



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 21-093R2

Issued: 20 July 2021

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Manufacturer Name:

UMLAUT ENGINEERING GMBH

Type/Model designation(s):

HAFEX (Halon-free) hand-held fire extinguishers

Effective Date: [TBD - standard: 14 days after AD issue date]

Foreign AD: Not applicable

Supersedure: None

ATA 26 – Fire Protection – Hand-operated Fire Extinguishers – Inspection / Replacement

Manufacturer(s):

umlaut Engineering GmbH, formerly P3 Engineering GmbH

Applicability:

HAFEX (Halon-free) hand-held fire extinguishers, having Part Number (P/N) P3APP003010A, P/N P3APP003010B or P/N P3APP003010C, all serial numbers (s/n).

The affected fire extinguishers may be eligible for installation on any aircraft and may have been installed during the aircraft manufacturing process (production line), or in-service modification, either through a Supplemental Type Certificate, or using Type Certificate holder approved modification instructions, or through a minor modification approval.

Definitions:

For the purpose of this AD, the following definitions apply:

The VSB: umlaut Engineering GmbH (formerly P3 Engineering GmbH) [Vendor Service Bulletin \(VSB\) P3VSB000003](#) issue B.



Serviceable part: Any hand-held fire extinguisher that is not affected (the P/N is not listed in the Applicability of this AD) which is eligible for installation on the aircraft; or an affected fire extinguisher that, prior to installation, has passed an inspection (no defect found) in accordance with the instructions of the VSB.

Groups: Group 1 aircraft are those that have an affected fire extinguisher installed.
Group 2 aircraft are those that do not have an affected fire extinguisher installed.

Reason:

A safety issue has been reported on the affected HAFEX fire extinguishers where, under certain environmental conditions, it might not be possible to discharge the extinguisher, resulting in a loss of extinguishing functionality of the equipment. Investigation determined that, after prolonged exposure to high temperature conditions, the spindle can dislodge in the fire extinguisher head, making the fire extinguisher inoperative. Such conditions can occur if an aircraft is parked or stored in hot locations, however, it is not possible for an operator to determine the exact environmental conditions the extinguisher has been (or will be) exposed to in service.

This condition, if not detected and corrected, could prevent proper extinguishing of a fire in the cabin or cockpit, possibly resulting in damage to the aircraft and injury to occupants.

To address this unsafe condition, umlaut Engineering GmbH issued the VSB, as defined in this AD, providing instructions to identify and inspect affected fire extinguishers.

For the reason described above, this AD requires repetitive inspections of each affected fire extinguisher, and, depending on findings, replacement with a serviceable part, as defined in this AD. This AD also requires inspection of an affected fire extinguisher, prior to installation.

PAD 21-093R1 was issued to expand the Applicability to include certain Boeing aeroplanes which embody EASA STC 10073853.

Prompted by operator comments on the need to capture all aircraft that could have an affected extinguisher installed, PAD 21-093R2 is issued to make the AD applicable to the affected fire extinguishers, irrespective of the aircraft type(s) on which they are (to be) installed. This revised PAD also refers to the VSB at issue B and introduces text changes, not affecting the requirements, to improve clarity. The consultation period is further extended.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Repetitive Inspections:

- (1) For Group 1 aircraft: Within 30 days after the effective date of this AD, and, thereafter, at intervals not to exceed 6 months, inspect each affected fire extinguisher in accordance with the instructions of paragraph 3.2.C of the VSB, or equivalent maintenance instructions issued by the design (change) approval holder.
- (2) For a Group 1 aircraft that, at any time after the effective date of this AD, is parked or stored for a period of 30 days or more, before release to service of that aircraft, inspect each affected



fire extinguisher in accordance with the instructions of paragraph 3.2.C of the VSB, or equivalent maintenance instructions issued by the design (change) approval holder. Thereafter, inspect each affected fire extinguisher on that aircraft at intervals not to exceed 6 months.

Corrective Action(s):

- (3) If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, it is determined that the safety pin does not touch the valve head, before next flight, or within the time and under the conditions allowed by the provisions specified in the applicable operator's approved Minimum Equipment List (or similar document), remove that affected fire extinguisher from service and replace it with a serviceable part in accordance with instructions provided by the applicable aircraft design (change) approval holder.

Credit:

- (4) Inspections, accomplished on an affected fire extinguisher before the effective date of this AD in accordance with the instructions of the VSB at original issue (issue A), are acceptable to comply with the initial requirements of this AD for that fire extinguisher.

Terminating Action:

- (5) None.

Part(s) Installation:

- (6) For Group 1 and Group 2 aircraft: From the effective date of this AD, it is allowed to install on any aircraft an affected fire extinguisher, provided it is a serviceable part, as defined in this AD, and that, following installation, it is inspected at intervals not to exceed 6 months, as required by this AD.

Ref. Publications:

umlaut Engineering GmbH VSB P3VSB000003 (formerly P3 Engineering GmbH) original issue (issue A) dated 10 May 2021 or issue B dated 14 July 2021.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 30 July 2021. This Proposed AD was previously posted on 01 July 2021 as PAD 21-093, republished on 13 July 2021 as PAD 21-093R1 and closed for consultation on 15 July 2021. The Comment Response Documents can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this PAD.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other



than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.

4. For any question concerning the technical content of the requirements in this PAD, please contact: umlaut engineering GmbH (formerly P3 Engineering GmbH), Blohmstraße 12, 21079 Hamburg, Germany, website: <https://www.umlaut.com/en/hafex>, E-mail: hafex@umlaut.com.

