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The Silhouette Owners'
International
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The Silhouette Handbook

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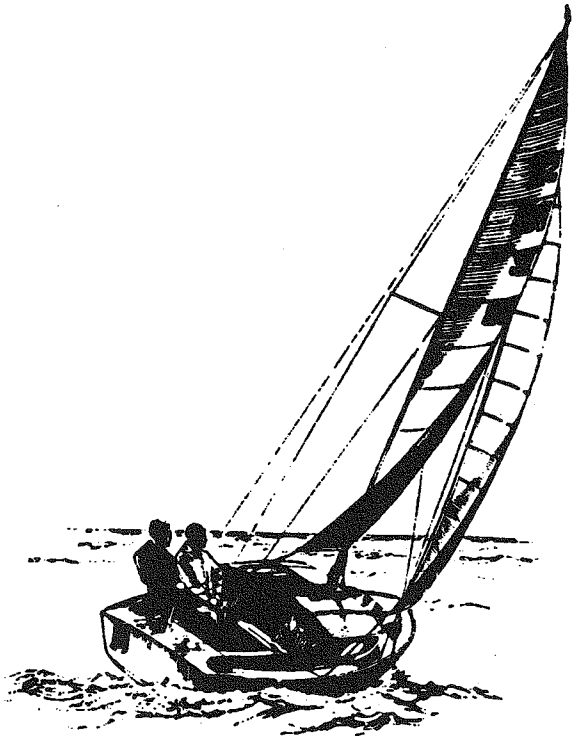

The Silhouette Owners' International Association

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The S.O.I.A. was founded in 1957 with the object of promoting the interests of Silhouettes and similar small craft. 'The Silhouette Owner' our association magazine is posted monthly to members free. It relies for its contents on members' contributions and the editor is always delighted to receive letters, accounts of cruises, or hints on maintaininng and refurbishing our boats.

Membership of SOIA is worldwide, but with the majority of members living and sailing in the U.K. There are several Regional Groups who organise sailing and social programmes throughout the year, while for members in more isolated areas, the Journal serves as a lively means of communication. Highlights of the S.O.I.A.calendar are the Sailing weekend at Rutland Water each June, and the one week National Rally held at Plymouth in August.

The Association is managed by a committee of about fifteen members elected at the Annual General Meeting. It is chaired by the National Commodore, and includes the Hon. Secretary, Hon. Treasurer and Hon. Editor, plus representatives of the Regional Groups. There are usually two meetings a year as well as the Annual General Meeting .

Unfortunately there are no Silhouettes being built commercially today, and so the nature of the Association is somewhat different to what it was in the ninteen seventies, when there were a thousand or so members, many of whom had just acquired new boats and were enjoying the companionship of the SOIA both on the water and through the Journal.

Today, there is a balance of interest between sailing the boats and maintaining, restoring and improving them, and again, the Association serves to communicate the experiences of members and to keep the spirit of Silhouetting *alive*.

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The third edition

This edition of the Silhouette Handbook aims to address the most frequently raised questions received from members today - acquiring a boat, differentiating between the various successive marques, boat handling in and out of the water, and carrying out modifications and improvements.

Much of the information comes from experience with the SII - numerically the largest group of the five recognised versions - but it is valid in much of the detail for the later Silhouettes.

We cannot hope to cover the whole area of restoration and refurbishment in this publication however, and supplementary data sheets on specific topics, as well as individual reprints from the Journal may be obtained separately from the Hon. Editor, for the cost of copying and postage. If you have a query on any aspect of Silhouette ownership don't hesitate to contact either the Secretary or the Editor, and we will do our best to help you. Alternatively, the SOIA members' list is an invaluable aid to finding somebody not too far away with the answers you need.

I am very grateful to all the members, past and present, whose experience is drawn on for the Handbook; to Denis Heald and other members of the National Committee for their comments on the draft copy of this edition.

Ian Rodger
Hon. Editor
September 1995

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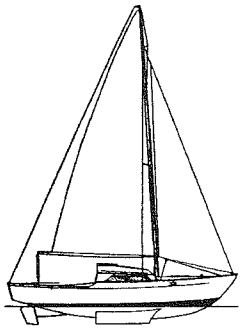
Development of the Class



Mk I. Marine ply. 1954
Single chine hull
LOA: 16ft 6 ins
Beam: 6ft 3ins.
Draught 11 .5.ins..
Mast stepped forward of cabin front.
Bilge keels, or swing keel.
Rig: Gunter lug 115 sq ft or 3/4 bermudan rig 99 sq ft
Builders: Kits by Slingsby Sailplanes Ltd , Self build.

In November 1953, Robert Tucker announced that he had designed a small sailing cruiser especially for the amateur builder. She was 16 ft 6ins LOA , 12 ft 6 ins WLL and 6 ft 3 ins beam with a draft of 1ft. The sail area was 115 sq ft with a gunter lug, or 99 sq ft with a bermudan rig. All the materials could be bought for £100.

The SI hull was hard chine marine ply on oak with two metal plate bilge keels set at quarter beam and at equal depth to the deepest part of the hull. The ballast was carried internally.

She was designed as a two-berth boat. This small inexpensive cruiser was of interest as at that time, particularly as the cult of "tenting" in dinghies was beginning to be popular.

Early in 1954, the first Silhouette was launched on the Medway. SI/1 Blue Boy had been built by two students from Battersea Polytechnic for £85.

Naturally with the first Silhouette launched, alterations, variations and modifications began.

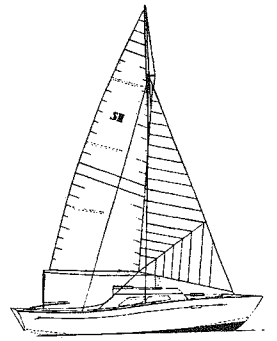
The builders of SI/1 were a bit dubious about the bilge keels and so a special fin keel was designed and fitted. This keel had its trailing edge leading forward more sharply than its leading edge,' (this design seemed to be still in favour with One Ton Cup designers).

Incidentally after achange of owners and a move to the Broads, SI/1 reverted to bilge keels. SI/2 started as a bilge keeler and was converted to a fin keel in 1973. In both forms, she had been winning races.

Silhouette I's were mostly built by amateurs and have been found around the world including some sailing 600 feet above sea level in the Transvaal.

In 1954, the west Hartlepool YC asked Bob Tucker if he could extend the SI to 18 ft LOA for racing. This was done and the "Fantasie" came into existence and examples are still around.

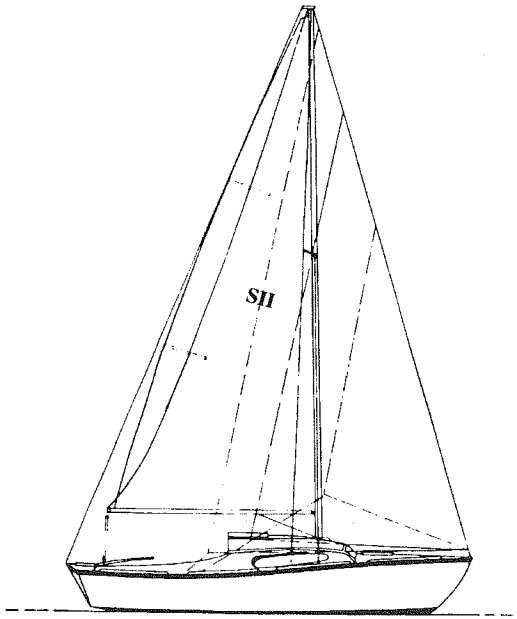
In 1954/5, the SII arrived as a greatly modified SI. Drawings for the Silhou-



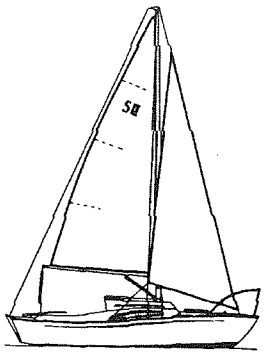
Mk II Marine ply. 1955
Single chine hull
LOA: 17ft 3ins. Beam:6ft 7ins.
Mast height: 19ft.
Diamond stays & jumper struts Single shrouds from hounds. 3/4 bermudan rig. Forestay led to just aft of samson post. No kicking strap or topping lift. Builders: Lee & Boswell, Beta Marine, and other companies or self-build.

ette were first published in the American magazine RUDDER in April, 1955. Some of those who saw the drawings commented on the good outline or silhouette of the boat and the name "Silhouette" stuck.

The first boats were centre-boarders and the credit for pushing the marriage of the Mark II and bilge keels must go to Jimmy Hamilton, whose SII/2 preceded Robert Tucker's own SII/1 by a few months. The measurements were increased to 17 ft 3 ins LOA, 12 ft 6 ins WLL, 6 ft 7 ins beam and 1 ft 6 ins draft. The SII was again a hard chine bilge keeler, this time with a centre stub keel which was her ballast. The distinguishing serpentine sheer came - so it is claimed - from an owner-builder, and the boat that we now know as the SII started life. No. 3 was built in Florida and No. 4 in Canada. No. 7 was built by Lee and Boswell of Great Yarmouth, and was shown at the London Boat Show in 1956 selling at £245. About 20 were built by this firm before the yard decided against continuing and George Hurley of Plymouth began his association with Silhouettes which continued until 1976. Plans for the wooden SII are still available although Tucker Designs are no longer actively promoting the class. Sets of A4 size mini-plans for the MkII are available from the Hon. Secretary for a couple of pounds and are a useful guide to general construction details.



Mk II Marine ply from 1960 or g.r.p. from 1962
Single chine hull, bilge keels.
LOA: 17ft 3ins. Beam:6ft 7ins.
Mast height: 19ft 6ins.
Upper and lower shrouds. Masthead rig, and forestay led to the stem.
Builders: Hurley Marine
(complete or part finished boats).
GRP hulls sometimes fitted with ply deck fittings and hatches, and also fin keel version available.

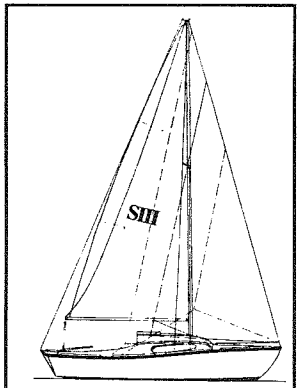


Mk II Marine ply. 1958
Single chine hull
LOA: 17ft 3ins. Beam:6ft 7ins.
Mast height: 19ft 6ins.
Upper and lower shrouds.
Masthead rig, but forestay still led to earlier position. Kicking strap and Topping lift added.
Windows in rubber mouldings.

EARLY RIGS

Up to 1960, all the boats sailed with a 3/4 rig having a 45sq ft jib. This was replaced from about Sail No 600 by a full jib of 52 sq ft, the forestay still coming to a plate about 18 ins from the stem head. In both cases, the main was 65 sq ft. Naturally the rig of a large number of the earlier boats was modified. The SII continued to be supplied in Kit form and in some instances, the marine ply and wood were cut to size and shape. In 1960 Hurleys supplied their first kit with the hull completed and the buyer receiving the rest in kit form. By September 1961, there were 1000 Silhouettes in existence - over 300 in America, 500 in the UK and the remainder around the world.

In about 1962 moulds were taken off a plywood hull so that Hurleys could commence production in fibreglass. New deck mouldings were also produced, which established the 'softer' look of the later MkIII boats. The marine ply boats still continued to be built both by the works, by amateurs and by the smaller yards. With the GRP boats, the jib size was increased again to 53 sq ft and the forestay and jib tack carried to the stem head. This reduced some weather helm which had been a criticism of the previous boats.
Too much weight in the cockpit area was a major cause of weather helm. Correct trim and stowage play an important part in achieving a balance with these small cruisers. Many owners fail to read the instructions about the mast angle, or to follow the waterline; the result being that with the weight of the crew on board, the mast is raked aft and the transom is well dug into the water. The spate of owner modification continued but the GRP boats provided less scope for altering the internal layouts. 2133 sail numbers have been issued to SIIs and there are at least another 1000 sailing without SII numbers .

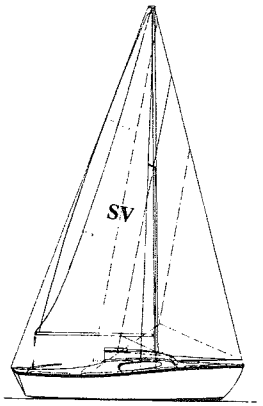


Mk III All g.r.p.
From 1965
Completely new round-bilge hull designed. Same deck mouldings, length and beam as g.r.p. Mk II, but deeper draught with encapsulated ballast in grp bilge keels. Mast 21ft 6ins. 33% more sail area than SII. Available with bilge or fin keels.
Builders: Hurley Marine, then Russell Curnow.
MkIV : All g.r.p.
From 1972 Same hull & rig as SIII, but 4 berth

A major lengthening of the SII produced the Silhouette Senior 20 ft LOA. which had a finer bow and entry into the water. She was a very fast small cruiser built around 1967 in Essex, and later by Tankard Yachts.

ANEWDESIGN

The MkIII Silhouette was designed in 1965 as a GRP boat using the same deck as the GRP SII. Export versions were produced with fin keels but the standard hull had rounded bilges, ballasted bilge keels and carried approximately 33% greater sail area: jib 66 sq ft, main 99 sq ft, totalling 165 sq ft compared to the 120 ft total of the SII. The SIII was a Hurley special and was supplied solely by them either ready to sail or as a hull plus parts for



Mk V All g.r.p.
From 1974

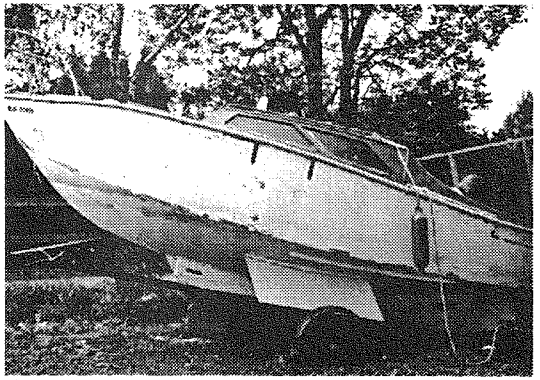
Hull mouldings modified to give 3" more freeboard. Builders: Russell Curnow, Varne Yachts, then Beresford Marine. Ceased production about 1990. Probably only about 5 built.

the owner to complete. 365 of these were registered with sail numbers and there are known to be a number of home-finished boats without registered number. For the U.S. market, a long keel version with bowsprit was produced - this last item as an optional extra. Naturally owners in the UK copied this and bowsprits appeared on SIIs and SIIIs. Generally, the SIII was produced with 2 berths but some were made with a quarter berth.

THE MK IV AND V

In November 1972 Hurleys announced the MkIV built by them and marketed by J.G.Meakes.This was a four berth version of the SIII and was sold complete with pulpit, berth cushions, sink, cooker and chemical toilet. However, the price was against sales and only 25 were made. T Hurleys finished trading in 1972. Moulds were passed on to Russell Curnow, who built the MkV from about 1974. This had the same layout as the IV, but an increase of 3" on the freeboard and headroom.

Acquiring a Silhouette



An early and neglected SII by Beta Marine. £400?

The S.O.I.A. has a monthly journal 'The Silhouette Owner' which usually has a number of boats advertised for sale on the back page, and this is probably the best source for getting one. Since most of them belong to members you are unlikely to be sold a 'pup'. Alternatively, 'Practical Boat Owner' and other yachting periodicals usually have a Silhouette or two offered for sale.

If you are really keen, you can build a boat from scratch, using plans obtainable from Tucker Designs, 15 Wrensfield, Hemel Hempstead, Herts. A complete set costs £57 which includes V.A.T. and designer's royalty.

Building is usually a two year (or even longer) project, slow, but rewarding.

Unfortunately there are now no new Silhouettes being manufactured, nor are there any kits available for home completion. The next best thing is to buy a very dilapidated boat for about £250, and strip off all the plywood cladding. Usually the oak framing beneath is quite sound, and re-panelling it is simpler than building a complete boat.

If you join the S.O,I.A. we can put you in touch with other members in your area who will be pleased to show you their boats, or give you a sail. You can then compare the merits of the wooden and fibreglass boats.

As a brief guide, if you have £500 to £600 to spend, and enjoy woodwork, you will be able to get a plywood S.II which probably needs considerable attention, and put it to rights. For £700 to £1,000 you will get a plywood or slightly younger fibreglass S.II with a motor. An average S.II, complete with road trailer, motor and perhaps a dinghy, usually goes for £900 to £1,200. About 400 S.III's were built, all in fibreglass. A good one will cost £1,300 to £1,800.

Buyers' Guide

This section is intended to help anyone considering buying a particular boat, but it may also serve to provide current Silhouette owners with a maintenance checklist.
Don't be put off by the length of this list!
Even though most of the Silhouettes are 30 years old ar more, the cures for the problems are relatively simple, and wellworththe timeinvolved.

Mk II

Silhouettes

Wooden boats, whilst often preferred as a material, do need more maintenance than g.r.p. ones, but their straightforward construction allows more scope for easy modifications to be made. Information sheets or reprints of articles from the Journal are available for many of the jobs described.

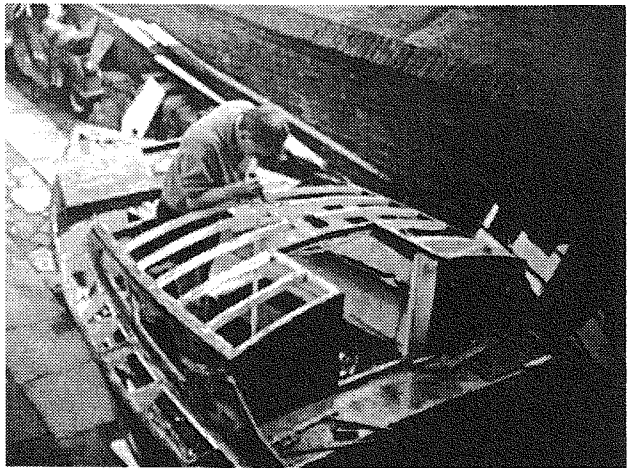
Originally built all in marine ply, moulds were later taken off a wooden hull and GRP versions produced. Some versions had wooden hatches and toerails, later ones were all g.r.p. Fibreglass SII's were lightly moulded and are only slightly heavier than the wooden ones. Earlier wooden boats had wooden masts, which may now have been replaced with alloy ones, but the later GRP hulls were usually supplied with alloy spars.

If you buy the boat, don't be too hasty in ripping out all suspect plywood and replacing it wholesale. If possible, let the boat dry out for a few months - at least let the wind blow through it. It is surprising how it will harden up as it dries - even spongy floor panels. Don't be tempted to use a heat gun to force-dry plywood, as this will weaken the glued laminations. Soft areas on deck can often be satisfactorily treated by paring out half the depth of the 3/8" ply and letting in a thin piece of new, using epoxy resin glue.

Likelyproblemareas:

1. The wedge shaped tiller pivot block tends to become rotten on both wooden and early GRP Mkll's. (on later grp hulls they were moulded in). Even if it is in a bad state, this is not a significant problem as it isn't a major structural element and can be renewed fairly easily.

2. The tiller face plates are brass - one eighth thick, screwed into recesses on the upper and lower sides of the tiller, where the rudder stock passes through. The lower one has a square hole which should be a snug fit round the squared shank of the stock, but both may have become rounded, allowing some degree of 'slop' in the fit. The solution is to fit a new plate with the aperture fitting the shank, or even build up the shank with weld, and re-shape. The upper plate should just allow the threaded part of the stock to pass through, but may likewise have become worn and need replacing.



3. The rudder tube tends to corrode at the lower junction with the skin of the hull. The best cure is a new tube with a grease nipple fitted. In a plywood hull a new block will be needed where it joins on to the hog plank, In a g.r.p. hull the rudder tube may be glassed in to place. If the rusting has been chronic, the rudder stock may have also worn and need building up with weld, or replacing. Good worksheets are available for these jobs.

4. The lower rudder pivots (gudgeon and pintle) may have rusted badly. Fairly easy to renew.

5. The hatches (if made of timber) may be coming apart at the corners. Not a big problem, they are easy to dismantle, clean up and re-glue, replacing the brass slides which run in the side grooves.

6. The mast tabernacle and fittings should be inspected for cracks and sprains.

7. Rot and delamination. All marine ply Silhouettes tend to deteriorate in the same places, particularly after a number of seasons left out in the open. Look for soft wood in the following places where rain water may have gathered:

8. Cabin roof and sides, Front corners.

9. The foredeck, particularly between the runners of the sliding hatch, if fitted.

10.The top two inches of the topsides, immediately below the rubbing strips.

11.The side decks from the cabin front to the aft deck, particularly in the hollows.

12.The aft deck in the corners of the rear extensions of the cockpit coaming.

13.The cockpit coaming, outer face.

14.The aft cockpit bulkhead is rather inaccessible and may have deteriorated through lack of attention - and ventilation. Sometimes there is leakage from deck fittings and the rear locker remains damp. The bulkhead may need reinforcing with fibre glass matting on the inside faces.

15.The underside of the foredeck, after deck, and locker covers tend to be neglected. Not serious - a rub down and repainting is normally all that is required.

16.The foot of the internal mast support may have rusted if the bilges have been wet. A simple clean and repaint (rust protective) is the usual remedy.

17.The floors at the foot of the mast support are bonded to GRP hulls with fibreglass matting. In time, this may delaminate and should be cut away and replaced. (Similarly elsewhere if it is loose).

18.Window rubbers may be or have been leaking. Many owners fit new windows, bolting them to the cabin sides on mastic sealant. Alternatively, mastic may be sufficient tocure the offending leak, which can usually be found by pouring water on to the cabin top.

19.Handrail fixings, if neglected, may have deteriorated and be a further source of leaks. They are easily removed, cleaned up and refixed, using slightly oversize screws, on sealant.

20.The bilge keel plates eventually wear away at the edges. If severely corroded, they may need replacing or strengthening with lengths of 2" or 3" x 1/4" mild steel strip bolted on.
Note that the bilge keels are not intended to bear the boat's weight, only to provide some additional ballast, give directional stability, and keep the boat upright when aground.

21.Keel bolts and nuts may be subject to rusting through water in the bilges, and/or working loose. A good clean up, tighten or replacement is advised.

22.The hog plank running centrally inside the bottom of the hull should be sound, but check under cockpit and cabin floorboards where rainwater may have accumulated.

Silhouette MkIII, IV and V

The MkIII hull is a superior moulding to the GRP MkII, with a round bilge configuration and GRP moulded keels filled with ballast and then sealed in resin.

All SIII's were built by Hurley Marine, Plymouth, and carry a LLoyds Series Production Certificate, which is fixed to the cabin forward bulkhead. The serial number on it is the boat production number wich may also be found on the plywood parts.

Unlike the SII, the main problem areas are not likely to be on the hull itself, but in the mechanical bits. There are relatively few pieces of timber on the SIII, and any that are suspect, can easily be refurbished or replaced.

Likely problem areas:

1. Rudderhead stock. The bronze bearing at the top may have worn, allowing play in the rudder stock. This will vibrate noisily at speed. The answer is to put a piece of brass shim down the gap and grease well before replacing the tiller head fitting.

2. The bronze rudder stock head fitment may have 'play' when turned. Tightening, fitting of a grub screw (or a new one) Should be sufficient. Increasing the gap in the pinching slot may also produce a positive fixing.

3. The rudder bottom pivot is made from flimsy mild steel strip, which may have corroded. Similarly, the half inch diameter pin extending from the bottom of the rudder stock may have worn away. Both can be replaced.
Although it looks as if they support the rudder, their effect is more to stiffen the skeg, which is not an integral part of the hull.

4. The GRP bilge keels are fitted with 'shoes' underneath, to prevent excessive wear. These may have become damaged at the ends, possibly allowing water to enter the keels themselves. If so, salt water may have started to rust the encapsulated iron ballast, in the worst case expanding and eventually splitting the keels. Probably unlikely, but definitely a good bargaining point (worth ú200 off?) if there is any damage to the shoes.

5. Junctions of internal bulkheads should not show any cracking or delamination of the fibreglass tape. If there are cracks, the hull has probably been in collision with something. Look on the outside of the hull for evidence.

6. Osmosis on the outer skin of the hull will show in the form of fine patches of blistering. Very seldom found on the SIII, but sometimes on the GRP SII versions. Definitely a bargaining point, but not incurable.

7. Hatches on MkIII and some GRP MkII's have a piece of 'woodgrain' Formica moulded flush with the surface. This is likely to have cracked and split off in parts. It is best to scrape out all the loose material and fill flush to the original surface with body filler, then sand down and paint all the hatches with a suitable deck paint.

8. Deck fittings may have become loose, allowing ingress of water. These should be removed, cleaned and re-bedded on mastic. In particular the Bow cleat needs checking, and if it only fastened down with 3/16th bolts, re-drill it and fit 1/4" stainless bolts

9. Shroud plate fixings and terminals. If the lower end of the rigging screw attached to the shroud plate is bent, straightening it again will most probably weaken it excessively.

Missing bottle screws?

Rigging screws supplied as standard with all Silhouettes are still obtainable from;

Brooks and Adams Ltd.
Yacht Fitting Division,
Shady Lane,
Kingstanding,
Birmingham B44
9DX.

You need Design no. 886350 - size 5D. Number 523 in their catalogue.

Silhouettes in detail

Mk.II
The serpentine sheer of the deck line is possibly the distinguishing characteristic of the Silhouette.A typical boat is probably built of marine plywood,with a single hard chine. It has separate stern skeg with rudder mounting, probably painted Oxford blue, with light blue decks and varnished mahogany cockpit, handholds and rubbing strakes. The mast will be about twenty feet in solid wood and the overall length of the boat 17 ft 3 ins with a beam of 6 ft 9 ins. Internally, two berths would be typical and some form of gas cooking, a water container and a toilet box would be normal. Two sails: a jib up to 56 sq ft and main 65 sq ft would be expected. There should be an outboard engine somewhere, probably a Seagull, either in the starboard locker in the cockpit or sent forrard in the cabin if sailing hard, but probably on the transom.

STOWAGE
Lockers will be found everywhere: cockpit one either side and a large one under the stern deck (don't load this one with heavy items or you will have a problem with getting the trim correct); cabin lockers under the berths, in the bridge deck possibly three, then two more forrard of the mast step, and finally the forepeak to take the anchor warp, spares, etc.

VARIATIONS
The SII could be a bilge-keel boat with centre stub, or have a fin keel, or have a retractable centre board or plate. SIIs were built in plywood, GRP or steel, and of course, some boats not originally built in GRP are now sheathed in it. SII spars were originally wood but alloy spars were used on GRP hulls, but since the SII was sometimes built from plans or kits, a number of wooden boats had alloy spars as original equipment put in by the private builder. Others had alloy spars fitted when the wooden mast got broken and Hurleys had given up supplying wooden masts.

The forestay is taken to a plate some fourteen inches from the stem head

or in later boats, to the stem head itself. The shrouds are led to a pair of chain plates on each side. The cap shrouds are more often taken to the aft plates of the pair, and the lowers brought to the forward chain plate. With this arrangement the spreaders should be swept aft in line with the shrouds, and fixed, not free to swivel. If the shroud positions are reversed, the middle part of the mast will tend to bend aft causing bagging in the main sail. The function of the lower shrouds is therefore to maintain a straight mast and a flat sail.

ACCOMMODATION

Internally, the usual layout is two berths but there are layouts sacrificing cockpit locker space for one or two quarter-berths as well. Some achieve family sleeping by converting the whole cabin into one large cushioned berth! (The smallest sleeps forrard; all sleep athwartships) . Note that no locker space is lost. The SII has a mast step or support in the cabin, If an inboard engine was fitted, the usual place will be under the centre of the bridgedeck.

As some SIIs were built by "home builders", small boat-yards, and others, from plans, not all SIIs have numbers. Some of the boats sent out in a part finished state likewise did not have sail numbers and these were, and still are, only issued to completed boats. Owners may find a pencilled or stamped number on some of the loose bits of woodwork, particularly on the Hurley boats, but this is the job number and is not the sail number. If your boat has no sail number, and you would like one, contact the Sail Registrar, Mrs. Chris Derry.

No mention has been made of the various sheeting arrangements as, except that custom dictated that the jib sheet went outside one shroud and inside the next, the variations are legion. As for the mainsheet, the original was a wire horse with a block to an eye in the centre, but most of these were converted to a rigid horse, or a length of mainsheet track with a traveller.

STANDARD SAILAREAS

In all Classes, the problem of maintaining a proper balance between healthy development and irritating modifications is bound to be a difficult one. Since 1957, the Silhouette has gone through the change from the original rig to masthead rig and from inboard fitting of the forestay to the permitted nose fitting. Some people feel that the stemhead or nose fitting makes for a better balanced rig, and that the slightly larger jib is an improvement to prevent back-winding of the mainsail. These are matters of opinion.

On a number of occasions during Plymouth Rallies the question of maximum permitted sail areas for the Silhouette has arisen. In October 1987 it was agreed that there should be no change to the 1983 interpretation which reads as follows:-

"For Silhouette events organised by the SOIA, standard sized jib and mainsail are the only authorised sails".

When Silhouettes are racing at their own clubs, genoas and spinnakers are possibly allowed. At the SOIA Rally, standard jib and mainsail are the only sails allowed in the points series of races. However, if a Silhouette Owner declares in his entry form that he has a genoa and/or spinnaker, these may be used in the open events such as the Yealm and Breakwater races.

What are 'standard' jib and mainsails? The original SII had a 3/4 masthead rig, that is, with the forestay running from about 10" aft of the bow to about 3/4 of the way up the mast. The jib measured 45 sq. ft, and the main 65 sq. ft. Subsequently, a masthead rig was adopted (forestay running from bow to masthead), giving a larger jib of 50 sq. ft. The main stayed at 65 sq. ft. The jib size was further increased to approximately 56 sq.ft and this is now the maximum permitted standard size, together with the 65sq. ft. mainsail.

MK III

Although it is sometimes dismissed as just 'A dinghy with a lid', the MkIII Silhouette was consciously designed as a tough little seagoing yacht, with seakeeping qualities appropriate to that kind of craft.

The SIII has similar measurements to the SII, the major differences being 5 inches more draught and 10 inches greater waterline length. SIII is a GRP boat with a rounded hull, the familiar serpentine sheer and alloy spars. The most usual form was twin bilge keels with encapsulated ballast weight at the bottom - 225 lbs of cast iron in each keel. This extra ballast was necessary, as the sail area was increased to 165 sq ft. There is no centre stub keel. Some fin keel boats were a spade rudder, the underwater section is very clean, so the boat moves through the water with very little turbulence. MK III boats up to number 364 were built by Hurley Marine, Plymouth. Manufacturing standards were very high, and these boats carry a Lloyds Series Production Certificate.

SOMECOMMON PROBLEMS

The weakest component on these boats is the lower rudder bearing, which is simply a steel pin rotating in a fabricated sheet steel housing. After a few years the pin wears down to about 1/4" diameter, and the housing disintegrates. It is a simple item to renew, but has to be made from scratch.

A feature of SIII and later SII models, is that the hatch mouldings incorporate a panel of 'woodgrain' Formica moulded flush with the surface. In time this cracks, breaks off in patches, and becomes unsightly. It also presents a slippery surface - not particularly suitable anywhere at deck level. The remedy is simple. Scrape and pare out the damaged Formica back to the GRP underneath with a sharp chisel, and rebuiild the surface with epoxy filler paste, sanding down to the original contour. Finally, mask off the inset panel area, sand the surface to give a good key, and paint with International Deck Paint. If all three hatches are treated in this way, the boat will look considerably smarter.

Newcomers to the SIII are sometimes puzzled to find that on rigging the boat for the first time, the outer end of the boom fouls the backstay. This will tend to happen if the mast is raked too far forward, if the gooseneck fitting is not pulled down, or if the topping lift is too short. When the mainsail is hoisted it will become apparent which factor is causing the problem.

The SIII has a self-draining cockpit, with two outlets leading down to skin fittings under the hull. No seacocks are fitted. The original connection was by two short lengths of 7/8" rubber pipe. If you have just bought an SIII it is wise to replace these with braided polythene hose, as the rubber is very likely to have perished.

In the MkII boats, a popular modification is the removal of the fixed mast prop in the cabin, and its replacement with an adjustable one that can be

removed when not under sail. Unlike the SII, the SIII has no mast prop. and since there can be 1" deflection of the cabin roof when sailing hard, some owners have introduced one as a 'belt & braces' measure. Ideally, this is removable, so as not to restrict movement in the cabin, and access to the forehatch. It can be braced between floor and roof by means of either wedges or a simple screw-tightening arrangement. (Always stow it somewhere where you won't forget to replace it before getting under way!).

For correct boat trim, the mast should be raked no more than 4" aft. On most SIII's the position of the bolt holes on the tabernacle will not allow this, and you may have to remove the tabernacle, make a wedge 1/2" thick at the aft end to pack under it. The upper hole may also need elongating forward to permit the correct mast rake to be achieved. As the boat approaches maximum speed, a vibrating sound sometimesdevelops from the bilge keels, or from the rudder. The former is just something you have to put up with; the latter can usually be cured by dismantling the rudder tube assembly, re- packing, greasing, and tightening the fittings.

Mk.IV

Only 25 Mk IV Silhouettes were built, up to about 1974, and the first impression is that it is the same boat as the SIII.

Earlier marques of the Silhouette had been sold as very basic boats. The appeal being that the owner was free to modify or enhance the boat to his own taste. The concept of the MkIV was an up-market 4 berth Silhouette, supplied with pulpit, pushpit, fancy window trim, an Elsan mini-toilet, Campteen sink, and chrome plated bronze deck fittings. It was moulded by Hurleys and marketed by J.G.Meakes as a small luxury cruiser, but never captured the imagination of the public.

Externally, it is identical in shape, although the hull, the deck and cabin top were usually a soft mid-green called 'Madeira'. Another outward difference is that there are no forward windows in the cabin but otherwise the dimensions are exactly the same as the SIII. The mast tabernacle is stainless steel, the mast anodised, and the fittings chrome plate. The chief difference is that the SIV was built as a four berth boat, with quarter berths under the cockpit seats - hence there are no cockpit lockers. It has the usual stern locker and the recess in the transom for mounting the outboard. The cockpit is self-draining as usual.

The cabin appears a little larger than on the SIII inside, since there is no forward bulkhead, The forward bunks go right up into the forepeak, with a small moulded in chain locker above. The step into the cabin conceals the mini-loo. On each side dividing the quarter-berths from the forward berths are two lockers: on one side is mounted the cooker and on the other, one can put the portable Campteen sink unit . Under the forward hatch there is a big triangular berth cushion. Right forward there is the chain locker which is much smaller than in the SIII.

All berths have cushions with good locker space below. This 4 - berth boat with gimballed cooker, an ingenious sink unit with its own water supply, and a self-contained Elsan loo, never proved as popular as its predecessors.

MK.V

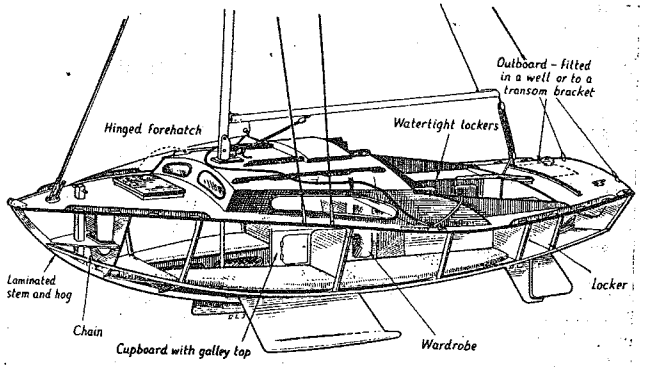
This is the most recent development of the class, in which the increased accommodation of the MkIV was retained

The Mk V Silhouette was moulded and marketed by Russel Curnow of Marazion, and then by Varne Yachts of Nottingham, though they produced only a few of them. The chief feature of the SV is it's increased headroom (45"), acheived by heightening the topsides though Like the MkIV, it is a four berth version, with the forward berths running right into the forepeak. Forward windows were reintroduced in the cabin front. On the port side, the berths are separated by a small galley unit. Sail area is the same as the SIV.

SVSPECIFICATIONS

Length overall:	17' 3"
Length waterline	14'
Beam:	6' 7"
Draft (bilge keel)	2' 1"
Tonnage (TM)	2.3tons
Ballast	450 lbs
Displacement	1,890 lbs

The S20



Marine ply construction
LOA 20ft
WLL 14' 9" -
(only nine inches more than the MkII).
Beam 6' 9"
Draught 2'.0
Displacement 1400 lbs
Berths 3 or 4
Mainsail area 90 sq ft
working jib 57 sq ft
(Various genoas available)
Price £780 (kit £579)
builders/ kit suppliers:
Myson Marine Ltd
Industrial Estate
Ongar Essex.

In December 1967 Practical Boat Owner reviewed the 'Super Silhouette' S20 which had been designed in the previous year. Afloat, it resembled a scaled up plywood MkII. Underwater details were quite different though, with a hydrofoil-section skeg and balanced rudder and torpedo-bulb ballast at the bottom of the bilge keels. Later models featured a mainsheet traveller on the large stern deck, a lifting tiller, modified standing rigging to allow more flexibility to the mast, and aluminium window trims.

Below decks, the three berth version the galley was to starboard, with a formica covered worktop which could be used for chartwork or food preparation. With four berths, there was an ingenious sliding galley arrangement which was pushed away under the bridge deck when not in use.

The S20 sailed well and was a well balanced boat. Several of them made Atlantic crossings.

The

S 21

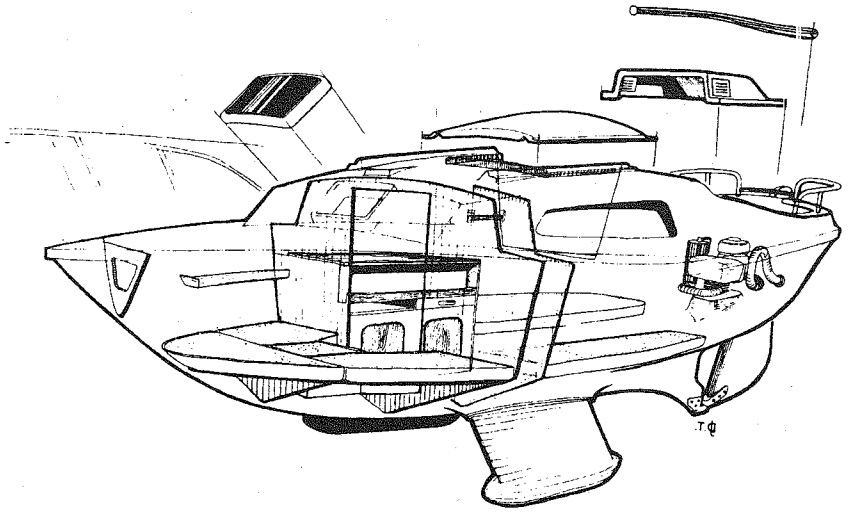
Hull: Fibreglass
LOA: 20' 9"
LWL: 16' 6"
Beam: 7.3"
Draught: 2' 5"
Ballast:
(Twin bilge keels) 480 kg
Engine: Seagull Inboard Saildrive

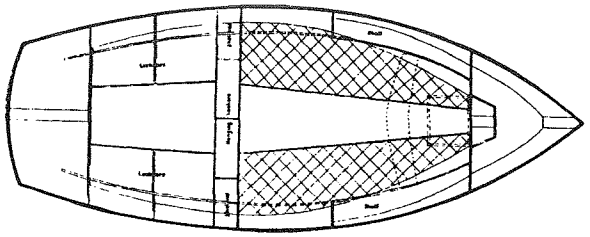
Mainsail 108 sq ft
Working jib: 90 sq ft
Storm jib: 35 sq ft
No.1 genoa: 125 sq ft
No. 2 genoa: 150 sq ft.
Manufactured by:
Varne Yachts
Papplewick, Nottingham

Varne Yachts introduced the S21 as a fibreglass successor to the S20 in the early eighties. Their 1981 catalogue lists the standard version at £5,058 complete, ompared with £3,996 for a standard SV).
The S21 is instantly recognisable as a Silhouette, having the characteristic reverse sheerline, but a considerably finer entry to the bow.

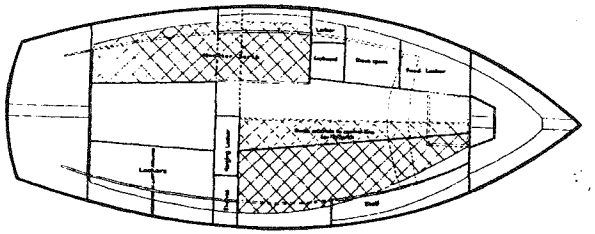
Accommodation comprised a vee berth forward, with the heads between, and two quarter berths aft.
On the port side of the cabin was a galley anda good sized stainless steel sink, and on the starboard side, a removable table on a pillar.
The fittings and finish to the S20 were of a high specification. Pulpit, pushpit and guardwires were standard.
For ballast, 16mm thick steel bilge keels were bolted to the hull, and like the S20, carried grey cast iron 'bombs' totalling 480kg in weight.

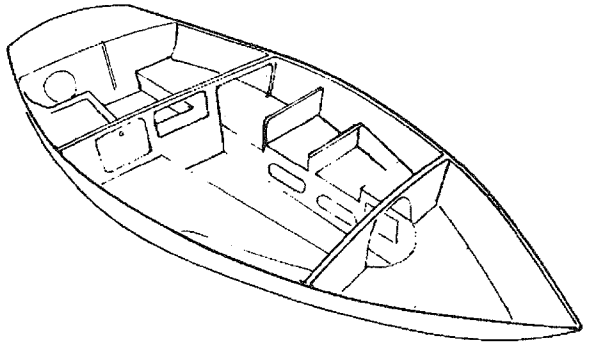
In the mid eighties the moulds for both the MkV and the S21 passed to Beresford Marine, Belper, Derby, but they did not mould any S21's and have now ceased building boats altogether.



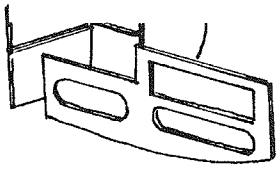


Mk II

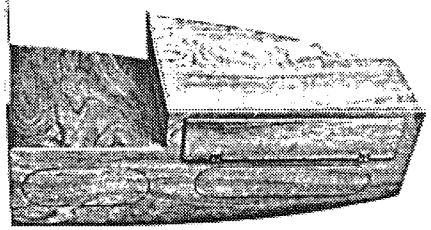




Mk III converted to 1/4 berth



Galley conversion kit

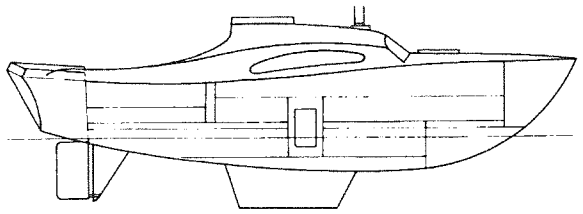


Interior layouts

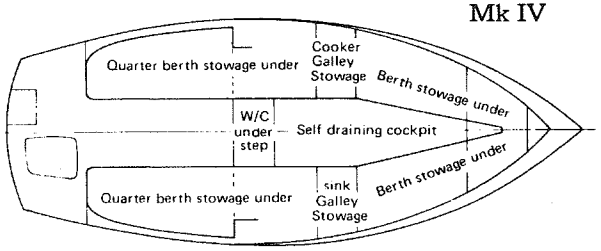
Mk II Silhouettes were designed with two alternative accommodation plans, the 'open plan' with two cabin berths, as in the first drawing, and the 'Suzanne' layout below, with one cabin berth to starboard and a quarter berth to port. Both versions were available as finished boats or as kits from Hurleys.

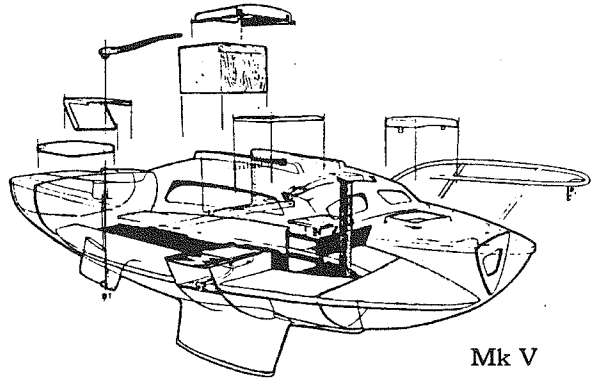
The Suzanne layout allowed a 'Galley Flat' to be fitted in forward of the quarter berth, with space for a cooker, food preparation surface, and good locker storage below. This unit took the place of the port berth, the 'TV' locker, and the port hand shelf. A sink with a drainer could be fitted into the worktop if required.

The Mk III copied the open plan layout of the Mk II, though Hurleys marketed quarter berth/ Galley conversion kits for it. However the quarter berth 'Suzanne' version is more commonly found in both wooden and g.r.p. MkII boats, and is probably the more convenient layout of the two. A DIY conversion to the quarter berth layout is one of the popular modifications carried out by members today.



Mk IV

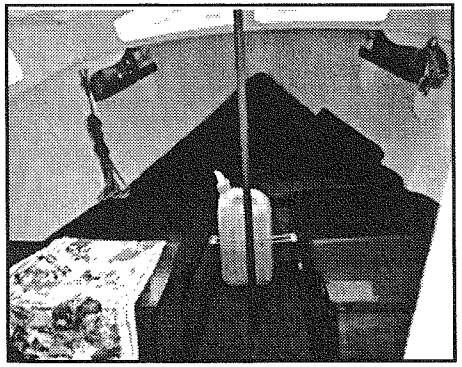




Mk V

The MkIV hull and deck mouldings are identical to that of the MkIII. The difference lies in the interior layout.This is even more 'open' than the earlier open plan, since the forward bulkhead has been removed. The cabin is divided by half-bulkheads on either side, containing a cooker and galley stowage to port and a sink with stowage beneath on the starboard side. There are four berths, single quarter berths running aft from the cooker and sink, and a double vee berth running forward into the bows. There is a minuscule chain locker right in the forepeak.

The Mk V interior is the same as the Mk IV, but with 3" extra headroom gained by extending the topsides slightly.



Mk II with fwd. bulkhead removed

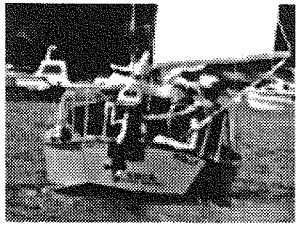
It is quite possible to convert Mk III's and standard Mk II's to this layout as is shown by the photograph of the g.r.p. MkII interior opposite. It is essential to retain the mast prop , but in any case, it can be made so as to be removable when not sailing, taking full advantage of the enlarged cabin space.

Hull Trim & Rigging

In order to get the best out of your Silhouette, you need to know how to set up the rig properly before you sail. The most well-known vice of the Silhouette - Weather helm - is mainly due to poor hull trim, too much aft mast rake, and incorrect mast control. If you get to know how to deal with these problems you should have no difficulty in sailing the boat easily and efficiently.

HULL TRIM

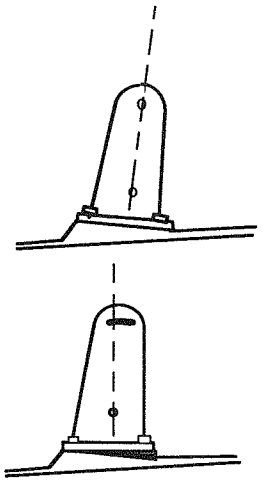
Most calculations in yacht design are based on the water-line, and a yacht will perform as she should only when trimmed to this line correctly. Make sure that the bottom of the transom is 2-3 inches out of the water when the crew are aboard in their sailing positions. On an SII the chine at its lowest point should be about 3/4 inch below still water level. Move stores and gear forward to ensure correct trim, and remember that the stern locker must be kept light. A crew of three weighs half as much as the Silhouette.



TUNING THE RIG

The mast should be perfectly vertical when the boat is floating level, or standing on level ground. Check arthwartships trim with a spirit level, and adjust shroud tension until the main halliard, used as a plumb line, aligns with the mast track. The mast should not be raked back by more than its own width.

On some boats it may not be possible to get the mast near vertical without extending the upper hole in the tabernacle forward, and even this may not be enough, because the cabin mouldings of fibreglass SII's and SIII's oblige the tabernacle to rake backwards. To cure this you need to remove the tabernacle and make a wedge to fit under it as shown over the page so that the two pairs of mast bolt holes are in a vertical line.

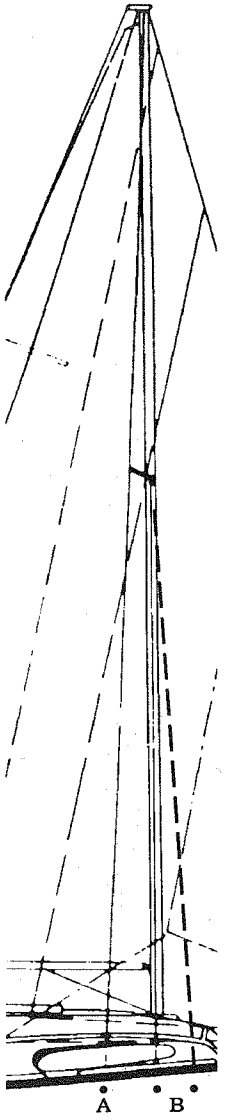


lateral support to the mast, and hold it perpendicular - if it is not so, performance will vary when beating to port and starboard. One effect of the wind on the mainsail is to try and pull the centre part of the mast backwards, preventing the sail from being kept to a flat and efficient aerofoil section. The purpose of the lower shrouds is to prevent this, by exerting a forward pull on the centre part of the mast, to which they are fixed. If these shrouds are led down to the aft pair of chain plates this cannot happen, instead, they will only help the mast bow backwards even more. The Lower shrouds should therefore lead down to the most forward of the chainplates fitted to exert maximum effect. The Cap shrouds

Both pairs of shrouds give tion with the Spreaders in controlling the upper part of the mast. Unlike a dinghy mast, the Silhouette mast head cannot flex fore or aft because it is held secure by the forestay and backstay. Again, unlike a dinghy mast, the spreaders are not free to pivot horizontally, but are fixed so as to bisect the vertical angle of the shrouds passing over them. They are also fixed in a swept back position so that that the line of the shroud from the masthead to the aft chainplate appears as a straight line when viewed from the side. The effect is to form a triangulated guy which prevents the part of the mast at spreader level flexing aft or sideways in response to pressure on the mainsail.

It is no good leading the Cap shrouds to the aft chain plates if the spreaders are not fixed in the swept back position. If they are allowed to swivel, half the effect of controlling the mast will be lost. On a wooden mast, it should be relatively easy to bend the 1/2" tubular spreader to the correct angle, and then pin it into position.

The spreaders on an alloy mast are usually made of 1" aluminium tube, located at the mast in a stainless steel fabricated housing, with a socket at 90°. It is difficult to alter this, and a better solution is to angle the spreader just outside the socket, by notching and bending it. The angle is then bridged by pop-rivetting sheet aluminium straps across it, and then neatly 'bandaging' the joint with fibreglass. Some care will need to be taken to achieve the correct angle, but the result is far preferable to putting up with incorrectly led shrouds.



SHROUDS

For best performance the upper shrouds (A) should be led to the aft chainplates and the lower shrouds (B) to the forward one. One some boats this may be slightly forward of the mast.

Safety

The Silhouette is a stiff boat, and many owners have found it next to impossible to get her lee gunwale down to the water. But boats can be blown over, and people have wondered what would happen to a Silhouette if she were blown down, with her mast forced into the water.

There have not been many reports of capsizes, but a Silhouette did go over on the Crouch estuary in exceptional circumstances. Reg Garrod was running goosewinged in pretty foul conditions in a stiff breeze. He went forward, slipped and clutched at the mast. Two things then apparently happened simultaneously: a quirk of wind caused the boat to gybe, and she broached to just as the leverage of his weight came on the mast. She went over, and her mast hit the water, with her weather bilge keel getting an airing. Reg was hanging in the water holding on to the mast about half-way along. The crew was floating around somewhere, still holding onto the mainsheet. Reg started to work his way along the mast to the cabin top and as he did so the leverage of his weight was reduced and the boat eventually came up head to wind, the crew was dragged in, and the race continued. No water had got in to the cabin and only a couple of gallons in the cockpit. Other incidents where Silhouettes have been knocked down confirm how easily the boats right themselves, and just how little water is taken aboard.

REJOINING SHIP

Even if your boat is uncapsizable, it is possible that you might fall overboard, and despite the Silhouette being fairly low in the water, it is virtually impossible to get back aboard without some human or artifial assistance.

The first thing is not to lose contact with your ship, and secondly to be able to get on board again. A most useful item to keep aboard a Silhouette is a 10 foot length of rope ladder (with wooden rungs) which can be employed in a variety of situations:

a/ For use when moored against a quay wall, or side of a large boat.

b/ For hoisting on a halyard to get some way up the mast.

c/ For a bather to get on board.

d/ For anyone in the water who wants to get out of it.

The rope ladder can be stowed in the stern locker, but when single-handed, either sailing or at anchor in a strong current, it is coiled and wedged under the backstay, with the end loop over the tiller. The advantage of keeping it at the stern is that should you fall overboard, you have a chance of grabbing at it as the boat saills on. The disadvantage is that once you have grabbed it, there is no part of the boat at the stern on which to gain a foothold when clambering aboard. a better position is to secure the inboard end at the foot of the mast,

with a trailing quick release line. If the ladder is made to fall outboard between the shrouds, it is possible to get a purchase against the bilge keel before climbing on upwards.

When single-handed in rough weather or at night, it is advisable to wear a safety harness with the line attached to a loop of rope which goes round the mast and reaches the cockpit. This enables you to move anywhere about the deck, and if you fall overboard, to reach the rope ladder and release it. A rope ladder floats and is very easy to catch hold of.

INSURANCE

It is important to insure any boat, not just because of its own value, but because of the damage it may cause to other boats, or persons.

If you sail in a club, or at the SOIA Rally, or have a rented mooring, you will be required to have third party insurance cover, usually for £500,000. A total value for the boat, its contents, engine, dinghy and trailer is usually about £2000 for a MkII, or perhaps £3000 for a MkIII. As indicated below, you should be able to obtain this level of cover for £60 or so.

FINDING A COMPANY
Premiums will vary from company to company., but it should be possible to insure a silhouette for under £100. A lower premium will be charged for third party only cover, but not all companies will do this. A word of warning though, check the small print regarding claims for outboard motors, and make sure that you value the motor at it's true replacement cost.

Because most Silhouettes are at least 25 years old, insurance companies are likely to require a survey before a policy is granted. Surveys are not generally required for MkIII Silhouettes buit by Hurley Marine as these carry a Lloyds Series Production Certificate. This is a small blue plate fixed at the front end of the cabin inside. Quote the number when you fill in the proposal form. Larger premiums may be asked if you keep your boat on a mooring, or in a marina, than if you trail-sail.

Many SOIA members insure their boats through .
Morgan Wright & Colman
6 Alie Street
London E11 8DD
Tel: 0171 488 9000

(Ask for Janette Aitken Ext. 2519).
Janette Aitken has dealt with SOIA insurance for several years. It is worth phoning her for a quote, but mention that you are a member of SOIA.

SURVEYORS
If you do require a survey, a number of qualified surveyors advertise in Practical Boat Owner.

SURVEY COST
The rate for carrying out a survey on an MkIII Silhouette is between £100 and £150 - plus expenses, and this may seem disproportionate to the amount you have paid for the boat.

PREMIUMS
You should be able to insure a 1964 Hurley-built MkII Silhouette for a premium of £60 or less with no-claims bonuses. This is normally for a period of 7 months in commission and a warranted laid up period from November to March, but 12 month sailing cover can usually be obtained for a proportionate increase in premium . It is unlikely that a company will offer insurance for less than £50.

When submitting a proposal form you will need to give the age of your boat, and indicate whether it is home or professionally built.
The majority of MkII hulls were built by A. G. Hurley of Plymouth and can be identified by a pencilled or stamped number on the back of loose parts such as locker covers. (This is not the number of the boat, just a batch number for the parts)If you don't know the boat's builder or date of manufacture, these details can usually be obtained from the Sail Registrar, Mrs. Chris Derry, 23, Maes Hyfryd, Moelfre, Gwynedd Anglesey LL72 7LR.

BOAT DETAILS
You will need to give some of the following information about your boat on the proposal form:

Tonnage: SIII -
2.3 tons T.M.
(This bears no relation to the weight of your boat !)
SII - use the displacement weight - 750 kg.
SIV, SV - 2.3 tons T.M.

Length O.A. (overall): SII and SIII - 17' 3".

Length W.L. (waterline)
SII : 13' 2",
SIII, SIV, SV: 14'

Beam: SII and SIII 6' 7".
SIV, SV: 6'7"

Sail area : SII 118 sq. ft.
SIII, SIV, SV: 165 sq. ft.

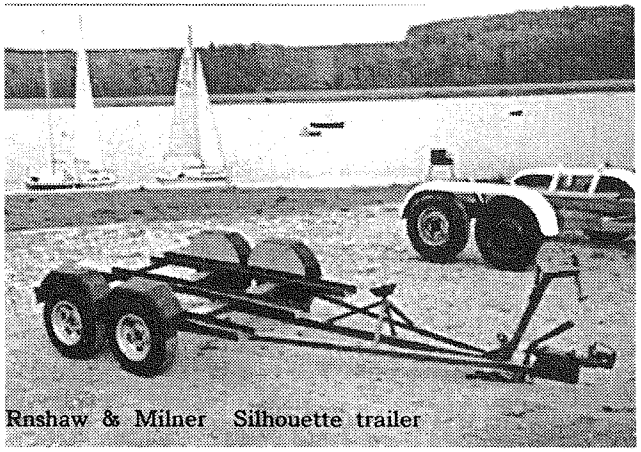
Once insured, DON'T let your insurance lapse, even if the boat is laid up for a year for major repairs for instance. Otherwise, you will find that the insurers may require a survey before reinstating the policy

Trailers

The Silhouette can easily be trailed behind a car with a 1600cc engine. Some members report that a 1300cc engine is adequate, and in the 'Good old days' people used to tow the MkII the length of the land behind Morris Minors.

Whatever car you have, you still need a sound trailer, adequate for the weight of the boat, and meeting the legal requirements for towing on the highway. Many MkII Silhouettes are still purchased on their original Hurley-built trailers, some of which have 14" wheels (tyres, not rims). Later ones have Mini wheels. Experience indicates that these trailers are by now not sound enough for travelling at 60mph on a motorway, The recommended pressure for the small size tyres was 90 (yes, ninety!) psi, with a maximum speed of 50mph. The only tyres available for these rims now are called 'Eurotyres', and they are incapable of holding higher pressures than 50psi, or travelling at more than 30 mph.
The use of the original small-wheeled Hurley trailers for anything other than launching is definitely not advisable.

New trailers can be bought from a number of companies but they tend to be expensive, even costing more than what you paid



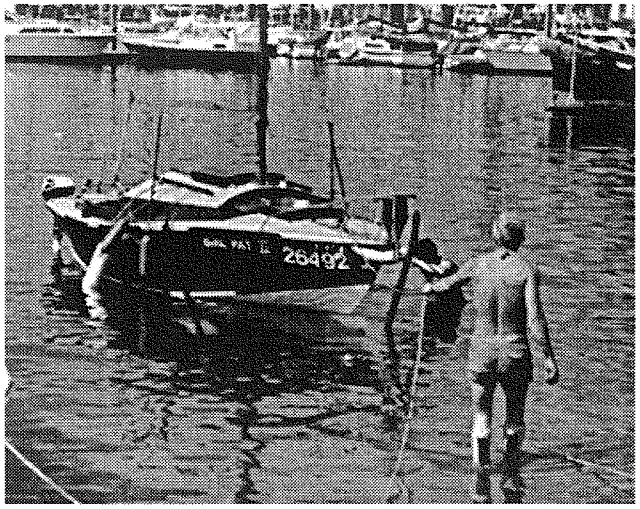
Rnshaw & Milner Silhouette trailer

for the boat.

RENSHAW & MILNER, Structural and General Engineers, New Forge Works, Main Street, Claypole, Newark, Notts NG23 5JB will supply basic Silhouette road trailers, ie chassis, keel guides, winch post, towing hitch etc, all welded up, or as separate components if you have the facilities for completing the job. David Milner is a Silhouette owner, and therefore knows what is required. (He will also supply new bilge keels).

If you decide to build a trailer, measurements can be obtained from the Hon. Secretary, with a list of recommended suppliers. An exhaustive catalogue,which includes all the legal requirements concerning trailers (costs about £3) as well as the components for building trailers can be bought from INDESPENSION Ltd., Belmont Road, Bolton. Tel: (0204) 58434, but members report especially good service and prices for equivalent gear, from:TOWSURE

155, Holme Lane, Sheffield. Tel: (0742)350542 or 341656. who will despatch parts against orders covered by credit cards,



Launching & Retrieving

Launching and retrieving Silhouettes can be a battle with all the natural forces - Gravity, the Tides, Wind, Friction, Buoyancy, Inertia - enough to put anyone right off sailing. However, members with accumulated experience of trail-sailing have found solutions to the two main problems - assuming you have found a reasonable slipway - getting the boat up and on to the trailer, and in doing so, keeping it square on to it, since wind and tide conspire to push it sideways.

THE WINCH

With regard to the first problem, it is particularly useful to have a winch fitted to the nose of the trailer, with an attachment point on the stem of the boat. For a start, this enables the boat to be pulled up to, or released from the trailer in a controlled manner when the correct depth of water is reached. Because both of these are aligned centrally, the boat will find its way into the keel guides and up against the bow snubber.

To be effective (and so you can reach it easily) , the winch needs to be on a post about a foot lower than the foredeck level. It should also be firmly stayed to resist the considerable resistance of a 700kg boat being pulled against it. If the winch line is taken directly to the deck forestay fitting, the effect will be to pull the nose of the boat down, and prevent it being pulled evenly on to the trailer guides. The fixing point should therefore be level with the winch when the boat is on the trailer.

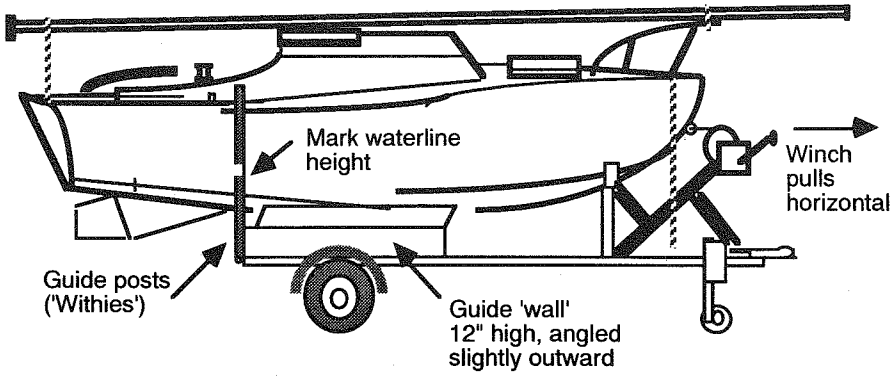
USE WEBBING NOT WIRE

There are alternative ways to attach the winch line, which should be Terylene webbing, terminating in a snap shackle. A wire winch line is potentially more lethal, should it snap - and they do!

A SECURE TOWING EYE

A large bow-eye (stainless steel 'U' bolt) can be fitted slightly above the foc'sle shelf, with a stout hardwood backing piece on the inside to spread the stress of the pull. Viewing the bow from outside, you would expect the internal angle to be fairly acute, In fact, the angle you need on the wood block inside is 90 degrees exactly (the same for all Silhouette models). All you need to do is saw a piece of 3" square (10" long) hardwood diagonally lengthwise to fit in to the angle of the bow. You then need a U bolt long enough to pass through the apex of this as well as the hull right at the bow. Drill the wood first (dead perpendicular to the base), then drill through the bow using holes in the block as a template. Pass the U bolt through, smear plenty of resin filler paste on the two faces of the block in contact with the hull and tighten up the nuts until paste oozes out all round. Clean off before it sets, then leave 24 hours to harden. Then remove the nuts, apply some flexible mastic, fit the steel backing plate (supplied with the bolt) against the wood block and tighten up again hard. Fitting this on a wooden boat may not require a fillet block, as there is a thick wedge of laminated hardwood right the way up the stem, which will distribute the load of the winch line.

An alternative method is to bolt a short shroud plate on to either side of the bow (level with the winch) with the eye end facing forward, and angled slightly outward. In this case the winch line termi-

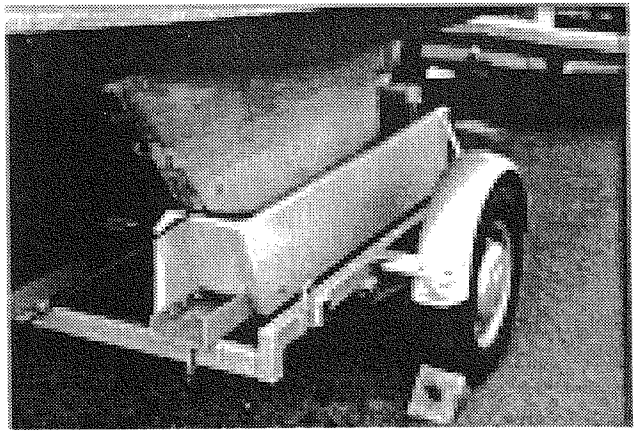


nates in a bridle with a snap shackle on each end. An advantage of this system is that the load is taken evenly by the two plates, and each one will probably have three or more bolts connecting it to the hull, as opposed to the two nuts holding the bow eye in place.

These shroud plates can be obtained from Davey & Co. (4 Oak Industrial Park, Chelmsford Road, Great Dunmow Essex CM6 1XN Tel: 0371 876361) Catalogue no. 9471 'Shroud plate', Galvanised iron or polished gunmetal, 4", 6", 8", 10", 12", or 16" long. Last known prices were about £2 for a galvanised 6" version, or £3.25 for gunmetal. A snug fitting backing plate ought to be fitted inside to prevent the bolts pulling through. SIII mouldings are pretty stout, and there should be no danger of the fittings damaging the hull in normal use, but GRP SII hulls are a lot thinner , and there could be the danger of snagging the outer ends of the plates on a passing object and ripping the hull skin as a result. For the same reason, it would be unwise to fit this type of bow fitting to a marine ply hull.

GUIDINGITON

So much for pulling the boat securely in to the trailer. The other problem of controlling the effects of side winds and tides can easily be dealt with by fitting vertical posts onto the trailer at the widest part of the hull, and reaching at least to deck level when the boat is on the trailer. These need to be substantial enough to resist the sideways nudging of the hull as it goes on to the guides, and should fit it snugly, but not too tightly. Some people fit rubber rollers on to the upper end. The posts should be clearly marked to show when the trailer is immersed to the correct depth for the boat to settle on to it, The parts that remain above the water serve to show you exactly where the trailer is, hence the term 'withies' sometimes being applied to them. The posts can be either welded vertically to the trailer frame, or may be hinged so as to be folded down out of the way during transit. Alternatively, they may be made to drop into permanent sockets welded on to the trailer. The 'Winch and the Withies' should therefore ensure that the boat floats over the centre of the trailer. What you CAN'T see is whether the bilge keels have located exactly in the angle iron guides, some two feet under water, and it can be dangerous putting your hand down there to check it! A simple solution is to build a wooden guide 'wall' on to the outer edge of each bilge keel angle iron, up to a foot high, and angled slightly outward. The keels will then find their way into the correct position as you winch the boat forward. Painting all the underwater parts white may also help. Finally, the adjustable jockey wheel at the front of the trailer should be adjusted so that the trailer is as level as possible fore and aft on the slipway.



SAILING techniques

REEFING

Silhouettes are generally equipped for roller reefing. The SII with wooden spars has a simple square ended gooseneck enabling the boom to be pulled away from the mast slightly, rotated so that a section of sail can be wound on, and then locked in position again. Alloy spars on SII's and III's are usually supplied with geared roller reefing, enabling the job to be done more easily with a small removable handle.

Reefing is easiest acheived with the boat pointing to windward, so that the pressure is off the main sail. Slacken off the main halliard, set the gooseneck at the top of its slide, and ease the boom off the square shoulder of the gooseneck. Roll the sail round the boom three times to take in a foot or so of sail. In a force 5 or 6 wind you may need to take in twice as much, or more. Slip the boom firmly back on the gooseneck, and tighten the main halliard again. Ensure that the luff rope is evenly rolled and that the final turn comes off close to the mast: then work along the boom smoothing the wrinkles from the turns, and pull the leach out tight. Finally, see that the halliard is sweated up hard. and then add the last tension with the sliding gooseneck. The sail should set smoothly and free from wrinkles, and with a little less flow than before.

However, roller reefing can be a slow process, and has a tendency to cause a bagging in the sail, and more annoyngly, the boom to droop at the outer end. This can be limited by inserting either a remporary or permanent wedge between the boom and sail as it rolls up. Some booms have been fitted with a timber wedge on either side extending about 3 ft in from the aft end, where it projects about 3" either side. A less lethal addition than this is a length of industrial pipe insulation kept in the locker, and slipped in as you reef the sail.

If you are contemplating a new mainsail it is well worth having it made for slab reefing, in which a 12" deep panel of the sail can be pulled down tightly to the boom. This retains a flat aerofoil section, and also enables the kicking strap to be kept in use when reefed. Alternatively, existing sails can be converted to Slab reefing by the addition of a few eyelets, tapes and hooks. Note: a reef made properly and in time is the mark of a good sailor: a novice leaves it too late, and makes a hash.

SAILINGTOWINDWARD

Sailing to windward calls for finesse and understanding. Adjust the mainsheet until the end of the boom is just inside the line of the toerail; pull in the jibsheet until the luff of the mainsail just begins to flutter, then ease it out an inch. Now bring your course towards the wind until both sails begin to flutter, then ease off very gently until both are drawing well. Check that the jib sheet requires no further adjustment. A bilge-keel yacht performs best when the leeward keel is vertical, so heel the yacht to about 15 degrees. In light winds, this may mean sitting your crew to leeward: in strong winds, sit them to windward to

prevent the heel exceeding this figure, since too much heel will slow the yacht and cause weather helm. Ensure that the fore-and-aft hull trim is maintained. Winds are never steady, and the gusts are freer than the average wind. Instead of letting them heel the boat, let the inherent helm make her sail closer to the wind until the gust has passed. Don't let the sails shiver afterwards. Well sailed, bilge-keel Silhouettes have made windward passages without excessive leeway. In very confined waters, the Silhouette can be driven very hard, with sheets as hard as they will come; there is some loss of speed and an increase in weather helm, but no loss of control. Such techniques should be reserved for emergencies.

GOINGABOUT

With a Silhouette, this is always slow but positive, and the boat will not respond as you would expect a dinghy to. Put the helm down smoothly, and not more than 45 degrees. As soon as the sails begin to flutter, free the jib sheet . The boom will move over to the other side, and if the main sheet runs on a traveller, you need to ensure that this runs freely enough, or you will have to 'help' the boom across in light airs. Once the boat has passed through the wind's eye, begin to tighten the jib sheet on the new tack, but be sure that it is not taken aback. Retain as before as soon as the new course is taken. Do not attempt to spin a Silhouette like a racing centre-boarder, but let her come round in her own time

KICKINGSTRAPS

The kicking strap is a device peculiar to the racing dinghy, yet those who have used it on small cruisers find it an invaluable aid. It allows the main to swing over in a single plane, instead of the boom riding wildly upwards to foul the backstay. It also allows the boom to be well squared off when running, for the head of the main cannot go very far forward of the boom, as it does when no kicking strap is fixed. This is particularly valuable on the Silhouette, with its small mainsail and aft-set rigging.

However, because the Silhouette was designed in 1954, before this device had proved its usefulness in cruisers, the boom of the original boats is really too low to allow an effective kicking strap. It was solely for this reason that the height of the mast was increased when the mast head rig was introduced.

There are many varieties of kicking strap fitting in the chandlers, and the items selected should be those designed for the bigger dinghies, since the strain on the fittings of a Silhouette at sea are much higher than those of a dinghy of comparable sail area. The normal fitting on the boom is a key device which fits a keyhole plate; this means chiselling a slot in the boom to take the key, and the keyhole plate should preferably be let into the wood so that it lies flush. The more ingenious owner will investigate the many proprietary types of claw ring now on the market, since the simple keyhole device has to be removed when the sail is reefed by being rolled round the boom. However, the problem is to keep the claw in position, since the tension in the strap itself will tend to pull the claw towards the gooseneck. Probably the best solution is a stainless-steel or brass tube, about 5/16 in o.d. welded or, brazed, to a plate which slips over the square shank of the gooseneck forward of the boom end.

The kicking strap itself should be made of 1/4 inch Terylene cord, with a block at each end to give a threefold purchase, the fall can be cleated, or made fast round the standing parts.

The lower end should be made fast to an eye bolted through the aft face of the tabernacle as close to the deck as possible. On steel tabernacles, the solution is to weld and eye plate in place. On some boats, the bitter end of the strap is made fast to the becket of a small block at the boom end, passes round a similar block at the tabernacle, round the sheath of the boom block, then through the eye on the tabernacle, the fall being made fast round the standing parts. The claw ring or key should be about 21 ins aft of the mast.

One final word - don't try setting up your kicking strap until your main is properly set, with the final luff tension provided by the sliding gooseneck. Either you get no luff tension, or no kicking strap.

TUNINGFORSPEED

Although Silhouettes are by no means racing boats, a great deal of satisfaction is to be had from getting the best out of the rig and competing against other boats.If a systematic approach is followed, some considerable improvement in performance can be expected.

BEATING

The jib is all important. Unless the wind is very light, sheet in hard and cleat. Point the boat until you see a small reflex develop in the jib luff, often near the head of the sail, and then bear away a little until it disappears. Concentration is needed to keep on a correct course - watch the burgee, compass, pairs of land marks, as well as the jib.

The main doesn't require sheeting too hard if you have no sheet horse, because with a block in each corner of the cockpit, it is possible to pull the boom onto the centre line, and that is too much. If the wind is strong and you are heeling, don't worry about the main flapping, because the jib is doing the work. If the wind is continuously too strong, reduce sail. Weather helm developing means too great an angle of heel, and to windward, it is better to be undercanvassed than overcanvassed.

REACHING&RUNNING

The main is now the more important sail, and the kicking strap determines its performance - without it the sail will twist and if the top is at the correct angle the bottom part will be ineffective , just heeling the boat.

The most common mistake off the wind is to sheet in too hard. The sails require to be almost on the point of being backwinded. Let the jib out until the reflex develops at the luff and pull the sheet in an inch or two. The main should be just inside the burgee, by say 5 degrees. Don't worry about leaches fluttering - that's just old sails or short battens. Also don't be fooled into thinking that a strong pull on the sheet and a large angle of heel mean you are going fast; you may be - sideways!

TACKING

If you have difficulty here in adverse seas, try not letting the jib fly until it has backed. A momentary push from the backed jib will guarantee not stopping "in stays", which could be embarrassing in a strong wind in confined waters. Also make sure you are close hauled before going about, i.e. don't try to tack from a reach without first hauling in your sheets.

LAYING UP FOR THE WINTER

If there is one golden rule about laying up, it is this: wood does not particularly mind getting wet but all wood hates, wet in places where a current of air can't get at it. So the strategy of laying up should be directed to achieving conditions for your boat such that if any water or damp can get at her, a flow of air can get around her and through her as well.

THE RIGHT PLACE

If you have a large shed, well ventilated and lighted, where a boat can spend the winter then you are lucky.

Silhouettes, with their bilge keels, sit happily on any flat or nearly flat piece of ground, but if the ground is not quite flat, ensure that the weight of the boat is taken by the centre keel (if it has one). Prolonged weighton the bilge keels of an SII will do no good at all to the hull. Try to wedge one or the other keel so that the boat sits as upright as possible. Remember if you go on board a Silhouette on the ground, that she is supported by her skeg and bilge keels aft rather than forward, and try to avoid standing on the extreme bow, or putting any excessive weight forward.

PREPARATION

The first thing to do is to clean up,

pump out the bilges, and to sponge out any water that may be in a place where the pump doesn't draw. All floor boards should be taken up - and it's a good idea to mark on the bottom where each goes because it's surprising what odd shapes some of them seem when it comes to putting them back. All locker covers should also be taken out, so that every enclosed space in the boat is open to the air. Floor boards and locker covers should be stored under cover, and make a note of any small repairs that may be necessary so that you remember to get them done. Floorboards ought, of course, to be cleaned before being put away, and they will benefit from a good wax polish or rub with linseed oil.

WAX THE BRIGHTWORK

All varnish work and external woodwork on the boat will also benefit from a coating of wax. Rub it in well, particularly where the varnish has worn, and it will for a good protective surface for the wood. It is not difficult to take off wax polish before re-varnishing for the next season - the old varnish will probably need rubbing down, anyway.

TOCOVER,ORNOTTO COVER?

Some people say that if a boat is going to live out for the winter, she is better off left uncovered, save for hatches and cockpit cover to protect her down below. This is applying the sound principle of leaving wood open to the air, but there's another hazard to be reckoned with in English winters - frost. Frost can play havoc with paint and varnishwork, particularly if it is worn paint, with patches - they can be all but invisible - where water can collect under the skin of paint. Some protection from frost is certainly desirable, and this means a cover of some kind but you want to be careful that in covering up you don't prevent a flow of air. Probably the best cover is a sort of tent, ridged over a pole extending from the tabernacle to the Samson post forward, and supported by a crutch (or on blocks of wood) aft. There is a choice of fabrics for waterproof covers nowadays, and one's personal choice will be governed largely by what one has to spend. At the cheaper end, woven polythene covers can be had for around £15. They are fitted with eyelets for lacing, and can be roped down securely, covering the boat from stem to stern, but leaving air holes at both ends. If the boat can be covered with a tent like this, the forehatch can be left slightly open, which will greatly assist the flow of air through the cabin. The cabin hatch should be closed, but the washboard should be left out - the cockpit cover, which should be in place under the tarpaulin tent, will cover this opening to the cabin without shutting out air.

CHECK THE DRAIN HOLES

One important small point - make sure that the drain holes in the coamings are clear so that water can run through them freely. There are drain holes port and starboard in the coamings just aft of the cockpit, in the slides for the main hatch and in the slides for the forehatch. Run a wire through them to be sure they are open. Even if no direct rain can get at the boat, water may condense in the corners of the coamings and the drain holes are vital for getting it away.

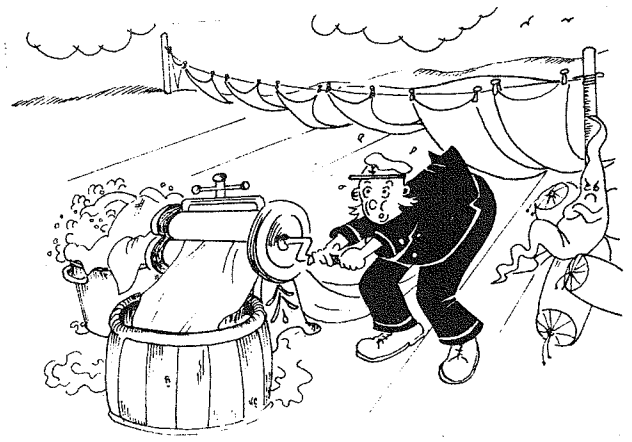
SECURELASHINGS

In laying up, as in mooring or anything else to do with a boat, remember to secure against the exceptional. On a still day, a few bits of string will keep a tarpaulin in place, but they'll snap as soon as a wind gets up. The tarpaulin or cover should be sheeted home with a good rope, and you should pay as much attention to making everything fast as you would in mooring.

STORINGTHE SENSITIVEPARTS

Mast, spars and standing rigging should be stowed under cover. In small modern houses and flats, it isn't always easy to find room for a 20 ft mast, but if you can't store the mast at home, find a friend with a loft or boat yard which will help. Don't lean the mast against a wall, or lay it over a couple of rafters - unrigged and unsupported. A mast is a sensitive willowy thing, and if it is not supported along its length, it will sag and get a kink in it. If it is being laid on rafters, it should be supported every couple of feet or it should be laid on an even floor. Most masts after a season at work can do with revarnishing and since the mast is going to be under cover, you can get on with varnishing when you feel like it. If you are not going to varnish until spring, the mast will benefit from a good rub with linseed oil as much as other woodwork

Sail Care



1. Fold or roll the sailso that there are as few sharp creases as possible.
2. Store under clean well ventilated conditions. While 'Terylene' itself is unharmed by mildew, it is possible that the finish on the sail may be affected, causing unsightly stains which are difficult to remove.

WASHING
Hose down or scrub if necessary with hand-hot soapy water containing washing soda, or liquid detergent. Heavy local soiling can be treated with neat detergent and left overnight before washing. In difficult cases, steep overnight in cold water containing 1 lb of sodium metasilicate per gallon or 3 oz of caustic soda per gallon. Do not use aluminium or galvanised vessels. Drain and hand wash in warm water and detergent before rinsing, lightly scrubbing if necessary.

STAINREMOVAL
Important: treat stains as soon as possible, the longer they are left, the more difficult they are to remove. Bad staining on coloured sails should be treated by specialist drycleaners.

BLOOD
Soak in cold water containing half a cupful of ammonia to half a gallon of water. If this is not successful, damp the stain with water containing 1 percent of pepsin, and a few drops of dilute hydrochloric acid, allow to stand without drying out for 30 minutes, and then rinse thoroughly. The new biological detergents can also be used.

MILDEW
Remove as much of the growth as possible with a stiff dry brush. Steep for two hours in a cold solution of bleach (sodium hypochlorite) or a proprietary bleach like Domestos at one part for every ten parts of water. Rinse in water and repeat this treatment if necessary. Remove chlorine smell if necessary by soaking for a few minutes in 1 percent solution of sodium thiosulphate (photographer's hypo) and rinse finally with water.

OIL,GREASEAND WAXES
Dab with Genklene or any propriety stain remover. Really heavy staining can be removed by brushing on a mixture of detergent solvent (eg one part Lissapol NX in two parts benzene or toluene or Polyclens) . Brush well into fabric, leave for 15 minutes and wash off with warm water.

METALLICSTAINS
including stains caused by fine metallic particles often associated with lubricants. Either- Immerse in 5 percent solution of oxalic acid dissolved in hot water (1oz of oxalic acid per pint) . This is poisonous so wash hands and fabrics thoroughly. Or - Immerse in a warm solution of one part concentrated hydrochloric acid to 50 parts water; wash off thoroughly with water. Important: do not allow these stain removers to come into contact with galvanised iron or copper.

PITCHANDTAR
Dab the stain with a solvent such as Genklene, solvent naptha or white spirit. Important: most of these solvents are inflammable, and work must be carried out in a well ventilated space.

PAINTANDVARNISH
Dab the stain with Genklene and then with a mixture of equal parts of acetone and amyl acetate. Remove Shellac varnish with alcohol or methylated spirit. Important: do not use paint strippers based on alkalis.

ADHESIVENUMBERS
Remove by soaking in benzene until the glue softens, and after peeling off the numbers, remove the glue from the sail with a rag dipped in benzene.

ENGINES

Few Silhouette owners sail without some auxiliary propulsion available. For most, this will take the form of an outboard motor, while a smaller number of boats will have an inboard engine. Both options have their band of devotees, and there is often as much enthusiasm for the maintenance and restoration of old Stuart Turners and Seagulls as for the Silhouettes themselves.....

KEEPINGITINTHE WATER
The characteristic 'rocker' in a Silhouette hull produces considerable fore- and -aft pitching motion, resulting in the transom going up and down rather a lot. Because of this, a long shaft outboard motor is to be preferred, whatever the make.

Otherwise the propeller may spend an unhealthy amount of time racing in the air, without the benefit of cooling water entering the motor. This is particularly evident when you transfer your weight to the front of the boat to attend to mooring warps or anchors. Even when motoring in a heavy sea, the stern, and therefore the motor, will rise and fall excessively. If you have one of the parallelogram type outboard brackets, this problem will be even more pronounced, and in a rough following sea, the head of a short shaft motor may be swamped as the stern dips into the troughs.

HOWISITMOUNTED?
The choice of outboard, and its mounting also affect the trim of the boat. Excessive weight in the cockpit, and even further aft, will reduce the boat's ability to point to windward, as well as increasing the drag. To keep the lower corner of the transom 3" clear of the water (optimum trim), the weight of the motor needs to be kept within reason. If it is mounted on a parallelogram bracket, this

moves the weight of the motor about a foot further aft still, and increases its effect of pulling the stern of the boat down in the water. Some MkII boats, and all MkIII's have a small 'pocket' cut in the port side of the transom, about 4" deep, enabling the outboard to be clamped directly to the hull, and with a long shaft motor, this is generally a satisfactory arrangement.

OUTBOARDWELLS

Some boats have been modified to include a full-depth outboard well, cut through the stern locker, or sometimes in the cockpit itself. There are two problems with this arrangement; firstly, if the well is covered over to reduce noise it is likely to prevent the engine from breathing properly. Secondly; if the well is left open to aid aspiration, rising exhaust fumes will be a problem (the bottom of the engine well should have a slitted rubber floor, through which the engine leg protrudes, and this will prevent exhaust gases escaping downwards).

WHICHMOTOR?

There are plenty of alternative motors to the Seagull. A 4 h.p. long shaft Mariner or Yamaha is one of the favourites, being fairly quiet and very reliable.

If you have strong tides to contend with, a 5 h.p. may be advisable and has the advantage of a separate 3 gallon tank instead of a small integral one. For harbour, canal, or lake work, even a 2 h.p. engine will suffice, though you may need to make a supplementary bracket to get the propellor immersed deep enough. The 4 and 5 h.p. Yamaha engines weigh 21kg. The 2 h.p. weighs 10kg.

HANDBOOKS

Maintenance manuals for most outboard motors are available through the Practical Boat Owner Book Service. There is usually an order form in each issue. The manuals Are relatively expensive, but in fact cost far less than an annual motor service.

Mariner 2-200 hp
Order ref. B714

Yamaha 2-220 hp
Order ref: B783

Mercury 3.5 - 40 hp
Order ref: B719

Evinrude/Johnson 2-40 hp . Order ref: B732

Suzuki 2-140 hp.
Order ref: B780

Seagull outboard motors

Until the appearance of the now popular japanese engines, the sandard outboard motor for the Silhouette was the Seagull Silver Century, noisy, but reliable, and with adequate power for this size of boat. The modern Seagull outboard reccommended for a Silhouette is the new QB range 'Osprey', which is approximately 5hp. It is a single cylinder 2-stroke engine of 102 cc's capacity, with forward, neutral and reverse gears. It has a four blade propellor, water-cooled undewater exhaust, and capacitor discharge ignition. Fuel capacity is 3.5 litres, but there is an optional remote tank available. Average fuel consumption is 1.65 litres per hour. The long shaft version is essential for the Silhouette, and it's weight is about 23 kg.

Seagull Handbooks can be obtained from the Manufacturers, and a full range of spare parts can also be got from regional stockists. When writing with any queries regarding your motor, always quote its serial letters and numbers .

MAINTENANCE

The following notes may be helpful to owners unfamiliar with these engines which are legendary in their ability to withstand all manner of ill-use. However, this is no reason to ignore basic procedures and maintenance schedules if trouble free service is to be expected.

FUEL/OIL MIXTURE

The Seagull is a two stroke engine, and is lubricated by oil mixed in with the petrol it burns. Without this oil, it will seize up, and require expensive attention.All old Seagull engines run on a 10:1 mixture unless the carburettor has been adjusted, in which case it will be 15:1. It is a good idea to find a small container that will hold exactly the right amount of oil to be added to a gallon of petrol. Fasten this on to your gallon can with string so it' s always handy. If in any doubt, err on the side of too much rather than too little oil: within a wide tolerance, a Seagull will run happily on more than the normal quantity of oil; but it will soon run itself to a standstill on less. DON'T be tempted to use ordinary two-stroke engine oil. It is designed to work in hot-running motor cycle engines, where excess oil is readily burnt off. When used in relatively cooler outboard motors, unburnt oil simply gunges up the carburet-

tor and upsets the running. Marine two-stroke oil is specially formulated for cooler operation, and any residues have no ill effects on the engine.

WHICHPETROLTOUSE
Modern Seagull engines are designed to run on lead-free petrol Since you can no longer buy 2-star petrol, you have no option but to use 4-star or unleaded for the older models. It does pay to buy branded oils of known and reliable quality. In a two-stroke engine, the oil in the mixture can do its job properly only if it is thoroughly mixed in with every drop of petrol that goes in to the carburettor. Don't put neat petrol in the Seagull's tank, pour in some oil and hope for the best; it won't work. If you are buying petrol from a pump, put the oil in the can first, then have the petrol pumped in, so that a good mixture is ensured. And give the can a good shaking before you fill the tank on the engine.

PLUGS
Given the right mixture in the fuel tank, the essence of reliable starting and good running is plug drill. First, use the right plug: it must be a single-point plug, and Lodge C1 or Champion 8 COM are recommended. Next, whenever the engine is in commission, take out the plug, look at it and clean it regularly after every 20 hours is the recommended time. You should always enter time under engine in the log, and make a record of plug inspection so that it can't get overlooked. The gap should be .015 inches, but of course there's no need to measure it if you use the gauge from the engine's own tool kit. There is always a tendency for the gap to widen with use; close the points so that the blade of the gauge can just slide in and out. Regular plug drill pays infinite dividends, and means that 99 times out of 100 the engine will start first pull. The hundredth time it will start second pull.

GEARBOX
Some of the older Seagulls had grease Lubrication for the gearbox, but for many years now, only oil has been used. This should be a good E.P. lubricant - SAE 140 in British waters. The filler hole in the gearbox is stopped with a screw cap. A 10p piece fits the slot of the screw nicely. Whenever the engine has been out of commission, have a routine which looks at the oil once a week. Always top it up, even if it looks even a fraction of an inch low. Don't worry if the oil has emulsified with water to form what looks rather like grease. This is apparently normal with Seagulls, and provided that the oil is changed at the beginning, and during the season, all should be well. If the oil has emulsified, it will have also thickened, and will take longer to drain off than normal . Alternatively, spooning it out may be possible.

STARTING
Given a good plug drill, you will hardly ever have difficulty in starting, but occasionally the fuel in the carburettor on starting can be too thin or too rich. If the engine fires and then stops at once, the mixture is too rich. - too much petrol and not enough air. To put this right, shut off the petrol at the cock from the tank , and turn the engine a few times with the starting cord, pulling gently, not with the brisk pull that you use to start. If the plug is in good shape this will not oil it up and the engine should start and run properly as soon as you turn on the petrol again. If you have neglected plug drill the engine may get oiled up, and if the motor still won't start, take out the plug and clean it. If the engine runs for a moment or so and then conks out, the mixture is too thin - too much air and not enough petrol. This is easily put right by flooding the carburettor.

TOOLS
A small bag of tools comes with each new Seagull, but it is worth adding a pair of pliers and a small adjustable spanner.

SPARES
The range of spares you carry is really a matter of choice, depending on how far you are cruising and on how long you are likely to be away from civilisation. Absolute essentials are a spare plug, propeller drive spring, H.T. lead for the plug, and a reserve starting cord, kept somewhere handy. Other useful items might be spare nuts for the locking bolts, spare split pins, and a spare locking pin for the engine mounting.

ENGINEOVERBOARD!
If you lose your Seagull overboard, and manage to recover it, the Seagull Handbook recommends the following:

1: Scrap all the fuel and flush out the tank.
2: Remove the spark plug and spin the engine to clear any water.

3: Dismantle the carburettor, clean thoroughly and dry all parts before reassembling.
4: Remove the flywheel (not the magneto), remove the H/T lead and rinse it in fresh water to remove all traces of salt before drying.
5: Reassemble, and with the spark plug removed and throttle fully open, inject some light oil through the plug hole and carburettor inlet. Then spin the engine.
6: It is recommended to renew the spark plug and H/T lead. Seagull also recommend running on a richer oil mix for the next few hours of running time.

If there is golden rule, it is:

ALWAYSSECURE
THEOUTBOARDMOTOR
TOTHEBOATWITHA
LANYARD.

LAYINGUP
When laying your boat up for the winter, your Seagull will work better next year if a few hours are spent on it now. First, drain the fuel system, and scrap the fuel. Do not store last season's fuel and expect the motor to run well on it first time next year (though it may do). Flush the cooling system through by applying a hose to the cylinder water outlet, and drain the water by standing the motor upright. Remove the spark plug, and inject a little light oil through the aperture before spinning the motor to disperse the oil inside.. Then replace the plug loosely. Oil the throttle cable and lever and wipe the H.T. lead clean. Drain the oil in the gearbox and refill with an SAE 140 lubricant. Store the engine upright.

BRITISH SEAGULL

publish three maintenance manuals no.1 for model 102, no.2 for all electronic ignition models, and no.3 for all standard ignition models, at £1.87 inc. postage each. These are available from:

BritishSeagull ,
Unit 3,
Wessex Trade
Centre,
Ringwood Road,
Parkstone, Poole,
Dorset BH12 3PF
Tel:01202 747400

Spares and service are also highly recommended from:
S.M.Spares
PO Box 17
Yelverton
Devon
PL20 6YR
Tel: 01860 700053

MAKE & MEND

This section shows some of the typical repair and maintenance jobs carried out by Silhouette owners, and are reprinted from articles which have appeared in 'The Silhouette Owner' over the past thirty years. If you need help or advice with Any aspect of maintenance or refurbishment of your boat, contact either the Editor or the Secretary, as there will nearly always be some information available.

Freeing seized rudder tubes

In issue 298 of the Journal the President refers to SII 1137 *Gemini* having trouble with a leaking rudder tube fitting. I had this problem on my GRP MkII Silhouette when the rudder tube was rusted (seized) to the rudder spindle. The effect was that as long as I only steered to port there was no leak, but turning to starboard unscrewed the tube from the bottom fitting, and water gushed in. The solution was to replace the whole rudder assemnbly. This involved cutting the spindle above the rudder, finding somewhere that allowed me to drop the rudder out with sufficient room to allow a new spindle to be inserted from underneath. I did not fancy trying to weld the rudder straps to the spindle once the spindle had been fitted to the boat.

I obtained a length of gas pipe and a flange threaded inside and out. The gas pipe was cut to size and threaded at the lower end. The flange was screwed into the bottom of the boat (at the correct angle to accept the threaded end of the rudder tube) and glassed in. While waiting for this to cure I made two saddles to fit over the pipe, and these were welded about three inches from the top and bottom of the tube. (If welding is not your forte, have this done professionally, as if this is not done properly the tube will distort).

The saddles were drilled and tapped to take grease nipples. A block of wood drilled with a suitably sized (and angled) hole was slid over the upper end of the tube, and the tube screwed into the bottom fitting and glassed in. The block of wood was glassed in to the underside of the transom deck.

The final act was to make a new spindle, weld the straps to it, fit the spindle and attach the rudder and tiller. The grease nipples made sure that the inside of the tube never rusted again.

Charlie Bissaker

Making a removable mast prop

All the SII's I have owned have had mast supports, and I mean the type that transfer the mast's downward load from the deck to the keel, hog or keelson usually via a floor cross beam.

Interior modifications such as extra berths, tables, or just more space are all helped by making this support detachable - but you must remember to put it in when going sailing, although I've forgotten mine a number of times- and haven't yet had the heel of the mast down below! If you do forget, you soon notice the rigging slacker than usual and that reminds you to put it back in before it really blows. The last few Silhouettes I have owned have all been SIII's and although these were made without mast supports, I like to make one and fit it when sailing hard.

I have measured up to 1/2" deflection of the cabin top although I've never heard of one collapsing. It is easier to set up the shrouds and trim for best performance if a mast support is used and I suppose that is the best reason for having one on an SIII.

Now to the detachable support. All that is required is a length of tube with a threaded collar and locations top and bottom. The top location should be under the tabernacle or mast step but choose the position by lifting the floor boards and choosing the floor cross beam which is the nearest to being vertically under the mast. A little fore or aft doesn't matter. On the SIII the floor boards join over the appropriate floor beam which is convenient. On the SII I think the same applies,

Chisel about 1/4" depth out of the beam big enough to take a large headed screw head and penny washer (brass or stainless) and that is the bottom location. The top location similarly on the wooden boat but using either a tapped hole or a self tapper on the fibreglass deck head. I find that a 1/4" whitworth head is adequate location both top and bottom but penny washers of suitable bearing plates are essential and you will need a half hole in each floor board to clear the tube comfortably.

Denis Heald

Tessa's new bilge keels

When tapped with a hammer, the bilge keels of my Silhouette II Tessa left more on the boatyard deck than was attached to the boat ! Obviously something had to be done, and done quickly. The most difficult part was coming to a decision, how to set about the job. Many days were spent pondering the problem, but once the decision had been made, the rest seemed to fall into line.

Tessa is of GRP construction, and the fixing nuts (fourteen to each plate) were fibreglassed over, and being a rank amateur, I sought the opinion of an expert, and who better than a former employee of George Hurley, who informed me that the nuts were best uncovered by using an electric grinder. Not having one - or the necessary cable, I decided a 1" wood chisel and mallet would do just as well. After cutting round the outline of the nut it was possible to remove the top, leaving it fully exposed. In less than an hour the work was completed. The next job was a little more time consuming, as I only had a small adjustable spanner, which is apt to spread when pressure is exerted on it.

Eventually, all but two nuts were unscrewed, and a cold chisel was effectively used on them. One was still reluctant, and I was obliged to borrow a small open ended 5/8" spanner . This, with the assistance of a screwdriver wedged between the jaws of the spanner and the nut did the trick. But alas, the keels were still firmly stuck to the hull, and my friend Dennis Saunders suggested that a larger hammer was needed to knock out the bolts.

First, a wedge was placed beneath the keels to give a firmer platform, and the bolts were hammered until level with the inside of the hull. A drift was then used to finish the job. When the last bolt was released the keel and wooden wedge between hull and keel simply fell away.

The new keels, made by a local Plymouth firm are now galvanised and ready to be fitted. No doubt, with the extra weight, my Silhouette will be a knot and a half slower, and in a light breeze require the assistance of a Seagull, but like a lady in a new outfit, Tessa looks elegant in her new keels.

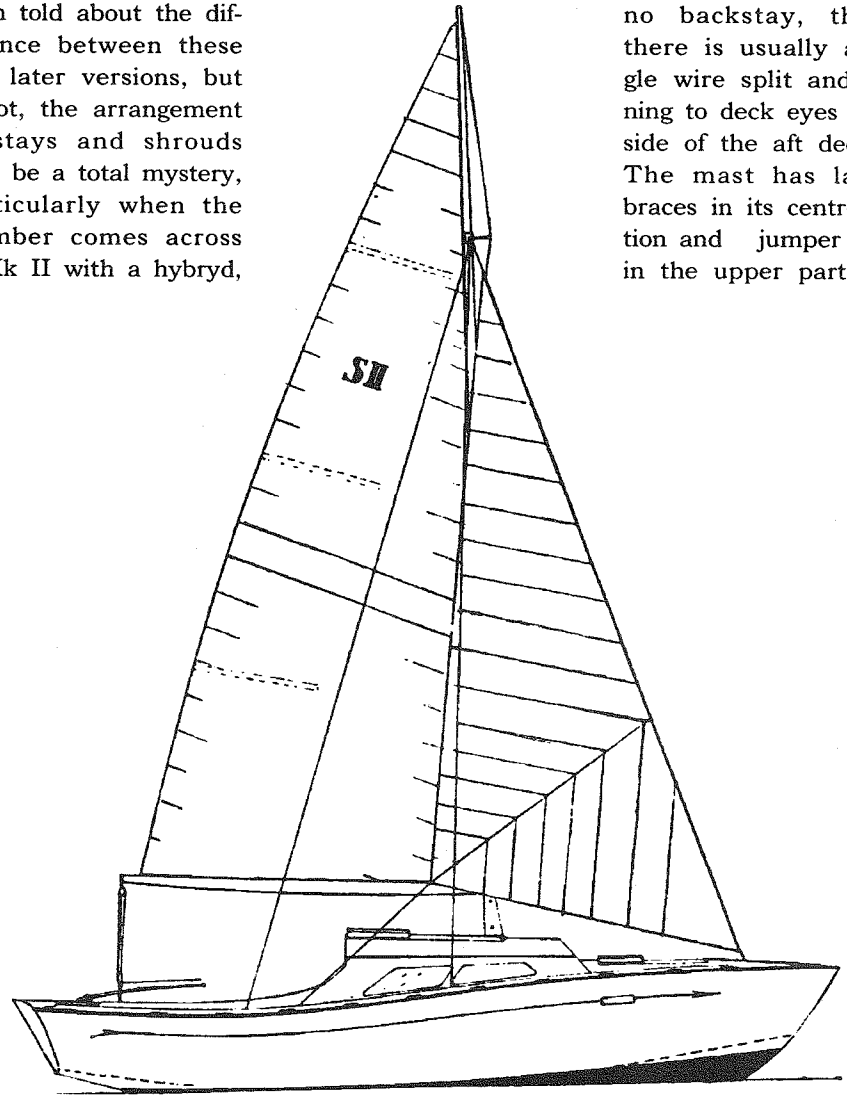
The materials used are as follows:
3'6" x 2' 0" x 3/8" steel
7'0" x 4" x 3/8" flat iron bar
8 welding rods
4 hours labour.

The holes for the bolts were drilled larger than 3/8" to allow for the galvanising and the metric bolts that are now used. Don't forget the words of a rank amateur - the job always looks more difficult than it actually is.

Cyril Longson.

The 3/4 RIG

Every so often a new member joins our company having bought one of the early Mk II Silhouettes with a three quarter rig. If it has been bought from an existing member the new owner may have been told about the difference between these and later versions, but if not, the arrangement of stays and shrouds may be a total mystery, particularly when the member comes across a Mk II with a hybryd, or a completely different arrangement of standing rigging. The drawing below shows the layout of the 3/4 rig. The mast is supported at the sides by single shrouds and in this drawing there is no backstay, though there is usually a single wire split and running to deck eyes either side of the aft deck.
The mast has lateral braces in its centre section and jumper struts in the upper part. The



forestay goes from a point just aft of the samson post on the foredeck to a point level with the jumper struts on the mast. This allows a foresail of 40sq ft to be set, but by common agreement amongst members, it did not give enough drive to be competitive against similar sized boats, and produced a centre of effort that was too far aft, thus giving the boat its legendary excessive weather helm.

Some members prefer to keep to the 3/4 rig, despite the advantages of subsequent developments, and advice is at hand from SOIA member Malcolm Maxwell of Breightmet, Bolton, whose SII *Windsong* is one of the originals. He writes the following to those considering what to do about the arrangement:

The following notes may be of use in setting up the rig on your Silhouette. My own SII *Windsong* is also fitted with the 3/4 rig which I have modified as described below.

1 The mast is designed to be 'bendy', and the diamond braces support the lower part, side to side. The jumper struts control the fore- and -aft bend in the upper part, which is induced by the backstay.

2. The forestay and shrouds set up the mast for rake and lateral verticality in relation to the hull. Use the main halliard as a plum bob.

3. The shrouds should not be overtightened as there is considerable strain on the hounds bolt. If it breaks you will almost certainly lose the mast.

4. The foredeck tack for the jib and forestay would indicate that you con use a 40 sq ft jib with a high cut clew. This should be on a pendant so that the head goes to the block on the mast.

5. You can improve the original sail plan by setting a new jib to the stemhead as in the photograph. The forestay should be moved to the stemhead also and set up on a lanyard - little cost, and more options open. This obviously precludes the use of a masthead forestay as the jib would not tack over the 3/4 stay, and also the mast would be difficult to set up.

Conclusions.

1. Keep the rig as it is.
2. If you must change, move to a stemhead 3/4 rig
3. The existing stay and sail can be used in either case but you can alter the balance at no cost.
4. If you want to buy a new sail - or two for a cutter rig - I feel you should get a new 52sq ft jib which tacks to the stemhead and goes to the original halyard. This gives better value for money, less effort, less clutter on deck, tacks smartly, and moves the centre of effort forward and downward just enough to acheive a balanced sail plan.

It has been my experience, having worked with this rig for some years now that it offers more control than the masthead setup and that any weather helm is due more to heeling angle than to sail trim.

The refitting of SII no. 578 *Paper Moon*

Impudent though it may seem to elder Statesmen of the fraternity, I write, as a Freshman, of the experience of converting from the very house-proud racing dinghy scene, to the more practical, and down to earth approach o£ the Cruiser Folk.

My son, Simon, and I, after many years of ulcer-producing competition, quit the rat-race for pastures new. In my case I have reached the age when getting the power-to-weight ratio right is creating problems, and I need a more stable and beamier craft to match my figure.

With completely open minds, and an unsurpassed ignorance of cruising boats, we came to the Silhouette as the craft most likely to receive the approval of our Bank Managers, even though the advice from an ex-owner was that it sailed like a pig, and then only downwind. We have since come to the conclusion that the nut holding his tiller was maladjusted.

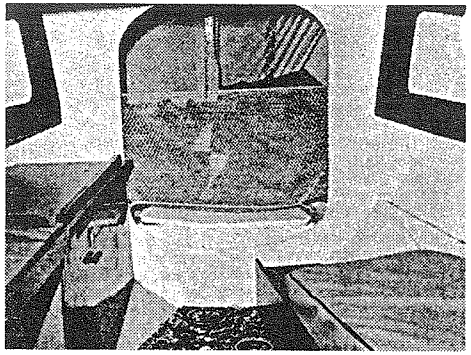
Once the novelty of the Honey-moon had worn thin, it dawned upon us that the basic difference between the two disciplines lies in time. The dinghy man, with his preoccupation with seconds, is like Winnie-the-Pooh and his bump, bump, bump with the back of his head on the stairs—he knows that there must be a better way, if only he had time to stop and think. Relieved of the pressures of the Start, the First Mark, Covering, Rule-bending, etc., we had time to gaze into the cabin and reflect on ways of improving the creature comforts.

With no measure of agreement between us, soon after lay-up we set about the task of stripping out. With a natural talent for vandalism, we removed all offending fixtures. Luckily, we had an early lunch call and were stopped when only the two bunk frames and the facia of the "cooker" unit remained. Thus, in one morning we had done little to better the boat but had provided the incentive for the winter's work.

Re-building to accept existing possessions, is a mistake. I know not who it was who coined the expression "A place for everything, and everything in its place", but it must rank in the lists of moronic quotes as a close second to "Let them eat cake". Who has ever met the Yachtsman who has Everything. He may think that he has at the start of a refit, but along come Birthdays, Christmas, and the Boat Show, and his Everythings change. Our policy was to find space and to leave the worry of filling it until later.

Starting at the front end; through the gloom, there appeared to us to be a lot of room up in the bow compartment, access to which was through a roughly circular hole. This hole allowed entry for either one head or one arm, but not both. Working techniques had to be based on the peer and grope method. Job One was to increase the size of the hole to some 23in by 20in—a five minute task using a Jig-saw.

Comfortable entry now being possible, we sloshed a good chunky coat of anti-condensation paint on all surfaces—a material we have used throughout the



interior—before constructing a Cat's Cradle above the chain locker. This was done by fixing four lengths of shock cord crosswise—two in the bow, at deck level and above the chain locker, and two at the bulkhead end at about two-thirds height of the newly cut hole, and again above the chain locker. Around these, working fore and aft, we fixed a length of shrimp netting. By pulling the one visible length of cord downwards, sails, sail bags, waterproofs, etc., can be stowed not only neatly, but also in a ventilated situation.

During the course of this operation, we found the presence of the cooker unit facia somewhat restricting to our elbows. Using our planned technique of "If in doubt, clout", we lopped some 3in off its height. This as it turned out gave us a massive amount of moving room, since the maximum beam of the passing crewman now overlaps the minimum width of the gangway. Even I can now pass on either side of the Kingpost.

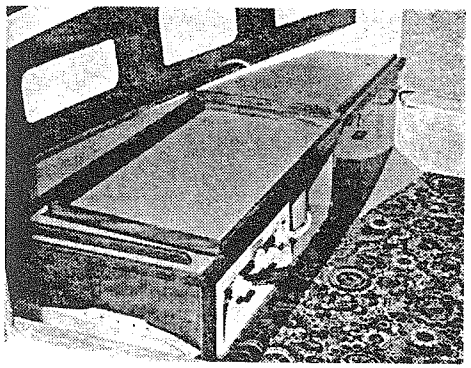
Under each side deck of the Silhouette there lurks a space quite useless to the human body. The man who can sit on the bunk, and lean comfortably back against the side of the boat, is in no condition to go to sea. Into this space we fitted nests of pigeon holes extending for about 42 feet aft from the bulkhead. These we made out of 4mm ply on a hardwood frame. Due to the upward sweep of the decks, graduated sizes are obtained ranging in height (in our case) from 8in at the aft end up to litre bottle size at the bulkhead. A certain amount of skill and patience is required for this exercise since the front face of the unit curves in two directions, and scribing in will either make or mar the job. For those who lack the courage, there are simpler ways of producing the same effect by constructing the front face piecemeal. A useful spin-off from this fitment is that it now provides the much needed back rest.

As with the second-hand car market, so too with boats, certain stock phrases have standard interpretations. In cars, one learns that most little old ladies live at quite considerable distances from their Churches, and frequently pile up more mileage than conscientious Commercial Travellers. With boats it is the "end of season condition" which strikes terror into the heart, and may be loosely translated as "if you want to see inside the cabin, bring your own shovel".

Simon and I have never been noted for our tidy habits, but, in a small boat, this is an essential vice in order to survive. Since much of the chaos centres around the meals prepared on board, often in hazardous conditions, we invested time and money in making the task of clearing up as painless as possible.

The cooker—twin burner with grill—we lowered into the port side unit and enclosed it in a three-sided Formica-lined box; the worktops, too, are all in Formica with hardwood edges and fiddle rails. The opening above the cooker is filled, when not in use, by a matching tray which doubles as a table in the cockpit

for civilised dining when weather conditions allow. This does not, by itself, keep the boat tidy, but a quick wipe with a damp J Cloth removes the glue to which other accidents adhere. At this stage, since all that remained of the cabin sides would be needed to accommodate reclining bodies, we turned our attention to the problem of condensation. As I have said previously, we were following a routine of plastering-up with Korkon paint at each step in the re-build, but had not sufficient faith to believe that this alone would cure the problem. Circulation of air too, must play its part— after all it works on car windscreens.
Along each still naked area of the cabin sides, we glued and screwed inch square vertical bearers at about 20in spacing.



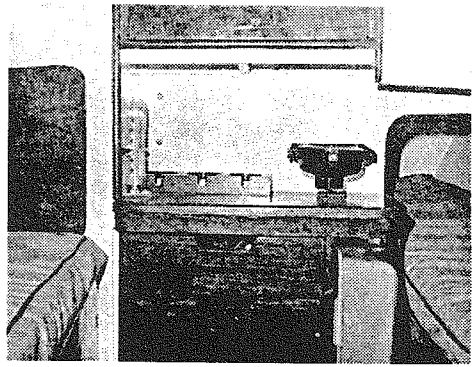
To these we fixed inch and a half hardwood slats, about one inch apart, using brass countersunk screws and cups. Thus nothing tossed carelessly on to the bunk—this includes me after a longish spell ashore—comes in contact with the hull.

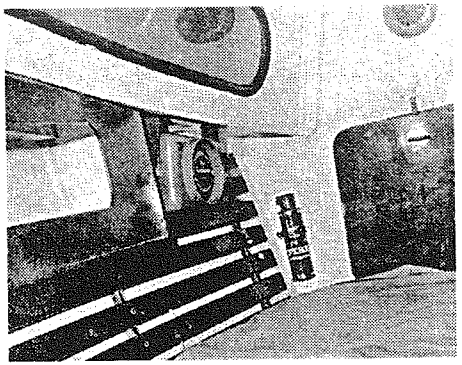
I make no apology for again plugging this idea. It crops up in one or other of its several forms with monotonous regularity, but is only rarely adopted. It is such an effective cure that we who are converted must continue to spread the word. With an understandable bias, we believe our system to be the best; use plain vertical bearers and allow the slats to follow the line of the hull. The use of screw cups not only will allow easy removal for future decorations, but also gives the job a pleasing and professional appearance.

For those who have failed to spot the problem carrying out this work on the quarter berth was a bit of a beast—or so Simon tells me. Much as I love the boat, I had no wish to become part of its permanent structure and so limited my assistance to advice-giving and tool-passing.

Our final exercise developed more by accident than from design. I was finding the first step down from the bridge deck a bit awkward, there being no intermediate staging point before the cabin floor. Because we happened to have a bit of suitable teak surplus to our needs, we fitted a solid worktop about half-way down and projecting about two inches into the cabin, thus forming a very useful heel step on the way down.

During a blank spell several months earlier, Simon had made two useful boxes to put things in. By pure luck we found that these gave us exactly the right height





under our new step to form two drawers, leaving a space on the quarter berth side. Our washing up bowl fits this space as a push fit. None of this was planned; it just happened.

Above this unit, under the bridge deck, we have formed the only purpose built section in the boat. Emergency gear, if required, is wanted quickly and in good working order; flares, reefing handle, glasses, etc., all have their proper place in this fitment, and are most conscientiously kept in Red Alert condition. After each emergency, we wash up and put them back in place.

And there we should have rested had not Simon watched a programme on TV demonstrating simple methods of moulding Perspex. At Regulo 4, for seven minutes, above the wife's Sunday roast, does little for the harmony of the household, but makes the forming of curved "fiddles" a very easy matter. We now have clear-fronted corner units in abundance. Aesthetically, this is matched in beauty only by the breath-taking decor to be found in most Victorian pubs. I suppose I should be grateful that he has never learned to carve grapes, but he does watch a lot of TV.

Pip Ward

USEFUL ADDRESSES

BILGE KEELS
For prices of replacement sets,
Phone David Renshaw
Renshaw & Milner, New Forge Works,
Main St. Claypole Newark NG23 5BJ
Tel: (01636) 84234

INSURANCE
Frizzel Insurance
Tel: Bournmouth. (0202) 760606,
or London 01-638 6252.

Morgan Wright & Colman
6 Alie Street
London E11 8DD
Tel: 0171 488 9000
Ext. 2519
(Ask for Janette Aitken).

St. Margarets Insurances
15 - 35 High St. Penge
London SE20 7DL
Tel: 0181-778-0161

OUTBOARDS
British Seagull
Unit 3, Wessex Trade Centre,
Ringwood Road, Parkstone,
Poole, Dorset BH12 3PS.
Tel (01202) 747400.

PLANS
Tucker Designs,
15, Wrensfield, Boxmoor,
Hemel Hempstead, Herts, HP11RN.
Telephone: 01442 253775

Practical Boat Owner
Book Service.
Westover House,West Quay Rd. Poole,
Dorset BH15 1JG.

RIGGING
Chris Whittington
Steel Wire Rope Ltd
Hemel Hempstead
Herts HP@ 5RJ

SAILMAKERS
J. Dawson (Sails). The Quay
Port Dinorwic N. Wales. LL56 4JL
Tel: (01248) 670103

SAILNUMBERS
Mrs. Chris Derry,
S.O.I.A.Sail registrar
23, Maes Hyfryd, Moelfre,
Gwynedd. Anglesey LL72 8LR.
Tel: 01248 -410- 705

SEAGULLSPARES&SERVICE
S.M.Spares
POBox17
Yelverton
Devon
PL206YR
Tel:01860700053

STAINLESSSTEEL
Stainless steel Stockholders Ltd.
Imber Court Trading Estate
Orchard Lane, East Molesey.(Delivery service)
Tel: (0181 394) 4121

Lencol Engineering,
22 Ashley Road,
Hampton. Tel: (0181 941) 4226
(Fabrication & welding service).

P. Ormiston & Co.
Broughton Road, London W 13.
Tel: (0171 567) 8211
(Rigging made to measure)

Phoenix Marine Ltd.
2, Marrowbone Slip,
Sutton Road, Plymouth PL4 OHX
(Pulpits, pushpits etc).

Steel Line Ltd
Shepherd St.
Sheffield S3 7BA
Tel:0114 2 20298
(Pulpits and other items made to order).

STUARTTURNERAGENTS
C. R. Irving & Co. Ltd. 'E' Plan Estate,
New Road, Newhaven.
Tel: Newhaven (01273) 3032.

C.S.P. Marine,
149 Old St, Clevedon, Avon.
Tel: (01272) 875703.

Fairways Marine Engineers, Bath Place
Wharf,Downs Road, Maldon, Essex.
Tel: (0621) 52866.

SURVEYORS
Brian Goodfellow
75 Abbey Road, Chertsey,
Surrey KT16 8NG
Tel: (01836) 611866

TRAILERS
Renshaw & Milner (see bilge keels)

SBS Trailers, Woden Road,
Wolverhampton WV10 0AS
Tel: (01902) 55655 or 55680

Towsure Ltd. 155, Holme Lane, Sheffield.
Tel: (0114 2350542 or 2341656

Indespension Ltd.
Belmont Road,
Bolton.
Tel: (01204) 58434