

To: J.R. Ayers - Plant - Bridgeport  
From: R.L. Sassone - Ilion

*C. B. Workman*

## LIMITED DISTRIBUTION

FIREARMS RESEARCH DIVISION

PROGRESS REPORT

APRIL 1980

*Remington Arms Company, Inc.*

## FIREARMS

### RESEARCH AND DEVELOPMENT

#### PRODUCT DEVELOPMENT

##### MODEL 870 COMPETITION TRAP GUN

Testing is continuing to find a solution to the locking block and vent rib problems. New designs of the locking blocks, vent rib barrels, barrel retaining systems and a piston retaining system are currently in test.

##### MODEL XSG SHOTGUN

A gas cut-off system has been designed, prototype parts fabricated and verified for function in a modified Model 1100 shotgun.

Locking system component parts are being detailed for two different style locking systems. One is a rear lock up, the other a frontal lock up system. Both designs lend themselves to simplicity of manufacture and smoothness of operation.

##### 21mm SEISMIC GUN

Dry cycle tests show that the present concept of firing pin design (wipe across shell model) has acceptable wear. Firing pin redesign is complete and retract firing pin mechanism is in test. The 15 Seismic guns are scheduled to be returned to Mapco on July 30, 1980.

#### PROCESS DEVELOPMENT

##### AUTO DRILL LINE

The Albion machine has been installed with peripheral units now being placed. The major wire ducts are in place and the tie in ducts for the chip system is complete. Service wiring is being run to the machine system. Reconnecting of

## PROCESS DEVELOPMENT

### AUTO DRILL LINE (Continued)

all the operating wiring is scheduled to begin the week of May 5, 1980. Preliminary control debugging is also under way to reconcile the logic with the hard wiring.

### FOUR-SLIDE MACHINE

Project has been authorized to purchase a Four-Slide machine for development of in house production of precision formed stampings and peripheral equipment. An order has been placed with the Torin Corporation to purchase a model V82 Verti-Slide machine with delivery scheduled for August 1980. Investigation of support equipment is continuing.

### ASEA MANIPULATOR

The ASEA programmable manipulator is not capable of dealing with the receiver tolerances in panel polishing. An LVDT-based system from Schaeitz Engineering and the ASEA Adaptive Control package are being considered for receiver repositioning. Selection of the appropriate system will be made by May 15, 1980.

### HIGH ENERGY BEAM APPLICATION

#### LASER WELDING

Sample slide block parts were welded by EDL. The weld appears strong, but has excessive porosity. Strength tests are scheduled to be completed May 15, 1980.

HIGH ENERGY BEAM APPLICATION

WOOD DECORATING

Stock and fore-end samples engraved by Lasermation with Remington designed art were received. Samples are currently being finished and will be reviewed with Marketing in May 1980.

OTHERS

STATUS

MODEL 7400 AUTOLOADING AND MODEL 7600 SLIDE ACTION CENTERFIRE RIFLES

Testing of the forty production machine pilot guns is complete. Reports are being compiled for each phase of the testing. Performance and measurement data indicate no serious problems with design or manufacturing aspects of the gun.

MODEL 700 BOLT LOCK

Bolt lock design has been completed and reviewed by Marketing and Operation Committee. Approval is required so as to finalize and transmit drawings.

BOLT ACTION CARBINE

A new conventional floor plate latch system has been designed, built and function tested satisfactorily. Models are being fabricated for more extensive functional testing.

Twenty five stocks have been received from Fajan. The stocks will be turned over to Process Engineering for stain and finish.

#### NEW OWNER MANUAL FORMAT

Mechanical illustrations for the Model 700 Owner's Manual have been completed. An order to print 25 instruction booklets has been placed with Brodock Press Inc. and are scheduled to be ready for review the week of May 5, 1980.

#### INTEGRAL EJECTORS

The 12 Ga. pilot run barrels have been satisfactorily field tested and are currently being tested for endurance. One barrel has been fired 15,000 rounds with no ejector problems and negligible wear of the ejection surface.

#### RIVETLESS EXTRACTORS

Production has been supplied with sufficient quantities of rivetless extractor bolt heads to satisfy their current requirements for Model 700 7mm-08 and Model XP-100 7mm BR production runs.

Premature failure of extractors in the Model 7400 pilot guns during endurance testing has been traced to possible incorrect heat-treatment and/or a die break stress raiser caused by vendors temporary tooling. The vendor has modified the tooling and supplied 24 extractors for endurance testing.

4/30/80