

## Test Lab Work Request Form

Date Submitted: 10 March, 2000

Tracking #: TLW 0010U

Project #: 241095

Engineer: J.R.SNEDEKER

**Test Objective:****TLW0010U – 50 lb. Trigger Pull Test**

This test is conducted to determine if the safety mechanism will release the trigger mechanism and cause the firearm to discharge if the trigger is pulled intentionally by the shooter with the safety on the "On-Safe" position. In addition, sufficient force is applied to the trigger with the safe in the "On-Safe" position to assure that the trigger dimensions will not change thereby affecting trigger/sear engagement. Prior to start of test verify that trigger pull, engagement and over-travel are within recommended specifications on the sample rifles.

**Test Description:**Method:

- Inspect and verify the rifle is not loaded and the safe is in the "On-Safe" position.
- Locate the firearm in a vertical position with the muzzle pointed up.
- Using the set of plug gauges determine the amount of minimum clearance between the rear of the trigger and the inside rear of the trigger guard. This dimension will be used as a reference to see if the trigger has been deformed by the loading in the next steps.
- Carefully load a primed case into the chamber and close the bolt.
- With the safe in the "On-Safe" position, using the NRA trigger pull rod, load the trigger with a 50 lb. weight. **BE EXTREMELY CAREFUL TO STAY CLEAR OF THE MUZZLE IN CASE THE FIREARM DISCHARGES THE PRIMED CASE.**
- Remove the load from the trigger.
- Move the Safety to the "Fire" position, the rifle must not discharge.
- Return the Safety to the "On-Safe" position.
- Carefully remove the rifle from the holding device and with the muzzle pointed in a safe direction, pull the trigger, the rifle must discharge. Extract the shell case.
- Using the plug gauges measure the minimum clearance between the rear of the trigger and the inside rear of the trigger guard.
- Measure the trigger pull, engagement and over-travel to insure that they have not changed from the beginning of the test.

Data required:

- Rifle serial number
- Measurements of Trigger pull, engagement, over-travel and trigger/trigger guard clearance before and after loading.
- Note that the rifle "fired" or did not fire when the safety was pushed to the "Fire" position.

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- Note that the rifle did "fire" when the trigger was pulled.

**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:** 13 Sept 2000**Completion Date:** 13 Sept 2000**Report Date:****Test Assigned To:***M. Carson*

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## 50 Lb. Trigger Pull Test - TLW0010U

	Trigger Pull	5.00 Engagement	Gage	Fire during	Fire after
B1	B) 4.75/5.00/5.25	5.08	27.8/27.1/28.0 .0276	No	Yes
	A) 4.75/5.25/5.25		.0294/.0296/.029 .0293		140
B2	B) 5.00/5.00/5.25	5.08	.0285/.0277/.0285 .0282	No	Yes
	A) 5.00/5.25/5.50	5.25	.0296/.0282/.0284 .0287		163
B3	B) 4.25/4.75/4.75	4.58	.0250/.0258/.0245 .0251	No	Yes
	A) 5.00/5.00/4.75	4.92	.0257/.0262/.0271 .0263		166
B4	B) 4.50/5.25/5.00	4.92	.0282/.0278/.028 .0280	No	Yes
	A) 4.50/5.00/4.75	4.75	.0283/.0279/.0275 .0277		165
B5	A) Could not do - No Bolt handle.				
B6	B) 4.50/5.25/5.00	4.92	.0291/.0275/.0275 .0280	No	Yes
	A) 4.50/4.75/5.00	4.75	.0309/.0291/.0304 .0301		166
B7	B) 4.50/4.75/4.50	4.42	.0275/.0288/.0283 .0282	No	Yes
	A) 4.75/4.50/5.00	4.75	.0297/.0308/.0317 .0307		167
B8	B) 5.50/5.00/5.50/5.33		.0294/.0303/.0299 .0299	No	Yes
	A) 5.00/5.00/5.00	5.00	.0293/.0296/.0256 .0287		168
B9	B) 4.75/5.00/4.75	4.83	.0310/.0296/.0306 .0304	No	Yes
	A) 4.25/4.50/4.75	4.50	.0293/.0287/.0290 .0290		161
B10	B) 5.50/5.00/5.00	5.17	.0245/.0273/.0278 .0265	No	Yes
	A) 5.00/5.25/5.25	5.17	.0296/.0269/.0279 .0281		165

9/22/00 JC, SF

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before .169 not cocked  
 .176 cocked (safe on)  
 after 50 lbs  
 .111 not cocked  
 .119 cocked (safe on)

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