



U.S. Department of Energy
**Energy Efficiency
and Renewable Energy**

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

2008 Roush Rev-1505 Hybrid BOT Battery Test Results



Hybrid System Specifications

Battery Specifications

Manufacturer: Sonnenschein
Type: Sealed Lead Acid
Number of Modules: 6
Weight of Pack: 191.4 kg
Module Weight: 31.9 kg
Nominal Module Voltage: 12 V
Nominal System Voltage: 72 V
Nominal Pack Capacity (C/3): 180 Ah

Vehicle Specifications

Manufacturer: 2008 Roush Industries
Model: Roush Rev
Year: 2008
Number of Motors¹: 1
Motor Power Rating²: 150 kW
VIN #: 9BFBT32N767991505

Battery Lab Test Results

Static Capacity Test

Measured Average Capacity: 156.0 Ah
Measured Average Energy Capacity: 11.2 kWh

Vehicle Mileage and Testing Date

Vehicle Odometer: 6,000 mi
Date of Test: May 28, 2009

Analysis Notes:

1. Motor refers to any motor capable of supplying traction power.
2. Motor power rating refers to the manufacturer's peak power rating for the motor(s) supplying traction power.
3. Calculated value based on selected battery voltage limits and at 50% SOC.

Test Results

Test results for the beginning-of-test battery testing are provided herein. Battery test results include those from the Static Capacity Test and the Hybrid Pulse Power Characterization (HPPC) Test¹.

Static Capacity Test Results

Static capacity test results are summarized in the fact sheet. The test was performed on May 28, 2008 with a vehicle odometer reading of 6000 miles. The measured average C/1-rate capacity was 156.0 Ah compared with the manufacturer's rated capacity (C/3) of 180 Ah. The measured average energy capacity was 11.2 kWh.

Figure 1 is a graph of battery voltage versus energy discharged. This graph illustrates the voltage values during the constant current discharge versus the cumulative energy discharged from the battery at a C/1 discharge rate.

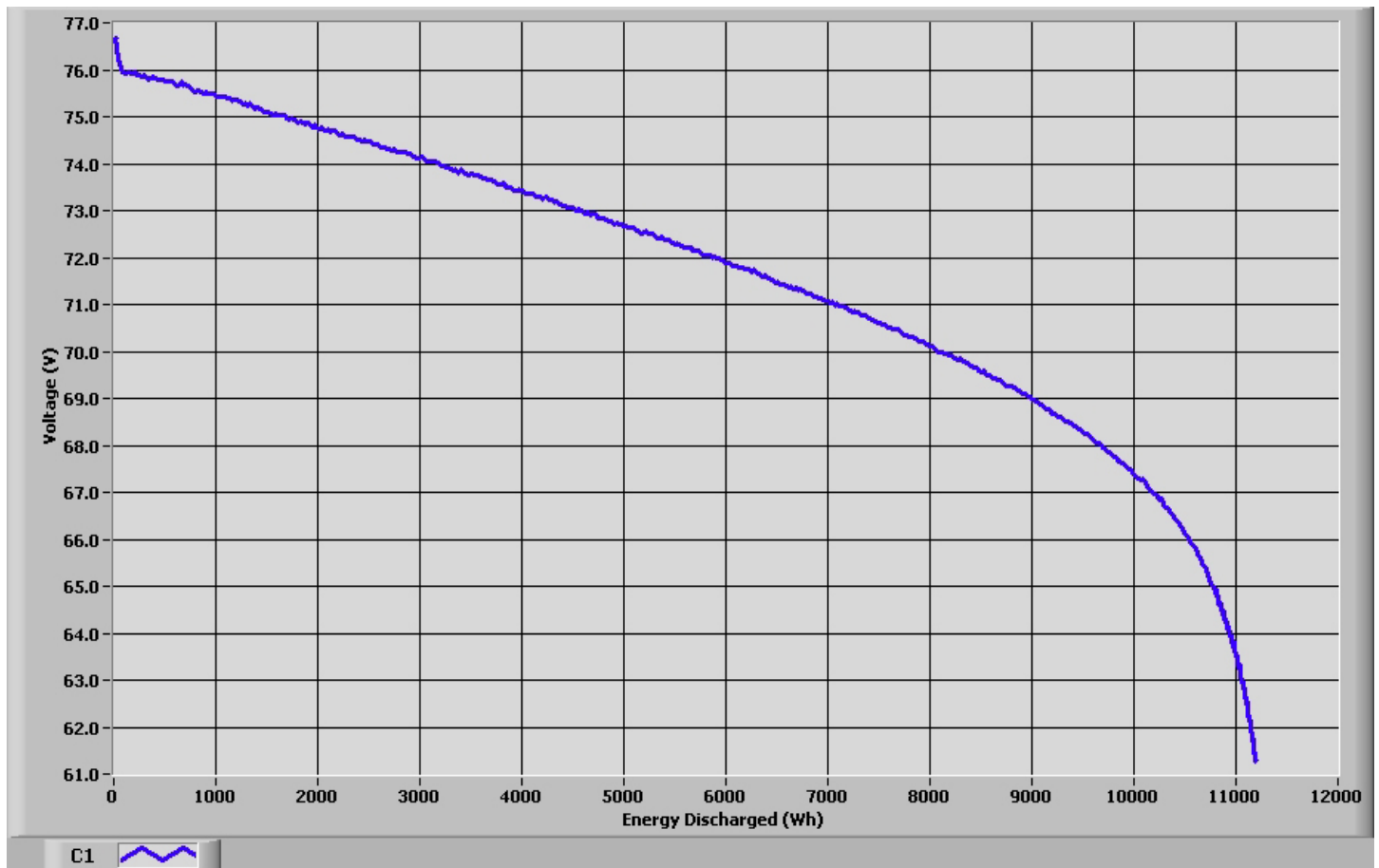


Figure 1
Voltage vs. Energy Discharged

This test was performed for DOE's Advanced Vehicle Testing Activity (AVTA). The AVTA, part of DOE's Vehicle Technology Program, is conducted by the Idaho National Laboratory and Electric Transportation Engineering Corporation.

1. Static Capacity test procedures were performed in accordance with FreedomCAR Battery Test Manual for Power-Assist Hybrid Vehicles, DOE/ID-11069, October 2003 procedures 3.2 and 3.3 respectively.