

out of the piston. The third gun had the interceptor latch turned end-for-end and located along the top of the magazine tube to eliminate one cut in the receiver. This particular cut results in a thin section on the right side forward of the ejection port. In the view of DED this thin section is involved either directly (by cracking) or indirectly (by stretching or folding) in most cases of receiver cracking, even though the only readily apparent area of cracking may be rearward of the ejection port. The gun containing the revised interceptor latch has been fired 500 rounds of all types of ammunition and appears satisfactory. However, time will not permit the complete evaluation of this idea at this time.

Additional guns like the second one above (square connecting stud between piston sections) will be prepared for design testing and it is expected that four of these guns will be ready before August 1 and six more within two weeks. Should the results of tests with these guns unequivocally support the adequacy of this design, a recommendation for its adoption might be forthcoming by September 1. However, should the results of the test be ambiguous or should they indicate the need for some redesign, this recommendation would, of course, be delayed. 83

Although the design is not entirely established, the Ilion Plant has been working with the information available and it is believed that the introduction of the XS-3 would require an expenditure of approximately \$43,000. On the basis of previous experience at Ilion, it is estimated that field test guns could be assembled approximately three months after approval. The earliest possible date for field test guns would appear to be December 1, 1958. It scarcely seems realistic, therefore, to forecast availability for announcement on January 1, 1959. There is an outside possibility, however, that this could be accomplished; hence the consideration of this course of action will not be discarded at this time.

Research and Development reported that parts are being made in the model shop for the XS-1. It is too early, however, to predict when design of this gun will be ready for release to the Plant. Any information concerning the probability that it will or will not be available for adoption in January, 1960, would have a considerable bearing on the choice of an A Grade gun for 1959. It is improbable, however, that any further information on this point will be available at the time when a decision must be made concerning plans for 1959.