

PRODUCT TEAM MEETING

October 18, 1988

TURKEY CHOKE TUBES

Remington received 900 tubes for inspection. The black oxide coloring was judged to be poor. Also, the lettering on the tube was placed such that, when positioned in the muzzle, the lettering could be seen on the protruding portion of the tube. An effort will be made to position the lettering further back on the tube such that it will not show when fully screwed into the muzzle. It was determined by R&D that the 900 units received had an incorrect dimension at the bore-end of the tube, which was four thousandths undersized. A fixture has been set up to make repairs. Shipments to customers are expected to be made initially by the middle of the last week in October. Marketing released coloring and lettering of existing tubes for shipment. Again, efforts will be made on future production toward better coloring and repositioning of the wording.

SP10 MAGNUM CHOKE TUBES

Ten gauge 2 1/4 ounce lead #4 Remington shotshells shot in the maraging steel, modified choke tube produced patterns of 50 to 55 percent, rated improved cylinder. The same load shot in the full choke maraging steel tube produced 70 to 73 percent patterns, rated a true full. More testing will be done using buffered loads of both Remington and Federal brands. Remington 4s, however, will be used as benchmarks. It appears that the two maraging steel tubes will be dual marked modified steel and lead; full steel and lead; and an extra full lead shot only tube manufactured of stainless steel will be provided as a turkey choke with the SP10 magnum.

FULL CHOKE TUBES/STEEL SHOT/11-87 -870 FIELD GUNS

A full choke manufactured of maraging steel would resolve any swelling problems associated with the use of large size steel shot i.e. BBs, BBBs, Ts, and Fs. This change would add approximately \$5 of cost to each gun. Preliminary recommendations include utilizing "Vascomax" maraging steel for an accessory tube, which could be purchased by waterfowl enthusiasts. It was agreed upon by all members of the product team that Remington's brochure "Shooting Steel Shot With Confidence" needs to be rewritten. It is necessary to further explain to our customer that the use of steel 2s and smaller can be shot in regular stainless steel full choke tubes without problems. BBs and larger size steel shot should be shot only in full choke tubes manufactured of maraging steel. Efforts on this project will begin immediately with EAD involvement after the Writer's Seminar is completed the second week in November.

MARKING MARAGING STEEL CHOKE TUBES

Finalized test results are not yet available on this issue. Preliminary results indicate that coating the tube with titanium nitride and then marking it appears to be the most acceptable method currently available.

SP10 MAGNUM CONSIGNMENTS

Field sales consignments will be available at the end of the first quarter at the earliest. This will coincide with the end of the trial and pilot run. It was pointed out that one cosmetically correct gun will be needed in January for the shotshow. It is recommended that the 20 SP10 magnum guns built for the upcoming writer's meeting be assigned to regional offices on an as needed basis to cover sales needs during the fourth quarter of 1988 and the first quarter of 1989.

SP10 MAGNUM "LIMITED EDITION"

Additional options for distinguishing this gun was determined not needed nor doable.

PARKER SERIAL NUMBERS

This project will utilize sequential serial numbers with an alphabetical suffix designating the grade of the shotgun. Example: 242500-A, 242500-B, 242500-C, 242500-D. This method should provide a value added feature for those customers wishing to collect guns of different grades as they become available.

MODEL 1100 TARGET GUNS/SMALL GAUGE SKIRT SPECIFICATIONS

The current field gun restyle, satin wood finish and no white line spacers, will be implemented on subject guns on a phase in basis.

870 POLICE SHOTGUN BARRELS

As requested by Bill Forson, these barrels will not be "Rem" choked in 1989. Process records have been checked to confirm.

REPLACEMENT PROGRAM UPDATE

T.A.R.P. - 8,000 units outstanding, 58% complete
B.A.R.P. 100 units outstanding, 93% complete.
N.A.R.P. 60 units outstanding, 84% complete.

UNITED KINGDOM GUN FIX

R&D's work on this project has been praised by International. The current recommendation is to modify 11-87s and 870s in house. Small gauges are to be modified by Hull Cartridge Company. Hull will make modifications from R&D drawings provided to them. Additional shotgun specifications will be provided by International. If small gauge shotguns are to be affected under this program, International sales must define the ammo usage range.

XF100 RECALL

Approximately 5,599 guns have been identified under this program. Complete information on this subject has been linked to Field Sales by Arms Service.

"REM" CHOKE TUBE BLOWOUTS

Ninety-nine return barrels were received in Arms Service during the last four week period. The highest concentration of problems were identified as product produced between June and October of 1987. It is hypothesized that the problem occurred due to an out-of-specification thread diameter of the choke tube located in the bore. This oversized condition has been found in a limited number of 1988 production. Only eight barrels were returned, which were produced in 1988. Two manufactured in January; five in February, one in July. Five were not damaged, and three met specification. Thirty-three of the ninety-nine returned barrels were not damaged; however, only three of the thirty-three returned barrels met Remington's specifications for concentricity. There appears to be no problem with vendor choke tubes. One hundred percent inspection of all choke tube barrels began in February of 1988. The situation will continue to be monitored and reported upon on a monthly basis. Arms Service will also be supplied with a set of gauges to check all extra barrels going out of their shop. Please see Attachment I for further detail on this subject.

COMPETITIVE TESTING OF CANTILEVER RIFLED CHOKE TUBE SYSTEM AND HASTING'S RIFLED EXTRA BARRELS

It was determined by R&D that the Hastings barrels only shoots better with B.R.I. sabot type slugs. Hastings shoots the worst with all foster type slugs, which are the most currently available product in the marketplace. Four inch groups were obtained using the Remington system with Remington ammunition. Four and a half inch groups were obtained using the Hastings barrel with Remington ammunition. It is apparent that there is also a headspace problems with Hastings barrels.

CANTILEVER DEER GUNS

This project has not yet been evaluated by Engineering for economics. Therefore, R&D has not received project funding.

Trial and pilot has also not been finalized, which is necessary to facilitate production scheduling for the second quarter of 1989. There is an apparent need in Process Engineering for more people to conduct work of this nature. Currently, resources are entirely too short to stay on schedule:

MODEL 7400 FORE-END PROBLEMS

Approximately one week prior to this meeting, the gallery experienced extensive fore-end fracturing during testing. The lack of glue to the fore-end cap was determined as a contributor to this problem along with an improper inletting cut. Work is progressing on the problem, and a fix will be forthcoming by injecting the fore-end with additional glue, and modifying the inletting cut.

RIMFIRE MAGAZINE CLIP

Marketing requested that the current plastic magazine clip utilized in the Model 541T and 581 be changed to metal. The need for a sturdy metal clip in Remington's rimfire offering has been apparent for a number of years. R&D will look at competitive clips; however, it is unlikely that the development of a new metal clip will be undertaken in the near future.

BENELLI RIMFIRE TESTING

R&D wants to pass on sourcing this proposed product because of lacking safety features. Please see Attachment II for further detail.

BERETTA OVER AND UNDER TESTING

Beretta over and under testing has been completed by R&D and all results have proved to be excellent. Marketing has moved forward in further defining cosmetic requirements of this product.

MODEL 1100 SMALL GAUGE FORE-END

To enhance machinability, reduce scrap, and align the offering cosmetically, the fan cut at the end of the fore-end on the above product will be removed. This change will result in the finger groove now being continuous similar to that of the Model 11-87 and 1100 "Special Field".

EMPLOYEE SUGGESTIONS

The following were reviewed by the Product Team:

- Sportsman 58 "Rem" choke extra barrel
- Full frame 20 gauge 1100 extra barrels
- Model 870 Upland barrel for special use in 23" to 24" offerings