

RotorSport UK Ltd

Service Bulletin

This form is the response from RotorSport UK Ltd against a problem found in the product either in service or test, which requires an immediate action.

Upon completion of the action, the person responsible must enter details into the aircraft logbook/worksheet with the SB and/or CAA MPD (Mandatory Permit Directive) number and sign as normal.

If any problems with carrying out the work authorised, contact RSUK immediately on 44(0)1588 650769, or email info@rotorsport.org.

SB No.: 016 issue 2	CCAR No.: None	Classification: OPTIONAL or RECOMMENDED or MANDATORY
Aircraft type & model (applicability) RotorSport UK MT-03	Aircraft serial Nos. effected RSUK/MT-03/all	

Problem description & cause of problem if known

The MT-03 series gyroplane pilot enclosure is retained to the airframe via several fastening points, two of which are via short metal straps at the lower rear of the enclosure. The straps are welded to the airframe, and one has been found to have broken free in service due to vibration.

Problem solution:

Two options are available; a) reweld the bracket to the airframe, (or weld a replacement bracket to the airframe) or b), accepting that a CAA approved welder is unlikely to be available in the field, fit a replacement bracket bolted between the enclosure and the suspension bow carrier.

Effective date: 12.01.10

Action required to implement this bulletin:

Option a) - re-weld in place by an RSUK/CAA A8-10 approved welder. This will require:

1. Disconnect the battery negative lead from the airframe and disconnect instrument panel by disconnecting the connectors between the instrument panel and the wiring harness. This is to protect aircraft electronics. Remove excess fuel and ensure filler caps are tight.
2. Remove the bracket, and if the bracket has failed, grind away the remains on the airframe.
3. Grind back any remaining weld on the bracket and airframe, taking care not to over-grind the parent metal.
4. Fit the bracket to the enclosure hole, to allow it to be tack welded in place. Tack, and then remove the enclosure connection.
5. Weld all around the contact area to the airframe, (see welding notes below), protecting the surrounding surface from weld splash. Remove ancillary aircraft items as required for clearance
6. Clean the weld, and check as far as possible for a good weld.
7. Re-attach the enclosure and any ancillary items removed or released for access – use new nylocks.
8. Reconnect the instrument panel. connector blocks, then reconnect the battery negative lead to the airframe

Note that it is also permissible to weld two broken parts of a bracket together with a suitable seam weld.

Option b) – reconnect bracket to airframe with new bracket:

1. Remove ignition key and isolate engine starter solenoid
2. Chock wheels.
3. Remove existing broken bracket, and carefully grind off any broken remains. Offer up new clamped bracket RSD3045 RH (or 3046 LH) to the Enclosure (see photo) so that the 6mm hole aligns with the hole indicated below, and the flat side is nearest the enclosure.
4. Clamp bracket to suspension bow cross tube with the M6 button head bolt, washers, and nylock nut (screw head uppermost, and bracket under the flange).
5. If required, adjust the bracket by bending so that the hole lines up with the enclosure.
6. Refit fastening between the enclosure and bracket.

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Welding requirements

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.

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.

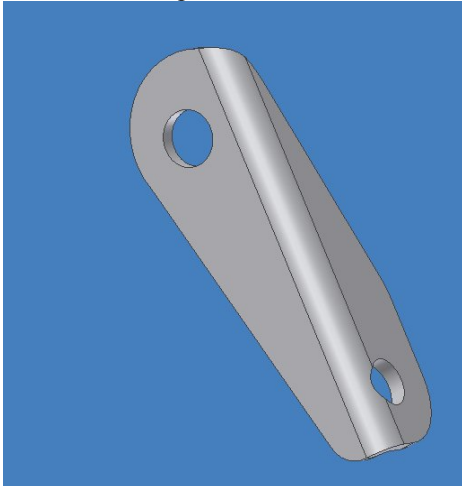
3. Clean-up

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 (difficult to remove)

4. Inspection

Using a magnifying glass at least 4x 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 and that the start and end of each run are of uniform shape.



Picture of replacement bracket (RH shown)

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MT-03 mounting as current build 6mm hole to use for new bracket
Note that the bracket fits UNDER the flange.

Parts required to implement the Service Bulletin (per side)

- 1 x RSD3045 Bracket RH and/or
- 1x RSD3046 Bracket LH
- 1 x RSD6008 Nylock nut
- 1 x RSD6057 M6 x 15 button head screw
- 2 x RSD6024 M6 plain washer

Effect on Pilots Handbook or Maintenance Manual?

No, other than to be noted in the next issue of the maintenance manual

Service Bulletin Completion action:

Issue Permit Maintenance Release Certificate

Ensure all fastenings are secure.

CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing 'SB-016 Enclosure bracket 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.

SB authorised by: (name, signature, and date of signature)

Quality Conformance Manager <i>[Signature]</i> 29/1/10	Engineering Manager <i>[Signature]</i> 29/1/10	Chief Test Pilot (if flight performance or safety effect) Not Reqd	Structures (where required) <i>[Signature]</i>
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Document completion date:	Issued to:	When	Issuer name	Signature
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