

Subject: Repair of the fuselage by scarfing.

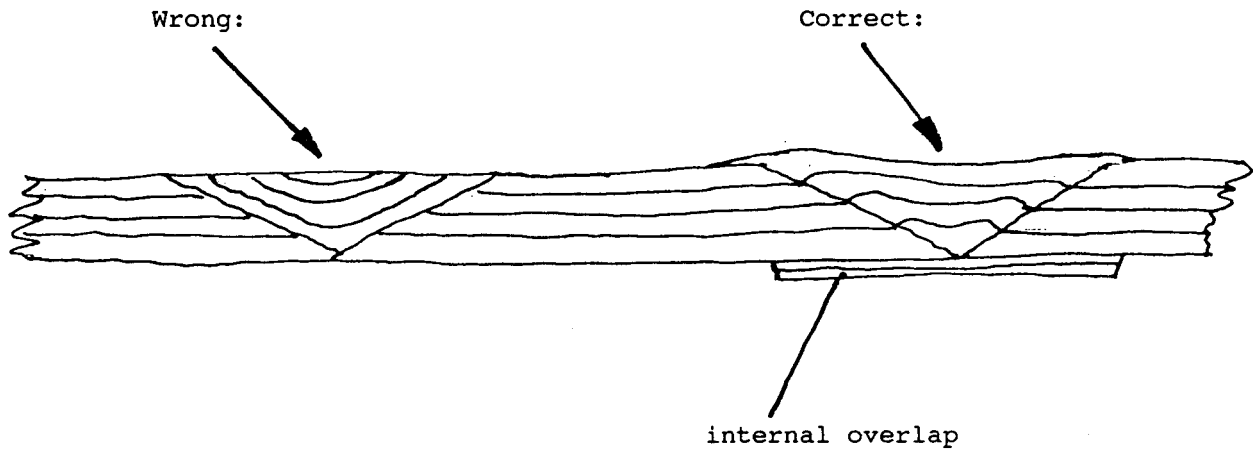
Affecting: All serial no.s ASW 27

Compliance: Where required.

Preface: For the repair of the ASW 27 fuselage skins it is important that the hybrid laminate of the skins is repaired. This means that the layer sequence (from inside to outside), i.e.

glass, Carbon, Kevlar, (Polyester-vleece not replaced!)
Carbon, Glass

is applied such that it matches the original.

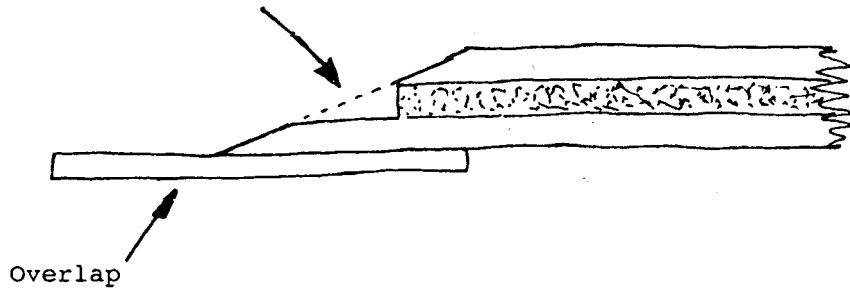


- Action:**
- 0 Make a 'backbone' jig by use of an unbroken ASW 27 fuselage.
 1. Trim edges of broken fuselage in simple geometric forms so that match with new part or prefabricated insert will be easy.
 2. Prepare an internal overlap (2x 92140 ✖ and 1x 92110 #, about 180 to 200 mm long) and glue approx. 50 % into the wider part of fuselage.
 3. Adjust other part on the backbone and glue parts together.
 4. Prepare scarf joints according to Repair Manual.

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5. PKM (19), Polyester vleece, must not be replaced but is removed as a step:



6. Innermost layer (24) 92110 \neq is included in overlap and needs no action any more.
7. UD-Carbon Laminate (22), 1 layer CX12 \neq (scarf 16.5 mm minimum length) and overlap over scarf.
- 8a Laminate (20), 1 layer Carbon 03040 \times as far as into the end of the PKM step or overlap.
- 8b Laminate (18), 1 layer Carbon ⁰³⁰⁵⁶~~03040~~ \times over scarf. Now wind peel ply all around and make bondage with tape to press for low resin content and harden. Remove peel ply after hardening and only scarf last 2 layers 03040.
9. Laminate (16), 1 layer Kevlar 98608 \times over scarf.
- 10 Laminate (11), 1 layer UD-Carbon CCC Style 798 \neq (or CX 250 or KDU 1012) and overlap.
- 11 Laminate (4), 1 layer 92145 \neq over scarf. Now again wind peel ply all around and make bondage with tape to press for low resin content and harden and post cure. Remove peel ply after hardening and only scarf last two layers, fill and gelcoat.
Then finish.

Material & drawings:

Use original material only, refer to layer scheme drawing 270.11.9002.

Notes:

The repair can be accomplished by a competent person. It must be checked and certified by an appropriately licensed inspector for aeronautical products.

Poppenhausen, April 7th, 1997

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The translation into English has been done by best knowledge and judgement; in any case of doubt the German original is controlling.

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