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	This Airworthiness Directive is published by the DGAC on behalf of EASA, Airworthiness Authority of the State of Design for the affected product, part or appliance.		<i>Translation of « Consigne de Navigabilité » of same number. In case of difficulty, reference should be made to the French issue.</i>		
	<p align="center">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.</p>				
Direction générale de l'aviation civile France GSAC publication	Corresponding foreign Airworthiness Directive(s): Not applicable		Airworthiness Directive(s) replaced: None		
Person in charge of airworthiness: TURBOMECA		Type(s): ARRIEL 2 turboshaft engines			
Type certificate(s) No. EASA E.001 TCDS No EASA E.001					
ATA chapter: 72	Subject: Engine - Check and modification of the conformation resistance values of the torque conformation box				

1. EFFECTIVITY:

This Airworthiness Directive (AD) applies to all TURBOMECA ARRIEL 2S1 turboshaft engines whose Module 01 serial number is listed in Service Bulletin A 292 72 2816.

2. REASONS:

The Digital Electronic Control Unit (DECU) used on the TM-USA engine test bench during final acceptance testing of ARRIEL 2S1 engines between April 1999 and July 2004 revealed an inaccuracy. This inaccuracy was corrected in August 2004. However, for the affected engines, the consequence is a conformation error of the engine torque meter on Module 1 which can lead to an overestimation of the torque.


This conformation error results in:

- a possible overestimation up to 27 N.m (3.0% torque) of the indicated torque compared to the real torque of the engine;
- a possible overestimation of the power margin during the Power Assurance Check as specified in the aircraft flight manual;
- a possible power limitation below the minimum declared levels of the "OEI 30s", "OEI 2min" and "OEI continuous" ratings in a limited part of the flight envelope.

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

Compliance with this AD is required as indicated, unless already done, from the effective date of this AD :

- 3.1. Check the torque measurements made by the production Digital Engine Control Unit (DECU) which is installed on the engine, and compare them to those obtained from a prototype DECU, installed in parallel with the production DECU.

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3.2. Following the check, calculate the new conformation resistance values and recalibrate the torque conformation box.

These actions must be performed following the Mandatory Service Bulletin A 292 72 2816.

This AD must be applied before January 31, 2006.

4. REFERENCE PUBLICATION:

Mandatory Service Bulletin A 292 73 2816 original issue or later approved revision.

5. EFFECTIVE DATE:

January 01, 2005.

6. REMARK:

For questions concerning the technical contents of this AD's requirements, contact:

Support Opérateurs ARRIEL 2
TURBOMECA
40220 TARNOS - France
Fax number: 33 (0)5 59 74 45 72.

7. APPROVAL:

This AD is approved under EASA No 2004-12118 dated December 13, 2004.