

Service Bulletin

S.B. No: 191

Title: INSPECTION OF INTEGRITY OF FRAME 6 AND 7 JOINT BONDING

Compliance: At next 150 flying hour check.

Applicability: T67B, T67C Series, T67M, T67M-MkII, T67M200 and T67M260.

The technical content of this Service Bulletin is approved under Authority of Marshall Aerospace Approval Number EASA.21J.181

INTRODUCTION:

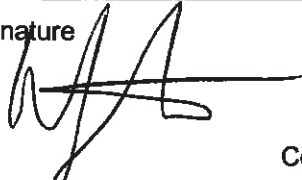
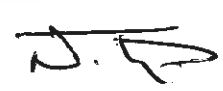

During the annual inspection a maintenance organisation reported de-bonding of Frame 6 and Frame 7 from the aircrafts skin over local areas adjacent to the canopy slide rails. Investigation revealed that the de-bonds were clean and had not damaged skin or frame structure.

Past records have shown this type of damage can be caused by the canopy being allowed to "slam" back during opening. Additionally if the canopy slide rail buffer is missing then this can cause similar damage. Operators are advised that all persons working around the aircraft follow the canopy opening guidelines in the Pilot Notes.

It is recommended that any Glass-fibre Reinforced Plastic (GRP) repair work is conducted by an operator who has completed the Marshall Slingsby GRP repair course.

ACTION:

- 1 Check canopy slide rail for canopy buffer, reference Figure 1. Check length of buffer, for single piece canopies length should be 50mm and for split canopy length should be 35mm +1/-0mm. If buffer is missing or lengths measure less than 2mm than stated at Figure 1, then replace with T67B-15-539 for single piece canopy; or T67M-17-313 (issue 3 & subs.) for split canopy.
- 2 Place trestle under bump stop of aircraft.
- 3 Gain access to aft fuselage via Frame 5 access panel and position crawl boards into aft fuselage. These are available from MSAC (Marshall Slingsby); order part numbers T67G-88-025 port and T67G-88-026 stbd. Ensure no damage to controls, structure, cable, etc. whilst positioning boards and during course of any work there in.
- 4 Inspect bond of Frames 6 and 7 to top skin either side of canopy rail GRP preform and to the preform.

Signature  Compiled	Signature  Design CVE	Signature  Approval
Print Name M. J. Rutter	Print Name N. THORP	Print Name P. ANDREWS
Date 26 th September 2012	Date 2-10-12.	Date 3-10-12.
MARSHALL SLINGSBY ADVANCED COMPOSITES Kirkbymoorside, York. YO62 6EZ Tel: 01751 432474 Fax No: 01751 433016 E-mail: mike.rutter@marshall-slingsby.com www.marshall-slingsby.com EASA Design Organisation Approval No. EASA.21J.181 (Marshall Aerospace)		Page 1 of 4 Issue 1

This Service Bulletin has been checked by Design and Airworthiness and has been technically accepted.

- 5 Any de-bond will be shown as a crack, gentle teasing of the frame would accentuate the crack. Additionally performing a gentle tap test on the exterior over the suspect area would assist in identifying a de-bond.
- 6 If a de-bond is detected, assess as to whether the joint line (bond area) is clean (smooth) or delaminated skin or frame. Only if bond area is clean, proceed as per step 7. If bond area is not clean, obtain advice from MSAC before proceeding.
- 7 Complete the attached form at Annex A and return it to the address provided.
- 8 For any rectification work protect structure and controls from dust and adhesive spillage. Support the tail of the aircraft and install crawling boards before accessing the tail of the aircraft.
- 9 Gently abrade area/s of de-bond. If this action extends the de-bonded area, continue until bond holds firmly. It is recommended to use 80 grit emery cloth, followed by cleaning with Acetone, Methyl Ethyl Ketone (MEK) or local equivalent.
- 10 Referring to the T67 GRP Repair Manual (4th Edition) mix a quantity of adhesive 126-51-042 and inject with syringe into joint ensuring that the adhesive fills entire de-bonded area. Starting at the front, proceed to the rear maintaining a consistent quantity of squeeze out down the length. Gather and wipe away any squeeze out.
- 11 Post-cure the bond in accordance with the T67 GRP Repair Manual (4th Edition) paragraph 2.6 step (8), taking suitable precautions to ensure no damage to the existing structure.
- 12 On completion remove any protection, FOD and crawling boards. Replace Frame 5 access panel. Perform an external tap test to ensure bond is secure. Obtain advice from MSAC if bond does not hold.
- 13 Record in logbook SB 191 Issue 1 accomplished. Check at each annual the condition of frame joints and buffer condition.
- 14 Ensure when opening canopy, it is not allowed to slam open. If this is the case, check for buffer and frame joint integrity.

Parts, crawling boards, materials and information on GRP repair courses can be obtained from MSAC Product Support contact Gemma Hodgson email gemma.hodgson@marshall-slingsby.com.

50mm (48mm MIN) FOR T67B-15-539 SINGLE PIECE CANOPY
35mm +1/0mm (33mm MIN) FOR T67M-17-313 SPLIT CANOPY

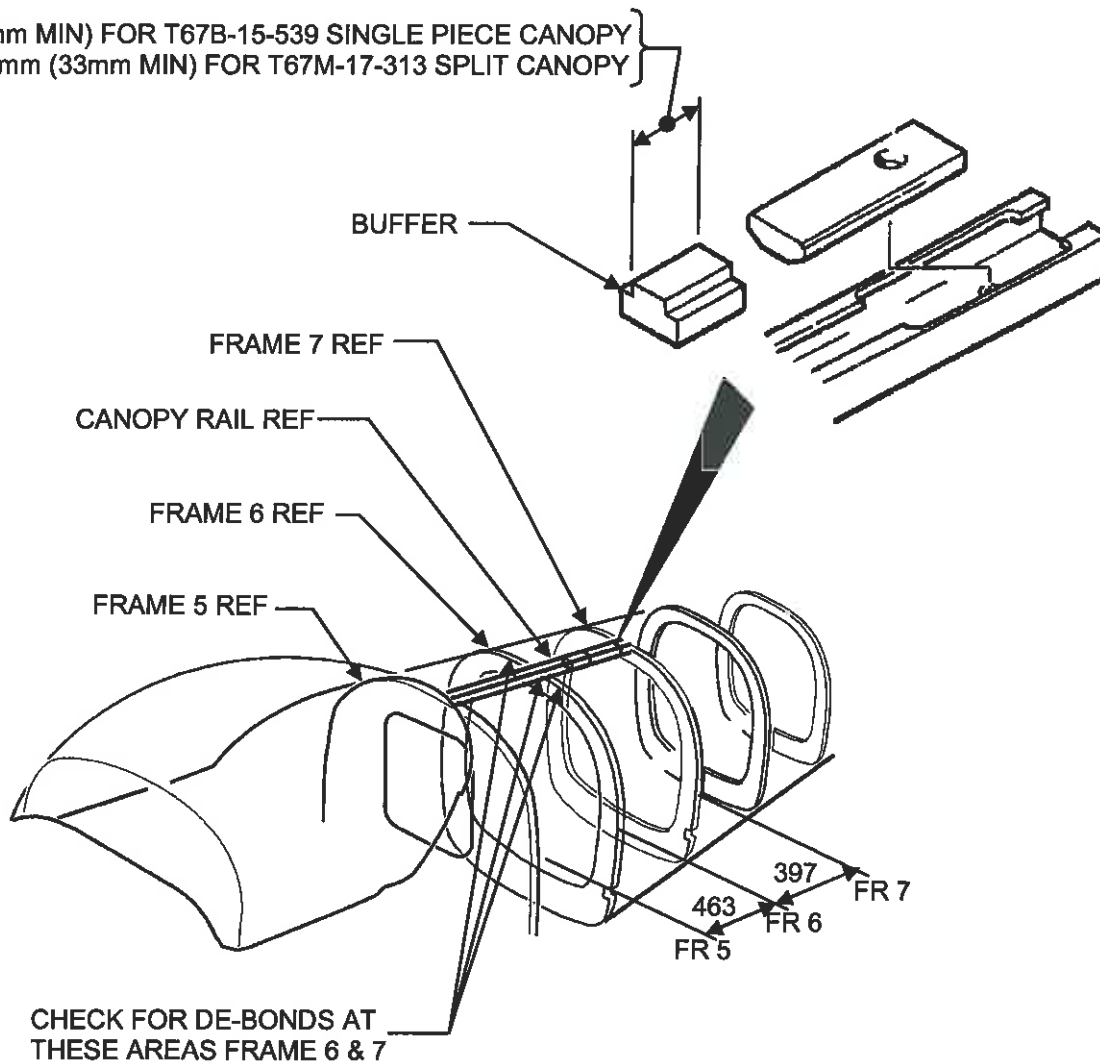


FIGURE 1
INDICATING POINTS OF INSPECTION OF BUFFER & FRAMES

SB 191 ANNEX A

INSPECTION OF INTEGRITY OF FRAME 6 AND 7 JOINT BONDING

This form is to be completed and submitted to the address below.

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Table 1

Aircraft works number	
Date SB 191 carried out	
If de-bond identified, was it clean (smooth)?	
Was crack in joint resin or against frame?	
Was cloth pulled away from either flange or skin?	
Was buffer in-place and of required length?	
Total flight hours	
Reporters contact details i.e. Name, Address, e-mail, telephone etc	
Owner's details	