


EASA	AIRWORTHINESS DIRECTIVE	
	AD No.: 2011-0119	
	Date: 28 June 2011	
<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>		
Type Approval Holder's Name :	Type/Model designation(s) :	
TURBOMECA	TM 333 series engines	
TCDS Number :	EASA E.030	
Foreign AD :	Not applicable	
Supersedure :	This AD supersedes DGAC France AD F-2005-110 dated 06 July 2005, EASA approval 2005-6046.	
ATA 73	Engine Control System – Free Turbine Overspeed Protection System – Check	
Manufacturer(s):	TURBOMECA	
Applicability:	<p>TM 333 engines, variant TM 333 2B2, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Hindustan Aeronautics Limited "Dhruv" (ALH) helicopters.</p>	
Reason:	<p>Five similar cases of electronic board trace damage have been discovered following repair on the ART 1 Digital Engine Control Unit (DECU) of the TM 333 2B2 engine, leading to the loss of Free Turbine (FT) electronic overspeed protection.</p> <p>The technical investigations carried out by TURBOMECA have shown that the origin of this trace damage was likely induced by an overcurrent, external to the engine and specific to the Hindustan Aeronautics Limited "Dhruv" (ALH) helicopter and that the trace damage is not detected by the self test performed by the DECU.</p> <p>This condition, if not detected and corrected, could lead to uncontained FT failures, possibly resulting in damage to the helicopter and injury to persons on the ground.</p> <p>To address this unsafe condition, TURBOMECA have updated the Airworthiness Limitations Sections of the engine Maintenance Manual, introducing a check of the electronic overspeed protection system which is to be carried out after any intervention on the helicopter likely to generate an overcurrent that could damage the DECU. This check is in addition to the normal check that must be accomplished at intervals not to exceed</p>	

	<p>100 Engine Hours (EH) which are introduced in the Airworthiness Limitations Sections of the engine maintenance manual which accomplishment is required with DGAC AD F-2005-110 (EASA 2005-6046).</p> <p>For the reasons described above, this AD, which supersedes DGAC France AD F-2005-110 retaining the checks requirement that must be accomplished at interval not to exceed 100 flight hours, requires accomplishment of these additional maintenance tasks.</p>
Effective Date:	07 July 2011
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Within 25 EH after the effective date of this AD or before accumulating 100 EH since accomplishment of the last FT overspeed protection check, whichever occurs first, and thereafter, at intervals not to exceed 100 EH, accomplish a FT overspeed protection check, in accordance with the instructions of Paragraph 2.B.(1) of TURBOMECA Mandatory Service Bulletin (MSB) 333 73 0812 version A.</p> <p>(2) From the effective date of this AD, accomplish a FT overspeed protection check, before next flight, after:</p> <ul style="list-style-type: none"> • Installing a DECU on a helicopter; • Accomplishing any helicopter maintenance task related to the DECU electrical system; • Accomplishing any helicopter scheduled inspection as required by Aircraft Maintenance Manual. <p>Accomplishment of a FT overspeed protection check in accordance with this AD paragraph may replace a FT overspeed protection check required by paragraph (1) of this AD.</p> <p>Note: TURBOMECA MSB 333 73 0812 version A gives instructions to operators to accomplish a FT overspeed protection check when the DECU is at a TURBOMECA-approved Repair Center.</p> <p>(3) If, during any check as required by paragraph (1) and (2) of this AD, the check is failed, before next flight, replace the affected DECU with a serviceable DECU.</p> <p>(4) Replacement of the DECU as required by paragraph (3) of this AD does not constitute terminating action for the repetitive check requirements of paragraphs (1) and (2) of this AD.</p> <p>(5) Compliance with the requirements of paragraphs (1) and (2) of this AD can be demonstrated by:</p> <p>(5.1) Revising as follows the approved aircraft maintenance programme on the basis of which the Operator or the Owner ensures the continuing airworthiness of each operated helicopter:</p> <p style="padding-left: 40px;">Incorporate the repetitive checks of the FT overspeed protection as indicated in paragraphs (1) and (2) of this AD.</p> <p style="padding-left: 40px;">and</p> <p>(5.2) Complying with the approved helicopter maintenance programme described in paragraph (5.1) of this AD.</p> <p>(6) After the effective date of this AD, do not install a TM 333 2B2 engine unless in compliance with the requirements of this AD.</p>

Ref. Publications:	<p>TURBOMECA Mandatory Service Bulletin 333 73 0812 version A, dated 16 May 2011.</p> <p>TURBOMECA 333 2B2 Maintenance Manual X 333 H8 450 2 Update 17.</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"> 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. 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: TURBOMECA Operator Support & Sales TM 333 40220 Tarnos – France Phone: +33 (0)5 59 74 44 95; Fax: +33 (0)5 59 74 45 16 or contact your nearest technical representative at www.turbomeca-support.com