



SUBJ: Equipment/Furnishings: Emergency Locator Beacon, G-Switch Failures

SAIB: CE-19-12
Date: June 18, 2019

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts you, aircraft owners and operators with installations of **ACR Electronics, Inc. (ACR)(formerly Artex Aircraft Supplies, Inc. and Chelton Avionics, Inc. and doing business as Wulfsberg Electronics) emergency locator transmitters (ELT) G406-4, C406-1, C406-1HM, C406-2, C406-2HM, C406-N and C406-NHM** identified by Part Number (P/N) and serial number (s/n) in Table 1 of this SAIB, of an airworthiness concern, specifically the ELT not transmitting alert and location signals in case of an accident due to an inoperative or a deteriorated G-switch. ELTs located in high vibration environments, for example in the tail of a helicopter, could have its acceleration sensor deteriorate after having been subjected to high levels of shock and vibration for five (5) years or more. This SAIB recommends best practices for the inspection, modification and replacement of these ELTs located in high vibration environments.

ELT Model	P/N	s/n (up to, inclusive)
G406-4	453-5012	210-08575
C406-1	453-5002	210-09438
C406-1HM	453-5003	All
C406-2	453-5000	210-09501
C406-2HM	453-5001	210-09936
C406-N	453-5060	252-01689
C406-NHM	453-5061	252-02321

Table 1: SAIB Applicability (Note this applicability is regardless of whether there are additional digits and Revision status appended to the ELT P/N, e.g. 453-5003-123 Rev B. is an affected P/N.)

At this time, this airworthiness concern has not been determined to be an unsafe condition that would warrant airworthiness (AD) action under Title 14 of the Code of Federal Aviation Regulations (14 CFR) part 39.

Background

The FAA has received reports of ACR ELT model C406 failures. Investigation and testing indicated that in some cases the main longitudinal G-switch was inoperative. Further investigations revealed that the performance of the ELT acceleration sensor could deteriorate after having been subjected to high levels of shock and vibration for five (5) years or more.

This condition, if not detected and corrected, could result in the ELT not transmitting alert and location signals in case of an accident, which could result in delayed deployment of rescue crews and possibly preventing timely medical assistance to injured crew members or passengers.

To address this condition, ACR Electronics has published Service Bulletin (SB) 1000, identifying those ELTs fitted with the original G-switch, prescribing testing, replacement of the G-switch at five (5) years, or alternatively, reducing the normal inspection intervals after five (5) years service to assure continued reliability.

Recommendations

The FAA recommends the following:

- Always follow the Instructions for Continued Airworthiness applicable to the ELT installed in the aircraft. Pay particular attention to recurring inspection intervals and instructions, which include recurrent testing of the G-switch.
- If your aircraft is equipped with an ELT listed in Table 1, and the ELT is installed in a high vibration environment, for example in the tail of a helicopter, and the ELT has been in service for more than five (5) years, replace the G-switch in accordance with ACR SB1000.

As an alternative to replacement, accelerated inspections may be performed in accordance with ACR SB1000 during the period from five (5) to ten (10) years in service, after which the G-switch should be replaced

Note: An ELT that has been previously modified to include a new hermetically-sealed longitudinal G-switch P/N A1-12-0135, as indicated by ACR SB1000, would include marking on the label stating “G-Switch Replaced in Accordance with Service Bulletin 1000 G-Switch Replacement Date _____”. This modification is sufficient to address the concerns of this SAIB.

For Further Information Contact

For a copy of the referenced SB 1000, contact ACR Electronics, Inc., 5757 Ravenswood Rd, Fort Lauderdale FL 33312, www.acrartex.com, (954)981-3333.

Sanford Proveaux, Program Manager, Atlanta ACO, 1701 Columbia Ave., College Park, GA 30337; phone: (404) 474-5566; fax: (404) 474-5606; email: Sanford.Proveaux@faa.gov

John Lee, Aerospace Engineer, Atlanta ACO, 1701 Columbia Ave., College Park, GA 30337; phone: (404) 474-5568; fax: (404) 474-5606; email: John.Lee@faa.gov