

MICROLIGHT AIRWORTHINESS APPROVAL NOTE

MAAN NO: 2996

ISSUE 1

DATE: 24 JUNE 2024

TITLE: Microlight Airworthiness Approval Note 2996: Compulsory Service Bulletin reference cracks in the extruded bars of the main wing spar attachments

APPLICABILITY: UK (BMAA) MXP-740 Savannah aircraft, specifically: G-CCII (BMAA/HB/285)

STAGE: AUTHORISATION

1. INTRODUCTION

The MXP-740 Savannah is a type-accepted (amateur-built) Microlight described in BMAA HADS HM10. The BMAA is responsible for continued airworthiness.

This MAAN authorises the issue of a Service Bulletin to advise the affected owners and BMAA Inspectors regarding the replacement of the extruded bars of the main wing spar attachments due to cracking.

2. BASIS FOR APPROVAL

The approval basis for this Service Bulletin is BCAR Section S issue 8. Paragraph S303, S605, S609, S613 and S627 are relevant.

3. DESCRIPTION

Following an accident, an Italian Savannah was found to have cracks in the extruded bars of the main wing spar attachments., part numbers SA089-2 and SA090-2. The kit manufacturer I.C.P. Srl has released a mandatory service bulletin SB031, revision 00, dated 13/12/2023 describing the issue, aircraft affected and required actions.

UK BMAA Service Bulletin 2996 authorises the repair in accordance with I.C.P. Srl Service Bulletin SB031.

4. TECHNICAL INVESTIGATION

This BMAA Service Bulletin is issued to raise awareness and implement the I.C.P. Srl Service Bulletin SB031.

The kit manufacturer has confirmed that only one UK aircraft is affected:

- G-CCII (BMAA/HB/285)

Cracks have been found in the extruded bars of the main wing spar attachments of an Italian Savannah VG accident-damaged aircraft in Italy. These cracks are possibly a result of fatigue. As a precaution I.C.P. Srl have issued Service Bulletin SB031 for the replacement of the main spar attachments part numbers SA089-2 and SA090-2. I.C.P. Srl have classified this bulletin as Mandatory.

The new plates are of the same material specification but a thicker section and with an increase radius in the area where the crack was discovered. The original attachments used solid rivets, but these have been replaced with pop style rivets due to the method of fastening the rivets in the field. I.C.P. Srl have provided data to show that the replacement rivets are at least as strong as the original. The replacement extruded bars and attachments are therefore considered equivalent or greater in strength than the original.

5. FLIGHT TESTING

Not applicable.

6. MANUALS, PLACARDS AND INFORMATION

Manuals, Placards and Information are not affected by this note.

7. NOISE CERTIFICATION

Noise certification is not affected by this note.

8. RADIO

Any radio installation is not affected by this note.

9. INSPECTION

To the Service Bulletin appended to this MAAN.

10. WEIGHT AND BALANCE

Weight and balance is not affected by this note.

11. SIGNIFICANT FEATURES AND LIMITATIONS

See section 3. All limitations remain unchanged.

12. CERTIFICATION

I certify that BMAA Service Bulletin 2996 Issue 1 appended to this note is fit for issue.

Prepared by:



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Checked and Authorised by:



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Initial Distribution:

MAAN (including SB):
MAAN File 2996
CAA GA Unit

Service Bulletin:
Affected Savannah owners – G-CCII
All BMAA Inspectors
Mr S Whittaker, SUP
BMAA Website



BRITISH MICROLIGHT AIRCRAFT ASSOCIATION SERVICE BULLETIN

Reference: BMAA Service Bulletin 2996 Issue 1
Title: Cracks in the extruded bars of the main wing spar attachments
Applicability: MXP-740 Savannah G-CCII (BMAA/HB/285) only
Author: Rob Mott, Roger Pattrick BMAA
Effective date: 24 June 2024
Classification: Compulsory Service Bulletin

1 Introduction

Following an accident, an Italian Savannah aircraft was found to have cracks in the extruded bars of the main wing spar attachments. The kit manufacturer I.C.P. Srl has released a mandatory service bulletin SB031 describing the issue, aircraft affected and required actions.

The kit manufacturer has confirmed that only one UK aircraft is affected:

- G-CCII (BMAA/HB/285)

2 The Issue

Cracks have been found in the extruded bars of the main wing spar attachments of an Italian accident-damaged aircraft.

3 Inspection

N/A

4 Reporting and Repair

Reporting is not applicable. The BMAA Technical Office (technical.office@bmaa.org) can be contacted if owners or inspectors have questions about this bulletin.

All repairs (as described by I.C.P. Srl mandatory Service Bulletin SB031 - Extruded of Main Spar-Rev00) must be performed in accordance with BMAA procedures, and all replacement parts must be original, or otherwise approved by the Technical Office.

Compliance must be recorded in the logbook and verified by an appropriately authorised BMAA Inspector.

Note: The technical content of this document is approved by the BMAA, UK CAA organisation approval ref. DAI/8909/84



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I.C.P. Srl



SERVICE BULLETIN 31 - Extruded of Main Spar-Rev00

	Function	Name	Signature
Prepared	Technical Staff	Emanuele Fondacaro	
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Verified	TECNIC - Technical Manager	Federico Peronato	
Approved	DIG - Accountable Manager	Tancredi Razzano	

Revision	Date	Description	Issued by
00	13/12/2023	First issue	Emanuele Fondacaro

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1. Classification

The following classification is used for I.C.P. Srl manufacturer Service Bulletins: Mandatory - Recommended - Optional - Informational.
The present Service Bulletin has been classified:

MANDATORY

2. Subject

Replacement of the extruded bars of the main wing spar attachments: SA089-2 and SA090-2. See *Figure 1* and *Figure 2*.

2.1. Reason

On the *Savannah VG* aircraft, it has been discovered a crack on the subject parts, during a reparation of the wing.

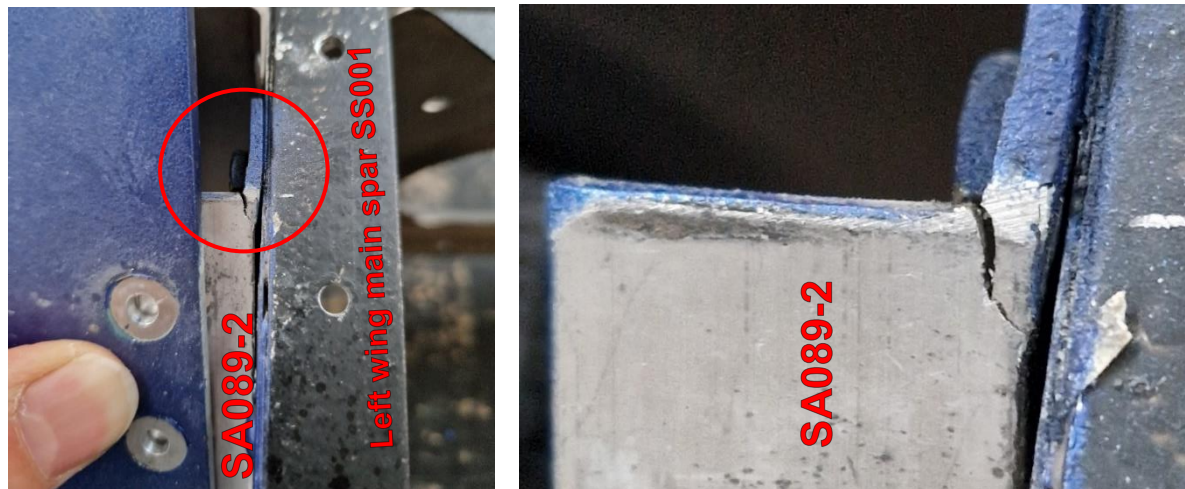


Figure 1: Left front strut attachment to the spar



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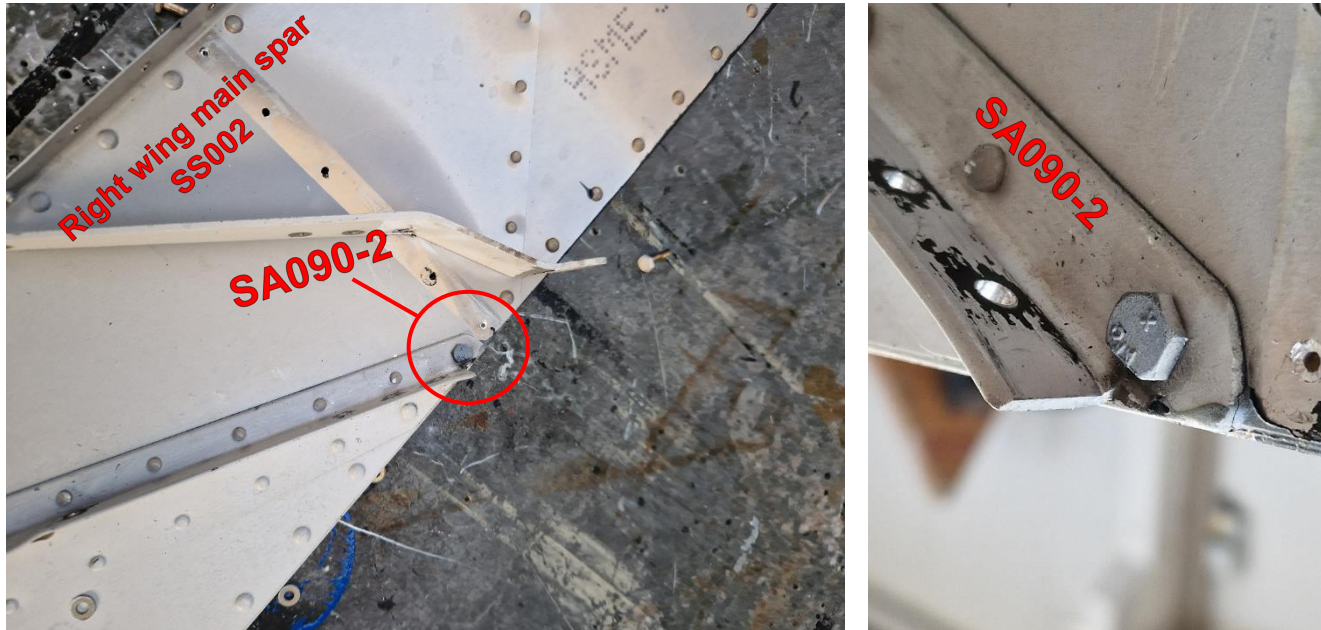


Figure 2: Right front strut attachment to the spar

3. Applicability

Aircrafts are identified by means of a Serial Number that can be found on the right side of fuselage rear cone, below the horizontal tailplane. The interested aircrafts Serial Numbers are composed like this:

- For MXP-740 / Savannah.....mm-yy-50-xxx
- For MXP-740 / Savannah (Slat) and Savannah VG produced up to S/N 01-01-51-050 (included):.....mm-yy-51-xxx
- For MXP-740 / Savannah (Slat) and Savannah VG produced after S/N 01-02-51-051 (included):.....yy-mm-51-xxx
- For Bingo:.....yy-mm-52-xxx

Where yy and mm correspond to the year and month of production, 50, 51 and 52 are the models and xxx is the progressive number.



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The present Service Bulletin is applicable to the following aircrafts S/N, summarized also in the following *Table 1*:

All MXP-740 / Savannah with S/N: ALL generic S/N *mm-yy-50-xxx*;
All MXP-740 / Savannah (Slat) and Savannah VG with S/N: ALL generic S/N *mm-yy-51-xxx* (up to *01-01-51-050* included);
All MXP-740 / Savannah (Slat) and Savannah VG with S/N: (from *01-02-51-051* included) up to *01-05-51-090* included;
All Bingo with S/N: up to *01-05-52-030* included

Aircraft Model	Aircraft S/N
MXP-740 / Savannah (Slat)	<i>mm-yy-50-xxx</i> Applicable to ALL
	<i>mm-yy-51-xxx</i> Applicable to ALL (up to <i>01-01-51-050</i> included)
	<i>yy-mm-51-xxx</i> Applicable up to <i>01-05-51-090</i> included

Aircraft Model	Aircraft S/N
Savannah VG	<i>mm-yy-51-xxx</i>
	Applicable up to <i>01-05-51-090</i> included

Aircraft Model	Aircraft S/N
Bingo	<i>mm-yy-52-xxx</i>
	Applicable up to <i>01-05-52-030</i> included

Table 1: Affected aircrafts and S/N

4. Compliance

Apply the SB within next maintenance work or within the next 10 flight hours, which one is shorter.
Ferry flight out of the previous limit is allowed to reach maintenance facility.

5. Approval

None.



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6. Labor time

Object	Time [min]
Fuel draining, Wing systems disconnection (fuel, wiring, Pitot), Wings and Flaperons disassembly	45'
Partial unriveting/opening of the upper wing skin	45' per wing
Strut attachment and extruded disassembly	30' per wing
Replacement of extruded part	20' per wing
Reassembly of the strut attachment	10' per wing
Closing and riveting of the upper wing skin	3h per wing
Painting, if required	TBD
Reassembly of the Wings and Flaperons	2h
Systems connections (fuel, wiring, Pitot)	30'
Verifications	30'
TOTAL	13h 30' (+ painting, if required)

Table 2

7. Warranty

The affected airplanes are not covered by warranty. However, I.C.P. Srl will send only the parts needed for the Service Bulletin application for free.

7.1. Contacts

Telephone	:	(+39) 011 9927503
Website	:	http://www.icp.it
Email	:	info@icp.it
PEC	:	icpsrl@pec.it
C.C.I.A.A.	:	00611190059
VAT number E C.F.	:	(IT) 00611190059
Address	:	S.P. 16 km 15,150 Castelnuovo Don Bosco, Italy, 14022



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7.2. Support

Parts and additional information about installation can be requested to the National Dealer or directly to I.C.P. Srl to the email info@icp.it.

7.3. Material - Price and Availability

The following kit of parts is supplied by I.C.P. Srl for the application of the present Service Bulletin. If additional parts (instruments, equipment) are required, send accordingly a request to I.C.P. Srl at info@icp.it.

Parts	Price
Ø3.2 rivets	Parts free of charge from ICP side, excluding the shipping and the installation work
Ø4.0 rivets	
Ø4.0 steel rivets	
AN3 bolts, nuts, washers for the spar	
AN3 bolts, nuts, washers for Flaperons reassembly	
AN5 bolts, nuts, washers for wing reassembly	
Cotter pins for Flaperons hinges reassembly	
SA089-2 (for Savannah Model 51 and Bingo Model 52)	
SA090-2 (for Savannah Model 51 and Bingo Model 52)	
2x raw extruded length 420 mm (for Savannah Model 50)	

Table 3

The customer will receive the parts for free by I.C.P. Srl, the only costs he will sustain are the shipping fees and the manual labor for installation.

8. Tools and Equipment

The tools needed are the following:

- Drill with drill bits Ø3,2 [mm], Ø4,0 [mm] and Ø6,0 [mm];
- Clecos for Ø3,2 [mm] and Ø4,0 [mm], with Pliers for Clecos;
- Riveter;
- Wrenches for AN3, AN5 and
- Torque wrench;
- Equipment for painting, if required.



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9. Variations

None.

9.1. Weight and Balance

Not changed.

9.2. Electrical load

N/A

9.3. Interchangeability

N/A

10. Accomplishment Instructions

No specific documents of instruction have been issued. Follow the sequence described in *Chapter 10.2*.

10.1. Reference documents

Refer to the *Spare Parts Catalogue* and *Construction Manual*, specific for each aircraft. Eventually, the Technical Specification S0222 could be useful to assist during the reassembly of the wing on the fuselage.



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10.2. Instructions

Drain all the fuel from the Collector Tank sump, then unmount the wings from the fuselage. Remove the cover at the wing root (top of the cabin), unriveting it and then proceed to detach all the systems connections (fuel, electrical, Pitot). Remove the wings by unscrewing all the AN5 bolts of the spar attachments to the cabin and the ones of the struts. Detach the Flaperons from the wing, removing the castle nuts with cotter pins of the hinges.

Once each wing has been unmounted, position it on a table and prepare it for the work.
To access the area of intervention, it is necessary to partially remove the upper skin of the wing.

First, unrivet the L.E. skin: drill the pop rivets Ø3.2 [mm] and Ø4 [mm] with relative drill bits, then pull the skin up like shown in *Figure 3* (shown the right wing, do symmetrically on the left wing).

Then, unrivet the top skin: like before, drill the pop rivets and separate the skin from the spars, the ribs and the stringers below (if present) up to the last stringer before the rear spar (shown in *Figure 3*).

ATTENTION: Be very careful not to buckle the upper skin, while lifting it up.

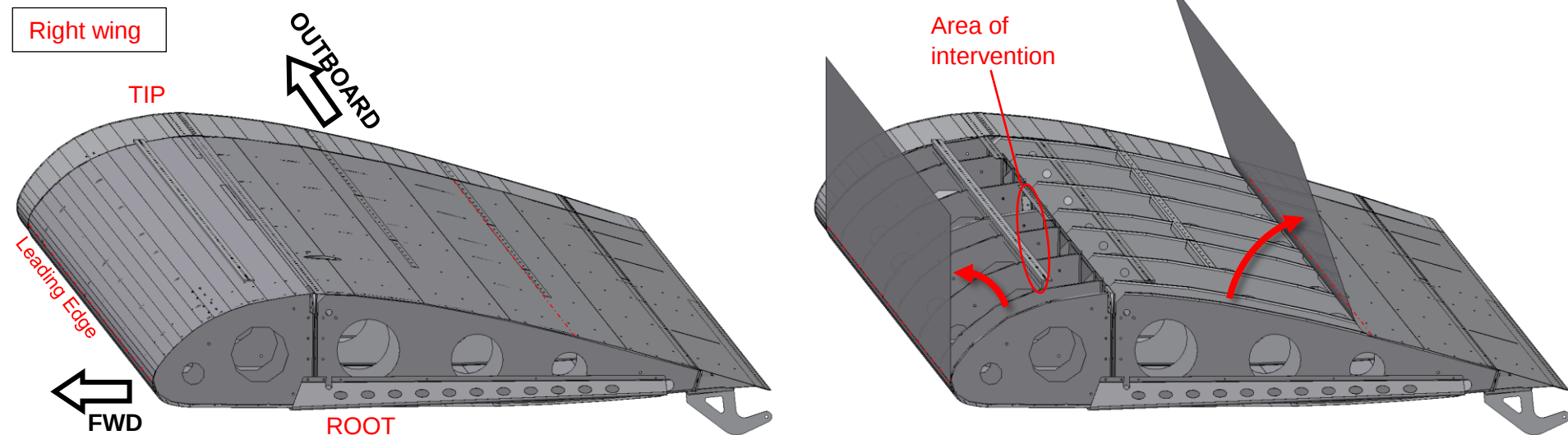


Figure 3: Right Wing, partial opening of the upper skin, to access the area of intervention



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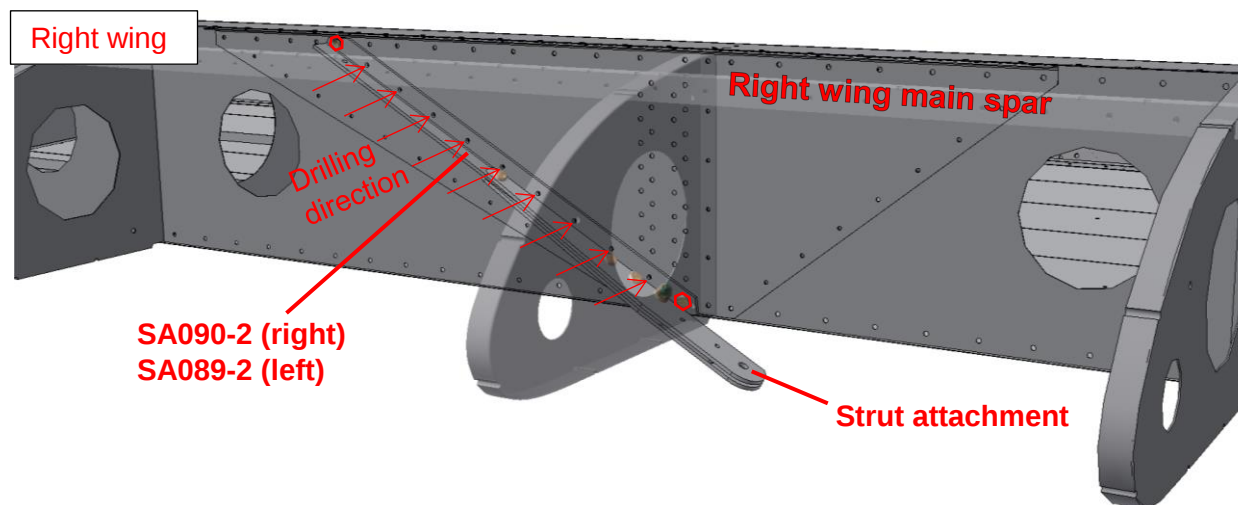


Figure 4: Right Wing, area of intervention from the front

Before unmounting the extruded part, remove the front strut attachment plates (same on both the left and the right wing). Those are bolted with AN3 to SA089-2 (left) and SA090-2 (right).

To remove the part SA090-2 from the right wing (SA089-2 on the left wing), drill $\varnothing 6$ [mm] just the tail of the solid rivets (from the front of the wing, like the view of *Figure 4*), in order to remove only the bulbous ends of the rivets.

Then, drill $\varnothing 4$ [mm] centered to the axis of the rivets, up to completely remove them. Pay attention to not excessively press the rivets when drilling, to not bend the main spar web.

After the work, use a vacuum cleaner to clean all the shavings and leftovers of the rivets, from inside the wing.

NOTE

The extruded parts SA089-2 and SA090-2 are provided with the kits supplied by ICP for the specific *Savannah Model 51* and *Bingo Model 52*. For the *Savannah Model 50*, in the specific kit supplied, are present 2 raw extruded parts, of 420 [mm] of length, that come without holes and without chamfers. Cut the parts in the correct shape and drill the holes in matching position



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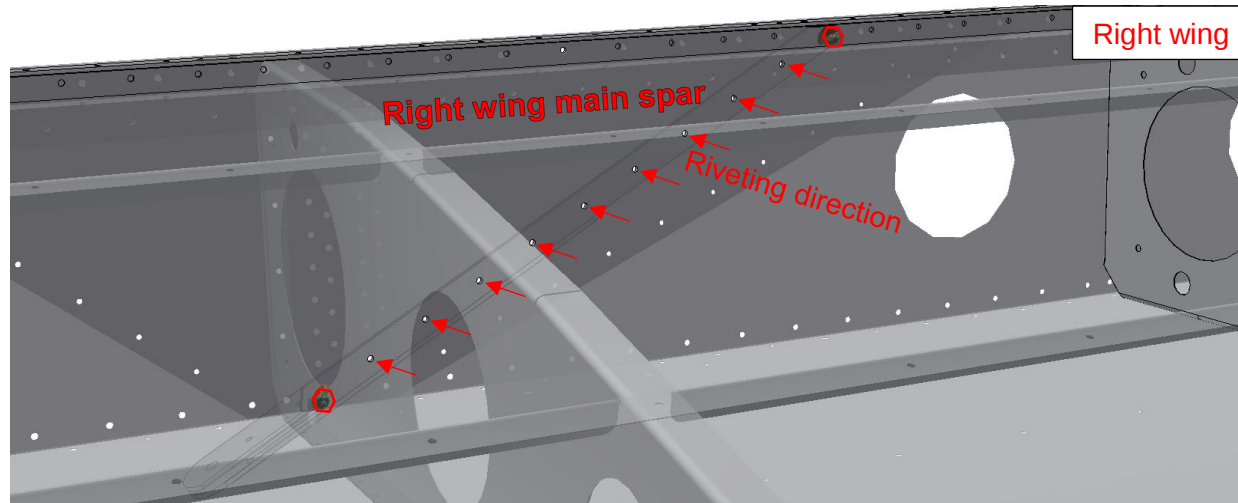


Figure 5: Right Wing, area of intervention from behind

Now, install the new SA090-2 on the right (SA090-2 on the left) applying the following sequence of operations:

- Install the new set of AN3 bolts with self-locking nuts and washers, like shown in *Figure 5* and;
- Rivet the extruded part with Ø4 [mm] steel pop rivets to the main spar web.
ATTENTION: the head of the rivets must be oriented behind the spar, therefore the tail of rivets must be pressing on the extruded part, like shown in *Figure 5*;
- Reinstall the front strut attachment plates with the proper sequence of bolts, washers and self-locking nuts;
- Close all the AN3 bolts/nuts at 6 [Nm] with a torque wrench.

CAUTION

The bolts and the self-locking nuts (“Nyloc”), once unmounted, must be replaced by new ones. Always assemble the bolted connections with a light closure torque and then, finally, apply the proper closure with the torque wrench



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- Rivet entirely the top rear skin of the wing;
- Rivet entirely the top nose skin of the wing.

ATTENTION: The riveting sequence must follow a certain order, as explained in *Figure 6*, also according to the *Construction Manual* of the airplane (Wing Chapters);

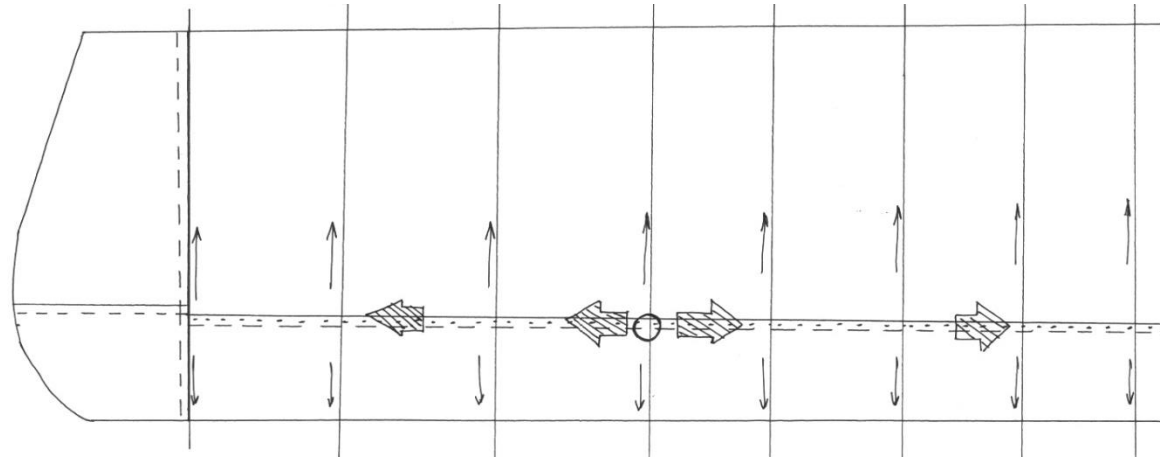


Figure 6: Right Wing, sequence of riveting top skins

- If required, paint the skin as original color;
- Reinstall the Flaperons according to the *Construction Manual* of the airplane (Wing Chapters). AN3 Bolts with castle nuts and the new cotter pins present in the kit;
- Reassembly the wing, bolting the spars to the cabin attachment points, connect and bolt the struts;
- Reconnect the wing Flaperons to the Flap and roll control system;
- Close the AN5 bolts of the wing attachments at 20 [Nm], with the torque wrench;
- Reconnect the fuel system (pipes, hoses, metal clamps);
- Reconnect the wing electrical wires are properly connected;
- Reconnect the pipe of the Pitot tube to the cabin pipe.



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10.3. Verifications

Verify all parts are present and correctly installed, bolted, riveted, before closing the skins.
Verify all bolted connections properly closed with the torque wrench.
Verify all rivets correctly installed when skins are closed.
Verify the wing is properly positioned, spars attachments to the cabin frame and struts attachments are bolted correctly;
Verify wing Flaperons are correctly interfaced with the control horn.
Verify all bolted connections are properly closed with the torque wrench, *Construction Manual* of the airplane (Wings attachment to Fuselage Chapter)
Verify the fuel system (pipes, hoses, metal clamps) is properly connected.
Verify the wing electrical wires are properly connected.
Verify the pipe of the Pitot tube is properly connected to the cabin pipe.

10.3.1. Ground test

Verify the correct motion of the Flaperons coherently with the stick.
Verify the correct function of the fuel system without leakages in cabin fittings.
Verify the correct function of the wing electric system (wing lights).
Verify the correct function of the Pitot tube by blowing lightly and reading the Airspeed Indicator increase.

10.3.2. Flight test

Workshop flight for overall check.

10.3.3. Documentation

Report in the aircraft Maintenance Logbook that the Service Bulletin SB031 has been performed. Also report the workshop flight performed.
If not present a dedicated logbook, use the final pages of the Maintenance Manual of the aircraft (Chapter Maintenance record).

It is appreciated by I.C.P. Srl to receive via email (tecnico@icp.it) an image or scan of the logbook entry after the SB application.



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