Care and Maintenance of Bike Parking Racks

Introduction

This document outlines the care, cleaning, and recommended maintenance of Sportworks racks. General guidelines and inspection apply to all rack metal and finish types. Refer to the subsections for additional instructions that apply to specific materials and finishes.

Storage, Transport, and Installation

To maintain optimal appearance of Sportworks bike racks, it is important to ensure the rack is not damaged or otherwise compromised during transportation, site storage, or installation. Racks should be stored inside or undercover, in a dry area with good ventilation to prevent entrapment of moisture. The original manufacturer's packaging should be maintained until racks are installed. Racks installation should be conducted after all other construction, painting, treating, and sealing processes have been completed.

Routine Inspection

Once installed, a routine inspection is recommended at minimum every six (6) months. High saline environments (marine areas, or locations where roads are salted) or high traffic areas with abundant particulates or pollutants warrant more frequent inspection.

1. Ensure that the rack is securely anchored to the ground by pushing and pulling against the rack sides. There should be no movement of the rack. If there is movement:
    a. For embedded racks in concrete, movement is typically caused by a gap between the rack and the concrete footings. Fill the gap with concrete or epoxy grout.
    b. For surface mount racks anchored to the ground, ensure that all the anchor components are intact and undamaged. Replace any missing or damaged anchor components. Then tighten all anchor nuts or bolts so that there is no rack movement when pushed or pulled.
2. Inspect all other components of the rack for structural integrity. Look for cracks near the welds, cuts, deformation, pitting rust or other abnormalities.
   NOTE: Thieves sometimes "pre-cut" a rack, then hide their cut with a circumferential sticker or duct tape.
3. If any structural issues are identified, it is recommended the rack be removed and replaced immediately, as it is no longer secure and may cause a safety hazard.
4. To obtain replacement or missing parts, contact Sportworks Support Department by phone: 425-483-7000, or by email: salesandsupport@sportworks.com

General Cleaning and Care (applies to all rack materials and finishes)

A. Surface Dirt Removal

- Use a soft nylon brush and mild soap or detergent to remove accumulated dirt.
- DO NOT use abrasives, especially on powder coatings.
- Rinse well with clean water.

B. Graffiti

- Graffiti "Safewipes" and "Afterwipes" are recommended to remove spray paint and permanent marker. These wipes are citrus-based (earth-friendly), and won't damage most finishes (powder coat, galvanizing, or stainless steel).

C. Removal of Stickers

- Utilize a plastic scraper (NOT metal) to manually remove as much of the sticker and adhesive as possible. Heating up the sticker with a heat gun before scraping may be necessary to soften the adhesive (be careful not to overheat powder coated surfaces).
- For powder coated racks, adhesive residue can be removed with a product like Goo Gone and a soft cloth. This process may be time consuming, but it won't damage the powder coat. DO NOT use abrasives.
- For stainless steel racks, acetone or Goo Gone may be used.

Stainless Steel Racks

Stainless steel is more resistant to stains, corrosion, and rust than mild steel because it contains more chromium and nickel to form a passive film of protective oxide. Stainless steel can still corrode and discolor in some conditions, but retain its strength and appearance, even in most outdoor locations.

To maintain the integrity and appearance of the rack:

- DO NOT cut, weld, drill, or grind mild steel near stainless steel as the mild steel particulates can adhere to the stainless steel surface, resulting in stains and rust.
- DO NOT use cleaning products that contain chlorides (such as muriatic acid) near stainless steel.
- DO NOT use abrasive elements. A fine-grade Scotch Brite pad is the most abrasive recommended.
- DO NOT use steel wool or steel brushes on stainless steel, as the mild steel bristles will deposit free iron on the surface of the stainless steel, which will cause red surface rust.
- DO NOT allow concrete detergents to contact stainless steel.
  Wrap or tarp the bike rack if detergents are used nearby. If contact occurs, immediately rinse the stainless steel and surrounding area with water.
- Severe corrosion (pitting rust, going deep into the metal) typically requires replacement.

In addition to the products recommended in the following sections:

- A citric acid cleaning kit for stainless steel can be supplied directly from Sportworks (Part Number: 101229).
- Rust remover called "Naval Jelly" is available at most hardware stores and works well to remove surface rust and discoloration.

A. Standard Cleaning

1. Using a soft cloth, apply a solution of soap or a mild detergent, diluted by warm water.
2. Rinse thoroughly with clean water.
3. To reduce spots, use a soft dry cloth to remove excess water.

B. Contamination with Mild Steel:

1. Using a soft cloth, apply an oxalic acid solution to the surface.
2. Let stand for several minutes.
3. Rinse thoroughly with clean water.
4. To reduce spots, use a soft dry cloth to remove excess water.

C. Mortar or Cement Spatter:

1. Using a soft cloth, apply a phosphoric acid-based stainless-steel cleaner (E-NOX CLEAN from Walter Surface Technologies works well).
2. Let stand for 30-60 minutes.
3. Neutralize the acid by applying an alkaline cleaner (UNO SF, also from Walter Surface Technologies is recommended).
4. Rinse thoroughly with clean water.
5. To reduce spots, use a soft dry cloth to remove excess water.

D. Removal of Oil, Grease or Adhesives

1. Using a soft cloth, apply a hydrocarbon solvent such as methylated spirits, paint thinner, isopropyl alcohol, or acetone to dissolve the product.
2. Rinse thoroughly with clean water.
3. To reduce spots, use a soft dry cloth to remove excess water.

E. Mild Corrosion (Surface Rust)

1. Using a soft cloth, apply a citric acid cleaner, such as Citrisurf 77 Plus (this product is included in the citric acid cleaning supplied directly from Sportworks (Part Number: 101229).
2. Follow application instructions supplied by the manufacturer.
3. Rinse thoroughly with clean water.
4. To reduce spots, use a soft dry cloth to remove excess water.

F. Moderate Corrosion (Start of Pitted Rust)

1. Using a soft cloth, apply a phosphoric acid-based stainless-steel cleaner (E-NOX CLEAN from Walter Surface Technologies works well).
2. Let stand for 30-60 minutes.
3. Neutralize the acid by applying an alkaline cleaner (UNO SF, also from Walter Surface Technologies is recommended).
4. Rinse thoroughly with clean water.
5. To reduce spots, use a soft dry cloth to remove excess water.

G. Surface Discoloration (Passivation)

In certain environments, stainless steel materials can develop surface discoloration. This are several causes of discoloration, primarily:

- Marine air or the use of salt on nearby roads and sidewalks
- Proximity to mild steel cutting or grinding, caustic or acidic cleaning operations such as treating brickwork

Passivation is a metal finishing process that prevents corrosion and corrects surface discoloration.

Required products, tools, and conditions:

- Citrisurf 77 Plus (this product is included in the citric acid cleaning supplied directly from Sportworks (Part Number: 101229).
- Scotch-Brite pad. 3M # 8447, very fine Grade 6, maroon color, non-woven aluminum is recommended.
- Oxide pad. Any Scotch-Brite brand pad is suitable. DO NOT use steel wool.
- A drop cloth can be used protect ground surfaces from overspray.
- Clean rags or paper towels.
- Access to water and a hose for rinsing.
- Personal protective equipment: eye, skin and clothing protection are recommended.
- Proper conditions – minimal wind, no direct sun or intense mid-day heat.

Instructions for use:

1. Ensure that the stainless-steel surface is dry, and free of grease, oils, and adhesive residues.
2. Protect ground beneath stainless steel with a drop cloth.
3. Spray CitriSurf 77 Plus on all stainless-steel surfaces, keep the surface saturated for 15 to 30 minutes (depending on the level of surface discoloration).
4. Use a Scotch-Brite pad to rub off surface corrosion and discoloration.
5. Remove all CitriSurf 77 Plus with clean rags or paper towels.
6. Rinse all surfaces and surrounding ground thoroughly.
7. Repeat process if needed to obtain desired results.

NOTE:

- CitriSurf 77 Plus is a water based. Be sure to turn off electrical currents prior to applying any water-based product to wiring or other conductive material.
- Surface coverage of a 22 oz bottle of CitriSurf 77 Plus is approximately 90 square feet.
- CitriSurf 77 Plus meets all the requirements of ASTM A967, A380, B600 and AMS 2700.
- For more information and to purchase stainless steel cleaning products, we recommend The Rust Store.

Powder Coated and Thermoplastic Coated Mild Steel

Powder coat and thermoplastic coating are available for mild steel racks and stainless-steel racks, providing a protective barrier to various environmental elements that will cause corrosion to bare mild steel.

To maintain the appearance of racks with this finish:

- Regular cleaning is recommended to maintain both appearance and life expectancy, especially if exposed to corrosive environments (industrial or marine locations, areas where salts are used to de-ice, etc.)
- DO NOT use acetates, dulon thinners, methyl ethyl ketone (MEK), acetone, or solvent-based products.
- DO NOT use acidic cleaners.
- DO NOT use hot water.
- DO NOT bend, as powder coatings are not flexible.

A. Standard Cleaning

1. Using a soft cloth or bristle brush, apply a solution of soap or a mild detergent, diluted by warm water. NOTE: Automotive type car wash detergents are generally safe for use on painted surfaces; however, a test in a small area should be conducted prior to widespread use.
2. Rinse thoroughly with clean water.
3. To reduce spots, use a soft dry cloth to remove excess water.

B. Scratched or Cracked Finish

NOTE: Deep scratches to the metal are not likely to be completely corrected, however follow the following steps can be used to improve the appearance of deep scratches and may remove surface-level scrapes.

1. Use sandpaper or an emery cloth to gently scuff scratches and the surrounding area, taking care to avoid undamaged areas.
2. Be sure to completely remove any visible rust.
3. Apply an exterior metal primer to the sanded area.
4. Allow to dry, following product instructions.
5. Apply matching color enamel to primed areas taking care to feather the edges of paint for a more seamless appearance.
6. Color-matched paint can be supplied directly from Sportworks.

C. White Finish has Muted, or Turned Brown

1. Utilizing a sprayer, apply a 3:1 mixture of warm water and bleach.
2. Let stand for a maximum of 10 minutes.
3. A soft cloth or bristle brush can be utilized.
4. Rinse thoroughly with clean water.
5. To reduce spots, use a soft dry cloth to remove excess water.

D. Re-welding has Caused Structural Damage

NOTE: In most cases, a replacement rack is recommended. Be sure that damage won't result in a safety hazard prior to attempting repair.

1. Completely remove all surface coatings from the heat-affected zone so that only bare metal remains.
2. Apply an exterior metal primer to the sanded area.
3. Allow to dry, following product instructions.
4. Apply matching color enamel to primed areas taking care to feather the edges of paint for a more seamless appearance.
5. Color-matched paint can be supplied directly from Sportworks.

Hot-Dip Galvanized Mild Steel

A hot dip galvanized finish is low cost and provides durability and corrosion protection. While a galvanized finish will appear rough when compared to zinc plated and powder coated finishes, galvanizing provides the highest degree of corrosion resistance. There may be brightness variations at the early stages of exposure, over time, the shiny surface will dull.

To care for galvanized mild steel:

- DO NOT use highly acidic cleaners (such as muriatic acid).
- Test any cleaners on a small area to ensure that it is not reactive with the galvanized coating prior to full application.
- In areas where the zinc coating is breached or gone, remove all red rust, then cover those damaged areas using a 99% pure zinc aerosol like IPS Labs cold galvanize corrosion inhibitor.

A. Standard Cleaning

1. Using a soft cloth or bristle brush, apply a solution of soap or a mild detergent, diluted by warm water.
2. Rinse thoroughly with clean water.
3. To reduce spots, use a soft dry cloth to remove excess water.

Anodized Aluminum

Anodizing is an electrochemical process that converts the metal surface into a decorative, durable, corrosion-resistant, anodic oxide finish. The anodic oxide structure originates from the aluminum substrate and is composed entirely of aluminum oxide. This aluminum oxide is not applied to the surface like paint or plating, but is fully integrated with the underlying aluminum substrate, so it cannot chip or peel.

To care for anodized aluminum:

- Use a neutral cleaner with a pH range between six (6) and eight (8).
- DO NOT use acidic or alkaline cleansers.
- DO NOT use cleansers that contain chlorine.
- DO NOT use baking soda, it may damage metal.

A. Standard Cleaning

1. Using a soft cloth or bristle brush, apply a solution of dishwashing soap diluted by warm water, or a product such as Bar Keepers Friend.
2. Rinse thoroughly with clean water, ensuring to completely remove any residue, as it may react with aluminum below the anodic layer and cause pitting.
3. To reduce spots, use a soft dry cloth to remove excess water.