M/700 Firing Pin Evaluation

Test of M/700 firing pin assembly w/ chrome sear & dry cycling

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This test was made on #139413 M/700 to determine damages to the firing pin (breakage) and durability of the F.M. chromed sear. The gun was cocked and fired at a rate of one cycle every two seconds with inspection of the firing pin and sear every 5000 cycles.

BEGINNING OF TEST

1. Five trigger pulls taken at start of test. (The fire control was cleaned and deburred before test.)

6.25
6.25
6.25 Average: 6.30 lbs.
6.50
6.25

2. The sear stuck down at 4,750 cycles (cleaned and oiled fire control).

3. 5000 cycles: Sear shows light wear but no deformation. On examination of the firing pin the shoulder shows an uneven seat in the front of the bolt body. The firing pin tip shows heavy chaffing against the firing pin hole.

4. 5,370 cycles: Cocking cam had to be lubricated because of excessive force required to cock the action. (dry cycle machine jammed)

5. Shoulder of bolt has picked up small pieces of metal and seats unevenly in bolt body. Firing pin tip shows increased rubbing around the tip.

6. 11,680 cycles: Action failed to cock due to excessive wear on cocking cam; replaced bolt body and took trigger pulls.

5.25
5.25
5.00 Average: 5.25 lbs.
5.50
5.25

7. 15,000 [illegible] assembly [illegible] body [illegible] change [illegible] of the gear.

8. 20,000 [illegible] shows no cracks. Visual inspection the same. [illegible] little change over 15,000 cycles.

9. 25,000 [illegible] inspection shows no cracks. Visual inspection [illegible] small place in the [illegible] which looks [illegible] chip. Trigger pulls at 25,000 cycles:

4.25
4.50
4.75 Average 4.60 lbs.
4.75
4.75

SUMMARY

The M/700 firing pin assembly under test showed no other results than already mentioned and no evidence of breakage could be located by the magnetic process or by visual inspection under the low power microscope. The worst area of wear appeared to be on the last .150 of the firing pin tips. One other change occurred when the new bolt made a different mark on the firing pin shoulders. The second bolt put a more even seat.

Other than light rubbing, the gear seems in good condition; however, the trigger pull increased 1.70 lbs. in the 25,000 cycles.

WMCtG
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