# Power Folding Top Inoperative

## Diagnostic Aids

- Complete the checklist prior to performing the diagnosis:
  - When the folding top control switch is pressed, check for driver information center (DIC) warning messages.
  - Windows are normalized. Refer to Power Windows Description and Operation in Doors.
  - Luggage barrier is installed and secured.
  - Vehicle is in PARK.
  - Press the ignition to ACCY or RUN, with the engine OFF.
  - Hydraulic fluid bypass valve in the operating position, turned clockwise, located above the pump motor.
  - Operating temperature is normal.
- When using the scan tool, the folding top cover is referenced as the tonneau.
- If a repair is made to a signal circuit for a fault to ground, test the component of that circuit for proper operation.
- Use the scan tool to access the History parameters for the folding top control (FTC) module. The parameters will display the status of the folding top systems last operation.

## Test Description

The numbers below refers to the step numbers on the diagnostic table.

14. This step determines the integrity of valve 1 and valve 2. When commanding the valves on, be careful not to confuse the low audible click from the valve with the louder click from the relay in the FTC module.

| Step | Action | Yes | No |
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| *Schematic Reference:* Power Roof Systems Component Views<br><br>*Connector End View Reference:* Power Roof Systems Connector End Views | | | |
| 1 | Did you perform the Diagnostic System Check - Vehicle? | Go to Step 2 | Go to Diagnostic System Check - Vehicle in Vehicle DTC Information |
| 2 | Verify that the Power Folding Top Inoperative complaint is present.<br><br>Does the Power Folding Top System operate as described in the System Description and Operation? | Go to Testing for Intermittent Conditions and Poor Connections in Wiring Systems | Go to Step 3 |
| 3 | Does the folding top cover pull down actuator continuously move up and down? | Go to Folding Top Stowage Compartment Lid | |

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| | | Release Inoperative | Go to Step 4 |
| 4 | 1. Observe the driver information center (DIC) warning messages.<br>2. Attempt to operate the power folding top.<br>3. If any DIC messages are displayed as a result of top operation, refer to DIC Warning Messages - Roof .<br><br>Did you find and correct the condition? | Go to Step 29 | Go to Step 5 |
| 5 | From the top closed position, did the folding top start to open then stop? | Go to Power Folding Top Does Not Open | Go to Step 6 |
| 6 | From the top open position, did the folding top start to close then stop? | Go to Power Folding Top Does Not Close | Go to Step 7 |
| 7 | 1. Install a scan tool.<br>2. Turn ON the ignition, with the engine OFF.<br>3. With a scan tool, observe the Window Normalization parameter by making the following selections:<br>• Roof<br>• Data Display<br>• Driver Door Module<br>• Passenger Door Module<br>4. View the window normalization parameter for each module.<br><br>Did the Window Normalization parameter display NO for either module? | Go to Power Window Reinitialization in Doors | Go to Step 8 |
| 8 | 1. With a scan tool, observe the inoperative Top Control Switch parameter in the Folding Top Module Inputs data list.<br>2. Press the inoperative top control switch.<br><br>Does the inoperative Top Control Switch parameter change state? | Go to Step 11 | Go to Step 9 |
| 9 | 1. Disconnect the folding top control switch harness connector.<br>2. Connect a test lamp from the battery positive voltage circuit of the switch connector to a good ground.<br><br>Does the test lamp illuminate? | Go to Step 10 | Go to Step 24 |
| | 1. Connect a 3-amp fused jumper wire from the battery positive voltage circuit of the switch connector to the inoperative switch signal circuit of the switch connector. | | |

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| 10 | 2. With a scan tool, observe the Top Control Switch parameter in the Folding Top Module Inputs data list.<br><br>Did the Top Control Switch parameter change state? | Go to Step 20 | Go to Step 17 |
| 11 | If the top is in the open position, did the folding top cover release? | Go to Step 12 | Go to Folding Top Stowage Compartment Lid Release Inoperative |
| 12 | 1. Wait four minutes for the module to release the pressure in the hydraulic system.<br>2. Manually open the folding top cover to access the hydraulic fluid bypass valve.<br>3. Turn the hydraulic fluid bypass valve counterclockwise to inhibit folding top movement.<br>4. With a scan tool navigate to Pump Motor Direction by making the following selections:<br>• Roof<br>• Special Functions<br>• Folding Top Module<br>5. With the scan tool, command the direction of the motor to the X/A and then Y/B directions.<br><br>Can you hear the pump motor respond with each command? | Go to Step 14 | Go to Step 13 |
| 13 | 1. Disconnect the inline harness connector at the pump motor.<br>2. Connect a test lamp between the pump motor control circuits A and B of the inline connector.<br>3. With the scan tool, command the direction of the motor to the X/A and Y/B directions.<br><br>Does the test lamp illuminate with each command? | Go to Step 22 | Go to Step 18 |
| 14 | With the scan tool command Valve 1 and Valve 2 ON and OFF.<br><br>Can an audible click be heard from each valve when commanded ON? | Go to Step 28 | Go to Step 15 |
| | 1. Disconnect the harness connector of the inoperative valve.<br>2. Connect a test lamp from the control circuit of the valve connector to a good ground. | | |

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| 15 | 3. With the scan tool command the Valve ON.<br><br>Does the test lamp illuminate when the valve is commanded ON? | Go to Step 16 | Go to Step 19 |
| 16 | 1. Connect a test lamp between the control circuit of the valve connector and the ground circuit of the valve connector.<br>2. With the scan tool command the Valve ON.<br><br>Does the test lamp illuminate when the valve commanded ON? | Go to Step 21 | Go to Step 25 |
| 17 | Test the appropriate switch signal circuit between the folding top control switch and the folding top control (FTC) module for an open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | Go to Step 23 |
| 18 | Test the control circuits of the folding top pump motor for a short to ground or open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | Go to Step 23 |
| 19 | Test the control circuit of the inoperative valve for a short to ground or an open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | Go to Step 23 |
| 20 | Inspect for poor connections at the harness connector of the FTC switch. Refer to Testing for Intermittent Conditions and Poor Connections and Connector Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | Go to Step 26 |
| 21 | Inspect for poor connections at the harness connector of the inoperative valve. Refer to Testing for Intermittent Conditions and Poor Connections and Connector Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | Go to Step 28 |
| 22 | Inspect for poor connections at the harness connector of the folding top pump motor. Refer to Testing for Intermittent Conditions and Poor Connections and | | |

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| | Connector Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | Go to Step 28 |
| 23 | Inspect for poor connections at the harness connector of the FTC module. Refer to Testing for Intermittent Conditions and Poor Connections and Connector Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | Go to Step 27 |
| 24 | Repair the short to ground or open in the battery positive voltage circuit of the folding top control switch. Refer to Wiring Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | -- |
| 25 | Repair the high resistance or open in the ground circuit of the inoperative valve. Refer to Wiring Repairs in Wiring Systems.<br><br>Did you find and correct the condition? | Go to Step 29 | -- |
| 26 | Replace the folding top control switch. Refer to Convertible Top Switch Replacement .<br><br>Did you complete the replacement? | Go to Step 29 | -- |
| 27 | Replace the FTC module. Refer to Control Module References in Computer/Integrating Systems for replacement, setup, and programming.<br><br>Did you complete the replacement? | Go to Step 29 | -- |
| 28 | Replace the folding top pump, valve, and motor assembly. Refer to Folding Top Pump with Motor Replacement .<br><br>Did you complete the replacement? | Go to Step 29 | -- |
| 29 | 1. Turn OFF the ignition.<br>2. Disconnect any jumper wires.<br>3. Connect all previously disconnected components.<br>4. Replace any open fuses, if necessary.<br>5. Turn the bypass valve clockwise to allow folding top cover movement.<br>6. Press the ignition to ACCY or RUN, with the engine OFF.<br>7. Use the scan tool to clear any DTCs.<br>8. Operate the system in order to verify the repair. | | |

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| | Did you correct the condition? | System OK | Go to Step 2 |