1. Approving Civil Aviation Authority/Country:	2	3. Form Tracking Number:
FAA/United States	**AUTHORIZED RELEASE CERTIFICATE** FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG	**2022 / 12 / 0041 - LRUS**

4. Organization Name and Address:	5. Work Order/Contract/Invoice Number:
Safran Helicopter Engines USA, Inc, 2709 North Forum Drive, Grand Prairie, TX 75052 (WC1R579K)	**21988211**

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
1	**Pump and Metering Valve Assembly, Adjusted**	**0292862600**	**1**	**1038B**	**Overhauled**

12. Remarks:

Overhauled, tested and calendar reset I.A.W. Arriel 2C C.M.M. X-73-23-04-2 Rev. 32 dated June 15, 2022.

* TSN: 4646.4 TSO: 0

* Refer to Pump and Metering Valve Log Cards for ADs, SBs, and TUs applied.

Certifies that the work specified in block 11/12 was carried out in accordance with EASA Part-145 and in respect to that work the component is considered ready for release to service under EASA Part-145 Approval Number: EASA.145.4961.

13a. Certifies the items identified above were manufactured in conformity to:	14a. ☒ 14 CFR 43.9 Return to Service ☒ Other regulation specified in Block 12
☐ Approved design data and are in a condition for safe operation. ☐ Non-approved design data specified in Block 12.	Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations; part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature:	13c. Approval/Authorization No.:	14b. Authorized Signature:	14c. Approval/Certificate No.:
			FAA Cert No WC1R579K
13d. Name (Typed or Printed):	13e. Date (dd/mmm/yyyy):	14d. Name (Typed or Printed):	14e. Date (dd/mmm/yyyy):
		Tuan Quoc Bui	**14-Dec-2022**

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

Log card n° / *Fiche N°*	4

LOG CARD / *FICHE MATRICULE*

MATERIAL IDENTIFICATION / *IDENTIFICATION DU MATERIEL*

DESIGNATION	**POMPE HP BP DOSEUR REGLE** *PUMP AND METERING VALVE ASSY, ADJUSTED*	**P/N** **P/N OTAN**	**0292862600** **2915145825073**	**MANUFACTURER /** *FABRICANT*	**SAFRAN HELICOPTER ENGINES**
FAMILY TYPE / *FAMILLE TYPE*	**ARRIEL 2**	**S/N**	**1038B**	**MANUF. CODE /** *CODE FABRICANT*	**F0228**

WORKS CARRIED OUT / *TRAVAUX EFFECTUES*	**REMARKS / *RENSEIGNEMENTS PARTICULIERS***
Overhaul / Révisé Calendar limit reset / Restitution de la limite calendaire Under W.O. 21988211	SB 292 73 2869 Rev. B, s/n 5790 is concerned.

According Maintenance manual / *Suivant manuel de maintenance* :	X-292-M1-450-2 Rev. 52	Service Letter / *Lettre Service* :	/

FATHER ITEM / *ITEM PÈRE*	TBO / *Potentiel HEURES*	HOURS since new / *HEURES depuis neuf*	HOURS since overhaul / *HEURES depuis révision*	Remaining HOURS / *Dispo. HEURES*	Remaining CYCLES / *Dispo. CYCLES*			Remaining creep damage (Point or %) / *Disponibilité Endofluage (Point ou%)*
	3000	4646.4	0	3000		HP / *HP*	/	/
						PT / *TL*	/	
						MGB / *BTP*	/	

USE OR LIFE LIMITED PARTS OR SUB-COMPONENTS / *PIECES A VIE-LIMITE OU A LIMITE D'UTILISATION OU SOUS-COMPOSANTS*

DESIGNATION	P/N	S/N	Total run HOURS / *HEURES de fct. Total*	Remaining HOURS / *Dispo. HEURES*	Total CYCLES carried out / *CYCLES eff. Total*	Remaining CYCLES / *Dispo. CYCLES*	Total creep damage / *Endofluage total*
/ /	/	/	/	/	/	/	/
/ /	/	/	/	/	/	/	/
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*Refer to Guide 008175 (U015) / *Voir Guide 008175 (U015)

LOG CARD / *FICHE MATRICULE*

MODIFICATIONS AND SERVICE BULLETIN APPLIED AT TIME OF DELIVERY / *ETAT DES MODIFICATIONS ET SERVICE BULLETINS APPLIQUES A LA LIVRAISON*

MODIF	Service Bulletin	Modif	Service Bulletin	Modif	Service Bulletin	Modif	Service Bulletin	Modif	Service Bulletin	Modif	Service Bulletin	Modif	Service Bulletin	Modif	Service Bulletin
TU25	292 73 2025	TU105	292 73 2105	/	292 73 2869 B	/	/	/	/	/	/	/	/	/	/
TU31	292 73 2031	TU133	292 73 2133	/	292 71 2853	/	/	/	/	/	/	/	/	/	/
TU32	292 73 2032	TU148	292 73 2148	/	292 73 2831	/	/	/	/	/	/	/	/	/	/
TU39	292 73 2011	TU149	292 73 2149	/	/	/	/	/	/	/	/	/	/	/	/
TU40	292 73 2040	TU158	292 73 2158	/	/	/	/	/	/	/	/	/	/	/	/
TU42	292 73 2042	TU160	292 73 2160	/	/	/	/	/	/	/	/	/	/	/	/
TU43	292 73 2043	TU172	292 73 2172	/	/	/	/	/	/	/	/	/	/	/	/
TU45	292 73 2045	TU178	292 73 3178	/	/	/	/	/	/	/	/	/	/	/	/
TU56	292 73 2056	TU184	292 73 3184	/	/	/	/	/	/	/	/	/	/	/	/
TU62	292 73 2062	/	/	/	/	/	/	/	/	/	/	/	/	/	/
TU64	292 73 2064	/	/	/	/	/	/	/	/	/	/	/	/	/	/
TU76	292 73 2076	/	/	/	/	/	/	/	/	/	/	/	/	/	/
TU82	292 73 2082	/	/	/	/	/	/	/	/	/	/	/	/	/	/
TU83	292 73 2083	/	/	/	/	/	/	/	/	/	/	/	/	/	/
TU92	292 73 2092	/	/	/	/	/	/	/	/	/	/	/	/	/	/

AIRWORTHINESS DIRECTIVES APPLIED AT TIME OF DELIVERY / *ETAT DES CONSIGNES DE NAVIGABILITE APPLIQUEES A LA LIVRAISON*

A.D. / *N° C.N.* EASA	A.D. / *N° C.N.* FAA	A.D. / *N° C.N.* Local	A.D. / *N° C.N.* EASA	A.D. / *N° C.N.* FAA	A.D. / *N° C.N.* Local	A.D. / *N° C.N.* EASA	A.D. / *N° C.N.* FAA	A.D. / *N° C.N.* Local
2019-0180	2021-13-03 AMOC	/	/	/	/	/	/	/
2013-0170R1	2014-12-05 AMOC	/	/	/	/	/	/	/
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Hours and cycles realised at test bench but not count up into availability status, in accordance with cct 6100 or RTC. /
Heures et cycles realises au banc d'essai mais non pris en compte dans l'etat de disponibilite en accord avec le cct 6100 ou RTC.

HOURS *HEURES*	/				HOURS *HEURES*	/				HOURS *HEURES*	/			
CYCLES	HP / *HP*	/	PT / *TL*	/	CYCLES	HP / *HP*	/	PT / *TL*	/	CYCLES	HP / *HP*	/	PT / *TL*	/

Authorized Approval / *Contrôle Habilité*		
Date	Signature	Stamp / *Tampon*
14 Dec 2022		

*Refer to Guide 008175 (U015) / *Voir Guide 008175 (U015)

Log card n° / *Fiche N°*	4

LOG CARD / *FICHE MATRICULE*

MATERIAL IDENTIFICATION / *IDENTIFICATION DU MATERIEL*

DESIGNATION	**POMPE HP BP DOSEUR REGLE** *PUMP AND METERING VALVE ASSY, ADJUSTED*	**P/N** **P/N OTAN**	**0292862600** **2915145825073**	**MANUFACTURER /** *FABRICANT*	**SAFRAN HELICOPTER ENGINES**
FAMILY TYPE / *FAMILLE TYPE*	**ARRIEL 2**	**S/N**	**1038B**	**MANUF. CODE /** *CODE FABRICANT*	**F0228**

Calendar Limit or Visit Value / *Valeur de la limite ou Visite Calendaire*	**Date for first entry into service /** *Date 1ère mise en service*	**Operation limit date /** *Date limite d'utilisation*
10 YEARS		

MODIFICATIONS, SERVICE BULLETINS & AIRWORTHINESS DIRECTIVES APPLIED OR REMOVED BY OPERATOR /
MODIFICATIONS, SERVICE BULLETINS ET CONSIGNE DE NAVIGABILITE APPLIQUES OU SUPPRIMES PAR L'UTILISATEUR

DATE	Applied / Removal	**A.D. / *N° C.N.***			**Service Bulletin**	**Modification**	**DESCRIPTION - COMMENTS /** *DESCRIPTION - COMMENTAIRES*	**Signature - Stamp /** *Signature - Tampon*
		EASA	**FAA**	**Local**				

LIFE LIMITED OR USE LIMITED PARTS REPLACED BY OPERATOR OR LIFE LIMIT EVOLUTION /
PIECES A VIE LIMITE OU A LIMITE D'UTILISATION REMPLACEES PAR L'UTILISATEUR OU EVOLUTION DE VIE LIMITE

DATE	Installation	Removal	**DESIGNATION**	**P/N**	**S/N**	**HOURS /** *Total HEURES*	**Total CYCLES**	**Remaining HOURS /** *Dispo. HEURES*	**Remaining CYCLES /** *Dispo. CYCLES*	**Creep damage /** *Endofluage*	**Signature - Stamp /** *Signature Tampon*

LOG CARD / *FICHE MATRICULE*

MAINTENANCES - WORKS CARRIED OUT - TRANSFERS / *MAINTENANCES - TRAVAUX EFFECTUES - MOUVEMENTS*

DATE	Installation	Removal / *Dépose*	Engine Counter Since New or Overhaul / *Moteur compteur depuis neuf ou révision*					Equipment Counter Since Overhaul / *Equipement compteur depuis révision*						Observations - Works carried out *Observations - Travaux effectués* & Signature - Stamp *Signature - Tampon*
			Variant-Version / *Variant-version*	S/N	HOURS *HEURES*	CYCLES HP *HP*	CYCLES PT *TL*	HOURS / *HEURES*	CYCLES HP *HP*	CYCLES PT *TL*	CYCLES MGB *BTP*	Creep damage / *Endofluage*	O.E.I OEI 1	O.E.I OEI 2	
14 Dec 2022			/	/	/	/	/	0	/	/	/	/	/	/	SAFRAN HE Delivered

REMARKS / *RENSEIGNEMENTS PARTICULIERS*

New statut of availabilities following replacement of usage limited parts and life limited parts: *Nouvelle disponibilité suite à remplacement de pièces à limite d'utilisation ou de pièces à vie-limite :* - HOURS / *HEURES* : - CYCLES : - Creep damage / *Endofluage* :		Oil Type / *Type d'huile*

U.S. Department
of Transportation
**Federal Aviation
Administration**

Compliance and Airworthiness Division

ECO Branch
1200 District Avenue
Burlington, MA 01803
(781) 238-7140, Fax: (781) 238-7199

August 12, 2021

Mr. Darwin Binek
Quality Assurance Manager
Safran Helicopter Engines USA
2709 North Forum Drive
Grand Prairie, TX 75052

Subject: Global Alternative Method of Compliance to Airworthiness Directive (AD) 2021-13-03

Dear Mr. Binek:

The Federal Aviation Administration (FAA) received your letter dated July 28, 2021, proposing a global alternative method of compliance (AMOC) to paragraph (g)(2) of Airworthiness Directive (AD) 2021-13-03.

Airworthiness Directive (AD) paragraph (g)(2) requires an operational test of the fuel filter pre-blockage pressure switch in accordance with Task 73-23-01-750-801-A01– Pre-Blockage.

Your proposal would allow the testing be performed in accordance with Safran Helicopter Engines Mandatory Service Bulletin 292 73 2869, Revision B dated July 5th, 2019 or in accordance with the task for testing the pre-blockage pressure switch from the Maintenance Manual (MM) applicable to the variant they operate. Your AMOC would apply to Safran Helicopter Engines Arriel 2B, 2B1, 2C, 2C1, 2C2, 2S1 and 2S2 model turboshaft engines.

The ECO Branch has reviewed Safran Helicopter Engines Mandatory Service Bulletin 292 73 2869, Revision B dated July 5th, 2019 and the referenced Maintenance Manual (MM), and we approve your AMOC to paragraph (g)(2) of FAA AD 2021-13-03.

This FAA AMOC is transferable with the engine(s) to another owner or operator who operates the aircraft under U.S. registry.

Before using this AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local Flight Standards District Office/Certificate Holding District Office.

The preceding paragraph also applies to any applicable foreign-registered aircraft upon transfer of the aircraft to the U.S. registry if compliance with the AMOC has not been accomplished.

All provisions of FAA AD 2021-13-03 that are not specifically referenced above remain fully applicable and must be complied with accordingly.

This AMOC only applies to the FAA AD listed above. The FAA does not have the authority to approve this as an AMOC to any AD issued by another civil aviation authority (CAA). Approval of an AMOC to another CAA's AD must come from that CAA. A copy of this response will be forwarded to the CAA where this (these) aircraft is (are) registered for their consideration.

If you have any questions or need additional information, please contact Mr. Wego Wang at 781-238-7134, fax 781-238-7199. or via electronic mail at wego.wang@faa.gov.

Sincerely,

MARTIN B ADLER

Digitally signed by MARTIN B ADLER
Date: 2021.08.12 16:04:09 -04'00'

(for) Tomek Rakowski
Manager, ECO Branch

cc: Propulsion and APU AEG

U.S. Department
of Transportation
**Federal Aviation
Administration**

Engine and Propeller Directorate

Engine Certification Office
1200 District Avenue
Burlington, MA 01803
(781) 238-7140, Fax: (781) 238-7199

APR 04 2017

Mr. Darwin Binek
Quality Assurance Manager
Turbomeca USA
2709 North Forum Drive
Grand Prairie, TX 75052

Dear Mr. Binek:

Subject: Safran Helicopter Engines Global Alternative Method of Compliance (AMOC) to Airworthiness Directive (AD) 2014-12-05

The Federal Aviation Administration (FAA) Engine Certification Office (ECO) received your letter dated March 29, 2017, requesting a global AMOC to AD 2014-12-05, paragraph (e), for the Safran Helicopter Engines (SHE) Arriel 2B, 2B1, 2C, 2C1, 2C2, 2S1, and 2S2 engines. Paragraph (e) of AD 2014-12-05 requires inspection of the hydromechanical metering unit (HMU) drive gear shaft splines at specific times.

The Turbomeca USA global AMOC proposal would permit operators to comply with paragraph (e) of AD 2014-12-05 by upgrading an affected HMU to the TU184 configuration. The TU184 configuration introduces a new drive link design that permanently removes the unsafe condition that is addressed by AD 2014-12-05.

The ECO reviewed Turbomeca SB 292 73 2184, Version A, dated April 1, 2015, and Turbomeca SB 292 73 3184, Version A, dated March 23, 2016, and determined that the new drive link design described in these service bulletins provides an acceptable level of safety. Therefore, the FAA approves your global AMOC to paragraph (e) of AD 2014-12-05 to allow modification of an affected HMU to the TU184 configuration to be an optional terminating action for AD 2014-12-05, provided that the modification to the TU184 configuration is performed in accordance with the instructions contained in the two aforementioned service bulletins at the beginning of this paragraph.

We have determined that this AMOC is of general applicability to the Arriel 2B, 2B1, 2C, 2C1, 2C2, 2S1, and 2S2 engine type designs, and therefore this letter is issued to Turbomeca USA with the understanding that it may subsequently be distributed to operators. Operators may then use this letter, along with evidence of compliance with the terms of this letter, to document compliance to AD 2014-12-05.

This FAA AMOC is transferable with the engine(s) to another owner or operator.

Before using this AMOC, operators must notify their appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

All provisions of AD 2014-12-05 that are not specifically referenced above remain fully applicable and must be complied with accordingly.

If you have any questions or need additional information, please contact Mr. Philip Haberlen at 781-238-7770, fax 781-238-7199, or via electronic mail at philip.haberlen@faa.gov.

Sincerely,

Thomas Boudreau
Manager, Engine Certification Office

cc: Mr. Omiros Kastanis, EASA PCM
Mr. William Fullam, Boston AEG