SPORT HANG GLIDER

*"**Stealth KPL 3 / Combat**"*

MANUAL

Size: _____

Manufactured by:

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Date of production: _____
Serial number: _____

T A B L E O F C O N T E N T S

Section 1. GENERAL INFORMATION

1.1. Introduction

The Stealth KPL 3 / Combat hang glider is an advanced product of **Aeros Ltd**. It is aimed at improvement of the modern competitive glider with very high performance combined with maximum safety and comfort.

Please read and be sure you thoroughly understand this manual before flying your **Stealth KPL 3 / Combat**. Be sure you are thoroughly familiar with the set up, break down, preflight and maintenance procedure as described in this manual.

In case of any doubts or questions contact your local dealers or Aeros.

1.2. Main data

The **Stealth KPL 3 / Combat** is a high-performance hang glider designed for foot-launching, soaring and cross-country flight.

Table 1.2.

	Stealth 14 KPL 3	Stealth 13 KPL 3
Sail area, sq.m. (sq. ft.)	14,0 (151)	13,2 (142)
Wing span, m (ft.)	10,45 (34.5)	9,9 (32.7)
Aspect ratio	7,8	7,65
Nose angle, °	128 – 130	128-130
Pilot clip weight optim, kg (lb)	80 (176)	70 (154)
Weight (without bags), kg (lb)	35,5 (78)	33,5 (74)
Breakdown length, m (ft.)	4,1 / 5,9 (13.4 / 19.3)	3,9 / 5,8 (12.8 / 19)
Min sink rate, m/sec (ft/min)	0,9 (172)	0,9 (172)
Max glide ratio	15	15

	Stealth Combat 13	Stealth Combat 14	Stealth Combat 15
Sail area, sq.m. (sq. ft.)	13,5 (145)	14,2 (153)	14,6 (157)
Wing span, m (ft.)	10,35 (33,96)	10,7 (35,1)	10,7 (35,1)
Aspect ratio	7,94	8,06	7,84
Nose angle, °	129-131	129 – 131	129-131
Pilot clip weight optim, kg (lb)	70 (154)	80 (176)	90 (198)
Weight (without bags), kg (lb)	34,5 (76)	35,9 (78)	36 (79)
Breakdown length, m (ft.)	3,9 / 5,8 (12.8 / 19)	4,1 / 5,9 (13.4 / 19.3)	4,1 / 5,9 (13.4 / 19.3)
Min sink rate, m/sec (ft/min)	0,8 (157)	0,8 (157)	0,8 (157)
Max glide ratio	15+	15+	15+

1.3. Operation limitations

Table 1.3.

	13 KPL 3/Combat 13	14 KPL 3/Combat 14	Combat 15
Tested load	+ 6 / - 3 G	+ 6 / - 3 G	+ 6 / - 3 G
Wind speed max, m/sec (mph)	12 (27)	12 (27)	12 (27)
Permissible range of temperature, °C (F)	-15 / +40 (0 / +112)	-15 / +40 (0 / +112)	-15 / +40 (0 / +112)
Minimum airspeed, km/h (mph)	29-31 (17-18)	29-31 (17-18)	29-31 (17-18)
Maximum airspeed, km/h (mph)	110 (68)	110 (68)	110 (68)
Minimum clip pilot weight, kg (lb)	65 (132)	75 (165)	80 (176)
Maximum clip pilot weight, kg (lb)	90 (198)	105 (235)	115 (253)

After structural, aerodynamic and flight tests, the **Stealth KPL 3 / Combat** has been shown to comply with requirements (_____ certificates No._____ for **Stealth KPL 3 / Combat**).

ATTENTION ! ***We do not recommend to use Stealth KPL 3 / Combat for motorized and aerobatic flights.***

Stealth requires recommended pilot proficiency not less than pilot rating +40 hours or equivalent Safe Pro rating.

We inform you that manufacturer and _____can in no way be responsible for safety of your flight in case of exceeding operation limitations stated above in present manual.

1.4. Flying tests

Your Hang Glider **Stealth KPL 3 / Combat** (serial No _____) was tested _____

"Hang glider is airworthy according to present manual".

Test pilot_____/_____/

NOTES.

Section 2. SET UP PROCEDURE

This manual describes methods, which are distinctive to the **Stealth KPL 3 / Combat**. Procedures, typical for all gliders are described in less detail.
The set up procedure should be carried out on a clean, non abrasive surface.

ATTENTION: ***After each set up procedure you must do a preflight inspection of the glider.***

2.1. Set up procedure from the 4 meters long package

2.1.1. With the glider in the bag (4 metres long) lay the glider on the ground.

2.1.2. Unzip the zipper. Undo the velcro straps. Remove the batten bags, the speedbar, the aft leading edge tubes (N3) and wing tips from the bag.

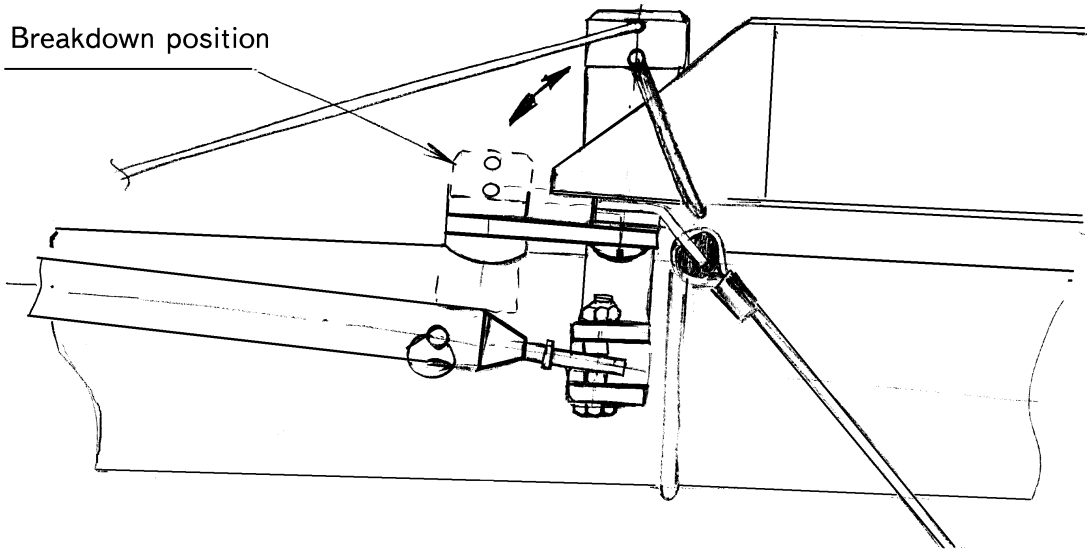
2.1.3. Unfold the sail along the leading edge. Attach the aft leading edge tubes (N3) to the forward leading edge tubes (N2) according to the marking (L-left, R-right, marks must be on the top).

2.1.4. While installing the leading edge tubes into the sail, place the washout tips facing forward toward the nose of the wing and along the leading edge tubes (Fig.1). Note: put washout tips outside the sail, through zipper holes. Tighten the sail along the leading edge and put the sail mount webbing into the slot in the end cap.

Fig. 1

2.1.5. Install the dive sticks to the corresponding places on the LE-tube/X-beem junctions. Attach the dive sticks using pins and safety rings (Fig. 2). The dive sticks must be outside of the bottom surface.

FOR STEALTH KPL3



FOR COMBAT

Fig. 2

2.2. Set up procedure from the 6 meters long package

2.2.1. Remove the speedbar from the bag, spread the uprights. Install the speedbar so that off-set of the speedbar is directed forward in the direction of flight. Attach the speeedbar using the quick-pins. Pass the VG-rope through the cleat, make a knot on the end of the rope (Fig. 3).

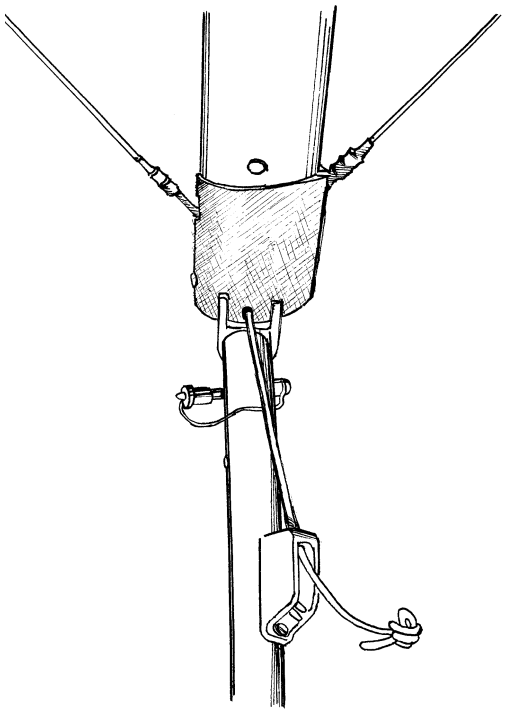


Fig. 3

2.2.2. Set the glider on the control bar, spread the leading edges so that sail is a little sagged and the glider is resting on the wing tips and on the keel tube (Fig. 4). The keel battens must be rested on the keel tube.
Secure the ring of the bottom front wires on the hook on the nose junction.

Fig. 4

2.2.3. Install the small mast on the LE-tubes/X-beam junction to it's proper place. Dive sticks must be outside of the sail. (Fig. 5).
Remove the battens from the bag and insert battens No.2 - 6 into corresponding batten pockets (don't remove the bags from the wing tips). (Fig. 6). Secure each top batten by the rear spring end in trailing edge pocket.

For Combat. Install the keyhole tang of the sprog wire over the collared bolt of the sprog tube.

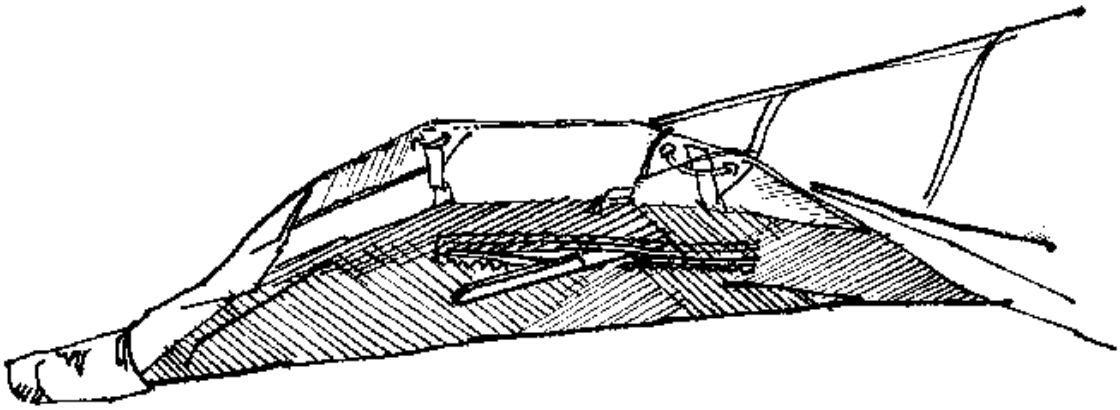


Fig. 5

2.2.4. The hang point spreader bar turn perpendicular to the keel tube.
Insert the battens carefully so as to minimize stress and wear on the sail. Never insert or remove top surface battens with the cross-bar tensioned (except for up to the last four on each side) and never insert or remove battens with heavy wind pressure on the top of the sail or in any condition which causes the battens to slide with great resistace in the pockets.

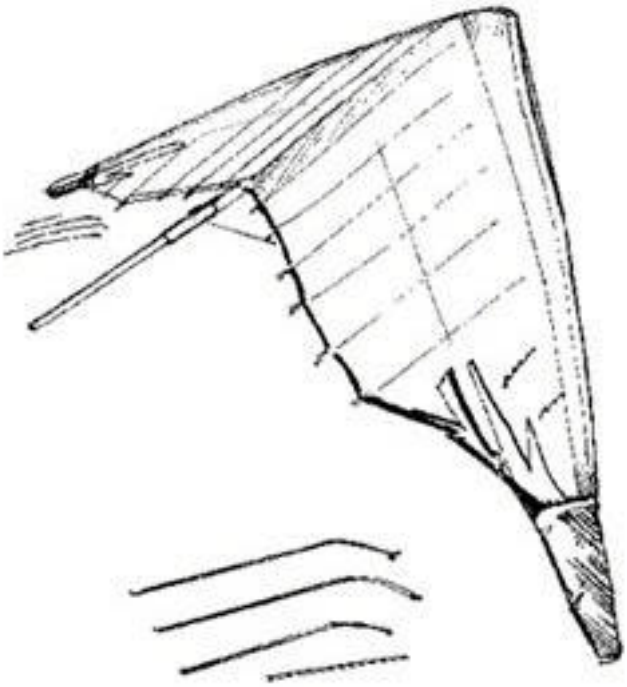


Fig. 6

2.2.5. Attach the shackle of the cross-beam tensioning wires to the hook which is placed on the keel tube (Fig. 7). Check that cross-beam wires and VG ropes are not twisted.

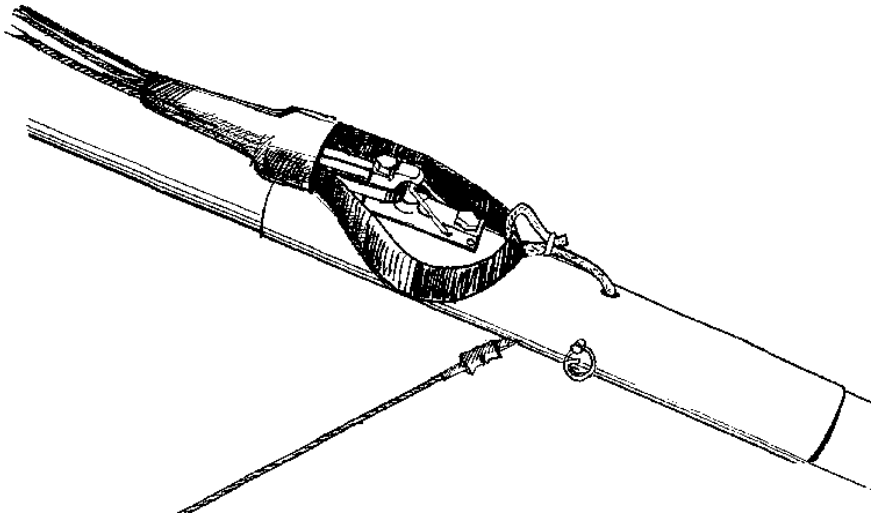


Fig. 7

2.2.6. Remove the bags from the wings tips, install the remainder of the battens and install the washout tips, just swing them to the right place underneath the corresponding top surface battens through the access zipper in the bottom surface.

2.2.7. Install the tip battens:
- bend the tip batten with angle approx. 60 degrees;
- install the batten into the sail with bend going to wards the wing tip;
- install flat end of the batten to the angle of the sail tip;
- straighten it a little bit and guide another end of the batten onto the leading edge batten hook;
- pull the bend towards the keel and gently straighten the batten completely.

Fig. 7

2.2.8. Put dive sticks inside the double surface in it's proper place. Zip the zipper.
Note: This is most easily performed with the VG tight.

2.2.9. Install the bottom surface battens. Secure into pocket by placing folded portion of aft end of the batten pocket over the aft tip of batten. Make sure that the rope loops are outside of batten pocket.

2.2.10. Install the nosecone taking care to align it so that it lies flat on the top and bottom of the saile.

2.2.11. Do a complete preflight inspection of the glider (see Section 2.3 "Preflight inspection of the glider").

2.2. Preflight inspection of the glider

2.2.1. To do a complete preflight inspection of the glider, check all parts and all assemblies of the glider. Beginning at the nose go around the glider, check all details of the construction. Finish the inspection by checking the keel tube and control frame.
Take your time and inspect entire glider!

2.2.2. Check the nose junction. The wires must be secured. The keel battens must be resting on the keel tube (Fig. 9).

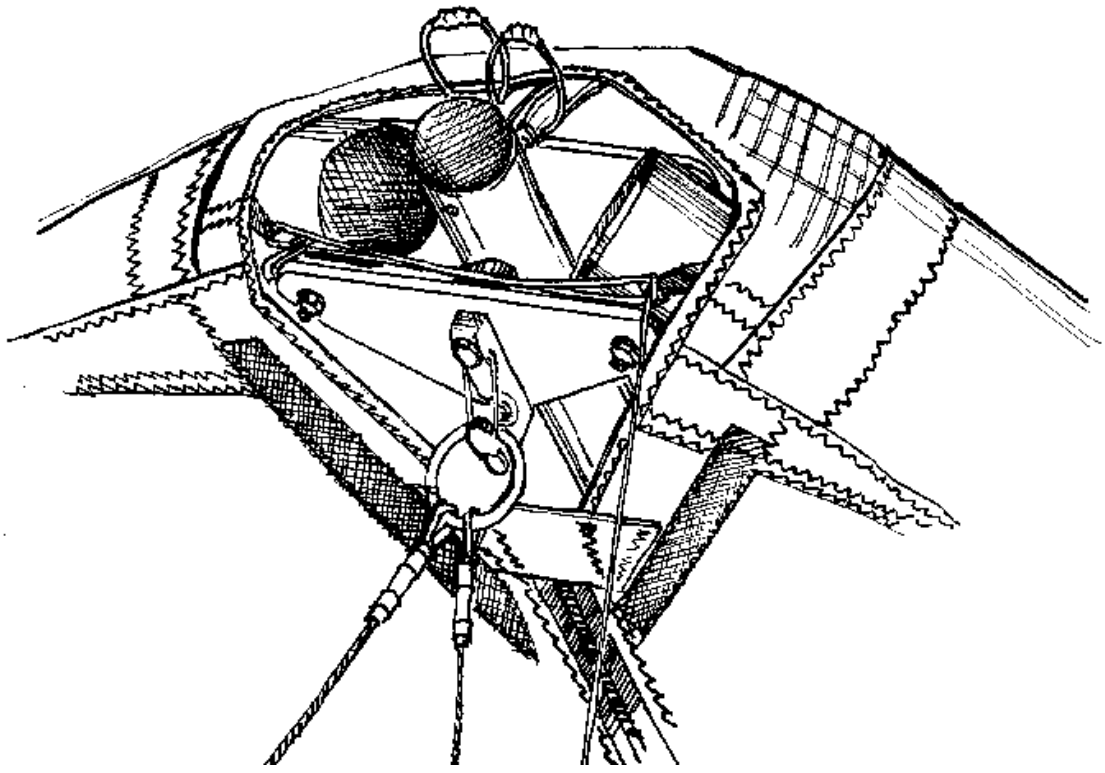
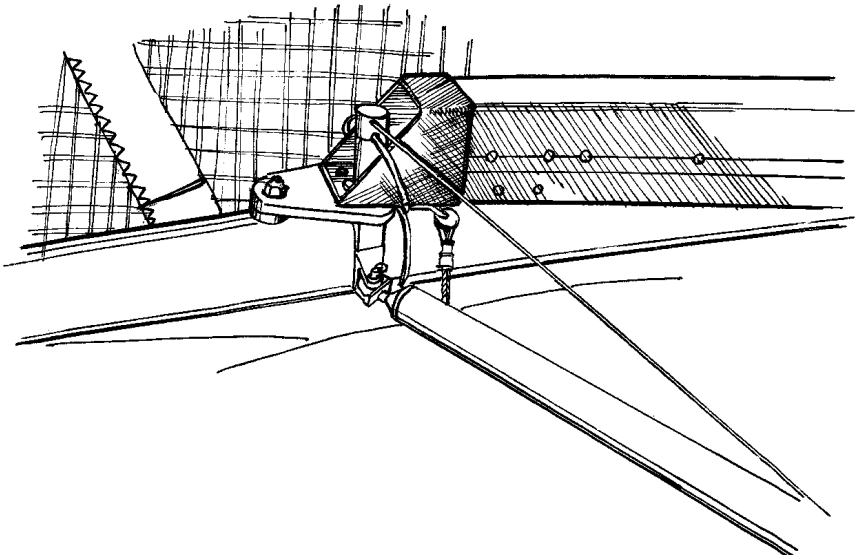


Fig. 8

2.2.3. Check that the leading edge mylars inserts have no bends.

2.2.4. Look through the open bottom surface pockets near the X-beam/LE junction and check that this junction is assembled properly and safely secured with the nut and the safety ring (Fig. 9). Zip the zipper near the X-beam/LE junction closed.

FOR STEALTH KPL 3



FOR COMBAT

Fig. 10

2.2.5. Look into the sail at each wing tip. Tip battens must be rested on the batten stop. The washout tip must be installed. Check for any evidence of dents, deep scratches, cracks or bends in the LE tubes. Be sure that the sail mount webbing is safely and correctly secured in the end cap slot (Fig. 10).

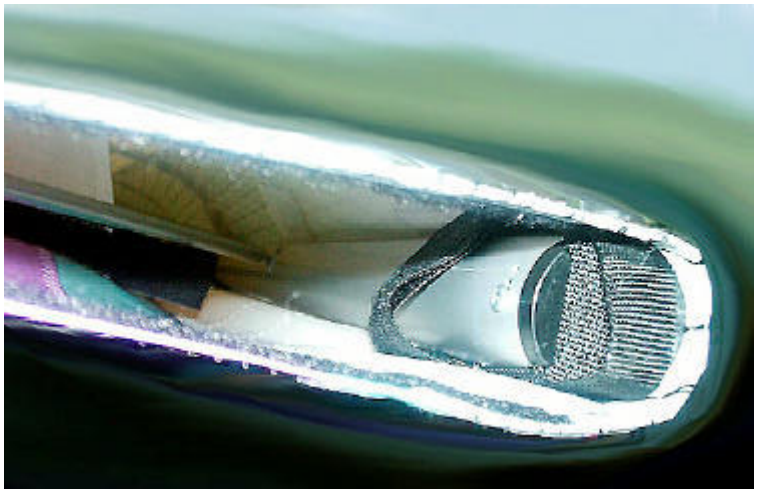


Fig. 11

2.2.6. Attach plastic wingtips. Put front part of wingtip under sail leading edge on the front part of tube. Put wingtip tightly to inside sail, fix it by velcro.

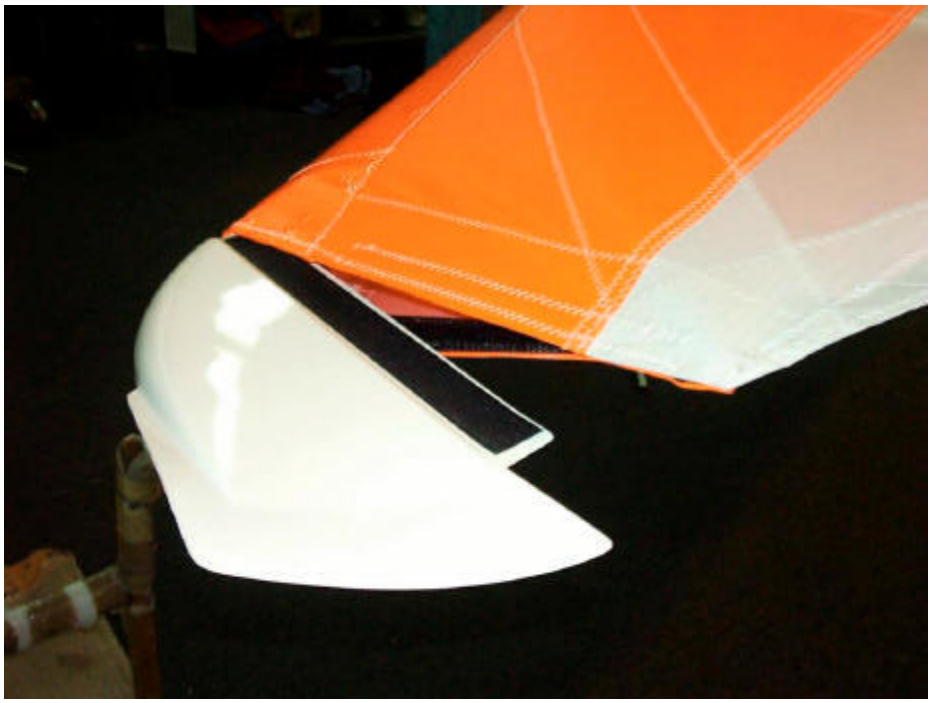


Fig. 12

2.2.7. Check the trailing edge for any cuts, tears or broken stitching. Check that the battens are properly held in place.

2.2.8. Check the rear wires/keel tube junction. Assembly must be connected with the pin and the safety ring (Fig. 13).

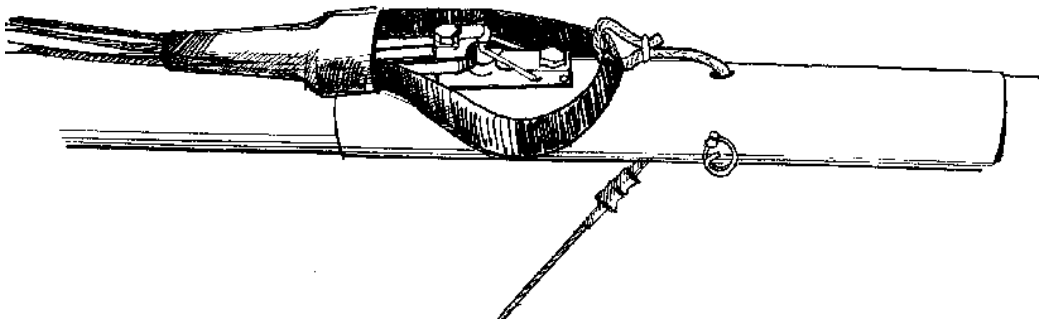


Fig. 13

2.2.9. Check that X-bar tensioning wire is secured on the hook on the keel tube. Check the proper alignment of the VG ropes - they must not be twisted.

2.2.10. Check the following items through the main undersurface zipper:

- X-beam wire/X-beam junction;
- VG blocks/X-beam junction.

The X-beam wire and VG ropes must not be twisted (Fig. 14). Check the ropes for wear, especially near the rollers. Zip the zipper of the bottom surface closed.

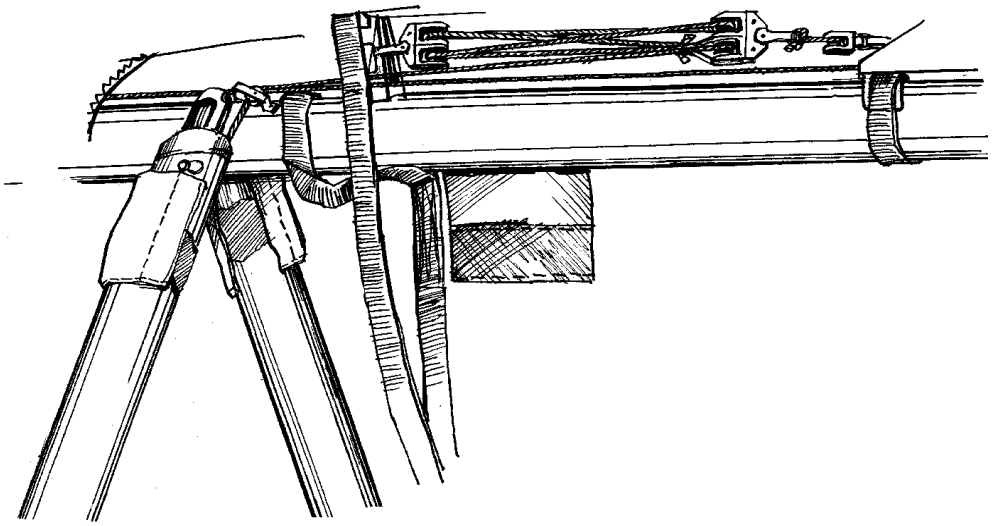


Fig. 14

2.2.11. Check the main and safety hang loops for wear or broken stitching.

2.2.12. Check the wire thimble fittings on the control bar corners. Be sure that the bottom wires are safely secured. The uprights and speedbar must not have traces of deformation.
Do not fly with bent uprights !

2.2.13. Check that off-set of the speedbar is directed forward in the direction of the flight. Quick pins must be covered with caps.

2.2.14. Check that the VG is not too hard to pull on and the cross-beam is actuated smoothly.

2.3. Laying the glder flat

Once you have the glider set up, you can lay it flat on the ground. (This may not be possible with all models.)

2.3.1. Remove the nose cone from the nose junction. Remove the ring of the bottom front wires from the nose hook. Lay the glider nose into the wind.

Section 3. PERFORMANCE AND FLIGHT CHARACTERISTICS

Lift the glider up if it is laid on the ground. To do this you must perform the procedure reverse to that described in the points of Section 2.3. (Laying the glider flat).

Check and adjust your harness. We strongly recommend that you hang as low as possible (as close to the basetube) for maximum ease of roll control. Be sure that no part of the harness touches with the speedbar while pilot moves over all the range of motion.

3.1. Take off

Make sure you are hooked in and check your position hanging in the control bar.
If the wind is more than 8m/s (18 mph) or is gusty, you should have at least one wire assisstant, on the nose wires.

When you hold the glider prior to your take off run, you should have the nose slightly elevated and wings level.
The glider takes off easily in zero winds as well as with strong winds and does not require any special methods of handling. Do not pull in excessively after take off.

3.2. Flying

At first, the handling of the **Stealth KPL 3 and Combat** may seem to be different from some other gliders. The **Stealth KPL 3 / Combat** handles easily at any speed. It is normal for the control bar to trim farther out than some other gliders
Make your first flights on the Stealth KPL 3 / Combat in smooth flying conditions.
After you initiate a turn, easing the bar out will make the turn more efficient. The **Stealth KPL 3 / Combat** is stable in multiple 360 degree turns at shallow bank angles in both directions and has no tendency to sideslip.

3.3. Speeds to fly

The range of trim speed of **Stealth KPL 3 / Combat** with VG off is 35 - 38 km/h (22 - 24 mph). The speedbar position in front of the pilot's face corresponds to this range.
The range of stall speed of **Stealth KPL 3 / Combat** is 29 - 31 km/h (18 – 19 mph). The glider is stable in the beginnings of a stall. While pushing out on the bar, the bar pressure is progressive.
Stealth KPL 3 / Combat speeds up to 90 - 100 km/h (56 - 62 mph) easily being essentially roll neutral, with little tendency to yaw . The bar pressure is mild, but progressive and consistent.
With the VG on the range of trim speed of **Stealth KPL 3 / Combat** is 40 - 50 km/h (25 - 31 mph). The speedbar position opposite the pilot's chest corresponds to this range. The pitch bar pressure decreases with the VG on. The glider's handling is stiffer with VG on, but within permitted limits.

3.4. Turning

Stealth KPL 3 / Combat handles easily, the control efforts in pitch are small. Efficient turns require pilot to ease the bar out. The speedbar position in front of the pilot's face corresponds to the established multiple 360 degree turns at shallow bank angles.
Stealth KPL 3 / Combat speeds up very easily. Avoid radical maneuvering near the slope until you are thoroughly familiar with the glider's response characteristics.

3.5. Variation of the nose angle (utilization of the VG)

Take off should be performed with the VG off.
To put the VG on take the VG rope with your right hand and move it along the speedbar. It needs to be done several times to put the VG on all the way. At the end of each pull, check that the rope is secured in the clamcleat on the speedbar.
To take the VG off, pull the rope up and away from the clamcleat and the X-beam will go back to its initial position.
Landing can be performed with both VG on and VG off.

3.6. Landing

As the **Stealth KPL 3 / Combat** is a high performance wing, you should attempt to land into the wind and avoid going downhill.
Stealth KPL 3 / Combat requires that the pilot fly intently during landing.
Keep the wings level, and the airspeed up slightly and fly the glider down until the altitude is 0,5 - 0,8 m (2-3 ft.) from the ground to the speedbar. At this altitude decrease descent rate by pushing slightly on the control bar. When you feel the glider unresponsive to the bar displacement quickly ease the bar out all the way before your feet touch the ground. With a good sharp final thrust, the sudden increase in drag will slow the glider very suddenly and you will land softly.
Do not ease the bar out with extra speed! It leads to an abrupt climb out which requires extra attention to hold nose up to "parachute" to the ground.
With nil wind conditions we could recommend you to use 1/3 – ? VG setting.

We wish you many happy landings!

Section 4. BREAKDOWN

4.1. Breakdown into the 6 metres long package

4.1.1. Take the VG off and detach the plastic wingtips.

4.1.2. Put out the washout struts and place them along the leading edge out of the sail in directon of the tips. Remove the battens from the outboard section of the sail. Put the outboard wing tip bags on (Fig. 13).

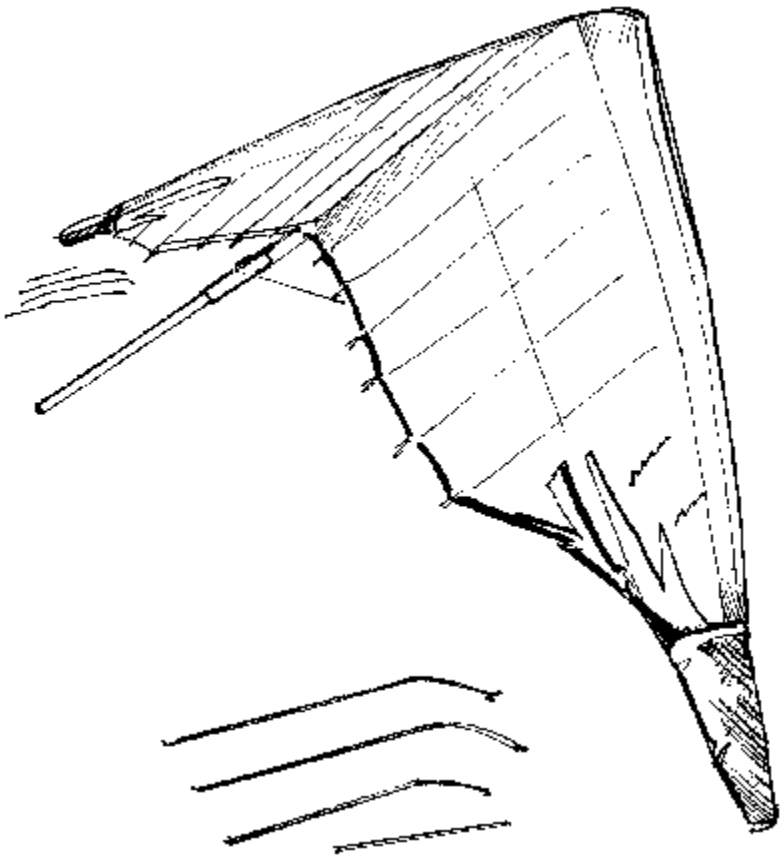


Fig. 13

4.1.3. Prepare for removal of the dive sticks by first unzipping the sail and removing strut from inner surface (Fig. 14).

Fig. 14

4.1.4. Detach the shackle of the crosss-beam tensioning wires from the hook.

4.1.5. Pull the nose cone off and detach the ring of bottom front wires from the hook.

4.1.6. Unzip the bottom surface and orientate the paddings sewed on the sail so that they protect the hardware fittings of the uprights from the contact with sail (Fig. 15). Zip the zipper.

Fig. 15

4.1.6. Pull in the wings slightly and remove all battens except the top battens No.1. Remove only the batten spring ends from the trailing edge pockets. Put the battens into the bag.
Do not forget to remove the undersurface battens from the sail !

4.1.7. Pull the wings in parrallel to the keel tube. **Take care that the shackle of the cross-beam tensioning wires don't get caught where it enters the sail !**
For KPL3: Pull out small masts on the LE-tube/X-beam junction.
For Combat: Detach the keyhole tang of the sprogwire from the collared bolt of the sprogtube.

Spread the sail so that both the top and bottom surfaces of the sail are equally taught, roll the sail up to the dive sticks and place it along the leading edge. Secure the sail at dive stick with the velcro ties. Continue rolling the sail up to the wing tip bags and secure the wing with more velcro straps (Fig. 16).

Fig. 16

4.1.8. Cover the rear keel tube/wires junction by a protective bag. Place the bags with battens on the nose section along the keel, put the nose cone under the velcro strap that is nearest to the nose tighten tape (Fig. 16). Fit the bag over the glider (from the upper side).

4.1.9. Lay the glider in the bag on the ground. Detach the speedbar from the uprights. Bring all wires forward along tubes and place uprights inside the folded sail. Place speedbar between the leading edges in the bag provided.

4.1.10. Cover the upright junctions in the low control bar corners by the protective bag and place them along the keel tube. Straighten the bottom wires and the spacer between the uprights. Zip the zipper on the bag.
The glider is ready for transportation.

4.2. Breakdown into the package 4 metres long

4.2.1. Perform the procedures as described in the points 4.1.1. - 4.1.10., except the last procedure.

4.2.2. Remove the sail mount webbing from the leading edges end caps. Press the spring lock pins through the sail and remove the tubes No.3 from the sail.

4.2.3. Place the leading edge of one sail over the other one, fold the sail to the nose and fix it with the velcro strap to the bag.

4.2.4. Place the detached leading edges into the bag and zip the bag.

Section 5. MAINTENANCE

5.1. Tuning

Properly tuned, the glider is comfortable, well controllable and safe in all permissible flight modes.
Stealth KPL 3 and Combat has several adjusting points can be used for essential changes of performances.
ONLY ADJUST ONE THING AT A TIME !

5.1.1. Hang point

The range of trim speed of **Stealth KPL 2** is 35 - 38 km/h (22 - 24 mph). The speedbar position in front of the pilot's face corresponds to this range.
If the control bar wants to go forward - the trim speed is too low. Move the hangpoint tower to the next forward hole on the keel tube.
If the control bar goes backward, the sink rate increases and the handling becomes more heavy - the trim speed is too high. Move the hangpoint tower to the next backward hole on the keel tube.
Do not miss the holes in the keel tube during hang point position adjustment !
Pilot's weight has an effect on trim speed. If the trim speed is got for a pilot of 80 Kg, a pilot of 60 Kg has to move the kingpost to the next backward hole to keep this trim speed.

5.1.2. Turn trim

Turns are caused by an an asymmetry in the glider. If you have a turn, first try to make the glider symmetrical in every way. If a turn only appears at VG settings of ? to full tight, it may be an indication that the sprogs are set assymetrically.
In this case you have to lower the sprog on the side the glider is turning towards or raise the other sprog by the same amount.
To lower the sprog, turn it clockwise. To raise the sprog, turn the entire sprog conter clockwise. One full turn raises or lowers the sprog about 20 mm.
If you have a turn both with VG on and VG off, you can correct it by rotating one of sail mount plugs. A left turn is corrected by twisting the right sail plug clockwise (twisting the sail up at the trailing edge).
Don't forget to fix the plug in the chosen position using the screw.

5.2. Periodical maintenance inspection

Your glider should have a periodical maintenance inspection:
- prior to beginning its operation;
- any time you suffer a hard landing to find a possible deformation of the frame;
- every year or 50 hours of airtime whichever comes sooner.

5.2.1. Inspection of the frame

Inspect all tubing for any residual deformations, dents, signs of corrosion or cracking, especially around bolt holes and sleeve ends. Inspect all wires for broken strands, kinks, corrosion etc. Especially take care about the bottom side wire which is the most loaded in the glider construction! Change wires every 100 hours or every year whichever comes sooner.
Whenever replacing nuts and bolts be careful not to overtightenon replacement as this may damage tubes and wires. Where nyloc type nuts are used be sure at least a minimum of two threads are visible.

5.2.2. Inspect the main and safety hang loops for wear and replace it is any wear is indicated

5.2.3. Inspect the sail

Inspect the sail carefully for tears and broken stitching, especially along the trailing edge, the sail mount webbing attachment point at the wing tips and the keel section stitches. Have any discovered defects repaired. Contact manufacturer or _____ if the sail is not intact, and you will get professional repairs.

5.2.4. Inspection of the battens

Compare batten profiles with the template.The template must be placed on a flat surface. True the battens to the template. If you have no template at the moment, check the symetry of the left-wing and right-wing battens.
Have any discovered defects replased.

5.3. Maintenance

You should continually maintain your glider in a proper state of tune to insure optimum performance and flight characteristics for a long time.
We recommend that you do not expose your glider to any more solar radiation than necessary.
Do not leave your glider on the control bar for a long time when the wind is strong. It will decrease the life of your sail. Keep the glider under your care.
Do not fold a wet sail. In case of necessity you should unfold the sail and dry it thoroughly as soon as possible.
Your sail should never be washed in anything other that fresh water without any soap or detergent.
If you set up or break down your glider take care not to allow sand, soil and dirt to enter your sail, batten pockets or tubes.
Keep the telescopic connectors thoroughly clean as their dirtying will make the set up or break down diffiucult or impossible.

5.4. Sail height measurement of KPL 3 / Combat wings.

The following procedure is to enable a check of hang gliders' sail reflex:

5.4.1. Rig wing on level ground ready for flight.

5.4.2. Lift glider on vertical support (height is about 1,5 m) which support wing in three points: in a place of connection of leading edge and cross beam and also in a place behind of connection of rear bottom cables to a keel tube.

5.4.3. Run 10 lbs fishing line from each pair of batten ends number 7, 8, 10 for **Stealth 14 KPL 3** and number 5, 6, 8 for **Stealth 13 KPL 3**, number 7,8,10 for **Combat 14 & 15.** Pull it tight with 130 mm moving of cross beam.

5.4.4. Measure and record distances between the lines and the top of keel tube. Make two mesuares: when VG is on and off. When VG on you must take out rear part of keel tube and make measurements concerning a top level of keel tube (you can use long rule which is necessary densely to put on top keel tube).

5.4.5. Ensure the line runs cleanly from the center of butten. See fig. A.

5.4.6. If recorded distances are less than those of the table AA the wing should not be flown until re-adjusted as follows. To fly a wing with incorrect heights of sail should result in a fatal accident.

5.4.7. If you'd like to get in a correct range of the sail heights you should open the bottom surface in a place of LE/X-beam connection and remove washout struts, to make 1-2 rotations of a conical tip counter-clockwise. After this return the struts on a place and fix this connection. Measure a new sail heights and if necessary make the same adjustment again.
In this way you can correct assymetrical fly at VG on position.

Table AA

Permissible range of sail heights above the top level of keel tube

Batten	**AEROS STEALTH 13 KPL 3**	Batten	**AEROS STEALTH 14 KPL 3**
	VG on (mm)		VG on (mm)
5 – 5	- 5 / 15 mm	6 - 6	- 30 / - 10 mm
6 – 6	0 / 20 mm	7 - 7	- 25 / - 5 mm
8 - 8	- 5 / 15 mm	9 - 9	- 35 / - 15 mm
Batten	**AEROS COMBAT 13**	Batten	**AEROS COMBAT 14**
	VG on (mm)		VG on (mm)
7 – 7	- 5 / 15 mm	7 – 7	- 30 / - 10 mm
8 – 8	0 / 20 mm	8 – 8	- 25 / - 5 mm
10 - 10	- 5 / 15 mm	10 – 10	- 35 / - 15 mm
Batten	**AEROS COMBAT 15**		
	VG on (mm)		
7 – 7	- 5 / 15 mm		
8 – 8	0 / 20 mm		
10 - 10	- 5 / 15 mm		

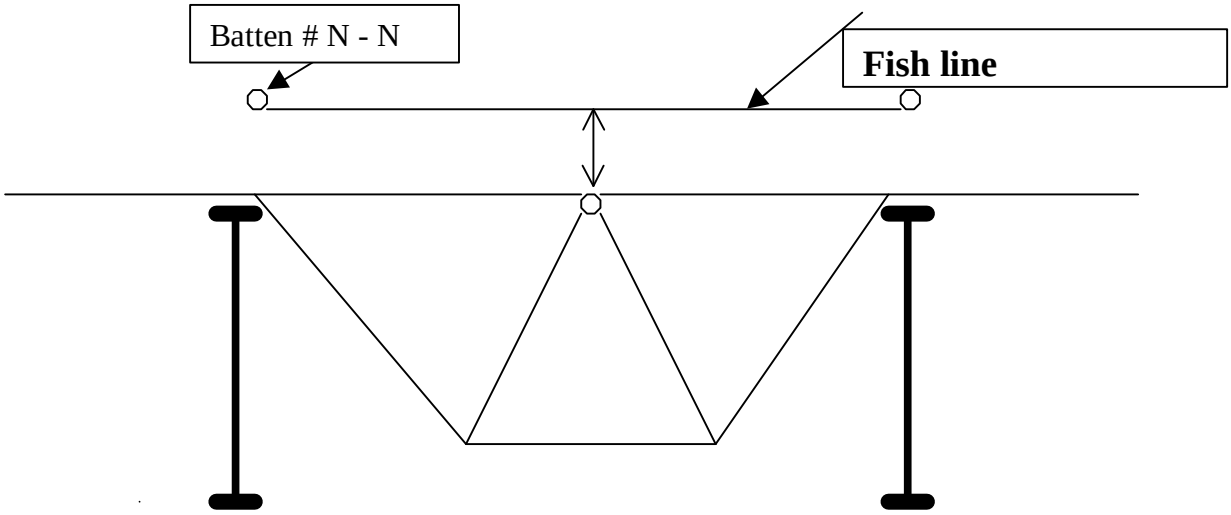


Fig. A

MAINTENANCE LOG

TABLE OF CHANGE AND ADDITION

DATE	WORK DONE	BY WHOM

Section 6. LIST OF REPAIR PARTS

For Combat 13	For Combat 14	For Combat 15	Parts
COM13.1000	COM14.1000	COM15.1000	Complete Matryx sail
COM13.0100	COM14.0100	COM15.0100	Matryx sail
COM13.0101	COM14.0101	COM15.0101	Nose cone
COM13.0101comp	COM14.0101comp	COM15.0101comp	Narrow nose cone
COM13.0110	COM14.0110	COM15.0110	Mylar (L+R)
COM13.2000	COM14.2000	COM15.2000	All battens
COM13.2100	COM14.2100	COM15.2100	Right battens or left battens
COM13.2100-UP	COM14.2100-UP	COM15.2100-UP	Upper right battens or left battens
COM13.0201	COM14.0201	COM15.0201	Batten [1] 1
COM13.0202	COM14.0202	COM15.0202	Batten [1] 2
COM13.0203	COM14.0203	COM15.0203	Batten [1] 3
COM13.0204	COM14.0204	COM15.0204	Batten [1] 4
COM13.0205	COM14.0205	COM15.0205	Batten [1] 5
COM13.0206	COM14.0206	COM15.0206	Batten [1] 6
COM13.0207	COM14.0207	COM15.0207	Batten [1] 7
COM13.0208	COM14.0208	COM15.0208	Batten [1] 8
COM13.0209	COM14.0209	COM15.0209	Batten [1] 9
	COM14.0210	COM15.0210	Batten [1] 10
COM13.0211	COM14.0211	COM15.0211	Tip folding batten
COM13.0220	COM14.0220	COM15.0220	Keel batten
COM14.0231	COM14.0231	COM14.0231	Shovel of battens (new) for 10x0,75
Sth.0231	Sth.0231	Sth.0231	Shovel of battens for 10x0,75
Sth.0232	Sth.0232	Sth.0232	Aluminium shovel of keel battens
Sth.0233	Sth.0233	Sth.0233	Fork of top battens for 12x1
COM14.0235	COM14.0235	COM14.0235	Spring fork
COM14.0236	COM14.0236	COM14.0236	Spring
COM13.0251	COM14.0251	COM15.0251	Bottom batten [1] 1
COM13.0252	COM14.0252	COM15.0252	Bottom batten [1] 2
COM13.0253	COM14.0253	COM15.0253	Bottom batten [1] 3
COM13.0254	COM14.0254	COM15.0254	Bottom cross batten
COM13.0300	COM14.0300	COM15.0300	Complete LE tube
COM13.0310	COM14.0310	COM15.0310	Leading edge tube [1] 1
COM13.0320	COM14.0320	COM15.0320	Leading edge tube [1] 2
COM13.0335AR	COM14.0335AR	COM15.0335AR	Washout struts system
COM13.0339AR	COM14.0339AR	COM15.0339AR	Set of wires for washout struts system
COM14.338	COM14.338	COM14.338	Eye bolt M8
COM13.0330	COM14.0330	COM15.0330	Leading edge tube [1] 3
COM13.0330R	COM14.0330R	COM15.0330R	Leading edge tube [1] 3 with adjustable washout tip strut
COM13.0340R	COM14.0340R	COM15.0340R	Adjustable washout tip strut
KPL2.0338	KPL2.0338	KPL2.0338	Eye bolt M6
Sth.0342M	Sth.0342M	Sth.0342M	Tip batten metall stop detail
Sth.0343	Sth.0343	Sth.0343	Console cap

COM13.3500	**COM14.3500**	**COM15.3500**	**Complete crossbeam**
COM13.016	**COM14.016**	**COM15.016**	**Central beam**
COM13.3400p	**COM14.3400p**	**COM15.3400p**	**Complete keel tube (painted)**
COM13.0400p	**COM14.0400p**	**COM15.0400p**	**Keel tube without details (painted)**
COM13.0401p	**COM14.0401p**	**COM15.0401p**	**Keel tube [1] 1 without details (painted)**
COM13.3401p	**COM14.3401p**	**COM15.3401p**	**Keel tube N1 with details (painted)**
COM13.3402p	**COM14.3402p**	**COM15.3402p**	**Keel tube N2 with details (painted)**
COM13.0415	**COM14.0415**	**COM15.0415**	**Top nose plate**
COM13.0415B	**COM14.0415B**	**COM15.0415B**	**Bottom nose plate**
Sth.0418	**Sth.0418**	**Sth.0418**	**Plug for keel tube 42x1**
COM13.0425	**COM14.0425**	**COM15.0425**	**Hang bar tower**
Sth.0426	**Sth.0426**	**Sth.0426**	**Shock cord L=1500 mm**
COM13.0427	**COM14.0427**	**COM15.0427**	**Radius support**
COM13.0431	**COM14.0431**	**COM15.0431**	**Keel tube's hook**
COM13.0460	**COM14.0460**	**COM13.0460**	**Hang strap**
Sth.0501W	**Sth.0501W**	**Sth.0501W**	**Uprights aerofoil tube 25x51 L=1620 mm**
Sth.0502W	**Sth.0502W**	**Sth.0502W**	**Upper detail - right**
Sth.0503W	**Sth.0503W**	**Sth.0503W**	**Upper detail - left**
Sth.0504	**Sth.0504**	**Sth.0504**	**Upright bottom inner tube - right**
Sth.0505	**Sth.0505**	**Sth.0505**	**Upright bottom inner tube - left**
Sth.0506W	**Sth.0506W**	**Sth.0506W**	**Control-bar corner**
Sth.0507	**Sth.0507**	**Sth.0507**	**Faired top cap**
Sth.0508	**Sth.0508**	**Sth.0508**	**Faired bottom cap**
Sth.0509	**Sth.0509**	**Sth.0509**	**Clevis pin 6-30**
Sth.0510	**Sth.0510**	**Sth.0510**	**Bolt 6-43**
Sth.0511	**Sth.0511**	**Sth.0511**	**Counter nut M6**
Sth.0512	**Sth.0512**	**Sth.0512**	**Screw**
Sth.0513	**Sth.0513**	**Sth.0513**	**Roller**
COM13.0501R	**COM14.0501R**	**COM15.0501R**	**Uprights aerofoil tube 23x53 L=1680 mm (right)**
COM13.0501L	**COM14.0501L**	**COM15.0501L**	**Uprights aerofoil tube 23x53 L=1680 mm (left)**
COM13.0502BR	**COM14.0502BR**	**COM15.0502BR**	**Upper detail - right**
COM13.0503BL	**COM14.0503BL**	**COM15.0503BL**	**Upper detail - left**
COM13.0504BR	**COM14.0504BR**	**COM15.0504BR**	**Upright bottom detail - right**
COM13.0504BL	**COM14.0504BL**	**COM15.0504BL**	**Upright bottom detail - left**
COM14.0509C	**COM14.0509C**	**COM14.0509C**	**Clevis pin 6-19**
COM14.0510	**COM14.0510**	**COM14.0510**	**Clevis pin 6-40**
COM14.0514	**COM14.0514**	**COM14.0514**	**Shackle**
COM14.0513	**COM14.0513**	**COM14.0513**	**Roller**
COM14.0515	**COM14.0515**	**COM14.0515**	**Splint**
COM13.0501CR	**COM14.0501CR**	**COM15.0501CR**	**Carbon uprights L=1680 mm (right)**
COM13.0501CL	**COM14.0501CL**	**COM15.0501CL**	**Carbon uprights L=1680 mm (left)**
COM13.0502CR	**COM14.0502CR**	**COM15.0502CR**	**Upper detail - right**
COM13.0503CL	**COM14.0503CL**	**COM15.0503CL**	**Upper detail - left**
COM13.0504CR	**COM14.0504CR**	**COM15.0504CR**	**Upright bottom detail - right**
COM13.0504CL	**COM14.0504CL**	**COM15.0504CL**	**Upright bottom detail - left**

COM14.0509C	COM14.0509C	COM14.0509C	Clevis pin 6-19
COM14.0510	COM14.0510	COM14.0510	Clevis pin 6-40
COM14.0514	COM14.0514	COM14.0514	Shackle
COM14.0513	COM14.0513	COM14.0513	Roller
COM14.0515	COM14.0515	COM14.0515	Splint
COM13.0550	COM14.0550	COM15.0550	Complete Al speedbar
Sth.0553	Sth.0553	Sth.0553	Clamcleat
Sth.0554	Sth.0554	Sth.0554	Rubber grip L=280 mm
COM13.0550C	COM14.0550C	COM15.0550C	Complete carbon speedbar
COM14.0553C	COM14.0553C	COM14.0553C	Clamcleat for carbon speedbar
COM13.0560	COM14.0560	COM15.0560	VG rope system
COM13.0561	COM14.0561	COM15.0561	Rope L=2500 mm
COM13.0573	COM14.0573	COM15.0573	Rore d=3 ì ì L=6000 ì ì
COM14.0563	COM14.0563	COM14.0563	Single turning block
COM14.0564	COM14.0564	COM14.0564	Double block
COM14.0565	COM14.0565	COM14.0565	Single block
COM14.0580	COM14.0580	COM14.0580	on/off X-bar strap
Sth.0581	Sth.0581	Sth.0581	Staple
Sth.0582	Sth.0582	Sth.0582	Bolt 6-30
Sth.0583	Sth.0583	Sth.0583	Tape
COM13.6000	COM14.6000	COM15.6000	All wires (non-corrosive)
COM13.6000comp	COM14.6000comp	COM15.6000comp	All wires (non-corrosive) competition variant
COM13.0600	COM14.0600	COM15.0600	Crossbar sweep wire
COM13.0610	COM14.0610	COM15.0610	Bottom side wire
COM13.0620-2,5	COM14.0620-2,5	COM15.0620-2,5	Bottom front wires
COM13.0620-2	COM14.0620-2	COM15.0620-2	Bottom front wires (2-mm)
COM13.0630-2,5	COM14.0630-2,5	COM15.0630-2,5	Bottom rear wires
COM13.0630-2	COM14.0630-2	COM15.0630-2	Bottom rear wires (2-mm)
COM14.0002	COM14.0002	COM14.0002	Bolt M8 (keel + control bar)
Sth.0007	Sth.0007	Sth.0007	Custle nut M8
Sth.0009	Sth.0009	Sth.0009	Selffixed nut M6
Sth.0010	Sth.0010	Sth.0010	Nut M6
Sth.0017	Sth.0017	Sth.0017	Safety ring
Sth.0018	Sth.0018	Sth.0018	Small safety ring
Sth.0025	Sth.0025	Sth.0025	Plastic washer 7-mm thick
Sth.0026	Sth.0026	Sth.0026	Standoff (2)
Sth.0027	Sth.0027	Sth.0027	Standoff with one pin
Sth.0028	Sth.0028	Sth.0028	Metal washer 12-6-1
Sth.0029	Sth.0029	Sth.0029	Metal washer 16-8-1
Sth.0040	Sth.0040	Sth.0040	Button spring (2)
Sth.0050	Sth.0050	Sth.0050	Self-tapping flush screw 4-10
Sth.0051	Sth.0051	Sth.0051	Self-tapping screw 4-10
Sth.0052	Sth.0052	Sth.0052	Self-tapping screw 5-10
Sth.0060	Sth.0060	Sth.0060	Rivet 4-6 Al
Sth.0061	Sth.0061	Sth.0061	Rivet 4-10 Al
Sth.0062	Sth.0062	Sth.0062	Rivet 3-6 Al
Sth.11	Sth.11	Sth.11	Bolt 6-77 (LE + keel)

Sth.71	Sth.71	Sth.71	Clevis pin L=55 mm (LE2 + LE3)
Sth.81	Sth.81	Sth.81	Bolt Quick Pin
KPL.015	KPL.015	KPL.015	LE connection plate
KPL.61	KPL.61	KPL.61	Bolt M8 L=32 mm (LE + X-beem)
KPL2.0012	KPL2.0012	KPL2.0012	Clevis pin L=32 mm (HGP bar)
COM14.20	COM14.20	COM14.20	Hangpoint bar
KPL2.31	KPL2.31	KPL2.31	Clevis pin L=53 mm (rear wires)
COM13.7000	COM14.7000	COM15.7000	All bags and packing set
COM13.0710	COM14.0710	COM15.0710	6-metres bag
COM13.0730C	COM14.0730C	COM15.0730C	Combined battens bag
COM14.0740	COM14.0740	COM14.0740	Protective bag for bottom of uprights
COM14.0745	COM14.0745	COM14.0745	Uprights top bag
Sth.0755	Sth.0755	Sth.0755	Wing tips bag
Sth.0756	Sth.0756	Sth.0756	Bag for aerofoil wingtips
Sth.0760	Sth.0760	Sth.0760	Tighten tape
Sth.0775	Sth.0775	Sth.0775	End keel bag
Sth.0790	Sth.0790	Sth.0790	Rear keel junction bag
Sth.0795	Sth.0795	Sth.0795	Spidbar bag
Sth.0796	Sth.0796	Sth.0796	Protective cover for X-bar strap
KPL2.0797	KPL2.0797	KPL2.0797	Protective cover for shakle
KPL2.0798	KPL2.0798	KPL2.0798	Protective cover for struts junction
COM13.0800	COM14.0800	COM15.0800	Battens template
COM13.0810	COM14.0810	COM15.0810	Manual
Sth.0850	Sth.0850	Sth.0850	Aerofoil wingtips (L + R)

STRUT SYSTEM

THE FRAME

COMPLETE RIGHT UPRIGHT

NOSE JUNCTION

COMPLETE LEFT UPRIGHT

HANG POINT SYSTEM

REAR KEEL LINE

VG - ROPE SYSTEM

CROSS BEAM JUNCTION