

595-095-E
2008-09-23
500 H

FURLEX

SELDÉN

Supplementary Manual

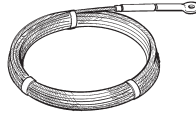
Furlex *500 H*

These pages replace
corresponding pages of
manual 595-119.

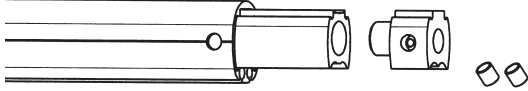
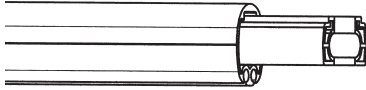

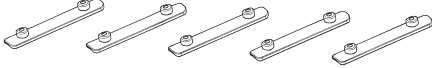


SELDÉN

Forestay wire

<input type="checkbox"/> Forestay wire & bushing, 1 off	
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Luff extrusion tube

<input type="checkbox"/> One 1000 mm (39 3/8") luff extrusion with long joining sleeve + bearing plug with bushes	
<input type="checkbox"/> One 2000 mm (78 3/4") luff extrusion with distance tube halves.	
<input type="checkbox"/> 4800 mm (189") luff extrusions with distance tube halves + joining sleeve (number dependent on length ordered.)	
<input type="checkbox"/> One connecting plate for 1000 mm (39 3/8") extrusion. <input type="checkbox"/> One connecting plate for each 4800 mm (189") extrusion.	

Tools

Tools needed for assembly:

- Screwdriver
- Hacksaw
- 2 adjustable spanners (one of smaller type, or No 16 fixed open ended)
- Channel-joint Pliers
- Adhesive tape
- File
- Marking pen, waterproof
- 8 mm Allen Key (supplied with kit)
- Steel measuring tape (20 m) (60'7")
- Knife

For halyard leads:

- Heavy-duty Philips screwdriver
- Drill
- Drill bit Ø 5.3 mm (7/32") (included in package)

Calculations for wire $\phi 16 - 500 H$

1. Determine mast rake with fore and backstays tensioned.
2. Slacken off the backstay as much as possible. Use the genoa halyard to pull the masthead forward. Tie the halyard to the boat, do not use the snap-shackle. Remove the forestay without altering the setting of the rigging screw if fitted. Place the forestay on a smooth surface and measure its length (FL) with the steel measuring tape.
3. Note the forestay length (FL) in the following table. The correct wire length (WL) can then be calculated.
4. Measure the new wire from the centre of the hole in its end fitting. Mark off the length WL on the wire in such a way that it cannot be eradicated. Do NOT cut the wire yet.



Note! Use caution when opening the roll of wire.

	FORESTAY WIRE LENGTH (See fig. 8.1)	Your stay	Example
FL	Old forestay length (FL) without tension, but including rigging screw (if any). (See fig 8.1)		28.000
T	Deduction for lowerwire terminal:	- 500	- 500
	If a link or an extra toggle will be fitted then deduct its length from FL. Note: Any additional link or toggle must have a torsional strength (torque capacity) not less than the stem-head fitting requirement stated on page 9, second item.	-	- 27.500
WL	Cut the new forestay wire at this length (WL, fig. 8.2)	=	=
	LUFF EXTRUSION LENGTH (See fig. 8.2)	Your foil	Example
WL	New forestay wire length as per table above		27.500
A + B	Standard deduction (A + B):	- 1.320	- 1.320
C + D		C + D =	= 26.180
C	Max. number of 4800 mm extrusions which together are shorter than C + D: off x 4800 mm D =	-	(5 extrusions) - 24.000
D	Cut the top extrusion. Chamfer the cut end with a file. Length of top extrusion D = If D is longer than 2000 mm; cut the top section from a 4800 mm extrusion. If D is between 1000 and 2000 mm; cut the top section from a 2000 mm extrusion. If D is shorter than 1000 mm; replace the topmost 4800 mm extrusion with a 2000 mm extrusion. (See C). The join will then be moved down 2800 mm. Also adjust C and D as follows: Reduce measurement C by 2800 mm. Increase the D measurement by 2800 mm. Cut the top section from a 4800 mm extrusion.	=	= 2.180
E	Cut the distance tube for the top extrusion: (fixed measurement) Distance tube length E =	- 500 =	- 500 = 1.680

Calculations for rod stay – 500 H

1. Determine mast rake with fore and backstays tensioned.
2. Slacken off the backstay as much as possible. Use the genoa halyard to pull the masthead forward. Tie the halyard to the boat, do not use the snap-shackle. Remove the forestay without altering the setting of the rigging screw if fitted. Place the forestay on a smooth surface and measure its length (FL) with the steel measuring tape.
3. Note the forestay length (FL) in the following table. The correct rod length (WL) can then be calculated.

	FORESTAY ROD LENGTH (See fig. 8.1)	Your stay	Example
FL	Old forestay length (FL) without tension, but including rigging screw (if any). (See fig 8.1)		28.000
T	Deduction for lower rod terminal (rigging screw 50% extended): ROD 40: – 495 mm ROD 48: – 500 mm ROD 60: – 505 mm	-	- 500
	If a link or an extra toggle will be fitted then deduct its length from FL. Note: Any additional link or toggle must have a torsional strength (torque capacity) not less than the stem-head fitting requirement stated on page 9, second item.	-	-
WL	Cut the new forestay rod at this length (WL, fig. 8.2)	=	= 27.500
	LUFF EXTRUSION LENGTH (See fig. 8.2)	Your foil	Example
WL	New forestay rod length as per table above		27.500
A + B	Standard deduction (A + B): ROD 40: – 1380 mm ROD 48: – 1400 mm ROD 60: – 1420 mm	-	- 1.400
C + D		C + D =	= 26.100
C	Max. number of 4800 mm extrusions which together are shorter than C + D: off x 4800 mm	C =	(5 extrusions) - 24.000
D	Cut the top extrusion. Chamfer the cut end with a file. Length of top extrusion D = If D is longer than 2000 mm; cut the top section from a 4800 mm extrusion. If D is between 1000 and 2000 mm; cut the top section from a 2000 mm extrusion. If D is shorter than 1000 mm; replace the topmost 4800 mm extrusion with a 2000 mm extrusion. (See C). The join will then be moved down 2800 mm. Also adjust D and E as follows: Reduce measurement C by 2800 mm. Increase the D measurement by 2800 mm. Cut the top section from a 4800 mm extrusion.	=	= 2.100
E	Cut the distance tube for the top extrusion: (fixed measurement)	- 150	- 150
	Distance tube length E =	=	= 1.950

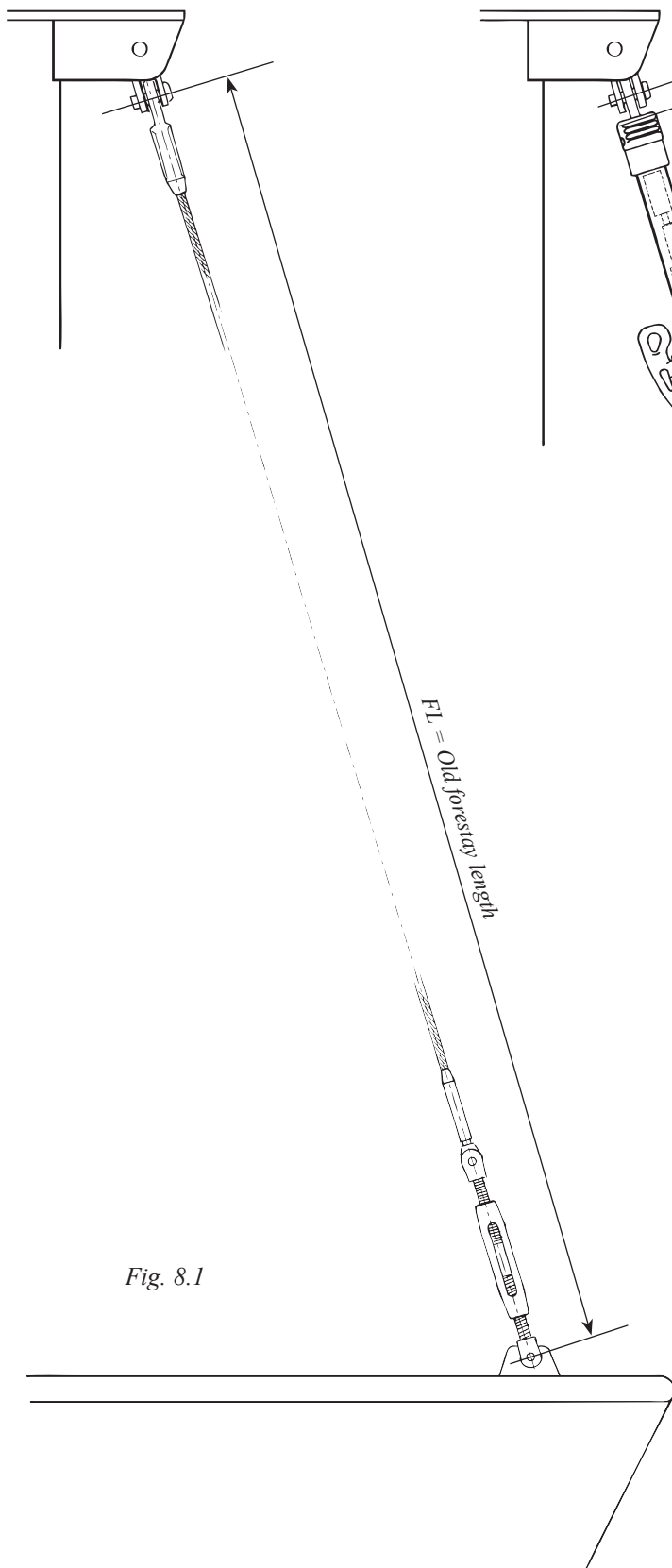


Fig. 8.1

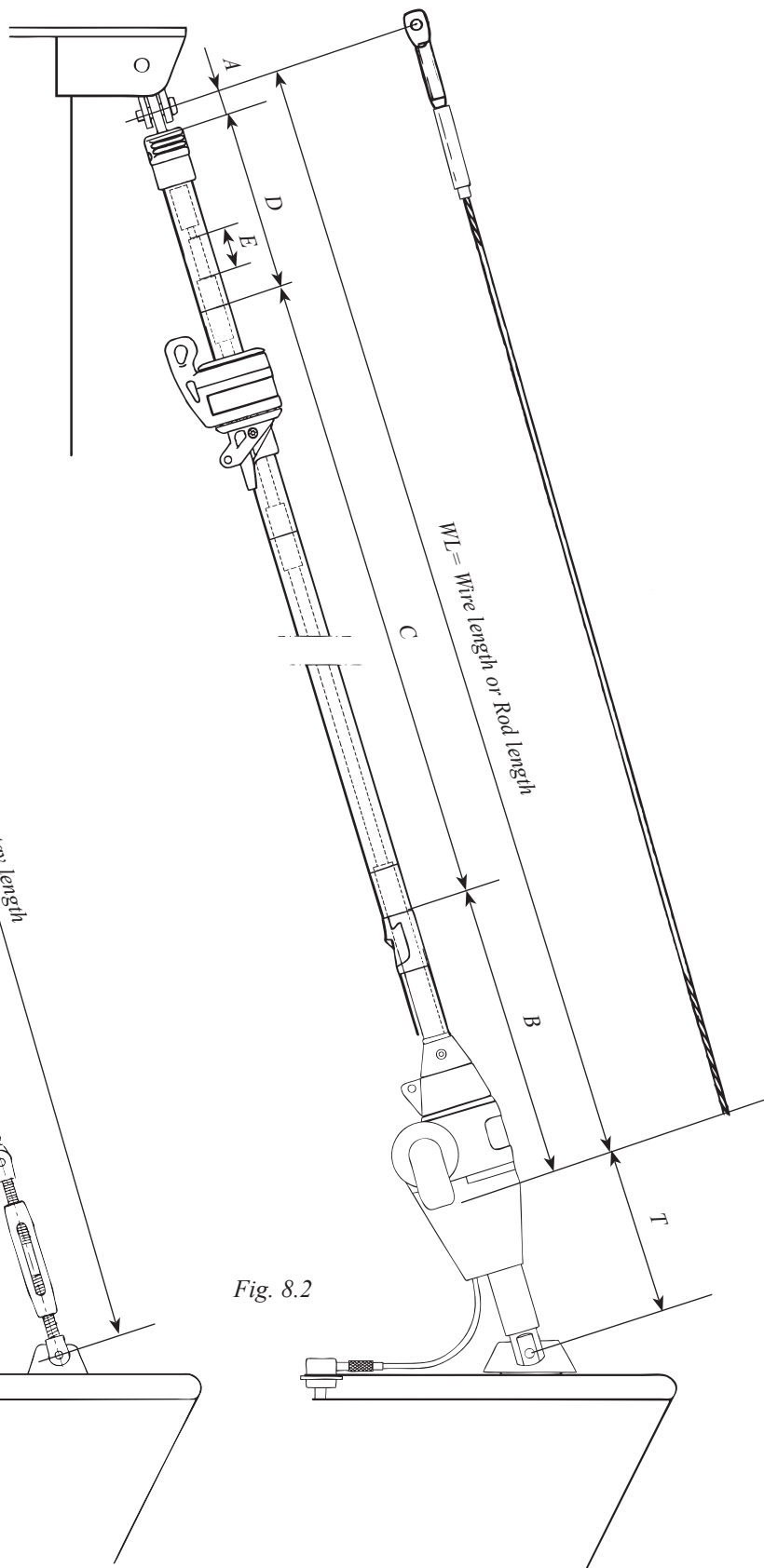


Fig. 8.2

Installation

Forestay installation to deck

1. The forestay is fitted with a stout torsion-resistant lower toggle (see fig. 9.2). This is attached to the stem-head fitting. The toggle can be fitted either athwartships or fore-and-aft.
2. Check that the stem-head fitting and the toggle are suited (see table below). The stem-head fitting must be able to withstand a torque of *1200 Nm for Wire Ø 16, Rod 40 and Rod 48, or 1600 Nm for Rod 60* (Maximum working load).
3. Check that the drive unit goes free of the pulpit, bow anchor, or other deck equipment. (See fig. 9.1 and the table).

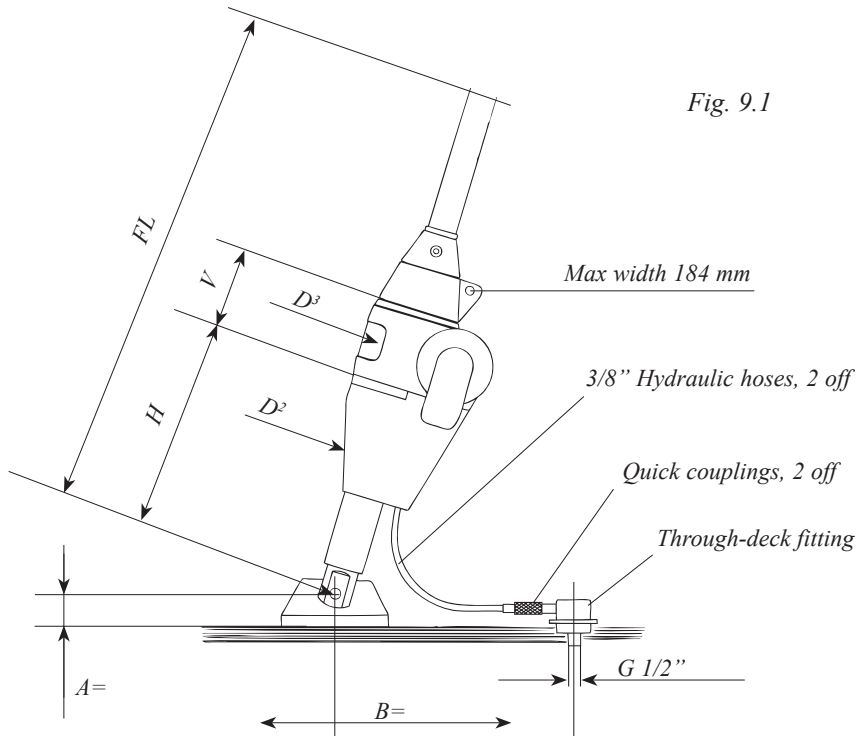


Fig. 9.1

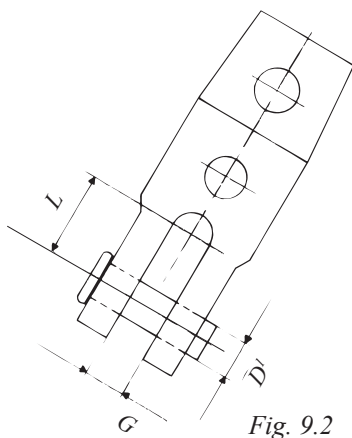


Fig. 9.2

All measurements in millimeters

500 H	$\text{Ø } D^1$	G	L	$\text{Ø } D^2$	$\text{Ø } D^3$	H	V
Wire Ø 16	25.4	26	45	90	160	430	140
ROD 40	25.4	26	45	90	160	430	140
ROD 48	28.6	29	50	90	160	430	140
ROD 60	31.8	32	55	90	160	430	140

4. Protect the hydraulic hoses an through-deck fitting from the anchor chain.
5. Siting of the through-deck fitting is to your choice. *Send measurements A and B to Seldén Mast AB or your dealer.* We will then make up the two hydraulic hoses for the motor. See fig. 11.1 for the through-deck fitting dimensions. A $\text{Ø } 72 \text{ mm}$ hole through the deck is required.

Installation

Hydraulic motor

- The drive unit and hydraulic motor are tested before delivery.
- The hydraulic motor is a Danfoss OMM 20 cm³/revolution. Maximum recommended pressure, p=140 bar.
- The oil flow, Q=20 litres/min. gives a nominal speed n=40 rpm.
The normal working load when reefing or unfurling is p=40 bar when Q is 19 litres/min.
- A 24-volt hydraulic pump unit with an effect of P=3 kW is usually sufficient.

Through-Deck fitting

The main installation dimensions are shown in fig. 11.1.

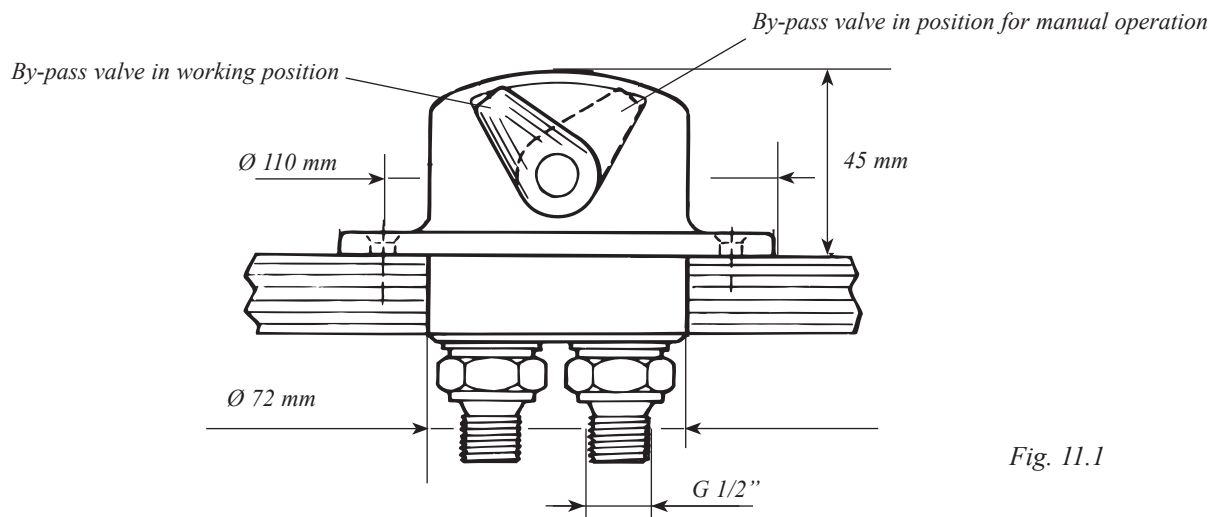


Fig. 11.1

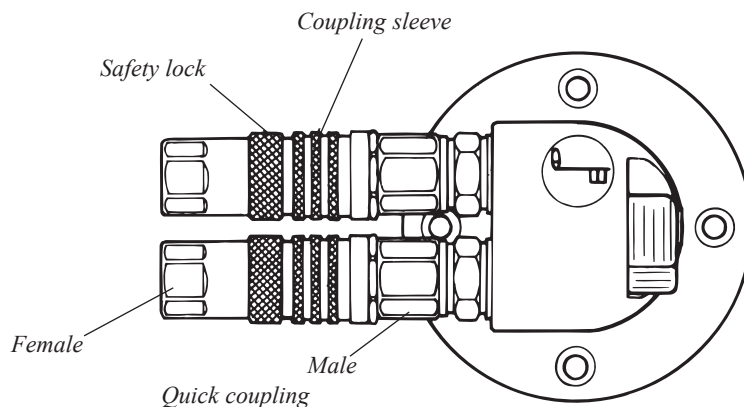


Fig. 11.2

Quick couplings

The quick couplings (fig. 11.2) are disconnected by pushing the knurled coupling sleeves out from the coupling. The coupling sleeves have *safety locks* to guard against involuntary disconnection. These are freed by twisting the locking rings until they release.

Always check that quick couplings are locked!

Hydraulic hoses

1. Hydraulic hoses for installation below deck are *not* supplied. (See fig. 12.1).
2. Connecting threads are G 1/2". (See fig. 11.1).
3. Use hydraulic hoses of good quality corresponding so SAE 100R7/-ISO3949. Minimum dimension 1/2". Minimum working pressure 140 bar. Minimum recommended bending radius 150 mm (6").

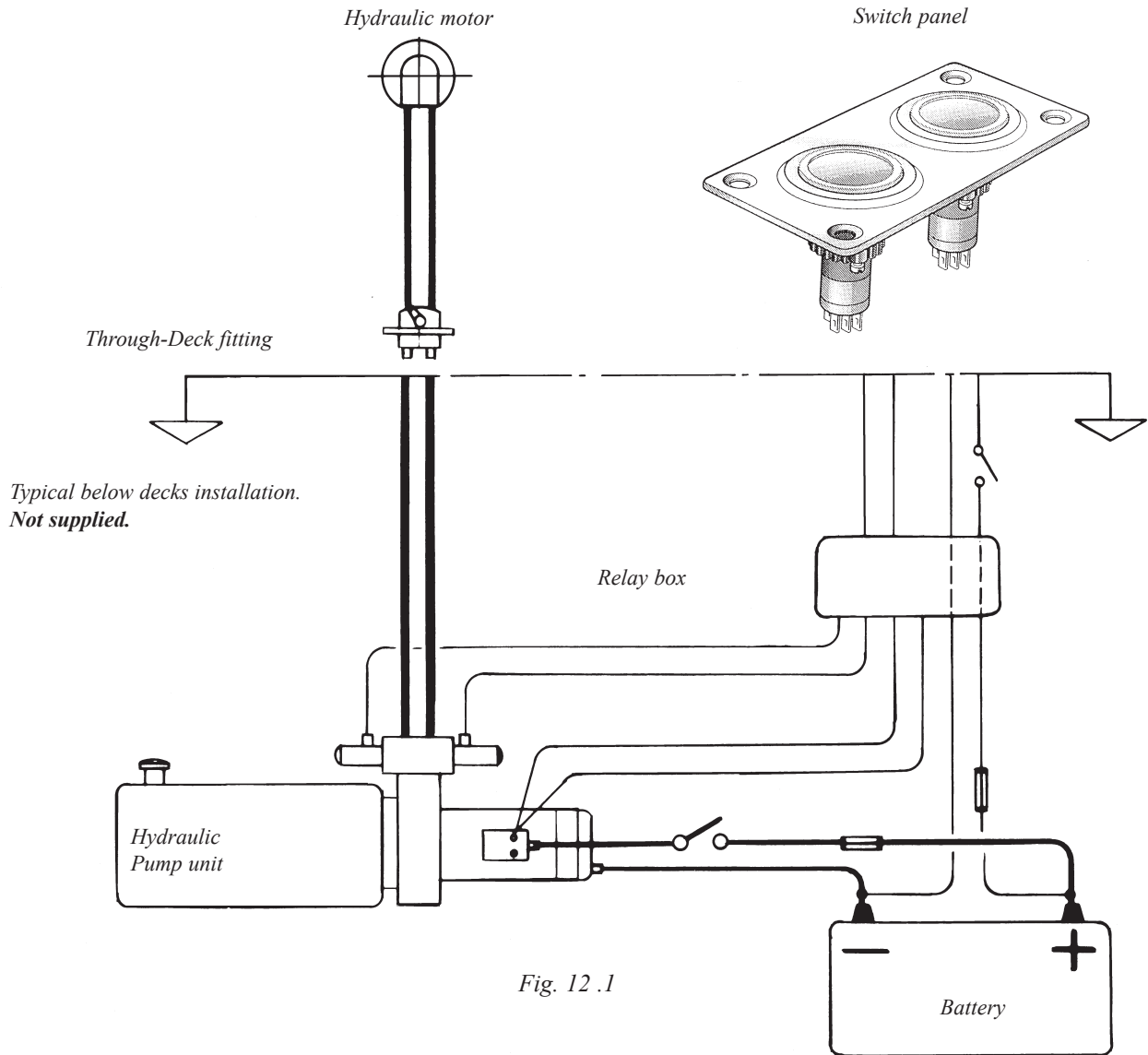


Fig. 12 .1



Important! Blow through all new hoses with compressed air to clean them from possible dust and dirt before fitting. Check the system very thoroughly during assembly to ensure that no impurities are present.
When disconnecting the quick coupling, always apply the protective covers and sleeves supplied.

Put suitable marks on the hoses where they connect to the quick coupling. If they are crossed over the operation of the hydraulic motor will be reversed.

The sail

The sail should be made for rolling up on the starboard side of the luff foil.

Any sun-strip should therefore be on the starboard side of the sail.

A high cut clew can give a constant sheet angle even when reefing.

The luff tape "hard line" should end above the sail feed. (See fig. 31.1).

We recommend webbing on both the head and tack.

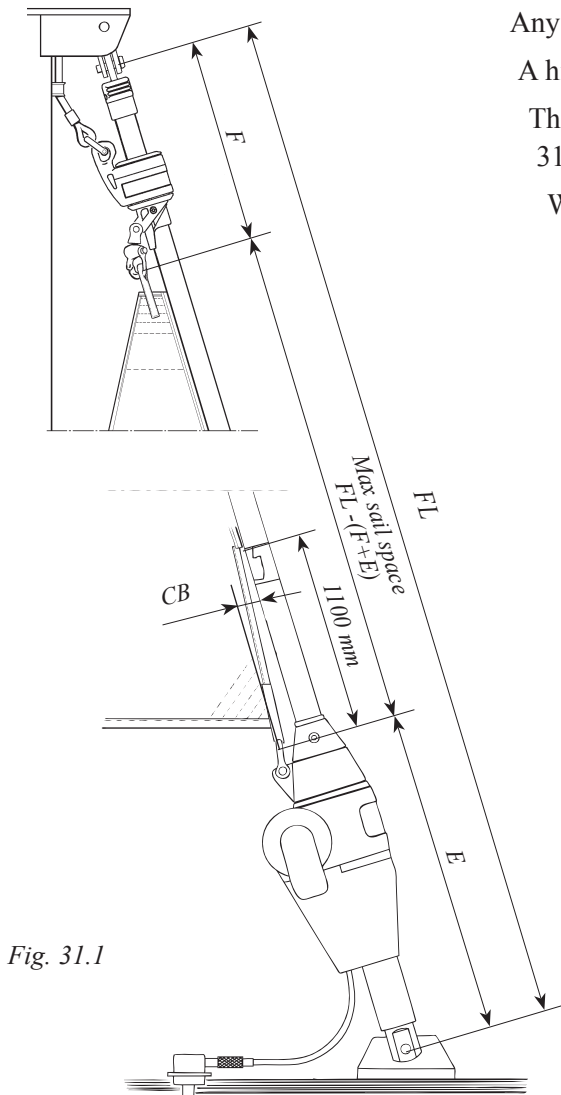


Fig. 31.1

Wire head pendant

Sail with a luff more than 500 mm (19") shorter than the maximum luff length should be fitted with a permanent wire head pendant. The pendant and sail luff together should not have a total length exceeding the maximum permissible luff length.

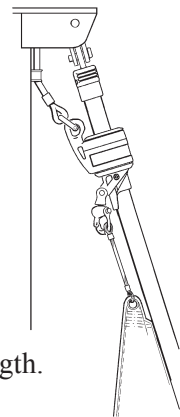


Fig. 31.2

Luff extrusion

The sail luff should slide very easily in the groove as friction increases very greatly over the whole luff length.

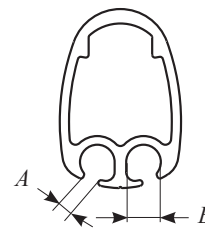


Fig. 31.3

Furlex Hydraulic 500 H	Extrusion Dimension	A mm	B mm	Max Luff tape mm	Cut-back CB mm	F mm	E mm	F+E MM
Wire Ø 16	60/46	3.0	Ø 9	Ø 7	100	620	675	1295
ROD 40	60/46	3.0	Ø 9	Ø 7	100	620	675	1295
ROD 48	60/46	3.0	Ø 9	Ø 7	100	620	675	1295
ROD 60	60/46	3.0	Ø 9	Ø 7	100	620	675	1295

Important points to remember before sailing

- The sail rolls on to the starboard side of the luff extrusion.
- The halyard angles out 5–10° from the forestay with sail set.
- All sails used have the right total luff length. See page 31.
- No lines or halyards can get caught in either the swivel or sail.
- The tack ring is in the right position. See page 20.
- The winch handle is not in the drive unit when that is out of use. It will rotate very fast if the sail is rolled in or out.
- The by-pass valve is correctly set when operating manually.
- The quick couplings are properly locked. Look at page 11.

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Dealer:

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