



## SERVICE BULLETIN

### INSPECTION OF SLINGSBY T67M260 FIREFLY AIRCRAFT AIR CONDITIONING COMPRESSOR MOUNTING BRACKET FOR CRACKS

1. PLANNING INFORMATION

A. EFFECTIVITY

Slingsby T67M260 Firefly Post Mod 501 (Air Conditioning Fit) Works Numbers 2234, 2235, 2266, 2268 – 2274, 2276, 2277, 2279 – 2284.

B. CONCURRENT REQUIREMENTS

None

C. REASON

During an audit inspection, Engineering Report ER/MSAC(T67)/12/0379 refers, a failed air conditioning compressor mounting bracket lug was found. Upon further inspection it was noted that the lug weld had appeared to have cracked through completely without any sign of fretting. A fleet inspection was undertaken and a second bracket was found to be cracked but in its base plate. Refer to photographs 1 and 2 for the first affected aircraft's bracket and photograph 3 for the second affected aircraft's bracket.

D. DESCRIPTION

This Service Bulletin details the inspection of the air conditioning mounting bracket, T67G-74-203, following removal from the aircraft and subsequent replacement. This Service Bulletin also details the repetitive inspections required.

E. COMPLIANCE

Inspect prior to next flight, thereafter visually inspect every 50 flying hours and perform NDT inspection procedure at every 150 flying hours as detailed in this Service Bulletin.

F. APPROVAL

Marshall Aerospace EASA Design Organisation Approval No EASA.21J.181

G. MANPOWER

Two persons – approximate man-hours per person (waiting time, e.g. drying times, not included) as follows:

Preparation	1
Testing	1
Re-assembly	2
Records	0.25
Total	4.25

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H. WEIGHT AND BALANCE

No change.

I. ELECTRICAL LOAD DATA

No change.

J. SOFTWARE SUMMARY

Not Applicable.

K. REFERENCES

Marshall-Slingsby Firefly T67M260 Maintenance Manual  
Marshall-Slingsby Technical Report T67G-900-015 R134a Air Conditioning System  
Service Manual

L. OTHER PUBLICATIONS AFFECTED

Not Applicable.

M. INTERCHANGEABILITY/INTERMIXABILITY OF PARTS

Not Applicable.

2. MATERIAL INFORMATION

A. MATERIAL – PRICE AND AVAILABILITY

Not Applicable.

B. INDUSTRY SUPPORT INFORMATION

Not Applicable.

C. MATERIAL NECESSARY FOR EACH AIRCRAFT

Not Applicable.

D. MATERIAL NECESSARY FOR EACH SPARE

Not Applicable.

E. RE-IDENTIFIED PARTS

Not Applicable.

F. TOOLING AND AVAILABILITY

Not Applicable.

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3. ACCOMPLISHMENT INSTRUCTIONS

A. MAINTENANCE PRACTICES

WARNING DO NOT ATTEMPT TO MAINTAIN, REPAIR, REBUILD, OVERHAUL OR REMANUFACTURE THIS UNIT OR ANY OF ITS COMPONENTS EXCEPT IN STRICT ACCORDANCE WITH THE METHODS, TECHNIQUES AND PRACTICES SPECIFIED IN THIS SERVICE BULLETIN.

WARNING OBEY ALL WARNINGS, CAUTIONS AND MAINTENANCE PRACTICES. IF YOU DO NOT OBEY THIS WARNING THERE IS A RISK OF INJURY TO PERSONNEL AND/OR DAMAGE TO THE EQUIPMENT.

WARNING WHILST WORKING IN THE ENGINE BAY OBSERVE ALL STANDARD PROCEDURES FOR WORKING ON THE ENGINE AS PER T67M260 FIREFLY MAINTENANCE MANUAL SECTION 6 FIGURE 6-1.

WARNING WHILST WORKING WITH THE AIR CONDITIONING SYSTEM ENSURE ALL CAUTIONS AS STATED IN THE T67M260 FIREFLY MAINTENANCE MANUAL, SECTION 9, PARAGRAPH 9.4 ARE ADHERED TO.

WARNING WHILST WORKING WITH REFRIGERANT; WORK WITH FINGERS PROTECTED WITH CLOTH GLOVES AGAINST FROSTBITE BY REFRIGERANT. SAFETY PRECAUTIONS QUOTED IN T67M260 MAINTENANCE MANUAL MUST BE OBSERVED AT ALL TIMES.

WARNING ENSURE WHILST WORKING WITH PAINT/LACQUER AND PAINT REMOVAL MATERIALS THAT THE MATERIAL SAFETY DATA SHEETS (MSDS) ARE AVAILABLE AND ARE WORKED TO. ENSURE MANUFACTURERS APPLICATION AND REMOVAL PROCEDURES ARE ADHERED TO. ENSURE USE IN WELL VENTILATED AREA, USING RESPIRATORS AND AWAY FROM IGNITION SOURCES. ENSURE APPROPRIATE PERSONNEL PROTECTIVE EQUIPMENT (PPE) IS USED, I.E. GLOVES, EYE PROTECTION, PROTECTIVE CLOTHING.

WARNING ENSURE WHILST WORKING WITH DYE PENETRANT MATERIALS THAT THE MATERIAL SAFETY DATA SHEETS (MSDS) ARE AVAILABLE AND ARE WORKED TO. ENSURE THAT THE MANUFACTURERS NDT APPLICATION AND REMOVAL PROCEDURES ARE ADHERED TO. ENSURE USE IN WELL VENTILATED AREA AND AWAY FROM IGNITION SOURCES. ENSURE APPROPRIATE PERSONNEL PROTECTIVE EQUIPMENT (PPE) IS USED, I.E. GLOVES, EYE PROTECTION, PROTECTIVE CLOTHING.

- (1) Observe all safety procedures.
- (2) All engineering and local procedures are to be observed whilst embodying this Service Bulletin.
- (3) After inspection ensure aircraft's engine bay is clean and clear of tools and miscellaneous equipment.

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### B. PREPARATION

Prior to proceeding ensure that the Service Bulletin has been read in its entirety and is understood.

- (1) Gain access to the engine bay in accordance in accordance with (iaw) T67M260 Maintenance Manual paragraph 6.3.1 Engine Cowling Removal.
- (2) Remove air conditioning compressor iaw T67M260 Maintenance Manual paragraph 6.4.6 (1) through to (11), fig 9-5 Compressor assembly.
- (3) Remove mounting bracket and shim, if fitted, by releasing 3 off nuts from engine mounted studs.

### C. INSPECTION

- (1) Clean and de-grease bracket of any dirt/contamination.

**NOTE** Any repaired compressor mounting bracket shall be removed and replaced with a new bracket part number T67G-74-203 which shall be subject to this Service Bulletin's repetitive inspections.

- (2) If no obvious cracking or damage visible, chemically remove paint over inspection areas (Ref Fig 2) (do not use mechanical means; e.g. scraper, emery paper, etc). Ensure paint remover has been completely rinsed off from aft lug welds (Ref Fig 1 Photo's 2 and 3) and mounting plate area above lug (Fig 1 Photo 2) and perform dye penetrant (NDT) inspection.

For NDT procedure refer to FAA Advisory Circular AC 43.13-1B Acceptable Methods, Techniques, and Practices-Aircraft Inspection and Repair; Chapter 5 for Non-destructive Inspection techniques including guidance on operative/inspector requirements Paragraph 5-4, Visual Inspection techniques Chapter 5, Section 2 and penetrant Inspection Chapter 5, Section 5.

- (3) If bracket is cracked replace with new bracket, part number T67G-74-203.
- (4) If the bracket is not cracked ensure all dye penetrant materials have been washed away and thoroughly dried prior to protecting areas of removed paint with a clear high temperature petroleum resistant lacquer, apply iaw manufacturers instructions.
- (5) Re-assemble either the original or the replacement bracket to the engine. Ensure that the shim is refitted, if applicable. Torque nuts to 30 ft lb (40.5 NM).
- (6) Re-assemble compressor to bracket, connect hoses, compressor baffle, tension the belt and charge the system. Refer to T67M260 Maintenance Manual paragraphs 9.4.6 (12) through to (16). Also reference report T67G-900-015 R134a Air Conditioning System Service Manual.
- (7) At each subsequent 50 flying hour check gain access to the bracket and visually inspect iaw FAA Advisory Circular AC 43.13-1B, Visual Inspection techniques Chapter 5, Section 2. If in any doubt remove the bracket for further inspection.
- (8) If no cracks are detected replace cowling (Ref T67M260 Maintenance Manual paragraph 6.3.1).
- (9) If cracks are detected replace with new bracket, part number T67G-74-203.

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(10) At each subsequent 150 flying hours check, repeat this procedure.

D. MODIFICATION

Not applicable.

E. TESTING

(1) Refer T67M260 Maintenance Manual paragraphs 9.4.6 (17) and (18).

(2) Replace cowlings iaw T67M260 Maintenance Manual paragraph 6.3.1 Engine Cowling Installation.

F. COMPLETION

(1) Annotate airframe logbook, or aircraft record, iaw local requirements, with SB 195 carried out. At each subsequent 50 flying hour check and 150 flying hours check annotate airframe logbook accordingly.

(2) Upon discovery of cracks in the compressor mounting bracket T67G-74-203 please complete the attached form at Annex A and return it to the address provided.

(3) For any replaceable parts or materials contact Marshall-Slingsby Product Support Department contact details as below:

Gemma Hodgson  
Marshall-Slingsby Advanced Composites  
Ings Lane  
Kirkbymoorside  
North Yorkshire  
England  
YO62 6EZ

Tel. no. +44 (0) 1751 432474

Email: [gemma.hodgson@marshall-slingsby.com](mailto:gemma.hodgson@marshall-slingsby.com)

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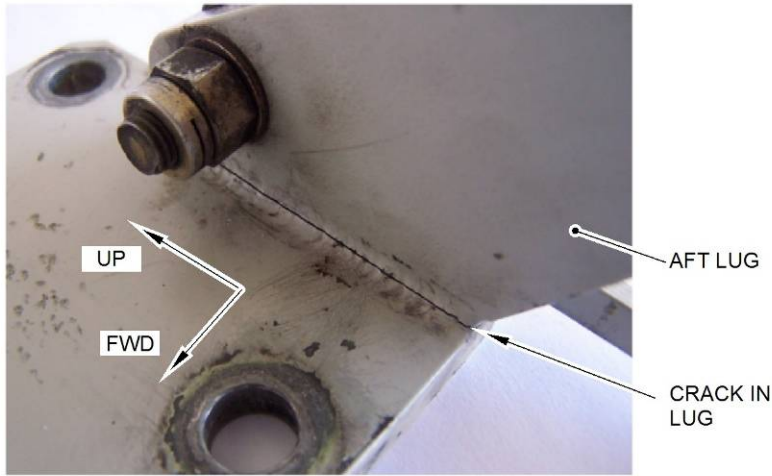


PHOTO 1 FIRST AFFECTED AIRCRAFTS BRACKET

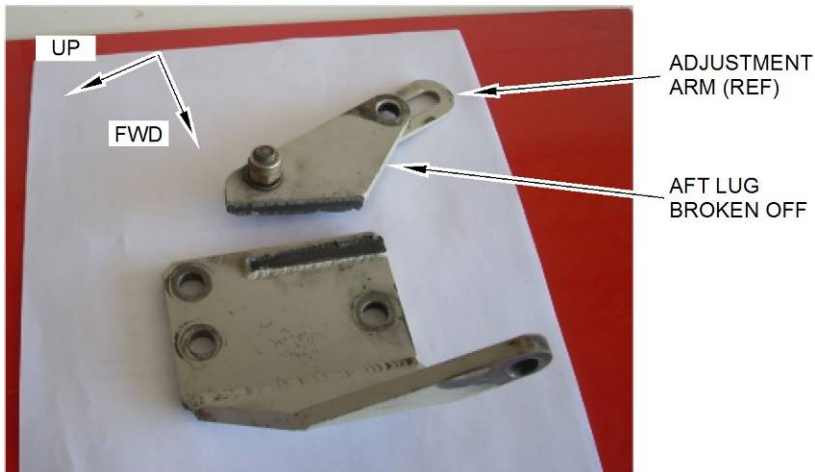


PHOTO 2 FIRST AFFECTED AIRCRAFTS BRACKET

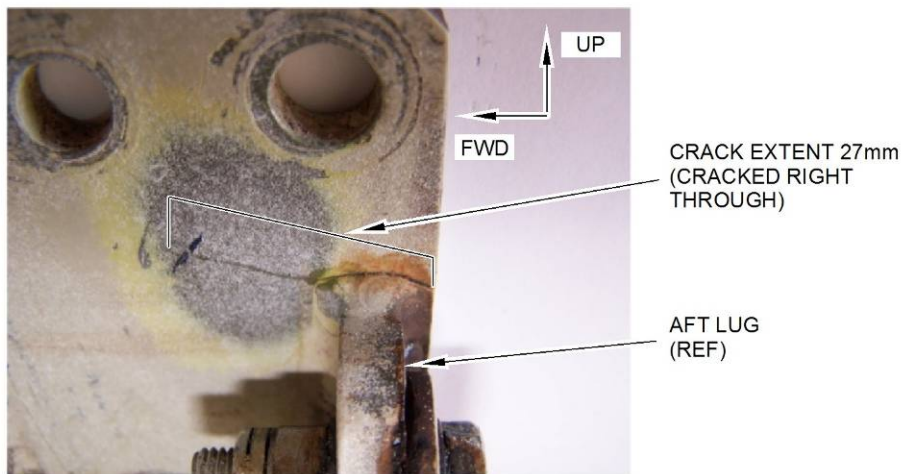
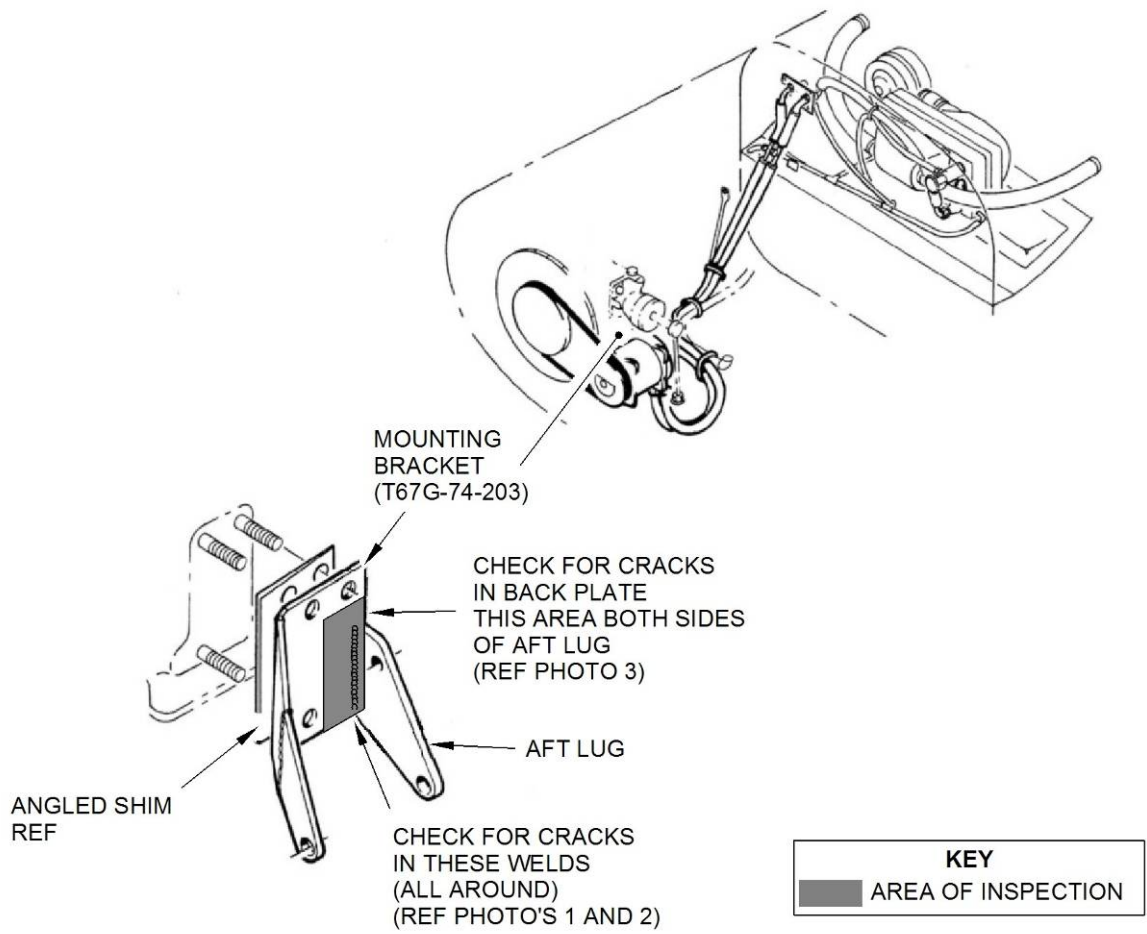


PHOTO 3 SECOND AFFECTED AIRCRAFTS BRACKET

SBM-195-I-001-A

**Figure 1 Areas of inspection**

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**Figure 2 Location of Mounting Bracket**

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**SB 195 ANNEX A**

**INSPECTION OF SLINGSBY T67M260 FIREFLY AIR CONDITIONING COMPRESSOR MOUNTING  
BRACKET FOR CRACKS**

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

Mr M J Rutter  
Airworthiness Co-ordinator  
C/O Marshall-Slingsby Advanced Composites  
Ings Lane  
Kirkbymoorside  
North Yorkshire  
England  
YO62 6EZ

Tel. No. +44 (0)1751 432474

Fax. No. +44 (0)1751 433016

E-mail: [mike.rutter@marshall-slingsby.com](mailto:mike.rutter@marshall-slingsby.com)

**Table 1**

Aircraft works number	
Bracket cracked (indicate on figure 2)	
Total Flight Hours	
Hours since last SB195 inspection	
Reporters contact details i.e. Name, Address, e-mail, telephone etc	
Owner's details	