

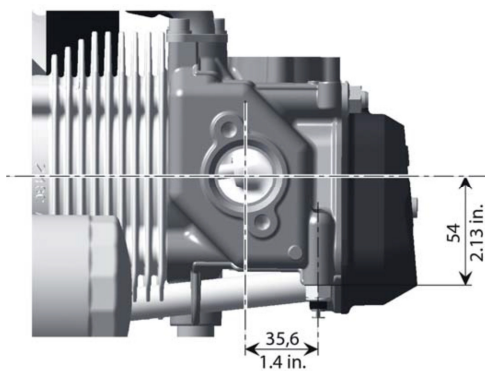
Reference: BMAA Service Bulletin 2612 issue 1
Title: Rotax 912-series cylinder head temperature measurement
Applicability: All BMAA aircraft with Rotax 912-series engine
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Classification: Recommended Service Bulletin

1 Introduction

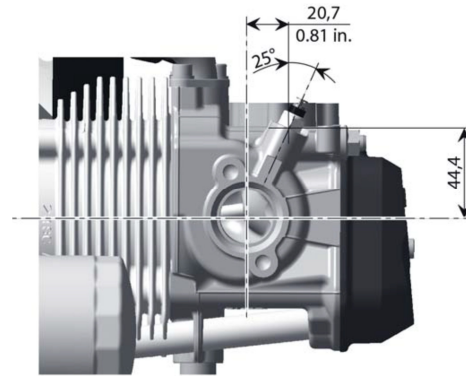
In 2013 Rotax changed the detailed design of the cylinder head on their 912-series engines (including the 912 / 912UL and 912S / 912ULS). The temperature measurement point, which used to measure cylinder-head temperature (CHT), now measures coolant temperature, which has a lower maximum temperature.

2 Details

The drawings below show the old type head, which measures CHT, and the new type head, which measures coolant temperature. The new type head can be retrofitted to older engines (but is not suitable for use with waterless coolant, such as Evans’).



CHT measurement (old)



Coolant temperature measurement (new)

Rotax has decided that if an engine has a new type head fitted to it, the engine type designator should have ‘-01’ appended to. This is to help identify these engines in future documents. The photo to the right shows an amended type plate for a certified 912S engine.



3 Action

If your aircraft has a CHT gauge (or displays CHT on an EFIS or EMS)...

- Check the cylinder head whose temperature it is measuring. If it is the new type of cylinder head:
 - Change the marking of the gauge to show that it is measuring COOLANT temperature, not CHT;
 - Change the maximum temperature limit on the gauge to the maximum coolant temperature of 120°C;
 - Ensure any engine limitation placard displays the maximum coolant temperature.

If your engine has the new type of cylinder head...

Append ‘-01’ to the engine type in the front of the engine logbook (if it does not have it already). For example a ‘912UL2’ becomes a ‘912UL2-01’. Also amend the type plate fitted to the engine (similarly to the photo above), although this can be delayed until the next time the engine is removed.

Record compliance with this Service Bulletin in the engine logbook (even if no action was required).

PTO

Appendix 1 - Notes

- It is recommended that this Service Bulletin is complied with as soon as practicable. It is anticipated that the UK CAA will mandate this Service Bulletin with a Mandatory Permit Directive (MPD), in which case the timescale specified in the MPD must be complied with.
- All BMAA aircraft have a list of required instruments that must be fitted, which is contained in the TADS / HADS for the type. BMAA aircraft powered by a Rotax 912-series engine are required to display either CHT or coolant temperature. Therefore changing from measuring CHT to measuring coolant will not invalidate the instrument fit. Simply deleting a CHT gauge will invalidate the instrument fit unless coolant is independently monitored.
- If the aircraft displays CHT on an EFIS (Electronic Flight Information System) or EMS (Engine Monitoring System) the minimum requirement is that the temperature limit is lowered to the coolant temperature limit. If possible, the CHT display should be changed to a coolant display.
- To measure coolant temperature, a Rotax 912-series engines with the old style (CHT measuring) cylinder head required an additional temperature sensor located somewhere in the cooling system. What such a sensor will indicate in case of a loss of coolant - 'high', 'low', or 'normal' temperature - depends very much on the sensor's location. The new cylinder head is more reliable in that it will normally give a 'high' temperature reading in case of coolant loss.
- More significant changes (than those described in Section 3) to the instrument fit require assessment, and potentially approval, by the BMAA Technical Office.

Appendix 2 - Further information

Rotax docs: SB-912-066 & SB-912-066UL; SB-912-068 & SB-912-068UL; SI-912-016

Note: The technical content of this document is approved by the BMAA, UK CAA organisation approval ref. DAI/8909/84.