



FAA
Aviation Safety

EMERGENCY

AIRWORTHINESS DIRECTIVE

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DATE: September 11, 2015
AD #: 2015-18-51

This emergency airworthiness directive (EAD) 2015-18-51 is being sent to owners and operators of Airbus Helicopters Model AS332C, AS332C1, AS332L, and AS332L1 helicopters.

Background

This EAD was prompted by a report of a tail rotor (T/R) de-icing system power supply box stuck in a “closed” position providing an uncontrolled and un-announced power supply to the system. The T/R de-icing system is part of the entire rotor de-icing system. This EAD requires inspecting certain T/R blades, replacing the set of T/R blades if there is damage, deactivating the rotor de-icing system, revising the rotorcraft flight manual (RFM), and installing a placard. These EAD actions are intended to detect and prevent structural damage to the T/R blades caused by overheating, and subsequent loss of control of the helicopter.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, issued EASA EAD No. 2015-0153-E, dated July 24, 2015, to correct an unsafe condition for Airbus Helicopters Model AS 332 C, AS 332 C1, AS 332 L, and AS 332 L1 helicopters, equipped with T/R de-icing installation unit part number (P/N) 204ZP01Y01 and T/R blade P/N 332A12-0055-XX (where XX represents any dash number). EASA advises of a report of a T/R blade that was overheated and damaged after application of alternating current (AC) from a ground power unit (GPU) following a flight during which the de-icing system was used. Subsequent analysis determined failure of the power supply box stuck in the “closed” position caused the uncontrolled power supply to the rotor blade de-icing system and subsequent damage. EASA also states that its EAD is considered an interim action and further AD action may follow.

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 issued Alert Service Bulletin No. AS332-05.01.02, Revision 0, dated July 22, 2015 (ASB), which specifies, before each flight and before starting at least one engine, if the applicable helicopter has been supplied external 115V/400Hz AC GPU with the rotor stationary or if the de-icing system has been used or tested using an AC GPU with the rotor stationary or spinning, visually inspecting the T/R blades for burn marks, detached leading edge protection, or cracks at the skin/leading edge protection junction. If at least one T/R blade is damaged, the ASB specifies replacing all of the T/R blades.

EAD Requirements

This EAD requires, before further flight, inspecting each T/R blade for a burn mark, any disbonding of the leading edge protection, and a crack at the junction of the skin and the leading edge protection. If there is a burn mark, any disbonding of the leading edge protection, or a crack at the junction of the skin and the leading edge protection on a T/R blade, this EAD requires replacing all of the T/R blades with airworthy T/R blades. This EAD also requires deactivating the rotor de-icing system, revising the RFM to state that flight into known icing is prohibited, and installing a placard stating that the rotor de-icing system is deactivated.

Differences Between This EAD and the EASA EAD

The EASA EAD allows operation of the rotor de-icing system with a recurring inspection of the T/R blades. This EAD requires an initial inspection and prohibits operation of the rotor de-icing system by deactivating the rotor de-icing system, revising the RFM to state flight into known icing is prohibited, and installing a placard stating that the rotor de-icing system is deactivated.

Interim Action

We consider this EAD to be an interim action. Once a modification to the rotor de-icing system design is evaluated, approved, and available, we might consider additional 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.

2015-18-51 **Airbus Helicopters:** Directorate Identifier 2015-SW-039-AD.

(a) Applicability

This EAD applies to Airbus Helicopters Model AS332C, AS332C1, AS332L, and AS332L1 with tail rotor (T/R) de-icing installation unit part number (P/N) 204ZP01Y01 and T/R blade P/N 332A12-0055-XX (where XX is any dash number) installed, certificated in any category.

(b) Unsafe Condition

This EAD defines the unsafe condition as uncontrolled and un-annunciated power supply to the T/R de-icing system, which could overheat the T/R blades. This condition could result in structural damage to the T/R blades 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

Before further flight:

(1) Inspect each T/R blade for a burn mark, any disbonding of the leading edge protection, and a crack at the junction of the skin and the leading edge protection. Examples of a burn mark, disbonding, and a crack are shown in the photos under paragraph 3.B.2., Accomplishment Instructions, of Airbus Helicopters Alert Service Bulletin No. AS332-05.01.02, Revision 0, dated July 22, 2015. If there is a burn mark, any disbonding of the leading edge protection, or a crack at the junction of the skin and the leading edge protection on a T/R blade, replace all of the T/R blades with airworthy T/R blades.

(2) Deactivate the rotor de-icing system.

(3) Revise Section 2, Limitations, of the Protective Equipment for Flight in Icing Conditions supplement to the rotorcraft flight manual by inserting the following: ROTOR DE-ICING SYSTEM IS DEACTIVATED. FLIGHT INTO KNOWN ICING IS PROHIBITED.

(4) Install a placard with 6 millimeter red letters on a white background next to the rotors de-icing control panel that states the following: ROTOR DE-ICING SYSTEM IS DEACTIVATED.

(f) Special Flight Permit

Special flight permits will be permitted for flights to a location where the required inspection can be performed provided the flight does not exceed 5 hours time-in-service.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this EAD. Send your proposal to: George Schwab, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177; telephone (817) 222-5110; email 9-ASW-FTW-AMOC-Requests@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.

(h) Additional Information

(1) For further information contact: George Schwab, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177; telephone (817) 222-5110; email george.schwab@faa.gov.

(2) For a copy of the service information referenced in this AD, contact: Airbus Helicopters, 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 (EASA) EAD No. 2015-0153-E, dated July 24, 2015.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 3060, Rotor De-Ice System.

Issued in Fort Worth, Texas, on September 11, 2015.

Jim Grigg,
Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.