

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 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%.