

SPORT HANG GLIDER

“Stealth KPL 2”

MANUAL

Size: _____

Manufactured by:

*AEROS Ltd.
32-B Obolonskiy pr.
Kyiv 254205
UKRAINE*

*Tel: (380 44) 411 14 07
Fax: (380 44) 411 14 07
E-mail: aerosint@aerosint.kiev.ua*

Date of production: _____

Serial number: _____

TABLE OF CONTENTS

Section 1. General information.....	2
1.1. Introduction.....	2
1.2. Main data.....	2
1.3. Operation limitations.....	2
1.4. Flying tests.....	2
Section 2. Set up procedure.....	3
2.1. Set up procedure from the 6 meters long package.....	3
2.2. Preflight inspection of the glider.....	7
2.3. Laying the glider flat.....	10
Section 3. Performance and flight characteristics.....	10
3.1. Take off.....	10
3.2. Flying.....	10
3.3. Speeds to fly.....	10
3.4. Turning.....	11
3.5. Variation of the nose angle.....	11
3.6. Landing.....	11
Section 4. Breakdown.....	12
4.1. Breakdown into the 6 metres long package.....	12
4.2. Breakdown into the 4 metres long package.....	14
Section 5. Maintenance.....	15
5.1. Tuning.....	15
5.2. Periodical maintenance inspection.....	16
5.3. Maintenance.....	16
Section 6. List of Repaire Parts.....	19
Section 7. Schematics.....	22

Section 1. GENERAL INFORMATION

1.1. Introduction

The **Stealth KPL 2** 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 2**. 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 2** is a high-performance hang glider designed for foot-launching, soaring and cross-country flight.

Table 1.2.

	Stealth 14 KPL 2	Stealth 13 KPL 2
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	14	14

1.3. Operation limitations

Table 1.3.

	Stealth 14 KPL 2	Stealth 13 KPL 2
Tested load	+ 6 / - 3 G	+ 6 / - 3 G
Wind speed max, m/sec (mph)	12 (27)	12 (27)
Permissible range of temperature, °C (F)	-15 / +40 (0 / +112)	-15 / +40 (0 / +112)
Minimum airspeed, km/h (mph)	29-31 (17-18)	29-31 (17-18)
Maximum airspeed, km/h (mph)	110 (68)	110 (68)
Minimum clip pilot weight, kg (lb)	75 (165)	65 (132)
Maximum clip pilot weight, kg (lb)	105 (235)	90 (198)

After structural, aerodynamic and flight tests, the **Stealth KPL 2** has been shown to comply with BHPA requirements (BHPA certificates No. _____ for **Stealth KPL 2**).

ATTENTION ! *We do not recommend to use Stealth KPL 2 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 2** (serial No _____) was tested _____
“Hang glider is airworthy according to present manual”.

Test pilot _____ / _____ /

Section 2. SET UP PROCEDURE

This manual describes methods, which are distinctive to the **Stealth KPL 2**. 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.

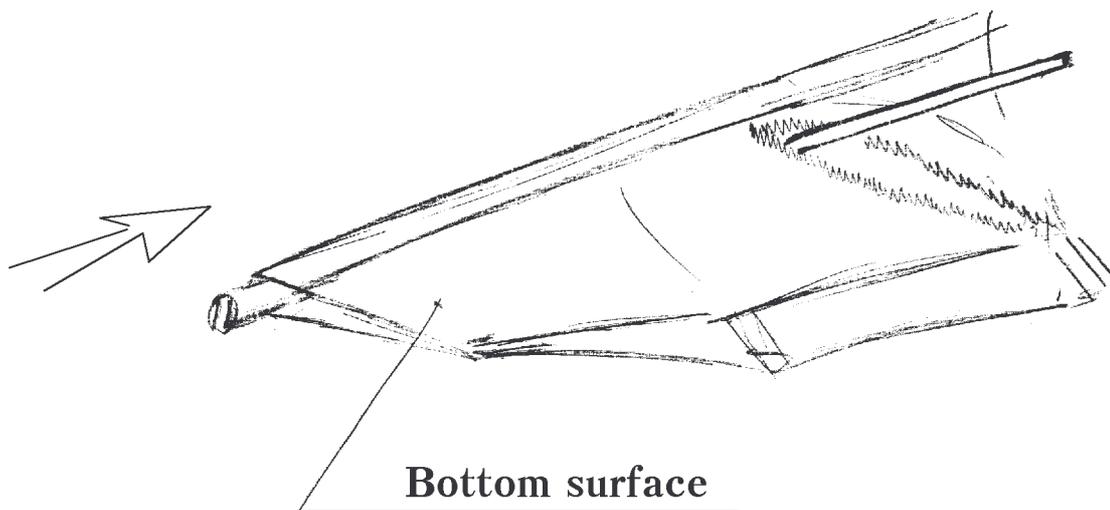


Fig. 1

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

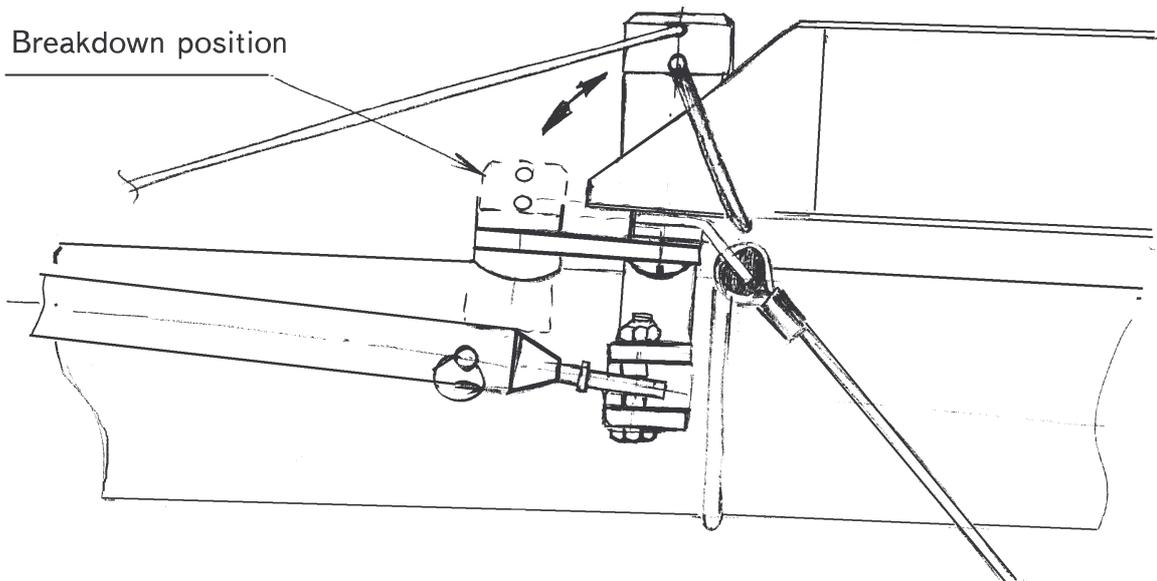


Fig. 2

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 speedbar using the quick-pins. Pass the VG-rope through the cleat, make a knot on the end of the rope (Fig. 3).

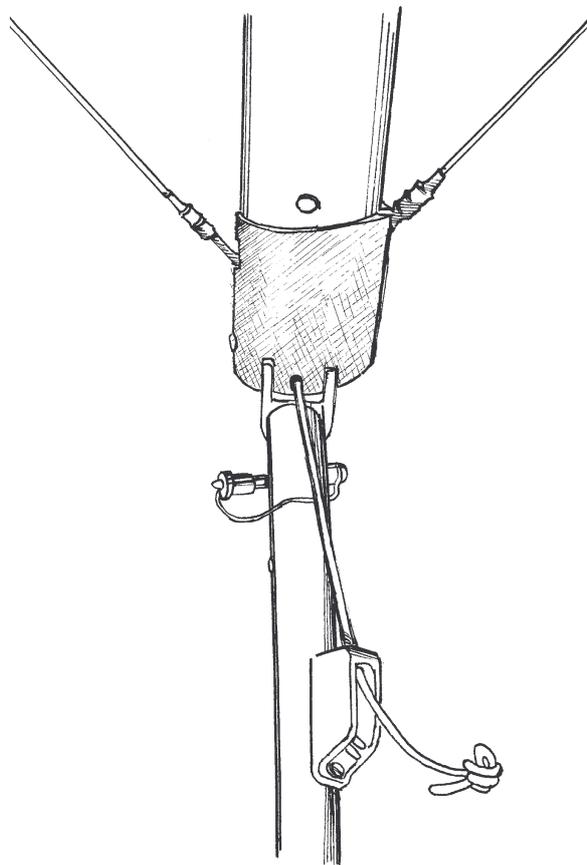


Fig. 3

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.

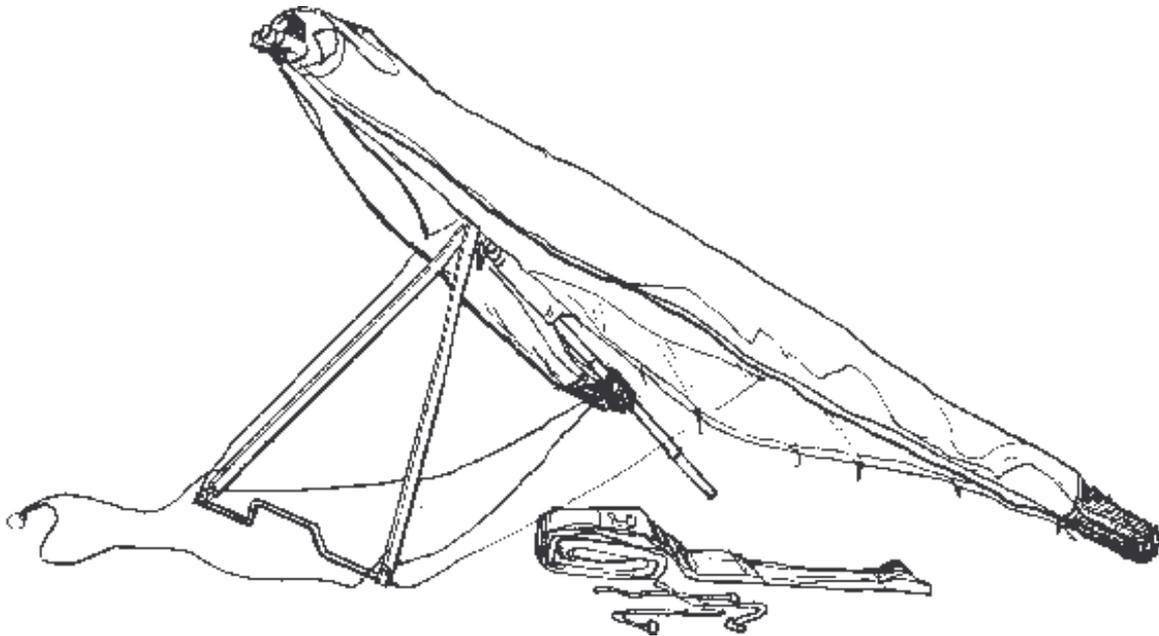


Fig. 4

2.2.3. Install the small mast on the LE-tubes/X-beam junction to its proper place. Dive sticks must be outside of sail. (Fig. 5).

Remove the battens from the bags 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 batten cord.

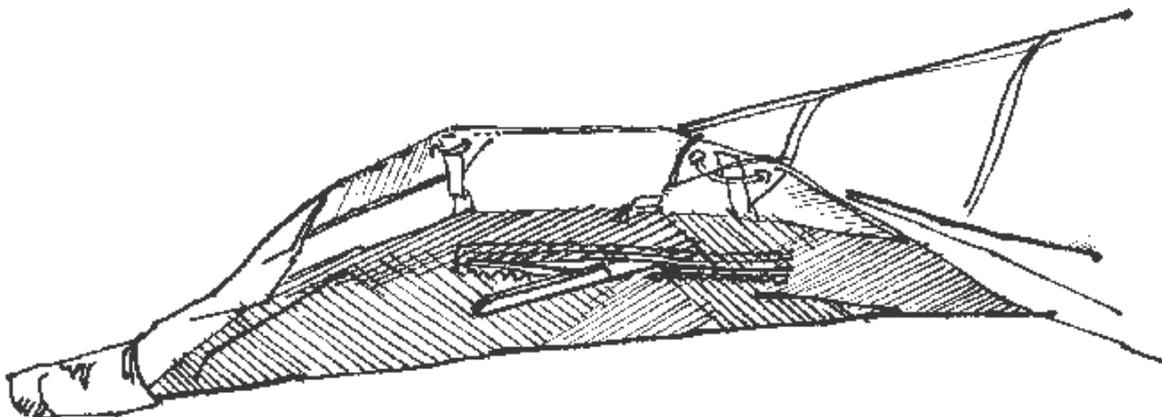


Fig. 5

2.2.4. The hang point spreader bar turn perpendicular to the keel tube.

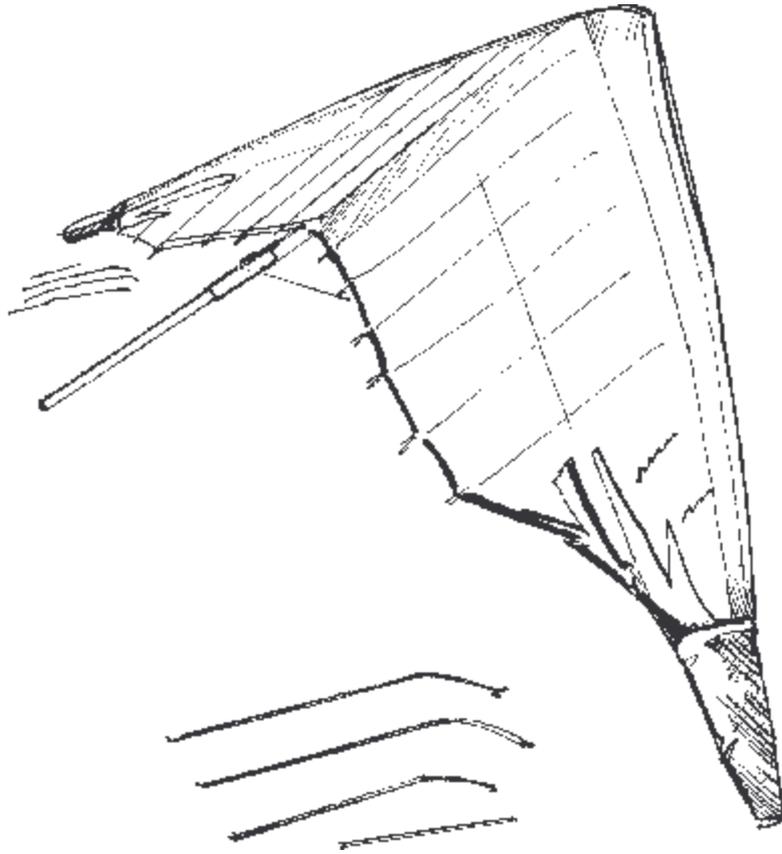


Fig. 6

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.

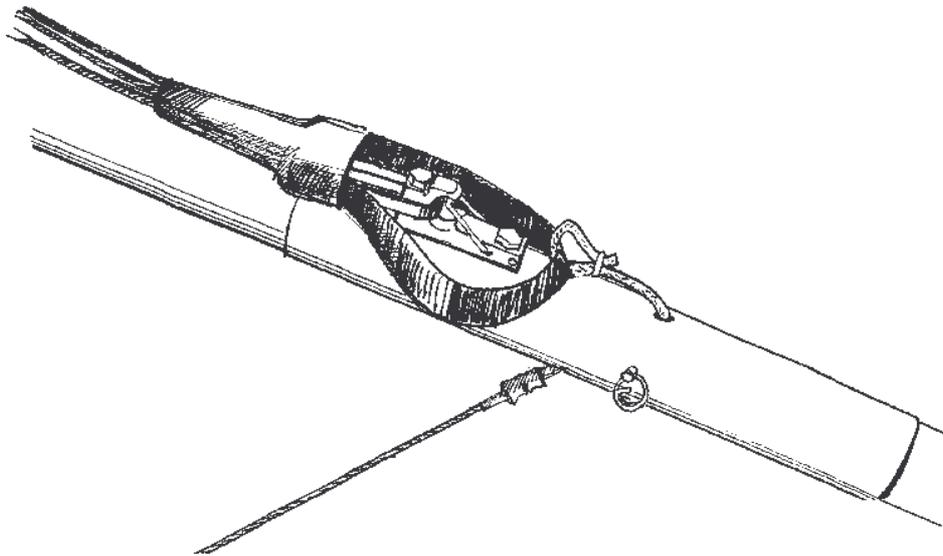


Fig. 7

2.2.6. Remove the bags from the wings tips, install the remainder of the battens and the washout struts. Place washout struts inside wing surfaces and zip the zipper.

2.2.7. Secure the ring of the bottom front wires on the hook on the nose junction.

2.2.8. Put dive sticks inside the double surface in it's proper place and fasten them with velcros. 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. 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. 8). Put the nose cone on the sail.

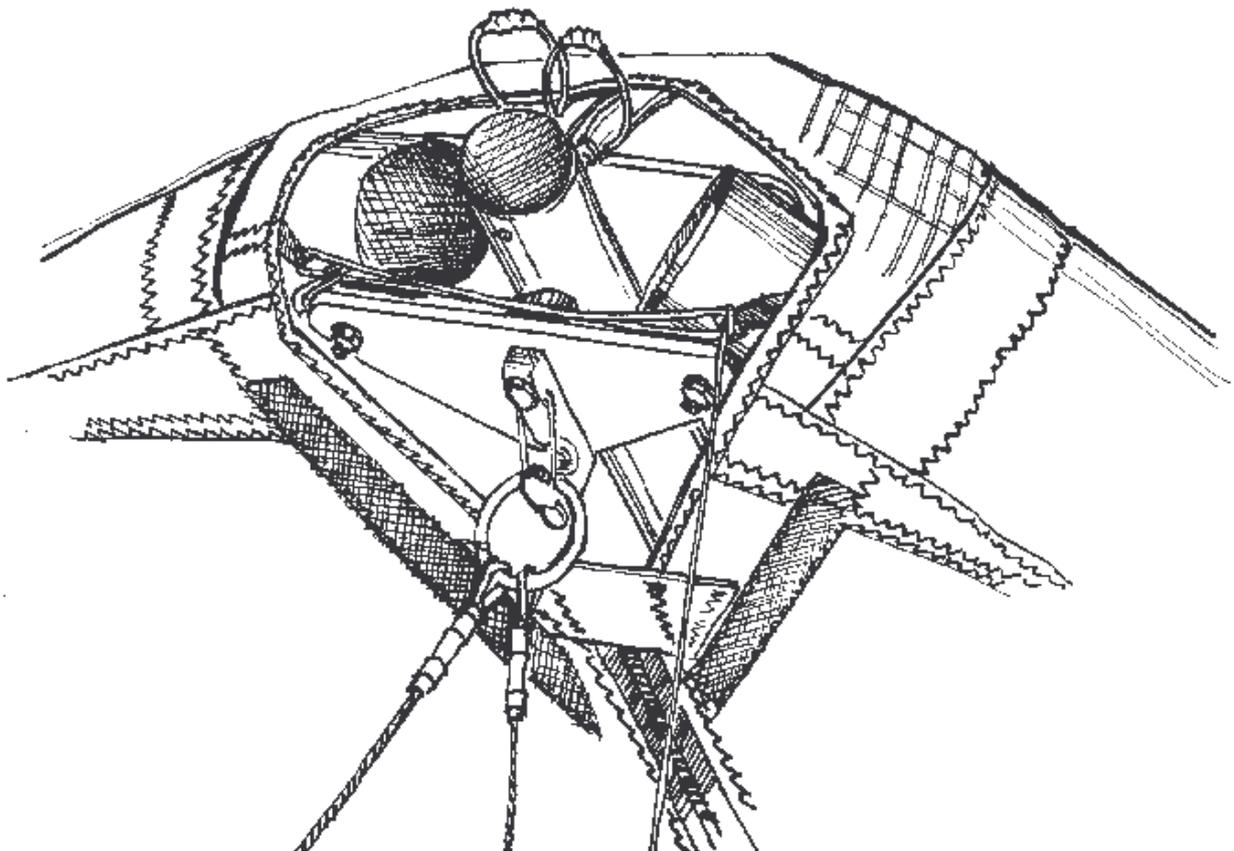


Fig. 8

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.

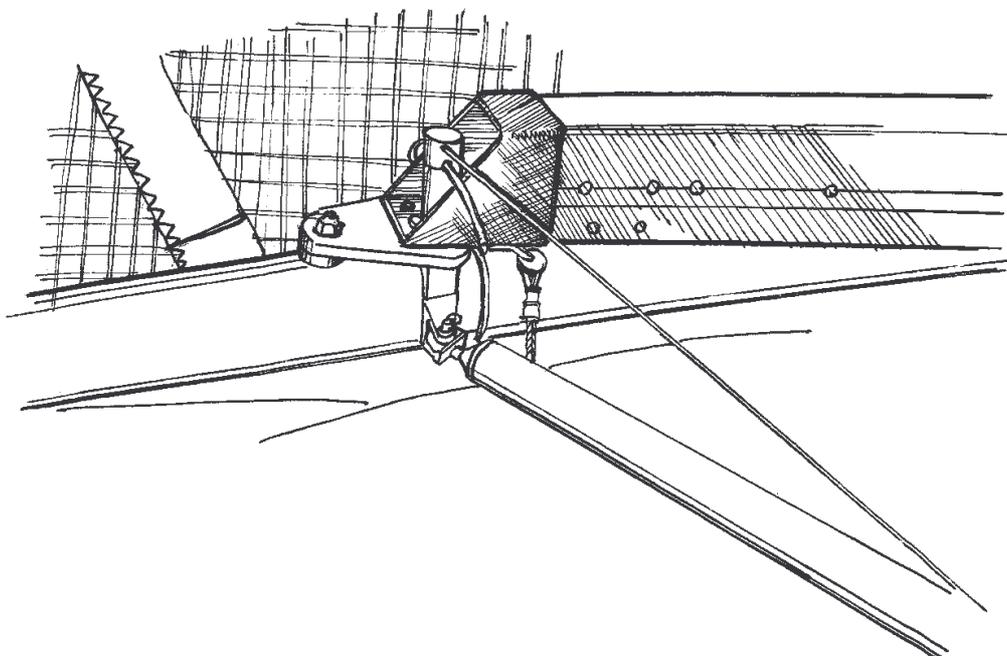


Fig. 9

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). Check for symmetric tension of the sail.

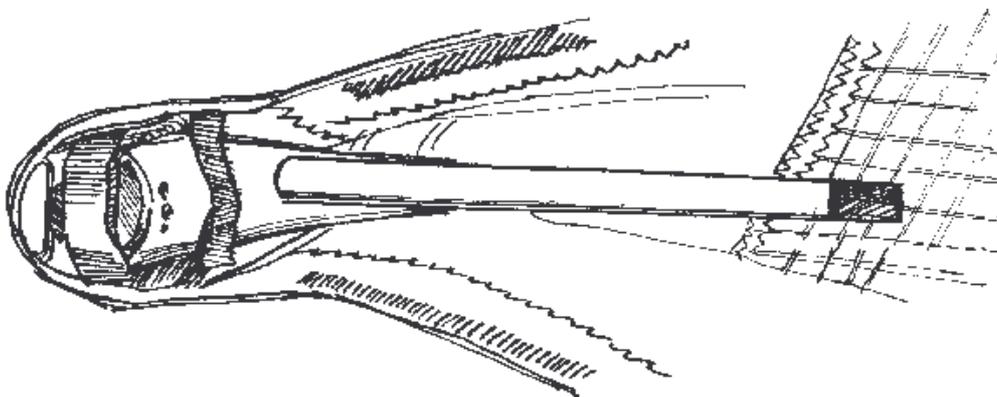


Fig. 10

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.

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. 11).

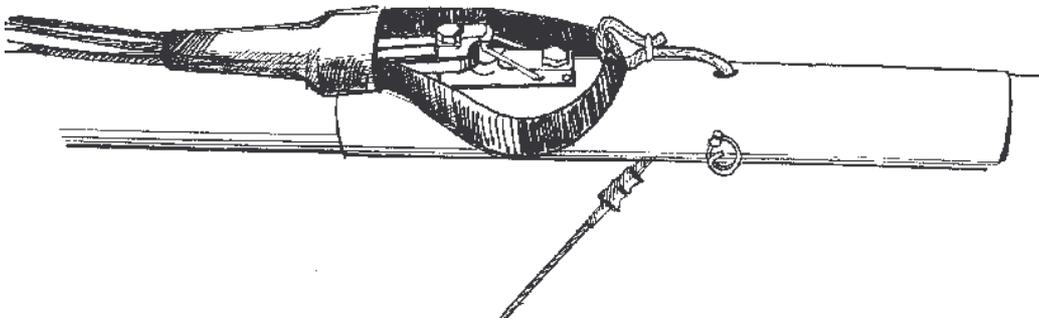


Fig. 11

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. 12). Check the ropes for wear, especially near the rollers. Zip the zipper of the bottom surface closed.

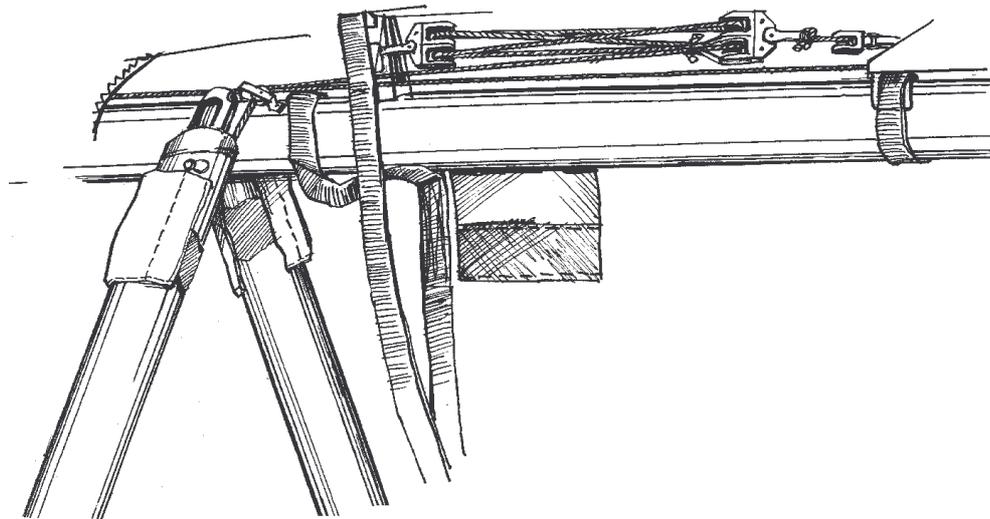


Fig. 12

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 glider 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 assistant, 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 2** may seem to be different from some other gliders. The **Stealth KPL 2** 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 2 in smooth flying conditions.

After you initiate a turn, easing the bar out will make the turn more efficient. The **Stealth KPL 2** 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 2** with VG off is 38 - 40 km/h (22 - 25 mph). The speedbar position in front of the pilot's face corresponds to this range.

The range of stall speed of **Stealth KPL 2** is 29 - 31 km/h (17 - 18 mph). The glider is stable in the beginnings of a stall. While pushing out on the bar, the bar pressure is progressive.

Stealth KPL 2 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 2** is 40 - 44 km/h (25 - 27 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 2 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 2 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. Remember that the glider with the VG on has the higher landing speed than it does with the VG off.

3.6. Landing

As the **Stealth KPL 2** is a high performance wing, you should attempt to land into the wind and avoid going downhill.

Stealth KPL 2 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.

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

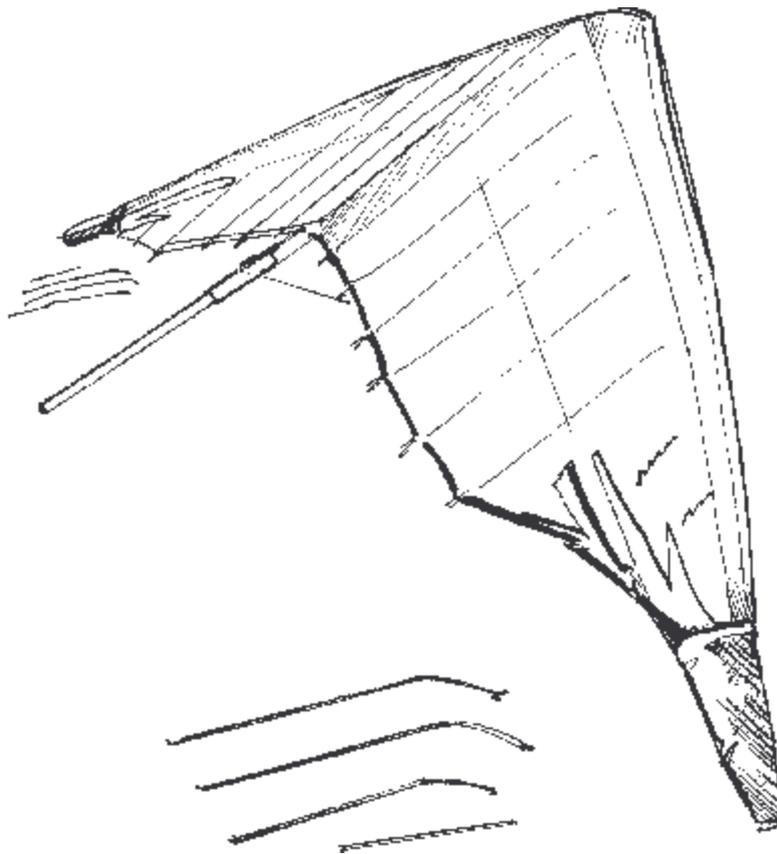


Fig. 13

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

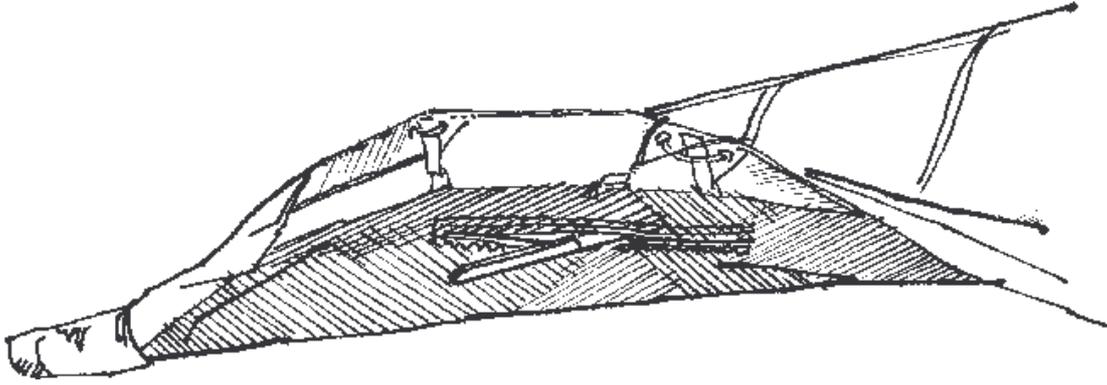


Fig. 14

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, put out the hangpoint spreader bar from the tower on the keel tube 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.

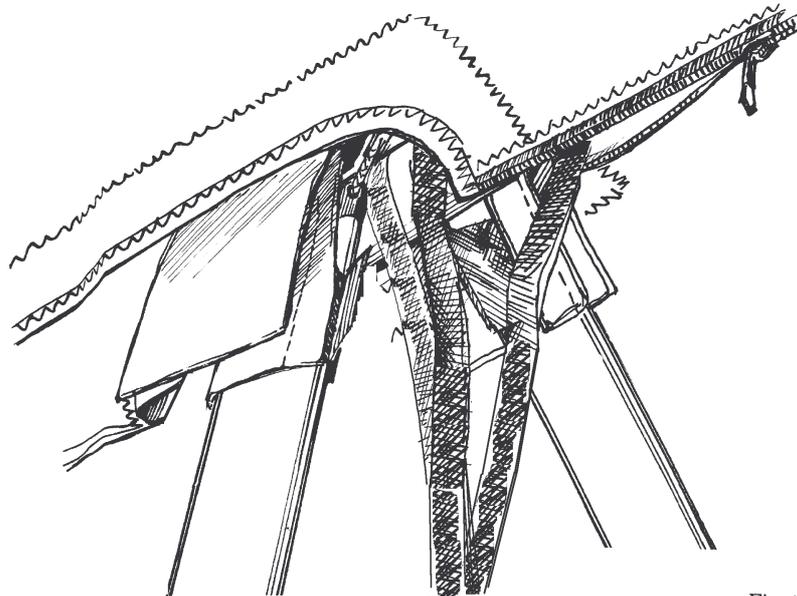


Fig. 15

4.1.6. Pull in the wings slightly and remove all battens except the top battens No.1. Remove only the batten cords from these battens. Put the battens into the bags.

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 !** Pull out small masts on the LE-tube/X-beam junction. 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).

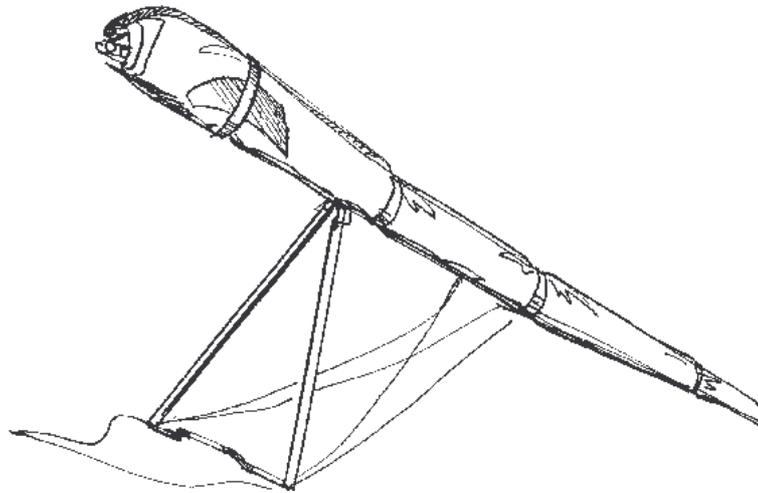


Fig. 16

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. Place hang loop spreader bar along the keel tube between the uprights. Bring all wires forward along tubes and place uprights inside the folded sail. Detach the speedbar from the uprights and place it 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 2 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 38 - 40 km/h (23 - 25 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. Console cap alignment

If the glider flies assymmetrically, change the angles of the console caps. To do this remove self-tapping screws and turn the console caps in opposite directions. To cure a left roll, turn the right plug to increase wing geometric twist. To cure a right roll, turn the left plug to increase wing geometric twist (Fig. 17, 17A). Fix the cap in the chosen position using the screws.

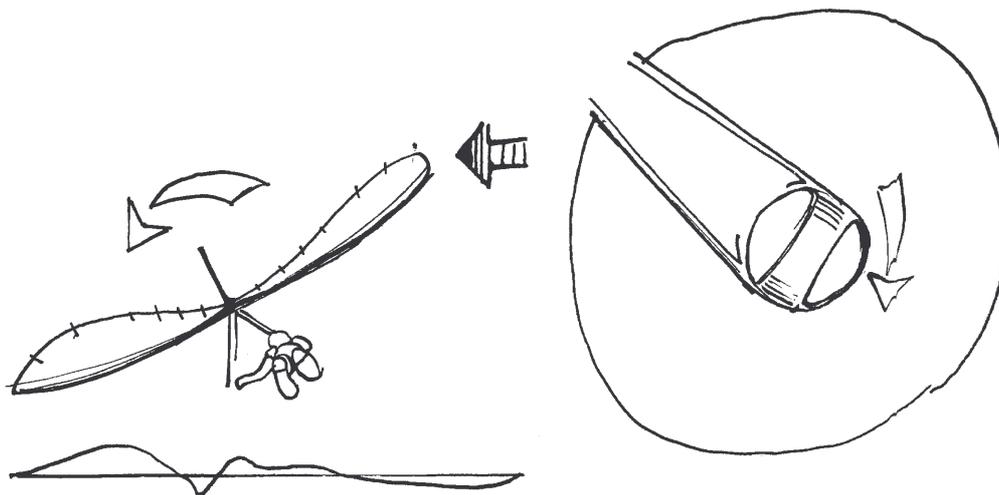


Fig. 17

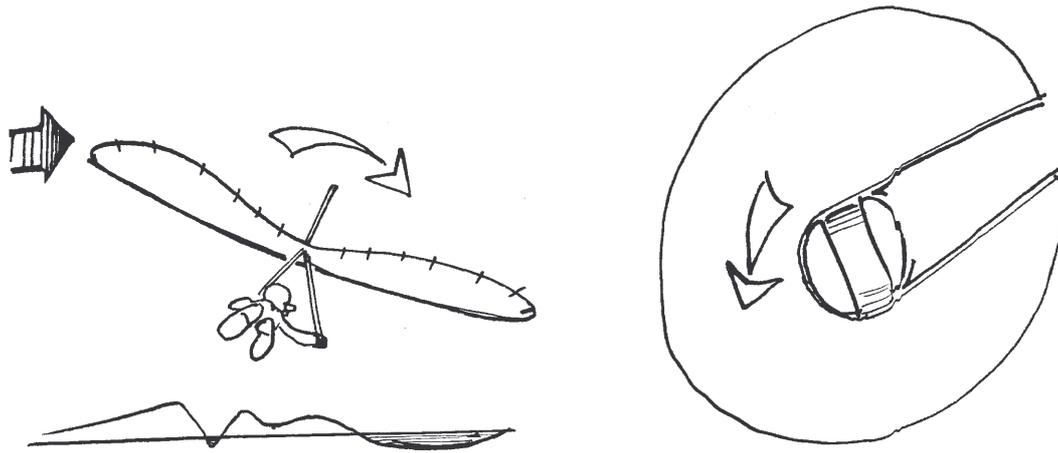


Fig. 17A

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 overtighten on 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 if 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 symmetry of the left-wing and right-wing battens.

Have any discovered defects replaced.

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 than 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 difficult or impossible.

HAPPY FLYING !

5.4. Sail height measurement of KPL 2 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 6, 7, 9 for KPL 14 and number 5, 6, 8 for KPL 13. Pull it tight.

5.4.4. Measure and record distances between the lines and the top of keel tube. Make two measures: 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 batten. 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 asymmetrical fly at VG on position.

Table AA

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

Batten	AEROS STEALTH 13 KPL 2		Batten	AEROS STEALTH 14 KPL 2	
	VG off (mm)	VG on (mm)		VG off (mm)	VG on (mm)
5 - 5	70 / 90 mm	- 5 / 15 mm	6 - 6	80 / 100 mm	- 30 / - 10 mm
6 - 6	90 / 110 mm	0 / 20 mm	7 - 7	100 / 120 mm	- 25 / - 5 mm
8 - 8	95 / 115 mm	- 5 / 15 mm	9 - 9	90 / 110 mm	- 35 / - 15 mm

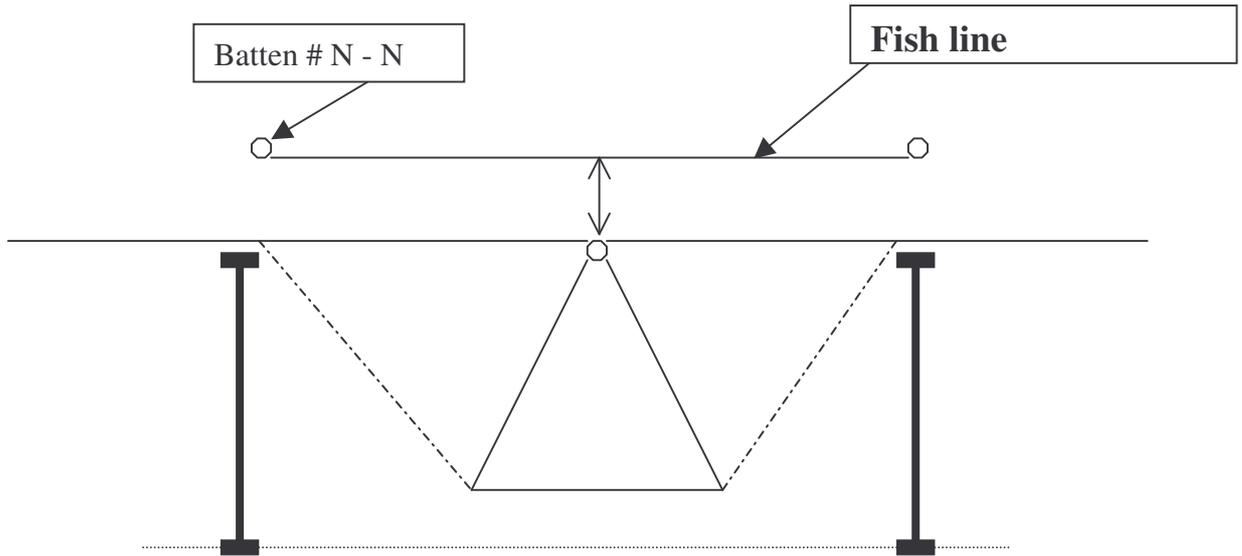


Fig. A

TABLE OF CHANGE AND ADDITION

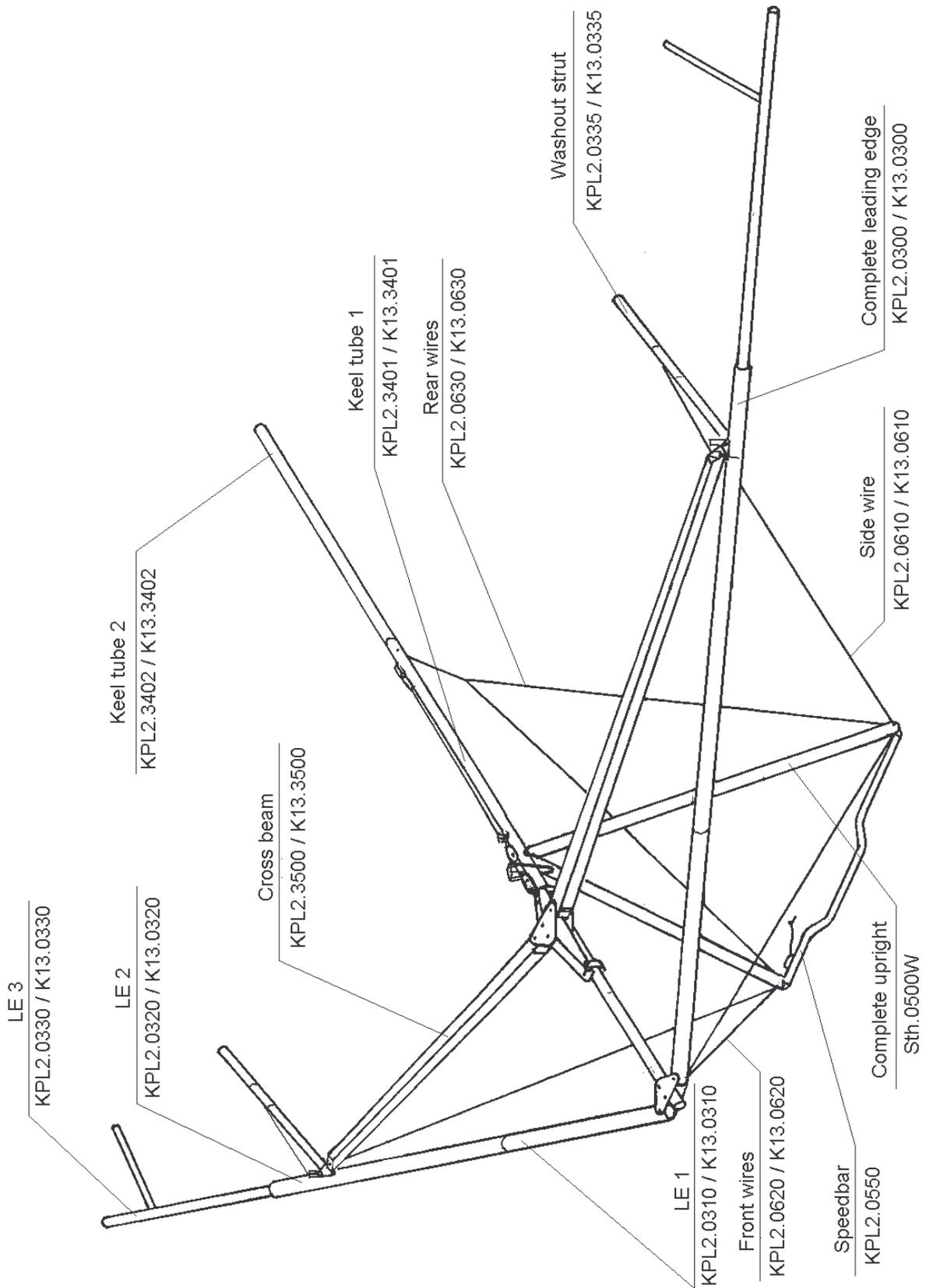
DATE	WORK DONE	BY WHOM

Section 6. LIST OF REPAIR PARTS

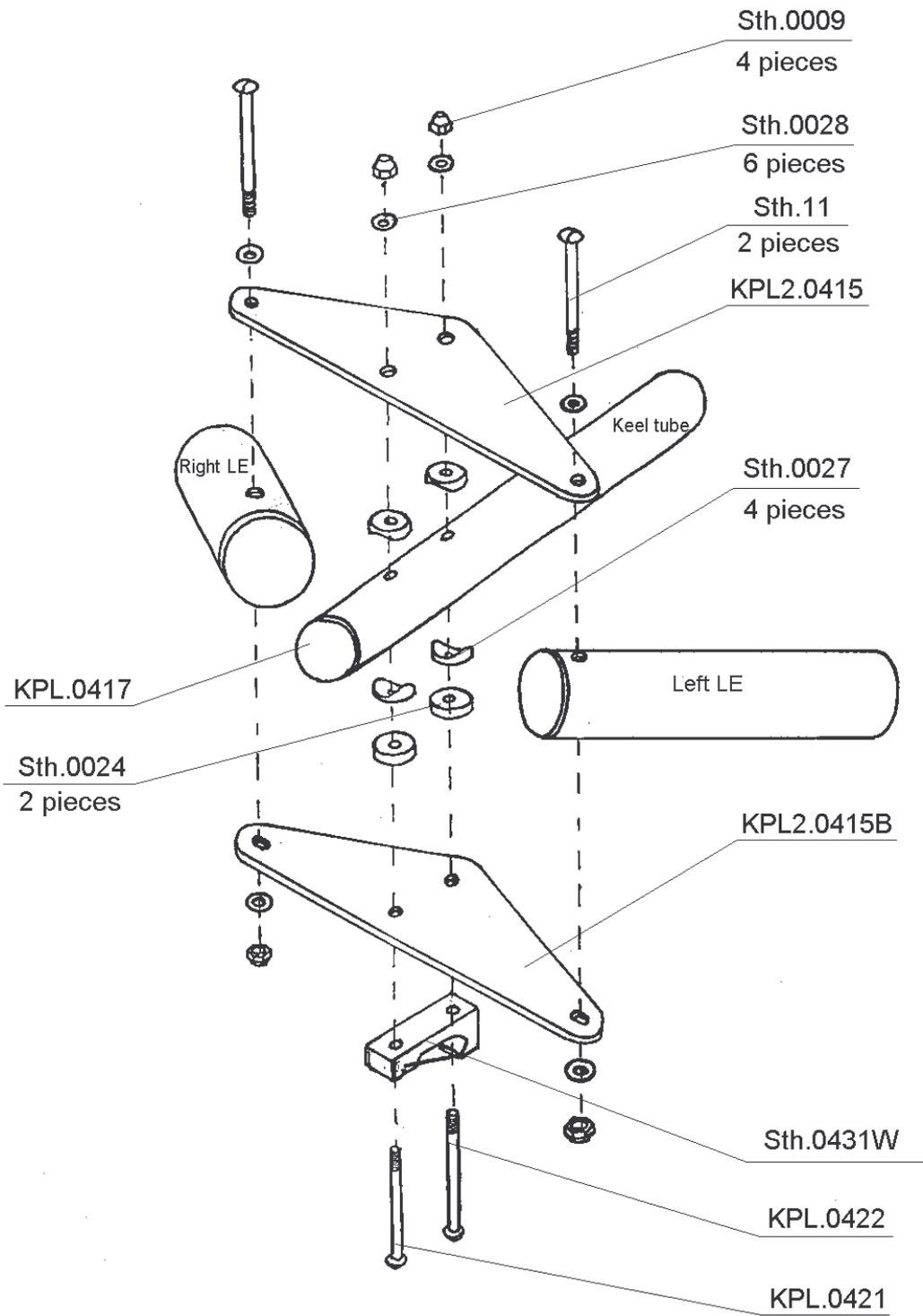
For Stealth 14 KPL 2	For Stealth 13 KPL 2	Parts
KPL2.1000	K13.1000	Complete sail
KPL2.1000M	K13.1000M	Complete Matryx (PX10T) sail
KPL2.0100	K13.0100	Sail
KPL2.0100M	K13.0100M	Matryx sail
KPL2.0101	K13.0101	Nose cone
KPL2.0101M	K13.0101M	Nose cone from Matryx
KPL2.0110	K13.0110	Mylar (L+R)
KPL2.2000	K13.2000	All battens
KPL2.2000S	K13.2000S	All battens with spring tip
KPL2.2100	K13.2100	Right battens or left battens
KPL2.0201 (S)	K13.0201 (S)	Batten №1 (S – spring tip)
KPL2.0202 (S)	K13.0202 (S)	Batten №2
KPL2.0203 (S)	K13.0203 (S)	Batten №3
KPL2.0204 (S)	K13.0204 (S)	Batten №4
KPL2.0205 (S)	K13.0205 (S)	Batten №5
KPL2.0206 (S)	K13.0206 (S)	Batten №6
KPL2.0207 (S)	K13.0207 (S)	Batten №7
KPL2.0208 (S)	K13.0208 (S)	Batten №8
KPL2.0209 (S)	K13.0209 (S)	Batten №9
KPL2.0210 (S)	-----	Batten №10
KPL2.0211 (S)	K13.0211 (S)	Tip batten
KPL2.0220	K13.0220	Keel batten
Sth.0231	Sth.0231	Shovel of battens
Sth.0232	Sth.0232	Shovel of keel battens
Sth.0233	Sth.0233	Fork of top battens d=10 mm
Sth.0234	Sth.0234	Fork of battens d=12 mm
KPL2.0251	K13.0251	Bottom batten №1
KPL2.0252	K13.0252	Bottom batten №2
KPL2.0253	K13.0253	Bottom batten №3
KPL2.0254	K13.0254	Bottom cross batten
KPL2.0300	K13.0300	Leading edge tube
KPL2.0310	K13.0310	Leading edge tube №1
KPL2.0320	K13.0320	Leading edge tube №2
KPL2.0330	K13.0330	Leading edge tube №3
Sth.0342M	Sth.0342M	Tip batten metall stop detail
Sth.0343	Sth.0343	Console cap
KPL2.0344	KPL2.0344	Washout tip strut
KPL2.0344R	K13.0344R	Washout tip strut with regulation
KPL2.0335	K13.0335	Washout struts system
KPL2.3500AL	K13.3500AL	Complete crossbeam from aluminium
KPL2.3500CAR	KPL13.3500CAR	Complete crossbeam from carbon
KPL2.3400p	K13.3400p	Complete keel tube (painted)
KPL2.0400p	K13.0400p	Keel tube №1 without details (painted)

KPL2.3401p	K13.3401p	Keel tube N 1 with details (painted)
KPL2.3402p	K13.3402p	Keel tube N2 (painted)
KPL2.0415	KPL2.0415	Top nose plate
KPL2.0415B	KPL2.0415B	Bottom nose plate
Sth.0418	Sth.0418	Plug for 42x1
KPL2.0425	KPL2.0425	Hang bar tower
Sth.0426	Sth.0426	Shock cord L=1500 mm
Sth.0431W	Sth.0431W	Keel tube's hook
KPL2.0460	KPL2.0460	Hang strap
KPL2.66	KPL2.66	Shakle with screw
Sth.0500W	Sth.0500W	Complete uprights
Sth.0501W	Sth.0501W	Uprights aerofoil tube L=1620 mm
Sth.0502W	Sth.0502W	Upper detail - right
Sth.0503W	Sth.0503W	Upper detail - left
Sth.0504	Sth.0504	Upright bottom inner tube - right
Sth.0505	Sth.0505	Upright bottom inner tube - left
Sth.0506W	Sth.0506W	Control-bar corner
Sth.0507	Sth.0507	Faired top cap
Sth.0508	Sth.0508	Faired bottom cap
Sth.0509	Sth.0509	Clevis pin 6-30
Sth.0510	Sth.0510	Bolt 6-43
Sth.0511	Sth.0511	Counter nut M6
Sth.0512	Sth.0512	Screw
Sth.0513	Sth.0513	Roller
KPL2.0550	KPL2.0550	Complete speedbar
KPL2.0550CAR	KPL2.0550CAR	Complete speedbar from carbon
Sth.0553	Sth.0553	Clamcleat
Sth.0553CAM	Sth.0553CAM	Cam clamcleat
Sth.0554	Sth.0554	Rubber grip L=280 mm
KPL2.0560	KPL2.0560	VG rope system
KPL2.0561	KPL2.0561	Rope L=2450 mm
KPL2.0562	KPL2.0562	Rope L=2600 mm
KPL2.0573	KPL2.0573	Rope d=3 mm L=3500 mm
Sth.0563	Sth.0563	Single turning block
Sth.0564	Sth.0564	Double block
Sth.0565	Sth.0565	Single block
Sth.0566	Sth.0566	Small clevis pin d=3 mm
Sth.0580	Sth.0580	on/off X-bar strap
Sth.0581	Sth.0581	Staple
Sth.0582	Sth.0582	Bolt 6-30
Sth.0583	Sth.0583	Tape
KPL2.6000	K13.6000	All wires (non-corrosive)
KPL2.0600	K13.0600	Crossbar sweep wire
KPL2.0610	K13.0610	Bottom side wire
KPL2.0620	K13.0620	Bottom front wires
KPL2.0630	K13.0630	Bottom rear wires
KPL2.0002	KPL2.0002	Bolt M8 (keel + control bar)
Sth.0007	Sth.0007	Custle nut M8
Sth.0009	Sth.0009	Selffixed nut M6

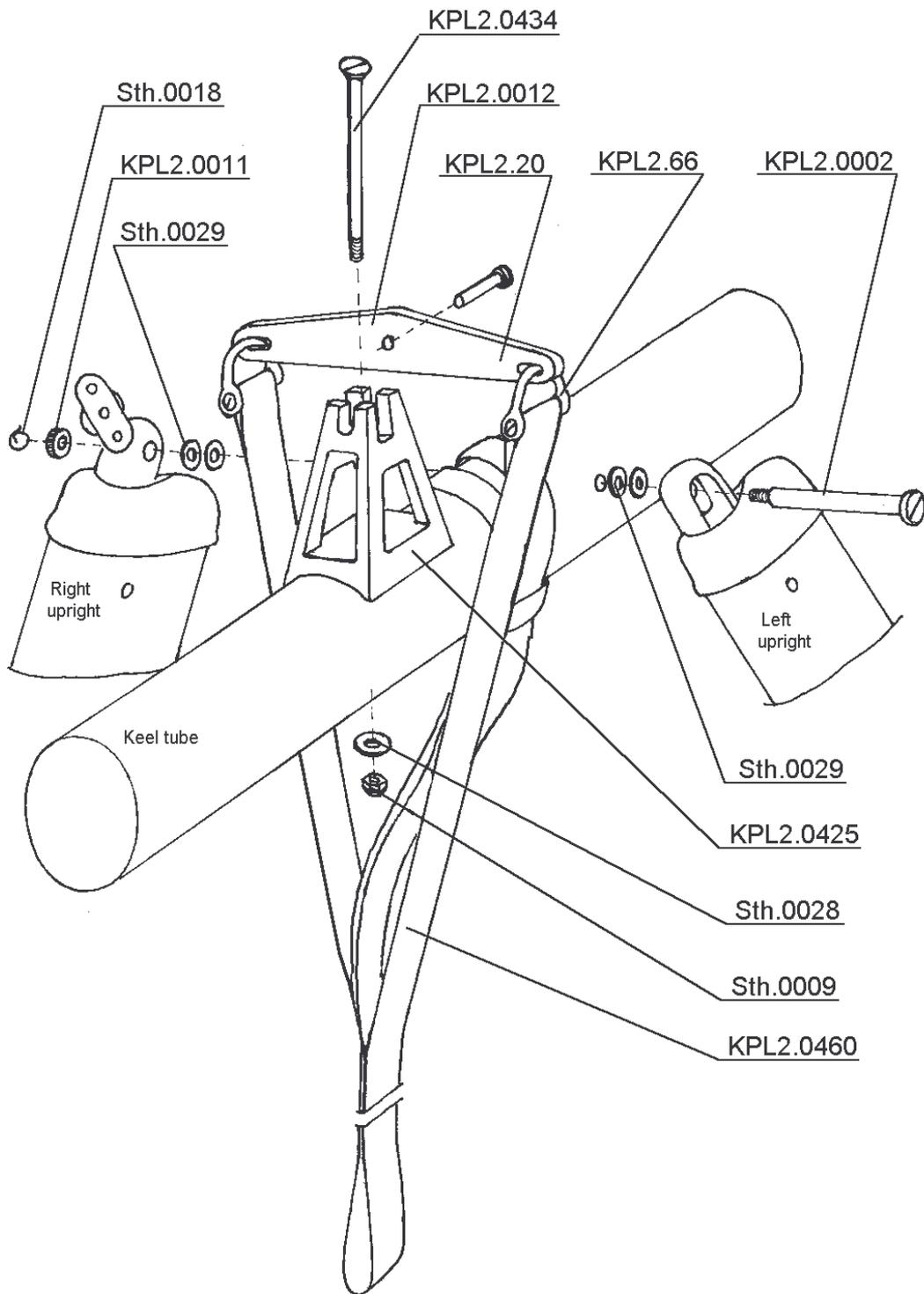
Sth.0010	Sth.0010	Nut M6
Sth.0017	Sth.0017	Safety ring
Sth.0018	Sth.0018	Small safety ring
Sth.0025	Sth.0025	Plastic washer 7-mm thick
Sth.0026	Sth.0026	Standoff (2)
Sth.0027	Sth.0027	Standoff
Sth.0028	Sth.0028	Metal washer 12-6-1
Sth.0029	Sth.0029	Metal washer 16-8-1
Sth.0040	Sth.0040	Button spring (2)
Sth.0050	Sth.0050	Self-tapping flush screw 4-10
Sth.0051	Sth.0051	Self-tapping screw 4-10
Sth.0052	Sth.0052	Self-tapping screw 5-10
Sth.0060	Sth.0060	Rivet 4-6 Al
Sth.0061	Sth.0061	Rivet 4-10 Al
Sth.0062	Sth.0062	Rivet 3-6 Al
Sth.11	Sth.11	Bolt 6-77 (LE + keel)
Sth.71	Sth.71	Clevis pin L=55 mm (LE2 + LE3)
Sth.81	Sth.81	Bolt Quick Pin
KPL.015	KPL.015	LE connection plate
KPL.61	KPL.61	Bolt M8 L=32 mm (LE + X-beam)
KPL2.0012	KPL2.0012	Clevis pin L=32 mm (HGP bar)
KPL2.20	KPL2.20	Hangpoint bar
KPL2.31	KPL2.31	Clevis pin L=53 mm (rear wires)
KPL2.66	KPL2.66	Shakle with screw
KPL2.7000	K13.7000	All bags and packing set
Sth.0710	K13.0710	6-metres bag
Sth.0730	Sth.0730	Battens bag
Sth.0740	Sth.0740	Protective bag for bottom of uprights
Sth.0745	Sth.0745	Uprights top bag
Std.0750	Std.0750	Protective padding
Sth.0755	Sth.0755	Wing tips bag
Sth.0756	Sth.0756	Plastic wingtips bag
Sth.0760	Sth.0760	Tighten tape
Sth.0775	Sth.0775	End keel bag
Sth.0790	Sth.0790	Rear keel junction bag
Sth.0795	Sth.0795	Spidbar bag
Sth.0796	Sth.0796	Protective cover for X-bar strap
KPL2.0797	KPL2.0797	Protective cover for shakle
KPL2.0798	KPL2.0798	Protective cover for struts junction
KPL2.0800	K13.0800	Battens template
KPL2.0810	KPL2.0810	Manual
Sth.0850	Sth.0850	Aerofoil wingtips (L + R)
Sth.0850CAR	Sth.0850CAR	Aerofoil wingtips from carbon (L + R)



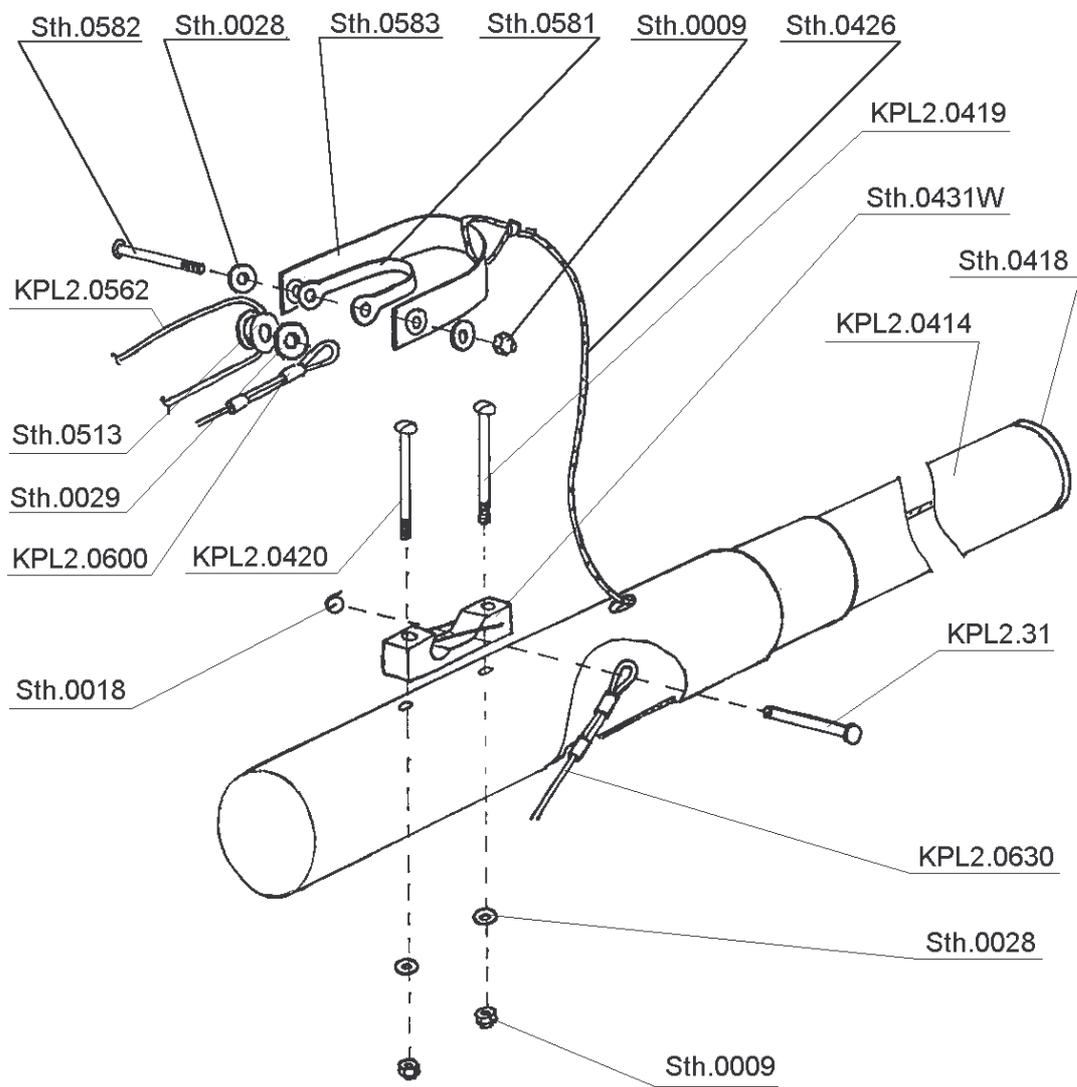
THE FRAME



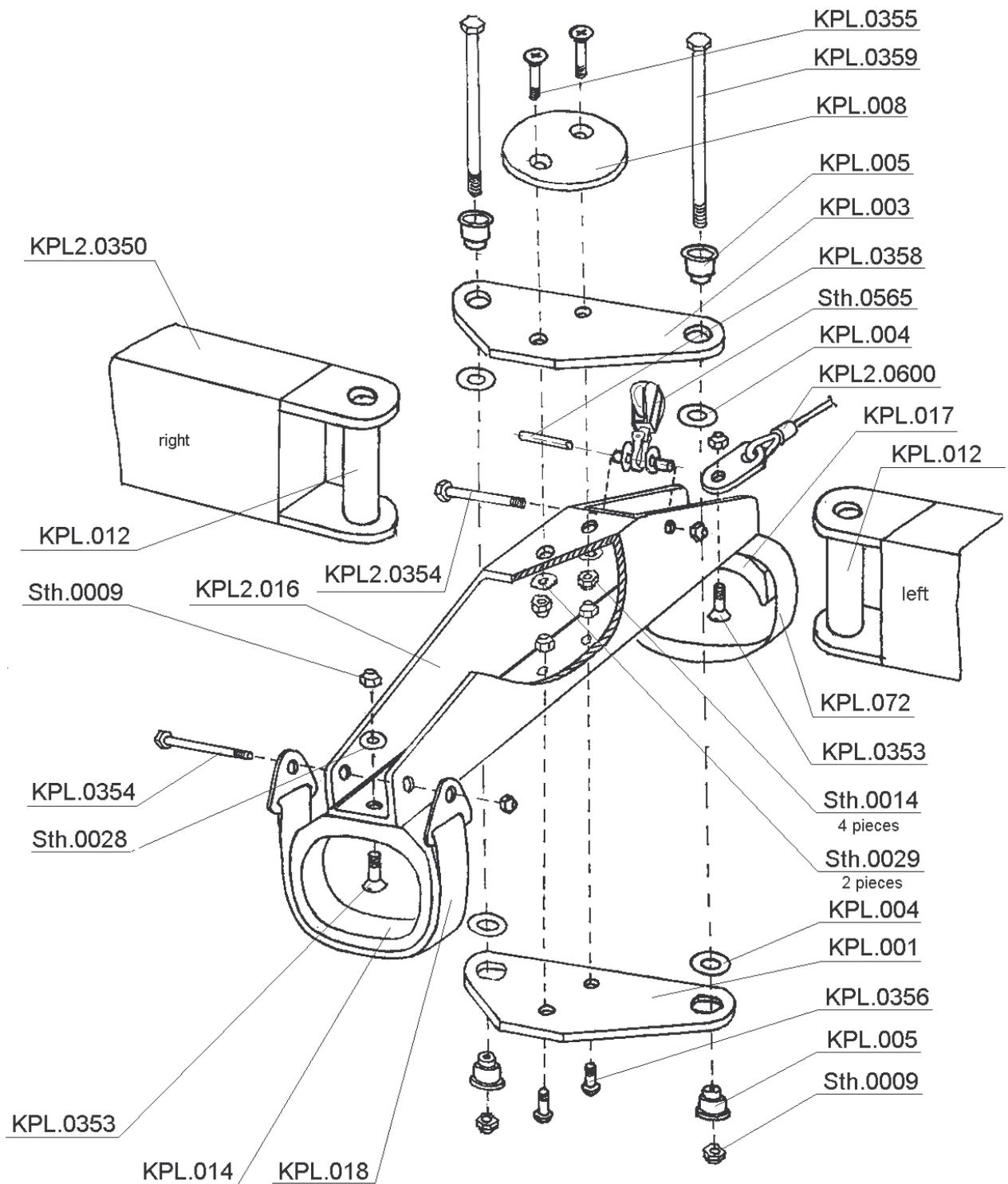
NOSE JUNCTION



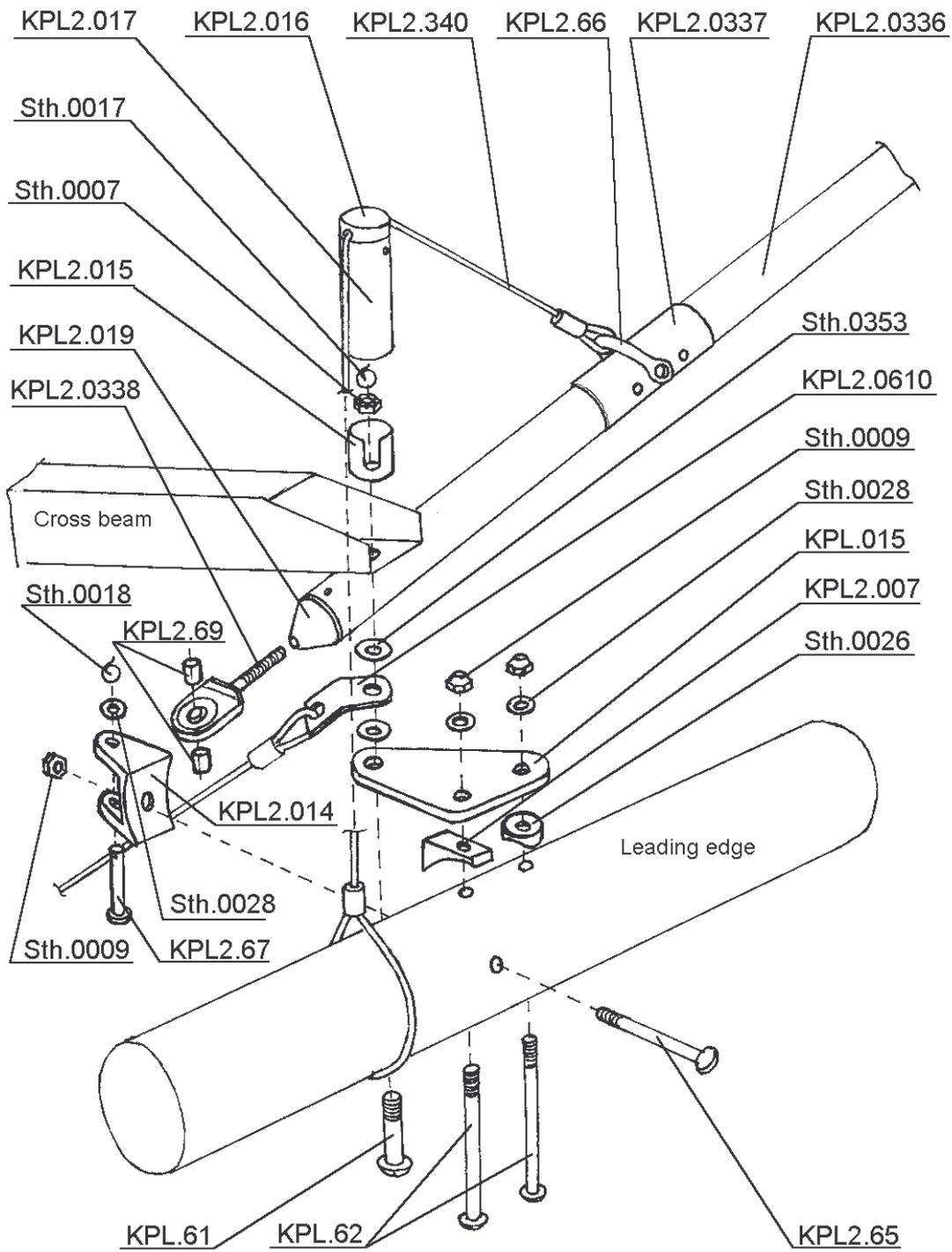
HANG POINT SYSTEM



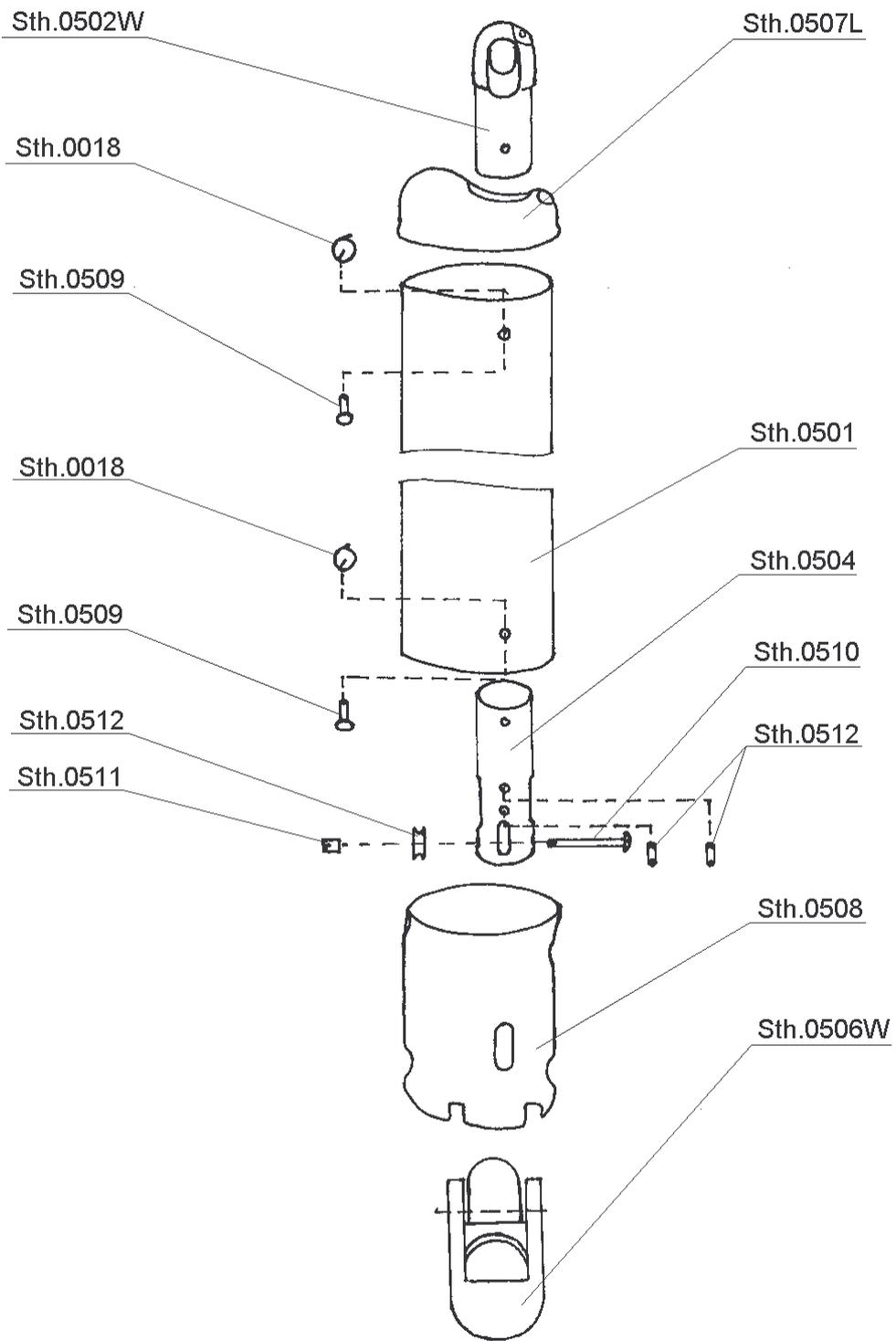
REAR KEEL LINE



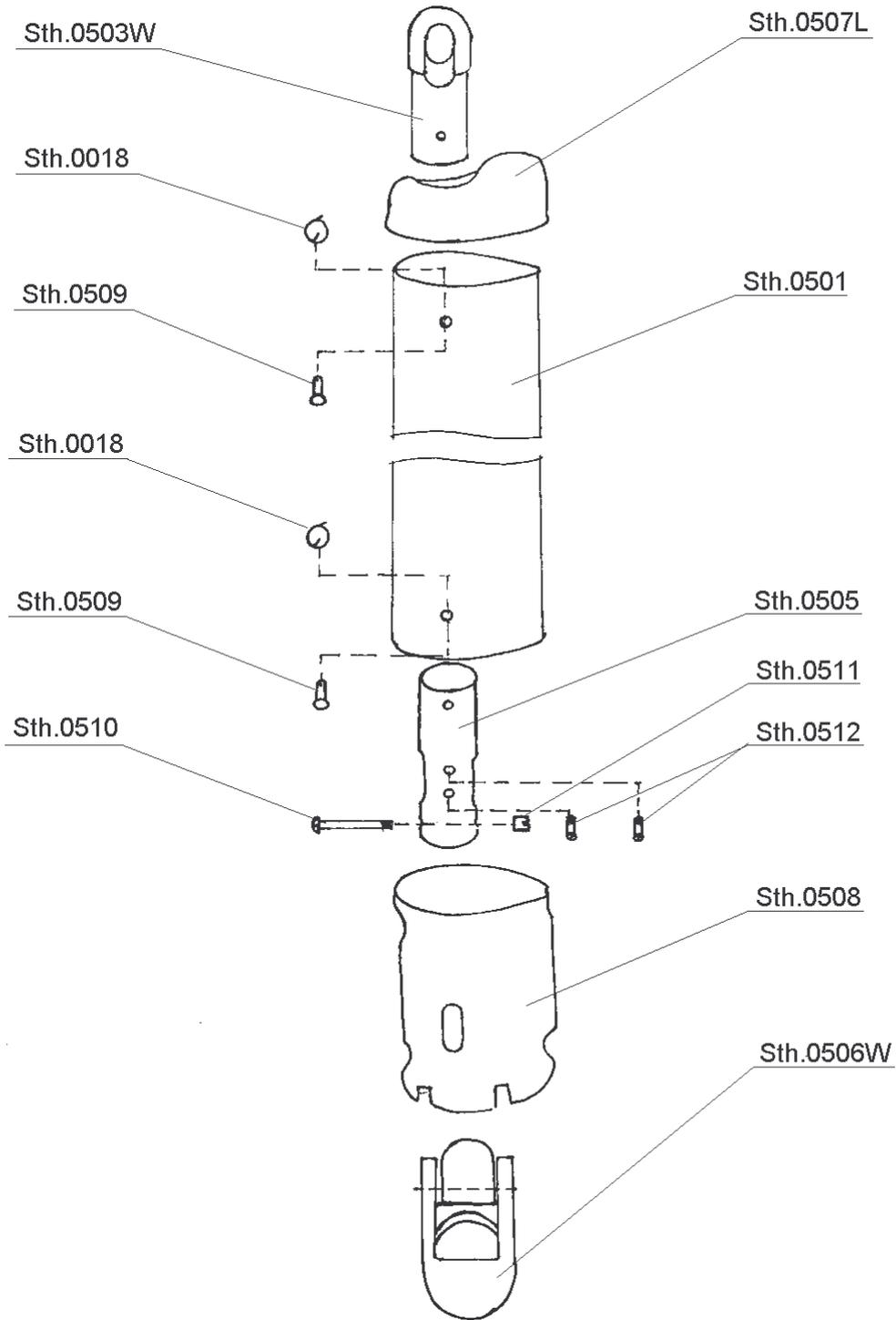
CROSS BEAM JUNCTION



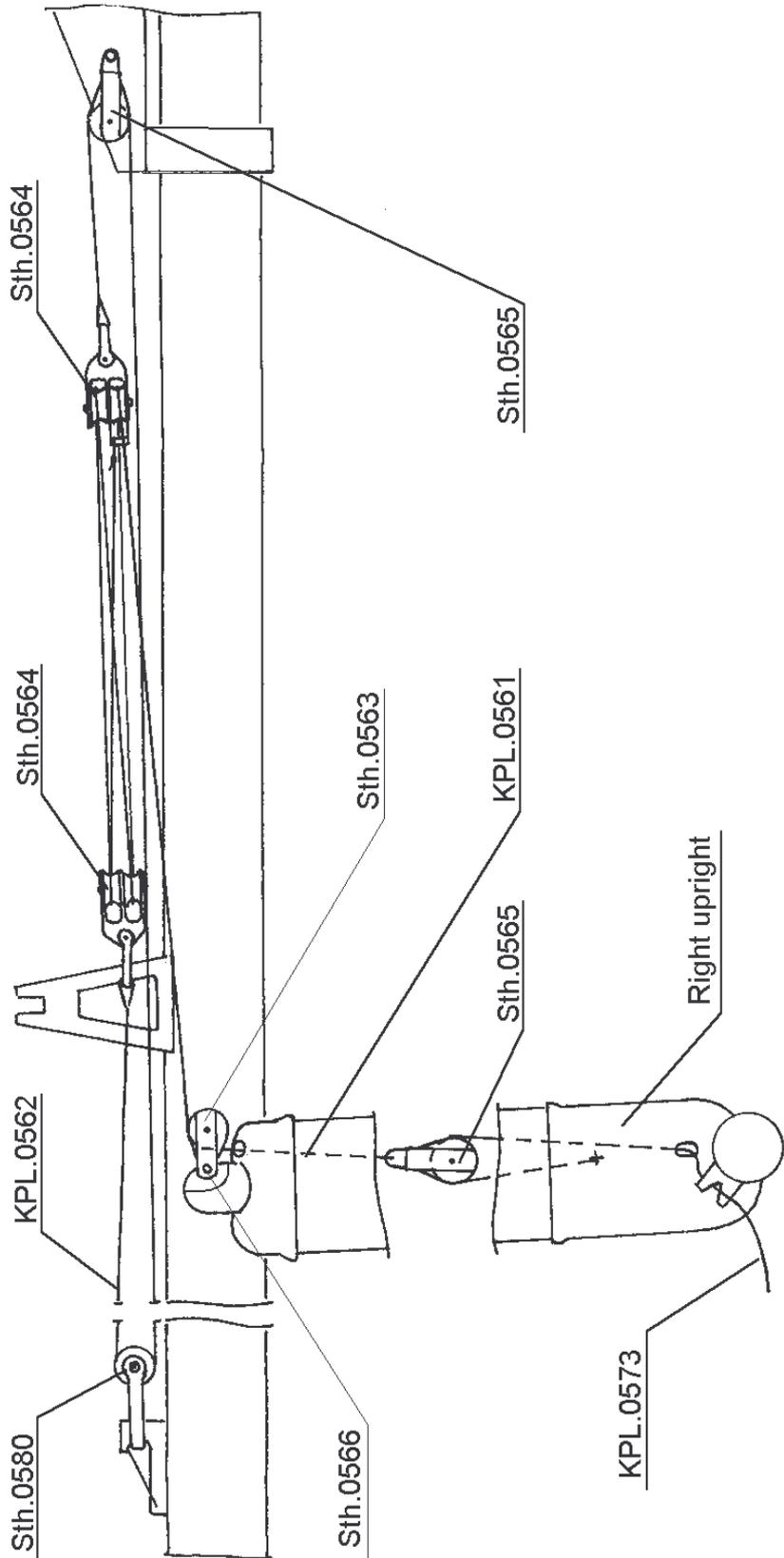
STRUT SYSTEM



COMPLETE RIGHT UPRIGHT



COMPLETE LEFT UPRIGHT



VG - ROPE SYSTEM