


EASA	AIRWORTHINESS DIRECTIVE	
	AD No.: 2007-0209R1	
	Date: 11 September 2015	
<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 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].</p>		
Design Approval Holder's Name:	Type/Model designation(s):	
AIRBUS HELICOPTERS	AS 355 helicopters	
TCDS Number:	EASA R.146	
Foreign AD:	Not applicable	
Revision:	This AD revises EASA Emergency AD 2007-0209-E dated 06 August 2007, which superseded EASA Emergency AD 2006-0378-E dated 21 December 2006.	
ATA 67	Rotor Drive – Main Gearbox Lubrication Pump – Inspection / Replacement	
Manufacturer(s):	Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aerospatiale)	
Applicability:	AS 355 E, AS 355 F, AS 355 F1, AS 355 F2 and AS 355 N helicopters, all serial numbers, equipped with lubrication pumps Part Number (P/N) 355A32-0700-01, P/N 355A32-0700-02 or P/N 355A32-0701-00, installed on the main gearbox (MGB), except those modified in accordance with Airbus Helicopters modification (mod) 077222.	
Reason:	<p>DGAC France issued AD F-2006-027 (EASA approval 2006-0020) following four reports of MGB lubrication pump deterioration. These cases had occurred on pumps with serial numbers relatively close to each other and with few (less than 610) operating hours. AD F-2006-027 required monitoring of MGB oil pumps, limited to those serial numbers corresponding to a machining modification concerning the shape of the pump casing.</p> <p>After that AD was issued, a further incident occurred on a MGB fitted with a pump that had not been subject to this machining modification. This event showed that the machining modification of the pumps was not the only reason for early deterioration of the oil pumps. After a period of operation of insufficient lubrication, the combining gearbox assembly can deteriorate.</p> <p>This condition, if not corrected, could result in the loss of the drive train from one or possibly both engines (deterioration of the combiner gearbox gears), resulting in reduced control of the helicopter.</p> <p>Consequently, EASA issued Emergency AD 2006-0378-E, which superseded DGAC France AD F-2006-027, retained the basic requirements of that AD and extended the Applicability to helicopters with certain P/N lubrication pumps installed.</p>	

	<p>After EASA AD 2006-0378-E was issued, Eurocopter developed an improved procedure for monitoring the (condition of the) MGB lubrication pump. EASA reviewed Eurocopter AS355 Alert Service Bulletin (ASB) 05.00.51 and agreed that this achieved an adequate level of safety.</p> <p>Consequently, EASA issued Emergency AD 2007-0209-E, superseding EASA AD 2006-0378-E, retained the basic requirements of that AD and subsequently required the implementation of the improved periodic monitoring of the oil pump for wear to prevent insufficient lubrication of the MGB. This procedure replaced the monitoring procedures described by Eurocopter AS355 ASB 05.00.40.</p> <p>Since EASA AD 2007-0209-E was issued, Airbus Helicopters developed a modification of the combiner gearbox oil flow distribution (mod 077222), which is also available for in-service helicopters. This modification provides the same level of safety as the MGB lubrication pump inspection.</p> <p>For the reason described above, this AD is revised to reduce the Applicability, excluding post-mod 077222 helicopters, and to introduce the modification of the combiner gearbox oil flow distribution in accordance with Airbus Helicopters SB AS355-63.00.25 Revision 1 as an optional terminating action for the repetitive inspections required by this AD.</p>
Effective Date:	<p>Revision 1: 25 September 2015</p> <p>Original Issue: 08 August 2007</p>
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>Restatement of requirements of EASA AD 2006-0378-E:</p> <ol style="list-style-type: none"> (1) From 27 December 2006 [the effective date of EASA AD 2006-0378-E], during each check after the last flight of the day (ALF-check), without exceeding 10 flight hours (FH) between two successive checks, inspect the MGB magnetic plug and the MGB oil sight glass in accordance with the instructions of paragraph 2.B.1 of Eurocopter AS355 ASB 05.00.40. (2) Depending on the results of any check as required by paragraph (1) of this directive, before next flight, inspect the lubrication pump and, if discrepancies are detected, accomplish the applicable corrective actions in accordance with the instructions of paragraph 2.B.2 of Eurocopter AS355 ASB 05.00.40. (3) Before installation on a helicopter of a spare lubrication pump having P/N 355A32-0700-01, P/N 355A32-0700-02 or P/N 355A32-0701-00, either already installed in a MGB or separately, if the pump has logged flight hours since new, overhaul or repair (refer to the log card), check the lubricating pump and, if necessary, take corrective action in accordance with the instructions of paragraph 2.B.2 of Eurocopter AS355 ASB 05.00.40. <p>New requirements of this AD:</p> <ol style="list-style-type: none"> (4) Within the next 25 FH after 08 August 2007 [the effective date of the original issue of this AD] and, thereafter, at intervals as indicated in paragraph (5) or (6) of this AD, as applicable, depending on inspection results, inspect the oil pump for wear in accordance with the instructions of paragraph 2.B of Eurocopter AS355 ASB No. 05.00.51. <p>Note 1: The flight immediately prior to each inspection as required by paragraph (4), (5) or (6), as applicable, needs to last more than 20 minutes to ensure the MGB oil temperature has stabilized.</p> <p>Note 2: After implementation of the inspection programme as required by paragraph (4), (5) and (6) of this directive, the ALF-checks and follow-on actions as required by paragraphs (1), (2) and (3) of this directive may be discontinued.</p>

	<p>(5) If the recorded value is in Zone 1 (see Figure 1 of the ASB), at intervals not to exceed 110 FH, inspect the oil pump for wear in accordance with the instructions of paragraph 2.B of Eurocopter AS355 ASB No. 05.00.51.</p> <p>(6) If the recorded value is in zone 2, at intervals not to exceed 25 FH, inspect the oil pump for wear in accordance with the instructions of paragraph 2.B of Eurocopter AS355 ASB No. 05.00.51.</p> <p>(7) If, during any inspection as required by paragraph (4), (5) or (6) of this AD, as applicable, the recorded value is in zone 3, before next flight, replace the oil pump with a serviceable part.</p> <p>(8) Immediately after the first flight following installation on a helicopter of a replacement lubrication pump, having P/N 355A32-0700-01, P/N 355A32-0700-02 or P/N 355A32-0701-00, inspect the oil pump for wear in accordance with the instructions of paragraph 2.B of Eurocopter AS355 ASB No. 05.00.51. This is required for lubrication pumps installed as part of a MGB assembly replacement, or installed separately on the helicopter.</p> <p>Note 3: The flight as specified in paragraph (8) of this AD needs to last more than 20 minutes to ensure the MGB oil temperature has stabilized.</p> <p>(9) Modification of a helicopter in accordance with the instructions of Airbus Helicopters SB AS355-63.00.25 constitutes (optional) terminating action for all repetitive inspections required by this AD for that helicopter.</p>
Ref. Publications:	<p>Eurocopter AS355 ASB No. 05.00.40 Revision 2 dated 20 December 2006, or Revision 3 dated 09 July 2007.</p> <p>Eurocopter AS355 ASB No. 05.00.51 original issue dated 09 July 2007, or Airbus Helicopters AS355 ASB No. 05.00.51 Revision 1 dated 29 July 2015.</p> <p>Airbus Helicopters SB No. AS355-63.00.25 original issue dated 24 March 2015, or Revision 1 dated 29 July 2015.</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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication. 3. Enquiries regarding this AD should be referred to the Safety Information 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: Airbus Helicopters, Département Support et Services 13725 Marignane CEDEX, France Telephone +33 (0) 4 4275 4922, Fax +33 (0) 4 4285 9966 E-mail Dyncomp.Technical-Support@airbus.com.