

To: Ken Soucy
 From: David Findlay
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 Subject: January 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 was received by year's end and 50 parts were molded out of LCP plastic. This magazine box, if functionally successful should reduce the magazines price from approximately \$5.00 a unit to \$.75. The Test Lab will shortly receive these boxes for testing. Initial impressions indicate that a metal insert for the lip area of the mold will still be required to prevent the rounds from "cutting" through the synthetic lips.

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.

Additionally, Research and Process Engineering are looking at an assembly aid design that is glued in versus sonically welded. Research is also investigating .5 lb. to 1 lb. reduction in trigger pull through the use of a ground firing pin surface treatment and/or firing pin spring modification. Also, Process Engineering and Research are making samples of Viper stocks with different "Colorworks" camouflage patterns as a possible addition to the line for 1994 introduction.

Where did this directive come from?

5R Rifling

On January 14, 18 30-06 cal. 5r M/700's and 20 .308 cal. 5r M/700's were turned over to the Test Lab for evaluation and testing. Testing will 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 was 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.

Testing indicates that this approach is unacceptable in endurance shooting due to the collar spreading out through shooting. All indications are that the way to solve this condition will revolve around the wood receiver clearance cut or moving the receiver bottom radius cut lower in the front edge.

*STATUS?
 How close are we to an acceptable fix?*

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 was 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 obtained a 30+ piece sample of pistons and seal using Nitronic 60 Steel and 6150 steel to the current design configuration. These were heat treated and processed through the plant and turned over to the Test Lab for evaluation.

Dead End

Testing indicates that these new pistons and seals are not an improvement over the current material and as a result a high speed movie of the guns gas system function has been requested by Design to investigate further.

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. 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. which will then be assembled with the short action receivers already received from the Plant.

Resource Allocation

Lt. Colonel LaChapelle, of the Canadian Army was given plant tour on December 11 and the program was discussed in some detail. As a result, Research is investigating the use of the M-14 10 round magazine box retrofitted for use with the M/700 receiver as the primary approach for the box design. The secondary approach is to add use the Remington 5 shot design currently under development. Primary approach on the sights is to use the RPM XP-100 sight with modifications and the secondary approach is to reverse engineer the M-1 carbine sight.

Five M/700 Stainless Steel rifles are being prepared for shipment to the Canadian Army for Environmental testing and evaluation of three different metal finishes; black oxide, powder coat, and black chrome. These are anticipated to be completed in January and shipped the first week in February.

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.

Nothing

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 stocks.

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.

*When did this
come from?*