

Mechanical Play Equipment Management

Incidents involving Mechanical Play rides are uncommon, but when they occur it usually results in some level of injury and them can lead to recrimination. There are however management steps which if applied, may prevent a number of those incident occurring, apart from operator error or public not following advice whilst the ride is in motion.

Other than user error or operator error, failures that occur are usually caused by poorly designed or maintained equipment, failure of the trackway caused instability or tyre failure, poor inspection before use, and not ensuring equipment has been inspected by an external engineer in accordance with statutory duties.

Like all equipment we use in our industry, the design and manufacture are a key component. That is supported by thorough inspections before each use and structure/integrity inspections by a competent person at least 3 monthly.

It makes no difference whether the attraction purchases a Play Equipment from a supplier, or whether they make them themselves, they still must be built to a standard that prevents failure or instability when in use. The person who designs or makes the Play Equipment is responsible for making sure they are designed and manufactured so they are safe and stable. They must ensure they have considered what can fail, what circumstances will cause the failure, and ensure the resultant effect is contained so the passenger is not put at risk. They must also ensure they are fitted with the correct safety equipment to ensure the passenger is safe when getting in, when the ride is in motion, and when the passenger is getting out. Legislation is very clear on these requirements and prohibition from use will be applied if the Play Equipment is not compliant.

These rides are very popular, and it is not the intention of this alert to stop the activity from happening, just to ensure Operators have sufficient information to ensure they have effective controls in place.

Like all operations on your attraction, you must ensure you have a properly considered risk assessment in place and your controls measures properly introduced. Staff training and monitoring are most vital to ensure those controls are followed.

The measures highlighted in BOLD are essential to maintaining legal compliance and achieving the standards required.

1. **Most Mechanical Play Equipment falls within the definition of BS EN 13814, “Fairground and Amusement Park machinery and structures –Safety”. They require a management scheme to be operated by the Operator and subject to an annual ADIP Inspector completed by a registered ADIPS.** Advice on compliance with this standard can be found at <https://www.hse.gov.uk/pubns/books/hsg175.htm>
2. **That which does not fall within the scope of BS EN 13814 will still need to comply with the general duties place on the Designer, Manufacturer and Operator.**
3. **The structure, design and stability of the equipment MUST be risk assessed before the operation of the ride. The structure and stability risk assessment should be completed by the designer or manufacturer and advice given to the operator regarding any limitations that should be imposed due to the design.**

4. **Likewise, the track and the suitability of the track for the ride experience you are wanting to achieve must also be risk assessed before the ride commences, and the risk assessments reviewed periodically. Weather conditions and ground stability will also be part of that assessment.**
6. **You must complete a risk assessment for this area of your activity and either have completed the installation of control measures or you can demonstrate a planned delivery of the controls.**
7. **Make sure you have both Manufacturers User and Technical Handbooks for the equipment you use.**
8. **Make sure any equipment that is redundant or temporarily unfit for use is obviously identified and not able to be used.**
9. **Play equipment that is unfit for use and cannot be removed must be physically blocked off from use. Signs and bits of tape are easily taken down or can become detached.**
10. **Make sure you have a maintenance record file for each item of equipment which shows their service and repair.** The record should show not only what has happened but also what is planned to happen. This is known as a Planned Preventative Maintenance Programme [PPMP].
11. **All plant and equipment should be subject to a PPMP.** By following the process below, you will ensure the item of plant or equipment is operated and maintained to as high as practicably possible level of efficiency:
 - An individual identification number.
 - A selection process and monitoring programme to ensure it is “Fit for Purpose” which reflects the requirements described in the Manufacturers Handbooks.
 - A specified Daily or Weekly inspection process operated by the members of staff who are trained and directed to complete the inspections before its use.
 - Daily / Weekly checklist inspection processes that identify what is to be checked and what is considered safe for use.
 - A periodical Structure and Integrity Inspection, at least every 3 months, by an internal Trained member of staff to ensure the equipment remains fit for use and not in the process of failure.
 - A defect reporting and management procedure that ensures the defect is dealt with in a timely manner. Such a system will also stipulate what defects renders the item of plant and equipment Unsafe for Use.
 - The defects system that ensures a signature of inspection before the item of equipment returns to operational duty. A senior member of the operational staff should complete this signature.
12. **Make sure your Play Equipment complies at the point of manufacture and supply, that you complete the maintenance inspections at least every 3 months to ensure the fitting and structure are consistent with the manufacturer’s information. By following the steps below, you can be sure you are able to demonstrate compliance. If you are unsure of the standard the equipment was designed under, ask your supplier for assurance.**
13. **Ensure you have a copy of, and you are following, the manufacturer’s guidance on inspection and maintenance at all times.**
14. **Do not exceed their recommendation’s regarding speed, numbers of occupants or stability of the ride.**
15. **The seat supports, the tyres and the Play Equipment must be checked before each ride.**
16. **Ensure a member of staff, properly trained, inspects the ride and the route before you start a day’s operations.**

Electrical Testing and Inspection

Electrical equipment is one of the areas that require inspections by Competent Persons. You are required to implement different inspection regimes depending on whether the equipment is a fixed installation or portable.

17. **Electrical equipment must only be inspected by a registered electrical engineer, who carries out the statutory inspections according to a fixed schedule. That being so, untrained persons cannot complete it. A record of that inspection must be available on request by any visiting inspector or an electrical engineer who may be working on or with that equipment.**
18. **All fixed installations will be:**
 - **Routinely inspected on a specified interval depending on its use or condition.**
 - **Inspected following any major intervention work.**
 - **Inspected following any significant damage or significant unplanned service interruptions other than power cuts.**
 - **Inspected following all extension of any electrical wiring circuits.**
19. **All Portable Electrical Appliances will be subject to a Portable Appliance Test [PAT Testing] at an interval deemed suitable by a Registered Electrical Engineer based on its use and its condition.**

Public Attraction and Mechanical Play Equipment

These items of equipment must be dealt with in a similar manner. We must remind ourselves that we cannot continually be present when some of this equipment is used; therefore, our provisions need to be more robust. In many cases we may also offer moving rides to people who do not understand the risks involved in misbehaving on equipment. **The safeguards you provide must be extended to include:**

20. **Properly designed with sufficient tolerances in the design to allow for some abuse when in use.**
21. Engine driven equipment that is used for public transport must be subject to some form of speed control so that the maximum desired speed cannot be accidentally exceeded. You may specify that a selected maximum gear will be sufficient. Where this control is used, make sure you have signified this on a driver / operator reminder notice on the equipment.
22. Key controlled ignitions fitted on self-driven equipment with engines.
23. **Head protection for users of self-driven equipment with petrol engines.**
24. Seating, seatbelts, and safety guards, where fitted and required, need to be fully operational and not frayed, broken, or cracked.
25. **Guard rails or fences must be designed to prevent persons from climbing over or under and thus gaining access to a dangerous or unauthorised area.**
26. **Steps and ladders need to be rigidly fixed and the steps defect free.**
27. **Sharp edges need to be rounded off where people are climbing or holding on for balance.**
28. Balance aids or balustrades fitted at the correct height to assist the intended user of the equipment.
29. Balance aids and balustrades must continue to offer the support that is not only desired, but also what it is perceived to provide. This is particularly important where rope balustrades are used as the rope may stretch and give.
30. **Hinges, Catches and Latches must be correctly selected, fitted and operate correctly in the way they are designed.**
31. A regular, at least daily, cleaning regime for all items of equipment. This regime must be supplemented by additional cleaning when accidental incidents occur.
32. **Age limits clearly identified where they apply.**
33. **Weight limits clearly identified where they apply.**

34. **Signage that gives clear instructions as to how the equipment is to be used and if possible, in picture format.**
35. **A method of locking off, locking out or immobilisation any equipment when a defect is identified that renders it unsafe for use.**

<https://www.hse.gov.uk/pubns/ais36.htm>

<https://www.hse.gov.uk/pubns/books/l22.htm>

<https://www.legislation.gov.uk/ukpga/1974/37/section/6>

<https://www.hse.gov.uk/pubns/books/hsg175.htm>