


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2014-0233</b></p> <p><b>Date: 23 October 2014</b></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 EU 748/2012, Part 21.A.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><b>Design Approval Holder's Name:</b> AIRBUS HELICOPTERS</p>	<p><b>Type/Model designation(s):</b> AS350 helicopters</p>
TCDS Number:	EASA.R.008
Foreign AD:	Not applicable
Supersedure:	This AD supersedes EASA AD 2013-0284R1 dated 25 July 2014.
<b>ATA 63</b>	<b>Rotor Drive – Hydraulic Pump Bearing – Inspection / Replacement</b>
Manufacturer(s):	Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aerospatiale)
Applicability:	<p>AS 350 B, AS 350 BA, AS 350 BB, AS 350 B1, AS 350 B2, AS 350 B3 and AS 350 D helicopters, all serial numbers,</p> <ul style="list-style-type: none"> <li>• if equipped with single hydraulic system (PRE MOD OP3346 or OP3082) and incorporating Airbus Helicopters, modification 079566 (hydraulic pump drive assembly part number (P/N) 350A35-0132-00 equipped with bearing P/N 704A33651243), or</li> <li>• modified in service by Airbus Helicopter Alert Service Bulletin (ASB) No. 05.00.72 Rev.04 when the pump drive assembly is equipped with bearing P/N 704A33651243,</li> </ul> <p>except helicopters which embody modification 079568 (hydraulic pump drive assembly P/N 350A35-0132-01 fitted with bearing P/N 704A33651269).</p>
Reason:	<p>Several events were reported on AS 350 helicopters of hydraulic pump drive belt failure caused by seizure of the hydraulic pump drive pulley bearing. For helicopters with a single hydraulic system, this condition, if not detected and corrected, could lead to loss of hydraulic servo assistance and increase in pilot work load, consequently resulting in reduced control of the helicopter.</p> <p>The initial investigation supported the conclusion that the failure of the hydraulic pump drive was caused by incorrect fitting of the bearing that induced an accidental indentation of the raceways. In addition, investigation showed that premature degradation of the bearings could also have been initiated by the excessive dimensional tolerances, and consequent high preloading, identified</p>

	<p>within a batch of bearings.</p> <p>To address this potential unsafe condition, EASA had issued AD 2013-0044-E to require repetitive inspections and, depending on findings, replacement of the affected hydraulic pump drive assembly.</p> <p>Since AD 2013-0044-E was issued, a new inspection procedure was developed and a reduction of the inspection interval was found necessary.</p> <p>Consequently, EASA issued AD 2013-0284-E, retaining the requirements of EASA AD 2013-0044-E, which was superseded, to mandate the new inspection procedure as specified in Eurocopter AS350 Alert Service Bulletin (ASB) No.05.00.72 (Rev.2) and to reduce the inspection interval for hydraulic pump drive assemblies with P/N 350A35-0132-00, which are equipped with the affected bearing serial numbers (S/N). That AD also required marking of pump support assemblies or replacement of affected pump drives as a terminating action for the requirements of this AD.</p> <p>EASA AD 2013-0284-E was revised (R1) to exclude helicopters which embody modification 079568 (hydraulic pump drive assembly P/N 350A35-0132-01 fitted with bearing P/N 704A33651269) from the Applicability and to make reference to Airbus Helicopters AS350 ASB No. 05.00.72 Revision 4.</p> <p>Since EASA AD 2013-0284R1 was issued, new cases of seizure of the hydraulic pump drive bearing P/N 704A33651243 were reported, despite the actions accomplished per AS350 ASB No. 05.00.72.</p> <p>For the reasons described above, this AD supersedes EASA AD 2013-0284R1 and requires repetitive inspections and greasing of bearing P/N 704A33651243. This AD also requires replacement of all bearings P/N 704A33651243 with bearing P/N 704A33651269 (MOD 079568) which constitutes terminating action for the repetitive inspection and greasing actions.</p>
Effective Date:	31 October 2014
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> <li>(1) For a bearing P/N 704A33651243 which, on the effective date of this AD, has accumulated 115 flight hours (FH) or more since first installation on a helicopter, during the next scheduled 150 FH inspection of the helicopter, or within 50 FH after the effective date of this AD, whichever occurs first, visually inspect and grease bearing P/N 704A33651243 in accordance with the instructions of paragraphs 3.B.1 and 3.B.2 of Airbus Helicopters ASB No. AS350-63.00.24.</li> <li>(2) For a bearing P/N 704A33651243 which, on the effective date of this AD, has accumulated less than 115 FH since first installation on a helicopter, during the next scheduled 150 FH inspection of the helicopter, visually inspect and grease bearing P/N 704A33651243 in accordance with the instructions of paragraphs 3.B.1 and 3.B.2 of Airbus Helicopters ASB No. AS350-63.00.24.</li> <li>(3) Thereafter, during each scheduled 150 FH inspection of the helicopter, repeat the visual inspection and the greasing of bearing P/N 704A33651243 in accordance with the instructions of paragraphs 3.B.1 and 3.B.2 of Airbus Helicopters ASB No. AS350-63.00.24</li> <li>(4) In addition to the repetitive inspections as required by paragraph (3) of this AD, during each scheduled 600 FH inspection of the helicopter, or each 24 month inspection, whichever occurs first, inspect the bearing P/N 704A33651243 in accordance with the instructions of paragraph 3.B.3 of Airbus Helicopters ASB No. AS350-63.00.24.</li> <li>(5) If, during any inspection as required by paragraph (1), (2), (3), or (4) of this AD, as applicable, any discrepancy is found, before next flight, replace the bearing P/N 704A33651243 with a serviceable part, or replace it with</li> </ol>

	<p>bearing P/N 704A33651269 in accordance with the instructions of paragraph 3.B.4 of Airbus Helicopters ASB No. AS350-63.00.24.</p> <p>(6) Unless already accomplished as required by paragraph (5) of this AD, within 8 months after the effective date of this AD, replace each bearing P/N 704A33651243 with a bearing P/N 704A33651269 in accordance with the instructions of paragraph 3.B.4 of Airbus Helicopters ASB No. AS350-63.00.24.</p> <p>(7) Modification of a helicopter by replacement of the bearing P/N 704A33651243 with bearing P/N 704A33651269, as required by paragraph (6) of this AD, or as specified in paragraph (5) of this AD, as applicable, constitutes terminating action for the repetitive inspections as required by paragraphs (3) and (4) of this AD for that helicopter.</p> <p>(8) After modification of a helicopter as required by paragraph (6) of this AD, or as specified in paragraph (5) of this AD, as applicable, do not install any bearing P/N 704A33651243 on that helicopter.</p>
Ref. Publications:	<p>Airbus Helicopters ASB No. AS350-63.00.24 initial issue dated 21 October 2014.</p> <p>Airbus Helicopters AS350 Emergency ASB No. 05.00.72 Revision 04 dated 15 July 2014.</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"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>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.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Certification Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters (EBSESB) – Aéroport de Marseille Provence 13725 Marignane Cedex, France; Telephone +33 (4) 42 85 97 97; Fax +33 (4) 42 85 99 66; E-mail: <a href="mailto:Directive.technical-support@airbus.com">Directive.technical-support@airbus.com</a>.</li> </ol>