

# RotorSport UK Ltd

## Service Repair Request and Evaluation/Approval

<p>This form (Part 2 of 2) is the response from RotorSport UK Ltd to a Service Repair and Evaluation/Approval request, which specifies the company authorised repair method. Deviation from this method renders the authorisation ineffective.</p> <p>Upon completion of the repair the repairer must enter details into the logbook/worksheet with the repair number and sign as normal.</p> <p>If any problems with carrying out the work authorised, contact RSUK immediately on 44(0)1588 650769, or email <a href="mailto:info@rotorsport.org">info@rotorsport.org</a>.</p>		
Repair No.: <b>013 Issue 1, 30.10.12</b>	CCAR No.: None Mod approval No. MC-223	Repair classification: <del>MAJOR</del> <b>MINOR</b>
Aircraft type: MT-03 (all aftermarket only)	Aircraft serial No.: OPEN (first application G-CFKA RSUK/MT03/051)	
<p>Repair problem description &amp; cause of problem if known:                  Aircraft G-CFKA suffered a slightly bent mast during a slow speed rollover. The bend is not considered significant enough to warrant airframe replacement, and this repair authorises straightening the mast and then strengthening the damaged area with a welded on doubler.</p> <p>NB: The weld repair may only be carried-out by a CAA approved welder.</p>		
<p>Approval statement.</p> <p>The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: DAI/9917/06.</p> <p>Tooling required. Jigs to straighten the mast are workshop created to suit the aircraft.</p> <p>Weight and balance. There is no effect on the issued AWC for the aircraft.</p> <p>Manuals affected. There is no effect on the aircraft POH or AMM.</p> <p>Previous modifications affecting this SRA. None.</p> <p>Accomplishment instructions.</p> <p>This repair is undertaken as part of other repairs works on the aircraft, and is a RotorSport workshop repair only.</p> <ol style="list-style-type: none"> <li>1. The mast is jig straightened using hydraulics. Correct straightness is measured using straight edges between the upper and lower masts, and twist by clamping a straight edge on the upper mast, and aligning with the keel.</li> <li>2. After satisfactory straightening, the mast is strengthened by welding in place a doubler (RSD3054) over the straightened area. This electropolished part is positioned as RSD7221 Mast Repair.</li> <li>3. Weld in place as per welding notes below.</li> <li>4. Check upper mast alignment after welding.</li> </ol> <p><u>Welding requirements</u></p> <ol style="list-style-type: none"> <li>1. Preparation of weld area                      Remove any lubricant deposits by cleaning with a lint-free cloth and suitable halogen-free solvent.                      Remove any surface debris by brushing with a stainless-steel wire-brush.</li> <li>2. Welding                      Position and clamp the parts in place                      Set the TIG welder for job +ve, electrode -ve.                      Using an electrode 2.4mm diameter, filler metal 316 stainless steel and heat-setting 60-70amps produce continuous fillet welds in a single run.                      Ensure that filler metal is present in the whole welded length so that a joint "fused only" is not created.</li> <li>3. Clean-up                      Remove burn marks from the weld and areas adjacent using a stainless-steel wire-brush followed by Scotchbrite pads or rubbing blocks if required.                      Do not use any acid treatment for clean-up</li> </ol>		

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### 4. Inspection

Using a magnifying glass at least 10x and good illumination inspect the weld to ensure that there is a high build for the whole length of the weld with no inclusions or voids present, the weld is free of cracks, and that the start and end of each run are of uniform shape.

Material requirements. None.

List of components require to complete this SRA. RSD3054 Doubler



Straightening jig  
Indentation in front of mast (sides pulled flat)

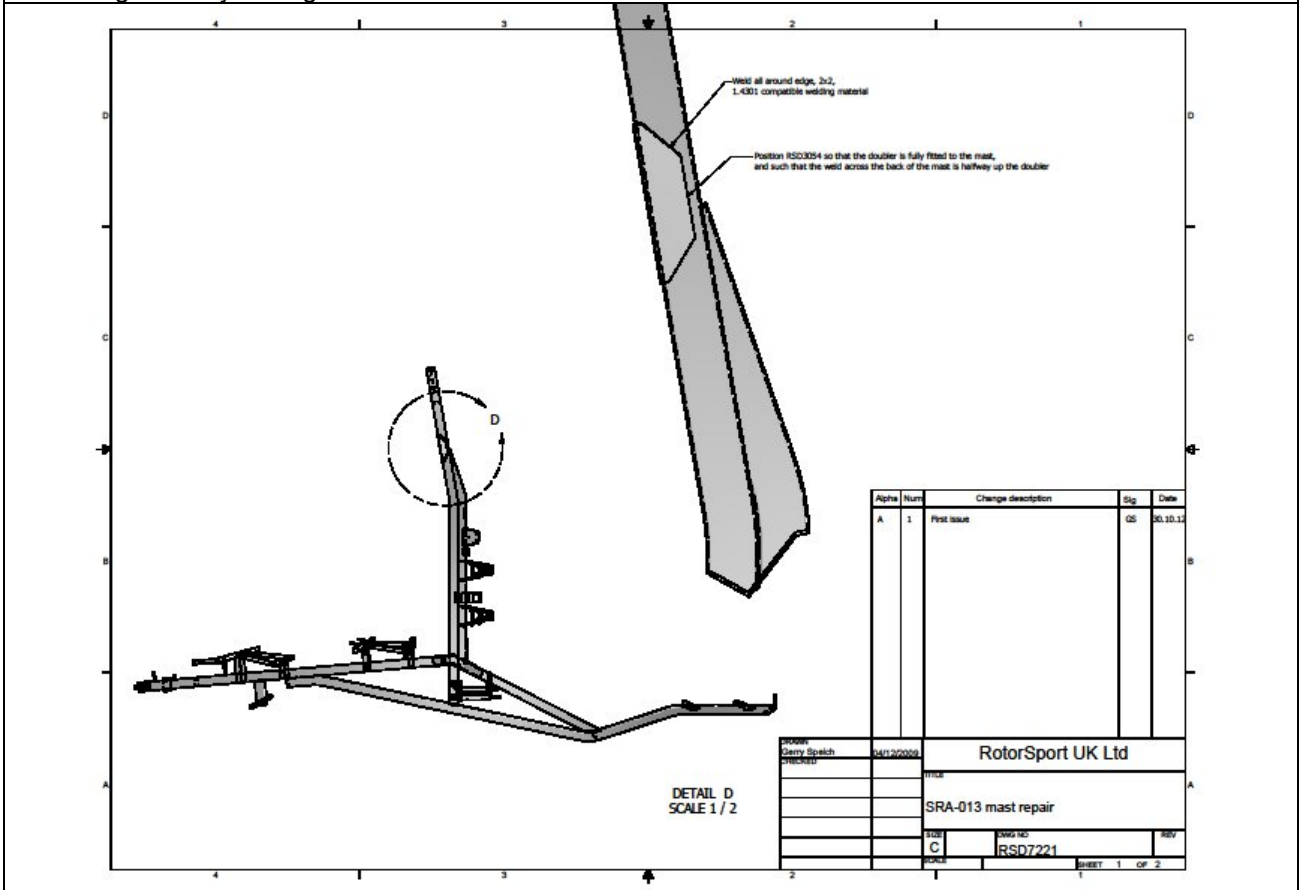


Straight edge showing straightness

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Checking sideways straightness



Special tools & Health and Safety requirements, and/or components required for repair:  
No special tools. Observe usual welding operational requirements.

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Quality Inspection requirements after repair: After welding check alignment of upper and lower mast.				
CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing 'SRA-0131 Mast repair incorporated' in the aircraft logbook white pages, and record the action in the pink pages entitled 'Aircraft Modifications'. Both entries must be signed by the CAA Authorised Person together with their CAA Authorisation number.				
<i>The technical content of this document is approved under the authority of the UK CAA                  Design Organisation Approval Ref: <b>DAI/9917/06</b></i>				
Service repair authorised by: (name, signature, and date of signature)				
Quality Conformance Manager	Engineering Manager	Chief Test Pilot (where an effect on flight performance or safety) Not required.	CVE	Head of Airworthiness
Document completion date:	Issued to:	When	Issuer name	Signature
	Internal			
	CAA			
	Owners			
	PFA/BMAA Inspectorate			

Form F023 Issue 2 Part 2 of 2

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Aircraft serial no.  Registration G-	<b>Service Repair Implementation Worksheet</b>	Date raised:  Raised by:	
Purpose – record service repair implementation actions taken, then to inspect aircraft and return to service.		Document reference: <b>SRA-013</b>	
Maintenance manual referred to and issue level/date:			
Note; attach any secondary sheets to this document			
<b>Task</b>	Notes	Eng'r check/date	Inspector check/date
Record aircraft service hours (from log-book)	Aircraft service hours:		
Upper to lower mast alignment – front, after welding			
Upper to lower mast alignment – side, after welding			
Upper to lower mast alignment – twist, after welding			
Weld inspection satisfactory			
Welder approval number	Record CAA approval ref.		
Customer acceptance: Name:	Aircraft Hobbs meter reading:		
Signature/date:	Confirm logbooks annotated:		
<b>Permit Maintenance Release: The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight.</b>			
Engineer/Inspector signature	Date of work		
Name: CAA Authorisation code :	Location where work completed		

PLEASE FAX THIS BACK TO 01588650769 (or send by email to [info@rotorsport.org](mailto:info@rotorsport.org))