
SERVICE BULLETIN

Modification <input checked="" type="checkbox"/>	Recurring action <input type="checkbox"/>	One-off action <input type="checkbox"/>
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No.**292 72 2078**

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

Subject: Module M01 (accessory gearbox). Increase in the triggering threshold of the oil filter pre-clogging indicator.

Application of modification TU 78A.

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 MARCH 2002

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

Version: B

Reason for update:

Merger of SB No. 292 72 2078 and SB No. 292 72 2078M.

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1. Planning information

A. Effectivity

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	3

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 or following depletion of the existing stock.

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

Application following depletion of the existing stock.

B. Purpose

To eliminate unexpected triggering of the oil filter pre-clogging visual indicator.

C. Description

This modification consists in increasing the triggering threshold of the by-pass valve and the setting of the oil filter pre-clogging visual indicator.

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.

E. Manpower

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

(a) **Personnel:** 1 mechanic.

(b) **Time required:** Approximately 2 man-hours.

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

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

(b) **Time** defined by approved Repair Center for the level of this intervention.

F. Material

Refer to paragraph 3.

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G. Tooling

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

Standard mechanic's tooling.

(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) | Helicopter Maintenance Manual. | |

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. |

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2. Instructions to be incorporated

A. Implementation

This modification can be incorporated with the engine installed on the helicopter.

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

With replacement of complete filter base and of oil filter pre-clogging visual indicator.

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

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)** Disconnect (M BP HUILE/L. OIL P. SW) – P001 connector from the indicating and control harness of the low oil pressure switch.
- (b)** Disconnect (P. HUILE/OIL P.) – P005 connector from the indicating and control harness of the oil pressure transmitter.
- (c)** Remove oil supply pipe from rear bearing: refer to the applicable ARRIEL 2 Maintenance Manual, task 79-29-00-900-802.
- (d)** Remove low oil pressure switch: refer to the applicable ARRIEL 2 Maintenance Manual, task 79-31-00-900-801.
- (e)** Remove oil pressure transmitter: refer to Helicopter Maintenance Manual.
- (f)** Remove adaptor flange (79-29-00-01-400).
 - 1** Remove attaching screws (79-29-00-01-402) (x 2) of adaptor flange (79-29-00-01-400).
 - 2** Remove adaptor flange.
 - 3** Remove and discard adaptor flange "o" ring (79-29-00-01-430).
- (g)** Remove exchanger/metering valve fuel pipe: refer to the applicable ARRIEL 2 Maintenance Manual, task 73-19-00-900-804.
- (h)** Remove metering valve/exchanger fuel pipe: refer to the applicable ARRIEL 2 Maintenance Manual, task 73-19-00-900-805.
- (i)** Remove PRE TU 78A pre-clogging visual indicator of oil filter: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-61-00-900-807.
- (j)** Remove oil filtering element: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-61-00-900-803.
- (k)** Remove exchanger: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-61-00-900-804.
- (l)** Remove complete PRE TU 78A filter base (72-61-00-02-010):
 - 1** Remove attaching screws (72-61-00-02-020) (x 3) from complete filter base.
 - 2** Remove complete filter base.
 - 3** Remove and discard "o" ring (72-61-00-02-050) and "o" ring (72-61-00-02-060).

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(m) Install complete POST TU 78A filter base (72-61-00-02-010):

Note 1: Degrease and eliminate any residual protection from the mating faces of screws and tappings marked •.

Note 2: Apply a thin layer of BRISAL OX-50855 vaseline on mating faces.

1 Lubricate a new "o" ring (72-61-00-02-050) and a new "o" ring (72-61-00-02-060) with standard AIR 3565 vaseline or equivalent.

2 Install new "o" ring (72-61-00-02-050) and new "o" ring (72-61-00-02-060) on complete filter base (72-61-00-02-010).

3 Install complete filter base (72-61-00-02-010) on casing (72-61-50-01-200).

4 Position and torque tighten attaching screws (72-61-00-02-020) (x 3) of complete filter base (72-61-00-02-010) to **0.48 daN.m** (42.48 lb.in).

(n) Install exchanger: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-61-00-900-804.

(o) Install oil filtering element: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-61-00-900-803.

(p) Install POST TU 78A pre-clogging visual indicator of oil filter: refer to the applicable ARRIEL 2 Maintenance Manual, task 72-61-00-900-807.

(q) Install exchanger/metering valve fuel pipe: refer to the applicable ARRIEL 2 Maintenance Manual, task 73-19-00-900-804.

(r) Install metering valve/exchanger fuel pipe: refer to the applicable ARRIEL 2 Maintenance Manual, task 73-19-00-900-805.

(s) Install adaptor flange (79-29-00-01-400).

1 Lubricate new "o" ring (79-29-00-01-430) with standard AIR 3565 vaseline or equivalent.

2 Install new "o" ring (79-29-00-01-430) on adaptor flange (79-29-00-01-400).

3 Install adaptor flange (79-29-00-01-400).

4 Position and torque tighten attaching screws (79-29-00-01-402) (x 2) of adaptor flange (79-29-00-01-400) to **0.48 daN.m** (42.48 lb.in).

(t) Install oil pressure transmitter: refer to Helicopter Maintenance Manual.

(u) Install low oil pressure switch: refer to the applicable ARRIEL 2 Maintenance Manual, task 79-31-00-900-801.

(v) Install oil supply pipe of rear bearing: refer to the applicable ARRIEL 2 Maintenance Manual, task 79-29-00-900-802.

(w) Connect (P. HUILE/OIL P.) – P005 connector of oil pressure transmitter indicating and control harness.

(x) Connect (M BP HUILE/L. OIL P. SW) – P001 connector of the low oil pressure switch indicating and control harness.

(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 Maintenance Center**

Do a ground run check: refer to the applicable ARRIEL 2 Maintenance Manual, task 71-02-13-280-801.

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

Refer to the ARRIEL 2 Overhaul Manual.

D. Identification

(1) Record the application of this SB in the module M01 log card.

Note: Update the availability status, if necessary.

(2) Tell Safran Helicopter Engines that this SB has been applied by sending back the fully-completed compliance certificate (Appendix 1).

E. Routine maintenance

Not applicable.

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3. Material information

A. Basic information

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

B. List of parts

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

New Part Number	Key	Qty	Description	Price	Old Part Number	Key	Qty
0 292 12 789 0	A	1	Complete filter base (72-61-00-02-010)	*	0 292 12 740 0	G	1
9 560 16 804 0	A	1	Oil filter pre-clogging indicator (72-61-00-01-460)	*	9 560 16 731 0	C	1
9 794 41 015 0	B	1	"O" ring (79-29-00-01-430)	*			
9 794 41 014 0	B	1	"O" ring (72-61-00-02-050)	*			
9 794 41 018 0	B	1	"O" ring (72-61-00-02-060)	*			

* Prices and delivery times are provided upon request.

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

New Part Number	Key	Qty	Description	Old Part Number	Key	Qty
0 292 12 789 0	A	1	Complete filter base (72-61-00-02-010)	0 292 12 740 0	G	1
9 560 16 804 0	A	1	Oil filter pre-clogging indicator (72-61-00-01-460)	9 560 16 731 0	C	1
9 794 41 015 0	B	1	"O" ring (79-29-00-01-430)			
9 794 41 014 0	B	1	"O" ring (72-61-00-02-050)			
9 794 41 018 0	B	1	"O" ring (72-61-00-02-060)			

Key

A - Part incorporated by the modification.

B - Part not incorporated by the modification but required for its incorporation.

C - Part deleted by the modification.

G - Part to be modified by Safran Helicopter Engines.

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

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Objet : Attestation d'application du SB n° 292 72 2078 (TU 78A).

Subject: SB No. 292 72 2078 compliance certificate (TU 78A).

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

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 M01 modifié Modified module M01						

* 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 1 / APPENDIX 1