Using the Battery Conductance Tester

Conductance is a measurement of the plate surface available in the battery, which determines how much power (or current) the battery can supply. As a battery ages the plate surface can sulfate, or it can shed active material. In addition, conductance can detect cell defects, shorts, and open circuits.

1) **Remove the Surface Charge** (A battery Load Test will remove the surface charge)
   If you do not have a carbon pile load tester, disable the fuel and crank the engine for about 10 seconds to remove the surface charge. *It is important to remove any surface charge to get an accurate test.* Let the battery rest for several minutes after cranking or load testing the battery. This will reveal the true state of charge for the battery.

2) **Make sure the conductance tester clamps are touching lead.** If steel or copper gets between the battery and the tester, inaccurate results may be obtained. For side terminal batteries you may need to install lead terminal stud adapters. If the battery passes the test your connections were O.K. *If the battery fails a conductance test, remove all cable clamps and re-test.*

3) **Conductance testers are sensitive to Electro-Magnetic Interference.** Make sure vehicle loads (lights, etc.) are off and the key is removed. Turn OFF any nearby battery chargers.

4) **Select the proper battery rating.** Do NOT use the label on the battery; look up the manufacturer rating that is specified for the vehicle.

5) **Press the TEST key**

   Some testers will display test results including the CCA, and pass or fail the battery. If the battery fails this test, remove all battery cables, and re-test with the tester hooked directly to the lead of the battery. (You may need to use lead stud adapters for side terminal batteries) Failure to repeat this test may result in unnecessary battery replacement.

   Some testers have three LED lights to indicate the battery condition.

   - If the Green LED (O.K.) illuminates the battery is O.K.
   - If both the Green (O.K.) and Yellow (LOW) LED illuminate, the battery is O.K. but low on charge. Recharge this battery and check the starting and charging system to find out why the battery is low on charge. Do not neglect to check for parasitic drains.
   - If only the yellow (LOW) LED illuminates the battery is low and might be bad. Recharge and retest. If it still reads Low after recharging, recommend replacing the battery.
   - If the Red (X) LED illuminates a replacement battery is recommended

Before replacing the battery, remove all battery cables, and hook the conductance tester directly to the lead terminals of the battery. If the battery now passes, clean the battery terminals and return the battery to service. Failure to repeat this test may result in unnecessary battery replacement.

Note: On some testers you must be sure CCA flashes on the screen when you hook it to the battery. (it will only show up for 3 seconds) If CCA does not appear for three seconds unhook the tester. Connect the black clamp to the negative (–) battery terminal. Press and hold down the TEST key while reconnecting the positive tester lead. Use the arrow key to select CCA.