

K.W. Louey
8-23-78

Research Progress Report

Model 1100 weighted 17.00, 25 and 9K sheet guns

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

XSE

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 P3 trigger piston gun system will be completed by the end of 7-78. The trigger gun has been received and is being tested. The trigger gun is a stronger extractor system and requires less force (new design).

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, Fitting" 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 avoidance of income tax. (A)

Model 7700 - 7200

The drawings for the work on the 7700 and 7200 series are complete. The drawings for the 7700 series are being checked and will be transmitted by 8-30-78. The drawings for the 7200 series are being checked and will be transmitted by 8-30-78.

(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% conformed
 magazine box location cut. Also
 included in the test will be the new firing
 pins, new hammers, modified antistat-
 ion cut on barrel extensions, and
 revised inserts with conformed
 head tract 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
 first two improvements
 tested and the first two
 to be tested with the
 breakage problem again to see how
 and where it is and to see if 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 mounts, not particular techniques. 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-annealed.

The upper receiver of the m/870 was found to be defective and replaced for the m/1100. The m/1100 was found to be defective and replaced for the m/870.

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~~ ^{CONTROL} ~~BARREL~~ BARREL MOUNTED SCOPE MOUNTS AND ONE RECEIVER MOUNTED SCOPE. EACH PART WAS SHOT A TOTAL OF 10,000 RDS. PLUS ACCURACY.

THE PREVIOUS BOLT HANDLE BREAKAGE PROBLEM APPEARS TO HAVE BEEN SOLVED BY THE USE OF ZYTEL ST-501. THERE WAS SOME WEAR ON ^{THE} FRONT & REAR WORKING EDGES OF THE HANDLE AND ACTUATION (~~REAR & BLANKING RINGS~~) WAS FELT TO BE INCONVENIENT. THESE PROBLEMS WILL BE CORRECTED ON A SUBSEQUENT SET OF PARTS. THE ^{BARREL} ~~SCOPE~~ MOUNTED SCOPE MOUNT EXHIBITED NO MECHANICAL PROBLEMS AND WAS EQUAL TO THE RECEIVER MOUNTED SCOPE IN ACCURACY. POINT OF IMPACT VARIED IN BOTH TYPES OF MOUNTS AS A LARGE NUMBER OF ROUNDS WERE FIRED THROUGH THE GUNS. THIS WAS FOUND TO BE DUE TO THE ~~SCOPE BEING TURNED~~ SCOPE ADJUSTING PERGUIS TURNING WHILE FIRING. REMINGTON'S PROMOTIONAL SCOPES (UNIVERSAL AND TASC) WERE USED FOR THE TEST. FUTURE TESTING WILL INCLUDE SCOPES

from
✓ FONTAINE
~~FOUNTAIN~~ INDUSTRIES, ~~AND~~ TASCOS AND
UNIVERSAL, WITH THE LAST TWO POSSIBLY
ALTERED TO PREVENT ~~AN~~ SCOPE ADJUSTING
SCREW MOVEMENT WHILE FIRING.

R. B. HURLEY

ASEA Manipulator
Barrel Drill Line

- A QUOTE ON POLISHING
EQUIPMENT TO FIT IN
THE VERY LIMITED AREA
AROUND THE MANIPULATOR
IS EXPECTED THIS AUGUST.

A REVIEW OF THE OVERALL LINE
DESIGN IS SCHEDULED FOR SEPT 5-6
IN DETROIT.