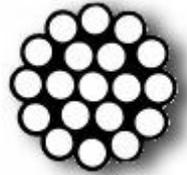


The Lido 14 sailboat is relatively unique compared to all sailboats that use standing rigging. The Lido 14 uses a very loose style of holding the mast AND the mast doesn't have spreaders that connect to the side shrouds. These two design choices lead directly to greatly increased wear and tear on the standing rigging and, all too often, unexpected failure of the rigging. This memorandum will help you assess the condition of the standing rigging on your Lido 14.

The standing rigging of a boat includes the wires responsible for keeping the mast standing upright. For the Lido 14, the standing rigging includes the forestay, which connects the mast to the front of the boat, and the shroud wires connecting the mast to the sides of the boat.

On the Lido 14, each wire is normally made from 3/32" diameter stainless steel wire – constructed as a bundle of 19 smaller strands in what is called "1x19". 1x19 wire has 12 outer strands, 6 middle level strands, and 1 inner strand.



The best indicator of unhealthy Lido 14 standing rigging is the presence of just a single broken outer strand. If a single outer strand is broken, the entire wire is considered unfit for use. Damaged wires cannot be repaired.

**If you find a single damaged strand, do not sail the Lido 14 and do not leave the mast rigged in the standing position.**

To determine the health of your standing rigging, please follow these steps:

- 1) Visually inspect the entire length of each wire to see if there are any obviously broken strands. If there is tape covering any portion of the wire, remove it and inspect the underlying wire. If there is a removable shroud cover, either remove it or slide it down the length of the wire to expose the wire underneath. Discard any wire found to have a broken strand. If a shroud wire is discarded, discard the other one too - we treat them as a matched set.
- 2) For each end of the forestay, bend the wire where it enters into the metal fitting. Look for strands popping outward right at the junction of the wire and the fitting. Repeat the bend in every direction so that each outer strand is flexed outwards.
- 3) Repeat step 2) for each shroud. If the plastic coating on the shroud is blocking your view of the junction between the wire and the end fitting, carefully trim back about 3/8" of plastic before conducting the test. Be careful to not scratch the wire if you are cutting away plastic – cut lightly. If the wire still seems OK, proceed to the next step.
- 4) Review the condition of the metal (both the wire and the end fittings) for corrosion (aka rust), buildup of gunk, or any other unnatural compounds. This is hard to judge, but anything that doesn't seem normal should be taken with great skepticism. Rust, for example, is cause for great concern.
- 5) Review the straightness of the wire. If there are any significant kinks or bends, the wire may be damaged. There is no way of telling for sure.

- 6) Examine the "lay" or the "packing" of the individual strands in the bundle wherever they are exposed. If you see a single strand that is somehow unique amongst its buddies in the bundle, consider that may be a defective strand. For example, if a single strand is a different color (perhaps slightly corroded), consider it to be bad and thus so is the whole wire. The 1x19 bundle only works if the strands are tightly packed together – they work as a team by binding up against their neighbors. If a single strand is somehow elevated outwards from the bundle, not only is that wire not taking on its share of the load, it also means there is a gap amongst the remaining strands that keeps those strands from working together properly. One might imagine that loss of a single strand would result in loss of 1/19<sup>th</sup> of the strength of the wire. It's not the case; the impact is greater.
- 7) Inspect the plastic jacket of the shroud. Is it brittle and cracked? Though not an indicator of the health of the underlying wire, it's an indicator of the age of the wire. Old wires are notoriously prone to failing. The average life span of Lido 14 standing rigging is quite short - several years. Of course there are boats with standing rigging that is decades old and in good condition but on average, that's extremely rare.

DoubleWave is a leading supplier of standing rigging for the Lido 14. We fabricate each wire in house using high quality components and precision tools and jigs to ensure high uniformity. We also produce standing rigging in quantity to increase our efficiency – which means we can offer the best quality product at the lowest cost. We warranty our product.

Contact DoubleWave if you have any questions:

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