City of Houston Fire Department

City of Houston Fire Department restores lost capacity in batteries on standby equipment in one month with use of PulseTech's SolarPulse, while allowing the assets to remain independent from shore power.

Challenge: Critical reserve assets, such as 5-Ton high water rescue trucks and fueling trailers, need to be deployment ready. The assets are stationed in areas not supported with shore power to maintain batteries with traditional AC to DC chargers. They are also exposed to high summer temperatures, negatively impacting battery health. The batteries are difficult to maintain in a state of reliability and loose capacity from sulfation.

Test: PulseTech's SolarPulse were installed on two of Houston's 5-Ton trucks and a fueling trailer. Initial battery readings were recorded before SolarPulse was installed. Period of time was one month from the starting numbers to the results. Assets were not connected to shore power, or any charging equipment except the installed SolarPulse units. Assets remained stationary with no deployment during the period of time.

Equipment:

- 777P-PT – Digital battery analyzer used for recording battery state of charge and state of health.
- SP-2 – PulseTech's SolarPulse 2-Watt 12-Volt unit installed on fueling trailer.
- SP24-PSC – PulseTech's SolarPulse 6-Watt 24-Volt unit installed on 5-Ton trucks.

Results:

PulseTech SolarPulse Installed 6/8/2018							
Unit #	Station 5 - Unit 46313				Station 57 - Unit 46560		Fuel Trailer
Battery #	1	2	3	4	1	2	1
CCA Rating	1225	1225	1225	1225	1250	1250	900
Date	6/8/2018	6/8/2018	6/8/2018	6/8/2018	6/8/2018	6/8/2018	6/8/2018
Voltage	12.46	12.48	12.47	12.47	12.76	12.46	11.73
State of Charge	67%	68%	68%	67%	100%	82%	21%
CCA Measured	1034	1109	1292	1216	1235	1026	751
State of Health	84%	90%	105%	99%	98%	82%	83%
Date	7/11/2018	7/11/2018	7/11/2018	7/11/2018	7/11/2018	7/11/2018	7/11/2018
Voltage	12.68	12.67	12.68	12.71	12.76	12.47	11.99
State of Charge	88%	88%	89%	92%	100%	83%	36%
CCA Measured	1071	1181	1343	1255	1263	1027	847
State of Health	87%	96%	110%	102%	101%	82%	94%

Summary: All batteries held or increased state of charge, and experienced an increase in measured CCAs. PulseTech's SolarPulse charged and maintained battery voltage, and restored lost health by removing sulfation with the patented pulsing process.

Testing conducted for CAP Fleet Upfitters by:
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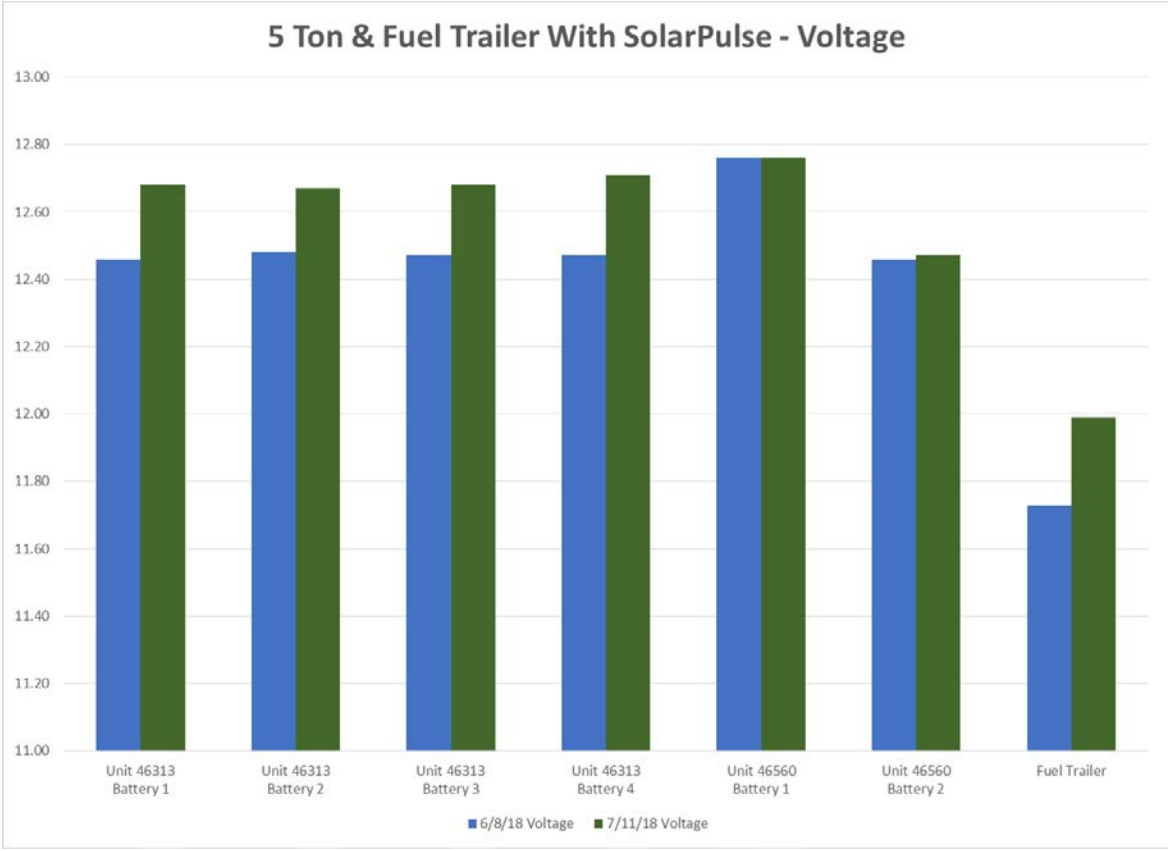

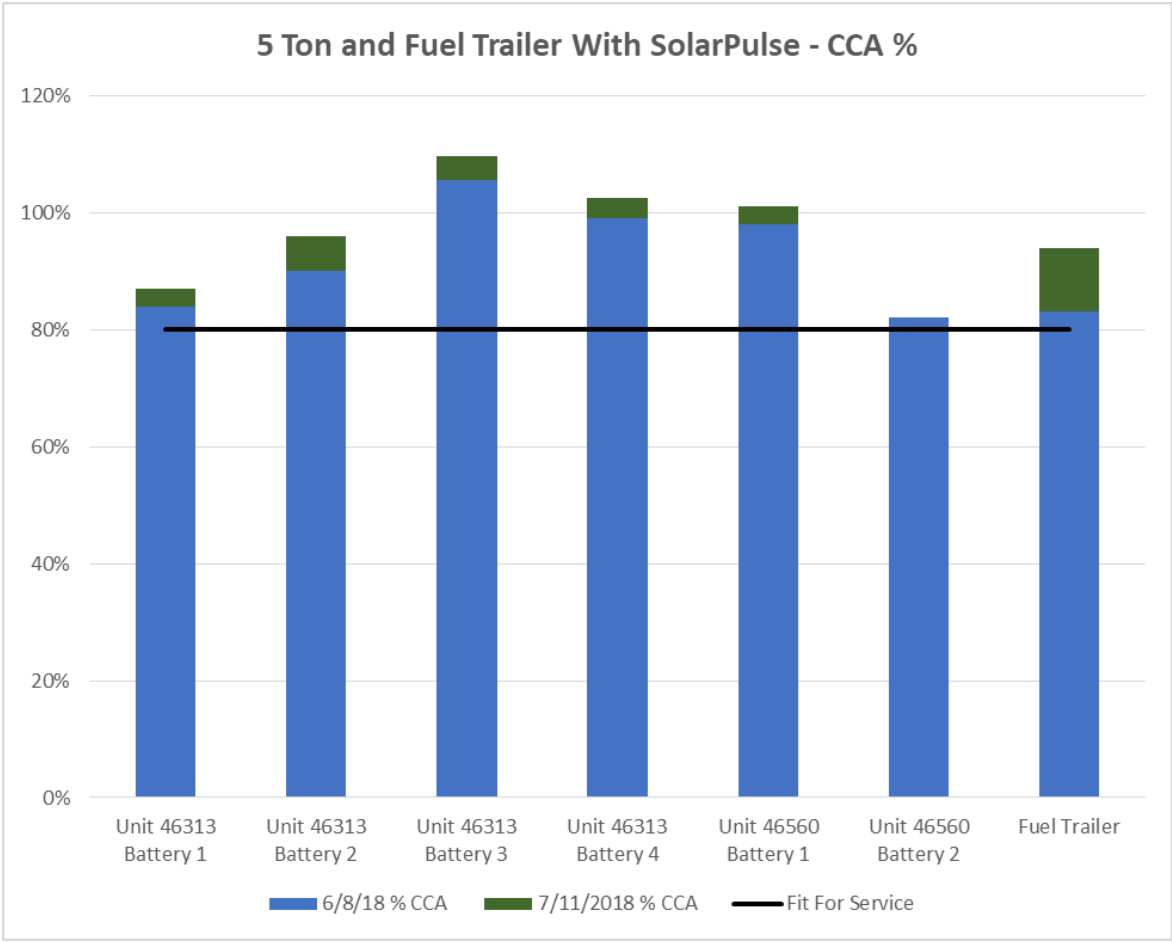

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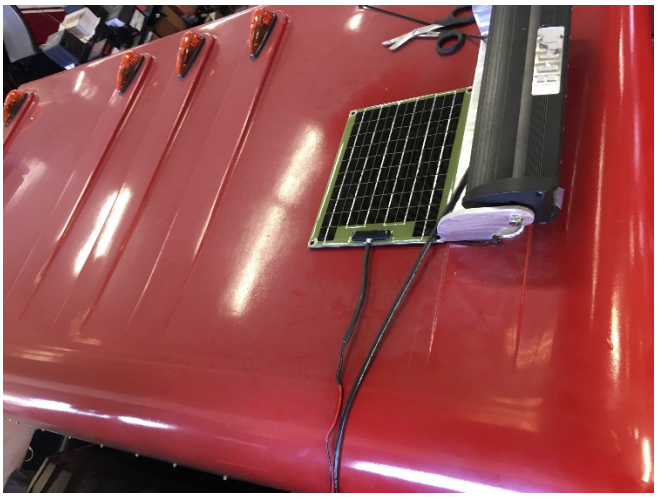
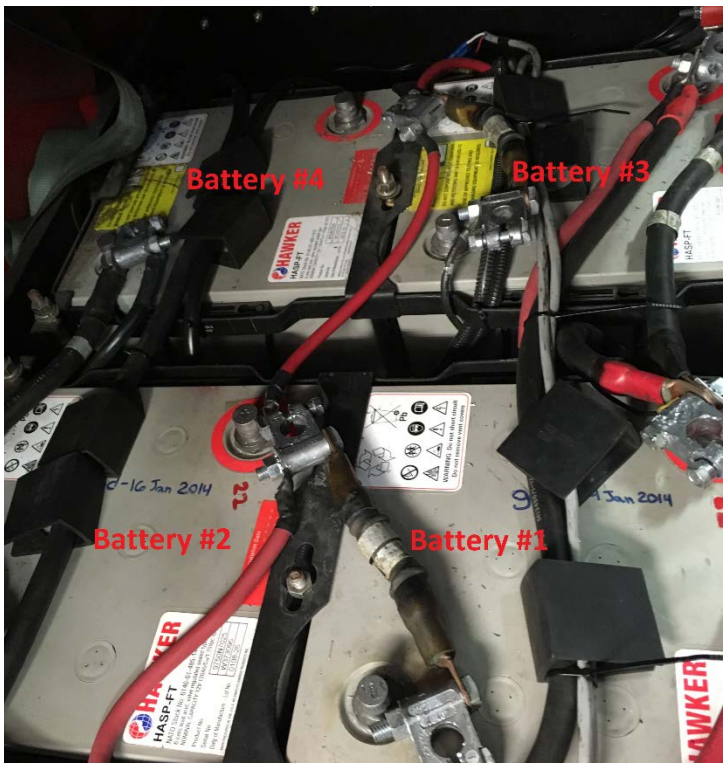
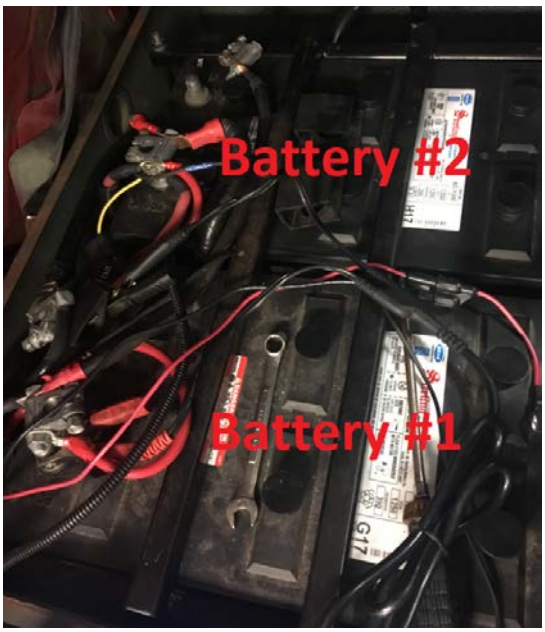
Unit 46313





Unit 46560



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