

**ASSEMBLY MANUAL
MANUEL DE MONTAGE**

X AIR

DEMO VERSION-Limited to 15 pages



KIT N°

VERSION DEMO-Limitée à 15 pages

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IMPORTANT ADVICE**FOR THE ASSEMBLY OF YOUR X-AIR ULTRALIGHT.**

Your **X-AIR** is delivered in kit form with many pre-assembled units.

Hence, assembly is considerably simplified; however, a few elements remain to be assembled with utmost care.

We urge you to read the following **carefully and thoroughly** before you start work on your ultralight. We insist you follow the assembly schedule of this manual, which is based on our own, considerable experience and makes best use of it.

Please return your warranty sheet to us promptly, bearing the stamp of your dealer, and send us the address of any subsequent buyer so that we may keep him posted on the latest, often vital information about the **X-AIR**.

Make a complete inventory of the kit, checking for any missing part.

When in doubt during assembly, before any damage is done, call:

-your favorite dealer who will be happy to help

-our company at the following numbers:

phone: +33 (0)2 40 64 21 66

fax.: +33 (0)2 40 64 15 22

email: xair-info@randkar.fr

Web site: <http://www.randkar.fr>

you can too join the e-group dedicated to X-AIR on the internet:

http://www.egroups.com/group/X-Air_Ultralight_Aircraft

We welcome any criticism or suggestions sent by mail: they help us improve the quality of our product and service. Thank you for writing.

***We wish you a pleasant, easy assembly,
and many enjoyable flights***

A few tips from a friend:

☞ Apart from the nuts securing the rubber silent blocks, Loctite thread Locker 243 or equivalent should be applied on all screws and nuts before tightening. This kind of nut with nylon ring must be used only once and have to be replaced if taken out.

☞ Torqueing norms for the airframe are:

-6mm screws 1kgm

-8mm screws 2,5kgm

Except screws going through tubes, in this cases, just torque to apply surfaces in contact and take care to never put the tubes out of shape.

For the engine, refer to the manufacturer's manual.

☞ References to the parts are of two kinds:

with three digits, they refer to a pre-assembled unit ex: **101** Keel front part

with six digits, they refer to a sub-unit ex: **101.124** Leading edge fitting plate

☞ Screws, pins and axles fitted vertically are installed with their heads up

☞ those fitted horizontally, parallel to the keel axis are installed from front to back (head forward).

☞ refer to the drawing sheets to visualize the stages of assembly.

Paragraph A 11 Plan A11

Paragraph C 3 Plan C3

Tools needed:

Open-, ring- or socket-wrenches: 7 / 10 / 13 / 14 / 17 / 19

Allen wrenches: 3 / 4 / 5 / 6 / 8

Nylon-tipped hammer

Pop rivet tool

Drill with 4/5/6mm bits

Torque wrench (advisable, but not strictly necessary)

Products needed

Blue Loctite

Silicone grease

Lubricant silicon spray

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A/ AIRFRAME ASSEMBLY

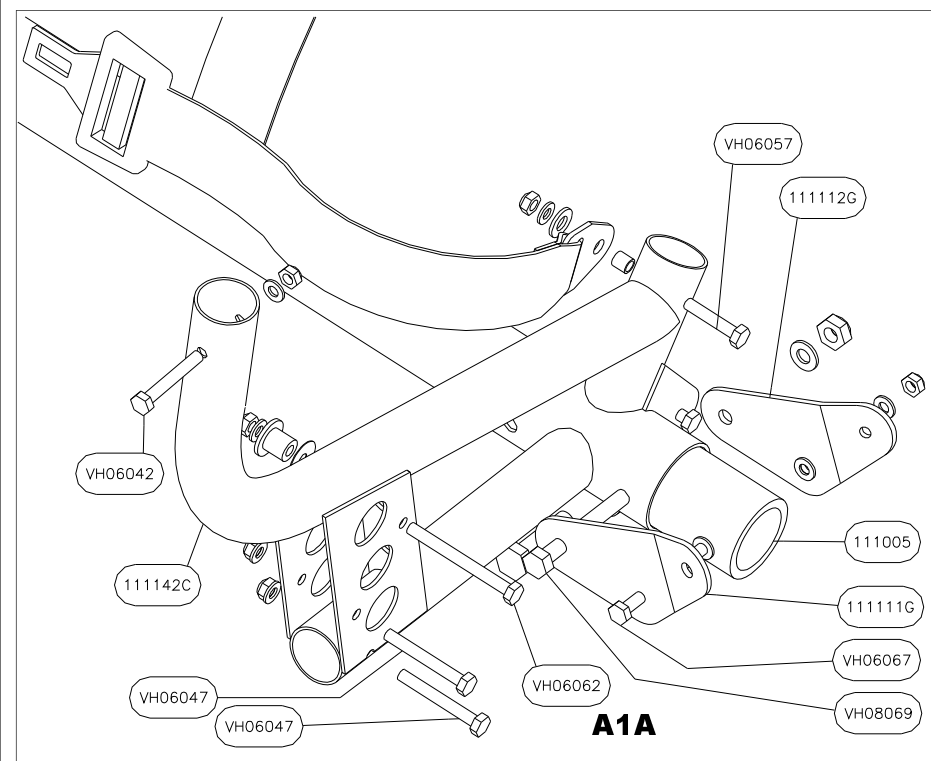
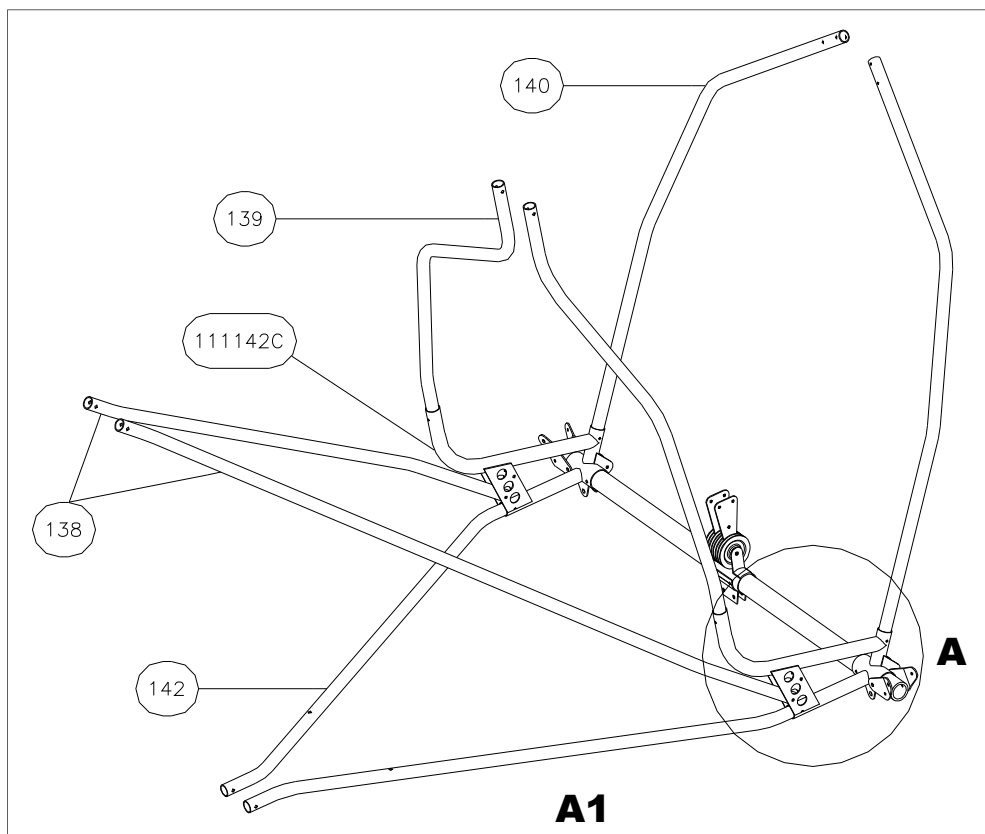
A/ MONTAGE DE LA CELLULE

For engines Rotax 503 –582 and HKS 700E
(see page 5 for Jabiru and page 10 for 912)

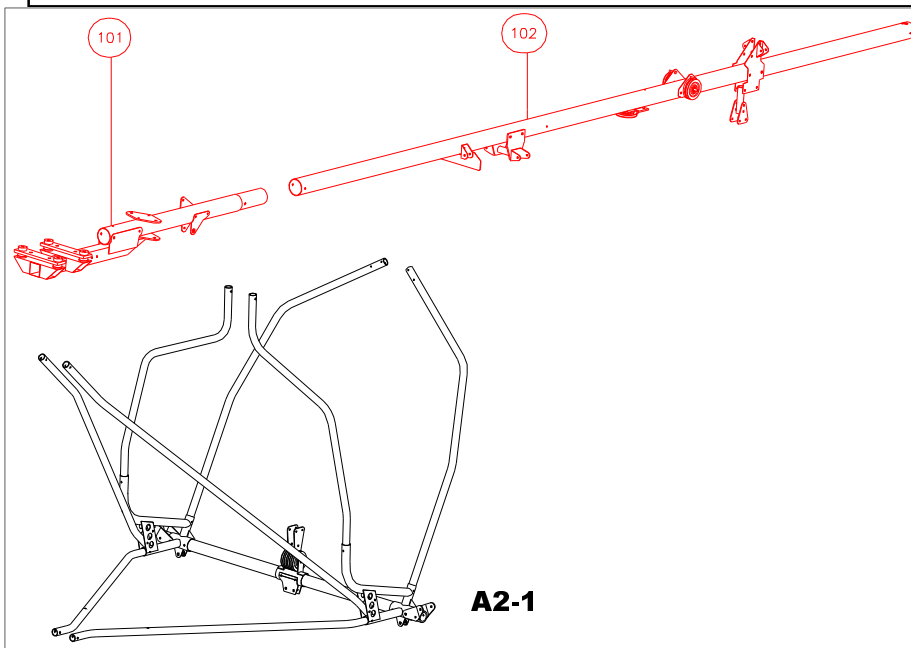
Pour moteurs Rotax 503-582 et HKS 700E
(voir page 7 pour Jabiru et page 10 pour 912)

A 1) Mount parts 111142C on tube 111005 (see A1A).
take care with safety belts, there is one right and one left.
Place unit 111 on the ground and insert all the tubes making up the cockpit frame: 138,139,140,142.
Check that there is a chamfer at the upper end of tube 140. If not, do it. This chamfer will avoid to the diameter 8 screw to come in contact with the tube 140 and to force on it when tightening.
Place all bolts without tightening.

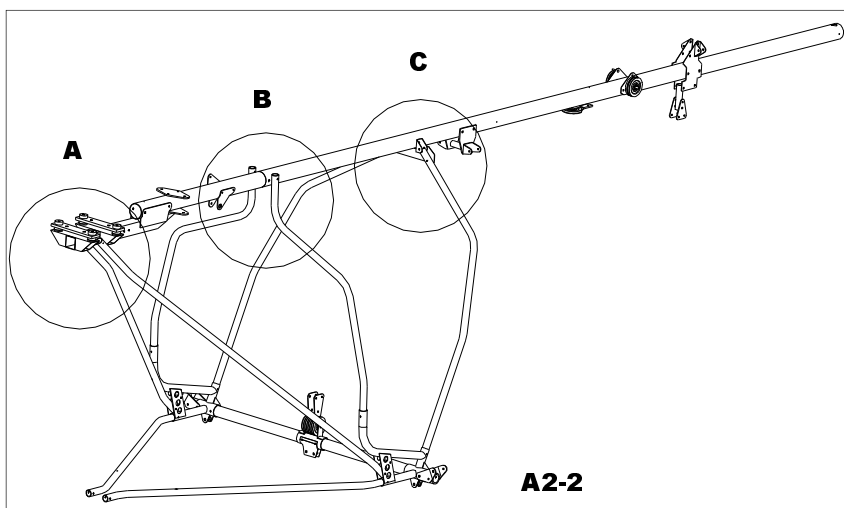
A 1) Monter les pièces d'entrées de cockpit 111142C sur le tube 111005 (voir A1A).
Attention au sens des ceintures, il y a une droite et une gauche.
Poser au sol l'assemblage 111 et insérer tous les tubes constituant la cabane: 138, 139, 140, 142.
Vérifier que les tubes 140 sont chanfreinés à leur extrémité supérieure. Si ce n'est pas le cas, réaliser le chanfrein qui a pour but d'éviter que la vis de 8 qui traverse la quille ne puisse venir en appui sur l'extrémité du tube 140.
Poser toutes les vis sans les serrer.



A 2) Assemble keel forward section 101 to aft section 102, observing the reference marking; place keel on the cockpit assembly .
Do not fit the cables yet.



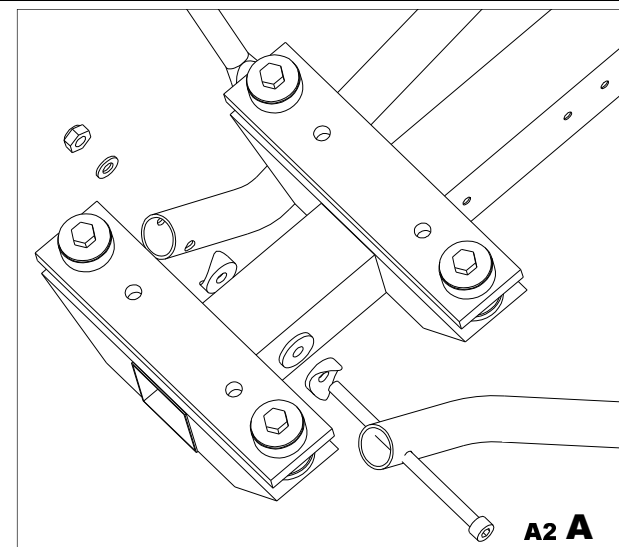
A2-1



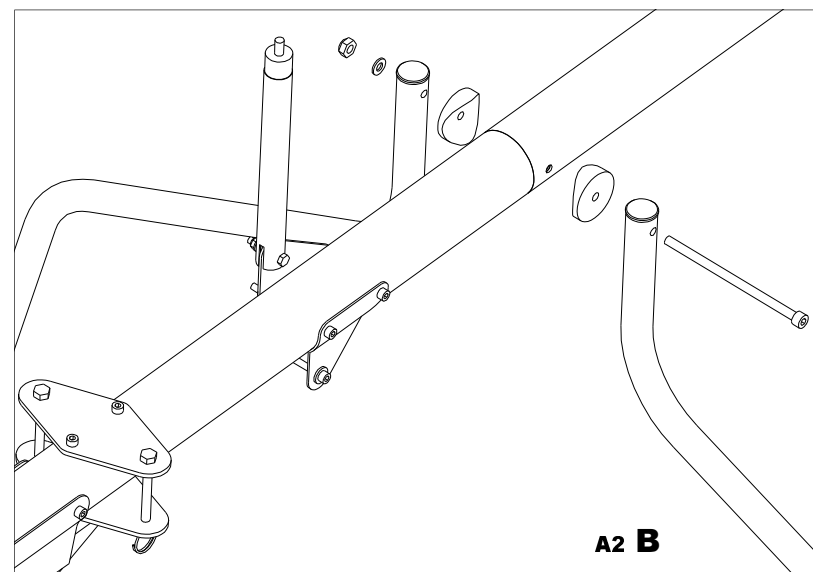
A2-2

For the next step of kit assembly, see chapter A3 page 13

A 2) Assembler la quille partie avant 101 avec la partie arrière 102 suivant le repère et poser l'ensemble sur la cabane. (voir A2 A+B+C)
Ne pas fixer les câbles maintenant (voir A5)



A2 A



A2 B

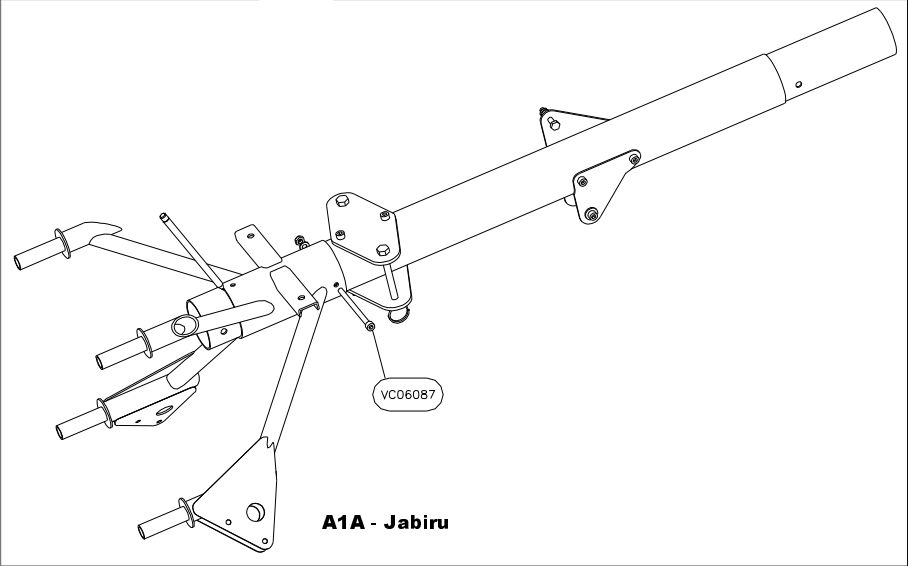
Pour la suite du montage, voir chapitre A3 page 13

For Jabiru 2200 engine
 (see page 5 for 503,582 and hks)
 (see page 10 for 912)

Pour moteur Jabiru 2200
 (voir page 5 pour 503,582 et hks)
 (voir page 10 pour 912)

A1A) Position the engine support on the keel front part 101 with the screw VC06087.
 Mark the limit of the engine support forwards on the keel.

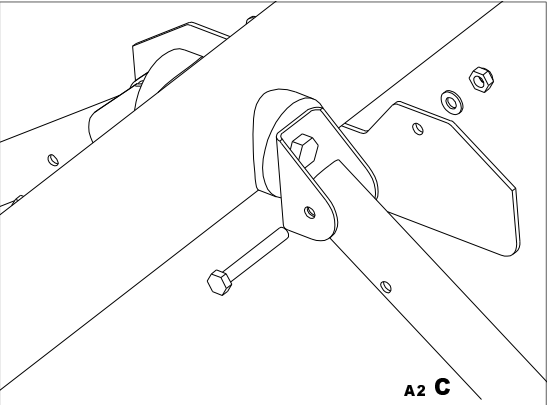
A 1A) Positionner le support moteur sur la partie avant de quille 101 avec la vis VC06087.
 Tracer sur la quille l'emplacement de la coupe au ras de la partie avant du support moteur.



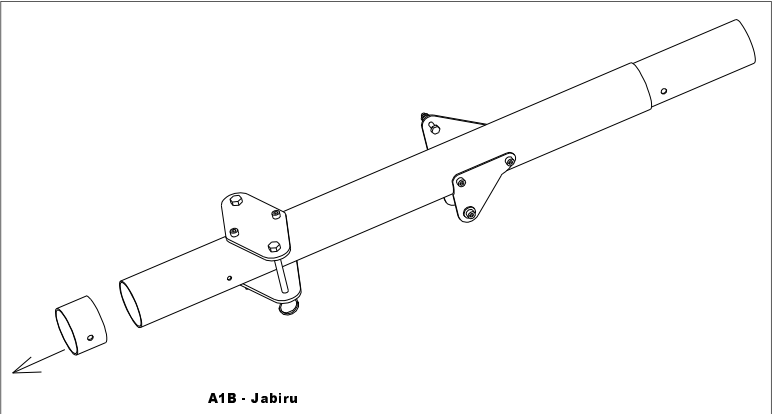
A1A - Jabiru

A1B) Remove the engine support and cut the keel at the mark

A 1B) Déposer le support moteur et couper la quille au niveau du tracé.



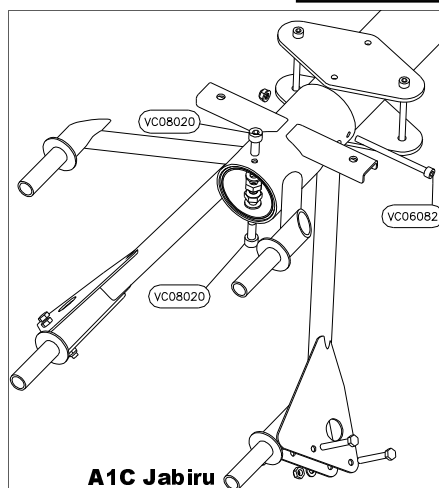
A2 C



A1B - Jabiru

A1C) Re-install the engine support on the keel. Fit it with the rear screw VC06082 and drill at the place of the front screws in the keel. Fit the front screws VC08020.

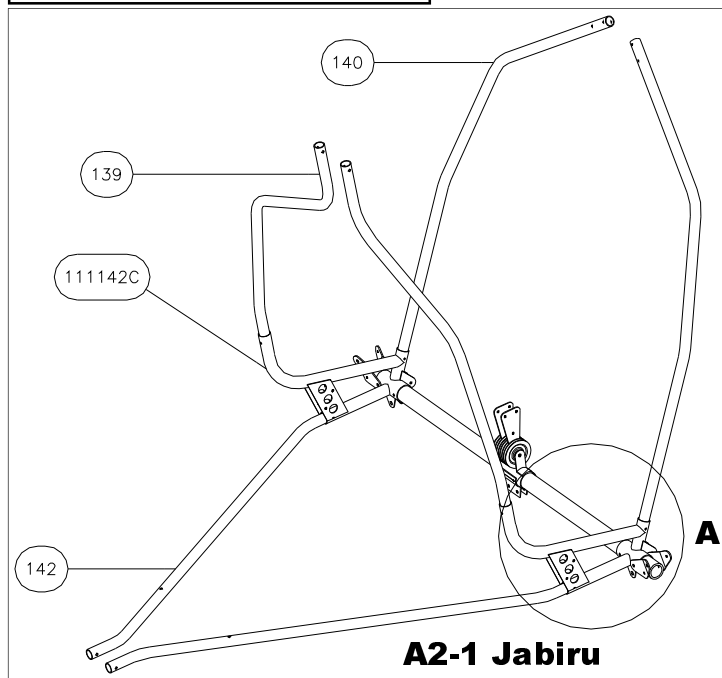
A 1C) Reposer le support moteur sur la quille et le fixer avec la vis arrière VC06082. Contrepercer la quille à l'emplacement des vis avant. Fixer les vis avant VC08020.



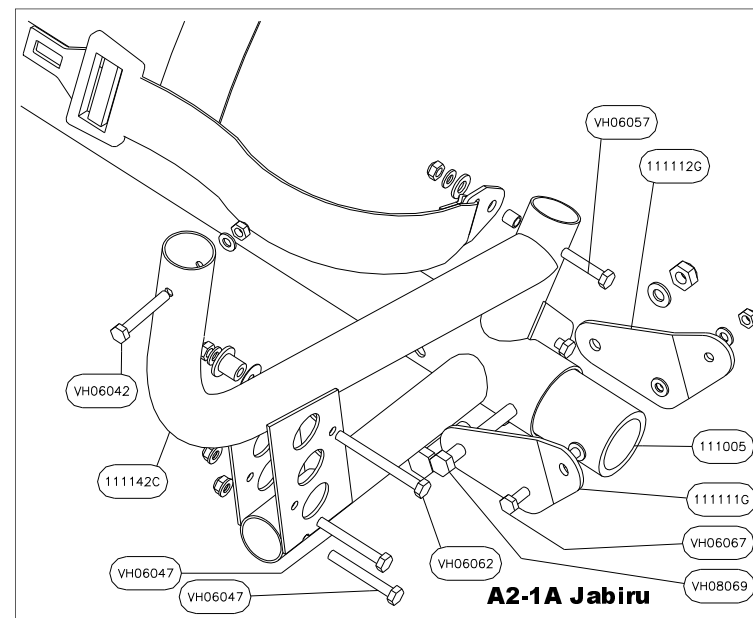
A1C Jabiru

A2-1) Assembly the cockpit tubes.

A 2-1) Monter les pièces d'entrée de cabine 111142C sur le tube de base 111 (attention aux ceintures, il y a une droite et une gauche). Assembler les tubes de cockpit.



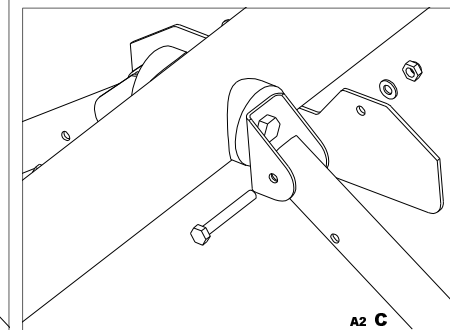
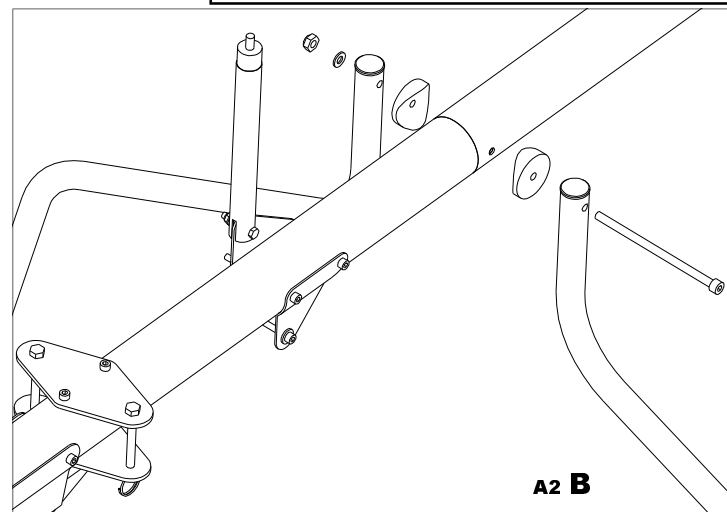
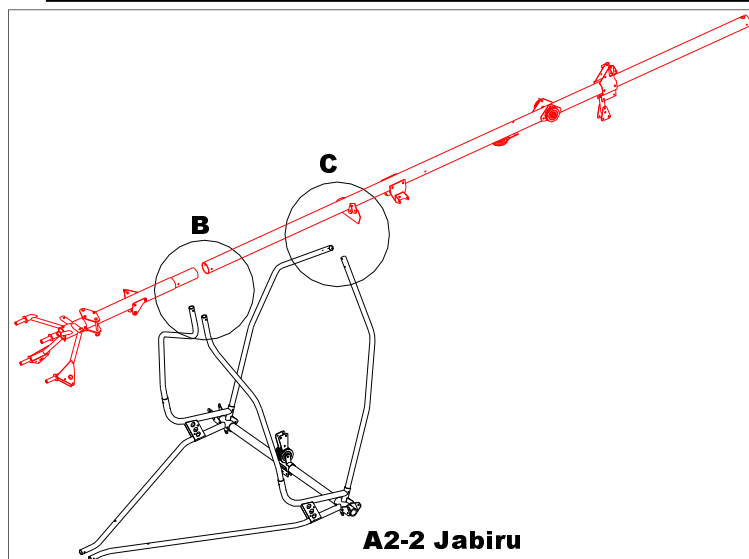
A2-1 Jabiru



A2-1A Jabiru

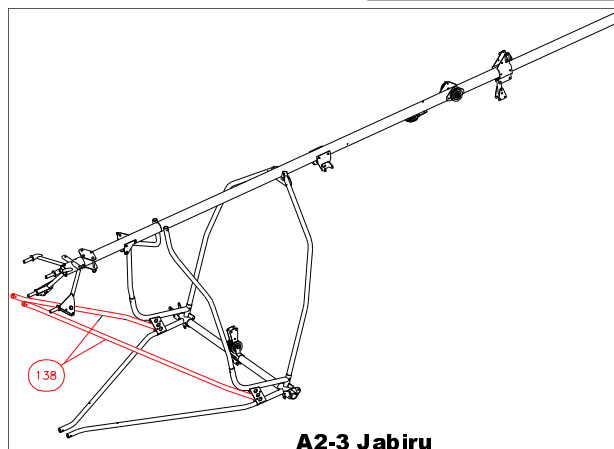
A2-2) Assembly front and rear keel parts together and install them on the cockpit frame.

A 2-2) *Assembler ensemble la partie avant et la partie arrière de quille et installer l'ensemble sur la cellule*



A2-3) Position tubes 138 on the cockpit entry (the long straight part down). They have to be shorten.
 Mark the place they have to be cut opposite the engine support.
 Remove tubes 138 and cut them.
 Re-position tubes 138 on the frame. Position them on the engine support, drill the holes and fit the tubes.

A 2-3) *Positionner les tubes 138 en les fixant sur la cellule dans leur partie basse (la partie droite la plus longue en bas).
 Présenter leur partie haute contre le support moteur et tracer l'endroit où ils doivent être recoupés.
 Déposer les tubes 138, les couper suivant le tracé et les reposer sur la cellule.
 Les fixer en bas sur les entrées de cabine.
 Tracer et percer les trous de fixation dans le tube 138 au niveau du support moteur et boulonner les tubes sur le support moteur.*



**For the next step of kit assembly,
 see chapter A3 page 13**

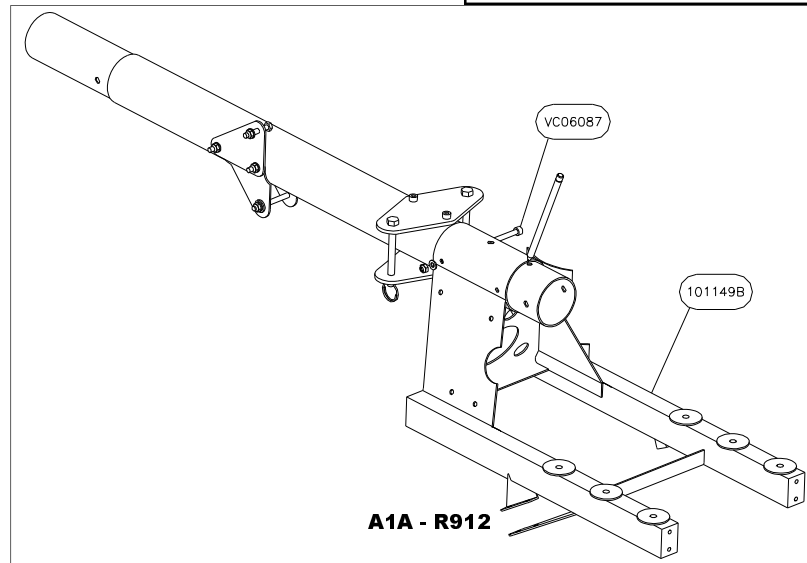
***Pour la suite du montage,
 voir chapitre A3 page 13***

For Rotax 912 engine
 (see page 5 for 503,582 and hks)
 (see page 7 for Jabiru)

Pour moteur Rotax 912
 (voir page 5 pour 503, 582 et hks)
 (voir page 7 pour Jabiru)

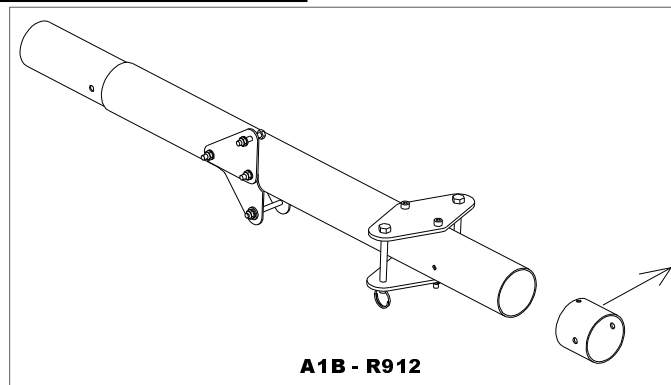
A1A) Position the engine support on the keel front part 101 with the screw VC06087.
 Mark the limit of the engine support forwards on the keel.

A 1A) Positionner le support moteur sur la partie avant de quille 101 avec la vis VC06087.
 Tracer sur la quille l'emplacement de la coupe au ras de la partie avant du support moteur.



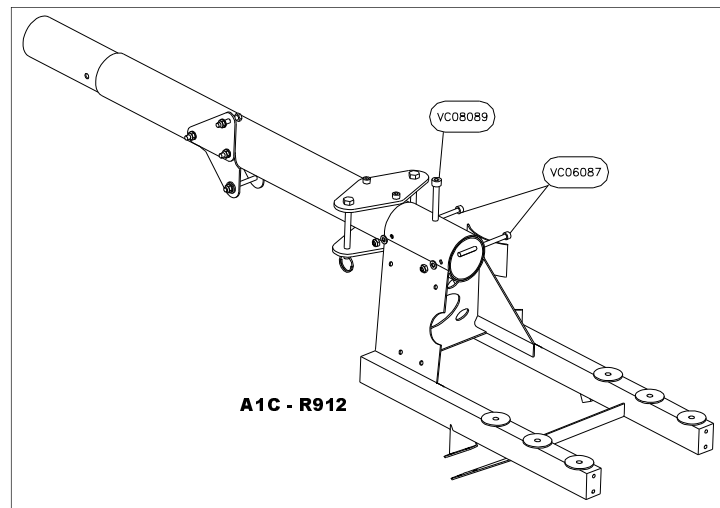
A1B) Remove the engine support and cut the keel at the mark

A 1B) Déposer le support moteur et couper la quille au niveau du tracé.



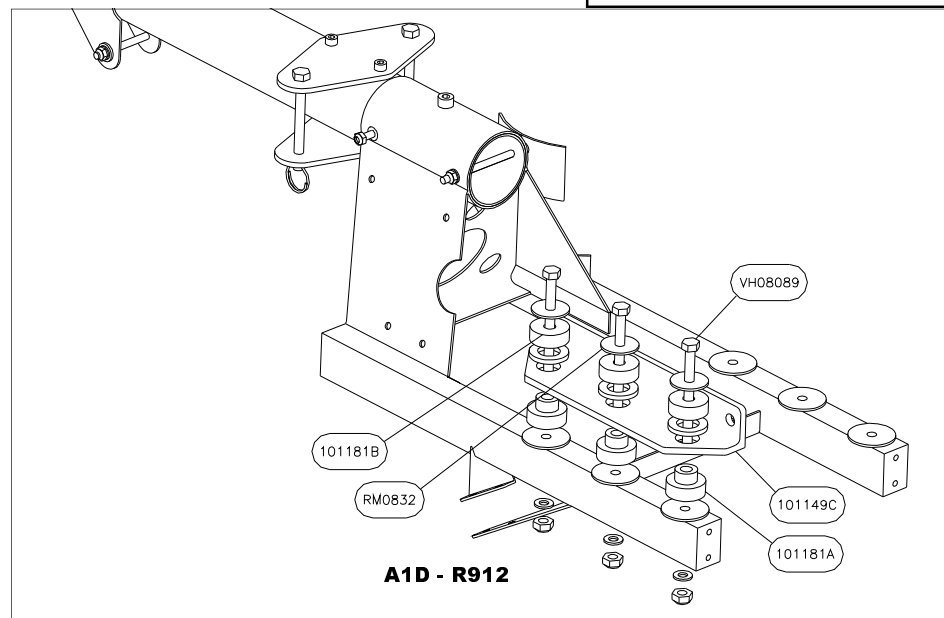
A1C) Re-install the engine support on the keel. Fit it with the rear screw and drill the front screw in the keel. Fit the front screw. Fit the front screw.
Do the same way for the central vertical screw.

A1C) *Reposer le support moteur sur la quille et le fixer avec la vis arrière. Contrepercer la quille à l'emplacement de la vis avant. Fixer la vis avant.. Idem pour la vis centrale verticale.*

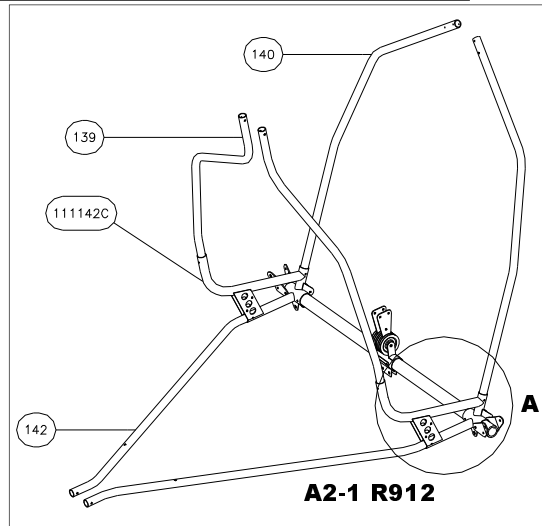


A1D) Install silent-blocs and aluminium engine plates

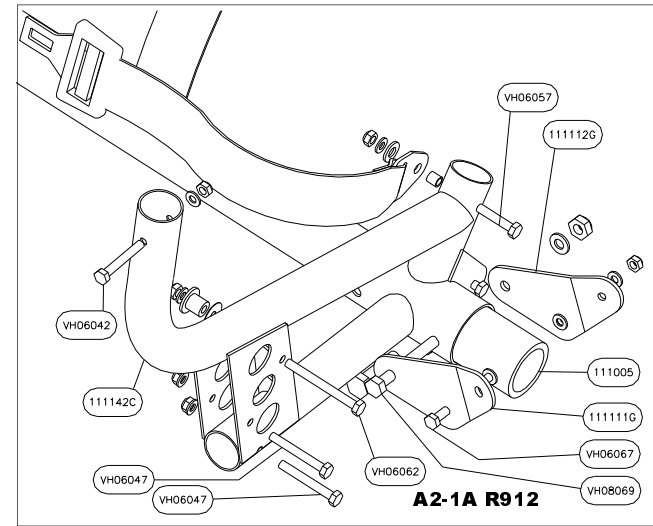
A1D) *Installer les silent-blocs et les platines moteur.*



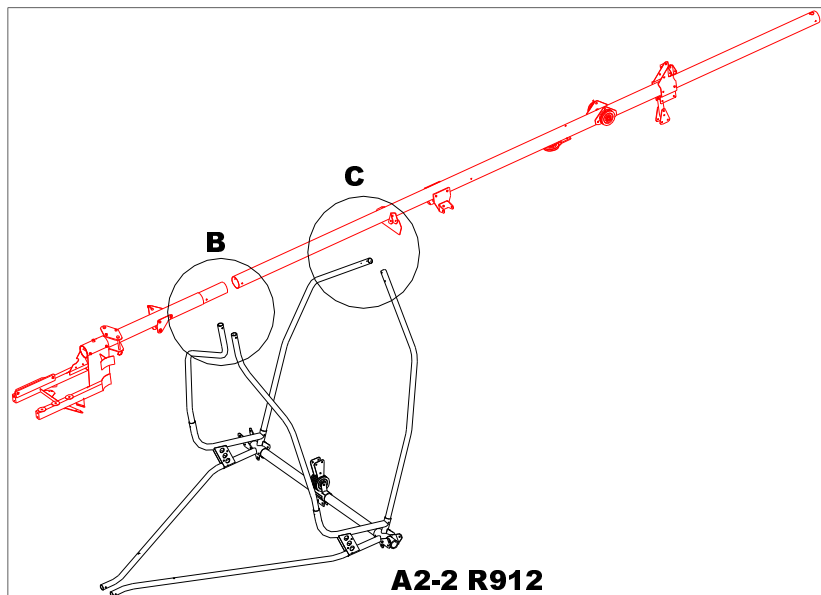
A2-1) Install cockpit entry parts 111142 on base tube 111. Assemble the cockpit tubes.



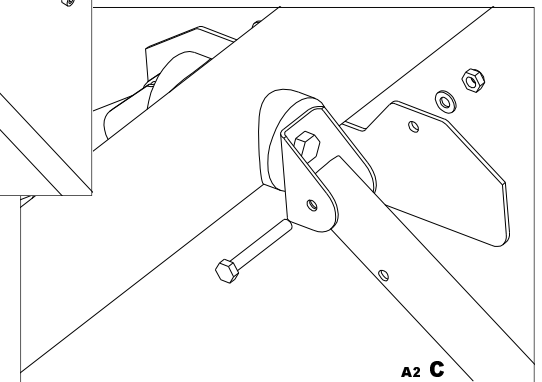
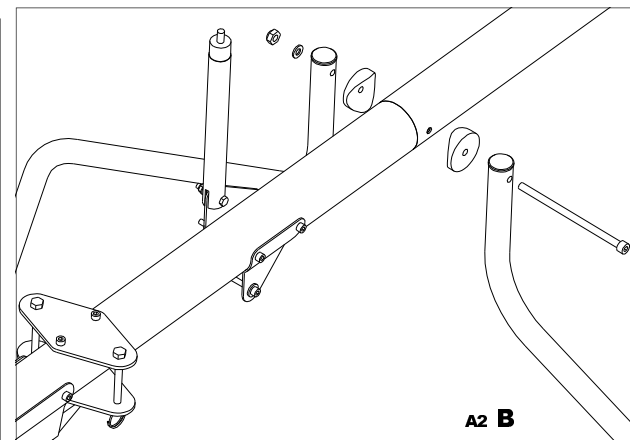
A 2-1) Installer les entrées de cockpit 111142C sur le tube de base 111. Assembler les tubes de cockpit.



A2-2) Assembly front and rear keel parts together and install them on the cockpit frame.

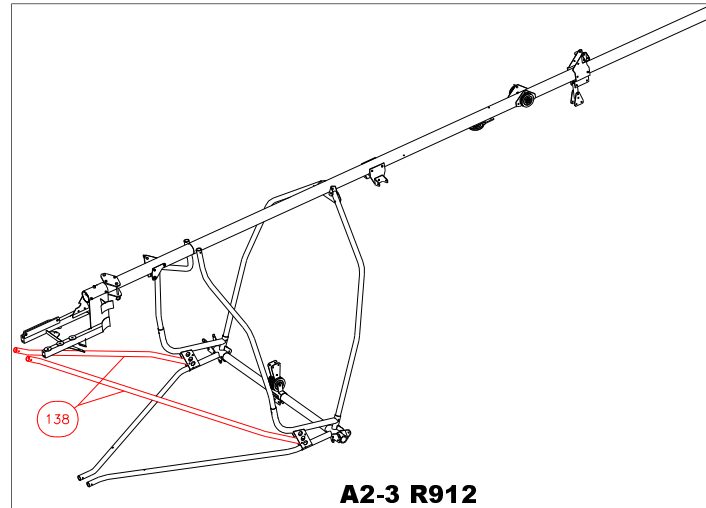


A 2-2) Assembler ensemble la partie avant et la partie arrière de quille et installer l'ensemble sur la cellule



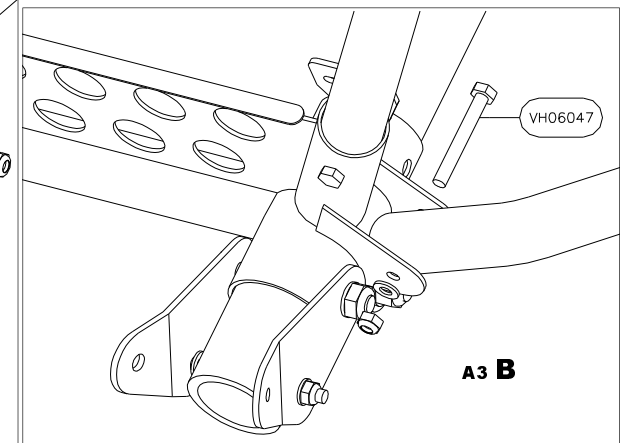
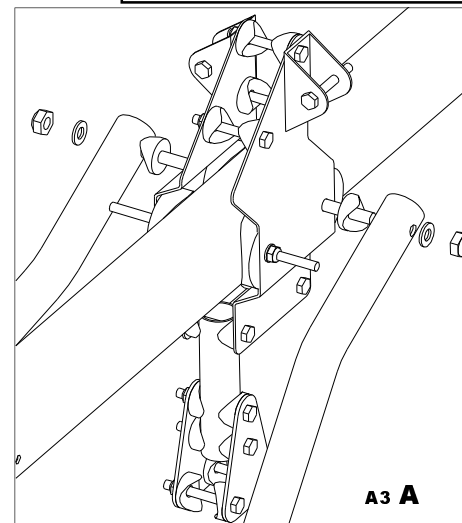
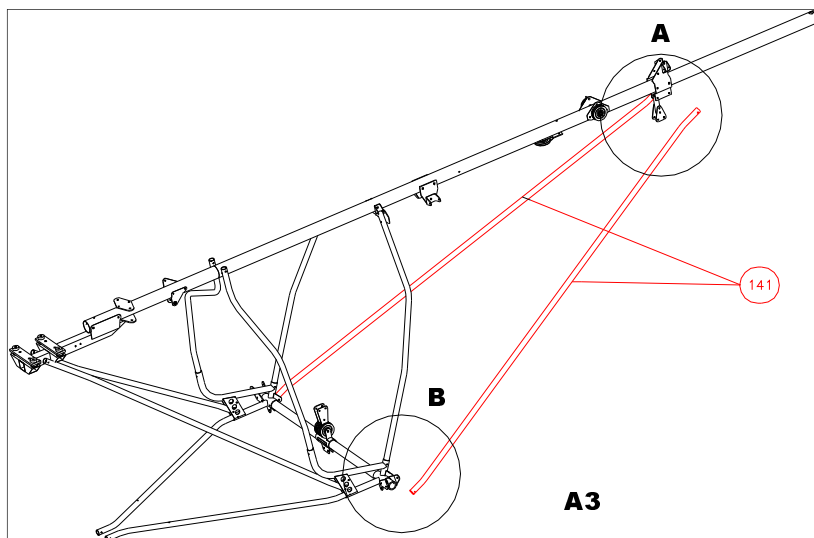
A2-3) Position tubes 138 on the cockpit entry (the long straight part down). They have to be shorten.
 Mark the place they have to be cut opposite the engine support.
 Remove tubes 138 and cut them.
 Re-position tubes 138 on the frame. Position them on the engine support, drill the holes and fit the tubes.

A 2-3) Positionner les tubes 138 en les fixant sur la cellule dans leur partie basse (la partie droite la plus longue en bas).
 Présenter leur partie haute contre le support moteur et tracer l'endroit où ils doivent être recoupés.
 Déposer les tubes 138, les couper suivant le tracé et les reposer sur la cellule.
 Les fixer en bas sur les entrées de cabine et en haut sur le support moteur.

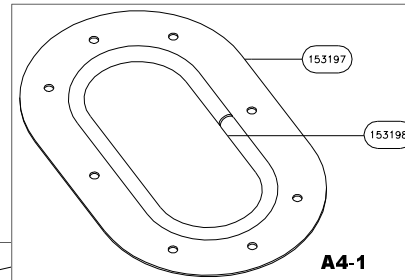


A 3) Fasten rear support tubes 141 between bottom of cockpit assembly and aft section of keel.

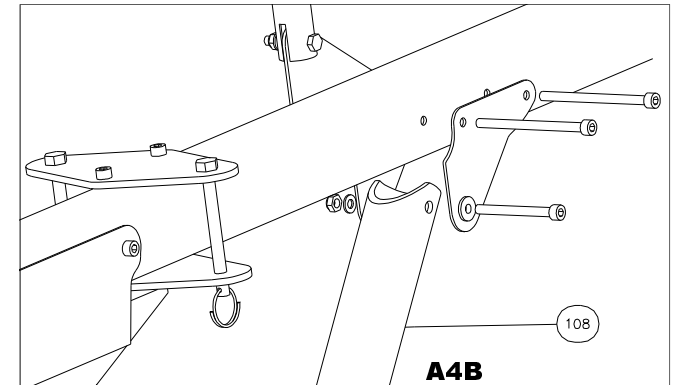
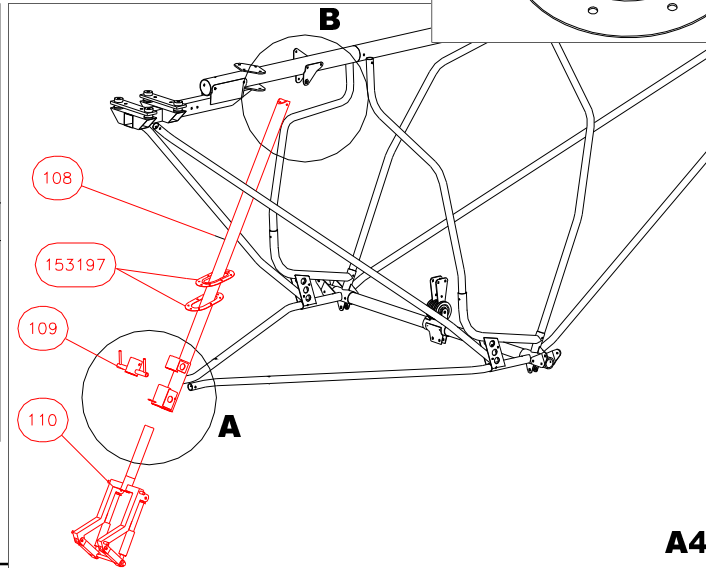
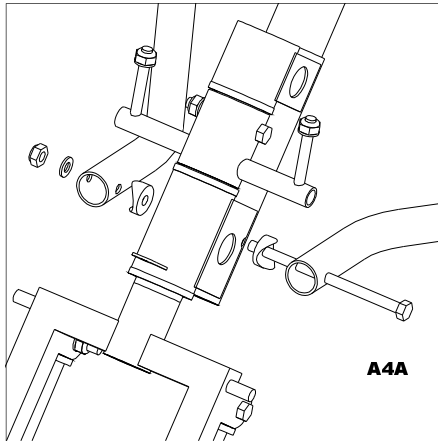
A 3) Monter les tubes de liaison 141 entre le bas de la cabane et l'arrière de la quille.



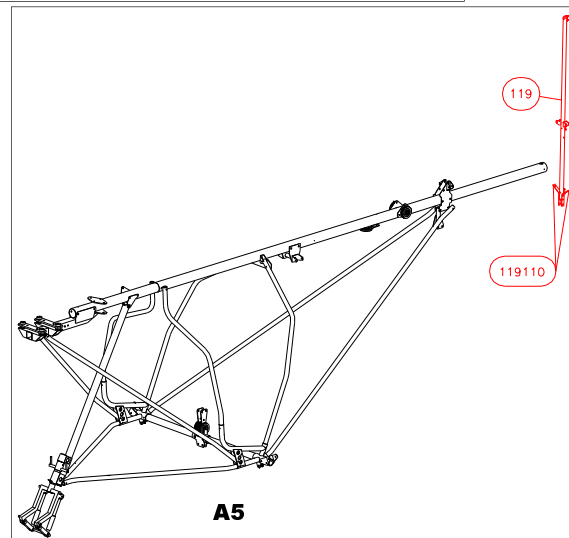
A 4) install the rubber gasket on one of the two plates 153197. Slide these plates along tube 108, the one with the gasket over the other one (it will be located outside of the windscreen). Assemble nosewheel tube 108 with its bellcrank 109 and the fork 110. Align bellcrank 109 to the fork 110. Drill 8 mm hole, insert screw but do not tighten at this stage.



A 4) installer le jonc caoutchouc sur une des deux platines d'étanchéité de pare-brise 153197. Glisser ces deux platines sur le tube 108, celle portant le jonc étant au dessus de l'autre (elle se positionnera à l'extérieur du pare-brise). Monter le tube de roue de nez 108 avec son guignol 109 et la fourche 110. Positionner le guignol de roulette 109 parallèle à la fourche. Percer à 8, insérer la vis de M8 mais ne pas serrer maintenant, la fourche devant être redéposée lors du montage du carénage.



A 5) Remove the stainless steel fittings 119.110 and the lower hinge at the base of tube 119 and insert this tube in the hole at the tip of the



A 5) Déposer les platines 119.110 à la base du tube 119 ainsi que la charnière inférieure et le positionner dans son trou à l'extrémité arrière de la quille.

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