

Document ID: 2368989

#PIC4188G: Battery Drain Check List - Corvettes - keywords adaptor draw harness interface iPod lamp light lights lock manual parasitic program shift shifter steering transmission wheel - (Nov 17, 2009)

Subject: Battery Drain Check List - Corvettes

Models: 2005-2009 Chevrolet Corvette



This PI was superseded to clarify iPod interface mentioned is for aftermarket devices and that this does not apply to the GM PAL device and to mention importance of correctly installing the PAL. Please discard PIC4188F.

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition/Concern:

A customer may complain of an intermittent battery drain.

Recommendation/Instructions:

If a complaint of a battery drain arrives it is important to do a little product investigation prior to applying battery power or jump starting the vehicle. Please read each step carefully.

- Use the emergency entry procedure to enter the car, unlock the trunk or hatch and release the driver's door.

Note: For 2005 MY manual transmissions only, perform the following check prior to proceeding to step 2: Attempt to turn the steering wheel. The Electric column lock waits to see if the shifter was placed in reverse prior to issuing the command to lock the column. If the column is unlocked there is a good chance the shifter was not in the proper location when the car was shut down and as a result, the BCM may not have "gone to sleep". If the column is locked when inspecting the vehicle, then the shifter had to be in reverse at time of key-off (as is required for 05MY for successful engine shutoff).

- Open the hood and apply battery power, either to jump or charge the battery. DO NOT START THE ENGINE. Enter the car, close the door and wait for 90 seconds. Take note of what is on. Address any item that is on that should not be.
 - Are the headlamp or day time running lamps lit? With the ignition off there should not be any lamps lit. Perhaps the headlamp switch has been inadvertently turned on. Remember the only time the headlamps are turned off are in the off position or automatic. If the customer has turned the stalk to parking lamps or headlamps those lamps will be lit when the ignition is off. There should be a chime to remind the driver the lamps are lit but often times the chime is ignored. These are on the 20 minute battery saver circuits but it does not require many short trips (several start and stops) to draw the battery down to a voltage that will not allow the car to start.

- Is the radio still on? There have been reported cases where the radio stays powered up after the vehicle is shut down. This has been an intermittent complaint and it only occurs on cars equipped with the Bose systems which are the multi-disc player and the Nav radio. Only service the radio if this concern can be identified.
- Does the customer own an iPod? It is possible an aftermarket iPod interface has been installed. This aftermarket device connects directly to the radio at the XM connection. It will keep the audio powered up after shutdown. Even if the aftermarket iPod device has been unplugged, this aftermarket device must be removed from the vehicle completely. The device triggers the data bus to maintain power even when the device is not powered.

Note: This direction does not apply to the approved GM Accessory PAL device. It is critical, however, that the installation and wiring of the GM PAL device is followed exactly as written or you may experience concerns.

- Close both doors.

After 2 minutes are there any interior lamps on? Visually check the map lamps on the rearview mirror and vanity lamps. Often these lamps can be bumped and if the car is only driven during the day it will not be noticed. Under dash lamps are controlled by the courtesy lamp switch. Many customers do not realize that the switch has been bumped and turned on. The old switch (C5 cars) used to push in and you could tell it was off. The new switch (C6 cars) does not press in. It can be bumped and turned on and go unnoticed. There should not be any lamps on in the interior of the car after 3 minutes if the ignition has not been turned on, including the cluster. Note anything that is on.

- Check for electrical accessories plugged into the cigarette lighter and the accessory plug in the console. Even though there may not be anything plugged into the accessory cord it can be a source of battery draw.
- Use the Tech2 to monitor key cylinder operation for the deck lid or hatch depending on body style. Be sure this cylinder changes status on the Tech2 as the cylinder is rotated. An "Active" input to the BCM may keep the BCM awake and induce a battery drain condition. The Tech2 path is... Model Year > Passenger Car > Chevrolet > Y Car > Body and Accessories > Body Rear End > Data Display > Body Control Module > Chassis Data > Keyless/Remote Start Data > locate the parameter labeled "Trunk Key Cylinder Switch". This item should change from Active to Inactive when the cylinder is rotated.
- Remove the CTSY/LAMP fuse from the electrical center. Perform a 20 minute parasitic draw test. Was the draw eliminated with the CTSY/LAMP fuse removed? If so, remove 1732 circuits from the BCM, Connector C4 terminals D5 and E5 and Connector C3 terminal A3. Test for continuity to ground on each terminal. There should be no ground continuity with all devices turned off, trunk/hatch closed and door latches closed. Diagnose and repair circuit conditions on any 1732 branch with unwanted grounding path. Normal system operation will have a signal voltage on the 1732 circuit while powered down and all three 1732 circuits installed at the BCM in their proper connectors.

Note: There have been reports of buttons on the Universal Garage Door Opener sticking. This device could lead to an intermittent battery drain. Unplug the driver's side visor/sunshade and evaluate. When a button sticks, the vehicles battery draw is typically around 250mA. This device is powered by the 1732 courtesy circuit listed above.

- If all of the above information has been inspected and Strategy Based Diagnostics has been performed with no resolution, reprogram the PCM/ECM with the latest calibration through TIS-2WEB. Once the calibration has been down loaded to the PCM/ECM, release the vehicle for the customer to evaluate.

Note: 2007-2009 model year vehicles were given this updated calibration prior to shipping from Bowling Green Assembly.

Note: 2005 Model vehicles select the calibration under the tab for "Main Operating System" labeled: "New software to address potential battery run-down situation"

Note: 2006 Model vehicles select the calibration under the tab for "Main Operating System" labeled: "New software contains diagnostics enhancement for DTC P0128 and DTC P0507. Also addresses battery drain."

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



WE SUPPORT
VOLUNTARY
TECHNICIAN
CERTIFICATION