



Airworthiness Directive

AD No.: 2016-0024

Issued: 26 January 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:

SIEMENS S.A.S.

Type/Model designation(s):

PMC11, PMC31 and GMC11 Smoke Detectors

Effective Date: 01 February 2016

ETSOA Number(s): EASA.21O.437, EASA.21O.438 and ETSOA.21O.10054627 (ETSO-C1c)

Foreign AD: Not applicable

Supersedure: None

ATA 26 – Fire Protection – Optical and Ambient Smoke Detectors – Identification / Replacement

Manufacturer(s):

Siemens S.A.S.

Applicability:

Part Number (P/N) PMC1102-02, P/N PMC3100-00 and P/N GMC1102-02 smoke detectors, having a date of manufacture (DMF, in digits as 'MMYYYY', e.g. 072010, see Appendix 2 of this AD) between November 2010 to January 2013 inclusive, and certain repaired units, as identified by P/N and serial number (s/n) in Appendix 1 of this AD.

These smoke detectors are known to be installed on, but not limited to: Airbus A330, A330 Freighter and A380 aeroplanes by the aeroplane manufacturer on the production line; and in service by Supplemental Type Certificate (STC) modification on certain Airbus A319 and A320, Bombardier CL-600-2B19 (Challenger 850), Boeing (formerly McDonnell Douglas) DC-9 series 80, and Boeing 737-400(BDSF), 767 and 747-8 aeroplanes.

Reason:

During a maintenance operation, some smoke detectors P/N PMC1102-02 failed an acceptance test, due to a significant degraded optical sensitivity. Investigation results concluded that light-emitting diodes (LED) were abnormally degraded, affecting specific batches where changes occurred in the LED manufacturer production process. Further investigation has determined that the affected LED



have been installed on smoke detectors manufactured between November 2010 and January 2013, and on certain repaired units.

This condition, if not corrected, will generate an abnormal ageing of the smoke detector, leading to a decrease of the light intensity capability, possibly resulting in failure to detect smoke and consequent risk of an on board uncontrolled fire.

Prompted by these findings, Siemens published Service Information Letter (SIL) PMC-26-002 and SIL PMC-26-003 (hereafter collectively referred to as 'the applicable SIL' in this AD), providing instructions to identify the affected smoke detectors for repair action.

For the reasons described above, this AD requires identification and removal from service of all affected smoke detectors.

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

Required as indicated, unless accomplished previously:

- (1) Within 30 days after the effective date of this AD, inspect each Siemens smoke detector to determine whether it is an affected part, by identifying the P/N, s/n and DMF. See Appendix 2 of this AD how to find the P/N, s/n and DMF markings on a detector. The applicable SIL contains additional information that can be used to identify the affected units.

A review of aeroplane delivery and/or maintenance records is acceptable in lieu of the inspection as required by this AD, provided that the P/N, s/n and DMF of the installed smoke detectors can be conclusively determined from that review.

Note 1: This AD applies to more s/n smoke detectors than those identified in the applicable SIL.

Note 2: Airbus have issued Alert Operators Transmission (AOT) A26L001-15 (for A330 aeroplanes) and AOT A26R002-15 (for A380 aeroplanes) to provide additional information on the subject addressed by this AD.

- (2) For affected smoke detectors, identified as required by paragraph (1) of this AD, within the compliance time specified in Table 1, or Table 2, or Table 3 of this AD, as applicable, depending on the P/N and DMF, and, for repaired units as identified in Appendix 1 of this AD, within 5 months after the effective date of this AD, replace each affected smoke detector with a serviceable part (see Note 3 of this AD).

Note 3: The applicable SIL instructs operators to send all removed detectors to a Siemens authorised repair station, where the affected units can be corrected (an action which results in P/N change for the PMC units, and marking of 'SIL PMC-26-002' for the GMC units) and restored to serviceability.



Table 1 – P/N PMC1102-02 Detectors (Cargo Compartments)

Manufacturing Date (month/year)	Compliance Time (after the effective date of this AD)
122010 to 112011 inclusive	Within 5 months
122011 to 012013 inclusive	Within 11 months

Table 2 – P/N PMC3100-00 Detectors (Cargo Compartments)

Manufacturing Date (month/year)	Compliance Time (after the effective date of this AD)
032011 to 012012 inclusive	Within 5 months
022012 to 012013 inclusive	Within 11 months

Table 3 – P/N GMC1102-02 Detectors (Passenger Cabin, or any other on board location)

Manufacturing Date (month/year)	Compliance Time (after the effective date of this AD)
112010 to 022012 inclusive	Within 24 months
032012 to 122012 inclusive	Within 36 months

- (3) From the effective date of this AD, do not install on any aeroplane an affected P/N smoke detector, as identified by DMF (see Table 1, or Table 2, or Table 3 of this AD, as applicable to P/N), or identified by P/N and s/n (see Appendix 1 of this AD), unless the unit (GMC only) is marked 'SIL PMC-26-002'.

Ref. Publications:

Siemens SIL PMC-26-002 original issue dated December 2015, and Revision 1 dated January 2016.
Siemens SIL PMC-26-003 original issue and Revision 1, both dated December 2015.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact: SIEMENS - Aviation Customer Support, 697 rue Fourny, 78530 Buc, France
E-mail: aerospace-support.fr@siemens.com.



Appendix 1 – Affected repaired Smoke Detectors

P/N	s/n
PMC1102-02	2129, 2281, 2335, 2343, 2356, 2399, 2411, 2428, 2588, 2731, 2851, 2888, 3658, 3696, 3710, 3729, 3731, 5032, 5039, 5040, 5107, 5216, 5233, 50069, 50075, 50087, 50122, 50204, 50250, 50264, 50268, 50270, 50272, 50366 and 50386
PMC3100-00	201, 208, 213, 227, 260, 268, 312, 528, 588, 592, 606, 652, 655, 660, 667, 50037, 50046, 50058, 50060, 50062, 50067, 50070, 50072 and 50090



Appendix 2 – Identification of Smoke Detectors

Figure 1 – P/N PMC1102-02, P/N PMC3100-00

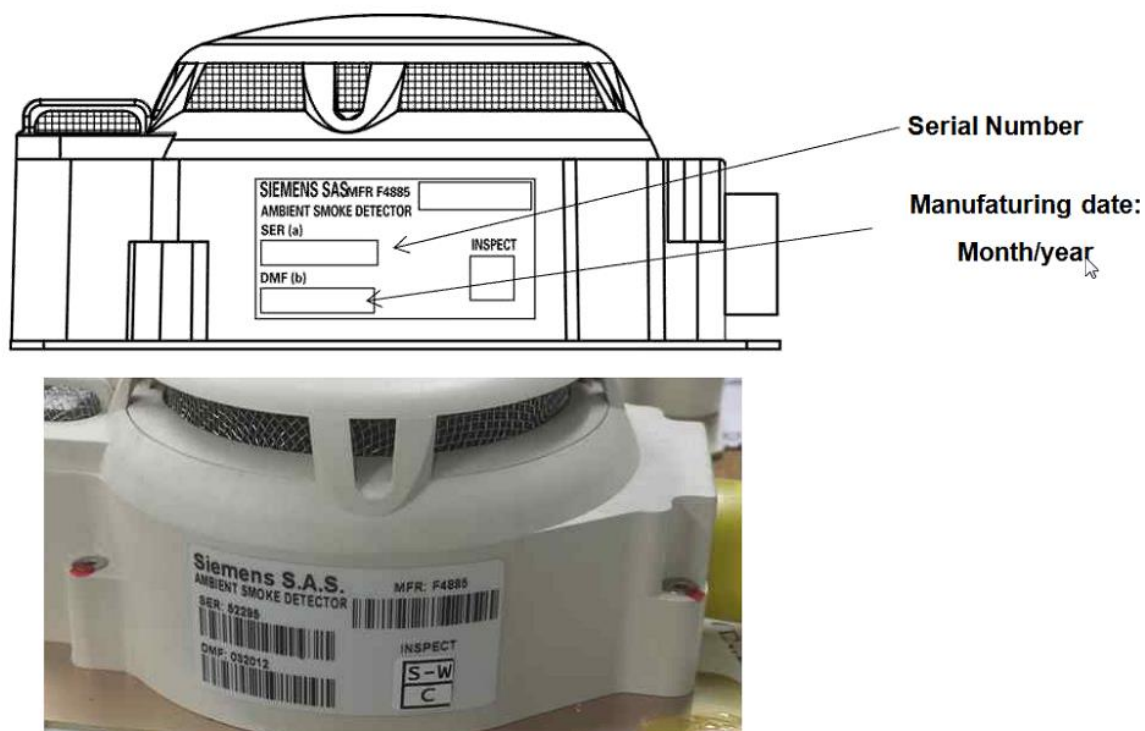


Figure 2 – P/N GMC1102-02

