

The Preventive Maintenance Series

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Electrical Tips.2

Battery and cable maintenance:

Remove the cable ends from the battery and clean the inside as well as the posts. Avoid cable ends with bolt on clamps, they add resistance and will corrode quicker than molded cable ends. The ground cable must be bolted firmly to the engine with a pigtail grounded to the body; early models had a braided strap that did both. The body ground is for the primary electrical circuit to work properly since the engine is mounted in rubber. If you do not ground the negative cable firmly to the engine you risk burning the shifter cable or clutch cable and other items every time you crank the starter (which will also crank slow).

To check for a battery drain, disconnect any “always on” accessories such as clock or parasitic radio memory and disconnect the two terminal connector on internally regulated alternators if the output stud is used as the main junction (regulator will be energized). Remove the negative battery cable and connect a voltmeter between the negative post and the negative cable end; there should be no potential (meter reading) difference. Hook the positive meter lead to the cable; a reading of 12 volts indicates a drain. A simpler method is to remove the negative cable and scratch the end against the battery post with the lights out (or under a blanket) and look for a spark. Pull fuses and disconnect circuits until the drain stops and you can make the repair.

Some Common Drains:

- The left side heater hose (non gas heater) can contact the battery cable mounting stud on the back of the starter solenoid. Original car hoses had a shield but that has usually been lost long ago. The wire reinforcement in the hose will short to the battery cable and can even burn the fabric. Although early cars are the most susceptible, it can happen to any Corvair if placement of the hose is not checked. Make a rubber shield, get a reproduction shield from a vendor or support the hose.
- Cigarette lighter sockets will corrode from ash and humidity and cause a low amp short; that circuit is not fused and the short can increase with time.
- Horn relays are not fused and hot all the time. Early model cars have the relays located where water can get in them if the trunk seal is bad or if the channels are rusted. A damp trunk that is closed all the time will accelerate failure in all cars. If the relay looks rusted, replace it. You can also carefully take the relay apart for inspection.

- Fuse blocks can be a real problem if they have had water leaking on them; most common on late models with windshield leaks. If your fuse holder clips are rusted, you should remove the screws holding the fuse block and turn it over for inspection.
- Although usually obvious, dome and courtesy lights, glove box lights, and mercury switch lid lights can be out of adjustment and stay on continuously.
- Late model manual transmission cars can have a clutch cable saw into the main body harness in the tunnel pan, causing intermittent shorts that blow fuses or kill the engine when you push in on the clutch - as well as the potential for a constant battery drain. A service bulletin called for checking early production '65 models and I have seen this happen on the '65 models. Later models did not have a service bulletin warning, however, 46 years with the potential for someone moving the harness when replacing a cable would make a check worthwhile. Have someone push your clutch pedal while you inspect its travel in the tunnel next to the harness.
- Another service bulletin concerned the grommet in the '65 front engine sheet metal that the battery cable and fuel line passed through. The slotted grommet allowed the battery cable and fuel line to rub against the sheet metal which is thin and sharp. There are also cars out there with no grommets, or home made plugs that will allow the problem to occur.