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## SERVICE BULLETIN

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**Modification**



**Recurring action**



**One-off action**



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**No.**

**292 72 2023**

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**ARRIEL 2 B - B1 - C - C-PM - C1 - C2 - C2-CG - S1**

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**Subject: Module M04 (power turbine). Solid power turbine disk shaft.  
Application of modification TU 23.**

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Date on which this SB becomes effective and must systematically be complied with, according to the conditions of application.

This is the date all resources (parts, tools, documentation, etc.) required for this procedure are available.

**Applicable from JANUARY 2003**

If resources (parts, tools, documentation, etc.) are available any earlier, the SB may be applied prior to the effectivity date.

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**Version: C**

**Reason for update:**

**Merger of SB No. 292 72 2023 and SB No. 292 72 2023M.**

# SERVICE BULLETIN

## 1. Planning information

### A. Application

The manufacturer recommends this modification be incorporated as defined in this Service Bulletin.

Validity	Code
ARRIEL 2 B - B1 ARRIEL 2 C - C-PM - C1 - C2 - C2-CG ARRIEL 2 S1	3

### Conditions of application for engines in service

#### (1) Application at the operator's site or at a Safran Helicopter Engines-approved Service Station

Upon customer request or following depletion of the existing stock.

#### (2) Application at a Safran Helicopter Engines-approved Repair Center

Following depletion of the existing stock.

### B. Purpose

To simplify the manufacturing process.

### C. Description (see Appendix 1)

This modification consists of eliminating the 20 mm diameter x 138 mm length hole drilled into the shaft of the power turbine disk.

### D. Approval

- ARRIEL 2 B - B1 - C - C1 - C2 - S1 variants:  
The technical content of this document is approved under the authority of the DOA (Design Organisation Approval) ref. EASA.21J.070.
- ARRIEL 2 C-PM - C2-CG variants:  
The technical information given in this document is approved by Safran Helicopter Engines.

### E. Manpower

#### (1) At the operator's site or at a Safran Helicopter Engines-approved Service Station

##### (a) By the operator

**1 Personnel:** 1 mechanic.

**2 Time required:** 4 man-hours (removal and installation of module M04).

##### (b) By a Safran Helicopter Engines-approved technician

**1 Personnel:** 1 technician approved by Safran Helicopter Engines to perform this intervention.

**2 Time required:** 8 man-hours (incorporation of Maintenance Technical Instruction (MTI) Ref. X 292 M5 333 2).

#### (2) At a Safran Helicopter Engines-approved Repair Center

(a) **Personnel** of approved Repair Center.

(b) **Time** determined by the Repair Center as being appropriate for this level of intervention.

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### F. Material

Refer to paragraph 3.

### G. Tooling

#### (1) At the operator's site or at a Safran Helicopter Engines-approved Service Station

##### (a) By the operator

- Mechanic's standard tooling.
- Tooling for module M04 removal/installation.

##### (b) By a Safran Helicopter Engines-approved technician

Refer to MTI Ref. X 292 M5 333 2.

#### (2) At a Safran Helicopter Engines-approved Repair Center

Refer to the ARRIEL 2 Overhaul Manual.

### H. Weight and balance

Increase in weight of 355 g.

### I. References

- |   |                      |
|---|----------------------|
| (1) ARRIEL 2 B Maintenance Manual.....            | Ref. X 292 M5 450 2. |
| (2) ARRIEL 2 B1 Maintenance Manual.....           | Ref. X 292 N5 450 2. |
| (3) ARRIEL 2 C Maintenance Manual.....            | Ref. X 292 M1 450 2. |
| (4) ARRIEL 2 C-PM Maintenance Manual.....         | Ref. X 292 P1 450 2. |
| (5) ARRIEL 2 C1 Maintenance Manual.....           | Ref. X 292 N4 450 2. |
| (6) ARRIEL 2 C2 Maintenance Manual.....           | Ref. X 292 N6 450 2. |
| (7) ARRIEL 2 C2-CG Maintenance Manual.....        | Ref. X 292 P8 450 2. |
| (8) ARRIEL 2 S1 Maintenance Manual.....           | Ref. X 292 L0 301 2. |
| (9) ARRIEL 2 Overhaul Manual.....                 | Ref. X 292 R1 500 2. |
| (10) Maintenance Technical Instruction (MTI)..... | Ref. X 292 M5 333 2. |
| (11) Applicable Helicopter Maintenance Manual.    |                      |

### J. Other publications concerned

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|--|----------------------|
| (1) ARRIEL 2 B Spare Parts Catalogue.....            | Ref. X 292 M5 700 2. |
| (2) ARRIEL 2 B1 Spare Parts Catalogue.....           | Ref. X 292 N5 700 2. |
| (3) ARRIEL 2 C Spare Parts Catalogue.....            | Ref. X 292 M1 700 2. |
| (4) ARRIEL 2 C-PM Spare Parts Catalogue.....         | Ref. X 292 P1 700 2. |
| (5) ARRIEL 2 C1 Spare Parts Catalogue.....           | Ref. X 292 N4 700 2. |
| (6) ARRIEL 2 C2 Spare Parts Catalogue.....           | Ref. X 292 N6 700 2. |
| (7) ARRIEL 2 C2-CG Spare Parts Catalogue.....        | Ref. X 292 P8 700 2. |
| (8) ARRIEL 2 S1 Spare Parts Catalogue.....           | Ref. X 292 L0 700 2. |
| (9) ARRIEL 2 B Illustrated Parts Catalogue.....      | Ref. X 292 M5 600 2. |
| (10) ARRIEL 2 B1 Illustrated Parts Catalogue.....    | Ref. X 292 N5 600 2. |
| (11) ARRIEL 2 C Illustrated Parts Catalogue.....     | Ref. X 292 M1 600 2. |
| (12) ARRIEL 2 C-PM Illustrated Parts Catalogue.....  | Ref. X 292 P1 600 2. |
| (13) ARRIEL 2 C1 Illustrated Parts Catalogue.....    | Ref. X 292 N4 600 2. |
| (14) ARRIEL 2 C2 Illustrated Parts Catalogue.....    | Ref. X 292 N6 600 2. |
| (15) ARRIEL 2 C2-CG Illustrated Parts Catalogue..... | Ref. X 292 P8 600 2. |
| (16) ARRIEL 2 S1 Illustrated Parts Catalogue.....    | Ref. X 292 L0 600 2. |

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### 2. Instructions to be incorporated

#### A. Implementation

Incorporation of this modification necessitates removing the engine from the helicopter.

**(1) At the operator's site or at a Safran Helicopter Engines-approved Service Station**

**(a) By the operator**

Replace module M04.

**(b) By a Safran Helicopter Engines-approved technician**

Replace power turbine assembly: refer to MTI Ref. X 292 M5 333 2.

**(2) At a Safran Helicopter Engines-approved Repair Center**

Replace power turbine disk: refer to the ARRIEL 2 Overhaul Manual.

#### B. Operating instructions

**(1) At the operator's site or at a Safran Helicopter Engines-approved Service Station**

**(a) By the operator**

Remove and install module M04: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-00-54-900-801.

**(b) By a Safran Helicopter Engines-approved technician**

Replace power turbine assembly: refer to MTI Ref. X 292 M5 333 2.

**(2) At a Safran Helicopter Engines-approved Repair Center**

Refer to the ARRIEL 2 Overhaul Manual.

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### C. Reconditioning and checks

#### (1) At the operator's site or at a Safran Helicopter Engines-approved Service Station

- (a) Do a ground run check: refer to the applicable ARRIEL 2 Maintenance Manual, task 71-02-13-280-801.
- (b) Do an oil pressure check: refer to the applicable ARRIEL 2 Maintenance Manual, task 79-00-00-200-801.
- (c) Do a vibration check: refer to the applicable ARRIEL 2 Maintenance Manual, task 71-02-10-760-801.

#### (2) At a Safran Helicopter Engines-approved Repair Center

Refer to the ARRIEL 2 Overhaul Manual.

### D. Identification

#### (1) At the operator's site or at a Safran Helicopter Engines-approved Service Station

##### (a) By the operator

- 1** Update the log card of the removed module M04 and the log card of the installed module M04.
- 2** Record the module M04 replacement in section "B" of the engine log book and integrate the log card of the installed module M04.
- 3** Record the application of this SB in section "D" of the "current" engine log book or in section "E" of the "unique" engine log book.  
**Note:** Update the availability status, if necessary.
- 4** Send back the removed module M04, along with its log card, to a Safran Helicopter Engines-approved Repair Center.
- 5** Tell Safran Helicopter Engines that module M04 has been replaced by sending back the fully-completed compliance certificate (Appendix 2 of this SB).

##### (b) By a Safran Helicopter Engines-approved technician

Refer to MTI Ref. X 292 M5 333 2.

#### (2) At a Safran Helicopter Engines-approved Repair Center

##### (a) Record the application of this SB in the module M04 log card.

**Note:** Update the availability status, if necessary.

##### (b) Tell Safran Helicopter Engines that this SB has been applied by sending back the fully-completed compliance certificate (Appendix 3).

### E. Routine maintenance

Not applicable.

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### 3. Material information

#### A. Basic information

The parts list required for the incorporation of this Service Bulletin is for one engine.

#### B. List of parts

(1) At the operator's site or at a Safran Helicopter Engines-approved Service Station

(a) For the operator

POST TU 23 module M04.

(b) For a Safran Helicopter Engines-approved technician

New Part Number	Key	Qty	Description	Price	Old Part Number	Key	Qty
0 292 81 738 0	A	1	Power turbine assembly	*	0 292 81 732 0	C	1

\* Prices are available upon request.

(2) At a Safran Helicopter Engines-approved Repair Center

New Part Number	Key	Qty	Description	Old Part Number	Key	Qty
2 292 81 061 0	A	1	Power turbine disk	2 292 81 031 0	C	1

#### Key

A - Part incorporated by this modification.

C - Part eliminated by this modification.

#### C. Supply conditions

Order supplies as needed from:

Your local Safran Helicopter Engines Support Center

or

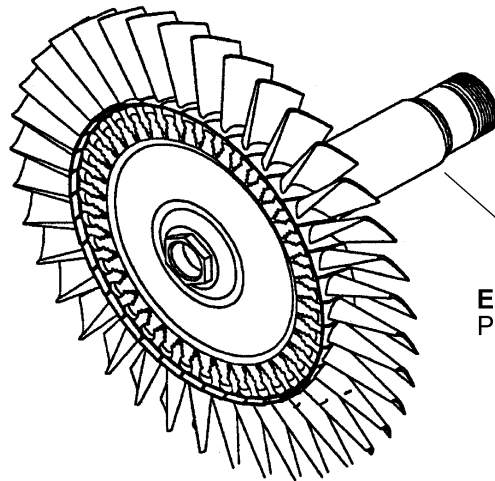
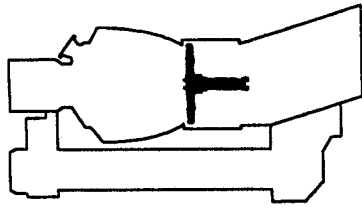
SAFRAN HELICOPTER ENGINES

Direction Support et Service

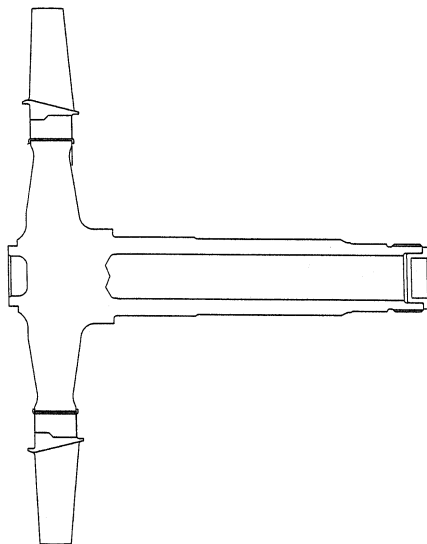
Département Commercial

40220 TARNOS - France

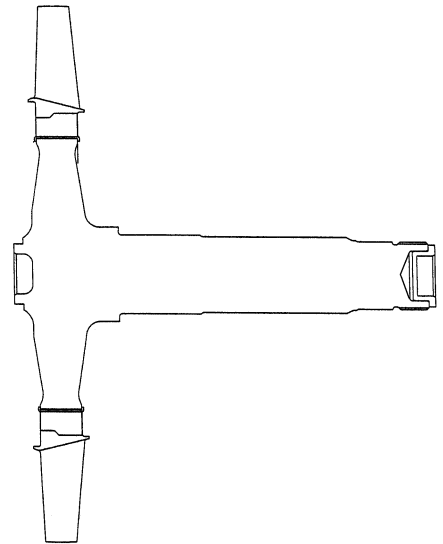
# SERVICE BULLETIN



**Ensemble turbine libre**  
Power turbine assembly



**AVANT / PRE TU 23**



**APRES / POST TU 23**

## ANNEXE 1 / APPENDIX 1

## SERVICE BULLETIN

**Objet : Attestation de remplacement du module M04 par application du SB n° 292 72 2023 (TU 23).**

**Subject: Compliance certificate for replacement of module M04 through application of the SB No. 292 72 2023 (TU 23).**

**Important / Important notice:**

**Après application des instructions spécifiées dans ce SB, veuillez compléter la présente attestation et la retourner par courrier ou courriel à :**

After application of the instructions specified in this SB, please mail or email the fully-completed compliance certificate to:

**SAFRAN HELICOPTER ENGINES**  
**Equipe Administration Base installée / Fleet Data Administrator Team, BP 25**  
**40220 TARNOS - France**

Email: [data-fleet.fr.she@safrangroup.com](mailto:data-fleet.fr.she@safrangroup.com)

Information concernant le matériel / Equipment information						
Utilisateur Customer				N° Appareil Aircraft S/N		
	N/S - S/N	Réf. - P/N	TSN*	TSO*	CSN*	CSO*
Moteur Engine						
Module M04 déposé Removed module M04						
Module M04 posé Installed module M04						

\* **TSN = Time Since New** (Heures depuis neuf)  
**CSN = Cycles Since New** (Cycles depuis neuf)

**TSO = Time Since Overhaul** (Heures depuis RG)  
**CSO = Cycles Since Overhaul** (Cycles depuis RG)

**Opération faite par / Work done by:**

**Je certifie que le module M04 identifié ci-dessus a été installé selon les directives de ce SB.**

I certify that the above-mentioned module M04 has been installed according to the directives given in this SB.

Date [JJ/MMMM (en lettre)/AAAA ou/or DD/MMMM (letter)/YYYY]	Nom / Name	Fonction / Job title

**Signature :**

**ANNEXE 2 / APPENDIX 2**



## SERVICE BULLETIN

**Objet : Attestation d'application du SB n° 292 72 2023 (TU 23).**

**Subject: SB No. 292 72 2023 compliance certificate (TU 23).**

**Important / Important notice:**

**Après application des instructions spécifiées dans ce SB, veuillez compléter la présente attestation et la retourner par courrier ou courriel à :**

After application of the instructions specified in this SB please mail or email the fully-completed certificate to:

**SAFRAN HELICOPTER ENGINES,  
Equipe Administration Base installée / Fleet Data Administrator Team, BP 25**

**40220 TARNOS - France**

Email : [data-fleet.fr.she@safrangroup.com](mailto:data-fleet.fr.she@safrangroup.com)

Information concernant le matériel / Equipment information						
Utilisateur Customer				N° Appareil Aircraft S/N		
	N/S - S/N	Réf. - P/N	TSN*	TSO*	CSN*	CSO*
Moteur Engine						
Module M04						
Disque turbine libre déposé Removed power turbine disk						
Disque turbine libre posé Installed power turbine disk						

\* TSN = Time Since New (Heures depuis neuf)  
CSN = Cycles Since New (Cycles depuis neuf)

TSO = Time Since Overhaul (Heures depuis RG)  
CSO = Cycles Since Overhaul (Cycles depuis RG)

Opération faite par / Work done by:

**Je certifie que le module identifié ci-dessus a été modifié selon les directives de ce SB.**

I certify that the above-mentioned module has been modified according to the directives given in this SB.

Date [JJ/MMMM (en lettre)/AAAA ou/or DD/MMMM (letter)/YYYY]	Nom / Name	Fonction / Job title

Signature :

**ANNEXE 3 / APPENDIX 3**