

Manufacturer's Bulletin

Inspection and Maintenance Guidelines for the "Lambada" Amusement Ride Issued by: Kolmax Plus s.r.o., November 2024

1. Introduction

We are Issuing this safety bulletin because of an incident with one of our "Lambada" rides. Recently, a shaft broke on one of the Lambada rides. The operator did the right thing by stopping the ride immediately. The inspection body quickly started an investigation and worked with us to do everything possible to prevent this from happening again.

To keep all our rides safe, we kindly ask you to follow the recommendations in this bulletin carefully. If anything is unclear or if you need more information, please contact us or your local inspection body. The safety of our rides is our top priority.

2. Purpose of this bulletin:

This safety bulletin provides inspection and maintenance procedures needed to ensure the safe operation of the "Lambada" amusement ride. It gives specific guidelines on what to check, how to check, and when to do these checks. It also includes criteria for replacing parts. These guidelines are designed to keep the ride safe and reliable.

3. Scope

This bulletin is for all operators and maintenance staff responsible for the "Lambada" ride. It covers:

- Daily, weekly, and yearly inspection routines.
- Specific parts and systems that need to be checked.
- Conditions under which parts must be replaced.
- Guidelines for setting up the ride on different ground conditions, especially soft or unstable ground.

4. Ride Specifications

- Total Weight of the Ride: 20,000 kg
- Maximum Passenger Weight: 1,500 kg
- Operating Conditions: Vertical rotation, which puts alternating loads on the jacks.

5. Inspection and Maintenance Checklist

5.1 Daily Inspections

- **Visual Check of the Jacks:**
The jacks must be set level, and the hydraulic jacks must be pressure-free. Check that all supports are stable and evenly carry the load. Perform this check also while the ride is operating. Look for any signs of sinking or instability. **Action:** If you notice instability, correct it immediately. Use hard wooden or synthetic/composite plates under the jacks. On soft ground, See Section 6
- **Visual Check of the Rubber Blocks:** Inspect the rubber blocks for any signs of wear, cracks, or damage. These blocks are crucial for absorbing vibrations. **Action:** Replace immediately if you see any damage.
- **Sound and Vibration Check:** Run the ride without passengers. Listen for unusual noises or vibrations, especially from the shaft and drive system. **Action:** Investigate and fix any issues before operating the ride with passengers.
- **Check of the Equalizer Bar:** The operator of the ride shall run the ride both left and right for a duration of approximately 1 minute. While the bench is at the highest position, the operator will stop the ride and go behind it to hand-tighten the nut on each side of the bolt.
- **Level Check of the Equalizer Bar:** Use a level to ensure the equalizer bar is perfectly horizontal. **Action:** If the bar is not level, check the entire structure to make sure it is level. On soft or uneven ground (e.g., a field), this check should be done at least once per day.

5.2 Weekly Inspections

- **Visual Check of the Shaft Alignment:** The alignment must be checked visually. Watch for signs of shaking or strange noises, which could mean the drive system is not aligned correctly. **Action:** If you notice these signs, stop the ride and call Kolmax Plus immediately.

5.3 Annual Inspections

- **Non-Destructive Testing (NDT):** Perform an NDT inspection on the main shaft and critical structural components. **Action:** Replace any part that shows signs of cracks or other defects.

6. Setup Guidelines

6.1 Ground Conditions

- **On Hard Ground:** Use standard hardwood or synthetic/composite plates of 1.00 x 1.00 x 0.05 meters under each support.
- **On Soft/Grassy Ground:** In addition to the standard plates, use larger support plates (e.g., 1.50 x 3 meters) to spread the load more evenly. **Note:** The final decision on whether the ground support is adequate is the responsibility of the operator, based on their assessment of the ground conditions (e.g., drainage, soil stability, etc.).

6.2 Operator's Responsibility

- If you are unsure about the stability of the ground, the operator should consult with a civil engineer or a professional experienced in assessing site conditions

7. Inspection and Replacement of Rubber Blocks

Configuration of the Rubber Blocks:

- Rear: 2 blocks
- Front (under the bench): 8 blocks

Replacement Interval:

- **Standard Replacement:** The rubber blocks should be replaced every 5 years.
- **Accelerated Replacement with Intensive Use:** Replace sooner if there is any play (movement) noticed in the rear or the bench. This can be checked by pressing your back against the bench and feeling for movement.
- The manufacturer strongly suggests replacing old rubbers for a new type provided by the manufacturer

Action:

- **Daily Check:** Perform this check at least once per event/fair. Replace immediately if any play is noticed.

Rubber Quality and Specifications:

- Always use rubber blocks that meet the specified quality and density standards. These parts can be ordered directly from Kolmax to ensure they meet safety requirements.

8. Replacement Criteria

- **Jacks:** Replace the jacks if any structural deformation is observed or if they do not remain stable during use.
- **Rubber Blocks:** Replace every 5 years, or immediately if signs of wear or play are detected during inspections.
- **Shaft and Drive Components:** Replace if cracks, fatigue, or excessive wear are found during NDT inspections.
- **Equalizer Bar:** Replace if the bar cannot be levelled correctly or if there are signs of damage affecting its operation.

9. Operator's Responsibility

Operators are required to follow the guidelines in this bulletin and keep detailed logs of all inspections, maintenance, and any issues that arise. These logs should be available for review by inspection authorities at any time.

CONTACT DETAILS:

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MANUFACTURER ISSUED 12-YEAR MANDATORY INSPECTION OF MAIN SHAFT

To ensure the safety and reliability of the "Lambada" amusement ride, Kolmax Plus s.r.o. has decided to implement a mandatory 12-year inspection of the main shaft. As the rides get older, it is important to pay extra attention to critical components like the shaft to identify and address any potential issues early.

Why is this inspection mandatory?

1. Safety

A thorough inspection, following the highest standard, ensures that hidden problems are detected and resolved. This greatly reduces the risk of accidents.

2. Consistency

By making this inspection mandatory, we guarantee a uniform safety standard for all "Lambada" rides. This protects the reliability of the ride and ensures that all rides meet the same high safety standards.

3. Legal Compliance

In many countries, regular inspections for older rides are required by law or strongly recommended. Complying with these rules helps prevent legal issues and ensures ongoing compliance with safety regulations.

4. Public Confidence

The public will have more confidence in the safety of the ride when they know that it undergoes a mandatory, thorough inspection every 12 years.

How is the inspection carried out?

The inspection must be conducted every 12 years by an authorized inspection body. This involves fully dismantling the shaft and checking it for signs of wear, fatigue, or defects. However, if your inspection body uses a method that allows for the safe and complete inspection of the shaft without dismantling (phased array), this method may also be used. It is important that this inspection is scheduled and carried out on time. Kolmax Plus s.r.o. will provide support and guidance to ensure that this process runs smoothly.

Please note: This inspection is in addition to all regular maintenance and inspection requirements set by Kolmax Plus s.r.o. The goal is to ensure that the ride remains safe in the long term.

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