



Civil Aviation Authority  
**SAFETY NOTICE**  
Number: SN-2024/004



4 July 2024

**Fire Suppression – Toilet Compartment  
Fire Extinguishers**

**This Safety Notice Contains Recommendations Regarding Operational Safety.**

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

<b>Applicability:</b>	
<b>Aerodromes:</b>	Not affected
<b>Air Traffic:</b>	Not affected
<b>Airspace:</b>	Not affected
<b>Airworthiness:</b>	CAMOs of aircraft fitted with Toilet Fire Extinguishers FE-36 (P/Ns see Note 1 below) manufactured by FFE Ltd, between serial numbers 70472 through 113558 inclusive, and with a manufacturing date before 12th June 2023 (see Note 2 below.)
<b>Flight Operations:</b>	Not primarily affected
<b>Licensed/Unlicensed Personnel:</b>	Not affected

**1 Affected Aircraft Types, Part Numbers and Serial Numbers:**

FE-36 Toilet Fire Extinguishers (see P/Ns in table below) manufactured by FFE Ltd, serial numbers 70472 through 113558 inclusive, and with a manufacturing date before 12th June 2023.

PART NUMBER	GUAGE Incorporated	Aircraft Type/Model Designation(s)
BA24320L-1	No	ATR 42/ATR 72
BA24320H-1	No	BAe146 / AVRO RJ Series
BA24320H-1	No	EMBRAER; - ERJ 170-100 and ERJ 170-200 - ERJ 190-100 and ERJ 190-200 - EMB-145 and EMB-135 - EMB-545 and EMB-550

BA24320X-X *	*	Bombardier CL-600-2B16 (Challenger) 605 and 650
BA24320P-1	Yes	Bombardier Series CL-600-2B19 CRJ 200

- \* FFE part numbers applicable to Bombardier CL-600-2B16 (Challenger) 605 and 650 to be confirmed by Bombardier

## 2 Introduction

The purpose of this Safety Notice is to alert owners and operators of affected aircraft models, as detailed in Section 1 above, regarding the inspection/check of the Toilet Compartment Fire Extinguishers. The affected fire extinguishers are used in passenger lavatories and are installed on a number of different aircraft types, including those identified in Section 1 of this Safety Notice. Some aircraft installations have fire extinguisher models that incorporate a sight gauge and/or utilise other features that can ensure the timely identification and removal of any fire extinguisher that has suffered premature discharge. Accordingly, this Safety Notice addresses aircraft types for which affected fire extinguishers may not yet have been inspected, and provides recommendations based on those published by FFE, the fire extinguisher manufacturer, in their Recommendation Letter FE 4120-DC.

Note 1: The EMBRAER types identified in Section 1 have affected fire extinguishers installed and these actions are already addressed by ANAC SAB BEA 2024-01.

Note 2: BAE have issued AOM 24-003V-1 on 29 Feb 2024, incorporating FFE Recommendation Letter FE 4120-DC.

Note 3: ATR have issued AOM 2024/01 on 25 Jan 2024, to recommend weighing and replacement of the fire extinguisher, if necessary, which will be the subject of an EASA Airworthiness Directive.

## 3 Background

A manufacturing defect has been identified which could affect the Lavatory Fire Extinguisher installations identified above. This defect can result in premature leakage at the eutectic tip, resulting in lack of pressurisation in the bottle, thus rendering it ineffective. However, it should be noted that, on the basis of the number of units rejected to date, it is estimated that the proportion of units affected by this defect may be less than 1%. It is therefore recommended that affected fire extinguisher units are inspected and replaced if found to have suffered a discharge.

## 4 Recommendations

- 4.1 Check aircraft maintenance records to confirm if affected fire extinguisher units are installed and if they have already been weight-checked since initial installation. No further action is required for units that have undertaken a weight test, as specified in FFE Recommendation Letter FE 4120-DC
- 4.2 CAA recommends that operators carry out the instructions of FFE Ltd Recommendation Letter FE 4120-DC – see Appendix 1.

**5 Enquiries**

- 5.1 Any enquiries or requests for further guidance as a result of this communication should be referred to: [Continued.Airworthiness@caa.co.uk](mailto:Continued.Airworthiness@caa.co.uk).

**6 Cancellation**

- 6.1 This Safety Notice will remain in force until further notice.

**Appendix 1 - FFE Recommendation Letter FE 4120-DC**



## RECOMMENDATION LETTER

### 1. General

A. Fire Suppression – Toilet Compartment Fire Extinguishers (Lavex).

### 2. Planning Information

A. All spherical type Toilet Compartment Fire Extinguisher FE-36 manufactured by FFE Ltd. between serial numbers 70472 through 113558 inclusive, and with a manufacturing date prior to 12<sup>th</sup> June 2023 (serial number list to be supplied separately).

#### i. Effectivity

a. Toilet Fire Extinguishers – part numbers:

BA24320A-1 BA24320B-1 BA24320C-1 BA24320D-1 BA24320E-1  
 BA24320F-1 BA24320G-1 BA24320H-1 BA24320J-1 BA24320K-1  
 BA24320L-1 BA24320M-1 BA24320N-1 BA24320P-1

#### ii. Reason

- a. A manufacturing defect has been identified which could potentially result in a leakage problem at the eutectic tip. This typically manifests early in the life of affected units. Any units which have undertaken weight tests as specified in FFE CMM 26-25-36 or Airbus MPD Task are considered unaffected by this defect (as they will have been re-checked).
- b. Rectification is accomplished by replacing found defective units with a replacement unit.

#### iii. Description

- a. The contents of this letter describe the action necessary to carry out inspection/check of the Toilet Fire Extinguisher.

#### iv. Tooling

- a. Calibrated high-resolution scales, with an accuracy of at least 0.1 gramme.

#### v. References

- a. Component Maintenance Manual (CMM) **26-25-36**.



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### 3. Accomplishment Instructions

- A. Identification of affected parts. All spherical type Toilet Compartment Fire Extinguishers with serial numbers 70472 through 113558 inclusive, and with a manufacturing date prior to 12<sup>th</sup> June 2023. Part numbers within the BA24320 series.
- i. Compliance – for Toilet Compartment Fire Extinguishers **within aircraft prior to delivery to operator** (e.g. aircraft under manufacture):
    - a. Remove Fire Extinguisher from aircraft.
    - b. Establish the production weight of the Fire Extinguisher, as mentioned on the product label.
    - c. Gently place the Fire Extinguisher onto high-resolution scales and compare the measured weight to that shown on the product label.
    - d. If the measured weight is more than 2.0 grammes below the gross weight stated on the product label, the unit shall be removed from service. The serial number, a photograph of the gauge reading, and the measured weight shall be notified to FFE Ltd., 9 Hunting Gate, Hitchin, Hertfordshire, SG4 0TJ, England, and a replacement unit will be provided for fitment to the aircraft.
    - e. If the measured weight is within 2.0 grammes of that stated on the product label, the unit should be returned to service.
  - ii. Compliance – for Toilet Compartment Fire Extinguishers **within aircraft that are in service**:
    - a. Where documentation is available that the specific unit, as validated by its serial number, has already been weight checked according to its maintenance records, no further action is required.
    - b. Remove Fire Extinguisher from aircraft at the next appropriate service opportunity (not exceeding 18 months from the date of this Recommendation Letter).
    - c. Establish the production weight of the Fire Extinguisher, as mentioned on the product label.
    - d. Gently place the Fire Extinguisher onto high-resolution scales and compare the measured weight to that shown on the product label.



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- e. If the measured weight is more than 5.0 grammes below the gross weight stated on the product label, the unit shall be removed from service and replaced. The serial number, a photograph of the gauge reading, and the measured weight shall be notified to FFE Ltd., 9 Hunting Gate, Hitchin, Hertfordshire, SG4 0TJ, England, and the unit returned for analysis.
- f. Otherwise, the unit should be returned to service.

#### 4. **Material Information**

##### a. **Cost**

- a. New replacement unit is free of charge EXW from FFE Ltd., 9 Hunting Gate, Hitchin, Hertfordshire, SG4 0TJ, England if within 5 years of the manufactured date and confirmed to be a consequence of the manufacturing defect.

##### b. **Availability**

- a. New replacement units will be dispatched as soon as possible from receipt of a purchase order. The purchase order must state all serial numbers of units which have been found defective, along with supporting photographic evidence.
- b. FFE reserve the right to request units returned to FFE for further investigation.



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