

November 27, 1991

TO: Hal Munson  
FROM: Jim Ronkainen

SUBJECT: November Monthly Report

M/700 SS

There has been a lot of activity on the M/700 SS this month. The sample gun for the Writer's Seminar, NASGW, and SHOT Show was completed and shipped to the Writer's Seminar. The rifle will be returned to Ilion after the NASGW show to be restocked with a polypropylene (PP) stock for the SHOT Show. Another M/700 SS sample gun is being readied for John Balio for the sales meeting in early December. Ron Shearer's 25-06 was returned to Ilion for evaluation. The trigger assembly on Ron's rifle had to be readjusted to factory specifications. The rifle shot 1.25" 6 shot group from the gallery accuracy fixture before we returned it to Ron. Parts for the stainless Custom Shop offerings have been provided to Wayne Cable.

Thirty stainless long action receivers were heat treated this month. Bolt bodies for design acceptance testing were run on the Miyano lathes; they will be built into bolts in the next two weeks. The upsetting trial for the Mountain Rifle contour barrels failed due to poor die fill. Feedback from metallurgists at CARTECH has lead us to believe that upsetting 416R stainless is possible, but difficult. Because of this, we have changed the material order to 1.500" from 1.032" diameter for first barrels to run them as turned rather than upset blanks. Stainless steel for the bolt bodies and receivers is on order and is scheduled to arrive in January.

Prototype PP stocks from Six Enterprises have been received and evaluated. Barreled actions fit unacceptably tight in the stocks. The tooling will need to be altered to account for the difference in shrink rate between PP and Arylon. Six Enterprises has drawings for the changes required to the stock tooling to add checkering, the Mountain Rifle barrel profile, and changing the inserts to account for the higher shrink rate of PP. Discussions are also underway about possibly moving the stock tooling to Remington to run in the new injection molding press.

Transmittal of the drawing package has been delayed by work I did on the M/522 and delays in having the package checked. I expect to transmit the complete package by 12/3.

#### M/700 Detachable Magazine Box

Fred Martin and I reviewed several concepts for the magazine box latching system with Marketing before October's Product Team meeting. The concept preferred by Marketing is a side latched magazine box grasped directly for removal from the gun. Work is proceeding to prototype the magazine by the SHOT Show so that it may shown to several gun writers for their feedback on the design. Discussions with EMT have begun in developing the stampings for the prototype box. We are involving Frank Ogrodnik to get his recommendations on parts we are considering as candidates for either PM or MIM. The prototype magazine box is expected to function in a manner similar to the final design although it may not be the final configuration.

#### M/700 220 Swift

Trial and pilot testing in the Test Lab is nearly complete, including the 10000 round endurance test rifle. The best way to describe the appearance of the endurance gun barrel is that it looks like a real old road culvert. Surprisingly, the accuracy has only degraded slightly from the baseline established at the beginning of the test (1.011 new vs. 1.215 at 8000 rounds).

The first guns through the gallery experienced problems with the shells in the magazine rearranging themselves under recoil. Replacing the magazine springs with the correct version solved the problem. Ron Smithson created and supplied the packers with a special loading instruction sheet for inclusion with the instruction booklet for all 220 Swift's.

#### M/700 AS Camo Stocks

The majority of long action standard caliber M/700 AS rifles pulled from the warehouse for camouflaging at Colorworks were found to have cracked stocks. Short action and magnum rifles with similar stocks were not cracked. The assemblers taking the guns apart noticed that the long action standard caliber stocks had a ridge of material in the receiver seat that could have caused the stock to crack when fired. Skip Smith and I found that removing the excess material stopped the cracking when the guns were shot in the R&D Test Lab. Both altered and unaltered stocks were tested in the Test Lab without failure. These stocks were then tested through the gallery and several cracked. This leads me to believe that the "stiffness" of the shooting jacks in the gallery coupled with excess material and possible poor knit line in the long action stocks is the cause of the cracking. Two altered stocks are first being tested in the Test Lab shooting jacks and from the shoulder and then in the gallery shooting jacks to test this hypothesis.

All long action standard caliber stocks in inventory are being altered by Dick Butler in the Model Shop to remove the excess material from the receiver seat. Lee Six developed a fix for the cracked bridge between the magazine well and the trigger assembly. We may ship the stocks to Six Enterprises for repair.