



TRI PHX LLC *dba Obstacle Builders*
1836 W Straight Arrow Ln
Phoenix, AZ 85085

860.378.4556
contact@obstaclebuilders.com

SBA WOSB ID#: 9EDX9 • SAM#: YSWVK8AP9MQ4 • CAGE#: 9EDX9 • DUNS# 839202772

Maintenance Guidelines for Obstacle Courses

Purpose and Overview

To maximize the operational life of your obstacle course elements and towers, it is essential to follow these maintenance protocols. Please note that all wood materials are subject to natural weathering from environmental exposure over time.

Safety Inspections

Before every use, instructors and participants are required to conduct a thorough visual inspection of the obstacles, rappel tower, and observation deck. Check for signs of damage or significant wear, including:

- Hardware stability (ensure no loose components)
- Integrity of ropes, cables, and shackles
- Material condition (check for cracks, splinters, or frays)
- Safety gear and anchor points (verify all quick links and mounts are secure)

Maintenance of Wood Surfaces

Our wooden poles receive pressure treatment and an initial sealant application on end grains during installation. To maintain protection, a full secondary sealing of all wood components is mandatory 90 to 120 days post-installation, once the wood has fully dried and absorbed the initial chemicals.

Sealant

All wooden surfaces must be treated with a wood sealant that is appropriate for the weather conditions the structures will encounter. While this document cannot take into consideration all conditions, Thompson's Water Seal or similar is extremely effective in most applications. Please speak with a local paint reseller for guidelines in purchasing the best penetrating wood sealant for your conditions and apply to all wooden surfaces based upon the manufacturer's guidelines and schedule.

Wood and pole end grains that are exposed to the elements will provide an easy access point for moisture and bugs and should be sealed with an appropriate end grain sealant; this is commonly a "tar-type" of consistency and much thicker than the penetrative water seal as listed above. Check with your local paint or hardware supplier for the appropriate end grain sealant and apply based on the manufacturer's guidelines and schedule.

Timber-based obstacles inherently involve risks of minor abrasions, cuts, or splinters. Although our team performs initial sanding on evident splits, these characteristics are natural to wood-constructed courses.

Materials

Depending on the specific design and load requirements, weight-bearing supports are made from either logs or dimensional lumber.

- Structural supports consist of 6x6 ground-contact, pressure-treated dimensional lumber, complemented by braces and supports of equivalent dimensions.
- Weight-bearing logs are comprised of pressure-treated pilings, typically 10" to 12" in diameter, selected according to their specific mechanical role.

Platforms and wall faces utilize application-specific pressure-treated dimensional lumber. These components necessitate regular monitoring for wear resulting from heavy use. Before applying a new coat of sealant, perform light sanding to address any rough patches or splinters.

The 1.5" poly dacron climbing ropes are engineered for outdoor durability and resistance to dry rot. Based on environmental exposure and usage intensity, these ropes generally require replacement every 12 to 18 months.

Daily inspections are mandatory, as environmental factors, frequent usage, or misuse can degrade all materials. For security and preservation, we advise removing or storing ropes out of reach when the course is inactive.

Hardware Tightening

All hardware will be visually inspected daily before usage as listed above, and hardware should be mechanically checked for tightness every 21-30 days.

Through Bolts

Through bolts in wood poles, such as those used in the rappel tower, are typically tightened until they are "just snug" to avoid over-compressing and damaging the wood fibers, which can lead to splitting as the wood dries. Using the appropriate wrench, secure each nut until it rests firmly against the washer, ensuring the washer does not compress excessively into the timber.

Decking Screws

To maintain the structural integrity of the connections, stainless steel decking screws must be tightened with extreme care using an impact driver or drill. To prevent splitting the boards, over-sinking heads, damaging wood fibers, or stripping the joist, utilize a clutch-based tool set to its lowest possible torque setting.

Verify that the driver bit fits securely in the screw head before application. Gradually apply pressure to the trigger, tightening until the screw head is perfectly flush with the surface of the fascia or decking; continue this process for all remaining fasteners.

If overtightening occurs and causes damage, reverse the drill to extract the fastener. Carefully install a replacement stainless steel screw that is approximately ½" longer than the original to ensure a secure hold.

Structural Screws

Because structural screws are more durable than decking varieties, they require a clutch-based tool set to a medium torque level. Always confirm the driver bit is correctly sized and seated in the head prior to use, as using the incorrect tip can lead to stripping.

Work through the remaining fasteners by gradually squeezing the trigger, stopping only when the screw head is perfectly level with the pole or board surface and both the board and pole are joined snugly together.

Conclusion

With proper maintenance consisting of inspecting all elements, tightening hardware, sanding and sealing any rough or high-traffic areas with the appropriate coatings, your obstacle course should last for many years of safe and productive training.

Ropes, cargo, and safety nets will wear at a different cadence than wood surfaces and must be inspected carefully for excessive wear or rot due to weather conditions. Depending on your weather conditions and amount of usage, ropes and safety nets should be replaced every 1-3 years, and cargo nets generally last a little longer; replacement may be necessary every 2-5 years.

You can contact us to purchase new rope or nets if you choose to perform your own maintenance, for those who select the Expert Maintenance Program, ropes and net installation labor is covered by ongoing maintenance.