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TECHNICAL NOTE 74: 5.56 NATO vs SAAMI .223 Remington vs Wylde Chambers

BACKGROUND: We are often asked about whether our rifles feature NATO (North Atlantic Treaty Organization) or SAAMI (Small Arms and Ammunition Manufacturer's Institute), or Wylde chambers and whether it makes any difference.

FACTS:

.223 Remington (SAAMI standard) and 5.56mm (NATO standard) rifle chambers are almost identical. The difference is largely limited to the "freebore", the cylindrical space in front of the casemouth, and the "lead" or "leade", the tapered region that eases the bullet into full engagement with the rifling. NATO and SAAMI cartridges can normally be used interchangeably with no problem.

The SAAMI chamber incorporates less freebore and a tighter leade, which normally provides better bullet-to-chamber fit and, therefore, better accuracy than the NATO chamber. It is wonderfully suited to match bullets.

Millions of rounds of NATO ammunition have been fired safely in Eagle Arms and ArmaLite's® SAAMI chambers over the past 22 years. Occasionally a non-standard round (of generally imported) ammunition will fit too tightly in the leade, and resistance to early bullet movement can cause elevated chamber pressures. These pressures are revealed by overly flattened primers or by powder stains around the primer that reveal leaking gasses.

The first few rounds of ALL ammunition, from whatever source or lot, should be checked for signs of pressure or any other defect before firing large quantities. If you have a problem, you can generally bet that the ammunition meets neither SAAMI nor NATO specifications.

ArmaLite® has adopted a practice of using a modified SAAMI chamber (Wylde) in its stainless steel match barrels. This chamber is better for match use than the NATO chamber, but fires the NATO ammunition perfectly. We use the NATO chamber in all moly (phosphated) and chrome-lined barrels.

NOTE: ArmaLite's® larger AR-10 series rifles are all chambered with 7.62 NATO chambers. .308 Winchester (SAAMI standard) ammunition functions perfectly in the 7.62 NATO chambers.