

# RotorSport UK Ltd    Service Bulletin

<b>Title: Side scoop radiators</b>		
<b>SB No.: 089 Iss1</b>	<b>Related documents</b> MC No: None CCAR No.: None	<b>Compliance Category:</b>
<b>Applicability</b>		<b>OPTIONAL or RECOMMENDED or MANDATORY</b>
<b>Aircraft type &amp; model:</b>  MT-03, MTOsport	<b>Aircraft serial Nos. affected:</b>  Any a/c not already fitted with the side scoops as standard	

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](mailto:info@rotorsport.org).

**Reason and overview of the Service Bulletin (cause of problem if known)**

To cater for engine cooling in hot climates a radiator option exists whereby two scoops are fitted either side of the enclosure over the suspension bow, and two standard radiators fitted behind them. The scoops are mounted to the enclosure and the airframe and are non-structural parts. In the UK the installation has proved beneficial for operation of training aircraft.

This option (approved under AAN29134 and AAN29247) is now available for aftermarket fitment under this SB-089.



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<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; up to 10hours  Task limitation – task inspection may only be carried out by authorised A3-7 (or equivalent) engineer		
<b><u>Tooling required</u></b> Hand tools as required		
<b><u>Weight and Balance Effects</u></b> The modification adds approximately 2.5kg to the aircraft weight. This weight is already catered for within the existing approved limits.		
<b><u>Manuals affected</u></b> Pilots Handbooks RSUK0011 and RSUK0043 are not affected. AMM's RSUK0012 and RSUK0044 already accommodate the modification.		
<b><u>Previous Modifications that affect the SB</u></b> None		
<b><u>Accomplishment instructions (Action required to implement this bulletin):</u></b> The effective date of SB is 22.09.14. There is no relevant MPD or other outside body documentation referenced.		
<b><u>Procedures</u></b>  In preparation for the new installation drain the coolant, remove the existing radiator, radiator hoses and radiator brackets. Dispose of the brackets but retain the other parts. Subject to condition it may be possible to trim and refit the hoses.		

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- 1) Insert the grommets from M.WA07 into M.WA08 and M.WA09 mouldings



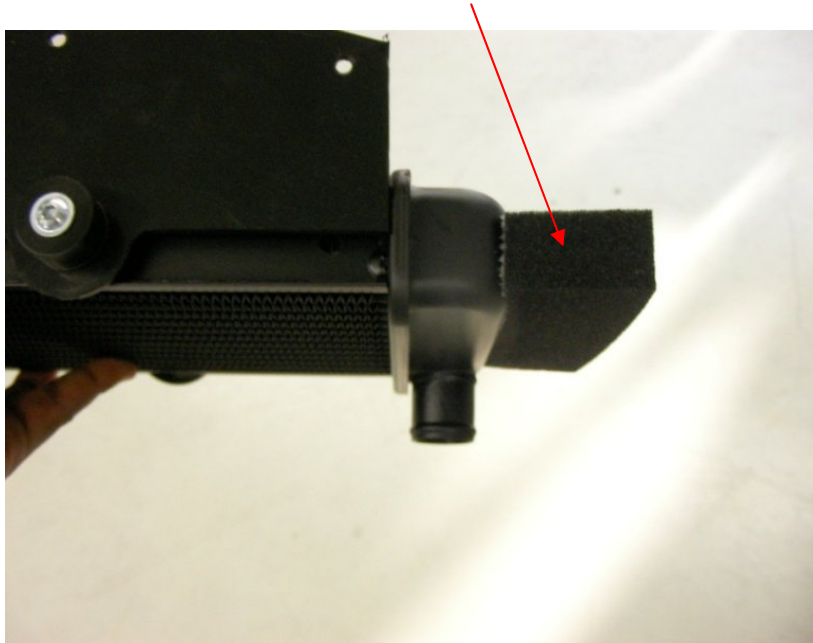
- 2) Assemble the air scoop/radiator mounts front and rear to the radiator using roundhead M6x12 screws and retaining caps from M.WA07



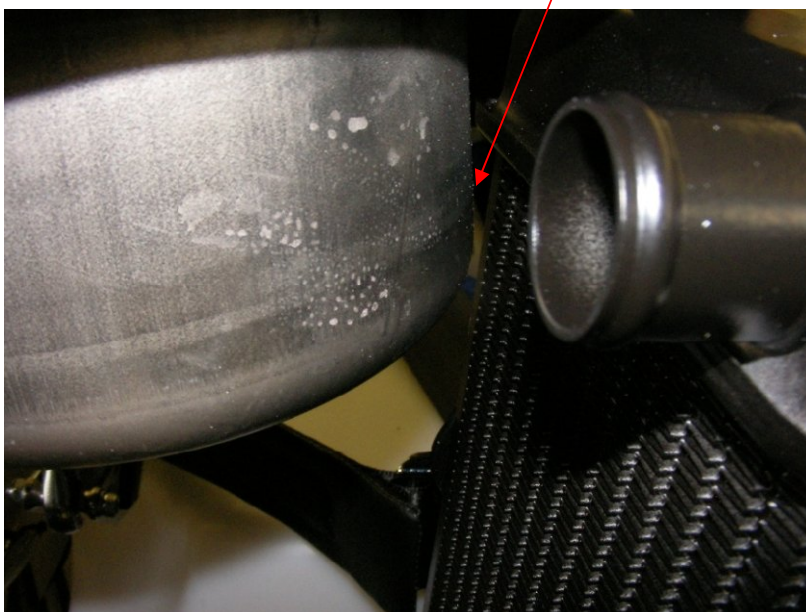
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- 3) Attach Kompriband self-adhesive foam to the base of the radiator



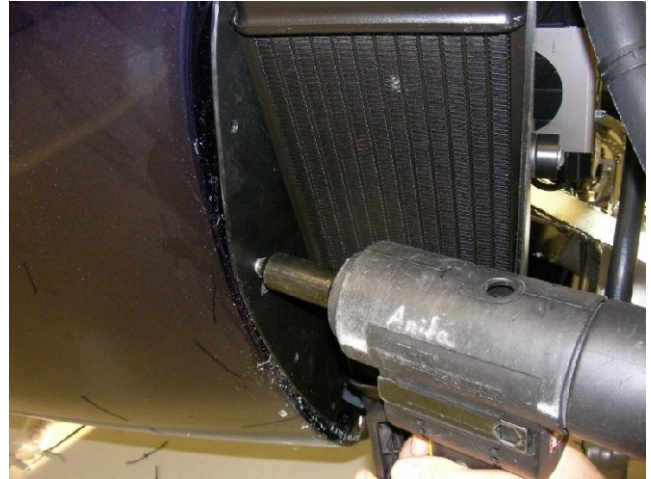
- 4) Position the radiator ensuring that the mounting follows the contour of the fuselage and that on the right-hand side there is enough clearance between the radiator and the oil tank



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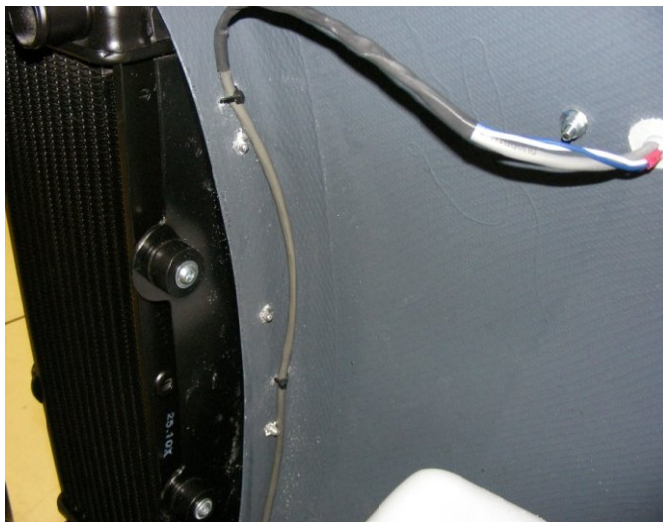
5) Mark the drilling points and then drill thru with a 5mm drill bit



## 6) Radiator Assembly

Rivet the radiator in position with 4.8x15 Alu blind rivets (alternatively use M5 fastenings)

If strobes are installed and if it is required to move the wiring harness, drill (from the rear) 3 pairs of parallel holes (5mm between the pair) on the left side. Feed small cable-ties through the holes and secure the strobe cable



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- 7) Fit captive nuts M6/9x17 and M4/6x13 from M.WA07 Attachment kit to the holes in the scoops. Apply Loctite 221 to all nuts. Assemble the scoops to the fuselage using M4x16 screws and U4/12 washers.



8) Front lower attachment

Insert an M6x20 screw with U6/18 washer and U6/18 white plastic washer through the fuselage, insert another two white plastic washers between fuselage and scoop and screw into the captive nut.



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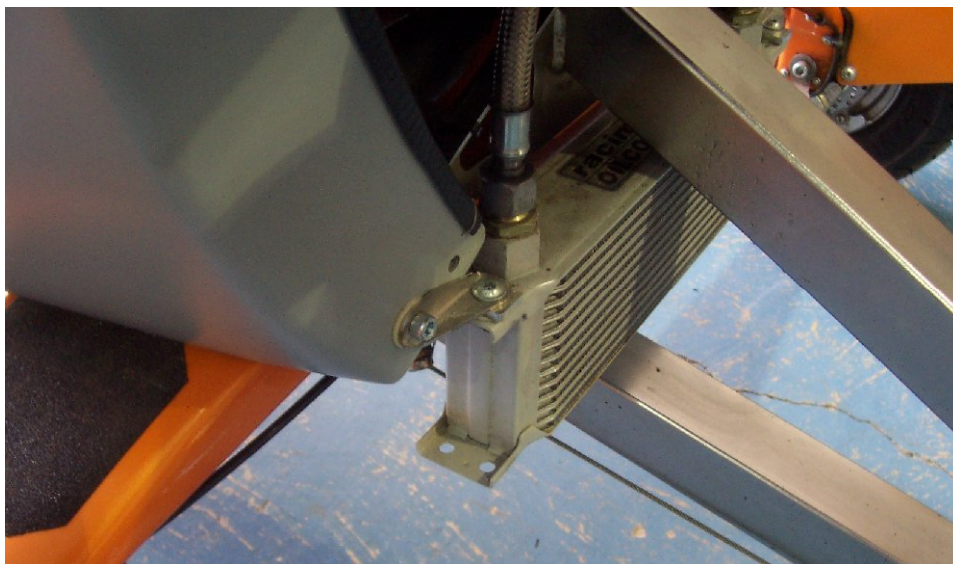
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## 9) Rear lower attachment

- Drill a 6mm hole in line with the support bracket hole in the scoop. Insert an M6x16 roundhead screw with U6/18 washer and U6/18 white plastic washer through the scoop, insert another white plastic washer between scoop and bracket and secure with an M6 nyloc nut

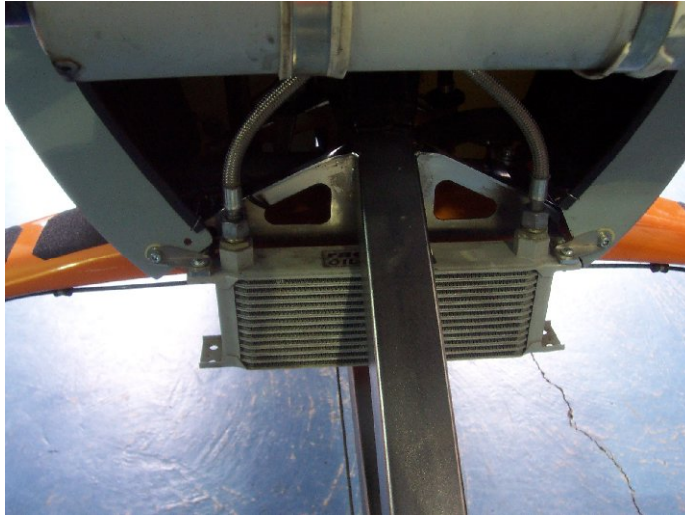


Depending on airframe configuration (MT-03 or MTOS) it may be necessary to use right-angled brackets RSD3045/RSD3046 to attach the enclosure to the oil cooler mounting on the airframe

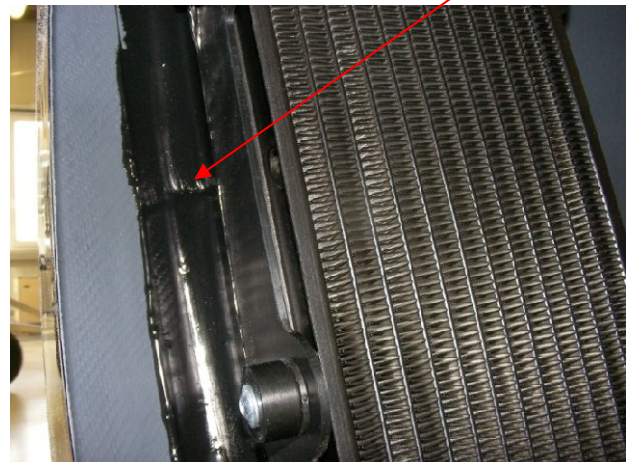
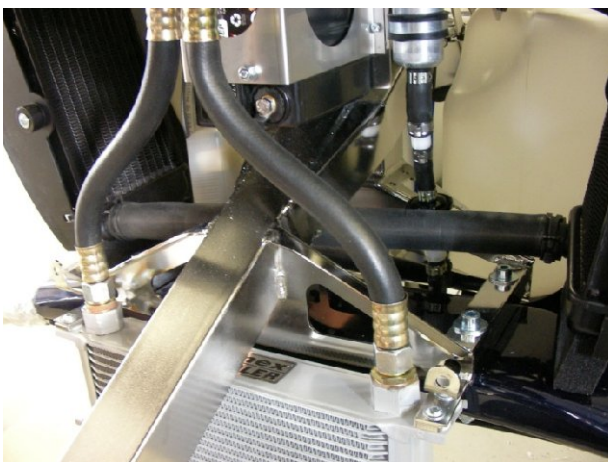


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- 10) Fit trim to rear edge of scoops and wire tie to scoop top and bottom.
- 11) Trim the coolant hoses to the correct length and de-grease with brake cleaner. Assemble the hoses on the radiators and secure with the hose clamps. Use cable ties and spacers made from scrap fuel hose to secure the hoses to the airframe. Re-fill the coolant system through the expansion tank with the recommended coolant (see AMM RSUK0012 or RSUK0044) and check for leaks. If all is satisfactory seal M.WA09 airscoops to the radiators at the rear using Sikaflex EBT mastic.



- 12) Allow the Sikaflex to cure for at least 24 hours at ambient temperature then following safe practice start and warm the engine to verify satisfactory cooling system performance. Check the coolant level when cooled to ensure it is correct, and top up as required.


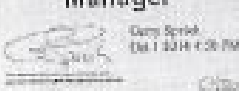



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<b><u>Material information (Parts required to be made to implement this service bulletin):</u></b> Simple rubber spacers are manufactured during embodiment of this Service Bulletin		
<b><u>List of components (with purchasable part nos)</u></b> M.KU13 (BG381) Airscoop left M.KU14 (BG382) Airscoop right M.WA08 (BG160) Radiator attachment kit front M.WA09 (BG161) Radiator attachment kit rear M.WA07 (BG159) Attachment kit scoops M.WA05 (BG157) Hose kit scoops RSD4107 (or M.WAE01) Radiator RSD 4068 Sikaflex EBT (as required) RSD4206 Cable tie 2.4mm (as required) RSD4207 Cable tie 4mm (as required) Scrap fuel hose for spacers		
<b><u>Interchangeability</u></b> Not affected		
<b><u>Parts disposition</u></b> a) Disposal requirements (whether discard or re-use) – normal waste b) Environmental hazards of parts containing hazardous materials – not applicable c) Scrap requirements (e.g. mutilate scrapped items beyond use) – not applicable.		

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<b>Documentation (Service Bulletin Completion action)</b>		
<p>a) Entries are required within the aircraft logbooks, eg Authorised Person has to certify that the work is completed by writing 'SB-089 Iss1 Side scoop radiators 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>		

Document approval signatures			
<b>Engineering Manager</b>   <small>Copy Sent: 06.10.14 4:26 PM</small> 	<b>CVE (as required)</b>  Not required as no structural change	<b>Chief Test Pilot (if flight performance or safety effect)</b>  Not required as no effect on flight characteristics	<b>Head of Airworthiness</b>   2 Oct 2014

# RotorSport UK Ltd Service Bulletin

Service Bulletin implementation Worksheet			
Aircraft type:	Serial no:	G-	
Worksheet completed by:		Document ref:	
Worksheet cross-checked by (if applicable):		SB-089 Iss1	
Purpose – record service bulletin implementation actions taken to inspect aircraft and return to service.			
Maintenance manual referred-to and issue level/date:	MT-03 AMM RSUK0012 Iss8 MTOsport AMM RSUK0044 Iss6 (Delete as applicable)		
<b>Note: attach SB sheets to this document</b>			
Task	Notes	Eng'r check/date	Inspector check/date
Coolant hoses satisfactory/not satisfactory for re-use			
Scoop installation structurally secure			
Coolant system leak-tight			
Engine run satisfactory			

Customer acceptance:	
Name:	Aircraft hobbs meter reading:
Signature/date:	Confirm logbooks annotated:
Permit Maintenance Release:	
<b><i>'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'</i></b>	
Engineer signature and date:	Location where work completed
CAA (or equivalent) Authorisation code :	