



Emergency Airworthiness Directive

AD No.: 2017-0028-E

Issued: 15 February 2017

Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, 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 Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 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 [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

LEONARDO S.p.A.

Type/Model designation(s):

AB139 and AW139 helicopters

Effective Date: 17 February 2017

TCDS Number(s): EASA.R.006

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA Emergency AD 2014-0215-E dated 24 September 2014.

ATA 62 – Main Rotor – Rotating Scissors – Inspection / Replacement

Manufacturer(s):

Leonardo S.p.A. Helicopters (formerly Finmeccanica S.p.A, AgustaWestland S.p.A., Agusta S.p.A), AgustaWestland Philadelphia Corporation (formerly Agusta Aerospace Corporation).

Applicability:

AB139 and AW139 helicopters, all serial numbers, if equipped with Main Rotor (M/R) scissor spherical bearing Part Number (P/N) 3G6230V00654.

Reason:

Some cases were reported of finding dislodged lower half M/R scissor spherical bearings, P/N 3G6230V00654, on in-service helicopters. These spherical bearings are installed on M/R Rotating Scissors P/N 3G6230A00733. As a result of the investigations accomplished by the supplier of the spherical bearings, it was determined that a quality issue may have affected the production of these bearings.

This condition, if not detected and corrected, could lead to M/R Scissor bearing failure, possibly resulting in loss of control of the helicopter.

To address this potential unsafe condition, AgustaWestland published Alert Bollettino Tecnico (BT) 139-368, providing instructions and identifying by serial number (s/n) specific batches of potentially affected M/R Rotating Scissors and spherical bearings, and EASA issued Emergency AD 2014-0073-E



to require repetitive inspections of the affected M/R Rotating Scissors P/N 3G6230A00733. That AD also required replacement of the affected spherical bearings or, as an alternative, replacement of the affected M/R Rotating Scissors.

After that AD was issued, further events occurred where the liner of the spherical bearing P/N 3G6230V00654 was found chipped and, in some cases, early excessive play was found. The affected bearings were not part of the s/n batch as initially established. Therefore, it was determined that all M/R Rotating Scissors P/N 3G6230A00733 with spherical bearing P/N 3G6230V00654 were potentially affected.

Prompted by these findings, AgustaWestland published Alert BT 139-392, providing instructions to inspect and modify all M/R Rotating Scissors by introducing special nut P/N 3G6230A06851 and extending the inspection interval for post-mod M/R Rotating Scissors. Consequently, EASA published Emergency AD 2014-0215-E, which superseded EASA AD 2004-0073-E, to require accomplishment of these actions.

Since that AD was issued, a new event of dislodged spherical bearing P/N 3G6230V00654 on a M/R Rotating Scissor equipped with special nut P/N 3G6230A06851 has been reported. Furthermore, it was determined that all M/R Rotating Scissors equipped with spherical bearing P/N 3G6230V00654 could be potentially affected by premature damage or wear, including those having special nut P/N 3G6230A06851 installed.

To address this recent occurrence, Leonardo published Revision A of Alert BT 139-392, providing a reduced interval for the repetitive inspections of the M/R Rotating Scissors with spherical bearing P/N 3G6230V00654, and modification instructions to install spherical bearing P/N 3G6230V00655 (improved part).

For the reasons described above, this AD partially retains the requirements of EASA AD 2014-0215-E, which is superseded, and requires repetitive inspections of all M/R Rotating Scissors with spherical bearing P/N 3G6230V00654 and, depending on findings, replacement of the spherical bearings and affected M/R components. This AD also requires replacement of the affected spherical bearing as terminating action for the inspections.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Note 1: Leonardo Alert BT 139-392 Revision A is hereafter referred to as 'the BT' in this AD.

Inspection / Operational Check:

- (1) Within five (5) flight hours (FH) or 7 days, whichever occurs first after the effective date of this AD, and, thereafter, prior to each first flight of the day or after the last flight of each day, inspect the M/R Rotating Scissors, including those having special nut P/N 3G6230A06851 and accomplish an operational check for play and wear of the affected spherical bearings in accordance with the instructions of Part I of the BT.



Corrective Action(s):

- (2) If, during any inspection as required by paragraph (1) of this AD, any spherical bearing is found free to move from its seat, before next flight, replace both M/R Rotating Scissors and the M/R Rotating Scissors attachment flange P/N 3G6220A00633 with serviceable parts (see Note 2 of this AD) in accordance with the instructions of Part I of the BT.
- (3) If, during any inspection or operational check as required by paragraph (1) of this AD, damage, play beyond the limits, or wear is detected on any spherical bearing, before next flight, replace the spherical bearing with spherical bearing P/N 3G6230V00655 in accordance with the instructions of Part I of the BT.

Note 2: For the purpose of this AD, serviceable parts are two new M/R Rotating Scissors with spherical bearings P/N 3G6230V00655 and a new M/R Rotating Scissors attachment flange P/N 3G6220A00633.

Modification:

- (4) Except for helicopters with M/R Rotating Scissors that are already equipped with special nut P/N 3G6230A06851, within 100 FH or 30 days, whichever occurs first after 26 September 2014 [the effective date of EASA AD 2014-0215-E], modify the lower M/R Rotating Scissors lever assembly by installing a special nut P/N 3G6230A06851 in accordance with the instructions of Part II of the BT.
- (5) Unless already accomplished as required by paragraph (2) or (3) of this AD, as applicable, within 12 months after the effective date of this AD, modify the helicopter by replacing each installed spherical bearing P/N 3G6230V00654 with a spherical bearing P/N 3G6230V00655 in accordance with the instructions of Part III of the BT.

Terminating Action:

- (6) Modification of a helicopter as required by paragraph (2) or (5) of this AD, as applicable, constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that helicopter.

Parts Installation:

- (7) After modification of a helicopter as required by paragraph (2) or (5) of this AD, as applicable, do not install any spherical bearing P/N 3G6230V00654 on that helicopter.

Ref. Publications:

AgustaWestland BT 139-392 original issue dated 23 September 2014, or Leonardo S.p.A. Helicopters BT 139-392 Revision A, dated 14 February 2017.

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 results of the safety assessment have indicated the need for immediate publication and notification, without the full public consultation process.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact Leonardo S.p.A. Helicopters, E-mail: CSE.AW139.AW@leonardocompany.com.

