconds. System will enter automatic display mode.

In automatic display mode, each system module will be displayed on DIC followed by DTCs that exist in that system. If no DTCs exist, DIC will display NO CODES for that system. If DTCs exist, each DTC will be displayed for 3 seconds followed by a one second pause. If Instrument Panel Cluster (IPC) cannot communicate with any system, DIC will display NO COMM for that system. For diagnosis of no communication fault, see appropriate BODY CONTROL MODULES article. At any time during automatic display mode, manual display feature can be activated by pressing any DIC button except E/M (switch 5). When all systems have been checked in automatic mode, IPC will display NO MORE CODES for 2 seconds, and will then enter manual mode.

When manual mode is entered, DIC will display MANUAL DIAGNOSTICS for 2 seconds or until any DIC button except E/M (switch 5) is pressed. DIC will then display first system and number of DTCs set in that system, and wait for further instructions. Using DIC buttons, move through system diagnostics as necessary. See **DIC BUTTON DIAGNOSTIC FUNCTIONS** table. Note power mirror related codes for Right Door Control Module (RDCM) and Left Door Control Module (LDCM) and perform appropriate diagnostic test. See **DIAGNOSTIC TROUBLE CODE INDEX** table.

When E/M button (switch 5) on DIC is pressed at any time, IPC will exit diagnostics mode. On-board diagnostics will also be exited automatically if no DIC buttons are pressed for longer than 60 seconds. If no DTCs exist, perform system operation check. See **SYSTEM OPERATION CHECK** under TROUBLE SHOOTING.

**DIC BUTTON DIAGNOSTIC FUNCTIONS**

| DIC Button | Function |
|---|---|
| FUEL (Switch 1) | Previous DTC |
| GAGES (Switch 2) | Next DTC |
| TRIP (Switch 3) | Previous System |
| OPTIONS (Switch 4) | Next System |
| E/M (Switch 5) | Exit Diagnostics |
| RESET | Clear DTCs |

### CLEARING DIAGNOSTIC TROUBLE CODES

#### Using On-Board Diagnostics

Use manual control functions to select and view DTC. See **USING ON-BOARD DIAGNOSTICS** under DIAGNOSTIC SYSTEM CHECK. Depress the RESET button on DIC for 2 seconds to clear the selected DTC from the selected module.

#### Using Scan Tool

Using scan tool manufacturer's instructions, use scan tool and clear DTCs.

## DIAGNOSTIC TESTS

### DTC B2222: LEFT MIRROR SELECT SWITCH FAULT

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select LDCM input and observe driver mirror select switch status. If scan tool displays ACTIVE, leave scan tool connected and go to next step. If scan tool displays INACTIVE, problem is intermittent. Check left-side mirror select switch circuit wiring and connections. See **WIRING DIAGRAMS** . If left-side mirror select switch circuit checks okay, retest system. If DTC B2222 sets as a history code, go to step 5 .
3. Disconnect left door switch connector. With LDCM input selected, observe driver mirror select switch status. If scan tool displays INACTIVE, replace power mirror switch. See **POWER MIRROR SWITCH** under REMOVAL & INSTALLATION. If scan tool displays ACTIVE, go to next step.
4. Check for short to ground in Light Green wire between Left Door Control Module (LDCM) connector C4 terminal No. 1 and left door switch connector terminal No. 1. See **Fig. 1** . See **WIRING DIAGRAMS** . Repair as necessary and retest system. If Light Green wire is okay, go to next step.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

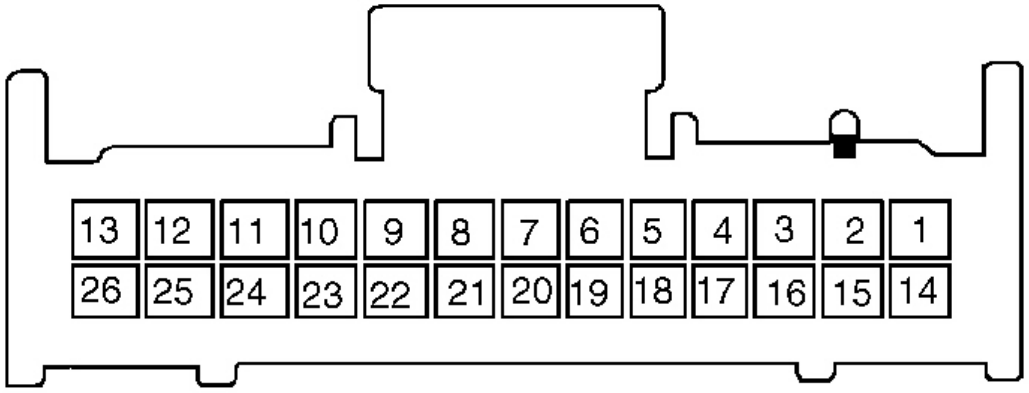


**Fig. 1: Identifying Door Control Module Connectors C1 & C4 & Left-Side Door Switch Connector Terminals**
**Courtesy of GENERAL MOTORS CORP.**

**DTC B2224: RIGHT MIRROR SELECT SWITCH FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select LDCM input and observe passenger mirror select switch status. If scan tool displays ACTIVE, leave scan tool connected and go to next step. If scan tool displays INACTIVE, problem is intermittent. Check left-side mirror select switch circuit wiring and connections. See **WIRING DIAGRAMS** . If left-side mirror select switch circuit checks okay, retest system. If DTC B2224 sets as a history code, go to step 5 .
3. Disconnect left door switch connector. With LDCM input selected, observe passenger mirror select switch status. If scan tool displays ACTIVE, go to next step. If scan tool displays INACTIVE, replace power mirror switch. See **POWER MIRROR SWITCH** under REMOVAL & INSTALLATION.
4. Check for short to ground in Light Blue/White wire between Left Door Control Module (LDCM) connector C4 terminal No. 2 and left door switch connector terminal No. 2. See **Fig. 1** . See **WIRING DIAGRAMS** . If Light Blue/White wire is okay, go to next step.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

**DTC B2226: MIRROR RIGHT SWITCH FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select LDCM input and observe mirror RIGHT switch status. If scan tool displays ACTIVE, leave scan tool connected and go to next step. If scan tool displays INACTIVE, problem is intermittent. Check mirror right switch circuit wiring and connections. See **WIRING DIAGRAMS** . If mirror right switch circuit checks okay, retest system. If DTC B2226 sets as a history code, go to step 5 .

3. Disconnect left door switch connector. With LDCM input selected, observe mirror RIGHT switch status. If scan tool displays ACTIVE, go to next step. If scan tool displays INACTIVE, replace power mirror switch. See **POWER MIRROR SWITCH** under REMOVAL & INSTALLATION.
4. Check for short to ground in White wire between Left Door Control Module (LDCM) connector C4 terminal No. 3 and left door switch connector terminal No. 3. See **Fig. 1** . See **WIRING DIAGRAMS** . If White wire is okay, go to next step.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

**DTC B2228: MIRROR LEFT SWITCH FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select LDCM input and observe mirror LEFT switch status. If scan tool displays ACTIVE, leave scan tool connected and go to next step. If scan tool displays INACTIVE, problem is intermittent. Check mirror left switch circuit wiring and connections. See **WIRING DIAGRAMS** . If mirror right switch circuit checks okay, retest system. If DTC B2228 sets as a history code, go to step 5 .
3. Disconnect left door switch connector. With LDCM input selected, observe mirror LEFT switch status. If scan tool displays ACTIVE, go to next step. If scan tool displays INACTIVE, replace power mirror switch. See **POWER MIRROR SWITCH** under REMOVAL & INSTALLATION.
4. Check for short to ground in Light Blue wire between Left Door Control Module (LDCM) connector C4 terminal No. 4 and left door switch connector terminal No. 4. See **Fig. 1** . See **WIRING DIAGRAMS** . If Light Blue wire is okay, go to next step.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

**DTC B2232: MIRROR UP SWITCH FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select LDCM input and observe mirror UP switch status. If scan tool displays ACTIVE, leave scan tool connected and go to next step. If scan tool displays INACTIVE, problem is intermittent. Check mirror down switch circuit wiring and connections. See **WIRING DIAGRAMS** . If mirror down switch circuit checks okay, retest system. If DTC B2232 sets as a history code, go to step 5 .
3. Disconnect left door switch connector. With LDCM input selected, observe mirror UP switch status. If scan tool displays ACTIVE, go to next step. If scan tool displays INACTIVE, replace power mirror switch. See **POWER MIRROR SWITCH** under REMOVAL & INSTALLATION.
4. Check for short to ground in Yellow wire between Left Door Control Module (LDCM) connector C4 terminal No. 6 and left door switch connector terminal No. 6. See **Fig. 1** . See **WIRING DIAGRAMS** . If Yellow wire is okay, go to next step.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

**DTC B2234: MIRROR DOWN SWITCH FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select LDCM input and observe mirror DOWN switch status. If scan tool displays ACTIVE, leave scan tool connected and go to next step. If scan tool displays INACTIVE, problem is intermittent. Check mirror up switch circuit wiring and connections. See **WIRING DIAGRAMS** . If

mirror up switch circuit checks okay, retest system. If DTC B2234 sets as a history code, go to step 5 .

3. Disconnect left door switch connector. With LDCM input selected, observe mirror DOWN switch status. If scan tool displays ACTIVE, go to next step. If scan tool displays INACTIVE, replace power mirror switch. See **POWER MIRROR SWITCH** under REMOVAL & INSTALLATION.
4. Check for short to ground in Light Green wire between Left Door Control Module (LDCM) connector C4 terminal No. 5 and left door switch connector terminal No. 5. See **Fig. 1** . See **WIRING DIAGRAMS** . If Light Green wire is okay, go to next step.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

**DTC B2262: LEFT MIRROR HORIZONTAL POSITION SENSOR FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select LDCM DTC display. If DTC B2262 is stored as a history code, go to next step. If DTC B2262 is not stored as a history code, go to step 8 .
3. Using scan tool, select LDCM data display. Monitor horizontal position sensor data while operating left-side mirror. Mirror horizontal position sensor voltage should display 0.1-4.8 volts. If reading is not as specified, go to next step. If reading is as specified, check mirror horizontal position sensor circuit for poor connections or intermittent operation. See **WIRING DIAGRAMS** . If mirror horizontal position sensor circuit checks okay, retest system. If DTC B2262 sets as a history code, go to step 11 .
4. Turn ignition off. Disconnect left power mirror 4-pin connector C2. Turn ignition on. Using DVOM, check voltage between left power mirror harness connector C2 terminal "A" (Gray wire) and ground. See **Fig. 2** . If reading is 4.0-5.5 volts, go to next step. If reading is not 4.5-5.5 volts, go to step 7 .
5. Check voltage between left power mirror harness connector C2 terminals "A" (Gray wire) and "C" (Black/White wire) while operating left-side mirror. If reading is 4.0-5.5 volts, go to next step. If reading is not 4.0-5.5 volts, go to step 9 .
6. Replace left power mirror. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION. Recheck system operation.
7. Check for open , short to ground or short to voltage in Gray wire between left power mirror connector C2 terminal "A" and Left Door Control Module (LDCM) connector C1 terminal No. 5. Repair as necessary. Recheck system operation. If circuit is okay, go to step 11 .
8. Turn ignition off. Disconnect left power mirror 4-pin connector C2. Turn ignition on. Using DVOM, check voltage between left power mirror harness connector C2 terminal "D" (Gray wire) and ground while operating left-side mirror. See **Fig. 2** . If reading is 3.5-5.5 volts, go to step 6 . If reading is not 3.5-5.5 volts, go to step 10 .
9. Check for open or short to voltage in Black/White wire between left power mirror connector C2 terminal "C" and LDCM connector C1 terminal No. 6. See **Fig. 1** . Repair as necessary. Recheck system operation. If circuit is okay, go to step 11 .
10. Check for open, short to ground or short to voltage in Gray wire between left power mirror connector C2 terminal "D" and Left Door Control Module (LDCM) connector C1 terminal No. 15. See **Fig. 1** . Repair as necessary. Recheck system operation. If circuit is okay, go to next step.
11. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

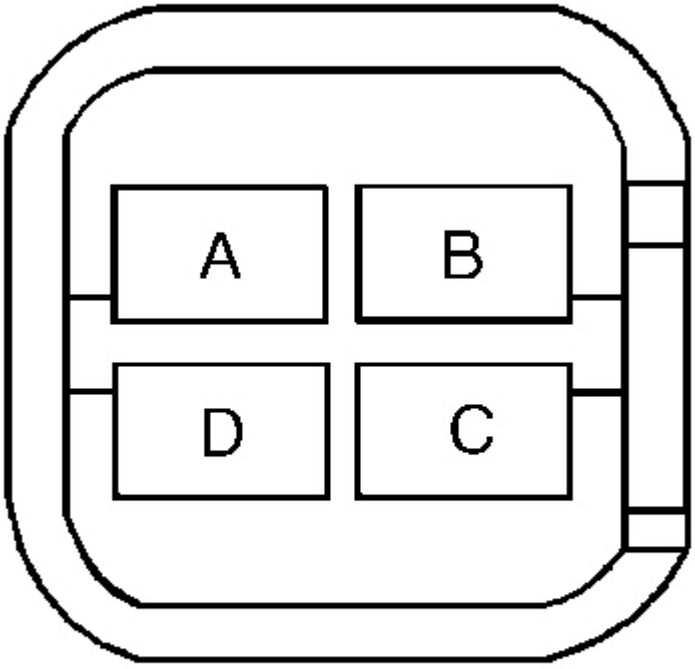


**Fig. 2: Power Mirror Connector C2 Terminal Identification**
**Courtesy of GENERAL MOTORS CORP.**

**DTC B2263: RIGHT MIRROR HORIZONTAL POSITION SENSOR FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select RDCM DTC display. If DTC B2263 is stored as a history code, go to next step. If DTC B2263 is not stored as a history code, go to step 8 .
3. Using scan tool, select RDCM data display. Monitor horizontal position sensor data while operating right-side mirror. Mirror horizontal position sensor voltage should display 0.1-4.8 volts. If reading is not as specified, go to next step. If reading is as specified, check mirror horizontal position sensor circuit for poor connections or intermittent operation. See **WIRING DIAGRAMS** . If mirror horizontal position sensor circuit checks okay, retest system. If DTC B2263 sets as a history code, go to step 11 .
4. Turn ignition off. Disconnect right power mirror 4-pin connector C2. Turn ignition on. Using DVOM, check voltage between right power mirror harness connector C2 terminal "A" (Gray wire) and ground. See **Fig. 2** . If reading is 4.0-5.5 volts, go to next step. If reading is not 4.0-5.5 volts, go to step 7 .
5. Check voltage between right power mirror harness connector C2 terminals "A" (Gray wire) and

"C" (Black/White wire) while operating right-side mirror. If reading is 4.0-5.5 volts, go to next step. If reading is not 4.0-5.5 volts, go to step 9 .

6. Replace right power mirror. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION. Recheck system operation.
7. Check for open, short to ground or short to voltage in Gray wire between right power mirror connector C2 terminal "A" and Right Door Control Module (RDCM) connector C1 terminal No. 5. Repair as necessary. Recheck system operation. If circuit is okay, go to step 11 .
8. Turn ignition off. Disconnect right power mirror 4-pin connector C2. Turn ignition on. Using DVOM, check voltage between right power mirror harness connector C2 terminal "D" (Light Blue/Black wire) and ground while operating right-side mirror. See **Fig. 2** . If reading is 3.5-5.5 volts, go to step 6 . If reading is not 3.5-5.5 volts, go to step 10 .
9. Check for open or short to voltage in Black/White wire between right power mirror connector C2 terminal "C" and RDCM connector C1 terminal No. 6. See **Fig. 1** . Repair as necessary. Recheck system operation. If circuit is okay, go to step 11 .
10. Check for open, short to ground or short to voltage in Light Blue/Black wire between right power mirror connector C2 terminal "D" and Right Door Control Module (RDCM) connector C1 terminal No. 15. See **Fig. 1** . Repair as necessary. Recheck system operation. If circuit is okay, go to next step.
11. Replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

**DTC B2264: LEFT MIRROR VERTICAL POSITION SENSOR FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select LDCM DTC display. If DTC B2264 is stored as a history code, go to next step. If DTC B2264 is not stored as a history code, go to step 8 .
3. Using scan tool, select LDCM data display. Monitor vertical position sensor data while operating left-side mirror. Mirror vertical position sensor voltage should display 0.1-4.8 volts. If reading is not as specified, go to next step. If reading is as specified, check mirror vertical position sensor circuit for poor connections or intermittent operation. See **WIRING DIAGRAMS** . If mirror vertical position sensor circuit checks okay, retest system. If DTC B2264 sets as a history code, go to step 11 .
4. Turn ignition off. Disconnect left power mirror 4-pin connector C2. Turn ignition on. Using DVOM, check voltage between left power mirror harness connector C2 terminal "A" (Gray wire) and ground. See **Fig. 2** . If reading is 4.0-5.5 volts, go to next step. If reading is not 4.5-5.5 volts, go to step 7 .
5. Check voltage between left power mirror harness connector C2 terminals "A" (Gray wire) and "C" (Black/White wire) while operating left-side mirror. If reading is 4.0-5.5 volts, go to next step. If reading is not 4.0-5.5 volts, go to step 9 .
6. Replace left power mirror. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION. Recheck system operation.
7. Check for open, short to ground or short to voltage in Gray wire between left power mirror connector C2 terminal "A" and Left Door Control Module (LDCM) connector C1 terminal No. 5. Repair as necessary. Recheck system operation. If circuit is okay, go to step 11 .
8. Turn ignition off. Disconnect left power mirror 4-pin connector C2. Turn ignition on. Using DVOM, check voltage between left power mirror harness connector C2 terminal "B" (Dark Green wire) and ground while operating left-side mirror. See **Fig. 2** . If reading is 3.5-5.5 volts, go to step 6 . If reading is not 3.5-5.5 volts, go to step 10 .

9. Check for open or short to voltage in Black/White wire between left power mirror connector C2 terminal "C" and LDCM connector C1 terminal No. 6. See **Fig. 1** . Repair as necessary. Recheck system operation. If circuit is okay, go to step 11 .
10. Check for open, short to ground or short to voltage in Dark Green wire between left power mirror connector C2 terminal "B" and Left Door Control Module (LDCM) connector C1 terminal No. 16. See **Fig. 1** . Repair as necessary. Recheck system operation. If circuit is okay, go to next step.
11. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

**DTC B2265: RIGHT MIRROR VERTICAL POSITION SENSOR FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. Using scan tool, select RDCM DTC display. If DTC B2265 is stored as a history code, go to next step. If DTC B2265 is not stored as a history code, go to step 8 .
3. Using scan tool, select LDCM data display. Monitor vertical position sensor data while operating right-side mirror. Mirror vertical position sensor voltage should display 0.1-4.8 volts. If reading is not as specified, go to next step. If reading is as specified, check mirror vertical position sensor circuit for poor connections or intermittent operation. See **WIRING DIAGRAMS** . If mirror vertical position sensor circuit checks okay, retest system. If DTC B2265 sets as a history code, go to step 11 .
4. Turn ignition off. Disconnect right power mirror 4-pin connector C2. Turn ignition on. Using DVOM, check voltage between right power mirror harness connector C2 terminal "A" (Gray wire) and ground while operating right-side mirror. See **Fig. 2** . If reading is 4.0-5.5 volts, go to next step. If reading is not 4.0-5.5 volts, go to step 7 .
5. Check voltage between right power mirror harness connector C2 terminals "A" (Gray wire) and "C" (Black/White wire) while operating right-side mirror. If reading is 4.0-5.5 volts, go to next step. If reading is not 4.0-5.5 volts, go to step 9 .
6. Replace right power mirror. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION. Recheck system operation.
7. Check for open, short to ground or short to voltage in Gray wire between right power mirror connector C2 terminal "A" and Right Door Control Module (RDCM) connector C1 terminal No. 5. Repair as necessary. Recheck system operation. If circuit is okay, go to step 11 .
8. Turn ignition off. Disconnect right power mirror 4-pin connector C2. Turn ignition on. Using DVOM, check voltage between right power mirror harness connector C2, terminal "B" (Brown wire) and ground while operating right-side mirror. See **Fig. 2** . If reading is 3.5-5.5 volts, go to step 6 . If reading is not 3.5-5.5 volts, go to step 10 .
9. Check for open or short to voltage in Black/White wire between right power mirror connector C2 terminal "C" and RDCM connector C1 terminal No. 6. **Fig. 1** Repair as necessary. Recheck system operation. If circuit is okay, go to step 11 .
10. Check for open, short to ground or short to voltage in Brown wire between right power mirror connector C2 terminal "B" and Right Door Control Module (RDCM) connector C1 terminal No. 16. See **Fig. 1** . Repair as necessary. Recheck system operation. If circuit is okay, go to next step.
11. Replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.

**DTC B2272: LEFT MIRROR MOTOR FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. If left-side power mirror moves left and right using left door switch, go to next step. If left-side power mirror does not move left and right, go to step 6 .
3. Turn ignition off. Disconnect left power mirror 8-pin connector C1. Turn ignition on. Using DVOM, check voltage between left power mirror harness connector C1 terminals "A" (Yellow wire) and "C" (Light Green wire). See **Fig. 3** . Move power mirror up, then down. If reading is 10-14 volts in both positions, go to next step. If reading is not 10-14 volts in both positions, go to step 5 .
4. Check mirror vertical and horizontal position sensor circuits for poor connections or intermittent operation. See **WIRING DIAGRAMS** . If mirror vertical and horizontal position sensor circuits check okay, go to step 8 .
5. Check for open, short to ground or short to voltage in Yellow or Light Green wire between left power mirror connector C1 and Left Door Control Module (LDCM) connector C1. See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
6. Turn ignition off. Disconnect left power mirror 8-pin connector C1. Turn ignition on. Using DVOM, check voltage between left power mirror harness connector C1, terminals "F" (White wire) and "H" (Light Blue wire). See **Fig. 3** . Move power mirror left, then right. If reading is not 10-14 volts in both positions, go to next step. If reading is 10-14 volts in both positions, go to step 4 .
7. Check for open, short to ground or short to voltage in White or Light Blue wire between left power mirror connector C1 and Left Door Control Module (LDCM) connector C1. Repair as necessary. If circuits are okay, replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
8. Replace left power mirror. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION. Recheck system operation.

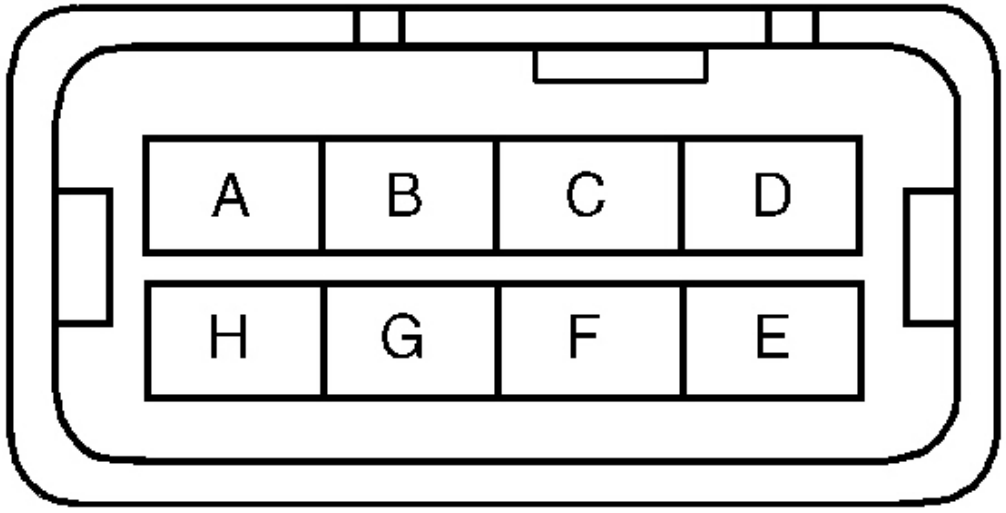


**Fig. 3: Identifying Power Mirror Connector C1 Terminals**
**Courtesy of GENERAL MOTORS CORP.**

**DTC B2273: RIGHT MIRROR MOTOR FAULT**

1. Perform **DIAGNOSTIC SYSTEM CHECK** under SELF-DIAGNOSTIC SYSTEM. Go to next step.
2. If right-side power mirror moves left and right using left door switch, go to next step. If right-side power mirror does not move left and right, go to step 6 .
3. Turn ignition off. Disconnect right power mirror 4-pin connector C1. Turn ignition on. Using DVOM, check voltage between right power mirror harness connector C1 terminals "A" (Brown/White wire) and "C" (Purple/White wire). See **Fig. 3** . Move power mirror up, then down. If reading is 10-14 volts in both positions, go to next step. If reading is not 10-14 volts in both positions, go to step 5 .
4. Check mirror vertical and horizontal position sensor circuits for poor connections or intermittent operation. See **WIRING DIAGRAMS** . If mirror vertical and horizontal position sensor circuits check okay, go to step 8 .
5. Check for open, short to ground or short to voltage in Brown/White or Purple/White wire between left power mirror connector C1 and Right Door Control Module (RDCM) connector C1. See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
6. Turn ignition off. Disconnect right power mirror 4-pin connector C1. Turn ignition on. Using DVOM, check voltage between right power mirror harness connector C1 terminals "F" (Red/White wire) and "H" (Gray wire). See **Fig. 3** . Move power mirror left, then right. If reading is not 10-14 volts in both

positions, go to next step. If reading is 10-14 volts in both positions, go to step 4 .

7. Check for open, short to ground or short to voltage in Red/White or Gray wire between right power mirror connector C1 and Right Door Control Module (RDCM) connector C1. Repair as necessary. If circuits are okay, replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
8. Replace right power mirror. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION. Recheck system operation.

## SYMPTOM TESTS

**CAUTION: To prevent damage to terminals, Connector Test Adaptor 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 TROUBLE SHOOTING .**

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

**SYMPTOM INDEX**

| Symptom | Perform Test |
|---|---|
| Left Mirror Inoperative (No DTCs Set) | A |
| Right Mirror Inoperative (No DTCs Set) | B |

**TEST A: LEFT MIRROR INOPERATIVE (NO DTCS SET)**

1. Using scan tool, select LDCM and command left-side mirror UP, then DOWN. If mirror moves up and down, go to next step. If mirror does not move up and down, go to step 3 .
2. Using scan tool, select LDCM and command left-side mirror LEFT, then RIGHT. If mirror moves left and right, go to step 4 . If mirror does not move left and right, go to step 5 .
3. Turn ignition off. Disconnect left-side mirror connector C1. Turn ignition on. Connect test light between mirror connector C1 terminals "A" (Yellow wire) and "C" (Light Green wire). See **Fig. 3** . Using scan tool, select LDCM and command left-side mirror UP, then DOWN. If test light illuminates with each command, go to step 13 . If test light does not illuminate with each command, go to step 8 .
4. Using scan tool, select LDCM inputs and monitor left door switch status. Press left-side mirror select switch. If scan tool displays ACTIVE, go to step 6 . If scan tool displays INACTIVE, go to step 12 .
5. Connect test light between mirror connector C1 terminals "F" (White wire) and "H" (Light Blue wire). See **Fig. 3** . Using scan tool, select LDCM and command left-side mirror LEFT, then RIGHT. If test light illuminates with each command, go to step 13 . If test light does not illuminate with each command, go to step 9 .
6. Using scan tool, select LDCM inputs and monitor UP and DOWN switch status. Operate left-side mirror up, then down. If scan tool displays ACTIVE in both positions, go to next step. If scan tool displays

INACTIVE, go to step 10 .

7. Using scan tool, select LDCM inputs and monitor mirror LEFT and RIGHT switch status. Operate left-side mirror left, then right. If scan tool displays ACTIVE in both positions, system has returned to normal at this time. If scan tool displays INACTIVE, go to step 11 .
8. Check for open or short to ground in Yellow wire between LDCM connector C1 terminal No. 21 and mirror connector C1 terminal "A". See **Fig. 1** and **Fig. 3** . Also, check for open or short to ground in Light Green wire between LDCM connector C1 terminal No. 22 and mirror connector C1 terminal "C". See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, go to step 14 .
9. Check for open or short to ground in White wire between LDCM connector C1 terminal No. 19 and mirror connector C1 terminal "F". See **Fig. 1** and **Fig. 3** . Also, check for open or short to ground in Light Blue wire between LDCM connector C1 terminal No. 20 and left mirror connector C1 terminal "H". See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, go to step 14 .
10. Check for open in Yellow wire between LDCM connector C4 terminal No. 6 and left door switch connector terminal No. 6. Check for open or short to ground in Light Green wire between LDCM connector C4 terminal No. 5 and left door switch connector terminal No. 5. Also, check for open in Black wire between LDCM connector C4 terminal No. 9 and left door switch connector terminal No. 9. See **Fig. 1** . See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, go to step 15 .
11. Check for open in White wire between LDCM connector C4 terminal No. 3 and left door switch connector terminal No. 3. Check for open or short to ground in Light Blue wire between LDCM connector C4 terminal No. 4 and left door switch connector terminal No. 4. Also, check for open in Black wire between LDCM connector C4 terminal No. 9 and left door switch connector terminal No. 9. See **Fig. 1** . See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, go to step 15 .
12. Check for open or short to ground in Light Green wire between LDCM connector C4 terminal No. 1 and left door switch connector terminal No. 1. Also, check for open in Black wire between LDCM connector C4 terminal No. 9 and left door switch connector terminal No. 9. See **Fig. 1** . See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, go to step 15 .
13. Replace left-side power mirror. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION.
14. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.
15. Replace power mirror switch. See **POWER MIRROR SWITCH** under REMOVAL & INSTALLATION.

**TEST B: RIGHT MIRROR INOPERATIVE (NO DTCS SET)**

1. Check operation of left-side mirror in up, down, left, and right positions. If left-side mirror operates in all modes, go to next step. If left-side mirror does not operate in all modes, see **TEST A: LEFT MIRROR INOPERATIVE (NO DTCS SET)** .
2. Using scan tool, select LDCM inputs and monitor passenger mirror select switch status. Press right-side mirror select switch. If scan tool displays ACTIVE, go to next step. If scan tool displays INACTIVE, go to step 9 .
3. Using scan tool, select RDCM and command right-side mirror UP, then DOWN. If mirror moves up and down, go to next step. If mirror does not move up and down, go to step 5 .
4. Using scan tool, select RDCM and command right-side mirror LEFT, then RIGHT. If mirror moves left and right, system has returned to normal at this time. If mirror does not move left and right, go to step 6 .

5. Turn ignition off. Disconnect right-side mirror connector C1. Turn ignition on. Connect test light between mirror connector C1 terminals "A" (Brown/White wire) and "C" (Purple/White wire). See **Fig. 3** . Using scan tool, select RDCM and command right-side mirror UP, then DOWN. If test light illuminates with each command, go to step 10 . If test light does not illuminate with each command, go to step 7 .
6. Connect test light between mirror connector C1 terminals "F" (Red/White wire) and "H" (Gray wire). See **Fig. 3** . Using scan tool, select RDCM and command right-side mirror LEFT, then RIGHT. If test light illuminates with each command, go to step 10 . If test light does not illuminate with each command, go to step 8 .
7. Check for open or short to ground in Purple/White wire between RDCM connector C1 terminal No. 22 and right-side mirror connector C1 terminal "C". See **Fig. 1** and **Fig. 3** . Also, check for open or short to ground in Brown/White wire between Right Door Control Module (RDCM) connector C1 terminal No. 21 and right-side mirror connector C1 terminal "A". See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, go to step 11 .
8. Check for open or short to ground in Gray wire between RDCM connector C1 terminal No. 20 and right-side mirror connector terminal "H". See **Fig. 1** and **Fig. 3** . Also, check for open or short to ground in Red/White wire between RDCM connector C1 terminal No. 19 and right-side mirror connector terminal "F". See **WIRING DIAGRAMS** . Repair as necessary. If circuits are okay, go to step 11 .
9. Check for open in Light Blue/White wire between LDCM connector C4 terminal No. 2 and mirror switch connector terminal No. 2. Also, check for open in Black wire between LDCM connector C4 terminal No. 9 and mirror switch connector terminal No. 9. See **Fig. 1** . See **WIRING DIAGRAMS** . If circuits are okay, go to step 12 .
10. Replace right-side power mirror assembly. See **POWER MIRROR ASSEMBLY** under REMOVAL & INSTALLATION.
11. Replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION.
12. Replace power mirror switch. See **POWER MIRROR SWITCH** under REMOVAL & INSTALLATION.

## REMOVAL & INSTALLATION

**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.**

### DOOR CONTROL MODULE

#### Removal & Installation

**CAUTION: Lower door panel retainers are 2-piece. Male fastener is attached to door**

**panel and female retainer is attached to door. To avoid breaking door panel fasteners, pry between male fastener and female retainer.**

1. Lower appropriate door window. Remove inside door handle bezel. Remove pull handle plug for access to 2 door panel screws. Remove 2 screws from behind pull handle plug. Pry lower door panel fasteners loose from door. Lift door panel up and off upper retainers. Disconnect electrical connectors from door panel. Set door panel aside.
2. Remove DCM mounting screws. Disconnect DCM electrical connectors and remove DCM from door. To install, reverse removal procedure. On hardtop models, DCM must be reprogrammed. See **PROGRAMMING** .

## POWER MIRROR ASSEMBLY

### Removal & Installation

**CAUTION: Lower door panel retainers are 2-piece. Male fastener is attached to door panel and female retainer is attached to door. To avoid breaking door panel fasteners, pry between male fastener and female retainer.**

1. Lower appropriate door window. Remove inside door handle bezel. Remove pull handle plug for access to 2 door panel screws. Remove 2 screws from behind pull handle plug. Pry lower door panel fasteners loose from door.
2. Lift door panel up and off upper retainers. Disconnect electrical connectors from door panel. Set door panel aside. Remove door speaker assembly. Remove mirror nut access plugs. Disconnect mirror wiring harness from retainers. Remove nuts from mirror studs. Remove mirror along with harness and gasket.
3. To install, reverse removal procedure. Tighten power mirror nuts and door speaker assembly screws to specification. See **TORQUE SPECIFICATIONS** .

## POWER MIRROR FACE/GLASS

### Removal & Installation

1. Tilt mirror face to allow access to grasp glass case firmly, and pull case from mirror body. Disconnect electrical connectors from case, if necessary. To install, place a little White lithium grease on motor pivot and on tip of jack screws. Align jack screws and motor pivot 90 degrees to mirror head. Reconnect electrical connectors. Align case to mirror motor.
2. Using palm of gloved hand, press firmly on center of glass until case snaps onto motor. If installing right mirror, rotate glass case down and press firmly on lower side snapping case to lower jack screw. If installing left mirror, rotate glass case up and press firmly on upper side snapping case to upper jack screw. For both mirrors, rotate glass case and press firmly on outer side snapping case to outer jack screw.

## POWER MIRROR SWITCH

### Removal & Installation

Power mirror switches, power door lock switches and power window switches are replaced as an assembly. Disconnect negative battery cable. Pry up rear edge of door switch assembly. Slide switch assembly rearward. Disconnect electrical connector. To install, reverse removal procedure.

## TORQUE SPECIFICATIONS

**TORQUE SPECIFICATIONS**

| Application | INCH Lbs. (N.m) |
|---|---|
| Door Speaker Assembly Screws | 22 (2.5) |
| Power Mirror Nuts | 89 (10) |

## WIRING DIAGRAMS

**NOTE: For power mirror wiring diagrams, see appropriate MEMORY SYSTEMS article.**