EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2012-0022 **Date: 01 February 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 :	**Type/Model designation(s) :**
EUROCOPTER	AS 355 N helicopters

TCDS Number:	EASA.R.146
Foreign AD:	Not applicable
Supersedure:	This AD supersedes EASA AD 2006-0254 dated 22 August 2006.

ATA 80	**Starting – Starter Generator – Check / Replacement / Modification**
Manufacturer(s):	Eurocopter (formerly Eurocopter-France, Aerospatiale)
Applicability:	AS 355 N helicopters, all serial numbers
Reason:	DGAC France issued AD F-1999-469-058 R2 following some reported cases of starter generator deterioration, leading to the failure of the engine exhaust pipe ejector attachment lugs and resulting in the loss of the exhaust pipe ejector in flight. Following a reported case of failure of a restraining cable, EASA issued AD 2006-0254, superseding AD F-1999-469-058 R2, requiring the accomplishment of new maintenance tasks, suited to the various cases of embodiment of Turboméca Modification (MOD) TU 106 (exhaust pipe nozzles fitted with retaining cables) and Eurocopter MOD 073159. Since EASA AD 2006-0254 was issued, another occurrence was reported, where, during an After-Last-Flight (ALF) check, two (out of three) engine exhaust pipe nozzle restraining cables were found broken, and two (out of four) attaching tabs were also found broken. This condition, if not detected and corrected, could result in the loss of the exhaust pipe ejector in flight, and subsequent damage to the helicopter and injury to people on the ground. For the reason described above, this AD retains the requirements of EASA AD 2006-0254, which is superseded, expands the applicability and revising the inspection intervals and maintenance actions and requires modification or replacement of the starter generator, taking into account also Turboméca Modification TU107 (including TU106 + reinforced attachment tabs).

Effective Date:	15 February 2012
Required Action(s) and Compliance Time(s):	Required as indicated, unless already accomplished: (1) From 01 September 2006 [the effective date of EASA AD 2006-0254], each time a replacement Part Number (P/N) 524-060 or P/N 524-061 starter generator is installed on a helicopter, before next flight after installation, check the vibration level of the starter generator in accordance with the instructions of paragraph 2.B.1 of Eurocopter AS355 Alert Service Bulletin (ASB) No. 01.00.45 Revision 2. (2) Thereafter, at the times indicated in the Table in paragraph 1.D (page 3/8) of Eurocopter AS 355 ASB No. 01.00.45 Revision 2, depending on whether engine modification TU107 is embodied, as applicable, check the vibration level of the P/N 524-060 or P/N 524-061 starter generator and the tightening torque of the retaining clamp, in accordance with the instructions of paragraphs 2.B.1 and 2.B.2 of Eurocopter AS355 ASB No. 01.00.45 Revision 2. (3) **For helicopters after embodiment of engine modification TU 107 (post-MOD TU 107 configuration):** Modification TU 107 is no longer considered as valid if, during any check as required by this AD, at least one restraining cable or attachment lug is found to have failed. In this case, before next flight, replace the failed component(s) and the exhaust pipe to restore the helicopter to either pre- or post-MOD TU 107 configuration and, thereafter, continue the checks as required by paragraphs (1) and (2) of this AD. (4) Checks, accomplished prior to the effective date of this AD, in accordance with the instructions of Eurocopter AS355 ASB No. 01.00.45 Revision 1, in compliance with EASA AD 2006-0254, are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD. After the effective date of this AD, all checks, as required by paragraphs (1) and (2) of this AD, must be accomplished in accordance with the instructions of Eurocopter AS355 ASB No. 01.00.45 at Revision 2. (5) Within the compliance time specified in Table 1 of this AD, as applicable, or within 72 months, whatever occurs first after the effective date of this AD, replace each P/N 524-060 and P/N 524-061 starter generator with a modified unit, having P/N 524-062, in accordance with the instructions of paragraph 2.B of Eurocopter AS355 ASB No. 80.00.12 Revision 1. Table 1 – Replacement of Starter Generator **FH accumulated by the Starter Generator, on the effective date of this AD** / **Compliance Time, after the effective date of this AD** 100 FH or less / 30 FH 250 FH or less, but more than 100 FH / 50 FH More than 250 FH / Within 72 months Modification of a helicopter as required by paragraph (5) of this AD constitutes terminating action for the repetitive checks required by paragraphs (1) and (2) of this AD. (6) After modification of a helicopter as required by paragraph (5) of this AD, at the times indicated in the Table in paragraph 1.D (page 3/11) of Eurocopter AS355 ASB No. 80.00.12 Revision 1, check the vibration level of the starter generator and the tightening torque of the attachment clamp, in accordance with the instructions of paragraph 1.D and 1.K of Eurocopter AS355 ASB No. 80.00.12 Revision 1. (7) After modification of a helicopter as required by paragraph (5) of this AD,

	do not install any starter generator P/N 524-060 or P/N 524-061on that helicopter.
Ref. Publications:	Eurocopter AS355 ASB No. 01.00.45 R2, dated 18 June 2010. Eurocopter AS355 ASB No. 80.00.12 R1, dated 22 July 2010. TURBOMECA SB 319 78 0073 (MOD TU 106) dated 03 August 2004. TURBOMECA SB 319 78 0107 C (MOD TU 107) dated 12 December 2011. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks :	1. If requested and appropriately substantiated, EASA can approve 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 (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: Directive.technical-support@eurocopter.com