

EASA	EMERGENCY AIRWORTHINESS DIRECTIVE
	AD No.: 2011-0128-E Date: 06 July 2011 Note: This Emergency 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 : Turboméca	Type/Model designation(s) : ARRIEL 2 series engines
TCDS Number : EASA.E.001	
Foreign AD : Not applicable	
Supersedure : None	
ATA 73	Engine Fuel & Control – Hydro-Mechanical Metering Unit (HMU) – Inspections / Replacement
Manufacturer(s): Turboméca S.A.	
Applicability: Arriel 2B engines, all serial numbers. These engines are known to be installed on, but not limited, to Eurocopter AS 350 B3 helicopters.	
Reason:	Non-conformities on adjustment of some HMUs have been reported by a Turboméca repair centre. The technical investigations carried out by Turboméca are showing that only a limited number of HMUs are potentially affected by this non-conformity to HMU adjustment. This condition, if not corrected, could lead to an uncommanded In-Flight Shut-Down (IFSD) during fast decelerations in automatic or manual modes, ultimately leading to an emergency autorotation landing for a single-engine helicopter. To address this unsafe condition, Turboméca have issued Turboméca Mandatory Service Bulletin (MSB) A292 73 2841. For the reasons described above, this AD requires replacement of the affected HMU with a serviceable HMU <u>or</u>, alternatively, accomplishing an engine functional test in order to allow further flights and replacement of the HMU at a later stage. Turboméca have as well developed a modification (TU143) of the Electronic Engine Control Unit (EECU) software to improve the logic

	concerning loss of steps tolerance. Introducing the TU143 software on the EECU of engines incorporating an affected HMU will limit the loss of automatic control function rate. Therefore, this AD requires as well embodiment of TU143 modification on each engine incorporating an affected HMU.
Effective Date:	08 July 2011
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) For the engines on which an HMU is installed, identified by Part Number and serial number in the Figure of Turboméca MSB A292 73 2841 version A, except those which have already passed the inspection, in accordance with Turboméca Service Bulletin (SB) 292 73 2840 version A, accomplish one of the actions specified in paragraph (2) or (3) of this AD. (2) Before next flight, replace the affected HMU with a serviceable HMU. Replacement of an HMU with a serviceable HMU constitutes terminating action for the requirements of this AD. Note: For the purpose of this AD, a serviceable HMU is a unit which is not identified in the Figure of Turboméca MSB A292 73 2841 version A, unless that unit has passed the inspection in accordance with Turboméca SB 292 73 2840 version A. (3) Alternatively to the requirement of paragraph (2) of this AD, before next flight, accomplish a one-time engine functional test in accordance with the instructions of paragraph 2.B.(1)(a) of Turboméca MSB A292 73 2841 version A. (3.1) If the engine fails the functional test as required by paragraph (3) of this AD, before next flight, replace the HMU with a serviceable HMU. (3.2) If the engine passes the functional test as required by paragraph (3) of this AD, accomplish the following actions: (3.2.1) Within 4 months after the effective date of this AD, install software modification TU143 on the Engine Electronic Control Unit (EECU) of the engine, in accordance with Turboméca SB 292 73 2143. (3.2.2) Within 12 months after the effective date of this AD, replace the affected HMU with a serviceable HMU. (4) From the effective of this AD, do not install an HMU on an engine or an engine on a helicopter unless the HMU or the engine is in compliance with the requirements of this AD.
Ref. Publications:	Turboméca Mandatory Service Bulletin A292 73 2841 version A dated 04 July 2011. Turboméca Service Bulletin 292 73 2840 version A dated 28 June 2011. Turboméca Service Bulletin 292 73 2143 Initial Issue dated 24 July 2007. 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 safety assessment has requested not to implement the full consultation process and an immediate publication and notification. 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: Turboméca, S.A. ARRIEL 2 Customer Support 40220 Tarnos, France Fax: +33 5 59 74 45 15 or your usual or nearest Turboméca technical representative at www.turbomeca-support.com
--	---