

Service Directive

Inspection of pipes and hoses of the coolant system

MANDATORY

Symbols:

Please pay attention to the following symbols throughout this document emphasizing particular information.

- ▲ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.
- **CAUTION:** Denotes an instruction which if not followed, may severely damage the aircraft or could lead to suspension of warranty.
- ◆ **NOTE:** Information useful for better handling.

1. General

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Release date: 2. Oktober 2008

Date of effect: immediately

Compliance: Prior to next takeoff

Release Number: SD-003-coolant system

Superseded notice: none

Models affected: G-3, G-3/600

Affected S/N: till S/N 245 (including 245)

Reason: The coolant tube of a REMOS G3/600 was routed too close to the valve pushrod tube of the front-left cylinder. The coolant pipe is made of aluminum, and was

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rubbed through by the valve pushrod tube. A loss of coolant was the result (see figure 1 to 3).

On another aircraft the coolant hose was routed too close to the exhaust system, so it was damaged (see Figure 4).

Subject: Inspection of all hoses and tubes of the coolant system. Check for damages and correct distance to **all parts of the aircraft engine, engine units, incl. exhaust system.**

Time of operating: Inspection only, incl. demounting and mounting of the cowling ca. 20min.

2. Material Information

Tools needed: Standard Tools

Parts needed: Wire strap, heat resistant at least 180°C, width at least 4mm, if necessary: coolant hose and coolant fluid according to the flight manual.

3. Accomplishment

Level of maintenance: medium

Certification required: A&P Mechanic, LSA Repairman or otherwise experienced persons

▲ **WARNING:** Precede this work only in a non-smoking area. Switch off ignition and secure engine against unintentional operation.
Perform on a cold engine only.

◆ **NOTE:** Please contact your Remos Service Center in case of doubt before you start to work.

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INSTRUCTIONS:

1. Open up the upper cowling.
2. Completely disconnect the battery and secure positive pole against unintended contact.
3. Open up the lower cowling.
4. Identify the coolant hoses, especially the coolant water tube (see figure 1). See the ROTAX Repair- and Maintenance Manual for more Information. Use the latest revision. Available under: www.franz-aircraft.de
5. Inspection of all hoses and pipes of the coolant system. Check for damages and correct distance to ***all parts of the aircraft engine, engine units, and incl. exhaust system.***
6. Check and judge the condition of all pipes and tubes of the coolant system.

■ CAUTION: The distance between coolant pipes/coolant hoses and all parts of the aircraft engine needs to be at least 10 mm.

■ CAUTION: The coolant pipes may not have any chafe marks, pinches, or thermal damages.

■ CAUTION: The coolant pipes may not have any cracks or rigidifications.

INSTRUCTIONS:

7. Exchange the coolant pipes/coolant hoses if necessary. Only use original spare parts by ROTAX or REMOS.
8. Fix the coolant pipes/coolant hoses with wire strap. Cut off the ends of the tightened wire straps.
9. Remove and replace the pipes and hoses if you cannot ensure the correct laying of the coolant pipes/coolant hoses. You have to fix the hoses and pipes afterwards.

◆ NOTE: The accurate laying of the coolant pipes can be seen in figure 5 to 10.

◆ NOTE: Coolant flows out when coolant pipe is disconnected. Avoid percolation in nature. Collect the coolant and recycle it environment friendly.

■ CAUTION: Do not reuse coolant. Flush the coolant system, refer to the engine maintenance manual and refill coolant according to specification.

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INSTRUCTIONS:

10. Check filling level and type of coolant refer to you flight manual or maintenance manual of the engine.
11. Perform an engine ground run. Ensure that the cylinder head temperature is at least 80°C over a period of 5 minutes. Do not exceed the engine parameters defined by the flight manual.

▲ **WARNING:**

Perform the engine ground run in eligible environment. Ensure that an experienced person sits on the pilot seat. Observe adequate space so that the propeller cannot be dangerous or damaged. Ensure that the airplane is secured and the brakes are applied.

INSTRUCTIONS:

12. After engine ground run, you have to check if the coolant pipes/coolant hoses are in their primary position and if they are leak-proof. Otherwise you return to instruction 5.

▲ **WARNING:**

Engine and parts of the engine are hot after test run! Do not burn yourself. In case of doubt, let the engine cool down until cylinder head temperature is less than 40°C.

INSTRUCTIONS:

13. Mount the lower cowling.
14. Mount the upper cowling.
15. The accomplishment of this Service Directive hast to be written down in your aircrafts logbook.
16. Send an informal confirmation about the accomplishment and status of this SD via post, fax or mail to REMOS. You can use the annexed form for your confirmation.
17. Prior to your next flight, you have to do a careful preflight check.

REMOS wishes you save and nice flights.

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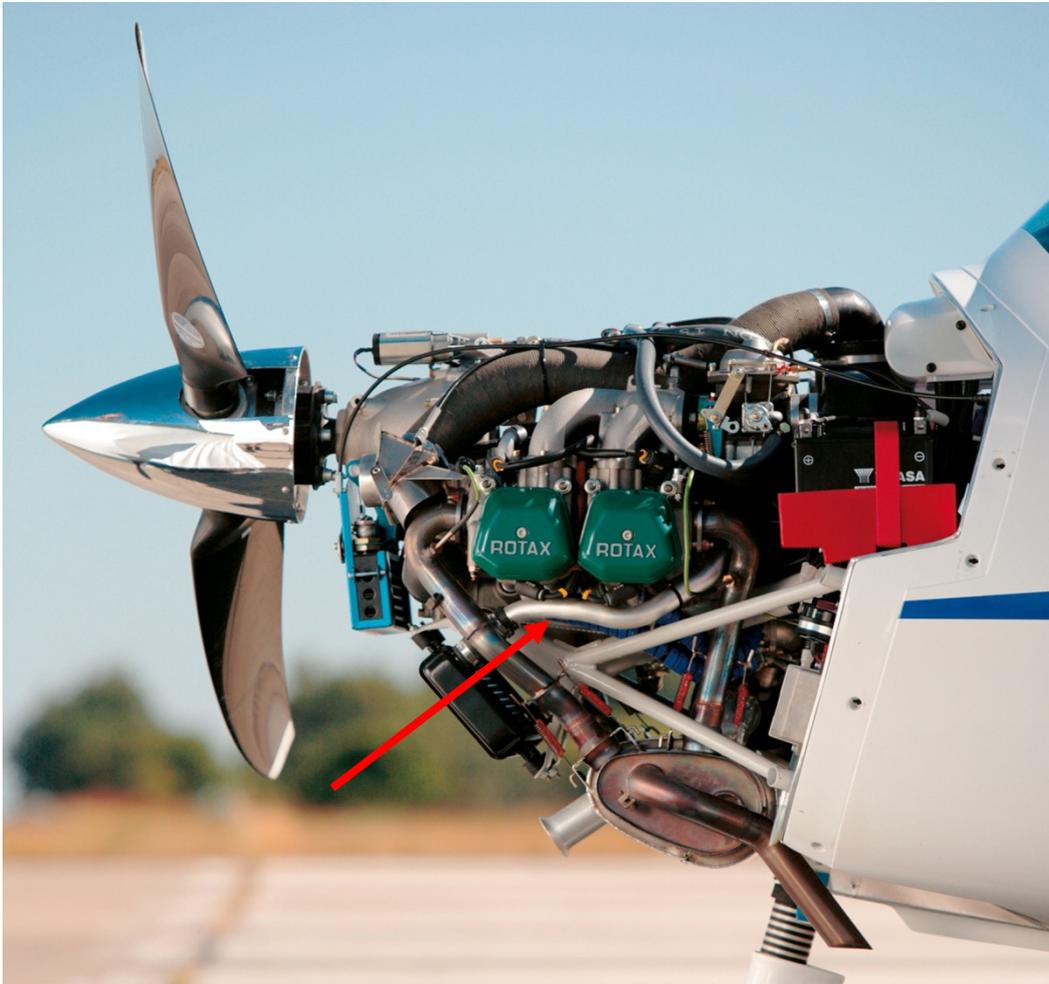


Figure 1 – Lying of the cooling water tube



Figure 2 – Damaged cooling water tube

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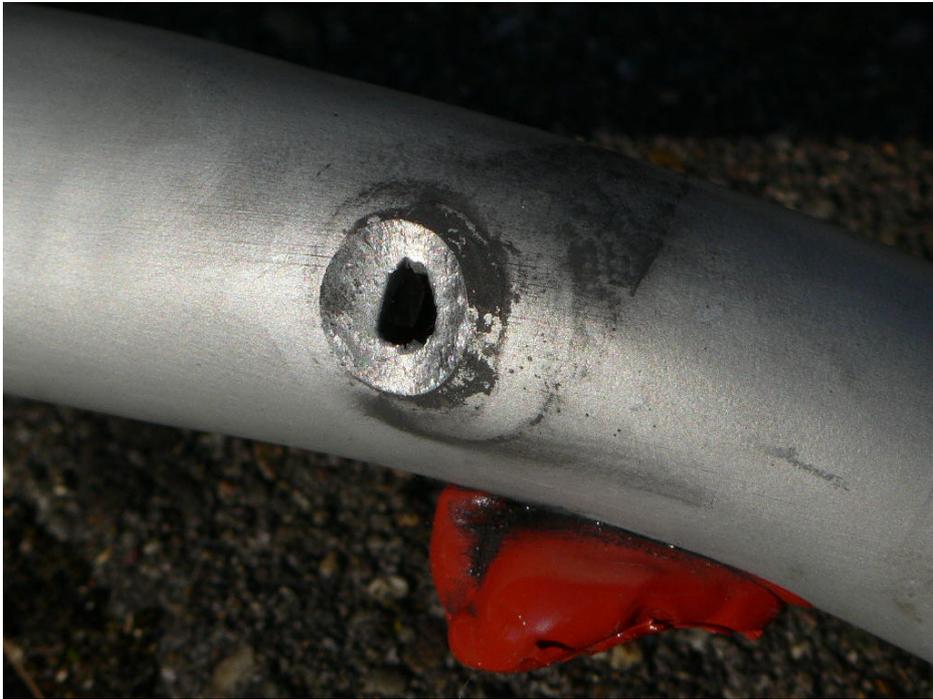


Figure 3 – Detail of defect cooling water tube

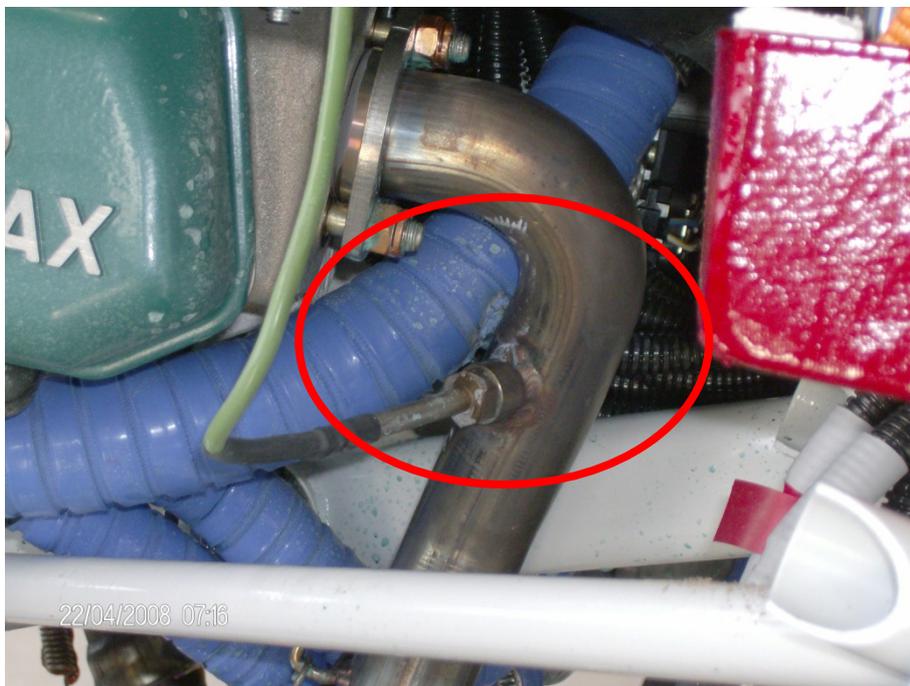


Figure 4 – Defect coolant hose

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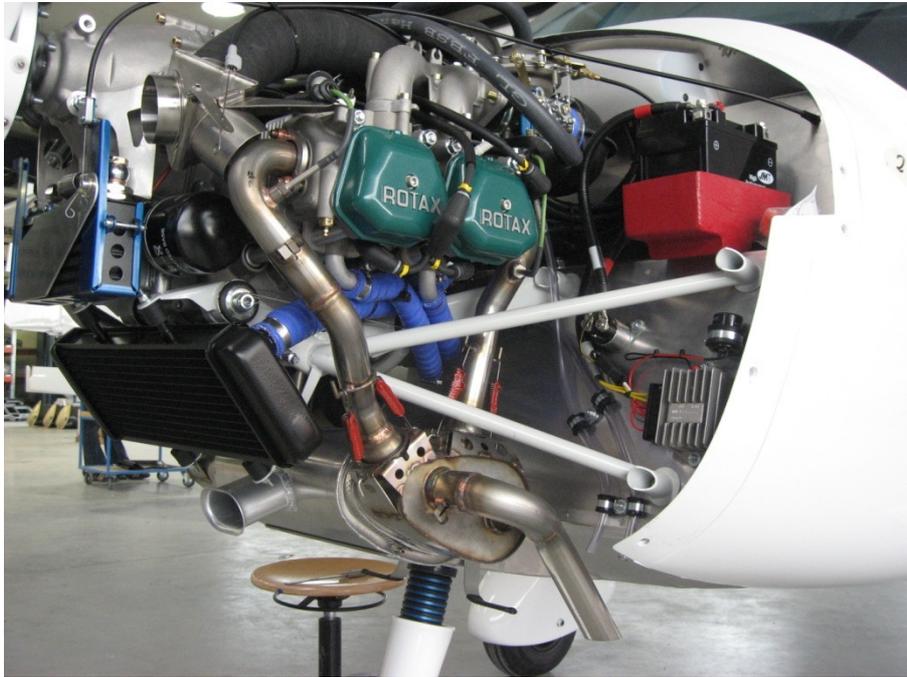


Figure 5 – Overview correct hoses from/to the engine, left-hand side



Figure 6 – Overview correct hoses from/to engine, right-hand side

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Figure 7 – Hoses from/to engine, detail view left-hand side

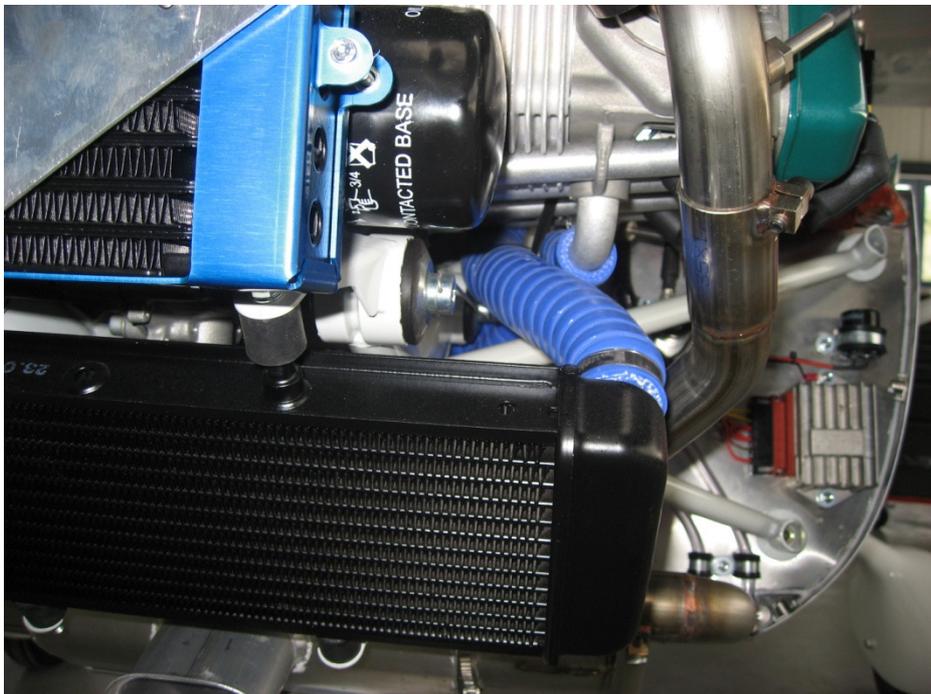


Figure 8 – Hoses from/to engine, detail view front-left

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Figure 9 – Hoses from/to engine, detail view right-hand side



Figure 10 – Hoses from/to engine, detail view front-right

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Feedback - Service Directive SD-003

The Service Directive SD-003 was accomplished at the airplane S/N _____ and written down in the logbook. Result of inspection:

No abnormality detected

Following coolant pipes/hoses were damaged:

Place, Date

Name

Signature

Thank you for your assistance and always good luck!