NAFLIC

National Association For Leisure Industry Certification

Standards & Related Documents Committee

TECHNICAL BULLETIN - JUNE 2000

210. Super Trooper Accident

An accident in London on 27 May 2000 resulted in the deaths of two people - a man and a woman. The ride was a Super Trooper, manufactured some 18 years ago by S E Ward and Sons (Engineers) Ltd of Sheffield.

The ride is a variant of the well-known Paratrooper type and the fatalities occurred when a car (which is a simple bench seat with no footwell) detached, flew through the air, and crashed into an adjacent stall.

It is known that the attachment of the seat to the "banana" (the vertical member which extends down from the pivots to carry the passenger seat) permits fatigue cracking of some of the structural sections making up the seat back. This much was clear from inspection on a different Super Trooper which was found to have a variety of cracks, some of which had been previously repaired. (We understand that the Health & Safety Executive investigation may have detected some cracks in the main radial arms but they have, as yet, been unwilling to divulge further information).

So far as we are aware the Super Trooper ride had never been through the process of Design Review. If this is the case, the design safety of the seat frame in relation to fatigue failure had never been confirmed. This emphasises the need for accessibility for inspection since the seat attachment is obviously safety-critical and the severity of injuries resulting from breakage could clearly be fatal. Unfortunately the cracked structural members on the Super Trooper were not easily accessible because of the way in which the seat shell had been moulded.

We would emphasise the need for designers to consider the need for access to safety-critical regions of rides, for maintenance and inspection purposes, particularly when there is insufficient evidence that failure can be avoided throughout the foreseeable life of the ride.

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