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TECHNICAL NOTE 20: AMMUNITION, BARRELS, AND ACCURACY OF AR-10(T) RIFLES

PURPOSE:

This technical note provides information concerning the accuracy of ArmaLite® 7.62 mm / .308 caliber AR-10(T) rifles

GENERAL:

ArmaLite® occasionally receives AR-10(T) rifles which are returned for accuracy problems. In virtually all cases, the problem is due to poor ammunition, poor break in procedures, or poor firing procedures.

ACCURACY GUARANTEE:

ArmaLite® AR-10(T) rifles are guaranteed to meet the same targeting requirements (the center of impact of the rifle) as the M16A2 rifle as spelled out in milspec MIL-R-63997. In addition, they produce 5 shot groups of less than two inches extreme spread at 200 yards, measured between the centers of the extreme shots, when using Federal Gold Medal (GM308M) ammunition or better.

AMMUNITION:

Even a fine rifle cannot make good ammunition from poor ammunition. It's amazing how frequently ArmaLite® is asked why surplus or imported ammunition shoots poorly. A key fact of ammunition is that a target rifle exhibits its best accuracy with ammunition tuned to THAT PARTICULAR RIFLE. Even high quality ammunition varies between lots, and even the highest quality ammunition may not be quite optimal for a given target rifle.

The AR-10 (T) has a special match grade barrel. It is superbly accurate when used with proven lots of Black Hills moly coated .308 Win Match, Federal 308M, M852, or other match quality ammunition. Accuracy naturally is less impressive if lower quality ammunition is used, or if less capable lots are used.

BARRELS:

The barrel of the AR-10(T) is produced from a custom, target grade blank. For optimum accuracy and improved life expectancy, it absolutely **MUST** be properly broken in. This time consuming process will allow the barrel to smooth out without an accumulation of copper fouling in the pores of the steel.

VIRTUALLY EVERY ACCURACY PROBLEM WITH MATCH GRADE RIFLES IS CAUSED BY FAILURE TO CAREFULLY BREAK THE RIFLE IN, FAILURE TO USE HIGH GRADE MATCH AMMUNITION, OR POOR MARKSMANSHIP.

BREAK IN PROCEDURE:

See ArmaLite® Tech Note 28 entitled “Breaking In Match Barrels”

FIRING PROCEDURE:

ArmaLite® tests rifles from a wooden bench using only simple sandbags as rests both fore and aft. A more complex machine rest is not needed to meet minute of angle accuracy, but proper break in and consistent, sound firing procedure is.

Accuracy varies in different firing positions. Bipods, in particular, tend to allow inconsistent rifle movement and are not as conducive to accuracy as a simple sandbag or rest.

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