

To: Ken Soucy  
From: David Findlay  
Date: 11/20/92  
Subject: November Monthly Report

M/522 VIPER

With the successful completion of all testing and the rifle's turn over to production, work on the M/522 has now been directed to cost cutting and product improvement items.

A 10 shot synthetic magazine box mold is expected by year's end to make magazines out of LCP plastic. This magazine box, if functionally successful should reduce the magazines price from approximately \$5.00 a unit to \$.75. At the same time, Research has requested the Metal Injection Molding group quote a new 5 shot magazine box tool that could also be used to make M/541 metal magazine boxes as well.

5R Rifling

Process has begun making 20 varmint M/700 with 5R rifling in 2 calibers (10 30-06; 10 .308 cal). These are hoped for by year's end. (they have been delayed due to other plant priorities). Testing will then commence and be comprised of accuracy and endurance testing.

M/11-87 Sporting Clays Fore-end Fit

Production and marketing have requested design to enhance the rear fit of the M/11-87 Sporting Clays fore end with the front of the receiver. Current fore ends "rattle" at the back end and have an objectionable amount of movement in Marketing's estimation. Design is currently pursuing the addition of a stamped component which slips over the magazine tube and prevents the fore end from moving both vertically and side to side.

Design feels that a change to 1050 steel from 1095 as well as a processing change will result in a greater than 10,000 rd. endurance life. Fifty sample parts have been requested from Square Stamping Mfg. Co. and should be available for testing by years end.

11-87 Product Improvement

Work has been initiated to develop an improved endurance life gas system for the Model 11-87. An investigation and redesign has begun of the current 2 piece steel piston and piston seal to utilize a higher strength steel or a change to the slot dimension of the current design. Design has obtained a 30+ piece sample of pistons and seal using Nitronic 60 Steel and 6150 steel to the current design configuration. These have been heat treated and processed through the plant and turned over to the Test Lab for evaluation.

#### Canadian Ranger Rifle

Layout work and preliminary investigation of the processing and design work needed to fill the Canadian army's requirements for this rifle have been started. To date, a steel trigger guard for the short action detachable magazine box has been designed and is being detailed. Trigger group components are being gathered and readied for electroless Nickel plating with Teflon impregnation for lubricity. Process Engineering has been requested to supply 5 stainless steel barrels with 5R rifling in .308 Cal. as well as 5 short action M/700 Stainless steel receivers. These are due in December.

A hybrid stock design, utilizing a 1903 Springfield fore arm and SP-10 Mag. stock, is currently under development. Tom Houghton, of H&S Precision, is expected December 1, at the plant to talk over this stock as well as the requirement for length of pull adjustment.

Lastly, Lt. Colonel LaChapelle, of the Canadian Army, has requested a plant tour. A preliminary date of December 11 has been discussed, but will be confirmed by the Colonel later this month.

#### NCS

To date only some preliminary discussions have taken place between Firearms Research, Ammunition Research, and Marketing on what the performance criteria and specifications for this new family line of shotguns should be. A meeting needs to be scheduled soon between the various interested parties to iron out objectives and scheduling.

#### Low Cost Centerfire Rifle

Currently, this program is envisioned as a M/700 ADL style derivative product with a synthetic stock. Custom Shop has been asked to make 2 prototypes and the plant has been asked for a no-turn barrel prototype to go with one of the custom shop rifles.

#### Low Cost Rimfire Rifle

Currently, this program is envisioned as a replacement for the M/581 and to be in keeping with the M/522 Viper. This program is currently in the feasibility phase to see if it is worth pursuing.