

Improving your Reefing System

1. **Historical development.** In the middle 70's when the 25 was first developed, production boat builders were still reefing the mainsail by rotating the boom. This was the same principle as the Wickham Martin gears, although those developed in the middle 70's had a direct system of rotation of the boom, using a long stowable handle (about 12" length). The system was fitted on a number of 25s, having been standard practice on the Contessa 32, and many of the early Sadler 32s.

Convenient though the above system was in terms of ease of handling, it produced a mainsail shape which became more full as it was reefed, being precisely the converse of what is trying to be achieved.

In the late 70's, the move towards "slab reefing" became fairly universal, with the reefing winch mounted at the mast (just below the boom) at an appropriate angle. Stoppers were arranged at the forward end of the boom, thus enabling each clew pendant to be secured once the reefing had been completed. The tack cringle was pulled down onto horns, one situated either side of the boom.

This arrangement was entirely seamanlike, in that the halyards were also at the mast.

During the 80's, the boat builders decided in their wisdom to mount the halyard winches on the coachroof so that various other tasks could be performed using clutches which were then becoming available. This produced a system which was more convenient for halyards in that they could be controlled from the safety and comfort of the cockpit, but the clew pendants and the hooks for the tack pendants had still to be attended to at the mast. This was of course unsatisfactory because it either needed two people to put a reef in, or alternatively, one had got several trips forward and aft to get the reef finally secured. This arrangement was generally supplied on Sadler yachts right upto 1988.

By this time, the case for bringing the clew pendants aft was recognised and as an optional extra, control lines for the tack pendants were also supplied and brought aft. This then became the ideal system providing that the kicking strap and topping lift came aft as well.

The Starlight 39 was developed with the ideal solution, having all control lines leading aft (7 per side) into a battery of clutches (7 per side). Generally, a pair of self tailing winches were supplied for the coachroof, which meant the total sail control operation could be handled from the safety of the cockpit.

The purpose of this article is to consider the necessary arrangements to update the reefing arrangements and bring them into line with the Starlight solution.

2. **Deck work.** Dependent upon the extent to which an efficient system is to be developed, the controls will require an arrangement of lead blocks at the mast foot, which needs to take into account the various configurations of sheave boxes mounted into the heel of the mast. It also requires deck organisers to be mounted in the appropriate position on the coachroof (requiring minor headlining mods on the older Sadler boats).

The fitting of clutches and appropriate winch arrangement is relatively straight forward on all Sadlers since large aluminium plates are fitted during construction of the boat, which can be tapped into for securing the deck hardware. You will be able to detect the precise location of the aluminium plates by using a hand-held metal detector (available B&Q, Do It All for under £10).

3. **Reefing lines.** Most of the older Sadlers seem to have the halyards running aft to coachroof winches with appropriate clutches. The next step is to figure out how many additional clutches are needed which will probably be two for tack pendants, two for clew pendants, one for topping lift, one for kicking strap, maybe second genoa halyard and also spinnaker boom lift and foreguy. Having decided how many lines will come aft, select a suitable clutch from the wide array that is available and these can be attached to the coachroof by drilling through and tapping into the aluminium plates.

Existing deck organisers are probably each of three sheaves. You will need to "double bank" another pair of identical organisers on the top of the existing ones. Now available through ourselves is an exact duplicate of this deck organiser which we have arranged to import from Denmark. We have also made up some packing pieces to enable the new organiser to be "double banked" on top of the old one. This part of the job is quite simple in that you should undo and withdraw the securing bolts, get longer bolts or machine screws if necessary and set the new deck organisers on top. This will now provide you with a total of six each side and sufficient to deal with all the lines that will now come aft.

Arrange the appropriate number of single blocks around the heel of the mast to provide lead for various lines aft to the deck organisers. Available for holding these blocks are stainless steel deck eyes which again need to be bolted through the deck. The deck may well need some reinforcement below and at any rate will require large penny washers.

4. **Reefing lines.** Providing you have a boom with internal reefing lines, these can be lead out from the forward end and down to the lead blocks on the deck. You can of course then dispense with the stainless steel horns at the forward end of the boom (hitherto used for tack cringles) and you won't need to use the stoppers at the forward end of the boom either.

5. **Single line reefing.** This is now being fitted as standard by some of the boat builders, but is in my view of questionable merit. Should anything come adrift inside the boom, it is very difficult to resolve this and there is without a doubt more friction in the system.

My preference is for two line reefing which is simple and certainly faster than single line reefing. My experience is that it takes nearly twice the time to take a reef in with single line reefing than it does with two line reefing.

6. **Summary.** Attention to the reefing system is certainly worthwhile. A fundamental requirement is to reduce friction and make the whole system efficient and fast to use. Providing the detail is thought through, it is quite reasonable to take in a reef within 30 seconds from start to finish. With confidence and little effort involved, one's inclination is then to put a reef in in good time and shake it out again when ready. The smaller the crew, the more important it is to get all this right.

In practice, the whole installation can be done quite easily by an owner with average practical ability. However, advice should be sought from a local rigger to get the system right, if in doubt. Time and thought given to this most essential business of reefing, will make your sailing more enjoyable and certainly safer.

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