


EASA	AIRWORTHINESS DIRECTIVE	
	AD No : 2007-0288R1	
	Date: 09 January 2012 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.	
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].		
Type Approval Holder's Name : EUROCOPTER	Type/Model designation(s) : AS 365, EC 155, SA 365 and SA 366 helicopters	
TCDS Number:	France No. 159 [TC No. 86]	
Foreign AD:	Not applicable	
Revision:	This AD revises EASA AD 2007-0288-E, dated 15 November 2007, which superseded DGAC France AD F-2005-181 (EASA approval 2005-6390) and DGAC France AD F-2005-182 (EASA approval 2005-6391).	
ATA 05, 63	Main Rotor Drive – Main Gearbox (MGB) Planet Gear Carrier – Inspection / Replacement	
Manufacturer(s):	Eurocopter; Eurocopter France; Aerospatiale (SNIAS)	
Applicability:	AS 365 N2, AS 365 N3, EC 155 B, EC 155 B1, SA 365 C, SA 365 C1, SA 365 C2, SA 365 C3, SA 365 N, SA 365 N1 and SA 366 G1 helicopters, all serial numbers, equipped with Main Gearbox (MGB), all part numbers, except those that have incorporated Eurocopter modification 0763C52.	
Reason:	<p>In 2004, cracks were discovered in the web of the MGB planet gear carrier. The two affected MGB units had been removed for overhaul/repair, subsequent to the detection of metal chips at the magnetic plugs. This phenomenon can be detected by metal chips at the magnetic plug. Investigation of the first case, detected by a subsidiary, showed a failure of the head of a screw that secures the sun gear bearing. The screw head was caught by the planet gear / fixed ring gear / sun gear drive train. The second case was discovered at the Eurocopter Marignane works and did not seem to be associated with any other failure.</p> <p>To address the unsafe condition, Eurocopter published Alert Telex documents for the types affected, containing instructions to check the magnetic plug of the MGB after the last flight of each day, without exceeding 10 flying hours, and a check of the MGB planet gear carrier as soon as one or more chips are found. DGAC France classified these instructions MANDATORY by the issuance of Emergency ADs UF-2004-181 for SA 360, AS/SA 365 and SA 366 helicopters (EASA Approval 2004-11051), UF-2004-182 for EC 155 helicopters (EASA Approval 2004-11052) and UF-2004-194 for all affected helicopters (EASA Approval 2004-12387). When the Alert Telex documents were re-published in 2005 as Alert Service Bulletins (ASB), these ADs were superseded by DGAC France AD F-2005-181 (EASA Approval 2005-6390) for EC 155 helicopters</p>	

	<p>and F-2005-182 (EASA Approval 2005-6391) for all other affected helicopters, with no change to the technical requirements.</p> <p>Since the issue of those ADs on 09 November 2005, a further case of crack in a planet gear carrier of a MGB installed on an EC155 helicopter has been reported. Examination of the crack revealed a progressive fatigue failure of the planet gear carrier initially caused by a machining non-conformity (scoring) in the blend radius between a pin and the web. An additional analysis showed, however, that the time limit of 265 hours that was assigned to the first inspection of the planet gear carrier, can no longer guarantee safe flight. The established interval of the inspection is not invalidated as the analysis also showed that the non-conformity does not affect the crack growth rate.</p> <p>Prompted by those findings, EASA issued Emergency AD 2007-0288-E, superseding DGAC France ADs F-2005-181 and F-2005-182, retaining the technical requirements thereof but requiring the initial inspection/check of the MGB planet gear carrier, irrespective of the accumulated operating hours.</p> <p>EASA AD 2007-0288 is revised to reduce the applicability by excluding helicopters which have been modified per modification 0763C52, and to remove SA 360 C helicopters from the applicability, since its type certificate (France n° 80) was revoked on 5 April 2011.</p>
Effective Date:	<p>Revision 1: 09 January 2012</p> <p>Original issue: 19 November 2007</p>
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> (1) From 19 November 2007 [the effective date of the original issue of this AD], accomplish the checks, inspections and replacements, as necessary, at the threshold and intervals as indicated in and in accordance with the instructions of Eurocopter AS365N Alert Service Bulletin (ASB) No. 05.00.48 Revision 1, 2, 3 or 4, SA366 ASB No. 05.33 Revision 1, 2 or 3, SA365C ASB No. 05.26 Revision 1, 2 or 3, or EC155 ASB No. 05A007 Revision 1, 2 or 3, as applicable to type/model helicopter; (2) After 19 November 2007 [the effective date of the original issue of this AD], do not install a spare MGB on a helicopter as a replacement part, unless the MGB has been inspected in accordance with instructions of Eurocopter AS365N ASB No. 05.00.48 Revision 1, 2, 3 or 4, SA366 ASB No. 05.33 Revision 1, 2 or 3, SA365C ASB No. 05.26 Revision 1, 2 or 3, or EC155 ASB No. 05A007 Revision 1, 2 or 3, as applicable to type/model helicopter.
Ref. Publications:	<p>Eurocopter AS365N ASB No. 05.00.48 Revision 4, SA366 ASB No. 05.33 Revision 3, SA365C ASB No. 05.26 Revision 3, and EC155 ASB No. 05A007 Revision 3, all dated 08 December 2011.</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 accept 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 Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: EUROCOPTER Aéroport de Marseille Provence 13725 Marignane Cedex – France; Tel: 33 (0) 4 42 85 97 97, Fax: 33 (0) 4 42 85 99 66; E-mail: Directive.technical-support@eurocopter.com.