Ilion, New York
April 28, 1964

STANDARD FIRING PIN TEST

5,000 Dry Cycles - Model 700 - 222 Caliber Rifle

This test was conducted to determine the durability of standard firing pin assemblies with max and min tolerances between the firing pin shank and the firing pin head. Endurance testing by dry cycling indicated that the firing pin assemblies with an interference fit between the firing pin shank and the firing pin head were more durable up to 5,000 cycles.

Max. Diameter Firing Pin Shank
with Min. Diameter Hole in Firing Pin Head

Five (5) firing pin assemblies with .0002" interference fit between the firing pin shank and the firing pin head were tested. All five assemblies remained in good condition.

Min. Diameter Firing Pin Shank and
Max. Diameter Holes in Firing Pin Head

Five (5) firing pin assemblies, with the firing pin shanks made to the minimum diameter and the shank hole in the firing pin head made to the maximum diameter, were tested. Four firing pin assemblies remained in good condition. One had a loose firing pin head after 2,000 cycles.

Inspection of the firing pin assembly with the loose firing pin head showed that the cross pin hole in the firing pin elongated parallel to the centerline of the firing pin. In heat treat, the firing pin hole in the firing pin head closed in at the front giving the hole a back taper.

Burrs

A burr is caused in the firing pin hole due to the tumbling operation to remove copper from the exterior of the firing pin heads.

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