

SHOTGUNS - contd.MODEL 870, 28-410 GAUGEMODEL 1100, 20-28-410 GAUGE

R & D reported on the endurance testing of production assembled Model 1100, 410 gauge 2 $\frac{1}{4}$ " chamber skeet grade guns. Using Remington ammunition which produces a 3.6 to 4.0 (p.s.i. x sec.) impulse, the malfunction rate is .5%. Ammunition in which the impulse is less than 3.6 there are 3.5 to 5% malfunctions. The gun did not function satisfactorily using new Federal plastic skeet shells.

The Model 1100, 410 gauge skeet gun can handle variations of .4 impulse. The orifice hole in the Barrel could be increased to provide power to handle the lower impulse shells. If this is done then ammunition producing the maximum 4.0 impulse would result in pulled heads and part breakage, particularly Extractors. 83

Preliminary tests indicate the new 410 gauge shell being developed by Bridgeport will function satisfactorily. Ilion R & D has advised Bridgeport of the condition.

It was believed that a field grade 3" chamber Model 1100, 410 gauge gun had been furnished Federal for testing. A skeet 2 $\frac{1}{4}$ " chamber gun should also be provided. Comments from Federal on the performance of the guns are to be requested.

In the prototype testing of the Model 1100, 20 gauge lightweight gun, failure to unlock developed after limited shooting due to deformation in the top of the Receiver. This has been eliminated by adding a hardened insert. The part was adhesive fastened in position. When Receivers in the Model 1100, 28 and 410 gauge endurance tested production guns were checked, there was also this same deformation inside the Receivers but to a lesser degree. The condition is more pronounced in the 410 gauge than the 28 gauge and is caused by the bounce of the Locking Block. This problem is avoided in the longer 12-16-20 gauge Receivers where there is space to provide for the longer hardened steel Barrel Extensions.