

HANG GLIDER

FOX-18

OWNER / SERVICE MANUAL



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AMENDMENTS

No.	Section	Pages	Date of correction	Comments

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Schemes

Thank you for purchasing an Aeros hang glider.

Applying the knowledge gained through years of developing and production hang gliders of all classes we have created a hang glider to heighten the enjoyment of flight for pilots of all levels: from intermediate to top – the Fox-18.

The Fox-18 will give you the ability to experience handling, pitch stability and performance gathered in this single surface hang glider.

Flight characteristics of Fox 18 will allow you to soar with minimum effort and maximum safety - whether you are at fun dune flight or at challenging cross-country adventure.

Please read and be sure you thoroughly understand this manual before flying the Fox-18. Be sure you are familiar with the glider and the contents of this manual before initial operation.

We encourage you to read this manual carefully for information on the proper use and maintenance of your Aeros glider. If you have access to the Internet, please visit us regularly at <http://www.aeros.com.ua>. In case of any doubts or questions contact your local dealers or Aeros.

We wish you a safe and enjoyable flying career.

Aeros Ltd.

Definitions

Definitions used in this Manual such as WARNING, CAUTION and NOTE are employed in the following context:

WARNING

OPERATING PROCEDURES, TECHNIQUES, ETC. WHICH IF NOT FOLLOWED CORRECTLY, MAY RESULT IN PERSONAL INJURY OR DEATH.

CAUTION

OPERATING PROCEDURES, TECHNIQUES, ETC. WHICH IF NOT STRICTLY OBSERVED, MAY RESULT IN DAMAGE TO THE AIRCRAFT OR ITS INSTALLED EQUIPMENT.

NOTE

Operating procedures, techniques, etc. which considered essential to highlight.

1. TECHNICAL INFORMATION AND OPERATING LIMITATIONS

The Fox 18 has been designed primarily as a foot-launched soaring glider; it has also been successfully tow launched, both by winch or by aerotow. If tow launching, the system must follow established safety guidelines, for example limiting the towing force, maximum climb rate, or towing speed to appropriate levels.

It is also possible to fly the Fox 18 under power (Mosquito, Doodle Bug or similar systems), although the BHPA certification is only valid up to a payload of 130kg (All-Up-Weight not exceeding 160kgs). There may be further limitations or licensing requirements for flying powered aircraft in your country of operation.

The Fox 18 is not suitable for dual flight.

Flight operation of the Fox-18 should be limited to non-aerobatic maneuvers; those in which the pitch angle will not exceed 30 degrees nose up or nose down from the horizon and the bank angle will not exceed 60 degrees.

	Fox-18
Sail area, sq.m. (sq.ft.)	17.9 (193)
Wing span, m (ft.)	10 (32.8)
Aspect ratio	5.6
Nose angle, °	122
Weight (without bags), kg (lb)	27.7 (61)
Number of sail battens	15
Breakdown length, m (ft)	5.95/4.15/2.2 (19.5/13.6/7.2)
Tested load, G	+6/-3
Wind speed max, m/sec (mph)	12 (27)
Min. airspeed, km/h (mph)	26 (16)
VNE, km/h (mph)	81 (50)
Min. clip-in weight, kg (lb)	80 (176)
Max. clip-in weight, kg (lb)	130 (287)

The stability, controllability, and structural strength of a properly maintained Fox-18 have been determined to be adequate for safe operation when the glider is operated within the entire manufacturer specified limitations.

No warranty of adequate stability, controllability, or structural strength is made or implied for operation outside of these limitations.

WARNING

OPERATION OF THE GLIDER BY UNQUALIFIED PILOTS MAY BE DANGEROUS.

WARNING

NO ATTEMPT SHOULD EVER BE MADE TO DELIBERATELY SPIN THE GLIDER.

WARNING

WE DO NOT RECOMMEND USING FOX-18 FOR MOTORIZED AND AEROBATIC FLIGHTS.

WARNING

FLYING FOX-18 IN THE PRESENCE OF STRONG OR GUSTY WIND OR TURBULENCE MAY RESULT IN LOSS OF CONTROL OF THE GLIDER, WHICH MAY LEAD TO INJURY AND DEATH.

Do not fly in such conditions unless you realize and wish to personally assume the associated risks.

WARNING

OPERATING THE FOX-18 OUTSIDE OF THE ABOVE LIMITATIONS MAY RESULT IN INJURY AND DEATH.

2. FOX-18 REASSEMBLY AFTER SHIPPING PROCEDURE

2.1 With the glider in the bag (4 meters long) lay the glider on the ground.

2.2 Unzip the bag. Undo Velcro straps. Remove battens, the speed bar and the rear leading edge tubes # 3 from the bag.

2.3 Unfold the sail along the leading edge to its full length. Attach the rear leading edge tubes # 3 to the front leading edge tubes # 2 according to the marking (L-left, R-right, marks must be on top).

Working on one wing at a time and working with the appropriate leading edge # 3, fold the outer sprog, which is attached to the rear leading edge, towards the inboard end of the leading edge tube # 3. Slide the inboard end of the leading edge tube # 3 into the sail.

Then slide the rear leading edge forward, allowing the sprog end to come outside the sail at the corresponding hole, and slide the rear leading edge into the front leading edge.

Align the rear leading edge properly so that the sprog is on the inside of the leading edge, and slide the rear leading edge forward, rotating as necessary, until the slot in the rear leading edge engages securely into the clevis pin in the front leading edge. When the rear leading edge is fully engaged, you will not be able to rotate it.

2.4 Tighten the sail along the leading edge by putting the sail mount webbing into the slot in the end cap of the leading edge # 3.



Figure 1



Figure 2

NOTE

The sail mount screws on the front part of the leading edge tubes # 1 must be unscrewed, otherwise the excess sail tension will not allow tightening the sail.

The sail mount screws have to be screwed back after you accomplish all steps in section "Fox-18 set-up procedure" from item 4.1 through item 4.8.

2.5 Secure the sail mount webbing to the leading edge # 3 with the sail mount webbing Velcro (fig. 1).

NOTE

When spreading the wings with the sail mount screws been unscrewed check that the sail mount webbing is in proper position in the slot of the end cap of the leading edge # 3.

2.6 Install the wing tip protection bags.

Put battens on top of the glider between Mylar pockets in the front part of the glider. Place Velcro ties around the glider.

Put the speed bar between leading edges in the rear part of the glider. Put the glider bag back on and zip it up (fig. 2).

3. FOX-18 BREAKDOWN FOR SHIPPING PROCEDURE

This process will basically be the reverse of reassembling after breakdown for shipping. Before beginning, read through the section above on how to re-install the rear leading edges.

- 3.1 Lay the glider on the ground or floor, unzip the bag and remove the Velcro ties. Remove the speed bar and battens from the glider. Remove the protection wing tip bags.
- 3.2 Check to see that the leading edges are marked "Left" and "Right". If they are not, mark them with an indelible marker.
- 3.3 Unscrew the sail mount screws from the leading edges # 1.
- 3.4 Undo the sail mount webbing Velcro and remove the sail mount webbing from the leading edges end caps. With the outboard sprop folded towards the nose pull the rear leading edge straight aft and slide it carefully out of the sail. Tape or pad the edges of the front end of the leading edge tubes # 3, and the rear of the leading edge tubes # 2 to prevent sail damage during transportation.



Figure 3

3.5 Carefully fold the rear of the sail against the front, place Velcro ties around the glider and put on the glider bag, turning the bag 180 deg (i.e. matching the front part of the bag to the rear part of the glider).

3.6 Zip up the glider bag zipper (fig. 3).

4. FOX-18 SET-UP PROCEDURE

- 4.1 Lay the glider on the ground, with the bag zipper up and at right angles to the wind.
- 4.2 Undo the zipper and take the speed bar out of the pack.
- 4.3 Lift and deploy the control frame legs.
Remove the quick pin from the corner bracket. Insert the corner bracket all the way into the speed bar, positioning the speed bar so that the off-set of the speed bar is directed forward in the direction of flight (fig. 4 and fig. 5). Install the quick pin (from front to rear), securing the bracket to the speed bar (fig. 5).



Figure 4



Figure 5

CAUTION

DO NOT FORCE THE FITTING INTO THE SPEEDBAR IF IT DOES NOT SLIDE IN FREELY AND CHECK FOR DIRT OR DAMAGE TO THE FITTING OR THE INSIDE OF THE SPEEDBAR.

4.4 Flip the glider upright on the control bar. Try to set the speed bar on level ground. Remove the glider bag and all the Velcro sail ties. Take the batten bag with battens out of the pack. Do not remove the leading edge tip protection bags at this time (fig. 6).

4.5 Attach the bottom front wires to the hook on the bottom nose plate (fig. 7).



Figure 6

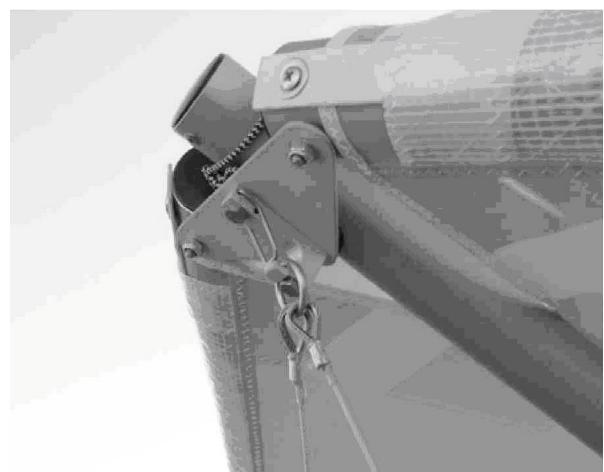


Figure 7



Figure 8



Figure 9

4.6 By lifting up the nose batten, push the nose batten fully back into the sail so that the V-tip of the batten rest on top of the keel tube (fig. 9).

4.7 Remove the kingpost protection bag (fig. 6). Remove sweep wires hook protection bag and the keel tube extension protection bag (fig. 10 and fig. 11).



Figure 10



Figure 11

4.8 Spread the wings all the way (fig. 12) and check all cables for any twisted thimbles or tangled cables.

At the trailing edge on the top surface of the wing find the sweep (crossbar tensioning) wires pull handle webbing. Pull the sweep wires handle rearwards along the keel tube, checking that the sweep wires are not twisted. The king post will rise up when doing so. Attach the shackle of the sweep wires to the hook, which is placed on the keel tube (fig. 13).

WARNING

IN-FLIGHT DISENGAGEMENT OF THIS ATTACHMENT WILL CAUSE A COMPLETE LOSS OF STRUCTURAL SUPPORT OF THE WING AND A TOTAL LOSS OF CONTROL. NEVER ATTACH THE PULL HANDLE WEBBING OF THE SHACKLE TO THE HOOK, EVEN TEMPORARILY!



Figure 12



Figure 13



Figure 14

When pulling the sweep wires handle make sure the washout bridles are not twisted or tangled around the bridle carabiner (fig. 14).



Figure 15



Figure 16

4.10 Remove battens from the batten bag and check each batten for symmetry against the corresponding

batten from the other wing. Align the battens at the nose, and at about the 60% chord point. There should not be any deviation of more than 3 mm (1/8") from one batten to the other along the full length of the battens.

If you choose not to check your battens for symmetry before each flight, you should, at a minimum, check them once a month.

Aeros convention is that red marked battens go in the left wing and green marked battens in the right. Battens are numbered from the centre outwards, and the longest batten in a Fox-18 is designated as the "No. 1" batten. Install all cambered battens in the sail.

CAUTION

INSERT BATTENS CAREFULLY, SO AS TO MINIMIZE STRESS AND WEAR ON THE SAIL.

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 resistance in the pockets.

Install the batten tips into the hem of the trailing edge. At each batten, make sure the opening in the underside of the trailing edge hem is spread to accept the tab on the batten tip. Make sure the tab slides fully into the hem.

To open or close the batten tip lever - press firmly on the undersurface of the tip lever to disengage or engage it (fig. 17).

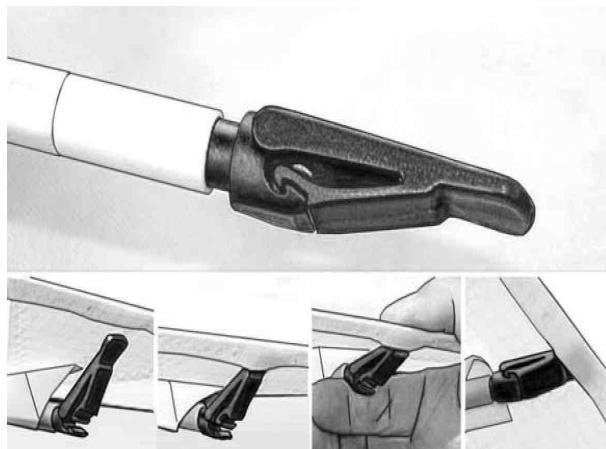


Figure 17



Figure 18

4.11 Tension the tip battens with the double tensioned rubber bands (fig. 18).



Figure 19

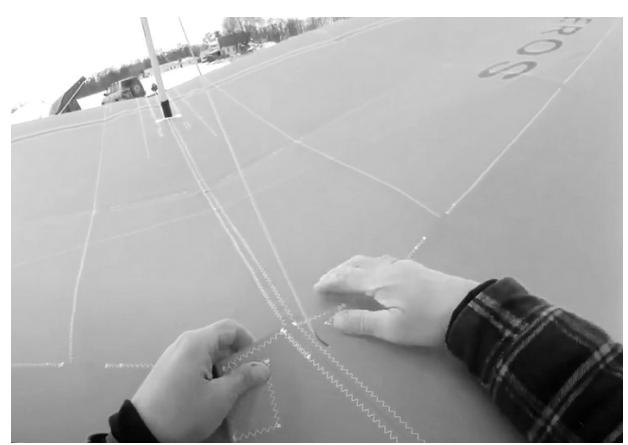


Figure 20

4.12 The next step is to install the outboard sprogs. To do so swing the sprop away from the leading edge and push it towards the leading edge into the receptacle. Make sure the sprop sits all the way in the sprop receptacle (fig. 19).

4.13 Install the keel tube extension back in the keel tube and lower the glider on the keel tube.

4.14 Having ensured that the keel batten is correctly positioned and resting with its nose on the keel tube,

install the nose cone by first attaching it to the upper surface of the wing (fig. 20) and then by pulling the lower edges of the nose cone backwards to the lower surface (fig. 21).



Figure 21

WARNING

DO NOT FLY WITHOUT THE NOSECONE!

For more information on Fox-18 set up procedure, see the video:
<https://www.youtube.com/watch?v=zfJfo0Q4Fu4>

5. PREFLIGHT PROCEDURE

Conduct a complete preflight inspection of the glider, checking all assemblies, which have not already been checked. Every bolt, nut, pin, safety ring, and fastener of any kind should be checked during every pre-flight. A full pre-flight inspection should precede every flight you make, not just the first flight of the day.

Carefully check the entire length of the leading edge pocket to insure that the Mylar insert is lying flat in the pocket. If any section of the Mylar is folded under, de-tension the crossbar, remove as many battens as necessary and unfold the Mylar.

At the nose:

Check that the nose cone is properly fitted on, that the front wires are secured to the hook on the bottom nose plate.

Along the left leading edge:

Open the crossbar junction access zipper and look inside, making sure that side wires are properly secured, that the thimbles are not cocked on the tang (fig. 22). Check the split pin and the nut, which secures the leading edge – crossbar junction (fig. 23). Check that the sail is not caught on the crossbar end, or on any of the hardware.



Figure 22



Figure 23

Don't forget to close the access zipper (fig. 24).

At the left wingtip: Check that the tip batten is properly secured with the double tensioned rubber band.



Figure 24

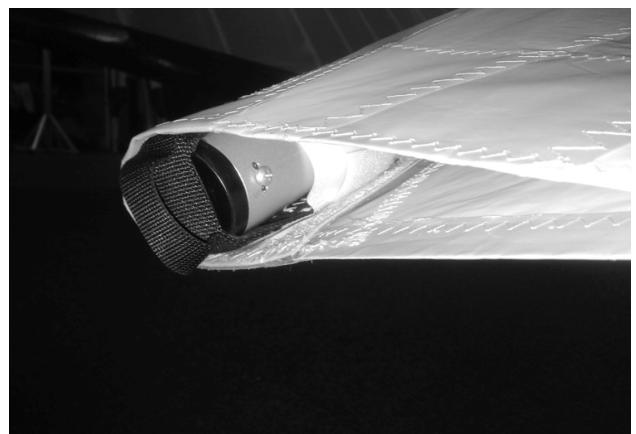


Figure 25

Check that the sail mount strap is properly secured on the LE plastic cap (fig. 25).



Figure 26

Along the trailing edge, left wing:

Check that there are no tears in the sail material along the trailing edge.

Check that all battens are properly secured.

Check that the outboard sprog is properly secured in position supporting the last outboard cambered batten.

Check that the washout bridles are properly engaged and secured with safety rings (fig. 26).

From the rear keel:

Check that the upper rear wire is secured to the shackle of the sweep wires, the shackle is splinted is secured to the hook on the keel tube (fig. 27).



Figure 27

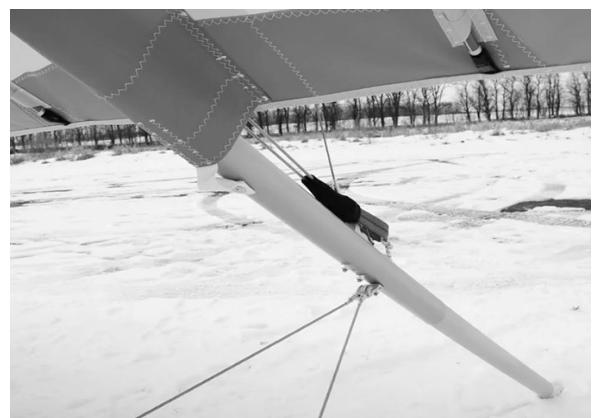


Figure 28

Check that the lower rear wires are properly secured to the keel tube, there are no kinks or twisted thimbles. Check that the keel pocket webbing is secured to the keel tube (fig. 28).

Check the kingpost top for proper attachment of the bridles and condition of the top rear wire, carabiner and bridle wires.

Along the trailing edge, right wing: Same as for the left wing.

At the right tip: Same as for the left tip.

Along the right leading edge: Same as for the left leading edge.

Under the glider at the control bar: Sight down the downtubes, making sure that they are straight.

WARNING

DO NOT FLY WITH BENT DOWNTUBES!



Figure 29



Figure 30

Check the cables at the control bar corners, making sure there are no kinks or twisted thimbles. Check for proper installation of quick pins and bolts with cap nuts at the control bar corners (fig. 29).

Check the main and backup hangloops, that they are properly installed in the proper position and that they are in good condition.

Check that the kingpost is properly attached to the kingpost channel.

Check the nut of the kingpost channel, which secures the channel to the keel.

Check the main and the backup hang loops.

Check the control frame apex bracket hardware, including the clevis pin safeties, the control frame top plug bolt and nut and the kingpost bracket bolt and nut.

Check the sweep wires for wear where they pass next to the kingpost channel (fig. 30).

Check the crossbar center plate's assembly including the sweep wire/X-bar junction and the centre bolt (fig. 31).

Visually inspect the crossbars by sighting along the length of the crossbars looking for any evidence of damage. Make sure the push pins are fully engaged (fig. 32).



Figure 31



Figure 32

6. LAYING THE GLIDER DOWN FLAT

Once you have the glider set up, it can be laid down flat on the ground.

6.1 Remove the nose cone from the nose.

6.2 Release the bottom front wires from the nose hook.

6.3 Lay the glider down with its nose into the wind.

Reverse the procedure to set the glider upright again.

7. LAUNCHING AND FLYING THE FOX-18

WARNING

BEFORE LAUNCHING, HOOK IN TO THE GLIDER AND DO A CAREFUL HANG CHECK.

We recommend that you hang as close to the speed bar as possible - this will give you lighter control pressures and better control in both roll and pitch.

7.1 If the wind is more than 25 km/h (15 mph) or gusty you should have an assistant on your nose wires on launch, and, if necessary, an assistant on one or both side wires. Make sure all signals are clearly understood. Do a hang check immediately prior to launch. The angle at which you hold the glider should depend on the wind speed and slope of the terrain at launch; you want to achieve a slight positive angle of attack at the start of your run.

7.2 Run aggressively on launch and ease the bar out for lift off.

7.3 The flying characteristics of the Fox-18 are typical of a low performance flex wing. Make your first flights from a familiar site in mellow conditions to give you time to become accustomed to the glider.

7.4 Do not take off if the sail is wet, especially if the leading edge is covered with raindrops, as the stall speed will increase significantly.

WARNING

ALWAYS FLY WITH A DRY SAIL!

7.5 For the same reason take special care to avoid ice-covering of the glider, particularly the leading edge in wintertime.

8. SPEED TO FLY

The range of **trim speed** for the Fox-18 is 30 - 32 km/h (19-20 mph). The speed bar position in front of the pilots face corresponds to this range.

The range of **stall speed** for the Fox-18 is 25 - 26 km/h (16-17 mph). The glider is stable at the beginning of stall. While pushing out the speed bar, the bar pressure is progressively increase.

The Fox-18 speeds up to 75 km/h (47 mph), being essentially roll neutral, with no tendency to yaw. The bar pressure progressively increase.

9. AEROTOWING

WARNING

GET APPROPRIATE TRAINING FOR AEROTOWING!

WARNING

MAKE SURE THAT ALL THE HARNESS ROPES ARE HIDDEN INSIDE THE HARNESS AND WILL NOT GET TANGLED ON THE CART DURING TAKE OFF.

If possible, it is best to adjust the keel cradle on the cart to re-set the glider to the proper angle of attack. For Fox-18 the best angle of the keel tube in relation to horizon is approx. 20 deg. If it is not possible to

re-adjust the cart, recognize the launch will be more demanding, and more dangerous, as the glider will have an increased tendency to leave the cart at a lower speed, where lateral control is reduced, and the tendency to come off the cart with one wing low is increased. To some degree, this can be compensated for by pulling forward through the control bar to position the speed bar below your shoulders, and holding tight to the hold down rope. This will cause the glider to raise the keel as it begins to develop enough lift to lift out of the cart. At that point, and not before that point, you can release the rope and ease your weight aft to fly the glider off of the cart. Be prepared to pull in once clear of the cart if necessary so as not to climb more quickly than the tug. Note that the bar pressure of the Fox-18 will be relatively high during the aerotowing.

Once clear of the cart and in the position behind the tug, use firm lateral movements of short duration for roll and directional control in order to stay in the position behind the tug. Do not move to one side of the bar and wait for the glider to respond - this will lead to over control and being out of position, and may lead to roll / yaw oscillations. It is better to "bump" the glider firmly in the direction of the desired correction and then return to center. If you need more correction, bump again. In pitch, stay on top of the situation and be as aggressive as necessary to keep the tug on the horizon.

10. LANDING THE FOX-18

Under ideal conditions, landing approaches are best done so as to include a long straight final into the wind at a speed above best L/D speed. In a very limited field, or a field which slopes slightly downhill, when landing in light wind, you may need to make your final approach at a slower speed, perhaps as slow as minimum sink, in order to be able to land within the field.

In winds of less than 5 km/h (3 mph), if the landing area slopes downhill at more than 10:1, you should seriously consider landing downwind and uphill, or crosswind, across the slope. Landing attempts, which require slow speed approaches, maneuvering around obstacles or into a restricted area, or downwind or crosswind landings are not recommended for pilots below an advanced skill level.

Some pilots have had difficulty with roll / yaw oscillations on final. The best way to avoid this is to fly your entire approach at a constant airspeed, and to control your touchdown point by making adjustments to the shape of your pattern. You should choose your approach speed based on the amount of wind and turbulence present - in stronger wind and more turbulent air fly faster. In any case try to fly a constant airspeed throughout the approach.

Once established on a straight final approach, with wings level and flying directly into the wind, you should fly the glider down to where the speed bar is about 1-1.5m (3-4 ft) off the ground. At this altitude, let the control bar out just enough to "round out" so that your descent is arrested and your flight path parallels the ground. The remainder of your approach will consist of bleeding off excess speed while paralleling the ground and keeping the wings level and the nose pointed in your direction of flight until it is time to "flare" for landing.

Prior to the landing flare your body position should be generally upright, but slightly inclined forward, with your head and shoulders forward of your hips and your legs and feet trailing slightly behind. Many pilots make the mistake of trying to get too upright at this stage of the landing, which actually reduces your flare authority and makes it harder to land on your feet. Your hands should be at shoulder width and shoulder height on the uprights.

You should be relaxed, with a light grip on the bar, and your weight should be fully supported in your harness and not at all by your arms. If your harness does not allow you to hang in the proper semi-upright landing position "hands off," without supporting your weight on the control bar, you will have a lot more difficulty making good landings.

11. FOX-18 BREAKDOWN

Careful attention to the recommended rigging and de-rigging sequences will protect the glider from the risk of unnecessary damage.

The de-rigging procedure is a direct reversal of the rigging procedure. Before you start to breakdown your glider please reread the section 4. FOX-18 SET-UP PROCEDURE thoroughly and make sure it is clearly understood.

11.1 Remove the nosecone. Remove any instruments.

11.2 Remove the keel tube extension from the keel tube and support the glider under the keel tube with it.



Figure 33

11.3 Pull out the outboard sprogs, swing them towards the leading edge and fix with Velcro (fig. 33).



Figure 34

11.7 Unhook the shackle and de-tension the crossbar sweep wires. Let the wings fold in slightly. The kingpost will automatically go down (fig. 34).

11.8 Install the protective pad on the top of the keel tube above the control frame apex and fix the flaps of the protective pad around uprights (fig. 35).

11.9 Detach the bottom front wires at the nose plate.



Figure 35



Figure 36

11.10 Fold the wings all the way towards the keel pulling the sail over the top of the leading edges. At each wingtip, remove the tip cover bag. Install the protective pads on the keel tube over the rear wires junction (fig. 36) and on the rear end of the keel tube (fig. 37). Install the protective bag on the top of the kingpost (fig. 38).



Figure 37



Figure 38

11.11 Lift the nose batten string up, then pull it sideways and down, so that the nose batten tip lowered from the top of the keel tube (fig. 39).

11.12 Pull the sail out away from the keel until it is even on top and bottom. Roll the sail gently and carefully, parallel to the trailing edge of the front and then outboard portion of the sail (fig. 40).

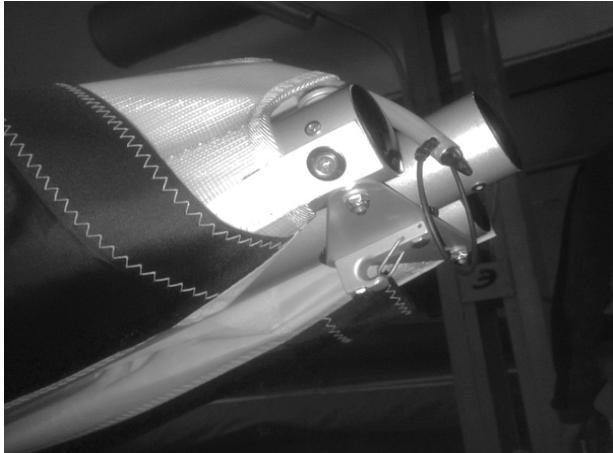


Figure 39



Figure 40

NOTE:

Try to roll the sail in such a way that the leading edge portion remains as smooth as possible. Do not attempt to stuff the sail between the Mylar pocket and the leading edge tube at any point where you feel resistance, and do not attach the Velcro ties so tight so as to induce creases in the Mylar or leading edge sail material.

11.13 Install the wing tip cover bags.

11.14 Put all battens in the batten bag and stow them in the front part of the glider, next to the kingpost (fig. 41)

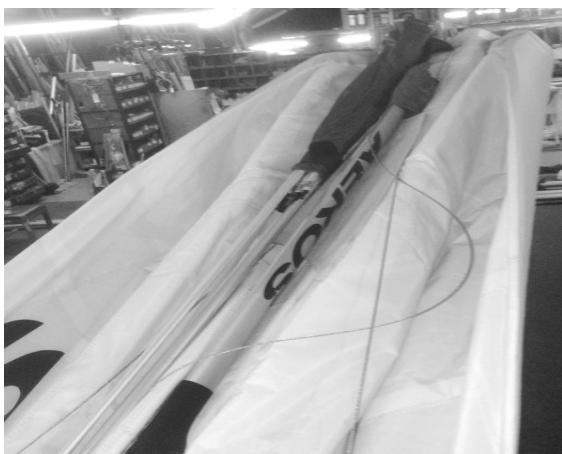


Figure 41



Figure 42

11.15 Install the sail Velcro ties around the glider and stow the nosecone under the most forward Velcro (fig. 42). The first Velcro tie is installed by passing it over the top of the keel tube just near the crossbar-LE tube junctions, and then installing it around the glider's leading edges.

11.16 Install the glider bag. Flip the glider over onto the ground. Detach the speed bar. Fit the speed bar in the protection bag and stow it between the leading edges in the aft part of the glider.

11.17 Fold up the control frame and install the control frame protection bag (fig. 43). Lay the control frame down against the keel. Lay the cables carefully without kinks between downtubes.



Figure 43



Figure 44

11.18 Zip up the glider bag (fig. 44).

12. GLIDER TUNING

Properly tuned, the glider is safe, comfortable and fun to fly. The glider has been tested and tuned by the manufacturer or your dealer. However, in case you have enough experience, you may tune the glider by yourself, as written below, if necessary. There are a number of adjustments that affect the flight characteristics.

WARNING

DO NOT PERFORM MORE THAN ONE ADJUSTMENT AT ONCE. IF YOU DO NOT HAVE ENOUGH EXPERIENCE TO TEST FLY THE GLIDER, ASK MORE EXPERIENCED PILOT TO DO IT FOR YOU. IT SHOULD BE PERFORMED IN SMOOTH AIR AND WITH CAUTION.

BATTENS

The battens will need to be trued to the template time after time. Small variations in batten camber (± 10 mm at trailing edge) will not have significant effect on flight characteristics.

BATTEN TENSION

With some airtime on the glider the batten tension may get too loose, this may cause the trailing edge to flutter. If the battens tensioned too much, the handling will become harder. Make sure the batten tension on both wings is identical.

All battens on the Fox-18 (except for the tip battens) are tensioned by lever batten tips. The desired batten tension can be easily adjusted by the threaded batten tip adjuster.

To increase batten tension rotate the threaded lever batten tip adjuster counter clockwise. To decrease batten tension rotate the threaded lever batten tip adjuster clockwise.

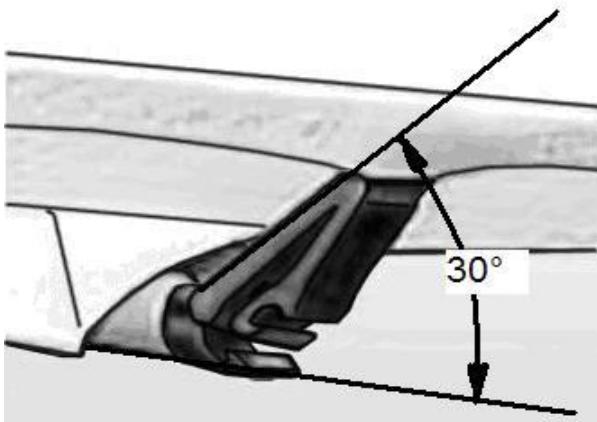


Figure 45

The correct batten tension is checked as described below:

Install the folding clip in the hem at the trailing edge of sail and start to clip the batten, the folding clip should be at approximately 30 degrees to the batten shaft as tension starts to come on the clip (fig. 45).

As the folding clip is closed, the sail should become tight without obvious wrinkles. The clip should not be difficult to close.

SAIL MOUNT CAP ADJUSTMENT

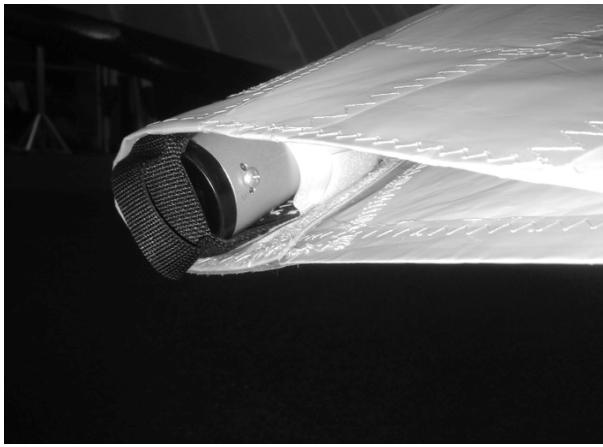


Figure 46

The turn of the glider can be corrected by rotating one of the sail mount plastic caps. The left turn is corrected by twisting the right sail cap clockwise (twisting the sail up at the trailing edge). The right turn is corrected by twisting the left sail mount cap counter clockwise (twisting the sail up at the trailing edge). If rotation of the plastic cap on one side is not enough to compensate turn, you can at the same time rotate the plastic cap on another wing in opposite direction (fig. 46).

CG ADJUSTMENT

CG adjustment is done by changing the location of your hang point along the keel. The farther forward hang point is, the faster the glider will trim, the less effort will be required to fly fast, and the more effort will be required to fly slow.

On Fox-18, the hang loop fore and aft position is adjusted by repositioning the hang loops on the keel. Hang loop fore and aft position is adjusted by moving the holding belt with the Velcro (and with the hang loops inside) along the keel tube upper surface at the desired position.

13. REMOVING THE SAIL FROM THE AIRFRAME AND RE-INSTALLING

Many maintenance and repair procedures will require the removal of the sail from the frame. Please follow these instructions when removing and reinstalling the sail. Please read all the instructions for each operation before beginning.

13.1 SAIL REMOVAL

You will need an unobstructed area 2.4 m by 9 m (8x30 ft). Make sure the surface is clean. If it is abrasive, you should either put down a protective tarp or be extremely careful not to scrape your sail.

13.1.1 Unzip and remove the glider bag and put battens and the speed bar aside.

13.1.2 Spread the wings slightly. Remove all battens from the sail including the keel batten. Remove the screws that tether the nose part of the sail at the leading edge tubes (fig. 47). Undo the sail mount webbing Velcro and remove the sail mount webbing from the plastic end at the rear leading edge (fig. 48).



Figure 47

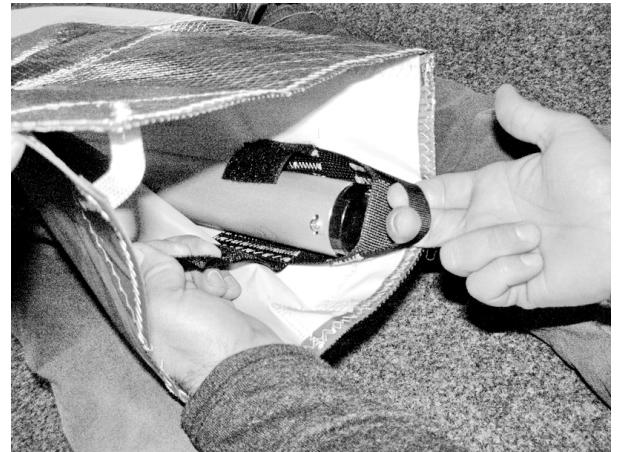


Figure 48

Note: Reassemble the hardware removed in its place in original order so that it doesn't get lost. All disassembled assemblies on the glider must be reassembled in the proper order and orientation.

13.1.3 Unbolt bottom and upper side wires from the crossbar and feed the upper side wire through the hole and out of the sail (fig. 49).



Figure 49



Figure 50

13.1.4 Unbolt the upper front wire from the nose plate and feed it through the hole and out of the sail (fig. 50).

13.1.5 Remove the keel pocket mounting screw from the keel pocket webbing at the rear part of the keel tube. Detach the rear bottom cables from the keel tube.

13.1.6 Unbolt the crossbar from the leading edge tube. Remove the crossbar ends from the sail.

13.1.7 Remove the clevis pin from the top of the kingpost and detach the top rear wire from the kingpost. Install the clevis pin back on the kingpost.

13.1.8 Unscrew the carabiner and detach the shackle of the sweep wires from the rubber cord.

13.1.9 Feed the webbing handle with the top rear wire out of the sail opening. Slide the crossbar central joint along the keel tube towards the nose plate.

13.1.10 Detach washout bridles from the sail.

13.1.11 Slide the frame forward and out of the sail through the nose hole of the sail. If you encounter resistance, stop and find out what is hanging up.

13.1.12 If you need to send the sail out for repair, remove the Mylar and the transverse battens. The Mylar is removed from the front end of the Mylar pocket. It helps to secure the opposite end of the sail to something solid, so that you can lay the leading edge out straight and pull the Mylar straight out of the pocket.

13.1.13 Fold and pack the sail carefully if you plan to ship it out for repair. Be sure to include written instructions of what you want done, your name and a phone number.

13.2 RE-INSTALLING THE SAIL ON THE FRAME

13.2.1 Install the Mylar inserts in the sail (if they have been removed before). Make sure you install it right side up; the slit edge is at the front and on the bottom. The easiest way to install the Mylar is to push it into the pocket using a long lofting batten attached to the end of the Mylar insert, which is first inserted in the pocket.

You will have to stop from time to time to make sure the Mylar is properly lying flat in the pocket. Do not push the Mylar too far into the pocket. Make sure there are no folds in the Mylar, especially at the tips. Make sure the Mylar wraps in the proper direction to follow the sail around the leading edge as it enters the pocket.

13.2.2. Position the sail on the floor with the keel pocket down and the wings folded over so that the leading edges lie along the length of the root line, with the Mylar pockets lying on top.

13.2.3 The frame is most easily inserted into the sail with the rear leading edges installed. Rotate the washout struts forward, towards the nose (fig. 51).



Figure 51

13.2.4 Position the frame with the control frame facing down and with the rear end of the leading edges at the nose of the sail (fig. 51). Slide leading edges into the sail through the nose opening, making sure that the leading edges of the frame pass properly into the leading edge pockets of the sail and don't get caught at the rear of the bottom surface near the root. As you feed the frame slowly into the sail, check periodically to see that none of the hardware is snagging on the sail. Make sure the keel tube stays outside the double surface. At certain stage don't forget to insert the keel tube into the keel pocket.

13.2.5 When the frame is fully inserted, slide the tip part of the sail on both rear leading edges forward, towards the nose as far as necessary to extract washout struts out through the washout holes in the sail.

13.2.6 Attach the rear sail mount strap to the keel tube. Attach the bottom rear wires to the keel tube.

13.2.7 Install the kingpost. Make sure the kingpost is located between the sweep wires.

13.2.8 Remove the clevis pin from the top of the kingpost and attach the top rear wire to the kingpost. Install the clevis pin back on the kingpost.

13.2.9 Feed the webbing handle with the top rear wire through of the kingpost sail opening on top of the sail. Slide the crossbar central joint along the keel tube backwards from the nose plate.

13.2.10. Attach the handle of the sweep wires to the rubber cord using the carabiner. Check that the routing of the sweep wires is right.

13.2.11 Attach washout bridles to the sail.

13.2.12 Insert the crossbar end into the leading edge / crossbar opening. Bolt the crossbar to the leading edge tube and splint the joint.

13.2.13 Feed the upper side wires through the corresponding holes in the sail. Bolt upper and lower wires to the crossbar, making sure that no wires are wrapped around a crossbar or leading edge and that no thimbles are cocked or twisted. Note that the upper side wire is attached to the upper side of the crossbar and the lower side wire is attached to the lower facing side of the crossbar.

13.2.14 Insert the upper front wire into the sail and attach it to the nose plate. Secure it with a safety ring.

13.2.15 Install the nose batten.

13.2.16 Reach into the sail from the sail tip, find the sail mount strap and stretch it towards the aft end of the leading edge, using the handle on the mount strap. Position the sail mount strap to the end cap slot of the leading edge tube and make sure the sail is mounted properly. Close the safety Velcro around the leading edge tube.

13.2.17 Install the control bar and set the glider up onto the control bar.

13.2.18 Spread the wings slowly and carefully, making sure that the sail rides forward as necessary at the nose without catching. Be careful: you can easily tear the sail open at the nose at this point.

Note: When spreading the wings with the sail mount screws been unscrewed check that the sail mount webbing is in proper position in the slot of the end cap of the leading edge # 3.

13.2.19 Tension the crossbar and install sail mount screws back in to the leading edge tubes.

Finish assembling the glider as written in the paragraph 4. FOX-18 SET-UP PROCEDURE.

14. Fox-18 BREAKDOWN FOR SHIPPING PROCEDURE IN A 2.4 METERS SHORT PACKAGE

The Fox-18 design allows for the glider transportation in a 2.4 meters short package.

Please read and be sure you thoroughly understand this manual before breaking down your glider into a short package.

You will need an unobstructed area 2.4 m by 9 m (8x30 ft). Make sure the surface is clean. If it is abrasive, you should either cover it with protective tarp or be extremely careful not to scrape your sail.

14.1 Unzip and remove the glider bag and put battens and the speed bar aside.

14.2 Spread the wings slightly. Remove all battens from the sail including the keel batten. Remove the screws that tether the nose part of the sail at the leading edge tubes (fig. 52). Undo the sail mount webbing Velcro and remove the sail mount webbing from the plastic end at the rear leading edge (fig. 53).



Figure 52

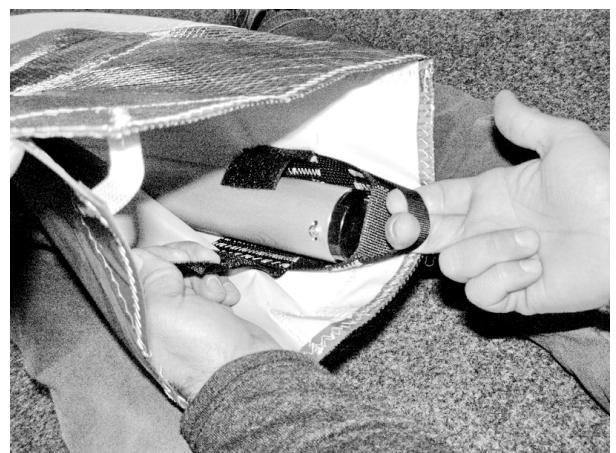


Figure 53

Note: Reassemble the hardware removed in its place in original order so that it doesn't get lost. All disassembled assemblies on the glider must be reassembled in the proper order and orientation.

14.3 Unbolt bottom and upper side wires from the crossbar and feed the upper side wire through the hole and out of the sail (fig. 54).



Figure 54



Figure 55

14.4 Unbolt the upper front wire from the nose plate and feed it through the hole and out of the sail (fig. 55).

14.5 Remove the keel pocket mounting screw from the keel pocket webbing at the rear part of the keel tube. Detach the rear bottom cables from the keel tube.

14.6 Unbolt the crossbar from the leading edge tube. Remove the crossbar ends from the sail.

14.7 Remove the clevis pin from the top of the kingpost and detach the top rear wire from the kingpost. Install the clevis pin back on the kingpost.

14.8 Unscrew the carabiner and detach the shackle of the sweep wires from the rubber cord.

14.9 Feed the webbing handle with the top rear wire out of the sail opening. Slide the crossbar central joint along the keel tube towards the nose plate.

14.10 Detach washout bridles from the sail.

14.11 Slide the frame forward and out of the sail through the nose hole of the sail. If you encounter resistance, stop and find out what is hanging up.

14.12 Fold the sail along its leading edge carefully. Put the sail in the glider bag, making sure the wider part of the sail goes into the wider part of the glider bag and zip the glider bag up (fig. 56, 57).



Figure 56



Figure 57

14.13 Remove battens from the batten bag. Disconnect battens #1 and #2 and put all battens back in to the batten bag.

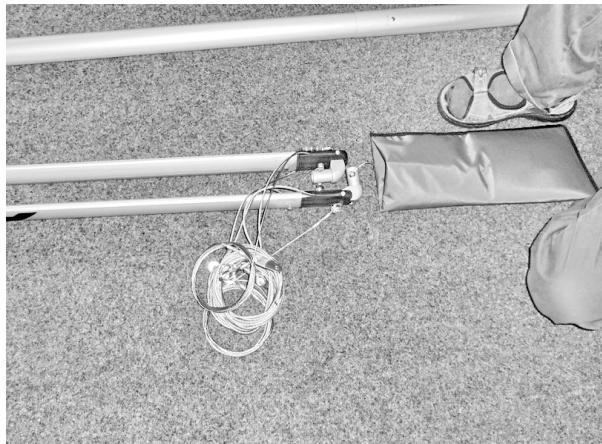


Figure 58

14.14 Detach the rear part of the keel tube and fold it along. Disconnect leading edge tubes and crossbar tubes.

14.15 Fold lower control frame fittings as shown on fig. 58. Roll up all wires as shown on fig. 58 and fig. 59.

Put protection bags on the control frame, on the king post and on the keel tube.



Figure 59



Figure 60

14.16 Rotate the control frame around its apex forward so, that the control frame lower fittings are directed towards nose plates of the frame.

14.17 Wrap bearing faces of tubes with soft foam to protect them from possible damage during transportation (fig. 60).

14.18 Put two Velcro ties on the glider bag with the sail inside (fig. 61). Pack all components of the frame on top of it carefully, using pieces of soft foam as pads in places that stick out or interfere with each other in order to protect frame parts from damage during transportation (fig. 62).



Figure 61



Figure 62

14.19 Put some foam sheets on both ends of the frame package for additional protection. Wrap the frame package around in the glider bag and tie it up with remaining Velcro straps (fig. 63, 64).

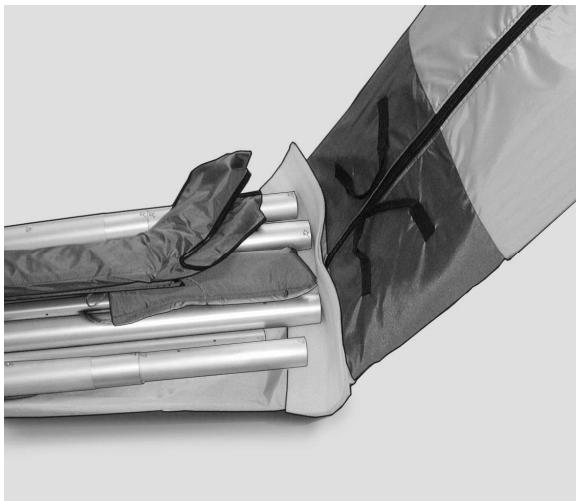


Figure 63



Figure 64

14.20 Put the 2.4 meters transportation bag on the glider (fig. 65). Now your glider is ready for transportation (fig. 66).

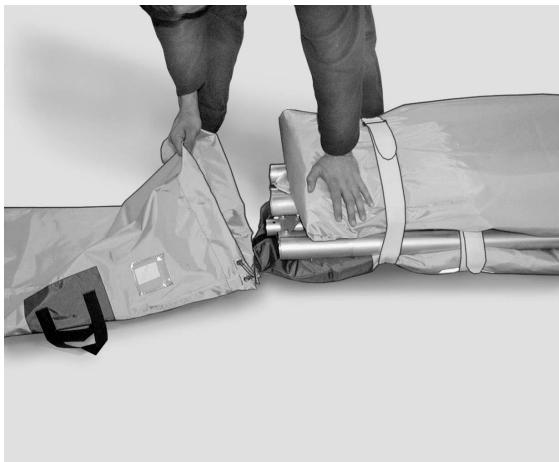


Figure 65



Figure 66

Fox-18 reassembling procedure from a 2.4 meters short package is reverse to its breakdown procedure. Please read written above manual and be sure you thoroughly understand it before reassembling your glider from a 2.4 meters short package.

15. Fox-18 REASSEMBLING AFTER SHIPPING PROCEDURE FROM A 2.4 METERS SHORT PACKAGE

Please read and be sure you thoroughly understand this manual before reassembling your glider from a short package. Also re-read section "Fox-18 breakdown for shipping procedure in a 2.4 meters short package" and refer to photos from this section, if necessary, during reassembling procedure.

15.1 Same as for breakdown procedure, you will need an unobstructed area 2.4 m by 9 m (8x30 ft). Make sure the surface is clean. If it is abrasive, you should either cover it with protective tarp or be extremely careful not to scrape your sail.

Remove the 2.4 meters short transportation bag from the glider. Unfold the 6 meters bag with the sail in it and take the frame off the glider bag (fig. 67).



Figure 67

15.2 Check completeness of the frame parts and make sure they have no damage after transportation. Rotate the control frame around its apex backwards so, that the control frame lower fittings are directed aft. Connect the rear keel tube with the front keel tube.



Figure 68



Figure 69

15.3 Identify the leading edges as to front, middle and rear. Identify them as left and right, checking the "right" / "left" markings in order to make sure you are mounting leading edges correct.

Connect the middle leading edge with the front leading edge. Align both tubes and slide the middle leading edge into the front leading edge, rotating as necessary, until the button spring in the middle leading edge engages securely into the holes in the front leading edge (fig. 68). Repeat for another half wing.

Connect the rear leading edge with the middle leading edge. Align both tubes and slide the rear leading edge into the middle leading edge, rotating as necessary, until the slot in the rear leading edge engages securely into the clevis pin in the middle leading edge. When the rear leading edge is fully engaged, you will not be able to rotate it. Repeat for another half wing (fig. 69).

15.4 Identify crossbar tubes as to left and right, checking the "right" / "left" markings, they have to be on top of the tubes.

Align front and rear crossbar tubes and slide the rear crossbar forward, rotating as necessary, until the button spring in the rear crossbar engages securely into the holes in the front crossbar. When the rear crossbar tube is fully engaged, you will not be able to rotate it.

15.5 Lay the crossbar on top of the frame so that the central unit of the crossbar is on the keel tube and crossbar tubes are along the leading edges.

15.6 Remove protection bag from the control frame. Unwind all wires and identify them as to front, rear and side. Check the wires are not damaged or tangled. Carefully inspect Nicopress sleeves and wires near Nicopress sleeves: there should be no damage and no visible deformation.

At this stage the frame is basically assembled and ready to install the sail.

15.7 Install the Mylar inserts in the sail (if they have been removed before). Make sure you install it right

side up; the slit edge is at the front and on the bottom. The easiest way to install the Mylar is to push it into the pocket using a long lofting batten attached to the end of the Mylar insert, which is first inserted in the pocket.

You will have to stop from time to time to make sure the Mylar is properly lying flat in the pocket. Do not push the Mylar too far into the pocket. Make sure there are no folds in the Mylar, especially at the tips. Make sure the Mylar wraps in the proper direction to follow the sail around the leading edge as it enters the pocket.

15.8 Position the sail on the floor with the keel pocket down and the wings folded over so that the leading edges lie along the length of the root line, with the Mylar pockets lying on top.

15.9 The frame is most easily inserted into the sail with the rear leading edges installed. Rotate the washout struts forward, towards the nose (fig. 70).



Figure 70

15.10 Position the frame with the control frame facing down and with the rear end of the leading edges at the nose of the sail (fig. 70). Slide leading edges into the sail through the nose opening, making sure that the leading edges of the frame pass properly into the leading edge pockets of the sail and don't get caught at the rear of the bottom surface near the root. As you feed the frame slowly into the sail, check periodically to see that none of the hardware is snagging on the sail. Make sure the keel tube stays outside the double surface. At certain stage don't forget to insert the keel tube into the keel pocket.

15.11 When the frame is fully inserted, slide the tip part of the sail on both rear leading edges forward, towards the nose as far as necessary to extract washout struts out through the washout holes in the sail.

15.12 Attach the rear sail mount strap to the keel tube. Attach the bottom rear wires to the keel tube.

15.13 Install the kingpost. Make sure the kingpost is located between the sweep wires.

15.14 Remove the clevis pin from the top of the kingpost and attach the top rear wire to the kingpost. Install the clevis pin back on the kingpost.

15.15 Feed the webbing handle with the top rear wire through of the kingpost sail opening on top of the sail. Slide the crossbar central joint along the keel tube backwards from the nose plate.

15.16 Attach the handle of the sweep wires to the rubber cord using the carabiner. Check that the routing of the sweep wires is right.

15.17 Attach washout bridles to the sail.

15.18 Insert the crossbar end into the leading edge / crossbar opening. Bolt the crossbar to the leading edge tube and splint the joint.

15.19 Feed the upper side wires through the corresponding holes in the sail. Bolt upper and lower wires to the crossbar, making sure that no wires are wrapped around a crossbar or leading edge and that no thimbles are cocked or twisted. Note that the upper side wire is attached to the upper side of the crossbar and the lower side wire is attached to the lower facing side of the crossbar.

15.20 Insert the upper front wire into the sail and attach it to the nose plate. Secure it with a safety ring.

15.21 Install the nose batten.

15.22 Reach into the sail from the sail tip, find the sail mount strap and stretch it towards the aft end of the leading edge, using the handle on the mount strap. Position the sail mount strap to the end cap slot of

the leading edge tube and make sure the sail is mounted properly. Close the safety Velcro around the leading edge tube.

15.23 Install the control bar and set the glider up onto the control bar.

15.24 Spread the wings slowly and carefully, making sure that the sail rides forward as necessary at the nose without catching. Be careful: you can easily tear the sail open at the nose at this point.

Note: When spreading the wings with the sail mount screws been unscrewed check that the sail mount webbing is in proper position in the slot of the end cap of the leading edge # 3.

15.25 Tension the crossbar and install sail mount screws back in to the leading edge tubes.

Finish assembling the glider as written in the glider manual.

16. MAINTENANCE

This section contains a recommended schedule of periodic maintenance. None of the items in this section are a substitute for the continual and consistent practice of proper pre-flight inspections and immediate maintenance of any items on the glider, which require it. Safety requires that your glider be fully airworthy for every flight. Nuts and bolts must always be secure, safeties must always be in place, and damage to any part, which could compromise the airworthiness of the glider, cannot be tolerated. If you have a question about the need to repair or replace some part of your glider, feel free to contact your dealer or Aeros directly. It is not always obvious which items require attention and which is not. Minor dents or dings in a non-critical location on an airframe tube may not require any repair or maintenance. On the other hand, a wire that has been kinked one time can fail very quickly after that, and should be replaced immediately.

We recommend that you have all maintenance work done by your Aeros dealer.

16.1 EVERY SIX MONTHS

16.1.1 Check the sail washout as described in the section "Checking the sail washout".

16.1.2 Check your battens on a flat level floor against the batten diagram provided, and correct any that deviate from the pattern by more than 6 mm (1/4").

16.1.3 If you fly in a dusty or sandy environment, it will help to prolong the life of your batten pockets if you wipe each batten with a rag before you install it in the sail.

16.1.4 Have a complete inspection performed on the glider and replace any suspension system component that shows any wear, and any cable that shows any kinks, wear, damage, corrosion, etc.

Inspect all bolts for tightness, all safeties for proper installation and possible damage. Inspect plates and fittings for damage, holes in tubes for elongation.

16.1.5 Inspect the sail for wear, tears, UV damage, loose stitching, etc.

16.1.6 Lightly spray all zippers on the glider with silicone spray lubricant. Also spray your battens before you install them in the glider to lubricate the insides of the batten pockets. Do not use any other type of lubricant. Wipe off any excess silicone so that it does not attract dirt.

16.1.7 Inspect the outboard sprogs. If the sprogs have been loaded heavily, it is possible that the sprog tubes may have been bent.

16.2 EVERY YEAR

In addition to the normal six month service items, also perform the following:

16.2.1 Have the sail completely removed from the frame, and disassemble all frame components. Inspect every part of the glider for any damage or wear. Inspect the tubes for straightness and for signs of corrosion.

16.2.2 Anytime you have the sail off the frame, inspect all of the batten pockets and batten pocket terminations.

16.2.3 Replace bottom side wires and the hang loop.

16.3 SPECIAL CIRCUMSTANCES

16.3.1 Any time you suffer a crash or extremely hard landing you should have an “annual” inspection done on your glider to insure that you find all damaged parts. Following any hard landing be sure to inspect the apex hardware, the control frame legs and speed bar, and all control frame fittings for damage. Any time you replace a downtube or speed bar, you must carefully inspect all related fittings and replace any that are bent or damaged.

Hard landings may also impose very high loads on the sprogs and bridle lines. Inspect them accordingly.

16.3.1 If your glider is ever exposed to salt water you will need to have the glider completely disassembled in accordance with the recommended annual inspection procedure. All frame parts will need to be disassembled, including the removal of all sleeves and bushings, flushed liberally with fresh water, dried completely.

16.3.2 A wet glider must be dried before storing. Do not leave your glider wet for more than one day, because corrosion may result.

16.3.3 Take special care to avoid ice-covering the glider, particularly the leading edge in wintertime.

16.3.4 If you fly regularly at the coast in windy conditions, be aware that the sea mist spray can have the same effect. Hose down your glider after such flights, and keep a special lookout for corrosion.

16.3.5 Keeping your sail clean will extend the life of the cloth. When cleaning the entire sail you should generally use only water and a soft brush. You may clean small spots or stains with any commercial spot remover that is labeled for use on polyester.

16.4 A NOTE ABOUT CABLES AND CABLE MAINTENANCE

The cables which support the glider's airframe are critical components of the glider's structure, and must be maintained in an airworthy condition. It is a general practice in the design of aircraft structures to design to an ultimate strength of 1.5 times the highest expected load in normal service.

Hang glider cables, like other structural components on the glider, are typically designed with a structural safety factor of only about 50% above the expected maximum load. No significant loss in cable strength can be tolerated.

A cable with even a single broken strand must be replaced before the glider is flown again. A cable which has been bent sharply enough to have taken a permanent set must also be replaced immediately.

Some degree of fatigue due to repeated bending of cables is almost unavoidable in an aircraft that is assembled and disassembled with every flight. Bottom side wires are subject to the highest loads in flight, and are therefore the most critical. This is why we recommend that these wires be replaced annually, even if there is no known damage.

16.5 CHECKING THE SAIL WASHOUT

16.5.1 Fully set up the glider on a reasonably level surface.

16.5.2 Place three equal supports, about 1,7 m (5.5 ft) tall, under the each leading edge tube-cross tube junction and in place behind the connection of rear bottom cables to the keel tube.

16.5.3 Tie a lightweight string tightly across the wing from the inner of the supported battens to the corresponding batten on the other wing.

16.5.4 Measure the height of each thread relative to the top of the keel tube. The results should be as follows:

Fox-18	
Batten number	Sail height above keel tube, mm
2 - 2	77
3 - 3	126
4 - 4	128
6 - 6	80

If measured distances are less than those of written in the table above, the glider should not be flown until readjusted. The tolerance is ± 20 mm. If measured distances are differ from those of written in the table for 20 mm per side, the glider should not be flown. In such case consult your local dealer.

17. TRANSPORTATION AND STORAGE

With good care and correct maintenance your hang glider will retain its good conditions for many years. We recommend that you do not expose your glider to any more direct sunlight than necessary. Do not leave under the sun for long periods of time when you are not flying.

Do not leave your glider for a long period of time against strong wind. It will decrease the life of the sail. The glider may be transported in its bag in any vehicle that offers protection from mechanical damage, soiling and long exposure to rain. During transportation, or when stored on supports, the wing must be supported not less then in three points: at its centre and at two more points.

Supports should be softly padded, and any support systems used for transport, such as roof racks, must use attachment straps that are sufficiently secure to eliminate the possibility of damage from vibration and movement. Flat straps should be used for tie downs to avoid damage to leading edge Mylar.

Store the glider in a dry room off the ground; air the out regularly to avoid mildew, and never store wet. If you fly at the costal area or your glider has been exposed to salt water rinse it with tap water thoroughly before storage. If you fly frequently at the costal area it is necessary to wash the glider with tap water at least once a month to prevent all aluminium parts from corrosion.

The recommended storage temperature is from +5 to +25° C.

18. IN CLOSING - A FEW WORDS ON YOUR SAFETY

- Hang gliding is an active air sport with associated risks. Your safety can be greatly enhanced by following a few simple rules:
 - Your glider is delivered to you ready to fly. Do not make any adjustments, which are not described in this manual.
 - If you are in doubt about any aspect of your glider, you should consult your dealer or Aeros for advice.
 - Only fly after having attended a good school, recognized by your hang gliding federation.
 - Fly a glider suited to your level of ability. A new risk may arise when you first fly a new type of the glider.
 - The reactions of your new glider may well differ from those of the glider you were used to. In order to keep this risk low, we recommend that you gradually become familiar with your new glider.
 - Before every take-off always do both an assembly check and a pre-flight check.
 - Do not take off if the sail is wet, especially the leading edge, as the stall speed will increase significantly.
 - ***Always fly with a dry sail!***
 - A wet glider must be dried before storing. Do not leave your glider wet for more than one day, because corrosion may result.
 - Never fly alone.
 - Do not attempt towing of any kind, unless you have attended a recognized towing school.
 - Don't push your luck. It is your responsibility to know the limits of your glider and the limits of your own experience. Remember, that ultimately your safety is your responsibility.
 - Fly only in places, which are suitable for hang gliding.
 - With proper care and maintenance, your glider will retain a high level of airworthiness for many years.

Have fun. Fly safely.
Aeros Team

F18.030.000.AD

Первич. примеч.

Справочный №

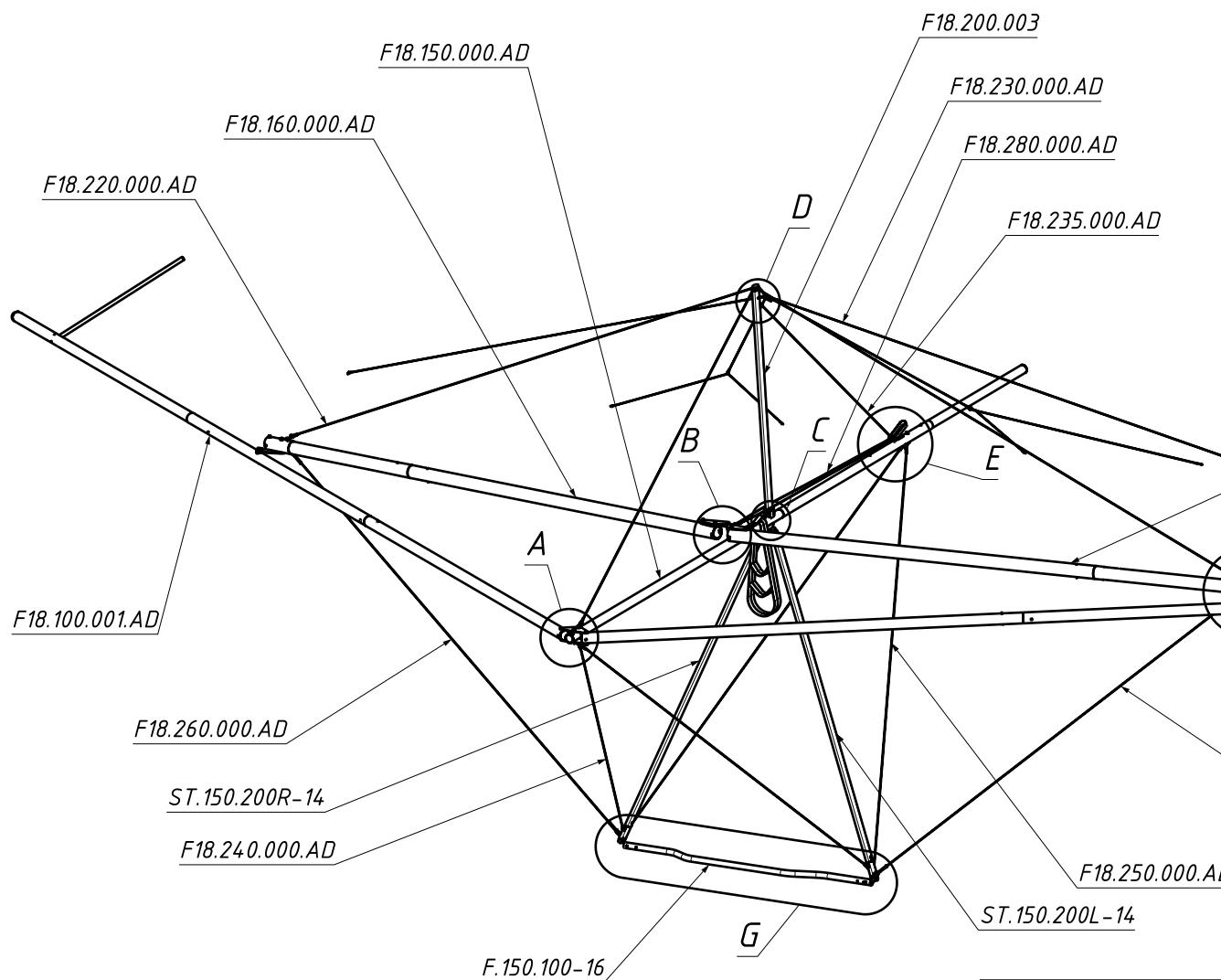
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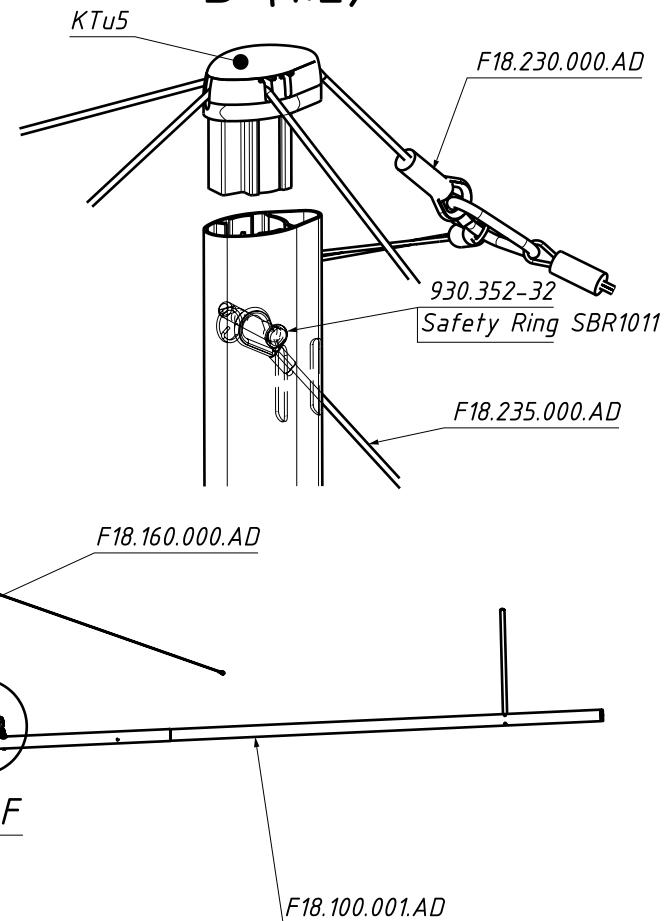
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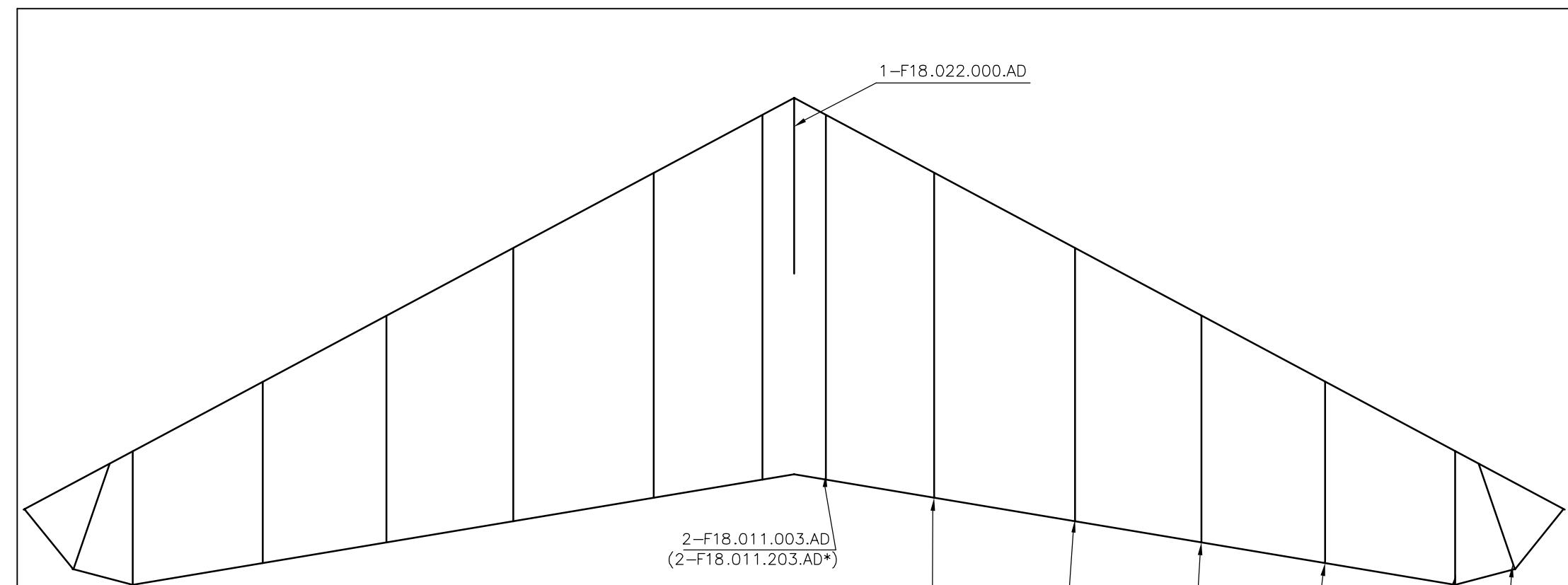
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F18.030.000.AD

Fox18 Airframe
Fox18 Каркас

1:20

Лист Листов 1



Parts List

ITEM	QTY	NAME	NOTE
1	1	F18.022.000.AD	KEEL BATTEN
2	2	F18.011.003.AD / F18.011.203.AD*	TOP BATTEN N1
3	2	F18.011.005.AD / F18.011.205.AD*	TOP BATTEN N2
4	2	F18.011.007.AD	TOP BATTEN N3
5	2	F18.011.009.AD	TOP BATTEN N4
6	2	F18.011.011.AD	TOP BATTEN N5
7	2	F18.011.013.AD	TOP BATTEN N6
8	2	F18.021.000.AD	TOP BATTEN N7

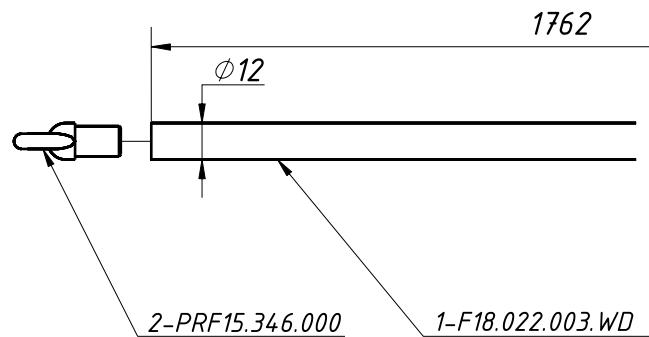
*Apply at 2 meters

AEROS

F18.010.000.AD

"FOX 18" BATTENS

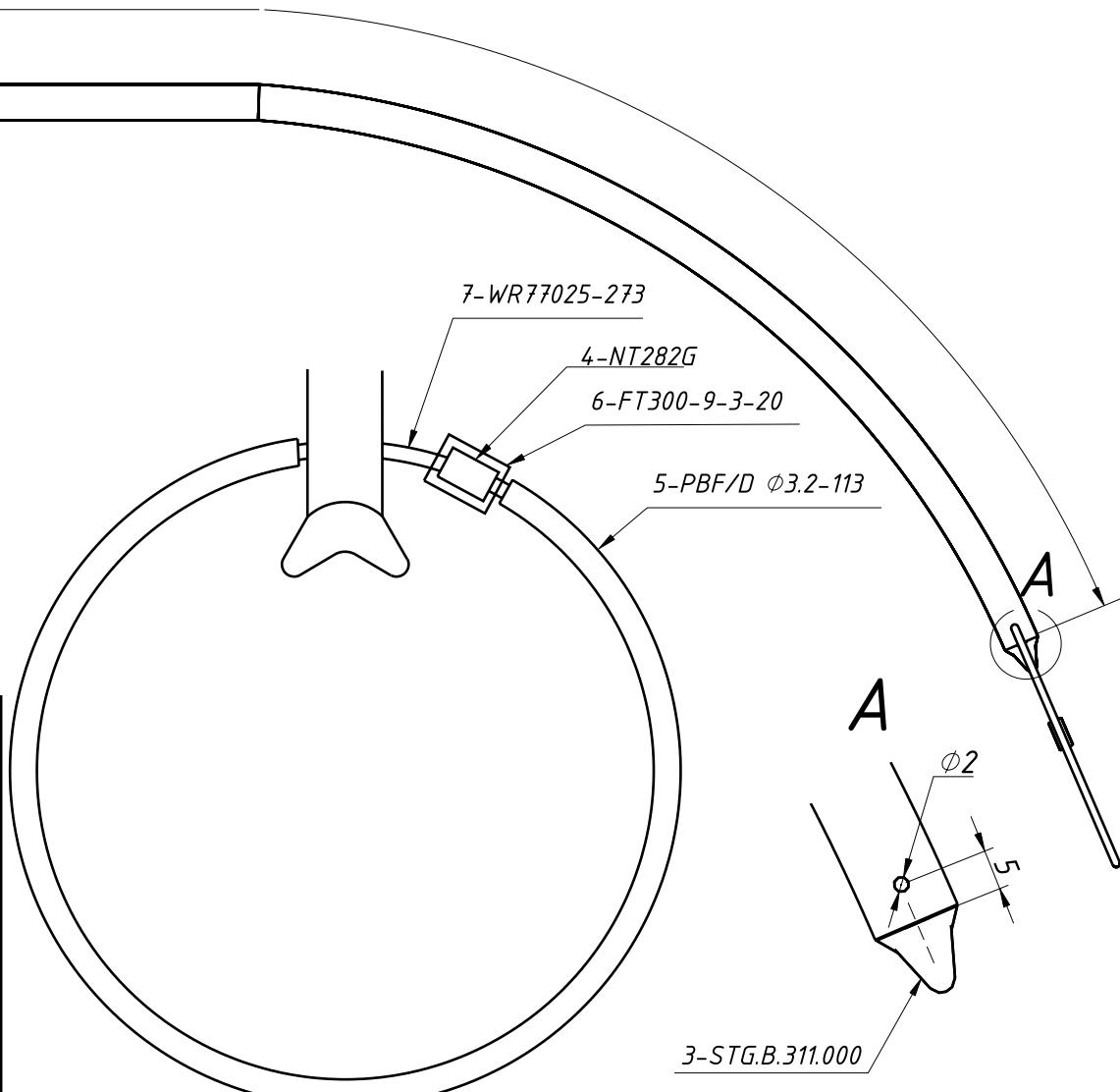
Scale:



* Заготовку обрезать на 17мм послегиба

Parts List

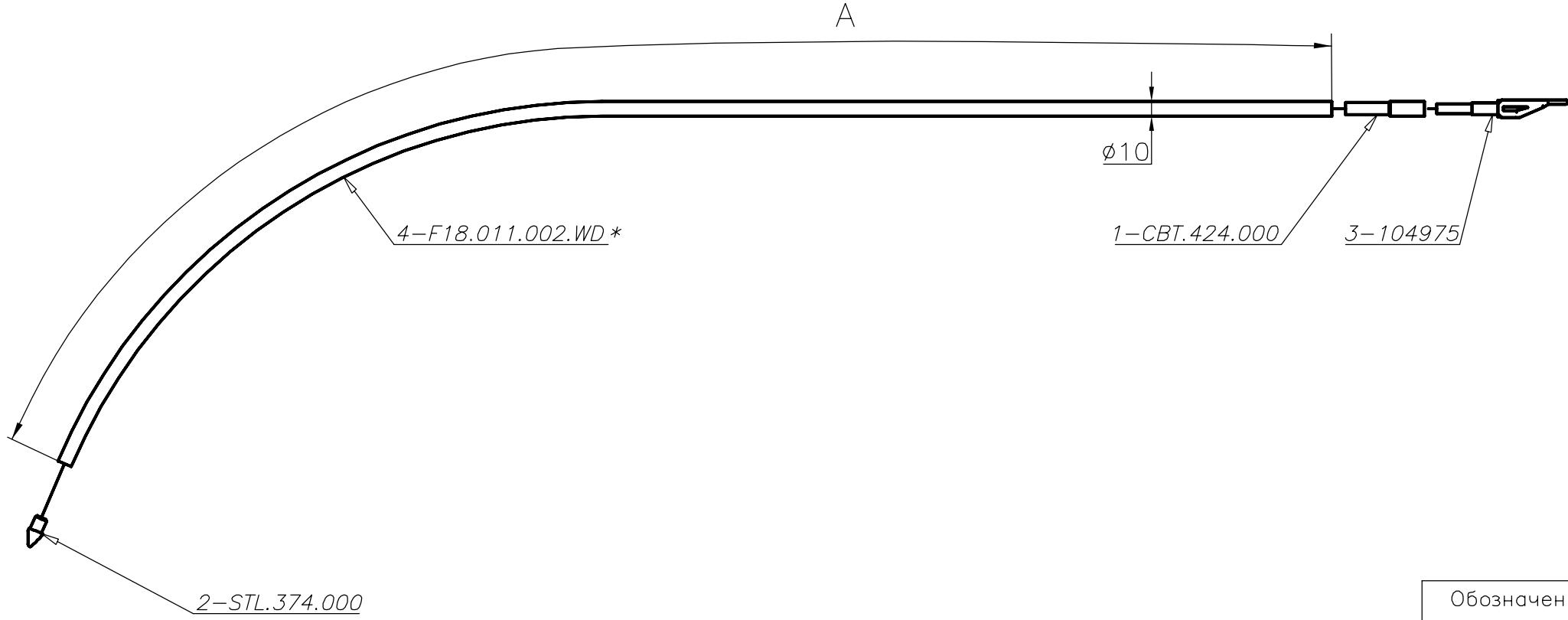
Item	Qty	Name	Material	Note
1	1	F18.022.003.WD	D16T $\Phi 12 \times 1$ L=1779*	TUBE
2	1	PRF15.346.000	PLASTIC	BATTEN TIP
3	1	STG.B.311.000	PLASTIC	BATTEN TIP FORK
4	1	NT282G	.	PRESS SLEEVE
5	2	PBF/D-3.2-113	L=113	HOT SHRINK TUBE
6	1	FT-300-9-3-20	L=25	HOT SHRINK TUBE
7	1	WR77025-273	WR77025 $\Phi 2.5$ 7x7 L=273	CABLE



AEROS

F18.022.000.AD
KEEL BATTEN

Scale:



Обозначение	
F18.011.003.AD	2554
.005.AD	2274
.007.AD	1960
.009.AD	1667
.011.AD	1298
.013.AD	1013

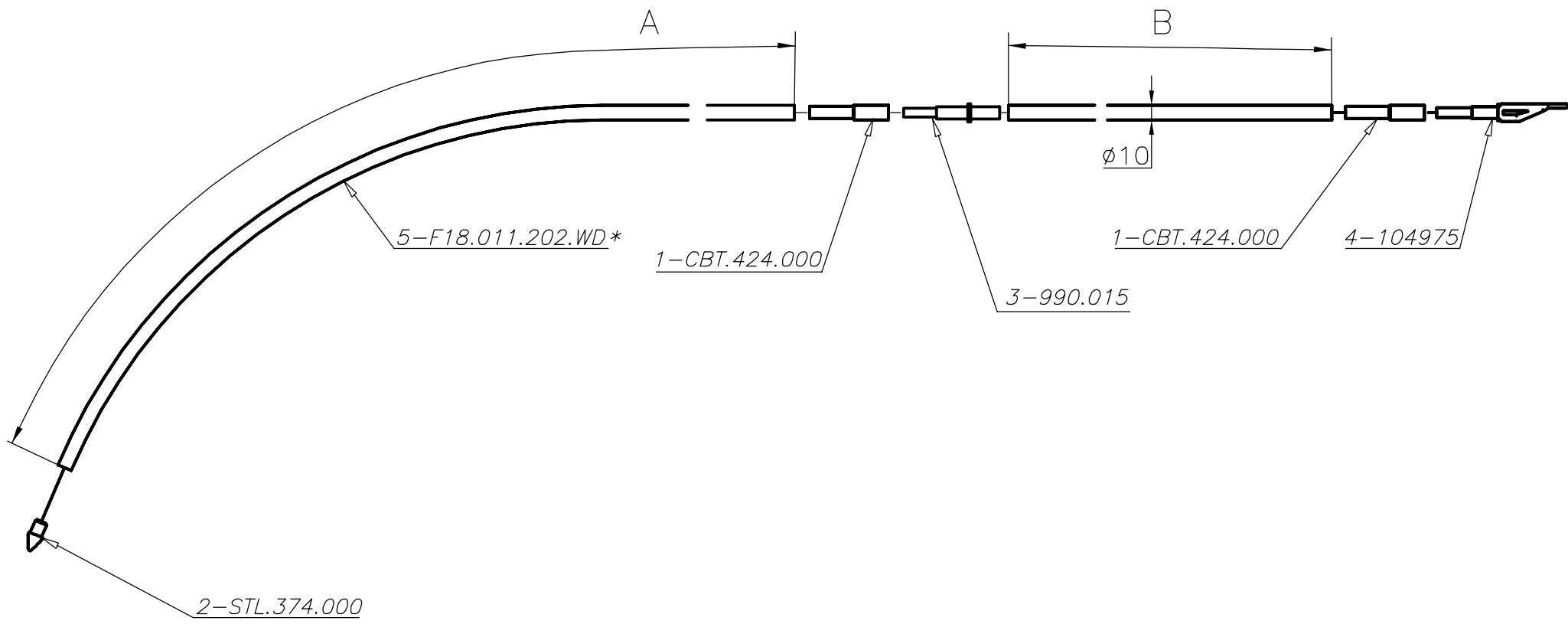
*Номера деталей указаны для латы
F18.011.003.AD

AEROS

F18.011.000.AD

TOP BATTEN 1-6

Scale:



*Номера деталей указаны для латы
F18.011.203.AD

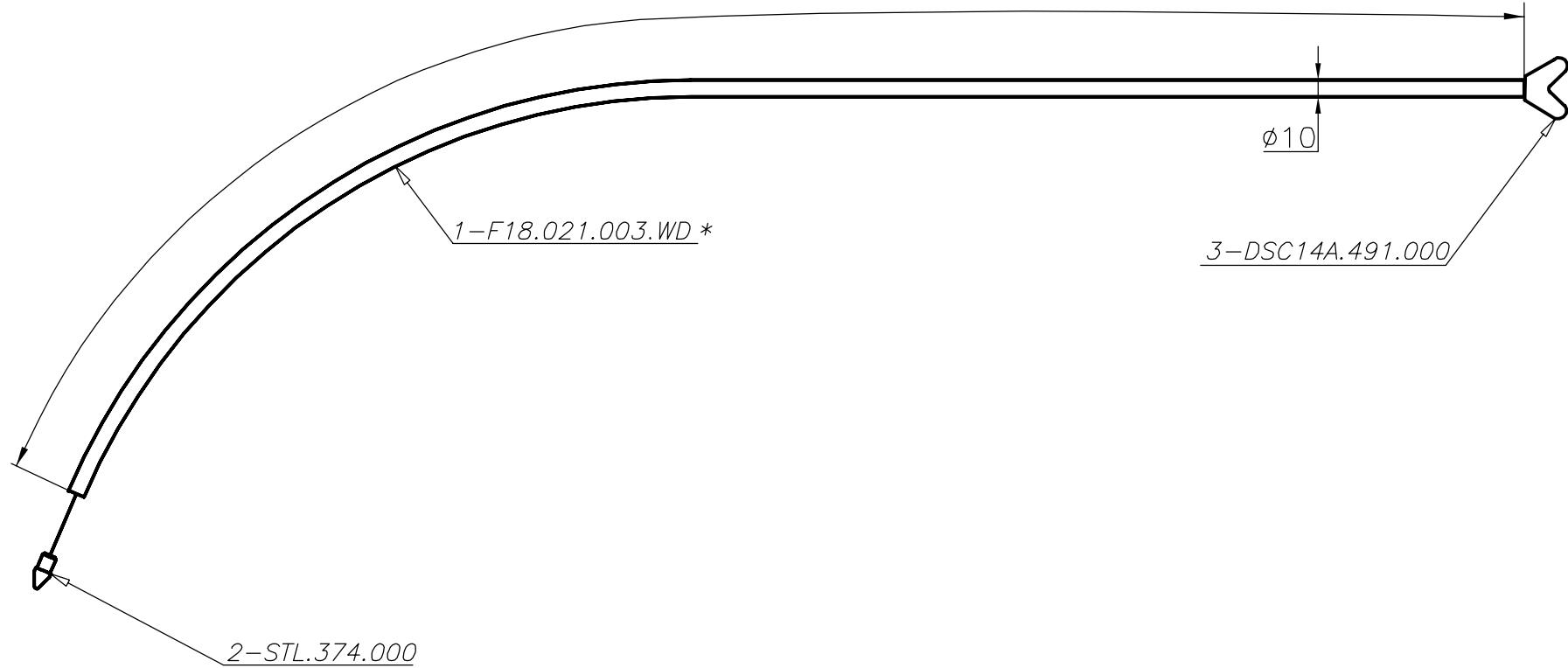
Обозначение	A	B
F18.011.203.AD	1928	600
.205.AD	1923	325

AEROS

F18.011.200.AD

TOP BATTEN 1-2

Scale:



ITEM	QTY	NAME	MATERIAL	NOTE
1	1	F18.021.003.WD	B95 d10x0.75 L=1032	Tube
2	1	STL.374.000	PLASTIC	Batten Tip
3	1	DSC14A.491.000	PLASTIC	Batten Tip Fork

AEROS

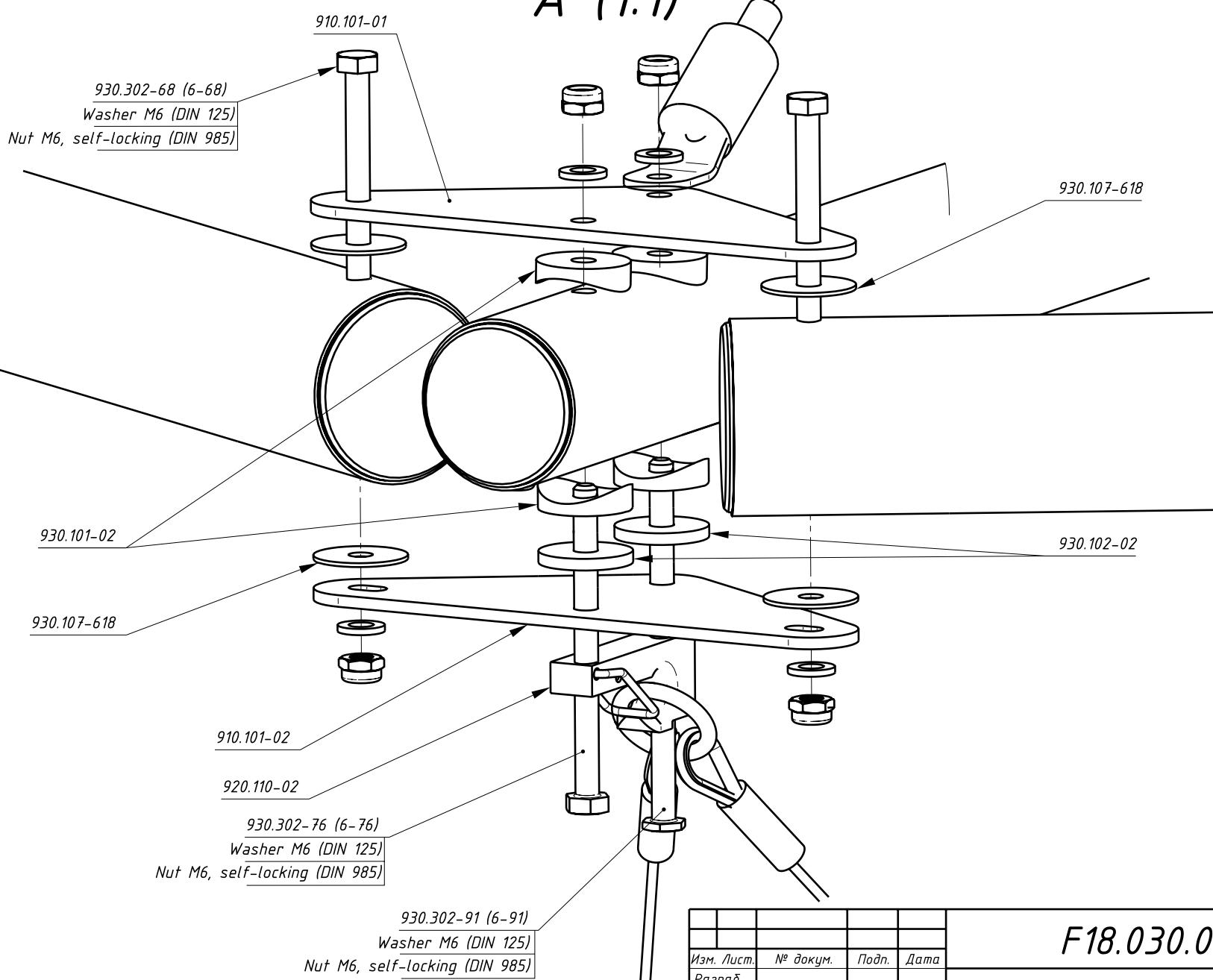
F18.021.000.AD

TOP BATTEN 7

Scale:

F18.030.000.AD

A (1:1)



Инв. №	Подп. и дата	Взам. инв. №	Инв. №	Подп. и дата

Изм. Лист.	№ докум.	Подп.	Дата
Разраб.			
Проверил			
Т.контр.			
Н.контр.			
Утв.	Дробышев С.		

F18.030.000.AD

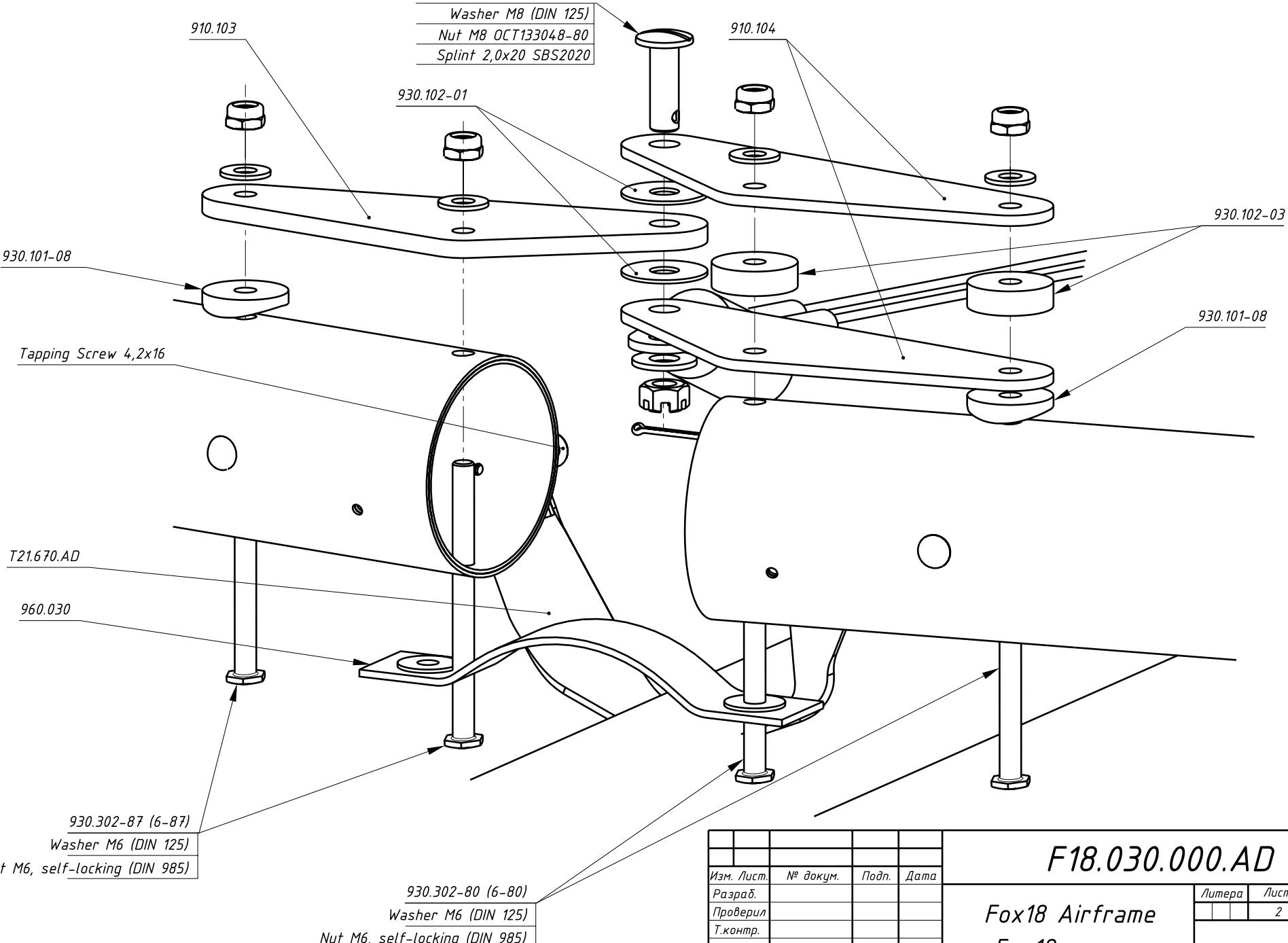
Fox18 Airframe
Fox18 каркас

Литера	Лист	Листов
	2	2

Формат А3

F18.030.000.AD

B (1:1)



Изм.	Лист.	№ докум.	Подп.	Дата
Разраб.				
Проверил				
Т.контр.				
Н.контр.				
Утв.		Дробышев С.		

F18.030.000.AD

Fox18 Airframe
Fox18 каркас

Литера	Лист	Листов
	2	2

F18.030.000.AD

C (1:1)

Первич. примен.

Справочный №

Подп. и дата

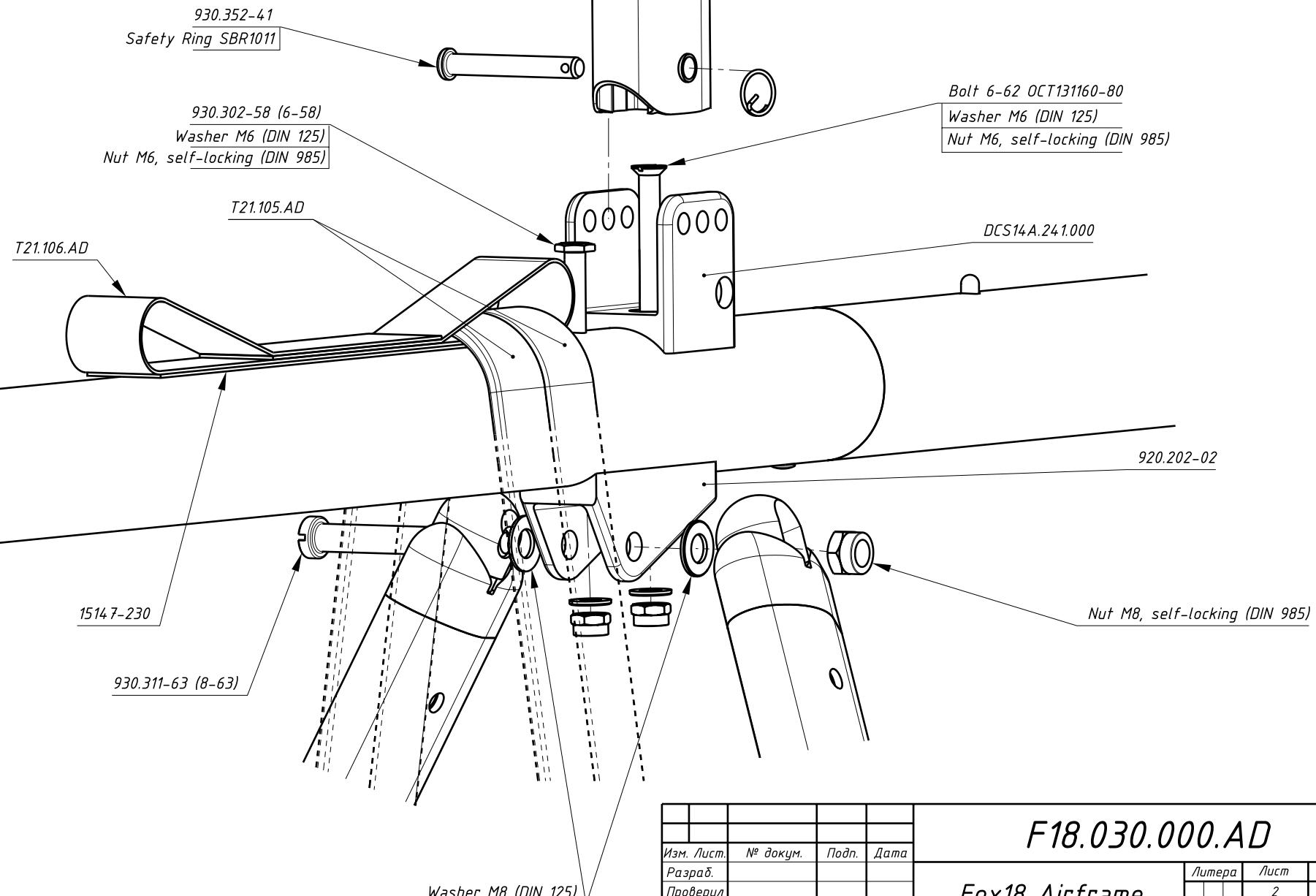
Инв.№

Подп. и дата

Взам. инв.№

Инв.№

Подп. и дата

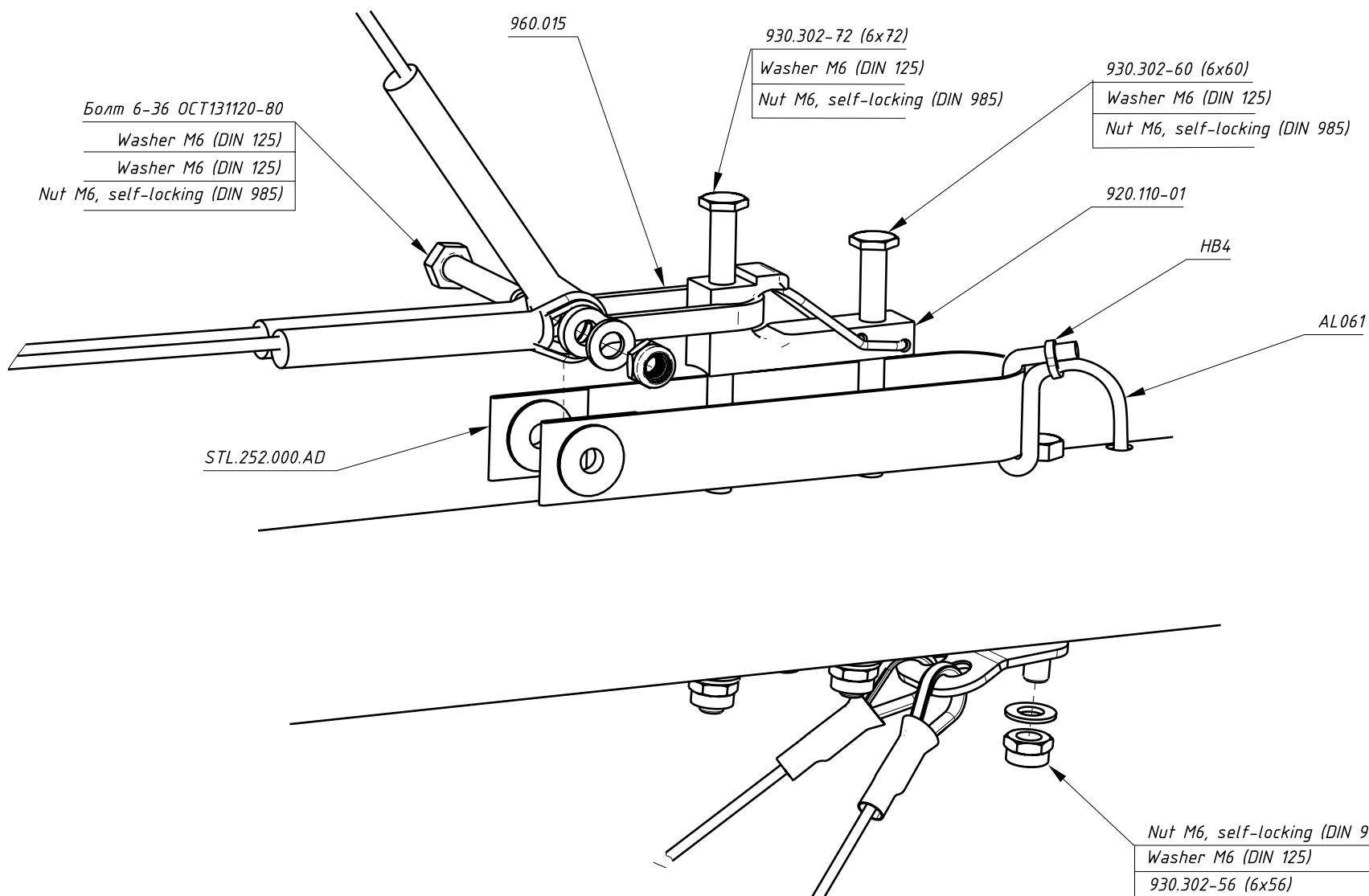


Изм. лист.	№ докум.	Подп.	Дата	F18.030.000.AD	Литера	Лист	Листов
Разраб.				Fox18 Airframe			
Проверил				Fox18 каркас			
Т.контр.							
Н.контр.							
Утв.	Дробышев С.						

Формат А3

F18.030.000.AD

E (1:1)



Инв. №	Подп. и дата	Взам. инв. №	Инв. № з/з/бл.	Подп. и дата				
Изм. Лист.	№ докум.	Подп.	Дата					
Разраб.								
Проверил								
Т.контр.								
Н.контр.								
Утв.	Дробышев С.							

F18.030.000.AD

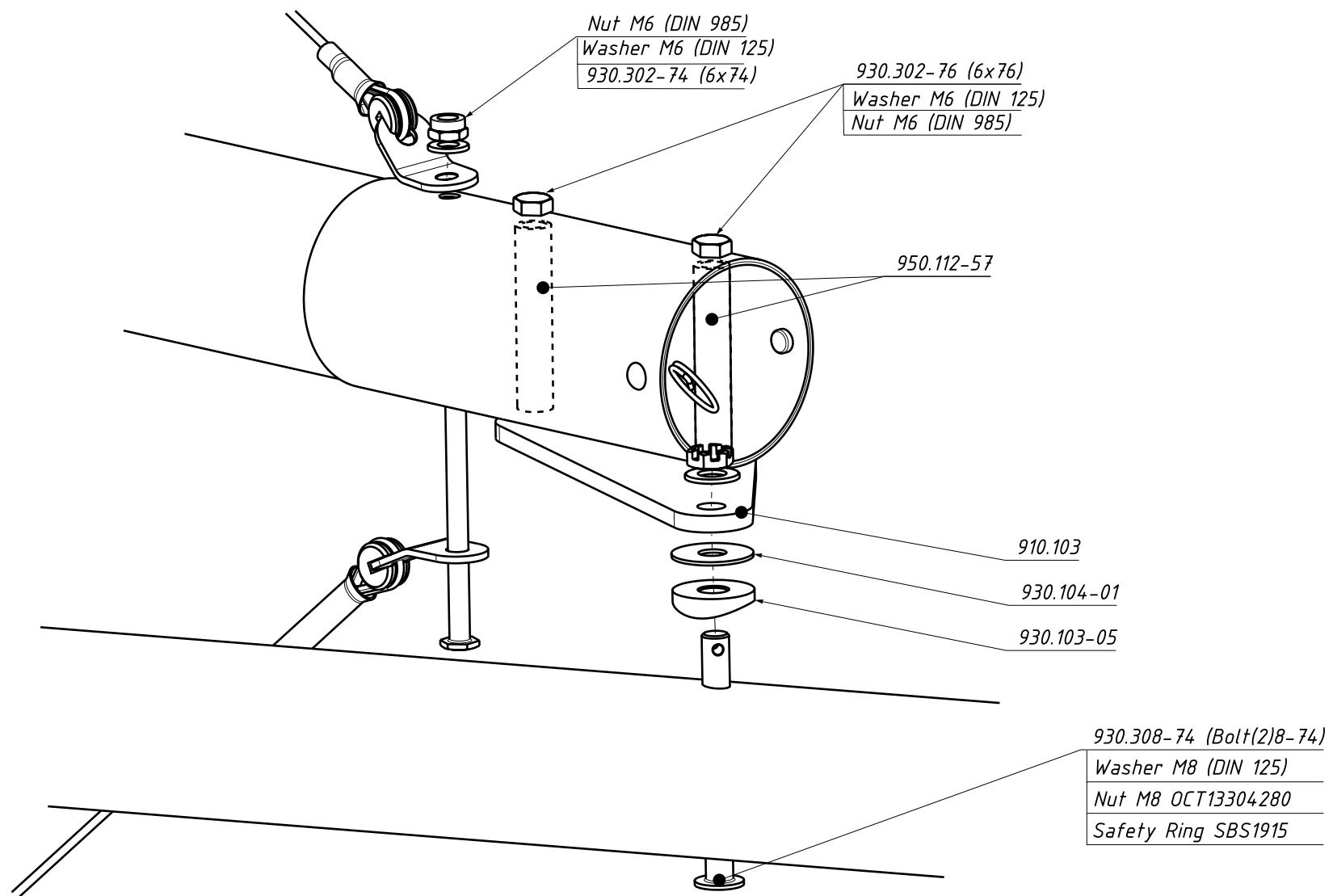
Fox18 Airframe

Fox18 каркас

Литера	Лист	Листов
	2	2

F18.030.000.AD

F(1:1)



Изм.	Лист.	№ докум.	Подп.	Дата
Разраб.				
Проверил				
Т.контр.				
Н.контр.				
Утв.				
Дробышев С.				

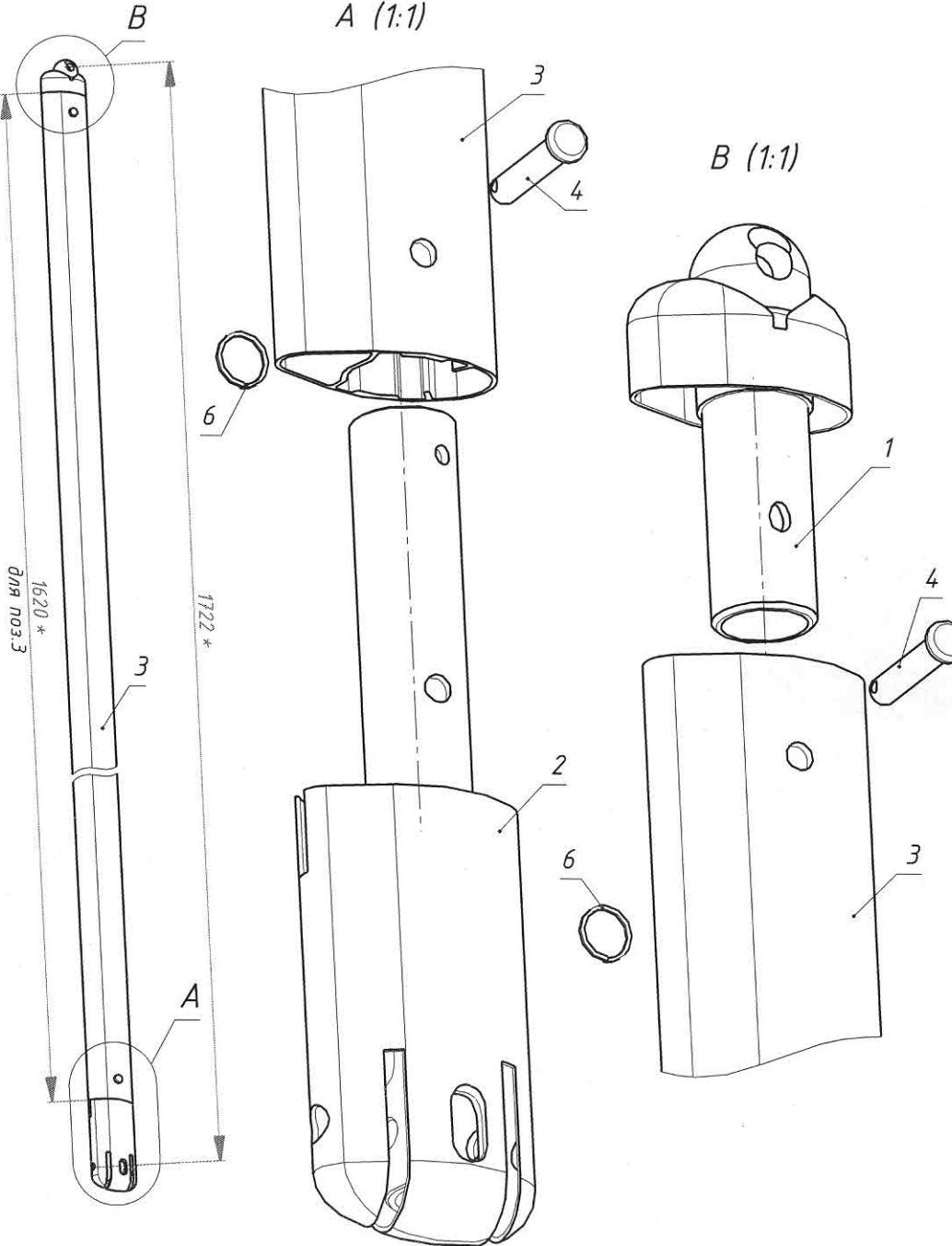
F18.030.000.AD

Fox18 Airframe
Fox18 каркас

Литера	Лист	Листов
	6	7

ST.150.200L-14

(✓)



*1.*Размеры для справок.*

2. Клеймить и маркировать по ОПИ-63-79 на бирке.

Фор.	Поз.	Обозначение	Наименование	Кол.
A4	1	810.310L	Unit, FW, Left, Upper / Узел FW левый верхний	1
A4	2	810.320L	Unit, FW, Left, Lower / Узел FW левый нижний	1
A4	3	810.301-04	Upright Tube / Труба стойки	1
A4	4	930.352-30	Clevis Pin ø6mm / Валик ø6мм	2
-	6	SBR1011	Safety Ring / Кольцо контролочное	2

ST.150.200L-14

Upright, Left

Изм.	Лист	№ докум.	Подп.	Дата	Литера	Масса	Масштаб
Разраб.	Хандожинский	277	03048			0,91	1:5
Проверил							
Т.контр.							
Нач.бюро.							
Н.контр.							
Утв.	Дробышев С.	180415					

ST.150.200R-14

Первич. примен.

Справочный №

Инв.№

Подп. и дата

Взам. инв.№

Инв.№ айдил.

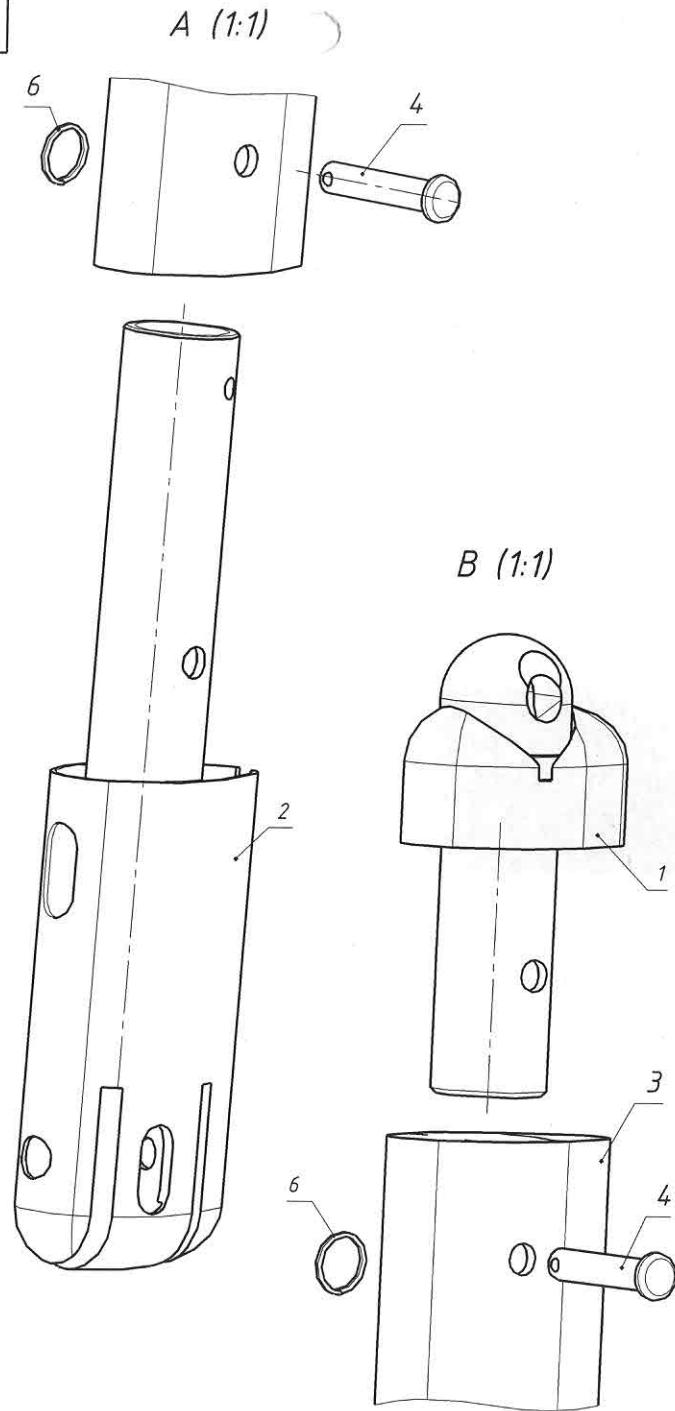
Подп. и дата

Первич. примен.

1620 *

для поз. 3

1722 *



1.*Размеры для справок.

2. Клеймить и маркировать по ОПИ-63-79 на бирке.

Фор.	Поз.	Обозначение	Наименование	Кол.
A4	1	810.310R	Unit, FW, Right Upper / Узел FW правый верхний	1
A4	2	810.320R	Unit, FW, Right, Lower / Узел FW правый нижний	1
A4	3	810.301-04	Upright Tube / Труба стойки	1
A4	4	930.352-30	Clevis Pin øбмт / Валик øбмм	2
-	6	SBR1011	Safety Ring / Кольцо контрольное	2

ST.150.200R-14

Изм. Лист. № докум. Подп. Дата
 Разраб. Хандожинский 08/08/2015
 Проверил
 Т.контр.
 Нач.дюро.
 Н.контр.
 Утв. Дробышев С.

Литера	Масса	Масштаб
	0,91	1:5
Лист	Листов	1

18.08.15

Upright, Right
 Стойка трапеции прав.

F.150.100-16

✓ (✓)

Справочныи №

Подп. и дата

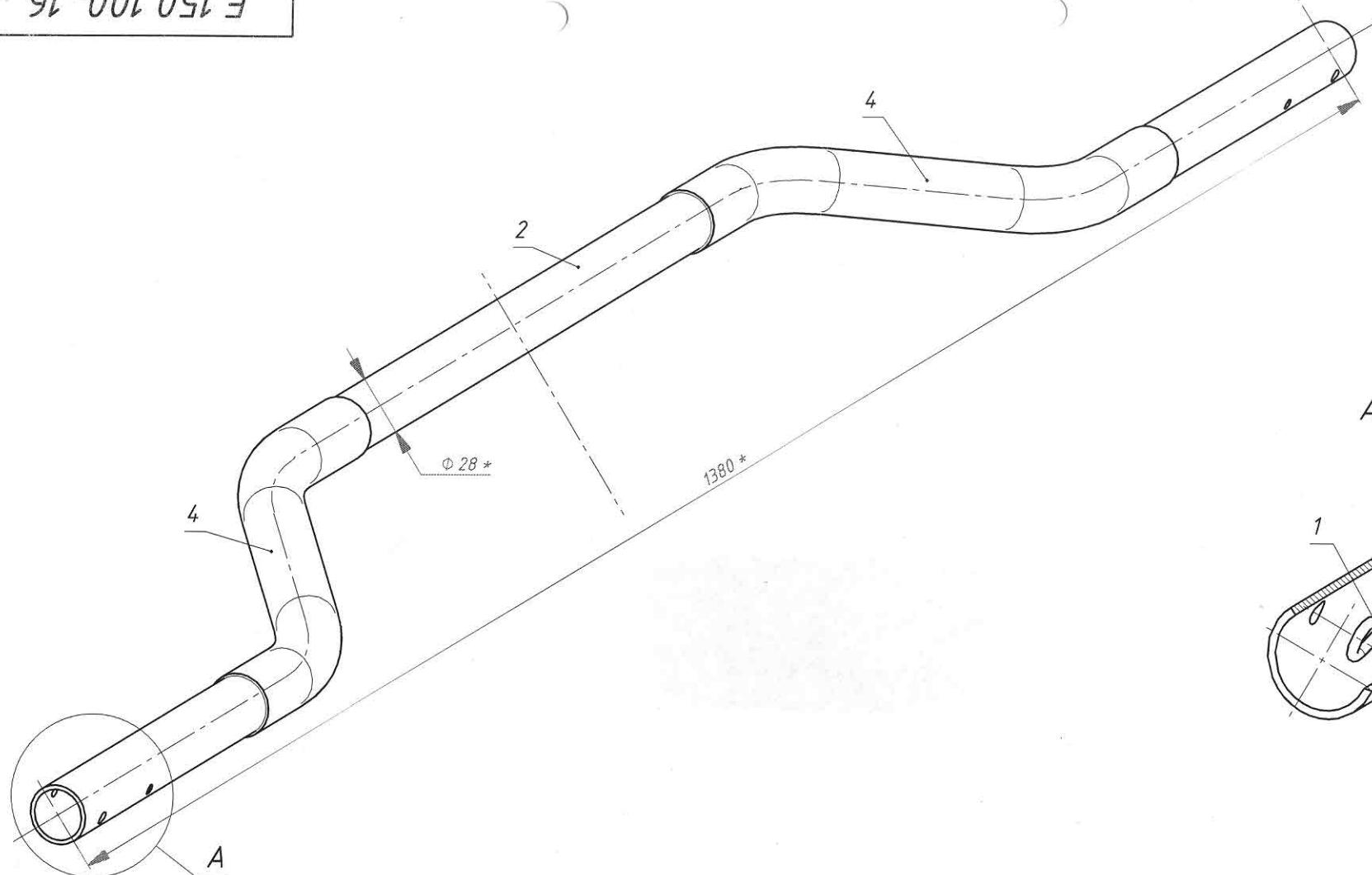
Инв. №

Вздел. инв. №

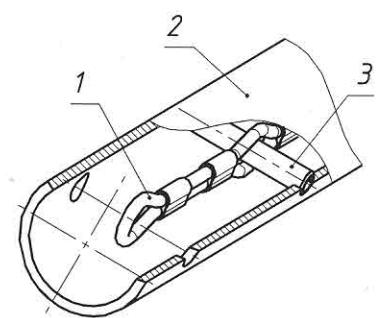
Инв. № дубл.

Подп. и дата

Проверк. приемк.



A (1:1)



1.*Размеры для справок.

2. Клеймить и маркировать по ОПИ-63-79 на бирке.

Фор.	Поз.	Обозначение	Наименование	Кол.
A4	1	820.350-02	Safety Wire / Трос страховочный	1
A3	2	820.301-02	Speedbar Tube / Труба спидбара	1
-	3	-	Ось разжимная (пружинная) 5x28мм DIN1481	2
-	4	HG11-320	Рукоятка резиновая	2

F.150.100-16

Speedbar F-16
Спидбар Ф-16Литера
0,65
1:2
Лист
Листов
118.09.15
Дробышев С.

F18.100.002.AD

Зуч. примен.

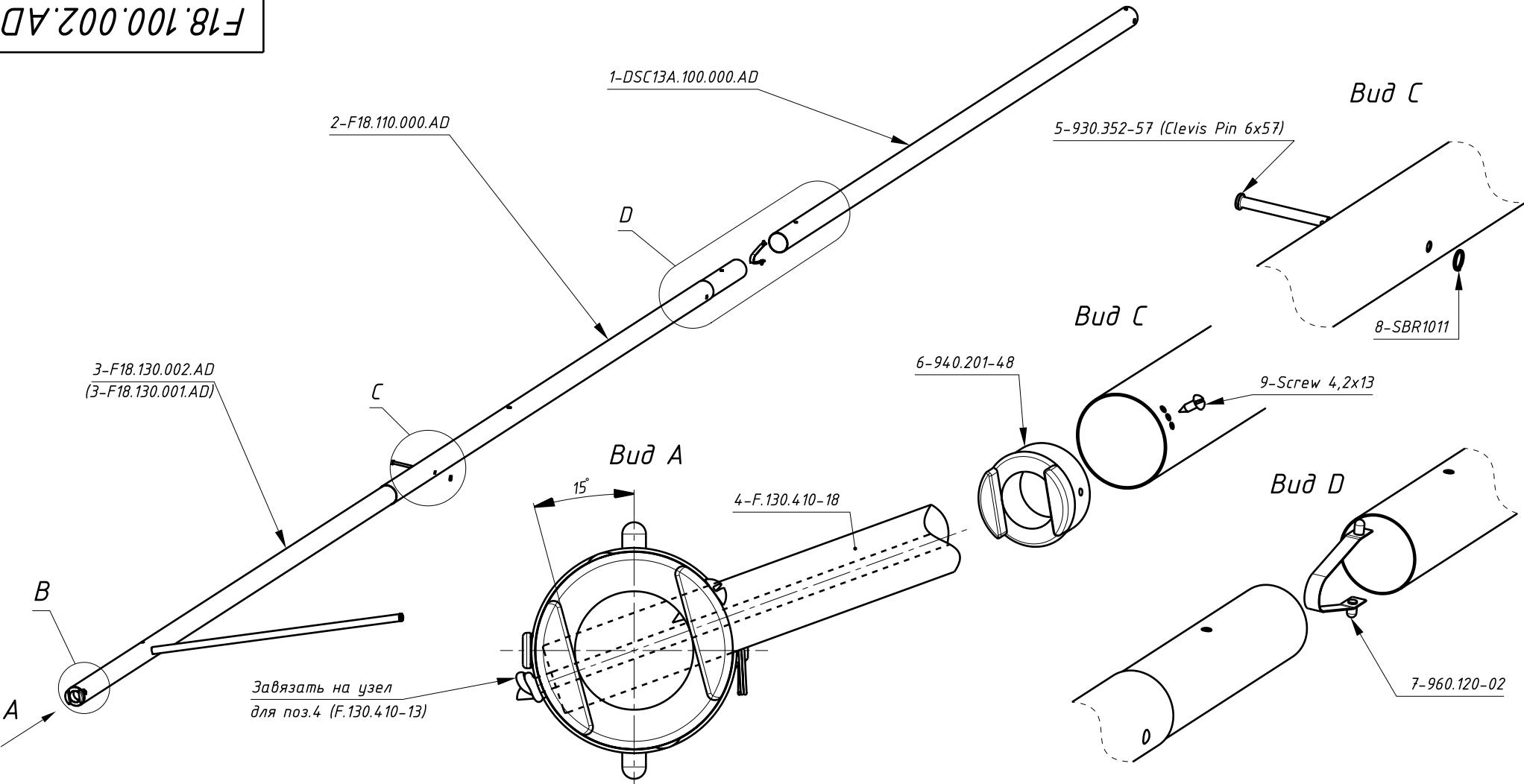
Справочники №

n. u dama

ВЗАИМ. УЧЕБ. № 2

ln. u dama

No σ



Поз	Обозначение	Наименование	F18.100.002.AD /к-бо	F18.100.001.A /к-бо
1	DCS13A.100.000.AD	LE tube №1 / Боковая труба №1	1	1
2	F18.110.000.AD	LE tube №2 / Боковая труба №2	1	1
3	F18.130.002.AD	LE tube №3 Left / Боковая труба №3 Левая	1	-
3	F18.130.001.AD	LE tube №3 Right / Боковая труба №3 правая	-	1
4	F.130.410-13	Swivel Cup / Поддержка АПУ	1	1
5	930.352-57	Clevis Pin ø6x57 / Валик ø6x57	1	1
6	940.201-48	End Cup / Заглушка	1	1
7	960.120-02	Button Spring / Фиксатор пружинный	1	1
8	SBR1011	Safety Ring / Кольцо контрбочное	1	1
9		Screw ø4,2x13 / Саморез ø4,2x13	1	1

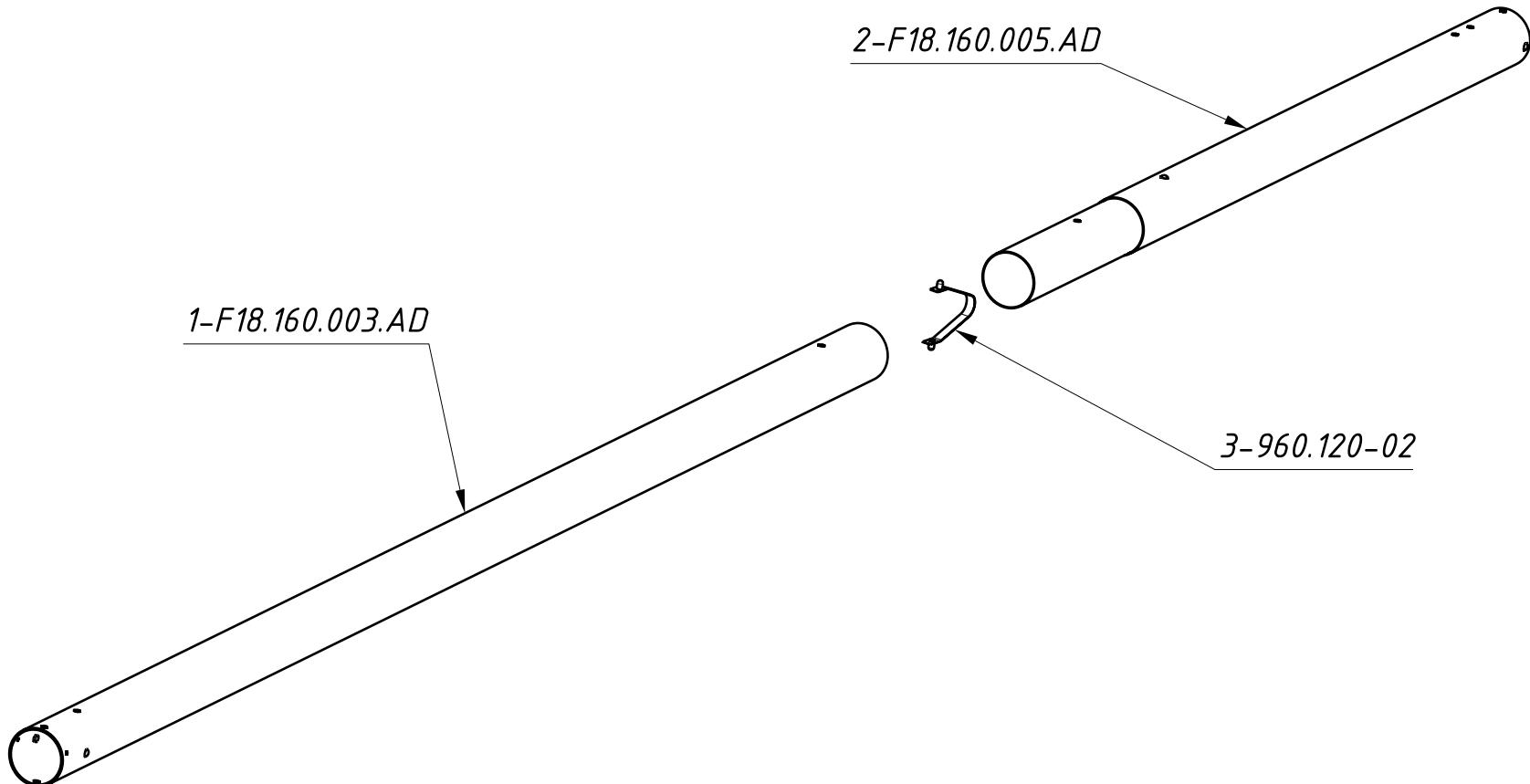
1. Показано F18.100.002.AD – левая.
Правая F18.100.001.AD – зеркальное отображение.
 2. Поз. 3: F18.100.002.AD и F18.100.001.AD – соответственно.

F18.100.002.AD

Изм.	Лист.	№ докум.	Подп.	Дата	LE Assembled Left Боковая трубы в сборе левая	Литера	Масса	Масштаб
Разраб.								
Проверил								
Т.контр.								
Нач.бюро.								
Н.контр.								
Утв.	Дробышев С.							
				Лист	Листов	1		

F18.160.000.AD

✓ (✓)



Первич. приемка.

Справочный №

Подп. и дата

Взам. инв.№

Инв.№

Подп. №

Инв. №

2-F18.160.005.AD

1-F18.160.003.AD

3-960.120-02

Поз.	Обозначение	Наименование	Кол.
1	F18.160.003.AD	Cross-beam Tube No.1 (Труба №1 попереч. балки)	1
2	F18.160.005.AD	Cross-beam Tube No.2 (Труба №2 попереч. балки)	1
3	960.120-02	Button Spring (Фиксатор пружинный)	1

Изм.	Лист.	№ докум.	Подп.	Дата	Литера	Масса	Масштаб
Разраб.							
Проверил							
Т.контр.							
Нач.бюро.							
Н.контр.							
Утв.	Дробышев С.						

F18.160.000.AD
Cross-beam
Поперечина

1:1
Лист 1 Листов 1

F18.230.000.AD

1

Первич. примен.

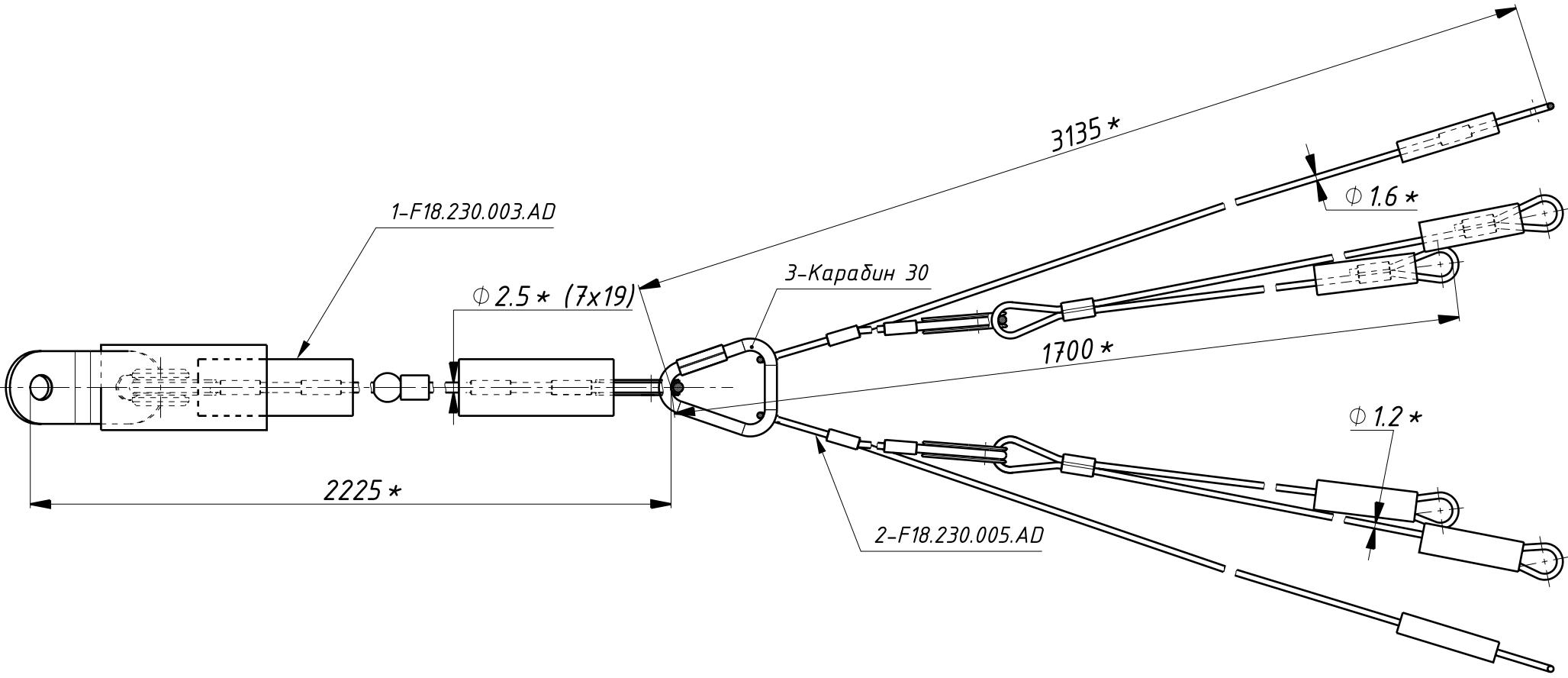
Справочный №

Лог. и дата

Инв. №

Подп. у дата

Инф.



1. Неуказанные предельные отклонения размеров:

H14, h14, ±JT14/2.

*2.*Размеры для справок.*