

NAFLIC

National Association For Leisure Industry Certification

Standards & Related Documents Sub-Committee

TECHNICAL BULLETIN - APRIL 1997

145. A.R.M. (UK) Ltd - Alibaba Service Bulletins

NAFLIC members A.R.M. (UK) Ltd, who manufacture a variety of rides including one called the AliBaba, have sent us copies of two recent Service Bulletins.

They have now completed their investigation of a problem of cracking which had been detected in the region of the arm gussets at the attachment to the centre drum. Prior to this, in the first Bulletin, A.R.M. advised that their AliBaba rides should be given visual inspection of the region in question and that irregularities should be reported to them.

In the second Bulletin, dated 7 February 1997, A.R.M. say that excessive stresses were caused by the computer program demanding power too abruptly and not ramping the motor properly. This has been modified and re-tested with the result that they are issuing a "Service Kit". The kit consists of a replacement EPROM chip with the new program downloaded into it.

By way of general comment from this committee, with respect to all sorts of amusement rides from manufacturers all over the world, we note that sudden or very rapid application (or removal) of driving or actuating forces or torques is a common occurrence. In some situations it may have very significant design implications. Often it has not been accounted for in the design assessments, and resultant stresses can be twice as large as those calculated (or even higher). Designers (and Inspection Bodies carrying out Design Review) need to remember that the rate of application of force or torque needs to be considered in relation to the dynamic response of ride structures, including secondary dynamic systems.

Committee Members :- Dr Garry Fawcett (Chairman), Mr Richard Barnes, Mr Bob Nicholls, Mr Doug Dadswell,
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