



PRODUCTION START DATE ____/____/____

AILERON PRODUCTION CYCLE

REV.0

PRODUCTION END DATE ____/____/____

MODEL:

FIGURE REFERENCE

REV.

CHECKED

DATE

SIG.

DATE

SIG.

APPROVED

M	STEP	DESCRIPTION	PAG	R	L	HOURS OF WORK		OPERATOR	
						R	L	R	L
	1	Regulate jig (twist / gradation) (see note 1)	fig 1						
	2	Cleco the spar (A-SP) in the jig through centering holes, check the direction of the spar caps	fig 2, 4						
	3	Cleco reinforcement (A-RC5) onto rib 5 (A-RB5) and insert into the jig	fig 3, 5						
	4	Check the linearity of the spar (A-SP) with the line before fixing the brackets	fig 4						
	5	Fix the body ribs (A-RB1/2/3/4/5) and nose (A-NRB1/2/3/4/5) with cleco paying attention to the direction	fig 5, 6						
	6	Cleco the "L" brackets (A-L1), into rib 1, (A-L5), into rib 5, paying attention to the linearity of the spar with the line	fig 5, 4, 3						
	7	Cleco the galvanized jig for the body ribs and check that they are at right angles with the spar (A-SP)	photo 1						
	8	Mark the centre of the rib lips with a central bar	fig 7						
	9	With a marker mark the centre of the spar fold (A-SP) and make 3 guide holes per portion, Ø2,4mm, with 30mm interaxle spacing straps	fig 7, 8						
	10	Insert body (A-SK) and check height of ribs 1 and 5 (check with the measurements on the jig). Position so that the centering holes present on the skin correspond with the previously marked central lines of the rib lips	fig 9						
	11	Block the aft edge with pliers and aluminum "bars" making sure it is straight	fig 10, photo 2						
	12	Call the manager before starting to drill the skin	-						
	13	Start drilling the skin at Ø2,4mm from the aft edge towards the spar (see note 2)	fig 10, photo 2						
NOTE 1	Check the level of the floor corresponding to jig 1-5 with set square. Position regulating jig with tabs towards the back and regulate								
NOTE 2	Insert rib drilling strips and start to drill the skin first creating just the first row of holes, Ø2,4 mm, starting from the aft edge, in the direction of the root-tip, up to (but not including) the spar. Repeat for other side								

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	14	Finish drilling ribs, redrill the guide holes of the spar on the skin with the Ø2,4 HoleFinder. Then insert the 30mm intermediate straps and drill the whole spar (first one side and then the other)	fig 8, 11, photo 2						
	15	Mark the surplus parts of the skin for later cutting	fig 11, photo 2						
	16	<i>Call the manager to check the work</i>	-						
	17	Redrill the holes of the rib skin at Ø3,2mm (remember to close the bar)	fig 11,12 photo 2						
	18	Make two holes per portion on the spar, between the 30mm interaxle spacing holes of the strap, to block twist, to countersink later	fig 11						
	19	Remove all the jig and position on the board	fig 9, 5, photo 3						
	20	Dimple holes for Ø2,4mm anchor nuts inside the spar. If not present redrill the holes on the hinge reinforcement slabs (A-PC2) (A-PC5)	fig 13, 14						
	21	Redrill the holes of rib 5 from Ø2,4mm to Ø3,2mm and countersink for reinforcing coupling / joint	fig 3						
	22	Redrill the rib foot holes at Ø3,2mm (both noses and body and those that correspond to the spar web at Ø3,2mm singularly)	fig 5, 6						
	23	Deburr and pass primer on the parts in contact (also on the nose lips) and cut the parts marked previously	fig 5, 6, photo 2						
	24	Nail the anchor nuts (MS21047L3) to the reinforcing slabs (A-PC2) (A-PC5) on the spar, inserting a Ø4,8mm AN3 bolt to block the anchor nut. Do not use cleco.	fig 13, 14						
	25	Countersink the intermediate holes to block skin both on spar lips and on skin	fig 11						
	26	Reassemble the spar (A-SP) with the ribs on the board checking the figure and that the primer is present on the feet of the rib	fig 5, 6, photo 3						
	27	<i>Call the manager before rivetting</i>	-						
	28	Rivet all the body ribs (A-RB1/2/3/4/5), nose (A-NRB1/2/3/4/5) and brackets (A-L5) (A-L1) on the spar web with Ø3,2mm rivets. Only on rib 5 rivet the support (A-RC5) in the countersunk holes with Ø3,2mm dimpled rivets.	fig 5, 6, 3						
	29	Pass the primer on the rib lips, noses and on the spar	fig 7, photo 3						
	30	Cleco the iron jig on the nose	photo 3						
	31	Recheck the correct gradation of the jig	fig 1						
	32	Insert the nose skin (A-NSK) into the jig being careful with the back and belly side (the belly is the wide part of the hinge holes present on the nose skin)	photo 3, 4, fig 15						

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						R	L	R	L
	33	Reinsert the fully assembled spar structure into the jig	fig 15						
	34	Reinsert the body skin (A-SK), totally clecoed at Ø2,4mm on the spar and at Ø3,2mm on the ribs into the jig and block the aft edge with bars	fig 9, 16, photo 5						
	35	<i>Call the manager before rivetting the the body skin</i>	-						
	36	After having checked the skin height (ribs 1-5) and aligned the exit edge, rivet body and rib skin (A-SK) with con Ø3,2mm rivets, except for the spar (see note 3)	fig 9, 16 photo 5						
	37	Block body skin with the spar rivetting only the countersunk holes (Ø3,2mm dimpled rivets)	fig 11						
	38	Mark lines corresponding to the lips, ribs and nose on the body skin (A-SK)	photo 6						
	39	Mark a horizontal line corresponding to the lines previously marked in the reference rib lips	photo 6, 7						
	40	Taking the centre of every rib lip as reference, measure up to the horizontal line and copy the various measures	photo 6, 7						
	41	Position the nose checking that the central curve of the skin corresponds with the centre of jigs 1/5. Tighten the nose with the help of straps	photo 8						
	42	Copy the vertical lines of the rib lips previously marked on the body skin	photo 7, 8						
	43	Mark the measures copied on the body skin to the nose skin taking the horizontal line marked on the body skin as reference	photo 7, 8						
	44	<i>Call the manager before drilling</i>	-						
	45	Drill the skin nose at Ø2,4mm (corrisponding to the ribs), both back and belly, after with the help of the HoleFinder make 3 holes per portion on the skin. With the help of the strap, drill everything first one side of the spar and then the other (see notes 4, 5)	photo 5, 8						
	46	Mark the surplus parts for cutting	photo 9						
	47	<i>Call the manager to check the progress of the kit</i>	-						
	48	Redrill the holes of the spar/skin to the final measure of Ø3,2mm	photo 5, 9						
	49	Remove the nose skin (A-NSK) cut the surplus parts and slightly fold the overlaps to the spar, remove the iron nose jigs and check that all holes are at the centre of the lips	fig 15, photo 3, 9						

NOTE 3	Rivet from the first row of holes, starting from the aft edge, in the direction of the root-tip, up to (but not including) the spar. Repeat for the other side
NOTE 4	The petals of the noses to drill are the 1st and 2nd starting from the spar (later they will be rivetted at Ø2,4mm)
NOTE 5	The drilling of the spar is done with closed bars on the aft edge

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						R	L	R	L
	50	Deburr	photo 9						
	51	Reassemble everything and rivet. The nose skins are rivetted with Ø2,4mm rivets except for rib 5 (A-RB5) that are rivetted by Ø3,2 avdel	photo 5, 9						
	52	Remove from the jig, check that the holes of the brackets (A-L5, A-L1) are rivetted. If the central hole is missing in the bracket (A-L1), mark it and later make it and rivet	fig 5						
	53	If necessary cut surplus skin from ribs 1/5	photo 9						
	54	Assemble counterweight blade	photo 17, 18						
	55	Rivet counterweight blade on rib 5	fig 17, 18						