

# MBC-1000 Battery Test

DECISION	DEFINITION	CUSTOMER TALKING POINTS
Good Battery	The battery has useful life remaining.	Meets or exceeds the industry requirements. Continue to use.
Good & Recharge	The battery is not fully charged, but is considered to have useful life remaining. Charge per manufacturer's specifications before returning to service.	The Customer should consider having the battery professionally charged to get the optimal performance and life out of the battery. This may take several hours depending on how deeply discharged the battery is. After a complete charge continue to use.
Suggest Replace	The battery is approaching the end of its useful service life.  The battery might fail. Customer should consider replacing with a new battery in the near future to prevent a breakdown.	
Charge & Retest	The battery is too discharged to determine battery condition (State of Health) accurately. Charge per manufacturer's specifications and repeat the battery test.	<ol> <li>Technician should:</li> <li>Assess pattern of failure through questions (in breakdown situations)</li> <li>Assess Customer Risk - How important is it that this vehicle start next time?</li> <li>Review the age and overall condition of the battery.</li> <li>Recommended actions for the Customer are "Professionally Charge and Retest" or "Replace" their battery.</li> </ol>
Replace Battery	This battery has reached its end of life. Immediate replacement is advised.	Replacement of battery is required whether from us or another retailer. Talk to the Customer about a replacement battery.
Bad Cell Replace	When one or more of the cells fails, the battery is incapable of producing the needed amperage to start the vehicle.	Replacement of battery is required whether from us or another retailer. Talk to the Customer about a replacement battery.

## **Tester Tips & System Test**

### **Tester Tips**

- Complete a visual inspection of battery (Safety first).
- Clean the battery posts and terminals.
- Good, clean connections ensure accurate tester results.
- Tester leads always are connected to lead posts of Customer's battery.
- To remove "Unstable voltage" alert on the MBC-1000 app ensure all loads (doors, boot, lights) are removed.
- When prompted be sure to place the jump pack on battery prior to moving to System Test.
- Look after cables and clamps. The cables should not be repetitively bent, twisted, or tensioned as this can affect tester accuracy over time.

### **MBC-1000 System Test**

SYSTEM TEST	DEFINITION	OUTCOME	RECOMMENDATION
CRANKING VOLTS	Average Voltage measured at cranking	Low	Investigate - Suspect starter motor or bad connections.
		Normal	No action required.
ALT.IDLE VOLTS	Alternator Voltage without the loads	Low	Investigate - Suspect alternator issue if combined result of alternator voltage at load is also low.
		Normal	No action required.
		High	Investigate - Suspect alternator or bad connections.
ALT.LOAD VOLTS	Alternator Voltage measured with loads	Low	Investigate - Suspect alternator or bad connections.
		Normal	No action required.
		High	Investigate - Suspect alternator or bad connections.
DIODE RIPPLE	Diode ripple Voltage	No Detect	No action required.
		Normal	No action required.
		High	Investigate - Suspect bad connections.
PARASITIC DRAIN	Parasitic battery drain measured with an Amp clamp	Warning	Vehicle must be inspected to find and remove the source of the drain. New battery should not be installed until the drain is fixed.
		Pass	No action required.

### **FAQ and Best Practices**

### I cannot connect my smart device to the tester. What do I need to do?

- Ensure tester is connected to battery and Bluetooth status button is lit and steady (Blue light on tester).
- Ensure Bluetooth setting within smart device is in the "On" position.
- Select "Scan" in upper right corner on MBC-1000 app.

### Tester leads appear worn or ripped. What do I need to do?

- Inspect tester leads daily, look for rips, cracks, tears, and/or any signs of normal wear and tear. If any signs of damage, replace leads immediately.
- Tester clamps should be cleaned regularly to ensure a good connection when testing.

#### Can I email test results to the Customer?

Yes, you can email the Customer results directly from the app.

### What is the minimum Voltage the MBC-1000 tester will operate at?

The MBC-1000 was designed to test down to 1.5 Volt.

## Can I connect the clamps to a remote post or ground or jump post to test the battery?

No. As this is an Ohmic tester, the clamps must be connected to the battery posts to perform the test. Failing to connect the clamps to the battery posts will result in an inaccurate diagnosis.

#### Can I test 24V battery?

Only a system test can be performed for a 24V system. A 24V battery test cannot be performed. To test the batteries in a 24V system, the test must be performed on an individual 12V battery.

### I received a message regarding low internal battery. How do I charge internal battery?

- Place on a known good battery for 1 minute.
- Internal battery recharges itself after every test.

# The test was closed before starting the Customer's vehicle. What do I need to do to complete the Full System Test?

On the main test page, enter the Job ID and press "Start Test". A question will appear asking if they would like to Retest or complete a System Test. The Technician would press "System Test" and continue through test sequence.

### How do I know if the test results have been sent?

- Access test records under TEST RECORDS in Home tab.
- Test records that have been uploaded will have a Cloud icon with a "Check mark"

  If Cloud icon has an "X"

  the test record has not been sent.
- Press the Cloud icon with the "X" for 1 second, a message stating upload successful will appear.
- Test records are uploaded through a smart device over WiFi.

