EASA	AIRWORTHINESS DIRECTIVE
	AD No : 2007-0085 **Date: 30 March 2007** **[Corrected 02 April 2007]**

No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.

Type Approval Holder's Name :	**Type/Model designation(s) :**
TURBOMECA	ARRIEL 2B1 Turboshaft engines

TCDS Number : EASA.E.001

Foreign AD : Not applicable

Supersedure : Not applicable

ATA 73	**Engine Fuel & Control - Engine Electronic Control Unit (EECU) – Software Modification**
Manufacturer(s):	TURBOMECA
Applicability:	Arriel 2B1 turboshaft engines, all serial numbers. These engines are known to be installed on, but not limited to, Eurocopter AS 350 B3 and EC 130 B4 single-engine helicopters.
Reason:	Two cases of flame-out have been reported on Arriel 2B1 engines: one when lowering collective pitch on ground at landing and one when switching from Flight Position to Idle Position on ground. Both flame-out events are explained as follows: ▪ in case of stepper motor loss of steps to a value below the "level 1 failure" detection threshold, the fuel flow of the anti flame-out limit can be reduced, ▪ the reduction can be sufficient to cause an engine flame-out when decreasing rapidly the demand for power (it can therefore also happen in flight) This condition may lead to an uncommanded in-flight shut-down. On a single-engine helicopter, the result may be an emergency autorotation landing or, at worst, an accident.

	To prevent this, software version 5.02 (TU 144C) increases the anti flame-out limit in the event of small stepper motor loss of steps (below the "level 1 failure" detection threshold). This AD was corrected due to a typographical error in the effective date. This has now been corrected to read 13 April 2007 instead of 13 March 2007.
Effective Date:	13 April 2007
Compliance:	Modify the DECU by downloading the TU144C software in accordance with Turbomeca Mandatory Service Bulletin 292 73 2144, as soon as a TURBOMECA technician qualified to download the new software is available or replace the DECU according to mandatory Service Bulletin 292 73 2144, as soon as a TU 144C-modified DECU is available, and by August 31st, 2007 at the latest. After incorporating the instructions of Turbomeca Mandatory Service Bulletin 292 73 2144, the compliance certificate for replacement of Engine Electronic Control Unit must be sent to Turbomeca within 7 days, as stated in paragraph D.(1)(c)3 of the Service Bulletin.
Ref. Publications:	Turbomeca Mandatory Service Bulletin 292 73 2144 Original Issue, or later approved revisions of this document.
Remarks :	1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Methods of Compliance (AMOCs) for this AD. 2. This AD was posted as PAD 07-034 on 27 February 2007 for consultation until 27 March 2007. No comments were received during this period. 3. Enquiries regarding this AD should be referred to the AD Focal Point - 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.