TO: KEN SOUCY

FROM: MICHAEL KEENEY
DATE: 07/27/92

TOPIC: JULY 1992 PROGRESS REPORT

o PROCESS DEVELOPMENT/RESEARCH OF NBAR:

Ingersoll Gmbh had completed the EDM process evaluation, but due to unacceptable results, requested approval to rerun the evaluation. Although the process was capable of producing the desired geometry, a 45 minute cycle time is not acceptable. Ingersoll believes that by altering the electrodes and process sequencing, the cycle time can be reduced significantly. Although significant time savings may be achieved, I feel the resultant cycle time will also be unacceptable for a production operation. The results of the second evaluation are expected by late August.

Due to the results of the EDM evaluation, the design emphasis has been concentrated around the development of a hammer forging operation to produce the internal receiver geometry. Experimental mandrels are expected to be complete by the end of August.

A test action was delivered to the Test Lab on July 27. The objective of the requested testing is to evaluate the proposed tri-lug locking system. The outer surface of the receiver containing the chamber and locking lugs will be coated with a brittle coating and subjected to the firing of a standard proof load. The brittle coating will provide visual indications of localized strain concentration areas. Following the visual inspection, a high pressure load, approximately 125 ksi, will be fired. The objective of this load will be to establish a reference pressure to be used as a control for further testing. The test is scheduled to be complete by July 31, 1992.