

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
1																			
2		Engineer:	James Urbon			Project #:	241230			TLW #:	2359								
3																			
4		Date Submitted:	8/29/2007			Requested Completion Date:	9/21/2007												
5																			
6																			
7		Test Description:	T&P follow up testing on 270 Win and 7mm Rem Mag M/770 Stainless Steel Rifles.																
8																			
9																			
10																			
11		Test Procedure:	- Any questions should be directed to James Urbon. If any clarification is required, please ask don't assume. - Record all test progress and data on a Daily Log Sheet and in this TLW. - Label rifles (All) - Label with the standard information; serial number, model number, TLW number, and Test ID number - Label the 7mm Rem Mag rifles with ID #'s D1, D2, etc. - Label the 270 Win. rifles with ID #'s E1, E2, etc. - Initial Measurement and Inspection. (All) - Generally visually inspect the overall condition of all of the rifles. Note and photograph any anomalies. - Measure the trigger pull on all of the rifles using the Spring Scale. - Perform a safety function test on all of the rifles. - Head Space / Proof / Head Space (All) - Measure and record headspace using chamber shoulder head space gauges. - Fire one standard proof cartridge per rifle in controlled environment via lanyard. - Measure and record headspace using chamber shoulder head space gauges following proof test. - Accuracy (D1-5, E1-5) - Clean and inspect each rifle prior to testing. - Shoot at a minimum five shot to sight in and foul the rifle. Fire additional shots if required to sight in the rifle. Record the exact number of rounds fired. - Fire 3 five shot groups for each rifle at 100 yards. - Keep track of and mark the placement of each shot in each group. Number the shots in each group 1 – 5 in the order in which they were fired. - Measure and record the three shot group size in each group using shots 1 – 3. - Measure and record the five shot group size in each group using all five shots fired. - All groups are to be measured center to center. - Clean and inspect each rifle after completion of testing.																
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37	Special Requirements:																		
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42	Supplies Availability:																		
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46																			
47	Results Required:										Formal Report								
48																			
49	*****This section to be completed by Test Lab Manager*****																		
50																			
51	Assigned To:										Lee, Bob	Start Date:		9/4/2007					
52																			
53	Assigned Date:										8/30/2007	Completion Date:		9/10/2007					
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55	Comments:																		
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Data Only
Formal Report

	A	B	C	D	E	F	G	H	I
1	• Endurance (D1-5, E1-5) ○ In each series, the guns are to be fired to the following round levels. ▪ Gun 1 to 1000 RL. ▪ Gun 2 to 500 RL. ▪ Guns 3, 4, & 5 to 100 RL. ○ All guns are to be cooled to the touch every 20 rounds via shop air. ○ All guns are to be cleaned and inspected every 500 rounds. • Metallurgical Evaluation ○ A sample of the endurance guns will be disassembled and have there barrels sectioned and mounted to check for possible barrel cracking and locking lug hardness.								
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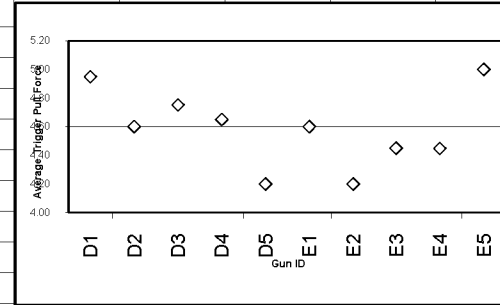
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
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Model 770 Stainless Steel T&P Follow up Testing Summary										
Caliber	7mm Rem Mag					270 Win				
Serial #										
Test Discription \ Gun ID #	D1	D2	D3	D4	D5	E1	E2	E3	E4	E5
Visual Inspection	O	O	O	O	O	O	O	O	O	O
Trigger Pull	O	O	O	O	O	O	O	O	O	O
Safety Function	O	O	O	O	O	O	O	O	O	O
HS - Proof - HS	O	O	O	O	O	O	O	O	O	O
Accuracy	O	O	O	O	O	O	O	O	O	O
Endurance to 100 RL	O	O	O	O	O	O	O	O	O	O
Endurance to 500 RL	O	O				O	O			
Endurance to 1000 RL	O					O				
Metallurgical Evaulation of Barrel	O					O				
Final Round Level										

LEGEND	
O = Planned	O = Completed Failed
O = In-Progress	⊗ = Cancelled
O = Completed & Passed	□ = Not Planned

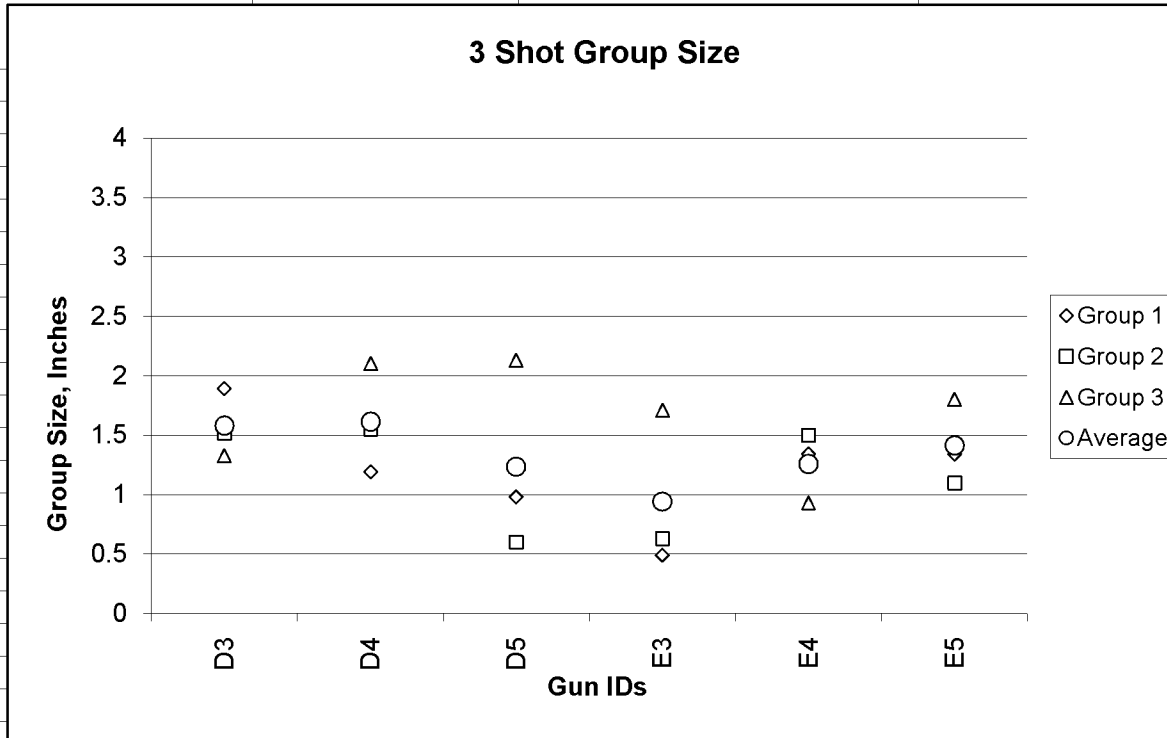
	A	B	C	D	E	F
1						
2						
3		Gun ID	Serial #	Cal	Visual Inspection	Safety Fcn Check
4		D1	71380501	7mm Rem Mag	GOOD	GOOD
5		D2	71384667	7mm Rem Mag	GOOD	GOOD
6		D3	71384729	7mm Rem Mag	GOOD	GOOD
7		D4	71385284	7mm Rem Mag	GOOD	GOOD
8		D5	71385225	7mm Rem Mag	GOOD	GOOD
9		E1	71390508	270 Win	GOOD	GOOD
10		E2	71384790	270 Win	GOOD	GOOD
11		E3	71384941	270 Win	GOOD	GOOD
12		E4	71385409	270 Win	GOOD	GOOD
13		E5	71386441	270 Win	GOOD	GOOD

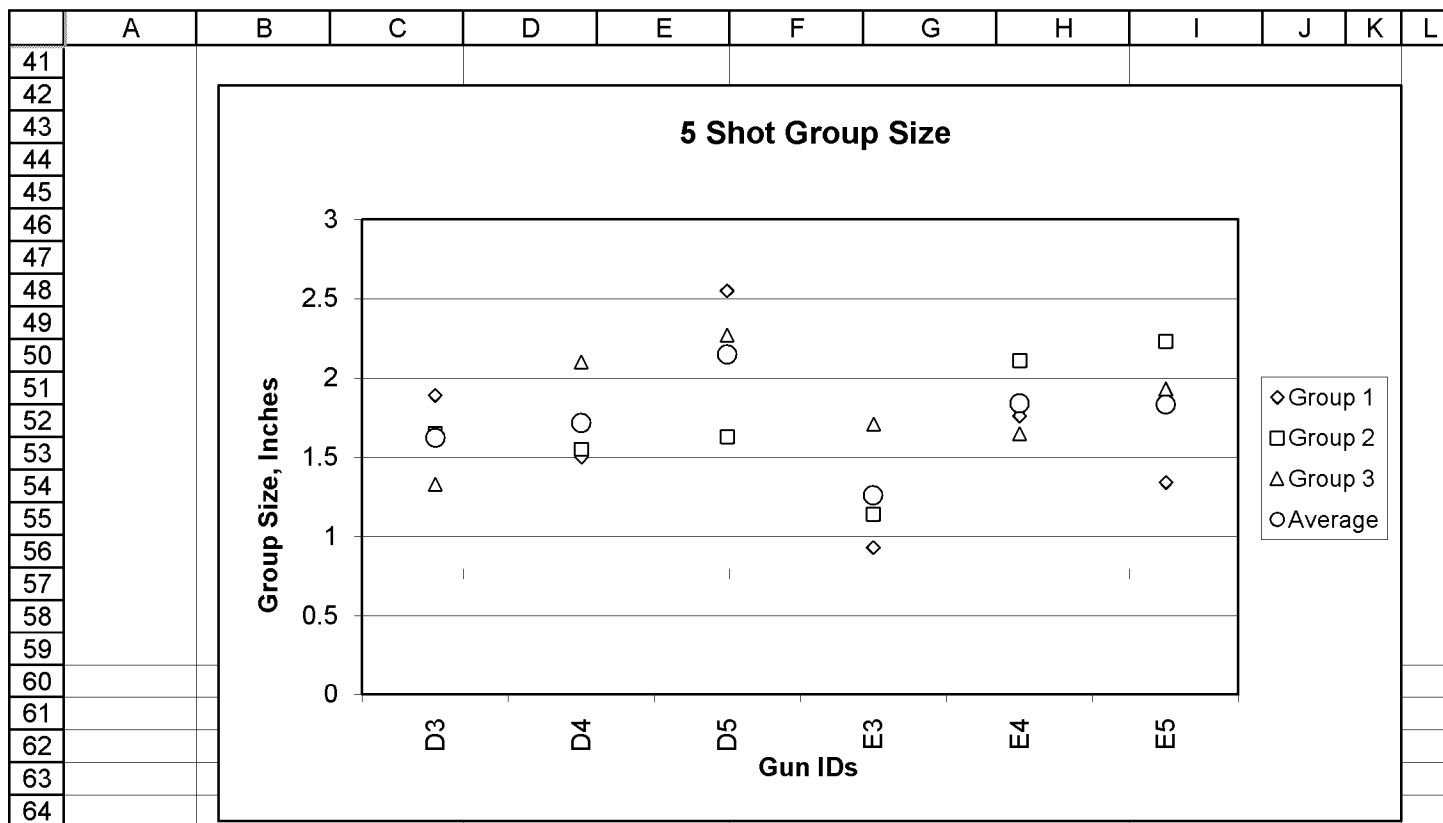
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1																					
2																					
3																					
4					Trigger Pull																
5				Gun ID	#1	#2	#3	#4	#5	Avg											
6				D1	5	5	5	4.75	5	4.95											
7				D2	4.5	4.5	4.75	4.5	4.75	4.60											
8				D3	4.76	4.75	4.5	5	4.75	4.75											
9				D4	4.5	4.75	4.75	4.75	4.5	4.65											
10				D5	4	4.25	4	4.5	4.25	4.20											
11				E1	4.75	4.75	4.5	4.5	4.5	4.60											
12				E2	4.25	4.25	4.25	4.25	4	4.20											
13				E3	4.25	4.5	4.25	4.5	4.75	4.45											
14				E4	4	4.75	4.25	4.5	4.75	4.45											
15				E5	5	5	5	5	5	5.00											
16										4.59											



	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3		Gun ID	Cal	Head Space before Proof	Head Space after Proof	Head Space Growth	Condition of Proof Case				
4		D1	7mm Rem Mag	0.002	0.002	0	GOOD	hard closing with rd in chamber			
5		D2	7mm Rem Mag	0.002	0.003	0.001	GOOD				
6		D3	7mm Rem Mag	0.003	0.004	0.001	GOOD				
7		D4	7mm Rem Mag	0.002	0.002	0	GOOD				
8		D5	7mm Rem Mag	0.002	0.003	0.001	GOOD				
9		E1	270 Win	0.002	0.002	0	GOOD				
10		E2	270 Win	0.001	0.002	0.001	GOOD				
11		E3	270 Win	0.003	0.003	0	GOOD				
12		E4	270 Win	0.002	0.004	0.002	GOOD				
13		E5	270 Win	0.003	0.003	0	GOOD				

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2		Shooter:										
3		Note: Shoot accuracy at 100yds. From bench, utilizing standard 3 X 9 Bushnell scope provided										
4		with firearm										
5		Ammo type.		270 Win 130 PSP CL R270W2 C20-VAI								
6				7mm Rem Mag 150 PSP CL R7mmm2 C13-VB1								
7												
8				3 shot groups				5 shot groups				
9			Group 1	Group 2	Group 3	Average	Group 1	Group 2	Group 3	Average		
10		D3	1.89	1.52	1.33	1.58	1.89	1.65	1.33	1.62		
11		D4	1.19	1.55	2.1	1.61	1.5	1.55	2.1	1.72		
12		D5	0.98	0.6	2.13	1.24	2.55	1.63	2.27	2.15		
13		E3	0.49	0.63	1.71	0.94	0.93	1.14	1.71	1.26		
14		E4	1.34	1.5	0.93	1.26	1.76	2.11	1.65	1.84		
15		E5	1.34	1.1	1.8	1.41	1.34	2.23	1.93	1.83		
16						1.34				1.74		
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1																					
2																					
3																					
4		Clean and Inspect Summary																			
5			D1	D2	D3	D4	D5	E1	E2	E3	E4	E5									
6		Before Test																			
7		100 RL																			
8		500 RL																			
9		1000 RO																			
10																					
11																					
12																					
13		Malfunction Summary																			
14			D1	D2	D3	D4	D5	E1	E2	E3	E4	E5	bolt locking lug was hitting front of follower								
15		100 RL	0	0	0	0	0	0	0	0	0	0	made chamfer on followers - D1,D2, E1,E2								
16		500 RL	0	0				0	0				corrected the problem								
17		1000 RO	0					0													

	A	B	C	D	E	F	G	H	I	J	K
1		PROJECT: 241230					M/770 STAINLESS STEEL				
2		TLW: 2359									
3		7MM REM MAG				Test Gun ID		.270 Win			
4	Round Level	D1	D2	D3	D4	D5	E1	E2	E3	E4	E5
5	1										
6	2										
7	3										
8	4										
9	5										
10	6										
11	7										
12	8										
13	9										
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104	100										

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2		7MM R M		.270 WIN	
3		Test Gun ID			
4	Round Level	D1	D2	E1	E2
5	101				
6	102				
7	103				
8	104				
9	105				
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403	499				
404	500				

	A	B	C
1			
2		7MM RM .270 WIN	
3		Test Gun ID	
4	Round Level	D1	E1
5	501		
6	502		
7	503		
8	504		
9	505		
10	506		
11	507		
12	508		
13	509		
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4		D1																		
5		D1 - Lug 1		D1 - Lug 2		D1 - Lug 3														
6		HRc	HV	HRc	HV	HRc	HV													
7		0.01																		
8		0.045																		
9		0.085																		
10		0.125																		
11		0.165																		
12		0.205																		
13		0.24																		
14																				
15																				
16		E1																		
17		E1 - Lug 1		E1 - Lug 2		E1 - Lug 3														
18		HRc	HV	HRc	HV	HRc	HV													
19		0.01																		
20		0.045																		
21		0.085																		
22		0.125																		
23		0.165																		
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