



AIRWORTHINESS BULLETIN

AWB 25-020 Issue 3 – 1 May 2018

Lifejacket Survivor Light Battery Failures

1. Effectivity

Epsilon – Electric Fuel Ltd. WAB-H18 Survivor Locator Light Batteries contained in but not limited to:

Regent Adult-Child Lifejackets (P/No. RSS-301WT and RSS-301WE)

EAM KSE-35L8 Adult-Child Lifejackets (P/No. P0723E109PW and P0723E105PW)

2. Purpose

To make operators aware of a possible loss of integrity of the battery for the survivor light in a time significantly less than the maintenance overhaul period.

3. Background

In 2011, CASA received defect reports on four (4) Regent RSS-301WT Lifejackets. An initial lifejacket was opened as a training aid. A very strong sulphur/acidic chemical smell emanated from the packaging. When the lifejacket was unfurled, the survivor light battery was found to have swollen internally to the point that the battery case had separated and the internal battery elements showed evidence of a substantial chemical reaction.

The operator opened further Lifejackets and they contained batteries that had deteriorated. As part of the investigation, numerous lifejackets from other operators around Australia were opened and batteries were found to be in conditions from perfectly serviceable through to being swollen beyond limits and split.

As a result, in 2012 the light/battery manufacturer Epsilon – Electric Fuel revised packaging processes and provided enhanced instructions on storage and handling of the batteries to Lifejacket manufacturers. Regent also revised their manufacturing processes.

Since the initial issue of this AWB, CASA has received three separate defect reports on Survivor Light Batteries on EAM Lifejackets and one on Regent Lifejackets that contain Epsilon – Electric Fuel WAB-H18 Survivor Locator Light Batteries. In all cases, the batteries of multiple lifejackets were swollen beyond limits and had split cases or endcap pushed off due to swelling of internal components.

These Lifejackets can be packaged in a sealed valise, non-sealed valise or a pouch. As the battery is packaged in the centre of the folded lifejacket contained within the valise, the failed batteries show little externally visible evidence of their



loss of integrity. Failure of the battery can only be confirmed by opening the valise.



Figure 1: Left to right – Serviceable battery, unserviceable battery (note swelling of main body and endcap pushing off), failed battery.

4. Recommendations

CASA recommends all operators with Regent RSS-301(XX) type and EAM KSE-35L8 (P0723E105PW) lifejackets be aware of the following attributes that may indicate a failed battery inside:

1. Visually inspect every lifejacket valise. Look for any tears or pin holes in the packaging, and for any visible moisture inside the packaging.
2. For Regent RSS-301WT, the valise should be sealed and evacuated ('sucked down'). Note if it is 'inflated' or pressurised.

CASA recommends lifejacket packages that contain:

- a. any tears in the valise,
- b. visible moisture inside the valise, and
- c. for Regent RSS-301WT lifejackets - the valise appears to be inflated,

be considered suspect in their integrity and the lifejacket should be returned for servicing.

EAM KSE-35HC2L8 Heli Vest lifejackets (P/No. P0723E109PW) are not able to be visually inspected without opening the device.



5. Reporting

CASA requests the details of any lifejackets found with a defective battery be submitted to the CASA [Defect Report Service \(DRS\)](#). The report should include:

- Lifejacket Make and Model Number
- Lifejacket Serial Number/Date of Manufacture
- Lifejacket Overhaul Due Date
- Battery Date of Manufacture
- Details of the battery condition
- Thickness of the battery case at the part marking sticker
- If possible, a photograph of the valise before it is opened
- If possible, a photograph of the survivor light battery

6. Enquiries

Enquiries with regard to the content of this Airworthiness Bulletin should be made via the direct link email address:

AirworthinessBulletin@casa.gov.au

or in writing, to:

Airworthiness & Engineering Branch
Aviation Group
Civil Aviation Safety Authority
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