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**REMINGTON ARMS COMPANY, INC.**

INTER-DEPARTMENTAL CORRESPONDENCE



"CONFINE YOUR LETTER TO ONE SUBJECT ONLY" \_\_\_\_\_

Ilion, New York  
June 25, 1975

TO: W. E. LEEK

FROM: A. A. HUGICK

DATE: June 23, 1975

WORK ORDER: E 0274 & E 0275

SUBJECT: M/580 Series and M/788 Safety Evaluation - REPORT #5

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INTRODUCTION:

Design initiated a review of safety function of the bolt action rifles. Two (2) model 580 series and three (3) model 788 rifles were delivered to the lab for testing and evaluation. Test activity of these rifles was confined to wear function of the safety and fire control.

TEST OBJECTIVE:

Dry Cycle Test the sample rifle safety assemblies for endurance and function.

TEST RESULTS & OBSERVATIONS:

1. M/580 - 1203937 - Test Gun #32

- Test Activity - Spiral Sear Pin (R&D)
- Large head dia. pin & spring clip at safety pivot & retaining (R&D)
- Swaged safety at cam.
- Duco seal on both spring clips (R&D)
- 50,000 Safe on/Safe off cycles.
- 10,000 cock and dry fire cycles.
- W D 40 lubrication.

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TEST RESULTS & OBSERVATIONS: -- Cont'd

- Test Results
- Safe on sear lift was erratic ranging from .104 to .0232.
  - Safe on force required ranged from 12.5 to 5.0 low.
  - Duco seals on spring clips remained in tact.
  - Safety cam shows slight wear.
  - Safe moves to off position with Min. of shock to barreled action.
  - Striker cross pin length is such that position to extreme left / or right results in bearing only on opposite side of cocking piece.
  - Spiral sear pin is intact without side ward motion.

2. M/580 - 1203939 - Test Gun #33

- Test Activity
- Spiral sear pin (R&D).
  - Large O.D. head safety pivot & retaining pins with spring clips (R&D).
  - Duco seal applied to spring clips (R&D).
  - Swaged safety cam (R&D).
  - 50,000 Safe on/Safe off cycles.
  - 10,000 cock and dry fire cycles.
  - W D 40 lubricant.

- Test Results
- Safe on sear lift was erratic increasing with safe cycling.
  - Spiral sear pin was tight and remained in tact.
  - Safety detent was rounded off (soft).
  - Duco seals were intact at spring clips while safety pivot did rotate.

3. M/788-22/250 Cal. - A6047744 - Test Gun #25

- Test Activity
- Spiral sear pin (R&D).
  - Large dia. head safety pivot and retaining pin w/spring clips (R&D).
  - Spring clips sealed with duco.
  - Swaged safety cams (R&D)
  - 50,000 safe on/safe off cycles.
  - 50,000 cock and dry fire cycles.
  - W D 40 lubricant

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TEST RESULTS & OBSERVATIONS: -- Cont'd.

- Test Results
- Spiral sear pin is tight and intact without movement.
  - Duco seals are intact.
  - Measured sear lift ranged from .015 Min. to .024 Max. during test.
  - Safe on force was fairly uniform around 6 lbs.
  - Safe off force was uniform averaging around 2.0 lbs.
  - Powder Metal sear is bearing down at cocking piece.
  - Safety detent hole in housing is enlarged in plane of safe rotation.
  - Safety detent show little if any wear.

4. M/788 - 22/250 - A6047781 - Test Gun #31

- Test Activity
- Spiral sear pin (R&D).
  - Large dia. head safety pivot and retaining pin with spring clip (R&D).
  - Spring clips sealed with Duco cement.
  - Swaged safety cams - Model Shop.
  - 50,000 cock and dry fire cycles.
  - 50,000 safe on / safe off cycles.
  - W D 40 lubricant in fire control.

- Test Results
- Safe on sear lift fairly uniform around .021 .022 inch.
  - Safe on force ave. around 10.0 lbs.
  - Safe off force ave. around 4.0 lbs.
  - Spiral sear pin in tact - okay.
  - Duco seal in place - in tact.
  - Special clearance cut in receiver for safety shows no contact marks.
  - Safety detent shows slight wear.
  - Non rotating safety pivot pin shows no major wear indications.
  - Sear break down at cocking piece was noted.
  - Remaining parts look good.

5. M/788 - 22/250 Cal. - 6047656 -- Test Gun #12

- Test Activity
- Safety cam swaged and embossed for centering of cam on sear safety leg.
  - Safety retaining screw - loctite.
  - 50,000 safe on/safe off cycles.
  - 10,000 cock and dry fire cycles.
  - W D 40 iubicant.

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TEST RESULTS & OBSERVATIONS - Contd.

- Test Results
- Measured safe on sear lift ranged from .0086 to .027 Hi.
  - Safety cam show only Min. of wear.
  - Safety detent hole is enlarged in plane of safety rotation.
  - The safety is more secure with large O.D. head pins when compared to smaller dia. head pin.

AAH:bd  
Measurement/Test Lab  
Illion Research Division