

K.W. Loney
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
stripper piston gun system will be
designed and fabricated by 7-7-78.
The new design for the receiver
will be a stronger extractor
spring and a stronger extractor (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 short 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
extractor spring, longer extractor pin,
revolver extractor (7 guns), no later
extractor (5 guns), and 100% confirmed
magazine box location. Also
included in the test will be the new firing
pins, new hammers, modified extraction
cut on barrel extensions, and
new inserts with confirmed
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 100
round field function tests
conducted. One of the most common
to 1000 rounds. The barrel
breakage problem appears to have been
and inserted in the test set.

was some wear on the corners of the handle and activation 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, even within the same gun. 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 portions of the receiver were inspected and required for assembly. The heat treating was satisfactory.

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~~ 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 HANDLES~~) WAS FELT TO BE INCONVENIENT. THESE PROBLEMS WILL BE CORRECTED ON A SUBSEQUENT SET OF PARTS. THE ~~BARREL~~ ^{BARREL} 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 ~~BARREL MOUNT BEING~~ ^{BARREL} SCOPE ADJUSTING PERGUN TURNING WHILE FIRING. REMINGTON'S PROMOTIONAL SCOPES (UNIVERSAL AND TARGO) 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 A 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.