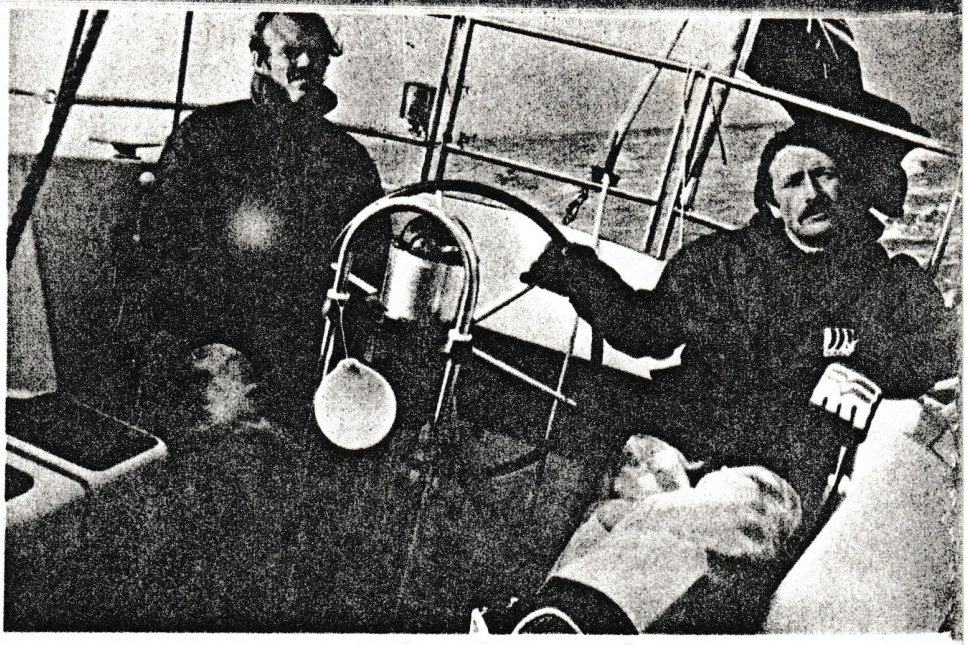
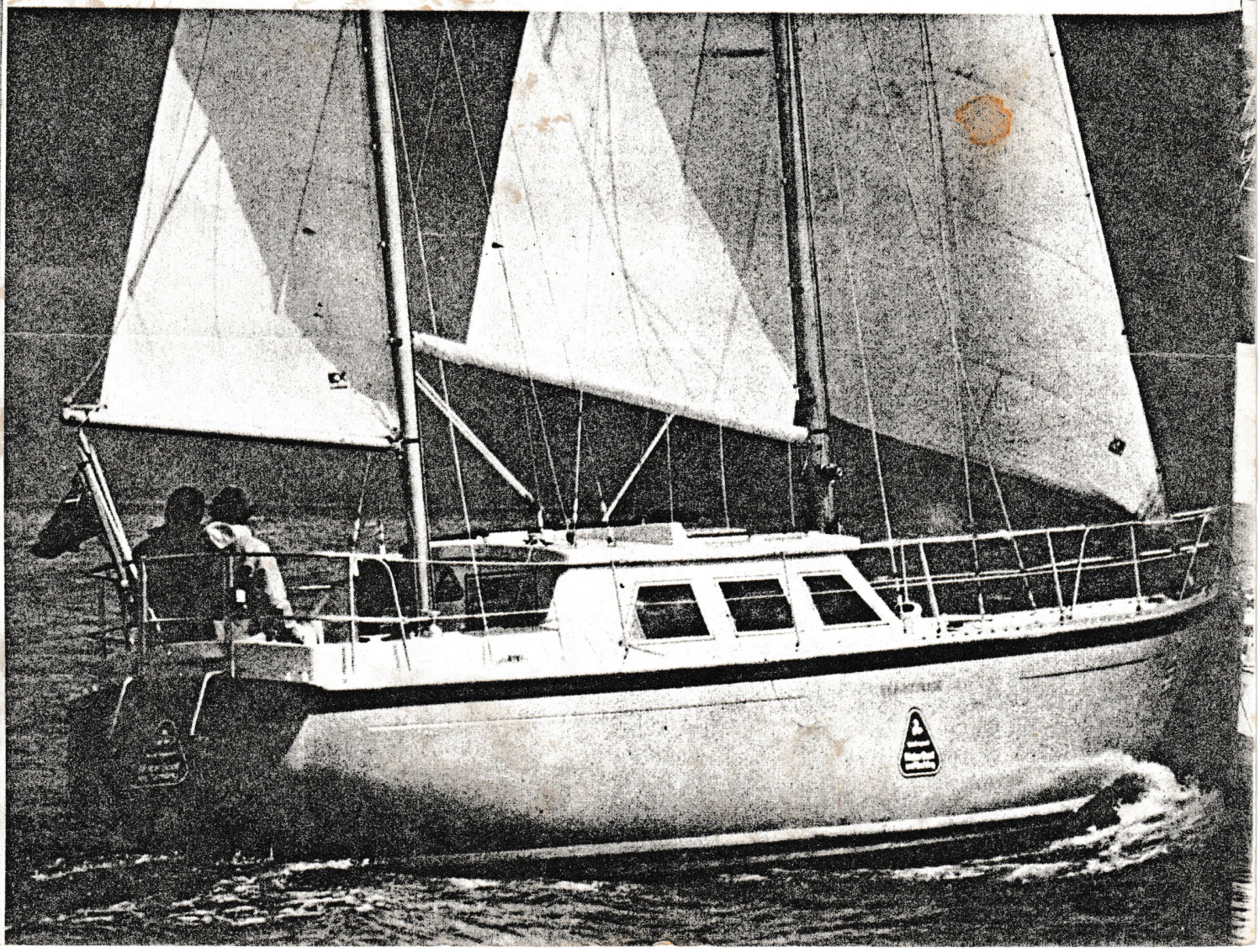
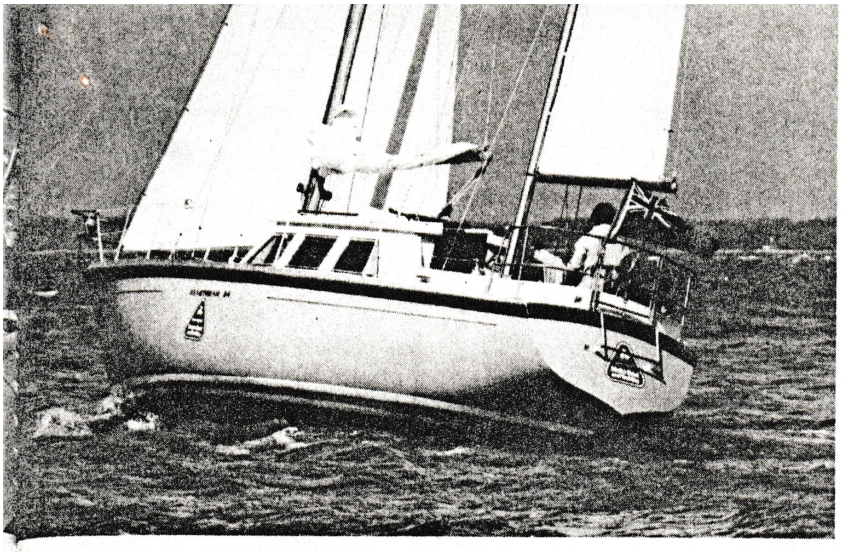
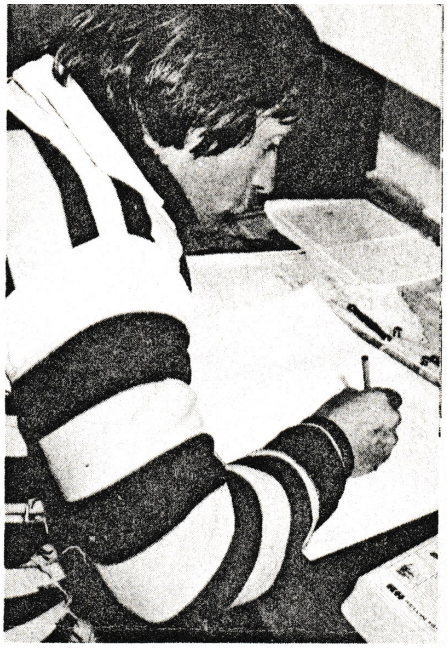


Moto

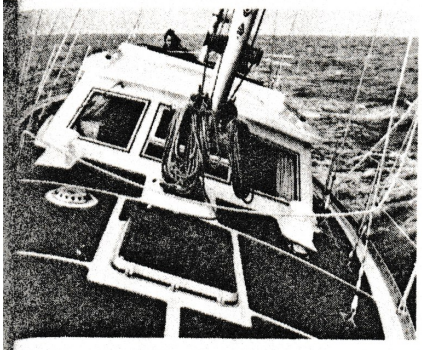
THE BEST OF

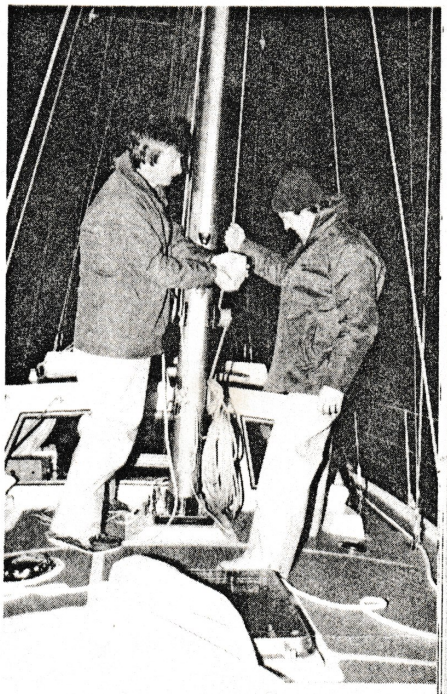






Sailing
BOTH WORLDS





In an eventful, 200-mile cruise from Hamble to Dartmouth and back we learnt the value of being able to motor sail when head winds and calms were prevalent. This spread of pictures sets the scene for David Glenn's article overleaf which describes the passages and gives a guide when to motor, when to sail and when to motor sail. Pictures by Eric Coltham

Motor Sailing

THE BEST OF BOTH WORLDS

THERE is an unfortunate myth about motor sailers that one should not expect too much from them under sail alone. It is a myth which I fear has afflicted some designers to the extent that their creations have fallen into a nasty compromise trap and have emerged primarily as motor boats with a frustratingly poor sailing performance.

However, it seems that the sailing aspect is making a come-back in some new boats and that the designers realise that good motor sailing can only be achieved by a carefully judged combination of hull shape, sail plan and engine specification.

The motor sailer is a difficult animal to describe. The popular ratio method is not very precise — for instance, 50/50 might suggest that she is equipped to sail relatively as well as she is intended to motor, but might disguise the fact that she is not very good at either.

The modern motor sailer, a type of boat ideally suited to cruising, has to meet a wide variety of demands. She has to be fast, reliable and economical under power, easy to handle and reasonably powerful under sail, and provide comfortable and copious accommodation.

These are qualities which might attract a family which needs the space for children and the reliability to get home on a set date, and also those who are looking for something more sedate, something in which they don't have to endure the extremes of out and out motor boating or sailing. The demands for the latter will be for comfort below and on the helm (i.e. an enclosed steering position) and an ability to progress steadily, but comfortably in most conditions.

Cruising to windward is something which most people try to avoid but probably find themselves confronted with more often than they would like. It is in these conditions, when the wind is particularly light or strong, that motor sailing itself is most valuable. It gives that extra punch to windward which sailing or motoring alone cannot give and in certain conditions it will enable a boat to sail closer to the wind at the expense of an acceptable loss of speed.

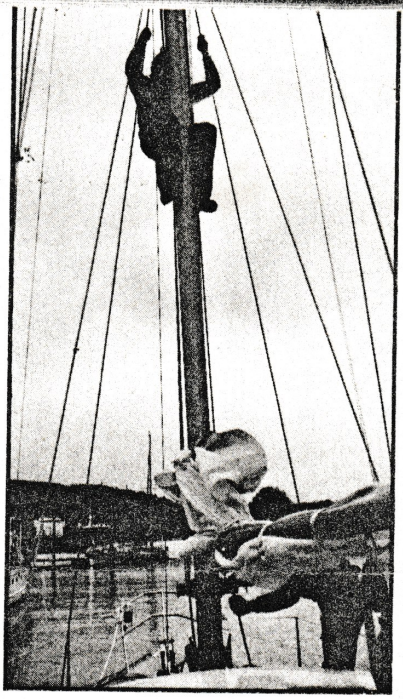
The ketch rig is arguably the best for cruising because sails are small and can be handled by a short-handed crew. The various sail combinations possible are ideal for motor sailing in different windward conditions and in light to moderate downwind sailing the benefits of the mizzen and the mizzen staysail come into their own.

Perhaps one of the less obvious aspects of motor sailing is the importance of reducing engine noise. Naturally, in any kind of boating, the quieter the engine the better, but if the noise can be reduced to a minimum it can make the motoring side of motor sailing all that more enjoyable.

When technical editor Dick Johnson, photographer Eric Coltham and myself went on a short motor sailing cruise we set out to demonstrate not only the value of motor sailing but also when to change a sail and stop or start the engine to get the best performance and most comfortable motion from the boat.

The boat we used was the relatively new Seastream 34, designed by Ian Anderson. With a working sail area of 415 sq ft and a 42hp Mercedes Benz diesel she is a good example of an effective motor sailer. Her underwater shape shows a split configuration with the rudder hung on a skeg, but with 6720lbs of ballast, an 11ft beam and relatively small main and mizzen, she proved to be a stiff, dry boat with a useful turn of speed.

Our plan was to make a non-stop passage from Hamble to Dartmouth, arriving early in the morning so that we could make use of Berry Head and Start Point lights before they were extinguished. With a distance of about 97 miles to cover we reckoned that, at an average speed of six knots, we would need to depart at about 1100 the previous day.



In a desperate effort to get the navigation lights working we had to pinch the steaming light bulb in the absence of any spares, which meant a trip up the mast.

Although tides were at neaps, the weather at the time was distinctly unsettled so we decided not to take the inside passage at the Portland Bill Race and opted instead to pass four or five miles to the south of the light.

The forecast for the day of departure was excellent, with a north-easterly force 3, good visibility and a break in the weather before the next front approached. So with visions of a gentle broad reach all the way down west we left in high spirits even though we had been delayed by having to treat the engine to a long overdue oil change.

As we emerged into the Solent the light north-easterly, which appeared to have been blowing at our berth in the Hamble, gave way to an irritating south-westerly, which I hoped might just have been generated by local conditions. But, as we reached the Needles Channel and the Fairway Buoy it was clear that we had nothing less than a dead noser for Dartmouth. So much for the forecast. The only consolation was that the conditions would be ideal for motor sailing.

By the time we had reached the Needles at 1635 (we had been punching the tide) a lop had built up in the main channel and clearly the Seastream, under engine and steadying main only, was labouring as she pitched into the short, steep sea. The motion was uncomfortable and on deck the air was full of icy spray so the protection of the enclosed steering position was much appreciated.

Going well under full main, mizzen and working jib at the start of the passage west. David Glenn does a quick check before nightfall. Note the lack of boom vang.

Once clear of the Needles we realised that to carry on in this rather violent manner was pointless, so we bore away to fill the main (which immediately gave us another ¾-knot) and shortly afterwards set the working jib.

With the mizzen set as well, and the engine ticking over gently at 1600rpm we ploughed along beautifully at a steady six knots. With full sail set we found it much easier to steer from the cockpit position so that the helmsman could feel the wind and thus get the best out of the boat.

In these conditions we could only steer about 210° (M) on starboard tack which put us 45° off our rhumb line, so we settled down to a night of short tacking to Portland Bill and into Lyme Bay. It was interesting to see how our speed slumped to a dismal three knots when we stopped to check engine oil levels. We also found that to get her going properly under sail alone we had to bear away by a good 10°.

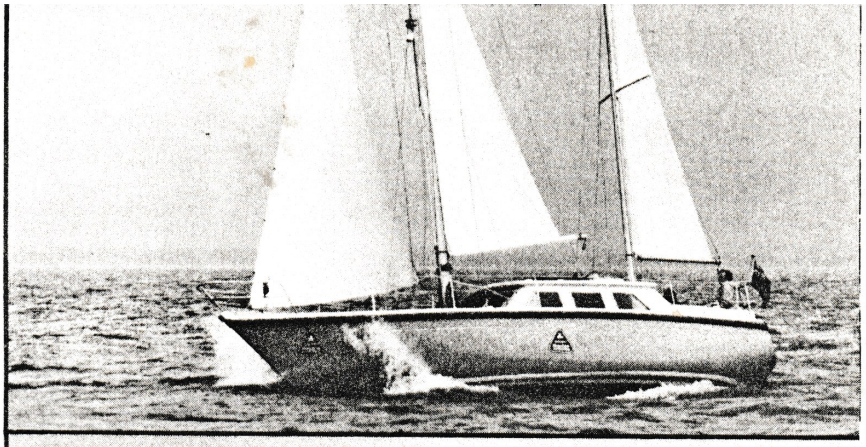
During the early evening the wind freshened to the bottom end of force 4 and this pushed our speed up to a healthy seven knots. With the engine still running at 1600rpm we found we could afford to point up so that the headsail just began to lift without any serious loss of speed. With the night coming on we could have dropped the main for comfort and sailed under headsail and mizzen only, but we decided that progress would be too slow and anyway there was nothing to suggest any great increase in wind strength.

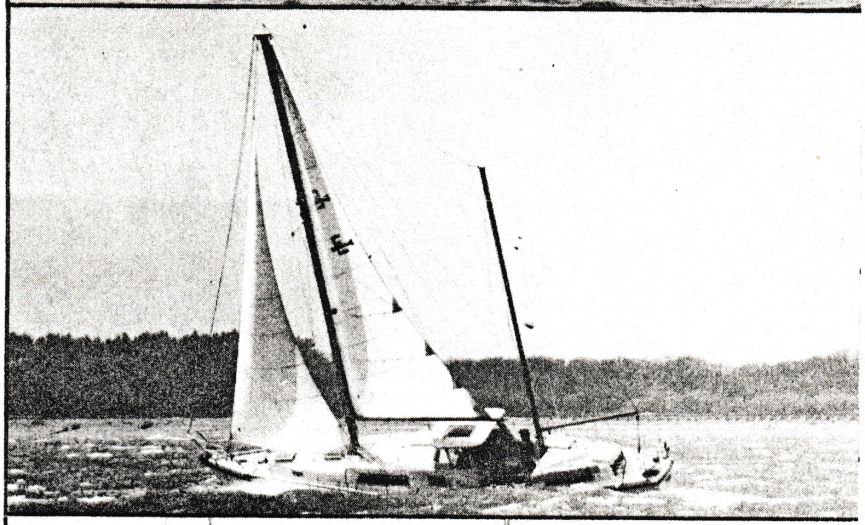
An impressive feature of the Seastream is her quiet Mercedes engine — at the outside wheel it was barely audible. We felt that these conditions epitomised motor sailing at its best and despite the beat we looked forward to a rapid passage across Lyme Bay. We were encouraged by the evening forecast which said that the wind would back into the south-east and freshen slightly.

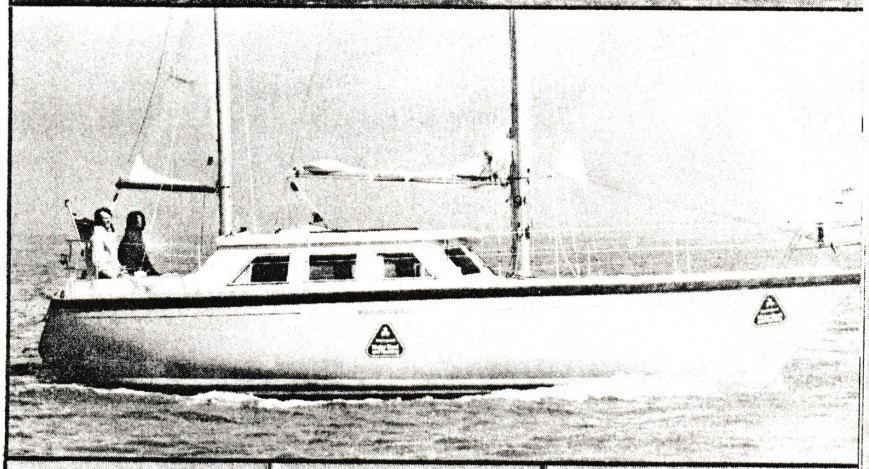
But it was not to be. By 2300 the wind had died to a feeble zephyr and it now seemed pointless to make use of the sails. We stopped the engine for checks at this point and in a remarkably glassy calm reflecting a brilliant starlit night we lay silently, five miles south-east of Portland Bill, deciding what do do.

The decision wasn't that difficult. Down came everything except the main, the engine was started and off we chugged on a course of 277° (M)

continued overleaf







Motor sailing shows its versatility. From top: In a force 4 to windward the Seastream was able to carry working jib, a couple of rolls in the main and a mizzen quite comfortably; photographed on the same day but sailing in a fresher breeze this 38ft Euros was making excellent progress under full main and a small headsail only; a comfortable combination is headsail and mizzen only, not as efficient as the above rig but easy to handle in strong winds; a good motor sailer should have a useful turn of speed under engine alone.

Motor Sailing

THE BEST OF BOTH WORLDS

continued

straight for the Dart entrance. At 1800rpm we were logging a good seven knots and this continued for four hours while we waited patiently for a handy south-easterly.

Fleets of well-lit fishing boats were dotted all over the place which was of some concern to us because despite delving into various junction boxes, fuse boxes and switch panels we were unable to get any life from our navigation lights. Instead we kept a powerful hand lamp in the cockpit which we played on our main whenever we closed another vessel.

Oddly, the night had been extraordinarily mild, but at about 0230 a breeze started filling in, not from the south-east, but again from the south-west. It allowed us to set a working jib, but it was a biting wind, which infiltrated any amount of protective clothing. We set the engine throttle at an economical 1700rpm and as she gently rode the long swell heaving in from the west we managed a comfortable seven knots.

Shortly before dawn we passed two well-lit tankers lying off Teignmouth, probably waiting for an oil transfer, so we knew we were approaching Torbay and the Dart.

Berry Head and Start Point lights gave us a good fix. We had obviously been carried slightly to the north by the tide which tends to swing into Lyme Bay at this point, so we altered course slightly to port and were able to lay the entrance to the Dart comfortably.

Close-hauled, we sailed right up to Dartmouth Castle in the early morning sunshine and at 0745 we dropped the hook in 20ft off Kingswear, for which the harbour authorities charged us £1.40. The trip had taken around 20 hours, longer than we had hoped, but it had proved that despite complete calms and light head winds, distances can be covered comfortably and at good speeds while motor sailing.

Apart from enjoyable visits to some of our favourite Dart haunts like the Ferry Boat at Dittisham, Taylor's Restaurant and the Dartmouth Arms, our 36-hour stay was disastrously eventful, to say the least.

We were combining our trip with a boat report (to be published in our September issue) and as one test was the measuring of fuel consumption we had to plumb our flow meter into the fuel system. A straightforward job, but in later bleeding the system, our mechanic (who shall remain nameless) overtightened and sheered off the fuel pump bleed screw allowing fuel to escape freely.

With no local Mercedes mechanic we decided that we would make the return trip without engine, having failed to make temporary repairs with Plastic Padding. However, this versatile stuff did come in handy when a weld split on a freshwater tank while we were filling it. The cause of the split was an air vent, too small to cope with the filling rate.

Although we left Dartmouth with the engine out of action little did we know that the ability to motor sail was going to display its importance very vividly later in the passage.

I felt a little anxious about the forecast, which gave westerly 4 to 5 in Plymouth, backing and increasing considerably later, but we thought it safe to go. Deciding that the time we would need the tide with us most would be at the Needles Channel we left at 2030 in the growing dark and pouring rain with just a whisper of wind coaxing us down the Dart on the last of the ebb. "Why *do* we do these things," was the sum total of conversation as we sailed down-river.

The night was a foul one. The south-westerlies of the last 48 hours had left a lumpy swell in the Channel and with a meagre force 3 behind us we rolled and slatted along at 3½ knots under full sail. We were slightly disappointed with the set of the main, largely because there was no vang to flatten the sail and thus enable it to give more power on the run.

Our luck was out

But one cause of anxiety had been removed — Dick Johnson had managed to get the navigation lights working.

My concern about the weather grew at the 0033 forecast when southerly gales were forecast for Wight and Portland. We were still well short of the Bill and it was important that we picked up speed in an attempt to reach the Needles before conditions worsened, and to catch the flood tide comfortably.

But our luck was out. Instead the wind gradually died away and 0300 saw us wallowing helplessly 17 miles south-west of Portland Bill. Dawn broke with the visibility down to about three miles and we spent the entire morning creeping very slowly around Portland against the tide. Having calculated at one stage that we had actually gone backwards 0.8 of a mile we set everything to catch the wind including the storm jib upside down as a staysail and the working jib upside down as a mizzen staysail. Totally unconventional, but under the circumstances it was a practical rig.

We would have been very lonely at this point had it not been for the Navy rushing about on exercise in frigates, helicopters and submarines. With the visibility deteriorating all the time, the engine throb from the warships was somewhat eerie as they appeared from all points around us.

But what was causing us more anxiety was the lack of wind. The tide would be in our favour at 1500, but at this speed under sail we would not make the Needles in six hours and the tide would be lost. We had to have another bash at the engine. Armed with a lump of Plastic Padding, Dick Johnson once again descended into the engine compartment. We had to pinch ourselves when the engine suddenly responded to the starter, running as sweetly as ever with no sign of air in the system. At last we were able to motor sail again.

Despite regular plotting we weren't sure of our position at this time and all land had been swallowed up long ago in the mist, now turned into fog. Radio fixes on the Bill, St Catherines (in line with Portland and therefore not a great bearing) and Barfleur were the most reliable means of pin-pointing our position and at 1635 we got a decent fix which put us abput five miles south west of St Albans Head. From this point we set a course for the Fairway Buoy, and tramped along at seven knots under engine and full sail.

But our jubilation over the engine was short lived. Visibility suddenly deteriorated and within minutes was down to about 400 yards. The fog brought an awkward companion — a freshening breeze from the south-east, which again put us close-hauled.

Just as we were thinking about reducing speed for safety, helmsman Johnson suddenly yelled at us, "buoy ahead". It was the last thing we had expected. We closed it in seconds and its only identifying marks were red and yellow markings. A quick scan of the chart showed the nearest red and yellow buoy to be north east of the Shambles bank and well into Weymouth Bay. Surely we couldn't have been carried that far north? If so, our radio fix would have been wildly out.

Moments later came another shout of "confused water ahead". The echo sounder showed a sudden shallowing and for a second or two all faces showed a twinge of worry. Another unidentifiable buoy out to starboard didn't help as we throttled back to think.

Furious thumbing through Reed's gave us the answer. The buoys were DZ (Danger Zone) buoys, five of them laid off St Albans Head. Not to be used for navigation, they indicate the firing areas for the firing ranges on the Dorset coast east of Lulworth Cove, and are positioned at the seaward end

of St Albans Ledge, where overfalls occur even in calm conditions.

In fact our 1630 radio fix had been pretty accurate. At the time we reckoned our course from the fix would have avoided the ledge, but in the event it didn't and we weren't expecting the DZ buoys.

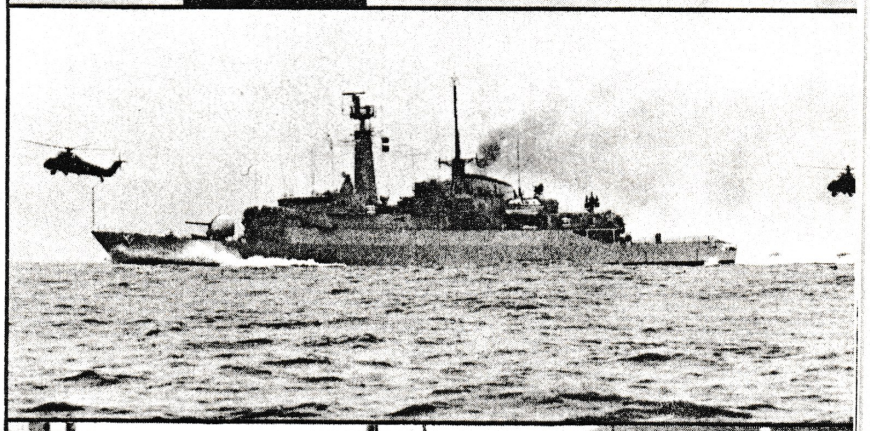
Our course to the Fairway Buoy allowed us to motor sail hard on the wind under full sail and at 1852 we sighted the buoy right on the nose. Normally, one feels home and dry at this point, but our little adventure still had something nasty up its sleeve.

For posterity's sake we tape-recorded the weird yet comforting whistle on the buoy as we passed, but between whistles the tape picked up an ominous but remarkably well controlled cry from the helmsman who suddenly found himself spinning a lifeless wheel. The boat immediately put herself about and sailed gently onwards on port tack. Yet another delve beneath the cockpit flooring revealed that the Whitlock steering had disengaged itself from the rudder stock. Luckily nothing had actually broken, the rudder hadn't parted company with the hull, and reassembly was managed again at the hands of Dick Johnson.

As we approached the lee of the Needles, the wind freshened to force 5 or 6. As we sailed past the roaring swell breaking on the Shingles Bank we were thankful for the advantages of motor sailing, which had got us to the Solent before dark and on the tail end of the flood. That night, while we were tucked up in Lymington it blew a gale from the south.

The return trip had taken an awful 23½ hours, which could have been reduced greatly if we'd been able to motor sail. What we had learnt was that motor sailing can make mincemeat of calms and headwinds. If possible, carry all sail to windward but if it gets too much either roll up the main or drop it, or in less severe conditions just drop the mizzen.

Obviously different boats will perform in different ways so there can be no set rules about sail plans in varying conditions. The engine can be running at any time while sailing, but there is no doubt that its most satisfying advantage is its ability to get a boat to steer closer to the wind even to the extent of allowing the headsail to lift. Too much lift will obviously ruin the effect and cut the speed, but the optimum point is something which can only be recognised by feel and experience. □



From top: the shallow inner harbour at Dartmouth known as the Boat Float. Although there wasn't a Mercedes mechanic in town the pubs and restaurants were good; Dick Johnson got a good radio fix as the fog came down off St Albans Head; the Navy in the form of frigates and helicopters kept us company as we made slow progress in light winds south of Portland; tidying up at a snug mooring in Dittisham after our passage west. Charge for a mooring is £2.80.