

FAA Approved
Airplane Flight Manual
Supplement (AFMS) For EarthX
ETX680-24-TSO Battery

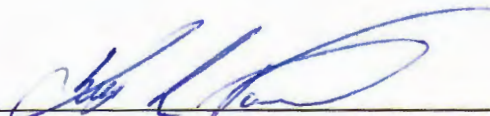
Installed in the

Part 23 Approved Model List

Aircraft Serial Number: _____ Aircraft Reg. Number: _____

This supplement must be attached to the FAA Approved Airplane Flight Manual (AFM) when an ETX680-24-TSO battery is installed in accordance with AML STC No. SA01134DE.

The information contained herein supplements or supersedes the basic manual or placards related to those areas specified herein. For limitations, procedures, and performance information not contained in this supplement, consult the basic Airplane Flight Manual, Placards and Markings.



ODA administrator, ODA(AIR)-833887-NM, For,
Manager, Flight Test & Human Factors
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Federal Aviation Administration

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Approved Date

Revision Log

REV NO	FAA APPROVAL	SUMMARY DESCRIPTION
IR 9/11/2023	Kreg R. Voorhies, ODA administrator Cert Works ODA, ODA(AIR)-833887- NM	Initial Release
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Section 1 General

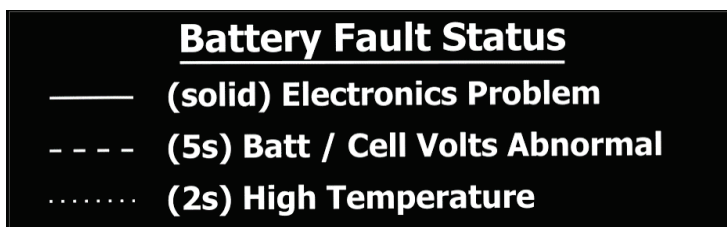
The EarthX lithium battery is a replacement for the existing lead acid start /storage battery but adds a fault/status indicator to alert the flight crew of any abnormal battery conditions.

Section 2 Limitations

No change to operating limitations.

Placard

A placard is provided, and installed, adjacent to the Fault/Status Indicator LED to decipher the various indications (see image below).



Section 3 Emergency / Abnormal Procedures

Emergency

No change.

Abnormal Procedures (Battery)

The LED has three display modes; turns on and stays on (solid), cycles 5 second on / 5 seconds off, and lastly 2 seconds on / 2 seconds off (see the chart below).

LED Light	Airplane Voltage/Current	Battery - Possible Cause	Recommended Action
Slow Flashing (5s on/5s off)	25.6-29.0V or current indicating normal charge or discharge	Cell to cell charge level imbalance	In Flight: No pilot action is required. The pilot should report a battery problem to maintenance personnel. On Ground: Do not takeoff, report to Maintenance.
Solid Light (steady on)	Any voltage or current	BMS electronics problem	In Flight: No pilot action is required. Monitor the aircraft's current and/or voltage meters as normal, and report battery problem to maintenance personnel. On Ground: Do not takeoff, report to Maintenance.
Short Flashing (2s on/2s off)	Any voltage or current	High battery temperature (> 75°C / 167°F)	In Flight: No pilot action is required in flight. Continue to monitor all electrical instruments per the POH. The pilot should report battery problem to maintenance.

			On Ground: Allow battery to cool down and LED light to extinguish before engine start. If the fault persists, report to Maintenance.
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Abnormal Procedures (Aircraft Charging System)

This indication is in addition to the existing aircraft charging system failure indication(s).

Slow Flashing (5s on/5s off)	Less than 25.5V/ amp meter shows discharge / or alternator warning light on	Charging system is not functioning (battery is being discharged or at a low state of charge)	In Flight: Pilot to follow aircraft flight manual procedure for faulty alternator. On Ground: Do not takeoff, report to Maintenance.
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Section 4 Normal Procedures

As a preflight test with the master switch on, push-in the LED housing and confirm the LED bulb illuminates, then release and verify the LED goes out.

Section 5 Performance

No change.

Section 6 Weight and Balance

The weight and balance is recalculated at the time of installation (see revised weight and balance record).