

CHIRP FEEDBACK

Issue No: 23

Summer 2009

EDITORIAL

DEFENSIVE SAILING

The principle of defensive driving is long established. The techniques can help protect road users from unexpected hazards, including wrongful actions by other drivers. Similarly, "defensive sailing" can help protect us from marine perils, including the failure of other mariners to keep a proper look-out or to apply the ColRegs correctly. This in no way condones such failures, but, rather provides some self-protection against them.

In the **CHIRP** comments on reports about close-quarters situations, we endeavour not only to comment on actions that the give-way vessel should have taken but also "defensive sailing" measures that the stand-on vessel could perhaps have applied.

Below are some suggestions of basic tenets of defensive sailing which apply to all types of vessels, from large commercial vessels to yachts:

- ✓ **Keep A Good All-Round Look-Out**
Sounds obvious but is absolutely fundamental. Watch-keepers on commercial vessels need to bear in mind that small craft may not be easy to see either visually or on radar, especially in moderate/rough sea conditions. This may be so even though the craft is showing lights as per the ColRegs and has a radar reflector.
- ✓ **Maintain Situational Awareness**
In particular, be aware of how quickly a traffic situation can change. For yachtsmen, it is useful to remember that ships travel a distance equivalent to 10% of their speed in 6 minutes. So a ship proceeding at 15 knots that appears to be some way off at 1.5 miles can be with you in 6 minutes (and less, of course, if you are moving towards it.)
- ✓ **Don't Assume You Have Been Seen**
As per ColReg 36: "If necessary to attract the attention of another vessel any vessel may make light or sound signals that cannot be mistaken for any signal authorized elsewhere in these Rules, or may direct the beam of her searchlight in the direction of the danger in such a way as not to embarrass any vessel."
- ✓ **Think "What If ... "**
Think beforehand what you would do to avoid the danger if the other vessel takes unexpected action or does not comply with the ColRegs?

✓ Allow A Prudent Margin of Safety and Respect the Other Vessel's Safety Margin

Consider the situation as it will be perceived from the bridge or cockpit of the other vessel and endeavour not to cause anxiety to the other mariner.

This is obviously not a comprehensive treatise on the subject. We would welcome any comments from readers and, in particular, reports of incidents from which lessons can be learned.



An illustration, albeit tenuous, of the link between the subjects of Defensive Sailing and Defensive Driving. We are always pleased to receive photographs with reports, even though they may not be as dramatic as this incident!

FEEDBACK ON **CHIRP**

As many readers will be aware, this Programme is sponsored by the Department for Transport as part of their commitment to improving maritime safety. Although the Programme is governed by an independent Board of Trustees, the DfT does need to be assured that it is cost-effective; for this reason the maritime programme is subject to an independent review periodically. The next is scheduled to be conducted towards the end of this year.

In addition to an objective assessment of the cost effectiveness of the programme by the Review Board, it is important that the programmes are perceived by the relevant user groups as making a positive contribution to maritime safety. We are therefore inviting comments from members of the wide maritime community, including the commercial, fishing, leisure and off-shore sectors.

If you wish to comment please use any of the methods available (see the attached report form), via our website: www.chirp.co.uk or e-mail us at: confidential@chirp.co.uk. Comments received will be made available to the Review Board.

Chris Rowsell

A Maritime Safety Newsletter

from **CHIRP** the Confidential Hazardous Incident Reporting Programme

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REPORTS

CHIRP receives reports on a range of hazardous incidents that have occurred within the commercial, fishing and leisure sectors of the maritime community. Here are a number of reports which will be of wider interest, together with the "lessons learned" as described by the reporter. The **CHIRP** comments have been reviewed by the **CHIRP** Maritime Advisory Board which has members from a wide range of maritime organisations. Full details of the membership can be found on our website - www.chirp.co.uk.

AN ALARMING ENCOUNTER

Report Text: While sailing our yacht, we had an incident!!

We had changed watch-keeper at midnight. Wind was Force 5 and weather fair with sea state slight. We were sailing well (5 knots) and had the tricolour lit.

We observed a number of ships making their way either in or out of a nearby port and safely passed between them. Our yacht was sailing well in open water when a ship was heard, then seen 50 feet or less from our stern and some 30 feet to starboard travelling at circa 15 knots. We made an emergency turn to port and the ship passed down our starboard side causing much turbulence and pounding hearts.

The vessel appeared black and had no one on watch. The bridge lights were on and therefore the watch-keeper must have been undertaking a task such as filling in the log or chart corrections etc. No one appeared to look over the side.

Our yacht has a radar reflector and the helmsman had looked behind him and not seen the vessel approaching some 5-10 minutes prior to the incident. It could be that the lights were hidden by the town lighting, however the merchant vessel should have seen the yacht with full sail and lights.

Our suspicions are that the watch-keeper had put the vessel on auto at "full away" and was undertaking other

tasks. The crew of the yacht could have ended up as another Ouzo!!

CHIRP Comment: We can well envisage that the circumstances were most alarming. As we do not have the name of the ship, we were not able to follow it up with the manager, so we do not know whether the assertion that the ship had no one on watch was in fact the case. Nevertheless we can make the following observations in respect of the navigation of the ship.

1. Even if the Officer of the Watch was engaged for short periods in other essential duties such as plotting the vessel's position, he should still have been keeping a proper lookout, visually and using the radar. He should not have been engaged in routine tasks such as chart correcting (if that is what he was indeed doing.).
2. Furthermore, during darkness there should have been another person on the bridge dedicated to keeping a look-out.
3. It would be completely unacceptable for the wheelhouse lights to be on as this would impair the keeping of a proper look-out.

There are also aspects that can be considered in respect of the yacht.

- a) As the weather was fair, the ship was probably readily visible at least three miles distance. Assuming the ship was travelling at, say, 15 knots and the yacht was going in the same direction at 5 knots, their relative speed would have been about 10 knots. If these assumptions are correct, the ship should have been visible from the yacht for at least 20 minutes prior to the incident.
- b) By the time the ship was within, say, two miles, (or about 12 minutes before the incident), it should have been apparent that there was a risk of collision.
- c) At this stage, the following actions may have been appropriate:
 - Skipper to be called.
 - Direct a series of at least five short and rapid flashes on a flashlight towards the ship. (Refer to Rule 34 d of the ColRegs.)
 - Illuminate the sails with the flashlight. (ColRegs Rule 36)
 - Endeavour to contact the ship by VHF.
 - If the crew are not already following the RNLi advice always to wear a lifejacket when afloat, this may be a good time to do so.
 - Consider what action the yacht can take to avoid collision under Rule 17(b) (Action by Stand-on Vessel) if the ship fails to give way.
 - Consider starting the engine to assist in such avoiding action.

In summary, "Sail Defensively".

UNLIT FISH FARM

Report Text: I and my two crew members left our port in Northern Ireland at 2200 hours in my yacht heading for a marina some miles away. The wind was blowing from the South 4-5 and occasionally 6. On leaving port, we

informed the Coastguard. Our decision to sail at night was governed by time and tidal conditions. We were aware that in the approaches to the marina there is a fish farm. On our approach my two alert and competent crew members were detailed to watch for lights indicating the fish farm. However no lights on the fish farm could be seen. Previous knowledge of the whereabouts of the fish farm was relied upon, but it was by sheer good fortune we made it safely into the marina. The yacht is not equipped with radar.

On leaving the marina later that day we checked for marker lights indicating the fish farm but there were none.

I feel the Fish Farm is a significant danger in the proximity of a marina. Is there no obligation on the owners of Fish Farms to provide sufficient buoyage lights in navigable waters?

CHIRP Comment: This report was referred to the Commissioners of Irish Lights which is the General Lighthouse Authority for Ireland. The Commissioners have a duty of superintendence and management of Local Aids to Navigation (buoys etc.).

There is a requirement to mark navigational hazards, and there are IALA (*International Association of Marine Aids to Navigation and Lighthouse Authorities*) guidelines on how aquaculture farms should be marked. The guidelines state that there should be two lighted buoys to the seaward side and two unlighted buoys/beacons to the shore side. The Commissioners discharge their duty of superintendence and management by a combination of regular inspection and engagement with the relevant regulatory departments.

The Commissioners' Inspector has visited the fish farm. The cages had previously been marked with buoys but these had been damaged by winter storms. Following the visit, the lighted buoys have been re-instated. We are grateful to the yachtsman for having reported this hazard, to the Commissioners for their prompt intervention and to the fish farm manager for taking remedial action.

POSITIVE REMEDIAL ACTION

Report Text: While standing by a Mobile Offshore Drilling Unit, my offshore support vessel was steaming slowly (dodging) approximately North at around 2.5 knots. At the change of watch at 0900, a tanker of approximately 20,000 tonnes was noted steaming at approximately 14 knots on a heading of roughly south east which would have taken the vessel directly through the position of the rig. A radar plot was commenced and the actions of the tanker noted. Through a succession of small alterations of course to port, the tanker increased her CPA with the rig but consequently put her on a collision course with my vessel. The radar plot was maintained until the tanker was at a distance of 8 cables with a Closest Point of Approach (CPA) of 0.03 miles. I deemed that the tanker was taking no appreciable efforts to avoid collision and altered my course to starboard. The tanker then made a large alteration of course to port and I continued to turn under increased power until the tanker had passed clear under my stern

and continued to turn under reduced power until I had made a round turn and the risk of collision had gone. Up to this time the tanker had made a succession of small alterations which made little difference to the CPA and did not reduce the risk of collision.

CHIRP Comment: This report was referred to the manager of the tanker. (As per our standard practice, the identity of the reporter or his vessel was not disclosed). A comprehensive response from the manager was subsequently received along with a report from the Master of the tanker which corresponded with the reporter's account of the events. In summary, a junior officer had the con; the Master was on the bridge but was engaged in administrative/communication matters. When he happened to take a break from these, he saw the offshore vessel close by, took over the con and made a large alteration to port.

The manager advised that they had identified the following failures:

- Lack of bridge team management,
- Failure to warn the Master,
- Poor judgment and coordination,
- Inadequate major and high-potential accidents/incident knowledge,
- Failure to follow the rules (Company's related navigational procedures and Master's bridge orders).

The manager further advised that training has been conducted by the Master for all deck officers regarding the Company's safe navigation procedure in congested water, separation zone areas, coastal and open sea areas. The case will be circulated to all fleet vessels for their knowledge and for necessary corrective actions.

Furthermore, the manager is arranging training for all officers and the Master on board this tanker when they next come to the office.

CHIRP is encouraged by the action taken. The reporter on the offshore support vessel acted responsibly in bringing the matter to our attention. The manager acted promptly in following up the report with the Master. The Master appears to have been open in his response to the manager. The manager's response appears to be positive in applying remedial action on that ship and promulgating it across his fleet.

We do make the additional comments that:

1. The vessel's passage plan should have taken account of the position of the rig.
2. Masters need to ensure that their presence on the bridge, whilst carrying out other tasks, does not reduce the alertness of the watch-keeper to the safe navigation of the vessel.

MAYDAY MAYHEM

Report Text: Whilst in mid-ocean in the afternoon, a Mayday was received on channel 16 by the 2nd Mate who was on watch at the time. The Mayday consisted of a ship's name and position, but this message not clearly distinguishable by the 2nd Mate. It was clear however from the message that the ship was on fire.

The 2nd Mate immediately called the Master who came

to the bridge. After 10 minutes, as no response was given by other vessels, we tried to contact the vessel in distress. Even though we tried several times by VHF on channel 16, we did not get a response.

I wanted to check if anyone else heard the Mayday, before contacting the coastguard, so checked my AIS and identified one other vessel in the area.

After repeated calls we finally made contact and found that the same voice, as was heard transmitting the Mayday, was now on the radio.

We asked if the vessel had sent the Mayday. We found that the ship was performing a drill and the person had sent the Mayday by VHF as part of the training scenario.

After a short conversation to check one more time that the vessel really was not in trouble we closed communications. If I had not eventually had a response from the ship, I would surely have reported the Mayday to the coastguard, after which a very expensive but unnecessary search for a vessel on fire would have been started.

CHIRP Comment: This report was referred to the manager in the Asia-Pacific region of the vessel that transmitted the Mayday. As yet, no response has been received. In the absence of a response, we surmise that a junior member of the ship's staff had been delegated to handle communications during the drill, but that it had not been sufficiently emphasised that external communications should be simulated and not actually transmitted. It is easy to blame the individual, but had proper instructions been given? Notwithstanding the error, we should give credit to the vessel for carrying out what was presumably a realistic exercise. (On board your vessel during drills, do you simulate the preparation of emergency messages?)

This report also illustrates a general point applicable to both on-board exercises and to larger exercises involving a number of parties. Care needs to be taken in explaining to everyone the communication boundaries, i.e. clarify which external parties can actually be contacted and which must be role-played. We recall a story of an intra-office exercise, long ago, in which the name of an actual ship was used, although the ship was not involved. An office staff member subsequently phoned the real ship to ascertain the extent of the Second Engineer's "injuries", causing consternation and confusion.

GULF OF ADEN CONVOY

Report Text: My vessel was in an Easbound Gulf of Aden Group Transit, escorted by a warship, and coming to the final waypoint where convoy would split up and vessels go their separate ways.

There were two columns of ships. My ship was the lead vessel in the port column.

At around 0330 Local Time the vessel two behind me, a fully laden tanker bound for Singapore (per AIS), began to increase her speed. At 0430 LT, my duty officer called me to the bridge, concerned about the actions of this tanker. When I came to the bridge, I found the tanker five cables on my port side, in line with me and doing the same speed, 12 knots.

She showed no sign of altering away and made no attempt to contact me. Other vessels were still in the basic convoy formation.

I kept in the convoy as I could not go to starboard where the lower column lead vessel was on my starboard beam, distance six cables, and same speed. Speed could not be reduced as ship astern also in convoy formation and distance under 1mile.

Shortly before the final way point when the convoy escort warship was calling all vessels that the convoy could now disband, the tanker, still the overtaking vessel and still at only five cables distance on my port beam, called me up and asked me to reduce speed and go around her stern, i.e. a hard over to port once enough room, as she would increase to her max speed of 14 knots and continue on her east-bound course towards Singapore. She said she knew I was bound Northeast (from our AIS) and she was bound for the East.

I asked her why she had not overtaken me on my starboard side and when free to do so, i.e. at the final way point, and advised her that she should reduce her own speed, and keep well clear of me. She made no response but continued her course and speed with no increase in the latter.

The situation being impossible and dangerous, I reduced speed and let her continue ahead, then swung around her stern and continued back once clear to our intended course heading towards the Persian Gulf.

Before making our large alteration I asked her why she had not overtaken me on my starboard side? There was plenty of sea-room to pass to starboard of both my vessel and the vessel in the lower column and abeam to starboard. With a nice big ocean, why take the most awkward and dangerous course?

CHIRP Comment: We followed up this report with the manager of the tanker who, in turn, followed it up with the Master and provided us with a comprehensive report. In summary, at 0300, with two hours remaining to the convoy dispersal point, the tanker had requested permission from the warship to leave the convoy in order to increase speed and clear the piracy prone area at full speed. Permission was granted and the tanker altered course to port and commenced increasing speed as the entire convoy formation was on her starboard side. Thereafter there were various communications between the tanker, the warship and other ships in the convoy.

Following from the review of this report, the manager of the tanker has advised all vessels in its fleet that vessels should stay in the convoy until it is dismissed by the warship.

We make the general point that operating in convoys requires "lane discipline". Particular care is required as the convoy disperses. By breaking away early from the convoy a few miles from the final waypoint and gradually increasing speed, it is not apparent that her security was enhanced and the saving in overall voyage time for the tanker was minimal. However it caused anxiety for at least one other vessel that was properly maintaining convoy discipline.

LOOK-OUT!!!!

Report Text: We were at anchor in our yacht. The anchor was holding fine and we were facing SE as the tide was ebbing. We were showing an anchor ball in the fore part of the boat - hoist by the spinnaker halyard with the bottom of the anchor ball secured to a D ring just inside the forestay so that it was clearly visible.

There were only a handful of sailing boats out on the water. At about 1200, we saw a sailing boat, that had been tacking to the North of us, heading in a SSW direction directly for us. This did not worry us unduly as another boat had also crossed our path in a SSW direction shortly before and had given us a wide berth. This yacht had a very low cut Genoa which prevented us from seeing her cockpit or side decks, and did not appear to be altering course to allow for the fact that we were in her path.

We did not want to jump in too early with a warning shout so waited, assuming that she would duck behind our stern. A cable off and nothing was happening, nor at 100 metres. It then became apparent that the skipper of this boat had no idea of our presence and so as he closed to within 50 metres of us we shouted in no uncertain terms.

Awakened from his reverie he popped his head out on the lee side and saw us directly ahead. He initially luffed up. Fortunately he did not lose too much way doing this and was then able to bear away and go behind us. We were too stunned to remonstrate and he offered no apology but just stared at us open mouthed. He did not appear to have crew.

It is the closest I have ever come to a very nasty accident. He would have T-boned us amidships. Deep cut Genoas are all very well but they are terribly restrictive in terms of visibility and any skipper, especially a single-hander must ensure that they have a clear picture of the water all around their boat at all times. There is no excuse for not keeping a proper look out at all times.

CHIRP Comment: This report illustrates that the principles of "Defensive Sailing" may also be applicable when at anchor. If you are in a boat at anchor and consider that you are at risk of being run into, we suggest the following:

- Use the horn at an early stage to attract the attention of the other vessel as soon as there is concern at risk of collision.
- Get everyone in the cockpit or on deck.
- Don lifejackets if they are not already being worn. (If the lifejackets are stowed below, they may be inaccessible if there is a collision and large ingress of water.)
- Start the engine - it may be of use for an emergency manoeuvre to avoid collision.
- Be prepared to slip the anchor.
- Know your vessel's position in case you need to call for assistance.

CORRESPONDENCE

CHIRP welcomes correspondence about the reports we publish. We reserve the right to summarise letters received. We apply the same rules as for reports, i.e. although you must provide your name, we do not disclose it.

BATTERY COMPARTMENT VENTILATION

CHIRP Narrative: In MARITIME FEEDBACK No.21, we published a letter suggesting that yachtsmen may wish to consider fitting forced ventilation to the battery compartment. The next letter amplifies this suggestion.

Letter Text: The comment suggests using a 12 volt computer fan to force ventilate the battery compartment. A fan may be a good solution but if fitted should be of a type certified as having a spark proof fan motor. Units complying with ISO 8846, Small craft - Electrical devices - Protection against ignition of surrounding flammable gases (or the equivalent US) standard should be selected. Electrical components that are capable of producing a spark in an area likely to have an explosive gas mixture (IEC. Classification Zone 1) should be avoided at all costs.

The ventilation system should also be configured to ensure the exhausted gas is directed overboard where it can safely disperse.

CORRODED BOLTS

(1)

CHIRP Narrative: In MARITIME FEEDBACK No.22, we published a report from a ship manager in which the stainless steel bolts securing a lifting lug on a rescue boat had failed. This occurred when the boat was being swung out. Two of the crew fell 12 metres into the sea, fortunately without major injury. We have received letters suggesting possible causes of the corrosion. Here are a selection:

Letter Text: The failure of the stainless steel bolts in the rescue boat was almost certainly due to anaerobic corrosion. I have had previous experience of this type of failure and it is probably more common than would be supposed. One case was of the failure of 12mm bolts holding down a radar support tripod. This tripod became rather loose and when I removed the head lining inside the boat two of the nuts with part of the bolt shanks still in place fell on the deck. The third one was still sound.

Anaerobic corrosion occurs when stainless steel is subject to sea water seepage but is deprived of a supply of fresh air. This can be the situation with through bolts, particularly in GRP, if the bolts fit tightly but do not entirely exclude sea water. The bolts that didn't fail were probably well sealed against the ingress of water.

The condition can occur in stainless wire rigging where the outer strands appear to be quite sound but the inner strands fail due to this type of corrosion.

The real problem is that there are no outward signs and most installations are never affected but in some cases, such as the one you report, such failure could be disastrous.

(2)

Letter Text: I recall that many years ago we had some incidents of corrosion of stainless steel, including corrosion of a propeller shaft under a wrapping. It was concluded that the cause of this corrosion was anaerobic corrosion of stainless steel, which occurs where air is excluded from the surface of the stainless steel. It seems possible to me that this was a factor in this case, although I note that the problem did not seem to be present on the other boats examined.

(3)

Letter Text: I have been reading your CHIRP MARITIME FEEDBACK issue no. 22 and my attention was caught by the report on the Rescue Boat Accident. The photograph of the fractured bolts (photo 3) reminded me of three failures which came to my attention when I was a Lecturer at a University.

The failures all related to high tensile stainless steel (HTSS) either in the form of chain or nuts, bolts and washers. In each case the HTSS had been used in conjunction with galvanized components and exposed to sea water or at least a marine environment. The chain had been used with ordinary galvanized shackles, the bolts to secure a galvanized backing plate and in one case the bolts themselves had been galvanized. All failures occurred suddenly, without warning, with fractures which showed no accompanying stretching or deformation. I was able to reproduce these failures in the laboratory by loading a tensile test piece overnight. The test piece was in contact with a scrap of zinc held in place by a gauze bandage soaked in sea water. When the test piece was subsequently stretched a network of cracks was revealed and the ultimate fracture resembled those of the failed components. If I omitted either the zinc or the sea water bandage, the material behaved normally stretching and necking down to a normal fracture.

To return to the failures you illustrate you do not give the material of the eye-plate but from the position of the fractures the problem would appear to lie under the decking of the rescue boat and one wonders whether the bolts had been married with either galvanized washers or nuts or perhaps a galvanized backing plate. You report that other bolts and eye-plates have been inspected and found to be satisfactory. I would warn that the type of cracking which I observed is difficult to detect non-destructively. I was able to observe it by metallographic examination but the cracks are very fine and could easily escape detection.

From time to time I hear of similar failures and it is clear that the dangers of marrying HTSS with galvanized components in a marine environment is not fully appreciated and requires greater publicity. I suspect that designers who appreciate the benefits of ordinary 18/8 stainless steel are mesmerized by the words "high tensile" and do not appreciate that the two materials differ significantly.

CHIRP Comment: Although we have not been informed of the actual failure mode of the bolts in the rescue boat reported in MARITIME FEEDBACK No.22, it is very credible that this was due to crevice corrosion caused

by exposing the bolt to anaerobic conditions. Some grades of stainless steel are more prone to this type of corrosion and potential subsequent failure. Operators should always ensure that when selecting materials they are suitable for the conditions to which they are exposed.

It is also credible that, if a backing plate of a different material had been used, galvanic conditions could have been generated resulting in corrosion and subsequent failure of the assembly. The use of different metallic materials should be avoided.

We have also received a report from another ship manager of an incident in which the lifting eye of a glass reinforced plastic rescue boat pulled out, not through failure of stainless steel but because the surrounding grp material failed. We will publish the full report in the next issue.

REPORTS FROM SHIP MANAGERS

CHIRP Narrative: Ship managers with well established safety management systems typically have their own in-house reporting schemes. Often such reports would be of interest to the wider maritime community. **CHIRP** is pleased to receive and publish these. We respect the confidentiality of the reporters and do not disclose identities of ships or companies.

ENGINE ROOM CRANE

Report Text: *Sequence of events:*

During the routine maintenance operation of removing a piston from the main engine, the overhead crane was pulled from its gantry and fell to rest on the engine entablature. No one was injured as a result of this accident, but the potential for injury significant.

Findings of subsequent investigation:

After connecting the piston lifting device to the piston crown at Top Dead Centre (TDC – the top of its stroke) with 4 x M16 bolts, the overhead crane (OHC) hook was attached to the device. An initial length of slack chain was then paid out. The engine was then turned utilising the turning gear to lower the piston to Bottom Dead Centre (BDC - the bottom of its stroke) to access the bolts to slacken, for its removal. At this point the crane operator was on the top of the engine and the turning gear operator beside the crankcase door at its base. The two operators were in close communication, although insufficient attention was paid to the chain tension as the piston was lowered.

Insufficient chain was paid out and the downward stroke of the piston put huge tension onto the chain. The resultant force was adequate to 'splay' the crane's end plates, and detach the wheels that support the cranes 'trolley'. The OHC trolley then fell to rest on the engine entablature.

Insufficient attention was allocated to the 'paying' out of chain as the piston descended. The operator was keeping eye contact with the turning gear operator and not the process he was in control of. It is unclear as to whether the chain hoist stopped paying out chain as events soon accelerated.

Recommendations and follow up actions:

The work card associated with the maintenance task does state the OHC to be attached at TDC. The ship will ascertain whether it is viable to attach the chain at BDC.

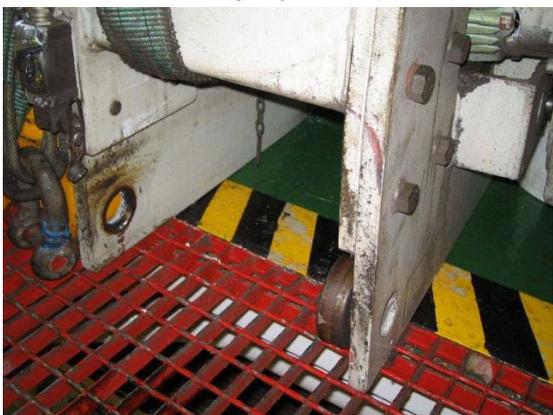
From this incident the procedure will be:

The turning gear operator is to be located on the top of the engine adjacent to the crane operator. A suitable initial length of chain is to be paid out before the engine is turned. An observer posted at the crankcase door will signal when the piston has reached BDC.

The chain and crane operator are now in close physical contact. Two pairs of eyes are now on the critical task of monitoring crane chain tension. The turning gear can be stopped immediately should a situation arise. This negates the risk of critical communication delay, from the top to the base of engine.



The overhead crane in its gantry.



End plates of gantry splayed out.



The crane mechanism lying on top of the engine.

CHIRP Comment: We are grateful to the ship manager for sharing this report. We have heard from another

manager that their procedure is first to put the piston to BDC, remove the securing bolts (using gravity to keep it in place), turn the engine so that the piston is at TDC, attach the piston lifting device and lift the piston from this position using the crane.

CHIRP is not able to advise on the appropriate procedure for all types of engines, but clearly this should be in accordance with the engine manufacturer's guidance and take into account the various risks, including the risk with the crane highlighted in this report. We would welcome any comments on this subject, and, more generally, reports of hazardous incidents related to marine engineering.

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(Hazardous incidents may be reported to your local Coastguard Station)

Marine Accident Investigation Branch (MAIB) reports and incident report forms are available on their website:

www.maib.gov.uk

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CHIRP

MARITIME REPORT FORM

CHIRP is totally independent of the MCA and any organisation in the maritime sector

Name: <input type="checkbox"/>	<p>1. Your personal details are required only to enable us to contact you for further details about any part of your report. Please do not submit anonymous reports.</p> <p>2. On closing, this Report Form will be returned to you. NO RECORD OF YOUR NAME AND ADDRESS WILL BE KEPT</p> <p>3. CHIRP is a reporting programme for safety-related issues. We regret we are unable to accept reports that relate to industrial relations issues.</p>
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e-mail: <input type="checkbox"/> <input type="checkbox"/> Indicates Mandatory Fields	

It is **CHIRP** policy to acknowledge a report on receipt and then to provide a comprehensive closing response, if required. If you do not require a closing response please tick the box:

No. I do not require a response from **CHIRP**

If your report relates to non-compliance by another vessel with regulations, for example the International Regulations for Preventing Collisions at Sea, **CHIRP** generally endeavours, when appropriate, to follow this up with the owner or manager of that vessel, unless you advise otherwise. The identity of the reporter is never disclosed.

No. You do not have my permission to contact a third party

If your report relates to safety issues that may apply generally to seafarers, it may be considered for publication in **MARITIME FEEDBACK** unless you advise otherwise. Reports may be summarised. The name of the reporter, the names of vessels and/or other identifying information are not disclosed.

No. Please do not publish in **MARITIME FEEDBACK**.

PLEASE COMPLETE RELEVANT INFORMATION ABOUT THE EVENT/SITUATION

YOURSELF - CREW POSITION		THE INCIDENT			
MASTER <input type="checkbox"/>	NAVIGATING OFFICER <input type="checkbox"/>	DATE OF INCIDENT		AT SEA <input type="checkbox"/>	IN PORT <input type="checkbox"/>
CHIEF ENGINEER <input type="checkbox"/>	ENGINEER OFFICER <input type="checkbox"/>	TIME	LOCAL/GMT	DAY <input type="checkbox"/>	NIGHT <input type="checkbox"/>
DECK RATING <input type="checkbox"/>	ENGINE RATING <input type="checkbox"/>	VESSEL LOCATION		HOURS ON DUTY BEFORE INCIDENT (IN PREVIOUS 24 HRS):	
CATERING <input type="checkbox"/>	OTHER (HOTEL, ETC) <input type="checkbox"/>	TYPE OF VOYAGE		TYPE OF OPERATION	
THE VESSEL:		OCEAN PASSAGE <input type="checkbox"/>	COASTAL <input type="checkbox"/>	COMMERCIAL TRANSPORT <input type="checkbox"/>	OFFSHORE <input type="checkbox"/>
TYPE (TANKER, BULK CARRIER, PASSENGER, ETC)		INLAND WATERWAY <input type="checkbox"/>	OTHER <input type="checkbox"/>	FISHING <input type="checkbox"/>	LEISURE <input type="checkbox"/>
YEAR OF BUILD / GT		WEATHER		VOYAGE PHASE	
FLAG / CLASS		WIND FORCE	DIRECTION	PRE-DEPARTURE <input type="checkbox"/>	ARRIVAL / PILOTAGE <input type="checkbox"/>
NAME OF VESSEL:		SEA HEIGHT	DIRECTION	UNMOORING <input type="checkbox"/>	MOORING <input type="checkbox"/>
EXPERIENCE / QUALIFICATION		SWELL HEIGHT	DIRECTION	DEPARTURE / PILOTAGE <input type="checkbox"/>	LOADING <input type="checkbox"/>
TOTAL YEARS	YRS	VISIBILITY	RAIN <input type="checkbox"/>	TRANSIT <input type="checkbox"/>	DISCHARGING <input type="checkbox"/>
YEARS ON TYPE	YRS	FOG <input type="checkbox"/>	SNOW <input type="checkbox"/>	PRE-ARRIVAL <input type="checkbox"/>	OTHER (SPECIFY IN TEXT) <input type="checkbox"/>
CERTIFICATE GRADE		THE COMPANY			
PEC <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/> NA	NAME OF COMPANY:		TEL:	
OTHER QUALIFICATIONS:		DESIGNATED PERSON ASHORE (OR CONTACT PERSON):		FAX:	

DESCRIPTION OF EVENT - PHOTOGRAPHS, DIAGRAMS AND/OR ELECTRONIC PLOTS ON A CD ARE WELCOME:

Your narrative will be reviewed by a member of the **CHIRP** staff who will remove all information such as dates/locations/names that might identify you. Bear in mind the following topics when preparing your narrative:

Chain of events • Communication • Decision Making • Equipment • Situational Awareness • Weather • Task Allocation • Teamwork • Training • Sleep Patterns

continue on a separate sheet of paper, if necessary



PLEASE PLACE THE COMPLETED REPORT FORM, WITH ADDITIONAL PAGES IF REQUIRED, IN A SEALED ENVELOPE (no stamp required) AND SEND TO:

CHIRP • FREEPOST (G13439) • Building Y20E • Room G15 • Cody Technology Park • Ively Road • Farnborough • GU14 0BR • UK

Confidential Tel (24 hrs): +44 (0) 1252 393348 or **Freefone** (UK only) 0808 100 3237 and Confidential Fax: +44 (0) 1252 394290

Report forms are also available on the **CHIRP** website: www.chirp.co.uk

For market research purposes, where did you obtain this report form?: