



DATE: November 18, 2010
AD #: 2010-24-52

Background

This EAD supersedes EAD 2010-24-51, dated November 12, 2010 (EAD 2010-24-51), and is prompted by the need to expand the applicability of the existing EAD to include the serial-numbered main rotor hub inboard strap fittings (fittings) from an additional manufacturing lot. We issued EAD 2010-24-51 for all Bell Model 212 helicopters, and it requires, before further flight, removing certain serial-numbered fittings and replacing them with airworthy fittings. EAD 2010-24-51 was prompted by a recent accident that resulted in several fatalities. During the investigation of the accident, a crack was found on the fitting. Subsequently, four additional fittings from the same manufacturing lot were inspected and two were found to exhibit the same type of cracking. We issued EAD 2010-24-51 to prevent a cracked fitting, which could result in failure of the fitting, loss of a main rotor blade, and subsequent loss of control of the helicopter.

Actions Since EAD was Issued

Since we issued EAD 2010-24-51, it has been discovered that three additional fittings from a different manufacturing lot have the same type of cracking found on the fitting installed on the Bell Model 212 helicopter that was involved in the accident.

Relevant Service Information

We reviewed Bell Alert Service Bulletin No. 212-10-141, Revision A, dated November 18, 2010 (ASB), which incorporates additional serial numbers (S/Ns) of the affected fittings, and specifies the immediate removal of these subject serial-numbered fittings from service. Bell states they have determined that the fitting may not have been manufactured in accordance with the engineering design requirements and may fracture as a result of the non-conformance. Bell further states that their investigation is ongoing, and indicates that the ASB affects the fitting, part number 212-010-103-007, S/Ns as listed in Table 1 below:

Table 1 Affected S/Ns

A-9956 through A-10005
SH-52, SH-54, SH-55
SH-57 through SH-65
SH-67, SH-69, SH-70, SH-71, SH-73
SH-103, SH-112, SH-113, SH-137, SH-139

FAA's Determination

We are issuing this EAD because we evaluated all the available information and determined the unsafe condition described is likely to exist or develop in other products of this same type design. Bell is still investigating the cause of these failures and we may issue additional rulemaking to correct this unsafe condition.

AD Requirements

This EAD requires, before further flight, removing each affected fitting and replacing it with an airworthy fitting. Any fitting with a part and S/N identified in the Applicability section of this EAD is no longer eligible for installation on any helicopter.

Differences Between This EAD and the Service Information

This EAD differs from the ASB in that we do not require returning parts to Bell.

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.

Pursuant to this Authority delegated to me by the Administrator, we are hereby issuing this Emergency Airworthiness Directive (EAD).

2010-24-52 BELL HELICOPTER TEXTRON, INC.: Directorate Identifier 2010-SW-095-AD.

Effective Date

- (a) This EAD is effective upon receipt.

Other Affected ADs

- (b) This EAD supersedes EAD 2010-24-51, dated November 12, 2010.

Applicability

(c) This EAD applies to Bell Helicopter Textron, Inc. Model 212 helicopters certificated in any category with a main rotor hub inboard strap fitting (fitting), part number 212-010-103-007, serial number (S/N) 9956 through 10005, with a prefix of "A"; and S/N 52, 54, 55, 57 through 65, 67, 69, 70, 71, 73, 103, 112, 113, 137, and 139, with a prefix of "SH"; installed.

Unsafe Condition

(d) This EAD is prompted by a crack found on a fitting after a recent accident. Subsequently, five additional fittings from two different manufacturing lots were found to have the same type crack.

A cracked fitting could result in failure of the fitting, loss of a main rotor blade, and subsequent loss of control of the helicopter.

Compliance

(e) Before further flight, unless accomplished previously, replace each affected fitting with an airworthy fitting. Any fitting with a part and serial number identified in the Applicability section of this EAD is no longer eligible for installation on any helicopter.

Special Flight Permit

(f) A special flight permit will not be issued.

Alternative Methods of Compliance (AMOCs)

(g) The Manager, Rotorcraft Certification Office, FAA, has the authority to approve AMOCs for this EAD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the Rotorcraft Certification Office, send it to the attention of the person identified in the Other Information section of this EAD.

Note: Before using any approved AMOC, we request that you notify your appropriate principal inspector, or lacking a principal inspector, your local Flight Standards District Office.

Other Information

(h)(1) For further information about this EAD, contact: Michael Kohner, Aerospace Engineer, FAA, Rotorcraft Directorate, Rotorcraft Certification Office, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222-5170, fax (817) 222-5783; e-mail: mike.kohner@faa.gov.

(2) Bell Helicopter Alert Service Bulletin No. 212-10-141, Revision A, dated November 18, 2010, which is not incorporated by reference, contains additional information about the subject of this EAD.

Subject

(i) The Joint Aircraft System Component Code is: 6220 Main Rotor Hub.

Issued in Fort Worth, Texas, on November 19, 2010.

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