

# NAFLIC

*National Association For Leisure Industry Certification*

## **Standards & Related Documents Sub-Committee**

### **TECHNICAL BULLETIN - JANUARY 1995**

#### **105. Zamperla Galleon Ship Ride**

*This bulletin supersedes No. 047, issued in February 1993*

At least three incidents have occurred where children have placed their feet outside the side walls of the moving passenger unit (galleon) and have struck the fixed guard-rail on the loading platform.

We recommend that, at each examination, the Appointed Person checks if it is possible to trail a leg or other part of the body so as to make contact with any shear trap formed between the galleon and the fixed guard-rails or barriers on the loading platform. If a shear trap exists, the following are some ways of eliminating it :-

1. Modify the guard rails / barriers so that they are lowered into a "safe" position when passenger loading has been completed and before the ride commences. The rails / barriers must then return to their original positions before the passengers alight. This can be achieved by moving the rails / barriers under pneumatic power, and by interlocking them with the braking system of the ride so that once the brake is released, the rails / barriers are lowered down the side of the platform. They must only be raised when the motion stops, the brake is set "on" and before the lap restraints are released at the end of the ride cycle.
2. Modify the loading platform so that it retracts away from the passenger unit once passengers are loaded and before the ride begins, only returning to its original position when the ride has stopped and before passengers are allowed to alight. Appropriate interlocking mechanisms are required as in 1) to prevent movement of the passenger unit when the platform is not retracted and the restraints are released.
3. Fit doors to the entrance / exit gaps in the galleon side walls which are not capable of being opened by a passenger. They are to be externally locked before commencement of the ride, and unlocked only after the passenger restraints have been released.
4. Fit suitable warning signs instructing passengers to keep all parts of their body inside the galleon at all times. Although informative, this option does nothing to remove the trapping hazard and should only be considered as an "additional" safety measure.

Committee Members :- Dr Garry Fawcett (Chairman), Mr Richard Barnes, Mr Bob Nicholls, Mr Les Howson,  
Mr Malcolm Tennant, Mr Peter Steffens

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P.O. BOX NO. 9, BUXTON, DERBYSHIRE. SK17 9XF  
TEL: (01298) 77468 FAX: (01298) 72343

Note :- If options 1 or 2 are used, it will also be necessary to ensure that waiting passengers are not placed at risk when the guard rails / barriers, or the platform, are being retracted or extended. If options 1, 2 or 3 are used, Design Review (including the control systems) and Initial Test will be necessary.

As other types of ride may present similar hazards, persons should, where appropriate, apply corrective actions consistent with this guidance.