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SB CG 125-1030 P1, Rev. 1

SERVICE BULLETIN **PRIORITY 1 – SAFETY**

Service Bulletin

SB CG 125-1030 P1, Rev. 1 / July 18, 2024

No. / Date:

Subject: Additional Coolant Liquid Analysis

Type affected:

TAE 125-02-125 (CD-170)

Models affected: all

Classification:

Category P1 - Safety

Time of Compliance: Analysis shall be accomplished within the next 5 flight hours or with the next

maintenance action, whichever occurs first.

Further operation is permitted after the sample has been taken and until the results of the analysis are available. A reasonable time frame for the evaluation

of the analysis results is 3 weeks after the sample has been taken.

Reason:

In the cooling system, instances of coolant contamination have been detected. which may potentially lead to corrosion damage in the engine's coolant circuit. Consequently, this can result in coolant loss and engine overheating during

operation.

Checked Approved

T. Kreißi, CVE

118. JULI 2024

D. Hartung, Office of Airworthines,

1 8. JULI 2024

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Page 1/



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SB CG 125-1030 P1, Rev. 1

Correction:

Carry out a coolant liquid analysis in accordance with the attached table and submit either the results or the sample taken to Continental Aerospace Technologies GmbH for further analysis. Additionally, an extended FADEC download is required. (Red Wrench – FADEC Service Tool)

The Tecnam SB 719 – shall be installed and the coolant system check must be performed in accordance with the relevant instructions (including dedicated Tecnam temporary revision or later approved AMM revision).

If any limit (see appendix A) exceeds the acceptable range, it is necessary to drain the coolant system, flush the coolant system and refill it with new coolant in accordance with the applicable engine and aircrafts Manuals to both eliminate contamination of the coolant and restore the anti-corrosion properties of the coolant.

Furthermore, if the aluminum exceeds its limit, cylinder head exchange is requested in accordance with RM-02-02, Chapter 72-30.13 Issue 5, Rev. 0 or later approved revision before refilling the coolant.

Remarks: Coolant sample analysis:

Labor effort: 0.5hr

Coolant exchange: Labor effort: 4hr

Cylinder head exchange:

Labor effort: 16hr

Approval: The technical content of this document is approved under the authority of the DOA

ref. EASA.21J.010.

Attachments: Appendix A: Materials; Methods; Limits

Appendix B: Instruction to take coolant sample



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SB CG 125-1030 P1, Rev. 1

Appendix A: Material, Methods and Limits

Num	Name	Note	Method	Unit	Acceptable Range	
					min	max
1	Glycol concentration		see RM-02-02	% [Vol/Vol]	45	55
2	freezing point	alternative (1)	see RM-02-02	°C	-40	-36
3	pH-value 25°C		ASTM D1287	-	6,5	8,5
4	water hardness		ASTM D6130	°dH	0	15
5	alkaline earths ions	alternative (4)	ASTM D6130	mmol/l	0	2,7
6	sulphate		ASTM D5827	mg/l	0	100
7	Chloride		ASTM D5827	mg/l	0	100
8	Fluoride		ASTM D5827	mg/l	0	30
9	Potassium (K)		ASTM D6130	mg/l	0	350
10	Aluminum (Al)		ASTM D6130	mg/l	0	20



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Appendix B: Instruction to take coolant sample

How to remove the coolant

- 1. Ensure that engine is cold (T_{H2O} max. 10C above ambient temperature)
- 2. Remove expansion tank cap
- 3. Remove coolant (min. 100ml) and fill it into the test set
 - a. Ensure that the removal device, hoses etc. are not contaminated with water or other mediums to avoid incorrect measurement results
- 4. Refill the same amount of coolant into the expansion tank
 - a. Refer to OM-02-02B Chapter 3.5 or AMM of the Aircraft Manufacturer
- 5. Install expansion tank cap

Ensure that all work on the system is done in accordance to aircraft manufacturer's instructions and Service Bulletins

Labeling of coolant samples

Coolant Sample	
Date:	
Call sign:	
Aircraft S/N:	
Engine S/N:	
Engine TT [hrs.]:	
Coolant type:	
Coolant TT [hrs]:	
Remarks:	