



Accident Report
Harbour Cat
Injury at Port of Auckland on
8 February 2004



SUMMARY

A Deckhand aboard *Harbour Cat* was moving to put the hatch cover on the hatch while the vessel was tied up alongside the wharf. He has his feet on either side of the hatch when another vessel's wash went past. The Deckhand lost his balance and fell down the hatch, cutting his leg. He was taken to Auckland Hospital where he underwent surgery.



KEY EVENTS

- 1.1 On 8 February 2004 at about 2000 hours New Zealand Daylight Time (NZDT), a Deckhand, raised the port engine room access hatch cover aboard the ferry, *Harbour Cat*. He rested the hatch alongside the opening in the galley floor while shutting off the intake valves as part of the shut down procedure.
- 1.2 He then climbed out of the engine room. He straddled the opening with his legs and picked up the hatch cover to replace it in the opening.
- 1.3 The wake of a passing vessel caused *Harbour Cat* to roll at its mooring. The Deckhand lost his balance and fell forward into the hatch. His right leg landed on the hatch coaming with the sharp aluminium corner causing a serious cut to his shin.
- 1.4 He was taken to hospital where surgery was required to repair tendon damage and lacerations.



KEY CONDITIONS

- 2.1 *Harbour Cat* is a 20 metre harbour ferry operated in Auckland by Fullers Ltd. It is powered by twin 370 kW diesel engines, located in each hull. It was launched in 1996.
- 2.2 *Harbour Cat* was recently re-engined. Access to the engine rooms was altered with a deck hatch being installed in the deck head of each engine room leading from the enclosed passenger deck. The port hatch was located in the galley floor.
- 2.3 The wooden deck was replaced with an aluminium deck when the vessel was re-engined.
- 2.4 The engine hatches were rectangular in shape and due to the need for adequate insulation weighed about 20 kg.
- 2.5 The edge of the hatch coaming was square aluminium that was sharp because it had not been ground off adequately.
- 2.6 No procedure was in place to prevent persons entering the area when the hatches were open.



CONTRIBUTING FACTORS

N.B. These are not listed in order of importance.

- 3.1 The hatch needed to be lifted and physically moved aside whenever access to the engine room was needed. Its weight was sufficient to force a person to straddle the hatch opening with legs splayed approximately 700 mm apart. Whenever this occurred, the operator would have been somewhat off-balance and leaning forward.
- 3.2 While holding the hatch with legs straddled any movement of the vessel would inevitably cause a person holding the hatch to overbalance.
- 3.3 The sharp corner of the aluminium coaming had not been ground off leaving an edge that was unnecessarily sharp.

CAUSE

Human Factor

<input type="checkbox"/> Failure to comply with regulations	<input type="checkbox"/> Drugs & Alcohol	<input type="checkbox"/> Overloading
<input type="checkbox"/> Failure to obtain ships position or course	<input type="checkbox"/> Fatigue	<input checked="" type="checkbox"/> Physiological
<input type="checkbox"/> Improper watchkeeping or lookout	<input type="checkbox"/> Lack of knowledge	<input type="checkbox"/> Ship Handling
<input type="checkbox"/> Misconduct/Negligence	<input type="checkbox"/> Error of judgement	<input type="checkbox"/> Other . . .

Environmental Factor

<input type="checkbox"/> Adverse weather	<input type="checkbox"/> Debris	<input type="checkbox"/> Ice	<input type="checkbox"/> Navigation hazard
<input type="checkbox"/> Adverse current	<input type="checkbox"/> Submerged object	<input type="checkbox"/> Lightning	<input checked="" type="checkbox"/> Other . Wake. .

Technical Factor

<input type="checkbox"/> Structural failure	<input type="checkbox"/> Wear & tear	<input type="checkbox"/> Steering failure
<input type="checkbox"/> Mechanical failure	<input type="checkbox"/> Improper welding	<input type="checkbox"/> Inadequate firefighting/lifesaving
<input type="checkbox"/> Electrical failure	<input type="checkbox"/> Inadequate maintenance	<input type="checkbox"/> Insufficient fuel
<input type="checkbox"/> Corrosion	<input type="checkbox"/> Inadequate stability	<input checked="" type="checkbox"/> Other . . Poor design.

- 4.1 The operator overbalanced when holding the hatch with an awkward stance and the vessel rolled on a wake.
- 4.2 The overly sharp edge on the hatch caused a more severe injury.



OPINONS & RECOMMENDATIONS

- 5.1** The design of the new engine hatches caused a hazard that was not recognised until this accident occurred. Following the accident Fullers Ltd conducted their own investigation and took the following actions.
- The sharp edges around the hatch coamings have been ground back.
 - The hatches have been fitted with hinges. Opening the hatch is now a controlled operation with the operator remaining balanced and in control even in a seaway.
 - The hinges have eliminated the possibility of an operator dropping the hatch cover through the opening causing damage or injury to anyone below.
 - There are now signs and a rope barrier available to put in place when the hatches are opened to avoid another person accidentally falling into the opening.
 - All company vessels have been inspected for similar hazards. One other vessel was found to have a similar arrangement and is being modified.
- 5.2** It is recommended that Fullers ensure all deck hatches are hinged wherever possible. Lifting an entire hatch cover is an unacceptable hazard due to the possibility of dropping the cover on to a person or equipment below. It also places the person lifting the cover at risk.
- 5.3** It is recommended that this report be sent to Fullers Ltd for their records and for training new staff.
- 5.4** It is recommended that Fullers Ltd consider possible hazards when making any modifications to existing vessels.

