

~~CONFIDENTIAL~~ 83
Field Debris
Test # 2

ET06761

Confidential - Subject to Protective Order
Williams v. Remington

Test Lab Work Request Form

Date Submitted: 10 March, 2000

Tracking #: TLW 0010AN

Project #: 241095

Engineer: J.R.SNEDEKER

Test Objective:

TLW0010AN - Field Debris Test: GUN # B-22 SERIAL # 71001278

This test determines the effect of "field debris" on firearm performance, where the firing is conducted after the firearm has field debris directly placed in the action. See Table No. 2 for field debris composition.

Table No. 2 - Field Debris Mixture (By Volume)

Dried Grass Clippings	2 parts
Toothpicks (round, .25" long max.) to represent twigs	1 part
Bird Seed	1 part
Table Salt	1 part
Small Stones (.015" dia. to .125" dia.)	1 part
Crushed Dry Leaves	2 parts
Pine Needles	1 part
Hair Samples (no longer than 2 inch)	1 part

Test Description:

Method:

- Clean and lubricate one test gun to the procedure supplied by the design team.
- Remove the bolt. Set the safety in the SAFE position and verify that the firearm is unloaded.
- Record the weight of one level tablespoon of field debris mixture per following table..005LBS
- Expose the firearm as follows:
- Place the firearm in a shooting jack, turn bottom side up, and apply a tablespoon of debris in the firecontrol mechanism from the bottom. Tap the firearm three times, in the middle of the receiver, to jar the rifle and aid field debris getting into the mechanism.
- Turn the firearm to its normal upright horizontal position and apply a tablespoon of field debris to the top of the firecontrol mechanism from the top. Tap the firearm three times, in the middle of the receiver, to jar the rifle and aid the debris getting into the mechanism.
- Wipe away any debris that prevents the bolt from closing. Clean parts as much as

ET06762

possible by blowing sharply or wiping.

- Fire a full magazine from the firearm. If repeated malfunctions make this impossible, attempt to fire with another magazine. If firing is still unsatisfactory, attempt to fire with a clean magazine, container, etc., loaded with clean ammunition. If repeated malfunctions make it impractical to fire the remaining ammunition, stop the test.
- Cycle the safety from fire to safe every 5 rounds.
- At every 5 round interval verify the firearm is not loaded.
- Close the firearm as if to fire it and put the safety to the SAFE position
- Pull the trigger firmly (10 lb. maximum) - firearm must not fire.
- With the finger off the trigger, move the safety to the FIRE position - firearm must not fire.
- Disassemble the firearm over white paper and weigh or measure the amount of debris present in the main mechanism area. Debris should be removed from the parts for weighing.

Data Required:

- Record malfunctions. **SEE NOTE'S**
- Record number of rounds fired. ~~X~~ / 7 ~~sr~~
- Record weight of debris in the gun at the conclusion of the test. **0 LBS.**
- Record any firing of the firearm without the trigger being pulled. **0**
- Record any hang fires. **0**

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: 9/27/00

Completion Date: 9/27/00

Report Date:

**Test Assigned To: STEVE WADE AND
JEFF WADE**

ET06763

GUN # B-27
DATE - 9/27/00
SHOOTER - JEFF WADE

M700 ETRONX GEN I
HUNTING RIFLE FUNCTION
AND ENDURANCE TEST

TRACKING # TLW 018009
PROJECT # 241197

Field Debris Test

TLW 0010AN
ROUNDS BEFORE

AMMO	REMINGTON EL3006B ETRONX	LOT# - C035C1326
✓ 1		51 Trigger Pull in stock 4.80
4 Rds ✓ 2	Debris in channel	52 Trigger Pull out stock 4.71
✓ 3		53 Engagement 1.0252
✓ 4		54 Over Travel 1.0112
✓ 5	10lb Test Pass	55
✓ 6		56
✓ 7		57
3 Rds ✓ 8	Fail To Feed Up	58
9	Stem Low	59
10	Stem Low (10lb Test Pass)	60
✓ 11	Put magazine box out of Gun	61
5 Rds ✓ 12		62
✓ 13		63
✓ 14		64
✓ 15	10lb Test Pass	65
✓ 16		66
✓ 17		67
5 Rds ✓ 18		68
✓ 19		69
✓ 20	10lb Test Pass	70
Total 21		71
17 Rds 22		72
23		73
24		74
25		75
26		76
27		77
28		78
29		79
30		80
31		81
32		82
33		83
34		84
35		85
36		86
37		87
38		88
39		89
40		90
41		91
42		92
43		93
44		94
45		95
46		96
47		97
48		98
49		99
50		100

ROUNDS AFTER _____

ET06764

E

SL

10247

10114

10248

10115

10252

10112

CONFIDENTIAL

Remington Arms Company Inc.
Research & Development Technical Center
315 West Ring Road
Elizabethtown, KY 42701

Trigger Pull out of stock

Aug. - ~~4.57~~ 4.71

Trigger Pull in stock

Aug. - 4.50

TLW0010AN - Field Debris Test:

This test determines the effect of "field debris" on firearm performance, where the firing is conducted after the firearm has field debris directly placed in the action. See Table No. 2 for field debris composition.

Method:

- Clean and lubricate one test gun to the procedure supplied by the design team.
- Remove the bolt. Set the safety in the SAFE position and verify that the firearm is unloaded.
- Record the weight of one level tablespoon of field debris mixture per following table. 0.0125 lbs
- Expose the firearm as follows:
- Place the firearm in a shooting jack, turn bottom side up, and apply a tablespoon of debris in the firecontrol mechanism from the bottom. Tap the firearm three times, in the middle of the receiver, to jar the rifle and aid field debris getting into the mechanism.
- Turn the firearm to its normal upright horizontal position and apply a tablespoon of field debris to the top of the firecontrol mechanism from the top. Tap the firearm three times, in the middle of the receiver, to jar the rifle and aid the debris getting into the mechanism.
- Wipe away any debris that prevents the bolt from closing. Clean parts as much as possible by blowing sharply or wiping.
- Fire a full magazine from the firearm. If repeated malfunctions make this impossible, attempt to fire with another magazine. If firing is still unsatisfactory, attempt to fire with a clean magazine, container, etc., loaded with clean ammunition. If repeated malfunctions make it impractical to fire the remaining ammunition (from a box of 20 cartridges), stop the test.
- Cycle the safety from fire to safe every 5 rounds.
- At every 5 round interval verify the firearm is not loaded.
- Close the firearm as if to fire it and put the safety to the SAFE position
- Pull the trigger firmly (10 lb. maximum) - firearm must not fire.
- With the finger off the trigger, move the safety to the FIRE position - firearm must not fire.

J.R. Snedeker

Page 49 of 624

03/31/00

Remington Confidential

Revision #2

ET06765

CONFIDENTIAL

Remington Arms Company Inc.
Research & Development Technical Center
315 West Ring Road
Elizabethtown, KY 42701

- Disassemble the firearm over white paper and weigh or measure the amount of debris present in the main mechanism area. Debris should be removed from the parts for weighing.

Data Required:

- Record malfunctions.
- Record number of rounds fired.
- Record weight of debris in the gun at the conclusion of the test.
- Record any firing of the firearm without the trigger being pulled.
- Record any hang fires.

Table No. 2 - Field Debris Mixture (By Volume)

Dried Grass Clippings	2 parts
Toothpicks (round, .25" long max.) to represent twigs	1 part
Bird Seed	1 part
Table Salt	1 part
Small Stones (.015" dia. to .125" dia.)	1 part
Crushed Dry Leaves	2 parts
Pine Needles	1 part
Hair Samples (no longer than 2 inch)	1 part

MISC. TESTS - TLW0010AO THROUGH TLW0010AP

TLW0010AO - Rain Test:

Use Standard Remington Rain test procedure using the Salt Fog Chamber.

Rifle must function without any safety related malfunctions.

J.R.Snedeker

Page 50 of 624

03/31/00

Remington Confidential

Revision #2

ET06766

T.P. 4.50 4.50 4.75 5.00 5.00 5.00

4.79

~~5.00 4.75 4.75~~

4.50 4.50 4.50 4.75 4.75 4.50

4.59

Out of Stock 4.50

4.80 4.25 4.75 4.75 4.25 4.50

IN Stock

~~4.25 4.50 4.75 4.50 4.50 4.50 4.50~~ out of stock

4.75 4.75 4.75 4.50 4.75 4.75 - 4.71

4.25 4.50 4.50 4.75 4.50 4.50 - 4.50 IN stock 83

Rounds

1. ✓

2. Multifunction Debris in channel

3. ✓

4. ✓

5. ✓

10 lb Test Pass

1. ✓

2. ✓

3. ✓ ~~Fail To Feed~~ Fail To Feed up

4. stem Low

5. stem Low

10 lb Test Pass

1. ✓ Go To New mag Box

2. ✓

3. ✓

4. ✓

5. ✓

10 lb Test Pass

1. ✓

2. ✓

3. ✓

4. ✓

5. ✓

10 lb Test Pass

ET06767