DATE: March 4, 2015
AD #: 2015-05-52

This emergency airworthiness directive (EAD) 2015-05-52 is being sent to owners and operators of Agusta S.p.A. (Agusta) Model A109, A109A, A109A II, A109C, A109K2, A109E, A119, A109S, AW119 MKII, and AW109SP helicopters.

Background

This EAD was prompted by a report of an in-flight failure of tail rotor (T/R) pitch control link (pitch link) part number (P/N) 109-0130-05-117 on an Agusta Model AW119 MKII helicopter. This EAD requires inspecting certain pitch links P/N 109-0130-05-117 for freedom of movement, corrosion, excessive friction of the spherical bearings, and cracks. These EAD actions are intended to prevent loss of T/R pitch control 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, issued EASA EAD No. 2015-0035-E, dated February 27, 2015 (2015-0035-E), to correct an unsafe condition for AgustaWestland S.p.A. Model A109A, A109AII, A109C, A109E, A109K2, A109LUH, A109S, AW109SP A119, and AW119MKII helicopters, all serial numbers. EASA advises of the reported "in-flight breaking" of the T/R pitch control link P/N 109-0130-05-117. EASA EAD 2015-0035-E requires inspecting the T/R pitch control link for corrosion, rotation resistance and/or binding, and cracks.

FAA's Determination

These helicopters have been approved by the aviation authority of Italy and are approved for operation in the United States. Pursuant to our bilateral agreement with Italy, 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

AgustaWestland issued Alert Bollettino Tecnico (BT) Nos. 109-145, 109EP-141, 109K-65, 109S-065, 109SP-087, and 119-072, all revision A, and all dated February 27, 2015. These alert BTs specify inspections of pitch link P/N 109-0130-05-117 for corrosion, freedom of movement, excessive friction of the spherical bearings, and cracks.

EAD Requirements

This EAD requires inspecting the pitch link for freedom of movement for rotation resistance or binding. This EAD also requires removing the pitch link and inspecting each pitch link spherical bearing for corrosion and the force required to rotate each pitch link spherical bearing. If there is any corrosion, the pitch link is unairworthy. If the force required to rotate a spherical bearing in either end

of the pitch link is greater than 7.30 N (1.64 pounds force), the pitch link is unairworthy. If the force required to rotate the spherical bearings in both ends of the pitch link is equal to or less than 7.30 N (1.64 pounds force), this EAD requires cleaning and visually inspecting the pitch link rod for a crack using a 10x or higher power magnifying glass or by performing a dye penetrant inspection. If there is a crack, the pitch link is unairworthy.

Interim Action

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

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.

2015-05-52 **Agusta S.p.A.:** Directorate Identifier 2015-SW-007-AD.

(a) Applicability

This EAD applies to Agusta S.p.A. Model A109, A109A, A109A II, A109C, A109K2, A109E, A119, A109S, AW119 MKII, and AW109SP helicopters, certificated in any category, with a tail rotor pitch control link (pitch link) part number 109-0130-05-117 with 100 hours or less time-in-service since overhaul.

(b) Unsafe Condition

This EAD defines the unsafe condition as failure of a pitch link. This condition could result in loss of tail rotor pitch control 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) Before further flight, inspect the pitch link for freedom of movement while it is installed on the helicopter.

(i) If there is rotation resistance or binding, before further flight, perform the actions in paragraphs (e)(2) through (e)(3) of this EAD.

(ii) If there is no rotation resistance and no binding, within 5 hours time-in-service, perform the actions in paragraphs (e)(2) through (e)(3) of this EAD.

(2) Remove the pitch link and inspect each pitch link spherical bearing for corrosion. If there is any corrosion, the pitch link is unairworthy.

(3) Determine the force required to rotate each pitch link spherical bearing as depicted in Figure 1 of AgustaWestland Alert Bollettino Tecnico (BT) No. 109-145, 109EP-141, 109K-65, 109S-065, 109SP-087, or 119-072, all revision A, and all dated February 27, 2015, as applicable to your model helicopter.

(i) If the force required to rotate a spherical bearing in either end of the pitch link is greater than 7.30 N (1.64 pounds force), the pitch link is unairworthy.

(ii) If the force required to rotate the spherical bearings in both ends of the pitch link is equal to or less than 7.30 N (1.64 pounds force), after cleaning the pitch link rod using aliphatic naphtha or equivalent and a soft non-metallic bristle brush, visually inspect the pitch link rod for a crack in the area depicted in Figure 1 of AgustaWestland Alert BT No. 109-145, 109EP-141, 109K-65, 109S-065, 109SP-087, or 119-072, all revision A, and all dated February 27, 2015, as applicable to your model helicopter, using a 10x or higher power magnifying glass or by dye penetrant inspection. If there is a crack, the pitch link is unairworthy.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this EAD. Send your proposal to: Martin Crane, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email martin.r.crane@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: Martin Crane, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email martin.r.crane@faa.gov.

(2) For a copy of the service information referenced in this AD, contact: AgustaWestland, Product Support Engineering, Via del Gregge, 100, 21015 Lonate Pozzolo (VA) Italy, ATTN: Maurizio D'Angelo; telephone 39-0331-664757; fax 39 0331-664680; or at http://www.agustawestland.com/technical-bulletins.

(3) The subject of this AD is addressed in European Aviation Safety Agency EAD No. 2015-0035-E, dated February 27, 2015.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 6720, Tail Rotor Controls.

Issued in Fort Worth, Texas, on March 4, 2015.

Bruce E. Cain,

Acting Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.