

# Part 3 – Leisure Craft



There once was a time when the only people who went to sea did so because they had to – they were either fishermen, merchant seamen or members of the Royal Navy. In doing so they recognised that from

time immemorial the sea has claimed the lives of the unwary, unprepared or unlucky. About 100 years ago there began to be a small group of people who, to the amazement of the professionals, actually went to sea for pleasure.

Around half a century ago, the people who went to sea for recreation tended to be wealthy, and usually owned either a ‘gentleman’s sailing yacht’ or a ‘gentleman’s motor yacht’. They often had paid hands to help with the more physical tasks, but took pride in their amateur seamanship and ensured that they were aware of, and able to cope with, the inevitable dangers.

Recently there has been an explosion in the use of the sea for recreation and the reason for this is a combination of factors which, when added together, produced a remarkable phenomenon.

Fast forward to the modern age. You can still be wealthy and go to sea in a ‘gentleman’s sailing yacht’ or a ‘gentleman’s motor yacht’, but there is now a plethora of other ways in which to enjoy the sea. Apart from more accessible sailing and motor yachts, you can also have a small sailing boat, a small motorboat, or a PWC (Jet-ski). You can go angling, waterskiing, kayaking, diving, rowing, surfing, kite surfing, or windsurfing. Many of these craft can be towed behind a car, or carried on a roof-rack. The sea is more accessible than ever before; nowhere in the British Isles is more than 72 miles from the coast and, with our highly developed



motorway network, that is little more than an hour in anybody’s book.

Couple this with the fact that the real cost of boating is now much less than it ever was, and that certain aspects of boating (in the sun) are a lifestyle choice, and you have the rationale for the extraordinary popularity of leisure boating.

However, this freedom to enjoy time at sea comes with a price tag. The massively increased use of the sea has come together with a corresponding decrease in knowledge about, and awareness of, the dangers that the sea presents. It has been killing people for a long time and will continue to do so. Sadly today’s recreational boater is often unaware of ‘the basics’, not just the ‘rules of the road’, but much more fundamental issues like the fact that the tide goes in and out, left and right, up and down; and that the weather can, and does, change. The RNLI’s volunteer lifeboat crews are constantly attending incidents where it is evident that there is simply no knowledge whatsoever that the sea is in any way different from a wet road.

The theory of unconscious incompetence says that you only know what you know. It is possible that this paucity of knowledge is the responsibility of the educational system; but nonetheless it seems that the lack of awareness of the potential of the sea to ruin a good day out is prevalent.

Even those who have acquired the basics of training, and even a modicum of experience, can find that a lack of preparation or specific attention to safety equipment can, when things go wrong, produce a chain of events which may culminate in death or serious injury.

It is interesting that this first Safety Digest of 2007 features more leisure craft than ever before, and the lessons that the recreational boat owner can learn from it are salutary. Complacency and ignorance play their part, and sheer bad luck sometimes can play a major role. The reports seem to span that spectrum.

There are, of course, things that everybody could and should do, in order to enhance their chances of survival when it all goes wrong. On that warm, bright sunny day with a gentle breeze, kind sea and the prospect of a pleasant landfall, an unchecked lifejacket, a missed weather forecast, poorly maintained equipment or simple naivety doesn't tend to

have calamitous consequences. How that all changes when things go a little wrong, the weather pipes up, and the sea rolls up its sleeves and flexes its muscles.

The RNLI, whilst being most famous for the lifeboat service that it provides around the coast of the UK and Ireland also has a strong programme of trying to address the lack of knowledge of all those who aspire to use the sea for pleasure. It boils down to five key safety tips, which, if applied and combined with the appropriate amount of training by those boating within their own limits, can go a long way to helping the rescue services bring safely ashore those who are reasonably prepared for the eventualities they may meet.

The MAIB's Safety Digests and reports are a valuable contribution to the cause of safety at sea, and if all those who read the articles in the leisure section ponder a minute and think "What if that happened to me?" or "Am I prepared to cope with that?" then, at the very least a thought process will have started to make their recreation safer and happier.



### **Peter Chennell**

Peter Chennell is the RNLI's Sea Safety Manager. With about a quarter of its seven thousand launches being to those who use the sea for pleasure, the charity sees a need to get these users to be more aware of the issues they should be aware of, in order to enjoy the sea safely, and to try and reduce the number of occasions they might need a Lifeboat.

He is Chair of the National Water Safety Forum's 'Sea Advisory Group', and contributes to many other marine safety related panels and committees. He is also a keen and experienced yachtsman.

## Check Your Knots

### Narrative

A charter yacht left harbour for a corporate team building day, in good weather with a pleasant force 3 to 4 breeze. It took about 15 minutes to clear the harbour limits and raise the mainsail and genoa. After 10 minutes of sailing it was decided to tack, and the yacht was swung round on to a port tack. A crew member was crouched over the starboard cockpit winch, taking in the genoa, when the main halyard suddenly failed. The sail and

boom dropped, hitting the crew member on the head and causing facial injuries. The yacht returned to harbour and the crew member was taken to hospital.

On examination, it was found that the knot which attached the halyard to the shackle at the head of the main sail had come undone. This knot had been secure on the previous charter and appeared satisfactory before the sail was hoisted. As the sail flogged during the hoist and during the tack the knot had come adrift.

### The Lessons

1. Although securing halyards to sails using knots is a generally accepted method, the securing arrangement must be checked regularly to ensure a situation like this incident does not occur. Flogging sails will impose demands on halyard connections and an appropriate secure knot is required.
2. For a more secure attachment, consider splicing the shackle to the halyard. This does not remove the need to check the connection, but it will ensure an incident of this type is less likely.

# The Sailing “Taster” that Left a Bitter Taste

## Narrative

Nine people from a social and adventure activities group booked a 1-day “sailing taster”, suitable for novices, which was to provide the opportunity to act as crew.

An IMX 38 yacht was designated for the trip. It was certified to carry up to 10 people in Category 2 waters (up to 60 miles from a safe haven). Regulations required it to be manned by the skipper and one other designated crew determined to be “*one other person on board deemed experienced by the skipper*”. The operating company had conducted some risk assessments, but none specific for operating with a totally inexperienced crew.

The group arrived at the marina at 0830, full of expectations. For most, this would be a new

experience and they were looking forward to testing their sea legs.

Things did not go well from the outset. There was no one to meet and greet the group. The nominated vessel had been changed, but the group were not told this. When they eventually found the yacht, the nominated skipper said that he was unwell and was waiting for the replacement skipper (who was also the director of the company) to arrive. To make matters worse, the boat had been out of the water for 8 months and little had been done to prepare it: the yacht was dirty, both below and between decks; ropes were tangled, some were covered in algae and the locking cleats did not work properly; the deck was slimy; and the impression was, that the yacht had been uncared for and very poorly prepared.

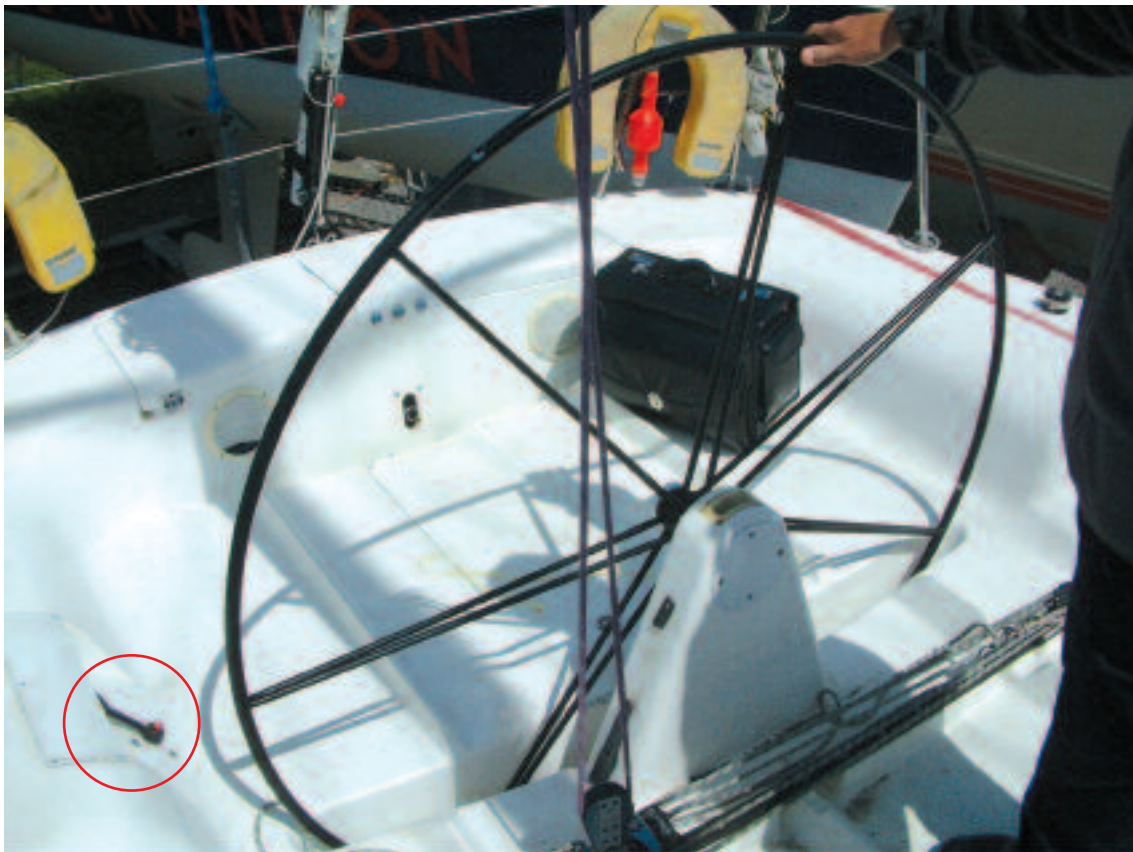


Figure 1 – Position of engine control lever



Figure 2 – Day skipper's leg position on the traveller rig

The replacement skipper arrived at about 0920. He agreed that the unwell skipper could remain on board in his bunk during the trip. The skipper then introduced himself and was advised that there was a Day Skipper qualified person among the group, but he was unaware of the group's experience prior to this.

A superficial safety briefing followed. The skipper emphasised the need to keep low under the boom and that the lifelines were to be always clipped onto the jacklines. Contrary to the Company's Safety Policy, there was no mention of the use of liferafts, flares, radio operation or how to start the engine, and the Day Skipper found the VHF radio to be switched off. At this point, some of the group were on the point of leaving, but they decided to see the day out; after all, they were due back alongside at 1700.

There were further delays as the mainsail and genoa were rigged. Fuel and water were then

loaded before the yacht finally left the pontoon at 1130 – 2½ hours behind schedule. The group were disgruntled, but at least they were on their way.

Once into the wide channel, the group were more relaxed and they settled down to the business of sailing. The Day Skipper was by now on the wheel, with his safety harness clipped onto the rod backstay. A light lunch was made, and at 1350 the yacht came about and made a straight run back down the channel. The wind was from the WNW at force 6-7 and the yacht was making between 7-8 knots over the ground. As the yacht was heeling to port, the skipper instructed three of the group to sit on the high side to try to bring the vessel onto an even keel. Being inexperienced they felt uneasy about this.

As the yacht approached the channel entrance, the weather had worsened. It began to rain, the wind was gusting force 8 and there were



Figure 3 – Detailed GPS track showing key accident points

white horses on the wave tops – the group were obviously unsettled. The skipper suddenly decided to return to the marina and, with that, things immediately took a dramatic turn for the worse.

At 1426 the yacht was tacked back up the channel. The skipper then asked the Day Skipper to start the engine. The Day Skipper unclipped his safety line as he prepared to check that the engine control was in neutral, but he found the lever to be seized (Figure 1). He spent the next 2 minutes releasing it; he then moved in front of the wheel to go down below to start the engine, but he was brought to an abrupt halt. His foot became entangled in the traveller because his safety line became taut (Figure 2). His line had not been released as first thought. The skipper, now distracted, turned round to release the safety line and, at the same time, the yacht conducted an

inadvertent gybe. The boom moved rapidly from starboard to port, trapping the Day Skipper's leg with the mainsheet, causing multiple fractures to his right leg. The boom immediately returned to the starboard side.

The Day Skipper clambered to the forward part of the cockpit. At the same time, another of the group, with the help of the unwell skipper, managed to start the engine. At about 1432, as the tension increased, the skipper mentioned the need to lower the mainsail, but he did not direct his instruction to anyone in particular. The lady operating the traveller stood up, possibly to help with the sail, and at the same time the yacht conducted its second inadvertent gybe. The boom moved rapidly from starboard to port, hitting the lady on the right side of her head, causing her severe injuries and forcing her partially overboard. The skipper and two of the group pulled her

back inboard. Bleeding profusely from her ears, nose and mouth, her situation was potentially life threatening. The skipper now busied himself in trying to get the sail down. A GPS track identifying the accident points is at Figure 3.

The injured lady was then attended by the group. They kept her airways clear, but it was a further 5 minutes before a VHF “Pan Pan” call was transmitted to the coastguard. The yacht then motored to a nearby jetty where the emergency services attended to the casualties.

## The Lessons

The Day Skipper suffered multiple fractures to his leg, and the lady was in a critical condition for a lengthy period. Happily, they both made a full recovery.

The accidents were caused by a combination of the skipper being distracted and the possible snagging of the Day Skipper’s lifeline around the wheel, as well as inattention to the weather conditions.

The organisation for the day was very poor, the yacht was ill prepared for the trip, and the manning was insufficient to cope with an emergency and did not comply with the regulations. There was no excuse for the very poor safety briefing, which is fundamental to preparing those on board for an emergency. The delay in alerting the coastguard to an obvious very serious injury was avoidable, and the safety briefing should have included the use of the radio, as promulgated by the company’s own Safety Policy.

In this case, the skipper failed to pay sufficient attention to the wind conditions and the limitations of the novice crew. Time

spent in preparing the vessel and those on board, is time well spent. Inadequate preparations and planning make stressful situations worse. Once things start to go wrong, anxiety levels increase while confidence fails and apprehension compromises the ability to make clear decisions – think and plan well ahead.

The following lessons can be drawn from this accident:

1. Ensure that vessels are properly prepared and equipped.
2. Take time to give a thorough safety briefing.
3. Ensure that manning levels are sufficient and in accordance with the regulations.
4. Risk assessments should be comprehensive and cover use of the vessel with a completely novice crew.
5. Alert the coastguard promptly about injuries to crew.
6. Wherever there is a serious injury, a “Mayday” call would be appropriate.

# The Tragic Consequences of Not Wearing a Lifejacket



## Narrative

A sailing club was holding its regular summer Wednesday evening race for the keelboat members of its club. That evening, a force 5-6 was anticipated outside the harbour breakwater. After a short discussion with the race officer to decide on a particular course, the yacht crews prepared their boats to race. Seven boats took part in the race, the majority of which were cabin cruiser/racers.

One of the racers was a distinctly different type of boat. This was an 8m sportsboat, equipped with an asymmetric spinnaker on a retractable bowsprit which enabled it to plane at speeds over 20 knots. The boat did not have an inboard engine fitted but, as required by class rules, did have a small outboard which was stored inside the hull near the mast.

The sportsboat had a crew of six on the evening of the accident. Earlier in the year, the sportsboat had been bought jointly by five of the crew on board. The helmsman was a very experienced and accomplished sailor who had sailed a variety of different craft over many years. The rest of the co-owners had only crewed sailing boats occasionally prior to buying the sportsboat. The sixth member of the crew had been invited along by the helmsman. He was an experienced racing crew, but this was his first time on the sportsboat. All of the crew were wearing sailing waterproofs. Two of the crew were wearing no personal buoyancy: the helmsman, who had chosen not to wear a lifejacket, and a crewman who had left his lifejacket in his car.

Prior to the race, the crew on the sportsboat completed some practice manoeuvres,

including raising and lowering the asymmetric spinnaker. The race then began and the sportsboat, with the asymmetric spinnaker flying, crossed the starting line on a starboard tack (sails on the port side). Sometime later, the crew successfully gybed the sportsboat on to a port tack (sails on the starboard side) and set course to pass the end of the breakwater into the open sea. The sailing was exhilarating and everyone on board was enjoying themselves.

Just as the sportsboat cleared the end of the breakwater, the retractable bowsprit pole snapped at the point where it passed through the hull. The boat slowed down and the crew lowered the spinnaker and retrieved the broken bowsprit over the open transom on the starboard side. The helmsman asked if everyone was content to continue racing under the main and jib only, to which they all agreed. The helmsman then tried to gybe to head for the first racing mark, but could not as the boat was moving too slowly. All of the crew apart from the helmsman were on the starboard side of boat clearing the spinnaker. After attempting to gybe on two occasions without success, the boat suddenly did gybe and heeled heavily to port. As a result, the helmsman fell overboard from his position on the port quarter.

The crew noticed the helmsman in the water, just as he shouted to them to turn the boat around. The guest crewman took the helm, but was unable to manoeuvre the boat as it had turned bow into wind and was caught 'in irons'. The crew shouted to another yacht that was racing to raise the alarm. That yacht then started his inboard engine and, leaving his sails to flog, made towards the man in the water. The skipper on this vessel also called the coastguard, and the inshore lifeboat was requested. Unfortunately, the rescuing yacht missed the man in the water on its first pass.

Meanwhile, on board the sportsboat, another crewman had taken the helm to try and steer the boat towards the casualty, while two crew members stood on the foredeck looking for him. While steering, the helmsman also tried to unlock his VHF hand-held radio in order to change channels to channel 16, but with only one hand free was unable to do so.

The man in the water was spotted floating face-down 10-12m away. One of the crewmen on the foredeck, who was wearing a buoyancy aid, dived in and started swimming towards the casualty. The sportsboat then started to make some progress towards the casualty and passed the swimming crewman. As it approached the man in the water, two of the crew grabbed hold of him, but were unable to hold him because the boat was still moving. One of the crewmen – who was wearing no personal buoyancy – jumped in when he realised he couldn't hold on. He tried to hold on to a line trailing behind the boat, but had to let go. The swimming crewman arrived at about the same time, and took the casualty from the crewman with no personal buoyancy to allow him to swim to the now nearby rescuing yacht and climb out of the water. The rescuing yacht then managed to come alongside the casualty and crew in the water but, with a freeboard of 0.9m, the crew on board the yacht only managed to hold the unconscious casualty vertically, half out of the water with the aid of a rope.

The lifeboat arrived soon afterwards, the casualty was taken on board and first-aid administered – some 10 minutes after the casualty had fallen in the water. The sportsboat crew, meanwhile, had fitted their outboard on to the stern bracket, but the engine would not start.

The casualty was winched aboard a rescue helicopter and taken to hospital, where he was pronounced dead.

## The Lessons

1. The sportsboat had a low freeboard and sea conditions were moderate to rough, so the chances of someone falling overboard were significant. As this was a keelboat race, there was no rescue boat. Personal buoyancy was, therefore, important to ensure anyone falling into the water stayed afloat. *In this case two men risked their own lives in an attempt to rescue a man who was not wearing a lifejacket. Don't be selfish, wear your lifejacket!*
2. The man who fell in the water was the only experienced helmsman on board the sportsboat. No man overboard drills (MOB) had been carried out since buying the vessel and none of the crew knew what to do in the event of someone falling in. *Ensure that at least two members of your crew can carry out an MOB recovery effectively.*
3. Although not a contributing factor to this accident, there was some difficulty using the radio that was on board the sportsboat. The crewman at the helm trying to retrieve the MOB owned the radio, and the rest of the crew were not readily able to use it. *All your crew should be familiar with using the VHF radio, sufficient to raise the alarm in an emergency.*
4. In this case, no first-aid resuscitation could be carried out on the casualty until he was in the lifeboat because neither of the boats involved in the rescue had an effective means of recovering an unconscious person from the water. *Think about how you might get an unconscious person back on board your boat. It could mean the difference between life and death.*

## To Sail or Not to Sail?



### Narrative

Three friends in their 60s and 70s joined several yachts from their local sailing club for a summer trip to mainland Europe in a bilge keeled yacht. The trip was intended to take 3 weeks, with the yacht owner's son joining them at some point.

The 11m yacht had been bought new earlier the same year and was described in the owner's manual as "exceeding the minimum requirements for category "A" offshore". It was therefore suitable for the voyage.

The skipper of the yacht had sailed since his youth and had owned progressively larger yachts during the last 25 years. He had sailed his yacht on several occasions along the English coastline in mixed conditions. The other two original crew members were experienced sailors, with many years of sailing around the UK coastline and occasional trips to mainland Europe, although one was physically limited in his ability to move quickly around the boat.

The voyage across was uneventful and very enjoyable, with everything going as planned. The skipper's son joined the party of three on board. Planning to return by themselves, they parted company with the other yachts from the sailing club.

Some days later, the yacht arrived at its last port before sailing to the UK. The crew was in no rush to return home and, having read the weather forecast for the area, decided not to sail and to review the weather later on. The following day, the midday shipping forecast predicted winds veering north force 5 to 7, perhaps gale 8 later in the west, becoming cyclonic, 4 in the east. A further forecast received on a mobile phone predicted winds of maximum force 6, weakening later.

The yacht departed port at lunch time, motoring into winds of force 4 to 5 from the west, with no sails set. The crossing was expected to take about 30 hours. Overnight, as the wind decreased slightly, the jib was unfurled to steady the boat and provide some additional way. The early morning weather



Photograph of yacht taken after the 3 crew were lost overboard *Image courtesy of the RAF*

forecast the next day gave the forecast wind as increasing to force 7 or gale 8.

During the morning, the weather deteriorated, the wind increased and the yacht crew decided to wear lifejackets on deck and use lifelines when outside of the cockpit. The sea conditions continued to worsen as the wind, now gusting at 40 knots, was against the tide. The waves appeared to the skipper to be “the size of houses”. Despite the heavy seas and the conditions being worse than any of the yachtsmen had previously experienced, the yacht seemed to be handling well and the steering remained in autopilot.

As the wind increased, the skipper attempted to contact the coastguard to let them know his position and planned destination. On the third attempt, his call was intercepted by a rig support vessel in the area and relayed to the coastguard. The coastguard passed the report to the RNLI, who agreed to launch a lifeboat to escort the yacht back to safety. The rig support vessel headed towards the yacht to monitor progress and provide a means of communication until the lifeboat arrived.

Meanwhile, one of the yacht’s crew had gone below to change into dry clothes when the vessel was unexpectedly “knocked down”, rolling heavily to port. The three crew in the cockpit, including the skipper, were washed overboard.

The skipper, by chance, had his hand-held VHF in his hand, and had sent a brief “Mayday” message before being swamped by a wave. The remaining crewman on board also attempted to send a “Mayday” call, but realised the yacht’s VHF set had failed. As the “Mayday” message was incomplete, the rig support vessel was unable to confirm the origin of the call, although the radio direction bearing was similar to the heading on which they were proceeding. Shortly after, the coastguard established with the rig support vessel that they had heard a brief “Mayday” distress message, so the rescue helicopter was requested.

Of the three crewmen in the water, two were conscious, with their lifejackets inflated, the third was unconscious and his lifejacket had not inflated. One of the survivors managed to

manually inflate this lifejacket, but it rode up under the casualty's arms.

The rig support vessel reached the yacht and after several attempts managed to manoeuvre close to the vessel. The rescue helicopter was now also on scene. A call by loud-hailer finally confirmed that there were three crew members in the water. The rig support vessel gave the last known position of the yacht to

the rescue helicopter which, seven minutes later, found the three men in the water and winched them on board. The three men had been in the water for almost an hour. The unconscious crew member was declared dead on arrival at hospital. The skipper and his son both made full recoveries. The remaining crew member on board the yacht was transferred to the RNLI lifeboat and then transferred to hospital for observation.

## The Lessons

The professional and proactive actions of the rig support vessel undoubtedly saved the lives of two of the three men washed overboard. In monitoring the progress of the yacht, they ensured their vessel was at the scene as quickly as possible when disaster struck. By noting the radio bearing of the yacht, and persevering in communicating with the remaining crew member by loud-hailer, they were able to direct the rescue helicopter to the position of the casualties in the water and ensured their rapid removal to hospital.

1. Weather forecasts must be carefully studied before embarking on long trips, bearing in mind that conditions may become much worse during the passage. Poor weather options should be considered, including turning back, heading for ports of refuge and "heaving to", and these should be reviewed regularly during passages when the weather deteriorates.
2. Do not rely on the autopilot to helm in heavy seas. A helmsman can react quickly and alter course for individual waves to minimise the risk of broaching.
3. Before commencing a passage with the prospect of bad weather, ensure the physical ability of ALL crew is taken into account. Setting a sensible weather limit is the prudent and safe approach to take.
4. Lifelines should not only be used on deck in heavy weather but also while in the cockpit. A knockdown following a rogue wave is always a possibility in steep heavy seas.
5. Make sure your lifejacket is fitted correctly and has a crotch strap. A badly fitted lifejacket will severely hamper you in the water, at which point it is virtually impossible to make adjustments.
6. When making longer sea passages, ensure your boat has an appropriate level of safety equipment. A liferaft, in this accident, could have been deployed by the crewman on board to provide both protection from the sea and act as a marker for the rescue helicopter. An EPIRB would have made certain the rescue services were alerted when out of VHF range.

# Cheap, Cheerful and Dangerous



## Case 1: Narrative

The owner of a 4.43m (14 foot) speedboat was involved in the pleasure boat building industry. This boat was old and run down and needed a bit of work, but he had bought it cheaply and, with his background, he was happy to refurbish it himself. There were several problems with the boat, notably the 60hp engine was unreliable and the navigation lights weren't standard – in fact the lights were from a car, and included one red brake light and two white reversing lights. They were all-round and very bright.

Unfortunately the temptation to use the boat before refurbishing it was too great. He managed to get hold of a used 70hp outboard, which he installed. It needed a service and ran on only two of its three cylinders most of the time, but it was an improvement on the first engine. Since he wasn't going to use the boat regularly, it did not seem important to have any insurance.

The weather was lovely, so he and his girlfriend did a bit of waterskiing and fishing. That night, the boat was left downriver. The following

evening, the owner went out again, this time taking along two friends.

They were stopped by the harbour patrol for speeding. They explained that the boat could fire on all three cylinders only if the throttle lever was left fully open. They did not want to pull the throttle back as the engine would misfire. But this didn't impress the patrol, who told them to slow down until they left the harbour limits.

After they had been out for about 2 hours they stopped off at a local pub, staying there for about 1½ hours. At 2345, they said their goodnights and all left to go home. As it was dark, the owner turned on his navigation lights – they were very bright and it was a dark night on an unlit river.

It was now low water, so the boat was constrained to take the deep water channel where many small craft had swinging moorings.

They began feeling their way using the dim shapes of these small craft to guide them. The throttle lever was set at about three quarters

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ahead to give slow speed on two cylinders. Suddenly the outboard fired on all three cylinders and the boat leapt forwards and began climbing up onto the plane. Seconds later, it ploughed into the stern of a moored motor cruiser.

The next thing the driver remembers was being in the back of the boat, alone, covered in blood and with serious facial injuries. His first thought was to stop the engine, so he reached for the throttle control; it was no longer there. He had not been wearing a killcord, and now the

engine could only be stopped by disconnecting the fuel supply. He was not aware of it at the time, but his two friends had been thrown clear of the boat and into the water.

The rescue services were quickly on scene and the driver and his two friends were taken to hospital. A little time later, the boat sank.

The driver had suffered a broken jaw and required over 100 stitches to his face. Fortunately, the passengers suffered only minor injuries.

## The Lessons

1. This boat and engine were not fit for purpose, and the owner should have had it properly refurbished before use.
2. Over-confidence and the excitement of the moment can sometimes make a person blind to a bad decision. Using this boat on a very dark night, in an unlit river, with blindingly bright navigation lights and an unreliable engine, was asking for trouble.
3. Alcohol and boating do not mix. Even in relatively modest quantities, it dulls the senses and reduces one's awareness of risks.
4. No killcord was fitted. If the passengers had been thrown out close to the boat, they could have sustained extremely serious injuries before the engine was stopped by cutting off the fuel supply.

## Cheap, Cheerful and Dangerous

### Case 2: Narrative

The owner of the 4m boat in this next case had no experience in boat safety or how to handle his craft. He had bought the RIB very cheaply and it was in poor condition, but his lack of knowledge meant that the defects were not noticed. The main problem was the unreliability of the outboard engine, and in particular the throttle linkage. The linkage was not securely fixed to the throttle and was connected so that putting the lever in the forward position put the engine astern, and vice versa.

On the day of the accident, the owner took the boat to the coast with his wife and three daughters. The idea was to give everyone a ride around the harbour. He embarked with his family and launched from the public hard landing. This was the passengers' first time in a RIB and it was only the driver's second time.

The trip passed quickly, with no problems, and after 30 minutes they headed back towards the landing. As the boat got closer he tried to slow down, but the throttle linkage slipped and there was no response from the engine. He was coming in far too fast for beaching. He tried again to throttle back, but in his haste he increased the speed. The boat was now very

close to the landing, so he turned the boat round and headed back out to deeper water to give him time to sort out the problem.

Without warning his passengers, he put the wheel hard over. The boat turned around almost within its own length. The passengers were not ready, and were thrown about in the boat; one fell backwards into the water. As he straightened up the boat to head out to sea, the boat surged forward and ran over his daughter in the water. She received four deep cuts to her head as the propeller struck her.

The driver of the boat was now in panic and did not know what to do next. He thought his daughter in the water was most in need of help, so he jumped in to assist her. This left the boat running at high speed, with no-one on board experienced in how to control it. The boat began circling, and it soon grounded close to the landing, luckily without further injuries to those in the water or in the boat.

After helping his injured daughter ashore, the driver waded out to the boat and stopped the engine by disconnecting the fuel line.

The girl was taken to hospital, where she was treated for cuts; luckily no other injuries were found. She was discharged the following day.

### The Lessons

1. The skipper of any boat is responsible not only for his own safety but also for that of his passengers and others using the water. It was irresponsible of this skipper to put to sea with no training and little experience.
2. This engine's control linkage was not fit for purpose. It was dangerous and resulted in the engine being uncontrollable at a vital part of a manoeuvre. Before buying any craft, make sure it is in good condition and is

safe to use. If you do not know enough to spot problems, ask a professional for advice.

3. No kill-cord was fitted. A kill-cord would have been the fail safe way to stop the engine without having to resort to drastic manoeuvres.
4. The consequences of using a cheap unreliable boat can be grave. The girl suffered serious cuts to her head. But it could have been much worse: it is rare for anyone struck on the head by a propeller to survive.

# Steering Seizure



## Narrative

Three crew on board their 11m yacht left their home port in the early morning, having determined that the weather should be good for their intended passage. The wind was south west force 5-6 and good progress was made, the yacht sailing first on a beam reach and then a broad reach. The mainsail had one slab reef taken in, and the roller reefing foresail was also reduced.

Some way into the passage, when the yacht was about 1 mile off a lee shore, the steering wheel mechanism started to make a clicking noise. Soon afterwards, the mechanism jammed completely, leaving the yacht with no steering. The boat gybed, and swung round 180 degrees, through the wind and into a hove-to position with the genoa secured on the windward side. The crew rigged the emergency tiller, but the rudder would not budge. At this time, the depth of water was 25m, but the yacht only had 20m of anchor chain attached to the anchor.

The crew tried to investigate the steering mechanism further, but at 1350 the skipper decided to make a “Mayday” call, following which the local lifeboat and SAR helicopter were launched. The yacht drifted inshore, but once in a water depth of 15m, the jib was furled and the anchor let go. Despite using the engine to alleviate the drift, the snatching of the anchor on the bottom caused such loads that the rope connecting the bitter end of the chain to the anchor locker failed and the anchor was lost. With nothing now to restrain it, the yacht continued to drift ashore.

At about 1415, and with the lifeboat in sight, the yacht beached. The lifeboat manoeuvred in close to the shore to try and pass a tow line, but grounded on a small reef. After freeing itself, the lifeboat stood further offshore and the crew fired a rocket speed line to the yacht. It missed, but a passer-by ashore helped get the speed line to the crew on the yacht, which allowed a tow line to be passed. The tow line was secured and the lifeboat started to pull the yacht off the beach but, unfortunately, the line parted and the yacht beached once again.



At this stage, the lifeboat coxswain decided that the risk to the yacht's crew was too great, and they were evacuated from their vessel by helicopter. The crew suffered no injuries

during their ordeal, and returned to the vessel at low tide to salvage some belongings. The yacht, however, was not able to be salvaged and became a total loss.

## The Lessons

1. If your yacht has wheel steering, make sure you are fully conversant with the emergency tiller system. The chances of needing it are probably remote, but solving a steering problem quickly will keep you out of trouble. Pay particular attention to the linkage between the rudder stock and the wheel because, as was the case in this accident, disconnecting the two can be the only way the rudder becomes free to move.
2. Be alert to navigational dangers and, where possible, keep well clear of a lee shore. On this occasion, there was no great need to be sailing 1nm off a very rocky coast. Standing further off will give you extra breathing space to deal with emergencies and the unexpected.
3. Ensure you have sufficient chain and rope attached to your anchor, and that it is of the correct size. For the yacht in this accident, 20m of chain was half the amount recommended. If weight is a major consideration on your yacht, then rope and chain can be used; but ensure you have sufficient chain to assist holding. The prudent mariner will also carry a kedge anchor, which can be used as a back-up in an emergency.