

The Preventive Maintenance Series

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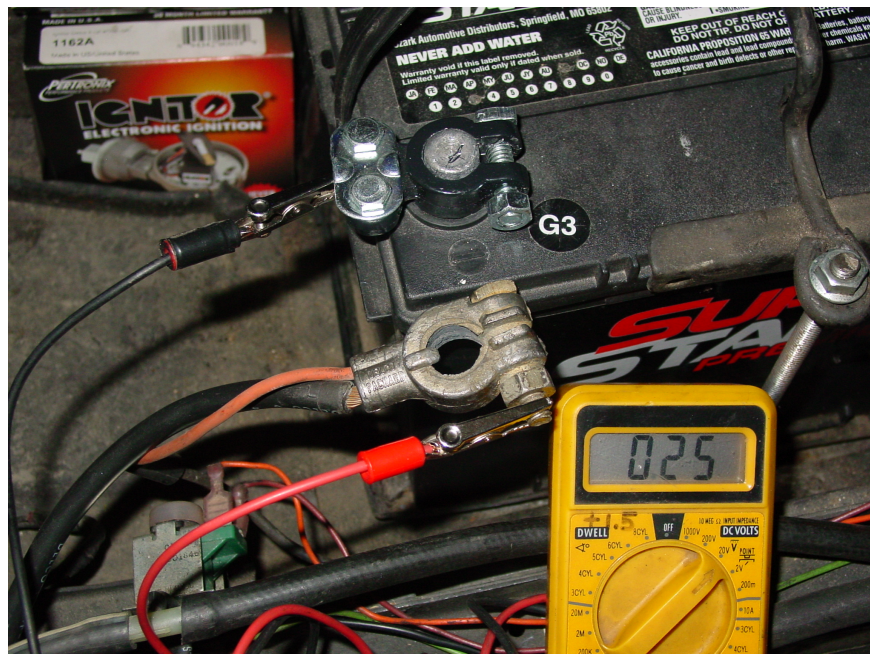
Battery Drain

Finding a battery drain can be really easy or really difficult. To begin diagnosis, be sure you have everything turned off. Unplug anything with a parasitic draw, such as any non-stock radios, players or anything with a memory, including any clocks wired to the car battery, and the internal voltage regulator plug on the alternator (if equipped).

Remove the negative cable and tap the cable end on the post to draw out any residual voltage before making your check.

Two ways to track your progress:

1. Remove the negative battery cable and in the dark, scratch the cable end repeatedly against the post looking for small sparks. Cover your head with a blanket (as long as nobody can see you).
2. Connect a volt meter between the negative battery post and its cable end (black to battery post or you get a negative reading which is irrelevant on a digital). If you get full battery voltage there may be a big enough drain to run the battery down. Normal voltage with this check is 0.50v or less. The setup below for checking potential shows 0.25v.



Over the years I have found a couple of batteries that must have had an internal draw of some kind, A quick battery change cured the draw so if you don't find the problem quickly, try swapping batteries before going to the following procedure.

1. Now install a voltmeter as noted above and begin to disconnect the various systems (leave them disconnected) while checking the voltmeter. Most likely offenders in the order that I have observed them are:
2. Failure to follow all of the instructions in paragraph 1 above.
3. Cigarette lighter socket; the base corrodes badly from the ash and shorts.
4. Glove box, engine compartment or trunk light adjustment.
5. Heater hose touching the battery cable end on the back of the starter solenoid. Usually early models but could happen to any.
6. Horn relay. Usually early models because they got wet from seal leaks and corroded internally. However, it could happen to any model and it has power all the time. It is un-fused and will burn the wiring all the way to the battery if it shorts.
7. Dimmer switch. It has power all the time and corrodes from getting wet over all the years. Some times coincides with loss of headlights when you use the switch.
8. Dome light could be on all the time because of damaged door jam switch.
9. On early model cars and FC vehicles the primary feed wire at the multi-connector in the left side of the engine compartment can melt, corrode and cause a small short to adjacent wires. It also can suddenly break contact and you loose all power. Build a bypass with soldered wire.
10. Late model cars had a service bulletin released correcting the rear fuel line and battery cable grommet in the left sheet metal. The grommet was soft and allowed the battery cable and fuel line to push through the slit and rub on the sharp sides. Also, those before you may have removed the grommet or it may have been broken.
11. Another service bulletin addressed the wiring harness in the early production manual '65 models. The harness in the tunnel pans was not supported correctly at the factory and the clutch cable sawed into the wiring. This could happen to any late model if the harness is moved from its original (corrected) position. I had this happen to a '65 Corsa that I bought new. My wife was driving it and every time she pushed in on the clutch the engine died.

If no culprit has been found by this time, the next step is isolating the harness sections to zero in. Start anywhere but pull the four harness connectors apart one at a time starting from the ends until you find the one that stops the short.