HAGS®

Inspection and Maintenance For Sports & Fitness Equipment

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Introduction

HAGS Adult Fitness Equipment
These products are intended for use by Youths and Adults and should be positioned to ensure they are NOT confused as 'Children's Playground Equipment'.
For further information on requirements for products of this type please refer to EN 16630 – Permanently Installed Outdoor Fitness Equipment'.
EN 16630 requires products to have appropriate labels and facility signage to ensure users fully understand their intended use and provide necessary warnings.

HAGS Multi-Sports Equipment
These products are not intended to be used by very young children and should be positioned to ensure they are not confused as 'Children's Playground Equipment'.
For further information on requirements for products of this type please refer to EN 15312 - Free Access Multi-sports Equipment.
EN 15312 requires facilities to have appropriate signage to ensure users fully understand their intended use and provide necessary warnings.

General
All HAGS Sports and Fitness equipment should undergo comprehensive routine and operational inspection and maintenance.
HAGS product warranties are only valid if the inspections and maintenance in this document are followed.
The frequency of inspection will vary with the type of equipment/materials used and other factors e.g.: heavy use, levels of vandalism, coastal location, air pollution, age of equipment.
Records of inspection and maintenance should be kept by the owner/operator in charge of the equipment, detailing what has been carried out.
If parts are discovered to be unsafe during inspection and cannot be replaced or corrected immediately, the equipment (or parts) should be secured against further use (immobilised or removed from site).

Routine Visual Inspection

Checklist ☑

A routine visual inspection should be carried out on a weekly base as a minimum. This should consist of the following as a minimum. In the case where the equipment is under intensive use or the object of vandalism, a daily check of this kind could be necessary:

a. Structure not bending, cracking, loosening. ☐

b. No loose or missing fasteners. All bolt covers and caps are secure. ☐

c. Surface finish: No damaged paint, rusting, other corrosion or deterioration and all surfaces are free from sharp edges. ☐

d. Foundation not cracked, loose in ground or exposed due to damage or deterioration of the finished surface used. ☐

e. Surrounding Surfaces not, damaged, puddling, with no contaminates or sharp objects. If a grass surface has been selected, ensure it is in good condition. ☐

f. Consumable (items that wear during use e.g. chains, ropes or bearings) items not missing bent, broken, loosened, worn. Each Sport or Fitness activity shall be tested with a suitable force to confirm the items function sufficient. ☐

g. All parts are secure and that there is no excessive movement between them which may lead to finger traps and any other traps. ☐

h. For Arena sports systems with self-closing gates; Ensure they are operating correctly and with an acceptable closing speed ☐

i. Any nets are in good condition with all attachment points secure. ☐

Operational Inspection

Checklist ☑

Operational Inspections should be carried out by trained operators (every 1-3 months) with the results recorded in a permanent log.
If anything is noticed below, please see maintenance procedure further on in this document and the product install guides that give specific information on parts. Care should be taken that the rate of wear and time to the next inspection is taken into account.
Each Sport or Fitness feature shall be tested with a suitable force to confirm its function.

a. Structures not bending,cracking, loosening, excessively corroded or other deterioration. ☐

Note: Special attention should be given to;

- equipment where stability relies on a single structural support.
- the area of the structure just as it enters the ground

b. Surface finis: no damaged paint, rusting, deterioration or contamination and all surfaces are free from sharp edges. ☐

Note: Particular attention should be made to the area of the structure just as it enters the ground.

c. Foundation not cracked, loose in ground or exposed due to damage or deterioration of the finished surface used. ☐

d. Site and Surfacing ☐
- Ensure that site is clear of all dangerous objects and rubbish and there are no trip points within the products Movement Space (Fitness) or Playing Area (Sports)
- If a grass surface has been selected, ensure it is in good condition.
- For more detailed inspection and maintenance of surfacing, please see separate section.

e. All fixings are tightened and have no protruding sharp edges. ☐

f. Welds show no visible cracks or corrosion. ☐

g. Ensure all moving parts are operating smoothly. ☐

h. Ensure any anti-slip surfaces (Fitness product step & seat treads) are still in serviceable condition. ☐

i. Ensure all parts are free from sharp edges. ☐

j. Plastic items including mouldings, panels, plugs, spacers etc., are secure and not broken, loose, cracked, sharp edges, burnt, deformed, due to UV light have any signs of embrittlement or missing. ☐

k. All wooden items are not broken and have no sharp edges or splinters. ☐

Note: All wooden items are prone to expansion and contraction that may cause temporary splits. This will depend on climate and temperature variance. Any cracks should be monitored to ensure they do not grow sufficiently to be a finger trap.

- Give a detailed check of all timber parts to confirm if any rot/degradation is present that could compromise its structural capacity. For structural wooden parts going direct into ground please pay extra attention to the area where the post enters the ground, until it reaches the concrete foundation. If the ground is prone to retaining water or flooding then extra attention needs to be taken.
- Special attention shall be given to dynamic items and those that rely on one post for their stability etc.
- To determine the condition of the timber, part of the evaluation can be to use a sharp tool (knife, screwdriver or similar) and push that into the timber at several places. The tool shall not easily enter the timber and the resistance shall increase when pushing it harder. There shall be no sign of softness in the timber. Please compare with a fresh timber unit. Any cracks in the timber can also lead to rot establishing from the inside.
- If any concern occurs please contact a local timber expert or contact HAGS for further advice. Where necessary products must be taken out of use, until a further investigation has been completed.

l. Ensure all product use labels (Fitness products only) and facility signage is still legible ☐

Fitness products only:

m. Ensure that all external buffers are securely in place and not broken, loose, cracked, burnt, deformed. For items with internal buffer stops, manually manipulate the product, rotating hubs to the stop position, applying a suitable force to any cantilever arms and listen/look for signs of metal on metal contact, crushing points or squeaking (indicating a buffer may be dislodged, damaged or worn). A use test is also helpful to confirm suitability, in addition to the manual manipulation. If there is any doubt, the buffers should be replaced immediately. ☐




n. Fibre Rope; ☐
• Ensure the rope is still firmly twisted together, without any finger trap points, paying particular attention to connection points.
• Ensure any damage is made good. If the damaged areas reduce the cross section of the rope, to less than 70% of its original size, it should be replaced.

o. Friction pad thicknesses on hand and foot cycle mechanisms (including Trinity) should be assessed by rotating the cranks and listening for sounds of metal on metal contact (which would indicate excessive wear) To prevent excess wear to friction pads and minimize the needs for other replacement parts it is recommended that the cranks and cover plates are removed annually and the thickness of the friction pads are measured, minimum recommended thickness 2mm. ☐

Multi-Sports products only:

p. Ensure any self-closing gate is operating correctly and with an acceptable closing speed. ☐

q. Ensure hinge pin on the DICTATOR Tube Gate Closer is lubricated. ☐

r. Ensure ball stop nets are still securely in position. Check all cables, connections, net tie-off points and net fibres. Any damaged or missing parts should be replaced. ☐

Inspection results faults log

Date	
Faults noticed	
Faults corrected	
Faults outstanding and need further action	
Name	
Profession	
Signature	

Annual Main Inspection
(not exceeding 12 months)

A detailed inspection should be carried out by a specialist engineer and the results of such inspections entered into a permanent record. The inspection is intended to establish the overall safety of the equipment, Integrity of internal buffer stops and friction pads, foundations and surfaces. The operational inspection log should be reviewed as part of this inspection.
Special attention should be given to assess the effects of weather, presence of corrosion and any change in the level of safety of the equipment as a result of repairs made, or added or replaced components.

N.B. This type of inspection may require the equipment to be taken out of use, as some parts may need to be dismantled to inspect fully.

Surfacing

For Fitness products; any Impact Attenuating Surfacing should undergo comprehensive routine and operational inspection and maintenance in accordance to the recommendations of EN 16630.

For Multi-sports products; there are specific requirements for Impact Attenuating Surfacing, as access to elevated positions should not be encouraged. The choice of surfacing should be determined by specific user and site requirements assessment.

The frequency of inspection will vary with the type of surface/materials used and other factors e.g.: heavy use, levels of vandalism, coastal location, air pollution, age of equipment, location adjacent trees. The type of equipment will also have an effect, with high intensity products being expected to wear and reduce the expected life of the surface more quickly. When an existing surface is viewed as being no longer effective it should be replaced.

For all types of impact attenuating surfacing particular attention shall be given to the effects of ageing (exposure to UV, heat, cold), pollution, causing degradation, or loss of the impact attenuating properties.

If areas are discovered to be unsafe during inspection and cannot be replaced or corrected immediately, the equipment (or parts) should be secured against further use (immobilised or removed from site).

Note: Lack of maintenance may reduce the impact attenuation properties of the surface and reduce its performance from the original EN 1177 test performance.

Routine visual inspection

A routine visual inspection is recommended. This should consist of the following (same as Operational) as a minimum, in the case where the equipment is under intensive use or the object of vandalism, a daily check of this kind should be necessary.

Operational inspection checklist

Operational Inspections (1 to 3 months intervals) should be carried out by trained operators with the results recorded in a permanent log.

General

a. Surface not compacted, damaged ☐

b. .Surface is clean and has no contaminates, sharp objects, mould growth or obstacles. ☐

c. The surface is draining well, with no water puddles or soft areas. ☐

Additional specific checks for Rubber wet pour

a. Surfaces not cracking and still bonded to all perimeter edges and equipment up-stands. ☐

b. Surfaces and the containment are free from protruding hard/sharp edges. ☐

c. Surfaces are free from contaminates or sharp objects. ☐

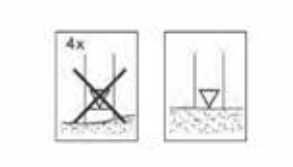
d. Surfaces are not vandalised, burnt or excessively worn. ☐

e. Surfaces are not slippery; free from leaf build-up or other organic growths. ☐




Additional specific checks for Loose Fill

a. If a loose fill surface has been selected, ensure it is in good condition and that it is of sufficient thickness to coincide with the 'Basic Level Marks' on the equipment up stands. Pay particular attention to high use areas. ☐



b. Particles have not consolidated and within the expected size range. ☐

Additional specific information for Grass/Turf

a. Ensure the grass is still in good condition, with no bare muddy patches ☐

Note: For Fitness equipment; materials such as grass have some limited impact attenuating properties and experience has shown that if well maintained, they are effective for certain fall heights and may be used without the need to conduct a test (subject to EN 16630 and national recommendations). If not adequately maintained their impact attenuation is significantly reduced.

Additional specific checks for rubber Grassmatt type surfaces

a. Ensure under-lying grass is still in good condition, with no bare muddy patches. ☐

b. Ensure the rubber mats have not significantly consolidated into the under-lying soil. ☐

c. Check adjacent mats are still securely connected and perimeter edges secured, with no trip points. ☐

Note: The performance of Grassmatt surfaces relies on the underlying soil conditions, together with the promotion of good grass growth. This can vary from site to site and can also change seasonally or over time. The installation of the product should be continually monitored and maintained as required.

Annual main inspection (not exceeding 12 months)

A detailed inspection should be carried out by a specialist engineer and the results of such inspections entered into a permanent record. The inspection is intended to establish the overall safety of the surfaces.

Maintenance procedure

Whilst any maintenance is carried out the equipment must be secured against use and the public warned of any risks associated with the work.

Any parts replaced must comply with HAGS specifications.

See installation guides for part number, part identification and information of disassembly and assembly.

Clean all equipment once a year unless the provision is within 1500m of the sea in which case it should be carried out every three months. To remove dirt, mould, contamination, salt deposits etc. with mild detergent solution (do not use strong solvents or solutions containing chlorinated hydrocarbons, esters, ketones or abrasive cleaners or polish) using a soft cloth, sponge or brush. Special attention should be given to walk areas, foot and seat supports, handrails and horizontal surfaces. As required, please clean surfaces with a suitable graffiti remover.

Powder Coated Finish.

Periodically our products should be inspected for mechanical damage, and we recommend that the powder-coated finish components be cleaned with a mild detergent solution and soft cloth. This should be carried out at least once a year, unless the provision is within 1500m of the sea in which case it should be carried out every three months.
Any identified breaks or scratches in coating surface, should be made good within a month:
- any bare metal should be thoroughly abraded with a fine grade sand paper to remove any corrosion
- clean area with a non-aggressive solvent.
- immediately repaint using HAGS touch up paint. Please contact your HAGS representative for further advice. If bare metal please use zinc rich primer before top coat.

Avoid any refurbishment work in direct sun or in temperature less than +10 degrees.

Particular attention should be paid to the areas adjacent to stainless steel components where corrosion on bare steel would be accelerated.

Galvanized Steel Components

Any damage or scratches in the coating surface identified should be made good within a month:
- any bare metal should be thoroughly abraded with a fine grade sand paper to remove any corrosion
- clean area with a non-aggressive solvent.
- then immediately repaint using a suitable cold galvanizing application.

Avoid any refurbishment work in direct sun or in temperature less than +10 degrees.

Polyethylene (plastic engraved), HPL/MEG (full colour printed) Panels, Plastic mouldings

Normal grime deposits can be removed from the installed panels with common, non-abrasive, household detergents using paper towels, sponges or soft cloths. Always avoid excessive rubbing or wiping and the use of instruments that could cause abrasion or scratching. Rinsing is recommended to remove all traces of detergent and it should be dried thoroughly to avoid leaving marks.
Graffiti can be removed from Polyethylene panels with a suitable detergent or graffiti remover.
MEG panel's chemical resistant composition and closed structure prevent spray paints, various inks, emulsion paints, lipstick and crayons from sticking to the surface and penetrating the material.
No preventive anti-graffiti treatment is necessary. If the surface of a MEG panel should be defaced by graffiti, and for any special cleaning requirements, please contact HAGS for advice.
Should any panels need replacing, please refer to the products Installation Instructions for replacement parts.
All HAGS plastic products are UV stabilised to provide a long trouble free life. However, after extended UV exposure some colour fading and material embrittlement can be expected. This will vary depending on the location and orientation of the products, but after a period of 10 years in normal environment, all products should be regularly checked for signs of embrittlement and replaced as required.
Any cosmetic damage to panels, including wear or colour fade should be monitored with panels being replaced as required.

Buffers

These should be replaced with new when required.

Fitness Products Only;

Bushes and bearings
If any noise or squeaking occurs or if it does not run smoothly, please apply universal grease or silicon spray. Make sure any over spill is entirely cleaned off.
If motion is still an issue or if the bush, bearing or swivel has worn out, replacement will be necessary. As a guide we recommend more than 0.5mm movement within component would require replacement.

Hand and foot cycle mechanism - friction discs (8005779)
These should be replaced with new when required.

Multi-sports Products Only;

Entrance Gates self-closing mechanism.
Attention should also be paid to ensuring the necessary adjustment and lubrication of hinge points to ensure an acceptable closing speed.
The self-closing mechanism is a 'DICTATOR RTS-E Tube Gate/Door Closer.
Web: www.dictatordirect.com

Apart from periodic inspections to ensure that the gate and RTS are correctly aligned and that the RTS unit is in working condition it is advised to occasionally re-apply a heavy grease to the plastic cable guide where it enters the main body of the unit.

Retiring old equipment

At the end of its working life HAGS equipment may be dismantled and the component parts sorted by material type for re-cycling and or disposal.

Please refer to the HAGS installation instructions for erection sequences, tools required and any Safe Working Practices that may be required.

Once dismantled parts may be sorted by material type:

1. Mild Steel – All powder coated parts, bolt fixings etc
2. Stainless Steel – Bolt fixings.
3. Galvanised steel parts
4. Thermo plastics – graphic panels, rota-moulded items, post/bolt caps etc.
5. PUR parts – handles
6. Rubber
7. HPL/MEG – (High Pressure laminate) Some printed graphics
8. Wood
9. Aluminium

HAGS would urge that wherever possible parts are passed to on to specialist recycling companies.

Inspection and Maintenance

For

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