

### 3. Analysis of Reliability

Product reliability is one of the best bets for keeping volume of sales up when competition, economic conditions, and prices get rough. Keeping quality up, handling complaints promptly and taking positive action to prevent such complaints in the product all improve reliability which becomes known by the customer, builds believability and confidence in our advertising and even makes the customer willing to pay more than another product. This reliability -- as a property of a product -- is nothing more than the probability that it will do its job under the conditions to be encountered.

An analysis of customer complaints, guns returned to the factory for gratis repairs, is one way of determining this "Property of a Product" because in the majority of cases, the customer is determining that it will or will not "do its job under the conditions to be encountered".

Customer complaints do not give an exact number of customer troubles because not all customers will take the time or bother to return the product for correction but will just be wary of Remington products in the future and these are the most damaging to future sales. Nevertheless a study of what is returned will indicate the areas of greatest need for improvement.

Customer complaints were therefore analyzed on the complete gun line to see if there is an additional correlation between reliability and drop in sales volume on certain guns.

During 1956, approximately \$232,000, and in 1957, \$252,000 was spent on gratis repairs in the customer repair department at Ilion, broken down as shown on Chart #27.

The more complicated autoloading models are the greatest repair cost offenders; i.e., M/740, M/11-43, S-58, M/550 and M/552 in descending order. A gun's relative position in this group may be caused to some degree by cost of repairs (some models cost more than others) and also by the number of guns that are in the field, because Remington will repair, gratis, all current customer complaint guns returned even though produced some years previously, provided the gun upon examination shows no excessive use or having been abused. As a result, the more guns in the customer's hands of a certain model, the greater total of returned guns even though the percentage of defective guns might be the same.

To analyze this problem more correctly repairs were analyzed on the basis of number of guns per model returned as a per cent of the total for 1955, 1956 and 1957, and reason or category of complaint. (See Charts #28, 29 and 30).