VENDOR SERVICE BULLETIN

ATA 26-24

FIRE PROTECTION – FIRE EXTINGUISHER - HIGH TEMPERATURE EXPOSURE - INSPECTION

PART MANUFACTURER	**umlaut engineering GmbH**
AFFECTED PART	**Hand-held Fire Extinguisher HAFEX, model type:** **P3APP003010A** **P3APP003010B** **P3APP003010C**

Issued	Checked	Approved
		

List of Revisions / Amendments

Issue	Affected Pages:	Reason for Revision / Amendment:
A	All	Initial Release
B	1	- Changed Title from “General” to “Inspection”
	4	- Removed exposure duration - Recommendations removed
	5	- Added explanation about cumulative effect - Changed compliance to Mandatory - Added chapters 1.0 L and 1.0 M; moved note about interchangeability from chapter 2.0 C to chapter 1.0 M - Added reference to EASA AD to chapter 1.0 K - moved part of note to chapter 1.0 M
	7	- Added chapters 2.0 D to 2.0 F
	8	- Updated introduction and removed inspection interval
	8f.	- Renamed chapter 3.1 and replaced content with reference to design holder and EASA AD and moved flow chart to chapter 3.2
	11	- updated step 6 of inspection procedure
	13f.	- Removed Annex A

List of Effective Pages/Table of Contents

VSB Summary

This Vendor Service Bulletin (VSB) introduces instructions to identify and replace potentially unsafe Hand-held Fire Extinguishers.

1.0 Planning Information

A. Effectivity

Hand-held Fire Extinguisher with part numbers (PNR):

- P3APP003010A
- P3APP003010B
- P3APP003010C

B. Concurrent Requirements

N/A

C. Reason

The equipment might have an impaired operability after exposure to environmental conditions leading to an equipment temperature higher than 65°C (see below).

This effect must be considered as a hidden defect which can lead to an impaired functionality of the equipment. This effect could even result in a complete loss of its intended function, which must be considered as a potential unsafe condition.

This VSB describes the inspection task to identify potentially affected extinguishers to be replaced.

D. Description

With respect to COVID-19 pandemic many aircrafts have been taken out of operation and put to parking or storage mode. This parking or storage might have been performed in regions with high temperature profiles which could lead to temperatures inside the aircraft of 65°C or higher.

The exposure to such high temperatures is unlikely to occur in normal operation and is not covered by current standard qualification requirements and tests. However, during parking and storage of aircrafts, this exposure of the equipment to such high temperatures might occur as a result of parking or storage of aircrafts in regions with continuous high temperature levels, e.g. parking or storage in desert-like regions, without the extinguisher being removed from the aircraft.

Other aspects affecting temperature inside an aircraft are e.g. aircraft painting color, installation location of the equipment inside the aircraft (cabin or cockpit, closed compartments).

NOTE: THIS EFFECT IS CUMULATIVE, THEREFORE TIME PERIODS FOR TEMPERATURE EXPOSURE CANNOT BE DEFINED.

E. Compliance

1) Classification: Mandatory

F. Approval

With this VSB, umlaut engineering GmbH gives only accomplishment instructions. This VSB shall not be considered as approved design data and does not contain any change information that revises the equipment definition covered by approved modifications.

NOTE: THIS VSB DOES NOT REPRESENT APPROVED DESIGN DATA. INSTRUCTIONS OF RELEVANT DESIGN HOLDER HAS TO BE CONSIDERED.

G. Manpower

Approx. 1 minute per extinguisher is necessary to perform the inspection task.

H. Weight and Balance

None

I. Electrical Load Data

Not changed

J. Software Accomplishment Summary

Not applicable

K. References

Airworthiness Directive (AD) is anticipated by EASA.

L. Publications affected

CMM 26-24-02 – Component Maintenance Manual with Illustrated Parts List – HAFEX.

M. Interchangeability

For some aircraft an alternate P/N can be installed as a replacement part (see chapter 2.0 C) to complete this VSB. Check the relevant ICA for applicability of the alternative P/N. In case of doubts contact the applicable design holder for support.

2.0 Material Information

A. Material – Availability

Contact umlaut engineering GmbH for availability.

B. Industry Support Information

If you need more information about this Service Bulletin, or to obtain delivery data, contact the Customer Support Manager at:

umlaut engineering GmbH
Blohmstraße 12
21079 Hamburg
Germany

E-Mail: hafex@umlaut.com

C. List of components

The following parts from umlaut engineering GmbH are necessary to accomplish this VSB if a replacement is recommended (see section 3.2 C).

(1) Material to be purchased (if applicable):

Original P/N*		
P/N	**Description**	**QTY**
P3APP003010A	HAFEX	1
P3APP003010B	HAFEX YELLOW	1
P3APP003010C	HAFEX GREEN	1

Umlaut recommends using the alternative P/N as replacement to complete this Service Bulletin:

Original P/N*			Alternative P/N*		
P/N	**Description**	**QTY**	**P/N**	**Description**	**QTY**
P3APP003010A	HAFEX	1	P3APP003010D	HAFEX UL	1
P3APP003010B	HAFEX YELLOW	1	P3APP003010E	HAFEX UL YELLOW	1
P3APP003010C	HAFEX GREEN	1	P3APP003010F	HAFEX UL GREEN	1

(2) Material supplied by the Operator (consumables):
- No additional material needed.

(3) Parts to be purchased to perform the change in shop:
- Not applicable (extinguisher cannot be repaired in shop).

D. Subcomponents to be Re-Identified

Not applicable

E. Tooling

Not applicable

F. Special Tooling

Not applicable

3.0 Accomplishment Instructions

WARNING: MAKE SURE TO OBEY ALL THE WARNINGS AND ALL THE CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

3.1 General

The instructions outlined in this chapter must be performed based on EASA AD or design holder stipulation, whatever is more conservative.

3.2 Inspection of fire extinguisher

A. General

The steps below outline the general accomplishment instructions. The detailed sequence is given in the procedure.

WARNING: MAKE SURE THAT YOU OBEY ALL THE WARNINGS AND ALL THE CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

B. Preparation

Identification of affected fire extinguishers:

On the RFID label located on the lever of the fire extinguisher, check the part number (PNR). Only PNR P3APP003010A, P3APP003010B, P3APP003010C are subject to this service bulletin. (refer to Figure 1).

NOTE: THE PART NUMBER OF THE EXTINGUISHER IS THE DECISIVE CRITERION FOR THE IDENTIFICATION OF AFFECTED FIRE EXTINGUISHERS.

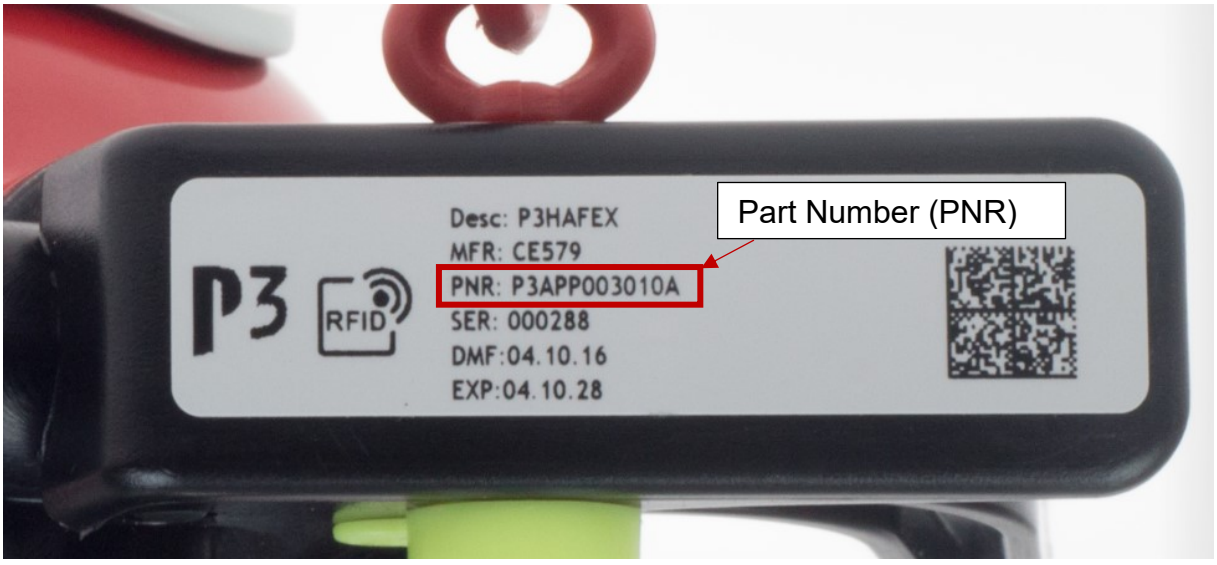
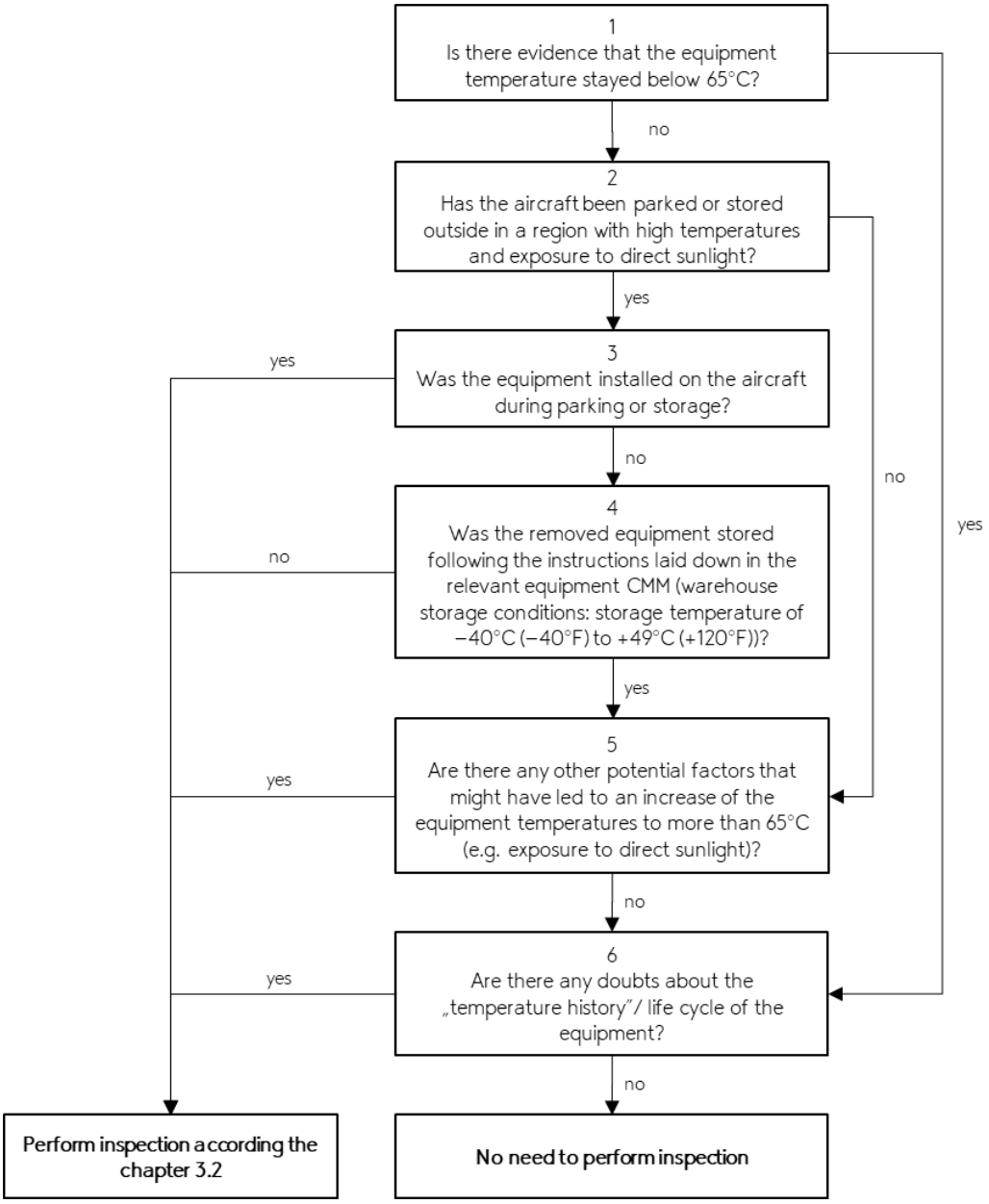


Figure 1: RFID Label.

Evaluation of the aircraft/ equipment history:

If a potentially affected fire extinguisher has been identified, it must be evaluated if it was exposed to environmental conditions as described in chapters 1.0 C and 1.0 D:



Rational: "high temperatures" in this context are considered as outside air temperatures of above 40°C to 50°C.

Rational: "Evidence" can be any traceable proof of the equipment temperature like temperature indicators, temperature logger,…

Rational: "outside" implies that the aircraft was exposed to direct sun light.

Rational: "temperature history" in this context means that the equipment has not been exposed to high temperatures of more than 65°C previously (e.g. before installation, during maintenance, transport, removal from other aircraft, etc.)

C. Procedure

1. Remove the fire extinguisher from its bracket. **Refer to CMM 26-24-02 page 12001.**
2. Put extinguisher in upright position onto a flat and even surface with safety pin in place (Figure 2).
3. Push the lever up carefully with low force and using only one finger (Figure 3).
4. Release the lever.

NOTE: THE LEVER SHOULD MOVE DOWN BY ITS OWN.

5. Check presence of potential gap between safety pin and valve head (without touching the lever): check visually if the safety pin touches the valve head (Figure 4).
    a. Case 1: safety pin touches valve head: the extinguisher can be considered as not affected. No further action needed.
    b. Case 2: safety pin does not touch valve head: If there is a gap, the extinguisher might be affected in its function and should be considered INOP and should be replaced according to instructions provided by the design holder.

NOTE: THE CHECK PROCEDURE IS REPEATABLE. REPEAT THE TEST IF NEEDED.

6. Please report the quantities of checked/ failed fire extinguishers to umlaut engineering and the responsible design holder.

NOTE: AN INOP EXTINGUISHER ITSELF IS NOT POSING A RISK TO CREW OR PASSENGERS BUT IS LIKELY NOT TO FULFIL ITS INTENDED FUNCTION.

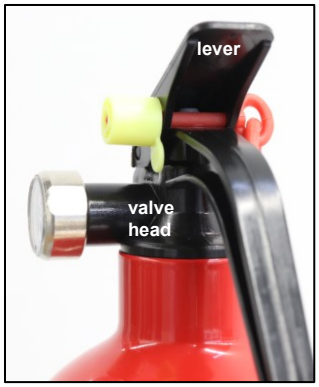


Figure 2: upright position

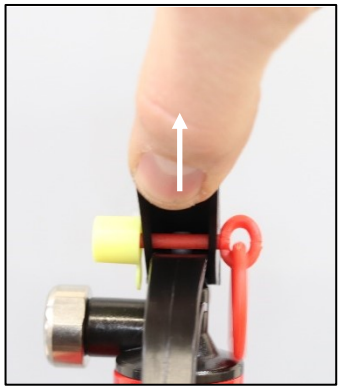


Figure 3: push lever up

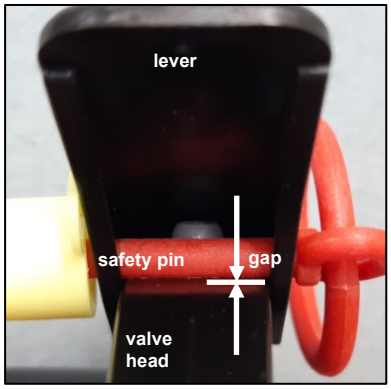


Figure 4: gap

D. Re-identification of equipment

Not applicable.

E. Test

Not applicable.

F. Close-up

Re-install fire extinguisher in bracket. **Refer to CMM 26-24-02 page 13001.**