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Lab File

REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE

Remington DUPONT PETERS DUPONT

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Ilion, New York
February 14, 1979

TO: C. B. WORKMAN

FROM: A. A. HUGICK

SUBJECT: XP-100 FIRE CONTROL MODIFICATION EVALUATION

Work Order: G0459

INTRODUCTION:

Per request of P.E. & C. fifteen (15) Model XP-100 221 Fireball Caliber Bolt Action Pistols were delivered to the Measurement and Test Lab for evaluation. The modifications being evaluated are as follows: (1) Removal of ears on the Trigger, (2) .301 dimension on the safety cam height and (3) increased pin to Sear safety cam clearance from .236 to .256 inch dimension.

TEST OBJECTIVE:

Evaluate XP-100 pistol modification.

TEST CONCLUSIONS:

1. No trigger upset or deformation resulted from the trigger ear removal modification.

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TEST CONCLUSIONS - Cont'd.

2. Stable Sear lift and stable Sear engagement was maintained in firing test, cock and dry fire test and drop test with safety cam height and Sear safety cam clearance modifications.

3. The design specification of .020-.015 Sear engagement was established for optimum performance of XP-100 drop test and trigger creep.

TEST RESULTS

1. Test pistol A-3 SN B7506234 recoil lug measurement data indicated .010 inch forward bending. [Zero = .003 rearward deflection, 2500 rounds = .007 forward deflection (centerline of barrel to bottom of recoil lug.)]

2. The experimental rivetless extractor bolt incorporated in this evaluation produced normal extraction and ejection during 4000 rounds of test.

3. Trigger pull changes of the XP-100 pistols stayed above the 1.5 lbs. min spec. Altered and print samples varied more than control samples due to zero rounds prior to trigger pull measurements.

TEST PROCEDURE:

1. Design specification of headspace, indent, trigger pull, safe on/safe/off forces, sear lift (full on and forward null position)were recorded.

2. Altered and print sample pistols were proof tested.

3. Control sample (C-4) and altered sample (A-1) were safe on/safe off dry cycle tested 50,000 cycles followed by 10,000 cock and dry cycles. Inspection and measurements taken at each 5,000 cycle interval. All dry cycle testing is with lubrication.

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TEST PROCEDURE - Cont'd.

4. Live firing was shot in the short measurement range with inspection and measurement taken at 500 round intervals. Guns fired are as follows:

Control Guns	(C-1) B7504938	- 500 Rds.
	(C-2) B7506393	- 1500 Rds.
Altered Guns	(A-2) B7506187	- 1000 Rds.
	(A-3) B7506234	- 2500 Rds.
Print Guns	(P-2) B7506257	- 1500 Rds.

5. Test gun (C-2) and (A-3) were disassembled for inspection and photos of trigger.

6. Three foot - pendulum drop test into hard maple plank impact media - with safe on/safe off were conducted on the following pistols.

Control Pistols	(C-3) B7504674
	(C-5) B7504932
Altered Pistols	(A-4) B7506674
	(A-5) B7506317
Print Pistols	(P-1) B7505481
	(P-5) B7505128

7. Results were reviewed with design and P.E. & C. indicating favorable performance.

8. Five additional production altered pistols were received for research pilot acceptance and Sear engagement vs. trigger creep review.

9. These additional five pistols were measured, inspected, reviewed and drop tested/trigger creep tested with varied Sear engagements.

10. Sear lift measurements were made with production's sear lift gage.

11. Sear engagement measurements were made with the Model Shop optical comparitor.

AAH:js
Measurement/Test Lab
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