

NAFLIC

National Association For Leisure Industry Certification

Standards & Related Documents Committee

TECHNICAL BULLETIN - MARCH 2002

230. Miami Trip Arm Cracking

We have received a report, from NAFLIC member I G Grant, of potentially serious cracking of the ends of the main radial arms of Keith Emmett & Sons / KT Enterprises Ltd Miami Trip rides.

On the design type in question, each car support shaft is retained in its arm by machine screws through a back plate. The shaft passes through the, locally thickened, front face of the radial arm. The bearing pressure on this thickness is sufficient to allow local distortion of it, and the shaft itself, to build up. We understand that the combined, reinforced, plate thickness varies according to the model.

As the distortion builds up, there is a hammering effect and a cyclical “diaphragming” of the back plate. Fatigue cracks propagate around the end cap welds and up the side welds. Another crack initiates at the top of the shaft retaining plate.

Controllers are advised to carry out immediate and regular visual inspection of these areas and to discuss the matter with their Appointed Inspection Body.

Committee Members :- Dr Garry Fawcett (Chairman), Mr Richard Barnes, Mr Peter Smith, Mr Ian Grant, Mr David Geary, Mr Steve Parker, Mr Eddy Price and Mr Mike Preston

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