

Test Lab Work Request Form

Rev.3 -20 April, 2000

Date Submitted: 10/27/00	Tracking # : TLW0344
Project # : 241095	Engineer: S. Franz for M. Keeney

Test Objective: A number of issues were identified in DAT Phase II that resulted in design changes. The purpose of this test is to determine if design changes made satisfactorily solve those deficiencies. Successful completion of this test will give a green light for T & P build and test activity to commence. Some of these issues have already been tested. For instance the magazine box weld strength was increased through weld parameter optimization and then subsequently tested via a tensile test run in the Metallurgical Lab. More specifically this test will focus on the following:

- Locking lug cam surface geometry changes and effect on bolt opening/closing
- Bolt stop location and detent(stock) support changes
- 2 bolt plug designs will be tested
 - ✓ Design #1: DAT design with material changed to nylon
 - ✓ Design #2: New design with material changed to nylon
- Stock mold alterations to bring stock within model drawing (ie. no shims)
- Permanent recoil lug attachment to the stock (shimmed and glued)

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ET06652

Test Description:**Test Plan:**

- 10 guns
 1. System operation/bench check
 2. Measure trigger pull 9 (3 measurements/gun)
 3. Measure bolt opening and closing force (3 measurements/gun)
 4. Measure bolt stop opening and closing force (3 measurements/gun)
 5. Confirm proper fit between stock and receiver (no shims)
 6. Confirm permanent attachment of recoil lug to stock
 7. Headspace, Proof, Headspace
 8. 200 round jack function test (all 10 guns)
- 8 guns
 1. ISS abuse test (See S. Franz)
- 1 gun
 1. 500 round jack function test

Resource Usage:**Manpower Requirements –****Facility Requirements –****Test Results Required:****Formal Report: X Data Only:****Requested Completion Date: 10/31/00****Required Materials/Parts/Equipment (include quantities):** Ten guns will be delivered. Five will have bolt plug design #1 and the remaining five bolt plug design #2.**Test Parts Availability Date: 10/27/00****Start Date:****Completion Date:****Report Date:****Test Assigned To: Jesse Arnold, Bob Lee & Jody Carson****Assignment Date: 10/30/00**

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PROJECT# 241095

11/1/00

TLW 0344

TESTERS- JESSE ARNOLD & BOB LEE

GUN	TRIGGER PULL	1	2	3	AVERAGE
A-1		4.75	5	4.5	4.75
A-2		4.75	4.75	4.75	4.75
A-3		5.5	5.25	5	5.25
A-4		5.5	5.5	5.25	5.42
A-5		6	5.75	5.75	5.83
A-6		4.75	4.25	4.75	4.58
A-7		4.75	5	5	4.92
A-8		5.5	5.5	6	5.67
A-9		6	5.25	5.5	5.58
A-10		4.75	4.5	4.75	4.67

CONFIRM PROPER FIT BETWEEN STOCK AND RECEIVER AND STOCK TO BARREL. NO SHIMS

GUN

A-1	STOCK, BARREL AND RECEIVER GAPS NOT UNIFORM BUT NOT EXCESSIVE NO SHIMS
A-2	STOCK, BARREL AND RECEIVER GAPS NOT UNIFORM BUT NOT EXCESSIVE NO SHIMS
A-3	STOCK, BARREL AND RECEIVER GAPS NOT UNIFORM BUT NOT EXCESSIVE NO SHIMS
A-4	STOCK, BARREL AND RECEIVER GAPS NOT UNIFORM BUT NOT EXCESSIVE NO SHIMS
A-5	STOCK, BARREL AND RECEIVER GAPS NOT UNIFORM BUT NOT EXCESSIVE NO SHIMS
A-6	OK
A-7	OK
A-8	STOCK, BARREL AND RECEIVER GAPS NOT UNIFORM BUT NOT EXCESSIVE NO SHIMS
A-9	STOCK, BARREL AND RECEIVER GAPS NOT UNIFORM BUT NOT EXCESSIVE NO SHIMS
A-10	STOCK, BARREL AND RECEIVER GAPS NOT UNIFORM BUT NOT EXCESSIVE NO SHIMS

CONFIRM PERMANENT ATTACHMENT OF RECOIL LUG TO STOCK

RECOIL LUGS ON ALL 10 GUNS WERE PERMANENTLY GLUED TO THE STOCK.

GUN	HEAD SPACE	PROOF RDS	HEAD SPACE	HEAD SPACE AFTER 10 RDS.
A-1	MIN	1	0.001	0.002
A-2	0.001	1	0.003	0.003
A-3	0.002	1	0.002	0.003
A-4	MIN	1	0.002	0.002
A-5	0.001	1	0.002	0.002
A-6	0.001	1	0.002	0.002
A-7	0.001	1	0.002	0.002
A-8	0.001	1	0.002	0.002
A-9	0.001	1	0.002	0.002
A-10	0.001	1	0.002	0.002

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TLW 0344

TESTERS- BOB LEE & JESSE ARNOLD

200 ROUND JACK FUNCTION TEST

GUN	AMMO	ROUNDS	
A-1	REM R30065 180GR	200	NO MALFUNCTIONS
A-2	REM R30065 180GR	107	BOLT HANDLE BROKE 107 RDS
A-3	REM R30065 180GR	200	NO MALFUNCTIONS
A-4	REM R30065 180GR	200	(6) STEM LOWS. FOLLOWER STICKING. FILED FOLLOWER NO MORE MALFUNCTIONS
A-5	REM R30065 180GR	200	NO MALFUNCTIONS
A-6	REM R30065 180GR	200	NO MALFUNCTIONS
A-7	REM R30065 180GR	200	NO MALFUNCTIONS
A-8	REM R30065 180GR	200	NO MALFUNCTIONS
A-9	REM R30065 180GR	200	(6) STEM LOWS. FOLLOWER STICKING. FILED FOLLOWER NO MORE MALFUNCTIONS
A-10	REM R30065 180GR	200	NO MALFUNCTIONS

TESTERS REPORTED THAT THE BOLT CLOSING FORCE WERE VERY HIGH WHILE ROTATING THE OPERATING HANDLE DOWNWARD ON GUNS A-1 & A-7
THIS OCCURRED MOST BUT NOT EVERYTIME

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PROJECT# 241095
11/1/00
TLR 0344
ISS ABUSE TEST
TESTER- PHILLIP REESOR

GUN

OLD STYLE INSERT

- A-1 BOLT CLOSED EASILY WITH ISS LOCKED. NO VISIBLE DAMAGE.
- A-5 CLOSED BOLT WITH ISS LOCKED. NO DAMAGE VISIBLE
- A-7 **CLOSED BOLT WITH ISS LOCKED. BROKE BOLT PLUG. DAMAGE VISIBLE.**
- A-8 **CLOSED BOLT WITH ISS LOCKED. BROKE BOLT PLUG. DAMAGE VISIBLE.**

NEW STYLE INSERT

- A-3 CLOSED BOLT WITH ISS LOCKED. NO DAMAGE VISIBLE
- A-6 COULD NOT CLOSE BOLT ISS LOCKED. NO DAMAGE VISIBLE
- A-9 CLOSED BOLT WITH ISS LOCKED. NO DAMAGE VISIBLE.
- A-10 COULD NOT CLOSE BOLT WITH ISS LOCKED. NO DAMAGE VISIBLE.

INSPECTED ALL BOLT PLUG WITHOUT VISIBLE DAMAGE USING STEREOSCOPE

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