

# RotorSport UK Ltd Service Bulletin

<b>Title: PTFE oil hose construction and new thermostat</b>		
<b>SB No.: 062 Iss1</b>	<b>Related documents</b> MC No: MC-222 CCAR No.: None	<b>Compliance Category:</b>  <b>OPTIONAL</b> <del>or</del> <b>RECOMMENDED</b> or <b>MANDATORY</b>
<b>Applicability</b>		
<b>Aircraft type &amp; model:</b>  MT-03, MTOsport, Calidus	<b>Aircraft serial Nos. affected:</b>  Any a/c presently fitted with rubber hoses between thermostat and oil cooler and/or the oil return line(s)	
This form is the response from RotorSport UK Ltd either against a problem found in the product in service requiring a containment or rectification action, or as service information for aircraft modification incorporation. For help, contact RotorSport on 44(0)1588 650769, or email info@rotorsport.org.		
<b><u>Reason and overview of the Service Bulletin (cause of problem if known)</u></b> Under MC-222 stainless-steel braided/PTFE-lined hoses may be fitted to MT-series and Calidus aircraft in place of the original rubber hoses. This hose construction offers an improved service life and removes the Rotax requirement for replacement (of rubber hoses) every five years. As the hose end fittings are different a new thermostat is required. This SB-062 is best embodied at the same time as a 100hour/Annual engine service.		
<b><u>Approval</u></b> The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: <b>DAI/9917/06</b>		
<b><u>Manpower estimates</u></b> Accomplishment of this Service Bulletin requires the following personnel (i) A3-7 (or equivalent) authorised engineer  Estimated man-hours to complete the task as a standalone item are; 1.0hours  Task limitation – None specific		
<b><u>Tooling required</u></b> Hand tools as required		
<b><u>Weight and Balance Effects</u></b> No significant effect		
<b><u>Manuals affected</u></b> The aircraft AMM's are affected by reference to the improved service life of the PTFE hoses. The Pilots Handbooks are not affected.		
<b><u>Previous Modifications that affect the SB</u></b> SB-036 Oil Thermostat insulator will need re-instatement if fitted.		

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<b><u>Accomplishment instructions (Action required to implement this bulletin):</u></b> The effective date of this SB is 15.09.14. There is no relevant MPD applicable to this SB. Reference should be made to the current issue of the Rotax Line Maintenance Manual, either "912Serie" or "914Serie".		
<b><u>Procedures</u></b> <ol style="list-style-type: none"> <li>1) If it is intended to change the engine oil and filter drain the oil, remove, inspect and replace the filter as defined in the Rotax Line Maintenance Manual, otherwise disconnect the oil pump feed pipe from the oil tank to prevent oil syphoning.</li> <li>2) Note or photograph the hose routing and the location of cable ties used to restrain the hoses. On replacement of the hoses reinstate these cable ties after verifying there is no twisting or kinking of the hoses and no points of abrasion.</li> <li>3) Remove the whole thermostat/pipe assembly by disconnecting the two upper pipe junctions and replace with the new assembly.</li> <li>4) Remove the sump return hose (note the wire-locking arrangement) and replace with the new hose, fitting new copper washers to the banjo end and tightening to 30Nm (912ULS) or 35Nm (914UL). Replace the locking wire.</li> <li>5) If a 914UL engine remove the turbo return hose and replace with the new hose, fitting new copper washers at each end and tightening to 12Nm at the oil pump and 25Nm at the oil tank. Use torque-seal lacquer to mark the fastener.</li> <li>6) Refit the oil pump feed pipe to the oil tank</li> <li>7) Purge the oil system (essential) and correct the oil level in accordance with the Rotax Line Maintenance Manual and Service Instruction SI-912-018R1/SI-914-020/R1.</li> <li>8) Following safe practice and with a trained pilot in the aircraft start and warm the engine. Check that the oil pressure rises and stabilizes in accordance with the information in the Pilots Handbook. After stopping the engine and cooling to handling temperature check for and rectify any oil leaks from the new fittings.</li> </ol>		
<b><u>Material information (Parts required to be made to implement this service bulletin):</u></b> If SB-036 "Oil thermostat Insulator" was originally fitted this should be re-instated after embodiment of this SB-062.		
<b><u>List of components (with purchasable part nos)</u></b>		

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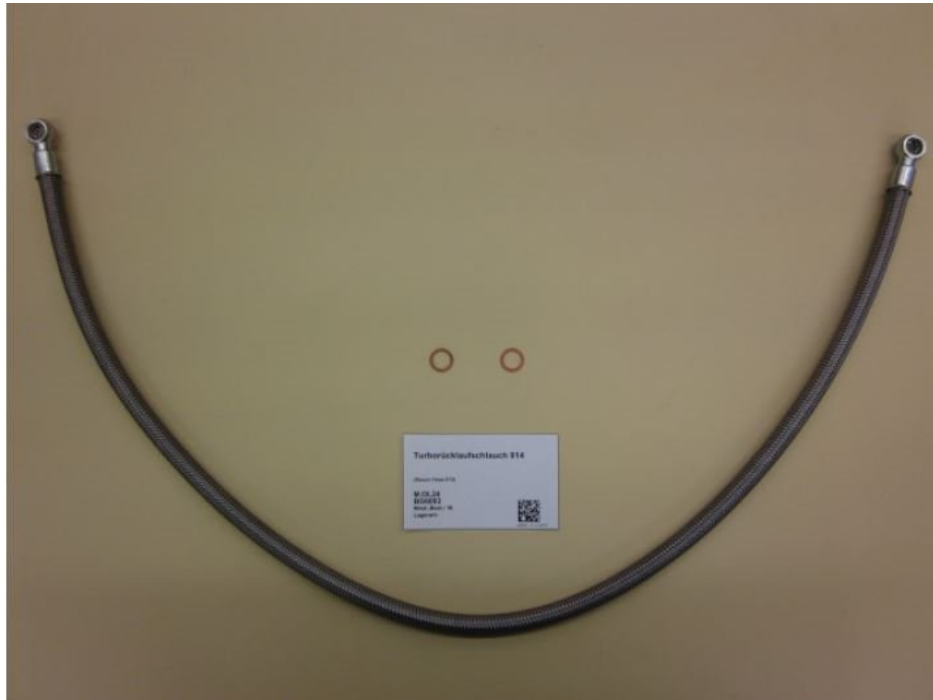
Thermostat set



Sump return

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Turbo return

MT-series with 912ULS engine

- M.OL17 (BG4077) Oil thermostat set (including pump adaptor and seal)
- M.OL18 (BG4084) Sump return hose 912ULS
- RSD6355 Copper washer sump hose – 2-off

MT-series with 914UL engine

- M.OL17 (BG4077) Oil thermostat set (including pump adaptor and seal)
- M.OL19 (BG4085) Sump return hose 914UL
- M.OL24 (BG6003) Turbo return hose
- RSD6355 Copper washer sump hose – 2-off
- Rotax 230150 Copper washer turbo return banjo – 4-off

Calidus with 912ULS engine

- C.OL14 (BG4464) Oil thermostat set (including pump adaptor and seal)
- C.OL201 (BG5128) Sump return hose 912ULS
- RSD6355 Copper washer sump hose – 2-off

Calidus with 914UL engine



- C.OL14 (BG4464) Oil thermostat set (including pump adaptor and seal)
- C.OL301 (BG5129) Sump return hose 914UL

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<p>C.OL304 (BG6003) Turbo return hose  RSD6355 Copper washer sump hose – 2-off  Rotax 230150 (10x14) Copper washer turbo return banjo – 4-off</p> <p>Plus:  Cable ties as required (RSD4207 4mm, RSD4208 6mm)  Engine oil filter and oil to Rotax requirements (RSUK recommend Shell Advance AX7).</p>		
<b><u>Interchangeability</u></b> Not affected		
<b><u>Parts disposition</u></b>		
<p>a) Disposal requirements (whether discard or re-use) – discard old hoses and thermostat in normal waste. Dispose of waste oil at a local recycling facility.</p> <p>b) Environmental hazards of parts containing hazardous materials – minimise skin contact with waste oil.</p> <p>c) Scrap requirements (e.g. mutilate scrapped items beyond use) – not applicable.</p>		
<b><u>Documentation (Service Bulletin Completion action)</u></b>		
<p>a) Entries are required within the aircraft logbooks, eg Authorised Person has to certify that the work is completed by writing ‘SB-062 Iss1 PTFE Oil hoses/new thermostat fitted’ in the aircraft logbook white pages, and record the action in the pink pages entitled ‘Aircraft Modifications’. Both entries must be signed by the Authorised Person together with their Authorisation number.</p> <p>b) Completion of the SB worksheet attached, This must contain a PMR statement, and a final check item that no tools or equipment have been left within the aircraft.</p>		

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Document approval signatures			
<b>Engineering Manager</b>  	<b>CVE (as required)</b>  Not required as no structural changes	<b>Chief Test Pilot (if flight performance or safety effect)</b>  = Not required as no effect on flight characteristics	<b>Head of Airworthiness</b>   30 Oct 2014

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## Service Bulletin implementation Worksheet

<b>Aircraft type:</b>	<b>Serial no:</b>	<b>G-</b>
<b>Worksheet completed by:</b>		<b>Document ref:</b>  <b>SB-062 Iss1</b>
<b>Worksheet cross-checked by (if applicable):</b>		
Purpose – record service bulletin implementation actions taken to inspect aircraft and return to service.		
Maintenance manual referred-to and issue level/date:	MT-03 RSUK0012 Iss 9 MTOsport RSUK0044 Iss 7 Calidus RSUK0061 Iss 5.1 (Delete as applicable)	

**Note: attach SB sheets to this document**

Task	Notes	Eng'r check/date	Inspector check/date
Drain oil and change filter (if required)			
Remove hoses and thermostat			
Fit new hoses/thermostat replacing copper washers as detailed			
Replace wire locking			
Refill, purge lubrication system and reinstate oil level	Rotax Line Maintenance Manual		
Fit new oil thermostat insulator (if previously fitted)			
Test run satisfactory, no leaks found.			

### Customer acceptance:

Name:  Signature/date:	Aircraft hobbs meter reading:  Confirm logbooks annotated:
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**Permit Maintenance Release:**  
*'The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight. I confirm that no tools, equipment or debris have been left in the aircraft'*

Engineer signature and date:   CAA (or equivalent) Authorisation code :	Location where work completed
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