Sling Aircraft (Pty) Ltd
Registration no 2002/022837/07
Approved Maintenance Organisation AMO1264
Manufacturing Organisation M677

Hangar 8 Tedderfield Airpark
Nettleton Road Eikenhof
Johannesburg 1872
South Africa

PO Box 308
Eikenhof
Johannesburg 1872
South Africa

[T]+27 (0) 11 948 9898
[F]+27 (0) 86 632 4493
sales@slingaircraft.com
www.slingaircraft.com

SERVICE BULLETIN **#0002** *(rev. 2)*

(Sling Aircraft (Pty) Ltd. considers compliance with all Service Bulletins mandatory)

RELEASE DATE: **11/02/2021**

EFFECTIVE DATE: **11/02/2021**

SUBJECT: Reinforcement of the upper join between the centre and rear fuselages

MODELS AFFECTED: *rev. 1* – Sling 4 and Sling 4 TSi ***(all from SN#001 to SN#060)***
rev. 2 – Sling 4 and Sling 4 TSi ***(all from SN#001 to SN#060 and non-parachute versions from SN#060 to #306)***

COMPLIANCE TIME: At the next MPI *(Mandatory Periodic Inspection)*

LABOUR TIME: Inspection only: 0.25 hours
Inspection & Repair: 2 hours

1. DESCRIPTION AND PURPOSE:

To strengthen and prevent fatigue related failures to the upper centre and rear fuselage connection points.

This bulletin, originally released on 14 August 2014, affected Sling 4 and Sling 4 TSi aircraft with serial numbers from #001 to #060. It has subsequently been updated to ***include non-parachute version aircraft with serial numbers #060 to #306.***

Following implementation of supplementary non-destructive and destructive testing, Sling Aircraft has determined that it is necessary to make an amendment to the build standard of the Sling 4 aircraft, which takes effect on all Sling 4 / Sling 4 TSi aircraft with serial numbers SN#001 to SN#060, and non-parachute versions of the aircraft with serial numbers from #060 to #306.

This Service Bulletin is required to be completed prior to or during the next MPI immediately after 11 February 2021. In addition, the change will affect all kit-built aircraft still under construction, prior to first flight. The change requires the installation of a number of additional aluminium blind rivets, of the kind used in the construction of the aircraft, to be fitted at specified spacing between the existing rivets attaching the upper rear fuselage skin to the rear canopy frame lip. In addition, certain existing 3.2mm rivets must be replaced with 4.0mm rivets.

If it is found that the skin on your aircraft does not match the original/fitted skins, or are unable to make the change due to pre-existing holes, please contact Technical@slingaircraft.com, with a description of the issue with images.

2. PARTS AND CONSUMABLES LIST:

a) (10x) 3.2 x 8 mm (1/8” x 5/16”) multi-grip, blind, Gesipa, aluminum rivets (available from Sling Aircraft *PN# HW-RIV-142-X-X-0*)
b) (65x parachute version, 48x non-parachute version) 4.0 x 10 mm (5/32” x 3/8”) multi-grip, blind, Gesipa, aluminum rivets (available from Sling Aircraft *PN# HW-RIV-153-X-X-0*)
c) Touch-up Paint(s)

3. TOOLS REQUIRED:

a) 1x Ruler
b) 1x Pen / Pencil
c) 1x Electric or Pneumatic Drill
d) 1x 3.2mm (1/8”) Diameter Twist Drill Bit
e) 1x 4.0mm (5/32”) Diameter Twist Drill Bit
f) 1x 3.2mm (1/8”) Diameter Punch
g) 1x Hammer
h) 1x Side Cutters
i) 1x Pneumatic or Hand Operated Pull Riveter

4. MATERIAL COST AND RESPONSIBILITY

Sling Aircraft AMO (Johannesburg, South Africa) is available to perform the work on all aircraft delivered to its premises. Make use of the following contact details for cost related queries: Airworthiness@slingaircraft.com or Technical@slingaircraft.com.

5. INSTRUCTIONS:

All work must be performed by a person appropriately qualified to make structural changes and repairs to the aircraft. The manufacture is available to perform the work required on all aircraft which may be delivered to its premises, or otherwise via special arrangement. Kit builders and owners of affected aircraft which are distant from the manufacturer's premises, however, will be required to perform the work themselves or to find an appropriately qualified person to do so.

Persons implementing the work are required to follow the instructions set out below. The changes required to be made to the affected aircraft appear from the content of the instructions.

1. Read and understand the inspection, procedure instructions and attached drawings in their entirety before attempting any work.
    a. The instructions provide for fitting a number of additional rivets to the two upper fuselage skins, and the replacement of certain additional rivets.
2. The affected skins on the upper rear fuselage have the part numbers:
    a. Parachute Versions
        i. RF-SKN-102-C-C-2 *(Left)* *(or earlier)*
        ii. RF-SKN-002-C-C-3 *(Right)* *(or earlier)*
    b. Non-Parachute Versions
        i. RF-SKN-105-C-C-2 *(Left)* *(or earlier)*
        ii. RF-SKN-106-C-C-2 *(Right)* *(or earlier)*

5.1. Inspection:

3. Verify that the aircraft is affected by the bulletin by making a comparison of the drawings provided below, to the aircraft.
    a. If the hole spacing does not match the unaltered or altered skins as per the diagrams, please refer to Appendix A. *This may affect the quantity of rivets required.*
4. Use a pen / pencil to draw a straight line on the curved skin surface of the upper rear fuselage skin, that passes through the existing rivet line connecting the skin to the rear, upper lip of the composite canopy frame. Ensure that the curve is the same distance from the edge of the skin along its entire length.
5. Use a ruler and a pen / pencil to mark-off the points along the curve where the new rivets will be inserted. 1/4 pitching (from the original rivet spacing) is required for the first set of holes, 1/3 pitching is required for the second set and 1/2 pitching is required for the last set of holes, from the top of the aircraft downwards. *Note – for parachute versions, the first holes will be covered by the parachute blowout skin and it is not required to remove this skin. Simply adjust the pitching in a practical fashion for the spacing of the first hole as close as possible to the parachute blowout skin edge.*

5.2. Procedure:

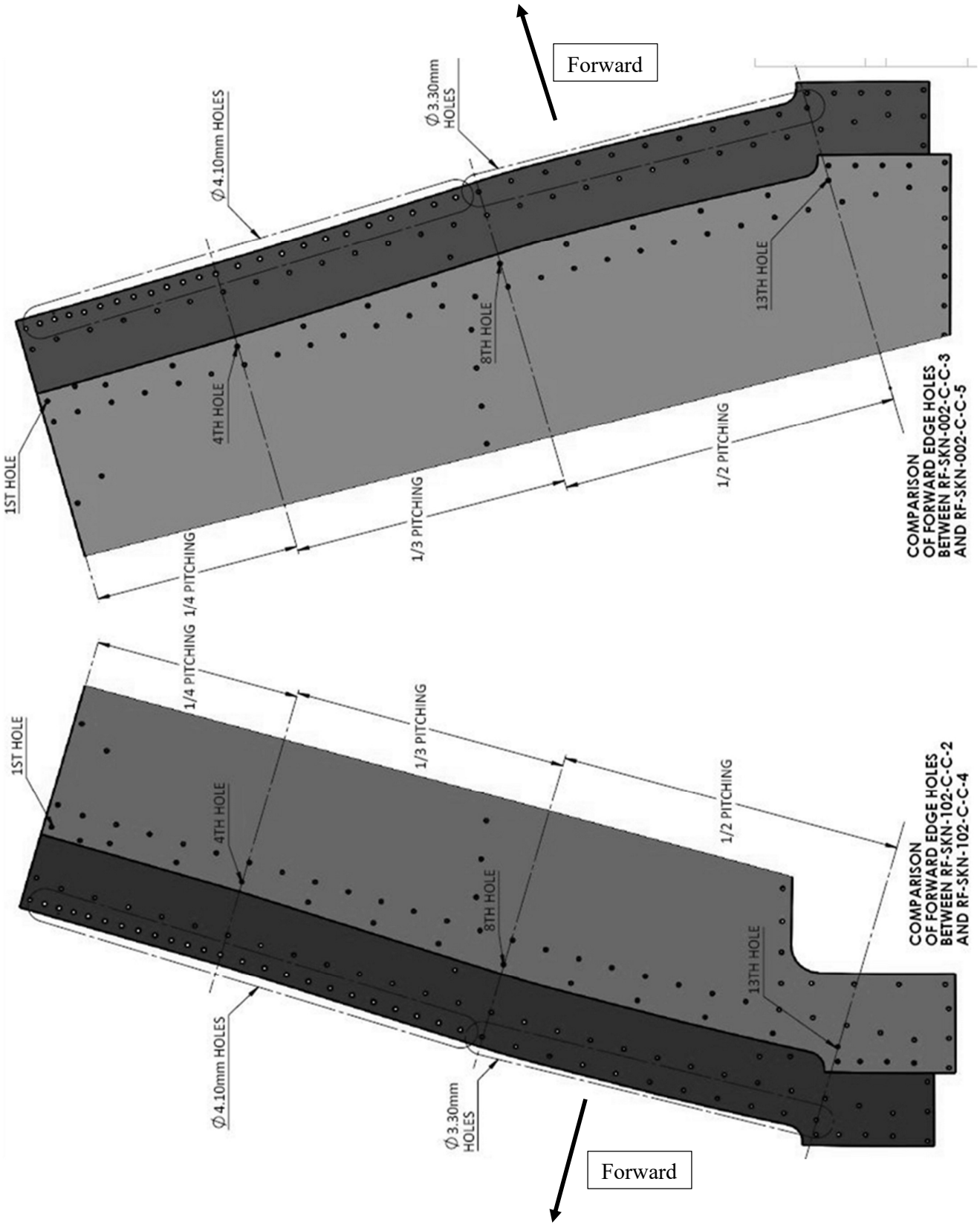
6. Use a 4.0mm (5/32") diameter drill bit to drill the holes marked as 4.10mm holes on the technical drawing and a 3.2mm (1/8") diameter drill bit to drill the holes marked as 3.30mm holes. Ensure to drill the holes in such a manner such that a correctly sized rivet flange will lie flush with the aluminum skin when fastened.

7. Pull the 3.2 x 8mm (1/8” x 5/16”) and 4.0 x 10mm (5/32” x 3/8”) multi-grip rivets with the pneumatic or hand operated pull riveter, whilst ensuring that the rivet flange lies flush with the aluminum skin.
8. Once the new rivets have been added, certain of the original 3.2mm rivets should be replaced with 4.0mm rivets. The regions with 1/3 and 1/4 pitching must contain 4.0mm rivets, and the quantity depend on if the aircraft is a parachute or non-parachute version. Please see attached drawings.
9. Remove the original, 3.2mm rivets, with a 4.0mm drill bit and continue to open the hole.
10. Fit and pull the remaining 4.0 x 10mm (5/32” x 3/8”) mulit-grip rivets with the pneumatic or hand operated pull riveter while ensuring that the rivet flange lies flush against the skin.
11. Touch-up the work completed with appropriate touch-up paint

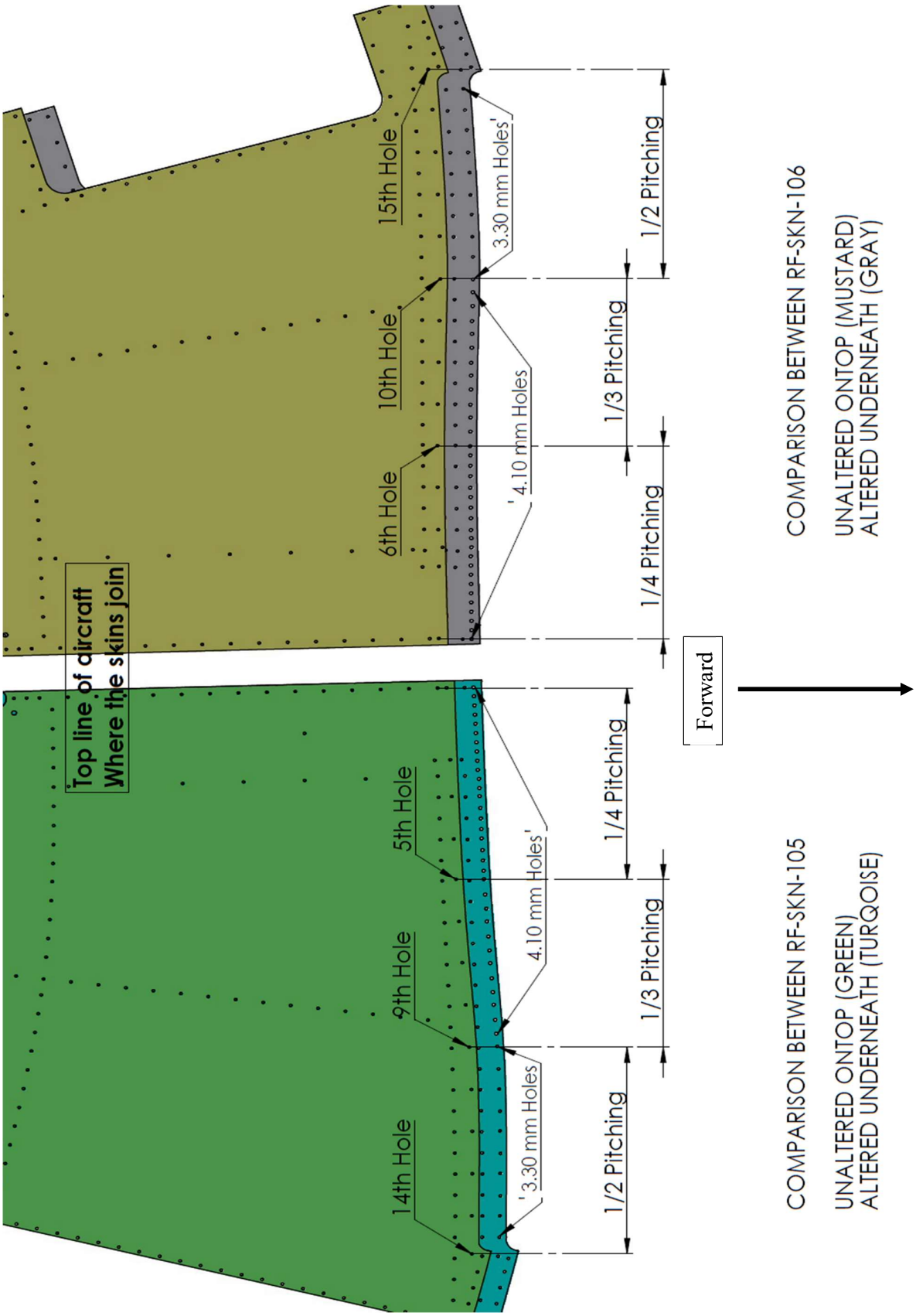
Please ensure that the compliance with the provisions of this Service Bulletin is entered into the required aircraft logbooks.

6. DIAGRAMS

6.1. PARACHUTE VERSION



6.2. NON-PARACHUTE VERSION



7. EXAMPLE IMAGES

INCORRECT SPACING

FIGURE 1 | **INCORRECT SPACING**

CORRECT SPACING

FIGURE 2 | **CORRECT SPACING**

8. APPENDICIES

8.1. Appendix A – Differing Spacing from Diagram

FIGURE 3 | **ALTERNATIVE SPACING**

If the spacing of the rivets differs from the diagrams provided above, but has the same as seen in Figure 3 (left), then an alternative spacing is required. The red markup in the figure is to show that the forward and aft rivets are inline.

If moving from bottom to top, the pitching does not change from 1/2 to 1/3 (original pitching) as in the technical drawings in section 6. This is still a sufficient number of rivets in this section and are required to remain. If the rivets in this section are 3.3mm, then they are required to be drilled out and replaced with 4.0mm rivets, as described in point 8. in INSTRUCTIONS.

The additional rivets may be added in the 1/4 pitching section, as per diagrams in section 6.

This requirement, in this appendix, is due to the original holes being misplaced in the 1/3 section, and if the diagrams/above instructions were to be obeyed, there will be an additional hole/rivet every 3rd rivet.

Signed on this the 11th day of FEBRUARY 2021

ACCOUNTABLE MANAGER
MR JAMES PITMAN