



Airworthiness Directive

AD No.: 2019-0015

Issued: 29 January 2019

Note: This Airworthiness Directive (AD) 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.

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 (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

ASI AVIATION

Type/Model designation(s):

F 406 aeroplanes

Effective Date: 12 February 2019

TCDS Number(s): EASA.A.109

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2006-0134 dated 22 May 2006.

ATA 24 – Electrical Power – Circuit Breaker Switches – Inspection / Replacement

Manufacturer(s):

Reims Aviation Industries (RAI), Reims Aviation, S.A.

Applicability:

F 406 aeroplanes, all serial numbers.

Definitions:

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

Affected part: Circuit breaker (CB) switches, Part Number (P/N) CM3589-50 and P/N CM3589-20.

Serviceable part: CB switches, P/N 4061-2400-1 and P/N 406E2450-00000-100, as applicable, either new (never installed), or having accumulated less than 6 years since first installation on an aeroplane.

The applicable SB: ASI Aviation Service Bulletin (SB) F406-62 Revision 1 (for CB switches P/N CM3589-50 and P/N 4061-2400-1), and SB F406-90 (for CB switches P/N CM3589-20 and P/N 406E2450-00000-100), as applicable.



Reason:

After the Federal Aviation Administration issued AD 2005-20-25, applicable to Cessna 400 series aeroplanes equipped with certain avionics bus CB switches, it was determined that, due to design commonality, one of the affected avionics bus CB switches, P/N CM3589-50, was also installed on Reims F 406 aeroplanes.

This condition, if not corrected, could lead to smoke and/or burning smell in the cockpit, possibly resulting in reduced control of the aeroplane.

To address that potential unsafe condition, RAI issued SB F406-62 to provide instructions to remove certain switches from service. Consequently, EASA issued AD 2006-0134 to require identification of the date code of P/N CM3589-50 CB switches and, depending on findings, replacement with improved design CB switches, P/N 4061-2400-1. That AD also imposed a life limit on the affected CB switches P/N CM3589-50.

Since that AD was issued, in-service occurrences of smoke and burning smell in the cockpit have been reported on F 406 aeroplanes. Technical investigations revealed that these were due to failure of CB switches P/N CM3589-20, which are used to control the propeller de-icing circuit. Prompted by these events, ASI Aviation issued the applicable SB (as defined in this AD) to provide instructions to replace the affected parts with serviceable parts.

For the reasons described above, this AD retains the requirements of EASA AD 2006-0134, which is superseded, expands the range of affected parts, and requires replacement of P/N CM3589-20 CB switches with improved design CB switches P/N 406E2450-00000-100. This AD also replaces the previous life limit, 1 000 flight hours (FH) for certain P/N CM3589-50 CB switches, with a 6 year calendar time life limit, and also imposes that limit on the improved design CB switches.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) Within 200 FH, or 12 months, or during the next scheduled inspection, whichever occurs first after 05 June 2006 [the effective date of EASA AD 2006-0134], inspect each avionics bus CB switch P/N CM3589-50 to identify the date code in accordance with the instructions of the applicable SB.

Corrective Action(s):

- (2) If, during the inspection as required by paragraph (1) of this AD, any CB switch P/N CM3589-50 without date code is found, before next flight, replace that affected CB switch with an improved design CB switch P/N 4061-2400-1 in accordance with the instructions of the applicable SB.
- (3) If, during the inspection as required by paragraph (1) of this AD, any CB switch P/N CM3589-50 with a date code earlier than 0434 is found, before that affected CB switch exceeds 1 000 FH since new (first installation on an aeroplane), replace that affected CB switch with an improved design CB switch P/N 4061-2400-1 in accordance with the instructions of the applicable SB.



Replacement:

- (4) Within 200 FH, or 12 months, or during the next scheduled inspection, whichever occurs first after the effective date of this AD, replace each CB switch P/N CM3589-20 with an improved design CB switch P/N 406E2450-00000-100 in accordance with the instructions of the applicable SB.
- (5) Before exceeding 6 years since new (first installation on an aeroplane), or within 12 months after the effective date of this AD, whichever occurs later, replace each CB switch P/N CM3589-50, having a date code 0434 or higher, with an improved design CB switch P/N 4061-2400-1 in accordance with the instructions of the applicable SB.

Life Limitation:

- (6) From the effective date of this AD, for each serviceable part, before exceeding 6 years since new (first installation on an aeroplane), replace that part with a serviceable part in accordance with the instructions of the applicable SB. Amending the approved aircraft maintenance programme in accordance with the instructions of ASI F 406 Aircraft Maintenance Manual, temporary revision n°5, is an acceptable method to comply with this life limit requirement.

Credit:

- (7) Inspection(s) and corrective action(s) accomplished on an aeroplane, before the effective date of this AD in accordance with the instructions of RAI SB F406-62 at original issue, are acceptable to comply with the initial requirements of paragraphs (1), (2) and (3) of this AD for that aeroplane.

Parts Installation:

- (8) From 05 June 2006 [the effective date EASA AD 2006-0134], do not install on any aeroplane a CB switch P/N CM3589-50 that does not have a date code, or has a date code earlier than 0434.

- (9) Do not install an affected part on any aeroplane, as required by paragraph (9.1) or (9.2) of this AD, as applicable.

(9.1) CB switch P/N CM3589-20: After modification of the aeroplane as required by paragraph (4) of this AD.

(9.2) CB switch P/N CM3589-50: After modification of the aeroplane as required by paragraph (5) of this AD.

Ref. Publications:

Reims Aviation Industries SB F406-62 original issue dated 08 March 2006, or ASI Aviation SB F406-62 Revision 1 dated 14 December 2018.

ASI Aviation SB F406-90 original issue dated 14 December 2018.

The use of later approved revisions of the above-mentioned 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 20 December 2018 as PAD 18-182 for consultation until 17 January 2019. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#).
5. For any question concerning the technical content of the requirements in this AD, please contact: ASI Aviation, Aérodrome de Reims Prunay – 51360 Prunay, France, Telephone: +33 (0)3 26 48 46 65, Fax: +33 (0)3 26 49 18 57, Website: <http://asi-aviation.fr>.

