

To: Ken Soucy  
From: Edward Ford  
Subject: March Monthly Report

CADD Software Study:

I spoke with Kevin Hennessey, regional account manager for Autodesk, to arrange the presentation of their M/700 Synthetic Stock benchmark results. Originally, he had planned to present their results during the last week in March. However, due to a reassignment of the application engineer working on the benchmark, the meeting has been postponed until April.

Design/Develop Improved Test Jack:

An accelerometer will be mounted on the M/870 shotgun used during the barrel burst testing (refer to M/870 Barrel Burst Testing) to record accelerations associated with free recoil. These results will be the beginning of a series of test results needed to define recoil in order to establish the design parameters for the new test jack.

M/Seven Stainless Synthetic Stock:

The parts list for the M/Seven Stainless Synthetic is approximately 93% complete. The remaining part numbers are those associated with the new synthetic stock. Ramac numbers and a PI-6 are needed.

The "master" stock was approved by the product team during the March 4, 1993 meeting. Joe Mead delivered the "master" to Three Rivers Tool on Friday March 5, 1993. Joe Mead and I approved the stylus template during a plant visit on March 29, 1993. The aluminum die is on schedule to be completed by May 13, 1993.

A package of marked prints for the recoil pad and reinforcement spacer were sent to Beebe Rubber on March 9, 1993 for quotation of costs involved to manufacture 6000 units in black with a 3.2" hole spacing. David Foss visited Beebe Rubber on March 22, 1993 to discuss the feasibility of our request and the costs associated with altering their dies. The quotation is due the week beginning April 12, 1993.

Model drawing updates are approximately 70% complete with transmittal scheduled for June 14, 1993.

#### M/870 Barrel Burst Testing:

Jim Hennings requested the test lab provide data comparing the recoil associated with the normal firing of a M/870 shotgun and the recoil associated with a barrel burst.

Jim Snedeker and I developed a test which involves suspending the shotgun from the ceiling of the 200 yd. range and remotely firing the trigger. Strobe photography will be used to capture the recoil at distinct time intervals.

A remote firing mechanism was designed to enable the trigger to be fired from outside the range during testing. The firing mechanism consists of a Smyth-Despard air cylinder mounted to a bracket which locates off the trigger plate pin holes. The air cylinder was chosen over a solenoid because of the weight associated with a solenoid coil large enough to fire the trigger.

Craft shop installed the concrete anchors in the 200 yd. range ceiling and built a stand for the 1/2" thick sheet of Lexan used to protect the camera equipment. A 20' shutter air release was purchased to enable remote operation of the camera shutter.

A 4X8 sheet of plywood was covered with black paper and marked with white vertical lines every 6". It will be used as a back drop during the test to provide a visual indication of the difference in recoil between the two cases.

All equipment needed to begin testing has been received except the air cylinder. The cylinder is due to be shipped the week beginning March 29, 1993. Testing is scheduled to begin the first week in April.

#### Peerless Proof Box Upgrades:

Production requested assistance with the design of the Peerless proof box. The current design has no provisions for the ergonomic concerns involving the repetition of opening and closing the proof box doors during each cycle. The proof box doors were redesigned to accommodate air cylinders which will automate the opening and closing of the doors. The cylinders were ordered and received, and the machine shop fabricated the necessary hardware. The air cylinders are currently being assembled to the proof box doors and are scheduled to be tested the first week in April.