


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2015-0090</b></p> <p><b>Date: 22 May 2015</b></p> <p>Note: This 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.</p>
This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with 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 [EU 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].	
<b>Design Approval Holder's Name:</b> TURBOMECA	<b>Type/Model designation(s) :</b> RTM 322 engines
TCDS Number:	EASA.E.009
Foreign AD:	Not applicable
Supersedure:	None
<b>ATA 76</b>	<b>Engine Controls – Electrical Wiring Harness – Modification</b>
Manufacturer(s):	Turbomeca, S.A.
Applicability:	RTM 322-01/9 and RTM 322-01/9A engines, all serial numbers. These engines are known to be installed on, but not limited to, NH Industries NH90 (military) helicopters.
Reason:	<p>Over the last few years, the RTM 322 fleet experienced a number of standby captions linked to the Inlet Guide Vane (IGV) / Variable Stator Vane (VSV) resolver. The results of the technical investigations concluded that this is prevalent in hot and sandy environment. Although standby caption resulting from single lane failure in the Engine Electronic Control Unit would not affect engine operation, recent field survey showed an increasing occurrence rate of single lane failure of IGV / VSV resolver.</p> <p>The investigation also identified the backing-off of ES2/3 harness connectors, in particular the IGV / VSV resolver connectors, as the cause of the in-service events. This disconnection is most likely due to the high level of wear within the ratchet mechanism. The wear is considered to be the result of repeated assembly and disassembly of the connectors which enabled ingress of foreign matter and self-generating debris. In case both IGV / VSV resolver lanes fail on the same engine during a single flight, this would result in the loss of IGV / VSV control, likely to cause a compressor surge.</p> <p>This condition, if not corrected, may lead to an uncommanded engine In-Flight Shut-Down (IFSD), possibly resulting in an emergency landing.</p>

	<p>To address this potential unsafe condition, Turbomeca issued Mandatory Service Bulletin (MSB) MSBP-M3-A-76-10-10-02A-A-A , providing instructions for installation of a wire lock on the four IGV / VSV connectors (two IGV / VSV resolver connectors and two IGV / VSV actuator connectors), for engines operating in a hot and sandy environment.</p> <p>For the reasons described above, this AD requires installation of a wire lock on the IGV / VSV connectors.</p>
Effective Date:	05 June 2015
Required action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> <li>(1) Within 630 engine hours (EH) after the effective date of this AD, accomplish the following actions: <ol style="list-style-type: none"> <li>(1.1) Determine the engine history and operating conditions.</li> <li>(1.2) If the engine operates, or has been operated, in a sandy environment (see Note 1), or the operating conditions and/or operational history of the engine cannot be determined, modify the engine by installing a wire lock on the IGV / VSV connectors in accordance with the accomplishment instructions of Turbomeca MSBP-M3-A-76-10-10-02A-A-A.</li> </ol> </li> </ol> <p>Note 1: The applicable MSB provides a definition of a “sandy environment”.</p> <ol style="list-style-type: none"> <li>(2) After modification of an engine as required by paragraph (1.2) of this AD, each time the IGV / VSV connectors are disconnected on that engine (see Note 2), before next flight after re-connection of the IGV / VSV connectors, install a wire lock on the IGV / VSV connectors.</li> </ol> <p>Note 2: The applicable MSB provides a list of tasks that require connection and/or disconnection of the IGV / VSV connectors.</p> <ol style="list-style-type: none"> <li>(3) For an engine for which it has been determined, as required by paragraph (1) of this AD, that it does not operate in, and has never been operated in, a sandy environment (see Note 1 of this AD), if, at any time after the effective date of this AD, the type of mission or geographical operating area in which the engine is operated changes, within 630 EH after such a change, accomplish the actions as specified in paragraph (1.1) and, depending on determination, paragraph (1.2) of this AD.</li> <li>(4) From the effective date of this AD, do not install an engine on a helicopter, unless in compliance with the requirements of this AD.</li> </ol>
Ref. Publications:	<p>Turbomeca MSBP-M3-A-76-10-10-02A-A-A Issue 1 dated 24 March 2015.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p>
Remarks :	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. This AD was posted on 16 April 2015 as PAD 15-045 for consultation until 14 May 2015. No comments were received during the consultation period.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Certification Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact: Operator Support &amp; Sales RTM322 - TURBOMECA 40220 TARNOS – France Telephone: +33 (0)5 59 74 40 00, Fax: +33 (0)5 59 74 45 15, or contact your nearest TURBOMECA field representative on <a href="http://www.turbomeca-support.com">http://www.turbomeca-support.com</a>.</li> </ol>