

**DROP TEST UPDATE**  
**2/13/90**  
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- o **LIVE FIRE in SHOOTING JACK:**  
(M/700 30-06 CAL., 180 gr. AMMO, RECOIL RESTRICTED AND WT. ON BARREL TO ELIMINATE MUZZLE JUMP)

<u>SHOT</u>	<u>PEAK ACCELERATION</u>	<u>CONDITION</u>
1	401 G'S	TRIGGER JERKED
2	401 G'S	SMOOTH TRIGGER FULL

- o **LIVE FIRE in SHOOTING JACK:**  
(SAME CONDITIONS AS ABOVE EXCEPT FULL RECOIL PERMITTED IN JACK)

<u>SHOT</u>	<u>PEAK ACCELERATION</u>	<u>CONDITION</u>
1	412 G'S	TRIGGER JERKED

- o **DRY FIRED ON EMPTY CHAMBER:**

Acceleration was monitored as the rifle was dry fired on an empty chamber. This was done with the trigger jerked and pulled smoothly. No significant acceleration was recorded. Only some low amplitude vibrations were observed. See attached traces.

- o **MUZZLE DROP ON 1 in. THICK BRASS PLATE:**

Muzzle drops were repeated onto  $\frac{1}{8}$ " thick brass plate at 6 in. increments. The brass plate was approximately 14 in. square and was placed onto a concrete floor for this testing. Five drops were done at each height and peak acceleration was measured on all five drops. One complete waveform from each height was recorded. The safe was off for this entire test. Fire control specifications were set to equal Davison's gun.

HEIGHT (in.)	PEAK ACCELERATION (G's)
6	2058 1841 2275 1950 1950 ----- avg. 2015
12	3033 3141 2383 3033 2600 ----- avg. 2838
18	3466 3683 3033 3900 3250 ----- avg. 3466
24	4117 3900 3575 4117 3900 ----- avg. 3921
30	4333 3900 4225 4225 4333 ----- avg. 4203
36	4983 4658 4767 4550 4550 ----- avg. 4702

No firings occurred on any of these drops.

o HI-SPEED MOVIE TESTING OF MUZZLE, BUTT, AND TOP DROPS:

The above rifle was dropped on the muzzle, butt, and on the top of the receiver onto the large rock imbedded in sand. Acceleration levels were monitored and hi-speed movies were taken. The movies will be sent out for processing on 2/13/90. They should be ready for viewing thursday.