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January 9, 1952

TO: W. A. Best
FROM: E. K. Wheat
SUBJECT: GALLERY TARGETING - M/721-722

A summary of gallery targeting data reported by range personnel for the month of December, 1951 is attached. We make the following comments:

POINT-OF-IMPACT

A slight increase in overall point-of-impact reject rate is noted. This may be due to cracked stocks which have been encountered when targeting the 30-06 caliber gun from the accuracy device. When stocks crack the gun will invariably target high and be classified as a reject. It is believed that the conditions causing stocks to crack have been classified and corrected.

GROUP SIZE

In general the overall grouping characteristics remain stabilized. An increase is noted in reject rate on the M/760. Classification of contributing factors is currently under way.

It should be noted that the M/721 - 270 caliber gun continues to show excellent grouping characteristics. Of the 1,407 guns targeted in this caliber during December, only one reject was found and this gun was accepted on re-targeting.

Notes: It is planned to consider the discontinuance of this report in the near future unless otherwise indicated by recipient comments. Any suggestions along this line will be appreciated.

GALLERY TARGETING - MODEL 721-722 (222)MONTH OF DECEMBER
1951

Total No. of Guns - 2,526
 Average Group Size - 1.64"
 Standard Deviation - .41"
 No. of Guns Rejected (over 2") - 18
 % Reject - .71%

No. of Guns having one stamp (Bore Variation of .0004-.0005) - 842
 Average Group Size for Guns in this classification - 1.66"
 Standard Deviation for " " " " - .36"
 No. of Guns Rejected (over 2") - 2
 % Reject - .24%

No. of Guns having two stamps (Bore Variation under .0004) - 1,684
 Average Group Size for Guns in this classification - 1.63"
 Standard Deviation for " " " " - .44"
 No. of Guns Rejected (over 2") - 16
 % Reject - .95%

Date	No. of Guns	Average Group Size (in)	Standard Deviation (in)	% Reject
8-17-51	2,032	1.66"	.5"	3.4%
9-12-51	4,179	1.65"	.43"	1.6%
11-10-51	170	1.60"	.32"	0.0%
Total Report	2,526	1.64"	.41"	.71%

* Provided Data

GALLERY TARGETING - MODEL 721-722 (270)MONTH OF DECEMBER
1951

Total No. of Guns - 1,407
 Average Group Size - 1.92"
 Standard Deviation - .51"
 No. of Guns Rejected (over 3½") - 1
 % Reject - .07%

No. of Guns having one stamp (Bore Variation of .0004- .0005) - 923
 Average Group Size for Guns in this classification - 1.86"
 Standard Deviation " " " " - .49"
 No. of Guns Rejected (over 3½") - 0
 % Reject - 0.0%

No. of Guns having two stamps (Bore Variation under .0004) - 480
 Average Group Size for Guns in this classification - 2.04"
 Standard Deviation for " " " " - .53"
 No. of Guns Rejected (over 3½") - 1
 % Reject - .2%

<u>Date</u>	<u>No. of Guns</u>	<u>Average Group Size (X)</u>	<u>Standard Deviation (s)</u>	<u>% Reject</u>
* 9-12-51	1,103	2.01"	.57"	.36%
* 10-4-51	2,004	2.01"	.52"	.09%
* 11-12-51	63	2.1 "	.42"	0.0%
* 12-30-51	3,230	2.03"	.54"	0.0%
This report	1,407	1.92"	.51"	.07%

* Previous Data

GALLERY TARGETING - MODEL 721-722 (30-06)

GALLERY TARGETING - MODEL 721 (30-06)MONTH OF DECEMBER
1951

Total No. of Guns - 934
 Average Group Size - 2.3"
 Standard Deviation - .76"
 No. of Guns Rejected (over 3½") - 22
 % Reject - 2.35%

No. of Guns having one stamp (Bore Variation of .0004--.0005) - 567
 Average Group Size for Guns in this classification - 2.3"
 Standard Deviation for " " " " - .77"
 No. of Guns Rejected (over 3½") - 16
 % Reject - 2.8%

No. of Guns having two stamps (Bore Variation under .0004) - 367
 Average Group Size for Guns in this classification - 2.23"
 Standard Deviation " " " " " " - .74"
 No. of Guns Rejected (over 3½") - 6
 % Reject - 1.63%

<u>Date</u>	<u>No. of Guns</u>	<u>Average Group Size (")</u>	<u>Standard Deviation (")</u>	<u>% Reject</u>
* 8-14-51	2,276	2.13"	.64"	1.4%
* 9-12-51	1,158	2.06"	.67"	1.7%
* 10-4-51	3,424	2.25"	.61"	1.5%
* 11-12-51	559	2.42"	.71"	4.3%
This Report	934	2.30"	.76"	2.35%

GALLERY TARGETING - MODEL 760 (50-06)MONTH OF DECEMBER
1951

Total No. of Guns - 2,428
 Average Group Size - 2.34"
 Standard Deviation - .81"
 No. of Guns Rejected (over 3½") - 77
 % Reject - 3.16%

No. of Guns having one stamp (Bore Variation of .0004-.0005) - 562
 Average Group Size for Guns in this classification - 2.28"
 Standard Deviation for " " " " - .76"
 No. of Guns Rejected (over 3½") - 16
 % Reject - 2.85%

No. of Guns having two stamps (Bore Variation under .0004) - 1,866
 Average Group Size for Guns in this classification - 2.36"
 Standard Deviation for " " " " - .82"
 No. of Guns Rejected (over 3½") - 61
 % Reject - 3.32%

<u>Date</u>	<u>No. of Guns</u>	<u>Average Group Size (X)</u>	<u>Standard Deviation (σ)</u>	<u>% Reject</u>
* 11-12-51	1,037	2.39"	.65"	1.8%
* 12-10-51	1,287	2.27"	.59"	1.32%
This report	2,428	2.34"	.81"	3.16%

* Previous Data