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ILION RESEARCH DIVISION
MONTHLY PROGRESS REPORT
AUGUST 1978

MODEL 1100 WEIGHTED LT-20, 28 and 410 SKEET GUNS

Components for both new systems are due from the Model Shop by 9-15-78.

XSG

Two Du Pont Vespel formulations, SP polyimide and KS aramid resins, have been tried for use as gas system pistons. Both were unsuccessful. Du Pont experts feel that breakage is due to internal stresses caused by high surface temperatures and low thermal conductivity of the materials. Further work on molded pistons will not be done until more promising materials become available.

New components for the A3 integral piston gas system will be available for test the week of 8-28-78. New action springs have been received from our vendor and will be included in the test as will a stronger extractor spring and experimental O-rings (new material).

MODEL 870 ALL GAUGES - WOOD COSMETICS

Drawings are complete. They will be checked and transmitted by 8-30-78.

MODEL 3200 SKEET SET

A "Barrel Assembly, Fitted" drawing was prepared and transmitted. It specifies the fitting operations necessary to match extra barrel assemblies to frames. Its primary purpose, however, is to provide for separate part and order numbers for extra skeet barrel assemblies for cost allocation.

Remington Arms Company, Inc.

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MODEL 3200 SKEET SET Continued

The first Trial and Pilot set was tested and targeted on 8-23-78. There were no significant problems during assembly, fitting or testing operations. All barrels targeted within specification. Four more sets are to be completed within the next few days.

MODELS 7400 - 7600

We are continuing to work on 7400 malfunction problems. Several potential changes have been identified and tested independently. We are now preparing 15 rifles which will include all of the changes as a package. They are; a solid barrel nut, longer ejection port, rivetless extractor (7 guns), rotated extractor (8 guns), and confirmed magazine box location cut. Also included in the test will be the new firing pins, new hammers, radiused antirotation cut on barrel extension, and receiver inserts with confirmed heat treat and straightness specs. Guns will be ready for test about the third week in 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 variable.

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NYLON 66 IMPROVEMENTS

Four bolt handles which allow the N-66 to be locked open were tested in two Nylon 66's along with three barrel mounted scope mounts and one control receiver mounted scope. Each part was shot a total of 10,000 rounds plus accuracy.

The previous bolt handle breakage problem appears to have been solved by the use of Zytel ST-801. There was some wear on the front and rear working edges of the handle and actuation was felt to be inconvenient. These problems will be corrected on a subsequent set of parts.

The barrel mounted scope mounts exhibited no mechanical problems. Accuracy was evaluated for grouping and for repeatability of point of impact. Grouping ability was equivalent between the new mount and the standard control mount. This has not been a significant problem with the N-66. The problem has been one of repeatability of point of impact. Both mounting systems were found to vary point of impact as a large number of rounds were put on the guns. This was later found to be due to the scope adjusting screws turning while firing. Remington's promotional scopes (Universal and Tasco) were used for the test. Future testing will include scopes from Fontaine Industries, Tasco and Universal, with the last two possibly altered to prevent scope adjusting screw movement while firing. Scope mount costs are not yet available.

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MODEL 1100 and 870 IMPROVEMENTS

The batch of 50 M/870 latches (spring retained) are still being evaluated by Production.

Fifty (50) M/1100 carriers of heavier material (.055 vs. .047) have been received and readied for assembly. A Plant gallery test is planned.

MODEL 870 COMPETITION TRAP

Transmittal of drawings required by Production can start in September.

Target grade trigger models are in the Test Lab.

MODELS 700-600 FIRE CONTROL

Three new M/600 fire controls are in the Test Lab. The M/700 fire control uses a different trigger. Parts for this model will be ready for testing the first week in September.

MODEL 788 - 22 HORNET

A layout has been made and work has begun on a magazine design.

MECHANICAL TRAP

The solenoid release trap will be returned from field tests in September. The reports of the tests will then be evaluated.

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PROCESS RESEARCH

Center Fire Rivetless Extractors

Purchasing is awaiting a proposal from our current vendor for him to manufacture the new rivetless extractors on his 4-slide machine. The vendor in turn expects a quote for a 4-slide machine before the end of August, so he can prepare his proposal.

ASEA Manipulator

A quote on polishing equipment to fit the very limited area around the manipulator is expected this August.

Barrel Drill Line

A review of the overall line design is scheduled for September 5-6 in Detroit.

BENCH REST BULLETS

Approximately 35,000 6mm bench rest bullets have been shipped to the warehouse.

Second draw machine cycle has been decreased, resulting in additional production per operation. Inspection and packaging procedures have been altered to reduce labor costs.

CEW:T
8-28-78