



Service Bulletin

Bulletin No.: 07-08-67-010C

Date: June, 2019

INFORMATION

Subject: Retractable Hard Top (RHT)/Convertible Switch Diagnosis (DTC B1296, B3669, B367A, B376B, B366E, B366D, B366B, B366A, B366F, B1307, B3683, B3685, B366C and/or B1010)

Models: 2006-2009 Pontiac G6

This Bulletin has been revised to remove references to Service Know-How and Training videos that are no longer available. This Bulletin replaces PIC4149C. Please discard Corporate Bulletin Number 07-08-67-010B and PIC4149C.

Do This	Don't Do This
Follow the proper DTC diagnosis.	Do not replace the FTC Module (Labor Operation B3346) or Hydraulic Pump/Motor (Labor Operation B3460). Do not repair the Hydraulic Seal/Line Leak (Labor Operation B3442).

This bulletin address the issue of the convertible top not cycling open or closed with one or more RHT DTCs set. When the top is cycle open or closed the Folding Top Control (FTC) Module looks for a specific sequence of switching events to take place (refer to the Switch Status Charts below). If the specific sequence is interrupted by one of the switches not properly changing status, the FTC Module will set DTC/s for the specific switch(es) that did not cycle. The module will then time out the hydraulic pump/motor and will not allow further top operation to protect top components from being damaged.

Important: Once the FTC module times out, it will no longer allow top operation until the switch that interrupted the sequence properly changes status (Note: At times the FTC may allow return of the roof to its previous position, but normally will not allow movement past the point at which the switch sequence was interrupted).

Important: The switch sequence can also be interrupted by a mechanical binding of the system latches or a hydraulic system leak. Both of these issues can cause a switch status not to change and the system will time out.

DO NOT replace the FTC module or the hydraulic pump/motor. Instead, follow the diagnostics below. Use the Tech 2 to identify the DTC(s) and symptom/descriptor set.

Important: Verify that the battery has a full state of charge (always cycle the top with the engine running).

- If no DTC is set or DTC B1010 is the only DTC set: Check the DIC for messages (i.e. "Check Cargo Shade" – the top will not cycle if the cargo shade is open). If no messages are displayed, cycle the top open/closed and re-check for DTCs. If the top operates normally and no DTCs are set, the condition is not present.
If the Top Operational Switch DTC is set (B3602), go to Step 1.

Important: The Top Operational Switch is designed to operate with constant finger pressure. For safety reasons, the top will stop if the constant pressure is not present. It is also normal for a slight pause to occur when resuming top operation with the switch after a constant pressure interruption has taken place. (No DTC will be set for this issue. Do not replace the switch for this normal condition).

- If any of the following Top Switch DTCs are set – B1296, B3669, B367A, B367B, B366E, B366D, B366B, B366A, B367F, B1307, B3683, B3685, B366C and/or B1010 - go to Step 1.

Important: B1010 is a System Sensors Data Mismatch Signal Invalid DTC and almost always sets with some other Switch DTC. Diagnose the set Switch DTC.

- If any Hydraulic Pump/Motor DTC is set, follow the 2008 SI document DTC Descriptors Circuit/System Testing Diagnosis:
 - B3680
 - B3674
 - B3675
- If any Folding Top Control (FTC) Module DTC is set, follow the 2008 SI document DTC Descriptors Circuit/System Testing Diagnosis:
 - B1000
 - B1325
 - B1335
 - B1345
 - B1395
 - B316A

1. Using the Tech 2®, verify the switch for the set DTC will properly change status when manually cycled. Note – in some instances the hydraulic pressure may need to be opened at the pump (i.e. S1/B1296, S2/B3669, S3/B367A, S4/B367B), refer to *Folding Top Pump Bypass Valve Pressure Release Adjustment* in SI.

Important: Using a Tech 2®, the DTC Diagnostic Matrix and the Switch Status Charts, you can determine the status of each switch in any position while the top is being opened or closed.

- If the switch changes status properly, go to Step 6.
 - If the switch does not change status properly, go to Step 2.
2. Disconnect the switch for the set DTC. Proceed to Step 3.
3. Ignition ON, probe the 12-volt reference circuit of the switch with a test lamp connected to ground. The test lamp should illuminate. If the test lamp does illuminate, go to Step 4.
- If the test lamp does not illuminate, test the 12-volt reference circuit for a short to ground or open.
 - If the test lamp does not illuminate and the circuit is OK, go to Step 5.

4. Probe the signal circuit of the switch with a test lamp connected to B+. The test lamp should illuminate. If the test lamp illuminates, go to Step 6.
- If the test lamp does not illuminate, test the signal circuit for an open or high resistance.
 - If the test lamp does not illuminate and circuit is OK, go to Step 5.
5. Disconnect the FTC module, verify the power and ground circuits for any short to ground, open or short to battery. Verify pins/connections, re-connect the module and the switch and cycle the top. If the condition is still present, replace the FTC module.
6. Verify that there is no mechanical binding of the switch latching system. Note – in some instances, the hydraulic pressure may need to be opened at the pump. Refer to *Folding Top Pump Bypass Valve Pressure Release Adjustment* in SI. If the latching system moves freely, go to Step 7.
- If the latching system does not move freely, repair (adjust/replace) the mechanical system accordingly.
7. Verify there are no hydraulic system leaks. Remove the trunk trim and check under the spare tire for signs of fluid leak. If there are no leaks found, go to Step 8.
- If a hydraulic leak is found, repair the damaged seal/line accordingly.
8. Verify that the switch is adjusted properly (i.e. S18/B3685 – refer to TAC PIC 4154A). Verify that the switch has no obstructions in it that would mechanically prevent the switch from properly cycling. Verify there is no damaged wiring/connections from a mis-routed/improperly tie strapped wire harness or moving parts contacting/pinching the wire harness when the top is being cycled open/closed (specifically in the deck lid reverse open hinge/hold down claws area). Re-connect the switch and cycle the top. If the condition is present, replace the switch.

Important: Refer to the DTC Diagnostic Matrix below for more specific switch information and diagnostic detail from Steps 1, 2, 3 and 4 above.

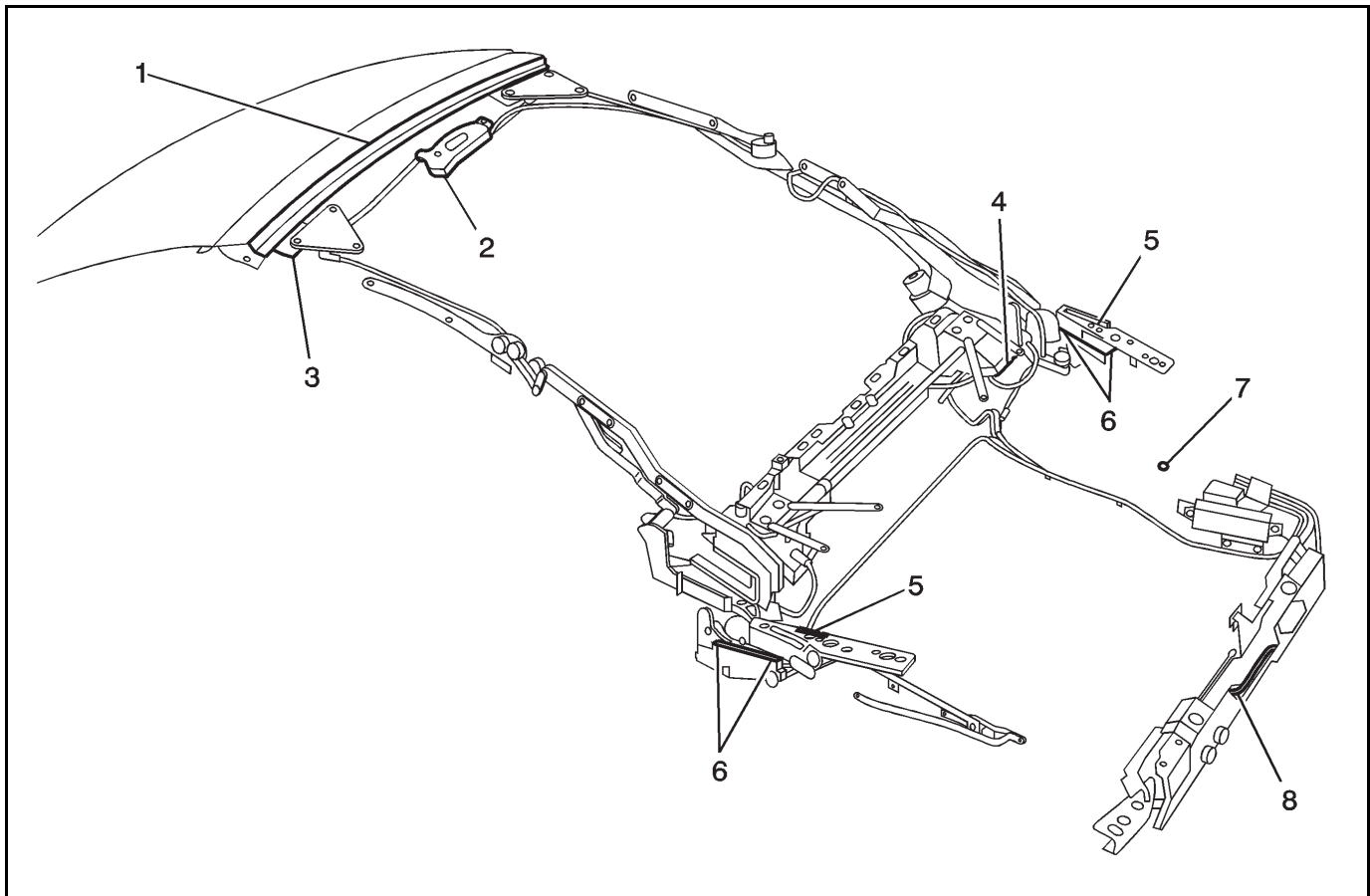
B1296	S1	header latch cylinder	"Folding Top Header Latched Cylinder" (hall effect sensor, header cyl.)	Monitor switch state on Tech 2 while operating top switch-should change from "latched" to "unlatched."	Check switch attachment to cylinder body, electrical connection and wiring.
B3669	S2	rear decklid 4-bar (for reverse open) cylinder	"RCL Cylinder Extended" (hall effect sensor, decklid cyl.)	Monitor switch state on Tech 2 while operating top switch-should change from "no" to "yes."	Check switch attachment to cylinder body, electrical connection and wiring.
B367A B367B	S3/S4	Rear RCL hinge (one switch)	"RCL Release Switch" (RCL lobster claws switch)	Loosen pressure relief, move claws manually up and down, monitor switch state with Tech 2 should show "unlatched" in the full downward position and "latched" when in the full upward position, "transition" anywhere in between.	Check wiring and connection at rear RCL hinge.

B366E	S9	Front of RH RCL front hinge	"Right Front RCL Latched Switch"	Decklid reverse open, operate switch with finger, monitor switch state with Tech 2 – should read "active" when engaged and "inactive" when released.	Check wiring along the RCL front hinge and connection.
B366D	S10	rear of RH RCL front hinge	"Right Front RCL Unlatched Switch"	Deck lid open, conventionally operate switch with finger, monitor switch state with Tech 2 should read "active" when engaged and "inactive" when released.	Check wiring along the RCL front hinge and connection.
B366B	S11	front of LH RCL front hinge	"Left Front RCL Latched Switch"	Deck lid reverse open, operate switch with finger, monitor switch state with Tech 2 – should read "active" when engaged and "inactive" when released.	Check wiring along the RCL front hinge and connection.
B366A	S12	rear of LH RCL front hinge	"Left Front RCL Unlatched Switch"	Deck lid open, conventionally operate switch with finger, monitor switch state with Tech 2 should read "active" when engaged and "inactive" when released.	Check wiring along the RCL front hinge and connection.
B366F	S13	RH front downstack receiver in trunk	"Folding Top Downstack Receiver Switch"	Roof in closed position, decklid open conventionally, operate switch with a pen, monitor switch state with Tech 2 – should change from "in position" to "not in position."	Check wiring and connections near the downstack receiver.
B1307	S14	header latch center drive	"Folding Top Bell Crank Switch"	Front headliner removed, operate switch with finger, watch switch state with Tech 2 – should change from "over-center" to "not over-center."	Check wiring and connection within harness bundle.
B3683	S17	LH header receiver	"Folding Top Header Dowel Pin"	Roof full open or in service position, monitor switch state with Tech 2, use pen to operate switch – should change from "in position" to "not in position."	Check alignment of dowel to receiver hole.
B3685	S18	LH header receiver	"Folding Top Header Latch"	Header trim pulled under left receiver, monitor switch state with Tech 2, operate roof open until header unlatches, close roof to latch header – Should change from "yes" to "no."	Front header trim pulled under receiver, operate roof open and closed from header, visually verify contact of the hook to the lever, adjust left header latch rod or the switch on the receiver if needed.
B366C	S19A/B	rear holes in RCL plates	"RCL Front Switch Ready to Latch"	Deck lid reverse open, operate both switches simultaneously with finger or pen, monitor switch state with Tech 2 – should change from "in position" to "not in position."	Verify alignment of RCL front hinge pins to Deck plate holes.

Important: As with all micro switches, listen carefully for a clicking sound when engaging and releasing the lever. This, along with monitoring the state with a Tech 2®, provides a basic mechanical check of the switch.

Important: When using the Switch Status Charts, always fully cycle the top "Closed to Open and Open to Close" or "Open to Closed and Closed to Open" to detect the switch that does not properly cycle.

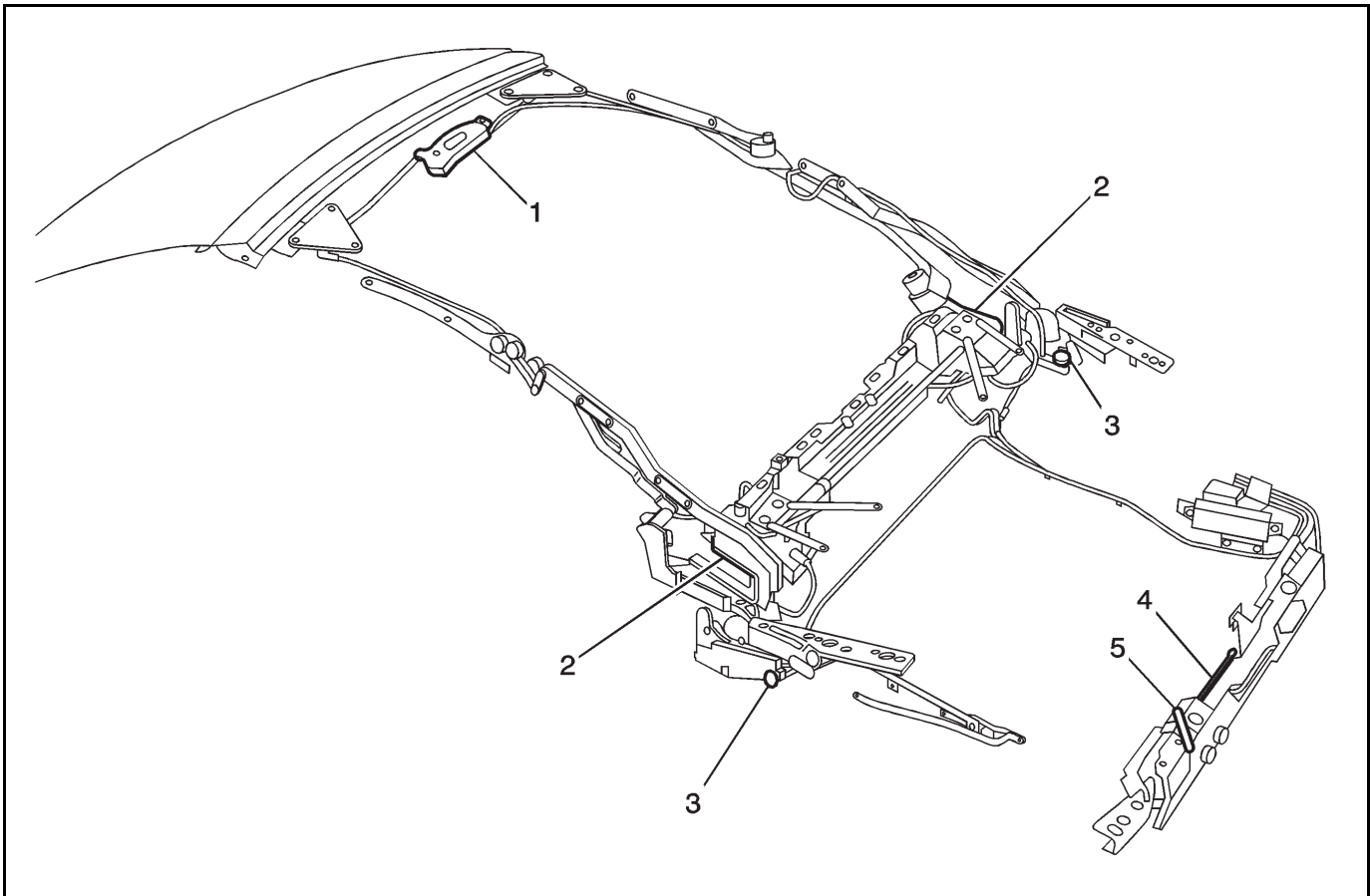
Warranty Information



2102068

Switch Labor Operation Callout #

Switch Diagram Callout # Switch #	DTC	Labor Code	Labor Operation	Labor Time
#1 S15 & S16	B3602	N2460	Convertible Top Switch Replacement	Use Published Labor Operation Time
#2 S14	B1307	N2240	Folding Top Front Latch Position Switch Replacement	
#3 S17, S18	B3683/B3685	B3223	Folding Top Front Locating Pin Guide Replacement	
#4 S13	B366F	N2241	Folding Top Front Locating Pin Position Switch Replacement	
#5 S19	B366C	B3748	Rear Compartment Lid Release Switch Replacement	
#6 S9, S10, S11, S12	B366E, B366D, B366B, B366A	B3747	Rear Compartment Lid Release Switch Replacement	
#7 S20	No DTC Radio Display (Check Cargo Shade)	B3745	Folding Top Stowage Compartment Panel Folding Actuator	
#8 S3 & S4	B367A, B367B	B3746	Rear Compartment Lid Release Switch Replacement	



2083287

Cylinder Labor Operation Callout #

Callout	Labor Code	Labor Operation	Labor Time
#1	B3246	Folding Top Header Latch Hydraulic Cylinder Replacement	Use Published Labor Operation Time
#2	B3762	Roof Retractable Panel Stowage Compartment Lid Cylinder Replacement	
#3	B3755	Roof Retractable Panel Stowage Compartment Lid Cylinder Replacement- Upper	
#4	B3757	Roof Retractable Panel Stowage Compartment Lid Cylinder Replacement- Rear Lower	
#5	B3756	Roof Retractable Panel Stowage Compartment Lid Cylinder Replacement- Rear	

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