

INVESTIGATION OF MODEL 708 RIFLE

A discussion was held of the circumstances and implications of a recent accident that occurred at Ilion while a Model 788 rifle was being tested. The following points were stated.

1. On February 16, 1971, during the proof and test firing of a caliber 6mm Remington Model 788 rifle, an Ilion employee suffered an injury to his left hand when the rifle fired as he closed the bolt. Investigation indicated that the cocking-piece head had broken at the point where the cylindrical pin passes through the cocking piece, fastening it to the firing pin. At the instant of breakage, the locking lugs on the bolt had not engaged the recesses in the receiver. The employee had already fired one proof load and one service round and he was preparing to fire a second service round when the accident occurred.

2. Several tests were conducted on randomly selected firing pin assemblies from available production and warehouse stock. This included dry-cycle firing of assemblies to a maximum of 10,000 cycles per assembly. In two instances involving assemblies produced after September 1, 1970, breakage occurred to the cocking-piece head. No breakage occurred with dry-cycle tests of assemblies produced prior to September 1970. In comparing the heads produced prior to September 1, 1970, with those produced after that date, it was noted that the latter exhibited more variable physical property characteristics. These differences were attributed to the fact that the powder for the powder metal heads used in the production after September 1, 1970, was obtained from a different source.

3. Field experience on broken firing pins on the Model 788 has been minimal, and there has been no field report on this model rifle firing on closing in an unlocked condition.

4. It is highly unlikely that there will be a reoccurrence of this model rifle firing on closing, as the cocking piece would have to break while the action is being closed. Even if this were to happen, it is expected that there would be sufficient engagement of the locking lugs to prevent rearward movement of the bolt on firing. Only if the cocking piece breaks as the bolt is brought forward and before the locking lugs are engaged is there danger of a reoccurrence of the Ilion employee's accident. The chance of this happening is exceedingly small, as little shock is transmitted to the cocking piece on closing until the bolt is cammed and the locking lugs are engaged. Furthermore, the degree of force with which the bolt would have to be brought forward would be very difficult to produce with the rifle at the shooter's shoulder in the