

---

## SERVICE BULLETIN

---

**Modification****Recurring action****One-off action**

---

**No.****292 72 2057**

---

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

---

**Subject: Module M05 (reduction gearbox). Improved lubrication of the power turbine/reduction gearbox coupling sleeve.****Application of modification TU 57.**

---

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 OCTOBER 2000**

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

---

**Version: C****Reason for update:****Merger of SB No. 292 72 2057 and SB No. 292 72 2057M.**

# SERVICE BULLETIN

## 1. Planning information

### A. Applicability

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 ARRIEL 2 S1	2-B

**Note:** Incorporation of this modification is required for 2 B to 2 B1 conversions.

#### Conditions of application for engines in service

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

Application upon customer request, with replacement of module M05.

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

Application during overhaul.

### B. Purpose

To better lubricate the splines of the power turbine/reduction gearbox coupling sleeve. This will reduce premature wear on the sleeve splines caused by insufficient lubrication which may result in the "chip" light illuminating.

### C. Description (Appendix 1)

This modification consists of:

- ensuring additional lubrication in the front cavity of drive pinion with:
  - the addition of jets and a shoulder to separate the flow to the drive pinion,
  - the extension of the jet body to position the extremity facing the sleeve.
- improving distribution of the oil flow to the splines and reducing the rotating mass of the sleeve by:
  - reducing the sleeve diameter,
  - adding a shoulder to separate the flow.

### D. Approval

- ARRIEL 2 B - B1 - C - C1 - 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 variant:  
The technical information given in this document is approved by Safran Helicopter Engines.

## SERVICE BULLETIN

### E. Manpower

- (1) **At the operator's site or at a Safran Helicopter Engines-approved Maintenance Center**
  - (a) **Personnel:** 1 mechanic.
  - (b) **Time required:** 2 man-hours (removal and installation of module M05).
- (2) **At a Safran Helicopter Engines-approved Repair Center**
  - (a) **Personnel** of approved Repair Center.
  - (b) **Time** determined by Repair Center that is appropriate for this level of intervention.

### F. Material

Refer to paragraph 3.

### G. Tooling

- (1) **At the operator's site or at a Safran Helicopter Engines-approved Maintenance Center**
  - (a) Mechanic's standard tooling.
  - (b) Tooling required to remove/install module M05.
- (2) **At a Safran Helicopter Engines-approved Repair Center**  
Refer to the ARRIEL 2 Overhaul Manual.

### H. Weight and balance

Not applicable.

### 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 S1 Maintenance Manual .....   | Ref. X 292 L0 301 2. |
| (7) ARRIEL 2 Overhaul Manual .....         | Ref. X 292 R1 500 2. |
| (8) Flight Manual of concerned Helicopter. |                      |

### J. Other publications affected

- |  |                      |
|--|----------------------|
| (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 S1 Spare Parts Catalogue .....          | Ref. X 292 L0 700 2. |
| (7) ARRIEL 2 B Illustrated Parts Catalogue .....     | Ref. X 292 M5 600 2. |
| (8) ARRIEL 2 B1 Illustrated Parts Catalogue .....    | Ref. X 292 N5 600 2. |
| (9) ARRIEL 2 C Illustrated Parts Catalogue .....     | Ref. X 292 M1 600 2. |
| (10) ARRIEL 2 C-PM Illustrated Parts Catalogue ..... | Ref. X 292 P1 600 2. |
| (11) ARRIEL 2 C1 Illustrated Parts Catalogue .....   | Ref. X 292 N4 600 2. |
| (12) ARRIEL 2 S1 Illustrated Parts Catalogue .....   | Ref. X 292 L0 600 2. |

## SERVICE BULLETIN

### 2. Instructions to be incorporated

#### A. Implementation

To incorporate this modification, the engine must be removed from the helicopter.

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

Replace module M05.

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

Replace jet, modify drive pinion and sleeve: refer to the ARRIEL 2 Overhaul Manual.

#### B. Operating instructions

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

**(a)** Remove PRE TU 57 module M05: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-00-15-900-801.

**(b)** Install POST TU 57 module M05: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-00-15-900-801.

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

Refer to the ARRIEL 2 Overhaul Manual.

#### C. Reconditioning and checks

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

**(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.

## SERVICE BULLETIN

### D. Identification

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

- (a) Update the log card of the removed module M05 and the log card of the installed module M05.
- (b) Record the module M05 replacement in section "B" of the engine log book and integrate the log card of the installed module M05.
- (c) 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.
- (d) Send back the removed module M05, along with its log card, to a Safran Helicopter Engines-approved Repair Center.
- (e) Tell Safran Helicopter Engines that module M05 has been replaced by sending back the fully-completed compliance certificate (Appendix 2 of this SB).

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

- (a) Record the application of this SB in the module M05 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. Periodic maintenance

Not applicable.

## SERVICE BULLETIN

### 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 Maintenance Center**

POST TU 57 module M05.

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

New Part Number	Key	Qty	Description	Old Part Number	Key	Qty
<b>ARRIEL 2 B - B1 - C - C-PM - C1</b>						
0 292 71 742 0	A	1	Reduction gearbox rear casing	0 292 71 735 0	F	1
7 292 71 702 A	A	1	Reduction gearbox rear casing	0 292 71 702 0	F	1
<b>ARRIEL 2 S1</b>						
0 292 71 741 0	A	1	Reduction gearbox rear casing	0 292 71 734 0	F	1
7 292 71 720 A	A	1	Reduction gearbox rear casing	0 292 71 720 0	F	1
<b>Common supplies</b>						
0 292 71 073 0	A	1	Jet	0 292 71 055 0	C	1
0 292 71 075 0*	A	1	Drive pinion or			
0 292 71 740 0**	A	1	Drive pinion assembly	0 292 71 057 0	F	1
2 292 71 076 0	A	1	• Drive pinion			
2 292 71 077 0	A	1	• Ring			
0 292 71 739 0	A	1	Sleeve assembly	0 292 71 721 0	F	1

\* As new.

\*\* After rework of pinion P/N 0 292 71 057 0 into P/N 2 292 71 076 0 and addition of ring P/N 2 292 71 077 0 to obtain the drive pinion assembly P/N 0 292 71 740 0.

#### Key

A - Part incorporated by the modification.

C - Part deleted by the modification.

F - Part to be modified by this manufacturer or at a Safran Helicopter Engines-approved Repair Center.

#### C. Supply conditions

Order supplies as needed from:

Your local Safran Helicopter Engines Support Center

or

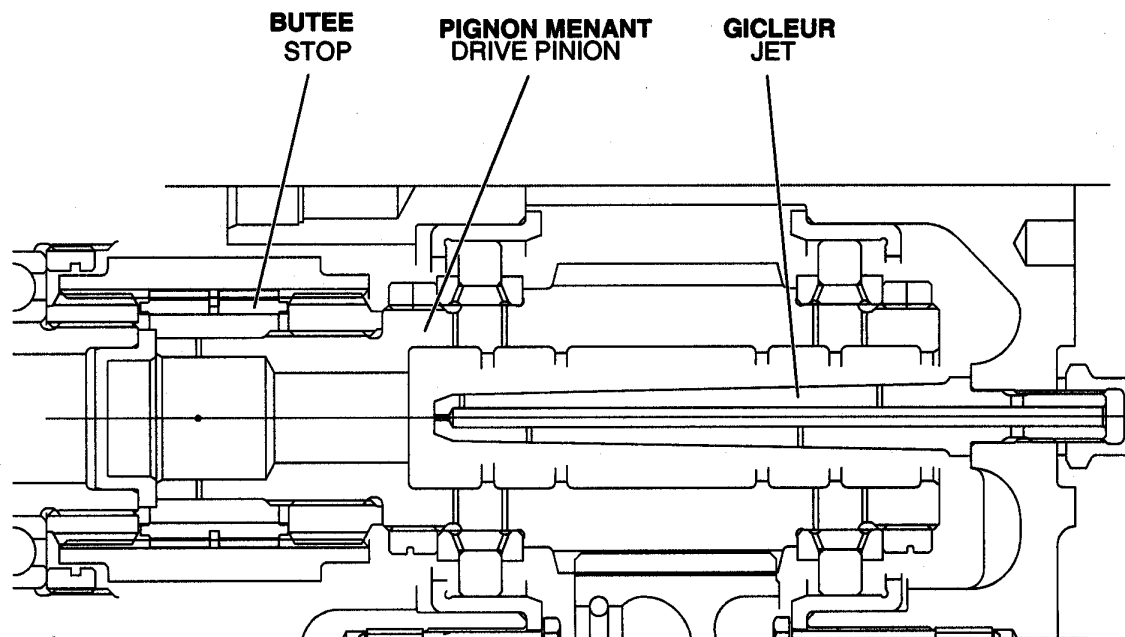
SAFRAN HELICOPTER ENGINES

Direction Support et Service

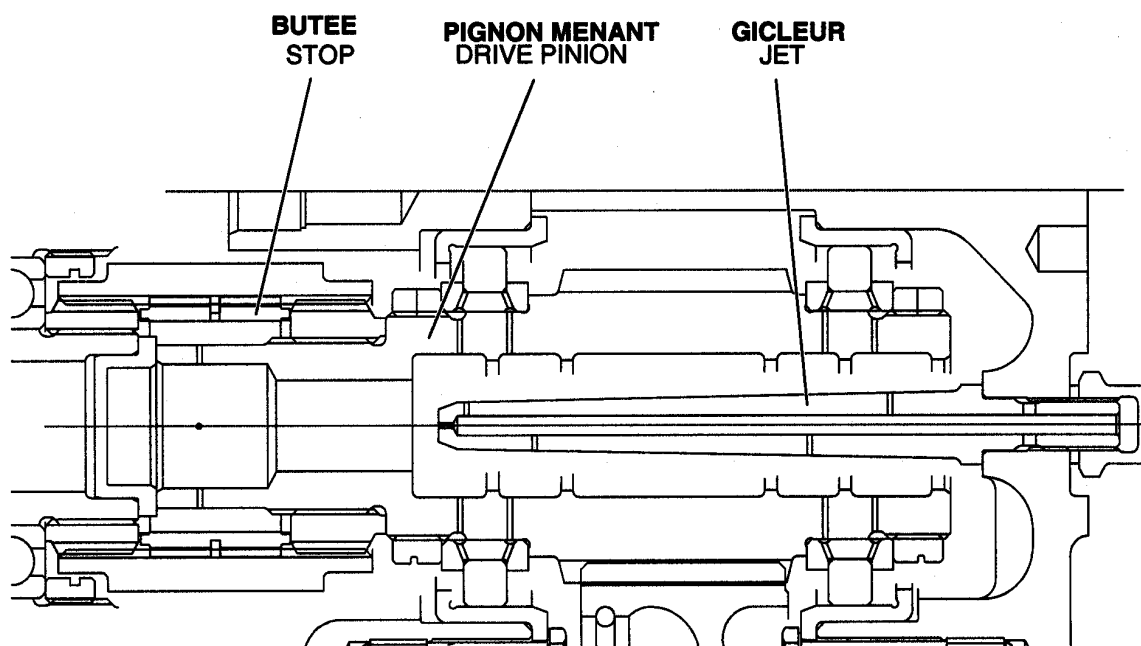
Département Commercial

40220 TARNOS - France

# SERVICE BULLETIN



**AVANT / PRE TU 57**



**APRES / POST TU 57**

## ANNEXE 1 / APPENDIX 1

## SERVICE BULLETIN

**Objet : Attestation de remplacement du module M05 par application du SB n° 292 72 2057 (TU 57).**

**Subject: Compliance certificate for replacement of module M05 through application of the SB No. 292 72 2057 (TU 57).**

**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 M05 déposé Removed module M05						
Module M05 installé Installed module M05						

\* **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 M05 identifié ci-dessus a été installé selon les directives de ce SB.**

I certify that the above-mentioned module M05 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 2057 (TU 57).**

Subject: SB No. 292 72 2057 compliance certificate (TU 57).

**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 M05						
Pignon menant modifié Modified drive pinion						

\* **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**