

Procedure:

A work up was done to provide data for a graph of powder weight versus chamber pressure. This chart and all calculations are in the appendix. The test guns were "cracked" by cutting a 1.5 inch slot back from the rear of the ejection port and a slot half way through the section in front of the ejection port. Several handloads were made with varying powder weights. Seven standard 870's and four 870 CT's were used for the test. Several rounds of SAAMI standard ammunition was shot through each gun to confirm pressure measurements prior to shooting the handload. All shots were fired using a lanyard and the fore-end was not held back. Chamber pressure was calculated from chamber strain measured with a strain gage on the barrel. 83

Test Results:

All testing showed no difference between a M/870 and a M/870 CT. Case heads failed at 30,000 psi; the receiver begins to wrinkle at 35,000 to 40,000 psi; catastrophic failure occurs at greater than 50,000 psi. 50,000 psi can be induced using 54 grains of 700X powder.

EWY:ws  
Attach.