DON'T SAY IT—WRITE IT

To E. F. BARRETT Date Sept. 11, 1978

From C. B. WORKMAN LIMITED DISTRIBUTION

NOTES FOR MANAGEMENT STAFF MEETING

Model 1100 Target Grade Styling

Previously transmitted drawings were pulled back to execute changes requested by Marketing. New model designations will be SA, S-T, TA, T-T. Revised and new drawings should be transmitted by 9-15-78.

Model 1100 Weighted LT-20, 28 & 410 Skeet Guns

Prototype guns for both new systems are scheduled for assembly by 9-29-78.

Model 1100 and 870 Improvements

Plant Gallery testing of spring retained feed latches has been successful. Experience has shown a .050 inch spring deflection to be the best compromise of holding power and ease of assembly. Fifty (50) each of 1100 and 870 latches have been transferred to Field Service personnel for their use and evaluation.

Fifty (50) M/1100 carriers of .055 material (vs. the present .047) have been tested in the Plant Gallery. There were no malfunctions attributable to the new carriers. Forty (40) were shipped out in new guns and ten (10) were retained for experimentation in malfanction prone guns. 150 additional heavy carriers are being prepared.

Model 1100 - 12 & LT-20 Waterfowl Guns

Previously transmitted designs have been pulled back and obsoleted. The only change remaining in effect is the contoured ejection port on the 12 Ga. Magnum.

XSG

New gas system components were received from the Model Shop and tested for bolt velocity. Parts were at mean dimensions and results were excellent. The XSG-A3 barrel used two .078 orifices and the control sample M/1100 used two .086 orifices. Initial bolt velocities for short magnum and light target loads were 280 in/sec and 205 in/sec, respectively. The M/1100 showed 291 in/sec and 205 in/sec with the same ammo. Terminal velocities were 80 and 53 in/sec slower on the A3 for the heavy and light loads respectively. This is thought to be due to a lighter reciprocating mass in the A3 (1.050 lb. vs. 1.160 lb.) and a higher action spring force at the rear of the stroke. Both of these variables are relatively easy

BARBER - PRESALE R 0106281

To: E.F. Barrett
From: C.B. Workman 9-11-78
Notes for Management Staff Meeting -2-

XSG Continued

to change if necessary. Labyrinth seals and leading orifice seals were not used on the A3 to achieve the above bolt velocities; however, further experimentation with these variables will be conducted.

Parts for a modified 1100 feed system have been designed. Some have been let out for fabrication and other drawings remain to be checked.

Model 3200 Skeet Set

Dry cycle testing of small gauge ejectors has begun.

Five skeet sets are complete through final inspection and five more are ready for Gallery test.

M/7400 - 7600

Work is continuing on preparing guns for a 15 sample function test. Alterations to Trial & Pilot guns include: solid barrel nut, deletion of buffer, longer ejection port, stronger ejector spring, rivetless extractor (7)guns), rotated extractor (8) guns, and confirmed magazine box location cut. Also included in the test will be new firing pins, new hammers, radiused antirotation lug cut on barrel extension, and receiver inserts with confirmed heat treat and straightness specs. Guns will be ready for test by the end of September. Testing will include pertinent specification checks and a 400 round field function test per gun, 100% shoulder shooting.

New magazine box assemblies will not be ready until October. Upon receipt, these boxes will be tested in the above guns as an independent variables.

Nylon 66 Improvements

Four bolt handles for the bolt lock design were shot 10,000 rounds each. Handles were found to be bent after the test. It was originally thought that this was due to high manual opening forces caused by muddy, rusted actions (water was presented in the air line used to cool guns). We are now devising an accelerated test to determine if material creep in the lock open position was the cause.

Powder metal slugs for barrel mounted scope mounts have been received and transferred to the Research N/C Group for fabrication.

To: E.F. Barrett
From: C.B. Workman 9-11-78
Notes for Management Staff Meeting -3-

Model 6600

A wooden pattern to generate a temporary Kirksite stock die was received from Gulf & Western for our approval. They had done an excellent job and only minor problems were noted. The pattern was returned for correction and die fabrication. The best estimate for receipt of prototype stocks is now December 1978.

Our stamping vendor sent us an unfinished punch and die set for the stamped receiver. We are to generate the complex top form on our N/C equipment. After completion the tools will be returned to the vendor for prototype part fabrication.

M/870 Competition Trap

The point of impact on the latest model was dropped at the request of Marketing. New stock and vent rib drawings will be ready by the end of September. Target grade trigger models are in the Test Lab ready for dry cycle.

M/700-600 Fire Control

Three new M/600 fire controls are in the Test Lab. The M/700 fire controls will be in the test Lab in September.

M/788 - 22 Hornet

Design work has begun on a magazine for the 22 Hornet cartridge.

Mechanical Trap

Requests are being sent out to have the solenoid release traps returned by September 30.

M/580 - 788 Fire Control

Models to the latest design are being assembled for Test Lab evaluation.

Bench Rest Bullets

35,000 bullets were shipped to warehouse in August.

Cost reduction program on the 6mm bullet job is continuing.

Automation of the second machine draw operation has proven successful. An annual cost savings of $16,500 has been realized. Additional improvement to the machine cycle time was made, increasing hourly production output.

Industrial Engineering is now in the process of re-evaluating labor and

BARBER - PRESALE R 0106283

To: E.F. Barrett
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Notes for Management Staff Meeting -4-

Bench Rest Bullets Continued

material standards. Presently .222 BR standards are being utilized for 6mm bullet. New standards will provide a true and accurate cost of the bullet job.

Process Research

Centerfire Rivetless Extractors - Two "magnum" rivetless extractors have been tested in M/700 rifles, firing a variety of magnum calibers. Both went 4,000 rounds without failure or malfunction.

In the latest two tests of "regular" rivetless extractors in M/7400 - 30-06 caliber rifles, the extractors went 5,000 and 7,000 rounds respectively without failure or malfunction.

ASEA Manipulators - The Manipulator Gripper design has been received from the vendor and rejected. Two Remington designs have been submitted to them for review.

Barrel Drill Line - Ray Hurley is currently in Detroit reviewing the overall line design.

CBW:T