## **Testing for Battery Drain**



Link: https://help.responsiblefleet.com/troubleshooting/testing-for-battery-drain/ Last Updated: October 4th, 2016

Although it may be *possible* for a device's power draw to exacerbate existing battery conditions (i.e., an old battery or other after-market products causing draw), the device alone *should not* cause battery draw issues.

**Note.** After a maximum of 30 minutes Ignition Off, fully updated devices typically see a range of 30-50mA draw.

- PNP = ~32mA - GPSI-5000 = ~40-50mA

If you're unsure if the device is drawing abnormally high amounts of power, the following steps will help you test draw:

All testing should be completed when the vehicle is in the open and the device has a clear line of sight to the sky. Ensure vehicle has been reporting properly prior to draw test.

1. Remove the negative battery cable from its post, set your multi-meter to DC Amperage, and connect the multi-meter to complete the circuit (in series).

Connecting the multi-meter in series will complete the circuit giving the vehicle and GPS unit power again.

- 2. Disconnect the GPS device from power by either removing the inline fuse on the red wire, unplugging the 20-pin Molex connector at the device, or by disconnecting the device from the OBD-II port (varies by device).
- 3. Close all doors, and wait 30 minutes for the vehicle's electrical system to stabilize.

**Note.** Failure to wait the full 30 minutes may result in a false reading, as various modules within the vehicle (DMC, ECM, ECU, ABS, etc.) will be "awake" and offset the test results.

- 4. Reconnect the GPS device without waking up any of the onboard modules. If the dome light comes on, or a door is opened, you may have to wait another 30 minutes for the vehicle modules to fall back asleep.
- 5. Confirm the device is connected to both GPS and Cellular networks; the green and amber LEDs should be on solid.
- 6. Record the amperage on your multi-meter (reading #1).
- 7. Without waking up any of the onboard modules, disconnect the GPS device from power by either removing the inline fuse on the red wire, by unplugging the 20-pin Molex connector at the device, or by disconnecting the device from the OBD-II port (varies by device).
- 8. Record the amperage on your multi-meter (reading #2).
- 9. Subtract **Reading #2** from **Reading #1** to obtain the number of milliamps the unit is drawing.

If you have any questions, please contact Support.