



September 15, 2011 Rev 3

## **TECHNICAL NOTE 28: BREAKING IN MATCH BARRELS**

### **PURPOSE:**

To instruct purchasers of ArmaLite match firearms regarding proper barrel break-in procedures.

### **BACKGROUND:**


All new rifle barrels contain internal machine marks that can scratch passing bullets. Bullet jacket metal can foul the pores of the new barrel. Leading competitive shooters believe that breaking their barrels in properly can improve accuracy and barrel life.

ArmaLite has consulted with several barrel manufacturers. All with whom we have spoken advise us that breaking a barrel in with an abrasive of any sort reduces the accurate life of a barrel. This matches ArmaLite's own observations: normal firing serves as a satisfactory break-in process if the barrel is properly cleaned during the process. We, therefore, do NOT recommend the use of any abrasive for breaking in a barrel.

### **BREAK IN:**

ArmaLite match rifle barrels are produced from a custom, target-grade blank. For optimum accuracy, and improved life expectancy, it should be properly broken in. We recommend the following procedure:

1. Before you fire your rifle, clean the bore of your firearm and lubricate the firearm as described in the Maintenance section of your owner's manual. ArmaLite® firearms are made more tightly than other rifles of similar design. A break-in period of 200 rounds allows machined or phosphate-coated surfaces to smooth out the rifle's action. Lubricate the rifle well before firing.

 **WARNING: TO ASSURE ITS PROTECTION FROM CORROSION, YOUR ARMALITE® FIREARM HAS BEEN SHIPPED WITH PRESERVATIVE OIL IN THE BORE. FIRING THE FIREARM WITH PRESERVATIVE IN THE BORE CAN INCREASE PRESSURES, WITH POSSIBLE FIREARM DAMAGE OR PERSONAL INJURY OR DEATH. CLEAN AND DRY THE BORE BEFORE FIRING YOUR ARMALITE® FIREARM.**

2. Fire 9 single shots. After each shot, push a cotton patch wet with solvent through the bore. Follow the instructions on the solvent bottle in regards to soak time, etc. Then wet a bronze brush with solvent and stroke the barrel five to ten round trips. Follow with another wet patch and then a dry patch or two. (We do NOT recommend nylon or stainless steel brushes.) Repeat if necessary. After you finish, wash the solvent off your brush so that the brush won't deteriorate.

3. From 10 to 30 shots, clean as above after each five shots. Initial break-in should now be complete. However, if time permits, it would be prudent to clean the barrel after each ten rounds until a total of 100 rounds have been fired.

For subsequent, normal cleaning, it is suggested that you clean after each range session. To obtain optimum match accuracy, many shooters clean approximately every 20 rounds. It is often suggested that the barrel be brushed one stroke for each shot fired.

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

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