



Airworthiness Directive

AD No.: 2011-0205R1

[Correction: 07 February 2017]

Issued: 23 January 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: Revision 1: 30 January 2017
Original issue: 27 October 2011

TCDS Number(s): EASA.R.006

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2011-0205 dated 13 October 2011.

ATA 55 – Stabilizers – Tail Fin Assembly – Inspection / Replacement

Manufacturer(s):

Leonardo S.p.A., Helicopter Division (LHD), formerly Finmeccanica S.P.A Helicopter Division, AgustaWestland S.p.A., Agusta S.p.A.; and AgustaWestland Philadelphia Corporation, formerly Agusta Aerospace Corporation.

Applicability:

AB139 and AW139 helicopters, all serial numbers (s/n), except 31002, 31003, 31004 and 31007, if equipped with Tail Fin Assembly having Part Number (P/N) 3G5351A00133, P/N 3G5351A00134, P/N 3G5351A00135 or P/N 3G5351A00136.

Reason:

At the end of 2005, tests showed that the LHD AB/AW139's tail fin assembly was prone to fatigue damage. To prevent cracks or structural failure of the tail fin assembly, a life limit of 6 500 flight hours (FH) was established and repetitive inspections were introduced, to be accomplished in the period before reaching the new life limit. These actions were required by ENAC Italy AD 2006-011. EASA issued AD 2006-0358, retaining the requirements of ENAC AD 2006-011, which was superseded, and expanding the applicability to include AW139 helicopters, without introducing additional requirements. EASA AD 2006-0358 was later re-published to correct a typographical error in paragraph (3) of the AD.



Since that AD was issued, detailed fatigue evaluations carried out by Agusta demonstrated that the tail fin assembly life limit of 6 500 FH, as imposed by EASA AD 2006-0358, is too conservative. LHD determined that an acceptable limit for the tail fin assembly is 10 000 FH or 32 000 flight cycles (FC), whichever occurs first. This determination was approved by EASA and, based on that approval, LHD updated the Airworthiness Limitations Section (ALS) of the related Maintenance Manual (MM), published as 39-A-AMPI-00-P Chapter IV Issue 2 Change 12. Concurrent with updating the ALS of the related MM, LHD cancelled Bollettino Tecnico (BT) 139-020, as all the technical requirements were transferred to the ALS of the related MM as indicated above. EASA AD 2006-0358R1 was issued to extend the life limit, and requires replacement of the tail fin assembly when the part accumulates 10 000 FH or 32 000 FC.

Since EASA AD 2006-0358R1 was issued, it was realised that:

- The AD requirements was also applicable to more recent tail fin assembly P/N 3G5351A00135;
- There was a mistake with the reference number of one of the two applicable maintenance tasks. The correct reference numbers are MI53-04 and MI53-11.
- Clarifications are necessary for calculating the number of FC accumulated by the tail fin assembly when it is unknown.

Consequently, EASA issued AD 2011-0205, retaining the requirements of EASA AD 2006-0358R1, which was superseded, to require replacement of the tail fin assembly when the part accumulates 10 000 FH or 32 000 FC and additionally provided a calculation method when the number of FC accumulated by the tail fin assembly could not be determined.

Since that AD was issued, revised fatigue evaluations accomplished by LHD demonstrated that the tail fin assembly life limits, as imposed by EASA AD 2011-0205, are still too conservative. It was determined that the same limit, established for the tail assembly on which the tail fin assembly is installed, is acceptable for the tail fin assembly.

For the reason described above, this AD is revised to extend the FH life limit of the affected tail fin assemblies, as well as the FC limit, depending on configuration (mod status). In addition, some improvements have been introduced to align with current AD writing standards, without changing its content. It is expected that next issuance of MM 39-A-AMPI-00-P Chapter IV will reflect the content of this AD revision.

This AD is republished to correct the affected Tail Fin Assembly P/N.

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

Required as indicated, unless accomplished previously:

Replacement:

- (1) Before an affected tail fin assembly exceeds the applicable life limit (time in service since first installation on a helicopter), as specified in Table 1 of this AD, as applicable, replace it with a serviceable part.



Table 1 – Affected Tail Fin Assemblies – Life Limit(s)

Tail Fin assembly P/N	Installed on Tail assembly P/N	Life Limit (do not exceed)
3G5351A00133	3G5350A00132	19 600 FH or 32 000 FC whichever occurs first
3G5351A00134	3G5350A00133	
3G5351A00134	3G5350A00134	
3G5351A00135	3G5350A00135	
3G5351A00133	3G5350A00132 fitted with retromods P/N 3G5309P02711 and P/N 3G5309P01812	19 600 FH or 78 600 FC whichever occurs first
3G5351A00134	3G5350A00133 fitted with retromods P/N 3G5309P02711 and P/N 3G5309P01812	
3G5351A00134	3G5350A00134 fitted with retromods P/N 3G5309P02711 and P/N 3G5309P01812	
3G5351A00135	3G5350A00135 fitted with retromod P/N 3G5309P02711	
3G5351A00136	3G5350A00136	

Note 1: For the purpose of this AD, a serviceable part is a tail fin assembly that has not yet exceeded the life limits specified in Table 1 of this AD.

Note 2: The number of landings recorded in the helicopter logbook in accordance with LHD MM 39-A-AMPI-00-P Chapter IV corresponds to the number of accumulated FC by this helicopter.

Note 3: The life limits for the tail fin assembly specified in Table 1 of this AD are the same as the life limits for the tail assembly specified in LHD MM, 39-A-AMPI-00-P Chapter IV.

Repetitive Inspections:

(2) Within 10 FH after 12 January 2006 [the issue date of ENAC Italy AD 2006-011], or upon accumulating 100 FH since first installation on a helicopter, whichever occurs later, and, thereafter, at intervals not to exceed 100 FH, inspect the tail fin assembly in accordance with the instructions of the maintenance tasks MI53-04 and MI53-11, as specified in Agusta MM 39-A-AMPI-00-P Chapter IV Issue 2, Change 12 (or later approved revision).

(3) DELETED (integrated with paragraph (2) of this AD).

Corrective Action(s):

(4) If, during any inspection as required by paragraph (2) of this AD, any discrepancy is found, before next flight, contact LHD for approved instructions and accomplish those instructions accordingly.



Determination:

- (5) For any tail fin assembly where the FC, accumulated since first installation on a helicopter, cannot be determined from maintenance records (for the entire or part of its life), the number of FC must be determined by multiplying the corresponding FH by 4 (four). This number of FC must be used for determining the replacement time for that tail fin assembly, as required by paragraph (1) of this AD.

Credit:

- (6) Actions accomplished before 27 October 2011 [the effective date of the original issue of EASA AD 2011-0205], in accordance with Agusta BT 139-020, are acceptable to comply with the requirements of paragraphs (1) and (4) of this AD.

Parts Installation:

- (7) From 27 October 2011 [the effective date of the original issue of EASA AD 2011-0205], it is allowed to install on any helicopter a tail fin assembly having a P/N as listed in the Applicability section of this AD, provided it has not exceeded the life limits as specified in Table 1 of this AD, as applicable, since first installation on a helicopter.
- (8) **Aircraft Maintenance Programme (AMP):** Compliance with the requirements of paragraph (1), (2) and (4) of this AD can be demonstrated by:
- (8.1) Revising the approved AMP on the basis of which the operator or the owner ensures the continuing airworthiness of each operated helicopter, as follows:
- Incorporate maintenance tasks MI53-04 and MI53-11, as specified in Agusta MM 39-A-AMPI-00-P Chapter IV Issue 2 Change 12 (or later approved revision),
- and
- (8.2) Complying with the approved AMP described in paragraph (8.1) of this AD.
- (9) **Recording AD compliance:** When the AMP of a helicopter has been revised as specified in paragraph (8) of this AD, that action ensures continued accomplishment of the tasks as required by paragraphs (1), (2) and (4) of this AD for that helicopter. Consequently, after revising the AMP, as specified in paragraph (8) of this AD, it is not necessary that accomplishment of individual action is recorded for demonstration of AD compliance on a continued basis.

Ref. Publications:

Agusta MM 39-A-AMPI-00-P Chapter IV Issue 2 Change 12, or Leonardo S.p.A Helicopters 39-A-AMPI-00-P Chapter IV Issue 7.

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. 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.
4. For any question concerning the technical content of the requirements in this AD, please contact Leonardo Helicopters E-mail: CSE.AW139.AW@leonardocompany.com.

