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8-23-78

Research Progress Report

Model 1100 weighted at .20, .28 and .910 Sheet Gms.

Components for both new systems
are due from the Model 5 labs by
9-15-78.

XSG

Two DuPont Vespel formulations, SP polyimide and K5 aramid fibers, have been tried for use as gas system pistons. Both were unsuccessful. DuPont experts feel that leakage is due to internal stresses caused by high surface temperatures and low thermal conductivity of the materials. Further work on modified pistons will be done until more promising materials become available.

New components for the P3 migration filter system will be delivered to the lab by 9-15-78. When this happens the data received from the first test will be analyzed for a stronger extraction system and experimental designs (new design).

Model 870 All Gages - Wood cosmetics.

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

Model 3200 Sheet Set.

A "Barrel Assembly, 17" drawing was prepared and transmitted. It specifies the fitting spacings necessary to match extra barrel assemblies to frames. Its primary purpose, however, is to provide separate part and order numbers for extra sheet barrel assemblies for cost allocation purposes and avoidance of confusion.

TSK-A

Models 77.1 - 78.0

The following is a list of parts required for these models. Since parts will be used from previous drawings, it is not necessary to list them all. If the

(A) The first Trial and Pilot set was tested and targeted on 5-23-78. There were no significant problems during assembly, fitting or testing operations. All trials targeted within specification. Four more sets are to be completed within the next few days.

changes as a package. They are; a solid barrel nut, no buffer, stronger piston spring, longer case frame part, switchless extractor (7 guns), soleated extractor (8 guns), and 100% conformed magazine box location cut. Also included in the test will be the new firing pins, new hammers, oxidized anti-corrosion cut on barrel extensions, and barrels machined with conformed heat treat and straightness specs. Guns will be ready for test about the third week in September. Testing will include pertinent specification checks and 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 subject guns as an independent variable.

Nylon 66 improvements

Four Nylon bars with 1/4" dia. and 1/2" dia. were tested under 1/2" load applied at 1/2" from the center of the bar. The small breaking point was due to non linear material and is not a critical test on these

...as some wear on the corners of the handle and actuation was felt to be inconvenient. These problems will be corrected on a subsequent set of parts. The scope mount exhibited no mechanical problems and shot much better groups than did control sample receiver mounts. Weight of impact was found to vary as follows. Number 1/4 rounds, 10 ft. at 1000 yards. This was found to be due to "walking" of the scope adjustment screws and occurred in the control guns also. Remington's promotional scopes (Universal) were used for the test.

Model 1100 and 870 improvements

The batch of 50 n/870 batches (spring retained) were incorrectly heat treated and will have to be re-heated.

It appears to me that this problem is due to the fact that the gun is not cleaned and oiled for storage. It is not necessary to do this.