

SERVICE BULLETIN No. 319 26 4099

Version: A

Date: 5 December 2023

First issue

Modification

Periodical action

One-off action

Applicable from:
"MARCH 2024"

Subject:
Fire detection - Fire detection assembly.
Modification TF 99.

APPLICABLE ENGINE / VARIANT(S)	EFFECTIVITY CODE	MAINTENANCE LEVEL	CONDITION OF APPLICATION	EFFECT ON OPERATION
ARRIUS 2 F	2-A-1	1, 2, 3	Application if the fire detector is replaced	Removal/installation of the fire detection assembly
		4	Application upon first return to an approved Repair Center, if the repair gives access, at least, to one of the fire detectors	

Apply this SB in full compliance with the manufacturer's instructions.
Refer to the Effectivity Code above.

Note: In level 1, 2 and 3, it is permitted to install a POST TF 99, upper or lower, front or rear fire detection assembly with one or several PRE TF 99, lower or upper rear or front fire detector(s) and their associated supports. Modification TF 99 is not marked in the engine logbook for this configuration. In the engine logbook you can mention that modification is applied only if the three POST TF 99 upper and lower, front and rear fire detection assemblies are installed on the engine.

1. GENERAL

1.1. Background

1.1.1. Context

On the ARRIUS 2 F engine variant, there are three fire detectors: one fire detector located in the cold area (front part of the engine) and two fire detectors located in the hot area (rear part of the engine, one is in the lower section and the other is in the upper section). The fire detector P/N of the cold area is different from the two fire detector P/Ns of the hot area because their trigger temperature thresholds differ. These two fire detector P/Ns have the same physical interface. It is thus possible on the engine, to interchange (by mistake) a fire detector P/N of the cold area (or hot area) with a fire detector P/N of the hot area (or cold area).

Such an error of installation of the two fire detector P/Ns can untimely trigger the fire alarm in flight. The associated airworthiness occurrence is an in-flight shutdown commanded by the pilot (in compliance with the Aircraft Flight Manual).

1.1.2. Analysis (Figure 1)

Fire detectors are attached with a screw-nut assembly to supports that are different between the cold area (front part of the engine) and the hot area (rear part of the engine, upper section and lower section) in their shape and their securing interface on the engine (Figure 1). These supports are not interchangeable on the engine.

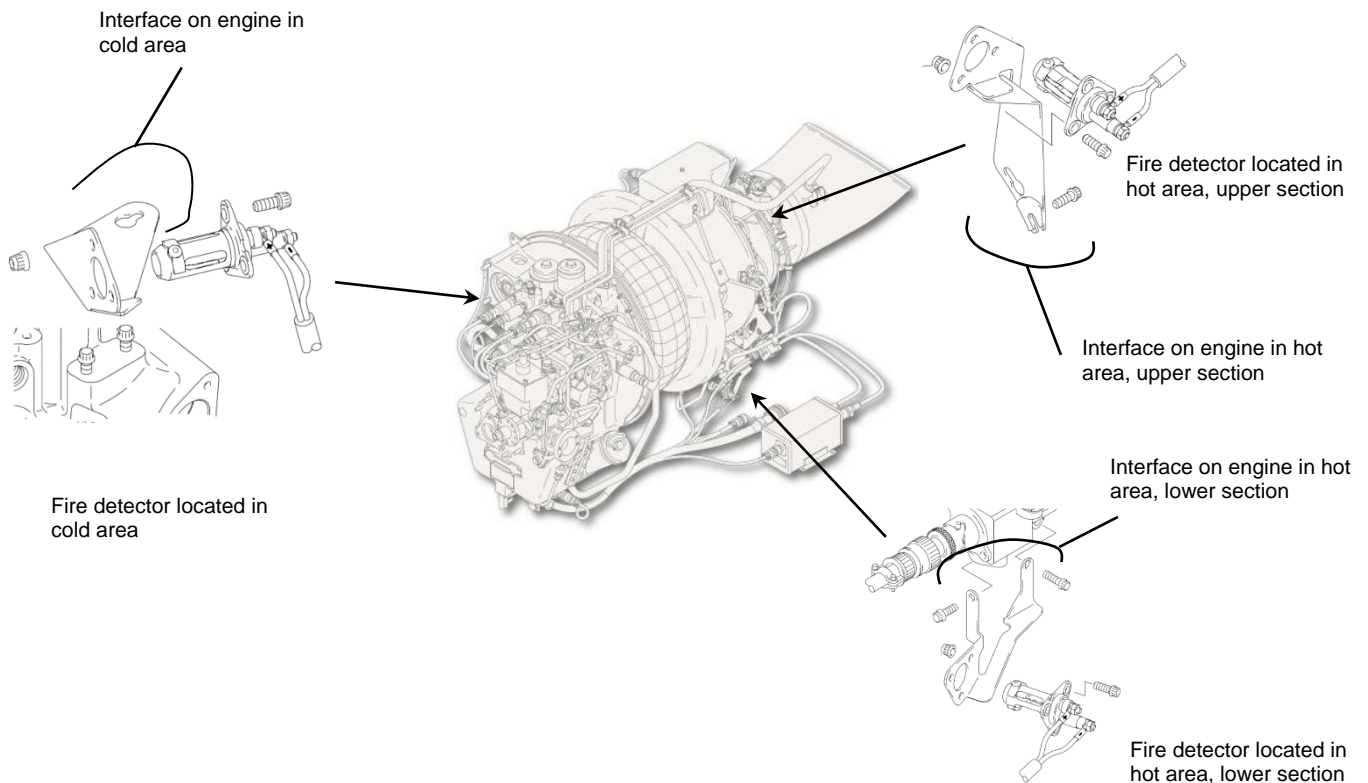


Figure 1

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§1.GENERAL	§2.LEVEL 1, 2	§3.LEVEL 3	§4.LEVEL 4	§5.CERTIFICATES
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1.1.3. Solution (Figure 2)

Safran Helicopter Engines developed TF 99 modification that creates an inseparable fire detection assembly that includes the detector and its support, for each of the three locations (cold area and upper and lower hot area). These three POST TF 99 fire detection assemblies have an interface on engine that is different and thus they are no longer interchangeable by mistake (Figure 2)

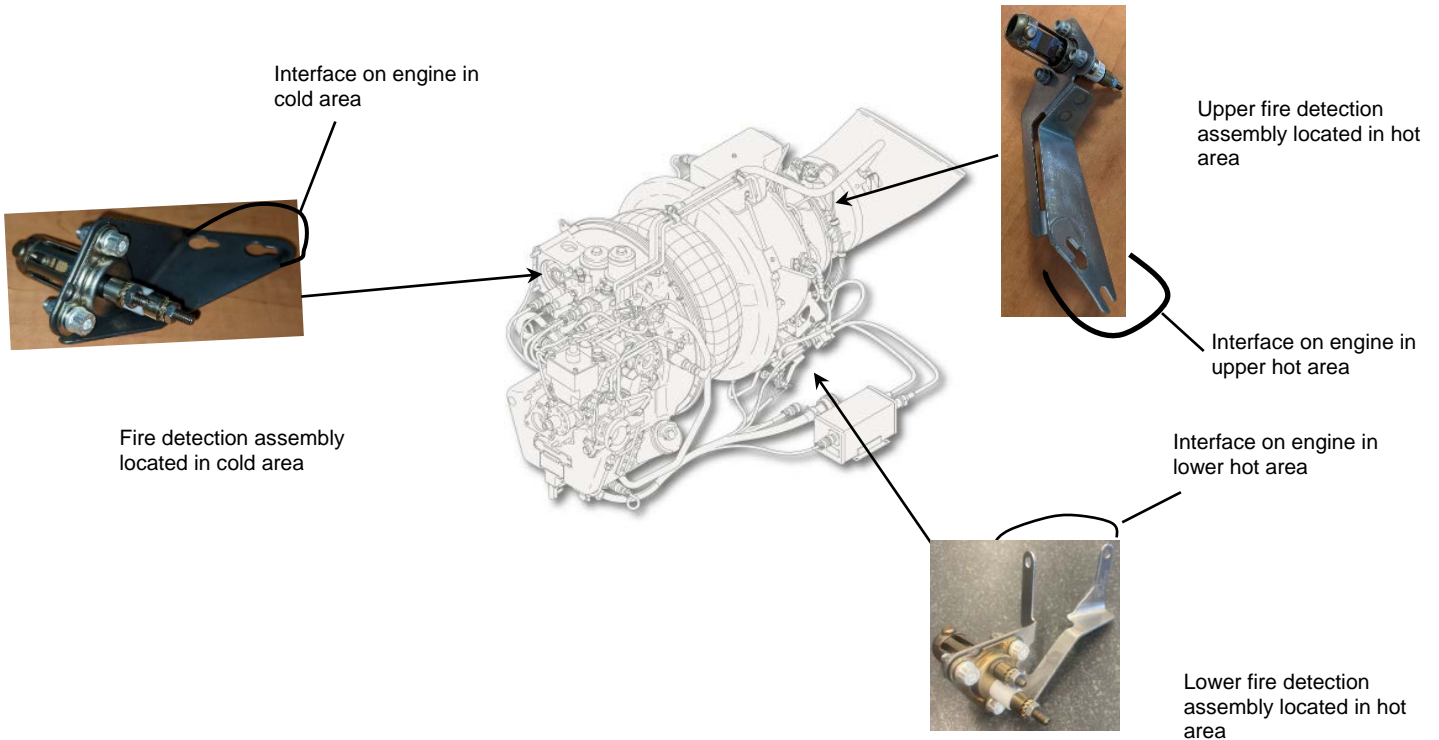


Figure 2

1.2. Approval

The technical content of this document is approved under the authority of the DOA (Design Organisation Approval) ref. EASA.21J.070.

1.3. Summary of updates

Not applicable.

End of Section §1

“General”

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§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

2. PROCEDURE DONE AT THE OPERATOR'S SITE OR AT A MAINTENANCE CENTER APPROVED FOR LEVEL 1, 2**2.1. Manpower**

- Personnel: 1 mechanic.
- Time: 1 man-hour (removal and installation of the fire detection assembly).

2.2. Tools / Parts

Mechanic's standard tools.

2.3. Parts information**2.3.1. Basic information**

The list of parts is given for one engine.

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§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

2.3.2. List of parts

2.3.2.1. Parts for application of this SB.

New Part Number	Key	Qty	Description* / Item	Old Part Number	Key	Qty
ARRIUS 2 F						
0 319 76 022 0	A	1	Front fire detection assembly (26-11-00-01-010)			
			Fire detector (26-11-00-01-010)	9 583 82 008 0	C	1
			Screw (26-11-00-01-012)	9 836 40 501 4	C	3
			Nut (26-11-00-01-014)	9 866 20 502 6	C	3
			Fire detector support (26-11-00-01-050)	0 319 76 771 0	C	1
0 319 76 023 0	A	1	Upper rear fire detection assembly (26-11-00-01-100)			
			Fire detector (26-11-00-01-100)	9 580 11 124 0	C	1
			Screw (26-11-00-01-102)	9 836 40 501 4	C	3
			Nut (26-11-00-01-104)	9 866 20 502 6	C	3
			Fire detector support (26-11-00-01-150)	0 319 76 829 0	C	1
0 319 76 024 0	A	1	Lower rear fire detection assembly (26-11-00-01-200)			
			Fire detector (26-11-00-01-200)	9 580 11 124 0	C	1
			Screw (26-11-00-01-202)	9 836 40 501 4	C	3
			Nut (26-11-00-01-204)	9 866 20 502 6	C	3
			Fire detector support (26-11-00-01-250)	0 319 76 146 0	C	1

* Prices are given upon request.

A full list of the old item part numbers above is given in the Spare Parts Catalog.

Key

A	Part included by this SB
C	Part deleted by this SB

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§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

- 2.3.2.2. Parts for application of the maintenance tasks referred to in this SB
Refer to the applicable ARRIUS 2 Maintenance Manual or Spare Parts Catalog.

2.3.3. Supply conditions

Order supplies from:
Your local Safran Helicopter Engines Support Center
or
SAFRAN HELICOPTER ENGINES
Direction Support et Service
Département Commercial
40220 TARNOS - France

2.4. Procedures

Assemble the three POST TF 99 front and rear fire detection assemblies, refer to paragraph 2.6.

2.5. Block diagram for this SB

Not applicable.

2.6. Instructions on how to do the procedure**2.6.1. Implementation**

Removal of the engine is not necessary to do this SB.

2.6.2. Operating instructions**2.6.2.1. Front fire detector (26-11-00-01-010)**

- 2.6.2.1.1. Remove the PRE TF 99 front fire detector (26-11-00-01-010): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-801 (BASIC).
- 2.6.2.1.2. Remove the PRE TF 99 front fire detector support (26-11-00-01-050): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-802 (BASIC).
- 2.6.2.1.3. Install the POST TF 99 front fire detection assembly (26-11-00-01-010): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-801 (TF 99).

2.6.2.2. Upper rear fire detector (26-11-00-01-100)

- 2.6.2.2.1. Remove the PRE TF 99 rear fire detector (26-11-00-01-100): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-801 (BASIC).
- 2.6.2.2.2. Remove the PRE TF 99 rear fire detector support (26-11-00-01-150): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-802 (BASIC).
- 2.6.2.2.3. Install the POST TF 99 rear fire detection assembly (26-11-00-01-100): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-801 (TF 99).

2.6.2.3. Lower rear fire detector (26-11-00-01-200)

- 2.6.2.3.1. Remove the PRE TF 99 rear fire detector (26-11-00-01-200): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-801 (BASIC).
- 2.6.2.3.2. Remove the PRE TF 99 rear fire detector support (26-11-00-01-250): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-802 (BASIC).
- 2.6.2.3.3. Install the POST TF 99 rear fire detection assembly (26-11-00-01-200): Refer to the ARRIUS 2 F Maintenance Manual, task 26-11-00-900-801 (TF 99).

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§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

2.6.3. Reconditioning and checks

Not applicable.

2.6.4. Identification

2.6.4.1. Record the application of this SB in sections A and E.

2.6.4.2. Send back the fully-completed compliance certificate, links to the digital document

EngineLife Customer Portal: [Certificate 5.1 SB 319 26 4099 EN A](#) or**2.6.5. Scheduled maintenance**

Not applicable.

2.7. Weight and balance

Not applicable.

End of Section §2**“Procedure done at the operator’s site or at a Maintenance Center approved for Level 1, 2”**

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§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

3. PROCEDURE DONE AT A MAINTENANCE CENTER APPROVED FOR LEVEL 3 OR AT THE OPERATOR'S SITE BY A MAINTENANCE CENTER APPROVED FOR LEVEL 3

Refer to the paragraphs of section [§2](#) related to the Maintenance Centers approved for Level 1, 2.

End of section §3

“Procedure done AT a Maintenance Center approved for Level 3 OR AT THE OPERATOR'S SITE BY a Maintenance Center approved for Level 3”

SERVICE BULLETIN No. 319 26 4099

§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

4. PROCEDURE DONE AT A REPAIR CENTER APPROVED FOR LEVEL 4**4.1. Manpower**

- Personnel of approved Repair Center.
- Time calculated by the Repair Center for this level of intervention.

4.2. Tools / Parts

Refer to the ARRIUS 2 Overhaul Manual.

4.3. Parts information**4.3.1. Basic information**

The list of parts is given for one engine.

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§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

4.3.2. List of parts

New Part Number	Key	Qty	Description / Item	Old Part Number	Key	Qty
ARRIUS 2 F						
0 319 76 022 0	A	1	Front fire detection assembly (26-11-00-01-010)			
			Fire detector (26-11-00-01-010)	9 583 82 008 0	C	1
			Screw (26-11-00-01-012)	9 836 40 501 4	C	3
			Nut (26-11-00-01-014)	9 866 20 502 6	C	3
			Fire detector support (26-11-00-01-050)	0 319 76 771 0	C	1
0 319 76 023 0	A	1	Upper rear fire detection assembly (26-11-00-01-100)			
			Fire detector (26-11-00-01-100)	9 580 11 124 0	C	1
			Screw (26-11-00-01-102)	9836 40 50 14	C	3
			Nut (26-11-00-01-104)	9866 20 50 26	C	3
			Fire detector support (26-11-00-01-150)	0 319 76 829 0	C	1
0 319 76 024 0	A	1	Lower rear fire detection assembly (26-11-00-01-200)			
			Fire detector (26-11-00-01-200)	9 580 11 124 0	C	1
			Screw (26-11-00-01-202)	9836 40 50 14	C	3
			Nut (26-11-00-01-204)	9866 20 50 26	C	3
			Fire detector support (26-11-00-01-250)	0 319 76 146 0	C	1

Key

A	Part included by this SB
C	Part deleted by this SB

SERVICE BULLETIN No. 319 26 4099

§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

4.3.3. Supply conditions

Order supplies from:
 Your local Safran Helicopter Engines Support Center
 or
 SAFRAN HELICOPTER ENGINES
 Direction Support et Service
 Département Commercial
 40220 TARNOS - France

4.4. Procedures

Assemble the three POST TF 99 front and rear fire detection assemblies, refer to paragraph 4.6.

4.5. Block diagram for this SB

Not applicable.

4.6. Instructions on how to do the procedure
4.6.1. Implementation

Not applicable

4.6.2. Operating instructions
4.6.2.1. Front fire detector (26-11-00-01-010)

4.6.2.1.1. Remove the PRE TF 99 front fire detector (26-11-00-01-010): Refer to the ARRIUS 2 Overhaul Manual.

4.6.2.1.2. Remove the PRE TF 99 front fire detector support (26-11-00-01-050): Refer to the ARRIUS 2 Overhaul Manual.

4.6.2.1.3. Install the POST TF 99 front fire detection assembly (26-11-00-01-010): Refer to the ARRIUS 2 Overhaul Manual.

4.6.2.2. Upper rear fire detector (26-11-00-01-100)

4.6.2.2.1. Remove the PRE TF 99 upper rear fire detector (26-11-00-01-100): Refer to the ARRIUS 2 Overhaul Manual.

4.6.2.2.2. Remove the PRE TF 99 upper rear fire detector support (26-11-00-01-150): Refer to the ARRIUS 2 Overhaul Manual.

4.6.2.2.3. Install the POST TF 99 upper rear fire detection assembly (26-11-00-01-100): Refer to the ARRIUS 2 Overhaul Manual.

4.6.2.3. Lower rear fire detector (26-11-00-01-200)

4.6.2.3.1. Remove the PRE TF 99 lower rear fire detector (26-11-00-01-200): Refer to the ARRIUS 2 Overhaul Manual.

4.6.2.3.2. Remove the PRE TF 99 lower rear fire detector support (26-11-00-01-250): Refer to the ARRIUS 2 Overhaul Manual.

4.6.2.3.3. Install the POST TF 99 lower rear fire detection assembly (26-11-00-01-200): Refer to the ARRIUS 2 Overhaul Manual.

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§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

4.6.3. Reconditioning and checks

Refer to the ARRIUS 2 Overhaul Manual.

4.6.4. Identification

4.6.4.1. Record the application of this SB in section A.

4.6.4.2. Send back the fully-completed compliance certificate, links to the digital document

EngineLife Customer Portal: [Certificate 5.1 SB 319 26 4099 EN A](#) or

**4.6.5. Scheduled maintenance**

Not applicable.

4.7. Weight and balance

Not applicable.

End of Section §4**“Procedure done at a Repair Center approved for Level 4”**

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§1.GENERAL

§2.LEVEL 1, 2

§3.LEVEL 3

§4.LEVEL 4

§5.CERTIFICATES

5.1- Compliance certificate of SB No. 319 26 4099 (TF 99) - LEVEL 1, 2, 3, 4

Important:

Fill in the compliance certificate after application of the instructions given in this SB.

Mail or email it to:

SAFRAN HELICOPTER ENGINES
 Equipe Administration Base installée / Fleet Data Administrator Team, BP 25
 40220 TARNOS - France
 Email: data-fleet.fr.she@safrangroup.com

Equipment information					
Customer			Aircraft S/N		
	S/N	P/N	TSN*	CSN HP*	CSN PT*
Engine					
Front fire detection assembly					
Upper rear fire detection assembly					
Lower rear fire detection assembly					

* TSN = Time Since New
 CSN = Cycles Since New

I certify that the above-mentioned engine has been modified according to this SB.

Date [DD/MMMM (letter)/YYYY]	
Comments	