

Long-Term_Firearm_Storage_2004.txt
LONG-TERM FIREARM STORAGE
by Frank Camper

Got a firearm you might want to stash for awhile, say five, ten, 15 years or maybe more? MODERN GUN shows YOU how.

Sometimes there is a need to put away a little something for the future. If that something is a firearm, and you want it to work when you retrieve it, the right preparation is critical.

The CIA and Special Forces have prepackaged long-term storage weapons and ammunition kits. Hundreds of these kits are still buried or hidden from northern Vietnam to the Balkans, put away years ago for guerrilla movements or special operations missions that never used them. If undamaged, every weapon in those kits will still shoot today, and every cartridge will still fire, and they will be good for 50 years or more.

To get this degree of reliability, the government paid big bucks for special packaging and preparation. You can put your own firearm away with as much confidence--and at far less expense--than Uncle Sam.

Let's take it by the numbers.

1. THE CONTAINER

A long-term storage container has to be strong, corrosion-resistant and waterproof Metals survive well when above the ground, but can corrode rapidly when buried in damp or chemically caustic soil. Wood tends to rot and is hard to dependably waterproof Heavy-duty plastics and fiberglass are the most practical materials.

Of course you can bury a pistol in an expensive, rubber-sealed fiberglass gun case, but for this article we've chosen one of the newer plastic ammo boxes. These are now common surplus items, thanks to Desert Storm. This particular box was originally made for 25mm cannon shot, and is just right for putting away a pistol or two. The MTM Company has two sizes of dry boxes which are ideal for this purpose and very affordable.

For rifles, an inexpensive expedient container is PVC pipe. You'll need a diameter large enough to contain the stock, which usually means at

least ten inches. If this is bigger than your local hardware store carries, then try a local plumbing and construction supply store.

The pipe is cut to length and sealed with PVC end caps, which can either be directly glued on with PVC cement, or threaded by a pipe shop and then screwed on. In either case a thick layer of waterproof (not water - resistant) silicone sealant is used on the seams. Threading is better because the threads increase the surface area of the seal.

Our model ammo box has a neoprene (synthetic rubber) gasket which not only seals out water, but is also resistant to petroleum products that would surely disintegrate ordinary rubber.

Gaskets and seals are vital because the main threat to a stored firearm is moisture. This is especially true if the container is buried or must actually be hidden underwater.

All doors or end caps on your container must be carefully sealed with a waterproof silicone-based adhesive. Silicone is the best sealant available because, like neoprene, it is a synthetic, and impervious to water, oils, and most soil chemicals.

A container can be damaged while in storage. Heavy objects may fall on it, or sharp-toothed rodents might chew on it. If buried, a container might be cracked by the pressure of vehicles driving over it. There is little you can do about accidents such as these except pick the safest spot you can to hide or bury your container. Remember: What looks like a safe spot today might be very different ten years from now.

2. PREPARING YOUR FIREARM

The firearm you put away should be in top-notch mechanical condition. If you don't have the experience yourself, pay to have a good gunsmith inspect your firearm and perform any marginal repairs. High-wear parts to check are firing pins, hammer faces, extractor claws, ejector rods, and all springs and spring guides.

Springs in a firearm are constantly under some tension and can gradually lose resistance over time. Luckily, quality springs are strong and can last 50 years or more. Most hammer, firing-pin and recoil springs in well made turn-of-the-century firearms are about as good today as they

were when new.

What wears springs out is firing, and especially leaving firearms cocked. Military weapons are stored intact and uncocked, ready to be used once the preservative grease is cleaned away, and they are ready for many years of storage.

If a firearm is stored uncocked, the chances are that its springs will survive longer than you will. However, if you're serious about long-term storage, then you don't want to take chances. The Special Forces guerrilla warfare kits might contain ten automatic rifles. If one is unserviceable because of a weak hammer spring, it's no critical loss. If you, as an individual, store one firearm and it is retrieved unusable, the results can be disastrous.

To play it safe, relieve the tension on your firearm's springs. The critical springs are:

- A. Hammer springs in revolvers and semiautomatic pistols and rifles.
- B. Firing-pin springs in bolt-action rifles and some simple semiauto pistol
- C. Recoil springs in all semiauto rifles and pistols.

These springs should be removed and stored with the firearm. This means that upon recovery of the firearm, it will have to be reassembled (as well as thoroughly cleaned of grease), so include a manual and tools in the container. The tools should be packed with the firearm. The manual must be enclosed in a plastic bag and then wrapped in aluminum foil. The manual is especially important for you or others that may need this gun far into the future.

It's important to also disassemble the magazines you stash. Magazines are considered disposable items and are usually manufactured as such. Even unloaded, they can't withstand years of storage and be relied on to emerge functional. For some long term storage kits, the military has used special, pre-loaded two-part magazines that are telescoped together to use. Locking the inner and outer sections together compresses the spring. For those without access to such trick equipment, disassembling the magazines, packing them in a preservative with the firearm and storing the ammunition separately is good enough.

3. PRESERVING YOUR FIREARM

The most common way to protect a firearm in storage is to cover it with heavy grease (this can include wooden stocks, but more on them later). For decades the government used Cosmoline for this, a brand name for petrolatum. Cosmoline was well suited for the job because petrolatum, like Vaseline, is a neutralized petroleum product with the caustic acids removed. Unlike medicinal Vaseline, the military version of Cosmoline contained a rust inhibitor.

Something to mention right now is the fact that all oils and greases, while being lubricants, are not necessarily rust preventatives, especially over long periods.

Oil or grease might temporarily prevent rust on a metal surface simply because oxygen can't easily get through it to the metal. True corrosion inhibitors are deliberately formulated in petroleum products. This is why the military specifies when an oil or grease is also a preservative.

Temperatures above 150° can melt Cosmoline, and when exposed to the air, it eventually dries out and becomes caked and gummy. An excellent expedient preservative you can go out and buy today is high-temperature automotive wheel bearing grease.

High-temperature wheel bearing grease is extremely dense and is made to combat water and heat. Water can not penetrate it, and if you buy a premium brand, a propane torch flame applied directly to it will not melt it.

Wheel bearing grease is also a preservative. It has to be, to keep bearing races rust-free.

A special note: Don't coat plastic or synthetic stocks, or plastic or rubberized pistol grips with grease. Petroleum attacks most plastics, and over time can warp or even dissolve them. Rubber or plastic parts must be removed from the firearm and stored where oil, grease and petroleum vapors from these products cannot affect them.

This brings us to wrapping the firearm and its parts for storage in the container. You'll notice that the military doesn't use plastic bags for petroleum-lubricated parts storage. Plastic is no good because oils dissolve it. Cloth is no good; in a damp place it can hold moisture. The

government uses an expensive treated paper which alone is a rust inhibitor. You can use kitchen-grade wax paper.

Once your firearm has been packed in grease, wrap it completely in several layers of waxed paper. Leave no openings to admit moisture, just in case your container suffers a small leak. Tape it all shut mummy style with plenty of paper masking

Now what about those plastic and rubber parts? You wrap them in overlapping layers of aluminum foil and firmly roll-wrap the package's edges. The foil will block the petroleum vapors which can attack the plastic and rubber parts.

As we mentioned earlier, wooden stocks may be protected with grease, but there is a risk to doing that for long periods. Depending on the grease used and the ability of the stock to absorb oil, a wooden stock can swell and split.

It's better to remove the stock or wooden parts from a firearm you intend to store, and thoroughly treat the wood with a waterproofing sealant. Don't use temporary sealants such as waxes. Even good commercial varnishes or paints are limited to what protection they offer.

A penetrating water sealant and repellent of the type used to protect wooden decks and stairs works well. (These are usually some type of wax or paraffin dissolved in a high-evaporation solvent.--Ed.) The very best treatment is a thick coat of a good quality brand of polyurethane.

Polyurethane is familiar to furniture refinishers and is a cross between a natural resin and space-age plastic. It is wonderfully dense and tough, and protects wood against water, oil and chemicals.

Whatever treatment you use, begin by stripping the stock of all metal attachments. This means butt plates, trigger guards, sling swivels, etc.--everything that is screwed to it. Then scrub the stock with steel wool and paint remover or varnish remover to get down to the wood itself.

Once you have it clean, wash the stock with paint thinner to remove any residual paint remover and skin oils left by your hands. Let it dry for a few days, then brush on the polyurethane. Make sure to let the polyurethane flow into screw holes, butt traps, and all slots and indentations. Coat the inside of the stock as well as the outside. Coat

every surface of the wood completely.

Let the first coat of polyurethane dry completely, then apply a second coat. You've now got a stock that could be stored in a mud puddle without being affected.

Wrap the stock in wax paper and put it in the container alongside the bundle which contains the barrel, action, and spare parts.

4. WATERPROOFING YOUR AMMUNITION

Gun powder--what we now call "propellant"--can become unreliable over the years. It happens when the stabilizer agents mixed into and coating the propellant particles break down with age.

When ignited, the propellant might do one of three things: explode, only partially ignite, or not ignite, rather than burning at an even rate.

Since World War II, stabilizers have been getting better, and modern ammunition can be stored for thirty years or more with little worry about the propellant. (I have been told by manufacturers that 50-plus years is easy with the new ammunition made since 1980.--Ed.) The trouble is with the primers.

To do its job, primer compound must be sensitive and totally dry. That sensitivity translates to a higher decay rate than the propellant it is supposed to ignite. Even so, modern primers are long-lived and can last at least 30 plus years without one failure in a hundred.

What kills most primers are moisture and contact with petroleum vapor, not time. A primer has to fit inside a cup in the cartridge base, and any deformation of the primer or cup can leave a gap through which moisture can enter. Reloaded ammunition has a higher primer failure rate than new ammo because reloads have had the old primers pushed out of the cups and new ones inserted, increasing the chances for a poor fit.

All military-specification ammunition and some commercial-grade ammunition have a sealant around each primer. You'll typically see this sealant as what appears to be a red ring between the primer and case. but other colors have been used.

A field expedient to waterproofing new or reloaded ammo is to apply fingernail polish or lacquer over the primer. Use a distinct color so you

can tell which cartridges have been waterproofed. There is a warning here: Ironically, the very act of waterproofing a primer may kill it if some of the polish or paint seeps inside through a gap, so don't thin it down too much. It's better to stow brand new military-grade ammunition and depend on the original sealant.

The .22-caliber rimfire ammo stores well in damp areas because it has no primer seal for water to leak past. The drawback to .22 ammunition is that its primer compound seems to be more age-sensitive than centerfire cartridges. The majority of any lot of 50-year-old WWII military small arms ammunition will fire today, while most cartridges out of a box of 22s that old will be misfires.

Modern primer compounds have improved that ratio, but not by much. However, ammunition which is 25-35 years old will do very well if it's kept cool. Shotgun shells are the worst to store--even the plastic-hull variety--because of the tendency of moisture to seep in between the brass case and the crimped hull.

Ammunition stored with the firearm should be kept in its original box, placed in a plastic bag and wrapped in aluminum foil, then securely taped.

5. TOOLS, SPARE PARTS AND ACCESSORIES

We've mentioned that any tools needed to reassemble your firearm must be packed in the container. Other necessities include cleaning kits, solvents, oil, rags, and spare parts.

What spares you pack depends on your firearm, but in general you'll want a firing pin, extractor and ejector parts, a complete spring set, and a few extra screws or roll pins. Major components such as trigger groups or bolts are the best way to go; just make sure they are fitted to your gun.

Nitrogen-filled telescopic sights keep well if they are a good, quality brand. What fails in scopes are the nitrogen gas seals that keep moisture out. A scope open to moisture fogs up from the inside and corrodes. All you can do here is put the lens caps in place, lightly oil the metal parts of the scope, and wrap it in wax paper and then aluminum foil. (I would suggest that your rifle have iron sights that are really set up. If your scope is no good, the irons are still there. I would never

"long term" a gun that did not have iron sights.--Ed.)

Battery-powered infrared or light amplification night-vision devices are packed just like telescopic sights. Don't store battery-powered night-vision equipment with batteries in it. Don't store batteries at all. They will die in a few years, and may leak and damage something else in the container.

6. FINISHING TOUCHES

Silica gel is the stuff you sometimes find in little packets in new electronic or camera-equipment boxes. It looks something like rock salt, and it is so low in moisture content of its own that it tries to suck all the moisture it can out of the surrounding atmosphere. Its job is to protect the merchandise.

You will use loose silica gel as a filler material inside your container to both cushion the packages and absorb residual moisture.

One source for silica gel is:

Eagle Chemicals
1500 Telegraph Road
P.O. Box 107
Mobile, AL 36601

Eagle's phone is (205) 452-9624. At this writing, three- to eight-mesh silica gel (about rock-salt granularity) sells for \$1.91 per pound in twenty-five pound pails.

Storing your ammo in an ammunition box designed specifically for that purpose and packing it with silica will keep your ammunition indefinitely.

About ammo boxes: If you use metal ones, use new or totally rust-free boxes. Paint the exterior with the poly paint--paint every edge of the exterior. Remove the rubber O-ring and paint its groove. Make sure the O-ring seal is good. After putting in the ammunition, put in a good load of silica. Put silicone sealant on the rubber O-Ring and close up the box. Then seal the edges with the silicone. It won't hurt to put the box into a plastic trash bag or two for extra protection.

Once everything is packed and the container is sealed and waterproofed with silicone sealant, your job is done. Go bury it. Whatever happens politically above ground, you've still got an ace in the hole.

HARD-HITTING HINTS

Long-term storage is intended to give you or your survivors a choice of options for the future. Another thing to consider is that your kids or grandkids may not have the opportunity to prepare, then your stored guns will become a legacy for your future generations--they sure did in Bosnia--when the guns could be found.

One thing for you to consider is the type of firearm to store. For serious work semi-auto rifles are best, but in the hands of a rash shooter the ammunition can run out quickly. Probably the best calibers would be the 5.56mm round, .308/ and 30-06. The 5.56 and .308 (7.62mm NATO) rounds are the most recent U.S. military rounds and are still available in fresh lots. The 30-06 military ammunition is still around, but even fresh ammunition is 15 years old. Commercial ammunition is available in all of these configurations. The 7.62 x 39mm Soviet round is a good one, however, all of the ammunition from China, etc., being imported into the country has a very limited storage life--some at less than five consider the best of commercial ammunition.

The recommended minimum amount of ammunition for any semi-auto rifle except the .22, is 500 rounds. You should stock at least 2,000 rounds for a .22. A high-power bolt-action rifle would be well off with 300 rounds. For any pistol, 400 rounds is a reasonable minimum amount. I would not store less than ten magazines of ammunition for a pistol, and would not even consider less than twenty 20- or 30-shot magazines for the rifle.

Shotguns of any kind should be ruled out, since ammunition weight and size preclude a reasonable storage amount and effective range is limited. Many people think that storing various calibers of guns is best. Think of the logistical mess of transporting three calibers, and their ammunition, in an emergency.

The bottom line is to get a couple of the same identical firearms, pack a few hundred rounds for each, with plenty of magazines. extra parts,

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tools, manual (absolutely necessary) and cleaning gear, and you are set for the coming plans to fight crime by the legislated elimination of your guns.