

Maintaining Your Stainless Steel Products

Notice: Stainless Steel Products *cannot* be regarded as completely maintenance free.

Low maintenance depends largely on the care given to the product. Most Suncor Products are made of marine grade 316 or 304 Stainless Steel as specified in our catalog. These materials hold up very well in corrosive environments. Incidental salt water exposure will cause corrosion to any metal including 316 Stainless Steel if not kept reasonable rinse off and cleaned. However, 316 Stainless Steel will hold up in these environments given an appropriate amount of maintenance. Continuous submersion of materials in uses such as mooring , long term anchoring and underwater construction will require routine replacement depending on the environment. Corrosion and deterioration under these uses is inevitable and not considered a warrantee issue.

Working Environments: Working environments create aggressive conditions, and proper cleaning must always be done before using a Stainless Steel product when it is exposed to such an environment. Be very mindful of the kind of work taking place around your Stainless Steel products. If environment includes cutting and machining of other metals it is likely that particles of the other metals will be on the stainless steel products. Please be sure to clean stainless steel products thoroughly before exposing them to a corrosive environment.

Cleaning Products, Beware!: Most simple cleaning solutions, when used in accordance with their makers' instructions are safe for incidental contact with Stainless Steel, but if used incorrectly they can cause discoloration and corrosion on the surface of stainless steel by affecting the protective elements of the metal. Strong acid and chemical solutions (e.g. hydrochloric acid, muriatic acid, methylethylkeytone or "spirits of salts") are sometimes used to clean masonry, tiling and heavy paint clean up of buildings but they should ***never be permitted to come into contact with your stainless steel***. It is safe to assume that anything you would not clean the aesthetic surfaces of a fine automobile with should not come in contact with your stainless steel railings. If contact of such a solution should happen the solution must be removed immediately by copious water flushing and cleaning with a mild automobile detergent (car wash). Anything containing a harsh acid or chemical coming in contact with Stainless Steel will potentially cause reactions that can lead to corrosion.

Use of iron tools or cutting in proximity of Stainless Steel: The use of bare iron tools such a crescent wrenches, pliers, channel locks and allen wrenches should be avoided. Use tools with chrome plating . If such tools are used the iron deposits, though not visible, will rust and potentially cause the stainless steel in contact with it to rust. Cutting anything with a power saw in the proximity of your stainless steel will contaminate the area causing iron particles to be airborne rusting wherever they land. Grinding will also have the same affect. Any contaminated surfaces should be treated with copious water flushing and cleaning with a mild automobile detergent (car wash). We also recommend the use of a passivation fluid such as CitruSurf to guarantee the surfaces are clean and sealed.

Use of Fasteners with Stainless Steel: All fasteners should be the same grade stainless steel if possible. Mixing carbon steel and plated fasteners will cause corrosion where they meet the stainless steel. Nearby steel items, either attached to or over hanging can cause staining to spread. Mixing metals can cause "electrolysis" to occur creating staining.

General Maintenance:

Initial Cleaning: Always Clean your stainless steel thoroughly before installing with warm water and automobile or marine cleaner (mild car wash). Rinse thoroughly with fresh water. Follow with a protective cleaner and polish such a Prism marine polish. Field passivate any place where tools have come in contact with your stainless steel products. If you use passivation fluid you must wash the product thoroughly afterward.

Dis Coloration, Rust or extended submersion.: If you see dis-coloration or light corrosion on your stainless steel product you should field passivate the product. Follow instructions for field passivating below. Clean thoroughly per instructions after passivating.

Continuous maintenance; Advice is often sought concerning the frequency of cleaning, and the answer is quite simply "clean the metal when it is dirty in order to restore its original appearance". As a rule of thumb it is always good to rinse with clean water whenever you are cleaning other adjacent surfaces such as a boat deck. The best thing for stainless steel is fresh clean water and oxygen. Clean with a Polish as needed to maintain the desired luster, again we recommend a marine polish such as Prism. In submerged environments an occasional cleaning and application of polish will slow corrosion, but you will need to replace submerged parts routinely.

Field Passivation Instructions:

Cleaning First, as described above.

Use Passivating Spray, after you have cleaned the railing go back and spray the passivating liquid on the places where you suspect iron may have contacted the stainless steel product. Let stand for 30 minutes and clean the sprayed spots again.

Clean again and apply marine polish, per directions above.

Environmental Awareness

A clean, freshly machined and polished stainless steel part automatically acquires a protective oxide film from exposure to oxygen in the atmosphere. Under ideal conditions, this protective oxide film completely covers all surfaces of the part and improves with exposure to the air (oxygen). In actual practice, however, contaminants such as dirt, salt and dust carry particles of iron and other corrosive material that may be transferred to the surface of the stainless steel parts. If not removed, these foreign particles can reduce effectiveness of the original protective film and cause surface discoloration if not occasionally cleaned.

Continuous submersion of a stainless steel part will cut off oxygen to the surface and make it impossible for the stainless steel part to maintain a strong chromium oxide layer. As the chromium oxide layer breaks down the stainless will discolor broadly and the crevices made by connectors will begin to pit and deteriorate. Given enough time it is almost certain that the continuously submerged part will fail.