

To: Ken Soucy  
From: David Findlay  
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Subject: July Monthly Report

#### MODEL 522 VIPER

Thirty-five design acceptance rifles were turned over to the Test Lab on July 20th. The lack of availability of magazine boxes precluded the making of a full 100+ sample. However, the boxes supplied by MIM, with the addition of 2 sizing operations, yields an acceptable product.

To date, all M/522 design acceptance testing completed indicates Remington has a safe reliable product. A field cycle test of 30 M/522's yielded an overall malfunction rate of .8% which is acceptable. Also, the drop testing of 5 rifles to the SAAMI drop test standards was completed and were passed by all rifles. Accuracy testing has also been completed on 5 rifles and found to be well with Remington standards. Hot testing has been performed and passed with cold testing currently ongoing. Further testing includes endurance testing as well as magazine box interchangeability. All testing will be complete by mid-August.

A full production run of rifles for the trial and pilot sample is scheduled to be run in September.

#### NCS/11-87 Product Improvement

Work has been initiated to develop a lower cost and improved endurance life gas system for the Model 11-87. It is conceivable that a New Concept Shotgun (NCS) will still utilize a variant of the M/11-87 Gas Compensation system. Efforts revolve around two major approaches:

1. An investigation and redesign of the current 2 piece steel piston and piston seal to utilize a lower cost steel or change in process or dimension of the current design.
2. The design of a stamped "heat shield" stainless steel piston and synthetic plastic piston seal to reduce cost and improve endurance life.

The Test Lab has been given 10 M/11-87 Premiers to evaluate both approaches. These guns were submitted to the Test Lab July 24.

#### M/541 Heavy Barrel

Work has been initiated on a M/541 Heavy Barrel Silhouette rifle. Marketing had a firm proposal to buy 500-1000 rifles from a dealer, but the current strategy is to offer this rifle as a catalog model variation in 1993. Initial indications are that this will require a new barrel rollmark for the model designation and warning label as well as require a revision to the stock. A drawing package of the design changes has been transmitted. A prototype rifle has also been completed in the custom shop and is currently out for catalog photography.

#### 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 when compared to the competition.

Design has proposed three possible corrective actions:

1. Alter the process to cut the receiver clearance cut at the rear of the fore end as the last operation to improve its dimensional variability and to hold mean figure. This will enhance the fit of the fore end side to side.
2. Taper the bottom radius of the receiver to remove the clearance between the receiver and the rear portion of the fore end. This will eliminate most of the up/down movement.
3. Add a stamped component which slips over the magazine tube and retains the fore end readily from moving both vertically and side to side.

All three approaches are being prototyped. Receivers with the new bottom radius have been received and are an improvement, but not a total solution. Fore ends with the rear receiver clearance cut have been received and are in the tool room for alteration. They will be complete in July. Lastly, the Test Lab has been given 5 fore end collars and three M/11-87 Sporting Clays guns for endurance testing. These guns were turned over to the Lab on July 24.