BARBER - PRESALE R 0118057

TO: J.C. Hutton

Subject: Model 700 Drop Test

Muzzle drop tests, at one and three feet, were conducted using a vertical drop fixture and a Model 700[,] 30.06 rifle. To determine the G acceleration, a PCB-305A04 accelerometer, serial# 8295 with a .000923 volts/g sensitivity, was mounted on the rifle. The drop mediums were as follows:

- 1) Large rock mounted in a base of sand.
- 2) Concrete floor.
- 3) Small rock mounted in a base of sand.
- 4) Two inch patio block mounted in a base of sand.
- 5) Wooden slab mounted in a base of sand.

In all cases the rifle was dropped with the safe in the off position.

The following pages contain a summary of the results of the drop test to date.

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DIGITAL ANALYZER SETTINGS	MEDIUM	DROP NUMBER	PEAK VOLTAGE	G ACCELERATION
Freq. Scan 0 - 100 kHz	Large Rock in sand	1 2 3	1.6 1.7 1.6	1730 1840 1730
Full scale Sensitivity 3.2V	l foot drops	4 5 Avg.	1.6 <u>1.7</u> 1.64	1730 <u>1840</u> 1780
Freq. Scan	Large Rock	1	2.1	2280
0 - 100 kHz	in sand	2 * 3	2.4 2.9	2600 3140
Full scale Sensitivity 3.2V	3 foot drops	4 5	3.1 3.1	3350 <u>3350</u>
		Avg.	2.72	2950
Freq. Scan 0 - 100 kHz	Concrete	1	.89	960
	Floor	2 3	.67 .74	720 800
Full scale Sensitivity 3.2V	1 foot drops	4 5	.67	720 990
		Avg.	.778	840
Freq. Scan 0 - 100 kHz	Concrete Floor	1 2 *	1.9 2.4	2050 2600
Full scale	3 foot	3 * 4	1.9 2.1	2050 2280
Sensitivity 3.2V	drops	5 Avg.	2.0	<u>2160</u> 2230
R 6	Small Rock	•		1100
Freq. Scan 0 - 100 kHz	in sand	1 2	$1.1 \\ 1.1$	1190 1190
Full scale	1 foot	3 4	1.3	1400 1300
Sensitivity 1.8V	drops	5 Avg.	1.4	1510 1320
Freq. Scan 0 - 100 kHz	Small Rock in sand	1 * 2 3 * 4 *	1.6 2.1 2.4	1730 2270 2600
Full scale Sensitivity 3.2V	3 foot drops	4 * 5	2.4	2600 2270
Demarcivity 3.20	arohz	Avg.	2.12	2300

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DIGITAL ANALYZER <u>Settings</u>	MEDIUM	DROP NUMBER	PEAK <u>VOLTAGE</u>	G ACCELERATION
Freg. Scan	Patio Block	1	.76	820
0 - 100 kHz	in sand	2	. 47	510
		3	.71	770
Full scale	1 foot	4	.82	890
Sensitivity 1.8V	drops	5	.85	920
		Avg.	.722	780
		,	••==	
Prog Coon	Patio Block	1	16	1730
Freq. Scan		1	1.6	
0 - 100 kHz	in sand	2 3	.78	840
	5 E		1.1	1190
Full scale	3 foot	4	1.0	1080
Sensitivity 2.0V	drops	5	1.1	1190
		Avg.	1.116	1210
Freq. Scan	Wooden Slab	1	.23	240
0 - 100 kHz	in sand	ž	.22	230
		3	.22	230
Full scale	1 foot	4	.23	240
Sensitivity 0.32V	drops	5	.22	230
-	•	Avg.	.224	240
Freg. Scan	Wooden slab	1	.31	330
0 - 100 kHz	in sand	2	.24	260
		3	.27	290
Full scale	3 foot	4	.28	300
Sensitivity 0.5V	drops	5	.32	340
		Avg.	.284	310

key:

* following the drop number indicates that the rifle fired on that drop. If there is no indication then the rifle did not fire.

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