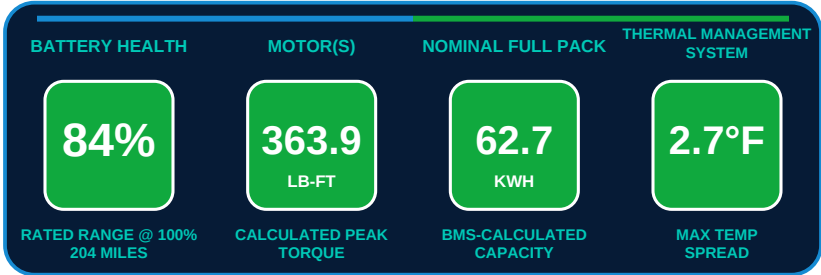




Vehicle Description

Name of EV	OutATime
Details	2018 Tesla Model X 75D
Miles	113,984
Date of Test	10-06-2026

At a Glance



1. System health scorecard

Battery Capacity	84%	62.7 kWh Nominal Full Pack divided by the official 75 kWh battery badge/nameplate capacity; dashboard rated range at 100% is 204 mi.
Cell / Brick Health	PASS	Settled cell-voltage spread returned to 10 mV after load; the 290 mV transient occurred at 1,319.2 A peak current.
Rear Motor / Inverter	HEALTHY	Peak mechanical output reached 132.5 kW with a 183.9 lb-ft / 249.3 Nm peak torque estimate.
Front Motor / Inverter	HEALTHY	Peak mechanical output reached 125.0 kW with a 180.0 lb-ft / 244.1 Nm peak torque estimate.
Battery Thermal System	PASS	Pack temperature spread remained at or below 2.7 °F throughout the logged drive.
Powertrain Cooling System	PASS	Both powertrain-pump commands varied from 17% to 100% as operating demand changed.
BMS Functional Health	PASS	83 individual pack-voltage channels and 28 temperature channels reported; capacity, CAC, SOC, current, and power signals were coherent.
DCDC / LV Charging	PASS	13.4-13.6 V regulated output, 30-84 A, and up to 1.14 kW during the logged drive.
Regenerative System	PASS	Battery charge power reached 62.5 kW during regenerative energy recovery.
A/C System	PASS	Center vent temperature reached 41.9 °F with the HVAC operating at high fan speed.
Cabin Heating	PASS	Recorded vent-air temperature reached 142.0 °F during commanded heat operation.

2. High-voltage battery and BMS assessment

Battery / BMS item	Observed / calculated value
Nominal full pack	62.7 kWh
Battery Health	84% - 62.7 kWh / 75 kWh x 100 = 83.60%, rounded to 84%.
Actual Rated Range at 100%	204 miles, confirmed on the vehicle dashboard
Peak battery output / current	295.2 kW / 1,319.2 A
Max discharge / max charge shown	296.09 kW / 81.46 kW
BMS SOC during logged drive	49.0% to 55.2%
CAC min / avg / max	211.1 / 214.0 / 215.9 Ah
CAC total spread	4.80 Ah, approximately 2.2% of average CAC
DC Charge / Supercharging Total	5,595.1 kWh
AC Charge Total	42,292.7 kWh
Regen Total	12,491.3 kWh
Total Charge Cycles	963.0, calculated from valid cumulative totals
Individual voltage channels active	83 channels populated; BMS min/max/average signals also reporting
Pack temperature channels active	28 channels reporting
Cell-voltage spread	10 mV settled after load; 290 mV transient at 1,319.2 A
Cell temperature range	64.4 °F minimum observed to 76.1 °F maximum observed
Final cell-temperature spread	2.7 °F

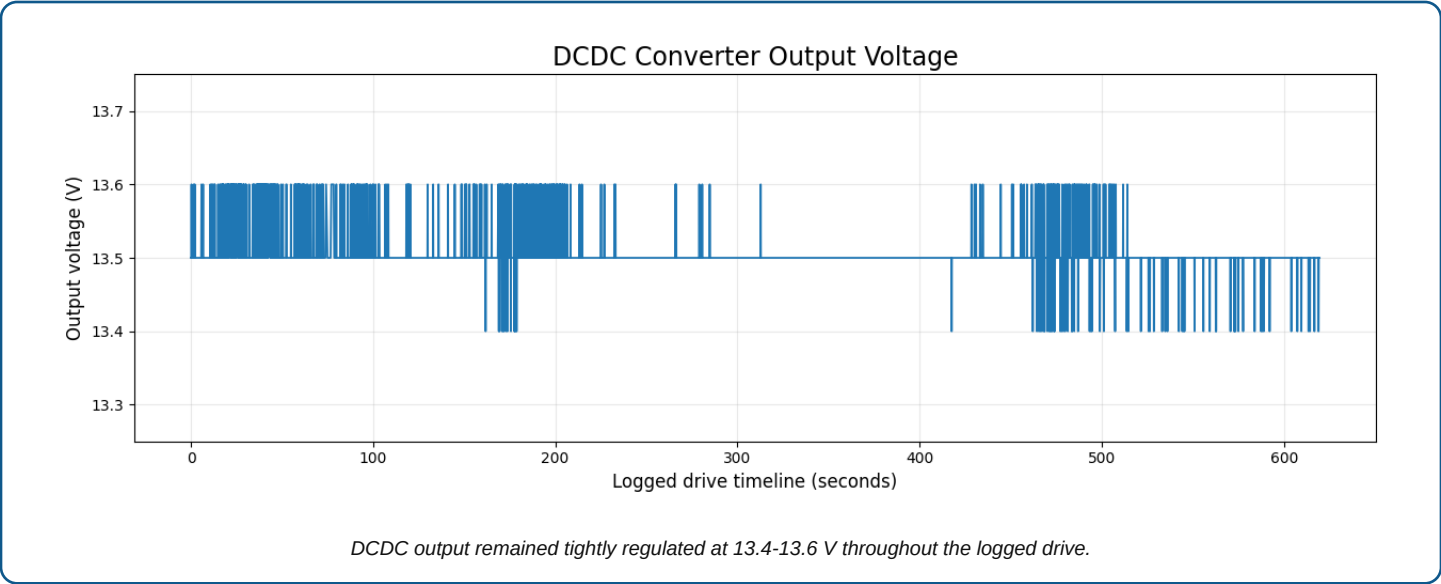
3. BMS Functional Health

BMS function	Result	Evidence
Battery Management System	PASS	Battery Management System: PASS - The BMS remained online and communicating throughout the test, with monitored voltage, current, temperature, SOC, capacity, and power-limit data operating normally and consistently.
Voltage sensing	PASS	83 individual voltage channels were populated, with coherent BMS min/max/average values and 10 mV settled spread after load.
Temperature sensing	PASS	All 28 reported pack temperature channels remained populated and tightly grouped.
Capacity estimation	PASS	Nominal Full Pack, CAC, SOC, and remaining-energy values were populated and internally consistent throughout the logged drive.
SOC reporting	PASS	BMS SOC signals changed coherently through the drive.
Current / voltage / power reporting	PASS	Pack current and voltage produced physically coherent power during acceleration and regen.
Charge / discharge limits	PASS	Max-charge and max-discharge limits remained populated throughout the capture.

4. Power electronics and regenerative-system health

System	Result	Evidence
DCDC converter	PASS	13.4-13.6 V output; 30-84 A; up to 1.14 kW output throughout the logged drive.
Low-voltage charging system	PASS	LV output remained regulated while DCDC current changed with vehicle load; calculated efficiency remained 93.6-96.2%.
Front inverter	PASS	Supported up to 125.0 kW front mechanical output and a 180.0 lb-ft / 244.1 Nm peak torque estimate.
Rear inverter	PASS	Supported up to 132.5 kW rear mechanical output and a 183.9 lb-ft / 249.3 Nm peak torque estimate.
Regenerative power transfer	PASS	Battery power reached -62.5 kW, showing substantial charge energy returning to the HV pack.
High-voltage power delivery	PASS	Pack voltage, current, and power remained coherent while output reached 295.2 kW and 1,319.2 A.
Thermal controller support	PASS	Thermal-controller power signals remained populated and changed coherently with cooling and cabin-climate demand.

5. DCDC evidence from the logged drive



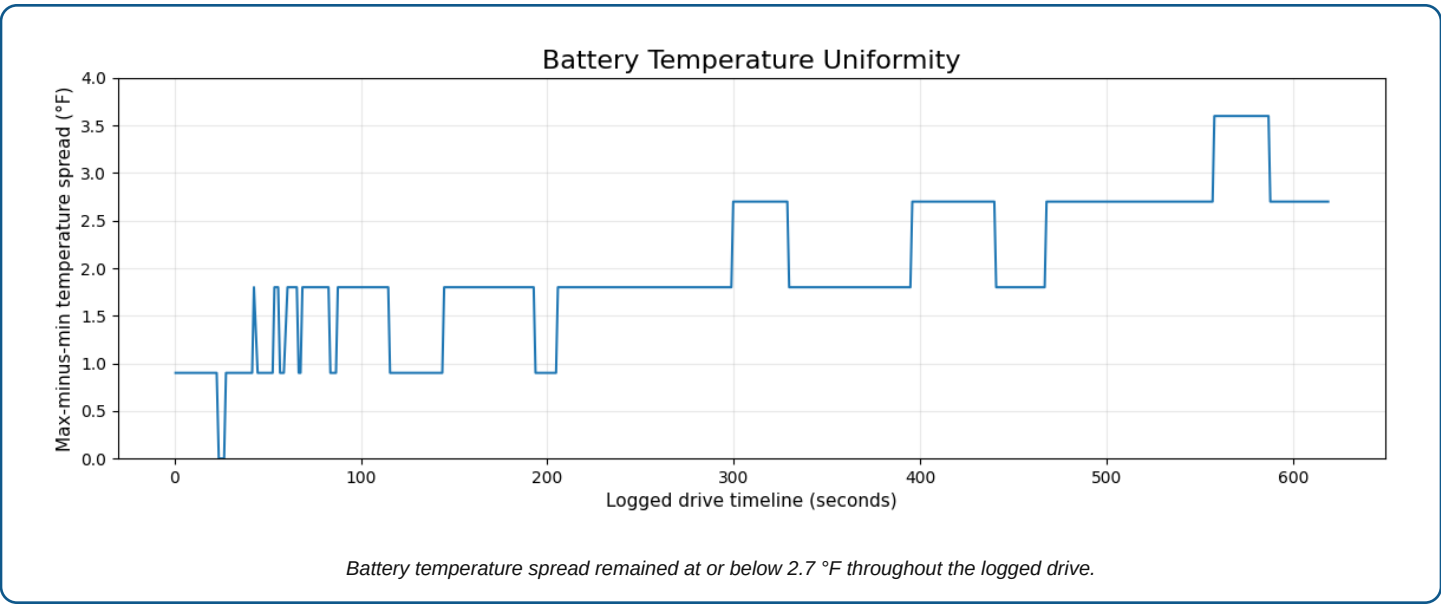
DCDC Interpretation

The DCDC converter maintained stable low-voltage output while current varied from 30 to 84 A with changing vehicle demand. Output power reached 1.14 kW, and calculated conversion efficiency remained between 93.6% and 96.2%. The voltage, current, input-power, output-power, and efficiency channels remained internally consistent throughout the logged drive.

6. Thermal-management and HVAC functional health

Thermal / HVAC area	Result	Evidence
Battery thermal management	PASS	Cell-temperature spread remained at or below 2.7 °F; peak cell temperature was 76.1 °F; final spread was 2.7 °F.
Coolant circulation	PASS	Battery-pump commands varied from 23% to 58%; both powertrain-pump commands varied from 17% to 100%.
Front drive unit thermal management	PASS	Stator temperature peaked at 136.4 °F and measured 113.0 °F at the final sample. Inverter temperature peaked at 82.4 °F.
Rear drive unit thermal management	PASS	Stator temperature peaked at 122.0 °F and measured 89.6 °F at the final sample. Inverter temperature peaked at 80.6 °F.
A/C refrigeration	PASS	Center vent temperature reached 41.9 °F while the system remained commanded on at high fan speed.
Cabin heating	PASS	Recorded vent-air temperature reached 142.0 °F, supporting effective commanded heating.

7. Battery temperature uniformity

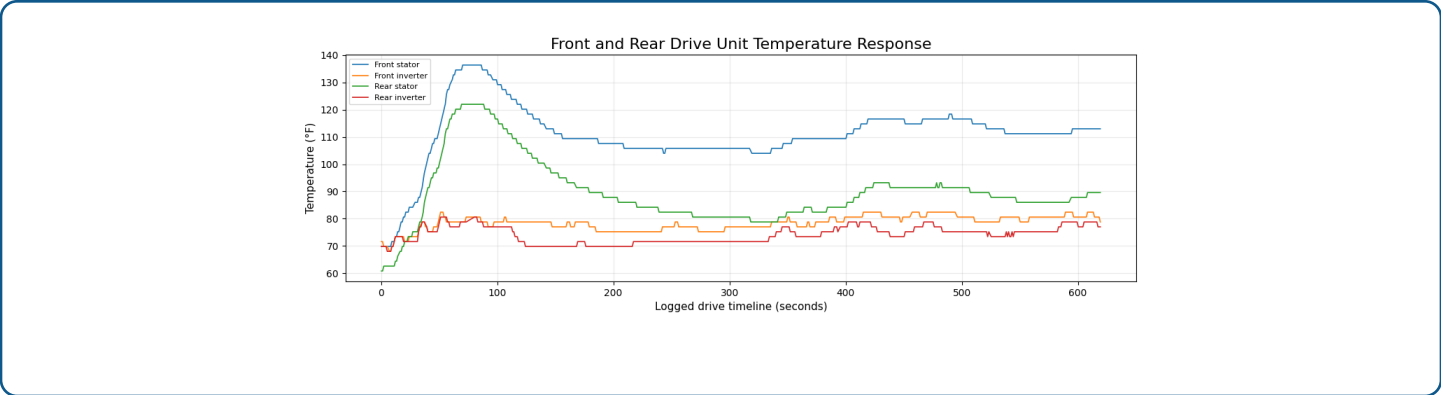
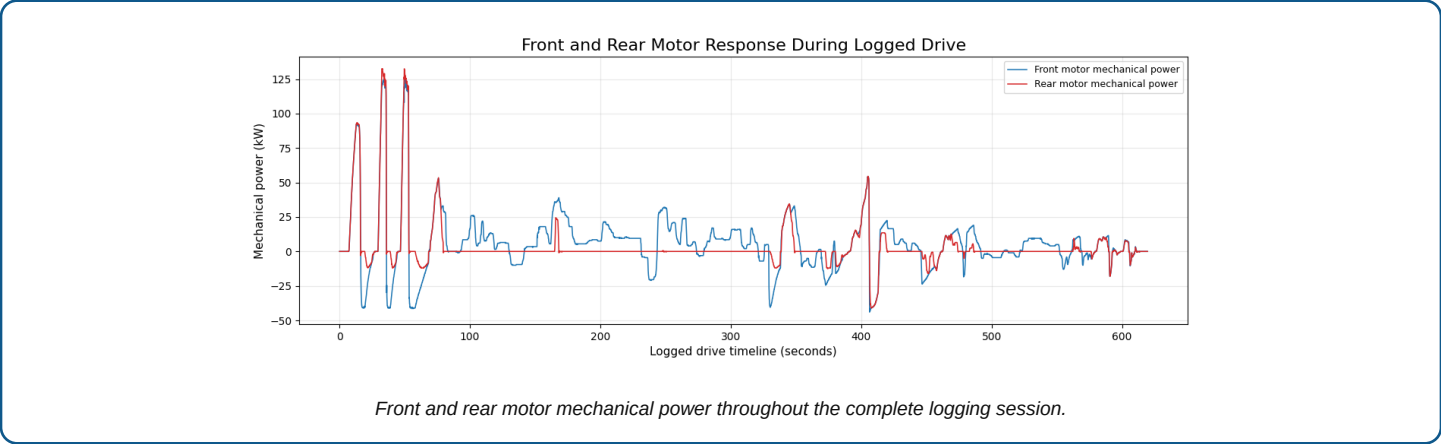


8. Motor / Inverter health analysis

DRIVE SYSTEM SUMMARY

The front and rear drive units produced substantial output throughout the logged drive. The capture included sustained operation, regeneration, and repeated high-load events while both motor and inverter temperature sets remained controlled.

Motor / drive item	Front Drive Unit	Rear Drive Unit
Drive unit result	HEALTHY	HEALTHY
Peak mechanical power	125.0 kW	132.5 kW
Peak Torque Estimate	180.0 lb-ft / 244.1 Nm	183.9 lb-ft / 249.3 Nm
Output validation	Responsive under load and regen	Responsive under load and regen
Maximum motor RPM	6,860 RPM	6,799 RPM
Stator maximum temperature	136.4 °F	122.0 °F
Inverter maximum temperature	82.4 °F	80.6 °F
Peak electrical power	167.6 kW	177.7 kW



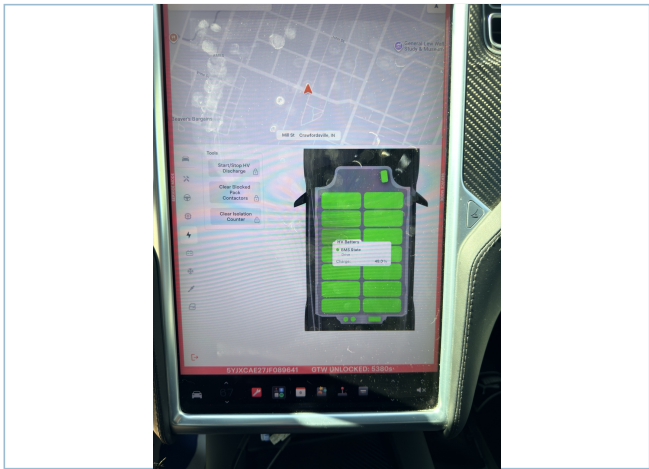
DEFINITIONS

Definitions

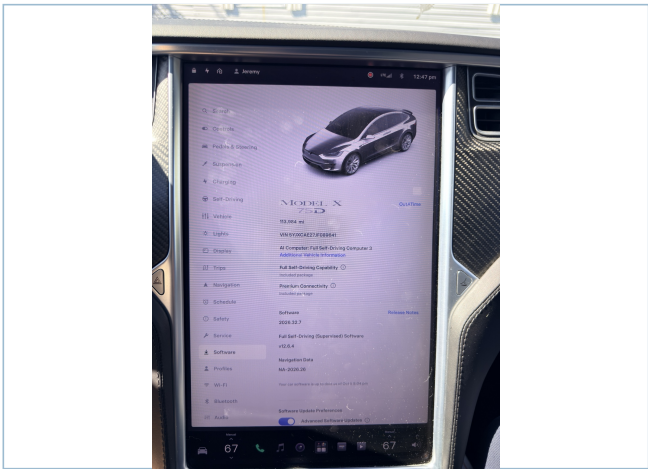
CAC	Calculated Amp-hour Capacity; BMS-estimated battery capacity in amp-hours.	LV	Low Voltage; the vehicle low-voltage electrical system.
UI	User Interface; the value presented on the vehicle display.	DCDC	DC-to-DC converter; converts HV battery power to regulated LV power.
BMS	Battery Management System; monitors and manages the high-voltage battery.	CAN	Controller Area Network; vehicle network used by control modules to exchange data.
SOC	State of Charge; the battery charge level at a given time.	A / V	Amps / Volts; electrical current and electrical potential.
SOH	State of Health; retained battery capacity/condition compared with the reference baseline.	kW / kWh	Kilowatts / kilowatt-hours; instantaneous power and accumulated energy.
HV	High Voltage; the vehicle traction electrical system.	RPM / Nm	Revolutions per minute / Newton-meters; rotational speed and torque.

9. Photographic Evidence

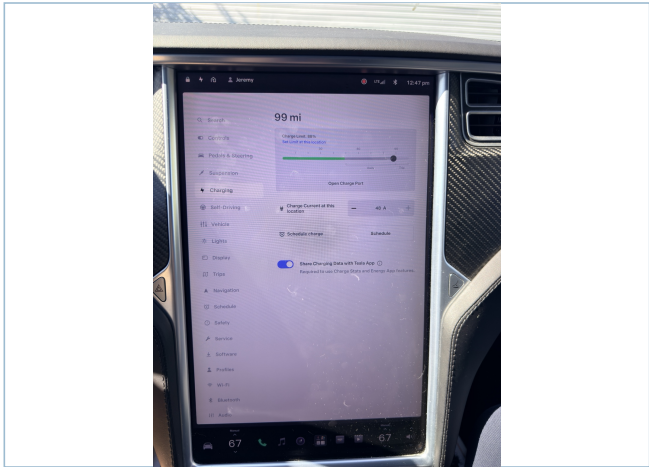
BMS / HV BATTERY



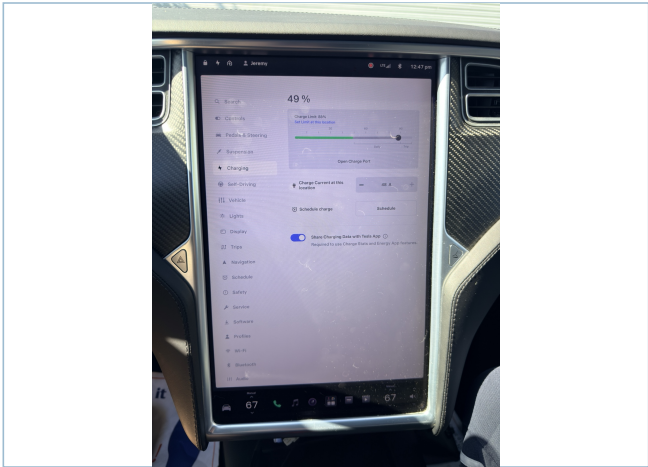
VEHICLE ID / SOFTWARE



RATED RANGE



STATE OF CHARGE



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Disclaimers

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- Professional scanning equipment physically plugged into the vehicle during drive cycle
- Official Tesla Tests
- Tesla Toolbox 3, Logs, Reports, and CAN data
- Data collected by a professional Mechanic
- Over the air confirmation scans from an outside source or sources.
- Data from outside source confirmation scans are not used to generate this report directly, we use their data to compare calculations, to eliminate errors and confirm accuracy across separate readings, sources and algorithms.

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- All data was presented as it was recorded without modification.
- All statements and positions are supported by the evidence collected.
- All calculations are explained in corresponding boxes.
- Every effort was made to ensure complete accuracy and accountability limited only to the tools used and data collected.
- SOH denominator: SOH was calculated using the vehicle's official 75 kWh battery badge/nameplate capacity. Badge capacity is not necessarily identical to the BMS New Nominal Full Pack value, so this badge-based SOH estimate may differ slightly from a true NFP-derived SOH.

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