



## THE GLIDING FEDERATION OF AUSTRALIA INC

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### **Airworthiness Alert 2019-1** **In-Situ Battery Charging and Maintenance** **for Non-Accessible Batteries**

#### **Overview**

*There have been multiple reports of batteries located in stations which are rarely inspected and which the battery is charged in-situ. Such examples are batteries located in the fin which requires disassembly for access. Batteries charged in-situ rely heavily on the charger and its inbuilt battery protection. Overcharging will result in a gradual decrease in battery performance and can lead to swelling and/or leakage resulting in corrosion and possible structural damage.*

#### **Investigation**

*One recent report detailed a gel cell battery which was known to have failed but was left in-situ. Battery acid leaked down the structure to the antennae coaxial destroying the antennae. Acid additionally damaged the elevator bracket, crank arm and fasteners. On inspection, the battery had expanded and jammed in the holder. The rectification required a costly structural repair.*

#### **Recommendation/Action**

- 1. Inspect all internal mounted batteries at intervals not exceeding six months and remove if unused for an extended period*
- 2. Replace batteries at regular intervals especially if the battery shows signs of leaking acid, swelling or reduced capacity*
- 3. Replace with a similar battery type or in the case of a LiFePO4 type, a GFA or manufacturer approved battery*
- 4. Take action and inspect immediately if suspecting a failure*
- 5. Charge in-situ with caution*
- 6. Use a quality battery charger correct for the battery type*
- 7. Consider / factor sailplane weight and balance*
- 8. Report all cases of battery failure.*

#### **Report**

*Notify the GFA of defects in the usual manner by submitting an online SDR ie Defect Report by the SOAR system on the GFA website.*

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23/05/2019