

Load Test

References

IEEE Std 450™-2020

IEEE Recommended Practice for Maintenance, Testing, and Replacement of **Vented Lead-Acid** Batteries for Stationary Applications

IEEE Std 1188™-2005

IEEE Recommended Practice for Maintenance, Testing, and Replacement of **Valve-Regulated Lead- Acid** (VRLA) Batteries for Stationary Applications

Load Test with BatteryDAQ BMS

With effective monitoring for Voltage, Internal Resistance, Connection Resistance, at normal battery condition, NERC PRC-005-2 standard does not mandate a performance or modified performance capacity test of the entire battery bank within maximum maintenance interval. [6 calendar years for Vented Lead-Acid (VLA) and Nickel-Cadmium (NiCad), 3 calendar years for Valve Regulated Lead-Acid (VRLA)]

If battery data indicates abnormality, or significant battery deterioration, a load test may be required to verify the battery still meets the performance requirements.

With DTU-800 embedded functions, a load test can be easily conducted and recorded without any other software.

Weak battery cell(s) can be easily identified during the load test.

Load Test Procedure

To keep data consistent, please stay with your existing load test procedure and discharge rate for specified application.

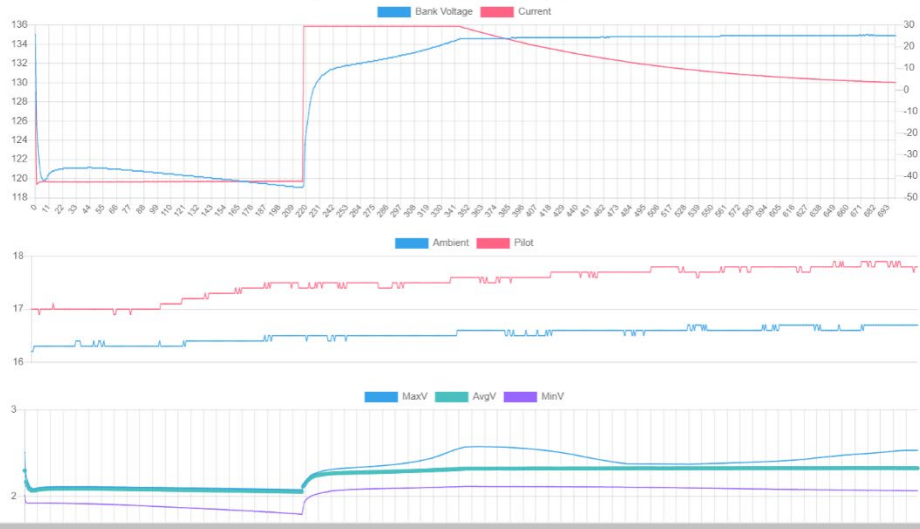
Here are some checkpoints and suggestions, BatteryDAQ is not in position to recommend the “best load test procedure”.

#	Description	Notes
1	Review Scope of Work, to ensure critical power supply for continuous operation.	
2	For single string battery, a temporary battery may be required.	
3	For parallel strings, do load test one at a time, do another string at different date.	
4	As of BatteryDAQ's experience, an equalize charge before load test is not necessary.	
5	Discharge rate shall be consistent to compare performance among similar battery banks.	
6	If the string voltage has not reached the termination limit, do not interrupt the test unless an individual cell is approaching 0.0V. It may need to bypass the worst cell(s) where feasible.	
7	The capacity Ah and Wh are calculated with actual current and voltage. So short time pauses (such as performing bypass) do not affect much of test accuracy.	

Realtime Data

Review: Last load test recorded on 2022-11-21 11:0

End Voltage_58 cells	119.1 V	Lowest Point(h:mm)	0:55	Temp.(Ambient)	17.4°C(16.4°C)
Cell Average	2.053 V	Highest	2.076 V	Lowest	1.792 V
Discharge Ah	39.1	Discharge kWh	0.391	Max Current	-43.6 A



Last Load Test Profile

Discharge data and profile is archived in SD card. It can be instantly viewed at any later time.

Caution: if you start a new load test, data for previous one will be erased. Please make sure you have downloaded the datasets before you start a new load test.

Replay: Last load test recorded on **2022-11-21 11:0**

End Voltage_58 cells	119.1 V	Lowest Point(h:mm)	0:55	Temp.(Ambient)	17.4°C(16.4°C)
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