Battery Drain Check

Check

NOTE: *No factory-equipped vehicle should have more than a 50 mA (0.050 amp) draw. Check for current drains on the battery in excess of 50 mA (0.050 amp) with all the electrical accessories off and the vehicle at rest for at least 150 minutes. Current drains can be tested with the following procedure.*

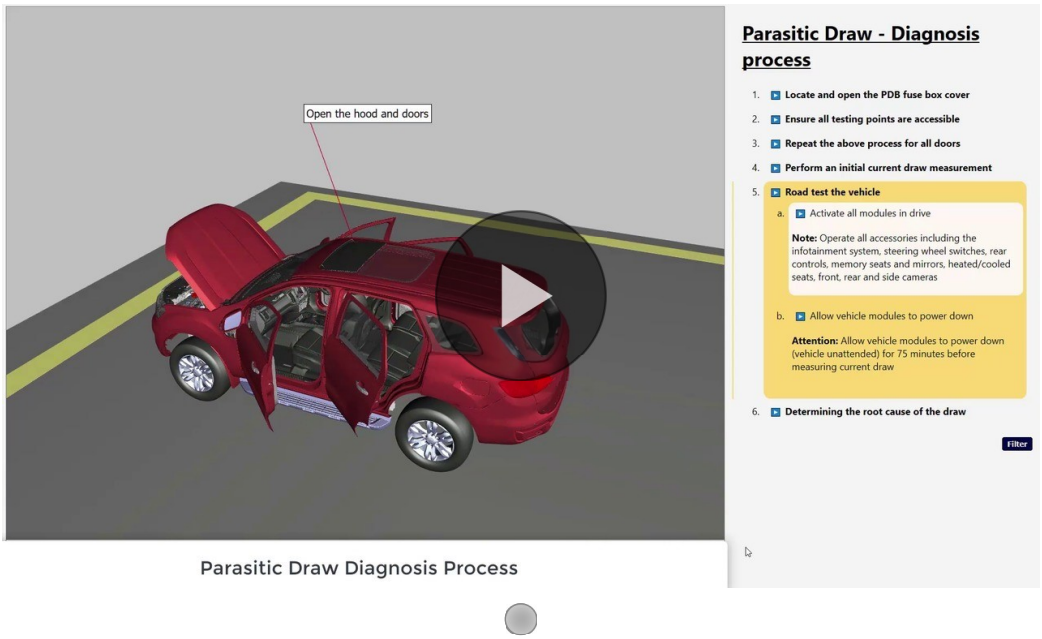
NOTE: *Many electronic modules draw 10 mA (0.010 amp) or more continuously.*

NOTE: *Typically, a drain of approximately 1 amp is attributed to an engine compartment lamp, glove compartment lamp or interior lamp staying on continually. Other component failures or wiring shorts are located by selectively pulling fuses to pinpoint the location of the current drain. When the current drain is found, the meter reading falls to an acceptable level.*

NOTE: *To accurately test the drain on a battery, an in-line ammeter must be used between the negative battery post and its respective cable. Use of a test lamp or voltmeter is not an accurate method.*

NOTE: *In addition to the battery drain check a parasitic draw test video is provided as an additional testing resource,*

Click here to view parasitic draw test.



Parasitic Draw Diagnosis

1. If equipped, disable the approach detection feature.
2. Make sure the fuse box(es) are accessible without turning on the interior lights or the underhood lights.
3. Drive the vehicle for at least 5 minutes over 48 km/h (30 mph) to activate the vehicle systems.
4. **NOTE:** *If equipped with an automatic transmission and the vehicle has an IPC PRNDL indicator, verify the gear selector lever is in the park position and is operating correctly. A fault in the park position indicator circuit can prevent modules from transitioning to sleep mode.*

   Allow the vehicle to sit with the ignition off for at least 150 minutes (depending on region) to allow the modules to time out/power down.
5. Connect a fused jumper wire (30A) between the negative battery cable and the negative battery post to prevent modules from resetting.

6. Disconnect the negative battery cable from the negative battery post without breaking the connection of the fused jumper wire.

7. **NOTE:** *It is important that continuity is not broken between the battery and the negative battery cable when connecting the meter. If this happens, repeat the time out/power down procedure.*

   NOTE: *The meter must be capable of reading milliamps and should have a 10 amp capability.*

   Connect a meter between the negative battery cable terminal and the negative battery post.

8. **NOTE:** *If the meter settings need to be switched or the test leads need to be moved to another outlet, reinstall the fused jumper wire to avoid breaking continuity.*

   Remove the fused jumper wire.

9. If equipped with auxiliary battery(s), ensure that the auxiliary battery(s) are disconnected when measuring current draw at the primary battery, to ensure the meter or inductive amp probe measures all current draws present. Disconnect the auxiliary battery(s).
   Refer to: Battery Disconnect and Connect (414-01 Battery, Mounting and Cables, General Procedures).

10. Note the amperage draw. Draw varies from vehicle to vehicle depending on the equipment package. Compare to a similar vehicle for reference.

11. **NOTE:** *If the vehicle sits for an extended period of time and the battery drains, there is the possibility of a control module staying alive and not going into sleep mode. If a control module stays alive, it can result in battery drain. If a control module is suspected, isolate individual modules by disconnecting them one at a time and note if the excessive draw goes away.*

    NOTE: *For vehicles equipped with aftermarket equipment containing electrical connections, disconnect the aftermarket to factory connections to isolate the body from the chassis.*

    NOTE: *Vehicles may be equipped with multiple fuse box locations.*
    Refer to Wiring Diagrams Cell 13for schematic and connector information.

    If the current draw is excessive, remove the fuses from the main fuse box one at a time and note the current drop.

12. When the current level drops to an acceptable level after removing a fuse, the circuit containing the excessive draw has been located. Reinstall the fuse and allow the vehicle to sit with the key out of the ignition for at least 150 minutes (depending on region) to allow the modules to time out/power down again.

13. The excessive draw can be isolated by continuing to pull subsystem fuses and disconnecting components. Do not reinstall the fuses or connect components until testing is finished. To correctly isolate each of the circuits, all of the fuses may need to be removed, then install one fuse and note the amperage draw, remove the fuse and install the next fuse. Continue this process with each fuse.

14. If excessive current draw is isolated to a specific module, verify if a module input is the cause of the concern. Refer to the corresponding workshop manual system operation and component description section to determine the inputs (hardwired or network messages) received by the module in question.

15. Check the Wiring Diagrams manual for any circuits that run from the battery without passing through the main fuse box or other fuse box(es). If the current draw is still excessive, disconnect these circuits until the draw is found. Disconnect the generator(s) electrical connections and retest if the draw cannot be located. The generator(s) may be internally shorted, causing the current drain.

16. If equipped with window one-touch up, perform the window motor initialization after the negative battery cable terminal is connected to the negative battery post.
    Refer to: Power Door Window Initialization (501-11 Glass, Frames and Mechanisms, General Procedures).

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