

TEST AND MEASUREMENT LAB

TEST REPORT

REQUESTER: M. Keeney
WRITTEN BY: D. Thomas
DATE: 5/14/93
WORK ORDER: 481153
REPORT NO.: 931241
TEST TYPE: Lock-Time Measurement
FIREARM STAT'S:
MODEL: 700

CAL: 30-06

REASON FOR TEST:

To determine the effect of a reduction in weight of the M/700 Firing Pin on lock time.

EQUIPMENT REQUIRED:

1 M/700 serial # B6889854

Three groups of firing pins (three in each group)

Group# 1 Samples 1-3 Standard M/700 firing pin

Group# 2 Samples 4-6 Std. M/700 firing pin tip with aluminum shank

Group# 3 Samples 7-9 Titanium firing pin tip with aluminum shank

Lock time circuit

Tektronix 7854 Oscilloscope

TEST PROCEDURE:

Using the lock time circuit ten measurements were taken with each firing pin assembly. The same M/700 (serial # B6889854 from the Research library) was used for all of the measurements. All of the data points were then put into minitab for analysis.

TEST RESULTS:

See minitab results attached.

TEST # 931241

Note: C1 = Sample 1, C2 = Sample 2 etc.

ROW	C1	C2	C3	C4	C5	C6	C7	C8	C9
1	3.008	2.998	3.330	2.568	2.393	2.393	2.666	1.973	2.197
2	3.057	3.076	3.408	2.578	2.363	2.383	2.226	2.402	2.226
3	2.969	3.066	3.418	2.539	2.393	2.451	2.256	2.226	2.207
4	2.949	3.193	3.428	2.559	2.402	2.471	2.295	2.158	2.217
5	3.125	3.154	3.467	2.588	2.490	2.305	2.285	2.197	2.168
6	2.979	3.174	3.574	2.568	2.324	2.422	2.324	2.266	2.236
7	3.096	3.174	3.408	2.598	2.451	2.324	2.178	2.246	2.266
8	3.115	3.105	3.457	2.559	2.324	2.363	2.334	2.236	2.148
9	3.027	3.125	3.516	2.568	2.334	2.393	2.226	2.266	2.178
10	3.076	3.174	3.418	2.305	2.305	2.295	2.363	2.188	2.217

	N	MEAN	MEDIAN	TRMEAN	STDEV	SEMEAN
C1	10	3.0401	3.0420	3.0409	0.0631	0.0199
C2	10	3.1239	3.1395	3.1310	0.0624	0.0197
C3	10	3.4424	3.4230	3.4400	0.0666	0.0211
C4	10	2.5430	2.5680	2.5659	0.0852	0.0269
C5	10	2.3779	2.3780	2.3730	0.0598	0.0189
C6	10	2.3800	2.3880	2.3792	0.0594	0.0188
C7	10	2.3153	2.2900	2.2886	0.1355	0.0429
C8	10	2.2158	2.2310	2.2229	0.1078	0.0341
C9	10	2.2060	2.2120	2.2058	0.0347	0.0110

	MIN	MAX	Q1	Q3
C1	2.9490	3.1250	2.9765	3.1007
C2	2.9980	3.1930	3.0735	3.1740
C3	3.3300	3.5740	3.4080	3.4792
C4	2.3050	2.5980	2.5540	2.5805
C5	2.3050	2.4900	2.3240	2.4142
C6	2.2950	2.4710	2.3192	2.4293
C7	2.1780	2.6660	2.2260	2.3413
C8	1.9730	2.4020	2.1805	2.2660
C9	2.1480	2.2660	2.1755	2.2285

TEST # 931241

ANALYSIS OF VARIANCE

SOURCE	DF	SS	MS	F	P
FACTOR	8	16.56037	2.07005	321.96	0.000
ERROR	81	0.52078	0.00643		
TOTAL	89	17.08116			

INDIVIDUAL 95 PCT CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV
C1	10	3.0401	0.0631
C2	10	3.1239	0.0624
C3	10	3.4424	0.0666
C4	10	2.5430	0.0852
C5	10	2.3779	0.0598
C6	10	2.3800	0.0594
C7	10	2.3153	0.1355
C8	10	2.2158	0.1078
C9	10	2.2060	0.0347

POOLED STDEV = 0.0802

