

# NAFLIC

*National Association For Leisure Industry Certification*

Standards & Related Documents Committee

TECHNICAL BULLETIN — June 2016

## **411. Zierer Wave Swinger service bulletin**

Zierer has issued the accompanying service bulletin relating to its Wave Swinger rides and the inspection and maintenance of these devices.

The bulletin warns of the potential for metal fatigue after years of operation in some areas on the rides and that any cracks can possibly ‘grow’ in these areas.

*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.*

Committee Members: Mr. D Dadswell (Chairman), Mr. A Mellor (Secretary), Mr. P Smith, Mr. J Green,  
Mr. D Cox, Mr. M Thirkettle, Mr. I Davies, Mr. J Shilling & Mr. D Inman

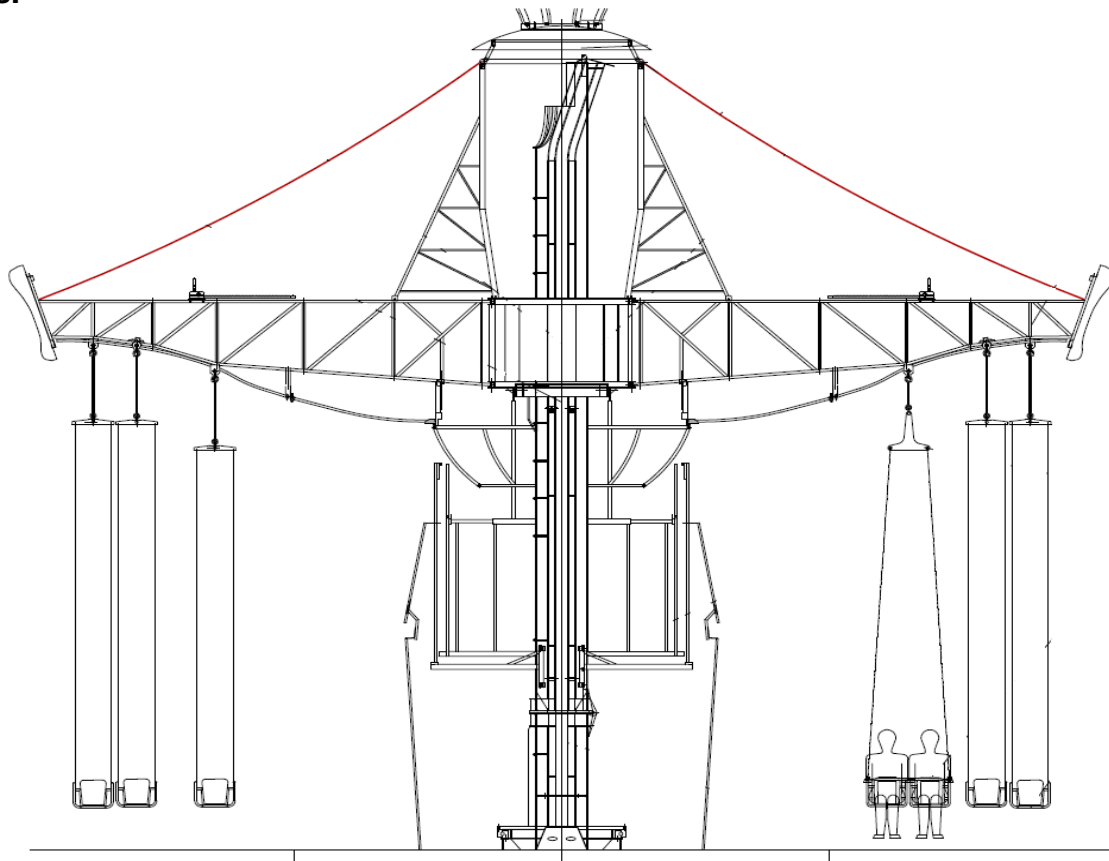
## Service Bulletin

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<b>SB-WS-1004</b>	<b>1</b>	<b>1 of 5</b>	<b>Wave Swinger</b>	<b>Service Bulletin</b>	<b>15.01.2016</b>	<b>röt/hast</b>
Original Ride Manufacturer			Release Date	Affected Production Dates:	Ride Name:	
<b>ZIERER – Karussell und Spezialmaschinenbau</b>			<b>2016</b>		<b>Wave Swinger</b>	

### 1 Reason for this service bulletin

Zierer would like to inform the owners of Wave Swinger No. 8042xxx about past deficiencies in customer performance of maintenance work. Therefore we want to present you this service bulletin.

This service bulletin is necessary because it is possible that there is metal fatigue after years of operation at some spots on your ride and cracks can grow in those areas.



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## 2 Introduction

Zierer produces Wave Swinger for more than 30 years now and because of regular maintenance and inspections a safe operation was ensured all the time.

In light of recent events we want to remind the owners to check all critical spots where cracks may exist.

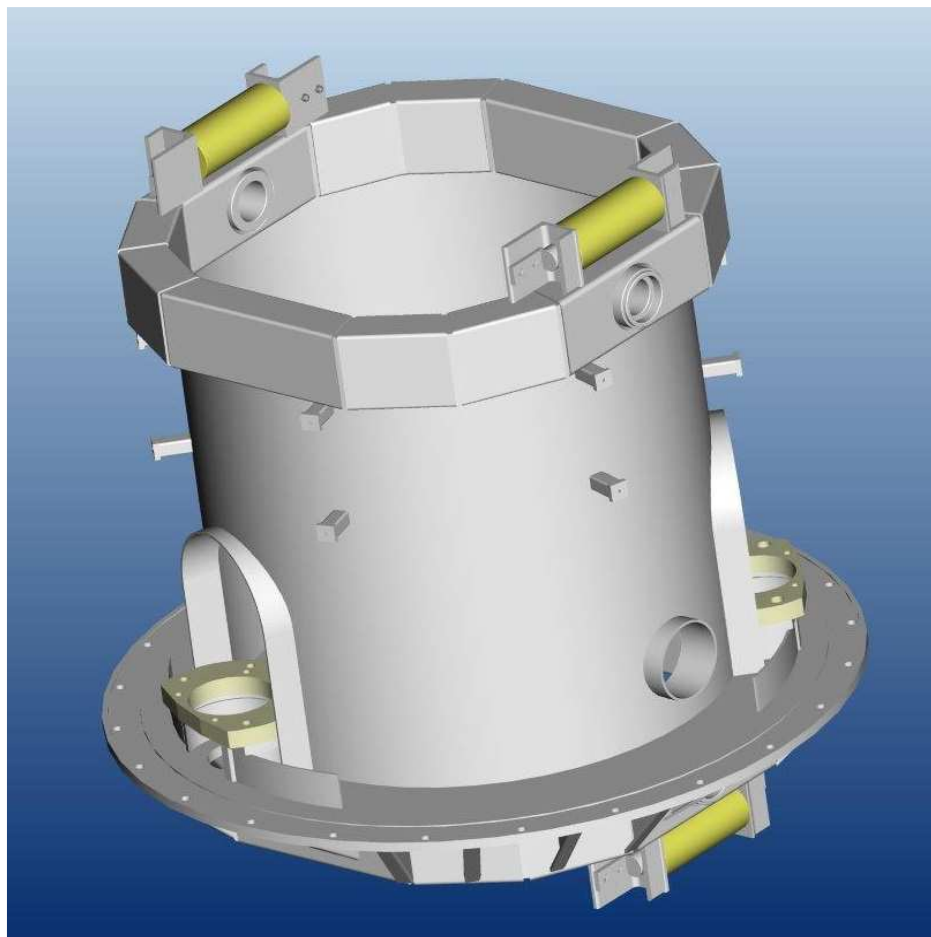
If cracks are **not** noticed right in time dangerous situations may follow as a result.

This Service Bulleting is according to AST F853-04 standard and shows how to protect you and your guests from danger.

This letter is an addition to the non destructive testing (NDT) schedule you have either received with the Manuals already or together with this bulletin.

### 3.1 Actions to be taken

The inner basket is one of the spots this service bulletin wants to focus on.



**Image 1:** 3-D model of the inner basket

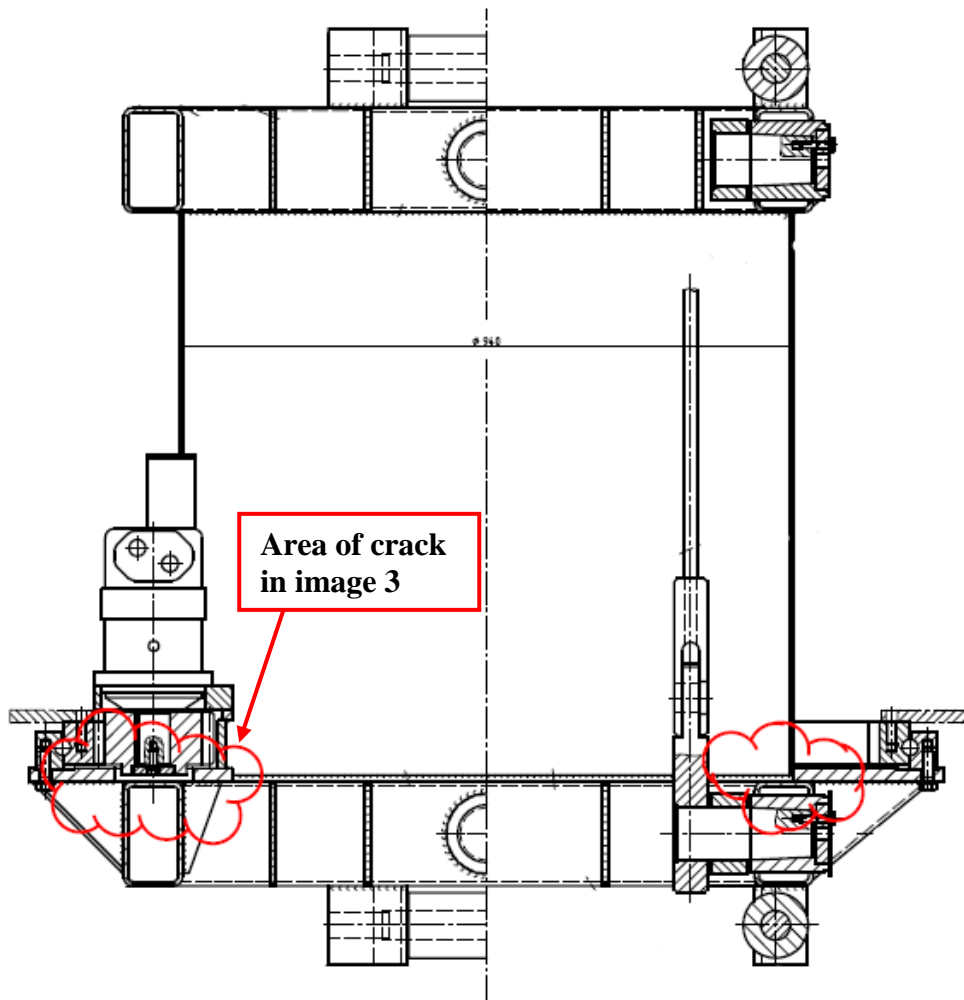
We want you to perform a visual check of the welding seams **once a month** and not like in the old revision of the NDT schedule once a year.

Please make sure that you clean the welding seams before each check.

At the bigger check (the first time after 12 years and then every 6 years (Y12 in testing schedule)) you have to check the welding seams either with magnaflux, paint penetration or ultrasonic method to make sure that there are no cracks.

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The following images should give you an idea where the most critical areas for cracks are



**Image 2:** Drawing of inner basket with highlighted areas

Check all of the welding seams on the basket, especially those in the highlighting clouds. Please inspect the seams in regular intervals and contact us if there are any complications.

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As a bad example we want to show you image 3, which displays an area of a basket which is cracked because of metal fatigue. Please note that this would not have happened if the owner of this ride would have performed regular checks.

If you see a crack it does not matter how big it is, you have to shut down your ride and fix all cracks by an expert in a proper way. To operate a ride with a crack is strictly not allowed!

**Do not take the crack in image 3 as a reference because this is the worst case!!**

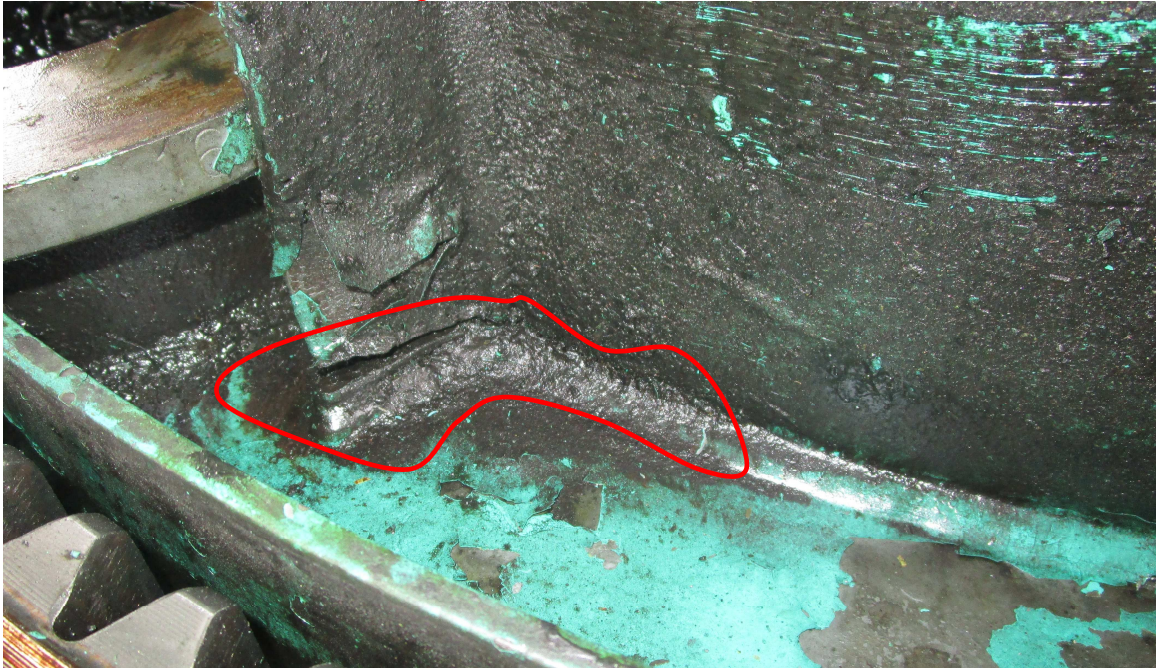


Image 3: Crack over the welding seam at an inner basket

To identify a crack as soon as possible is very important according to the safety aspect. Another goal why you have to identify a crack as early as possible is the fact that fixing a little crack is a way more easy than a bigger one (Image 3).

In addition to those aspects, an early identification can save you money and hours of maintain while the ride can not operate.

The area around the inner basket is only one spot among others to be inspected. We strongly advise you to check the entire ride and react immediately with appropriate measures if anything unusual should be noticed such as noises or ride instability during operation.

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### 3.2 Qualification and Personnel

Please perform the checks by qualified personnel who are familiar with our checking and maintain list.

The lists are only guidelines therefore you have to make sure that your personnel is able to notice any wear which is not normal.

Do not hesitate to contact us if there are any problems you can not solve on your own.

### 4. Contact

For further details please feel free to contact us.

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