

The principal purpose of the Transport Accident Investigation Commission shall be to determine the circumstances and causes of accidents and incidents, with a view to avoiding similar occurrences in the future, rather than to ascribe blame to any person.



# GEESE WERE A DISTRACTION FOR JET BOAT DRIVER

Passengers on scenic tourist jet boat trips along the Dart River are to be made aware not to talk with the driver while the boat is moving, except in an emergency or they have a safety concern.

This safety action by Dart River Jet Safaris Ltd follows a Transport Accident Investigation Commission report on the grounding and subsequent rollover of the company's 7m tourist jet boat *DRJS-11* on the Dart River on February 20, 2009. Several passengers were injured or required treatment for mild hypothermia.

The passengers had assembled at the DRS Safari base in Glenorchy, given a short talk and issued with splash coats before boarding a coach for the drive to the Dart River. Although it was mid-summer the weather was overcast with a cold wind.

After arriving at the riverbank, the jet boat driver and the coach driver issued the passengers with lifejackets and the jet boat driver seated the passengers on the *DRJS-11* for the correct balance and trim of the boat. He gave a safety briefing and lowered the boat's hydraulically operated canopy.

He drove the boat upstream to Sandy Bluff, turned and was heading past the Routeburn toward Lake Wakatipu, where a passenger was asking questions about the vegetation and bird life.

The driver had just made a left-hand turn to follow the main channel when he pointed out a flock of geese taking flight to the right of the boat. When he looked ahead again he noticed the boat had drifted to port of his intended track. He turned the boat to starboard but immediately realised he was too late to clear a gravel bank, so he centred the wheel and took his foot off the throttle pedal.

As the *DRJS-11* lost speed she slid along the bank and rolled slowly over to port before coming to rest upside down on the roll bar and canopy.

He made a "code-one" emergency radio call; one of the passengers shouted out to "kick the windows". Once this was done, 16 passengers crawled out to starboard and exited on to the bank, but two exited on the port side and into the river.

One became soaked in petrol running out of a tank vent which was above the emergency exit when the boat became inverted, and received petrol burns. The driver and two others were also injured.

A staff member at the Glenorchy base heard the call and activated the company's emergency response procedure. The harbourmaster and the Police were also informed. The jet boat driver advised everyone to avoid lighting cigarettes or using a naked flame because of the petrol fumes. He then helped the passenger who had been doused with petrol to remove his upper clothing and helped wash him down.

He called the base on a hand-held VHF radio to make an initial report and re-entered the upturned boat to isolate all the electrical equipment before leading the group to the riverbank,

Two other Dart River Safari jet boats, *DRJS-7* and *DRJS-2*, arrived and stopped close by. The drivers provided assistance and first aid. The passengers then boarded the two boats and



were driven to the Dart River Bridge, where a coach took them to Glenorchy.

The passenger who had been doused with petrol was taken to a nearby lodge for a shower and a change of clothes. Two others ▶

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were taken to Queenstown Hospital. The remainder were debriefed and driven to Queenstown.

The boat was found to be intact apart from extensive damage to the canopy and superficial damage to the hull and roll structure. A naval architect found the canopy had not affected the boat's fitness for purpose.

Dart River Safaris had bought the *DRJS-II* in 2006. The hydraulically operated canopy could be manually jettisoned if required and the emergency escape windows on either side could be pushed out. These were not marked and the passengers sitting beside them were not briefed about what to do in an emergency.

Safety issues identified in the Commission's report included:

- the potential difficulty of removing the canopy in a deep-water situation or if the boat were inverted
- the passengers' inability to hear all the safety briefing
- the poorly marked emergency exit windows, and
- the fuel vent design

In its analysis of the accident, the TAIC said if the *DRJS-II* had been travelling in a straight line the boat would probably have slid to a stop on the shingle bar or travelled further into the river channel. The driver's attempt to centre the boat reduced the capsizing moment enough for the boat to slowly roll over, rather than flip.

The passengers had received only a rudimentary verbal instruction on jettisoning the canopy. Had they been subjected to further stress it was unlikely the canopy could have been successfully removed, as it required four different actions involving the driver and two passengers, who were pivotal to the

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task. The position of the fuel tank vents over the escape route was unfortunate, the Commission said.

Had the driver been able to quickly isolate the boat's electrical power and fuel systems he would have been able to reduce the risk of fire, prevent fuel leaking from the vents and avoid having to re-enter the upturned boat.

The Commission said there had been one fatality, five serious and five minor injuries on commercially operated jet boats over a period of just over 11 years. All four rollover events, including the *DRJS-II*, were caused more by human factors than by design or maintenance issues.

Driver distraction was a contributing factor to the accident and should be a foreseeable risk with this type of operation. "Commentary and interaction with the driver should be limited to times when the boat is stopped or travelling at low speed."

Although the safety briefing had no affect on the outcome of the accident, "the fact that giving a meaningful safety briefing is still posing a challenge to operators is a concern."

As a result of the Commission's recommendations, Maritime New Zealand said it would:

- identify jet boat driver distraction as a safety issue to operators, and
- ensure changes to the fuel breather system used by DRJ Safaris and any new commercial jet boats with canopies prevent the uncontrolled escape of fuel from fuel tank vents.

The new draft Maritime Rules part 82 proposed that emergency exits on boats fitted with canopies be clearly marked as such. ⚓



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