


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2012-0187R2</b></p> <p><b>Date: 06 December 2012</b></p> <p>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.</p>
<p>This AD is issued in accordance with EU 748/2012, Part 21.A.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].</p>	
<p><b>Design Approval Holder's Name:</b></p> <p>TURBOMÉCA</p>	<p><b>Type/Model designation(s):</b></p> <p>ARRIEL 1 engines</p>
TCDS Number:	EASA.E.073
Foreign AD:	Not applicable
Revision:	This AD revises EASA AD 2012-0187R1 dated 11 October 2012.
<b>ATA 72</b>	<b>Engine – Airworthiness Limitation Section – Cycle Counting Aid System – Modification/Amendment</b>
Manufacturer(s):	Turboméca S.A.
Applicability:	<p>ARRIEL 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K, 1K1, 1S and 1S1 turbo-shaft engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Eurocopter (formerly Eurocopter France, Aerospatiale) AS 350 B, BA, BB, B1 and B2, and AS 365 N, Eurocopter Deutschland (formerly Messerschmitt-Bölkow-Blohm) MBB-BK117-C1 and -C2, AgustaWestland (formerly Agusta) A 109 K2, and Sikorsky S-76A helicopters.</p>
Reason:	<p>Following detailed analysis and review of in-service feedback performed by Turboméca on the ARRIEL 1 engines, the chapter 05-10 Airworthiness Limitation Section (ALS) of ARRIEL 1 Maintenance Manuals has been updated in order to clarify the definition and update the requirements relative to the cycle counting aid system (modification introduced in production by Turboméca modification TU207 or TU243 and in-service, respectively, by Turboméca Service Bulletin (SB) 292800190 or SB 292800168), add associated maintenance tasks, and modify the Power Turbine (PT) partial cycle counting method.</p> <p>Failure to comply with the instructions contained in these documents could result in an unsafe condition.</p> <p>To address this potential unsafe condition, EASA issued AD 2012-0187, requiring implementation of the changes applied to the chapter 05-10 ALS of</p>

	<p>the ARRIEL 1 Maintenance Manuals.</p> <p>After it was found that only Temporary Revisions of the Maintenance Manuals, referenced in Appendix 1 of EASA AD 2012-0187, were available, EASA revised the AD to add references in Appendix 1 of the AD to those Maintenance Manual Temporary Revisions as alternatives to quoted issues of Maintenance Manuals which were not be available yet.</p> <p>Since EASA AD 2012-0187R1 was issued, EASA was made aware that some operators have the engine cycle counting aid system installed on their engine, but do not use it.</p> <p>For the reason described above, this AD is revised to confirm that, if the cycle counting aid system is installed on the engine but is not used, the requirements of this AD do not apply to that engine.</p>
Effective Date:	<p>Revision 2: 13 December 2012</p> <p>Revision 1: 25 October 2012</p> <p>Original issue: 02 October 2012</p>
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) From the effective date of this AD, record the updated definition of the cycle counting aid system and apply the updated PT partial cycle counting method and, within the intervals specified in chapter 05-10 ALS of the ARRIEL 1 Maintenance Manual or alternatively Maintenance Manual Temporary Revision (T/R), as applicable to engine Model, as listed in Appendix 1 of this AD, accomplish the following tasks:</p> <p>New mandatory tasks associated with the cycle counting aid system (requirements applicable to engines modified in production with Turboméca modification TU207 or TU243 <u>or</u> in service, respectively, with Turboméca SB 292800190 or SB 292800168), and defined as follows:</p> <ul style="list-style-type: none"> <li>- "Cycle Counting" coherence/consistency check</li> <li>- Functional check for the "Cycle Counting" function of the Tachometer Unit.</li> </ul> <p>(2) Compliance with the requirements of paragraphs (1) of this AD can be demonstrated by:</p> <p>(2.1) Revising as follows the approved Aircraft Maintenance Programme (AMP) and standard practices on the basis of which the operator or the owner ensures the continuing airworthiness of each operated helicopter:</p> <p>Incorporate the updates described in paragraph (1) of this AD and defined in the chapter 05-10 of the applicable Arriel 1 Maintenance Manual or, alternatively, Maintenance Manual T/R and</p> <p>(2.2) Complying with the approved AMP described in paragraph (2.1) of this AD.</p> <p>(3) If the engine cycle counting aid system is installed on the engine but is not used, the requirements of paragraphs (1) and (2) of this AD are not applicable.</p>
Ref. Publications:	<p>Turboméca ARRIEL 1 Maintenance Manuals or Maintenance Manual T/R, as listed in Appendix 1 of this AD.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>

Remarks:	<ol style="list-style-type: none"><li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li><li>2. The original issue of this AD was posted on 20 August 2012 as PAD 12-110 for consultation until 17 September 2012. No comments were received during the consultation period.</li><li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li><li>4. For any question concerning the technical content of the requirements in this AD, please contact: Turboméca, S.A., ARRIEL 1 Customer Support, 40220 Tarnos, France, Fax: +33 5 59 74 45 15, or contact your usual or nearest Turboméca technical representative at <a href="http://www.turbomeca-support.com">www.turbomeca-support.com</a>.</li></ol>
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Appendix 1

Maintenance Manuals and Maintenance Manual T/Rs, according to Engine Variant, respectively, with initial issue/version and reference incorporating the additional requirement of this AD in the ALS:

Engine Variant	Maintenance Manual		Maintenance Manual Temporary Revision
	French Version	English Version	French and English Reference
ARRIEL 1A1	X 292 B3 452 1 Issue 14	X 292 B3 452 2 Issue 14	05-11
ARRIEL 1A2	X 292 A9 452 1 Issue 15	X 292 A9 452 2 Issue 15	05-06
ARRIEL 1B	X 292 65 452 1 Issue 14	X 292 65 452 2 Issue 14	05-11
ARRIEL 1C	X 292 B0 452 1 Issue 15	X 292 B0 452 2 Issue 15	05-11
ARRIEL 1C1	X 292 C3 452 1 Issue 15	X 292 C3 452 2 Issue 15	05-11
ARRIEL 1C2	X 292 G1 452 1 Issue 15	X 292 G1 452 2 Issue 15	05-11
ARRIEL 1D	X 292 E5 452 1 Issue 15	X 292 E5 452 2 Issue 15	05-11
ARRIEL 1D1	X 292 G2 452 1 Issue 15	X 292 G2 452 2 Issue 15	05-12
ARRIEL 1E2	X 292 M3 452 1 Issue 15	X 292 M3 452 2 Issue 15	05-13
ARRIEL 1K	X 292 D8 452 1 Issue 15	X 292 D8 452 2 Issue 15	05-05
ARRIEL 1K1	X 292 H3 452 1 Issue 15	X 292 H3 452 2 Issue 15	05-06
ARRIEL 1S	X 292 F9 452 1 Issue 15	X 292 F9 452 2 Issue 15	05-07
ARRIEL 1S1	X 292 H4 452 1 Issue 15	X 292 H4 452 2 Issue 15	05-11