



**FAA**  
**Aviation Safety**

## **EMERGENCY**

# **AIRWORTHINESS DIRECTIVE**

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**DATE: February 24, 2010**

**AD #: 2010-05-51**

This Emergency Airworthiness Directive (AD) is prompted by a mandatory continuing airworthiness information (MCAI) AD issued by the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community. The MCAI AD states that ECF has been informed of an emergency landing due to excessive vibrations originating from the main rotor. The MCAI AD also states that as a result of an investigation, it was determined that the main rotor head rotor hub (rotor hub) had failed in the attachment area of one of the three drag damper fittings. This condition, if not corrected, could result in failure of a hub, excessive vibrations, loss of a main rotor blade, and subsequent loss of control of the helicopter.

The FAA has reviewed Emergency Alert Service Bulletin No. 05A012, Revision 1, dated February 19, 2010 (EASB), which specifies inspecting the rotor hub for a crack. Also, if you find local deterioration (scoring or paint spalling), the EASB specifies sanding the area, removing the finish paint until the primer coat becomes visible, and inspecting the area for a crack. If you find a crack, the EASB specifies replacing the affected rotor hub with a new rotor hub.

EASA, the airworthiness authority for France, notified the FAA that an unsafe condition may exist on these helicopter models. EASA advises of an emergency landing due to a set of amplitude vibrations originating from the main rotor. EASA classified the EASB as mandatory and issued AD No. 2010-0026-E, dated February 19, 2010, to ensure the continued airworthiness of these helicopters in France.

This helicopter model is manufactured in France and is type certificated for operation in the United States under the provisions of 14 CFR 21.29 and the applicable bilateral agreement. Pursuant to the applicable bilateral agreement with France, EASA, their technical agent, has kept the FAA informed of the situation described above. The FAA has examined the findings of EASA, reviewed all available information, and determined that AD action is necessary for helicopters of this type design that are certificated for operation in the United States.

This unsafe condition is likely to exist or develop on other helicopters of the same type design. Therefore, this AD requires, at specified intervals, inspecting the rotor hub for a crack. If you find scoring, paint flaking, or left-over identification plate adhesive, the AD requires sanding the area using abrasive paper until the primer coat becomes visible and inspecting the specified areas of the rotor hub for a crack. If you find a crack, the AD requires, before further flight, replacing the rotor hub with an airworthy rotor hub. The actions must be done by following specified portions of the EASB.

This AD differs from the MCAI AD in that we refer to flight hours as hours TIS. Also, we do not require you to contact the manufacturer.

This rule is issued under 49 U.S.C. Section 44701 pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency AD.

**2010-05-51 EUROCOPTER FRANCE:** Directorate Identifier 2010-SW-024-AD.

Applicability: Model EC120B helicopters, with a main rotor head with a rotor hub, part number (P/N) C622A1002103, C622A1002104, or C622A1002105, installed, certificated in any category.

Compliance: Required as indicated.

To prevent failure of a main rotor hub, excessive vibrations, loss of a main rotor blade, and subsequent loss of control of the helicopter, do the following:

(a) Within 15 hours time-in-service (TIS), unless done previously, and thereafter at intervals not to exceed 15 hours TIS, inspect the rotor hub for a crack in the areas depicted in Figures 1 and 2, areas "A1" and "A2," of Emergency Alert Service Bulletin No. 05A012, Revision 1, dated February 19, 2010 (EASB). If the identification plate "b" depicted in Figure 2 of the EASB is in the inspection areas "A1" or "A2," remove the plate and clean the area where the identification plate information will be marked "B," by following the Accomplishment Instructions, paragraph 2.B.2.a., of the EASB.

(1) If you find scoring, paint flaking, or left-over identification plate adhesive, sand the area using No. 600-grit (fine grit) abrasive paper until the primer coat becomes visible and inspect the rotor hub for a crack.

(2) If you find a crack, before further flight, replace the rotor hub with an airworthy rotor hub.

(b) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Manager, Safety Management Group, ATTN: DOT/FAA Southwest Region, Gary Roach, ASW-111, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Guidance Group, 2601 Meacham Blvd, Fort Worth, Texas 76137, telephone (817) 222-5130, fax (817) 222-5961, for information about previously approved alternative methods of compliance.

(c) Special flight permits will not be issued.

(d) The Joint Aircraft System/Component (JASC) Code is 6220: Main Rotor Head.

(e) Copies of the applicable service information may be obtained from American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, TX 75053-4005, telephone (800) 232-0323, fax (972) 641-3710, or at <http://www.eurocopter.com>

(f) Emergency AD 2010-05-51, issued February 24, 2010, becomes effective upon receipt.

Note: The subject of this AD is addressed in European Aviation Safety Agency AD No. 2010-0026-E, dated February 19, 2010.

FOR FURTHER INFORMATION CONTACT: DOT/FAA Southwest Region, Gary Roach, ASW-111, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Guidance Group, 2601 Meacham Blvd, Fort Worth, Texas 76137, telephone (817) 222-5130, fax (817) 222-5961.

Issued in Fort Worth, Texas, on February 24, 2010.

Lance T. Gant,  
Acting Manager, Rotorcraft Directorate,  
Aircraft Certification Service.