Airworthiness Directive

AD No.: 2016-0220

Issued: 04 November 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 350 B3 helicopters

Effective Date:	18 November 2016
TCDS Number(s):	EASA.R.008
Foreign AD:	Not applicable
Supersedure:	None

ATA 67 – Rotor Flight Controls – Dual Hydraulic System – Modification

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Manufacturer(s):
Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aerospatiale)

Applicability:
AS 350 B3 helicopters, all serial numbers, if equipped with a dual hydraulic system, except those that embody Airbus Helicopters modification (mod) 074719 and mod 074622.

Reason:
During the past 5 years, four in-service occurrences were reported concerning certain AS 350 B3 helicopters, equipped with a dual hydraulic system, that did not involve any component malfunction or failure, but where a crew human factor was determined to have been a contributing cause. These events were assessed from the man-machine interface standpoint, and it was recognized that a pilot could forget to reactivate the HYD switch or the ACCU TST button during a hydraulic test. Improper setting of the HYD switch and ACCU TST button significantly increases the control load necessary to generate sufficient TR thrust for take-off.

This condition, if not corrected, could cause the pilot to take off without recognising the omission, preventing safe completion of the manoeuvre, possibly resulting in damage to the helicopter and injury to occupants.

Prompted by these findings, Airbus Helicopters (AH) developed a new Rotorcraft Flight Manual (RFM) procedure for the functional check of the Yaw Load Compensator, and published Service Bulletin (SB) AS350-67.00.66 to provide that procedure for in-service application. The advantage of the new procedure is that actuating the Yaw Servo Hydraulic Switch during the run-up hydraulic check is no longer necessary. Consequently, EASA issued AD 2015-0178 to require the new procedure to be incorporated in the normal procedures section of the applicable AS350 B3 RFM.

In addition to the RFM change, AH developed production mod 074622 and mod 074719, the purpose of which is to (1) trigger a caution when the hydraulic switch on the collective grip is set to OFF; (2) add an indicator light to indicate the status of the dual hydraulic system; and (3) replace the bistable ACCU TST push button with a monostable push button. AH published corresponding SB AS350-67.00.64 and SB AS350-67.00.65, respectively, to provide in-service modification instructions.

Based on further analysis of the reported occurrences, it was determined that, despite the RFM change introduced by AD 2015-0178, a critical scenario may still develop, leading to a human error, unless the new modifications are required to be introduced.

For the reasons described above, this AD requires the modification to trigger a caution when the hydraulic switch on the collective grip is set to OFF, the installation of an additional indicator light, and the replacement of the bistable ACCU TST push button with a monostable push button.

Required Action(s) and Compliance Time(s):
Required as indicated, unless accomplished previously:

Within 12 months after the effective date of this AD, modify the helicopter in accordance with the instructions of Section 3 of AH SB AS350-67.00.64 and SB AS350-67.00.65.

Ref. Publications:
Airbus Helicopters SB AS350-67.00.64 dated 25 February 2015.

Airbus Helicopters SB AS350-67.00.65 dated 25 August 2016.

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 30 September 2016 as PAD 16-140 for consultation until 28 October 2016. 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. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters (ESBESB) - Aéroport de Marseille, Provence 13725 Marignane Cedex – France, Telephone: + 33 (0) 12 85 97 97, Fax: + 33 (4) 85 99 66,
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