

Battery: Testing and Inspection

Drain Test

Check for current drains on the battery in excess of **50 milliamps** with all the electrical accessories off and the vehicle at rest. Current drains can be tested with the following procedure.

WARNING: DO NOT ATTEMPT THIS TEST ON A LEAD-ACID BATTERY THAT HAS RECENTLY BEEN RECHARGED. EXPLOSIVE GASES CAN CAUSE PERSONAL INJURY.

CAUTION: To prevent damage to the meter, do not crank the engine or operate accessories that draw more than **10A**.

NOTE:

^ Many computers draw **10 mA** or more continuously.

^ Use an in-line ammeter between the battery positive or negative post and its respective cable.

^ Typically, a drain of approximately **one amp** can be attributed to an engine compartment lamp, glove compartment lamp, or luggage compartment lamp staying on continually. Other component failures or wiring shorts may be located by selectively pulling fuses to pinpoint the location of the current drain. When the current drain is found, the meter reading will fall to an acceptable level. If the drain is still not located after checking all the fuses, it may be due to the generator.

^ To accurately test the drain on a battery, an in-line digital ampmeter must be used. Using a test lamp or voltmeter is not an accurate method due to the number of electronic modules.

1. Make sure engine compartment and interior fuse panels are accessible without turning on interior and underhood lights.
2. Drive the vehicle at least **5 minutes** and over **30 mph** to turn on and exercise vehicle systems.
3. Allow vehicle to sit with the key off for at least **one hour** to allow modules to time out/power down.
4. Connect a jumper wire between negative battery cable and negative battery post to prevent modules from resetting and to catch capacitive drains.
5. Disconnect negative battery cable from post without breaking the connection of the jumper wire.
6. Connect the SABRE Premium Electrical System Tester between the negative battery cable and post. The meter must be capable of reading milliamps and should have a **10 amp** capability.

NOTE: It is very important that continuity is not broken between the battery and the negative cable when connecting the meter. If this happens, the entire procedure must be repeated.

7. Remove the jumper wire.

NOTE: If the meter settings need to be switched or the test leads need to be moved to another jack, the jumper wire must be reinstalled to avoid breaking continuity.

8. No stock vehicle should have more than **50 MA** draw.

NOTE: AMP draw will vary from vehicle to vehicle depending on the equipment package. Compare to a comparable vehicle for reference.

9. If the draw is found to be excessive, pull fuses from the interior fuse panel one at a time and note the current drop. Do not reinstall the fuses until you are finished testing.
10. If the draw is still excessive, remove fuses from the engine compartment fuse panel one at a time and note the current drop. Do not reinstall fuses until you are finished testing.
11. Check the wiring schematic in the wiring diagram for any circuits that run from the battery without passing through the engine compartment fuse box. Disconnect these circuits if the draw is still excessive.