CRUISER AIRCRAFT	SERVICE BULLETIN	Czech Aircraft Group s.r.o. Na Záhonech 212 686 04 Kunovice Czech Republic info@cruiseraircraft.cz
No.: SB-CR-071		**REV.:** 1
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PAGE: 1/8		

MODEL AFFECTED:	PS-28 Cruiser / SportCruiser / PiperSport (operating under EASA rules)
SUBJECT:	Inspection and eventual adjustment of the sufficient distance between the exhaust and cooling tubes
AIRCRAFT AFFECTED:	PS-28 Cruiser / SportCruiser / PiperSport aircraft with dual circuit thermostat valve Hektik F 1104 installed
COMPLIANCE:	Apply this Service Bulletin as soon as possible, not later than before completing three flight hours as of the day of this Service Bulletin issue. Apply this service Bulletin every 100 FH or at any time when any works on exhaust or cooling tubes are performed.

DESCRIPTION:

This Service Bulletin contains instructions for inspection and eventual adjustment of cooling tubes in order to secure their sufficient distance from the engine hot exhaust system and other surrounding components.

REASON:

Sufficient distance of cooling tubes from the engine hot exhaust system and other surrounding parts is an important safety requirement. If not followed, it may lead to contact between tubes causing wear or even penetration of tubes and coolant loss with dangerous consequences. Inspection requirement is based on operational experience when clearances might change due to vibrations and various operational conditions.

AUTHORISATION TO PERFORM:

Repairman (LS-M) or Mechanic (A&P)

MANPOWER:

Inspection: ½ hour, repair: 4 hours (app. values)

SPECIAL TOOLS:

Common tools for aircraft maintenance.

WEIGHT AND BALANCE:

N/A

ELECTRICAL LOAD DATA:

N/A

PUBLICATIONS AFFECTED:

N/A

MATERIAL AND COSTS:

All costs are to be covered by the aircraft owner/operator.

ACCOMPLISHMENT INSTRUCTIONS:

1. Move the aircraft to a suitable place to perform the work.
2. Remove the engine upper cowling (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
3. Disconnect the battery terminals (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
4. Disconnect the carburetor air inlet hose from the left NACA inlet of the lower cowling (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
5. Disconnect the air inlet hose bringing the air into the heat exchanger (if installed) from the right NACA inlet of the lower engine cowling (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
6. Remove the engine lower cowling (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
7. Inspect tubes of the cooling system at a sufficient distance from exhaust tubes or other components (engine body, engine mounting, etc.) according to Figures 1 - 7. Ensure that at least the minimum distance provided in Table 1 below is kept.
8. If needed, release fixing stripes and clips and adjust the positioning of cooling tubes in hose fittings accordingly. The recommended minimum distances are shown in Table 1.

Table 1: Recommended minimum distances between cooling and exhaust tubes or other components

Figure No.	Dimension	Recommended minimum distance from hot parts and other components (mm)
Figure 1: Distance between exhaust and coolant tube	A	8
Figure 2: Distance between exhaust and thermostat valve	B	8
Figure 3: Distance between cooling tube and engine mount – left side – bottom view (left side)	C	5
Figure 4: Distance between cooling tube and engine mount – right side – bottom view (right side)	D	5
Figure 5: Distance between cooling tube and alternator sensor – view from above	E	5
Figure 6: Distance between cooling tube and Spark plug – view from the right	F	2
Figure 7: Distance between cooling tube and fixing stripe free ends	G	10
Figure 8: Distance between cooler and exhaust	H	8

9. After adjustment of distances tighten all released fittings and components and check the distances again.

Note: In case any recommended minimum distance can not be maintained, then:

- In case the insufficient distance is between the cooling tube and the exhaust system, protect the relevant cooling tube from the exhaust system by applying proper thermo-insulating foil, or
- In case the insufficient distance is between the cooling tube and other than exhaust parts of the engine compartment (engine mount, spark plugs, etc.), protect the relevant tube from undesirable contact by applying sufficient dampening insert (e.g. Silicone tube ID25, MVQ-blue, QI 512K2204).

10. Install the engine lower cowling (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
11. Connect the carburetor air inlet hose on the left side of the NACA inlet of the lower cowling (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
12. Connect the air inlet hose bringing the air into the heat exchanger (if installed) to the right NACA inlet of the lower engine cowling (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
13. Connect the aircraft battery terminals.
14. Install the engine upper cowling (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
15. Depending on corrective actions made on the cooling system, perform an engine run test and check the cooling system on leakage (see the CR-MM-1-0-00 or SC-AMM-1-0-00, the latest revision).
16. Complete the aircraft records (log book) to reflect compliance with this Service Bulletin.
17. Thereby, the performance of this Service Bulletin is completed.

SUPPLEMENTS:

Figure 1: Distance between exhaust and coolant tube

Figure 2: Distance between exhaust and thermostat valve

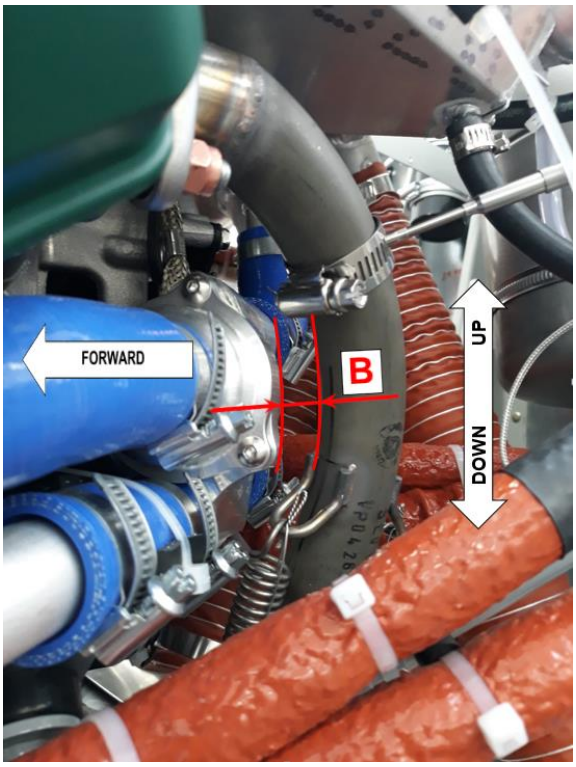


Figure 3: Distance between cooling tube and engine mount – left side – bottom view

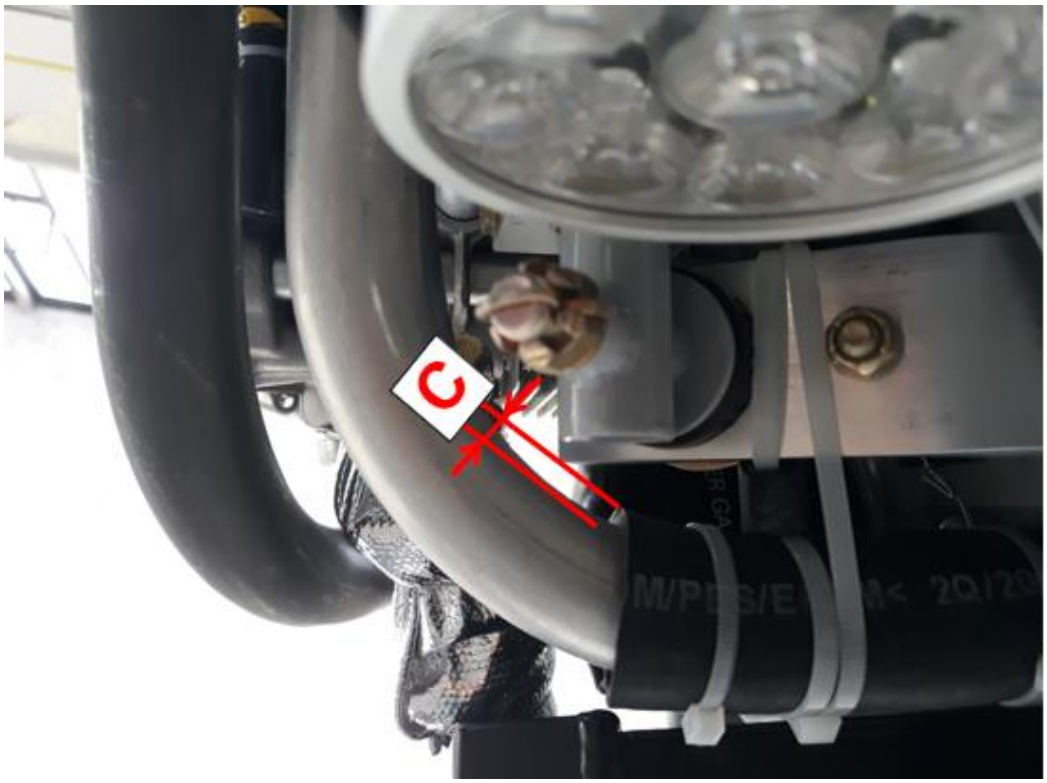


Figure 4: Distance between cooling tube and engine mount – right side – bottom view

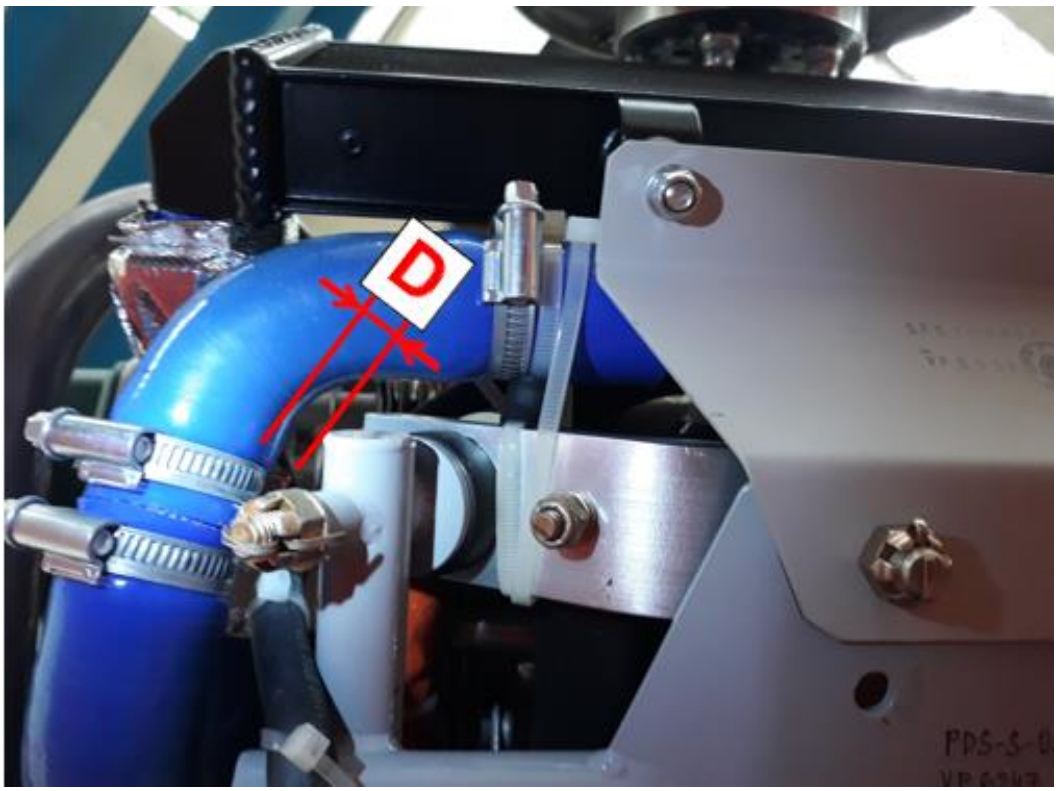


Figure 5: Distance between cooling tube and alternator sensor – view from above

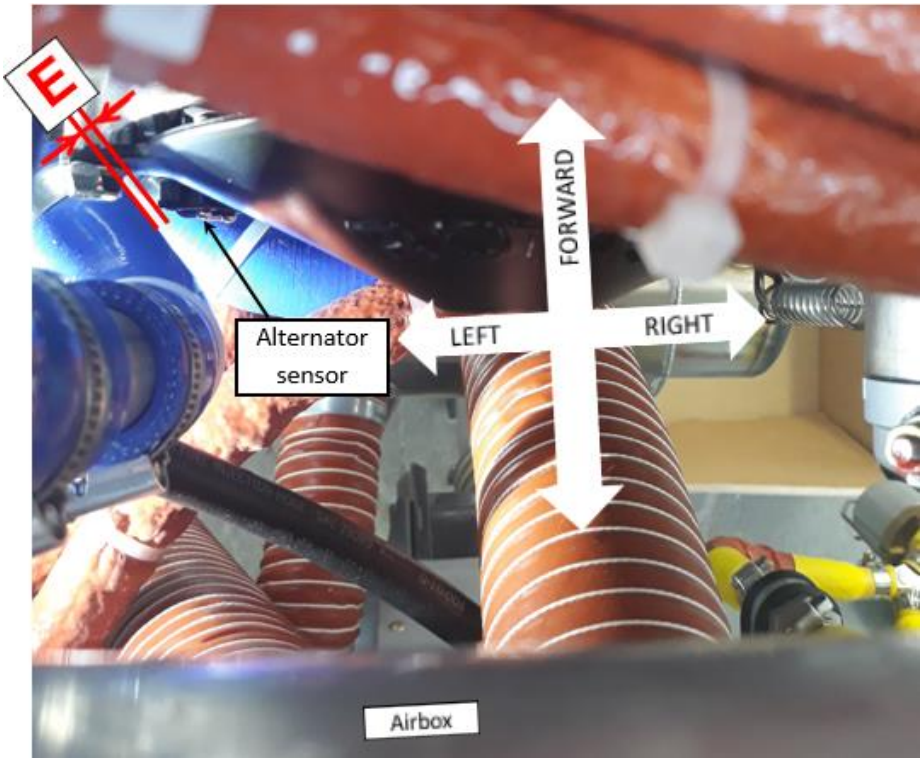


Figure 6: Distance between cooling tube and Spark plug – view from the right

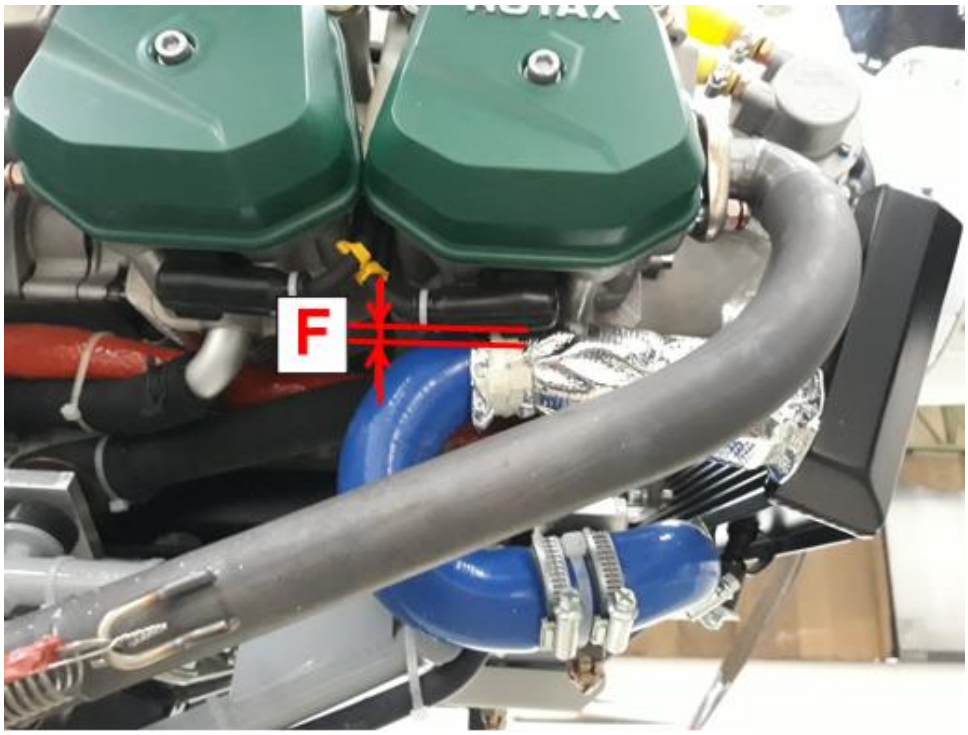
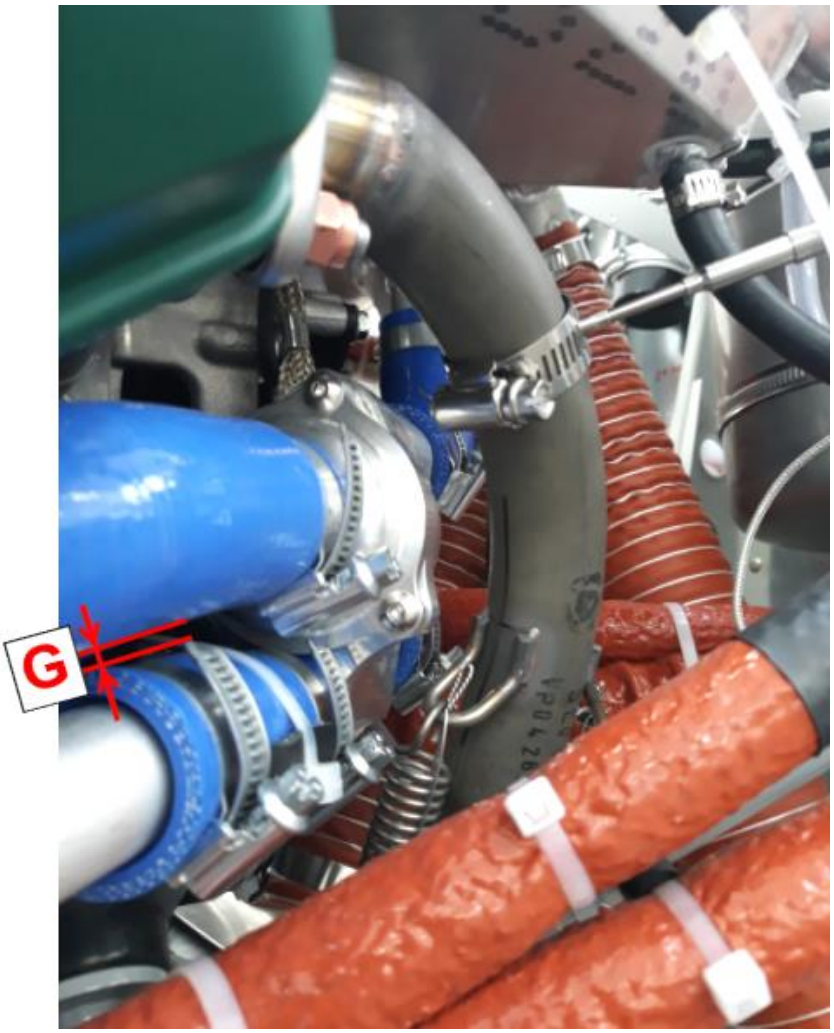


Figure 7: Distance between cooling tube and fixing stripe free ends



Note to figure 7: Stripe end should be bent to prevent damage of the hose in case of accidental contact.

Figure 8: Distance between cooler and exhaust

APPROVAL:

This Service Bulletin has been approved by:

TITLE:	Head of Design Organisation	Airworthiness Manager
NAME:	David Bilík	Jan Pejchar
HANDWRITTEN SIGNATURE:		