

TO: KEN SOUCY

FROM: MICHAEL KEENEY

DATE: 01/20/93

TOPIC: DECEMBER 1992/JANUARY 1993 PROGRESS REPORT

o PROCESS DEVELOPMENT/RESEARCH OF NBAR:

The experimental forging mandrels were received on Jan. 8, one of the three had to be returned due to nonconformance to the print. The alteration is expected to be completed by Jan. 27. The Tool Room has completed the receiver blanks and is currently working on the GFM collet. If the mandrel and collet are completed as scheduled, the initial forging should take place by Feb. 5. Although computer modeling of components has been continuing, the concepts are based on the ability to forge the internal receiver geometry. Once our ability to forge the receiver is confirmed, the project will become more dynamic. Although Process Engineering is aware of the basic design and process intentions, a thorough design and process review will begin.

A trip to Carrier Corp. of Syracuse, to review the performance of a "Nobur" recessing tool, is scheduled for Jan. 27. Nobur has quoted their standard internal recessing tool for the receiver lug facing operation. The tool converts axial translation into radial translation while piloting on the internal diameter, thus reducing cutter deflection and vibration. Carrier Corp. currently utilizes the units in their daily production. If the units perform as expected, orders will be placed for experimental units.

The Tool Room has completed the RECBAR's required to build the Focus Panel guns. John Remington will have completed the first stock by Jan. 22. Marketing has not determined if a second stock will be required. It appears that all Research obligations will be fulfilled for a February Focus Panel.

o M/7400 M.I.M OPERATING HANDLE/BOLT CARRIER ASSEMBLY:

No further testing has been completed due to other Test Lab obligations.

o ECM of CENTERFIRE RIFLING:

No further testing has been completed due to other Test Lab obligations.

o REAR SIGHT SLIDE IMPROVEMENT:

No further testing has been completed due to other Test Lab obligations.

o M/320 BARREL ASSEMBLY POLISHING:

The production fixturing has been ordered, delivery is expected by mid February.

Tom Paatz has been evaluating different polishing as well as jeweling alternatives. To date, the process requires a two step cycle where the first step would remove the black oxide finish and the second would produce the jeweled finish. The cycle time for this process is in excess of 10 minutes per barrel assembly. The majority of the cycle time is a resultant of the jeweling pass, due to the small diameter of the jeweling stick and dwell time required to produce an acceptable pattern. Although we are investigating other polishing/jeweling attachments, it does not appear that a significant cycle time reduction will be feasible.