Airworthiness Directive

AD No.: 2017-0184

Issued: 20 September 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:
MECAER AVIATION GROUP S.p.A.

Type/Model designation(s):
NH-300C helicopters

Effective Date: 04 October 2017

TCDS Number(s): EASA.R.143

Foreign AD: Not applicable

Supersedure: This AD supersedes Registro Aeronautico Italiano (RAI) AD 94-018 dated 03 February 1994.

ATA 63 – Main Rotor Drive – Lower Coupling Drive Shaft – Inspection

---

Manufacturer(s):
Breda Nardi S.p.A.

Applicability:
NH-300C helicopters, all serial numbers.

Reason:
Reports were received by the Federal Aviation Administtration (FAA) of finding cracks, machining steps, manufacturing tool marks, surface defects and lack of cleanup during production grinding operation of certain lower coupling driveshafts, installed on Schweizer (formerly Hughes) 269 helicopters.

That condition, if not corrected, could lead to loss of power to the rotor system, possibly resulting in loss of control of the helicopter.

Prompted by these findings, Schweizer issued Service Bulletin (SB) B-257.1 to provide inspection instructions and the FAA issued AD 93-17-13, requiring installing tachometer markings, repetitive inspections, at intervals not exceeding 300 flight hours (FH), of the lower coupling driveshaft and, depending on findings, replacement with a serviceable shaft. Due to similarity of design and commonality of parts, the same unsafe condition could exist or develop on Breda Nardi NH-300C helicopters, a licensed development based on the Hughes 269C helicopter. Consequently, Breda

Nardi issued SB BN-300-89 and RAI issued AD 93-338, later replaced by AD 94-018, to require the same actions for the NH-300C as specified in the FAA AD.

Since those ADs were issued, Sikorsky (the current design approval holder for the 269) determined that the initial and repetitive inspection intervals and inspection method were not adequate to detect all corrosion, pits, nicks, scratches, dents, and cracks. Accidents due to driveshaft failures continued to occur. Prompted by these findings, Sikorsky issued Alert SB B-307, providing improved inspection instructions, and amended the applicable maintenance manual to include this inspection, at reduced intervals, not to exceed 150 FH. Consequently, the FAA issued AD 2017-14-06 (which was adopted by EASA) to require those actions.

Prompted by the Sikorsky and FAA actions on the 269 type design, Mecaer Aviation Group S.p.A. (MAG) issued Mandatory SB BN-300-121, providing similar instructions for NH-300C helicopters.

For the reasons described above, this AD partially retains the requirements of RAI AD 94-018, which is superseded, and requires implementation of the new inspections at reduced intervals.

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

Required as indicated, unless accomplished previously:

Note 1: Lower coupling driveshaft, Part Number (P/N) 269A5559-003 (which is a component of Lower Coupling Drive Shaft Assembly P/N 269A5559), is hereafter referred to as 'affected part' in this AD.

Modification:

(1) Within 30 days or 100 FH, whichever occurs first after 20 December 1993 [the effective date of RAI AD 93-338], install engine and rotor tachometer markings in accordance with the instructions of Part II of Breda Nardi SB BN-300-89.

Inspection(s):

(2) Within 25 FH after the effective date of this AD, or within 150 FH after the last inspection in accordance with the instructions of MAG Mandatory SB BN-300-121 original issue, whichever occurs later, and, thereafter, at intervals not to exceed 150 FH, inspect the affected part (see Note 1 of this AD) in accordance with the instructions of MAG Mandatory SB BN-300-121, Revision A.

Corrective Action(s):

(3) If, during any inspection as required by paragraph (2) of this AD, discrepancies (as defined in MAG Mandatory SB BN-300-121, Revision A) are detected, before next flight, replace the affected part with a serviceable part.

Terminating Action:

(4) None.

Parts Installation:

(5) From the effective date of this AD, it is allowed to install an affected part (see Note 1 of this AD) on a helicopter, provided that the part is new, or has passed an inspection in accordance with the instructions of MAG Mandatory SB BN-300-121, Revision A.

Ref. Publications:

Breda Nardi SB BN-300-89 dated 22 December 1993.

MAG Mandatory SB BN-300-121, original issue dated 08 May 2017, or Revision A dated 03 August 2017.

The use of later approved revisions of these documents 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. This AD was posted on 04 September 2017 as PAD 17-125 for consultation until 18 September 2017. No comments were received during the consultation period.

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: Mecaer Aviation Group S.p.A., 1 Via dell'Artigianato V Traversa, 63076 Monteprandone (AP) – Italy, Telephone: +39 735 7091, Fax: +39 735 709 369, E-mail: caw@mecaer.com.