

Fitness Equipment – Maintenance, Inspection, and Best Practices

Allianz Risk Consulting

Introduction



In general terms, fitness machines have an average life of ten years. Most equipment has built in service checks for the life of the equipment similar to a maintenance schedule for an automobile. For example, the service plan may call for a belt change on a treadmill every two to three years or 15,000 miles. Retain a copy of the manufacturer's maintenance schedule and follow it for the life of your equipment. Also ensure that proper documentation is maintained of your inspections and maintenance.

Ten years is a general rule of thumb, but there are many variables that will determine the actual life of your equipment including your maintenance practices and frequency of use. One critical step to maintain machinery with electronic components is keeping dust out of the circuitry. Daily wipe-downs with anti-bacterial wipes not only provide better hygiene for users, but sweat is very corrosive and may cause long-term trouble for parts. Vacuuming the inside and outside of equipment on a regular basis may also prolong the useful life of your equipment.

Most manufacturers suggest a daily inspection of fitness equipment to check for worn and damaged parts.

If the integrity of any piece or part is in question, "tag out" or remove the machine until the applicable repairs can be completed by the manufacturer or service contractor. It is imperative to create a best practice for prohibiting the use of a machine while it is out of service, which should include a lock out tag out procedure (unplug the machine and install a plug lock), signage on the equipment indicating it is out of service, and notification to residents or guests.

Provide signage that relates to the proper age and use of equipment. Most of the equipment will come with an age designed criteria so use this as a guide to the specific age ranges for all machines. The signage should also warn potential users that if there appears to be any malfunction or other obvious damage, do not use the equipment and report the problem to management.

Risk Transfer

During the vetting process for new equipment, consider the manufacturer's warranty and service warranty of the retailer/distributor. Read all warranties carefully and keep copies on file. Fulfill all consumer requirements within the warranty to the letter. If no current maintenance contract is in place for your equipment, consider engaging a third party service provider. ***Require the service vendor to include your organization as an additional insured on their insurance policy. Craft a formal service contract with language indemnifying and holding your organization harmless for the negligent maintenance and repairs performed by the vendor.*** Review of contracts by legal counsel is strongly advised in order to optimize your protection. Lastly, obtain a copy of the vendor's certificate of insurance ("COI") evidencing adequate coverage for workers' compensation, general liability, and auto liability.

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Specific maintenance and inspection criteria for commonly used equipment:

Cable Motion Weight Machines Parts & Attachments

Cable attachment bars and associated parts such as triceps ropes, bars, straps, attachment grips, row handles, lat bars, straight bars, curl bars, ankle cuffs and straps, abs strap, etc., should be inventoried and inspected. A daily inspection is recommended for this equipment and should focus on the following parts and features:

- Cables, pulleys, crimps, thimbles, stake-eyes, ball stops, and weight pins should show no visible signs of wear or misalignment. For instance, frayed cables, misaligned pulleys, loose cable crimps, etc., should be documented and the equipment closed until repairs and/or replacement is complete.
- Inspect the rubber grips on the equipment and all attachments for wear and slippage. Keep grip glue on hand for easy repairs.
- The attachment hardware for the bars and other pieces to the cable must also be given attention. Worn and non-functioning snap hook links, S hooks, and C clamps are often in use and may go unnoticed for long periods. When these parts fail, the attachments can cause serious injury to users and bystanders. Keep extra attachment hardware on hand at all times. A snap hook link is the ideal attachment when it includes a safety screw.

Motorized and belted machinery (tread mills):

- Visibly inspect for belt deficiencies including uneven wear, fraying, snags, and cuts on a daily basis
- Weekly Inspection:
 - View the deck for groves and excessive wear
 - Check the belt seam for deterioration and breakdown
 - Warning signs for improper belt function or misalignment include:
 - The belt sticking to the deck and drums
 - Pulling of the belt to one side of the deck
- Semi Annual maintenance should include lubrication, belt alignment and tensioning. Third party maintenance personnel or properly trained employees (if under warranty, always follow manufacturer's instructions) should also remove motor covers and

clean excess carbon, check belt drives for wear and clean the drums/rollers

Elliptical:

- Daily maintenance: Inspect footpads, pedal carriages, and other parts are secure and safe for operation. Cleanliness is also very important. Keep dust, liquids, and other debris off the machine.
- Monthly maintenance: Inspect the power cord and foot/handgrips for damage. Make sure the pedestal and other parts are secure, and that screws are tight.
- Semi Annual maintenance:
 - Turn off and unplug the unit
 - Remove the cover and vacuum. Avoid bumping wires and electronic components.
 - Check drive belt for wear. Replace if cracked or damaged.
 - Align pulleys as required.
 - Inspect stride operation. Lubricate ball bearing.

Exercise Bike:



Besides equipment sanitation, daily inspections should include engaging the drive train to test for vibration in the pedals. Keep the proper tools on hand to tighten pedals and drive train tension, when necessary. Depending on frequency of use, weekly and monthly maintenance requires:

- Inspect and tighten all hardware, protective covers, straps, seats, handle bars, etc.
- Examine the pull pins in the frame for marring and excessive wear. Pull pins are used to adjust the seat, handle bars, and even the resistance for the bike.
- Remove the flywheel cover and inspect the resistance pads for debris and wear. Use a silicon lubricant per the manufacturers' suggested maintenance guide for the pads.

- Lubricate the drive chain. Some models have a small hole towards the back of the chain guard on the top side where a straw can be inserted to add lubricant while other models require you to remove the cover. Rotate the crank slowly while lubricating the drive chain.
- Clean and lubricate the brake tension rod while inspecting for signs of wear such as missing threads.

Resistance Bands (exercise belts):

- Resistance bands should last approximately six months under normal use, but consider more frequent replacement if they are used heavily.
- Inspect the bands daily for cuts, cracks, nicks, scratches, punctures, discoloration, or weakened areas. Carefully inspect the area where the handles are connected to the band.
- Because these items are frequently misused, display instructions in a highly visible area. Parameters are usually provided by the manufacturer. Besides the band breaking, releasing the band while under tension also causes many accidents.
 - Prohibit guests from attaching the bands to door frames or fixtures.
 - Bands should be used on a level and smooth surface.
 - Instruct users to remove watches, rings, or bracelets which can rub on the bands and cause damage.
- Clean the bands by wiping them with a damp cloth (no anti-bacterial wipes). Do not use soap or chemicals to clean. Avoid storing near heat sources or direct sunlight or in cold environments, this weakens the belt and alters the elasticity.
- **DISCARD DAMAGED BANDS IMMEDIATELY. Do not attempt to repair them.**

What to do if an incident occurs:

Do not admit fault or liability and do not mention insurance. Ask the injured party if he/she desires medical attention. Collect contact information from the claimant and witnesses including name, address, phone number, and date of birth. Record a description of the incident and obtain photos, diagrams, claimant and witness statements, surveillance camera footage, etc. Ensure your maintenance personnel or service contractors do not alter the equipment in any capacity before the claim investigation takes its course. Tag out the equipment so it cannot be used. All the aforementioned actions assist the Claim Adjuster in defending and mitigating the incident, thereby reducing claim costs.

