

TestReport004 – eTransit with SBS

Fenton Secondary Battery System – DC Fast Charging Test Results

Report Date: 2023-Oct-28

Vehicle: Prototype1



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1. Test Purpose

To establish real-world charging performance baseline when charging the Ford eTransit using DC Fast Charging.

2. Test Setup

- The charger used was a Chargepoint branded charger, provided by the Jamestown BPU on the corner of Prendergast and 4th St. in Jamestown, NY. It was labeled as “**125kW DC Shared**”. This defines the maximum charging power possible, shared between multiple vehicles.
- Vehicle under test is a Ford eTransit 2023.
- Secondary Battery System under test is Fenton SBS Revision1. The SBS system does not support DC Fast Charging at this time.



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3. Test Data & Summary

- Chart1 shows the test data from a DC Fast Charge session.
- Summary:
 - The Average Charging Power is ~63.3kW. Note that this is less than the maximum 125kW available.
 - DC Fast Charging is ~58x faster than Level1 Charging (~1.1kW).
 - DC Fast Charging is ~9x faster than Level2 Charging (~7.0kW).

DC Fast Charge Session (Partial Charge)		
0.7	Hours	<-- Time on Charger
19	%	<-- SOC% Start
80	%	<-- SOC% End
61	%	<-- SOC% Delta (Added)
85.7	%/h	<-- SOC% Charge Rate
45.0	kWh	<-- Energy Delta (Added)
63.3	kW	<-- Ave Charging Power
\$0.39	\$/kWh	<-- Energy Unit Cost
\$17.57	\$	<-- Energy Total Cost

Chart1 – Test Data

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4. Other Fenton Documents

- For real-world testing data of charging both the Ford eTransit 2023 and the Fenton Secondary Battery Systems, please also see these documents:
 - Charging @ Level1: See ***TestReport002-eTransit-w-SBS-ChargingLevel1***
 - Charging @ Level2: See ***TestReport003-eTransit-w-SBS-ChargingLevel2***
 - For best practices and recommendations for optimizing performance and getting the most out of your system, please see the ***Best Practices*** document on the website @ fentonmobility.com.