

SAFETY ALERT – BARREL/EGG TRAINS

In the last 4 months there have been two accidents involving these rides. The first occurred in the UK, which resulted in a number of (minor) injuries. The second happened in the USA and resulted in a fatality and 4 serious injuries, all involving the passengers in the carriages and all to children aged between 3 and 8 years of age.

An example of the ride is shown below.



Rides similar to this have been sold commercially in the UK for around 10 years with the majority being designed, built and supplied in line with the principles recommended in HSE Guidance document HSG 175 – ‘Fairgrounds and amusement parks Guidance on safe practice’ (<http://www.hse.gov.uk/pubns/priced/hsg175.pdf>). There are however a number of these rides in operation both in the UK and abroad, to which the principles for design, manufacture and use have not been applied. Investigations into both incidents, which involved overturns of the rear carriages, probably due to a whip effect during tight turns, are ongoing so details cannot be released but there are a number of safety issues that apply to all of these types of rides and ride controllers, suppliers, buyers and visiting staff from local authorities [LAs] and HSE should be aware of the following issues:

1. This ride fits the definition of fairground equipment as defined in the Health & Safety at Work etc Act 1974 and should be subject to an annual inspection by a competent person. There is no expectation that this will necessarily be by an ADIPS registered examiner but the inspector should be competent. See HSG 175 for further details of the ADIPS scheme.
2. Manufacturers of these rides should design and construct them to the standards required by BS EN 13814 'Fairground and Amusement Park machinery and structures –Safety'. As part of this they should supply instructions to the purchaser including information regarding loading, safe use, maintenance and operation.
3. Some of the trains have as many as 12 carriages which, when laden, constitutes a considerable weight. The controller should ensure that the manufacturers recommendations regarding the unbraked towing weight of the towing vehicle are not exceeded. This may mean that the train runs with fewer carriages if a light tractor or quad bike is used. Some small tractors and quad bikes are not designed for towing and should not be used. Towing vehicles should have serviceable brakes which are capable of safely stopping the train when it is fully loaded.
4. The maximum speed at which the train is run should be in accordance with the manufacturer's recommendations. This speed should be reduced considerably during turns or when negotiating slopes. The vehicles used for towing may not be fitted with a speedometer when bought so other methods of speed control, such as defined gear selection may be required.
5. Passengers should be assessed for their suitability for the ride. Those who are too small, too big, are unlikely to remain seated during the ride or may become frightened or distressed during the ride should be excluded.
6. Only one person or child should be allowed to ride in each car unless it is specifically designed to carry more than one passenger. No sitting on laps.
7. Passengers should be capable of being observed at all times. This cannot effectively be undertaken by the driver who should be looking forward. Controllers may decide to operate with a 'Conductor' riding in the back car and if this option is taken up they should ensure the car is suitable for that purpose. Alternatively, if the operating speed of the train is low, an observer may be able to walk alongside the carriages. The Conductor or observer should not be a member of the public, should be trained to know what to do if passengers are behaving incorrectly and should be able to communicate effectively with the driver.
8. The Driver and Conductor/observer should be at least 18 years of age. The driver should be competent to operate the towing vehicle and should have attended an appropriate training course if available.
9. The train route should be assessed for suitability. Where possible the route should avoid slopes (both forward and transverse), tight turns and circles. It may be necessary to impose different speed limits at different parts of the route.

The vast majority of these rides are believed to be operating at premises enforced for H&S by LAs (stately homes, open farms, country fairs etc). LA Inspectors are advised that, their powers are limited to advice on the maintenance and operation of fairground rides. If there are concerns that the duty holder/controller is not taking the offered advice or that the ride is being operated unsafely, the LA Officer is requested to contact their local HSE Office and speak to the National Fairground Inspection Team (NFIT) Inspector.

Further information concerning this alert can be obtained from:

M Sandell (HSE Entertainments and Leisure Sector) – 07527002689

Liz Evans (HSE Agriculture Sector) – 01772 836259 or 07798 882024