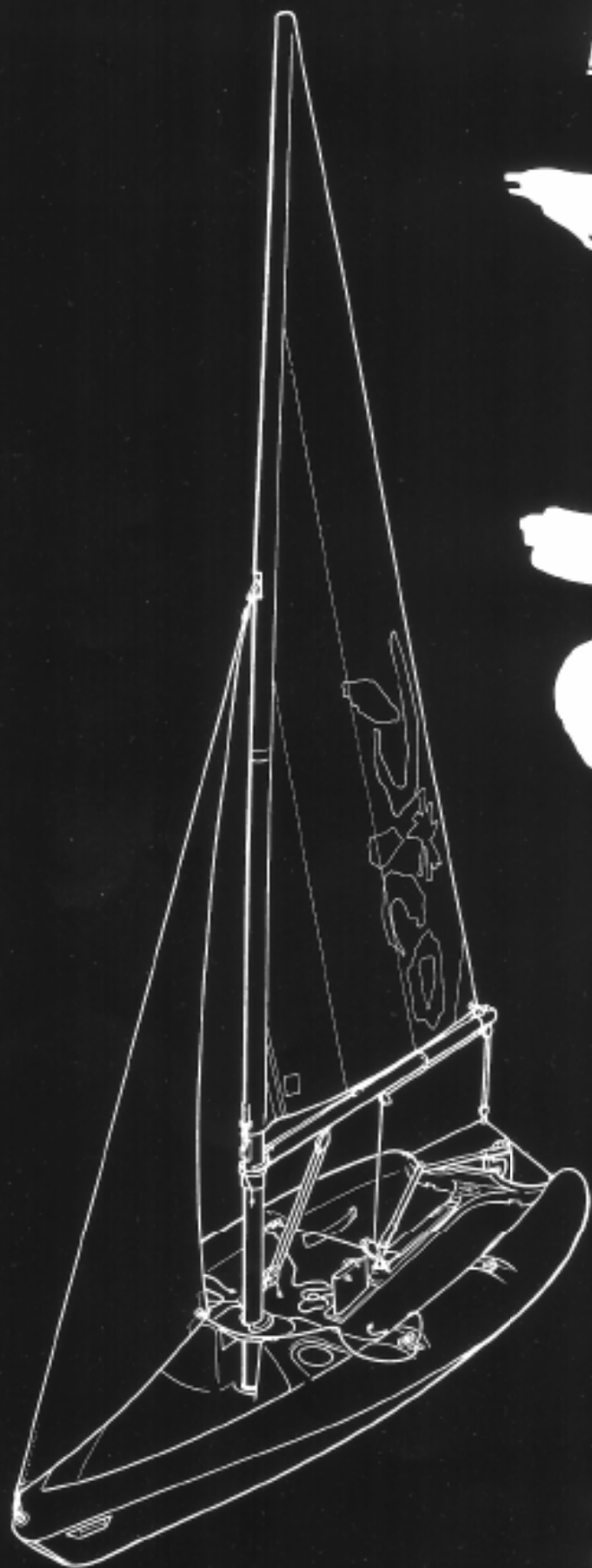


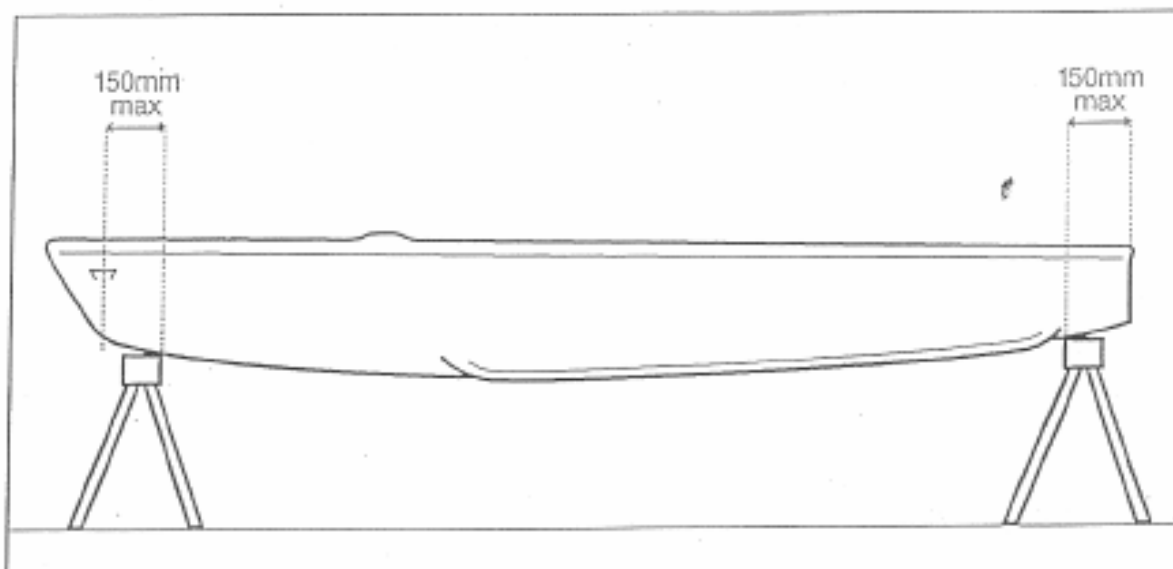
**Laser** 



**Laser Pico**  
**RIGGING MANUAL**

**WARNING:**

It is best to store your Pico using a gunwale hung trolley. If storing the hull on racks, it is best to turn the hull "deck down". If deck up, the hull should be supported as per the drawing below.



## GLOSSARY

**Aft:** towards the back of the boat.

**Bow:** the front end of the boat.

**Burgee:** a flag normally flown from the top of the mast.

**Batten:** a thin plastic strip which fits into a long narrow pocket in the leech of the sail.

**Cleat:** a fitting to which ropes can be attached and made fast.

**Centreboard:** a vertical sliding keel to prevent sideways drift.

**Fairlead:** a fitting that leads a rope in the most convenient direction for working.

**Foot:** the bottom edge of the sail.

**Forward:** towards the bows of a boat.

**Gooseneck:** a hinge fitting connecting the boom to the mast.

**Gunwale:** the outermost edge of the craft.

**Head:** the top corner of a sail.

**Kicking strap:** a line or series of lines between the base of the mast and the underside of the boom to control sail twist and boom position.

**Leech:** the trailing edge of a sail.

**Leeward:** the side of the boat on which the mainsail is set when sailing.

**Luff:** the front edge of a sail.

**Mainsheet:** the rope controlling the position of the mainsail.

**Mast step:** the position on the hull or deck in which the mast is located.

**Port:** the left hand side of a craft looking forward.

**Reefing:** the ability to shorten sails appropriate to the degree of wind strength.

**Shackle:** a 'U'-shaped piece of metal secured with a pin, used for securing halyard to sails, etc.

**Starboard:** the right hand side of a craft looking forward.

**Stern:** the aft-most area of a boat.

**Tack:** the lower forward corner of a sail.

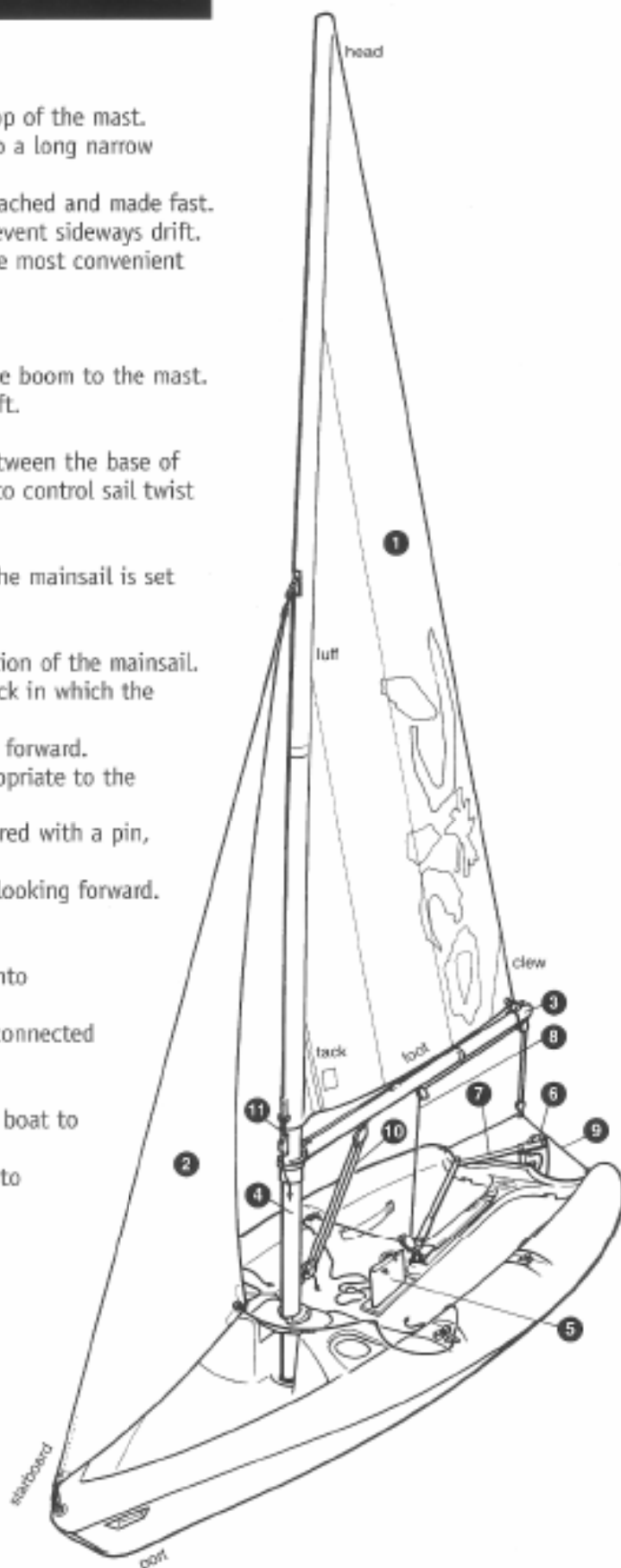
**Tiller:** a length of aluminium which fits into the rudder head to allow steering.

**Tiller extension:** a length of aluminium connected to the tiller by a universal joint which allows steering whilst leaning out.

**Transom:** flat area across the back of the boat to which the rudder is hung.

**Windward:** the side of the boat opposite to which the mainsail is set when sailing.

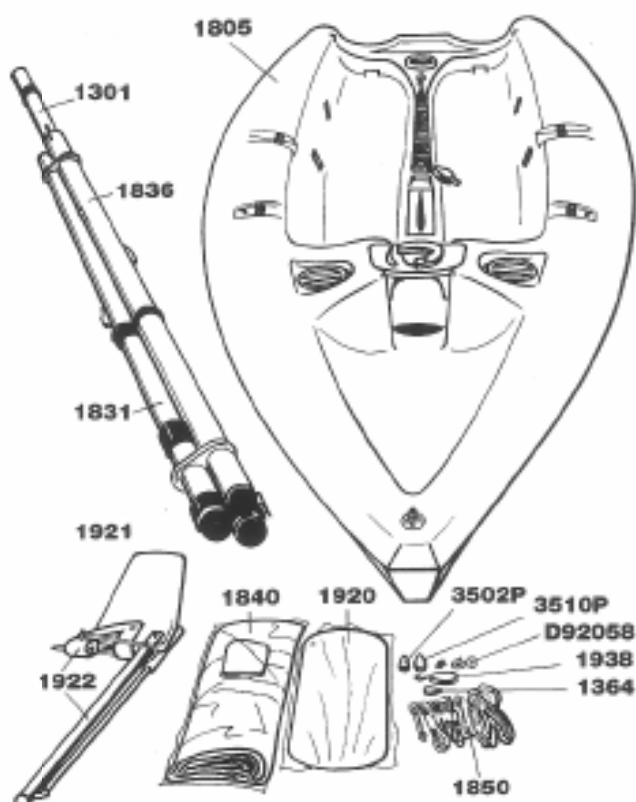
- 1 Mainsail
- 2 Jib
- 3 Boom
- 4 Mast
- 5 Centreboard
- 6 Rudder
- 7 Tiller
- 8 Mainsheet
- 9 Traveller
- 10 Kicking strap
- 11 Cunningham



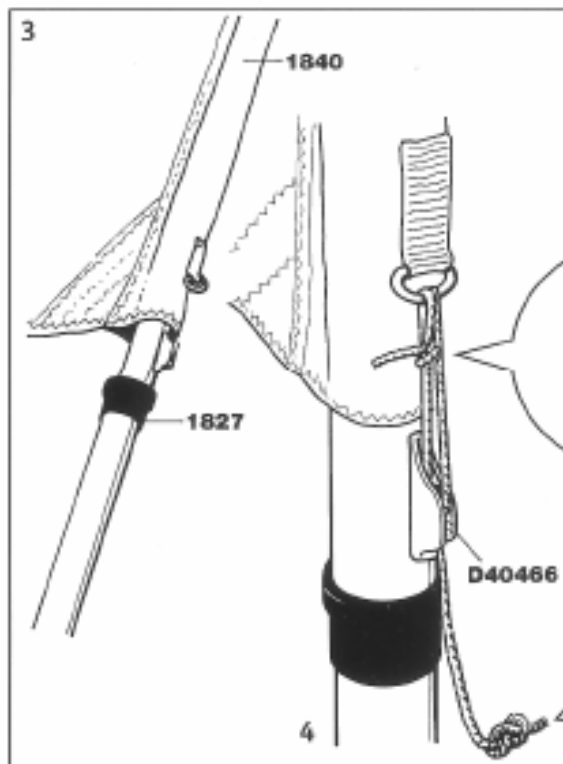
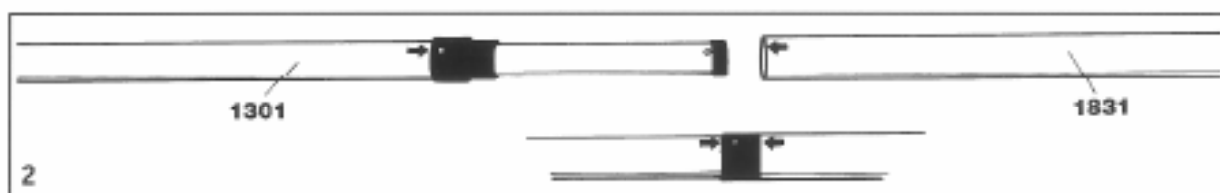
## RIGGING INSTRUCTIONS

1 Unpack your Pico and check that you have all the components:

	Part number
Pico hull	1805
<b>Rudder assembly</b> comprising:	
Rudder blade	1921PP
Rudder stock, tiller and extension	1922
Mainsail and sailbag	1840MY
Centreboard	1920
Boom	1836
Upper mast	1301
Lower mast	1831BL
Rope pack	1851
Small kicker block	1364
Large kicker block	1938
Small traveller block	3502P
Large traveller block	3501P
Metal twisted hook	D92058
4 x englefield clips	D40028



2 Assemble **upper** [1301] and **lower** [1831] mast sections, making sure that the red arrows align.

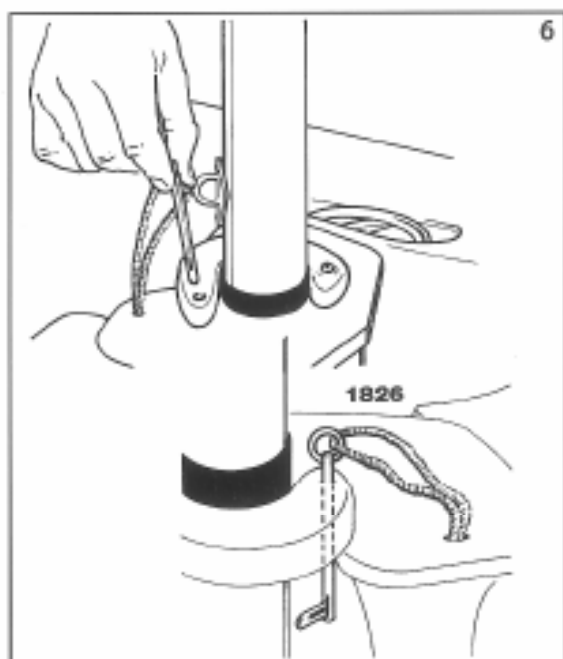


3 Unfold the **mainsail** [1840] (try to keep it clean and dry) and sleeve it over the top of the mast, making sure that the mast stays together. Slide the sail down over the mast, with the cunningham D-ring facing forward in line with the cleat at the bottom of the mast.

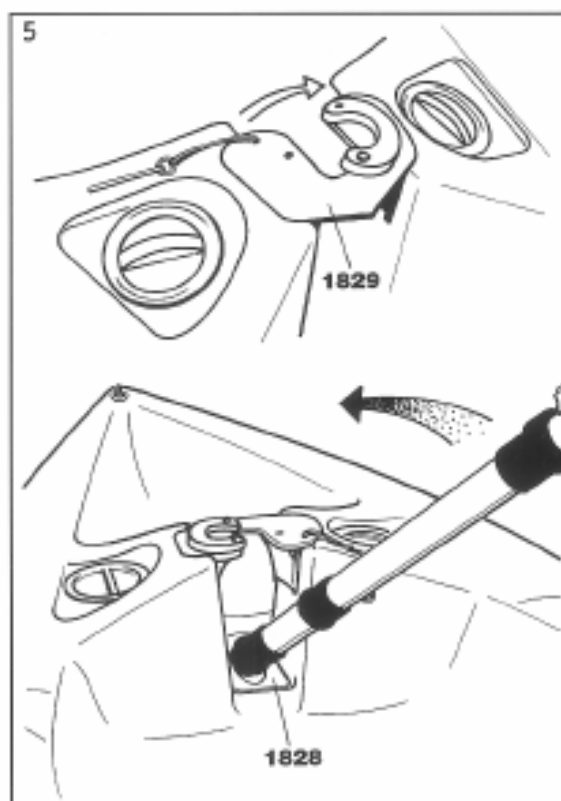
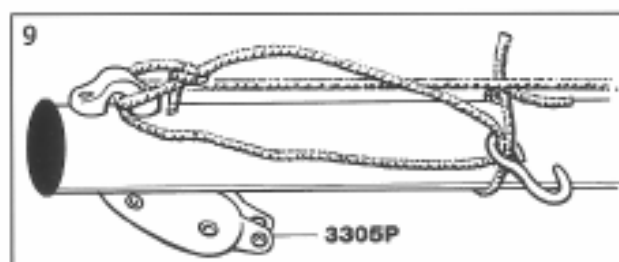
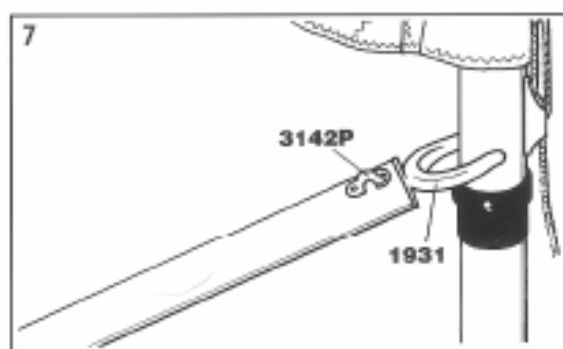
4 From your **rope kit** [1851], find the rope marked **cunningham**. Tie a bowline loop onto the sail ring, thread round small black pulley on the **cleat** [D40466], back up to the D-ring and down to the cleat to jam off. Add a small amount of tension and tie a figure of eight knot in the end of the rope.

5 With the boat turned into the wind, remove the **mast gate pin** [1826] and open the **mast gate** [1829]. Lift mast into the boat, dropping the bottom of the mast into the **mast step** [1828]. Raise the mast into an upright position and mast gate will close. **WARNING:** do not let go of the mast at this stage or it may fall backwards.

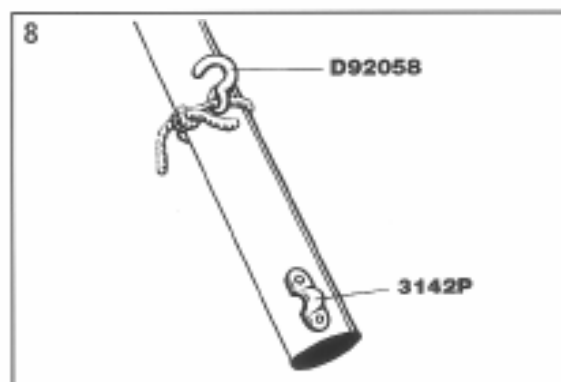
6 Insert the mast gate pin into the mast gate claw. Remember to move the tang to lock the pin in position. Your mast should now be secure.



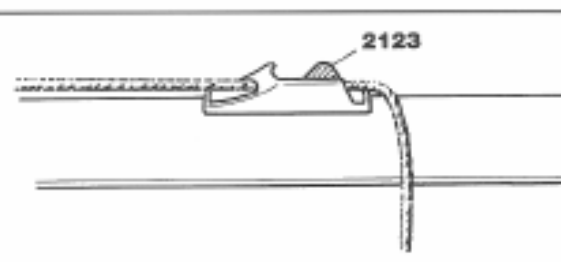
7 Clip **boom** [1836] onto mast above black collar. This will require a firm push!



8 At the back of the boom, use a reef knot to tie on the **clew hook** [D29058] with the **clew tie down**.



9 Tie the clew outhaul line to the small **fairlead** [3142P] fitting on the end of the boom with a bowline loop, then run through the eye of the clew hook, back round the fairlead and up to the **cleat** [2123] on the boom.

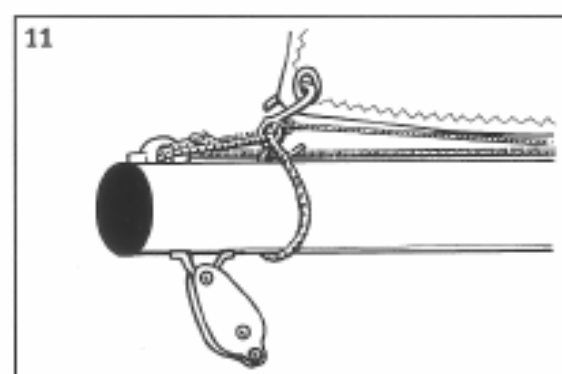


**10** Take the tail end of the clew outhaul line and pass it through the front fairlead mounted on the boom. Thread through the very small grey **englefield clip** [D40028] and tie off with a figure of eight knot. At the outer end take the long piece of **shockcord (1)**, pass it

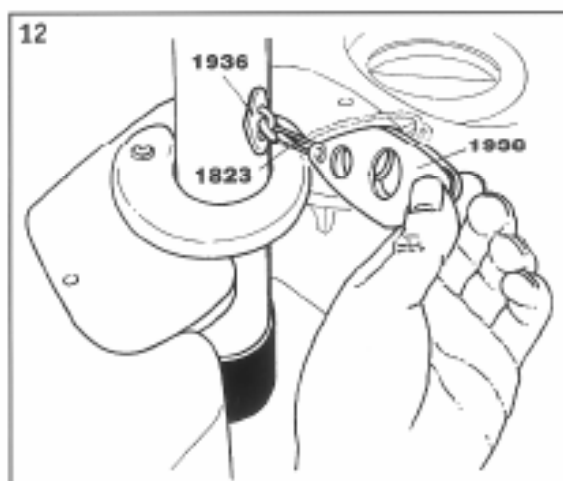
through the eye of the hook and tie a large knot. At the other end pass through another small grey englefield clip and tie a figure of eight knot in the end. Now clip the two clips together. This is the tidy up line for your clew outhaul.



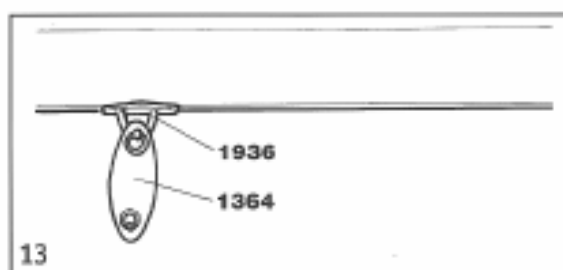
**11** Now take the sail and, with the boat pointing into the wind, locate the clew hook into the eyelet on the corner of the sail.



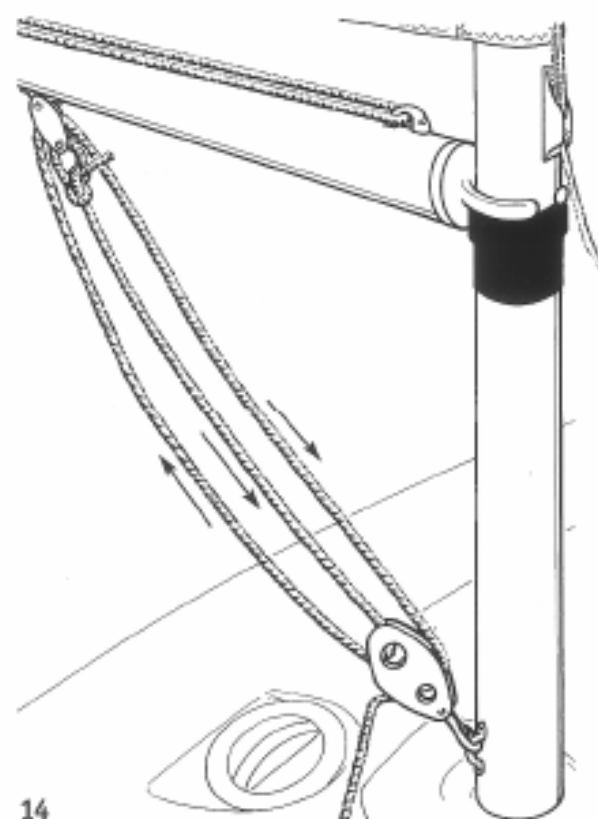
**12** Take the **large kicker block** [1938] with snap hook, and clip it to the **plate** [1936] on the mast, just above the mast gate.



**13** Take the **small kicker block** [1364] and fit it to the eyelet on the boom (near the front end), using the small pin and ring.

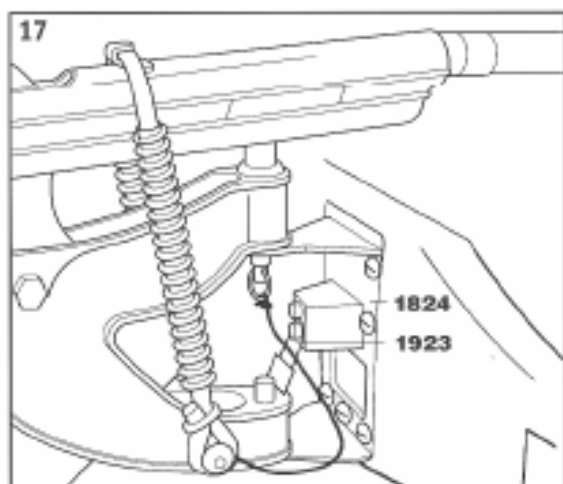
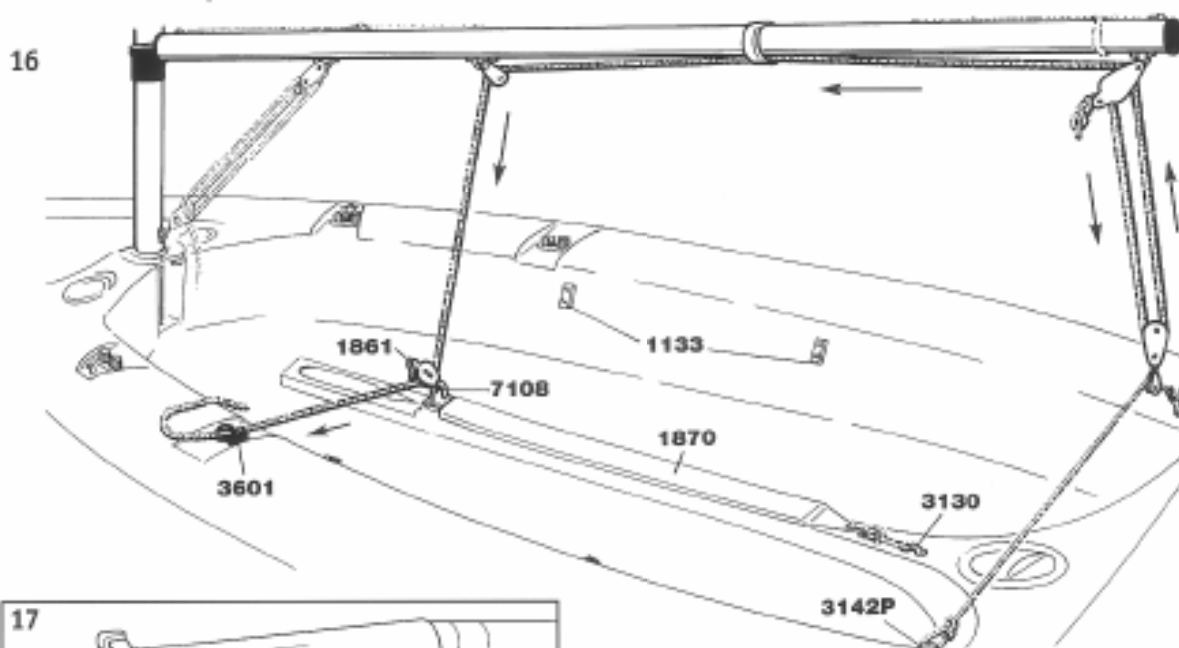
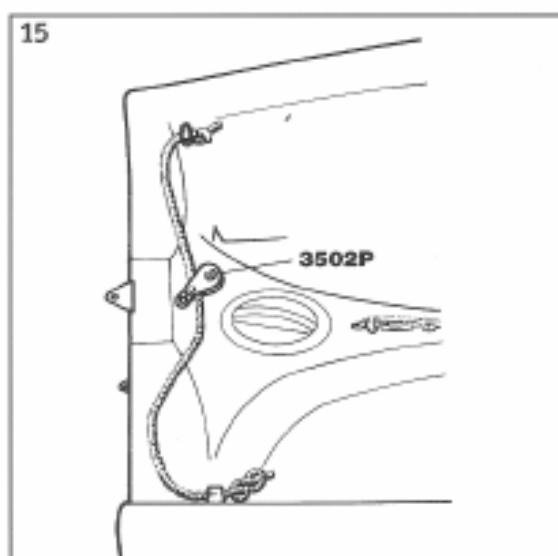


**14** Now thread the **kicking strap line** as per the drawing, starting with a bowline on the upper block.



**15** Attach the **traveller system**. Take the traveller line, tie a knot in one end, pass it through the **small traveller block** [3502P] and the fairlead on the opposite side. Tie a knot in the end of the rope.

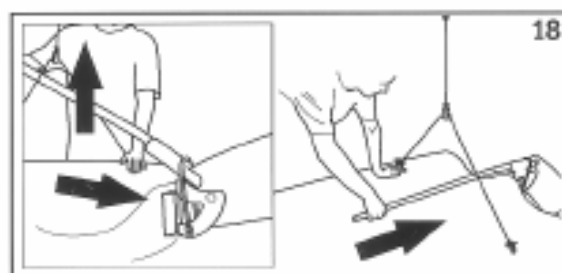
**16** Join the large traveller block to the small block on the traveller with the englefield clips. Take the **mainsheet**. Starting at the back of the boom, you will find a block with a becket at the bottom. Pass the end of the mainsheet through the back end of the block and tie a figure of eight knot. Then thread the mainsheet down to the large traveller block, back up to the boom end block and along to the **webbing loop** [1939]. Pass the sheet through the loop, along to the middle block and down to the and down to the **ratchet block** [1861] in the middle of the boat. You will find a small black slide on the side of the ratchet block. This turns the ratchet on and off. Ensure that the ratchet 'click-clicks' when the mainsheet is pulled out to the cleats.



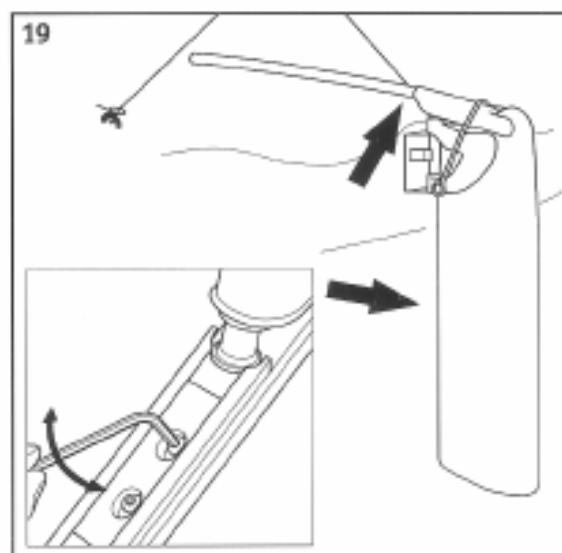
**17** Fit the **rudder assembly** [1921/1922] on the **transom rudder fitting** [1824].

**Important:** The **split ring** must be used to secure the rudder assembly to prevent it from falling off during a capsize. See illustration. The **rudder retaining clip** [1923] locates the rudder stock when the rudder assembly is positioned on the transom rudder fitting and should be adjusted so that the stock cannot be removed without depressing the clip by hand.

**18** To put the rudder blade down from the fully up position lift the tiller slightly and push backwards.



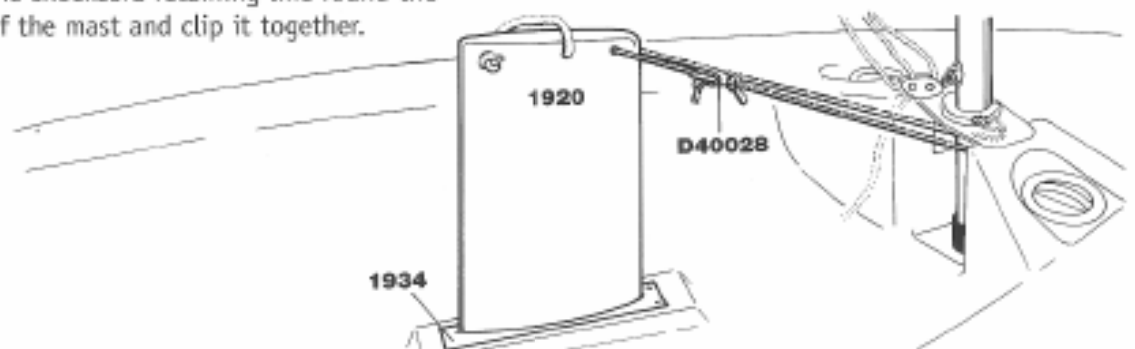
**19** The rudder assembly has a kick-up system so that if you run aground the rudder will come up automatically. This can be adjusted by repositioning the plastic buffer under the tiller. When the rudder blade is fully down the tiller should locate over the capstone on the stock. If the rudder blade can be moved backwards from the tip more than 3mm then the plastic buffer under the tiller should be moved forward to remove the slack. The buffer is adjusted by loosening the Allen screws with Allen key provided, moving the buffer and re-tightening the screws.



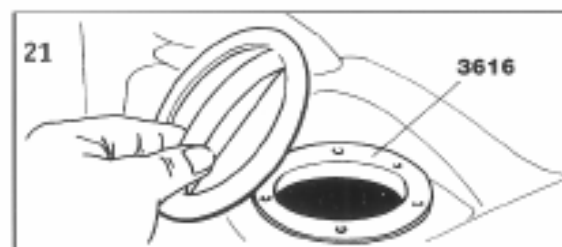
**Warning:** The kick up system is a safety feature in case you run aground accidentally. Under normal circumstances the rudder should be lifted before approaching the beach or slipway.

To lift the rudder raise the tiller slightly to disengage the lock down mechanism and pull the tiller towards you

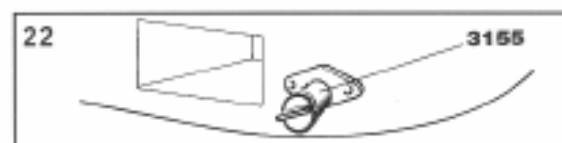
**20** Take the **centreboard** [1920]. Thread the **centreboard shockcord** (2) through the small hole, put the small englefield clips on either end and secure each end with a knot. When you put the board into its slot, you can then loop the shockcord retaining line round the base of the mast and clip it together.



**21** Ensure that the **hatches** [3616] are fitted correctly. It is advisable to apply a small amount of vaseline or other non-staining lubricant to the threads on a regular basis.



**22** Ensure that the **transom bung** [3155] is fully screwed in.

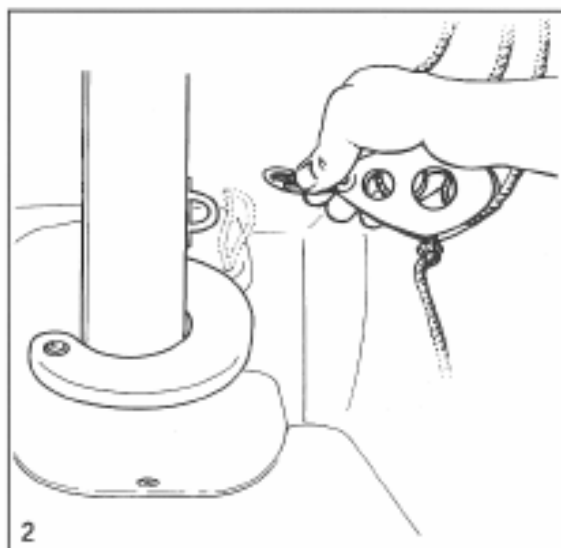
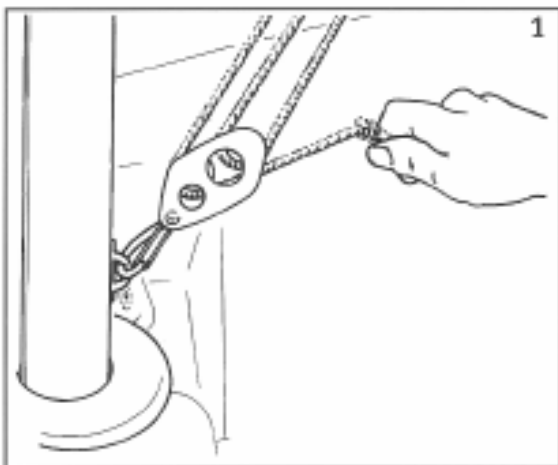




## REEFING YOUR PICO

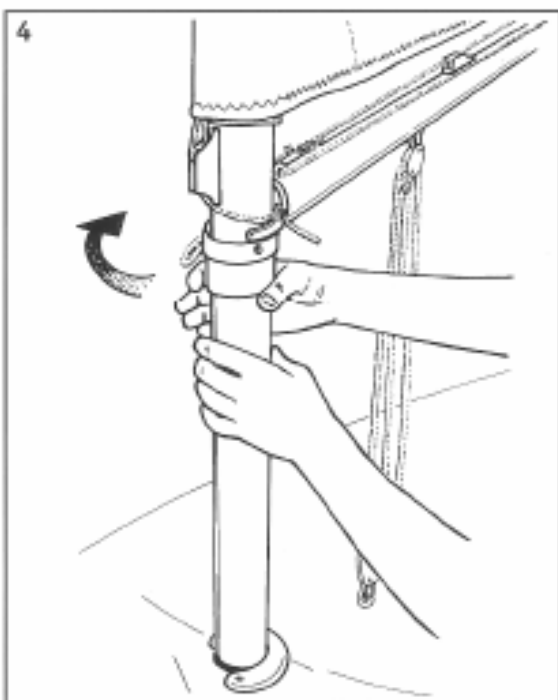
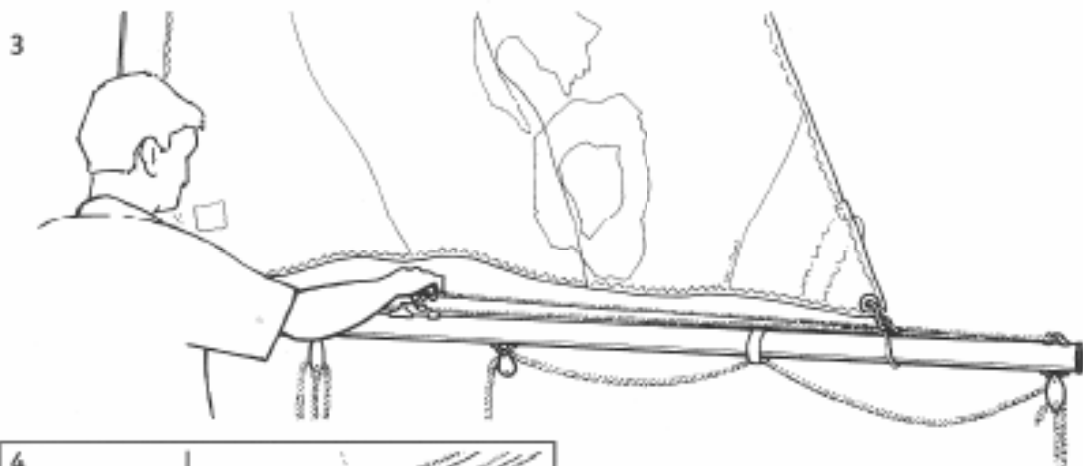
In strong winds, or if you are unsure whether you can cope with the conditions, it is always best to reef the sail down to reduce its area.

1 First slacken off the kicking strap.



2 Unclip the large kicker block from the mast.

3 Uncleat and slacken the clew outhaul line and ensure that the foot of the sail is loose.



4 Rotate the mast in either direction by turning the mast below the gooseneck. This will roll the sail around the mast, thus reducing the sail area. This is reefing.

5 Re-attach the kicking strap but leave it loose.

6 Re-attach the clew outhaul and pull it tight.

7 Re-tighten the kicking strap.

## PICO JIB KIT

Your jib fairleads and cleats have been fitted as standard. Unpack your jib kit and check that you have all the components:

	Part number
Pico hooks x2	1823
Rigging links x2	2136
Jib sheet rope 6m x 8mm	0524
Jib	1841

**1** Attach a Pico hook [1823] to the top and bottom of the jib luff with the rigging links [2136] provided.

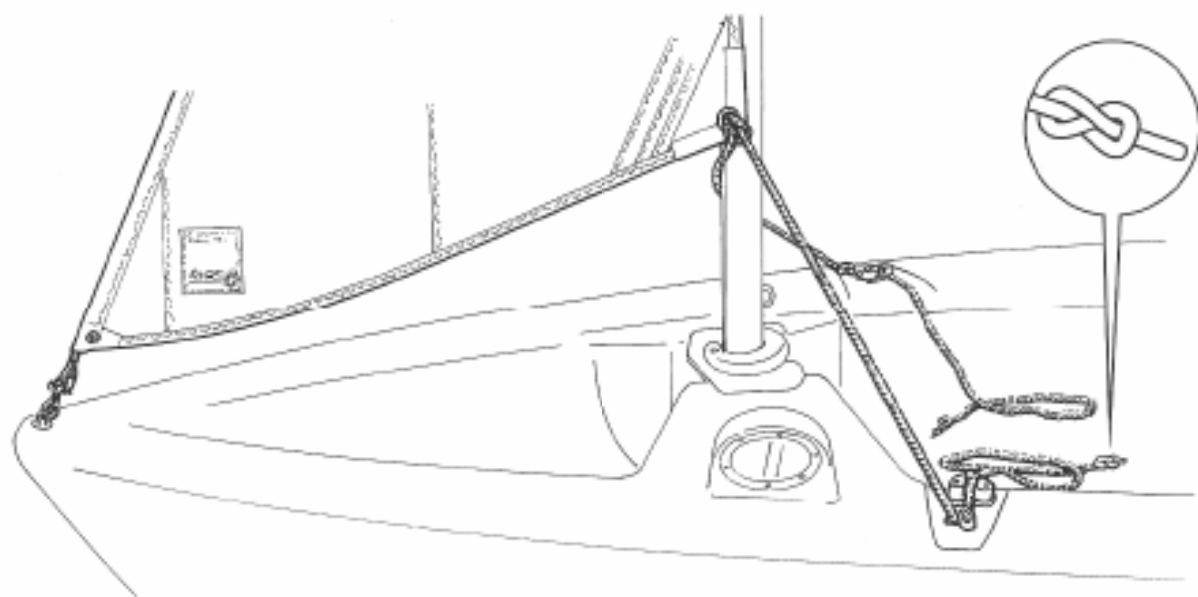
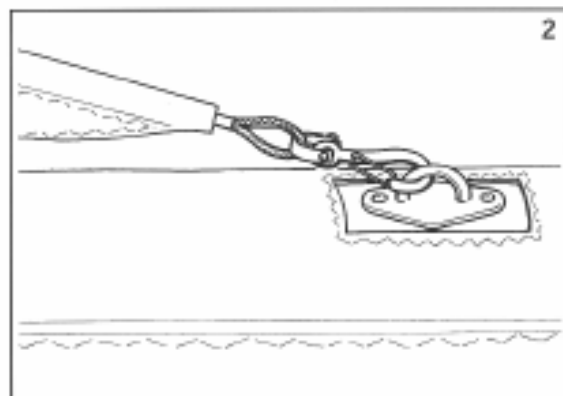
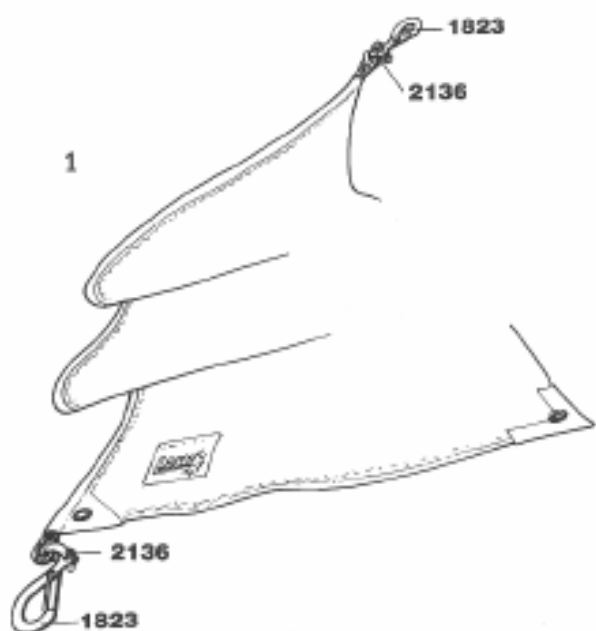
**2** Ensure that the slot for the jib on the luff of the mainsail is over the eye for the jib and hook the head of the jib onto the upper mast.

**3** Step the mast as described in item 5 of the main rigging instructions.

**4** Clip the bottom of the jib onto the eye bolt fitted to the bow.

**5** Tie the jib sheet onto the jib clew with two half hitches, ensuring that there is an equal rope tail for each side of the boat.

**6** Thread the ends of the jib sheets through the fairleads and tie a figure of eight knot in each end.



## PICO SPORT PACK

1 Unpack your Sport pack and check you have all the components:

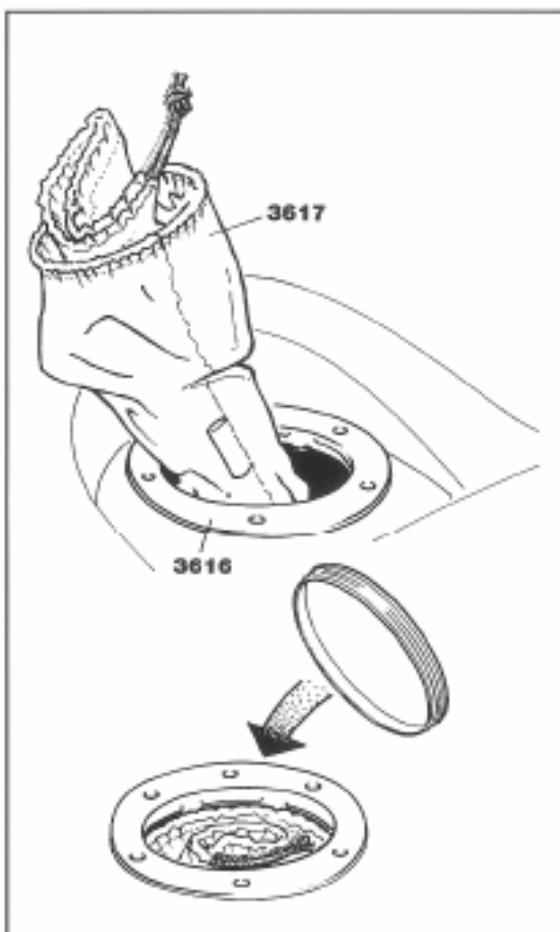
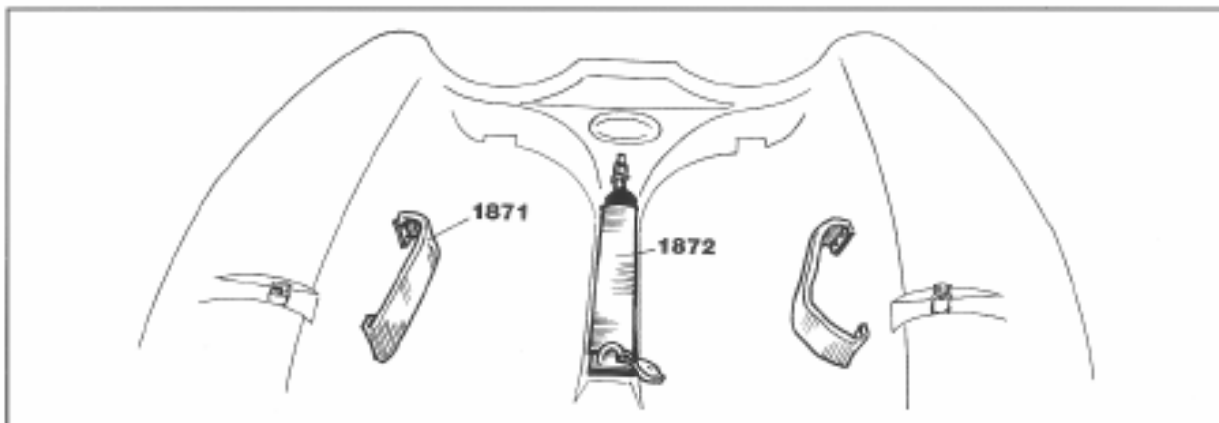
	Part number
Side padded toe straps x2	1871
Centre padded toe strap	1872
Inspection hatch bags x2	3617

**WARNING:** Please take care not to over-tighten the screws. Screws should be 'finger tight'. Over-tightening can strip the thread in the plastic.

2 Unscrew and remove the **plastic side plates**. Remove the **centre toe strap**.

3 Attach the **side padded toe straps** [1871], using the plastic side plates as per the illustration.

4 Attach the new **centre padded toe strap** [1872].



5 Insert the hatch bags [3617] inside the hatches adjacent to the mast.

## PICO ACCESSORIES

	Part Number
1 Top Cover	1860
2 Boat Bag	1862
3 Combo Bag	1863
4 Jib Kit	1845Y
5 Sport Kit	1897

## LASER MAIL ORDER

To order your Pico parts and accessories, call **LaserDirect 01295 252599**, quoting your Visa/Mastercard/Switch number, or go to **[www.lasersailing.com](http://www.lasersailing.com)** for secure online ordering (plus a whole lot more!).

## BASIC SAFETY AFLOAT

### Before you go sailing:

- Check you are wearing suitable clothing and safety equipment for the conditions and time of year. Always wear a buoyancy aid or life jacket.
- Make sure a third party knows where you are sailing and how many there are of you in your group.
- Check the weather forecast: radio, television or coastguards.
- Check the time of high and low tides, if applicable.
- Seek advice on local conditions if sailing in a new area.
- Check the condition of your craft.
- Check for overhead power cables when launching.

### On the water:

- Conform to the sailing rules of the road.
- Look out for changing weather conditions.
- Never sail beyond your ability or that of your crew.
- Understand and be competent in the sailing skills and righting techniques of your craft.

## GENERAL MAINTENANCE AND SERVICE

- 1 Your boat should always be tied down securely to the ground fixing when not in use. Sails should be stored dry when possible.
- 2 Any excess water in the hull should be drained by the transom bung.
- 3 The keel line should be tilted towards the stern to allow the drainage of any water that may find its way into the cockpit.
- 4 Boats and rigging should be checked periodically for wear or damage.
- 5 Damaged or worn parts should be replaced using the LaserDirect part identification system.
- 6 The hull should be washed down with fresh water after sailing on the sea.
- 7 Spars and rigging should be washed thoroughly.
- 8 Sails should be thoroughly washed, dried checked and stored in a dry place.
- 9 Road trailer and launching trolley should be washed, checked and greased where necessary.



## Statement of Conformity

We hereby confirm that the

# Laser Pico

built by

**Performance Sailcraft Europe Limited**

**Banbury**

**Oxfordshire, U.K.**

Boat type:	Sailing Dinghy
Design category:	C
Length of hull:	3.5 m
Beam of hull:	1.35 m
Unladen weight :	90 kg
Maximum number of persons:	3
Maximum load:	175 kg
Including: Persons at 75kg each Carry on load	

has been assessed to conform  
with the requirements of the  
EU Recreational Craft Directive  
94/25/EC

**Annex I- Sections 3.2 & 3.3 & Annex VI - Module Aa**

Date of issue:	01 January 2002
Valid until:	31 December 2002
Statement Number:	7/97a

**Paddy Boyd**

**Irish Sailing Association**

**EU – Notified Body: 0808**

March 1997

SEA000      PICO ROPE KIT -1851

<b>MAINSHEET</b>	10metres 8mm Excel Marston Blue
<b>JIB SHEET</b>	6metres 8mm 8plait Yellow Marston
<b>TRAVELLER</b>	1.2metres 6mm Excel Pro Purple
<b>KICKER LINE</b>	2.7metres 6mm Excel Pro Purple
<b>CUNNINGHAM</b>	1.25metres 4mm Excel Pro Blue
<b>CLEW OUTHAUL</b>	3.65metres 4mm Excel Pro Blue
<b>CLEW TIE DOWN</b>	0.35metres 4mm Excel Pro Blue
<b>SHOCKCORD</b>	1.1metres 5mm Blue
<b>SHOCKCORD</b>	1.2metres 5mm Blue

