RMA REPORT

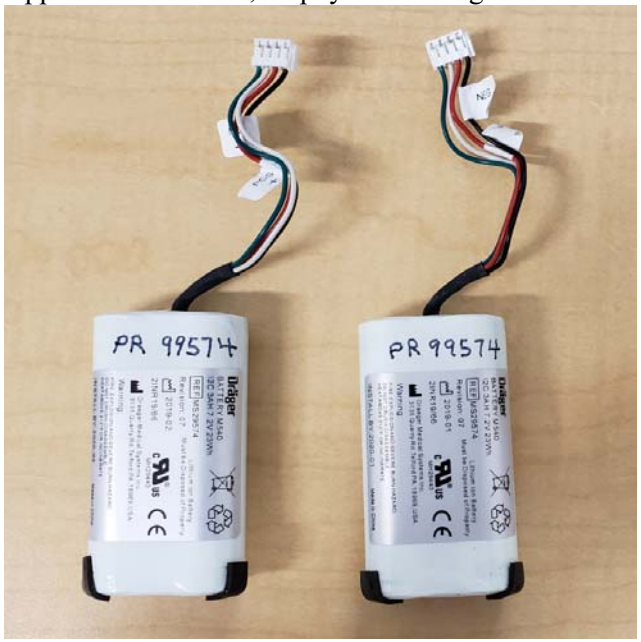
RMA Number: 203710
Model Number: U80314
Date: 12/17/2020
Check By: Thanh Nguyen

I. Return Reason

Batteries are only lasting 10 – 12 months and then unable to recharge.
Date code: 2019-01

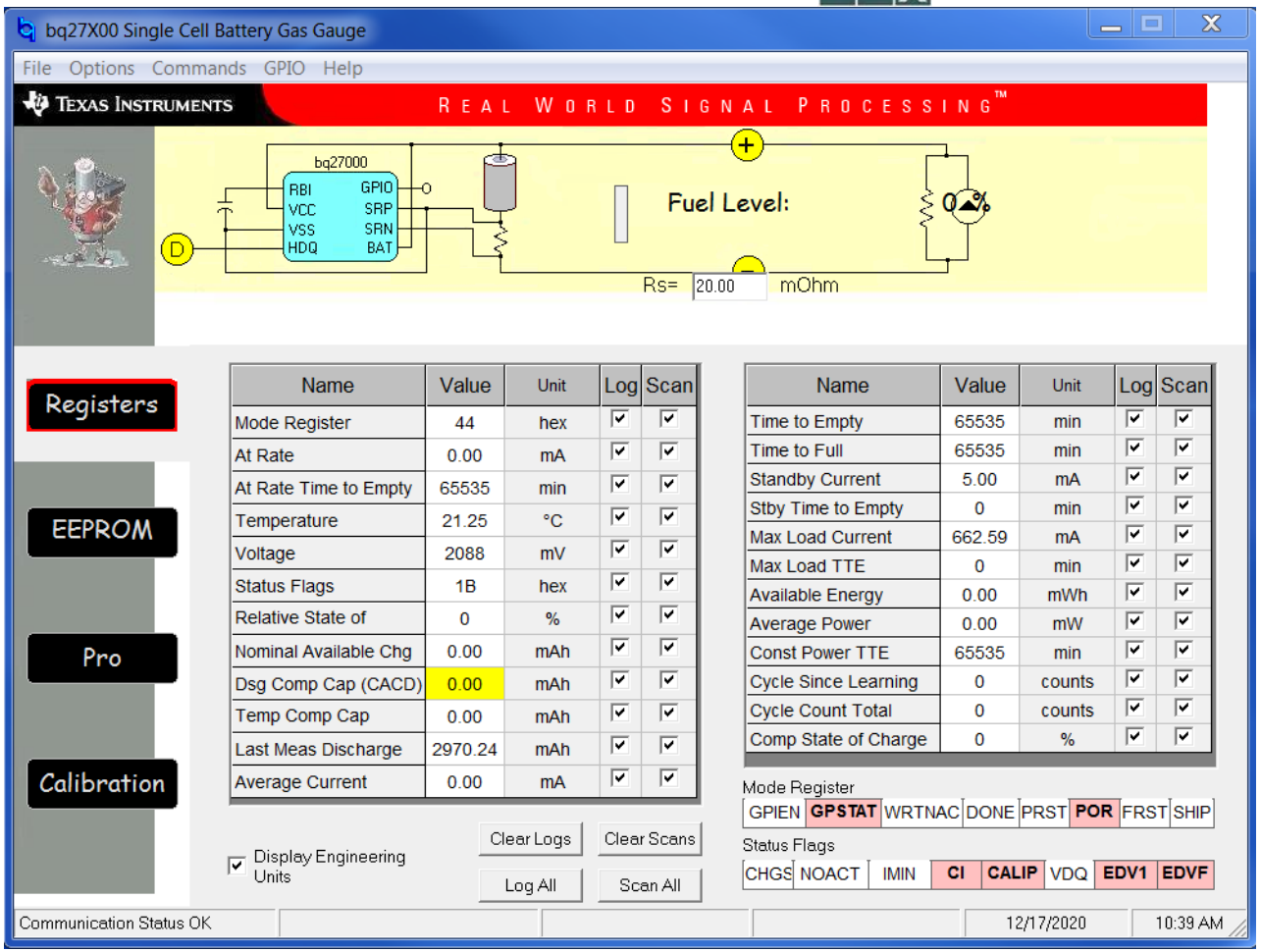
II. Observation

A. Appearance: Normal, no physical damaged.



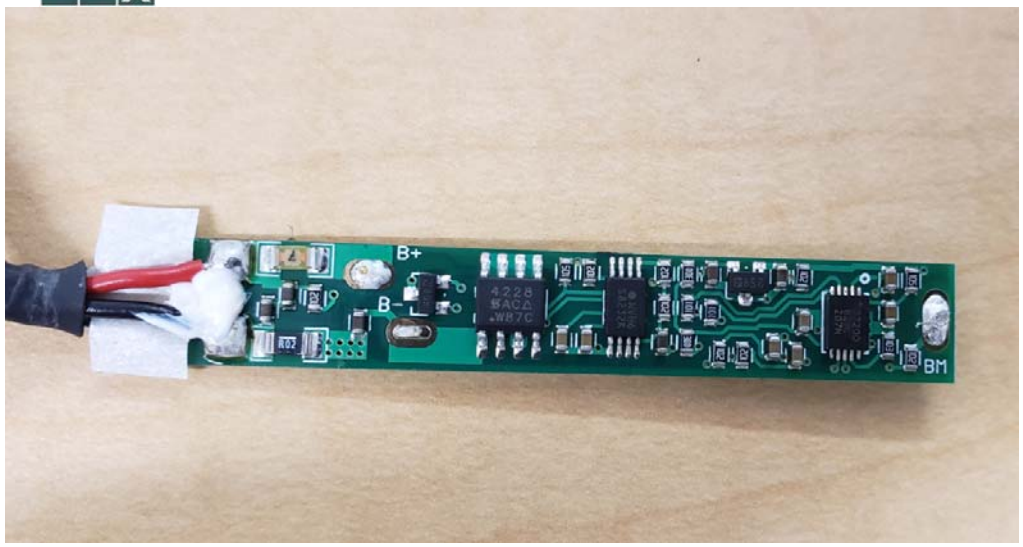
B. Batteries Fuel Gauge Before Fully Charge Test:
-Pack #1: Date Code: 2019-01

Totex Manufacturing Inc. 3050 Lomita Blvd. Torrance, CA 90505
Phone (310) 326-2028 Fax (310) 326-2336
www.totexmfg.com



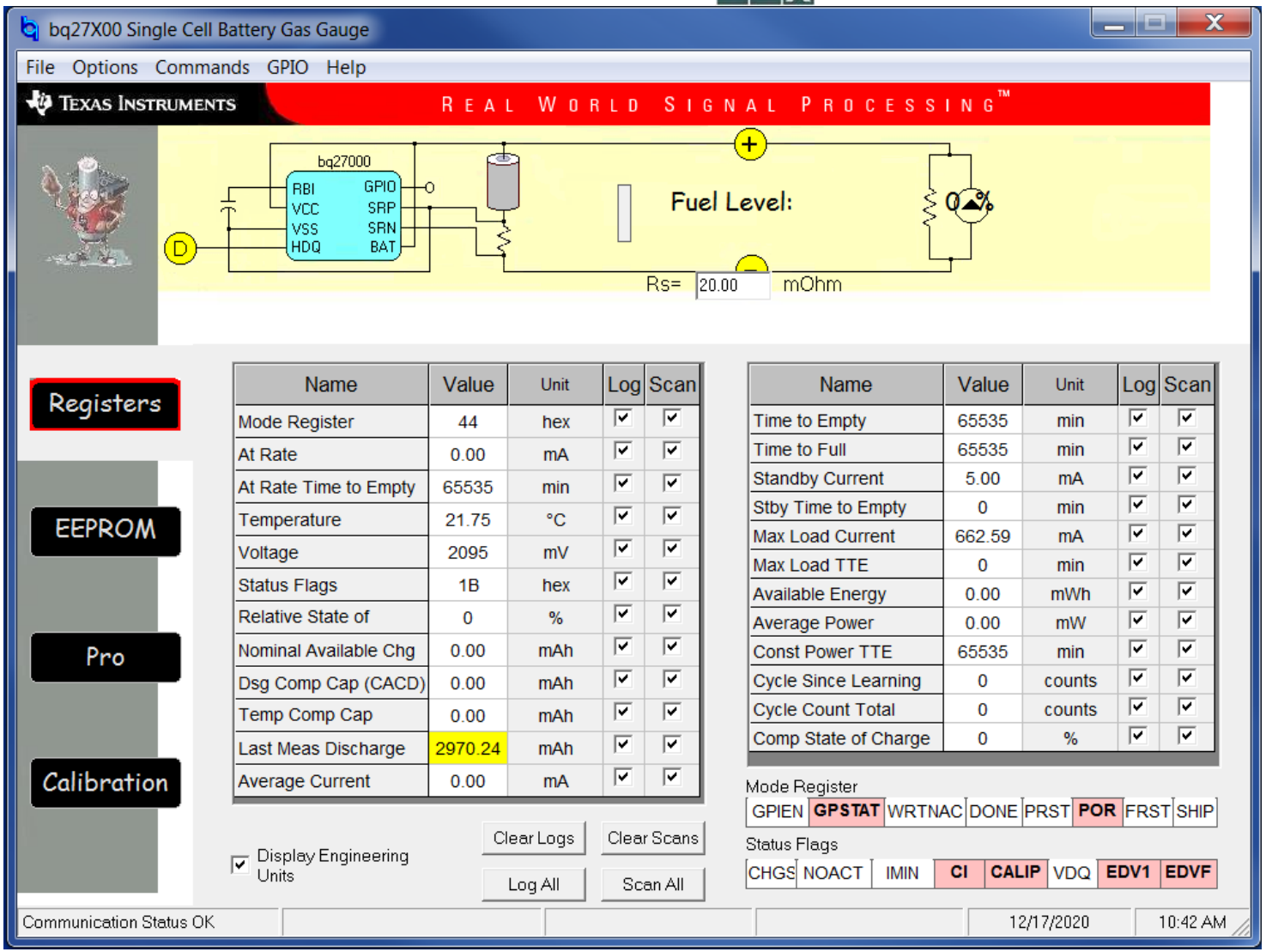
Note: this battery has no output voltage and only communicates when connecting with a power supply. Also it is not taking charge.

Remove protective shrink wrap



Date Code	Cell Voltage		PCBA Leakage		Remark
	Cell 1 (V)	Cell 2 (V)	B+ (µA)	BM (µA)	
2019-01	4.103	3.786	43.4	<0.1	The cell 2 is not holding energy or taking charge.

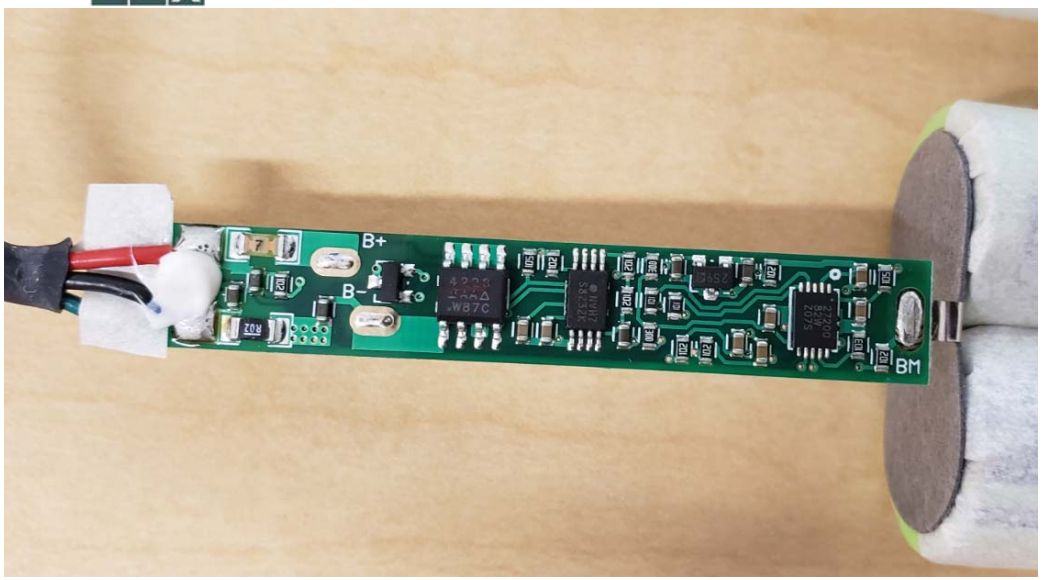
-Pack #2: Date code 2019-02



Note: this battery has no output voltage and only communicates when connecting with a power supply. Also it is not taking charge.

Remove the protective shrink wrap.

Totex Manufacturing Inc. 3050 Lomita Blvd. Torrance, CA 90505
Phone (310) 326-2028 Fax (310) 326-2336
www.totexmfg.com



Date Code	Cell Voltage		PCBA Leakage		Remark
	Cell 1 (V)	Cell 2 (V)	B+ (μA)	BM (μA)	
2019-02	0	4.134	43.7	<0.1	The cell 1 has zero voltage, and not takes charge.

III. Summary

Batteries do not show any sign of mechanical or electrical component damage. Both battery PCBAs have normal communication function and quiescent current. Their cell voltages are imbalanced, which will result in premature charge termination due to one of the cell reach cell reach over voltage threshold and trigger over charge protection.

Since there is no sign of mechanical and electrical damage found other than the cell, such failure might be caused by below reasons in order of probability:

1. One of the two cells in the pack is weaker than the other one. Their performance degradation rates are different. This results in Cell voltage difference increases over cycles or long storage.
2. Battery is operated or stored at elevated ambient temperature.
3. Battery is charged by voltage higher than spec limit or a broken charger.