

Competition Trap

Insert **

Initially Action Bar Assemblies (the same as current 870) were tested in the soft ~~condition~~ and exhibited three modes of failure:

1. Action bar failure
2. Separation of the tube through the threads
3. Failure of the tube at the braze joint.

(Jan thru March 1979)

Test history shows a total of fourteen assemblies tested with failures ranging from 2200 rounds to 20,000 rounds. The average life of these action bar assemblies was 9,000 rounds.

Working with P E & C, heat treatments were developed that resulted in four Assemblies surviving shooting endurance tests for 38,000 rounds, 34,000 rounds and 17,000 rounds before failure. The fourth assembly endured 20,000 cycles ^(including 5000 Express 202's) and did not fail. ~~Two recent assemblies, however, failed at under 2,000 rounds. Our efforts at this time are centered around defining the cause of this extreme variation.~~

~~Control 870s tested with these samples failed at 18,000 and 7,000 rounds (XXX)~~

(XXX-X) P E & C is continuing to refine their heat treatments by carburizing the assemblies to two different levels, heat treating and drawing them to increase impact strength. ^(A) Research is investigating the effect of assembly torque on the initial stress levels to the tube and the addition of an O-ring buffer between the tube and the fore-end.

Schedule at this time shows one version of the heat treatment ~~undergoing~~ ^{to be ready} for test today, the second version to be ready for test ~~on Friday.~~

The O ring buffer is in test now. Preliminary strain measurements shows that the addition of the buffer reduced the impact stress by 40%.