

MAIB

MARINE ACCIDENT INVESTIGATION BRANCH

FLYER TO SMALL HIGH-SPEED CRAFT OPERATORS ACCIDENT TO PASSENGER ON A DELTA 8.5M RIB

At approximately 0708 on 6 May 2010 a male passenger on a Delta 8.5m rigid inflatable boat (RIB) suffered lower back wedge compression fractures while the boat was transporting him, together with fellow workers, to a jack-up rig on the River Thames.

The injury occurred when the man landed heavily onto the lid of a locker, which was used as a seat, after he had been momentarily lifted off the lid due to the motion of the craft. At the time of the accident there was a light wind with a slight sea.

The injured passenger was landed ashore and taken to hospital where he was fitted with an external body support brace. He was subsequently off work for several months, while recovering from the accident.



Previous Accidents:

In August 2008 a female passenger on the RIB *Celtic Pioneer* suffered a lower back wedge compression fracture when she landed heavily on her seat after she was momentarily lifted into the air due to the motion of the craft. The MAIB investigated the accident and issued a report which concluded, inter alia, that the operators and skippers of RIBs are not generally aware of the dangers to their passengers associated with shock and vibration in their craft.

The report refers to data obtained during trials conducted on an 8.5m RIB during a high speed passage in calm conditions. The data recorded measurements of the forces acting through the deck of the RIB which were constantly in the region of 2g, with regular shocks of between 6g and 10g. Occasional shocks of up to 20g were recorded during the trial.

The magnitude of the repeated shocks experienced during a high speed passage in a small craft can be sufficient to cause impact injuries to both passengers and crew.

Evidence from accidents indicates that impact injuries also occur at lower speeds, when large waves or wakes are encountered.

In the 2 years since the *Celtic Pioneer* accident the MAIB has been made aware of a further 12 accidents which have resulted in lower back compression injuries on board RIBs operating in UK waters.

Lessons Learnt:

- Operators of high-speed craft should conduct Whole Body Vibration and shock impact risk assessments in accordance with the requirements of the Vibration Regulations to reduce the risk of injury to their employees and passengers to a level which is as low as reasonably practicable (MGN 353 (M+F) refers).
- Helmsmen should be made aware, through appropriate training, of the risks posed to crew and passengers from shock impacts when conducting high speed passages or when encountering large waves or wakes at lower speeds.

This flyer and the MAIB's investigation report are posted on our website:

www.maib.gov.uk

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