FORESPAR®

Leisure Furl® Passagemaker™

Aft Drive In-Boom Furling System

Owner's Manual

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V3
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Overview

The **Leisure Furl® Passagemaker™** in-boom furling system, available in three sizes, is a combination of two proven Leisure Furl systems. The mast mounted Reef-Lok™ includes the winch handle manual backup common to the hydraulic and electric Leisure Furl systems. The aluminum boom shell assemblies, stainless steel front ends, aft spigot, luff tracks, universals and gooseneck assemblies are used in the Leisure Furl Offshore™ systems.

IMPORTANT

Read this manual from cover to cover before attempting to use your Leisure Furl boom. It contains important operating and sail fitting instructions. The "Frequently Asked Questions" section contains important tips and troubleshooting advice. Follow the instructions in this manual. We accept no responsibility if you fail to do so. **If you are uncertain of any points, please contact an authorized Leisure Furl distributor, listed on pages 25-26.**

We have made every effort to explain the operating and sail fitting procedures as clearly and completely as possible. Nonetheless, it is not possible to anticipate or address every conceivable problem that might arise under actual sailing conditions. Hence, we cannot accept responsibility for errors or omissions in this manual.

This manual is intended to provide general guidance to owners of a Leisure Furl system. For specific guidance and technical support, contact the person who sold you the Leisure Furl system or an authorized distributor.

Learn how to use the Leisure Furl system before taking your boat out on open waters.
The operator is expected to have prior sailing experience, including knowledge of generally recognized safe sailing procedures. The operator should also have an understanding of such basic sailing techniques as hoisting and reefing a sail. The instructions in this manual should be read in conjunction with such techniques and safe sailing procedures. Such techniques and procedures shall be deemed to supplement the instructions in this manual.

Use the Leisure Furl® at your own risk. We accept no liability for personal injury or property damage resulting from your failure to follow the instructions in this manual or generally recognized safe sailing procedures. As the manufacturer did not install the Leisure Furl, we accept no liability for personal injury or property damage resulting from faulty installation.

WARNING — it is possible for the furling mandrel to slide off the aft spigot if the boom is lowered to the deck, resulting in possible damage to the mast area and universal if raised into position without realignment. Ensure the mandrel is aligned with the spigot before lifting up to the desired height.

Boom vangs & topping lifts
In-boom furling systems require both a Forespar® Yacht Rod™ rigid boom vang and a traditional boom topping lift for safety and ease of sail trimming.

When furling or reefing, the boom should be adjusted to the required 87° angle and held at that angle with the support of the boom vang during the furling process. In heavy weather the boom topping lift should be used to arrest the motion of the boom during furling.

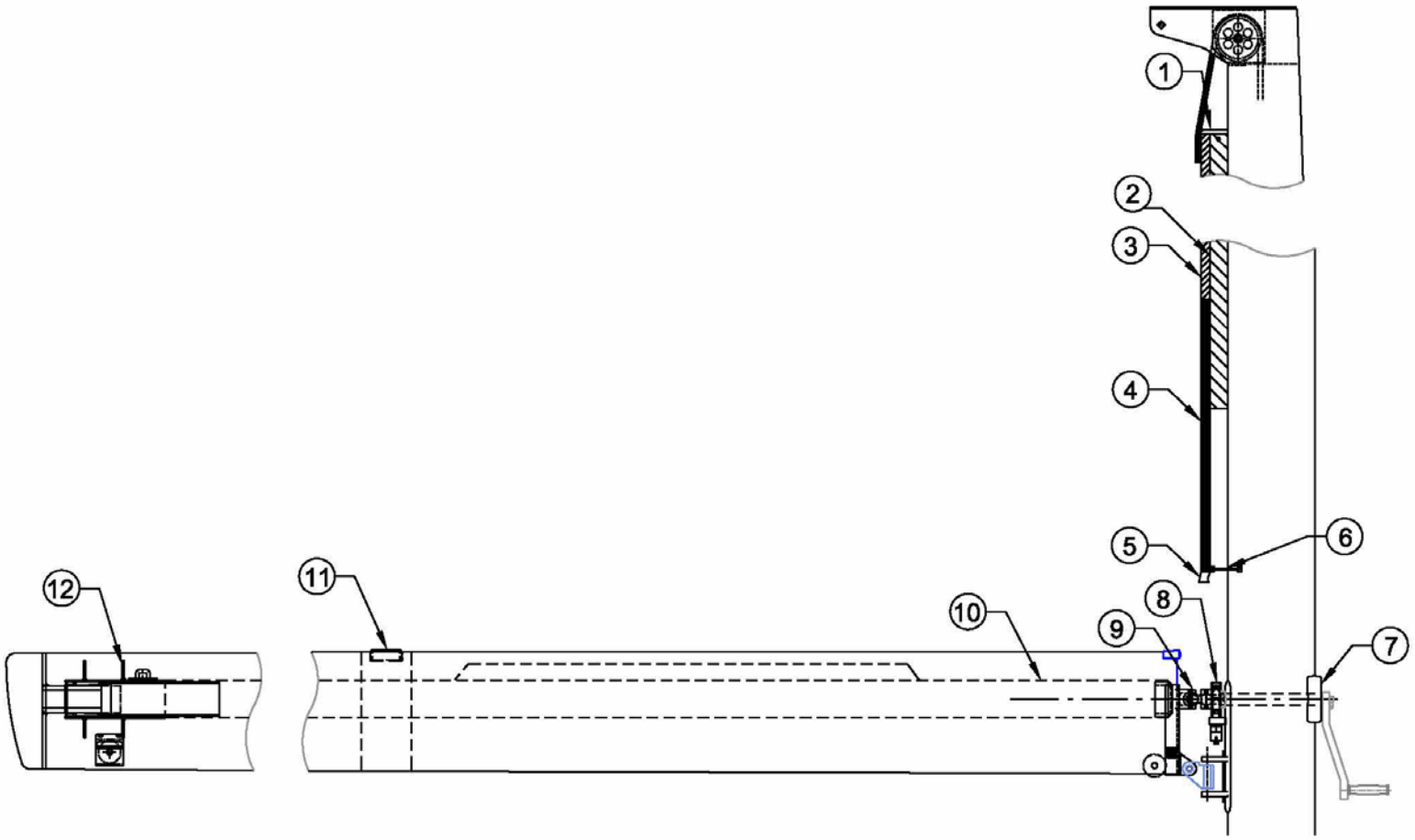
When the boat is moored, a boom topping lift will extend the life of your boom vang no matter what type (spring, pneumatic or hydraulic).

Serial number

Forespar® keeps a file on your boat's Leisure Furl® system based on the 6 digit serial number. Your serial number is located on the aft inside bulkhead at the back of the LF boom. Please record it here for future reference:

Serial Number _____

Parts Diagram



1. Top Chafe Cap
2. Base Track
3. Luff Foil
4. Flex Feeder
5. Pre-feeder
6. Limit Line
7. Winch Handle Casting
8. Reef-Lok™ System
9. Universal Joint
10. Furling Mandrel
11. Roller Guide
12. Furling Drum

Sail cover operation

Your Leisure Furl® boom comes with an integral sail cover. The cover must be fully opened before hoisting the mainsail. To open the cover, stand in front of the mast and pull both lower sail cover lines together evenly until the cover has fully retracted into the aft end of the boom. There are stopper knots inside boom to prevent the sail cover from coming out of the aft end sail track.

To close the sail cover, pull the upper sail cover lines together evenly until the sail cover has covered the entire sail cavity.

If the sail cover is wet, it may bind or bunch when opening or closing, and you may need to pull the upper & lower lines back and forth evenly.

Replacement sail covers are available from Forespar®. Your current cover can be duplicated if you provide your 6 digit serial number.

Initial check

- Ensure the furling mandrel rotates freely. Lubricate per “maintenance schedule” if necessary.
- Ensure the feeder is correctly aligned with the sail track (see Diagram 5). Adjust to correct if necessary – see Flexible feeder limit line adjustment on page 15.
- Set up the furling line leading aft before fitting the sail.

Sail fitting

1. With the sail laid on the port side, lift the foot up to the furling mandrel, then slide the foot boltrope into the track from either forward or aft.

2. Lash the mainsail tack to the tack padeye on the mandrel, with the luff boltrope aligned with the flex feeder - see Diagram 4, *Adjustment A.*

3. Now lash the clew to the aft padeye on the mandrel -see Diagram 4, Adjustment C. ***Do not pull the foot out tight***; leave fullness in the foot for efficient downwind sailing. The built-in sail controls will generate outhaul tension.

4. ***Using a separate lashing, lash the clew with a minimum of three wraps around the furling mandrel, pulling the clew down to within 1/2” [12mm] of the mandrel - see Diagram 4, Adjustment B.***

5. The mainsail may be initially furled onto the mandrel in one of two ways. In calm winds, you can first hoist the sail directly off of the deck. Set the boom to the correct 87^{o} angle for furling before the sail is hoisted. The furling line should be pre-wound on the mandrel spool, so once the sail is fully hoisted it can be furled into the boom by winching the furling line and tailing the halyard. Use the minimum amount of main halyard tailing tension to ensure a tight sail roll.

6. In windier conditions, it may be preferable to furl the sail directly onto the mandrel without hoisting it. Remove all but 5 turns of the furling line on the spool, and disengage the Reef-Lok™ pin. Using a winch handle inserted into the winch handle socket on the front of the drive shaft, roll the sail onto the port side of the mandrel by turning the handle clockwise looking aft. Keep light tension on the furling line while doing this. We recommend two people assist by pulling either the luff or leech to ensure that the bolt rope remains in the area between the boom edge and the mast while the sail is being furled.

The sail fitting is now complete, however minor adjustments may need to be made as the lashings stretch. ***Apply McLube or similar PTFE lubricant to the luff tape as needed to reduce the friction in the luff foil.***

Topping lift & main halyard setup

To establish the correct operating angle for the boom once at full hoist, over tension the main halyard. This will give an accurate indication of the tack angle. Pull on the topping lift, cleat it off and substantially mark a position at the rope clutch for future reference. This is the correct boom angle for furling. Release the topping lift if interfering with the mainsail. It is likely that the topping lift will stretch over time, so review the height as above or as suggested on page 19 regularly.

Release the load of the main halyard until wrinkles just start to appear at the luff. Engage the main halyard clutch, and mark a position on the main halyard at the entrance of the rope clutch for reference. This position will be normal maximum hoist. With the foot track on the mandrel in its uppermost position, ensure adequate fullness has been allowed for. This should now be a relatively full and powerful downwind sail. Adjust if required (see *sail adjustments* on page 14*).*

Reefing setup

1. Engage the Reef-Lok™ pin.

2. **Snub the main halyard around a winch or cleat to take the halyard load once the rope clutch is released.**

3. Release the main halyard rope clutch, ensuring load on the halyard is maintained.

4. Pull in on the furling line as you ease the main halyard. Apply the desired amount of resistance to the halyard so as to control the amount of “pull back”. *See sail adjustments on page 14.*

5. When each batten is approximately 1” [25mm] from the furling mandrel, engage the main halyard rope clutch. Flatten the sail further by pulling in on the furling line, tensioning the luff. Then release the tension on the furling line to allow the Reef-Lok™ to carry the load. The batten should lie along the mandrel, and the sail should flatten along the foot. The batten in this position prevents fullness creeping into the foot, so where possible reef on any of the batten positions.

6. At each of the reef positions, mark the main halyard at the clutch position for future height reference.

Sail hoisting

Pre-check before hoisting the sail:
- Guide the sail into the pre-feeder. Attach the main halyard.
- Check that the boom is at the correct, 87° angle to the mast.
- Ensure the Reef-Lok™ pin is disengaged.
- Release the mainsheet and position the yacht head-to-wind so as to unload the sail.

1. Load the halyard winch with the main halyard and release the furling line rope clutch.

2. Proceed to hoist the sail, allowing the furling line to pull lightly through the hand. If windy, snub the furling line around a winch or similar to avoid the sail billowing out uncontrollably. If the sail should unintentionally billow out, **STOP HOISTING**. Furl the billowed portion back into the boom, and then resume hoisting. **Never try to hoist a sail which has billowed out** as damage WILL occur to the flex feeder when a batten that is not oriented vertically reaches the pre-feeder. The sail should always be as flat and vertical as possible as it enters the pre-feeder.

3. Hoist the sail fully or to a reef position.

4. Lock off the furling line rope clutch.

5. Engage the Reef-Lok™ pin, and ease the load off of the furling line. The Reef-Lok should always be engaged after the sail is hoisted, whether fully or to a reef point.

6. Proceed to sail.

Controlling sail shape (luff tension & outhaul)

The built-in sail controls allow sail shape to be controlled without the use of a cunningham or an outhaul by simply tensioning the furling line.

Upwind-
Luff tension is essential for efficient sail shape for sailing upwind, especially in heavy weather. With Leisure Furl's® captured luff, the luff remains straight and flat with minimal furling line tension. To flatten the sail for upwind conditions, lock off the main halyard rope clutch, then tension the furling line. This rotates the furling mandrel and draws fullness out of the foot as with an outhaul, at the same time tensioning the luff as with a cunningham. Engage the Reef-Lok pin and loosen the furling line to avoid creep. **NEVER lock the mandrel and tension the luff with the halyard**.

Downwind-
To make the sail fuller for downwind sailing, tighten the furling line slightly, disengage the Reef-Lok pin and then ease the furling line. The mandrel will rotate back to the downwind position. Re-engage the Reef-Lok pin.

Sail furling and reefing

Pre-check prior to furling or reefing the sail:

- Check that the boom is at the correct, 87° angle to the mast *(*see *page 19).*
- Release the mainsheet with the yacht on a close reach so as to unload the sail.
- If reefing while sailing on a beam reach, ensure the boom is not out more than 45°
- If reefing while sailing on a broad reach or run, see *Furling downwind* on page 11

1. If reefing, engage the Reef-Lok™ pin. If furling, the Reef-Lok pin may be either engaged or disengaged.

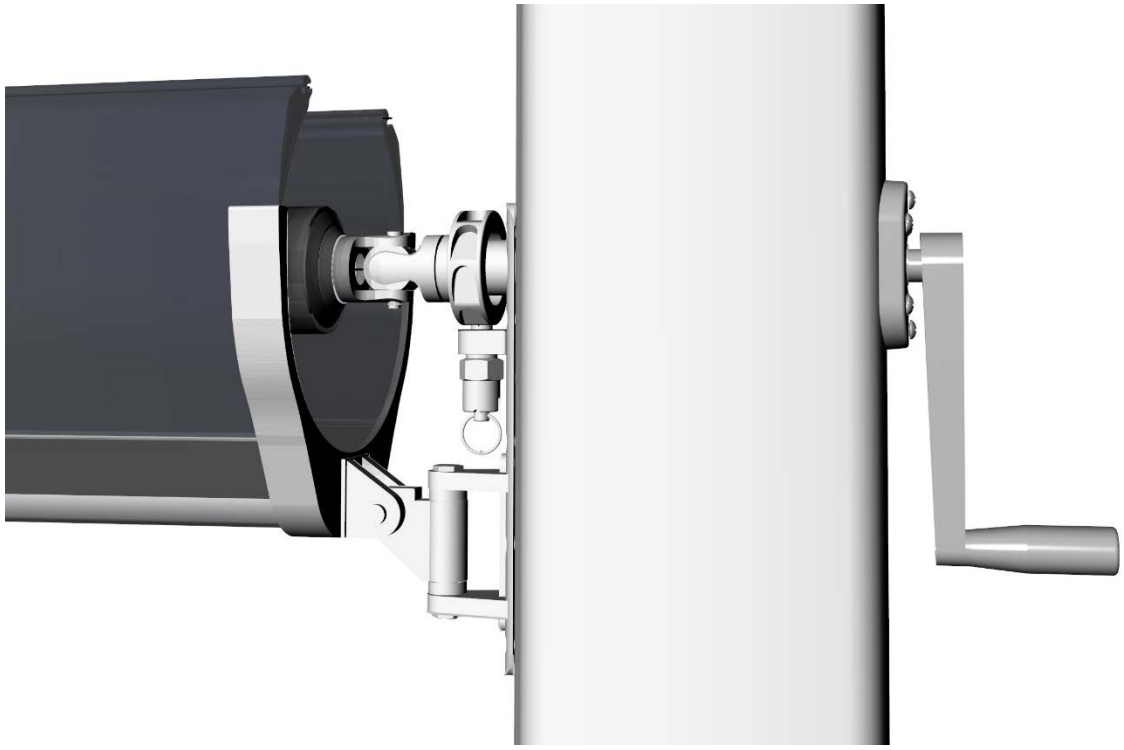
2. **Snub the main halyard around a winch or cleat to take the halyard load once the rope clutch is released**.

3. Release the main halyard rope clutch, ensuring load on the halyard is maintained.

4. Pull in on the furling line as you ease the main halyard. Apply the desired amount of resistance to the halyard so as to control the amount of "pull back". See page 12.

5. If reefing, engage the main halyard rope clutch once at the desired reef position. While possible to reef at any point of hoist, it's desirable to reef on a batten or else fullness may creep into the foot and some efficiency lost for upwind sailing. Flatten the sail further by pulling in on the furling line until the foot is completely flattened. Then release the tension on the furling line to allow the Reef-Lok to carry the load.

The mandrel Reef-Lok™ system locks the mandrel, preventing it from rotating. It should always be engaged after the sail is hoisted. The Reef-Lok opposes luff tension and takes the load off of the furling line. If necessary, the sail can be furled with the Reef-Lok engaged. This is an important function in the case of a furling line failure. The sail can be furled manually by inserting a winch handle into the winch handle socket on the front of the mast & rotating it clockwise (looking aft). Tail the main halyard throughout this process.



Furling downwind

If it is necessary to furl downwind, use a modified procedure for furling the sail:

- Square away to a broad reach or run.
- ***Pull the mainsheet in so the boom is approx. 45° to the centerline of the boat***.
- Release the vang a little to cause the boom to rise a bit, and pull in on the topping lift.
- Snub the main halyard off before releasing the main halyard rope clutch. Do not release any of the main halyard.
- Initiate furling without releasing any main halyard, and then slowly allow the halyard to pull against the power of the winch. A lot of power will be required.

Pull back

Pull back is a term used to refer to the sail gradually working aft along the mandrel as it is furled. Pull back is visible as lines on the sail, stretching back from the feeder at an angle to the furling mandrel (see Diagram 1). A system that is set up and operated correctly will control the amount of pull back and sail shape. Ideally the sail should always furl neatly and directly under the feeder. Indications that the sail is pulling back excessively will be highly visible, with lines stretching through the sail from the feeder.

If the sail shows these signs of substantial pull back, reduce the resistance on the main halyard while furling. You will notice that the lines of pull back gradually start to decrease as you continue to furl. *Severe pull back can damage the boltrope*.

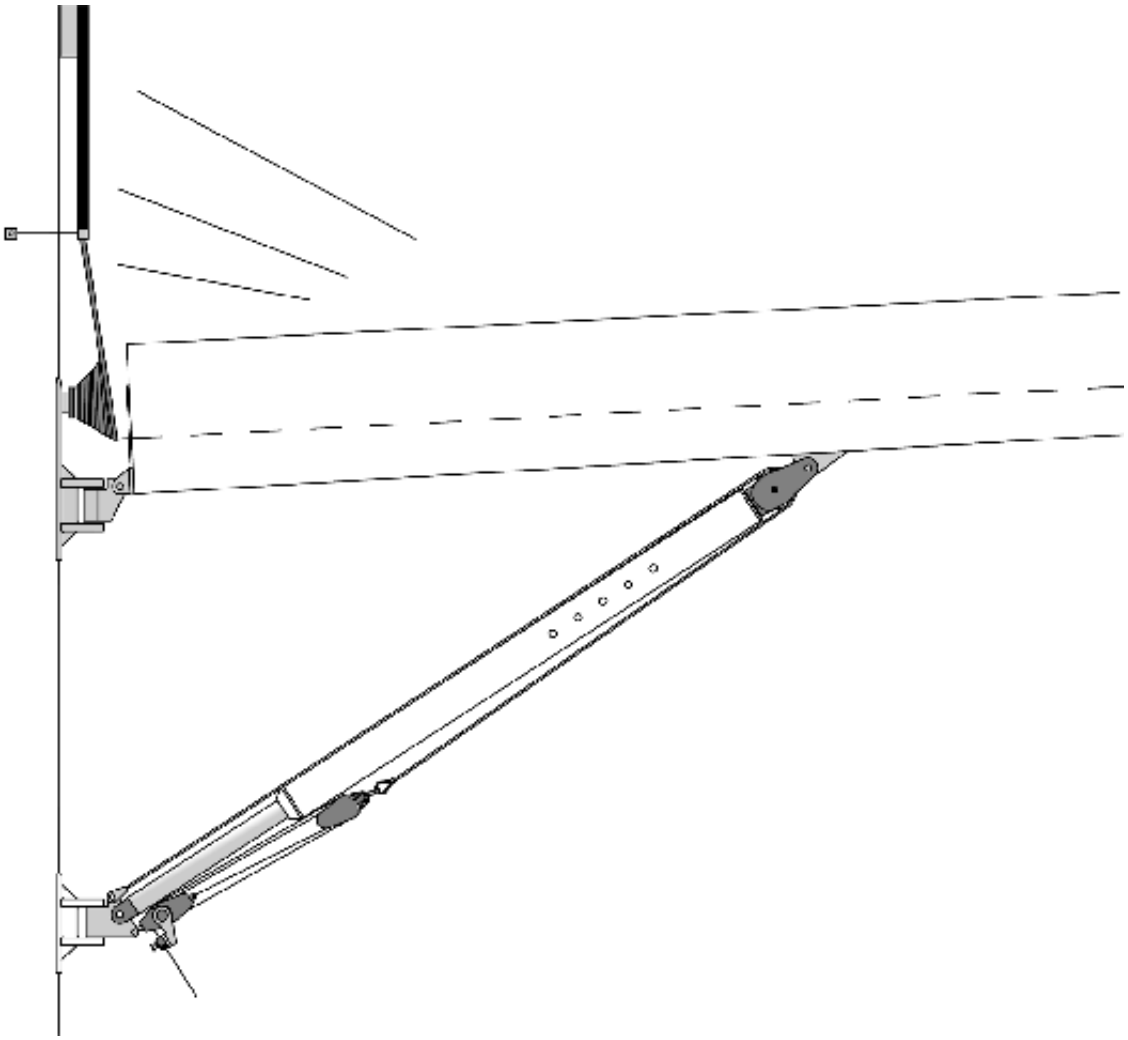


Diagram 1

Sail works forward

If the sail works forward on the mandrel when furling (Diagram 2), increase the resistance on the main halyard and ensure that the mainsheet is slack and the boom angle is correct.

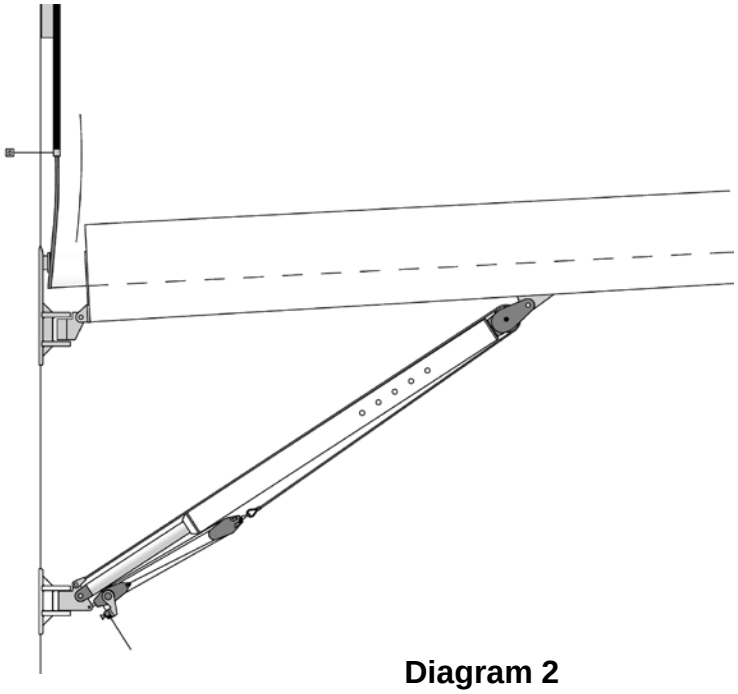


Diagram 2

Do not release the main halyard in spurts, or the sail may bunch up at the tack (Diagram 3)

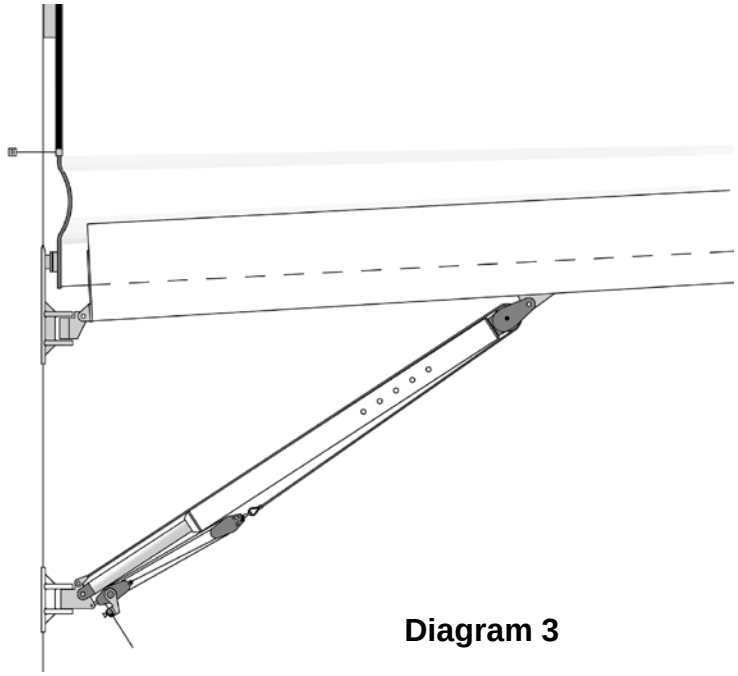


Diagram 3

A consistent amount of halyard resistance is necessary for efficient furling. If the pull back does not appear to be controllable as explained, consider the following:

- The boom angle is not set correctly
- The mainsheet has not been eased sufficiently
- The sail is not positioned correctly on the mandrel (see *sail adjustments)*

Sail adjustments

Small adjustments to perfect the furl can be made as follows:

- If the sail shows signs of pull back without resistance on the halyard, make adjustments at the tack (Adjustment A in Diagram 4). Pulling the tack forward artificially creates luff round down low. Use the aft tack web ("Tack 2") if necessary for greater adjustment. This may cause slight distortion at the luff area around the first batten.

- Ease Adjustment C to return fullness to the foot. Adjustment B will not need to be moved from its original setting.

- If the sail works forward as it furls, release Adjustment A approximately 2". Leave Adjustment B as it is and pull Adjustment C out by 2". Also, it may help to pull the topping lift on a little to decrease the boom to mast angle to, say, 86.5°.

If these adjustments do not rectify the problem, sail modifications may be required. Contact an authorized dealer for further assistance.

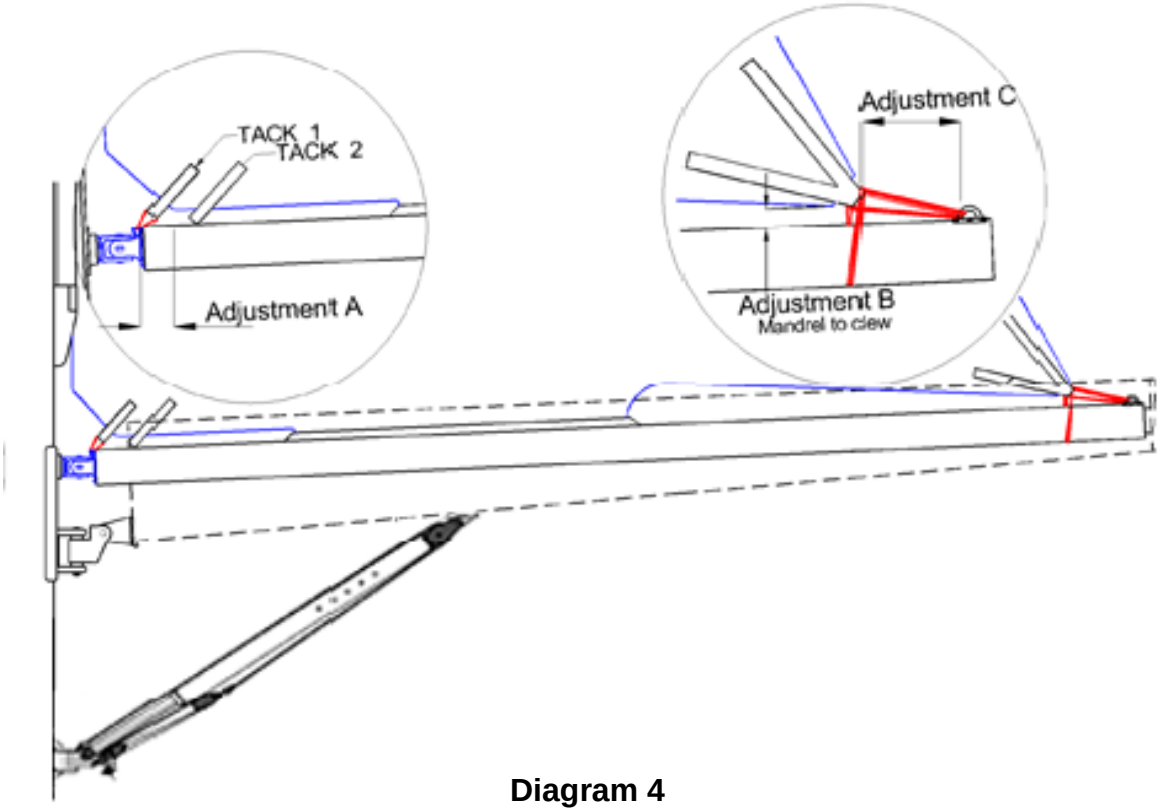


Diagram 4

The clew lashing line must take a minimum of 3 wraps around the mandrel to eliminate the vertical load component on the pad eye.

Damage to the mandrel and the foot of the sail WILL result if this process is not followed.

Flexible feeder limit line

The limit line assembly consists of two stainless steel termination blocks and a fixed length of Spectra™ line which passes through the eye on the forward face of the luff prefeeder. The termination blocks have been installed on the port and starboard sides of the mast, at an equal distance from the aft face of the mast. **The limit line should be loose enough to allow the feeder to flex port & starboard but not aft.** If the line is too loose and the feeder is allowed to flex aft, the flex feeder can be damaged or break. It is equally important not to force the flex feeder forward toward the mast. This can result from allowing the sail to furl forward (see Diagram 2) or by a batten which is overloaded.

Each installation is a little different, and the desired amount of flex has to be determined by hoisting and furling the sail. The furling operation should be done several times while watching the luff of the sail. Ensure that the 87° boom angle is correct, and then watch as the sail rolls into the boom. Furling should be checked at different angles to the wind, since this is the true test of the flexible feeder setup.

Once the termination blocks have been installed on the mast, the only way to control the amount of flex in the unsupported portion of the luff track is to change the length of the limit line. If less flex is deemed necessary, the line can be shortened. If a longer line is required for additional flex, Spectra™ line can be purchased from your local chandlery. Use a figure eight stopper knot in each end and trim the ends as necessary.

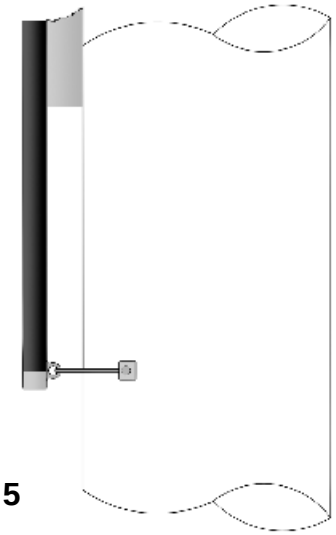
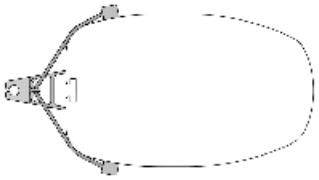


Diagram 5
SIDE VIEW



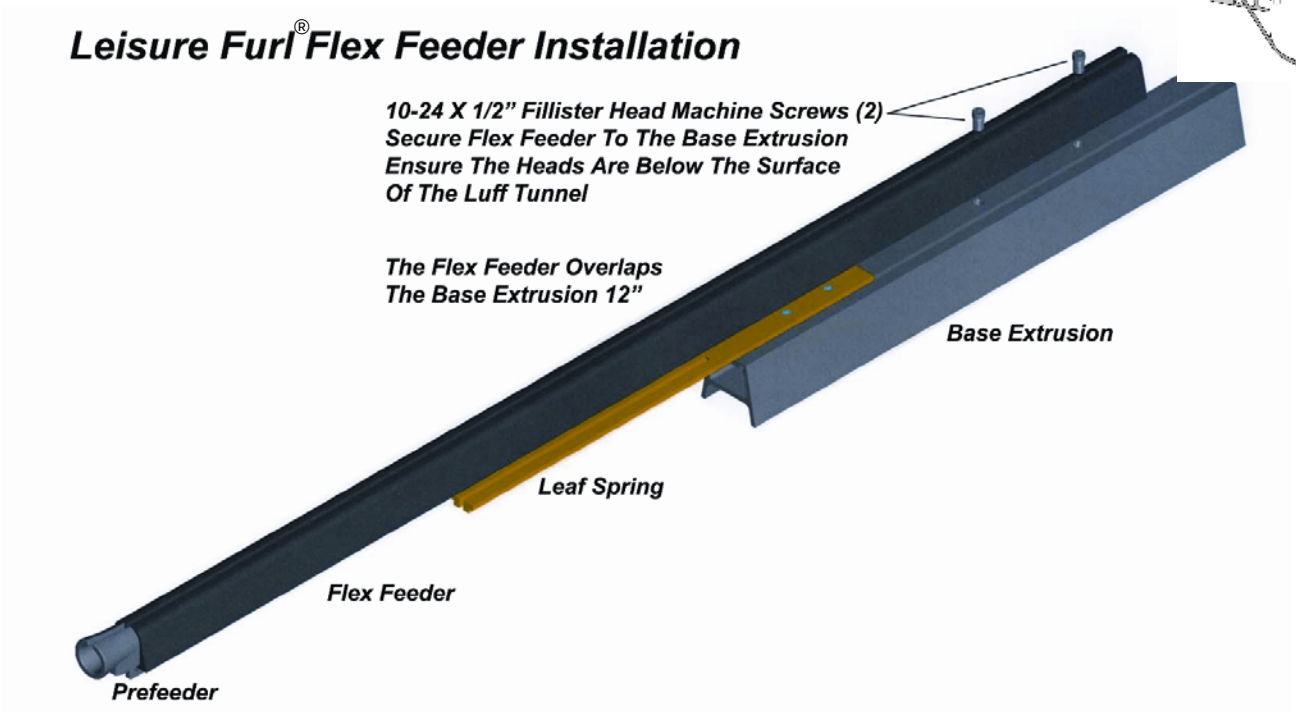


Diagram 6
BOTTOM VIEW

Reef-Lok™ system and manual winch handle backup

The Reef-Lok™ system is mounted on the aft side of the mast. It consists of the ratchet wheel and pin assembly. The Reef-Lok pin has two positions: up (engaged), and down (disengaged). The pin is disengaged by pulling downward and rotating 90º, so that it locks into the lower position. If the pin is under load, the furling line will first need to be tightened to remove the load on the pin before disengaging it. To engage the pin, pull downward, rotate 90º and release. A light line may be led aft to operate the pin from the cockpit.

A locking winch handle can be inserted into the socket on the front end of the mast to use as a manual override for furling. **Remove the winch handle when not in use to avoid possible injury.**

Trouble shooting

Sail cannot hoist
- Furling line rope clutch is not released
- Reef-Lok™ pin is engaged
- Furling line has a knot in it somewhere
- Sail has not been fed into the feeder correctly

Sail is hard to hoist
- Sail is partially loaded
- Main halyard or sail is catching somewhere (check head is not hooked on runners etc.)
- Furling line is catching somewhere
- Furling line is jammed in the spool

Sail cannot furl
- Main halyard rope clutch is not released
- Main halyard is jammed somewhere
- Sail is caught somewhere – (*Would only occur if something is not set up correctly*)

  Always remember that at any time the sail can be lowered by simply releasing the halyard

Sail pushes forward when furling
- Sail has not been unloaded
- Boom height is set too low
- Insufficient halyard resistance applied during the furl
- Sail is positioned too far forward on the mandrel

Sail pulls back excessively when furling
- Boom height is set too high. A small amount of extra height is not normally critical
- Too much halyard resistance applied
- Sail is positioned too far back on the mandrel

Broken or damaged furling line, deck gear
- Bring the yacht head-to-wind, insert a winch handle in the forward socket, engage the Reef-Lok™ pin and ease the main halyard as the mandrel is rotated. At the desired level of hoist, engage the main halyard rope clutch and continue rotating the mandrel to tension the luff and flatten the foot. *It may be necessary to winch up the main halyard also under these circumstances.*

System makes a noise while at anchor
- Take the load off of the topping lift or attach a shock cord from the roller guide to the topping lift, then pull tight.
- If the sail cover rattles at night, pull the cover along the boom to open.

Maintenance schedule

LUFF TAPE: *For a new mainsail, apply an even coat of McLube™ to the full length of the luff tape on both sides during initial hoist, ensuring the head and batten ends are well coated.*

After several weeks of use, apply another coat, mainly to the head and batten ends. Thereafter apply to head and batten ends approx. three times a season, and to luff tape as needed.

MOVING PARTS:
Aft spigot bearing .
Forward winch handle casting bearing
Aft mast bearing
Reef-Lok™ pin
Universal joint
Roller guide rollers
Sail cover rollers
Sheaves

Rinse with fresh water as required. Use MareLube™ synthetic lubricant or similar once per season. Apply several drops to accessible moving parts.

FIXED COMPONENTS:
Vang lug
Mainsheet bails
Preventer padeyes

Check once a season. Ensure that all machine screws are tight & there is no sign of movement.

LINES:
Main halyard
Furling line
Sail cover

Check for any signs of chafe at rope clutches, rope guides, sheaves etc. Check sail cover retrieving line & where lines are joined.

RIG:
Base track
Masthead sheave box

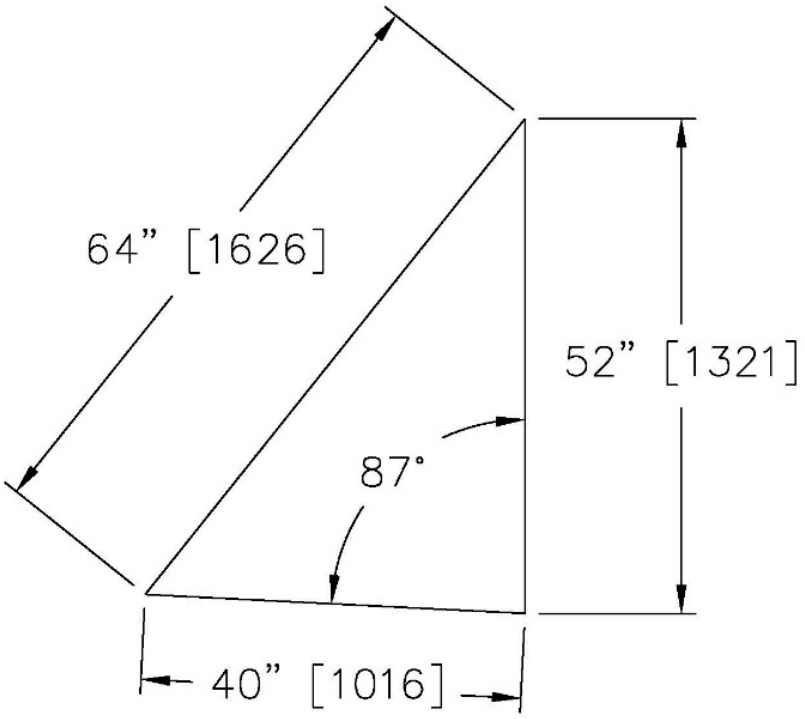
Check that bolts holding base track to slugs are tight, and lubricate the sheave box at the mast crane.

SAIL:
Tack & clew lashings
Inner batten ends
Bolt rope

Check for signs of chafe & wear.

Manually setting the boom angle

The easy way to set the boom is to hoist the mainsail to full height and substantially tension the luff. However, there could be occasions where there is a need to set the boom angle without the sail, or there may be suspicions that the tack angle is incorrect. If so, you can use the following template:



BOOM ANGLE TEMPLATE
–MARK MAST AT 52" (1321mm) ABOVE MAST/BOOM INTERSECTION, & MARK BOOM AT 40" (1016mm) AFT OF INTERSECTION.
–POSITION BOOM SO THAT DISTANCE BETWEEN MARKS IS 64" (1626mm).

Frequently Asked Questions

Must I always reef with a batten on the mandrel?
No. You can reef at any point **except with a batten on the flex feeder,** in which case damage will occur to the flex feeder due to batten compression loading. Reefing with a batten on the mandrel is the most efficient position in terms of holding the foot totally flat. The least efficient position is with the batten just outside the boom.

Must I go head-to-wind to reef?
No, not under normal circumstances. As with a slab reef, a close reach is the best point of sail to reef. It's desirable to have the mainsail completely unloaded. However, if the boom is out more than 45 degrees, the universal will bind and damage may result.

Do I need to snub the furling line when hoisting?
If the mainsheet is totally free, the furling line only needs to be snubbed in heavy winds. It's good practice to let it run through the hand while hoisting.

Does corrugation in the sail roll damage the sails?
Corrugations are caused by small sail faults, but do not cause any problems. They will gradually disappear as the sail softens up.

For racing, can I get degrees of fullness in the foot and still get luff tension?
Yes. Degrees of fullness can be achieved by pulling small amounts on the furling line, but if a tight luff and loose foot are desired, luff tension will need to be achieved with a conventional cunningham at full hoist. Remember to remove it before furling.

Do I have foot control after reefing?
No, it's not required. If correct procedures are followed, the sail will always be totally flat on the foot when reefed. If more power is required, simply unwind more sail.

Can I still operate the system if my winch should fail?
Yes. Take controls to another winch or operate from the mast.

Can I still operate the system if I break a furling line or some of my deck gear fails?
Yes. Go forward with a winch handle and engage the Reef-Lok™ pin. Wind the sail down with a winch handle to the desired position and tension with the main halyard against the Reef-Lok.

What do I need to watch in very strong winds?
When hoisting or furling, the mainsheet must be totally released and the bow not allowed to drop off far enough for the sail to start filling. Also make sure the furling line is snubbed when hoisting, and the main halyard is snubbed adequately when furling.

Can I use a solid vang in place of a topping lift?
Yes. Hydraulic vangs are quite satisfactory, but the angle has to be watched before furling. If using a gas or spring vang without a topping lift, there must be considerable upward pressure on the boom at its normal furling height, otherwise in a seaway the boom will start bouncing while furling.

Can I get away without a vang if I only cruise?
Generally, no. A vang is essential to maintain the 87 degree angle and to stop the boom from riding up when furling. However, certain boats cannot be fitted with a vang due to space limitations.

<u>Glossary of terms</u> – see Parts Diagram on page 5

Bolt Rope	The rope used in the mainsail luff tape.
Clew	The aft lower corner of the sail, between the foot and the leech.
Cunningham	The luff tensioning device on a conventional setup (not required with Leisure Furl® as it has its own unique & efficient luff tensioning system).
Downwind	With the wind aft of the beam.
Drive Shaft	The shaft that connects the universal to the winch handle socket.
Flex Feeder	The plastic track at the bottom of the sail track that guides the boltrope.
Foot	The bottom edge of the sail that attaches to the boom.
Furling Drum	The spool on the aft end of the mandrel that the furling line winds around.
Furling Line	The line that is used to lower the sail by rotating the mandrel.
Gooseneck	The fitting attaching the boom to the mast.
Head	The top corner of the sail.
Head-to-wind	With the bow of the yacht directly into the wind.
Leech	The back edge of the sail between the clew and the head.
Leisure Furl® track	The sail track on the aft face of the mast.
Luff	The front edge of the sail closest to the mast.
Luff Tape	The tape at the sail luff which feeds into the sail track.
Topping Lift	The line that holds the boom up from the aft end.
Main Halyard	The line that pulls the mainsail up the mast.
Mainsheet	The line that pulls the boom in and out.
Mandrel	The tube that the sail furls around.
McLube™	McLube™ SailKote™ or similar PTFE-based lubricant.
Outer Bearing	The bearing at the aft end of the mandrel.
Reef-Lok™	The ratchet mechanism on the aft side of the mast.
Roach	The area of mainsail that extends beyond the leech.
Roller Guide	The rollers in the middle of the boom that guide the sail and limit mandrel flex
Run	With the wind directly from the stern.
Tack angle	The angle between the foot and the luff.
Tack	The lower forward corner of the sail, between the foot and the luff.
Universal Joint	The swiveling joint that connects the mandrel to the drive shaft.
Vang	The strut or rope purchase system that controls the boom angle.

Important information for both installers and owners

- **Ensure there are a minimum of 3 wraps of the clew lashing around the mandrel at initial setup and each time the sail is reinstalled.**
- **Do not raise the boom with the topping lift or vang more than 3 feet [0.9m] from the normal operating angle, as the mandrel will bottom out on the boom end plate and cause damage. If it is essential to do this, the mandrel must be disconnected from the universal.**
- **If the boom is dropped down to the deck for any reason, ensure that the mandrel has not dropped off the aft end spigot before raising the boom again with the vang or topping lift.**
- **If it is necessary to furl downwind, pull the boom in to 45 degrees before commencement. This decreases the load in the sail, gets the sail off the shrouds and spreaders and increases the efficiency of the universal.**
- **If a topping lift only is being used to support the boom, tie a knot in the topping lift line aft of the rope clutch or cleat to ensure that if someone accidentally releases the topping lift cleat the boom doesn't crash down and cause damage or injury.**
- **Ensure all track joints are smooth and radiused. The track entrance from the sail prefeeder is particularly important. See Diagram 6. You can slide a short piece of luff tape through the luff track to check for smoothness.**
- **Ensure that there is nothing on the mast in the area that the sail rolls that could possibly cause sail chafe. This could include fittings around the side of the mast and trysail tracks.**

Accidental Gybes

IT IS THE OBLIGATION OF EVERY SKIPPER TO PREVENT UNSAFE AND DESTRUCTIVE BOOM MOVEMENT BY ENSURING THAT THE BOOM IS RIGGED FOR GYBE CONTROL

Rigging preventers and boom brake type systems

Accidental gybes happen in all conditions, even in light air when a momentary lack of concentration can result in an accidental gybe. All booms should have some sort of control rigged when sailing deep off the wind. Again, even in light air conditions a boom can develop dangerous and destructive inertia when allowed to gybe freely. In-boom furling systems are heavier than standard booms, and it is even more important to control their freedom of movement.

Preventer and boom brake systems must be rigged to suit the layout of the boat, since all boats are different. Likewise the choice of which type of control system to use is an individual decision with varied opinions between experienced sailors. A preventer is rigged from a padeye on the bottom or side of the boom and led forward to the toerail. A snatch block can lead the line aft to a winch.

If your boom can dip into the water at any time, a shock absorber must be included. **Shockles®** is a product which can be rigged into the preventer line to allow the boom to have some freedom of movement.

If the boat cannot be steered back to the original gybe, a rigged preventer must be released after the gybe to get the boat under control.

Shockles®
shock absorber
www.shockles.com

CONSULT WITH YOUR RIGGER FOR THE BEST METHOD TO CONTROL YOUR BOOM - IT'S YOUR RESPONSIBILITY AND PRUDENT SEAMANSHIP

Another popular approach is to rig a boom brake system, which restricts the boom to a slow rate of travel during a gybe. These units do not require the immediate crew attention that a rigged preventer must have. The brake usually rides on a line running perpendicular to the boom. When the boom brake is actuated, it grabs the line and either works as a preventer or slows the boom's speed while gybing. The brake is actuated by tensioning the line upon which it rides.

Boom Brake

Warranty information

Painted Leisure Furl® booms must never be left wrapped in plastic. ***This can cause the paint finish to blister, and is not covered by the Warranty on Finishes and Coatings.*** **Immediate unpacking upon delivery is required.**

Never wrap your Leisure Furl® boom in plastic for seasonal storage. Trapped moisture condensing within the plastic wrap will over time penetrate the paint finish, and blisters will result.

WARRANTY ON FINISHES AND COATINGS

Forespar® Products Corp. hereby warrants and grants limited warranty to paint coatings on spars painted and assembled by Forespar as described herein as follows:

Forespar Products Corp. hereby warrants, to the original owner of the spar, that the paint coating shall be free of defects in material and workmanship, based upon industry standards, for a period of 3 (three) years from the date of purchase receipt. At its discretion, Forespar Products Corp. will provide touch-up paint or repaint the spar limited to the following:

Year 1:
Forespar Products Corp. will repaint the spar at its principal place of business upon discovery of any such defect in material or workmanship during the period.

Year 2:
Forespar Products Corp. will repaint the spar at its principal place of business upon discovery of any such defect in material or workmanship during the period. Labor and material costs will be shared 50% original owner and 50% Forespar Products Corp.

Year 3:
Forespar Products Corp. will repaint the spar at its principal place of business upon discovery of any such defect in material or workmanship during the period. Labor and material costs will be shared 80% original owner and 20% Forespar Products Corp.

Forespar Products Corp. does not accept responsibility or liability for charges or fees incurred by original owner for boat yards, cranes, surveyors, riggers or shipping companies. Forespar Products Corp. will pick up and deliver the spar within a 100 (one hundred) mile radius at no charge to the original owner.

Forespar Products Corp. does not accept responsibility or liability for damages to the spar during transportation, unless said damage occurs on Forespar Products Corp's truck.

Except to the extent expressly provided here and above and in lieu of all other warranties, there are no warranties, express or implied, including but not limited to, any warranties of merchantability or fitness for a particular purpose for the above described item or items.

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North American Forespar® Leisure Furl® Installer List *10/21*

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CC Rigging	Chris Catterton	San Diego	CA	(619) 756-9437	chris@cc-rigging.com
Pacific Offshore Rigging	Kasey Cambell	San Diego	CA	(619) 226-1252	KC@pacificoffshorerigging.com
Rigworks	Ray Pope	San Diego	CA	(619) 223-3788	Info@Rigworks.com
Kelly Marine	Jib Kelly	San Pedro	CA	(310) 548-5348	jib@kellymarine.com
The Chandlery	Ken Kieding	Santa Barbara	CA	(805) 698-7060	kkieding@chandlery.com
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Kim Weir Rigging	Kim Weir	Ventura	CA	(805) 607-1113	riggingbykim@gmail.com
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Onboard Rigging	Anthony Kelhower	Cape Coral	FL	(239) 244-7700	anthony@onboardrigging.com
Collection Yachts	Michael Relyea	Ft Lauderdale	FL	(954) 951-9500	michael@collectionyachts.com
Nance & Underwood Rigging	Roger Underwood	Ft Lauderdale	FL	(954) 764-6001	roger@nanceandunderwood.com
North Sails	Peter Grimm	Ft Lauderdale	FL	(954) 522-8840	peter.grimm@northsails.com
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Outbound Yachts	Phil Lambert	Ft Lauderdale	FL	(949) 275-2665	plambert@outboundyachts.com
Dam Rigging	Christian Dam	Hollywood	FL	(305) 490-0675	dam@damrigging.com
Catalina Yachts	Ellie Quinn	Largo	FL	(727) 544-6681	ellie@catalinayachts.com
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SSMR Sailboat Rigging	Steve Smith	St Petersburg	FL	(727) 823 4800	lbeearigger@juno.com
The Yacht Rigger	Stephen Lloyd	St Petersburg	FL	(423) 747-0384	stephen@theyachtrigger.com
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Thunderbolt Marine	Johnny Beasley	Thunderbolt	GA	(912) 352-4931	jbeasley@thunderboltmarine.us
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Larsen Marine	Mark Kish	Waukegan	IL	(847) 336-5456	mkish@larsenmarine.com
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Schubert's Marine	David Miller	New Orleans	LA	(504) 282-8136	DavidM@schubertsmarine.com
Seabrook Harbor Marine	Jeff Moniz	New Orleans	LA	(504) 283-6001	jeff@seabrookharbormarine.com
North East Rigging Systems	Kevin Montague	Concord	MA	(978) 287-0600	info@nerigging.com
Bay Sailing	Christine Pires	Fall River	MA	(508) 678-4419	chris@baysailingequipment.com
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Foster Rigging	Wally Foster	Quincy	MA	(781) 389-3405	fosrig@shore.net
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CL Rigging	Collin Linehan	Annapolis	MD	(410) 693-8068	Collin@CLRigging.com
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