

# NAFLIC

*National Association For Leisure Industry Certification*

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

### **TECHNICAL BULLETIN - FEBRUARY 1997**

#### **142. Zamperla Ferris Wheel - Car Shaft Weld Failure**

NAFLIC members Leisure Technical Consultants Ltd have informed us that they have now detected a total of 17 car support shafts (3 different rides) having cracking at a particular welded connection on Zamperla Ferris Wheels.

The problem is a known design limitation. That is to say that, back in 1988, Wilson Consultants calculated a fatigue life of about 5000 hours of full operation for this region. The calculated life ties up quite well with the LTC experience of these three rides.

The area of interest is the circumferential weld on the back face of the flange plate by which the car support shaft assembly is bolted to the main radial arm section. Note that the Wilson Consultants' work predicted limited fatigue lives at three other positions along the car support shaft length.

Persons maintaining and inspecting Zamperla Ferris Wheels should be aware that there may be a significant risk unless they take steps to detect / monitor the development of such cracking.

Committee Members :- Dr Garry Fawcett (Chairman), Mr Richard Barnes, Mr Bob Nicholls, Mr Doug Dadswell,  
Mr Peter Smith and representatives of Plant Safety Ltd, and Banwell & Associates Ltd

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