

EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2013-0120 Date: 04 June 2013 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.
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].	
Design Approval Holder's Name:	Type/Model designation(s):
TURBOMECA	ARRIEL 1 engines
TCDS Number:	EASA.E.073
Foreign AD:	Not applicable
Supersedure:	None
ATA 72	Engine – Free Turbine Bearing Plug – Inspection / Rework
Manufacturer(s):	Turbomeca
Applicability:	ARRIEL 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K, 1K1, 1S, 1S1, all serial numbers. 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.
Reason:	A "chip light illumination" event in flight on an ARRIEL 1C2 engine was reported to Turbomeca. Following this event, which resulted from Free Turbine front bearing deterioration, the investigation revealed that the loss of the Free Turbine (FT) bearing plug has led to a major disruption in the lubrication of the FT module (M04) bearings. The root cause of this event has been attributed to incorrect bonding of the Free Turbine Bearing Plug, accomplished during the repair process in an identified Repair Center. Consequently, it was possible to identify a batch of Modules M04 which are potentially affected. This condition, if not detected and corrected, could lead to an uncommanded engine in-flight shut down, possibly leading to an emergency landing. To address this potential unsafe condition, Turbomeca issued Mandatory Service Bulletin (MSB) A292 72 0838, which provides inspection instructions to determine whether a potentially affected Module M04 is installed. For the reasons described above, this AD requires a one-time inspection to

	check for the presence, positioning and bonding of the FT Bearing Plug, and, depending on findings, accomplishment of applicable corrective action(s).						
Effective Date:	18 June 2013						
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) Within the compliance time specified in Table 1 of this AD, for engines equipped with a Module M04 identified by Part Number (P/N) and serial number (s/n) in Appendix 1 of this AD, as applicable, visually check for the presence of the FT Bearing plug, its positioning and bonding in accordance with the instructions of Turbomeca MSB A292 72 0838: Table 1 <table border="1"> <tr> <th>Engine Model</th><th>Compliance Time after the effective date of this AD</th></tr> <tr> <td>ARRIEL 1B, 1D and 1D1</td><td>Within 50 Engine Flight Hours (EFH)</td></tr> <tr> <td>ARRIEL 1A1, 1A2, 1C, 1C1, 1C2, 1E2, 1K, 1K1, 1S and 1S1</td><td>Within 300 EFH</td></tr> </table> (2) If, during the actions as required by paragraph (1) of this AD, any discrepancy is found, before next flight, accomplish the applicable corrective actions in accordance with the instructions of Turbomeca MSB A292 72 0838. (3) From the effective date of this AD, do not install an affected module M04 (identified by P/N and s/n in Appendix 1 of this AD) on an engine, or an engine on which an affected Module M04 is installed, on a helicopter, unless the affected Module has been inspected and, depending on findings, corrected as required by this AD.	Engine Model	Compliance Time after the effective date of this AD	ARRIEL 1B, 1D and 1D1	Within 50 Engine Flight Hours (EFH)	ARRIEL 1A1, 1A2, 1C, 1C1, 1C2, 1E2, 1K, 1K1, 1S and 1S1	Within 300 EFH
Engine Model	Compliance Time after the effective date of this AD						
ARRIEL 1B, 1D and 1D1	Within 50 Engine Flight Hours (EFH)						
ARRIEL 1A1, 1A2, 1C, 1C1, 1C2, 1E2, 1K, 1K1, 1S and 1S1	Within 300 EFH						
Ref. Publications:	Turbomeca MSB A292 72 0838 version A dated 24 May 2013. The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.						
Remarks:	- If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. - The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. - Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. - For any question concerning the technical content of the requirements in this AD, please contact: Turbomeca, ARRIEL 1 Customer Support, 40220 Tarnos, France, Fax: +33 5 59 74 45 15, or contact your usual or nearest Turbomeca technical representative at www.turbomeca-support.com.						

Appendix 1

List of potentially affected ARRIEL 1 Modules M04 - P/N and s/n

Module M04 P/N	Module M04 s/n	FT Bearing s/n
70BM041020	296	0735CC
70BM041030	1173	1911MF
	1943	2781MF
70BM041040	723	1283MF
70BM043110	14054	0125PC
	14055	0127PC
	14060	0152PC
	14063	0193PC
	14074	0324PC
	14075	0327PC
	14076	0276PC
	14078	0266PC
	14079	0262PC
	14083	0352PC
	14085	0381PC
	14086	0382PC
	14148	0788PC
	14156	0973PC
70BM045210	5038	0294CC
	5107	2480MF
70BM045400	9136	0642CC
	9153	0651CC
	9184	0748CC
	9185	1266MF
	9276	0894CC
	9293	1018CC
	9343	1154CC
	9344	1138CC
	9378	2746MF
	9381	2743MF
	9562	2972MF
	15131	0895CC
70BM045410	9638	0358CC
	9672	1370CC
	9775	3262MF
	9787	3143MF
	9888	0305PC
70BM047100	16032	1389CC
70BM047200	3036	2475MF
	3104	2640MF
	3105	0759CC

Note: FT Bearing s/n are provided for information