



Service Bulletin

Change of measurement method from cylinder head temperature to coolant temperature for ROTAX Engine Type 912 (Series) – revision

MANDATORY

Symbols:

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

- ▲ 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 / engine or could lead to suspension of warranty.
- ◆ NOTE: Information useful to implement the change more easily.

1. General

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Release date: May 27th 2015

Date of effect: immediately

Compliance: Within 25 operating hours but before March 31st 2015

Release number: SB-012-modification-ROTAX-CHT-revision

Superseded notice: SB-011-modification-ROTAX-CHT

This revision contains over the original document modifications to the cockpit stickers and additional sections of the pilot operating handbook. Added paragraphs are highlighted in yellow.

Compliance with SB-012 replaces compliance with SB-011.



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Referenced documents: ROTAX Service Bulletin ROTAX SB-912-066 R3/SB-912-068 UL R3, latest issue available via download on www.flyrotax.com

REMOS pilot operating handbook, latest revision for the aircraft

Models affected: G3/600, GX

Affected S/N:

- Aircraft with engine serial no. as per referenced document
- Aircraft with engines, that have been equipped with new cylinder heads as spare part or during engine repair/general overhaul since March 1st 2013

Reason: As per referenced document: In the course of continuous development and standardization with ROTAX 912 i Series, new cylinder heads with modifications in its mold have been introduced. Due to these changes the coolant temperature instead of the cylinder head temperature in the aluminium will be displayed. Check the temperature limit for the new positioned measuring point of the cylinder head displayed in the cockpit and if necessary correct its naming (measuring position) and limit.

Subject:

- Periodic inspection of the float buoyancy of ROTAX engine type 912 (Series)

Time required:

- check for applicability approx. 20 min
- modification of engine display approx. 30...60 min
- modification of cockpit sticker approx. 10 min
- modification of POH: approx. 10 min
- modification of engine type plate: approx. 15 min

2. Material Information

Tools needed:

- As per referenced document and instructions of chapters 5 and 6

Parts needed:

- none

3. Compliance

Schedule for inspection:

- within 25 operating hours, not later than March 31st 2015

Level of maintenance:

- check for applicability line
- modification of engine display line
- modification of cockpit sticker line
- modification of POH: line



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- modification of engine type plate: line

License required:
(US-LSA)

check for applicability:

- owner/operator with Sport Pilot Licence (or higher)
- LSA Repairman, or
- A&P Mechanic, or
- Part 145 Repair Station

modification of display:

- owner/operator with Sport Pilot Licence (or higher)
- LSA Repairman, or
- A&P Mechanic, or
- Part 145 Repair Station

modification of cockpit sticker:

- owner/operator with Sport Pilot Licence (or higher)
- LSA Repairman, or
- A&P Mechanic, or
- Part 145 Repair Station

modification of POH:

- owner/operator with Sport Pilot Licence (or higher)
- LSA Repairman
- A&P Mechanic
- Part 145 Repair Station

modification of engine type plate:

- owner/operator with Sport Pilot Licence (or higher)
- LSA Repairman
- A&P Mechanic
- Part 145 Repair Station

License required:
(EASA-LSA)

check for applicability:

- pilot / owner with appropriate pilot license
- REMOS Aircraft GmbH Flugzeugbau or REMOS Service Center

modification of display:

- REMOS Aircraft GmbH Flugzeugbau or REMOS Service Center

modification of cockpit sticker:

- pilot / owner with appropriate pilot license
- REMOS Aircraft GmbH Flugzeugbau or REMOS Service Center



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modification of POH:

- pilot / owner with appropriate pilot license
- REMOS Aircraft GmbH Flugzeugbau or REMOS Service Center

modification of engine type plate:

- pilot / owner with appropriate pilot license
- REMOS Aircraft GmbH Flugzeugbau or REMOS Service Center

4. CHECK for APPLICABILITY

Check engine SN: The engine serial number is named on the aircraft equipment list and on the engine data plate, which is found on the ignition cover, on the left, opposite the electric starter. See ROTAX Maintenance Manual (Line) for further information.

◆ **NOTE:** If the engine data plate contains the suffix -01 at the end of the engine type designation, this SB has already been executed or the engine is very recent. The applicability of the steps in chapters 5 and 6 is to be checked nevertheless. Chapter 7 can be omitted.

Check cylinder 3 head type: The cylinder head temperature is measured at cylinder 3 in REMOS aircraft. It is located on the rear right side, seen in direction of flight (the cylinder numbers are also written on the intake manifold). The part number of the cylinder head in this position needs to be determined, it is written on the cylinder head itself at the position which is given in the referenced document. There the part numbers corresponding to the modified cylinder heads are also given.

Applicability: First it needs to be determined, whether a cylinder head with the modification is installed at cylinder 3. Afterwards a check is required, whether the permitted maximum cylinder head / coolant temperature on the engine instrumentation as well as in the pilot operating handbook is set to the corresponding value, as described in chapters 5 and 6.

If a cylinder head of the new type is installed, the engine data plate is to be modified according to chapter 7

5. INSTRUCTIONS for MODIFICATION of the PERMITTED OPERATING TEMPERATURE on the ENGINE DISPLAY



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5.1 Instructions:

Follow the referenced document and instructions given below.

- ◆ NOTE: Before maintenance, review the entire documentation to make sure you have a complete understanding of the procedure and requirements.

- ◆ NOTE: All work has to be performed in accordance with the relevant Installation Manual and Maintenance Manual.

5.2 Safety notice:

none

5.3 Preamble:

On cylinder heads of the conventional design, the temperature of the aluminium was measured, which may be as high as 135 °C (275 °F). On cylinder heads of the new design, the temperature of the coolant is directly measured, which may only be 120 °C (248 °F).

On aircraft with a cylinder head of the new design at cylinder 3, the engine instrumentation has to be modified to display this upper limit.

5.4 Bill of Materials:

See referenced document

5.5 Preparation:

none

5.6 Procedure (analogue engine instruments):

Remove glass cover, if required uninstall the cylinder head temperature gauge.

Modify the engine temperature range with paint or adhesive tape according to the changed maximum temperature.

Reinstall the glass cover, if required reinstall the gauge into the dashboard.



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5.6 Procedures (digital engine instruments):

For modification of the temperature range on ROTAX flydat or DYNON D120, D180 and SkyView displays, follow the instructions of the instrument manufacturer, given in the according manual.

5.7 Modification of the max. permitted Cylinder Head Temperature on the Cockpit Sticker

The maximum permitted cylinder head temperature is stated on a sticker on the center console in the cockpit.

The value for the max. cylinder head temperature shall be modified analogue to the engine instrumentation. This can be done using a white permanent marker or an additional sticker.

6. INSTRUCTIONS for MODIFICATION of the PERMITTED OPERATING TEMPERATURE in the PILOT OPERATING HANDBOOK

6.1 Preamble:

The permitted cylinder head temperature is given in the pilot operating handbook in chapter 02 "Limitations" (for NXT and eLITE versions as well as chapters 4 of the supplements "glider towing" and "banner towing" for all aircraft versions). The listed instances refer to the most recent revisions at the date of publishing of this SB.

The standard cockpit version did not contain an instance of the maximum cylinder head temperature up to the latest revision, which already includes the modified CHT. For this version, no modification of the POH is required, it is recommended to obtain the latest revision.

On aircraft with a cylinder head of the new design at cylinder 3, the value for the maximum permitted cylinder head temperature has to be changed to 120 °C (245 °F) in writing. Subsequent revisions of the POH will contain both temperatures. If a cylinder head of the conventional design is installed to an aircraft with a handwritten modification of the POH, a new POH of the latest revision is to be acquired.

6.4 Bill of Materials:

none

6.5 Preparation:

none



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6.6 Procedures (Only for NXT and eLITE versions):

In section 2.17 "Engine" on page 2 - 8 the value for "cylinder head temperature – maximum" shall be changed to 248 °F (120 °C) in writing.

6.7 Procedures (for all aircraft versions):

In supplement "glider towing" in section 4.4 "Descent" on page 10 - 8 the value for "11. CHT max" shall be changed to 248 °F (120 °C) in writing.

In supplement "glider towing" in section 4.6 "Landing" on page 10 - 9 the value for "11. CHT max" shall be changed to 248 °F (120 °C) in writing.

In supplement "banner towing" in section 4.4 "Descent" on page 11 - 8 the value for "11. CHT max" shall be changed to 248 °F (120 °C) in writing.

7. INSTRUCTIONS for MODIFICATION of the ENGINE TYPE PLATE

7.1 Instructions:

Follow the referenced document and instructions given below.

- ◆ NOTE: Before maintenance, review the entire documentation to make sure you have a complete understanding of the procedure and requirements.
- ◆ NOTE: All work has to be performed in accordance with the relevant Installation Manual and Maintenance Manual.

7.2 Safety notice:

none

7.3 Preamble:

For ease of identification of engines with a cylinder head of the new design at cylinder 3, these engines shall receive the suffix "-01" after the engine type designation. Type plates of more recent engines contain this suffix from the factory, in this case no action is required.

7.4 Bill of Materials:

none



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7.5 Preparation:

none

7.6 Procedure:

The suffix to the engine type designation is to be added permanently. For the procedure check the referenced ROTAX SB-912-068 (UL).

8. DOCUMENTATION:

Execution of this Service Bulletin must be entered in both the aircraft and engine logbook by a licensed person. Include engine SN and type of the cylinder head at cylinder 3.

**REMOS wishes you safe and fun flights!
Always check your aircraft before you fly!**