DoubleWave
Marine Sales, Service & Technology

# Why is my Lido 14 mainsail so hard to hoist?

by

John Papadopoulos

Often is the case that hoisting the mainsail on a classic Lido 14 is a very difficult and noisy affair. We'll look at the issues that lead to this problem and present a few solutions that will help.

First, a bit about the main sail's bolt rope. The Lido 14 main sail utilizes a boltrope along the luff (i.e. forward) edge of the sail. In very early Lido 14 sails, the boltrope was hand sewn directly to the sailcloth – a very labor-intensive process. In modern times, the boltrope is encased inside a long strip of sailcloth, called the luff tape that is sewn to the edge of the sail. This method allows use of a sewing machine. The boltrope is fastened to the top and bottom ends of the luff – allowing the luff tape to slide up and down. There are some advantages and disadvantages to this method of attaching the boltrope. By allowing the rope to stretch or shrink inside its luff tape, the sail maker can introduce what is commonly called contraction into the sail.

Here's how contraction is created and what it offers. Before fastening the boltrope to the clew of the sail, the sail maker will pull out some of the boltrope from the luff and lock it in place with a few hand stitches. When they let go of the boltrope, it will contract and "scrunch" up the sail – much like an elastic band in a garment. This improves the range of adjustability of the sail's luff tension. When the sail is hoisted to the top of the mast, the contraction will keep it from stretching out to its full length – the contraction will be keeping some cloth bunched up. The sailor can then use the Cunningham to pull the sail down further and then subsequently letting the Cunningham off will let the sail rise back up – thus extending the range of control over the luff tension.

Boltropes may shrink with age. This will create contraction too. As it will be seen soon, too much contraction is a precursor to difficult mainsail hoisting.

The classic Lido 14 main halyard is composed of a 1/16" diameter wire rope with a shackle attached on one end and a rope attached to the other end. The wire portion passes thru a curved stainless steel tube mounted onto the masthead fitting.

As you hoist the main sail, the wire rubs against the inside wall of the stainless steel tube. Over time, the wire may cut a groove into the stainless steel tube. In many cases, the wire will distort into a twisted shape. Both the distorted wire and cut tube will contribute to the difficulty in hoisting the main sail. Both are replaceable items.

The main sail, of course, rides up the sail track of the mast. If the track isn't clean and smooth, the ride up can be difficult. This is a major contributor to the problem of hard-to-hoist main sails. If you leave your mast outdoors, gunk will likely build up inside the track so think about covering the mast or storing it with the track facing down so that dirt, rain, and other gunk won't settle into the track.

Keeping the sail track clean is your first defense against friction. Sometimes this requires a bath of soap and water to get the basic dirt out followed by solvents (only after the water has dried) to remove any grime. Acetone applied to the corner of a rag, which is then pushed into the sail track and dragged up and down the mast is a good solution to removing grime inside the track. Lastly, applying a dry lubricant will help reduce friction.

Lido 14 masts notoriously corrode. Often the result of being left outdoors near the ocean, the corrosion creates a coarse surface. The only remedy to this problem is to either remove the roughness thru polishing (very difficult!) or thru the application of some sort of coating. The coating of choice is a modern dry lubricant such as McLube's Sailcoat. A dry lubricant is essential, as it won't collect grime.

When a "scrunched" up boltrope is hauled up a sail track with lots of friction, the small folds in the luff tape will bunch up even more and snag on the rough spots. This is the most common reason why sails become hard to hoist. If you've hoisted a scrunched sail up a dirty sail track, you'll see the folds clearly along the luff – they will be dirty. Again, a dry lubricant such as McLube Sailcoat applied to the luff tape will help.

You can also take your sail to a sail maker to have the boltrope relaxed. This involves disconnecting the bolt rope at the clew, letting it relax up the cloth luff tape "sleeve", and re-fastening the bolt rope in the new, relaxed, position. This "bolt rope ectomy" might cost a few tens of dollars and but may be well worth the money and time if the sail is really hard to hoist but is otherwise in very good condition.

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In the extreme case, one can replace the luff tape and even the boltrope – making the luff of the sail completely new – will eliminate the sail's contribution to difficult hoisting. This requires more labor and is rarely worth the effort if done commercially.

In the worst sail hoisting cases, all of these factors co-exist – worn masthead tube, warped/worn halyard wire, shrunken boltrope cloth, and a mast track that is not smooth.

To find the most important contributor, consider hoisting your sail on another Lido 14 mast. If it goes up easy, it indicates that your mast is the problem.

As a sail rises higher up the mast, there will be more and more friction between the sail and the sail track. That means that the sail will get harder and harder to hoist as you go higher up. At some point, the sail sticks so hard that the tension in the wire halyard will cause a squealing sound as it rubs very tightly against the inside of the tube of the masthead fitting. This is excess tension is what leads to a groove being worn into the tube, which just compounds the whole situation.

Note that many classic Lido 14 owners mistakenly identify the masthead fitting as the culprit and before they investigate all the contributors to the problem, they invest in changing the main halyard and masthead fitting to the rope based system used on 6000 Series Lido 14s. A word of caution – the rope based system will irrevocably alter your ability to accurately calculate your mast's rake – an important matter for anyone racing their Lido 14. To learn more about this issue, contact DoubleWave or read Ullman Sails Lido 14 Tuning Guide published by both DoubleWave and Ullman Sails.

Lastly, the 6000 Series masthead fitting is known to corrode in seaside environments - which may lead to seizure of the rope sheaves – and (you guessed it) a hard-to-hoist main sail! There are excellent remedies to this problem but that's a topic for another memorandum.

**About DoubleWave and John Papadopoulos**

DoubleWave, the leading independent supplier of parts and service in the Lido 14 community, is owned and operated by John Papadopoulos.

DoubleWave is an authorized dealer for W.D. Schock Corp., the builder of the Lido 14 but extends service and parts well beyond those of a traditional boat dealer. In many cases, DoubleWave innovates solutions to problems in both the classic and 6000 series boats and has, in several cases, become a preferred supplier of parts and technology to W.D. Schock Corporation.

Outside of DoubleWave, John is very active in many dimensions of the sport of sailboat racing – from organizing local racing to serving as an International Measurer at world championships to writing on various topics of one-design sailing.

To learn more about DoubleWave, please visit www.doublewave.com