

Checking your Rig and Deck Equipment

This short article is intended to summarise the perceived wisdom of riggers over many years and to interpret the comments and findings of surveyors in looking at Sadler yachts in particular. The views expressed are about the standing rig in general, followed by specific comments relating to each type of Sadler/Starlight yacht.

Unless it can be proven to be less than ten years old, most insurers attempt to persuade their policy holders to renew the standing rig. Surveyors take a more liberal line and suggest that if the rig is more than ten years old, consideration should be given to changing it, during the course of the next two to three years. The surveyor's comments will relate to some extent on the condition of the rig as he sees it and how well the boat is managed. These points are worth checking:-

- (a) Are the swaged fittings straight, or is distortion evident? Many Sadler rigs have slightly "banana'd" swages, which are the result of poorly set and worn dies in the swage machine, when the rig was initially made up.
- (b) Is there adequate articulation, where the 'T' terminals fit into the mast, and are the backing plates showing signs of wear?
- (c) Any signs of corrosion where the wire feeds into the lower swage could be a sign of trouble and if there is a single frayed strand, then the wire should be condemned.
- (d) Are the rigging screws perfectly straight (no bends) and lubricated? Are the clevis pins the correct size for the chainplate holes and rigging screw toggles.
- (e) Is there evidence of chain plate movement, especially with regard to the babystay and aft lowers, since these take heavy loads?
- (f) Are moving parts in good condition, such as goose-neck, kicker and mainsheet connections?
- (g) Are there any signs of dents, or chafe damage that could weaken the structure of the mast or boom?
- (h) Is the Furlex and headfoil system in good condition? Maybe needs a service.
- (i) Is there any evidence that the 'T' base/mast post assembly has degraded through compression. Poorly fitted deck glands can result in water penetrating the structure immediately beneath the 'T' base under the mast.
- (j) Are deck organisers, clutches and winch arrangements correctly positioned in terms of minimising friction? Are they lubricated and do they function effectively?

We have become aware of certain specific problems that may arise, quite apart from the general points just mentioned.

1. **SADLER 25.** Most of the boats built pre 1979 have by now received enhancements and refurbishments to the rig, which is clearly beneficial. As originally set up, this rig was fairly "light weight", especially as regards most of the deck fittings, chain plates, headstay arrangements and other fittings.

A number of enhancements came through in 1979 with the Mark III rig, which is 16" (430mm) higher and fittings were generally beefed up. The early practice of putting the mainsheet in the middle of the cockpit sole has been changed on many later boats to a mainsheet track across the bridge deck, or further aft on a beam, just below seat level.

2. **SADLER 26.** Learning from the Sadler 25, this rig was well conceived and is pretty standard across the range of Sadler 26s (1982 to 1991).

Sadly, the 26 rig had the capshrouds and lowers both set on the same chainplate at the main bulkhead, which provided no aft component for the rig either at spreader height, or at the top. Also, no babystay was fitted. I suspect that both these steps were taken as an economy and it did mean there was considerable mast movement in a fore and aft direction at spreader height, under certain conditions of sailing. Some boats now have a babystay fitted, which is an improvement. In general, 26s are not pushed too hard and most come through survey with little trouble.

3. **SADLER 29.** This is a good rig, with chainplates and attachments being adequate for the boat, with normal use. However, the babystay eyebolt (aft of the hatchway), can work through the stiffening, especially if the boat has been sailed hard. If so, it requires re-bedding with a stainless steel pad. The babystay does take considerable load. The backstay chainplate is invariably not in a direct line with the backstay and can be as much as 15° out. Most of the 29s are the same, and if you get an opportunity to remove the backstay chainplate and correct this error in the angle, it is worth doing, since it gives a better load-bearing surface to the clevis pin. In fact, the load on the backstay is less than other shrouds because it has the largest angle. It is essential that a toggle is fitted here.

4. **SADLER 32.** This rig was well set up by designer David Sadler to be a tough cruiser/racer under the IOR rule. Shroud anchorages are generally good, although like the 29, the babystay can give trouble. The oldest of the 32s, should by now have the complete rig replaced and mast and boom as well. This is important, because pre 1981 they had furling main booms and no proper boom vang, except with a claw ring. No slab reefing was available. Most of these booms have now been replaced with proper slab reefing arrangements. A number of different furling systems were fitted prior to 1984 when Kemp became standard. Buyers should be wary of these earlier furling systems, since spares are difficult and the whole unit probably now needs replacing.

Generally speaking, for boats from 1986 onwards, the standing rig and deck arrangements are reliable, and cause no trouble.

5. **SADLER 34.** In general, the rig has stood the test of time and was very satisfactory from the earliest boats, the only problem being the aft lowers.

You will realise that the capshroud chainplates are fastened through the main bulkhead and therefore can be sited reasonably inboard to get the sheeting angle right. However, the aft lowers are set up on an 'L' shaped stainless steel knee, which is fastened and bonded into the interior moulding. This is the most common rig problem on 34s, because the load on the aft lowers is considerable and the chainplate gradually eases upwards through general "creep" and this movement can distort the deck in that area. You can check whether you have a problem by measuring whether there is any upward distortion of the deck near the chainplate. No distortion means no creep! We have dealt with this aft lower chainplate problem by refitting the chainplates into redrilled holes in the stainless steel knee, at the same time as pulling the deck back down to shape.

The only other problems that occur are the babystay eye-bolt anchorage (as with other Sadlers) and the genoa sheet lead block anchorage. The genoa sheet goes from the car, to a large turning block mounted on a high 'U' bolt sited well aft on the side deck. There can be a heavy load on this 'U' bolt and some have been known to move considerably and one or two pull out completely. Check that there is sufficient stiffening beneath the 'U' bolt to spread the load. The presence of stress cracks will indicate if there is a problem and you should then take the opportunity to fit a lower 'U' bolt.

6. **STARLIGHTS 35 AND 39.** We have been involved in nearly twenty Starlights now in terms of sales and subsequent surveys. In general, they have come through survey extremely well and the rig and deck fittings have presented no problem. My opinion is that the rig is tough and able to take all the rigours of normal sailing and passage making, providing it is maintained and kept in tune.

No particular Starlight class problems have been identified and the only thing to look for is signs of normal wear and tear. A point of detail worth noting however, is that several times we have discovered the Lewmar genoa cars have failed. Firstly, the sheave bearing gives trouble then the

sheave stops turning and develops grooves and finally bursts - so do check the Lewmar cars.

7. RIG TUNE. The single biggest cause of rig failure is when the mast has not been tuned correctly, thus inducing metal fatigue at rig terminals, in the wire itself and also the backing plates in the mast. Selden/Kemp have an excellent booklet, which used to be supplied with every new Sadler. It is still available and you should give them a call to get a copy, called - Hints and Advice on Rigging and Tuning your Kemp Mast.

Key points to check with the standing rig and the mast itself are as follows:

(a) Check that the chain plates are in a direct line with the rigging, so that clevis pins are aligned in the hole

(b) Check that toggles are fitted below and above the rigging screw, so as to give adequate articulation

(c) Lubricate rigging screws, being especially important with the older all stainless steel versions, which used to "bind up". Modern rigging screws either have chromed bronze barrels, or bronze inserts.

(d) Check that the cap shrouds and lowers take up a correct line at the mast. It is important that the 'T' bars articulate properly on the backing plate, so that each swage is aligned with its shroud.

(e) Check wear in the sheave cages at masthead (spindles and sheaves) and that the sheaves are adequately lubricated at mast heel. A useful tip is to ensure that the main halyard is shackled into the forward hole of the headboard, rather than the aft one. Reason for this is that when running, if you shackle into the aft hole, the halyard will take up too great an angle over the shoulders of the sheave and wear it down. Ultimately, the halyard will jump off the sheave.

(f) Check that the no. 1 genoa halyard feeds through the bullseye fairlead situated some 6" to 9" below the halyard sheave. This will prevent an involuntary "wrap" of the halyard.

(g) When mast is unstepped, check security of rivets in heel fitting.

(h) At the end of each season, wash all spars and rigging to clear salt deposits and lubricate all moving parts. Take special care where stainless steel is in contact with aluminum and lubricate these fastenings. Squirt water down inside the boom, since this is where considerable corrosion takes place, since anodising is less effective in these areas. Ideally take all running rigging out and thoroughly wash and refit to mast in the spring. By sewing a small loop in the end of each rope tail, it will be possible to attach the messenger with more security.

8. FINAL THOUGHTS. In general, Sadlers and Starlights are set up with adequate rigging and deck fittings for the purpose - certainly much better than most of the competition! As with other equipment, regular maintenance and an annual check is essential. If in doubt, ask your local rigger to do a rig check for you. Wash the rig frequently with fresh water and use Vaseline and WD40 to lubricate moving parts.

Enjoy your sailing next season in the confidence that the rig is as good as it can be.

Good luck and good sailing

Mike Lucas