



## Airworthiness Directive

**AD No.:** 2017-0083

**Issued:** 10 May 2017

Note: This 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 May 2017

**TCDS Number(s):** EASA.R.006

**Foreign AD:** Not applicable

**Supersedure:** None

### ATA 62 – Main Rotor – Main Rotor Slip Ring – 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 (s/n), if equipped with Main Rotor (MR) Slip Ring Part Number (P/N) 4G6220V00151 as part of the Full Ice Protection System (FIPS).

**Reason:**

Some cases were reported of AW139 MR Slip Rings which upon inspection had been found either without the proper lock wiring, or with loose fasteners.

This condition, if not detected and corrected, could lead to the failure of the MR Slip Ring bearing inner race, possibly resulting in damage to the drive system components and consequent reduced control of the helicopter.

To address this potential unsafe condition, Leonardo published Alert Service Bulletin (SB) 139-472 providing instructions for the inspection of the MR Slip Ring fastener installation. That SB also provides instructions for the replacement of the fasteners and the installation of the proper lock wiring in order to ensure that the fasteners are correctly secured.



For the reasons described above, this AD requires a one-time inspection of the MR Slip Ring fastener installation and, depending on findings, replacement of the fasteners and installation of the lock wiring, as applicable.

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

Required as indicated, unless accomplished previously:

Note 1: Leonardo Alert SB 139-472 original issue is hereafter referred to as “the SB” in this AD.

Note 2: For the purpose of this AD, an affected MR slip ring has a P/N 4G6220V00151 with a s/n up to s/n 0141 (inclusive), except those marked “L” after the last character of the s/n on the component identification label.

#### Inspection:

- (1) Within the compliance time as specified in Table 1 of this AD, as applicable, visually inspect each fastener location of the MR Slip Ring upper and lower end in accordance with the instructions of Annex A of the SB.

Table 1 - MR Slip Ring fastener inspection

Flight Hours (FH) Accumulated (see Note 3 of this AD)	Compliance Time
Less than 900 FH	Within 300 FH, or during the next MR Slip Ring removal or before exceeding 950 FH, whichever occurs first after the effective date of this AD
900 FH or more	Within 50 FH, or during the next MR Slip Ring removal, whichever occurs first after the effective date of this AD

Note 3: Unless specified otherwise, the FH specified in Table 1 of this AD are those accumulated by the MR Slip Ring since first installation (new) on a helicopter.

#### Corrective Action(s):

- (2) If, during the visual inspection as required by paragraph (1) of this AD, any of the four fasteners that join the connector to the main body of the upper end of the slip ring are missing, before next flight, replace the affected MR Slip Ring with a serviceable part (see Note 4 of this AD).

Note 4: For the purpose of this AD, a serviceable part is a MR Slip Ring which is not affected by this AD (see Note 2 of this AD).

- (3) If, during the visual inspection as required by paragraph (1) of this AD, a safety cable is found installed at any fastener location, before next flight, remove the safety cable from the fastener on which it is installed and accomplish a torque check of each fastener from which a safety cable was removed (correct torque value is 1-1.25 Nm) in accordance with the instructions of Annex A of the SB.
- (4) If, during the visual inspection as required by paragraph (1) of this AD, the affected MR Slip Ring is missing the lock wire from any of the fastener locations, before next flight, accomplish a



torque check of each fastener from which the lock wire is missing (correct torque value is 1-1.25 Nm) in accordance with the instructions of Annex A of the SB.

- (5) If, during the torque check as required by paragraph (3) or (4) of this AD, as applicable, any affected fastener rotates by any amount, before next flight, apply the correct torque values on the affected fastener that join the connector to the main body of the upper end of the affected MR Slip Ring and replace all other fasteners with new fasteners (correct torque value is 1-1.25 Nm) in accordance with the instructions of Annex A of the SB.
- (6) Before next flight after accomplishment of all applicable corrective action(s), as required by paragraph (5) of this AD, install the lock wire(s) in accordance with the instructions of Annex A of the SB.
- (7) Before next flight after the inspection as required by paragraph (1) of this AD (in case of no findings) or after accomplishment of the applicable corrective action(s) as required by this AD, as applicable, re-identify the MR Slip Ring in accordance with the instructions of Annex A of the SB.

**Credit:**

- (8) The inspection, corrective action(s) and re-identification of MR Slip Ring as required by this AD can be accomplished using MOOG SB 16-01 Revision 05.

**Parts installation:**

- (9) From the effective date of this AD, do not install an affected MR Slip Ring (see Note 2 of this AD) on any helicopter.

**Ref. Publications:**

Leonardo S.p.A Helicopters SB 139-472 original issue, dated 09 May 2017.

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

MOOG SB 16-01 Revision 05.

**Remarks:**

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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](mailto:CSE.AW139.AW@leonardocompany.com).

