REMINGTON ARMS COMPANY, INC.

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MODEL XP-100 ALUMINUM RECEIVER INVESTIGATION

Several weeks ago an investigation was initiated to determine the feasibility of using an aluminum receiver in the Model XP-100, .221 Fireball. The purpose of this report is to explain the test procedures involved and the results of these tests.

All receivers used in the test were made of 75ST6 aluminum and were manufactured on standard production machinery. Receivers were hardcoated prior to assembly with barrels. Barrels and bolt assemblies were standard production items. The bolt locking lug cam surfaces were inspected to insure smoothness at points of contact with the receiver.

The investigation was conducted in two phases, the first being to determine whether or not the receiver possessed adequate strength for safe operation in the field. The test procedure used was as follows:

1. Fire 50 proof rounds. Headspace checked with no change.

2. Increase headspace to .019 inches over max. allowable.

3. Fire two standard and two proof rounds. No adverse effects.

4. Fire proof round on top of .224 dia. bullet lodged just ahead of chamber. Both bullets left barrel. Bolt difficult to unlock. Case not ruptured, but broken off on attempt to remove it from bolt head.

5. The locking surfaces in receiver set back .003 inches during entire course of test.

The second phase of the investigation consisted of firing 1500 standard production 50 grain rounds after proofing. A new barrel and receiver were used in this phase. Headspace was checked after each 100 rounds. No adverse operation was experienced throughout the test.

On completion of the second phase, the gun was disassembled and inspected. The upper locking surface in the receiver had been compressed .0005 inches and the lower remained constant. Hardcoat had been worn off the locking cams in the receiver, but all surfaces remained smooth and unobstructed.

The extraction cam on the rear of the receiver showed signs of wear; however, it still functioned satisfactorily and no permanent damage resulted.

It is intended at this time to produce a working model incorporating an aluminum receiver for a shooting characteristics comparison with the standard production guns.

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