Power Door Locks

DESCRIPTION & OPERATION

NOTE: On some vehicles, the power door lock system is integrated with the Remote Keyless Entry (RKE) system. For information on RKE, see appropriate REMOTE KEYLESS ENTRY SYSTEMS article.

The Automatic Door Lock (ADL) operation is controlled by the Door Control Module (DCM). ADL operation can be customized. See **SYSTEM CUSTOMIZATION** .

The following locking functions are available:

- Auto Lock
- Auto Unlock

The illuminated entry and delayed illumination features operate in conjunction with BCM and power door lock system. See **ILLUMINATED ENTRY** .

ILLUMINATED ENTRY

BCM turns on courtesy lights under following conditions:

- Any vehicle door is opened.
- Unlocking doors using Remote Keyless Entry (RKE) transmitter (if equipped) or key with ignition switch in OFF position.
- Locking doors using RKE transmitters door lock switches or key.

When any door is opened, illuminated entry is cancelled. Interior lights will stay on while any door is open, and slowly fade out when all doors are closed.

COMPONENT LOCATIONS

DOOR LOCK COMPONENTS

Component	Location
Body Control Module	Under Passenger Floor Board
Door Control Modules	Behind Appropriate Door Panel
Instrument Panel Electrical Center	Under Passenger Floor Board
Door Lock Switch	In Appropriate Door Switch Panel
Door Lock Key Switch	Attached To Appropriate Door Lock
Door Lock Actuator	Lower Rear Corner Of Appropriate Door

SYSTEM CUSTOMIZATION

CHANGING AUTOMATIC DOOR LOCK/UNLOCK OPERATION MODE

Personalized automatic door lock functions are available through the Driver's Information Center (DIC) display functions. Press OPTIONS button until desired option is indicated on DIC. See **Fig. 1** . To set individual functions within the options, see appropriate AUTO LOCK procedure. After selecting desired option and function, press OPTIONS button until the DIC is blank.

Auto Lock

To change locking functions of automatic door lock system, press OPTIONS button on DIC until AUTO LOCK is displayed. Press RESET button until one of the following desired functions is displayed:

- **AUTO LOCK ON**

  - On manual transmission models, when vehicle reaches speed of 10 MPH (16 km/h) or greater, driver's and passenger's doors will automatically lock. On automatic transmission models, when vehicle is shifted from PARK position, driver's and passenger's doors will automatically lock.

- **AUTO LOCK OFF**

  - Function is off.

Auto Unlock

For this function to be available, AUTO LOCK option must be on. To change unlocking functions of automatic door lock system, press OPTIONS button on DIC until AUTO UNLOCK is displayed. Press RESET button until one of the following desired functions is displayed:

- **AUTO UNLOCK DRIVER**

  - Driver's door will automatically unlock when ignition is turned off and key is removed from ignition switch.

- **AUTO UNLOCK BOTH**

  - Driver's and passenger's doors will automatically unlock when ignition is turned off and key is removed from ignition switch.

- **AUTO UNLOCK OFF**

  - Function is off.

TROUBLE SHOOTING

POWER DOOR LOCKS SYSTEM CHECK

1. Operate power door locks using left door lock/unlock switch. If both doors lock and unlock, go to next step. If both doors do not lock and unlock, go to **LEFT POWER DOOR LOCK INOPERATIVE** under SYSTEM TESTS.
2. Operate power door locks using right door lock/unlock switch. If both doors lock and unlock, go to next step. If both doors do not lock and unlock, go to **RIGHT POWER DOOR LOCK INOPERATIVE** under SYSTEM TESTS.
3. Operate power door locks using keyless entry transmitter. If both doors lock and unlock, system is operating properly at this time. If both doors do not lock and unlock, go to REMOTE KEYLESS ENTRY SYSTEMS - CORVETTE article.

SYSTEM TESTS

LEFT POWER DOOR LOCK INOPERATIVE

1. Perform **POWER DOOR LOCKS SYSTEM CHECK** under TROUBLE SHOOTING. Go to next step.
2. Connect scan tool to Data Link Connector (DLC) and check for DTCs B2236, B2238 or B2276. If any of these DTCs are stored as history, go to **POWER DOOR LOCK DTCs** table under SELF-DIAGNOSTIC SYSTEM. If none of these DTCs are stored as history, go to next step.
3. Check for mechanical binding or obstructions and repair as necessary. If mechanical binding or obstructions are found and repaired, go to step 13). If no mechanical binding or obstructions are found, go to next step.
4. Using scan tool, command Left Door Control Module (LDCM) to lock and unlock left door. If left door locks and unlocks, go to step 6). If left door does not lock and unlock, go to next step.
5. Turn ignition off. Disconnect left door lock actuator connector. Turn ignition on. Connect test light between terminals "A" and "B" of door lock actuator connector. See **WIRING DIAGRAMS** . Using scan tool, command LDCM to lock and unlock left door. If test light comes on and turns off with each command, go to step 10). If test light does not come on and turn off with each command, go to step 8).
6. Using scan tool, monitor LDCM door LOCK switch status. Press door lock/unlock switch to LOCK position. If scan tool indicates ACTIVE, go to next step. If scan tool does not indicate ACTIVE, go to step 9).
7. Using scan tool, monitor LDCM door UNLOCK switch status. Press door lock/unlock switch to UNLOCK position. If scan tool indicates ACTIVE, system is okay at this time. If scan tool does not indicate ACTIVE, go to step 9).
8. Check for open or short to ground in Gray or Tan wires between LDCM and left door lock actuator. If faulty circuit is found and repaired, go to step 13). If circuit is okay, go to step 11).
9. Check for open in Black or Orange/Black wires between LDCM and left door lock/unlock switch. If faulty circuit is found and repaired, go to step 13). If circuit is okay, go to step 12).
10. Replace left door lock actuator. See **DOOR LOCK ACTUATOR** under REMOVAL & INSTALLATION. After repairs, go to step 13).
11. Replace left door control module. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. After repairs, go to step 13).

12. Replace left door lock/unlock switch. See **DOOR LOCK SWITCH** under REMOVAL & INSTALLATION. After repairs, go to next step.
13. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs.

RIGHT POWER DOOR LOCK INOPERATIVE

1. Perform **POWER DOOR LOCKS SYSTEM CHECK** under TROUBLE SHOOTING. Go to next step.
2. Connect scan tool to Data Link Connector (DLC) and check for DTCs B2237, B2239 or B2277. If any of these DTCs are stored as history, go to **POWER DOOR LOCK DTCs** table under SELF-DIAGNOSTIC SYSTEM. If none of these DTCs are stored as history, go to next step.
3. Check for mechanical binding or obstructions and repair as necessary. If mechanical binding or obstructions are found and repaired, go to step 13). If no mechanical binding or obstructions are found, go to next step.
4. Using scan tool, command Right Door Control Module (RDCM) to lock and unlock right door. If right door locks and unlocks, go to step 6). If right door does not lock and unlock, go to next step.
5. Turn ignition off. Disconnect right door lock actuator connector. Turn ignition on. Connect test light between terminals "A" and "B" of door lock actuator connector. See **WIRING DIAGRAMS** . Using scan tool, command RDCM to lock and unlock right door. If test light comes on and turns off with each command, go to step 10). If test light does not come on and turn off with each command, go to step 8).
6. Using scan tool, monitor RDCM door LOCK switch status. Press door lock/unlock switch to LOCK position. If scan tool indicates ACTIVE, go to next step. If scan tool does not indicate ACTIVE, go to step 9).
7. Using scan tool, monitor RDCM door UNLOCK switch status. Press door lock/unlock switch to UNLOCK position. If scan tool indicates ACTIVE, system is okay at this time. If scan tool does not indicate ACTIVE, go to step 9).
8. Check for open or short to ground in Gray or Tan wires between RDCM and right door lock actuator. If faulty circuit is found and repaired, go to step 13). If circuit is okay, go to step 11).
9. Check for open in Black or Orange/Black wires between RDCM and right door lock/unlock switch. If faulty circuit is found and repaired, go to step 13). If circuit is okay, go to step 12).
10. Replace right door lock actuator. See **DOOR LOCK ACTUATOR** under REMOVAL & INSTALLATION. After repairs, go to step 13).
11. Replace right door control module. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. After repairs, go to step 13).
12. Replace right door lock/unlock switch. See **DOOR LOCK SWITCH** under REMOVAL & INSTALLATION. After repairs, go to next step.
13. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs.

SELF-DIAGNOSTIC SYSTEM

DIAGNOSTIC PROCEDURE

Check for Diagnostic Trouble Codes (DTCs). See **RETRIEVING DIAGNOSTIC TROUBLE CODES** . If any DTCs exist, perform appropriate test under **DIAGNOSTIC TESTS** . If no DTCs exist, perform system

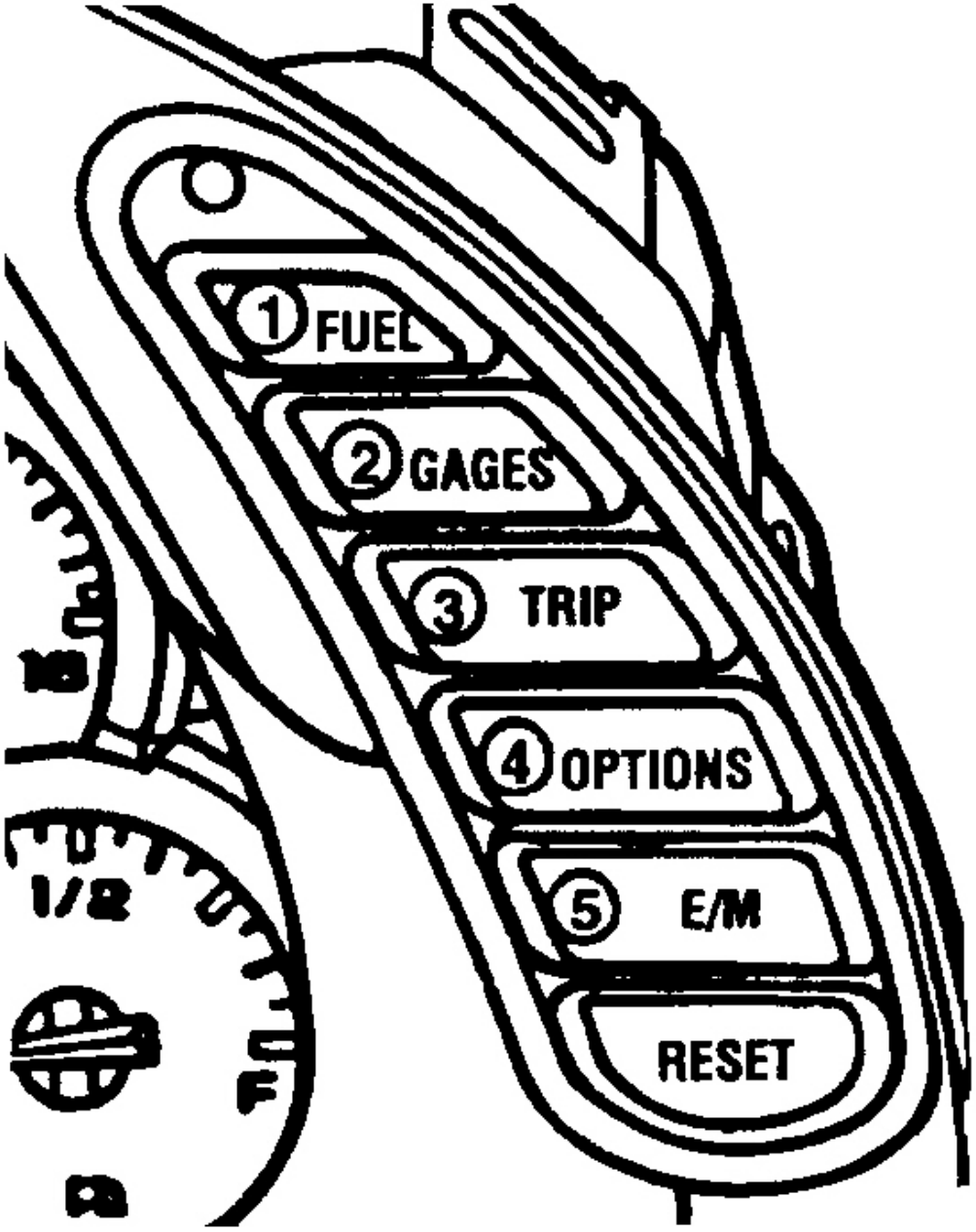
check and diagnose by symptom. See POWER DOOR LOCKS SYSTEM CHECK under TROUBLE SHOOTING. After repair is complete, recheck system operation.

RETRIEVING DIAGNOSTIC TROUBLE CODES

Using On-Board Diagnostics

If any warning messages exist, DTCs can be retrieved by depressing RESET button on Driver's Information Center (DIC) control panel. Depress and hold OPTIONS button and press FUEL button 4 times within 5 seconds of depressing OPTIONS button. See **Fig. 1** . Select appropriate module number and module name will appear on DIC display. See **MODULE IDENTIFICATION** table. After module is displayed, individual DTCs will be displayed.

To begin manual control of DTC viewing, depress FUEL, TRIP, GAUGES, OPTIONS or RESET button. Depress TRIP button to view previous module. Depress OPTIONS button to view next module. Depress FUEL button to view previous DTC in selected module. Depress GAUGES button to view next DTC in selected module. After retrieving and recording current and history DTCs, identify DTC. See **POWER DOOR LOCK DTCs** table. Depress the E/M button to exit self-diagnostics.



DIC CONTROL PANEL

G98J12228

Fig. 1: Identifying Driver's Information Center (DIC) Buttons
Courtesy of GENERAL MOTORS CORP.

MODULE IDENTIFICATION

Description	Module No.
Left Door Control Module (LDCM)	A0
Right Door Control Module (RDCM)	A1
Seat Control Module (SCM)	A6

Using Scan Tool

Diagnostic Trouble Codes (DTCs) can also be retrieved using scan tool. Connect scan tool to Data Link Connector (DLC) located under driver's side of instrument panel. Turn ignition switch to ON position. Select appropriate module on scan tool display to retrieve current and history DTCs. Record and identify DTCs. See **POWER DOOR LOCK DTCs** table.

POWER DOOR LOCK DTCs

DTC (1)	Description
B2236	Left Door Lock Switch Fault
B2237	Right Door Lock Switch Fault
B2238	Left Door Unlock Switch Fault
B2239	Right Door Unlock Switch Fault
B2252	Left Key Cylinder Fault
B2253	Right Key Cylinder Switch Fault
B2276	Left Door Lock/Mirror Heater Fault
B2277	Right Door Lock/Mirror Heater Fault
B2282 (2)	LDCM Battery 1 Fault
B2283 (2)	RDCM Battery 1 Fault
B2284 (2)	LDCM Battery 2 Fault
B2285 (2)	RDCM Battery 2 Fault

(1) Go to appropriate repair procedure under **DIAGNOSTIC TESTS** .

(2) See appropriate POWER WINDOWS or POWER DOOR LOCKS article for repair procedures.

CLEARING DIAGNOSTIC TROUBLE CODES (DTCS)

Seat Control Module (SCM) and Door Control Module (DCM) DTCs can be cleared using sacn tool or Instrument Panel Cluster (IPC) clearing feature, or will automatically clear if malfunction has not reoccurred within 50 ignition cycles.

Using On-Board Diagnostics

Use manual control functions to select and view DTCs. See **RETRIEVING DIAGNOSTIC TROUBLE**

CODES . Depress the RESET button for 2 seconds to clear the selected DTC from selected module.

Using Scan Tool

Select CLEAR DTCs function on scan tool. Clear current and history DTCs. Operate vehicle and recheck for DTCs.

DIAGNOSTIC TESTS

DTC B2236: LEFT DOOR LOCK SWITCH FAULT

Circuit Description

The left door lock/unlock switch provides lock input on Red/Black wire to Left Door Control Module (LDCM) when switch is pressed to LOCK position.

If the LDCM detects low voltage (short to ground) on switch lock input circuit for 20 seconds or more, DTC B2236 will set. DTC will only be set as history even if condition is current. No driver warning message will be displayed.

DTC will clear when condition no longer exists. Driver's Information Center (DIC) or scan tool can be used to manually clear DTC.

Testing

1. Using scan tool, monitor LDCM inputs. Display door lock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 6).
2. Disconnect left door lock/unlock switch connector. Using scan tool, monitor LDCM inputs. Display door lock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 4).
3. Check for short to ground in Red/Black wire between LDCM connector C4 and left door lock/unlock switch. If faulty circuit is found and repaired, go to step 8). If circuit is okay, go to step 5).
4. Replace left door lock/unlock switch. See **DOOR LOCK SWITCH** under REMOVAL & INSTALLATION. Recheck system operation.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
6. Check for intermittent connections at left door lock/unlock switch. If fault is found and repaired, go to step 8). If circuit is okay, go to next step.
7. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM. Wait 20 seconds. Recheck for DTCs. If DTC B2236 sets as history, go to step 5). If DTC B2236 does not set as history, system is okay at this time.
8. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM.

Diagnostic Aids

The following conditions may cause an intermittent fault:

- Intermittent short to ground in lock input circuit.
- Door lock/unlock switch is sticking or internally shorted.
- Door lock switch was pressed to LOCK position for more than 20 seconds.

If lock input circuit is shorted to ground or switch is stuck, door control module will continuously lock doors.

DTC B2237: RIGHT DOOR LOCK SWITCH FAULT

Circuit Description

Right door lock/unlock switch provides lock input on Red/Black wire to Right Door Control Module (RDCM) when switch is pressed to LOCK position.

If the RDCM detects low voltage (short to ground) on switch lock input circuit for 20 seconds or more, DTC B2237 will set. DTC will only be set as history even if condition is current. No driver warning message will be displayed.

DTC will clear when condition no longer exists. Driver's Information Center (DIC) or scan tool can be used to manually clear DTC.

Testing

1. Using scan tool, monitor RDCM inputs. Display door lock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 6).
2. Disconnect right door lock/unlock switch connector. Using scan tool, monitor RDCM inputs. Display door lock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 4).
3. Check for short to ground in Red/Black wire between RDCM connector C4 and right door lock/unlock switch. If faulty circuit is found and repaired, go to step 8). If circuit is okay, go to step 5).
4. Replace right door lock/unlock switch. See **DOOR LOCK SWITCH** under REMOVAL & INSTALLATION. Recheck system operation.
5. Replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
6. Check for intermittent connections at right door lock/unlock switch. If fault is found and repaired, go to step 8). If circuit is okay, go to next step.
7. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM. Wait 20 seconds. Recheck for DTCs. If DTC B2237 sets as history, go to step 5). If DTC B2237 does not set as history, system is okay at this time.
8. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM.

Diagnostic Aids

The following conditions may cause an intermittent fault:

- Intermittent short to ground in lock input circuit.
- Door lock/unlock switch is sticking or internally shorted.
- Door lock switch was pressed to LOCK position for more than 20 seconds.

If lock input circuit is shorted to ground or switch is stuck, door control module will continuously lock doors.

DTC B2238: LEFT DOOR UNLOCK SWITCH FAULT

Circuit Description

Left door lock/unlock switch provides unlock input on Orange/Black wire to Left Door Control Module (LDCM) when switch is pressed to UNLOCK position.

If LDCM detects low voltage (short to ground) on switch unlock input circuit for 20 seconds or more, DTC B2238 will set. DTC will only be set as history even if condition is current. No driver warning message will be displayed.

DTC will clear when condition no longer exists. Driver's Information Center (DIC) or scan tool can be used to manually clear DTC.

Testing

1. Using scan tool, monitor LDCM inputs. Display door unlock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 6).
2. Disconnect left door lock/unlock switch connector. Using scan tool, monitor LDCM inputs. Display door unlock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 4).
3. Check for short to ground in Orange/Black wire between LDCM connector C4 and left door lock/unlock switch. If faulty circuit is found and repaired, go to step 8). If circuit is okay, go to step 5).
4. Replace left door lock/unlock switch. See **DOOR LOCK SWITCH** under REMOVAL & INSTALLATION. Recheck system operation.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
6. Check for intermittent connections at left door lock/unlock switch. If fault is found and repaired, go to step 8). If circuit is okay, go to next step.
7. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM. Wait 20 seconds. Recheck for DTCs. If DTC B2238 sets as history, go to step 5). If DTC B2238 does not set as history, system is okay at this time.
8. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM.

Diagnostic Aids

The following conditions may cause an intermittent fault:

- Intermittent short to ground in unlock input circuit.
- Door lock/unlock switch is sticking or internally shorted.
- Door lock switch was pressed to UNLOCK position for more than 20 seconds.

If lock input circuit is shorted to ground or switch is stuck, door control module will continuously unlock doors.

DTC B2239: RIGHT DOOR UNLOCK SWITCH FAULT

Circuit Description

Right door lock/unlock switch provides unlock input on Orange/Black wire to Right Door Control Module (RDCM) when switch is pressed to UNLOCK position.

If RDCM detects low voltage (short to ground) on switch unlock input circuit for 20 seconds or more, DTC B2237 will set. DTC will only be set as history even if condition is current. No driver warning message will be displayed.

DTC will clear when condition no longer exists. Driver's Information Center (DIC) or scan tool can be used to manually clear DTC.

Testing

1. Using scan tool, monitor RDCM inputs. Display door lock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 6).
2. Disconnect right door lock/unlock switch connector. Using scan tool, monitor RDCM inputs. Display door lock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 4).
3. Check for short to ground in Orange/Black wire between RDCM connector C4 and right door lock/unlock switch. If faulty circuit is found and repaired, go to step 8). If circuit is okay, go to step 5).
4. Replace right door lock/unlock switch. See **DOOR LOCK SWITCH** under REMOVAL & INSTALLATION. Recheck system operation.
5. Replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
6. Check for intermittent connections at right door lock/unlock switch. If fault is found and repaired, go to step 8). If circuit is okay, go to next step.
7. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM. Wait 20 seconds. Recheck for DTCs. If DTC B2239 sets as history, go to step 5). If DTC B2239 does not set as history, system is okay at this time.
8. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM.

Diagnostic Aids

The following conditions may cause an intermittent fault:

- Intermittent short to ground in unlock input circuit.
- Door lock/unlock switch is sticking or internally shorted.
- Door lock switch was pressed to UNLOCK position for more than 20 seconds.

If lock input circuit is shorted to ground or switch is stuck, door control module will continuously unlock doors.

DTC B2252: LEFT KEY CYLINDER FAULT

Circuit Description

Door key switch provides input on Light Green wire to Left Door Control Module (LDCM) when door key switch is rotated to UNLOCK position.

If LDCM detects low voltage (short to ground) on key switch input circuit for 20 seconds or more, DTC B2252 will set. DTC will only be set as history even if condition is current. No driver warning message will be displayed.

DTC will clear when condition no longer exists. Driver's Information Center (DIC) or scan tool can be used to manually clear DTC.

Testing

1. Using scan tool, monitor LDCM inputs. Display door key unlock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 6).
2. Disconnect left door key switch connector. Using scan tool, monitor LDCM inputs. Display door key unlock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 4).
3. Check for short to ground in Light Green wire between LDCM connector C1 and left door key switch. If faulty circuit is found and repaired, go to step 8). If circuit is okay, go to step 5).
4. Replace left door latch. See **DOOR LATCH** under REMOVAL & INSTALLATION. Recheck system operation.
5. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
6. Check for intermittent connections at left door key switch. If fault is found and repaired, go to step 8). If circuit is okay, go to next step.
7. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM. Wait 20 seconds. Recheck for DTCs. If DTC B2252 sets as history, go to step 5). If DTC B2252 does not set as history, system is okay at this time.
8. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM.

Diagnostic Aids

The following conditions may cause an intermittent fault:

- Intermittent short to ground in key input circuit.
- Door key switch is sticking or internally shorted.
- Door key switch was rotated to UNLOCK position for more than 20 seconds.

DTC B2253: RIGHT KEY CYLINDER SWITCH FAULT

Circuit Description

Door key switch provides input on Light Green wire to Right Door Control Module (RDCM) when door key switch is rotated to UNLOCK position.

If RDCM detects low voltage (short to ground) on key switch input circuit for 20 seconds or more, DTC B2253 will set. DTC will only be set as history even if condition is current. No driver warning message will be displayed.

DTC will clear when condition no longer exists. Driver's Information Center (DIC) or scan tool can be used to manually clear DTC.

Testing

1. Using scan tool, monitor RDCM inputs. Display door key unlock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 6).
2. Disconnect right door key switch connector. Using scan tool, monitor RDCM inputs. Display door key unlock switch status. If scan tool indicates status as ACTIVE, go to next step. If scan tool does not indicate status as ACTIVE, go to step 4).
3. Check for short to ground in Light Green wire between RDCM connector C1 and right door key switch. If faulty circuit is found and repaired, go to step 8). If circuit is okay, go to step 5).
4. Replace right door latch. See **DOOR LATCH** under REMOVAL & INSTALLATION. Recheck system operation.
5. Replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. Recheck system operation.
6. Check for intermittent connections at right door key switch. If fault is found and repaired, go to step 8). If circuit is okay, go to next step.
7. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM. Wait 20 seconds. Recheck for DTCs. If DTC B2253 sets as history, go to step 5). If DTC B2253 does not set as history, system is okay at this time.
8. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM.

Diagnostic Aids

The following conditions may cause an intermittent fault:

- Intermittent short to ground in key input circuit.
- Door key switch is sticking or internally shorted.
- Door key switch was rotated to UNLOCK position for more than 20 seconds.

DTC B2276: LEFT DOOR LOCK/MIRROR HEATER FAULT

Circuit Description

Left Door Control Module (LDCM) provides output to heated mirror and door lock actuator. When LDCM receives LOCK or UNLOCK inputs from door lock switch or UNLOCK input from door key switch, LDCM will send appropriate signal to door lock actuator. When LDCM receives input from defogger switch, LDCM will send appropriate signal to activate heated mirror element.

DTC will set if LDCM detects a high current or short to voltage condition along door lock actuator control circuit when door lock is commanded by LDCM, if LDCM detects a high current or short to voltage in heated mirror control circuit when heated mirror is commanded on or if LDCM detects a voltage drop of 5 volts or more at BATTERY 2 circuit when door lock actuator is commanded. DTC will only be set as history even if condition is current. No driver warning message will be displayed. Heated mirror and door lock functions will be disabled.

For DTC to clear, rear defogger must be turned on. DTC will clear when conditions for setting DTC no longer exist. Driver's Information Center (DIC) or scan tool can be used to manually clear DTC.

Testing

1. If driver's door locks and unlocks correctly, go to next step. If driver's door does not lock and unlock correctly, go to step 3).
2. Disconnect left mirror connector C1. Using DVOM, measure voltage between left mirror connector C1 terminals "B" (Black wire) and "E" (Orange wire). See **WIRING DIAGRAMS** . Turn ignition on. If battery voltage is indicated, go to step 9). If battery voltage is not indicated, go to step 5).
3. Disconnect left door lock actuator connector C3. Using DVOM, measure voltage between left door lock actuator connector C3 terminals "A" (Tan wire) and "B" (Gray wire). Press left door lock/unlock switch to LOCK and UNLOCK positions. If battery voltage is indicated, go to step 10). If battery voltage is not indicated, go to next step.
4. Check for open, short to ground or short to voltage in Gray or Tan wires between LDCM and left door lock actuator. If faulty circuit was found and repaired, go to step 11). If circuit is okay, go to step 8).
5. Check for open, short to ground or short to voltage in Orange or Black wires between LDCM and left mirror. If faulty circuit was found and repaired, go to step 11). If circuit is okay, go to step 8).
6. Replace left mirror heating element assembly. See appropriate POWER MIRRORS article. After repairs, go to step 11).
7. Replace left door lock actuator. See **DOOR LOCK ACTUATOR** under REMOVAL & INSTALLATION. After repairs, go to step 11).
8. Replace LDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. After

repairs, go to step 11).

9. Check for intermittent condition between left heated mirror and LDCM. If faulty circuit was found and repaired, go to step 11). If circuit is okay, go to step 6).
10. Check for intermittent condition between left door lock actuator and LDCM. If faulty circuit was found and repaired, go to next step. If circuit is okay, go to step 7).
11. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM.

Diagnostic Aids

The following conditions may cause an intermittent fault:

- Intermittent short to voltage in Tan or Gray wires between door lock actuator and LDCM.
- Intermittent short to voltage in Orange wire between heated mirror and LDCM.
- Door lock actuator or heated mirror are shorted internally.

When fault is detected, LDCM will disable system fault was detected in.

DTC B2277: RIGHT DOOR LOCK/MIRROR HEATER FAULT

Circuit Description

Right Door Control Module (RDCM) provides output to heated mirror and door lock actuator. When RDCM receives LOCK or UNLOCK inputs from door lock switch or UNLOCK input from door key switch, RDCM will send appropriate signal to door lock actuator. When RDCM receives input from defogger switch, RDCM will send appropriate signal to activate heated mirror element.

DTC will set if RDCM detects a high current or short to voltage in door lock actuator control circuit when door lock is commanded by RDCM, if RDCM detects a high current or short to voltage in heated mirror control circuit when heated mirror is commanded on or if RDCM detect a voltage drop of 5 volts or more at BATTERY 2 circuit when door lock actuator is commanded. DTC will only be set as history even if condition is current. No driver warning message will be displayed. Heated mirror and door lock functions will be disabled.

For DTC to clear, rear defogger must be turned on. DTC will clear when conditions for setting DTC no longer exist. Driver's Information Center (DIC) or scan tool can be used to manually clear DTC.

Testing

1. If driver's door locks and unlocks correctly, go to next step. If driver's door does not lock and unlock correctly, go to step 3).
2. Disconnect right mirror connector C1. Using DVOM, measure voltage between right mirror connector C1 terminals "B" (Black wire) and "E" (Orange wire). See **WIRING DIAGRAMS** . Turn ignition on. If battery voltage is indicated, go to step 9). If battery voltage is not indicated, go to step 5).
3. Disconnect right door lock actuator connector C3. Using DVOM, measure voltage between right door lock actuator connector C3 terminals "A" (Tan wire) and "B" (Gray wire). Press right door lock/unlock

switch to LOCK and UNLOCK positions. If battery voltage is indicated, go to step 10). If battery voltage is not indicated, go to next step.

4. Check for open, short to ground or short to voltage in Gray or Tan wires between RDCM and right door lock actuator. If faulty circuit was found and repaired, go to step 11). If circuit is okay, go to step 8).
5. Check for open, short to ground or short to voltage in Orange or Black wires between RDCM and right mirror. If faulty circuit was found and repaired, go to step 11). If circuit is okay, go to step 8).
6. Replace right mirror heating element assembly. See appropriate POWER MIRRORS article. After repairs, go to step 11).
7. Replace right door lock actuator. See **DOOR LOCK ACTUATOR** under REMOVAL & INSTALLATION. After repairs, go to step 11).
8. Replace RDCM. See **DOOR CONTROL MODULE** under REMOVAL & INSTALLATION. After repairs, go to step 11).
9. Check for intermittent condition between right heated mirror and RDCM. If faulty circuit was found and repaired, go to step 11). If circuit is okay, go to step 6).
10. Check for intermittent condition between right door lock actuator and RDCM. If faulty circuit was found and repaired, go to next step. If circuit is okay, go to step 7).
11. Turn ignition off. Reconnect all disconnected components and connectors. Turn ignition on. Clear DTCs. See **CLEARING DIAGNOSTIC TROUBLE CODES (DTCs)** under SELF-DIAGNOSTIC SYSTEM.

Diagnostic Aids

The following conditions may cause an intermittent fault:

- Intermittent short to voltage in Tan or Gray wires between door lock actuator and RDCM.
- Intermittent short to voltage in Orange wire between heated mirror and RDCM.
- Door lock actuator or heated mirror are shorted internally.

When fault is detected, RDCM will disable system fault was detected in.

REMOVAL & INSTALLATION

DOOR LOCK SWITCH

Removal & Installation

Disconnect negative battery cable. Insert a flat bladed tool at rear of switch plate on passenger side or front of switch plate on driver's side and press toward switch to release retainers. Disconnect switch electrical connectors. Remove door lock switch. To install, reverse removal procedure.

DOOR LATCH

Removal

1. Remove door panel. See **DOOR CONTROL MODULE** . Remove water deflector. Reconnect power

window switch and raise window. Disconnect window switch.

2. Disconnect lock cylinder rod from outside door handle. Disconnect electrical connectors from latch assembly. Disconnect door opening rod from latch assembly by using diagonal cutters to cut off clip. Remove 3 screws attaching latch to door.
3. Remove inside door handle and disconnect lock and opening rods. Unclip rods from anti-rattle retainer. Remove door latch with inside rods and lock cylinder rod attached. Remove lock rods if necessary. Note position of each rod. See **Fig. 2** .

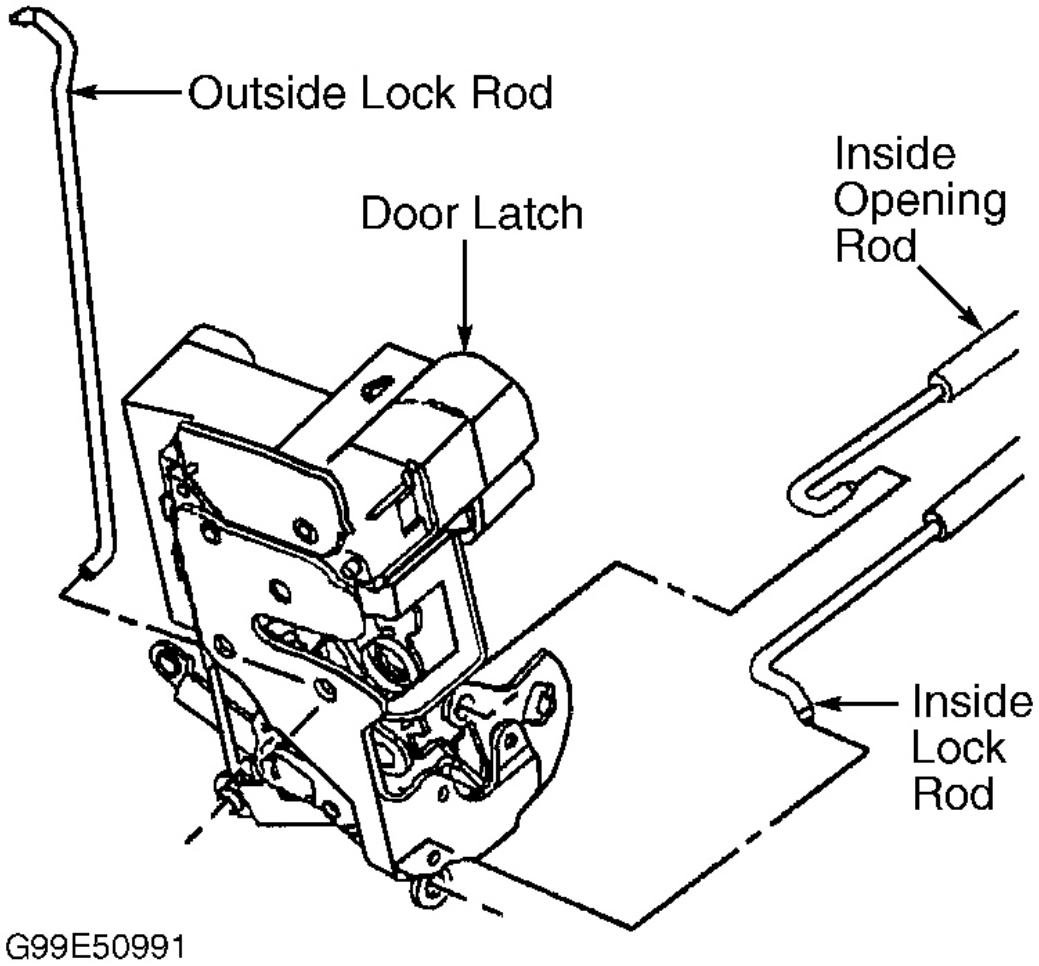


Fig. 2: Identifying Lock Rod Positions
Courtesy of GENERAL MOTORS CORP.

Installation

To install, reverse removal procedure. Ensure lock rods are installed properly. Use NEW clip for outside door

handle opening rod. Ensure water deflector is properly installed to prevent water leaks after installation.

DOOR CONTROL MODULE

Removal & Installation

1. Pull inside door handle to access door handle bezel locking tabs. Insert a screwdriver below bezel. Pry downward while pulling on bezel. Remove bezel.
2. Remove power window switch. See **DOOR LOCK SWITCH** . Remove 2 screws hidden behind pull handle. Pry door panel clips to remove door trim panel. Remove door panel with speaker grill.
3. Remove screws attaching door control module to door. Disconnect electrical connectors and remove DCM from vehicle. To install, reverse removal procedure.

DOOR LOCK ACTUATOR

Removal & Installation

Remove door latch assembly. See **DOOR LATCH** . Remove Torx screws attaching actuator to latch assembly. Unclip actuator rod from latch. To install, reverse removal procedure.

DOOR LOCK CYLINDER

Removal & Installation

1. Remove door panel. See **DOOR CONTROL MODULE** . Remove water deflector. Reconnect power window switch and raise window. Disconnect window switch.
2. Disconnect lock cylinder rod from outside door handle. Disconnect electrical connectors from latch assembly. Disconnect door opening rod from latch assembly by using diagonal cutters to cut off clip.
3. Remove bolts attaching outside door handle to door. Remove outside door handle. Remove retaining clip and lock cylinder lever. Remove spring clip retaining lock cylinder. Remove lock cylinder and "O" ring seal from door handle. To install, reverse removal procedure.

WIRING DIAGRAMS

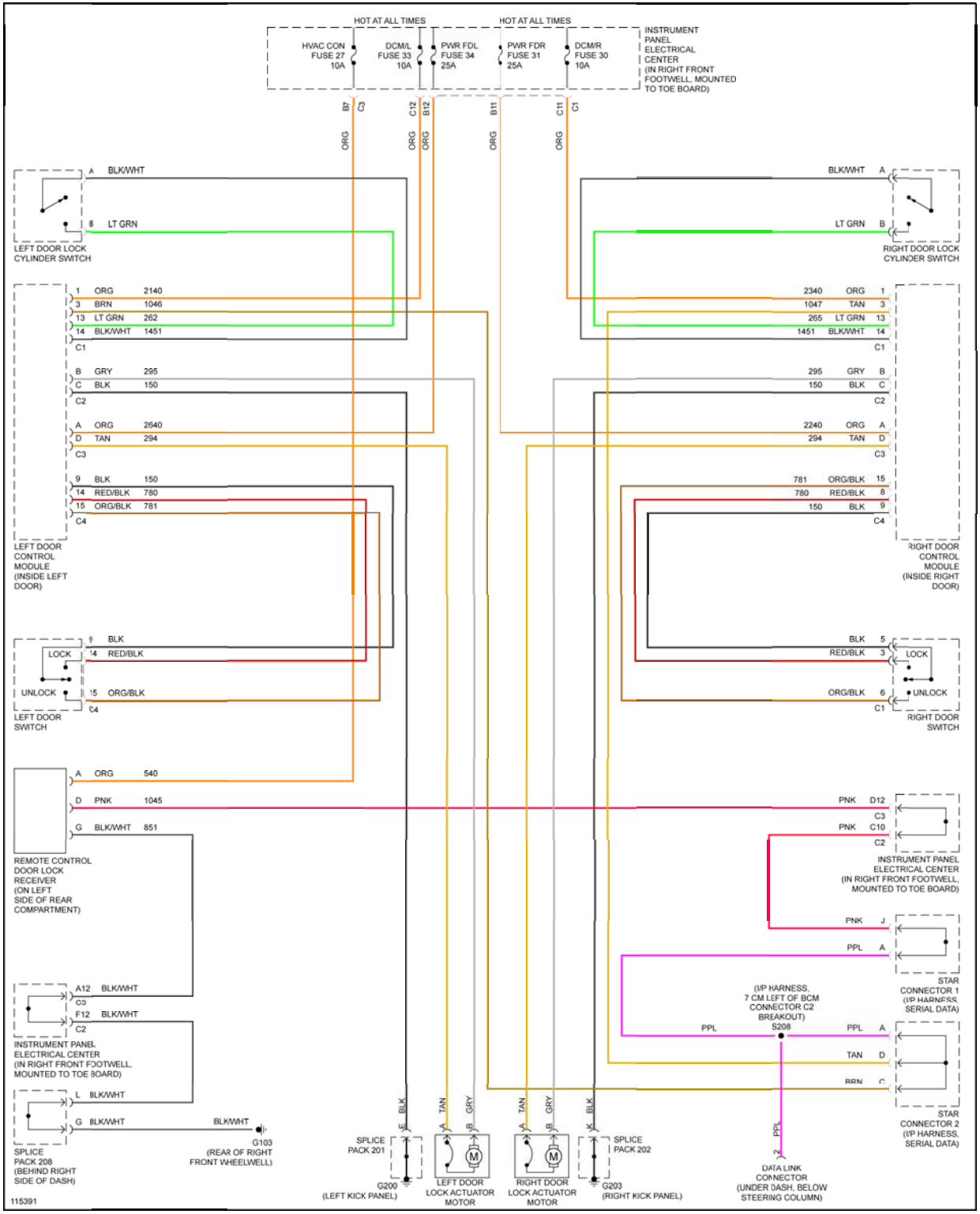

HOT AT ALL TIMES
HOT AT ALL TIMES
HVAC CON FUSE 27 10A
DCM/L FUSE 33 10A
PWR FDL FUSE 34 25A
PWR FDR FUSE 31 25A
DCM/R FUSE 30 10A
INSTRUMENT PANEL ELECTRICAL CENTER (IN RIGHT FRONT FOOTWELL, MOUNTED TO TOE BOARD)
LEFT DOOR LOCK CYLINDER SWITCH
RIGHT DOOR LOCK CYLINDER SWITCH
LEFT DOOR CONTROL MODULE (INSIDE LEFT DOOR)
RIGHT DOOR CONTROL MODULE (INSIDE RIGHT DOOR)
LEFT DOOR SWITCH
RIGHT DOOR SWITCH
REMOTE CONTROL DOOR LOCK RECEIVER (ON LEFT SIDE OF REAR COMPARTMENT)
INSTRUMENT PANEL ELECTRICAL CENTER (IN RIGHT FRONT FOOTWELL, MOUNTED TO TOE BOARD)
INSTRUMENT PANEL ELECTRICAL CENTER (IN RIGHT FRONT FOOTWELL, MOUNTED TO TOE BOARD)
STAR CONNECTOR 1 (I/P HARNESS, SERIAL DATA)
STAR CONNECTOR 2 (I/P HARNESS, SERIAL DATA)
(I/P HARNESS, 7 CM LEFT OF BCM CONNECTOR C2 BREAKOUT)
S208
SPLICE PACK 208 (BEHIND RIGHT SIDE OF DASH)
G103 (REAR OF RIGHT FRONT WHEELWELL)
SPLICE PACK 201
G200 (LEFT KICK PANEL)
LEFT DOOR LOCK ACTUATOR MOTOR
RIGHT DOOR LOCK ACTUATOR MOTOR
SPLICE PACK 202
G203 (RIGHT KICK PANEL)
DATA LINK CONNECTOR (UNDER DASH, BELOW STEERING COLUMN)
115391

Fig. 3: Power Door Lock System Wiring Diagram (1998-99 Corvette)

1998 ACCESSORIES & EQUIPMENT General Motors Corp. - Power Hatch & Fuel Door Release

DESCRIPTION & OPERATION

Hatch release system allows rear hatch to be opened using a rear compartment lid release switch. Release switch is part of fog lamp/rear compartment lid release switch located on instrument panel, to left of steering column. Rear hatch may also be opened by Remote Function Actuator (RFA) module. RFA module receives signals electronically from Remote Keyless Entry (RKE) transmitter. In the event of an electrical malfunction, hatch may also be opened by using manual release cables located under carpet in rear center storage compartment.

Fuel filler door release switch is located in center console storage compartment. In the event of an electrical malfunction, fuel filler door may also be released by a manual release cable located in rear compartment, against driver's side upper trim.

TROUBLE SHOOTING

Ensure all ground connections are clean and tight. Check fuses, and replace as necessary. If fuses are blown, check for short to ground in power supply circuit. Visually inspect for broken or open wires. Check for a broken or partially broken wire inside insulation which could cause system malfunction but prove good in a continuity/voltage check with system disconnected. Ensure any aftermarket electronic equipment is properly installed.

SYSTEM TESTS

NOTE: On models with RKE system, check operation of all RKE transmitter functions. If RKE transmitter is malfunctioning, see REMOTE KEYLESS ENTRY SYSTEM article.

REAR COMPARTMENT LID RELEASE INOPERATIVE

1. Connect scan tool to Data Link Connector (DLC) located on left side of instrument panel, to right of steering column. Check if any Diagnostic Trouble Codes (DTCs) are set. If no DTCs are set, go to next step. If DTCs are set, diagnose DTC. See **TESTS W/CODES** article in ENGINE PERFORMANCE section.
2. Disconnect fog lamp/rear compartment lid release switch connector. Using a DVOM, measure voltage at fog lamp/rear compartment lid release switch connector terminal No. 1 (Orange wire). See **WIRING DIAGRAMS** . If voltage is 10-14 volts, go to step 3). If voltage is not 10-14 volts, go to step 5).
3. Using a DVOM, check for continuity of Black wire between fog lamp/rear compartment lid release switch connector terminal No. 6 and Body Control Module (BCM) connector C2 terminal D9. See **WIRING DIAGRAMS** . If continuity exists, go to next step. If continuity does not exist, go to step 6).
4. Replace fog lamp/rear compartment lid release switch. See **FOG LAMP/REAR COMPARTMENT LID RELEASE SWITCH** under REMOVAL & INSTALLATION.
5. Repair open in Orange wire between instrument panel electrical center and fog lamp/rear compartment lid

release switch.

6. Repair open in Black wire between fog lamp/rear compartment lid release switch and BCM.

FUEL FILLER DOOR RELEASE INOPERATIVE

1. Disconnect fuel filler door release switch connector. Using a DVOM, measure voltage at fuel filler door release switch connector terminal "D" (Orange wire). See **WIRING DIAGRAMS** . If voltage is 10-14 volts, go to next step. If voltage is not 10-14 volts, go to step 6).
2. Remove fuel filler door lock. Using a DVOM connected to ground, measure voltage at fuel filler door release switch terminal "E" (Pink wire) with switch in release position. See **WIRING DIAGRAMS** . If voltage is 10-14 volts, go to next step. If voltage is not 10-14 volts, go to step 7).
3. Using a DVOM, check for continuity of Pink wire between fuel filler door release switch connector terminal "E" and fuel filler door release solenoid connector terminal "A". See **WIRING DIAGRAMS** . If continuity exists, go to next step. If continuity does not exist, go to step 8).
4. Disconnect fuel filler door release solenoid connector. Using a DVOM, check for continuity of Black wire between fuel filler door release solenoid connector terminal "B" and splice pack No. 302 connector terminal "K" (ground connection). See **WIRING DIAGRAMS** . If continuity exists, go to next step. If continuity does not exist, go to step 9).
5. Adjust fuel filler door release switch to release position. Using a DVOM, measure voltage between fuel filler door release solenoid terminals "A" (Pink wire) and "B" (Black wire). See **WIRING DIAGRAMS** . If voltage is 10-14 volts, go to step 10).
6. Repair open in Orange wire between instrument panel electrical center and fuel filler door release switch.
7. Replace fuel filler door release switch. See **FUEL FILLER DOOR RELEASE SWITCH** under REMOVAL & INSTALLATION.
8. Repair open in Pink wire between fuel filler door release switch and fuel filler door release solenoid, or replace instrument panel electrical center located in passenger side footwell, under carpet.
9. Repair open in Black wire between fuel filler door release solenoid and splice pack No. 302 (ground connection).
10. Replace fuel filler door release solenoid. See procedures in **FUEL FILLER DOOR RELEASE SOLENOID** 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 section before disconnecting battery.

FOG LAMP/REAR COMPARTMENT LID RELEASE SWITCH

Removal & Installation

Carefully pry lower edge of fog lamp/rear compartment lid release switch to release locking tabs. Pull switch

away, to release locking tabs. Disconnect electrical connector from fog lamp/rear compartment lid release switch and remove switch. To install, reverse removal procedure.

FUEL FILLER DOOR RELEASE SOLENOID

Removal & Installation

1. Remove center and left rear storage compartment trim panels. Remove rear compartment carpet trim panels. Remove carpet from inner wheelwell. Open fuel filler door. Remove nut from fuel filler door release cable. Remove fuel filler door release solenoid mounting nut. Disconnect electrical connector from fuel filler door release solenoid. Remove solenoid and cable.
2. Remove wheelwell liner panel for cable installation access. To install, reverse removal procedure. Tighten nuts to 18 INCH lbs. (2 N.m).

FUEL FILLER DOOR RELEASE SWITCH

Removal & Installation

Remove instrument panel accessory trim plate and reposition center console. While supporting center console, disconnect electrical connector from fuel filler door release switch. Using a small, flat-blade screwdriver, release switch locking tabs from underside of console. Remove fuel filler door release switch from console. To install, reverse removal procedure.

REAR COMPARTMENT LID RELEASE SOLENOID

NOTE: Procedure applies to either left or right release solenoid. Solenoid is located on rear compartment latch assembly.

Removal & Installation

Open rear hatch. Remove rear floor storage compartment covers. Remove rear compartment carpet trim panels. Disconnect electrical connectors from rear compartment lid release solenoid. Remove taillights for access to latch bracket nuts. Remove latch bracket mounting nuts. Remove latch bracket and latch assembly. To install, reverse removal procedures. Tighten latch bracket mounting nuts to 89 INCH lbs. (10 N.m).

WIRING DIAGRAMS

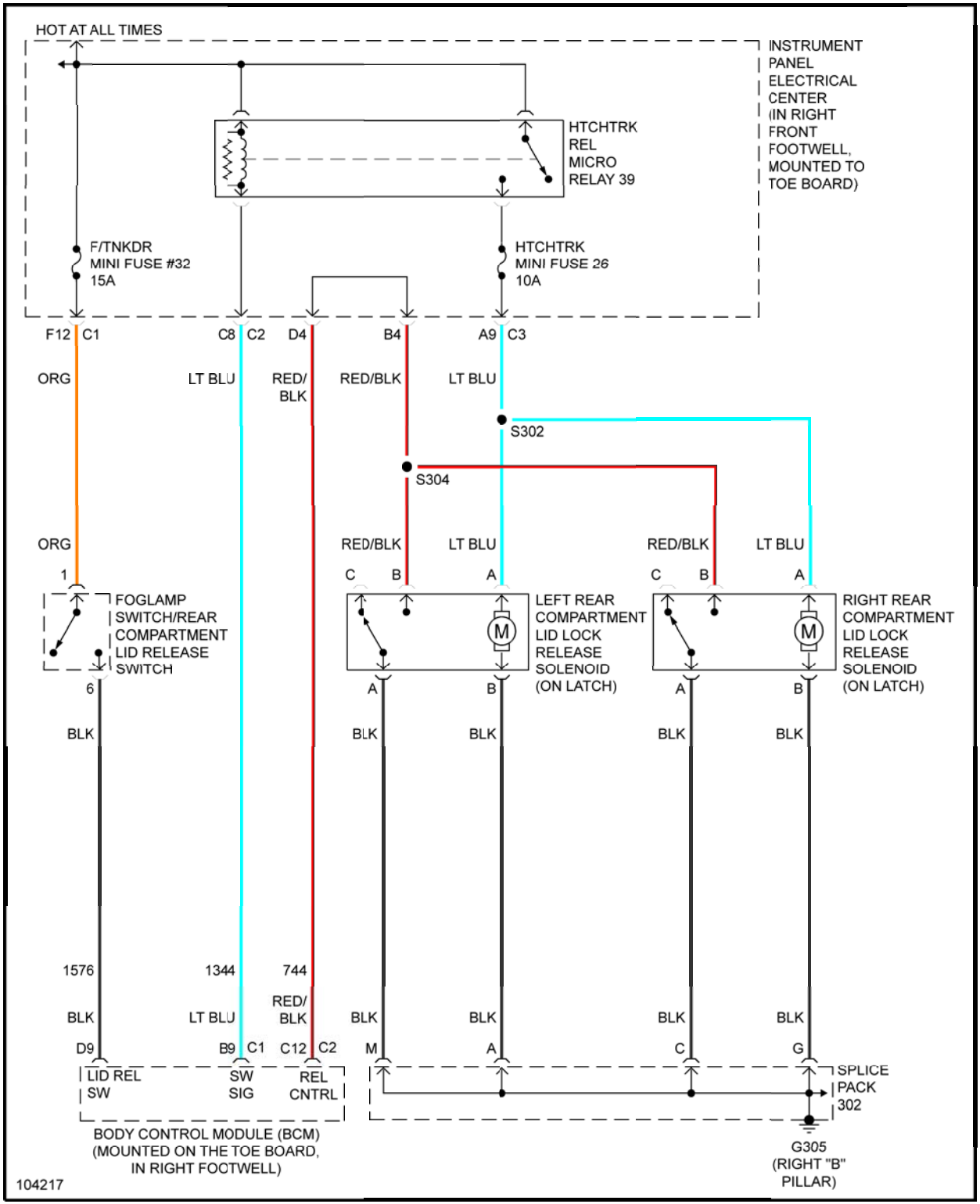

HOT AT ALL TIMES
INSTRUMENT PANEL ELECTRICAL CENTER (IN RIGHT FRONT FOOTWELL, MOUNTED TO TOE BOARD)
HTCHTRK REL MICRO RELAY 39
F/TNKDR MINI FUSE #32 15A
HTCHTRK MINI FUSE 26 10A
F12 C1
C8 C2
D4
B4
A9 C3
ORG
LT BLU
RED/ BLK
RED/BLK
LT BLU
S302
S304
ORG
RED/BLK
LT BLU
RED/BLK
LT BLU
1
C B A
C B A
FOGLAMP SWITCH/REAR COMPARTMENT LID RELEASE SWITCH
LEFT REAR COMPARTMENT LID LOCK RELEASE SOLENOID (ON LATCH)
RIGHT REAR COMPARTMENT LID LOCK RELEASE SOLENOID (ON LATCH)
M
6
A B
A B
BLK
BLK BLK
BLK BLK
1576
1344
744
RED/ BLK
BLK
LT BLU
BLK BLK
BLK BLK
D9
B9 C1
C12 C2
M A
C
G
LID REL SW
SW SIG
REL CNTRL
SPLICE PACK 302
BODY CONTROL MODULE (BCM) (MOUNTED ON THE TOE BOARD, IN RIGHT FOOTWELL)
G305 (RIGHT "B" PILLAR)
104217

Fig. 1: Power Hatch Release Wiring Diagram

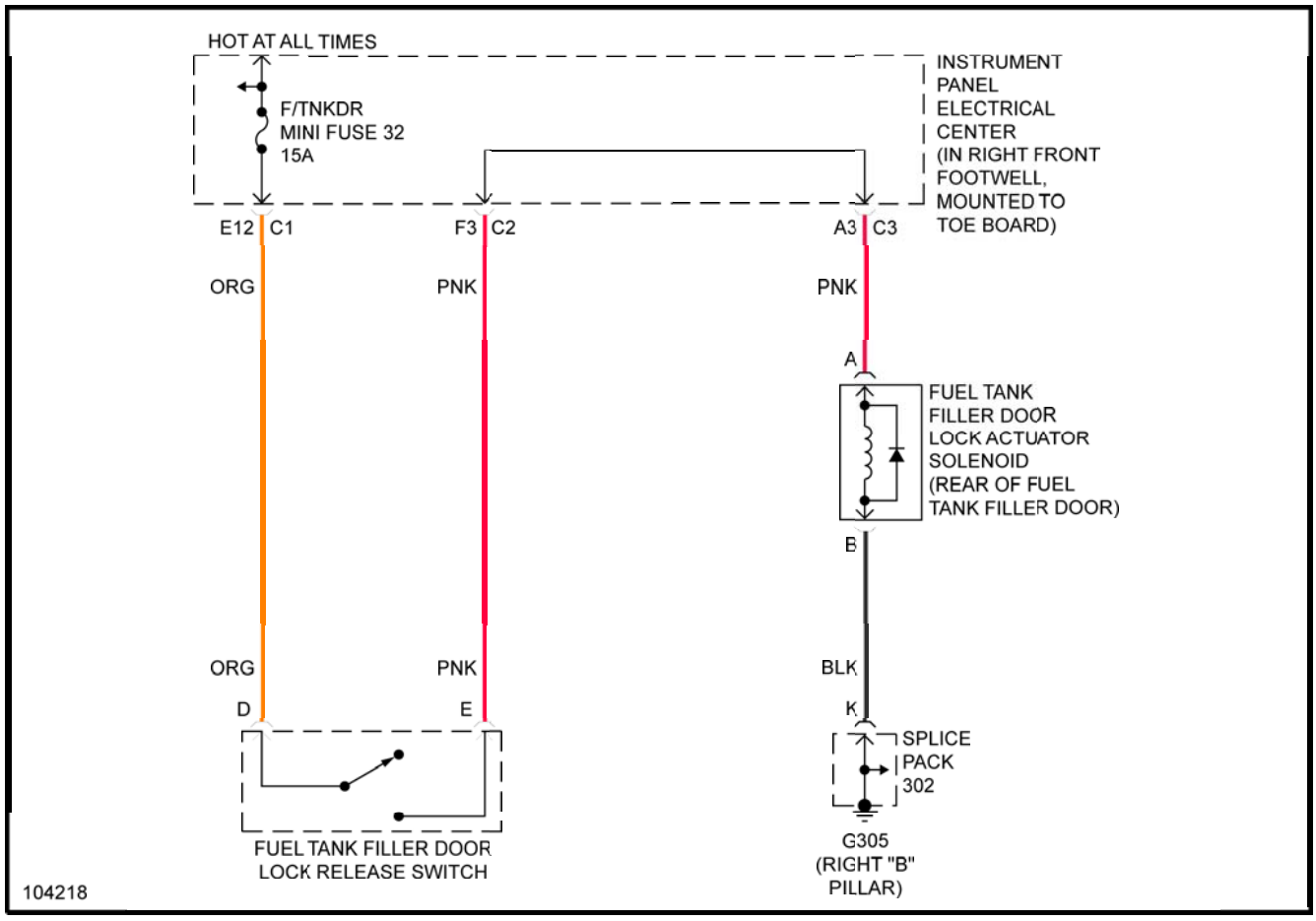

HOT AT ALL TIMES
F/TNKDR
MINI FUSE 32
15A
INSTRUMENT
PANEL
ELECTRICAL
CENTER
(IN RIGHT FRONT
FOOTWELL,
MOUNTED TO
TOE BOARD)
E12
C1
F3
C2
A3
C3
ORG
PNK
PNK
A
FUEL TANK
FILLER DOOR
LOCK ACTUATOR
SOLENOID
(REAR OF FUEL
TANK FILLER DOOR)
B
ORG
PNK
BLK
D
E
K
SPLICE
PACK
302
G305
(RIGHT "B"
PILLAR)
FUEL TANK FILLER DOOR
LOCK RELEASE SWITCH
104218

Fig. 2: Power Fuel Door Release Wiring Diagram