

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. 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)1926 484556, or email gerry@rotorsport.org.</p>		
Repair No.and Issue: SRA-018 Iss1	CCAR No.: None Mod approval no: MC-247	Repair classification: MAJOR or MINOR
Aircraft type Calidus	Aircraft serial No. OPEN RSUK/CALS/any. First application: G-CGJD	
Repair problem description & cause of problem if known Calidus aircraft have been in service since 2011 and some have suffered damage to the plexiglass canopy. This repair scheme describes how to remove the damaged plexiglass and replace with new under the approval of MC-247.		
Limitations on implementation: This repair scheme may only be implemented by RotorSport UK Ltd.		
Approval statement. The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: DAI/9917/06.		
Tooling required. None.		
Weight and balance. There is no effect on the issued AWC for the aircraft.		
Manuals affected. There is no effect on the aircraft POH or AMM.		
Previous modifications affecting this SRA. None		
List of materials required to complete this SRA: Macroplast adhesive/hardener UK1366 B10/UK5452 (RSD4780) Sikaflex EBT black RSD4068 Amberklene LO30 RSD4655 Small quantity aircraft original paint finish		
List of components required to complete this SRA: Canopy moulding (BT2231 closed or BT2937 summer)		
Interchangeability: Not affected – each canopy is hand-fitted to an individual aircraft		
Parts disposition: Dispose of damaged canopy and masking materials in normal industrial waste		

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Accomplishment instructions/details of the repair/reference to other documentation

As the plexiglass adds to the structure of the complete canopy the composite frame alone is quite flexible. It will be found easier to handle the parts if the repair is conducted with the canopy frame in a closed position on the aircraft. As there will be a significant amount of debris and dust created the interior of the aircraft should be carefully protected with polythene or cloth sealed with gaffer tape before work begins. The operative should wear gloves, a dust mask and eye protection. Part of the text below is abstracted from the original Auto-Gyro Process sheet (BG733 2013_06_25_05_55_01 LA R000 Kabinenhaube, lackiert) used to manufacture the assembly.

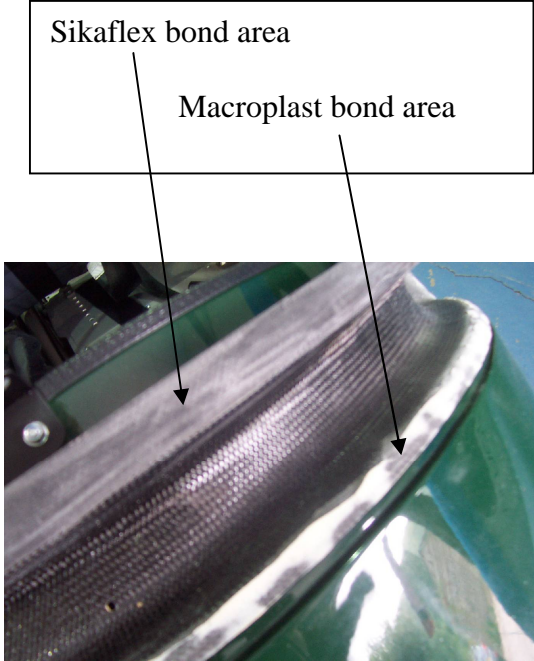
1. Remove all damaged plexiglass. This is readily accomplished by splitting the plexiglass away from the adhesive bond lines using a thin chisel. Take care not to crack the canopy frame.
2. Using a Dremmel and sanding disc dress the remains of the structural adhesive to a continuous smooth surface with rounded edges. Do not cut through the canopy frame.
3. Thoroughly degrease the two bonding surfaces using Amberklene LO30
4. Remove protective film as required from the new plexiglass. Offer-up the new plexiglass and using a felt-tip pen mark the extent of the bond lines
5. Protect the canopy as required with masking tape for full circumference of the canopy
6. Using red scotchbrite and a sanding disc with 360-grade paper abrade the canopy within the marked lines. Thoroughly de-dust the abraded surfaces using dry compressed-air and Amberklene LO30
7. Prepare the Macroplast adhesive gun (two pack) and Sikaflex EBT gun (one-pack)
8. Extrude a 6-8mm bead of each adhesive centrally around each bond area
9. Carefully place the plexiglass on the frame, add foam packing pieces and pull firmly into place with gaffer-tape.
10. Allow adhesive and mastic to cure overnight in a warm (20 to 30degC) environment
11. When cured carefully remove all tape and foam blocks and dress any surplus adhesive.
12. Add sikaflex EBT as required to ensure a good finish inside the canopy assembly where the inner frame abuts the canopy.
13. Remove the canopy from the aircraft and place on a suitable stand. Mark the required paint line on the canopy with a fine felt-tip pen and the add masking tape as required.
14. Using red scotchbrite and a sanding disc with 360-grade paper abrade the canopy within the marked lines.
15. Using vacuum-cleaner then tacky-rags remove all dust from the canopy
16. Thoroughly degrease the abraded surfaces using Amberklene LO30
17. Apply the paint finish to the perimeter of the canopy, including the sun-shield area if required
18. When the paint finish is dry remove all masking and replace the canopy on the aircraft.
19. Replace all canopy fittings, straps and locks.
20. Adjust the canopy lock in accordance with PDCD-057
21. Remove all protective film, masking tape residue and polish the canopy inner and outer surfaces with Plexus perspex polish
22. Remove all protective sheeting from aircraft

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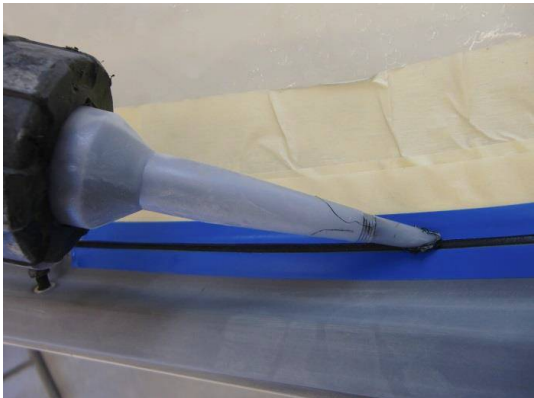
Canopy frame removed from aircraft



In place after preparation



Use of sanding disc to abrade plexiglass



Applying Sikaflex bead



Canopy fixtured onto in-situ frame with foam & tape

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Marking-out for spray-painting



Canopy repair finished (without sun-shield)

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Test and inspection records None other than worksheet attached to this document				
Special Tools & Health and Safety requirements, and/or components required for repair: PPE suitable for use with composite materials and paint finish.				
Quality Inspection requirements after repair: Before final painting check (by viewing through the plexiglass) that the Macroplast structural adhesive and Sikaflex mastic bond lines are complete. After painting check that the quality of paint finish is satisfactory.				
Flight test requirements after repair: None				
Documentation completion: CAA BCAR A3-7 Authorised Person to certify that the work is completed by writing 'SRA-018 Canopy plexiglass replacement' in the aircraft logbook white pages. The entry must be signed by the CAA Authorised Person together with their CAA Authorisation number. The same person to complete the worksheet/PMR form at the end of this document				
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 effectivity date: 28.08.13				

Form F023 Issue 2 Part 2 of 2

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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-018 Iss1	
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:		
Adhesive bond lines complete			
Paint finish satisfactory			
Confirm canopy hinges reattached properly			
Confirm canopy lock function satis			
Confirm no tools or equipment left in aircraft			
Confirm canopy clear and no distortion			
Customer acceptance: Name: Signature/date:		Aircraft Hobbs meter reading: 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 Name: CAA Authorisation code :		Date of work Location where work completed	

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