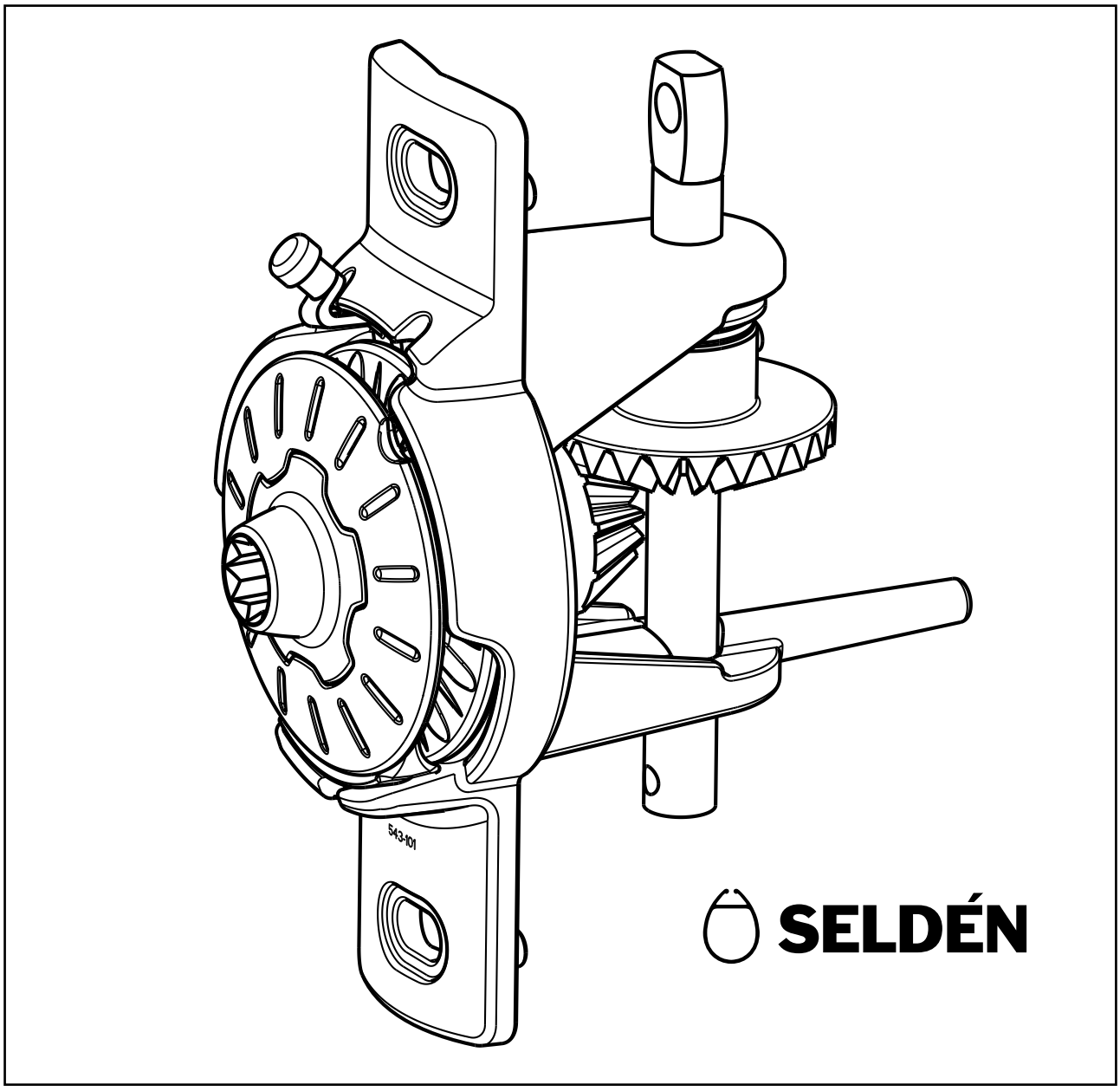
597-607-E
2024-09-11

Manual and Spare parts list for Furling mast

RB/RC Mk5



Product description

- Seldén furling masts allow for convenient setting and reefing of the mainsail.
- The unique design of the halyard swivel bearing distributes the load over the whole ball race to give smoother furling and the lowest possible friction, even under high loads.
- The new Mk5 gear mechanism is prepared for electric retro fit.
- This manual has been compiled to give you information on the furling mast reefing system.

Study it and follow the instructions carefully, and we guarantee you pleasurable use from your Seldén furling mast.

Follow the relevant rigging instructions in our booklet ”HINTS AND ADVICE” for tuning the rig.

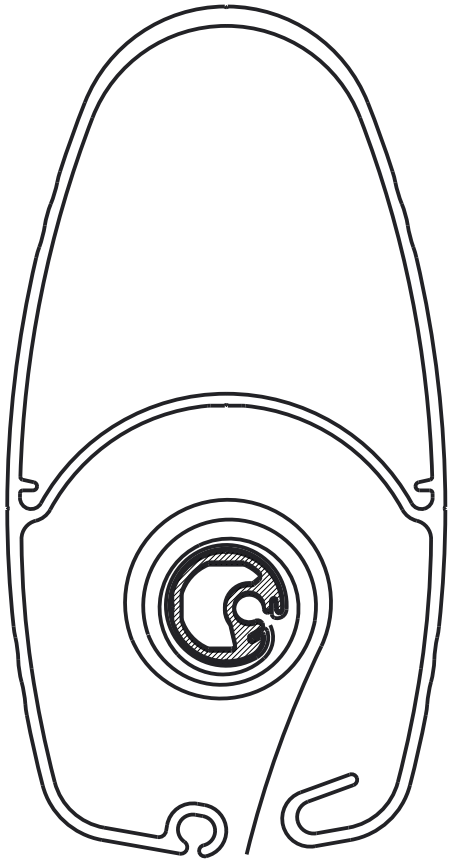


Fig. 2:1 Sail compartment with luff extrusion

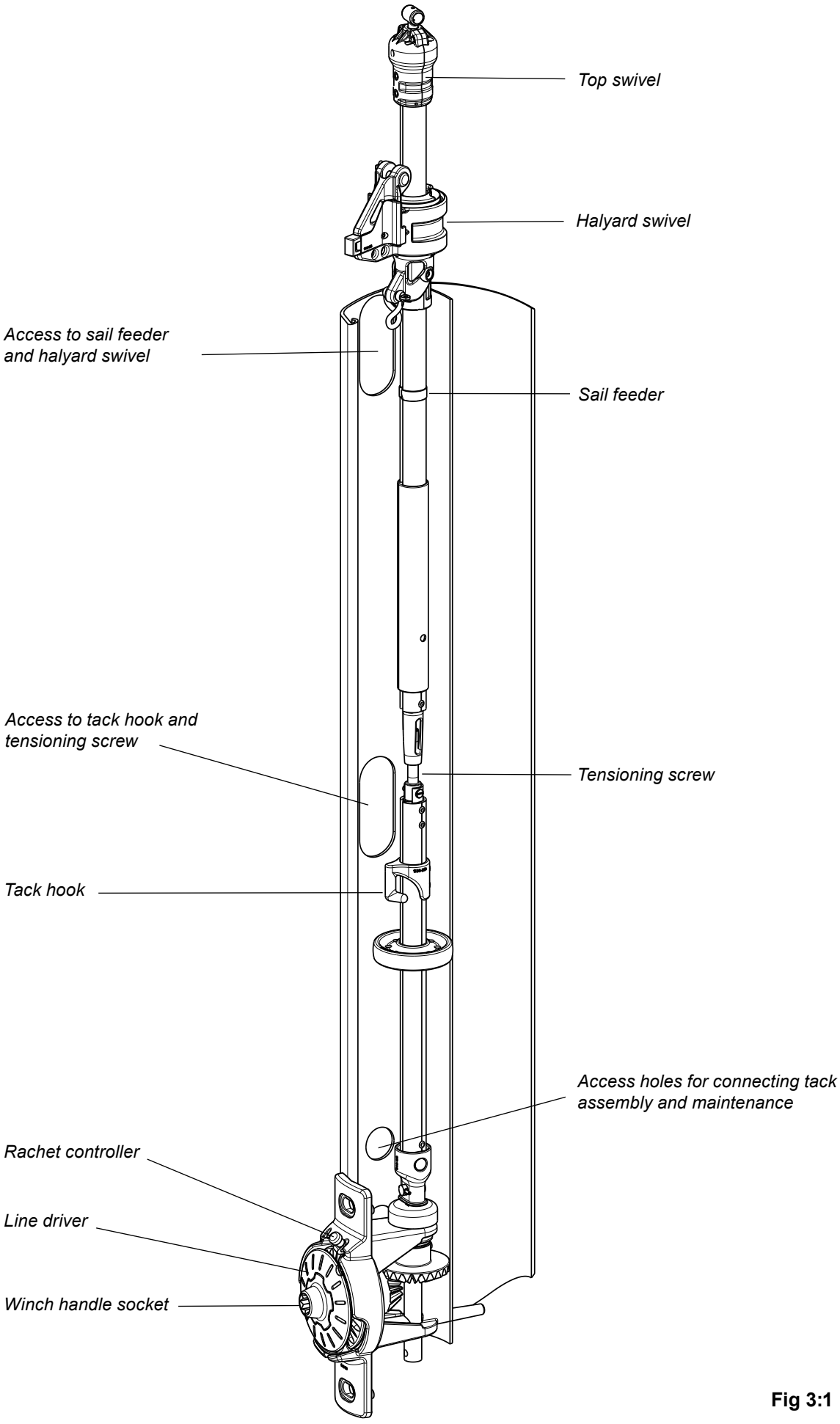

Top swivel
Halyard swivel
Access to sail feeder
and halyard swivel
Sail feeder
Access to tack hook and
tensioning screw
Tensioning screw
Tack hook
Access holes for connecting tack
assembly and maintenance
Rachet controller
Line driver
Winch handle socket

Fig 3:1

Checking luff extrusion tension prior to stepping the mast

The luff extrusion is correctly tensioned before leaving the factory, but tension can be re-checked before stepping the mast in the following manner.

Lay the mast horizontally on the side and keep it straight. The luff extrusion should now be just clear off the mast wall at its midpoint. If adjustment is necessary see points 1-5 below.

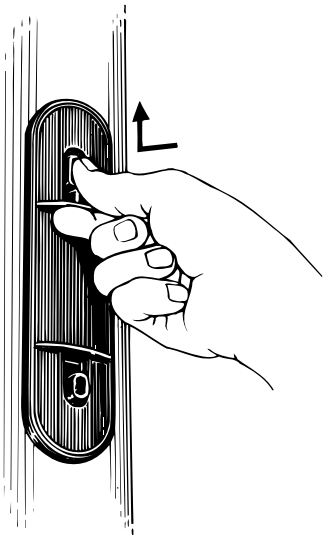
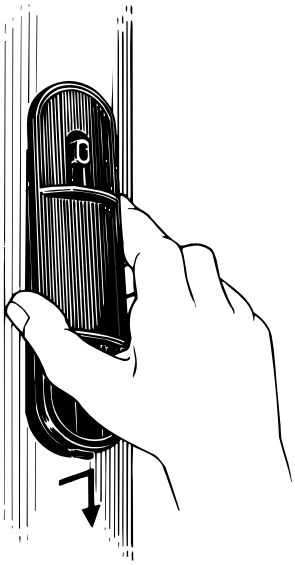
If adjustment has to be made after the mast has been stepped, then the luff extrusion should be so tensioned that it does not touch the mast wall when pushed by hand.

The luff extrusion can be tensioned also with the sail fitted if the winds are very light; Roll out the sail, lower it slightly and remove the tack from the tack hook. Hoist the sail so it does not interfere with tension screw.

Part of the extrusion will be resting on the aft face of the sail compartment when sailing.

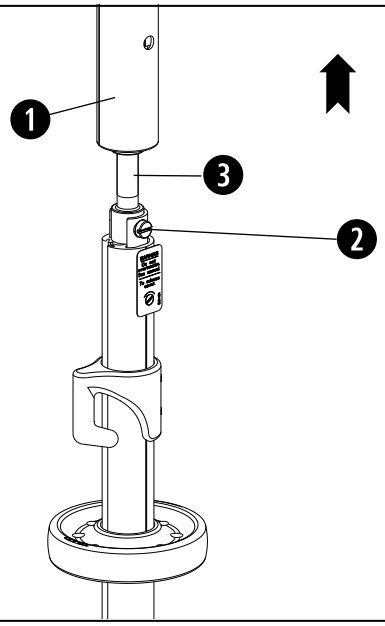
• Do not over-tension A luff extrusion that is over-tensioned will require increased furling effort.
• Always release the backstay tension before adjusting the luff extrusion.

Luff extrusion adjustment

1 a. Remove the access covers. Depress one button and push.	
1 b. Lift the opposite end and remove.	

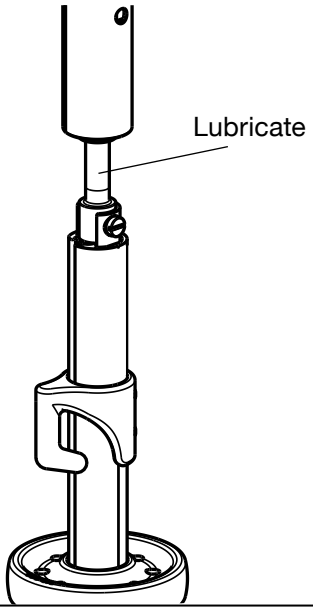
2.

Raise the locking tube ❶ by releasing the locking screw ❷ a few turns (counter clockwise). Lift the locking tube to expose the tensioning screw ❸
Secure the locking tube with tape.



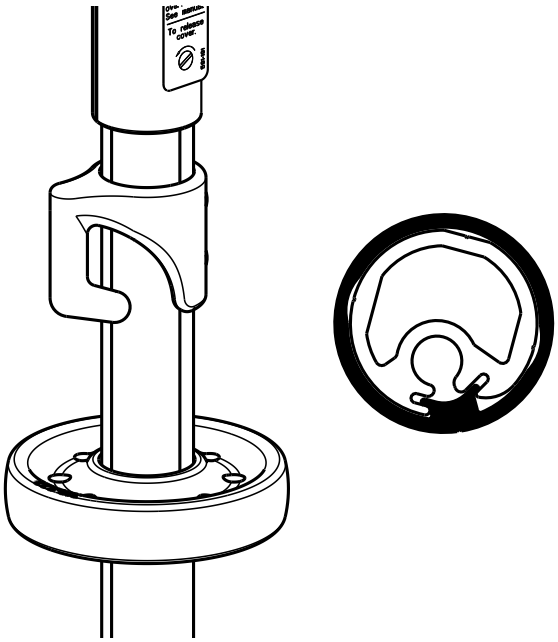
3.

Lubricate the tensioning screw with rigging screw oil or equivalent. Insert a winch handle in the line driver. Grab the luff extrusion through one of the access holes to prevent it from rotating.
Start turning the winch handle clockwise to tension the screw.



4.

When tension is satisfactory-back off by turning the winch handle counterclockwise until the locking tube flange aligns with the groove in the luff extrusion.
Lower the locking tube and tighten the locking screw. Note that the line driver must be set to "FREE" before operating the system counter-clockwise (un-furling).



5. Refit the access covers.

Line routing

Furling and unfurling is accomplished with an endless reefing line and an outhaul operated either from the cockpit or at the mast. In the latter case the outhaul is also taken to the boom or mast near the gooseneck. (See Fig. 7.1).

Endless reefing line

If the furling mast is to be operated from the cockpit an endless reefing line (loop) in combination with a self-tailing winch is recommended. Reefing line should be ø10 mm polyester rope supplied by Seldén (see page 17). The endless loop must have extra length to allow it to be easily removed from the winch. Both parts of the loop must be locked in stoppers. On most installations, the reefing line needs to be fed through blocks and stoppers before making an endless splice according to Seldén instruction 595-673. If the blocks and stoppers are possible to dismantle, a spliced endless line can be used according to the spare part list page 15.

Outhaul line

A self-tailing winch and a stopper is also recommended for the outhaul line.

Figs. 6: suggested arrangement

Layout 1.

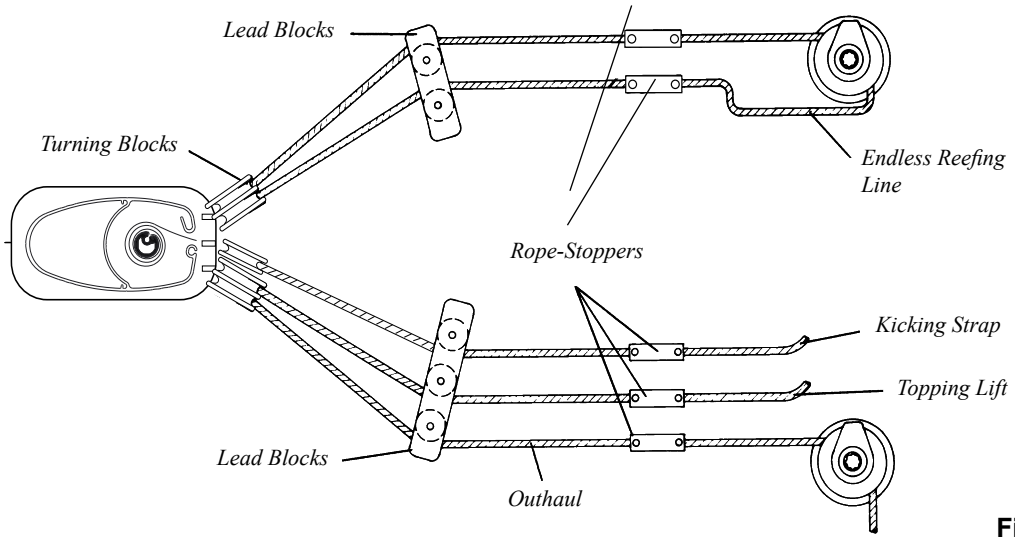


Fig 6:2

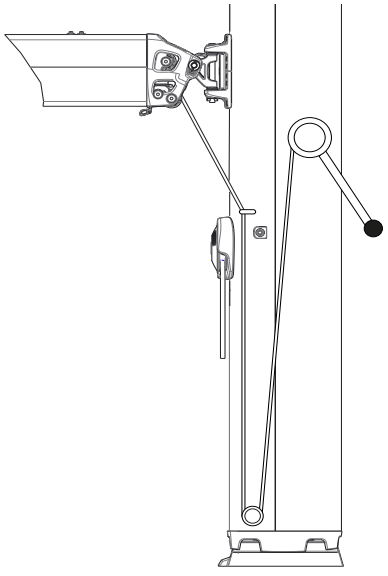


Fig. 7:1

Alternative clew outhaul arrangement.

Operation

Unfurling

Before unfurling, the ratchet controller must be set to “FREE”. (See Fig 7:2)

1. Free both sides of the endless loop from the winch and stopper.
   It will then slide on the linedriver.
2. Pull out the sail with the outhaul line.

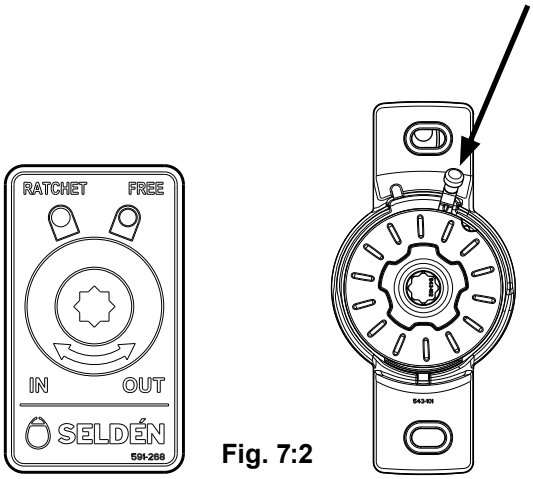


Fig. 7:2

Furling

1. The leech should be kept fairly tight when reefing or furling. Adjust the boom angle (vang or topping lift) to achieve this, and the sail will form a tight roll around the luff extrusion.
2. Locate the starboard part of the endless furling line on the winch and pull by hand, or if necessary use a winch handle.
3. Keep slight tension on the outhaul while doing this. This applies especially when the wind is abaft the beam or in light air.
4. Lock the linedriver by pulling both parts of the reefing line and close the stoppers. Set the rachet controller to “RATCHET” if leaving the boat un-attended.

Reefing

1. Carefully slacken off the outhaul line.
2. Locate the starboard part of the endless furling line on the winch and pull by hand, or if necessary use a winch.
3. The leech should be kept fairly tight. Keep slight tension on the outhaul during the maneuver.

When operating at the mast:
Activate the lock on the linedrive (-IN’) before reefing the sail. Use a winch handle to furl the sail. When the desired amount of sail is rolled in, use the outhaul to tension the foot of the sail. **Don´t leave the winch handle in the linedriver!**

When operating from the cockpit:
When reefed to desired sail area, lock both parts of the endless lines in stoppers and tighten to lock the reefing winch. Finally, tension the outhaul.

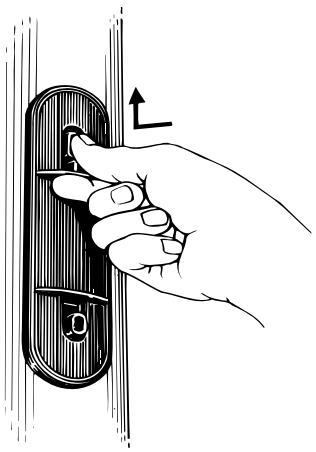
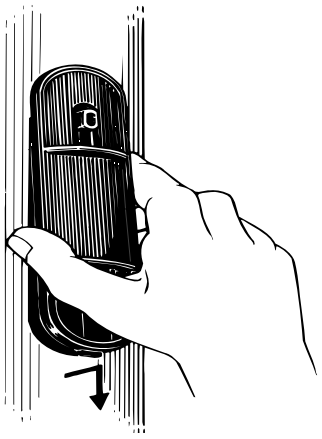
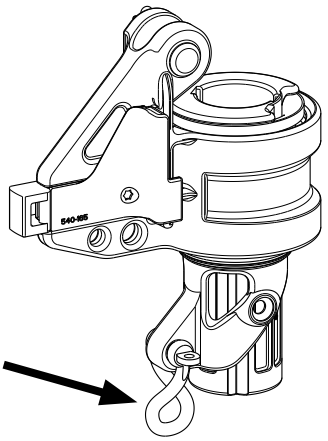
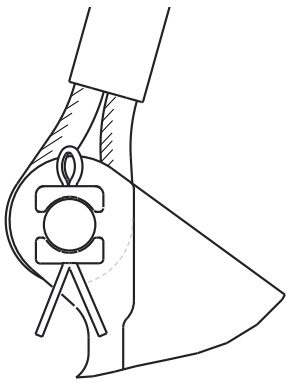
When leaving the boat.

Always lock the linedriver with the ratchet lever when leaving the boat!

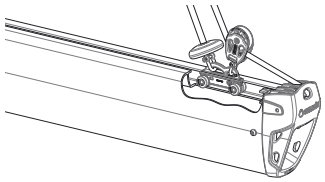
Never leave the winch handle in the linedriver!
It will rotate very rapidly when the sail is unfurled.

Fitting and hoisting sail

Check that the tack and head of the sail are made in accordance with Seldén instruction 595-542 “Sailmakers guide”. An incorrect design can cause wrinkles in the sail and make smooth furling difficult.

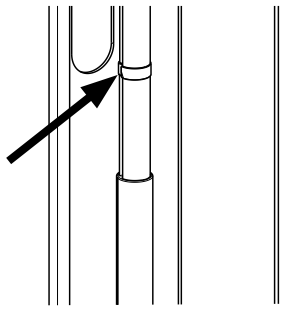
1 a. Remove the covers. Press one button and push.	
1 b. Lift the opposite end and remove.	
2. Attach the head of the sail to the swivel shackle.	
3. Connect the halyard to the halyard swivel.	

4. Attach the clew to the Outhaul Car.



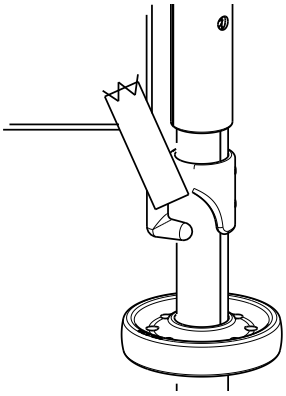
5.

Hoist the mainsail whilst simultaneously ensuring that it is feeding correctly into the sail feeder and into the luff extrusion.



6.

Attach the sail to the tack hook.



7. Tighten the halyard.

8.

Furl the sail until only 200-300 mm of the clew is exposed. The linedriver should be turned clockwise.

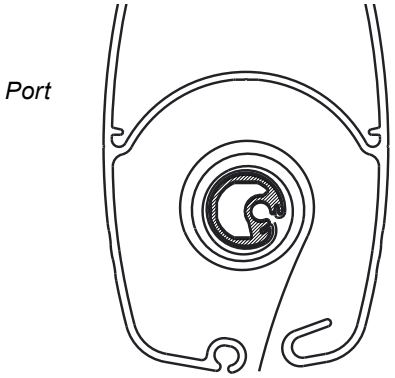


Fig. 9:1

For correct furling, pull on starboard part of the endless furling line for the line driver to turn clockwise.

Before sailing

1. Check that the sail is correctly furled on the STARBOARD SIDE of the luff extrusion. (See Fig. 9:1).
2. Furl and unfurl the sail a couple of times to ensure that the system works as it should, and to familiarize yourself with its operation, and also to check that the sail is correct size.
3. The area aft of the mast must be free from halyards etc. or these can be caught by the sail during the furling procedure.

Sail dimensions

For up to date sail design information, please see the sailmakers guide, 595-542-E.

Maintenance of the in-mast furling mast

Periodic Maintenance

Maintenance should be undertaken at least once a year. All bearings should be greased with GREASE (Part No. 312-501), a tube of which is delivered with the mast. Read the following instructions and see Fig. 13: I.
When greasing bearings and gears, do not over-grease. A thin coating of evenly applied grease is sufficient.

Top swivel:

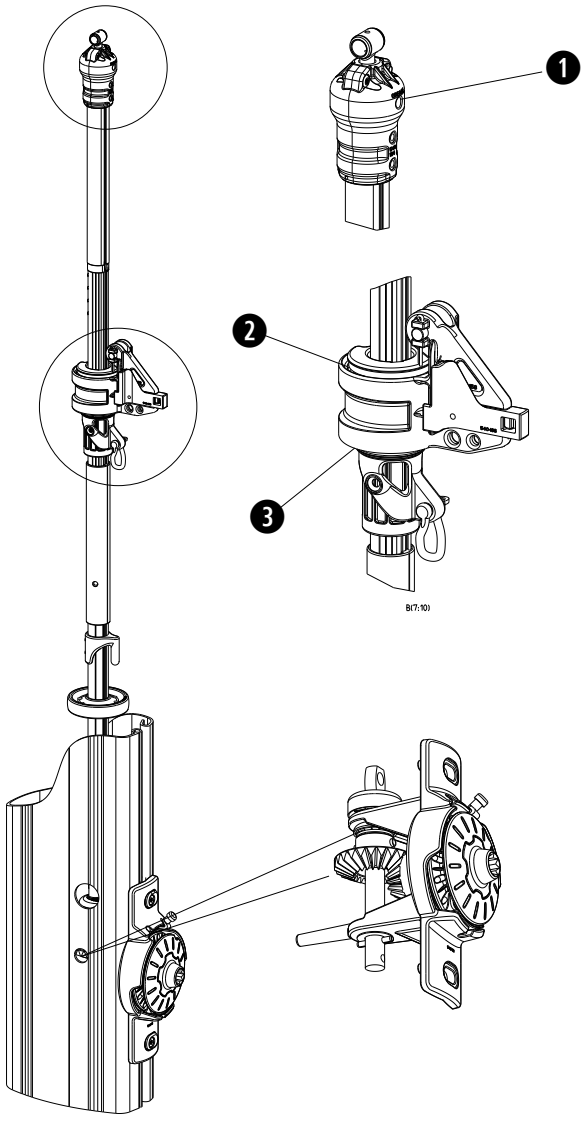
The bearing has a lubrication hole ❶ marked ”GREASE” where the grease should be injected. Access through the sail slot.

Halyard swivel:

Lubricate the swivel by injecting grease into the gaps ❷ & ❸ in the ring. This is best done through the upper access hole.

Furling mast gear.

Grease the bevel gears and the ball bearing above the large gear. A thin brush will facilitate greasing of the ball bearing.

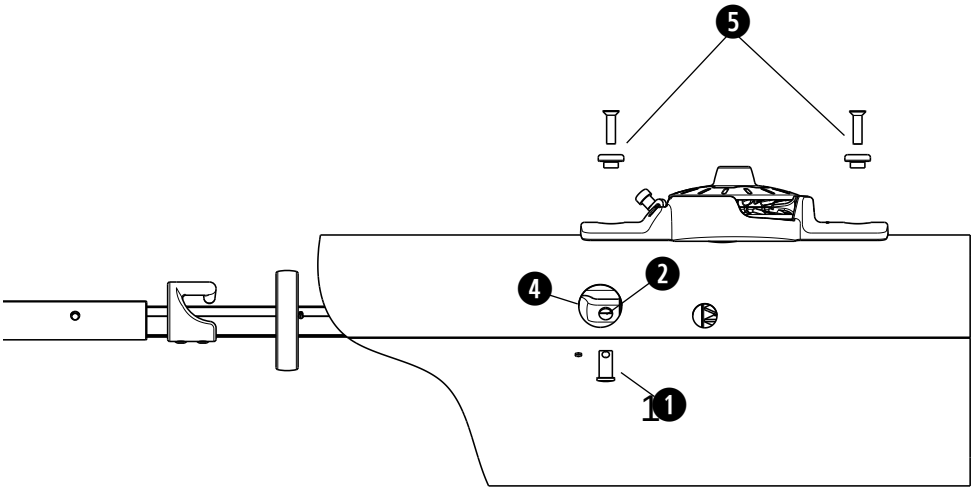


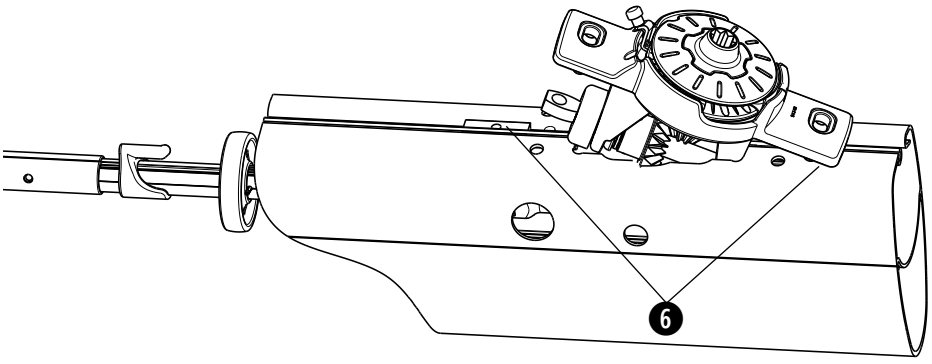
Complete Service

It is a good idea after some years use to dismantle the gear for thorough cleaning and re-greasing. The in-mast furling mast is built so that servicing will be easy even after protracted use. Stainless steel thread inserts for all screw fastenings ensure that corrosion is eliminated.

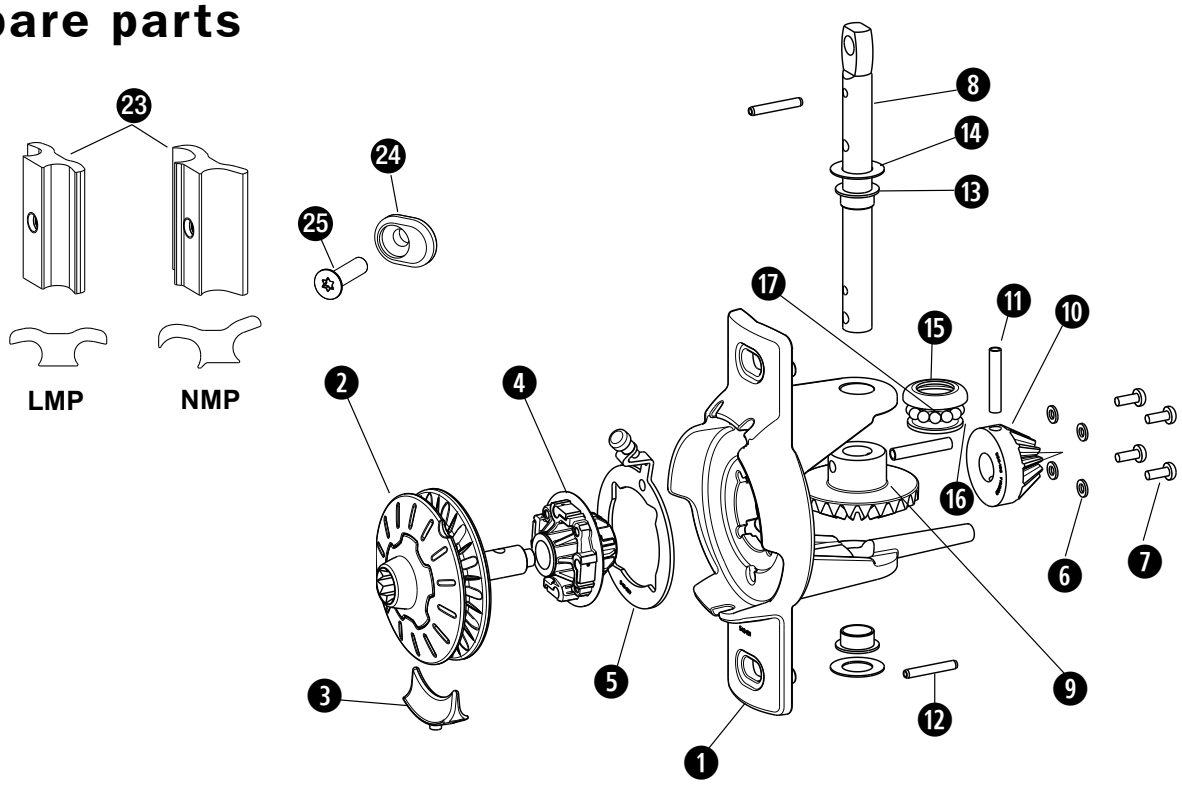
Removal of the furling mast gear from the mast

1. Lay the mast horizontally on trestles.
2. Relieve tension on the luff extrusion by slackening the tensioning screw. (The tensioning screw is described on page 5).
3. Remove the upper plastic plug ❹ Detach the tack assembly from the furling gear by removing the clevis pin ❶. Turn the line driver counter clockwise while holding the luff extrusion (shortening the tension screw) untill the adaptor ❷ clears the shaft.
4. Remove the furling gear from the mast by undoing the two screws and washers ❺. Push the backing plates ❻ away from the furling gear and secure them with tape preventing them from falling into the mast. (The furling gear can be removed even when the mast is stepped).
5. Remove the headbox by undoing the nuts on top. The box can then be lifted off. Detach the Top Swivel from the head box.
6. The luff section and the Halyard Swivel can now be pulled out of the mast.





Spare parts

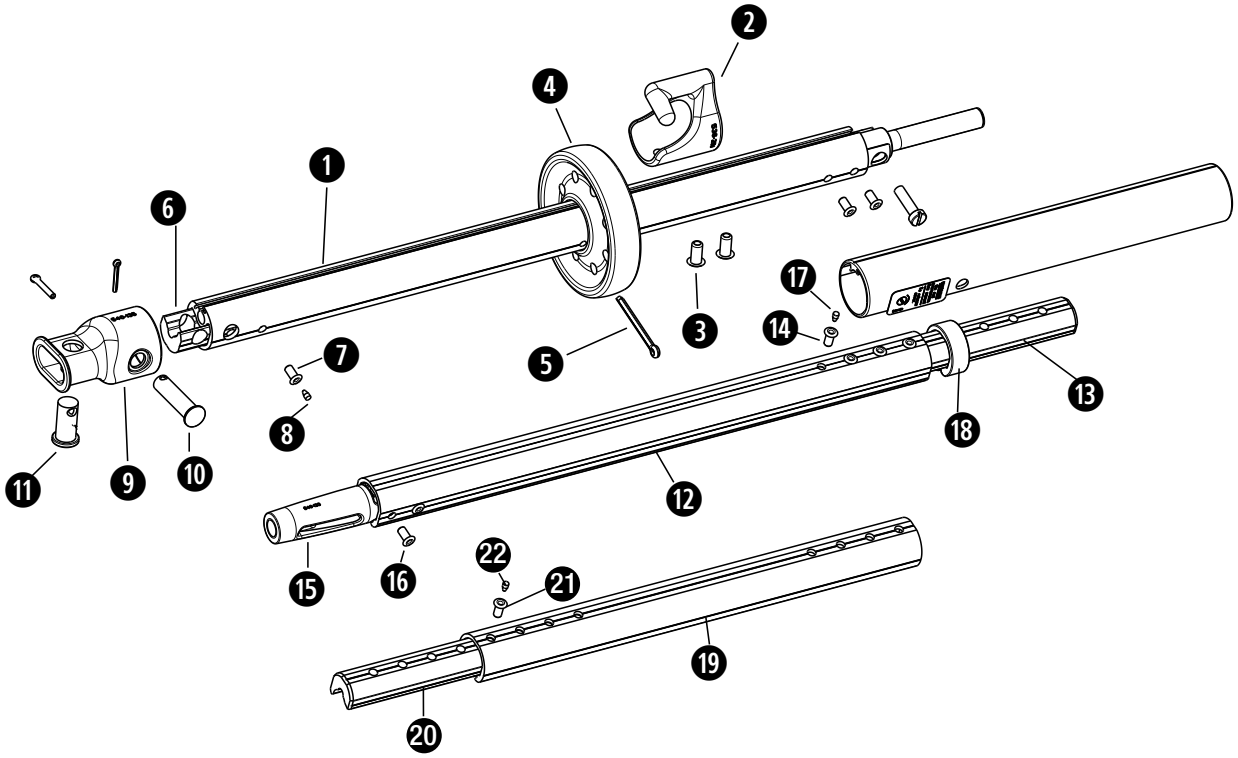


Furling gear

Item	Description	Dimension	Qty	Mast extrusion	
				F228/F217	All sizes above
Assembly number →				543-101-02	543-101-01
1	Gear bracket	RB/RC	1	543-101	543-101
2	Line driver assembly	Ø120x115	1	543-102-01	543-102-01
3	Stripper	58x20	1	540-034	540-034
4	Hub assembly	Ø80x50	1	543-100-01	543-100-01
5	Controller	Ø100	1	540-057	540-057
6	Washer	M6	4	164-407	164-407
7	Screw	MRT 6x20	4	155-621	155-621
8	Shaft	Ø20x213	1	166-582	166-582
9	Bevel gear	Ø84/20-43	1	-	320-107
	Bevel gear	Ø78/20-43	1	320-014	-
10	Bevel gear	Ø54x37	1	320-106	320-106
11	Spring pin	Ø8x45	2	166-857	166-857
12	Spring pin	Ø6x40	2	166-528	166-528
13	Bearing bush	GFM 2023-11	2	306-358	306-358
14	Washer	Ø37/21-1	2	164-467	164-467
15	Ball bearing ring outer	Ø44x8	1	539-223	539-223
16	Ball bearing ring inner	Ø38x8	1	540-106	540-106
17	Ball	Ø8	12	539-128	539-128

Backing plates

Item	Description	Dimension	Qty	Furling mast generation	
				NMP	LMP
23	Backing plate	48x60	2	543-107-01	-
	Backing plate	45x60	2	-	543-106-01
24	Washer	31x12	2	543-105	543-105
25	Screw	MFT 8x30	2	162-034	162-034



Tack assembly

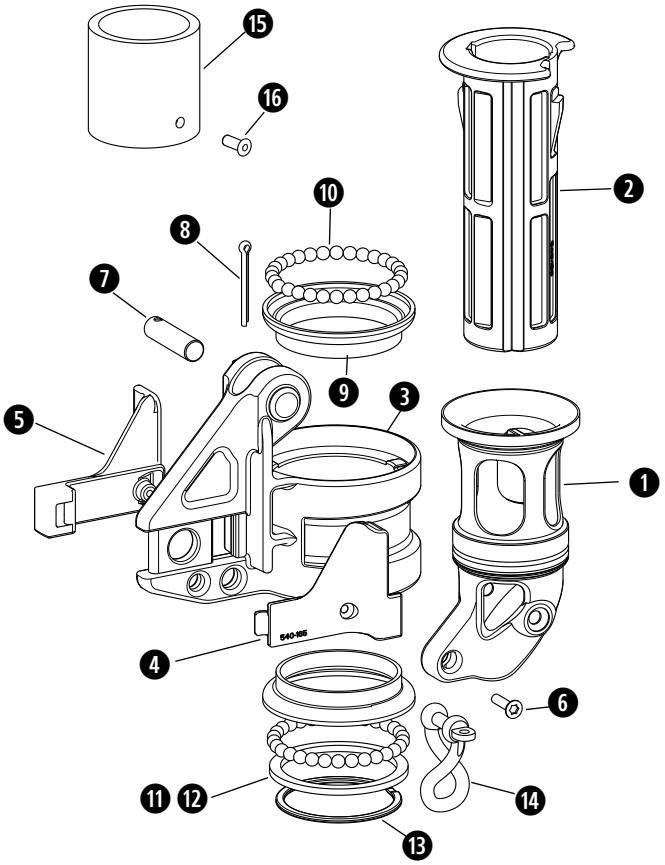
Item	Description	Dimension	Qty	Furling system	
				RB	RC
Assembly number →				543-136-01	543-201-01
1	Tack tube	30/29-450	1	543-136	-
	Tack tube	38/38-577	1	-	543-201
2	Tack hook	38x42	1	536-251	-
	Tack hook	45x90	1	-	536-257
3	Pop rivet	6.4x12.7	2	167-004	-
	Pop rivet	6.4x17.8	2	-	167-002
4	Wheel	Ø90x31.5	1	319-622	-
	Wheel	Ø100x30	1	-	319-601
5	Split pin	3.7x40	1	301-062	-
	Split pin	4x50	1	-	301-010
6	Reinforcment bar	23/20-330	1	543-173	-
	Reinforcment bar	32/25-60	1	-	540-232
7	Pop rivet	4.8x9.9	1	167-007	167-007
8	Sealing plug	-	1	319-510	319-510
9	Adapter	40x65	1	540-135	-
	Adapter	45x78	1	-	540-228
10	Clevis pin	Ø10x40	1	165-211	-
	Clevis pin	Ø12x53	1	-	165-403
11	Clevis pin	Ø12x25		165-401	-
	Clevis pin	Ø12x33		-	165-402

Sail feeder assembly

Item	Description	Dimension	Qty	Furling system	
				RB	RC
Assembly number →				540-154-01	540-233-01
12	Sailfeeder tube	Ø30x378	1	540-154	-
	Sailfeeder tube	Ø38x318	1	-	540-233
13	Joining sleeve	L=192	1	540-167	-
	Joining sleeve	L=212	1	-	540-215
14	Pop rivet	4.8x9.9	4	167-007	-
	Pop rivet	4.8x9.9	8	-	167-007
15	Tensioning screw body	ø23x101	1	540-133	-
	Tensioning screw body	Ø32x162	1	-	540-226
16	Pop rivet	Ø4.8x9.9	4	167-007	-
	Pop rivet	Ø6.4x12.7	4	-	167-004
17	Sealing plug	-	8	-	319-510
18	Sail feeder	ø32x12	1	540-344	-
	Sail feeder	Ø42x12	1	-	540-343

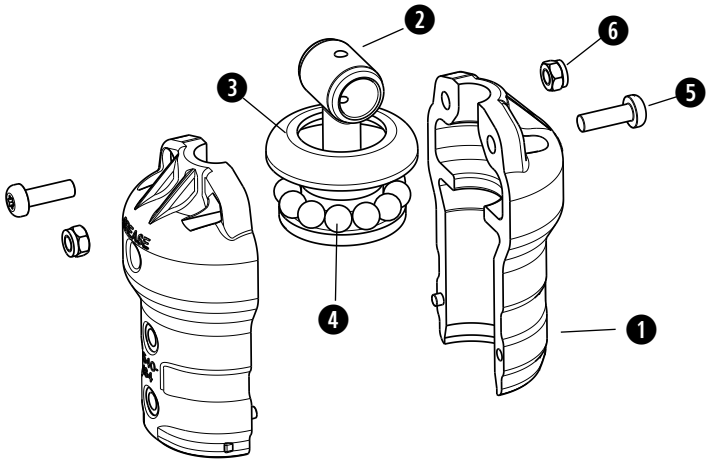
Luff extrusion assembly

Item	Description	Dimension	Qty	Furling system	
				RB	RC
Assembly number →				543-101-02	543-101-01
19	Luff extrusion w. cover	L=7500	1	540-111-01	-
	Luff extrusion w. cover	L=7500	1	-	540-217-01
20	Joining sleeve	L=180	1	540-148	-
	Joining sleeve	L=212	1	-	540-215
21	Pop rivet	Ø4.8x9.9	8	167-007	-
	Pop rivet	Ø4.8x9.9	8	-	167-007
22	Sealing plug	-	8	-	319-510



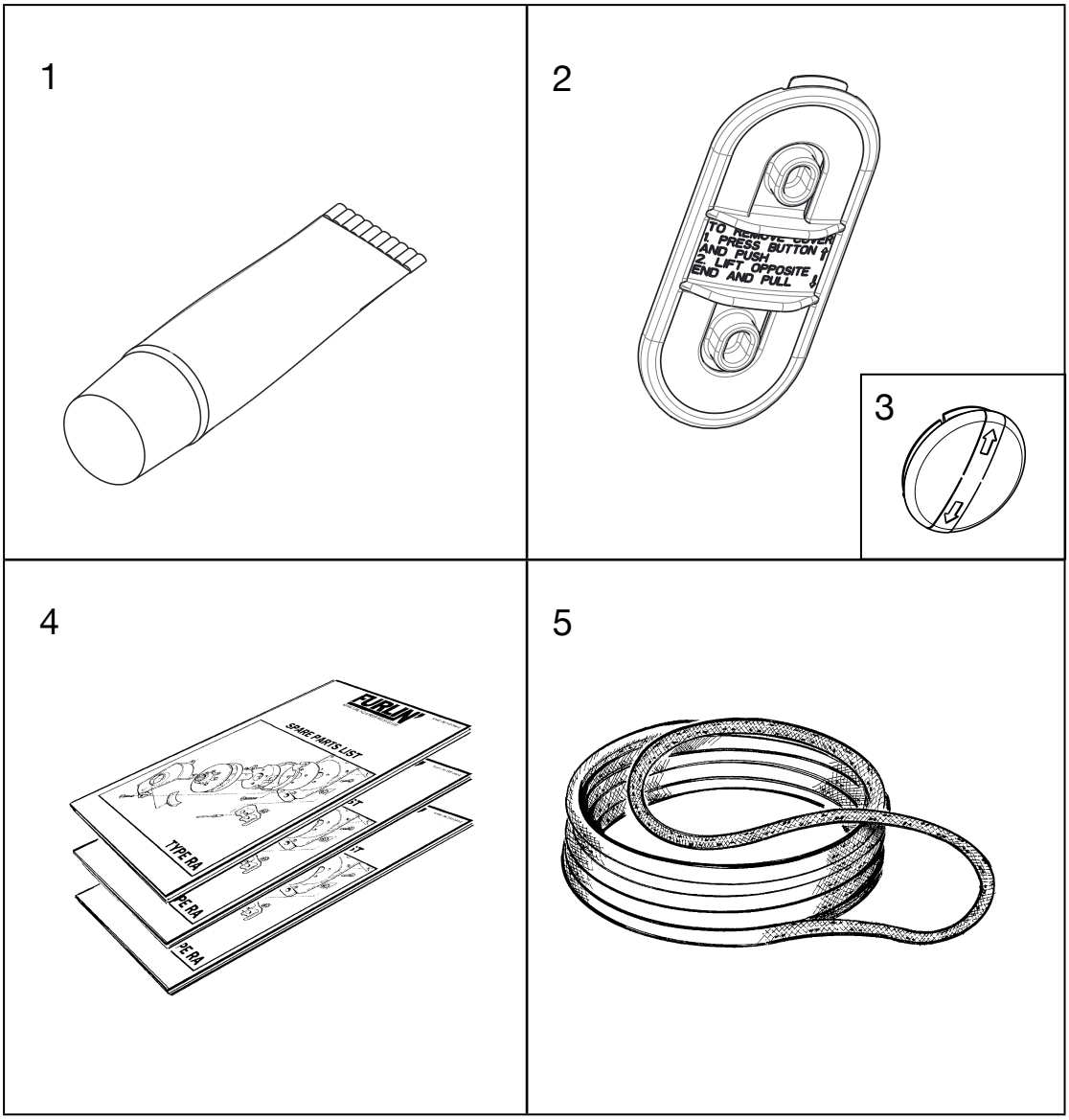
Halyard swivel

Item	Description	Dimension	Qty	Furling system	
				RB	RC
Assembly number →				540-158-01	540-253-01
1	Hub	Ø52x120	1	539-581	-
	Hub	Ø62x130	1	-	539-281
2	Sliding sleeve	Ø64x140	1	540-159	-
	Sliding sleeve	Ø80x150	1	-	540-254
3	Eye ring	Ø77x140	1	540-158	-
	Eye ring	Ø92x155	1	-	540-253
4	Sliding insert half-stb	52x52	1	540-165	540-165
5	Sliding insert half-port	52x52	1	540-166	540-166
6	Self tapping screw	FTS 3.5x9.5	1	171-047	171-047
7	Pin	Ø10x37	1	166-222	-
	Pin	Ø12x42	1	-	166-223
8	Split pin	2.9x32	1	301-525	301-525
9	Ball bearing ring	Ø68/52	1	539-272	-
	Ball bearing ring	Ø83x64	1	-	539-270
10	Ball	Ø6	60	539-034	-
	Ball	Ø8	54	-	539-128
11	Washer	Ø62/52-3	1	164-441	-
	Washer	Ø74/62-3	1	-	164-440
12	Washer (optional)	Ø62/52-0.5	1	164-464	-
	Washer (optional)	Ø74/62-0.5	1	-	164-465
13	Circlip	ø52	1	301-508	-
	Circlip	Ø62	1	-	301-507
14	Shackle-Twisted	13x25	1	307-023	-
	Shackle-Twisted	16x32	1	-	307-025
15	Bush (for top swivel)	Ø50/40-50	1	-	306-346
16	Rivet	4.8x12.7	1	-	167-018



Top swivel assembly

Item	Description	Dimension	Qty	Furling system	
				RB	RC
Assembly number →				540-164-01	540-204-01
1	Ball bearing house half	Ø55x91	1	540-164	-
	Ball bearing house half	Ø66x105	1	-	540-204
2	Ball bearing eye	Ø37x53	1	540-160	-
	Ball bearing eye	Ø44x69	1	-	540-207
3	Ball bearing ring ring	Ø44x8	1	539-223	-
	Ball bearing ring ring	Ø52x8	1	-	539-111
4	Ball	Ø8	12	539-128	-
	Ball	Ø8	15	-	539-128
5	Screw	MRT 5x16	2	155-807	-
	Screw	MRT 6x20	2	-	155-621
6	Nut-Nyloc	M5	2	158-004	-
	Nut-Nyloc	M6	2	-	158-005



Additional items

Item	Description	Dimension	Qty	Furling system		
				RB RC		
1	Grease	100g	1	312-501	312-501	312-501
2	Access hole cover	57x126	1	540-026	540-026	540-026
3	Grease hole cover	Ø44	1	319-609	319-609	319-609
4	Manual/Spare parts list-Swedish	A4	1	597-607-S	597-607-S	597-607-S
4	Manual/Spare parts list-English	A4	1	597-607-E	597-607-E	597-607-E
4	Manual/Spare parts list-German	A4	A4	597-607-T	597-607-T	597-607-T
5	Endless line Ø10	2x5000	1	611-011-05	-	-
5	Endless line Ø10	2x7000	1	-	611-011-06	-
5	Endless line Ø10	2x9000	1	-	-	611-011-07

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597-607-E Printed in Sweden

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