

Test Lab Work Request Form

Rev.3 -20 April, 2000

Date Submitted: 07-10-02	Tracking #: TLR 904	STRAIN
Project #: 241314	Engineer: Franz for Keeney	
Test Objective: Strain gauge evaluation of chamber stresses shooting standard .300 Win. Mag. Ammo.		
Test Description: Instrument a 710 300 Win. Mag. Barrel (Ser. No. 71032167 : Gun A-13) with 2 hoop strain gauges in the locations identified below. Shoot standard .300 Win. Mag. Ammo (use heaviest bullet available) and record strain throughout shooting sequence. After initial balance DO NOT rebalance the strain gauges throughout the test. Call S. Franz when test is about to be shot. 1.469 in. .584 in. Front edge of Receiver 1. Install 2 hoop gages in locations identified 2. Wire for simultaneous strain recording 3. Record initial resistance of each gage 4. Hook to strain gage equipment and setup for simultaneous strain recording of full waveforms. 5. Setup in blow-up room and do all shooting with a lanyard. 6. Obtain standard Rem. .300 Win. Mag. Ammo (use heaviest bullet available) 7. Call S. Franz when ready to shoot the test. 8. Balance both gages and commence shooting standard rounds, recording and storing each waveform for each shot. 9. DO NOT REBALANCE. 10. At the conclusion of testing record the final resistance of each gage after the gun has cooled completely to ambient temperature. 11. Check gages, hand load development, fire in same gun till chamber expands significantly, record waveforms and voltage on forward gage.		
Start Date: 11 July 02	Test Assigned To: Gary Howell	
Completion Date: 15 July 02		
Report Date: 16 July 02	Assignment Date: 07/10/02	
Results: See Tlr 896 for test # 1 & 2 and Tlr0896.xls and Tlr0904.xls.		
Test # 3: Fired 300WM with standard ammo only, no significant change in chamber.		
Test # 4: Fired hand loads to determine at what point chamber expands significantly, at 66grains (80.2k psi) change significant.		

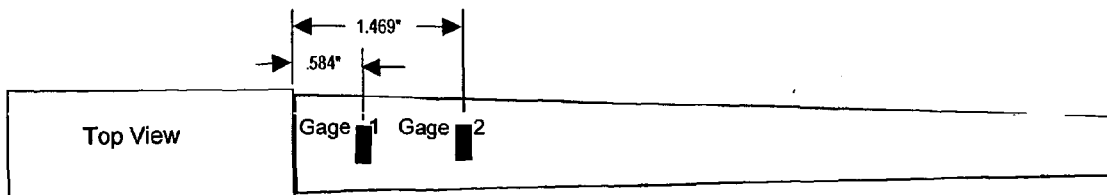
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300 WM Strains 710 Brl.

Shoot only standard rounds see if chamber expands!

Tlr Shot:	11-Jul-02		Gage 2 volts			Test 3	Scope:
	Gage 1	Gage 2	Before	After	Sum:	Notes:	
Normal:	50 / -10	50 / -10	-----	-----	-----	-----	500mv / 5ms / C1 100mv
Calib:	.990	.990	-----	-----	-----	-----	500mv / 5ms / C1 100mv
1	.630	.630	.000	.003	.003	Ammo Rem 180g R300W2	500mv / 5ms / C1 100mv
2	.630	.630	.003	.005	.002	Spiking up to 50mv then down	500mv / 5ms / C1 100mv
3	.670	.690	.050	.008	-.042	"	500mv / 5ms / C1 100mv
4	.630	.650	.010	.009	-.001	"	500mv / 5ms / C1 100mv
5	.650	.670	.010	.011	.001	"	500mv / 5ms / C1 100mv
6	.630	.630	.011	.012	.001	"	500mv / 5ms / C1 100mv
7	.650	.650	.014	.013	-.001	"	500mv / 5ms / C1 100mv
8	.630	.650	.014	.013	-.001	"	500mv / 5ms / C1 100mv
9	.630	.630	.014	.015	.001	"	500mv / 5ms / C1 100mv
10	.630	.650	.015	.012	-.003	"	500mv / 5ms / C1 100mv
11	.670	.650	.012	.010	.002	"	500mv / 5ms / C1 100mv
12	.630	.630	.010	.011	.001	"	500mv / 5ms / C1 100mv
13	.650	.650	.012	.010	-.002	"	500mv / 5ms / C1 100mv
14	.630	.650	.011	.009	-.002	"	500mv / 5ms / C1 100mv
15	.650	.650	.011	.010	-.001	"	500mv / 5ms / C1 100mv
16	.690	.670	.009	.009	.000	"	500mv / 5ms / C1 100mv
17	.690	.670	.010	.008	-.002	"	500mv / 5ms / C1 100mv
18	.650	.650	.009	.007	-.002	"	500mv / 5ms / C1 100mv
19	.650	.630	.008	.006	-.002	"	500mv / 5ms / C1 100mv
20	.610	.630	.007	.005	-.002	"	500mv / 5ms / C1 100mv
Normal:	50 / -10	50 / -30	-----	-----	-----	-----	500mv / 5ms / C1 100mv
Max:	.690	.690			Sum: -.054	1v = 1000ue	

See Tlr 896 for Test # 1 & 2



	Gage 1	Gage 2
Before	120.8	120.6
After	120.9	120.8
Diff:	+ .1	+ .2

Ohms

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