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REMINGTON ARMS COMPANY, INC.  
NEW PRODUCTS RESEARCH - FIREARMS  
FIRST QUARTER PROGRESS REPORT - 1984  
MARCH 12, 1984

Distribution:

|                   |                |
|-------------------|----------------|
| J. W. Bower       | J. A. Lawrence |
| W. H. Coleman, II | R. S. Murphy   |
| D. S. Findlay     | R. L. Sassone  |

*Remington Arms Company, Inc.*

HIGHLIGHTS

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| • Research acceptance testing of the Model 1100 Special Field is expected to resume the week of March 12.     | 3    |
| • Research has approved the Model 870 Special Field production samples.                                       | 3    |
| • The parts list and drawings package for the Model 870 12 gauge Restyle have been transmitted to Production. | 3    |
| • Prototype testing of the Model 1100 Waterfowl Gun is complete.  | 4    |
| • Introduction of the Model 870 and 1100 Deer Guns has been delayed until 1986.                               | 4    |
| • Research has tested and approved Briley choke tubes.  | 5    |
| • Research has begun a major new program to replace the Model 1100.   | 5    |
| <u>NEW PRODUCT DEVELOPMENT - RIFLES</u>   |      |
| • CAD modeling of the Model 700 Mountain Rifle stock is progressing on schedule.                              | 6    |
| • Functional and cosmetic improvements are being identified for the Model 7400 Restyle.                       | 6    |
| • Work is progressing on four model guns as part of the new bolt action rifle program.                        | 7    |
| <u>CURRENT PRODUCTS</u>   |      |
| • Testing of the flexi-tab anti-jam carrier is progressing satisfactorily.                                    | 7    |
| • The folding stock on the Model 870P shotgun has been redesigned in response to field complaints.            | 8    |

NEW PRODUCT DEVELOPMENT - SHOTGUNS

(D. S. Findlay)

Model 1100 Special Field Shotgun

(T. P. Powers, J. A. Lawrence)

The Model 1100 Special Field was developed to offer the shooter a lighter weight, faster pointing Model 1100, with a significant change in appearance. Features include a 21" barrel, slimmed and shortened fore-end, English-style stock, medium gloss finish, and cut checkering.

Research acceptance testing of Production's trial and pilot sample has been delayed due to questionable bolt velocities. Testing is expected to resume the week of March 12.

Model 870 Special Field Shotgun

(T. J. Plunkett)

This shotgun, due for introduction in 1984, has been developed to complement the Model 1100 Special Field, with similar appearance and performance features.

Research has approved the 12 gauge and LW-20 trial and pilot production guns. Production to the warehouse has begun on both shotguns.

Model 870 Restyle

(J. L. Kast, T. J. Plunkett)

This 1985 gun is being developed to offer the shooter more quality appearance features. Specifications include cut checkering, medium gloss finish, and 3" chambering.

The 12 gauge parts list and drawings package have been transmitted to the plant.

Samples and drawings for the 20, 28, and .410 gauges (all planned for 1986 introduction) have been started.

Model 870-1100 Waterfowl Guns

(T. J. Plunkett)

These guns are being developed to offer waterfowl shooters a specialized gun. They will complement the Deer Guns and have common features of Parkerized metal finishes, and oil finished birch stock and fore-end. Specifications also include 26" and 30" chrome bored barrels, and a camouflaged sling strap.

Introduction of these guns has been changed from 1986 to 1985.

Prototype testing of the M/1100 is complete and samples are available for Marketing. A specification sheet for estimating has been given to Production. A drawings package will be complete March 16.

Model 870-1100 Deer Guns

(T. J. Plunkett)

These guns are being developed to offer deer hunters a specialized gun. Specifications include a redesigned 21" slug barrel with a new rear sight base capable of mounting a long eye relief scope. They will also feature Parkerized metal finishes, oil finished birch stock and fore-end, and a camouflaged sling strap.

Introduction of these guns has been delayed to 1986 in deference to the Waterfowl Guns. This new strategy will result in Production having more time to process the sight base, and will allow Research the opportunity to investigate a new 20 gauge slug-slug gun combination.

Choke Tube Development

(T. P. Powers)

A choke tube system is being developed to offer shooters the convenience of a variable choke barrel to adapt to different hunting situations. One option is to offer choke tubes patented and manufactured by Briley Manufacturing, Houston, Texas. The current strategy is to offer Briley tubes in mid-1984, and Remington tubes in 1986.

Research has tested and approved Briley's choke tubes. Remington designed tubes are scheduled to be tested by June 1984.

Production has been asked to determine comparative costs for manufacturing Briley and Remington choke tubes, either in Ilion or by outside sources.

Model 1100 Replacement

(T. G. Bauman, T. P. Powers,  
K. C. Rowlands, R. H. Smith)

Research has begun a major new program with the objective of replacing the Model 1100 with a conventional shotgun that corrects the deficiencies of the Model 1100 and is able to sustain market share into the 1990's.

Research into the performance of the Model 1100 is almost complete. This research has pin-pointed six deficiencies that need to be overcome in the replacement shotgun:

- carrier assembly design
- action smoothness
- gas system design
- component endurance

- weight
- styling

Specific programs for each of these areas are being developed. As they are developed in more detail, introduction schedules will be prepared.

NEW PRODUCT DEVELOPMENT - RIFLES

(R. S. Murphy)

Model 700 Mountain Rifle

(F. E. Martin, K. L. Calkins)

The Mountain Rifle has been designed to deal with the upper end of the bolt action rifle market. It is scheduled for a mid-1985 introduction as a replacement for the Model 700 Classic. Specifications include the lightweight Model Seven barrel contour, 30-06, 270, and 280 caliber offerings, and a new stock.

Research testing of model guns was completed in February with good results. Research CAD modeling of the stock is progressing on schedule. The butt pad drawing will be complete by April 1. Production and Treasury are still working out the details before an economic evaluation can be done.

Model 7400/7600 Restyle

(A. R. Eddy, F. H. Smith)

A need to condense the Model 7400/7600 line has been indicated by Marketing. Hybrids of the 7400/Model Four and 7600/Model Six have been proposed as entries in the upper end of the autoloader and pump markets. The lower end of these markets will be filled with the currently offered Sportsman 74 and Sportsman 76. Introduction of the new guns is scheduled for 1986.

In addition to building styling samples, Research is identifying areas of the rifles needing functional improvement. In an effort to improve extraction, rifles with oversize chambers have been built and processed through the gallery with excellent results.

New Bolt Action Rifle

(F. E. Martin, K. L. Calkins,  
R. H. Smith)

A new bolt action rifle is being developed as a replacement for the Model 700 BDL. A 1988 introduction is scheduled.

Work is progressing, on schedule, on four model guns. These guns will exhibit various options for barrels, receivers, bolts, and fire controls. A review meeting is scheduled for May with Marketing.

CURRENT PRODUCTS

Model 870P Riot Shotgun

(A. A. Hugick, T. G. Bauman)

Occasionally a shell may jam between the carrier and slide assembly, making the Model 870P shotgun very difficult to open. Research has proposed modifications to the slide, breech bolt, and carrier, in an effort to eliminate this potential problem.

One Model 870 with the proposed changes has been cycled over 100,000 times with no problems. A second carrier was cyclically loaded to simulate a trapped shell. The flexi-tab on this carrier cracked at between 10,000 - 11,000 cycles, and broke at approximately 12,000 cycles.

An additional 100 carriers have been received from the stamping vendor. After processing, fifty will be made available to Marketing for field testing. The remainder will undergo additional

testing in Research. Pending successful test results, a model drawing transmittal should be made by the end of March.

Model 870P Riot Shotgun

(J. A. Lawrence)

Complaints were received from the Ohio State Police that, in sub-freezing temperatures, the folding stock, sold as an option on the Model 870P, would become inoperable. Research determined that the clearance between the stock and pivot pin was insufficient to compensate for the different coefficients of expansion of the stock and pin.

The pivot pin has been redesigned to provide adequate clearance. A quantity of pins to the reduced diameter have been purchased, and will be made available to the Ohio State Police for retrofitting in their Model 870P shotguns with folding stocks.

ILION RESEARCH DIVISION

EXEMPT 27

NON/EXEMPT 11

WAGE ROLL 16

Balaska, Robert J.  
Bauman, Thomas G.  
Bower, James W.  
Calkins, Kevin L.  
Coleman, Wm. H., II  
Curry, Wm. M  
Eddy, Albert  
Findlay, Davis S.  
Franz, Scott R.  
Hand, Charles J.  
Hennings, James H.  
Hugick, Adam H.  
Hutton, James C.  
Kast, Jack L.  
Lawrence, Jeffrey A.  
Martin, Fred E.  
Murphy, Randall A.  
Nightingale, Richard E.  
Plunkett, Thomas J.  
Powers, Thomas P.  
Rankins, Edwin D.  
Rowlands, Kenneth  
Sanzo, Robert J.  
Sassone, Richard L.  
Saunders, Eugene L.  
Smith, Robert  
Yetter, Edward W., Jr.

Eskoff, Sophie  
Jones, Raymond A.  
Martin, James S., Jr.  
Schuster, Joyce M.  
Scram, Wendy L.  
Smith, Floyd H.  
Smithson, Ronald  
Stephens, Charles  
Supry, Fred  
Urtz, Donald  
Weaver Harold E.

Baggetta, Joseph A.  
Beader, Robert W.  
Bedworth, Gary R.  
Butler, Richard G.  
Fiorentino, D.J.  
Harter, James D.  
Howe, Robert W.  
Jennings, Dale E.  
Kozakowski, Robert J.  
Paslak, Wm. F.  
Sohns, William A.  
Storne, Ramon  
Truax, Irving E., Jr.  
Williams, Clifford  
Williams, Donald  
Williams, Ronald R.

3/1/84 - 54  
(E/27-N/E/11-W/16)

3/31/84 - Total Research Personnel - 54

(Effective March 1, 1984 - Raymond A. Jones  
was a successful bidder to  
Dept. 9097 as a Draftsman - Non/Exempt)