

RotorSport UK Ltd

Service Repair Request and Evaluation/Approval

Form F023 issue 4 Part 2 of 2

<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. Upon completion of the repair the repairer must enter details into the logbook/worksheet with the repair number and sign as normal. If any problems with carrying out the work authorised, contact RSUK immediately on +44(0)1588 650769, or email gerry@rotorsport.org.</p>		
Repair No. and Issue:	CCAR No.: None	Repair classification:
SRA-019 Iss2	Mod approval No: MC-330	MAJOR or MINOR
Aircraft type	Aircraft serial No. OPEN	
MTOSport, MT-03	First application: G-CGEW	
<p>Repair problem description & cause of problem if known</p> <p>Gyroplane G-CGEW was found to have a crack in its lower engine mounting cross-piece. Subsequently, gyroplane G-CFGY was found with a short (12mm) crack in the similar upper item. This SRA-019 describes how this type of damage may be repaired (after the engine has been removed for access).</p>		
<p>Limitations on implementation</p> <p>The repair may only be carried-out by a RSUK/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.</p> <p>No special tooling required</p>		
<p>Weight and balance.</p> <p>Not affected</p>		
<p>Manuals affected.</p> <p>None affected</p>		
<p>Previous modifications affecting this SRA.</p> <p>None</p>		
<p>List of materials required to complete this SRA:</p> <p>Reinforcing plate manufactured from 1.4301 stainless steel sheet 20 x 15 x 2.5mm or offcut taken from a scrap airframe (if required)</p>		
<p>List of components required to complete this SRA:</p> <p>None</p>		
<p>Interchangeability:</p> <p>Not applicable</p>		
<p>Parts disposition:</p> <p>Not applicable</p>		

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Location



Upper cross-piece

Lower cross-piece

Simple weld repair

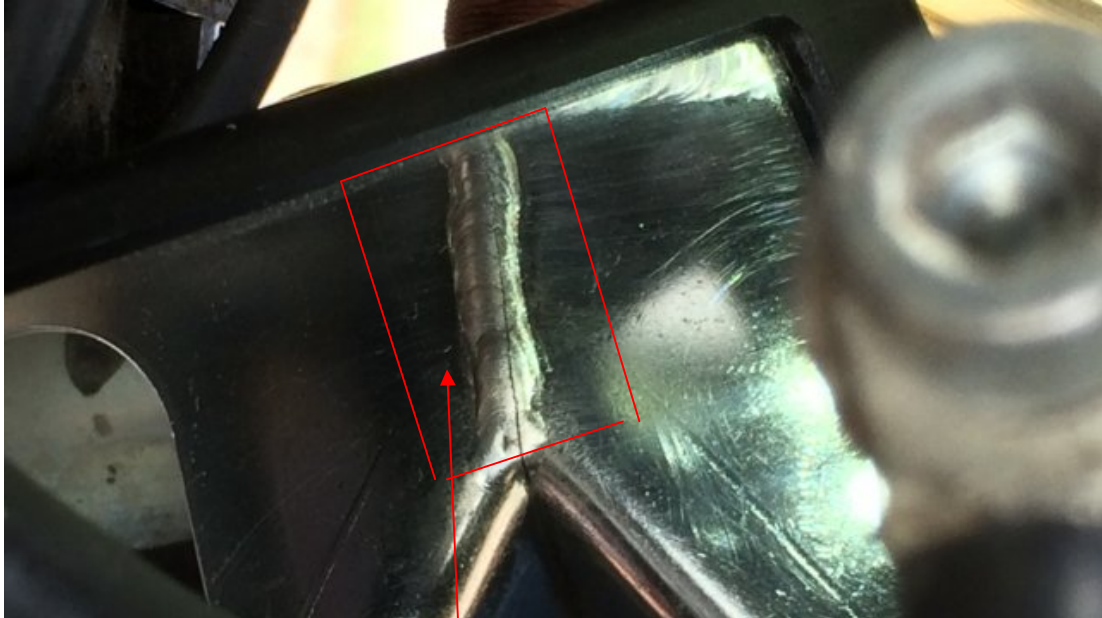


Short weld-run after preparation

Provided the crack does not separate the part and can be stop-drilled a reinforcing plate is not needed

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Weld repair (plated on upper surface)



Placement of reinforcing plate
If the crack separates the part a reinforcing plate is required

Weld repair (lower surface)

Mast tube



Crack running at an angle across underside of mount
If the crack separates the part a reinforcing plate is required on the top surface

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Accomplishment instructions/details of the repair:

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.
Grind the upper weld flat to allow the reinforcing plate to fit properly in contact with the two side pieces and stop-drill the crack 2.0 – 3.0mm diameter as required

2. Welding – upper side full crack

Position and clamp or tack the reinforcing plate 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.

3. Welding – lower side full crack

Retain the equipment set-up as above.

Produce a continuous fillet weld along the line of the crack for its whole length and on to the interface with the mast.

4. Welding – short/partial crack

Retain the equipment set-up as above.

Stop-drill and grind-out the crack as required. Produce a continuous fillet weld along the line of the crack for its whole length.

5. 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

Reference to other documentation:

None

Test and inspection records:

None

Special Tools & Health and Safety requirements, and/or components required for repair:

Conventional welding PPE. Observe usual welding operational requirements

Quality Inspection requirements after repair:

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

Flight test requirements after repair:

None

Documentation completion:

CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing 'SRA-019 Engine mount repair incorporated' in the aircraft logbook white pages, and record the action in the pink pages

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entitled 'Aircraft Modifications'. Both entries must be signed by the CAA Authorised Person together with their CAA Authorisation number.

In addition a Repetitive Task is to be entered into the aircraft log book requiring visual inspection of each weld every 25 flight hours.

Service repair authorised by: (name, signature, and date of signature)

Quality Control Manager	Engineering Manager	Chief Test Pilot (where an effect on flight performance or safety) Not required	CVE	Head of Airworthiness
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Document effectivity date:

21.09.15

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Aircraft serial no. Registration G-	Service Repair Implementation Worksheet	Date raised: Raised by:	
Purpose – record service repair implementation actions taken, then to inspect aircraft and return to service.		Document reference: SRA-019	
Maintenance manual referred to and issue level/date:			
Note; attach any secondary sheets to this document			
Task	Notes	Eng'r check/date	Inspector check/date
Record aircraft service hours (from log-book)	Aircraft service hours:		
Upper weld to reinforcing plate completed satisfactorily			
Lower weld completed satisfactorily			
Short weld completed satisfactorily			
Weld inspection satisfactory	Dual inspection required		
Confirm no tools or equipment left in aircraft			
Welder approval number	Record RSUK/CAA approval ref:		
Customer acceptance: Name:		Aircraft Hobbs meter reading:	
Signature/date:		Confirm logbooks annotated:	
Permit Maintenance Release: The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight.			
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)