EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2008-0185 **Date: 08 October 2008** 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	EC 120 helicopters

TCDS Number: France No. 189

Foreign AD: Not applicable

Supersedes: EASA AD 2006-0253 dated 22 August 2006

ATA 76	**Engine Controls – Twist Grip Drive Tube – Replacement / Inspection**

Manufacturer:	Eurocopter (formerly Eurocopter-France)
Applicability:	EC 120 B helicopters, all serial numbers fitted with: - Right Hand (RH) twist grip part number (P/N) C761A2024101 with serial numbers (S/N): 336 to 338 (inclusive), 342 to 353 (inclusive), 356 to 364 (inclusive) and 367 to 401 with no letter "V" marked on the lever base, and P/N C761A2024102, P/N C761A2024103 or P/N C761A2024104 with S/N below 418 with no letter "V" marked on the lever base. - Left Hand (LH) twist grip P/N C761A2025102, P/N C761A2025103 or P/N C761A2025104 with S/N below 382 with no letter "V" marked on the lever base.
Reason:	During autorotation training, a pilot experienced the loss of the engine fuel flow control function in which the engine remained at idle rating although the twist grip had been turned back to the flight position. The pilot continued the autorotation flight and landed the aircraft as expected. The loss of the engine fuel flow control function was caused by bonding separation of the RH pilot drive tube-to-pinion attachment. The TC Holder Quality Assurance department has detected a pinion bonding anomaly on certain RH pilot drive tube batches. AD 2006-0093 and its superseding AD 2006-0253 were issued following the above described occurrence. Their purpose was to mandate a check of the correct bonding strength of the control pinion on the pilot and co-

	pilot collective lever drive tubes. Analysis has revealed that the failure of the twist grip drive tube and control pinion bonded attachment is due to the preparation of the bonding surfaces on the two components. Recent investigations also revealed other twist grip batches potentially affected by non appropriate surface preparation prior to bonding. Over time, such surface preparation creates a risk of failure of the bonded attachment of the drive tube and thus a risk of losing in flight the engine fuel flow control function, which may constitute an unsafe condition. The purpose of this AD, which supersedes AD 2006-0253 retaining its requirements, is to replace, in accordance with EUROCOPTER EC 120 Alert Service Bulletin (ASB) No. 76A005 Revision 1, the drive tubes of the concerned twist grips whose P/N and S/N are given in paragraph 2. of the Required Action and Compliance Time section of this AD and to ensure for the remaining twist grips the correct bonding strength of the control pinion on the pilot and co-pilot collective lever drive tubes in accordance with EUROCOPTER EC 120 Alert Service Bulletin (ASB) No. 76A006 Revision 2.
Effective Date:	22 October 2008
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: 1. On helicopters having already accomplished EUROCOPTER EC120 Service Bulletin (SB) No. 76-005 Revision 0: Identify the collective lever in accordance with paragraph 2.B.3. of EUROCOPTER EC 120 ASB No. 76A005 Revision 1 within 9 months after the effective date of this AD. 2. On helicopters not having already accomplished EUROCOPTER EC120 SB No. 76-005 Revision 0: Replace the drive tube on the RH twist grips assemblies P/N C761A2024101, P/N C761A2024103 or P/N C761A2024104 with S/N: 336 to 338 (inclusive), 342 to 353 (inclusive), 356 to 364 (inclusive), and 367 to 401(inclusive), with no letter “V” marked on the lever base and on LH twist grips P/N C761A2025103 or P/N C761A2025104 with S/N: 371 to 381 (inclusive), with no letter “V” marked on the lever base in accordance with paragraph 2.B of EUROCOPTER EC120 SB No. 76-005 Revision 1 within 110 flight hours or 9 months after the effective date of this AD, whichever occurs first. 2.1. Pending replacement of the twist grip drive tube as per paragraph 2. of this AD: in autorotation training, the manoeuvre must be carried out until the helicopter touches down (full autorotation). 2.2. From the effective date of this AD, no person shall install a twist grip having P/N and S/N as per paragraph 2. of this AD on a helicopter, unless the drive tube has been replaced and the collective lever marked in accordance with paragraphs 2.B.2. and 2.B.3. of EUROCOPTER EC 120 ASB No. 76A005 Revision 1. 3. From the effective date of this AD, no person shall install on a helicopter twist grip assemblies P/N: - C761A2024102 and C761A2024103 and C761A2024104 with serial number below 418 - C761A2025102 and C761A2025103 and C761A2025104 with serial number below 382

	not having accomplished EUROCOPTER EC120 SB No. 76-005 Revision 1, unless the correct bonding strength of the control pinion on the pilot and co-pilot collective lever drive tubes has been checked in accordance with paragraph 2.B.4 of EUROCOPTER EC 120 ASB No. 76A006 Revision 2.
Ref. Publications:	EUROCOPTER EC 120 Alert Service Bulletin No. 76A005 Revision 1; EUROCOPTER EC 120 Alert Service Bulletin No. 76A006 Revision 2. 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. Required actions and the risk assessment have warranted the immediate adoption of this Final AD with request for comments. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research 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: 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.