| EASA | NOTIFICATION OF A PROPOSAL TO ISSUE AN AIRWORTHINESS DIRECTIVE |
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| | **PAD No.: 09-089**<br><br>**Date: 10 July 2009**<br><br>Note: This Proposed Airworthiness Directive (PAD) 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. |

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance/cancellation of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below. All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation closing date indicated.

| **Type Approval Holder's Name :** | **Type/Model designation(s) :** |
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| TURBOMECA | ARRIEL 2B, 2B1, 2B1A turboshaft engines |

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| TCDS Number : | EASA.E.001 |
| Foreign AD : | Not applicable |
| Supersedure : | None |

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| **ATA 73** | **Engine Fuel & Control – HP/LP Pump Metering Unit – Low Pressure Fuel Pump Impeller Drive – Inspection** |
| Manufacturer(s): | Turboméca S.A |
| Applicability: | all ARRIEL 2B, 2B1 and 2B1A turboshaft engines, which do not incorporate modification TU147.<br><br>These engines are known to be installed on, but not limited to: Eurocopter AS 350 B3 and EC 130 B4 helicopters; Changhe Z11 helicopters. |
| Reason: | Several events of uncoupling of the LP (Low Pressure) fuel pump impeller and the HP (High Pressure) fuel pump shaft have been reported on ARRIEL 2 engines which do not incorporate modification TU 147 ([1]). In most cases the "low fuel pressure switch" enlightened, the pilot activated the aircraft booster pump in accordance with the Flight Manual Instructions and landed safely with no other incident. One case, on a single-engine helicopter, led to a sudden engine power loss.<br><br>The uncoupling of the LP fuel pump impeller and the HP fuel pump shaft may lead to a limitation of engine power or, at worst, an uncommanded In-Flight Shut-Down (IFSD). On a single-engine helicopter, the result may be an emergency autorotation landing.<br><br>For the reasons stated above, this Airworthiness Directive requires to ensure that the LP fuel pump impeller is correctly driven by the HP fuel pump shaft, to prevent any detachment of the LP impeller from the HP shaft.<br><br>([1]) TU147 modification consists of bonding the LP fuel pump impeller with the impeller screw. |

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| Effective Date: | [TBD: 14 days after final AD issue date] |
| Required Action(s) and Compliance Time(s): | The following measures are made mandatory from the effective date of this AD, unless accomplished previously:<br>Within 500 Engine Flight Hours (EFH) from the effective date of this AD, but no later than 30 June 2010, perform a check of the transmissible torque between the LP pump impeller and the HP pump shaft in accordance with paragraph 2 of Turboméca Mandatory Service Bulletin (MSB) n° A292 73 2830.<br>- If the check is compliant, apply the nominal tightening torque to the screw of the LP pump impeller.<br>- If the check is not compliant, replace the HP/LP Pump Metering Unit with a pre-TU147 compliant unit or a post-TU147 unit.<br>**NOTE**: If the HP/LP Pump Metering Unit incorporates modification TU147, no action is required. |
| Ref. Publications: | Turboméca Mandatory Service Bulletin n° A292 73 2830, Version A dated 29 May 2009.<br>The use of later approved updates of this document is acceptable for compliance with the requirement of this AD. |
| Remarks : | 1. This Proposed AD will be closed for consultation on 07 August 2009.<br>2. Enquiries regarding this PAD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail ADs@easa.europa.eu.<br>3. For any questions concerning the technical content of the requirements in this AD, please contact:<br>**TURBOMÉCA S.A.**<br>ARRIEL 2 Customer Support<br>40220 Tarnos, France<br>Fax: +33 5 59 74 45 15, or your usual or nearest TURBOMÉCA technical representative (refer to http://www.turbomeca-support.com) |