

MORETON INVESTIGATOR ASSOCIATION

Technical Report No. 4 - Headsail Change Technique

Introduction

The jib-furler on the Investigator 5.63 is considered to be a feature of convenience which is worth keeping as part of the rigging system of the yacht.

1 The headsail provided as the No. 1 jib on this yacht is rope-luffed and consequently requires to be hanked on to a wire forestay to avoid excessive falling off of the sail and loss of pointing ability. This feature does prevent furling of the jib unless the halyard is also returned down the forestay and belayed at the plate on the jib furler. The system of tensioning the luff is crude and very slow.

The problem of headsail changes becomes acute when the storm jib is to be rigged at sea and exchanged for the No. 1 jib. Obviously, the wind is increasing and is probably over 15 knots and the seas are rising.

This sets the scene for a relatively hair-raising experience on the foredeck for probably fifteen minutes sailing without a headsail while the jibs are exchanged.

The technical committee has endeavoured to solve this problem by improving the rigging system so as to permit a rapid, safe, headsail change while retaining the jib furling system.

Purpose of this Report

This Report suggests the rigging modifications required to effect a quick headsail change.

Alternative systems are discussed briefly to indicate other possibilities. The alternatives will not offer the full potential of the recommended system, but will cost less.

Approximate costs of items and modifications have been indicated as a guide.

Headsail Changes on larger Yachts

One common method of effecting headsail changes on larger yachts is by the employment of two forestays.

This system works very well and obviously the new sail is tacked and hanked on and sheets arranged (as required) prior to lowering the sail in use. The halyard is then changed over and the new sail winched up.

After a considerable amount of thought was given to the matter it was decided that this system could be adopted on the jib furling gear of the Investigator.

Recommended Rigging Arrangement.

The arrangement of the rigging to allow two forestays to be used is shown in Figures 1 & 2. Items on the drawings are listed and identified below.

(see over)

Headsail Change Technique 2

Item No.	Description	Make & No.	No. off	Cost
1	Halyard (Existing shortened by 1')			\$2
2	New Forestay 39'9"	1/8" S/S wire (flexible) Eyes both ends		\$17
3	Forestay Block (metal) + shackle	Ronstan RF 468		\$2.60
4	Double Shackle	RM 22 HD		\$1.22
5	Jam Block & Pulley (4 falls) with whipped line 5' long	SS238VJ & 238B		\$5.70
6	Snap Shackle	RF 532	1	\$3.30
7	Snap Shackle (for jib Sheet block)	FG 0207 - 0	1	\$2.00
8	Halyard tail 8 mm Marlow yachting line 20' snap shackles both ends	Ronstan		

System Operation.

The normal rigging procedure can be described concurrently with a description of the correct procedure to change a headsail:

1. Take the new headsail and the halyard tail (item 8) to foredeck.
2. Secure one end of the halyard tail to the pulpit rail immediately (to avoid losing it overboard).
3. Hank the headsail on to the forestay not in use.
4. Shackle the tack of the new headsail to the furler plate.
5. Release the tension on the jib luff (using the pulley block).
6. Retrieve the free end of the halyard tail but keep the other end secure. Release the end of the jib halyard from the jam block and attach the snap shackle on the halyard tail to the halyard.
7. Lower the jib and swap the halyard to the new jib.
8. Release the jib sheet blocks and attach them to the new jib.
9. Raise the new jib and attach the halyard to the tensioning block. Then release the halyard tail.
10. Apart from moping operations, sailing may continue. The interruption to operations has been minimal.

Note A strop, 52½" long is required on the storm jib to allow the halyard to finish in approximately the same position as when the No. 1 jib is used.

(see over)

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Alternative Systems

Variations to the system described can be envisaged.

One system which represents a departure from the proposed system is to employ a lazy halyard kept on the mast until required. This halyard can be tensioned by a fitting on the mast (a Highfield lever or a small winch for example).

The spinnaker topping lift can be used as an auxiliary halyard. Two modifications are required to permit this:

- (i) The block for this line must be positioned high (just under the hounds).
- (ii) The topping lift needs to be about 10' longer.

This line can now be used as either an emergency halyard or to hoist the storm jib after the main jib has been furled. Since no hanking of the storm jib is possible maintenance of sufficient tension in the luff is a problem. The writer has tested this system and found it works reasonably well; but a definite loss in pointing ability is observed.

This method is quite cheap and simple, has three uses and is recommended for the following reasons:

- (a) It performs the topping lift function (for the spinnaker) better in this position.
- (b) It serves as an emergency halyard in the event the correct halyard runs up the mast. This happened to the writer while attempting a sail change with the original rig; even with a tail on the jib halyard the weight of the halyard with the jib down is so distributed that the free end will run up the hounds - which are a long way from the deck! (I was able to use the emergency system as described).
- (c) You are on your way with your spinnaker fittings!

Pole Ring:

There is a distinct advantage in buying and fitting a spinnaker pole ring as described in Report No. 3. Halyards, topping lifts and so on can be belayed here very neatly.

Practice

I believe it is important to test your rig and practise using it on the shore. This familiarity and experience will count for a lot when the chips are down.

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INVESTIGATOR HEADSAIL APPARATUS
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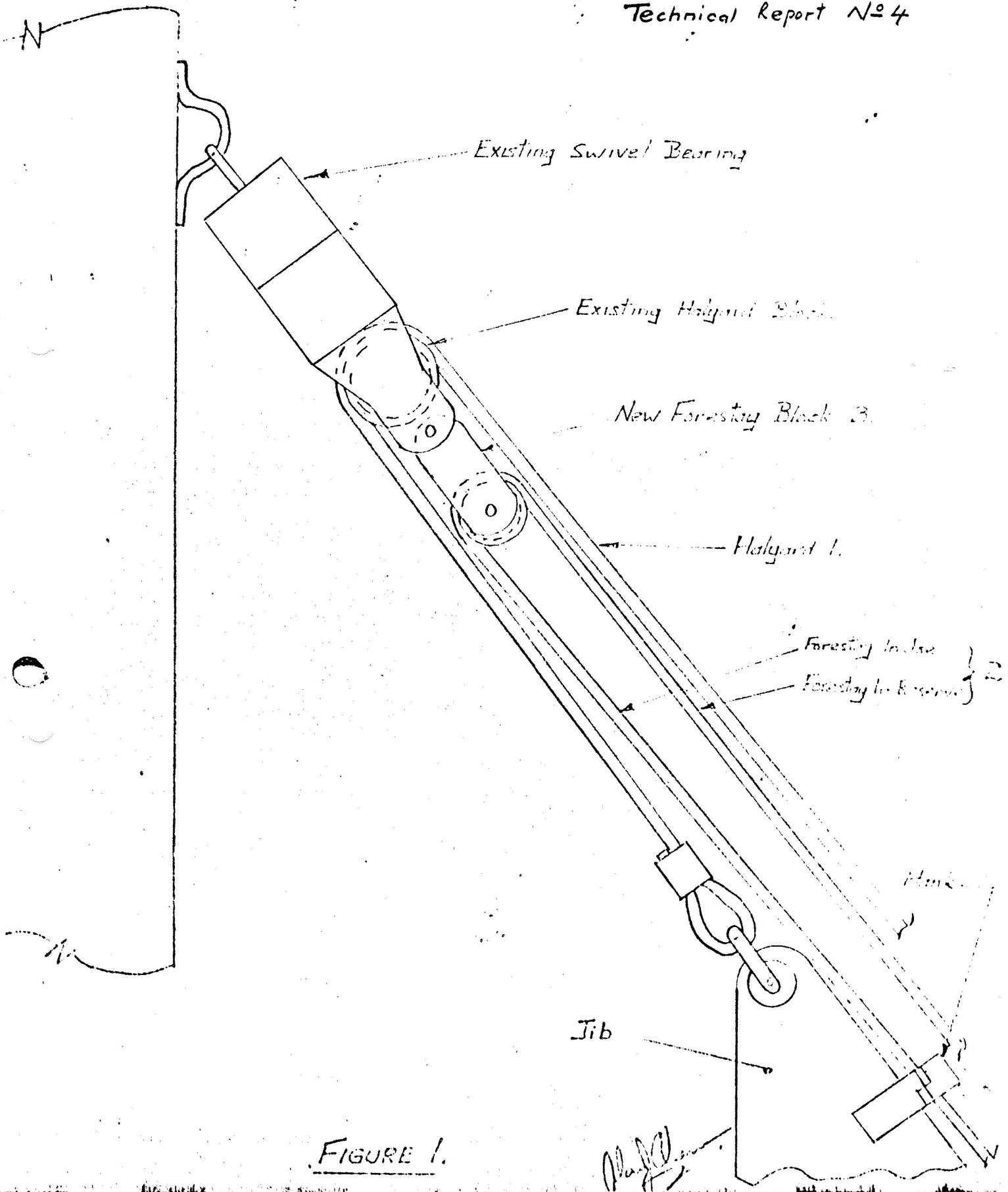


FIGURE 1.

INVESTIGATOR HEADSAIL ARRANGEMENT.

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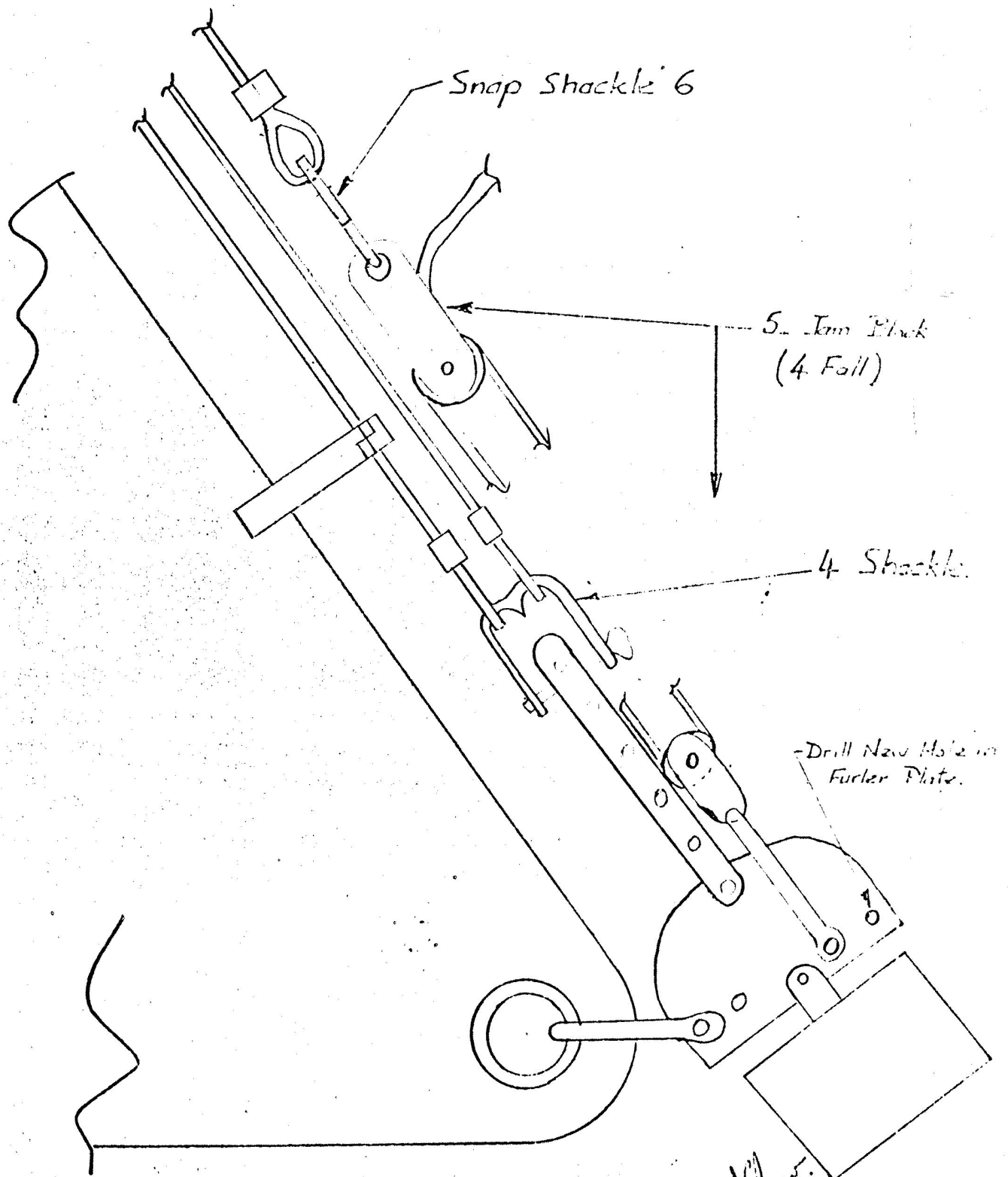


FIGURE 2.