

## FAA Approved Airplane Flight Manual Supplement (AFMS) For EarthX ETX900-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 ETX900-TSO battery is installed in accordance with AML STC SA01005DE.

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.

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Manager, Flight Test & Human Factors Branch, AIR-710  
Federal Aviation Administration

27 March 2025  
Approved Date

## Revision Log

Rev	Description	Cover	Document Date	FAA Approval /Date
Initial Release	New document	New	3/27/2025	Robert Schlein/ 27March2025

## Section 1 General

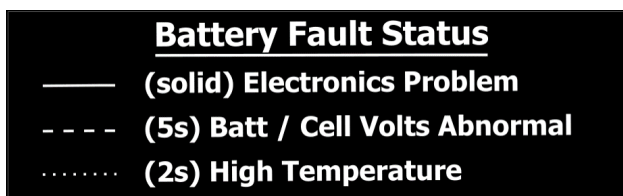
The EarthX lithium battery is a replacement for the existing lead acid start /storage battery but adds a fault/status indicator to alert the flight crew of any abnormal battery conditions.

## 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 Procedures

No change.

### Abnormal Procedures

The LED has three display modes; turns on and stays on (solid), cycles 5 seconds on / 5 seconds off, and lastly 2 seconds on / 2 seconds off (see Table 1 below). Use the LED Light and Aircraft Voltage/Current (first and second columns) to diagnose the condition.

**Table 1: Abnormal Procedures**

<b>LED Light</b>	<b>Airplane Voltage/Current</b>	<b>Battery - Possible Cause</b>	<b>Recommended Action</b>
Slow Flashing (5s on/5s off)	12.8-14.5V or current indicating normal charge or discharge	Cell to cell charge level imbalance	<b>In Flight:</b> No pilot action is required. The pilot should report battery problem to Maintenance. <b>On Ground:</b> Do not takeoff, report to Maintenance.
Slow Flashing (5s on/5s off)	Less than 12.8V / 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)	<b>In Flight:</b> Pilot to follow aircraft flight manual procedure for faulty alternator. <b>On Ground:</b> Do not takeoff, report to Maintenance.
Solid Light	Any voltage or current	BMS electronics problem	<b>In Flight:</b> No pilot action is required. Continue to monitor the aircraft's current and/or voltage meters for abnormal conditions, and report battery problem to Maintenance. <b>On Ground:</b> Do not takeoff, report to Maintenance.
Short Flashing (2s on/2s off)	Any voltage or current	High battery temperature (> 75°C / 167°F)	<b>In Flight:</b> No pilot action is required in flight. Continue to monitor all electrical instruments per the POH. The pilot should report battery problem to Maintenance. <b>On Ground:</b> Allow battery to cool down and LED light to extinguish before engine start. If the fault persists, report to Maintenance.

## **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).