



Renewable Lubricants, Inc.

476 Griggy Rd., P.O. Box 474

Hartville, Ohio 44632-0474

Voice: 330.877.9982 Fax 330.877.2266

Web: www.renewablelube.com

Directions for using RLI's Biobased Gun Oils

There are many recommended Biobased gun lubricants that RLI manufactures. The standard firearm lubricants on the markets are usually lower cost products for the amateur gun enthusiast or for gun applications in less-critical areas and/or, where hand-operated gun mechanisms are used, like single shot, double barrel, bolt-action, pump guns, or revolvers that are operating above -10°C (14°F). The Bio-Blast Penetrant and Bio-Penetrating Lubricant (BPL) are excellent one step gun oils that can be used in these applications to clean, lubricate, and prevent corrosion, but the gun bore may need additional cleaning with RLI's Bio-Cleaning Compound Corrosion Inhibitor Gun Bore Cleaner.

The serious gun owner can be shooting many rounds of ammunition during target practice, competing professionally, or hunting big game in many unfriendly environments. This would be considered gun applications in critical areas where deposit build-up, firing pin misfires, sluggish operation and mechanism jamming can create a serious problem. This can become a more severe problem when using automatic weapons below -10°C (14°F). The three gun oils recommend by RLI for the serious gun owner would include a three-step process using the Bio-Arctic Firearm Lubricant, the Bio-Penetrating Lubricant Corrosion Inhibitor with Finger Print Removal (FPR), and the Bio-Cleaning Compound Corrosion Inhibitor Gun Bore Cleaner.

The Bio-Arctic Firearm Lubricant provides very low temperature performance (pour point below -75°F), that prevents deposits from forming, firing pin misfires, and mechanism jamming. The improved performance of Bio-Arctic Firearm Lubricant is a benefit in all firearms, but is especially noticeable with automatic weapon. This improved performance will provide smoother mechanical action that is also noticeable in automatic weapons at temperatures above freezing. Because it is a multi-functional high performance lubricant, it can be used in many industrial applications, see data sheet. It provides excellent lubricity and passes the Four Ball Anti-Wear Performance in ASTM D-4172.

The Bio-Penetrating Lubricant Corrosion Inhibitor FPR should be used for longer term storage or shipping of guns and will provide the best corrosion protection in humid conditions. The Bio-Cleaning Compound Corrosion Inhibitor should be used as a bore cleaner and also for cleaning carbon and residue from the mechanisms before the Bio-Arctic Firearm Lubricant is applied. The viscosities of these formulations range from approximately 10 cSt in the Bio-Arctic Firearm Lubricant and Bio-Penetrating Lubricant Corrosion Inhibitor FPR to the lower viscosity of 6 cSt in the Bio-Cleaning Compound Corrosion Inhibitor.

All these formulations provide corrosion protection, but the best corrosion protection for storage would be in the Bio-Penetrating Lubricant Corrosion Inhibitor FPR and Bio-Blast Penetrant. If the Bio-Penetrating Corrosion Inhibitor FPR is left on automatic weapon mechanisms it can create residue build-up and cause sticking in automatic systems. The Bio-Penetrating Lubricant Corrosion Inhibitor FPR should be cleaned completely with the Bio-Cleaning Compound Corrosion Inhibitor, and the third step is to add the Bio-Arctic Firearm Lubricant before use. The Bio-Penetrating Lubricant Corrosion Inhibitor FPR can be left on the outside of the barrel during use with the Bio-Arctic Firearm Lubricant as long as it is not in the mechanism. This is mainly because the Bio-Penetrating Corrosion Inhibitor FPR and the Bio-Cleaning Compound Corrosion Inhibitor are to be used for cleaning and preventing corrosion and not as the main lubricant. The low temperature performance of these two products is poor compared to the Bio-Arctic Firearm Lubricant, Bio-Blast Penetrant and standard Bio-Penetrating Lubricant (BPL).

Respectfully submitted,

William W. Garmier