

October 18, 1976

TO: J. P. LINDE
FROM: F. E. MARTIN
SUBJECT: PROGRESS REPORT JULY - SEPTEMBER

M/600 & XP-100

All drawings for the new style Fire Control have been transmitted and it is expected to be in production in January 1977.

The cost estimate for XP-100 new style Safety has been received from I. E. and a decision as to transmittal date has to be made at R&D level.

Several samples of the new M/600 Trigger Guard have been made and assembled to rifles for review. No decision has been made.

Model 700

The 8mm Rem. Magnum development is continuing with both ammunition development and rifle assembly and testing. A lot of 12 rifles has been put up by Production and are being tested in the gallery.

A second group of three rifles was assembled by the writer and turned over to the Test Lab for testing. Subjects for this testing are accuracy, barrel bracket bending, function, and stock strength. To date the following tests have been completed and results are listed below:

Accuracy:	Shoulder	- 3 Gun Ave. -	220 Gr. Factory	3.23"
			185 Gr. Factory	3.14"
			220 Gr. Handload	2.66"
	Accuracy Device	- 3 Gun Ave.	220 Gr. Factory	4.17"
			185 Gr. Factory	2.87"
			220 Gr. Handload	3.70"

To: J. P. Linde
From: F. R. Martin
Subject: Progress Report July - September

Page 2

October 18, 1976

Model 700 - Contd.

Barrel Bracket Bending: has been measured before and after Proof. The Bracket was found to deform .001 with no progressive movement with successive shooting.

Functioning: functioning of these rifles has been checked with both dummies and live ammunition of both bullet weights. Some difficulties were encountered using the dummies. It has been generally accepted by those involved that the finish on the dummies was causing the problem.

Some alterations to the Receiver feed rails and release point have been made and found to cause more problems. This alteration has been dropped. Also the ejection clearance cut was altered. This has been found to help ejection but the appearance was found to be objectionable. No decision has been made as yet.

Stock Strength: the Stocks were examined by the writer and Test Lab personnel for cracking or breakage before and after Proof, and also after the subsequent limited shooting. To date no breakage has been observed.

For the present, accuracy continues to be our chief concern. It is hoped that with the latest loadings from Lonoke our accuracy, both from the shoulder and jack, will improve. It was learned late last week that 25,000 rounds of each bullet weight had been loaded in Lonoke and that a quantity was being prepared for shipment to Illion.

Fire Control Lubricant

Complaints from the field of hard or heavy trigger pull, creep, and extremely stiff triggers have prompted us to start investigation into cause and solution for these problems. Trigger pulls of twenty rifles were taken on Assembly ranging from 4 1/4# to 6 1/2#. Two guns have been prepared by Assembly and delivered to the Test Lab for dry cycle testing. It is felt that by measuring trigger pulls every 250 cycles for 25,000 cycles that a pattern can be established. A second sample will be tested using a new lubricant to help us evaluate both lubricant and assembly methods.

To: J. P. Linde
From: F. E. Martin
Subject: Progress Report July - September

Page 3

October 18, 1976

7mm Gallery Rejects and Related Problems

The gallery reject of the M/700 ADL 7mm Rem. Magnum has again appeared and a final satisfactory solution is being sought. Several Stock alterations have been tried with good results. Also, a different Magazine Box has been worked up and taken to the Model Shop for fabrication.

Evaluation of these alterations will continue with solution of the problem the ultimate goal. The Magazine components of all M/700s are also being evaluated.

Silhouettes

Four backstops for the quarter scale Silhouette Range have been fabricated and delivered to the Farms for completion of that range. An additional 20 sets of quarter scale, and 5 sets each of the 7/8 scale and 2X scale, have been obtained for distribution to desired individuals for evaluation and test.

Special Rifles - W. E. Leek

A Barrel configuration has been accepted and program for turning written. We are presently at a standstill due to lack of Barrels. Barrels were ordered from the Custom Shop August 24, 1976, and originally promised for the end of September. As yet no Barrels have been received. Special wrenches and vise jaws have been completed by the Model Shop.

M/40XB Rim Fire

A M/40XB Rim Fire Repeater has been partially completed and will be finished as time permits.

F.E. Martin/nl
Illon Research Division