| EASA | EMERGENCY AIRWORTHINESS DIRECTIVE |
|---|---|
| | **AD No.: 2011-0068-E**<br><br>**Date: 18 April 2011**<br><br>Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation. |

This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

| **Type Approval Holder Name :** | **Type/Model designation(s) :** |
|---|---|
| Agusta S.p.A | AB212 helicopters |

| | |
|---|---|
| TCDS Number : | Italy (ENAC) SO/A 375 |
| Foreign AD : | None |
| Supersedure : | This AD supersedes EASA AD 2010-0246R1 dated 10 December 2010 |

| | |
|---|---|
| **ATA 62** | **Rotors – Main Rotor Hub Inboard Strap Fitting – Identification / Inspection / Replacement** |
| Manufacturer(s): | Agusta S.p.A |
| Applicability: | Agusta AB212 helicopters, all serial numbers, if equipped with a main rotor hub inboard strap fitting Part Number (P/N) 212-010-103-007. |
| Reason: | In 2010, an accident occurred with a Bell Helicopter Textron, Inc. (Bell) Model 212 helicopter that resulted in several fatalities. During the investigation of the accident, a crack was found on the main rotor hub inboard strap fitting.<br><br>Subsequently, four additional fittings from the same manufacturing batch, which is suspected not to be in conformity with the approved design data, were inspected and two were found to exhibit the same type of cracking as found on the fitting installed on the helicopter involved in the accident.<br><br>This condition, if not corrected, could result in failure of the fitting, loss of a main rotor blade, and subsequent loss of control of the helicopter.<br><br>The FAA issued Emergency AD 2010-24-51, addressing this unsafe condition on Bell 212 helicopters, and requiring the replacement of the affected main rotor hub inboard strap fittings with P/N 212-010-103-007. Although the unsafe condition has been detected only on parts manufactured by Bell for installation on Model 212 helicopters, the possibility exists that the unsafe parts may be installed on Agusta AB212 helicopters, due to the P/N commonality of main rotor hub inboard strap fittings on these two type designs.<br><br>Consequently, Agusta issued Alert Bollettino Tecnico (BT) 212-201. Prompted by the initial FAA AD and the Agusta BT, EASA issued AD 2010-0240-E to require the same actions for Agusta AB212 helicopters.<br><br>After discovering that three additional fittings from a different manufacturing |

| | |
|---|---|
| | batch had the same type of cracking as was found on the fitting installed on the accident helicopter, the FAA issued Emergency AD 2010-24-52 for the Bell 212 helicopters, superseding AD 2010-24-51, expanding the Applicability to include the additional strap fittings. Prompted by the new FAA AD, Agusta issued Alert BT 212-201 Revision A and EASA issued AD 2010-0243-E, retaining the requirements of EASA AD 2010-0240-E, which was superseded, and requiring the same actions for Agusta AB212 helicopters.<br><br>After the FAA determined that additional serial-numbered main rotor hub inboard strap fittings might fracture as a result of the same production non-conformity, AD 2010-24-52 was superseded by AD 2010-25-51 to apply to these additional fittings and to require, for the additional serial-numbered fittings, a magnetic particle inspection (MPI).<br><br>Consequently, Agusta issued Alert BT 212-201 Revision C to introduce an MPI for the additional fittings and EASA issued AD 2010-0246-E (later revised) to require those inspections for the additional fittings, retaining the requirements of EASA AD 2010-0243-E, which was superseded.<br><br>More recently, it has been determined that additional fittings were not manufactured in accordance with the approved manufacturing processes and controls. Prompted by these findings, Bell issued Revision A of Alert Service Bulletin 212-10-142 to extend the applicability, including other inboard strap fittings serial numbers. In total, eight fittings have been found that have cracks.<br><br>In response, FAA issued AD 2011-08-01, which has been adopted by EASA, applicable to Bell 212 helicopters, retaining the requirements of AD 2010-25-51, which is superseded, expanding the applicability to require performing an MPI for a crack on the additional serial-numbered fittings.<br><br>Consequently, Agusta has issued Alert BT 212-201 Revision D to extend the applicability, including other inboard strap fittings serial numbers.<br><br>For the reasons described above, this AD retains all the requirements of EASA AD 2010-0246R1, which is superseded, and requires the identification and inspection (MPI) of certain other serial-numbered P/N 212-010-103-007 main rotor hub inboard strap fittings and replacement, if they fail to pass the MPI. |
| Effective Date: | 18 April 2011 |
| Required Action(s) and Compliance Time(s): | Required as indicated, unless accomplished previously:<br><br>(1) Before next flight after 26 November 2010 [the effective date of EASA AD 2010-0246-E], accomplish the following actions concurrently:<br><br>(1.1) Identify the serial number (s/n) of the P/N 212-010-103-007 main rotor hub (MRH) inboard strap fittings installed on the helicopter.<br><br>(1.2) If the s/n matches one of those listed in Table 1 of this AD, replace the MRH inboard strap fitting with a serviceable part, in accordance with the instructions of Agusta Alert BT 212-201 Revision D.<br><br>(1.3) If the s/n matches one of those listed in Table 2 of this AD, remove the MRH inboard strap fitting from the helicopter and accomplish an MPI, in accordance with the instructions of Agusta Alert BT 212-201 Revision D.<br><br>(1.4) If cracks are detected during the MPI as required by paragraph (1.3) of this AD, the affected fitting is no longer eligible for installation on a helicopter.<br><br>(1.5) If no cracks are detected during the MPI as required by paragraph (1.3) of this AD, before installing the fitting on a helicopter, re-identify the fitting in accordance with the instructions of Agusta Alert BT 212-201 Revision D. |

Table 1 - affected fittings s/n's

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

Table 2 - affected fittings s/n's

| |
|---|
| A-009911 through A-009955 inclusive |
| A-010006 through A-010049 inclusive |
| A-010075 through A-010174 inclusive |
| A-010455 through A-010460 inclusive |
| A-010581 through A-010655 inclusive |
| A-010742 through A-010791 inclusive |
| A-010862 through A-010946 inclusive |

(2) Inspections and applicable corrective actions, accomplished prior to the effective date of this AD, in accordance with the instructions of Agusta Alert BT 212-201 Revision C, are acceptable to comply with the requirements of paragraph (1) of this AD. After the effective date of this AD, the instructions of Agusta Alert BT 212-201 Revision D must be used.

(3) Before next flight after the effective date of this AD, identify the s/n of the P/N 212-010-103-007 MRH inboard strap fittings installed on the helicopter.

(3.1) If the s/n matches one of those listed in Table 4 of this AD, within the time indicated in Table 3 of this AD, as applicable, remove the affected fitting from the helicopter and accomplish an MPI, in accordance with the instructions of Agusta Alert BT 212-201 Revision D.

Table 3 – Magnetic Particle Inspection

| **Flight hours (FH) accumulated by the fitting on the effective date of this AD:** | **Compliance time after the effective date of this AD:** |
|---|---|
| 400 FH or less | Within 25 FH or 15 days, whichever occurs first |
| More than 400 FH but less than 800 FH | Within 100 FH or 30 days, whichever occurs first |
| 800 FH or more | At the next scheduled MRH teardown inspection, or scheduled tension-torsion strap replacement, whichever occurs first |

(3.2) If cracks are detected during the MPI as required by paragraph (3.1) of this AD, the affected fitting is no longer eligible for installation on a helicopter.

(3.3) If no cracks are detected during the MPI as required by paragraph (3.1) of this AD, before installing the fitting on a helicopter, re-identify the fitting in accordance with the instructions of Agusta Alert BT 212-201 Revision D.

Table 4 – affected fittings s/n's

| Pre-fix | Serial numbers |
|---|---|
| A | 7 through 9910 inclusive<br>10050 through 10074 inclusive<br>10175 through 10454 inclusive<br>10461 through 10580 inclusive<br>10656 through 10741 inclusive<br>10792 through 10861 inclusive |
| A-FS | 7 through 10946 inclusive |
| A1 | 430 through 7606 inclusive |
| D1 | 22296 through 22681 inclusive |
| EA | 333 through 381 inclusive |
| LK | 4619 through 4631 inclusive |
| MB | 11908 through 11916 inclusive |
| WR | 275 through 319 inclusive |

(4) From 26 November 2010 [the effective date of EASA AD 2010-0246-E], do not install on any helicopter a P/N 212-010-103-007 MRH inboard strap fitting having a s/n that is listed in Table 1 of this AD.

(5) From 10 December 2010 [the effective date of EASA AD 2010-0246R1], do not install on any helicopter a P/N 212-010-103-007 MRH inboard strap fitting having a s/n that is listed in Table 2 of this AD, unless it has passed the MPI as required by paragraph (1.3) of this AD and has been re-identified as required by paragraph (1.5) of this AD.

(6) From the effective date of this AD, do not install on any helicopter a P/N 212-010-103-007 MRH inboard strap fitting having a s/n that is listed in Table 4 of this AD, unless the affected fitting has passed the MPI as required by paragraph (3.1) of this AD and has been re-identified as required by paragraph (3.3) of this AD.

Ref. Publications:

Agusta Alert BT 212-201 Revision A dated 22 November 2010, Revision B dated 22 November 2010, Revision C dated 10 December 2010 and Revision D dated 15 April 2011.

The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification.
3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact:
   Agusta S.p.A. Customer Support -
   Via del Gregge, 100 - 21015 Lonate Pozzolo (VA) – Italy
   Telephone + 39 0331 664873; Fax: + 39 0331 664680;
   E-mail: absereng@agustawestland.com.