Test Lab Work Request Form

Date Submitted: 10 March, 2000	Tracking #: TLW 0010E
Project #: 241095	Engineer: J.R.SNEDEKER

Test Objective:

TLW0010E – Measure Sear/Trigger Engagement and Sear Lift:

The Sear/Trigger Engagement will be measured. The amount of engagement must be measured between .020" and .025" measured with the bolt in the fully closed and locked position. Minimum Sear lift is 0.006" and maximum sear lift is 0.018".

Test Description:

Method for measuring Sear/Trigger Engagement:

- The 30" Optical comparator will be used to measure the engagement at 50X magnification.
- With the barreled action held firmly in position, the barreled action will be aligned such that the action is held perpendicular to the lens in both the horizontal and vertical planes.
- With action closed and locked, the safety in the "fire" position, measure the amount of overlap between the sear and the trigger.

Method for measuring Sear Lift:

- Remove the bolt from the action.
- Place the Safety in the "Off-Safe" (i.e. "Fire") position.
- With the action held firmly in a horizontal position pre-load the sear in the downward position using a small screwdriver and with a dial indicator zeroed on the top of the sear, gently rotate the Safety to the "On-Safe" position.
- Record the amount of vertical movement of the sear.
- Minimum sear lift is 0.006" and maximum sear lift is 0.018"

Data Required:

- Rifle Serial number
- Record Sear/Trigger Engagement
- Record Sear Lift

Resource Usage: Manpower Requirements - Facility Requirements -	Test Results Required: Formal Report: Data Only: X REQUESTED Completion Date:
Required Materials/Parts/Equipment (include quantities):	
Test Parts Availability Date:	
Start Date: Completion Date: Report Date:	Test Assigned To:

BARBER - 5.22.06r0001127

PROJECT# 2410 D.A.T. 2
[redacted]/ 0010E
SEAR/TRIGGER ENGAGEMENT AND SEAR LIFT
9/11/00 MEASUREMENTS BY JESSE ARNOLD
GUNS B-1 TO B-20 ARE REPLACEMENT GUNS
GUNS B-21 TO B-30 WERE SELECTED FROM THE ORIGINAL 30 GUNS

SEAR/TRIGGER ENGAGEMENT			SPEC= .020 TO .025	
GUN#	1	2	3	AVERAGE
B-1	0.0206	0.0214	0.0211	**0.0210**
B-2	0.0256	0.0247	0.0258	**0.0254** ✓
B-3	0.0253	0.0255	0.0239	**0.0249**
B-4	0.0236	0.0241	0.0252	**0.0243**
B-5	0.0219	0.0223	0.0225	**0.0222**
B-6	0.0239	0.0241	0.0249	**0.0243**
B-7	0.0278	0.0269	0.0278	**0.0275** ✓
B-8	0.0245	0.0249	0.0247	**0.0247**
B-9	0.0212	0.0214	0.0233	**0.0220**
B-10	0.0254	0.0249	0.0248	**0.0250**
B-11	0.0227	0.0238	0.0231	**0.0232**
B-12	0.0201	0.0199	0.0197	**0.0199**
B-13	0.0249	0.0247	0.0249	**0.0248**
B-14	0.0227	0.0234	0.0219	**0.0227**
B-15	0.0249	0.0248	0.0247	**0.0248**
B-16	0.0252	0.0248	0.0249	**0.0250**
B-17	0.0249	0.0247	0.0248	**0.0248**
B-18	0.0248	0.0247	0.0253	**0.0249**
B-19	0.0212	0.0222	0.0231	**0.0222**
B-20	0.0249	0.0237	0.0239	**0.0242**
B-21	0.0238	0.0241	0.0239	**0.0239**
B-22	0.0247	0.0248	0.0246	**0.0247**
B-23	0.0247	0.0248	0.0241	**0.0245**
B-24	0.0256	0.0239	0.0238	**0.0244**
B-25	0.0268	0.0262	0.0268	**0.0266** ✓
B-26	0.0241	0.0241	0.0239	**0.0240**
B-27	0.0246	0.0252	0.0248	**0.0249**
B-28	0.0251	0.0248	0.0246	**0.0248**
B-29	0.0258	0.0261	0.0256	**0.0258** ✓
B-30	0.0242	0.0247	0.0239	**0.0243**

SEAR LIFT			SPEC= .006 TO .018
1	2	3	AVERAGE
0.0169	0.0171	0.0168	**0.0169**
0.0167	0.0169	0.0167	**0.0168**
0.0169	0.0168	0.0159	**0.0165**
0.0159	0.0162	0.0141	**0.0154**
0.0178	0.0169	0.0156	**0.0168**
0.0186	0.0188	0.0187	**0.0187** ✓
0.0172	0.0179	0.0182	**0.0178**
0.0154	0.0153	0.0159	**0.0155**
0.016	0.0163	0.0161	**0.0161**
0.0149	0.0147	0.0134	**0.0143**
0.0155	0.0151	0.0143	**0.0150**
0.0152	0.0154	0.0152	**0.0153**
0.0181	0.0167	0.0166	**0.0171**
0.0172	0.0164	0.0166	**0.0167**
0.0179	0.0167	0.0172	**0.0173**
0.0151	0.0154	0.0162	**0.0156**
0.0167	0.0168	0.0171	**0.0169**
0.016	0.0163	0.0152	**0.0158**
0.0171	0.0169	0.0164	**0.0168**
0.0174	0.0172	0.0162	**0.0169**
0.0161	0.0168	0.0166	**0.0165**
0.0112	0.0116	0.0114	**0.0114**
0.0121	0.0127	0.0117	**0.0122**
0.0179	0.0183	0.0178	**0.0180**
0.0175	0.0176	0.0174	**0.0175**
0.0171	0.0172	0.0174	**0.0172**
0.014	0.0141	0.0142	**0.0141**
0.0179	0.0177	0.0164	**0.0173**
0.0128	0.0125	0.0128	**0.0127**
0.0132	0.0141	0.0137	**0.0137**

ET06959

Worksheet size: 100000 cells

Descriptive Statistics - Sear / Trigger Engagement & Sear Lift - Phase II - TLW0010E

Descriptive Statistics

Variable	N	Mean	Median	TrMean	StDev	SE Mean
S/Trig E	30	0.02419	0.02460	0.02426	0.00156	0.00028
Sear Lif	30	0.01596	0.01660	0.01610	0.00175	0.00032

Variable	Minimum	Maximum	Q1	Q3
S/Trig E	0.01990	0.02750	0.02373	0.02490
Sear Lif	0.01140	0.01870	0.01522	0.01713