

CONFIDENTIAL

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REMINGTON ARMS COMPANY, INC.

NEW PRODUCTS RESEARCH

MONTHLY PROGRESS REPORT - AUGUST, 1985

FIREARMS RESEARCH

SHOTGUN DEVELOPMENTM/1100 Functional Improvements (1987 Introduction)

Design verification testing is in progress. Half of the improvement guns (15) have an .089 orifice hole, which has proved effective in previous testing, in handling ammunition loads between and including 1 1/8 oz. "Shurshot" and 1 7/8 oz. magnums. The other half of the guns have a .109 orifice, which has previously shown potential for operating with 1 oz. target loads, in addition to all of the other loads mentioned above. Federal has recently introduced a 2 oz. load. That ammunition is also being tested. Bolt velocities with the 2 oz. load are about 30 in/sec faster than the 1 7/8 oz. load. Design verification testing should be complete by August 27.

Eight of the ten standard Model 1100's being used as controls are out of test with various broken parts. All of the improvement guns are still in test at an average round level of 3500.

M/870 Functional Improvements (1987 Introduction)

Results of the six gun development test showed an overall malfunction rate for the improvement guns of .14%, significantly better than the .26% for the control guns. The major design improvement is a new ejector. Ejector related malfunctions were .04% for the improvement guns versus .23% for the control guns.

Design verification testing by the Test Lab is scheduled to start the week of August 26, immediately following design verification of the Model 1100 Functional Improvements. These guns will have the new ejector with Delrin® base and Injectalloy® ejector rod, revised camming angles on the action bars and latches, improved staking of the shell latches, new firing pin retract spring, and the Special Field type magazine detent system.

M/870 and M/1100 Special Purpose Deer Gun (1986 Introduction)

The parts list and drawings package has been transmitted to Production.

Research Department

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August, 1985

New Concept Shotgun

PDS has submitted proposals for the next stage in the development of advanced fire controls. Purchase requisitions are being prepared.

A potential vendor for molding Rynite® stocks and fore-ends was visited on August 15. Methods of attaching the butt plate, and the internal configuration of the fore-end are still to be determined. A visit to PPD is scheduled for the week of August 26 to finalize the design.

RIFLE DEVELOPMENT

New Bolt Action Rifle (1988 Introduction)

Five rifles are being built for the second focus panel review. Input from the review will be helpful for firming design cosmetics.

Critical path items for the next phase of development testing are receivers and vendor-supplied magazine boxes. Testing should start in late October.

M/700 Mountain Rifle (1986 Introduction)

Production has supplied forty-one rifles for trial and pilot functional evaluation. These rifles will be tested for function, accuracy, and endurance. Testing is scheduled to start on August 28, and conclude on September 6.

Sportsman 78 - .223 Caliber (1986 Introduction)

The decision was made to transmit this item as a .223 caliber and not 5.56 mm. Research has transmitted the package to production.

M/700 Classic - .264 Win. Mag.

The parts list and drawings package has been transmitted to Production.

Research Department

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August, 1985

AMMUNITION RESEARCH

SHOTSHELL DEVELOPMENT"Premier"

Screening and environmental tests of 12 Ga. 1 7/8 oz. handloads using many combinations of powders, primers, and buffering materials in the 3" SPLV body have identified several loads that give acceptable ballistic results. Loading details and ballistics results have been transmitted to Lonoke for review and production loading evaluation.

Screening tests of 20 Ga. - 1 1/8 oz. loads with Remington 150X primers and Federal 209 primers have identified several Du Pont and Hercules powders as possible candidates. Designed experiments and long term storage tests are being conducted with Du Pont's 8688 and blends of Hercules 361/363 and 363/365 powders. One day storage results have also been acceptable with 8692, 8188, and 8168 powders. Lonoke has been informed of the results.

Remington Target Load

Fabrication of "Figure 8" wad tooling for assembly into a rebuilt "RXP" mold frame is underway at Osley and Whitney, Inc. Delivery is expected in November.

Steel (New Products)

12 Ga. - 1 1/4 oz. BB choke strain tests have been completed and the results are satisfactory. The data has been transmitted to Lonoke where MVD plans to demonstrate at the end of their present steel production run.

Quotes have been received from GTE for 20 Ga. 3" steel shot wad tooling and molds.

Shotshell Rifled Slugs

12 Ga. swaging dies have been modeled on the CV system and will be sent out for quotes when detailed. Main differences include an increase in diameter and a tapered body to improve accuracy.

Research Department

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August, 1985

CENTERFIRE DEVELOPMENT

38 Special - Plastic Case

Cases fabricated from Rynite® SST are due in Ilion by August 26. Upon arrival they will be loaded and tested.

JWBower:js

Research Department

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August, 1985

RESEARCH PERSONNEL AS OF AUGUST 31, 1985FIREARMS

Exempt	<u>24</u>	Non/Exempt	<u>12</u>	Wage Roll	<u>19</u>
Bauman, Thomas		Frost, Helen B.		Baggetta, Joseph A.	
Bower, James W.		Jones, Raymond A.		Beader, Robert W.	
Calkins, Kevin L.		Miller, Steven		Bedworth, Gary R.	
Coleman, Wm., H., II		Pickett, Wm., F.		Butler, Richard G.	
Curry, Wm., M.		Saunders, Susan P.		Dickison, Wm.	
Douglas, Terry C.		Schuster, Joyce M.		Eastwood, Ralph	
Ericson, Wm., L.		Smithson, Ronald L.		Eckler, John	
Findlay, David S.		Stephens, Charles J.		Failing, Marvin	
Franz, Scott R.		Supry, Fred L.		Fiorentino, Dominick	
Hand, Charles J.		Urtz, Donald J.		Harter, James D.	
Hennings, James H.		Weaver, Harold E.		Howe, Robert	
Hugick, Adam H.		Webster, Ronald A.		Jennings, Dale E.	
Hutton, James C.				Kozakowski, Robert	
Lawrence, Jeffrey A.				McManus, Owen	
Martin, Fred E.				Paslak, Wm., A.	
Martin, James S., Jr.				Starks, Gerry	
Murphy, Randall S.				Truax, Irving E.	
Plunkett, Thomas J.				Williams, Clifford	
Powers, Thomas P.				Williams, Donald	
Rankins, Edwin D.					
Rowlands, Kenneth C.					
Sanzo, Robert J.					
Saunders, Eugene L.					
Snedeker, James R.					

Total Firearms Personnel - 55

AMMUNITION

Exempt	<u>4</u>	Non/Exempt	<u>2</u>	Wage Roll	<u>2</u>
Cole, Wm., T.		Conant, Paul		Dunn, Timothy	
des Jardins, C.F.		Thomas, Dennis		Selan, Jerry	
McDonald, Alexander, D.					
Smith, Floyd H.					

Total Ammunition Personnel - 9

* ESD Engineer - James Ronkainen (Firearms)

REMINGTON PERSONNEL

Remington Roll

Actual
8/31/85Exempt

Ammunition Research	4
Firearms Research	24
Firearms Modernization	6
Administration	<u>1</u>
Total Exempt	35

Non/Exempt

Ammunition Research	2
Firearms Research	12
Firearms Modernization	2
Administration	<u>1</u>
Total Non/Exempt	17

Wage Roll

Ammunition Research	2
Firearms Research	<u>19</u>
Total Wage Roll	21

Total Research	73
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