

cc: S.M. Alvis  
D.E. Miller  
R.A. Williamson  
H.J. Hackman  
V.G. DeReus  
W.A. Best

Ilion, New York  
February 7, 1957

W. E. LEEK

SPORTSMAN-58 - 20 GAUGE  
COMPARISON TEST OF NEW DESIGN BREECH BOLT AND BARREL EXTENSION  
VS.  
PRESENT PRODUCTION DESIGN

At your request this test was started on 1-21-57 and completed 1-23-57.

PROCEDURE

Component parts for ten (10) guns were secured from assembly and assembled by this group. All components were of the present vintage design with the exception of the ejector, which did not have the top rail cut, but did have the .040" cut on the bottom rail.

Each gun was fired 25 rounds, using 5 rounds of each type of ammunition ranging from Win. light loads to Rem. magnums as a preliminary functional test. Then the ten guns were fired 500 rounds each on the skeet field, firing from five stations and using five shooters. The breech bolt and barrel extension were replaced by your new design and the above test was repeated.

The results are as follows:  
New Bolt & Bbl.

| Gun No. | Extension |               | Present Design |              |
|---------|-----------|---------------|----------------|--------------|
|         | Mail.     | Rate          | Mail.          | Rate         |
| 87371   | 0         | 0             | 0              | 0            |
| 87347   | 2         | .66%          | 2              | .66%         |
| 87852   | 3         | 1.6           | 2              | .66%         |
| 87354   | 0         | 1.0           | 0              | .0           |
| 87870   | 4         | 1.5           | 0              | .0           |
| 87852   | 0         | 1.0           | 3              | 1.0          |
| 87873   | 3         | 1.0           | 0              | 1.0          |
| 87855   | 4         | 1.3           | 0              | .0           |
| 87778   | 7         | 2.3           | 1              | .3           |
| 87856   | 5         | 1.6           | 0              | .0           |
| Total   | 32        | Overall 1.00% | 11             | Overall .56% |