

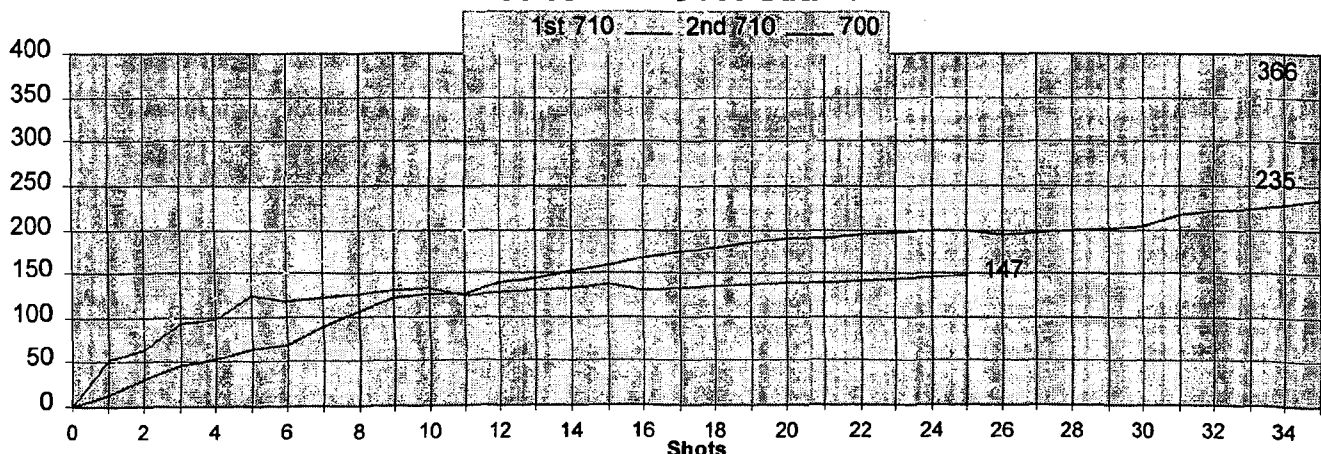
Test Lab Work Request Form

Rev.3 -20 April 2000

Date Submitted: 12 Aug. 2002	Tracking #: TLW 0932	STRAIN
Project #: 241314	Engineer: Franz for Keeney	
Test Objective:		
Tangential Strain on OD of a M/700 barrel, .30-06 Springfield in chamber area shooting Proof ammo.		
Test Description:		
• Strain Gage: a new Model 700 ADL chambered in .30-06 Springfield. ○ Apply strain gage in exactly the same location as the recent 710 testing ○ Location must be determined from the breech face, about mid point of the main tapered section of the chamber. ○ Apply a single gage in the tangential direction to measure hoop strain ○ Measure initial resistance of the strain gage after installation ○ Calibrate strain gage via Shunt Calibration (1,000 μi/i per Volt) ○ Hook up gage for monitoring in the blowup room and ○ Balance strain gage circuit once and then do not balance for the remainder of the test, contact S. Franz when ready to run the test. • Shoot: at least 25 consecutive proof rds. and monitor, record and store peak strain from firing, voltage after firing via volt meter and the full waveform signal, exactly like the recent 710 test procedure. Save all the spent cases, number them sequentially • Data: Turn off excitation voltage after the test is complete, let stand for a minimum of 1/2 hour, turn on excitation and record voltage reading. Do not rebalance Record gage resistance at the conclusion of all testing.		
Required Materials/Parts/Equipment (include quantities):		
1 M/700 ADL in .30-06 Springfield, strain gage and instrumentation, proof rds.		
Start Date: 12 Aug. 02	Test Assigned To: Gary Howell	
Completion Date: 13 Aug. 02	Assignment Date: 08/12/02	
Report Date: 13 Aug. 02	See also: Tlr 920	

Milivolts

30-06 710 vs 700 Strains



ET28179

30-06 Strains 700 Brl.

Shoot proof rounds, record headspace / gage / multimeter after each shot.

Tlr 932

Gun # 721

See Tlr 896 & 904 & 920

13-Aug-02

Shot:	Scope Gage		Multimeter			Headspace		Gage 125BT-120	Notes:	Scope setup:
	Hi	Low	Before	After	Sum:	Go	No-Go			
Normal:	40	-20	—	—	—	3	4		Resis: 121.0 Ohms	500mv / 10ms / C1 100mv
Calib:	1000	-20	—	—	—	3	4			500mv / 10ms / C1 100mv
1	720	0	0	52	52	3	4	Proof		500mv / 10ms / C1 100mv
2	840	40	51	65	14	3	4	Proof		500mv / 10ms / C1 100mv
3	Pre-Trig		64	93	29	3	4	Proof		500mv / 10ms / C1 100mv
4	840	80	93	98	5	3	4	Proof		500mv / 10ms / C1 100mv
5	780	80	97	123	26	3	4	Proof		500mv / 10ms / C1 100mv
Cool minimum 5 min., air hose.										
6	780	100	108	117	9	—	—	Proof		500mv / 10ms / C1 100mv
7	820	100	117	122	5	—	—	Proof		500mv / 10ms / C1 100mv
8	880	120	123	126	3	—	—	Proof		500mv / 10ms / C1 100mv
9	880	100	125	130	5	—	—	Proof		500mv / 10ms / C1 100mv
10	720	120	130	132	2	.003	.004	Proof	Headspace after 5 rds	500mv / 10ms / C1 100mv
Cool minimum 5 min., air hose.										
11	880	120	120	124	4	—	—	Proof		500mv / 10ms / C1 100mv
12	820	120	124	128	4	—	—	Proof		500mv / 10ms / C1 100mv
13	860	120	128	130	2	—	—	Proof		500mv / 10ms / C1 100mv
14	760	120	130	133	3	—	—	Proof		500mv / 10ms / C1 100mv
15	860	120	133	136	3	.003	.004	Proof	Headspace after 5 rds	500mv / 10ms / C1 100mv
Cool minimum 5 min., air hose.										
16	780	120	127	130	3	—	—	Proof		500mv / 10ms / C1 100mv
17	880	100	130	132	2	—	—	Proof		500mv / 10ms / C1 100mv
18	820	120	132	134	2	—	—	Proof		500mv / 10ms / C1 100mv
19	840	120	134	136	2	—	—	Proof		500mv / 10ms / C1 100mv
20	880	140	136	139	3	—	—	Proof		500mv / 10ms / C1 100mv
21	880	140	139	140	1	—	—	Proof		500mv / 10ms / C1 100mv
22	960	140	139	142	3	—	—	Proof		500mv / 10ms / C1 100mv
23	800	140	142	144	2	—	—	Proof		500mv / 10ms / C1 100mv
24	840	140	143	145	2	—	—	Proof		500mv / 10ms / C1 100mv
25	840	140	144	147	3	.004	.005 Tight	Proof	Headspace after 10 rds	500mv / 10ms / C1 100mv
Max:	960	140			Sum: 189					
	mv	mv	mv	mv	mv	inches			Final Resis: 121.0 Ohms	1v = 1000ue
	60	0	2							
	180	120	126							
	180	140	135							

← .844" →

Top View

Gage 1

ET28180