

the fall of the firing pin sets up pre-vibrations in the barrel prior to ignition which disrupt accuracy. There also may be a more uniform ignition advantage.

Accuracy testing of thousands of production rifles has revealed that the M788 is superior to the M700. This fact was observed during the development of the M788 when compared to the M700. Using the same barrel process, stock bedding principles and the same lots of ammunition have ruled out most of the variables between the two rifles, the exception being the receiver (front vs rear lockup), heavy vs light barrel bracket, and the difference in lock time. M700 lock time is approximately 5.5ms and the M788 is 2.7ms. The shooters are also observing the accuracy advantage of the M788. It is believed that the faster lock time in the M788 gives this model accuracy advantage. Re-design of the M700 should involve reduced lock time to improve its accuracy and give the off hand competitor the advantage of this principle.

There are numerous ideas to achieve faster lock time. Such a design is a flat-type formed pin with rotary swaged nose as used in the M788. Other ideas include the use of lighter weight metals, ie, aluminum, titanium, tubular construction, carbide or alloy steel-tipped light weight pins, etc. It will be found that a nose diameter of .060" is necessary when using the lighter weight pin for proper ignition. Faster lock time approaching zero should be our objective.

Reliable accuracy is no more secure than the rigidity of the scope base mounting screws and in the M700 6/48 screws are