



BATTERY TETSING PRECAUTION & PROCEDURE THROUGH MIDTRONICS ANALYZER TEC- 6500

Sl. #	Precautions to be taken while measuring Conductance Measurements "ON LINE"	Precautions to be taken while measuring Conductance Measurements "OFF LINE"
1	Physical check (The cells/Battery to be checked for Physical abnormality)	Physical check (The cells/Battery to be checked for Physical abnormality)
2	Terminals should be free from dust & acid trace	Terminals should be free from dust & acid trace
3	Check for room Temperature(23°C to 30°C)	Check for individual cell temperature
4	Check individual Cell/Battery with system load consistency	Check for individual cell open circuit voltage (OCV) to confirm the SOH
5	Ensure cooling & ventilation system performance.	Ensure cooling & ventilation system performance
6	Ensure required float voltage applied on battery bank as per manufacturer recommendations	Disconnect the breaker to the battery string & isolate the battery bank from mains
7	Ensure the state of charge (SOC) If not, allow the battery bank to attain full charge.	Ensure the state of charge(SOC) If not charge the battery bank to attain full charge with rest period of 2hrs before test
8	For accurate Conductance measurements the probes should be connected on terminals or on inter cell straps nearer to terminal but not on stainless steel bolts	For accurate Conductance measurements the probes should be connected on terminals or on inter cell straps nearer to terminal but not on stainless steel bolts
9	Check for cell/battery leakage, if found, isolate such cells	Check for cell/battery leakage, if found isolate such cells



10	Repeat Conductance tests for the cells minimum two times found to be uneven values comparing other cells/battery	Repeat Conductance tests for the cells minimum two times found to be uneven values comparing other cells/battery
11	While calculating the average, the difference between three readings should not be more than 2%	While calculating the average, the difference between three readings should not be more than 2%
12	Consider the average as the final reading of that cell/Battery	Consider the average as the final reading of that cell/Battery
13	Consider the highest measured value as reference values (For old sites)	Consider the highest measured values as reference values (For old sites)
14	For new (Between 3 to 6 months old) consider Manufacturers recommended values as reference values	For new (Between 3 to 6 months old) consider Manufacturers recommended values as reference values
15	Check for ground leakage, if any , correct the same before conductance test	
16	Under any circumstances 50% and below of the reference value should be considered as questionable.	Under any circumstances 50% and below of the reference value should be considered as questionable
17	During conductance test on "ONLINE" if power outage is observed do not continue test. Once power resumes allow the bank to fully charge & then continue the conductance test.	Do not check conductance tests on cells/Battery which is displaying OCV below recommended values by manufacturers values
18	Ensure the tester probe contact is properly placed on terminals or inter cell connectors	Ensure the tester probe contact is properly placed on terminals or inter cell connectors
19	Wear safety materials while working on Batteries	Wear safety materials while working on Batteries



A. Process of testing

- i) Number of jars: - Input the No. of jars (batteries) in a string (connected in series)
- ii) Post/Terminal per jar: -Input the terminals per jar
- iii) Nominal voltage per jar: - Input the voltage per jar
- iv) Reference Value: - Input manufacturer's recommended value for Good Battery, if known else select reference developer to 30%
- v) A.C Ripple: - 1.5 % of the Float voltage
- vi) D.C Float Voltage: Depends on the per jar voltage (e.g.:- for 12 V – 13.50 & for 2V cell - 2.50 V.
- vii) D.C Float Current : - (Max.50ma per 100ah)

B. Before proceeding to test

- a. Ensure that, test probes are fitted properly in the tester. (Fix the probe gently. Do not handle it roughly. (threads may get damaged)
- b. Remove the rubber cap gently. If pulled by force Pins may come out.
- c. Ensure the caps are put back after test.
- d. Ensure that probes do not come in contact with other foreign particles which could damage the sensitive pin tips.



Testing procedure:

Step 1 Connect Positive (+ve) terminal of battery to red lead and negative (-ve) terminal to black lead ensuring the correct polarity.

Step 2 Start testing jar 1. Once the probe is kept on jar 1, one beep sound is heard, which indicates the tester is reading measurement. In few seconds two beep sound will be heard, which indicates the reading is over.

Step 3 Proceed to next cell or Jar & continue the same procedure till the test is completed.

Step 4 All the data's are stored in memory through memory card in **.CSV file** format. This could be down loaded to P.C as and .Also the consolidated report can be taken out through IR printer.

Step .6 Call the concerned for further help.

For Apple Energy Pvt. Ltd.

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