

K.W. Loucy
8-23-78

Research Progress Report

Model 1100 weighted 17.20, 28 and 910 Sheet Guns

Components for both new systems
are due from the model shops by
9-15-78.

XSG

Two DuPont Vespel formulations, SP polyimide and K5 aramid resins, 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 molded pistons will not be done until more promising materials become available.

New components for the #3 stopped piston gun system will be completed by 10-1-78. The #3 gun will be replaced by a stronger vibrator system and experimental 3-gun (new) system.

Model 870 All Pages - Word Cosmetics

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

Model 3200 Sheet Set

A "Barrel Assembly, Detail" 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 separate part and order numbers for extra sheet barrel assemblies for cost allocation purposes and maintenance services.

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Models 7700 - 7800

The engineering team is working on the design of the barrel assembly. The design is being completed and the drawings are being prepared. The design is being completed and the drawings are being prepared. The design is being completed and the drawings are being prepared.

(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 barrels 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
 ejector spring, longer ejector pin,
 rivetless extractor (7 guns), rivetless
 extractor (8 guns), and 100% confirmed
 magazine box location cut. Also
 included in the test will be the new firing
 pins, new hammers, revised intima-
 tion cut on barrel extensions, and
 revised 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 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 66's with the
 old buffer in the test
 were tested and the results
 to 400 rounds were the same. The barrel
 breakage problem was not seen again
 and in the 400 round test the

was 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. Point of impact was found to vary as a function of number of rounds fired in the guns. 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 m/870 latches (spring retained) were incorrectly heat treated and will have to be re-treated.

The upper receiver of the 1100 was found to be defective and was replaced and re-tested for functionality. The lower receiver was found to be defective and was replaced and re-tested for functionality.