MAIB Safety bulletin 2/2003

Capsize of the motor hire cruiser *Breakaway V* on the River Bure, Norfolk 19 July 2003

This document, containing Safety Recommendations, has been produced for marine safety purposes only on the basis of information available to date.

The Merchant Shipping (Accident Reporting and Investigation) Regulations 1999 provide for the Chief Inspector of Marine Accidents to make recommendations at any time during the course of an investigation if, in his opinion, it is necessary or desirable to do so.

The Marine Accident Investigation Branch (MAIB) is carrying out an investigation of the capsize of the motor hire cruiser *Breakaway V* on 19 July 2003. The MAIB will publish a full report on completion of the investigation.

Towards the end of a day's cruising on the Norfolk Broads, *Breakaway V* capsized and inverted, trapping two of her ten occupants in the upturned hull. One of the two persons trapped subsequently died.

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Safety Recommendations

Background

Breakaway V was a 6.77m day hire motor cruiser built and operated by Barnes Brinkcraft Ltd, Wroxham, Norfolk. It was based upon a traditional open boat hull form, which had been modified, and to which a 'sports cruiser' type superstructure had been added. The boat's maximum capacity was ten persons, which had been based on the boat's seating arrangements. No in-depth stability tests were considered necessary because two other types of craft based on the same hull form had been operated safely by the builder since 1996.

On 19 July 2003, a group of ten persons hired the boat for the afternoon. When returning to Wroxham, the boat capsized to starboard and inverted without warning. Two of the party were trapped underneath. Rescue services managed to cut into the upturned hull but tragically, one of the trapped persons had died.

The MAIB conducted an inclining test on another *Breakaway* boat on 29 July 2003, initial analysis of which indicated that *Breakaway V* capsized because of the loading and distribution of the ten persons on board at the time. The total weight of these persons was about 845Kg, and they were distributed primarily forward and starboard of the centreline. Six of the party were located on the raised forward deck, which because of its height, had a considerable destabilising influence.

The MAIB considers that this tragic accident highlights the importance of stability calculations and tests on build or following major modifications to vessels, and the need to allow an adequate safety margin when determining the maximum number of persons a boat can carry.

Safety Recommendations

All bodies and authorities responsible for the licensing of pleasure vessels let for hire, and all hire boat operators are recommended to:

- 1. Ensure that on completion of build or any modification altering a vessel's stability characteristics, the consequences of such changes has been determined through calculation and testing by a suitably qualified person before the vessel is put into service.
- 2. Allow an adequate safety margin when determining the maximum number of passengers a boat is authorised to carry, taking into account the potential inexperience and weights of the persons hiring a boat, and the worst-case effects of uneven weight distribution.
- 3. Ensure that handover procedures and briefs to persons hiring a boat be comprehensive, and include the dangers of uneven weight distribution, particularly on raised decks.