

Proper Lubrication of Your Auto Pistol and Revolver or How not to have jams with your Auto and Keep Your Revolver from Squeaking.

I'm sure that you have all been told "don't oil your pistol/revolver because it will jam or lock up. WRONG ANSWER!

Ten or twenty years ago that might have been partially true. The lubricants that were available then were completely different than the modern ones available today. I have disassembled thousands of firearms over the last thirty some odd years and have also probably tried just about every "Snake Oil" that's been available during that time. It has been my observation that the oils that were available during the years prior to the 1970's and 80's contained paraffins that turned gummy with age and finally dried up leaving a hard varnish-like coating on the surface. These oils also became thicker as the temperature dropped causing revolvers to become harder to operate and semi-auto pistols more likely to "jam."

I'm not going to get into recommending any specific brand of lubricants as there are so many good ones on the market today. You will also find that some lubricants are more suited for use under certain conditions than others. I will leave the selection of lubricant up to your judgment. What I will do is give you the different conditions that require the use of different types of lubricant and what properties the lubricant should have to be effective under those different conditions. Another variable that must be covered is the different lubrication requirements of the semi-auto pistol and revolver. To simplify the discussion I will cover them separately.

First, let's cover the various types of conditions encountered. For simplicity, all temperatures given will be in Fahrenheit. The temperature range of 40 to 86 degrees can be handled by just about any oil as there are no abnormal demands placed on the oil. A light grease will work well also as this temperature range will allow the grease to stay soft.

The temperature range of 39 degrees and below begins to change the demands placed on the lubricant. As you well know, the colder it gets, the thicker most oils and greases become. As the temperature

begins to drop and the lubricant becomes thicker, the energy needed to move a part becomes greater and greater. If the energy needed to operate the specific firearm becomes greater than the energy available, you will encounter a malfunction. The semi-auto pistol will begin to malfunction due to thickened lubricant sooner than a revolver as the power to operate the semi-auto is provided by the cartridge instead of your muscle power.

If you are going to use your firearm in a cold weather environment and need to determine the suitability of a specific lubricant the following tests can be performed.

Most of you probably have a freezer compartment in your refrigerator. You will need a thermometer that will register below zero so you can actually tell just how cold a temperature your test is being conducted at. You will want to chill some of your lubricant in a small container so that you can actually see just how stiff it will get at various temperatures. This can be determined by placing the thermometer in the lubricant and chilling it as cold as you can and then testing the thickness as it warms up. If you don't want to go to all the hassle of freezing and transporting a frozen gun to the range for tests, freezing the lubricant and checking the increase in thickness is a viable method to give you a good idea of the suitability of a specific lubricant to extreme cold weather. If you can find a lubricant that remains nearly as thin at extremely low temperatures as it does at room temperature, you can be pretty sure that it will not cause a malfunction during cold weather use. Most home freezers will not get below zero. For extreme cold weather testing you will need to find a method to reach lower temperatures than your home freezer. The next situation that may be encountered is extremely hot weather – temperatures above 85 degrees. Why test a lubricant for high temperatures? You will find that some oils will literally evaporate as the temperature exceeds 100 degrees. Many will become so thin that they offer almost no lubrication and will run out of the areas in the firearms that really need to be lubricated. You will probably find that a good grease is more suitable for extremely high temperature operations. If you intend to test lubricants at elevated temperatures use only a heat source that offers no flame or red hot elements. Oils and greases can flash into flame when heated enough. A source of heat that can be closely regulated so as not to exceed 125 degrees without flame or red hot elements is needed. Before you try the oven, remember that there is an electric element that can get red hot in there and some oils and greases give off smoke or odor when heated. Be extremely careful if attempting this type of testing, wear eye protection, gloves, and do the testing outside.

Two other extremes in the environment can be encountered and that can have an effect on the lubrication of a firearm are wet and dry dusty conditions.

In wet weather, the best advice is to protect the firearms from getting wet if at all possible. Otherwise use a lubricant that repels water and does not allow moisture to emulsify or mix with it. Some oils, when subjected to water during movement of the surfaces that it's on, will allow water to become trapped in it. This severely decreases the lubrication ability of the oil.

Severe dust conditions present another circumstance that can cause problems with lubrication. Once again, if possible, protect the pistol from the dust. In the desert, the dust is as fine as talcum powder and gets into everything. It will even penetrate the seals on a hydraulic system. In this instance, the dust will mix with the lubricant and form a lapping paste that will cause accelerated wear, and if the firearm is not cleaned daily, can actually combine with oil to form an extremely thick putty-like goop that can actually stop the function of a semi-auto and cause a revolver action to be almost impossible to pull through. If the dust condition is severe enough it may be advisable to use no lubricant at all, or use a dry lubricant. Daily cleaning is absolutely mandatory if you want to keep your firearm in operational condition.

Now that we have covered the various environmental concerns of proper lubrication, let's get down to the proper methods of lubricating the semi-auto and the revolver.

First the semi-auto. The semi-auto, which I refer to from now on as a pistol, relies more heavily on the proper lubrication than the revolver because it depends on the power of the cartridge to operate it rather than your muscle power. I would like to state that most good quality pistols that are clean but dry of lubricant will function through several magazines before a stoppage is encountered. The stoppage that is usually encountered first is the failure to close with a dry pistol.

Let's set up the usual scenario that I have encountered – too many times to remember. The customer on the phone has had a problem with his or her pistol jamming when they were out to the range last week end and they are concerned that they may need some special reliability work or repair done so that it doesn't happen again. They cleaned the pistol completely after they were at the range the time before, and, yes they lubricated it before they reassembled it after they cleaned it. How long ago was that before this session on the range? Oh, three or four weeks ago. What caused their "jams?" The oil that they so carefully used has run out of the pistol during storage. Their pistol was actually almost dry of lubricant when they started shooting. After several magazines, the failures to close began. Also known as "jams." If you are going to use only an oil to lubricate your pistol, you must re-oil it just before you step up onto the line to start shooting if you have had it stored for several days or more. You also

should re-oil the pistol after each 50 rounds to keep things moving properly. Now I don't mean that you should soak the pistol with oil every 50 rounds, but just a few drops in the right places.

Just what are the right places? With the pistol unloaded and closed, put three or four drops on the barrel hood that is exposed in the ejection port. Then lock the slide open. Put a ring of oil 1/4 inch back of the muzzle of the barrel. This will keep the barrel/bushing area lubricated. If possible, put a couple of drops of oil in the open ejection port where the slide and frame touch on both sides. Turn the pistol upside down. The rear of the slide is now sticking back of the frame. Place two or three drops of oil in each slide rail groove and one or two drops on the center rail that cocks the hammer. Now close the slide and hand cycle the pistol half a dozen times with the muzzle pointed down. This will spread the oil. Wipe off any excess that might run out at the rear of the slide/frame area and commence firing.

This lubrication procedure done every 50 rounds will keep you from having any malfunctions due to dry and/or dirty pistol. Your pistol is getting dirty with carbon fouling and unburned powder as you keep shooting. The lubricant will keep this fouling in a suspension with it instead of becoming hard and slowing down the cycle of the pistol as it would if it were dry.

For those of you who carry a pistol on a daily basis, I would like to recommend that you use a light weapons grease instead of oil when you complete your weekly cleaning routine. You do clean your carry pistol weekly, don't you? It's real cheap life insurance, you know. Anyway, if you use a light weapons grease, the grease will not run out of the pistol as it rests in the holster in a fixed position day after day. When you go to the range to practice or qualify, be sure and do the 50 round lube with oil as recommended earlier.

Let's say that you have just finished cleaning your pistol and are ready to lubricate it and reassemble it. I would advise you to have several cotton tipped swabs handy along with the lubricant of your choice. If you are using a bottle oil and it comes with the little pipe that sticks into the opening of the bottle, use it! This little pipe allows you to apply small amounts of oil evenly to the pistol without mass quantities of oil running everywhere. It also saves on oil. If you are using grease, you can dip the swab in grease and apply a smooth, light coat of grease. The swab is also useful in spreading oil into an even, light film. I'll use a 1911 style pistol as an example of where to put the lube, but this will apply to all pistols.

Let's lubricate the slide first. The inside bore of the slide needs to be lubricated. This is the part of the slide that has the locking lug grooves in it. The top of the barrel bears heavily against this part of the slide during recoil as the slide moves back during the firing cycle. Put a light coat of lube in the locking

lug recesses and all along the curved surface ahead of the locking lugs. Next, put a light coat of lube in the slide rail grooves, and on the surface below the groove, as well as on the bottom of the slide rails. The center rail, which cocks that hammer as the slide moves rearward, and has to slide over each cartridge as the pistol cycles, needs to have a light coat of lube applied. If you have a series 80 style pistol, you also need to apply a light coat of lube to the firing pin plunger hole. A very light coat of lube can also be applied to the firing pin hole. All parts can be wiped with a light coat of oil. If you are using light weapons grease, use it only on the bore of the slide and locking lug grooves as well as the slide rail area. Oil is recommended on all other areas of the slide and the internal parts. Grease is especially suited to the high load areas such as the bore of the slide and the rails, but is a little too heavy for the small parts that exert only a light bearing load as they function. The barrel must be lubricated before you install it into the slide. A light coat of grease or oil may be applied to the locking lug area and the top of the large diameter of the chamber area. A light coat is also applied to the outside of the barrel tube where the bushing will rub during firing. The locking lug and link area needs to have grease or oil applied to the bearing surfaces also. If you are going to the store the pistol for a long time – months, a coat of grease can be applied to the chamber and bore. THIS IS FOR LONG TERM STORAGE IN AN UNLOADED CONDITION AND MUST BE REMOVED BEFORE YOU CAN LOAD AND FIRE THE PISTOL. FAILURE TO REMOVE EXCESSIVE LUBRICANT FROM THE CHAMBER AND BORE CAN CAUSE EXCESSIVE PRESSURE WHICH CAN CAUSE DAMAGE TO THE FIREARM AND YOURSELF!!

The frame comes next. If you have completely disassembled the frame, all internal components should be given a light coat of oil before reassembly. Once again, if you have light weapons grease, the frame rails are the only area that needs that type of lube.

Let's not forget magazines. You should disassemble the magazines and clean them at the same time that you clean the pistol. Magazines need only the barest minimum of lube. Don't forget the spring. The word again is very, very light lubrication. If you are going to be shooting practical pistol courses and will be dropping you mags in the dirt, I would recommend that you use no lubricant on your mags at all. Any lubricant will pick up and hold gravel and dirt which will cause the ammo to stick in the mags.

Now we'll cover revolvers. First, most people don't take the side plates off of their revolvers when they clean them, so we'll cover that type of lubrication first. After you have cleaned your revolver's chambers, barrel, and external surfaces, a light coat of oil is recommended. The cylinder turns on a shaft that can be called the crane or yoke. You can put one or two drops of oil at the point that the cylinder and yoke join. Tip the revolver muzzle up as you apply the oil and rotate the cylinder after each drop. If you continue to hold the muzzle up and turn the cylinder for a few moments after you apply the oil, it will run to the rear of the moving surfaces.

Next, you can apply one drop to the hand that rolls the cylinder, while keeping the muzzle pointed upwards. Immediately after applying the oil, cycle the action several times. Open the cylinder again and put one drop of oil on the rear of the cylinder in the center where it turns against the frame. On S&W revolvers, there is an ejector rod lock up in the front of the ejector rod. Place one drop of oil into the end of the ejector rod. Once again, tipping the muzzle upwards and turning the cylinder will help spread the oil to the moving surfaces. With the cylinder closed, cock the hammer. Put two drops of oil along each side of the hammer while it's cocked. Now cycle the action twelve times double action to spread the oil, Turn the pistol upside down. Put two drops of oil on each side of the trigger. Now cycle the revolver twelve times while it is upside down to spread the oil. This is about as good a job of lubrication that can be done if you do not remove the side plate. If you do not remove the side plate at all, I would recommend that you have the pistol completely disassembled at least annually by a pistolsmith and thoroughly cleaned and lubricated. If you carry the revolver daily, the complete disassembly should be done semi-annually at a minimum.

If you can remove the side plate and do a complete disassembly of your revolver, you should do so every 500 rounds. In this case, you can use a light weapons grease on the internals. Again, a very light coating. Don't over do it, you're not greasing the front end of your car. You should also remove the cylinder from the yoke when you do the complete disassembly so that you can clean the yoke shaft and the inside of the cylinder area that turns on the yoke.

A word about lubricants. I highly recommend that you use a lubricant that has been designed for use in and on firearms. Many specialty lubricants have additives that will eventually harm your firearm and may cause unforeseen problems.

And now for the commercial! If you use our Dunk-Kit to clean your pistol or revolver, you will spend much less time getting your firearm clean and Dunk-Kit will not strip it dry as many of the spray cleaners do. It leaves a very light coat of oil on the firearm that will protect it, however, you will still need to do the proper lubrication as explained in the preceding paragraphs. For those of you who don't completely disassemble your pistols or revolvers, Dunk-Kit will get down inside of the actions and help flush out the crud that can build up. I still recommend that you have your firearm completely disassembled annually, at a minimum, for complete cleaning. For you revolver shooters, if you hold the action under the surface of the Dunk-Kit and cycle the action slowly, the Dunk-Kit will flush out the dirt and junk and keep the action very clean without removing the side plate. You can let the revolver drip dry or blow it out with air before applying the oil as recommended.

For you auto shooters, remove the grips and submerge the frame assembly in the Dunk-Kit. Use a toothbrush to scrub the areas that you can get to. Then hold the frame by the front of the recoil spring cover and agitate the rest of the frame in the Dunk-Kit. This will allow the Dunk-Kit to circulate through the action and remove the crud you can't reach with your toothbrush. Again, I recommend at least an annual disassembly for proper cleaning.

I hope that this discourse on cleaning and lubrication will help maintain your pistol or revolver in top condition and add to its reliability.

GOOD SHOOTING!