


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2009-0027</b></p> <p><b>Date: 18 February 2009</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 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>	
<p><b>Type Approval Holder's Name :</b></p> <p>EUROCOPTER</p>	<p><b>Type/Model designation(s) :</b></p> <p>AS 350 and EC 130 helicopters</p>
<p>TCDS Number : EASA.R.008</p>	
<p>Foreign AD : Not applicable</p>	
<p>Supersedure : This AD supersedes and cancels EASA AD 2009-0004 dated 12 January 2009.</p>	
<b>ATA 80</b>	<b>Engine Starting – Starter-Generator Damping Assembly – Adjustment</b>
<p>Manufacturer(s):</p>	<p>EUROCOPTER (formerly Eurocopter France, Aerospatiale)</p>
<p>Applicability:</p>	<p>AS 350 B, BA, BB, B1, B2, B3 and EC 130 B4 helicopters, all serial numbers, if equipped with ARRIEL engines where Aircraft Parts Corporation (APC) starter-generators with Part Number (P/N) 150SG122Q or P/N 200SGL130Q without "004" marking on their name plates are installed.</p>
<p>Reason:</p>	<p>EUROCOPTER has received several reports of engine flame-outs, all of which involved the failure of the 41-tooth pinion in the engine accessory gear box. All the concerned helicopters were equipped with starter-generators manufactured by the APC company (currently UNISON). In each case, it was found that the torque damping system of the starter-generator was inoperative.</p> <p>Further investigations have been conducted to assess the efficiency of the damping system of starter-generators with P/N 150SG122Q and 200SGL130Q, which have revealed that the non-operation of the torque damping system was due to an incorrect adjustment. If the damping system is incorrectly adjusted, torque oscillations may not be limited and can induce bending stress on the 41-tooth pinion of the accessory gear box, contributing to the pinion failure. Such pinion failure causes the fuel pump to stop which results in an engine flame-out.</p> <p>Pending additional investigations, EASA AD 2009-0004 required an inspection of the alignment and torque of the APC starter-generator damping assembly and, in case of discrepancies, the accomplishment of corrective actions.</p> <p>This AD, superseding EASA 2009-0004, requires the accomplishment of a new adjustment procedure, which has proven to be more reliable and optimizes the performance of the APC starter-generator damping assembly.</p>

Effective Date:	04 March 2009
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> <li>1. Within 110 flight hours or 3 months, whichever occurs first after the effective date of this AD, adjust and mark the APC starter-generator in accordance with the instructions of paragraph 2.B.2 of EUROCOPTER AS350 Alert Service Bulletin (ASB) No. 80.00.07 Revision 1 or EC130 ASB No. 80A003 Revision 1, as applicable to the helicopter version.</li> <li>2. After the effective date of this AD, no person shall install on a helicopter a starter-generator with P/N affected by this AD unless it has been adjusted and marked as required in the relevant ASB.</li> </ol>
Ref. Publications:	<p>EUROCOPTER AS350 ASB No. 80.00.07 Revision 1 dated 06 February 2009.  EUROCOPTER EC130 ASB No. 80A003 Revision 1 dated 06 February 2009.</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. 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.</li> <li>3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management &amp; Research 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: EUROCOPTER (STDI) – Aéroport de Marseille Provence 13725 Marignane Cedex – France.  Telephone: +33 (0)4 42 85 97 97, Fax: +33 (0)4 42 85 99 66  E-mail: <a href="mailto:Directive.technical-support@eurocopter.com">Directive.technical-support@eurocopter.com</a>.</li> </ol>