cc: S.M. Alvis J.B. Maupin R.A. Williamson

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Ilion, New York Apr11 29, 1955

W. A. BRST

## MODEL 722 - .308 CALIBER - PILOT LINE TESTING

At your request, ten (10) of the subject guns were withdrawn on 4-27-55 and subjected to a functional test of 320 rounds each. An accuracy test was attempted but due to production schedules which have to be met, facilities were not available. This test will be completed at a later date.

The results of the 320 round test are as follows:

Gun #	No. of Malf.	Rate		Type of Malfunction			
352682	None						
36086 <del>6</del>	None						
353207	3	.85	*1 \$	Feilures to eject Hard eccking			
354524	None		•				
360850	1	.2%	1	Failure to eject			
361012	1	.2%	*1	Hard cocking			
350 <b>906</b>	3	.8%	3	Failures to eject			
129499	11	3.1%	11	Pailures to eject			
36 <b>0742</b>	3	.8%	*1	Pailures to eject Hard cocking			
354553	1	.2%	*1	Hard cocking			

"The hard cocking that occurred on four of these guns was due to upsetting of metal on the cooking cam. An adjustment by using lubrication helped this condition. However, it is felt this should be investigated inasmuch as it must exist in all calibers in the M/721 and M/722. Gun #129499 which had the highest malfunction rate due to ejection failures actually is not as serious as pictured. The majority of the malfunctions occurred on slow and medium manual operation.

W. A. Best

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April 29, 1955

## Ammunition used in this test is as follows:

1.	Winchester	180 gr	. ST	6.	Western Remington	110	gr.	SP
2.	19	150 1	st	7.	Remington	180	11	SPOL
3.	Ħ	110 "	SP	8.	ei —	150	18	SPCL
4.	Vestern	180 B	SPGL	9.	ta	110	14	SPCL
<b>6</b>	N .	150 "	ST					

The malfumetions that occurred did not show a definite pattern of any one type of ammunition.

From the above results of test function-wise, the .308 Caliber appears satisfactory, providing the cocking cam condition is corrected.

Supervisor - Testing Unit Arms Research & Development Division

CJT:T