

OVERVIEW: Lubricants: Why are there so many choices?

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Lubricants are products designed to make things slip.

Sister products that have some lubrication but are specialized for other uses are penetrating oils that are used to loosen up rusted parts, drying sprays designed to remove water from electrical wires and some cleaning sprays.

Although I use a variety of these products for different purposes, you will have to read to the bottom to discover Fluid Film, one that I use most.

First let me get my own personal bug, and about my only negative comment out of the way. WD-40, which stood for "Water Displacement formula 40", is a lousy lubricant even though in recent years the percentage of lubricant contained in the can has been increased from almost nothing to a little bit.

Somehow they had a fantastic marketing campaign and got everyone to buy in, and buy a lot because it certainly didn't stop the squeak for very long -- so you needed more -- and we all bought more.

What incredibly good marketing: "this product doesn't work very well, so buy more of it". When you finally try a real lubricant, you will be surprised at the difference. Because of its Water Displacement formula WD-40 actually is a pretty good cleaner, leaving a very light oil film behind. But as a lubricant, there is better available. Interesting enough, we all bought enough of the fairly useless WD-40 that the company was able to pick up the old 3-in-1 brand of lubricants, a range of very good lubricants which they now call their 3-IN-ONE Professional line. Better late than never. www.WD40.com

The major players in the lubricant game have all come out with just about the same series of products -- although they vary in how they describe them. Of course the marketing departments are more prone to superlatives and entertainment than to telling us what each product is and where to use it.

Oil Lubricant

Although not generally available in a spray can, you can still buy good old fashioned oil in a squirt can. 3-IN-ONE sells it in a great little flex top can. You tip it over and squeeze the bottom, like your grandfather did -- and it works. The only drawback with straight oil is that it is a bit messy, tends to drip and tends to collect dust.

Penetrating Lubricant

Penetrating lubricant is basically designed to cut through rust, releasing stuck parts. Some of the most effective types smell really bad -- and the old idea of using a torch to heat up the joint while it has penetrating lubricant on it has proven to be a very bad idea as the fumes that come off of the hot mix can be toxic. Using vibration to get the oil to work in can help -- so will giving it adequate soaking time. These come in both liquid and spray types and are always identified as Penetrants. They do lubricate a bit, but not much, so once released, clean the parts and then properly lubricate them with something better.

Silicone Spray

This has won the hearts and tool boxes of many homeowners because it is a pretty good lubricant that doesn't make a mess. It can be used on most materials including plastics such as vinyl windows, even wood, and tends to waterproof what it is applied to -- although not as well as a specialized waterproofing spray. It can be used on zippers as it is compatible with the cloth of the zipper itself, although you will probably want to avoid overspray on the rest of the garment -- unless you want to waterproof the whole thing. Its waterproofing characteristics make it a good protector for electrical wires such as spark plugs. The surface should be clean for the Silicone to stick so if you have used other lubricants first, use a solvent cleaner to remove what might be left of the other product, allowing the silicone to stick to the surface.

The marketing department of the popular Jig-A-Loo brand won't admit it but their "All-Around

Lubricant" falls into the silicone category. www.JigaLoo.com It can be important for you to know if silicone is contained in a spray for if you spray both silicone and lacquer in the same room, even a large shop, the lacquer will always develop fish eyes. Yes, good as it may be as a lubricant, silicone must be banned from any shop that uses lacquer finishes.

PTFE (Teflon) Spray

Teflon is a trademark that belongs to DuPont so what we commonly call Teflon is often referred to by the generic chemical abbreviation PTFE. This appears to be similar to a silicone spray but more heavy duty; providing lubrication and corrosion protection under extreme temperature, pressure and motion with good bonding to metal. That is why Teflon or PTFE coated kitchen frying pans are so effective. (Don't try spray PTFE on a fry pan, the sprays are not designed for human consumption. Actually teflon burning or flaking off from a frypan is not good for your health either and many people are giving up their Teflon pans for other non-stick coatings.)

Because of its ability to stand up to high temperatures, it is ideal for lubricating all those moving parts that are connected to gasoline motors, like snow blowers and lawn mowers, giving good long lasting corrosion protection at the same time. Be sure to clean off all old oils, grease and rust prior to application or it won't bond with the metal.

Dry Lube / Graphite Lube

When you want to lubricate something that has a lot of very small parts it is important that the lubricant itself, or the dust that some lubricants attract, don't end up gumming up those parts. In fact sometimes you don't even want something as thin as a silicone spray to coat little pieces, like the pins in a lock. Traditionally we would use a graphite lubricant for that -- which can come in either a power form or in a spray can where the spray carrier dries up immediately. Products identified as Dry Lubricants may use synthetic polymers rather than graphite (not black and a bit cleaner) but serve the same purpose.

White Lithium Grease

Lithium Grease is that thick white grease you often find packed into bearing housings. It is the workhorse of the lubricants and can take high temperatures and pressures. If you have a grease housing which will hold extra grease, using a thick lithium grease from a tube or a can is the best thing to do. They have now come out with Lithium spray greases. These are great for outdoor uses, tending to be thicker and stay put longer under the rigors of outdoor conditions than other sprays, but they are not intended to replace the even thicker grease that you pack into a gear box. They are definitely a grease and will stain clothing as well as attract dust when used openly, so although a great lubricant, not the best product for a bicycle chain. Be sure to shake the can well before using.

Lanolin based lubricant

My preferred lubricant! This is my favorite lubricant. Fluid Film is a product in its own class and does not come in 46 varieties. It was originally developed for the US Navy in WWII to keep all that shipboard metal free of rust. Of highest importance is that it has no solvents in it. Although it has a small percentage of highly refined petroleum, is not a petroleum based product -- but is essentially derived from an organic lanolin base. Interestingly it does not dry, but leaves a wet non-drying film. It can be used on all surfaces. This can attract a bit of initial dust but because there are no solvents, it does not become gummy -- allowing its use in locks. It is a good waterproofer and even a leather conditioner -- after all it originally came from lamb's wool. The version sold in renovation centres is a food grade product approved for use in restaurants, meaning that young apprentice renovators, like your kids, can learn to eliminate squeaks in the house with no danger to themselves. Fluid Film is my lubricant of choice -- displaced only when I really need a dry lubricant. For a long time I could only find it in industrial outlets, it is finally beginning to show up on the hardware store shelves. It has less marketing hype than the others, but is a truly superior lubricant, waterproofer and corrosion resistant coating. Now I just need to get them to pay me to say that. www.EurekaFluidFilm.com

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