

## **BATTERY EARTH LEAKAGE TEST (PARASITIC DRAIN)**

**WARNING: Do not connect your voltmeter across the battery terminals when set to Amps or mA mode as you will blow the fuse in the voltmeter – these can cost around £10-15 each and some models have two fuses!**

### **Introduction.**

Whilst connected to your vehicle with the ignition off, the battery should show only minimal current draw - around 50mA is normal. This may be increased somewhat if an alarm systems is in use, so bear this in mind when you carry out this test. Either disconnect the alarm if possible or otherwise take into account the current draw of the alarm.

Carry out an earth leakage test as follows. **Read this procedure through in full** to make sure you understand it.

### **Ensure Ignition is switched OFF**

1. Disconnect the battery Negative (-) lead (and any other leads) from the Battery Negative Terminal. **Leave the Positive (+) lead connected to the battery.**
2. Using a voltmeter **set to High Amps**,
  - a. Connect the **BLACK voltmeter** lead to the Battery **Negative** Terminal
  - b. Connect the **RED voltmeter** lead to the (disconnected) **Negative** lead.

Once you make the connections, you should have **no reading** (Zero Amps) showing on the AMP scale, you can now safely reduce the range of the AMPS scale to the Milliamps mA scale.

3. Make the same connections again - the reading **should not exceed** 50mA.

**IF the reading is higher than 50mA you have a current draw from one of your circuits/components.**

5. Remove each fuse in turn (only one at a time) – if there is no reduction in the higher reading, replace that fuse and move onto the next one. Repeat this process until you discover which circuit is responsible. The higher reading returning to a normal reading (when the fuse is removed) will show which circuit is involved.
6. This circuit can then be investigated further – if there are multiple components sharing the fuse, disconnect each component in turn until the offending item is found.
7. If none of the components are responsible, then the wiring circuit connected to that fuse is suspect.

Hope this helps!

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