



Preliminary Information

PIC5960E Diagnostic Tip - Memory Seat / Power Seat Operational Characteristics

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Chevrolet	Corvette	2014 - 2019	All	All	All	All

Supersession Statement

This PI was superseded to update Model Years and provide additional information. Please discard PIC5960D..

Condition / Concern

The base power seat, Memory Recall (if equipped), and Easy Exit Recall (if equipped) functions may seem erratic or seem to operate intermittently. In most instances, this is normal operation and will require no repairs. Gaining a better understanding and familiarizing yourself with the characteristics of this all-new system is imperative to be able to explain the operation of these functions to the customer, and to service the system in the unlikely event that it is truly not working properly.

For additional information and tips on diagnosing memory seat systems, please view the January 2016 Emerging Issues video, course number 10216.01V. This section begins at the 9:27 mark.

Some common customer concerns:

These concerns may all be intermittent.

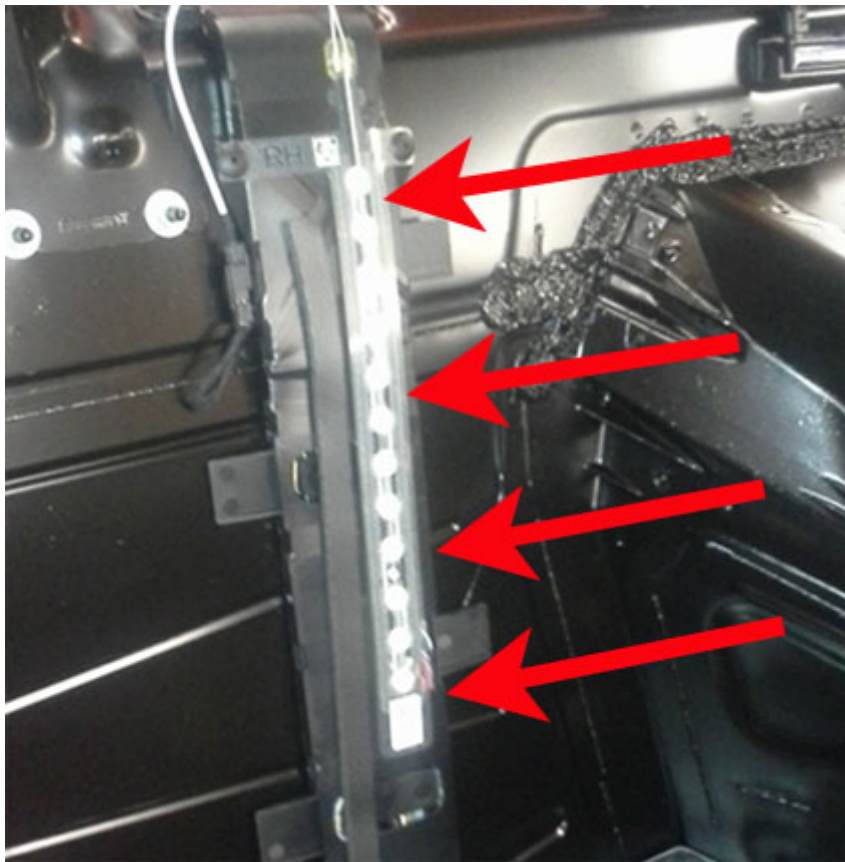
- **The seat will not recall when entering the vehicle.**
- **The seat only moves when pressing and holding the Memory 1, Memory 2, or Exit buttons down.**
- **The seat stops moving when releasing the Memory 1, Memory 2, or Exit buttons.**
- **Sometimes the seat moves completely to the stored position by pressing and releasing the Memory 1, Memory 2, or Exit buttons. Other times I have to hold the button down until the seat stops moving.**
- **The seat barely moves and then stops completely when I press the Memory 1, Memory 2, or Exit buttons. If I release the button and press it again, the seat does the same thing.**

Becoming familiar with the following areas of the power/ memory seat system will aid in assisting customers with its functionality.

Limit Switches

This all-new system utilizes two switches that were not used on prior Corvette models.

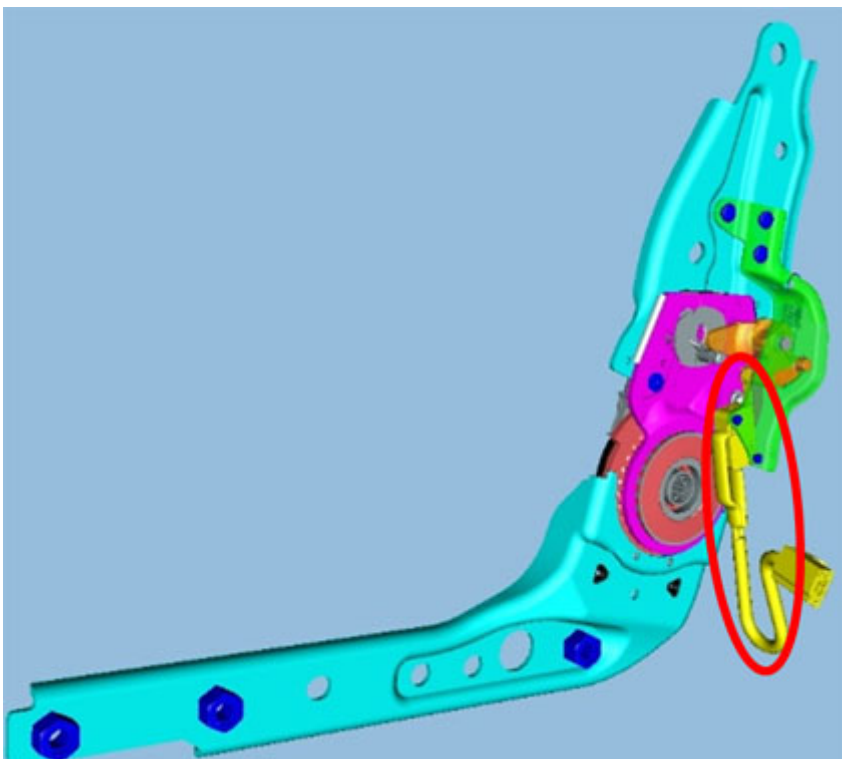
1. The Bulkhead Limit Switch



This switch is used in both seating positions, and is located on the left and right body harness conduit, directly behind each seatback assembly. It prevents damage to the body harness and seatback covers when the seat or seatback is moved in a rearward direction. When this switch reads "Active" in GDS2, the seat movements from both the power seat switch and the Memory 1, Memory 2, and Exit buttons are limited to only allow movements that will bring the seat/seatback forward, away from the switch. This switch is "Active" when pressure is detected against the rear bulkhead/carpet area directly behind the seats. The switch is "Inactive" when pressure is removed from this area.

Note: Both of these switches are viewable in GDS2 for each seat. If you experience a concern, you should first monitor these switch values for reading "Active." When either of these switches are "Active" they will repetitively toggle between "Active" and "Inactive" until the switch is physically moved out of the "Active" state. This is normal operation as the module continuously tests the signal circuits. The most common reasons for the Bulkhead Limit Switch being "Active" is if the Easy Exit setting is stored in a position that applies pressure to the rear bulkhead, or in cases where an object has fallen, or is being stored, behind the seatback and applies sufficient pressure to activate the switch.

2. The Seatback Unlock Switch



This switch is used in both seat positions and is located inside the seatback assembly near the recliner mechanism. It acts to prevent the seat from moving further rearward to ensure that the seatback can return to the normal upright position. This switch is "Active" when the seatback is manually folded forward. It is "Inactive" when the seatback is in the normal driving position. When this switch parameter reads "Active" in GDS2, the seat movements from both the Power Seat Switch and the Memory 1, Memory 2, or Exit buttons are limited to only allow movements that will bring the seat/seatback forward.

Unsupervised / Supervised Movements

IMPORTANT: Note Unsupervised Movements only apply to the 2014-2015 model years. This feature has been eliminated for the 2016 model year.

This all-new system utilizes two recall modes that were not used on prior models.

1. Unsupervised Movement

IMPORTANT: Note Unsupervised Movements only apply to the 2014-2015 model years. This feature has been eliminated for the 2016 model year.

Unsupervised movement occurs while the recall functions are active, but the operator is not pressing and holding the Memory 1, Memory 2, or Exit buttons. The operator is not actively "supervising" the movement. To activate this type of recall on the 2014-2015 model year vehicles, one of the memory seat buttons must be pressed for less than .5 seconds and then released.

Note: Pressing any power seat switch, Memory 1, Memory 2, or Easy Exit buttons again during unsupervised movement will stop the seat movement. Press and release, within .5 seconds, the desired Memory 1, Memory 2, Exit button again to resume the recall to the stored position.

There are several criteria that must be met before the vehicle will allow unsupervised movement to occur on 2014-2015 model year vehicles. These criteria differ based on transmission type.

- Automatic Transmission - The vehicle is running, the transmission is in Park, the Seatback Unlock Switch AND Bulkhead Limit Switch are both Inactive.
- Manual Transmission - The vehicle is running, the Park Brake is applied, the Seatback Unlock Switch AND Bulkhead Limit Switch are both Inactive.

Important: Regardless of transmission type, the Memory Recall button MUST be pressed and released in less than .5 seconds. If the button is pressed longer than 1/2 second the control module changes the request for movement to a supervised movement, meaning the seat will stop moving when the button is released. At this point you may either continue holding the button until the stored position is obtained or release the button, then press and release it within .5 seconds to activate an unsupervised movement.

2. Supervised Movement

Supervised movement occurs when the operator is actively pressing and holding the Memory 1, Memory 2, or Exit buttons; allowing the seat to move only while the operator is "supervising" the movement.

Note: Releasing the memory seat button during this operation will stop the seat movement. Press and hold the switch again to resume movement to the desired position. Only the supervised memory recall operation can occur when the vehicle ignition is not in the "Run" Position. If the Bulkhead Limit Switch or Seatback Unlock Switch are "Active", you will either experience no operation or supervised operation, depending on which switch is active and the requested direction of seat travel.

Auto Memory Recall (if equipped)

This all-new system allows the user to enable or disable the Auto Memory Recall operation of the seat.

Auto Memory Recall is when the seat moves to a previously stored position, either when opening the driver's door, or when the ignition is switched to the "Run" position. In order for the Auto Memory Recall system to function, you must first have the feature turned "On" in the personalization menu of the radio.

Note: Remote Start will not activate the Auto Memory Recall feature. Only by pressing the ignition mode switch to enter the Run, Start, or Accessory modes, will the Auto Memory Recall system be activated.

The operation of the Auto Memory Recall system will differ based on Transmission type.

Automatic Transmission:

- **At Driver Door Open** - When the vehicle ignition is "Off", after the customer has pressed the "Unlock" button on the transmitter, they have 4 minutes to open the driver's door. This will allow the seat to recall to the desired position as long as both the Bulkhead Limit Switch and the Seatback Unlock Switch are "Inactive". If the driver door is already open, then pressing the "Unlock" button on the transmitter will cause the seat to recall to the desired position as long as both the Bulkhead Limit Switch and Seatback Unlock Switch are "Inactive".
- **At Ignition On** - When the Ignition Mode Switch is pressed, the seats will recall to the desired position without a memory recall button press, as long as both the Bulkhead Limit Switch and Seatback Unlock Switch are "Inactive".

Manual Transmission:

- The only available selection that was originally released in 2014 was "On" or "Off". If "On" was selected, when the vehicle's ignition is off, after the customer has pressed the "Unlock" button on the transmitter, they have 4 minutes to open the driver's door. This will allow the seat to recall to the desired position as long as both the Bulkhead Limit Switch and Seatback Unlock Switch are "Inactive". If the driver's door is already open, then pressing the "Unlock" button on the transmitter will cause the seat to recall to the desired position, as long as both the Bulkhead Limit Switch and the Seatback Unlock Switch are "Inactive".

Note: Please reference the latest version of PI1245 if the customer requests the Auto Memory Recall to operate "At Ignition On" for a manual transmission equipped 2014 vehicle. The Memory Seat Module (MSM) will have to be reflashed with the calibration listed in SPS. The Auto Recall Feature will then have to be turned on through the Vehicle Personalization in the Settings menu.

Easy Exit Recall (if equipped)

This all-new system allows the user to enable or disable the "Easy Exit Automatic Recall" operation of the driver's seat.

This feature recalls the stored "Exit" button position when exiting the vehicle. In order for the "Easy Exit" feature to automatically recall the "Exit" position, you must first have the feature turned "On" in the vehicle's personalization menu of the radio.

Easy Exit Recall automatically activates when one of the following occurs:

- **Driver Door Open** - When the vehicle's ignition is "Off", after the customer has pressed the "Unlock" button on the transmitter, they have 4 minutes to open the driver's door. This will allow the seat to recall to the desired position as long as both the Bulkhead Limit Switch and Seatback Unlock Switch are "Inactive". If the driver's door is already open, pressing the "Unlock" button on the transmitter will cause the seat to recall to the desired position as long as both the Bulkhead Limit Switch and Seatback Unlock Switch are "Inactive".
- **Ignition On** - When the ignition mode switch is pressed, the seats will recall to the desired position without a memory recall button press, as long as both the Bulkhead Limit Switch and Seatback Unlock Switch are "Inactive".

- The vehicle's ignition is turned "Off" and the driver's door is opened within a short time.

Easy exit recall manually activates when you press the "Exit" button.

Note: Similar to the Auto Memory Recall feature, the operation of the Easy Exit Recall will differ based on transmission type. Refer to the "Supervised / Unsupervised Movements" section above.



© 2018 General Motors. All Rights Reserved.