



SUBJ: Hook and Loop Style Fasteners as a Mounting Mechanism for
Emergency Locator Transmitters (ELTs)

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This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) informs emergency locator transmitter manufacturers as well as installers and aircraft maintenance personnel of a concern with the ability of hook and loop style fasteners to retain their designed capability to restrain emergency locator transmitters during accident impact. In several recent aircraft accidents, ELTs mounted with hook and loop style fasteners, commonly referred to as Velcro®, have detached from their aircraft mounting. The separation of the ELT from its mount caused the antenna connection to sever, rendering the ELT ineffective.

Background

ELTs in use today typically have a technical standard order authorization (TSOA) for TSO-C91a, TSO-C126, or TSO-C126a and are incorporated into the type design of the aircraft in accordance with 14 CFR § 21 or installed as an alteration to the aircraft in accordance with 14 CFR § 43. The concern is with use of hook and loop style fasteners for mounting the ELT. Inconsistent installation and reinstallation practices can lead to the hook and loop style fastener not having necessary tension to perform its intended function. Additionally, the retention characteristics of the hook and loop style fastener may degrade over time due to wear and environmental degradation from vibration, temperature, or contamination. Concern increases further when the ELT instructions for continued airworthiness (ICA) do not have specific instructions for inspecting the hook and loop style fasteners or a replacement interval. This concern applies regardless of how the hook and loop style fastener is incorporated. The FAA has evaluated the mounting requirements and tests in TSO-C91a and TSO-C126a and determined that they do not adequately address retention capability in ELT designs and is revising TSO-C126a accordingly.

Recommendations

For ELT manufacturers who previously utilized hook and loop style fasteners for ELT retention, we recommend you include the following information in your ICA:

1. Instructions for properly securing the ELT during installation and reinstallation as well as a method to determine the appropriate tension of the hook and loop style fasteners.
2. Instructions for inspecting hook and loop style fasteners for wear, contamination, environmental degradation, or other effects to ensure they will continue to meet the requirements in the applicable TSO. Incorporating this inspection with the inspection required by 14 CFR § 91.207 is appropriate.
3. Replacement interval for the hook and loop style fasteners.

For Further Information, Contact:

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