



## NRA MUSEUMS

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### Caring for Your Collectible Firearms

By Doug Wicklund, Senior Curator

*You are a collector.  
You collect things.  
You need to take care of them.*

No matter what you collect, taking care of what you collect just goes along with the territory. Some of us might collect only NIB, meaning “new in the box” items. Some others go for the rustiest relics and the overwhelming majority usually collect somewhere in the middle. Whatever your preference or level of interest, you have a responsibility to care properly for your collection.

This short handbook has been designed to give you the best chance to make the most of your collection and keep it in the best possible condition. Any firearm can develop common problems, problems that can directly affect your enjoyment of it as a fine collectible, prime investment or treasured shooting iron. It doesn't matter what you collect – these general rules of thumb will make the difference in whether you have a collection or not in the long run.

Your firearm is usually a composite object, made of wood and metal and perhaps some other materials. Taking appropriate care, or conservation, is not a process solely limited to museums – almost anyone can take steps to preserve their personal collection. No matter where you call home in the U.S.A., you'll first have to deal with two implacable enemies of your collection – temperature and humidity:

<i>Temperature</i>	Ideally, you should store your collection year-round at about 70 degrees Fahrenheit. Variations in temperature cause wood stocks to expand and contract. While wood is flexible, too much flexing from temperature changes can result in permanent cracks. Keep the temperature constant.
<i>Humidity</i>	A middle ground figure of 50% relative humidity caters to both wood and metal components. Too much humidity and the metal parts corrode. Too little and stocks start cracking. Keep the humidity consistent.

Keep your environment as stable as possible. Consider buying a humidifier for those winter months. If you are in a humid environment, consider getting a dehumidifier to lower humidity. What you are attempting to do is to establish a "plateau" of stability in temperature and humidity. Remember – it is the variation in temperature or humidity that can cause stocks to swell or contract.

### ***Perhaps the No. 1 question for any collector is: What exactly should I use to protect my firearms?***

You can purchase a host of patent greases, oils, and preservatives at any gun show or shop. But the simplest solution is as close as your hands. Handling your firearm, regardless of brand name, is loving it to a slow death. Corrosive oils and secretions from your skin can etch into any blued surface or case-hardened receiver quickly. Less handling means longer lasting. But not being able to handle one's collectibles is no fun. So buy some sets of white cotton gloves. Handling using the gloves will also tell you immediately if your gun is corroding – the gloves will show the red rust particles well before your eyes notice them. More than one set of gloves will come in handy with friends. Some collectors use latex or nitrile gloves instead of cotton gloves. These will keep chemicals from contacting skin, but you'll also miss out the ability to see surface particles as easily.

### ***Waxing on about Microcrystalline Wax: Tips for Application***

Any oil will evaporate and should be counted on for only short-term protection. So what lasts longer than oil? Any good wax, being more chemically stable than oil, takes longer to degrade. In the NRA National Firearms Museum in Fairfax, VA and the NRA National Sporting Arms

Museum at Bass Pro Shops in Springfield, MO, we use microcrystalline wax. A fine microcrystalline wax like **Renaissance Wax** gives excellent protection and is in use by many American arms museums including the Smithsonian Institution and Springfield Armory. Wax puts a thin layer, an inert barrier, between your firearm's outside surface and the surrounding toxic atmosphere of car exhausts, chemical residues, and even your best buddy's saliva. Wax, microcrystalline wax, is what you really need to protect your collectible firearms. Other wax products may not have a neutral PH and may have unwanted other components.

Waxing a gun, just like waxing your car, really protects it from the elements. Remember that nice carpeted rack they put in your new gun safe? That carpet could hold damaging moisture in contact with your firearm's barrel, promoting contact corrosion. You may need a dehumidifier in the long run, but until you get one, you would be better off to wax those surfaces and regularly check your gun for any issues. Any warm hand can melt through a wax coating, so using gloves protects that coating. When applying wax, you can use cotton gloves or nitrile examination gloves to keep that "aromatic wax smell" off your hands.

### ***How long does waxing last?***

If the protective wax coating isn't scratched, the surface underneath may be safe for weeks or months, even under less than ideal conditions. Wax should be considered appropriate for both interior as well as exterior surface treatment to provide additional protection. Sometimes this extra protection can come in very handy. Guns treated with wax fared better than oil-treated pieces in museums that were impacted by Hurricane Katrina.

### ***How much do I need to put on?***

Just a very thin layer is necessary. Microcrystalline wax generally comes in small cans and a single can will last you a long time. If you use gloves to apply the coating, by handling the piece, you'll spread the wax over the surface. For a shinier finish, just buff, polish, or rub the waxed surface with cloth. If you don't wish as high a sheen on the surface, just lightly buff.

### ***Do I need to clean my gun before applying wax?***

Yes, a light cleaning with a solvent (mineral spirits) and bronze wool will remove dirt and surface contaminants. The company that manufactures **Renaissance** brand microcrystalline wax also have created a cleaner, **Pre-Lim** that is formulated to prepare surfaces for waxing.

Why bronze wool instead of steel wool? The hardness of steel wool makes it unfortunately very easy to impact adversely on finished surfaces. When you use steel wool, you are distributing small particles of steel all over the surface of the firearm and these can rust even faster than the surface you are working on. If you don't get all the particles, guess where the next points of corrosion are going to start on your firearm?

Bronze wool is softer than steel and generally will not cause scratching of surfaces or impact fine bluing. At the Museum, we use old U.S. pennies (pre-1980) to serve as delicate scrapers for raised corrosion points. We will cover this topic in greater depth further on.

### ***Is wax what I really need to use for all my guns?***

Possibly not, if you have a firearm you intend to use for personal protection. It is also not the best choice for a gun that will be fired regularly. Residues from firing will build up fast on a waxed gun's surface and may impact functioning reliability. But if you don't plan on shooting your firearm for a while, consider wax as the best preservative treatment.

### ***Now that I've waxed, what else can I do to help my firearm?***

Now that you've waxed your collectible firearm, here are a few simple housekeeping hints:

1. Dust regularly. Dust can serve as the foundation for moisture being trapped on the surface, aiding corrosion.
2. Use a clean, dry cloth to lightly wipe dust. Do not use any spray dusting products which can contain acidic chemicals or leave an oil residue behind.
3. Remember to handle the firearm only with cotton gloves or other hand covering.
4. Don't store your firearm inside a container, like a cotton sleeve or gun rug. These can retain moisture.

### ***How often do you have to wax firearms at the National Firearms Museum?***

At the NFM, we are constantly cycling through the museum collection as part of our preventative maintenance program. Each morning and some afternoons, our staff is dusting or waxing in some of the exhibit cases that hold more than 3,000 firearms on display in the galleries. We sequence our cleaning efforts to that each exhibit is covered quarterly. The material stored in the museum vaults is also regularly cleaned and waxed as part of this program. We are constantly monitoring the temperature and relative humidity in these areas.

Firearms in the museum collection are regularly removed from exhibition for photography or research and the coating of wax does not need to be removed for this work.

We regularly wax any firearm that is traveling as part of a temporary exhibit outside the Fairfax galleries. The waxing before travel gives additional in-transit protection if a firearm is outside the normal humidity-controlled environment in our galleries and vaults. On their return, we will re-wax as part of the detailed examination we perform when pieces come in or go out.

Other materials we treat regularly with wax in the galleries include several bronze statues, furniture, leather, and elephant ivory tusks.

## ***Where can I get microcrystalline wax and gloves?***

**Gaylord Brothers Inc. (just one of many archival supply companies)**

P.O. Box 4901

Syracuse, NY 13221-4901

(800) 448-6160 [www.gaylord.com](http://www.gaylord.com)

**Renaissance Wax (you can get almost anything gun-related at Brownells)**

<http://www.brownells.com/gunsmith-tools-supplies/stock-work-finishing/stock-waxes/micro-crystalline-wax-cleaner-polish-prod236.aspx>

## ***One last point – know when to stop!***

If you are starting out as a collector or in cleaning firearms, collectible pieces can be adversely impacted by cleaning. You may want to check first with a professional conservator, an individual often found in conjunction with museums or in private practice.

## ***Condition Standards – Just How Good is What I Have?***

All collectors need a common ground to describe exactly what condition their pieces represent.

In the late 1950s, the NRA Gun Collectors Committee established the following condition standards for antique and modern firearms that are generally accepted throughout the country. If you are buying a firearm from another party, knowing these NRA condition standards allows you to determine how good or how bad the piece should be, well before you see it in person.

Keep in mind that condition standards seem to elevate one grade in the opinion of the seller and will often depreciate one grade in the perception of the buyer. For both buyer and seller to absolutely agree on finish percentage is not common.

## NRA Condition Standards for Antique Firearms

<i>Factory New</i>	All original parts; 100% original finish, in perfect condition in every respect, inside and out.
<i>Excellent</i>	All original parts; over 80% original finish; sharp lettering, numerals and design on metal and unmarred wood; fine bore.
<i>Fine</i>	All original parts; over 30% original finish; sharp lettering, numerals and design on metal and minor marks on wood; good bore.
<i>Very Good</i>	All original parts; none to 30% original finish; original metal surfaces smooth with all edges, lettering, numerals and design on metal; wood slightly scratched. Bore disregarded for collectors firearms.
<i>Good</i>	Some minor replacement parts; metal smoothly rusted or lightly pitted in places, cleaned or reblued; principal letters, numerals and design on metal legible; wood refinished, scratched, bruised, cracked or minor cracks repaired; in good working order.
<i>Fair</i>	Some major parts replaced; minor replacement parts may be required; metal rusted, may be pitted all over, vigorously cleaned or reblued; rounded edges of metal and wood; principal letters, numerals and design on metal partially obliterated; wood scratched, bruised, cracked or repaired where broken; in fair working order or can be easily repaired and placed in working order.
<i>Poor</i>	Major and minor parts replaced; major replacement parts required and extensive restoration needed; metal deeply pitted; principal lettering, numerals and design obliterated; wood badly scratched, cracked or broken; mechanically inoperative; generally undesirable as a collectors piece.

### ***More About Condition Standards***

Antique firearms are often perceived as being “display” pieces rather than shooting firearms. For several grades with antique firearms, the bore condition is disregarded. With modern firearms, the condition of the bore can be paramount and many shooter/collectors look down the bore more than at the exterior of a firearm.

A general convention held among collectors is that many older firearms are not readily found in high condition grades. Hearing that an example is in “good condition for a Dragoon” might be common in a group of early percussion Colt collectors, where many guns were exposed to heavy military usage. There are collectors that chose to collect firearms that have little to no original finish and are more likely to have seen heavy service. Some collect rusty relics. Other collectors opt for mint firearms that likely never were fired in anger and might have been stored away in a closet after original sale.

Related items, like original factory boxes, can add considerably to the value and collector appeal of any given firearm. Bear in mind that many of these items have been reproduced in recent years and many have been artificially “aged”. For any collecting field, consulting a good reference library on the subject before going further with the collection is the best strategy. A good book can easily save a collector a considerable amount before their next arms purchase.

### ***NRA Condition Standards for Modern Firearms***

<i>New</i>	Not previously sold at retail, in the same condition as current factory production.
<i>Perfect</i>	In New condition in every respect, but has been fired by previous owner.
<i>Excellent</i>	New condition; used; little to no noticeable marring of wood or metal; bluing perfect (except at muzzle or sharp edges.)
<i>Very Good</i>	In perfect working condition; minor wear on working surfaces, no corrosion or pitting; only minor surface dents or scratches.
<i>Good</i>	In safe working condition; minor wear on working surfaces; no broken parts, no corrosion or pitting that will interfere with proper functioning.
<i>Fair</i>	In safe working condition but well worn; perhaps requiring replacement or minor adjustments that should be indicated in advertisement. No rust but may have corrosion pits which do not render article unsafe or inoperable.

### ***How to Clean Your Collectible Firearm (Or Not)***

There are some types of collectible firearms that really need to be handled as little as possible.

Collectors assign the greatest value with modern commemorative firearms only if they are still in original container of issue with all original manufacturing. For some commemorative

collectors, even the slightest evidence of handling is enough to make it undesirable. For firearms in this group, a light waxing and handling with gloves is the best long-term conservation solution. Some collectors use an ethafoam sleeve as a barrier from any interaction with packaging materials. Others use a newer synthetic material, Volara, which may provide a softer surface than ethafoam, but may have adverse chemical additives.

But suppose you have just acquired an antique rifle or pistol that has been poorly stored. Residues of the old box or leather holster where it was stored in are still adhering – what do you do?

First, components like wood and metal may need to be treated differently in cleaning. If the firearm can be disassembled without damage to any of its parts, consider taking it apart.

**Cleaning wood:** Make a solution of water with a few drops of a mild detergent and lightly scrub the exterior wood surfaces with a dampened soft cloth. Rinse the surfaces with a clean cloth dipped in plain water. Clean again with mineral spirits. Do not use oil-based soaps.

When dry, the end grain of the wood can be lightly wiped with lemon oil. A good quality paste wax (w/o carnauba or silicon) can be used as an overall stock finish.

**Cleaning metal:** Corrosion products on the surface of a firearm can be removed with a soft scraper. A pre-1980 penny coin works well as it is made of a soft bronze alloy. Another good material to utilize is a fine grade of bronze wool, available from boating supply houses. Some firearms may have older plated surfaces that will flake away if aggressively cleaned.

In cleaning corrosion, lightly rub the surface with penetrating oil, and then scrape the corrosion. With care, much of the corrosion can be removed with little impact on the remaining finish.

Crevice and crannies on a firearm can be cleaned using a combination of pointed probes and cotton swabs dipped in solvent. Plastic or metal picks can remove trapped dirt from screw heads – an important preliminary before fitting a screwdriver tip to the screw. Stuck screws can be often loosened with a gentle application of heat and cold.

Bores can be cleaned with a bronze brush or a toothbrush. Heavily corroded barrels may need several treatments to clean out residues. Bear in mind that many rust removers and heavy-duty bore cleaners have difficulty in telling rust from barrel and may cause pitting by their use.