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REMINGTON ARMS COMPANY, INC.

INTER-DEPARTMENTAL CORRESPONDENCE



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S. M. ALVIS

BARREL-RECEIVER TORQUE M/700 - 600

We were requested by the Plant to establish a torque specification for the 700-600 receiver-barrel joint some time ago. After considerable test work, assembling and disassembling with torque measurements, we established a minimum assembly torque of 180 ft. lbs.

One of the things we discovered during this work was that some barrel-receiver combinations could not be tightened completely at torques of 150 ft. lb.. One of the reasons was out-of-round and crooked barrel threads apparently caused by heat treat. A second reason was run out of the barrel shoulder with the threads. This second reason can be assigned originally to crooked barrels since the New Britain machines are not able to compensate completely during the chambering and threading.

It is certain that the assembly machine is not assembling all receiver-barrel combinations so that the shoulders meet. We continue to find assemblies with open shoulder joints and some loose barrels have been reported.

According to the torque formulae available in Kent's and other hand books, the present assembly system, holding the barrel at the muzzle, should not be used much beyond 100 ft. lbs. or barrel failure in torsion will occur.

The obvious conclusion is that the original 180 ft. lbs. torque spec should remain in effect. A change in process is indicated. Holding the barrel at the muzzle is not recommended.

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