

QUALITY CONTROL BY PRODUCTION
&
REPAIR PERFORMANCE

In preparing for this presentation on quality, one of the first things we tried to do was come up with a definition of quality...so we had a meeting. In the meeting, we discussed quality and then asked each person to write down on a piece of paper, his definition of quality. In reading them we found out that none of the definitions bore any similarity to each other.

Then we went into a Webster's dictionary and found that Webster had the same difficulty with defining quality that we had. He spent one entire column in the dictionary discussing quality but never really defining it. So instead of a definition of quality, we've come up with a statement about quality that we think fits our particular industry.

"A quality product is made to a standard that is accepted by the customer. Since the customer puts a price on quality, the product must be produced at a cost that is competitive." 23

Since 1957 our work force here has tripled, and we are now unquestionably Number 1 in the sporting firearms industry. Somewhere along the line we gained a rapport with the customer. Our task now is to be certain that we do not lose this support by being careful to continue to provide him with a reliable quality product.

The objective of this meeting is to present our Quality Control procedure to you. First of all, an understanding of how the level of quality is established is required, so I'd like to build a quality diagram for you. (Exhibit 1A) Whenever a new product is being considered, usually the Marketing Department or R & D will "start the process rolling" by talking to each other about what the customer wants.

During these discussions, a set of preliminary standards are established for this new product. Among other things, these standards include endurance life, function, finish, styling, and price range. A two-way line of communication has been established between two departments of the company. Once standards have been agreed upon, R & D goes ahead and designs a product that is as close to these standards as possible. After the product is designed, tested and proven to be basically sound, the design is released to Process Engineering. Here again, constant interchange of ideas takes place between two sections of the company, three sections really - P E & C, R & D and Marketing - to come up with whatever compromises that are necessary to get the design in a producible form.

In Process Engineering, engineers devise processes and procedures to insure that the product will exhibit all of the quality characteristics that are inherent in this design. Once this is done, through this interchange of ideas, one of the first obstacles that has to be overcome is the machine study. This is a sample of a machine study. (Exhibit 1B)