

To: Ken Soucy
From: David Findlay
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Subject: March 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 and 50 parts were molded out of LCP plastic. The Test Lab has received these boxes for testing along with 10 rifles. 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 for a quote to build 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, firing pin spring modification, or trigger return spring change.

Process Engineering and Research are also evaluating firing pin carriers made from a composite mix of Hytrel as well as magazine box bottoms out of Delrin 100ST for improved impact resistance.

M/870 - M/11-87 Synthetic Stock and Fore End

Research has completed with Process Engineering a Remington designed synthetic stock and fore end for the M/870 and M/11-87. All modeling was completed in February and preliminary drawings have been sent to the vendors for mold quotation. Finalized detailed drawings have been requested from the CAD Group.

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 but has been delayed due to other project priorities.

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.

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 were 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 awaiting shipment pending paperwork from the Canadian Army.

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.

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 between the various interested parties to iron out objectives and scheduling.

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.