

Cod. Specifica S0135

Descrizione: Installation of a kit of parts to increase Savannah MTOW to 560 kg

Modifications to right and left wing

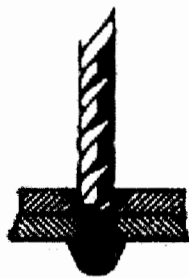
The wings are not installed on the airplane and the slats are removed.

It is necessary to remove the old 3 mm thickness plate of the attachment of the wing longeron to the fuselage and replace it with a new one 5 mm thickness. It is also necessary to remove the old plate 3 mm thickness of the attachment of the front strut to wing and install a pair of new plates.

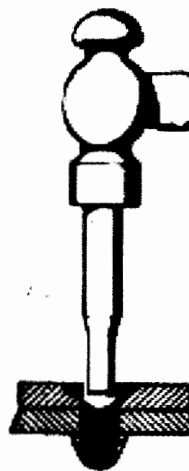
To do all this job, you must remove the nose skin. Remove it carefully, in order not to enlarge the holes (mainly those diameter 4 mm), also because you need to install this skin again after the end of the work.

Wing - fuselage attachment plate: the new plate is 5 mm thick while the old is 3 mm thick. Remove the old one removing the two bolts and the seven solid rivets.

To remove the solid rivets, act as follows: with a hand drill in slow rotational speed remove only the head of the solid rivet (push the hand drill perpendicular to the surface and inside the head for 2 - 3 mm, then give to the drill a little angle in order it can tear the head from the shank). The remaining shank must be thrown out of the hole with a pin and a hammer (the following drawing refers to this operation on a countersunk solid rivets, the same procedure can be applied also to round head solid rivets).



Drill through head



Drive out pin

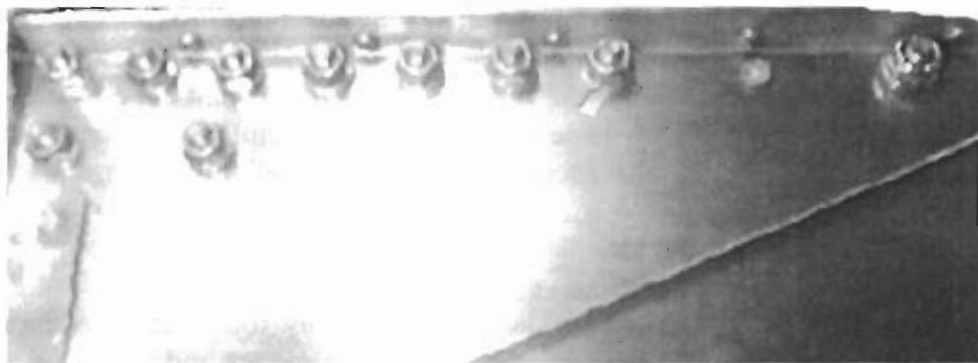
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Now enlarge the seven holes diameter 4.8 mm (also those of the supplied new plate) and install the bolts AN3-06A (9 in total), with one washer AN960-3 and nut AN365-3 each (torque 6 Nm).



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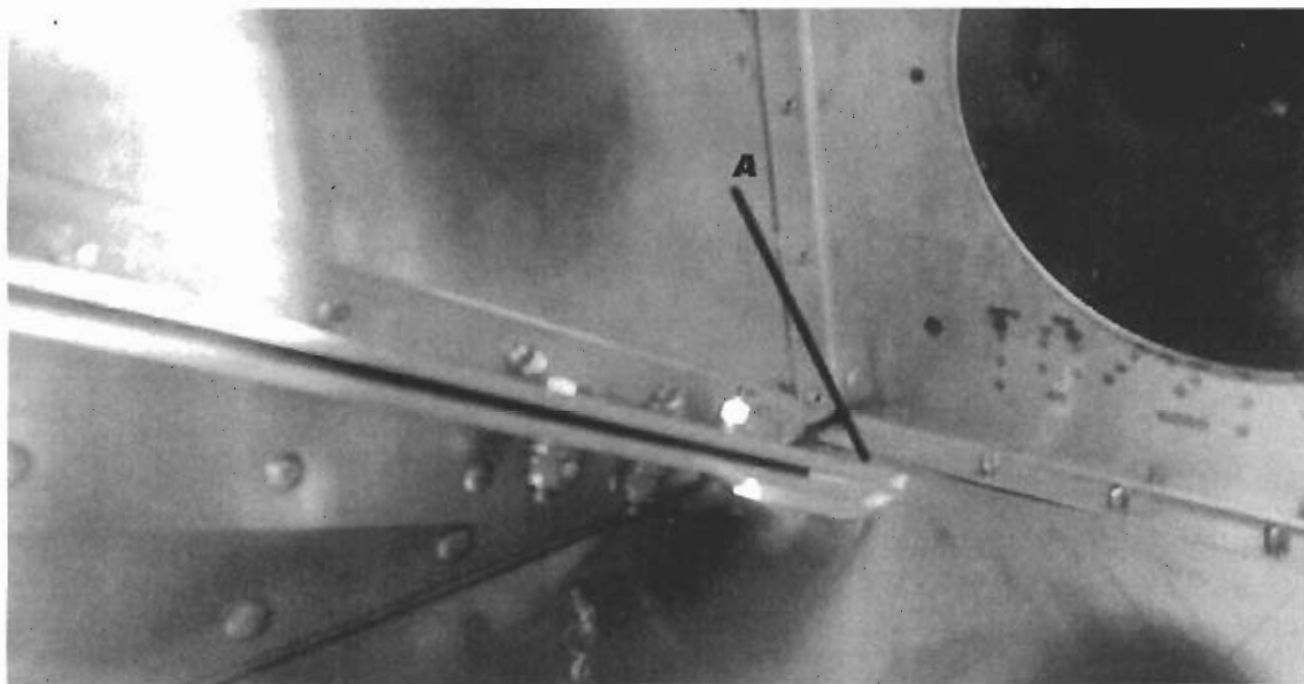
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Wing – front strut attachment plate: the old plate thickness 3 mm must be replaced with two longer plates SA112.

Remove the old plate removing the three bolts that connect the plate to the angular, then install the two new plates (one for each side of the angular) with bolts AN3-06A, two washers AN960-3 and nut AN365-3 each.



The new plates SA112 have a fourth hole, that is not present on the extruded angular, so drill it diameter 4.8 mm and install bolt AN3-06A, two washers AN960-3 and nut AN365-3.

Close all the bolts with torque 6 Nm.

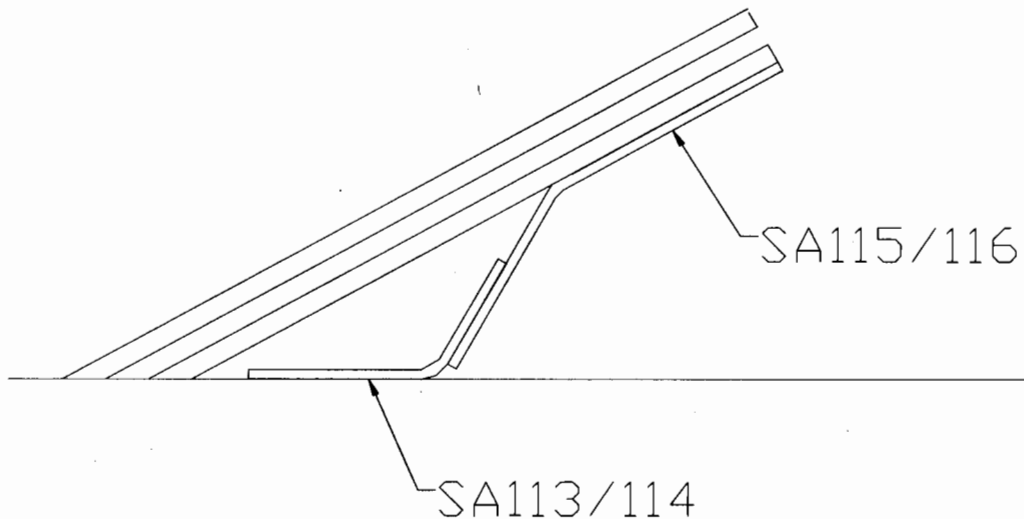
Note that you must cut a little the nose skin in the area marked “A” in order to make place for the double plate.

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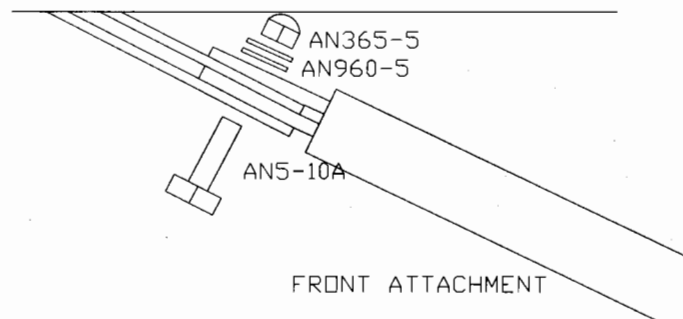
Install again the nose skin.

Externally, remove the old aluminium flanges and install SA114 and SA116 on the front strut attachment according to following drawing.



Note that SA116 must be drilled diameter 8 mm copying the holes of the flanges coming out from the nose skin.

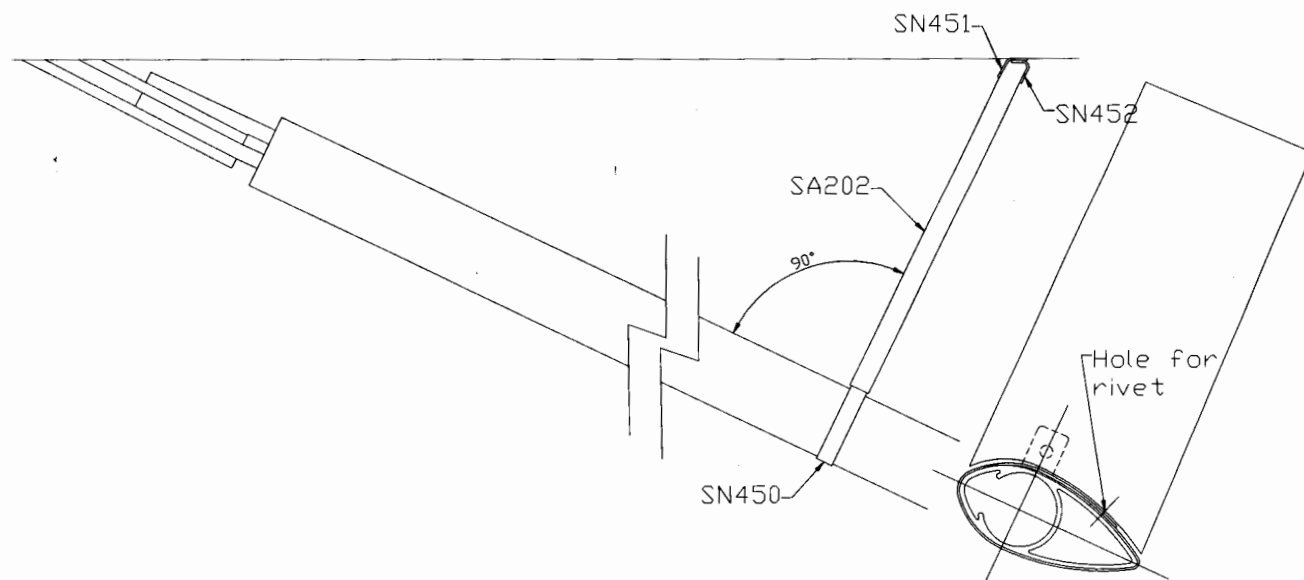
Front struts connections: use 2-3 washers AN960-5, bolt AN5-10A and nut AN365-5 (torque 20 Nm).



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Jury strut installation for front struts: it must be installed on both the front struts:



Positioning the items: the jury strut (SA202 for left wing and SA203 for right wing) must be perpendicular to wing strut (90°): when positioning this part you will note that one side arrives directly under the rib nr 2. In that position you must rivet the parts SN451 (towards wing tip) and SN452 (towards wing root) with two rivets diameter 3.2 mm (the pitch is exactly the same of the rib).

Install two riv nuts M4 on the flange SN450. On the strut, position the flange SN450: it is supplied not curved, you must curve it carefully by hand around the strut profile until the two holes for the rivet will match: this hole must be copied on the rear part of the strut profile and install it with a rivet diameter 3.2 mm. Note that the two flanges of the SN450 are centered with the center where the strut is thicker of course. Install two screws M4x16 to fix SA202 to SN450 (the holes on SA202 are already present). Now copy the holes of SN451 and SN452 on SA202 (two holes diameter 4 mm). Remove SA202, enlarge those holes you just made to diameter 6 mm and install riv nuts M4. Now install SA202 again, using 4 screws M4x16 and grover washers as locking devices. Act symmetrically for the other wing.

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NOTE ON OLD STRUTS

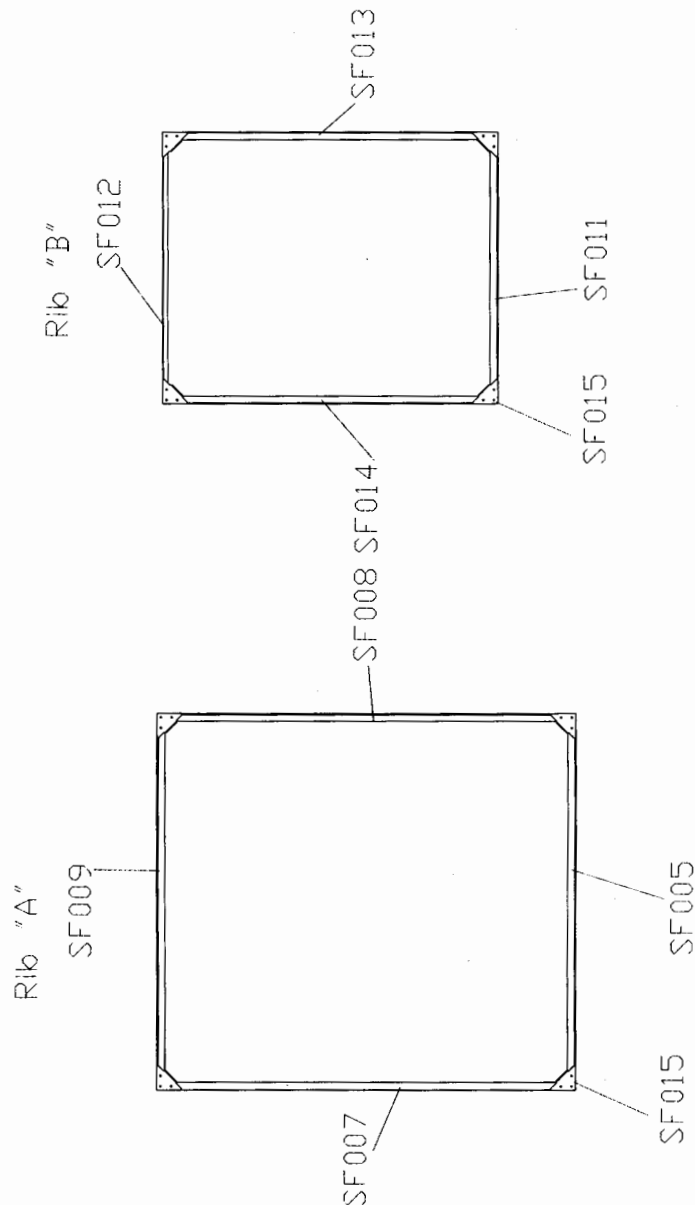
In the case of airplanes with the old front strut fittings (those made with a round tube and a plastic insert inside), it is not possible to insert it on the wing double flange of the front attachment. In this case a different strut fitting is supplied with a welded steel plate. The wings must be installed on the airplane with all the struts. Remove the old tube from the front strut, then insert the new one and bolt it to the wing flanges. Then mark the center of the holes (that are present on the aluminium struts) on the steel tube inside, remove it and drill diameter 6.5 mm (it is important that the holes are aligned trough the tube in order to match with the holes of the aluminium struts). Install the new strut fittings with the bolts AN4-15A, washers AN960-4 and nuts AN365-4, torque 7 Nm.

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Modifications to fuselage

Two supplementary ribs must be installed inside the fuselage, plus two supplementary angulars on the lower fuselage. For the installation of the ribs A and B see following drawings:



The elements for ribs A and B must be positioned before inside the fuselage and clecoed, then riveted to the fuselage skins and then rivet also the plates SF015.

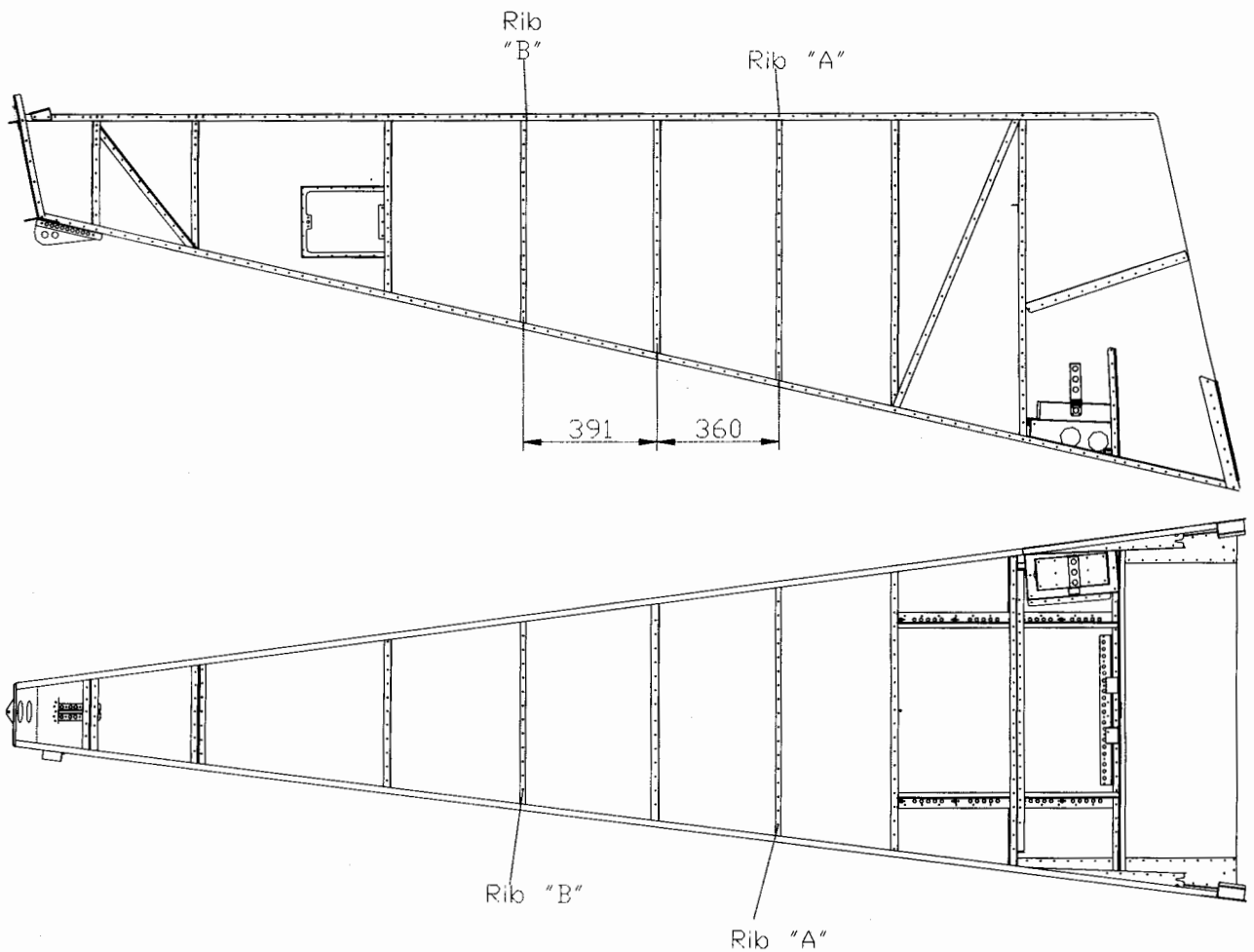
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NOTE: as the skins are not drilled, see the following drawings for finding the positions: drill the skins diameter 3.2 mm.



In practice, these ribs are composed by two vertical parts and two horizontal parts each: the only holes that can match are those on the long angulars: these holes will match with the first holes of each part of the rib. Use these holes to cleco the parts on the skins, and then copy the holes on the skins, then cleco everything, rivet (diameter 3.2 mm) and then join the angulars with the plates SF015.

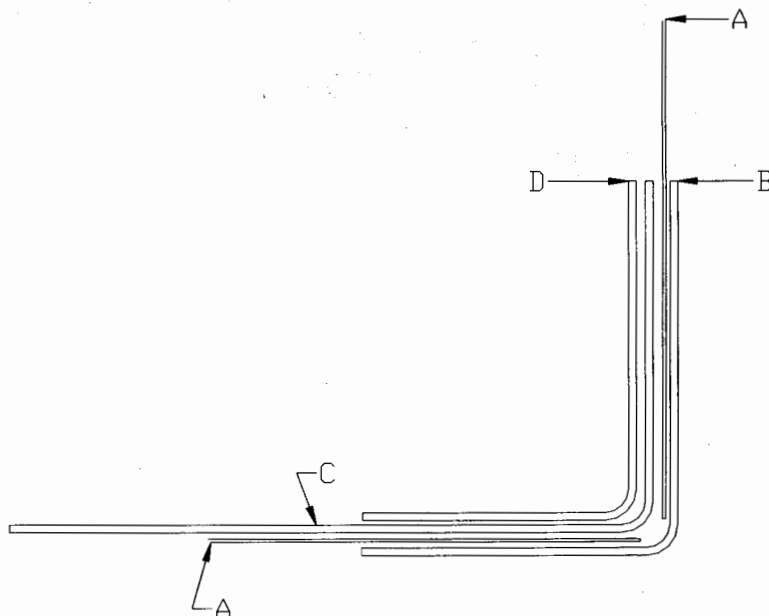
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Installare i due angolari per rinforzo della parte inferiore della fusoliera SF129 e SF130, devono essere installati come segue:



where

A=lower and side skins

B=outer lower angulars (SF246 and SF247)

C=inner reinforcement (SF200 and SF201)

D=inner long reinforcement (SF129 and SF130)

Note: to insert these angulars inside the fuselage, you must remove carefully all the rivets (not to enlarge the holes) for the length interested to the modification and slightly slide them inside the parts operating from inside the fuselage. When the position is reached, you can rivet again everything (diameter 3.2 mm): in the case some hole should be enlarged, replace with rivet diameter 4 mm.

MODIFICHE :

01-23/03/05: modificati bulloni attacco piastra

02-18/05/05: inseriti monconi montanti tipo vecchio