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John W. Brooks  
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Ilion, N.Y.

Dear John:

Thanks for the letter and I guess that it comes about because of my laxness in writing thru and acknowledging the receipt of the new bolt. I recieved it quite a while ago and sent it on to P.O. Ackley in Salt Lake who has the 40X. HE wants to get data from it for his new and he says, last book.

I just now finished writing him a letter in answer to a four page one from him. Old guys like R.O. and I just like to talk a lot I guess. Anyway, he did fix the gun up with a new chamber and will do some testing and such and then send it back.

I had finished most my tests on the new 7MM 08 and after getting it shooting well (1" groups with my hand loads and often that too with ~~factory~~ factory ammo. I will do a bit more on handloads when it gets back from Joyce Hornady who wanted to borrow it to make tests for load for his new and nearly finished loading book. HE did not want to send the book to the printer with out the new loads in it. And he will send it right back. I worked on the gun quite a bit to get it shooting as I wanted it too. The bedding took me time and I also installed a Canjar set trigger. Also a new Weaver Micro Doal scope. But what really did put it to shooting was when I discovered that the front action screw was bottoming. Just filed that off and it was great. The same happened on the 700-7MM EXP also. Thats the first time I have had that happen for many years.

Nick Harvey of Australia never did get the 8 MM mag shooting right when he was here a year ago, I'll check on that one too and it may be the trouble also.

I get a ~~letter~~ letter from Wayne Leek quite often and he always has plenty of questions to answer. One grand guy

You know something?? I never yet have found a typewriter that I can buy that will spell or space.

Thanks and best regards

Les

FIREARMS EDITOR - - - OUTDOORS WRITER

HIGH ENERGY BEAM APPLICATIONS

There has been no change in status for this item since last month.

3-28-80

ASEA MANIPULATOR

Rifle and shotgun receivers are rough and finish polished by a labor intensive hand process. ASEA, Inc., an industrial manipulator manufacturer, demonstrated the technical capability of automatically polishing Model 742 and Model 760 receivers utilizing their industrial robot. Estimated gross savings are \$67M per year.

The project timing has been revised to insure receiver polishing success before any capital money is spent on the conveyor system. Programming, development of a receiver realignment system to overcome the panel polishing problem, and a trial and pilot run, must be accomplished. The trial and pilot run is scheduled to commence in June 1980.

3-28-80

RIVETLESS EXTRACTORS

These new centerfire extractors in small, regular and magnum sizes will replace the troublesome riveted <sup>types.</sup> ~~styles~~. Part cost will be reduced, a number of bolt head operations eliminated, <sup>and</sup> gun reliability and ease of replacement will be improved.

Regular and magnum sizes have been transmitted to Production. Testing has now been completed on the small size with satisfactory results. Drawings are being prepared for transmittal.

Five thousand (5000) Bolt Heads originally intended for Model 700 7mm Mauser will now be used for Model 700 7mm-08 caliber and Model XP-100 7mm BR caliber.

All tooling to coin anti-rotation projections into Model 788 Reg., Model 700 Reg.L.H., Model 700 Mag. and Model 700 Mag.L.H. Bolt Heads will be completed in April.

An additional 25 regular caliber and 5 small caliber Bolt Assemblies are being manufactured for the new bolt action carbine prototypes. These should be ready by mid-April.

3-28-80

AUTO DRILL LINE

The present method of preparing shotgun barrel blanks for the swaging machines is difficult to control and requires an unacceptably high degree of technical and engineering support. A process has been developed to replace it utilizing proven machining methods and completely automatic part handling.

Fabrication of the system is now complete. Satisfactory run-off was achieved at the vendor's site on March 3. A problem with excessive smoke was evident and will be solved at Ilion. The system has been shipped from <sup>> the</sup> vendor and is being installed. Start-up is scheduled for early May.

3-28-80

FOUR-SLIDE MACHINE

This automatic manufacturing system for in-house production of precision formed stampings will enable Remington to develop an expertise in stamping manufacture in order to eliminate our total dependence on costly outside suppliers. An additional benefit will be improved quality and <sup>reduced</sup> new product lead times.

The appropriation request to purchase a Four-Slide Machine and support equipment has been submitted for approval.

3-28-80

INTEGRAL EJECTORS

Currently the Ejectors in the Model 1100 12 Ga. and 20 Ga. shotguns are spot welded to the Barrel Extension and machined to size. A process has been developed to form the Ejector as an integral part of the Barrel Extension. Savings of over \$60,000 per year can be realized by this procedure.

Three operations will be eliminated as well as the Ejector Pin and result in a more durable ejection system. Tooling to coin ejection surfaces into 12 Ga., 16 Ga. and std. 20 Ga. Barrels has been developed and transmitted to Production.

Marketing requested that the "bulge" in the area of the LT-20 Ejector be reduced. Tooling modifications have been made to support the outside of the barrel in the area of the Ejector. This produced satisfactory results. Four prototype Barrels have been sent to the Test Lab.

12 Ga. pilot run production barrels should be available for testing in April.

3-28-80

NEW OWNER MANUAL FORMAT

Our present owner manuals are written using words that often tend to be technically slanted, making it difficult for the average person to read and understand. The new manuals are being written using a controlled language with the key principle being one word-one meaning.

Mechanical illustrations for the Model 700 Owner's Manual are scheduled to be completed by Smart Communication, Inc. the week of March 24. Twenty-five instruction booklets are to be printed and distributed for final <sup>review</sup> ~~approval or editing~~ by April 20.

3-28-80



21mm SEISMIC GUN

A 21mm cartridge and gun system to be used for Seismic exploration for oil and gas is being developed for MAPCO. The cartridge is an electrically primed version of Remington's 8 gauge industrial load and the gun is a <sup>German made</sup> ~~Model 481~~ Kiln gun modified to fire either electrically or with percussion primers.

Fifteen (15) guns have been through an interchangeability test and preliminary results indicate that breech blocks can be made completely interchangeable if necessary.

The results of the test also show that neither the ammunition nor the gun at their present levels of development are acceptable products. Presently the gun is being redesigned to eliminate the malfunctions encountered in the interchangeability test. In light of this, the shooting test program will be suspended until the redesign is complete. We will <sup>continue</sup> ~~proceed~~ with a mechanical dry cycle test to determine the endurance of the present design.

Testing of redesigned parts will be complete by approximately April 15, 1980.

3-28-80

MODEL 700 BOLT LOCK

The objective of this development is to give the shooter the ability to open and unload his firearm without placing the Safety in the Off position. In order to do this, the <sup>operation</sup> ~~function~~ of the Bolt Lock and the ~~operation of the~~ Safety have been designed to be independent of each other.

Revisions to improve appearance have been made to several of the prototypes. Assembly of the modified system will be completed the week of March 24. It is planned that all samples will be available for review by mid-April.

3-28-80

MODEL 7400 AUTOLOADING and MODEL 7600 SLIDE ACTION CENTERFIRE RIFLES

These rifles have been developed as replacements for the current Model 742 and Model 760 and are scheduled for announcement in December 1980.

Forty (40) rifles of each caliber, 30-06, 270, 7mm Exp.Rem. and 6mm, were selected from Production samples for design verification measurements, field function cycles, and endurance tests. Preliminary test results so far indicate no serious problems.

The location of Model 4 and Model 6 designations has been approved. Production has three different renderings of the Model 4 roll marking on a single roll. Samples will be rolled the week of March 24.

The grip cap spacer 16 cavity mold has been reviewed and satisfactory samples have been molded. <sup>AW</sup> Optional pewter grip cap design by Sid Bell has been completed and approval has been given by Marketing for this final version.

3-28-80

MODEL XSG SHOTGUN

New autoloading and slide action shotguns are being developed for introduction in the 1984 Model Year. The objectives of the program are to replace the Model 1100 Autoloading Shotgun and the Model 870 Slide Action Shotgun. The guns are being designed together to take maximum advantage of common parts for optimum manufacturing costs.

A prototype autoloader is in test and has been fired over 6000 rounds using 2 3/4" Magnum loads. The Action Bar - Slide Block braze joint failure is the most prevalent problem. Mechanical joint designs utilizing welding and swaging processes are being fabricated to improve the joint's strength. The existing Action Spring design has set 2.28 inches. This is unsatisfactory. Testing is continuing on this gun with a new spring of the same design.

A redesign of the Action Bar Assembly was necessary to utilize a Model 1100 type gas system. This provides more room for the design of a lower stressed Action Spring. The design of a square wire Action Spring to reduce spring stress loads and setting is complete, with prototype parts currently on order from Connecticut Spring.

Two different Locking Systems with better mass distribution are being detailed.

A gas cut-off system has been designed to fit into an XSG or Model 1100 gas system. Component parts are being made for test to verify function and reduced bolt velocities for Magnum loads.

3-28-80