

510.

KMG 'FRB16' Freak Out – possible cause of a failure to a trailer structure

NAFLIC has received the accompanying notification from the Dutch manufacturer KMG International BV. This relates to the possible cause of a failure to a trailer structure on one of the company's 'FRB16' Freak Out rides. According to the notification, investigation into the incident referenced found that the cause of the failure was improper maintenance of the trailer structure.

The information contained within is that of the manufacturer and not NAFLIC. When following the advice from the manufacturer, you are reminded of your duties and responsibilities under HSG175 regarding modifications.



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Bulletin No:	FRB16-N003
Release Date:	Oct 26 th 2021
Effective Date:	Oct 26 th 2021
Supersedes:	None
Completion Date:	See text
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NOTIFICATION

Ride Mfg:	KMG International BV	Affected Production Dates:	All
Ride Name:	FRB16 or Freak Out	Affected Serial Numbers:	01 through 62
Model Number:	FRB16		
Abstract of Issue: Trailer structure			

Reason for release:

Recently KMG International investigated the possible cause of a failure to a the trailer structure of a KMG "FRB16" freak out ride. The failure relates to a formed section located midway down the trailer's side. This part of the trailer functions as the side and top wall of the center ballast tank which is filled with water during the operation of the ride.

It was reported to KMG that the incident happened during the assembly of the ride at the moment the main towers were lifted from their transport position, bending the trailer and resulting in the trailer's failure.

After investigation it has been determined that that the cause of the failure was improper maintenance of in particular the trailer structure that caused the structure to bend and fall.

These include:

- Improper and inferior maintenance of the tank in regards to surface material preparation, priming and painting.
- Several improper and unauthorized welding repairs that were made to the trailer structure.

KMG International was not aware of the condition of the ride until a service request was made by the new owner of the ride. During the requested service which was completed one year prior to this incident it was determined that the Center ballast tank was in great need of several maintenance tasks.

None of these tasks where executed between the day of the service visit and the day of the incident. It was noted during the investigation that new and improper repairs had been performed since the day of the service visit. These improper repairs even aggravated the existing factors that caused the trailer to fail.



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Action to be taken:

All owners of "FRB16"/Freak out rides should perform a thorough check of the trailer structure of the ride for any irregularities, not limited to the mid-section of the trailer. Hereby it must be noted that no welding is allowed to the ride without written confirmation of KMG International including the repair or installation of any brackets of any type whatsoever other than those originally present at first delivery. Any irregularities, repairs or brackets not originally installed by KMG International must be documented and reviewed by an inspector for proper execution.

In addition, all owners of "FRB16" rides should perform a check on the trailer structure of the ride for improper and inferior protective paint layers. This check shall include the interior bottom, side and top walls of the center ballast tank, and all outer walls of the trailer structural assembly.

Any locations where the protective paint layer shows signs of degradation should be addressed appropriately. In locations where paint layers have faded or paint layers have flaked in such way that the steel structure is compromised, additional measurements of structural wall thickness must be performed and compared to base thickness to determine if there is loss of wall thickness prior to new surface treatment.

Trailer structure





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Detail of proper repair of paint layers

- Sandblasting according to ISO 8501-1 SAE 2.5 profile 50-70µm.
- Locations where existing paint layer remains after blasting must be sanded in such a way that the new layer of paint has significant adherence.
- Ground layer paint 2K SIGMAFAST 205 approx. 100 µm.
- Top layer paint 2K SIGMADUR 586 approx. 120 µm.
- ISO 12944-C5 must be used as guide line.