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Distribution: C. B. Workman
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RESEARCH TEST and MEASUREMENT REPORT - Report No. 832091

PRODUCTION MODEL XP-100 - 7MM BR - 1000 ROUND ENDURANCE TEST

Prepared by: R. W. Howe

Date Prepared: August 18, 1983

Proofread and Cleared By:

J.H. Hennings, / R.E. Nightingale,
Foreman-Test Lab / Foreman-Measurement Lab

R.E. Nightingale
Signature Date

C.E. Ritchie,
Sr. Supervisor - Testing,
Meas. & Mech. Analysis Lab

C.E. Ritchie 8/21/83
Signature Date

TEST & MEASUREMENT LAB REPORT

REPORT NUMBER: 832091
REPORT TITLE: Production Model XP-100 - 7MM BR - 1000 Round Endurance Test
MODEL(S): XP-100
GAUGE OR CALIBER: 7MM BR
DATE: 8-18-83
WORK ORDER NO.: G-0459-000 X
PART NAME: XP-100 Pistol
DESIGNER/ENGINEER:

TEST TYPE:

1. PHOTO LAB
2. STRENGTH TEST - NO. OF GUNS TESTED _____
3. FUNCTION TEST - NO. OF GUNS TESTED _____
4. ACCURACY TEST - NO. OF GUNS TESTED _____
5. MEASUREMENTS - TYPE: _____
6. ENVIRONMENTAL TEST
7. AMMUNITION TESTING & EVALUATION - TYPE: _____
8. VISUAL EVALUATION - _____ OUT OF _____ GUN SAMPLE
9. ENDURANCE - NO. OF GUNS TESTED: 1

NO. OF ROUNDS PER GUN: 1000TOTAL ROUNDS FIRED IN TEST: 1000

AMMO TYPE: MAGS. _____; TARGET: _____

RIM FIRE _____ CENTER FIRE X

August 18, 1983

TO: C. E. RITCHIE
FROM: R. W. HOWE
REPORT TITLE: PRODUCTION MODEL XP-100 - 7MM BR - 1000 ROUND
ENDURANCE TEST

ABSTRACT

On 7-28-83, one Production Model XP-100 - 7MM BR caliber, was received in the R. & D. Test Lab from C. E. Ritchie, Firearms Research Supervisor, to be 1,000 live round endurance tested in the R. & D. Test Lab Shooting Room jacks.

SCOPE OF TEST

To evaluate the function of the Model XP-100 pistol in the 7MM BR Caliber.

TEST RESULTS

Of the 1000 live rounds jack fired in the test pistol, Serial No. B7519039, no malfunctions or non-acceptable safety conditions were encountered.

REPORT TEXT

- A. Head Space, Chamber Pressure and Muzzle Velocity measurements were taken, and found to be within Remington acceptable standards at the start of the test.

Present Remington Standards — Head Space — Min. to Min. + .009
Chamber Pressure — 5500 lbs. PSI
Muzzle Velocity — 2100 FPS

- B. Jack Function Test:

Acceptable standards are determined by percentage of malfunctions with severity of malfunctions being considered.

Of the 1000 live rounds jack fired in the test pistol, no malfunctions were encountered, for a malfunction rate of 0% for the total 1000 round test.

Refer to Appendix "A" Sheets 1 to 3 for data.

TEST PROCEDURE

- A. Measurements:

Measurements were taken in the R. & D. Test Lab using the following methods:

1. Head Space
Head Space measurements were taken using 7MM BR head space gauges ranging from Min. + Min. + .009.
2. Chamber Pressure
Chamber pressures were taken in the R. & D. Measurements Lab using a Universal Receiver fitted with a pressure barrel and PCB Piezo Electric Pressure Transducer.
3. Muzzle Velocity
Muzzle velocity measurements were taken in the R. & D. Measurements Lab using the Lab's ballistics screens.

- B. Jack Function:

The Jack Function Test was done in the R. & D Test Lab Shooting Room in Booth No. 5 using the XP-100 pistol fixture attached to the regular permanent rifle and shotgun shooting jack. 1,000 rounds of the following 7MM BR hand loads were shot (cooling the pistol with compressed air every 100 rounds) :

25 Gr. of DuPont No. 4198 Powder
Rem. 7½ BR Primer
150 Gr. Rem. 7MM P.S.P. Bullet

For Data, See Appendix "A" Sheets 1 to 3.

A P P E N D I X " A "

(Data Sheets)

Results of Remington Model XP-100 - 7MM BR (Serial No. B7519039) 1000 Round Endurance Test pursuant to subdivision 12A, Section Four Hundred, Sub-title K of Title Nine Part 482.6 Safety Standards Test, Item No. 2, Appendix B, Table No. 1 Pistol Endurance, of the Penal Law of the State of New York.

<u>Malfunctions and Non- Acceptable Conditions</u>	<u>Failures Permitted 1000 Rounds</u>	<u>Failures Encountered in XP-100 Test Gun</u>
1. Failure of Sear to Release	0	0
2. Gas Leakage Through Case	0	0
3. Safety Device Fails to Function	0	0
4. More than one shot fired for a single pull of the trigger.	0	0

Measurement Results of XP-100 - 7MM BR Cal. Test Gun Serial No. B7519039.

- | | |
|---|---|
| 1. Head Space
Min. | Present Rem. Standard
Min. to Min. + .009" |
| 2. Chamber Pressure
55,000 lbs. P.S.I. | 55,000 lbs. P.S.I. |
| 3. Muzzle Velocity
2180 F.P.S. | 2100 F.P.S. |

Ammo used in test:

7MM BR Hand Loads.
25 Gr. of DuPont No. 4198 Powder.
Remington 7½ BR Primer
150 Gr. Remington Pointed Soft Point Bullet.