


EASA	AIRWORTHINESS DIRECTIVE
	<p>AD No.: 2008 - 0169</p> <p>Date: 04 September 2008</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 Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive 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 :</p> <p>TURBOMECA</p>	<p>Type/Model designation(s) :</p> <p>TM 333 turboshaft engines</p>
<p>TCDS Number : EASA.E.030</p>	
<p>Foreign AD : Not applicable</p>	
<p>Supersedure : This AD supersedes EASA AD 2008-0065, dated 31 March 2008.</p>	
ATA 72	Engine – Gas Generator Air Flow Cage – Replacement
<p>Manufacturer(s): Turboméca S.A.</p>	
<p>Applicability: TM 333 2B2 and TM 333 2M2 turboshaft engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Hindustan Aeronautics Limited “Dhruv” (ALH) helicopters, for TM 333 2B2 and Hindustan Aeronautics Limited Cheetak and Chetan helicopters for TM 333 2M2.</p>	
<p>Reason:</p> <p>During a TM 333 2B2 flight acceptance test, one case of oil leak has been observed, leading to contamination of the bleed air for the cabin. Following low oil pressure indication, the flight crew shut the engine down. The oil leak was due to the deterioration of the labyrinth seal on the Air Flow Cage Part Number (P/N) 0 333 21 838 0. This seal ensures the front bearing tightness. Deterioration consisted of separation of the abrasible layer from the bonded surface. This separation has been identified as being caused by an inappropriate bonding process.</p> <p>Such a deterioration may lead to oil contamination of the bleed air for the cabin and/or to a commanded engine shutdown, following low oil pressure indication. In case of dual engine shut-down, this could result in emergency landing of the helicopter in autorotation.</p> <p>For the reason stated above, this AD requires the replacement of the air flow cages with air flow cages of an improved design.</p> <p>This AD supersedes EASA AD 2008-0065 to extend the applicability to include the TM 333 2M2 engine model, to prohibit the installation of an Air Flow Cage</p>	

	P/N 0 333 21 838 0 as a replacement part on TM 333 2B2 and TM 333 2M2 engines after the effective date of this AD and to change the marking requirements for the replacement Air Flow Cage P/N.
Effective Date:	17 September 2008
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>For TM 333 2B2 Engine Models:</p> <p>(1) <u>When two engines as listed in figure of Turboméca Mandatory Service Bulletin MSB n° 333 72 0807 Version B are installed on the same aircraft at the effective date of this AD:</u></p> <p>(a) Within 20 engine operating hours after the effective date of this AD and no later than 31 December 2009 replace the air flow cage with a P/N 333 21 009 0 on one of the engines in accordance with the accomplishment instructions of Turboméca MSB n° 333 72 0807 Version B and Turboméca SB n° 333 72 0037 Version A.</p> <p>(b) Within 150 engine operating hours after the effective date of this AD, and no later than 31 December 2009, replace the air flow cage with a P/N 333 21 009 0 on the second engine, in accordance with the accomplishment instructions of Turboméca MSB n° 333 72 0807 Version B and Turboméca SB n° 333 72 0037 Version A.</p> <p>(2) <u>When only one of the two engines as listed in figure of Turboméca Mandatory Service Bulletin MSB n° 333 72 0807 Version B is installed on the same aircraft at the effective date of this AD:</u></p> <p>Within 150 engine operating hours after the effective date of this AD and no later than 31 December 2009, replace the air flow cage with a P/N 333 21 009 0 in accordance with the accomplishment instructions of Turboméca MSB n° 333 72 0807 Version B and Turboméca SB n° 333 72 0037 Version A.</p> <p>(3) After the effective date of this AD, no person shall install an Air Flow Cage P/N 0 333 21 838 0 on any TM 333 2B2 engine.</p> <p>For TM 333 2M2 Engine Models:</p> <p>(1) After the effective date of this AD, all TM 333 2M2 engines installed on aircraft must have an air flow cage P/N 333 21 009 0 (introduced by Turboméca Modification TU37), in accordance with the instructions of Turboméca MSB n° A333 72 5037 Version A.</p> <p>(2) After the effective date of this AD, no person shall install an Air Flow Cage P/N 0 333 21 838 0 on any TM 333 2M2 engine.</p>
Ref. Publications:	<p>Turboméca MSB n° 333 72 0807 Version B dated 19 June 2008.</p> <p>Turboméca SB n° 333 72 0037 Version A dated 24 June 2008.</p> <p>Turboméca MSB n° A333 72 5037 Version A dated 10 July 2008.</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 Alternative Methods of Compliance for this AD.2. This AD was posted on 12 August 2008 as PAD 08-097 for consultation until 27 August 2008. No comments were received during the consultation period.3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail ADs@easa.europa.eu4. For any questions concerning the technical content of the requirements in this AD, please contact: Turboméca S.A., Service DSO/MTM (Equipe TM 333 2B2), 40220 TARNOS, FRANCE Fax: +33 5 59 74 45 48, or your usual or nearest TURBOMECA technical representative (refer to http://www.turbomeca-support.com)
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