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SERVICE BULLETIN

#0002

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The Airplane Factory Considers Compliance with all Service Bulletins Mandatory

RELEASE DATE: 14 August 2014
EFFECTIVE DATE: 14 August 2014
SUBJECT: Reinforcement of the Upper Join between the Centre and Rear Fuselages
MODELS AFFECTED: Sling 4 serial numbers 001 to 060, inclusive
COMPLIANCE TIME: Before or during next scheduled maintenance ("MPI")
PURPOSE:

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

Following implementation of supplementary non-destructive and also destructive testing, The Airplane Factory has determined that it is necessary to make an amendment to the build standard of the Sling 4 aircraft, which amendment takes effect in respect of all new Sling 4 aircraft manufactured from 14 August 2014. This Service Bulletin requires that the changes be effected also to all flying aircraft during or prior to the next MPI immediately after 14 August 2014, regardless of whether such MPI arises as a consequence of the expiry of 100 flying hours since the previous MPI, or due to expiry of one calendar year since the previous MPI. In addition, the change should be effected to all affected 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

It is reiterated that the work set out in this Service Bulletin should be implemented on all affected aircraft before or during the next aircraft MPI.

PARTS/EQUIPMENT LIST:

Only 1 person is required for the performance of the work. The following equipment is required:

- 1 x Ruler
- 1 x Pen or pencil
- 1 x Electric or pneumatic drill
- 1 x 3.2 mm (1/8") diameter drill bit
- 1 x 4.0 mm (5/32") diameter drill bit
- 1 x 3.2 mm (1/8") diameter punch
- 1 x Hammer
- 1 x Side cutters
- 5 x 3.2 mm x 8 (1/8" x 5/16") multi-grip, blind, Gesipa, aluminium rivets (available from The Airplane Factory)
- 24 x 4.0 x 10 mm (5/32" x 3/8") multi-grip, blind, Gesipa, aluminium rivets (available from The Airplane Factory)
- 1 x Pneumatic or hand operated pull riveter
- Touch-up paint

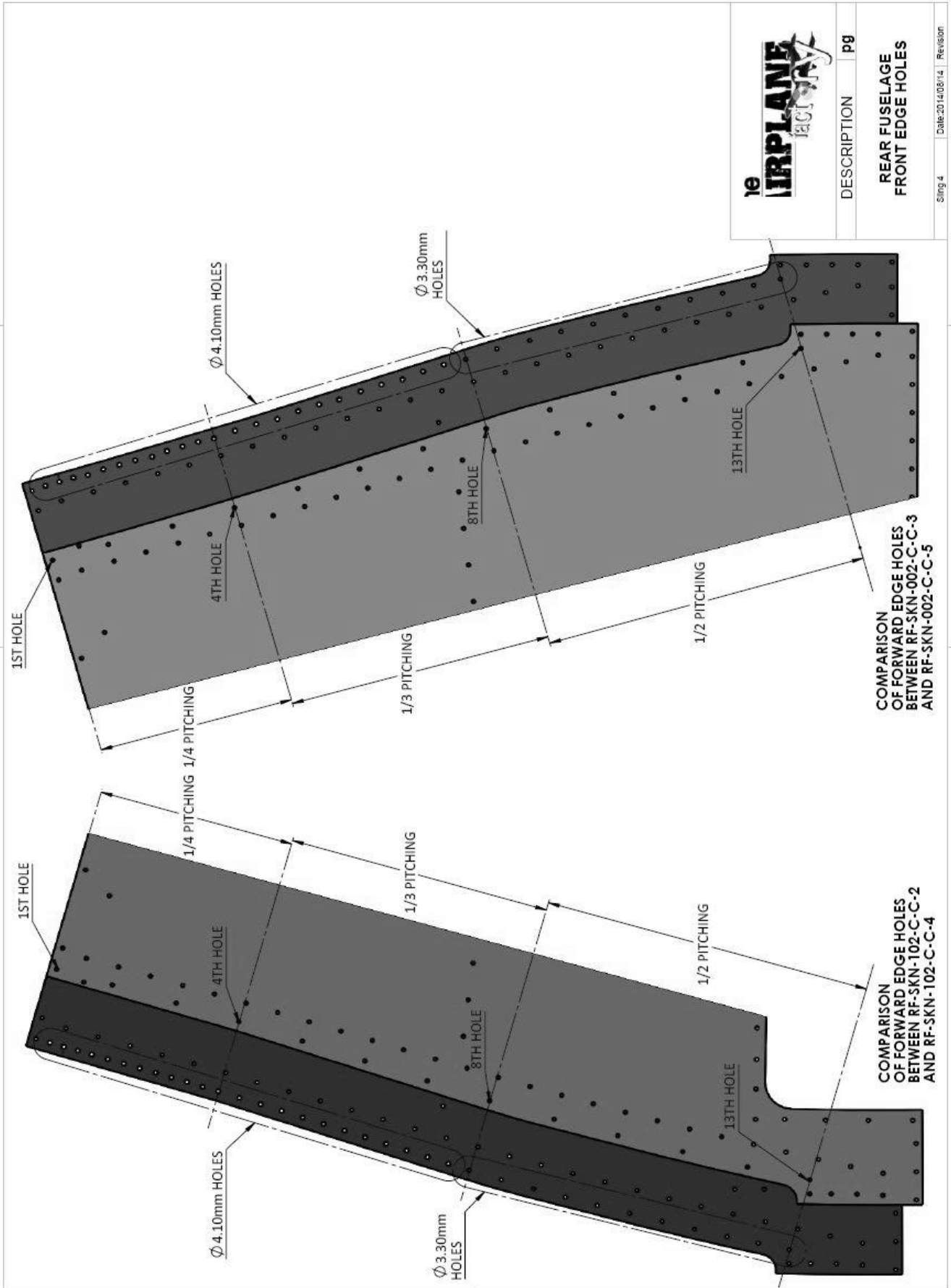
INSTRUCTIONS:

All work must be performed by a person appropriately qualified to make structural changes and repairs to the Sling 4 aircraft. The manufacturer is available to perform the required work on all aircraft that may be delivered to its premises, or otherwise by 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, as the case may be.

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

1. Read and understand these instructions, including by reference to the attached drawings, before attempting any work on the airframe.
2. The instructions provide for the fitting of a number of additional rivets to two upper fuselage skins, and the replacement of certain additional rivets.
3. The affected skins are those on the upper rear fuselage and have part numbers RF-SKN-102-C-C-2 (left side) and RF-SKN-002-C-C-3 (right side) respectively. The new skins have part numbers RF-SKN-102-C-C-4 (left side) and RF-SKN-002-C-C-5 (right side) respectively.
4. Following the modifications set out below, the modified aircraft will meet the post 14 August 2014 build standard reflected in document DC-BSC-001-X-C-1, which document supersedes the previous build standard reflected in document DC-BSC-001-X-C-0.
5. Use the pen or pencil to draw a straight line on the curved skin surface of the rear fuselage upper front skin edge 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.
6. Use a ruler and a pen to mark off the points along the curve where the new rivets will be inserted. One quarter pitching is required between the first and fourth holes counted down from the parachute cable tray. One third pitching is required between the fourth and eighth holes. Finally, half pitching is required between the eighth and thirteenth holes. Note: The first hole is covered by the parachute covering skin and it is unnecessary to remove this skin. Simply adjust the pitching in a practical fashion for the spacing of the first hole as close as practically possible to the parachute skin edge.
7. Use a 4.0 mm ($\text{Ø}5/32''$) diameter drill bit to drill the holes marked above the eighth hole and a 3.2 mm ($1/8''$) diameter drill bit to drill those below. Drill through the rear fuselage skins and the composite canopy lip in such a fashion that a correctly sized rivet may be fully inserted so that the rivet flange lies flush with the aluminium rear fuselage skin.
8. Pull the 3.2 mm x 8 ($1/8''$ x $5/16''$) and 4.0 x 10 mm ($5/32''$ x $3/8''$) multi-grip blind rivets with the pneumatic or hand operated pull riveter, whilst ensuring that the skin lies flush against the composite.
9. Now that the new holes have been drilled and riveted, certain of the original 3.2 mm rivets should be removed so that they may be replaced with 4.0 mm rivets – Note that this is only required for the top seven rivets. (In addition, if the first rivet is covered by the parachute covering skin then this rivet may be left as it is and need not be replaced). The eighth rivet and all rivets below it remains 3.2 mm diameter rivets.
10. Open the holes by drilling with a 4 mm ($5/32''$) diameter drill bit.
11. Fit and then pull the remaining 4.0 mm x 10 ($5/32''$ x $3/8''$) multi-grip blind rivets with the pneumatic or hand operated pull riveter whilst ensuring that the skin lies flush against the composite.
12. Touch up the work with appropriate touch up paint.

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



the AIRPLANE FACTORY	
DESCRIPTION	pg
REAR FUSELAGE FRONT EDGE HOLES	
Sheet 4	Revision
Date: 2014/08/14	Revision