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 <b>適航指令發布單</b> <b>Airworthiness Directive Issuance Form</b>	
民航局 AD 編號 AD number	CAA-2016-03-009 發布日期 Date issued 2016/3/10
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	Kidde Gravier Single Head Automatic Fire Extinguishers, Part Number (P/N) 12A, P/N 13A, P/N 59A, P/N 60A, P/N 99A, P/N 146A, P/N 161A, P/N 162A, P/N 167A, P/N 170A, P/N 170A-02, P/N 182A, P/N 187A, P/N 229A(1), P/N 242A(1), P/N 236A, P/N 237A, P/N 241A, P/N 1167A, P/N 1187A, P/N 1200A, P/N 57133 series, P/N 57135 series, P/N 57183 series, P/N 57331 series, P/N 57333 series and P/N 57335 series, all serial numbers. The use of the word 'series' signifies that all dash numbers of those P/N are affected. These fire extinguishers are known to be installed on various categories aircraft.
主旨摘要	Fire Protection - Engine and Auxiliary Power Unit Automatic Fire Extinguishers - Inspection/Overhaul
民航局 CAA <input type="checkbox"/> 本國產品 Native products <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authorities <input type="checkbox"/> FAA <input type="checkbox"/> Germany LBA <input checked="" type="checkbox"/> EASA <input type="checkbox"/> CAA-NL <input type="checkbox"/> Brazil <input type="checkbox"/> UK CAA <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> Japan CAB <input type="checkbox"/> DGAC <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____
	設計國 AD 編號 Original AD number 2016-0044
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)
備註 Note	ATA 26. Ref. Publications: Kidde Gravier SB 26-080 Revision 1 dated 27 July 2011. and Kidde Gravier SIL 01-10 dated 29 July 2010. and Kidde Gravier CMM 26-21-52 Revision 17. and Kidde Gravier CMM 26-21-40 Revision 20.
註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a> Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a>	

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CAA Form ACS-P08-02

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## Airworthiness Directive

**AD No.:** 2016-0044

**Issued:** 08 March 2016

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

**Design Approval Holder's Name:**

KIDDE GRAVINER Limited

**Type/Model designation(s):**

Fire Extinguishers

**Effective Date:** 22 March 2016

**ETSOA Number(s):** Various National equipment approvals issued by the Civil Aviation Authority (CAA) of the United Kingdom (UK), including E09087, E08874, E10633, E10634, E13816, E12439, E14061 and E04441.

**Foreign AD:** Not applicable

**Supersedure:** None

### ATA 26 – Fire Protection – Engine and Auxiliary Power Unit Automatic Fire Extinguishers – Inspection/Overhaul

**Manufacturer(s):**

Kidde Graviner Limited (formerly known as Graviner Manufacturing Co. Ltd. and Graviner Ltd.)

**Applicability:**

Kidde Graviner Single Head Automatic Fire Extinguishers, Part Number (P/N) 12A, P/N 13A, P/N 59A, P/N 60A, P/N 99A, P/N 146A, P/N 161A, P/N 162A, P/N 167A, P/N 170A, P/N 170A-02, P/N 182A, P/N 187A, P/N 229A(1), P/N 242A(1), P/N 236A, P/N 237A, P/N 241A, P/N 1167A, P/N 1187A, P/N 1200A, P/N 57133 series, P/N 57135 series, P/N 57183 series, P/N 57331 series, P/N 57333 series and P/N 57335 series, all serial numbers. The use of the word 'series' signifies that all dash numbers of those P/N are affected.

These fire extinguishers are known to be installed on various categories aircraft.

**Reason:**

A fire handle on a BAe 146 aeroplane was operated on the ground as a precautionary measure after the throttle cable on the affected engine failed, due to corrosion. The P/N 57333 extinguisher failed to discharge. Investigation results revealed that excess solder, which had been deposited during overhaul on the frangible plug of the extinguisher, prevented the release of the extinguishant.



This condition, if not detected and corrected, could result in the failure of a fire bottle to discharge, which reduces the ability of the fire protection system to extinguish fires in the engine or Auxiliary Power Unit (APU) fire zones, possibly resulting in damage to the aeroplane and injury to the occupants. Due to similarity of design, this condition may also affect other P/N fire extinguishers.

Prompted by this report, Kidde Graviner (KG), the fire extinguisher manufacturer, issued Service Information Letter (SIL) 01-10, and Service Bulletin (SB) 26-080, later revised, providing instructions to accomplish an inspection of the affected parts.

For fire extinguishers P/N 57333 series, installed on BAe146 and RJ aeroplanes, and P/N 57183 series, installed on ATP aeroplanes, EASA issued respectively AD 2012-0126 and AD 2012-0127 (both ADs were later revised), requiring inspections and providing requirements for installation or replacement of those fire extinguishers. For the other P/N fire extinguishers listed in KG SB 26-080, it was deemed that no EASA AD could be issued.

Recently, after a review of available data, the possibility to require the inspections on all affected parts was identified.

For the reasons stated above, this AD requires accomplishment of inspections, and provides requirements for new installation, of fire extinguishers not addressed by EASA AD 2012-0126R1 or AD 2012-0127R1, irrespective of the aircraft type on which the fire extinguisher is (or will be) installed.

Note 1: On 13 October 2015, CAA-UK issued a mandatory action, identified as AD G-2015-0001, applicable to all P/N fire extinguishers listed in SB 26-080, to require accomplishment of inspections of, and providing requirements for new installation of, affected fire extinguishers on aircraft registered in the UK. The AD is intended to apply only to “Annex II” aircraft (i.e., aircraft that are not in the remit of EASA in accordance with [Regulation \(EC\) No 216/2008](#)).

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

Required as indicated, unless accomplished previously:

Note 2: For the purpose of this AD, an overhaul includes the replacement of the operating head. Replacement of the pressure relief plug assembly only is not considered an overhaul.

- (1) Within 12 month after the effective date of this AD, inspect each fire extinguisher, except those having P/N 57333 series, installed on BAe146 and RJ aeroplanes, and those having P/N 57183 series, installed on ATP aeroplanes, and, depending on findings, accomplish corrective actions in accordance with the instructions of KG SB 26-080 Revision 1.
- (2) Accomplishment of an overhaul (see Note 2 of this AD) of a fire extinguisher by Kidde Graviner or Hugen, or in accordance with the instructions of KG SIL 01-10, or in accordance with KG Component Maintenance Manual (CMM) 26-21-40 Revision 14 or later, or KG CMM 26-21-52 Revision 13 or later (as applicable to fire extinguisher P/N) is acceptable to comply with the requirement of paragraph (1) of this AD for that fire extinguisher.



- (3) From the effective date of this AD, do not install on any aircraft an affected fire extinguisher, unless it is new, or it has passed an inspection in accordance with the instructions of KG SB 26-080 Revision 1, or it has been overhauled (see Note 2 of this AD) by KG, or by Hugen, or in accordance with the instructions of KG SIL 01-10, or in accordance with the instructions of KG CMM 26-21-40, Revision 14, or of KG CMM 26-21-52 Revision 13, as applicable to fire extinguisher P/N.

**Ref. Publications:**

Kidde Gravinier SB 26-080 Revision 1 dated 27 July 2011.

Kidde Gravinier SIL 01-10 dated 29 July 2010.

Kidde Gravinier CMM 26-21-52 Revision 17.

Kidde Gravinier CMM 26-21-40 Revision 20.

The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.

**Remarks:**

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 02 February 2016 as PAD 16-016 for consultation until 01 March 2016. The Comment Response Document can be found at <http://ad.easa.europa.eu>.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
4. For any question concerning the technical content of the requirements in this AD, please contact:  
Kidde Gravinier Ltd – Technical Support  
Mathisen Way, Colnbrook, Slough, Berkshire, SL3 0HB, United Kingdom  
Telephone: +44 1753 766128  
E-mail: [John.OBrien@hs.utc.com](mailto:John.OBrien@hs.utc.com).

