



## Airworthiness Directive

**AD No.:** 2016-0109R1

**Issued:** 27 October 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:

AIRBUS HELICOPTERS

### Type/Model designation(s):

AS 355 helicopters

**Effective Date:** Original Issue: 28 June 2016  
Revision 01: 10 November 2016

**TCDS Number(s):** EASA.R.146

**Foreign AD:** Not applicable

**Revision:** This AD revises EASA AD 2016-0109 which superseded EASA AD 2015-0202 dated 07 October 2015.

## ATA 28 – Fuel – FUELTRON Flowmeter – Removal

### Manufacturer(s):

Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aerospatiale)

### Applicability:

AS 355 E, AS 355 F, AS 355 F1 and AS 355 F2 helicopters, all serial numbers.

### Reason:

An occurrence was reported of an AS 355 helicopter where, after landing, an uncontrolled flame-out of engine No.1 occurred. Analysis results revealed that a particle contamination, possibly introduced during refuelling of the helicopter, had obstructed the FUELTRON flowmeter. The obstruction was due to the cross-section of the passage area of the flowmeter being smaller than the meshes in the upstream fuel pump strainer, allowing the particles to pass through the strainer. The installed FUELTRON flowmeter Part Number (P/N) 704A37-670-001 is identical for both engines.



The simultaneous obstruction of both flowmeters for both engines, if not detected and corrected, could lead to the flame-out of both engines in flight, possibly resulting in reduced control of the helicopter.

To address this potential unsafe condition, Eurocopter issued Alert Service Bulletin (ASB) AS355-28.00.20 to provide modification instructions and, consequently, EASA issued AD 2013-0205 to require removal of the FUELTRON flowmeter and modification of the fuel system.

Since that AD was issued, Airbus Helicopters developed a modification that allows (re-)installation of the FUELTRON flowmeter, provided a new (modified) fuel booster pump with a strainer of an appropriate mesh size is also installed. This modification is accepted as an alternative method of compliance (AMOC) to the requirements of AD 2013-0205.

Consequently, EASA issued AD 2015-0202, retaining the requirements of EASA AD 2013-0205, which was superseded, and introducing an alternative modification, allowing re-installation of the FUELTRON flowmeter, on the condition that, when modified, only new (modified) fuel booster pumps can be installed as replacement part.

Since that AD was published, it was found that in-service introduction of FUELTRON flowmeter P/N 704A37-670-001 through Aerospatiale Service Bulletin (SB) 28.02 (cancelled in 2015) was inadvertently omitted, which means some affected helicopters may not have complied with the AD.

For the reasons described above, this AD retains the requirements of EASA AD 2015-0202, which is superseded, and adds actions for helicopters which were modified in service through Aerospatiale SB 28.02.

After the issuance of EASA AD 2016-0109, it was discovered a discrepancy between the instructions of the SB AS355-28.00.21 and the requirements of paragraphs (6.2) and (6.3) of the original AD. These two subparagraphs required not to install booster pump P/N P94C16-602 for helicopters with mod 355A085801 embodied in production (6.2) or in service (6.3) (which both are incorrect). This mod requires removal of Fueltron flowmeter and in this case, customers can continue operate with old pump P/N P94C16-602 as long as Fueltron flowmeter is not re-installed.

The Revision of this AD harmonises the instructions of the SB and the requirements of the AD.

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

Required as indicated, unless accomplished previously:

- (1) For helicopters with modification (mod) 350A070791 embodied in production (installation of the FUELTRON flowmeter), within 5 months or 750 flight hours, whichever occurs first after 23 September 2013 [the effective date of EASA AD 2013-0205], accomplish the actions as specified in paragraphs (1.1) and (1.2) of this AD concurrently, in accordance with the instructions of the Eurocopter ASB AS355-28.00.20.

- (1.1) Remove FUELTRON flowmeter P/N 704A37-670-001 (both engines) and modify the fuel system.



- (1.2) Disable the electrical wiring connections related to the flowmeter installations.
- (2) For helicopters with Aerospatiale AS355 SB 28.02 (installation of the FUELTRON flowmeter) embodied in service, within 5 months or 750 flight hours, whichever occurs first after the effective date of this AD, accomplish the actions as specified in paragraphs (2.1) and (2.2) of this AD concurrently, in accordance with the instructions of the Eurocopter ASB AS355-28.00.20.
- (2.1) Remove FUELTRON flowmeter P/N 704A37-670-001 (both engines) and modify the fuel system.
- (2.2) Disable the electrical wiring connections related to the flowmeter installations.
- (3) From 23 September 2013 [the effective date of EASA AD 2013-0205], do not install a FUELTRON flowmeter P/N 704A37-670-001 on any helicopter.
- (4) As an alternative to the requirements of paragraph (1) or (2) of this AD, as applicable, replace (on both engines) fuel booster pump P/N P94C16-602 with fuel booster pump P/N P94C16-620, reinstall (on both engines) FUELTRON flowmeter P/N 704A37-670-001, and enable the electrical wiring connections related to the fuel flowmeter installation, in accordance with the instructions of Airbus Helicopters SB AS355-28.00.21.
- (5) Modification of a helicopter as specified in paragraph (4) of this AD cancels the requirement of paragraph (3) of this AD for that helicopter.
- (6) Do not install a fuel booster pump P/N P94C16-602 on a helicopter, as required by paragraph (6.1), (6.2) or (6.3) of this AD, as applicable.
- (6.1) For a helicopter (optionally) modified as specified in paragraph (4) of this AD: After modification of that helicopter.
- (6.2) [Deleted]
- (6.3) [Deleted]
- (7) From the effective date of this AD, do not modify a helicopter in accordance with the instructions of Aerospatiale AS355 SB 28.02.

Note: Actions to prevent fuel contamination during refuelling can be found in Eurocopter Information Notice No. 2145-I-28 and work card 20.07.02.208.

**Ref. Publications:**

Eurocopter ASB AS355-28.00.20 original issue dated 06 June 2013, or Airbus Helicopters ASB AS355-28.00.20 Revision 1 dated 24 June 2015.

Airbus Helicopters SB AS355-28.00.21 original issue dated 24 June 2015.



Aerospatale AS355 SB 28.02 original issue, approved 9<sup>th</sup> week of 1983, and Revision 1 dated 24 June 2015.

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. 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](mailto:ADs@easa.europa.eu).
4. For any question concerning the technical content of the requirements in this AD, please contact:  
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