



DATE: March 28, 2014

AD #: 2014-07-52

This emergency airworthiness directive (EAD) 2014-07-52 is being sent to owners and operators of Airbus Helicopters (previously Eurocopter France) Model AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters with modification (MOD) 07 3215 or with a reinforcement angle, part number (P/N) 350A08.2493.21 or P/N 350A08.2493.23, installed.

Background

This EAD was prompted by a report that cracks were found in the reinforcement angles of the rear structure to tailboom junction frame (reinforcement angles) on several AS355 helicopters. This EAD requires repetitively inspecting certain reinforcement angles for a crack, and repairing any cracked reinforcement angle. As an option to performing the 10 hour TIS repetitive inspections, this EAD allows an alternate 165 hour TIS repetitive inspection. These EAD actions are intended to detect a crack in the reinforcement angle, which if not corrected, could result in loss of the tailboom and subsequent loss of control of the helicopter.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA EAD 2014-0076-E, dated March 25, 2014, to correct an unsafe condition for Airbus Helicopters Model AS350B, AS350BA, AS350BB, AS350B1, AS350B2, AS350B3, AS350D, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters with MOD 07 3215 or with at least one reinforcement angle, P/N 350A08.2493.21 or P/N 350A08.2493.23 installed. EASA advises that during the inspection of several AS355 helicopters, cracks were found in the reinforcement angles. EASA further states that a subsequent investigation revealed that cracks were initiated on the non-visible surface of the angle, which is the surface in contact with the frame, and that this condition, if not corrected, could lead to further crack propagation and subsequent loss of the tailboom, resulting in loss of the helicopter. The EASA EAD requires repetitive inspections of the reinforcement angles, and states that a terminating action is currently under investigation.

FAA's Determination

These helicopters have been approved by the aviation authority of France and are approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA, its technical representative, has notified us of the unsafe condition described in the EASA EAD. We are issuing this EAD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs.

Related Service Information

Airbus Helicopters has issued Emergency Alert Service Bulletin (EASB) No. 05.00.70 for Model AS350B, BA, BB, B1, B2, B3, and D helicopters and EASB No. 05.00.62 for Model AS355E,

F, F1, F2, N, and NP helicopters, both Revision 0 and dated March 24, 2014. Each EASB describes procedures for inspecting the angle reinforcements for a crack.

EAD Requirements

This EAD requires, for helicopters with 640 or more hours time-in-service (TIS) since installation of MOD 07 3215 or since installation of an applicable reinforcement angle, within 10 hours TIS, inspecting certain reinforcement angles for a crack. If there is a crack, this EAD requires, before further flight, repairing the reinforcement angle. As an option to performing the 10 hour TIS repetitive inspections, this EAD allows an alternate 165 hour TIS repetitive inspection.

Differences Between This EAD and the EASA EAD

This EAD is not applicable to the AS350BB as that model is not type certificated in the U.S. This EAD applies to Airbus Model AS350C and AS350D1 helicopters because these helicopters have a similar design. The EASA EAD requires a 165 hour TIS repetitive inspection, this EAD allows the 165 hour TIS inspection as an option. Finally, the EASA EAD requires operators to contact Airbus if there is a crack, this EAD does not, however it does require repairing the crack before further flight.

Interim Action

We consider this EAD to be an interim action. If final action is later identified, we might consider further rulemaking then.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. "Subtitle VII, Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701, General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Adoption of the Emergency Airworthiness Directive (EAD)

We are issuing this EAD under 49 U.S.C. Sections 106(g), 40113, and 44701 according to the authority delegated to me by the Administrator.

2014-07-52 **Airbus Helicopters (previously Eurocopter France):** Directorate Identifier 2014-SW-021-AD

(a) Applicability

This EAD applies to Airbus Helicopters Model AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters, certificated in any category, with:

- (1) Modification (MOD) 07 3215 installed; or

(2) With a reinforcement angle, part number (P/N) 350A08.2493.21 or P/N 350A08.2493.23, installed.

(b) Unsafe Condition

This EAD defines the unsafe condition as a crack in a rear structure to tailboom junction frame reinforcement angle (reinforcement angle), which if not detected could result in loss of the tailboom and subsequent loss of control of the helicopter.

(c) Effective Date

This EAD is effective upon receipt.

(d) Compliance

You are responsible for performing each action required by this EAD within the specified compliance time unless it has already been accomplished prior to that time.

(e) Required Actions

(1) For helicopters with 640 or more hours time-in-service (TIS) since installation of MOD 07 3215 or since installation of an applicable reinforcement angle, within 10 hours TIS, and thereafter, at intervals not exceeding 10 hours TIS, inspect each reinforcement angle for a crack as depicted in Figure 1 of Airbus Helicopters Emergency Alert Service Bulletin No. 05.00.70 for Model AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350C, AS350D, AS350D1 helicopters and Airbus Helicopters Emergency Alert Service Bulletin No. 05.00.62 AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters, both Revision 0 and dated March 24, 2014.

(2) If there is a crack, before further flight, repair the reinforcement angle in a manner approved by the manager listed in paragraph (f)(1) of this EAD.

(3) As an optional terminating action for the repetitive inspections required by paragraph (e)(1) of this EAD, at intervals not exceeding 165 hours TIS, remove screw No. 5 from the reinforcement angle, thoroughly clean the area around the hole and inspect the reinforcement angle for a crack. If there is not a crack, reinstall the screw. Sequentially repeat the steps required by this paragraph for screws No. 6 through No. 12. If there is a crack, comply with paragraph (e)(2) of this EAD.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this EAD. Send your proposal to: Robert Grant, Aviation Safety Engineer, Safety Management Group, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email robert.grant@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this EAD through an AMOC.

(g) Additional Information

(1) For further information contact: Robert Grant, Aviation Safety Engineer, Safety Management Group, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email robert.grant@faa.gov.

(2) For a copy of the service information referenced in this AD, contact: Airbus Helicopters, Inc., 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.airbushelicopters.com/techpub>.

(3) The subject of this AD is addressed in European Aviation Safety Agency EAD No. 2014-0076-E, dated March 25, 2014.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 5302: Rotorcraft Tailboom.

Issued in Fort Worth, Texas, on March 28, 2014.

Kim Smith,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.