

NAFLIC

National Association For Leisure Industry Certification

Standards & Related Documents Sub-Committee

TECHNICAL BULLETIN - SEPTEMBER 1997

155. Huss Ranger Seat Restraint Prohibition Notices

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We recently became aware of a Huss Ranger ride, imported into Britain in about 1996, which has been the subject of Prohibition Notices following some incidents reportable under RIDDOR95. NAFLIC member Wilson Consultants has given us additional details of the incidents which involved the safety of the hydraulically operated passenger restraint bar. (An almost identical situation, apart from the Prohibition Notices, occurred in 1996 with respect to a Weber Dreamboat ride with a similar hydraulic restraint system.)

The Huss ride carried TÜV certification against German criteria, but this did not cover the risks associated with the hydraulically operated passenger restraints. In Britain the closure and locking of the restraint within the Ranger type of ride is definitely considered to be a safety critical matter. This would appear not to be the case in Germany, or at least, it wasn't in the early 1980s.

In the design of the hydraulic circuits, the locking of each restraint bar is achieved by its own check valve (i.e. non-return valve). There is a possibility, by debris jamming it open for instance, of check valve malfunction. In this case the restraint bar is still held locked by the main directional control valve supplying all the restraints. However, this is somewhat distant from the restraint, with flow paths to the other restraints. This means that there is some movement (50 - 75 mm) in the unchecked restraint before it holds. While this may not necessarily be unsafe there is at least a feeling of insecurity, which could lead to some distress, associated with check valve failure. The same could result to some degree from mechanical wear.

Neither of these issues need preclude safe operation. Mechanical wear need not be a serious issue since the clearances are taken up when the restraint is closed. However, it should not be allowed to develop to a point where other hazards (i.e. apart from this matter of play) become significant. Secondly, bearing in mind their detail and orientation, once a check valve has been confirmed to be closed at the start of a ride it will not then open during the course of the ride, in normal circumstances. Good operating procedure, with checking of restraint security after

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control valve closure, can ensure passenger security. Alternatively, design changes may be made to provide positive indication of check valve malfunction.

The Committee wish to remind readers of the following :-

- When bringing a ride (new or second-hand) into this country, it is necessary to ensure that it complies with British requirements. The responsibility falls on the showman or amusement park if they brought in the ride directly (i.e. not through an agent with a British base). Reports written by Inspection Bodies (or others) without a British base may be used as evidence in this process but, to comply with British law, it is important to check which provisions have not been dealt with fully or satisfactorily in accordance with British expectations.
- Reports are often provided which relate to a design which has since been changed. The person bringing the ride into the country needs to check this out. Inspection Bodies will be aware of the importance of Assessment of Conformity to Design, now included in *Guidance on Safe Practice in Fairgrounds and Amusement Parks*, to be launched by the Health & Safety Executive in October 1997.
- In both the rides which the Committee discussed while preparing this Technical Bulletin the importance of good maintenance of the mechanical and hydraulic components, was an important issue.