


EASA	AIRWORTHINESS DIRECTIVE	
	<p>AD No.: 2010-0203R1</p> <p>Date: 22 March 2011</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>	
<p>This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 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 [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>		
<p>Type Approval Holder's Name : ROLLS-ROYCE TURBOMECA Ltd</p>	<p>Type/Model designation(s) : RTM 322-01/9 and RTM 322-01/9A turboshaft engines</p>	
<p>TCDS Number : EASA.E.009</p>		
<p>Foreign AD : Not applicable</p>		
<p>Revision : This AD revises EASA AD 2010-0203 dated 04 October 2010, which superseded EASA AD 2010-0041-E dated 12 March 2010.</p>		
<p>ATA 75</p>	<p>Air System - P2.5 Air Tube and High Pressure Turbine (HPT) Interduct - Inspection</p>	
<p>Manufacturer(s):</p>	<p>Rolls-Royce Turbomeca Ltd</p>	
<p>Applicability:</p>	<p>RTM 322-01/9 and RTM 322-01/9A turboshaft engines, all serial numbers. These engines are known to be installed on, but not limited to, NH Industries NH90 (military) helicopters.</p>	
<p>Reason:</p>	<p>A Merlin Mk1 helicopter equipped with three RTM322-01/8 Mk100 engines suffered an uncontained failure of the No.1 engine. The initial symptom was the release of first stage power turbine (PT1) blades from the engine casing, some of which punctured the No.1 engine bay firewall and cowling, passed through the No.2 engine intake and were then ingested by the No.2 engine.</p> <p>Subsequent investigation showed that the turbine blades had been released radially from the PT1 Disc. The PT1 Disc had been significantly softened as a result of overheating, which had resulted in sufficient disc growth to allow not only the PT1 blade release but also separation of the PT1 and PT2 discs. There was evidence of a fire within the inner air passages of the HPT interduct, which is the engine static structure between the high pressure and power turbine sections. The most likely source of fuel for the fire is thought to be oil. The P2.5 buffering and cooling air supply tube through the interduct, the inner walls of the interduct, the combustion chamber outer casing and the three oil supply tubes that also traverse the interduct and their associated adapters and gaskets showed signs of significant oil leakage and/or lacquering.</p>	

	<p>Although the investigation is on-going, there is sufficient evidence at this stage to point to an oil leak as the root cause of the event and to justify immediate mitigating action.</p> <p>The RTM 322-01/9 and RTM 322-01/9A engines have similar architecture to the non-civil certified RTM 322-01/8 engine and are susceptible to the same condition that resulted in the uncontained failure. This condition, if not corrected, could lead to release of hazardous debris, fire or loss of power in flight.</p> <p>EASA AD 2010-0041-E required repetitive inspections of engines for oil leakage in the vicinity of the P2.5 air tube and interduct, and immediate withdrawal from service of any engine exhibiting signs of oil leakage in these areas.</p> <p>This AD, which supersedes EASA AD 2010-0041-E partially retaining its requirements, redefines the repetitive inspection requirements and the relevant compliance time. Additionally, this AD defines new criteria for operating the engine following an inspection.</p> <p>Revision 1 of this AD has been issued to simplify paragraph (3) of this AD related to the inspection findings for oil leakage. It was necessary following issuance of Rolls-Royce Turbomeca Mandatory Service Bulletin (SB) SBP-M3-A-75-09-00-02A-A-A issue number 002 in which the numbering of the paragraphs related to the inspection findings has been modified in comparison with Rolls-Royce Turbomeca Mandatory SB SBP-M3-A-75-09-00-02A-A-A original issue.</p>
Effective Date:	<p>Revision 1: 05 April 2011</p> <p>Original issue: 18 October 2010</p>
Required action(s) and Compliance Time(s):	<p>Required as indicated:</p> <ol style="list-style-type: none"> (1) Within 1 month or 25 flight hours after 14 March 2010 [effective date of EASA AD 2010-0041-E], whichever occurs first, inspect the P2.5 air tube and HPT interduct in accordance with the Accomplishment Instructions of Rolls Royce Turbomeca Emergency Mandatory SB SBP-M3-A-75-09-00-01A-A-A. (2) Repeat the inspection required by paragraph (1) of this AD at intervals not exceeding 200 flight hours or 6 months from the previous inspection, whichever occurs first, in accordance with the accomplishment instructions of Rolls-Royce Turbomeca Mandatory SB SBP-M3-A-75-09-00-02A-A-A. (3) If, during any inspection as required by paragraph (1) or (2) of this AD, evidence of any oil leakage is found, as defined in Rolls Royce Turbomeca Emergency Mandatory SB SBP-M3-A-75-09-00-01A-A-A or in Rolls-Royce Turbomeca Mandatory SB SBP-M3-A-75-09-00-02A-A-A, as applicable, engine operation is not allowed. (4) Engines entering service after the effective date of this AD must comply with the requirements of this AD.
Ref. Publications:	<p>Rolls Royce Turbomeca Emergency Mandatory Service Bulletin SBP-M3-A-75-09-00-01A-A-A.</p> <p>Rolls-Royce Turbomeca Mandatory Service Bulletin SBP-M3-A-75-09-00-02A-A-A.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated, EASA can approve

	<p>Alternative Methods of Compliance for this AD.</p> <ol style="list-style-type: none">2. The original issue of this AD was posted on 31 August 2010 as PAD 10-093 for consultation until 28 September 2010. The Comment Response Document can be found at http://ad.easa.europa.eu/.3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail ADs@easa.europa.eu.4. For any question concerning the technical content of the requirements in this AD, please contact: your usual or nearest TURBOMECA technical representative (refer to http://www.turbomeca-support.com).
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Superseded