

New Fire Control - Action Plan

Revised 2/10/09

Revised 2/11/09 - VBN

#	Item or Observation	Further Action(s) Required	Responsible
1	Sear lift measured .005 - .006" in Mayfield on early assemblies via sear lift gage. Another 6-pc sample measured .002 - .006" in E-town via comparator. A third sample built w/ latest versions of safety arm and receiver insert measured .006 - .008". The results are different from the current M770 and historical M710 measurements.	Go through scenarios for possible bad effects of new sear lift. Respond to Mayfield with recommendation. Recommended correcting safety arm to bring sear lift for new assembly in line with current product (.012 to .015"). Brainin was notified 1/9/09; samples produced after tool modifications are due to be shipped 2/18 and 2/25.	Vince N Mayfield
2	Side plate galling was found on (2) early assemblies; the effect was increasingly difficult operation (forces) of the safety arm; a 6-sample test conducted in E-town showed the safety "on" forces increased on 3 of the samples.	Dry cycle the new assembly and measure how safety forces change over time. Done - Safety forces creep up slightly on average but no significant increase. Continue previous safety forces test up to higher cycle count. Done - Safety forces creep up slightly on average but no significant increase Verify inside radius on trigger block. Samples received 1/20 following changes to Parmatech tool (added c-bores and sharpened slot radii). Investigate new material for side plate	Vince N Vince N Mayfield Mayfield
3	The new safety is more difficult to translate in either direction than the current safety. How do the safety on/off forces compare to the current forces? Is the condition likely to be objectionable to the customer?	Measure safety forces on current receiver insert assemblies. Compare to new assembly. Done - Safety forces on current assemblies measure an average of 4.27 lbs. (5 assemblies) Investigate lighter safety detent spring. Two springs were ordered with reduced wire diameter. Safety forces for the .038" wire were in line with the current fire control at 4 to 5 lbs. There was a little play in the safety arm because of a lack of pre-load on the spring in the fire and safe position. In order to correct this I have ordered another spring with an increased OD of .015". To compensate for the larger OD and increased forces I dropped the wire diameter down .001" to .037". Other work: Inspect DAT trigger blocks and production trigger blocks to compare dimensions that could affect safety forces. Done on 1/20. Data is available for review. Hole is in specification. Leaving trigger block alone and reducing safety forces with a new detent spring. Install the X-mark pro safety arm on the production insert assembly and compare forces to new, 770 safety arm. Done on 1/20. Safety forces with X-mark pro arm are on average 1.1 lbs. lighter.	Vince N Vince N Vince N Vince N

		Remeasure safety forces on DAT insert assemblies. DAT safety forces comparable to measurements taken at time of test.	Vince N
4	Method of setting trigger motion on safe (TMOS) is relatively uncertain. Overtravel checked in "fire" is thought to be the result of successful TMOS setting, rather than attempting to set both OT and TMOS. Consider applying a known force against the trigger if the results prove to be operator dependent.	Experiment with fire control adjustment process and develop a process for setting and checking TMOS	Mayfield
5	Identify an alternative coating (color) for the shorter safety pivot pin to avoid mix-up with the 300464 pin (longer by .050").	Select Coating and color. Anderson Precision provided a sample of parts coated with E-nickel. Determine suitability for assembly. Add finish spec to print Waiting for determination of coating by Mayfield	Mayfield Vince N
6	The new assembly requires (3) different adhesives. If possible, reduce the # by at least (1). If the black max cure time is greater than a few minutes, there is a higher likelihood of chipping the <u>slotted</u> screw heads. Care must be exercised when applying Duco to the trigger block screw head to prevent seepage into the trigger block.	Spec out Loctite for trigger block screw Done – Loctite 660 Apply Black Max thread sealer to all other adjustment screws and as tamper evident coating Prepare samples and test	Vince N Mayfield Mayfield
7	Reverse the direction of safety pivot pin installation, if there are no ill effects, to simplify the assembly process. All (3) retaining clips could be installed on the same side at the same time.	Use current samples to compare safety forces with pin inserted from either direction. Done – It is OK to assemble safety pin from the right side and put the clip on the left side	Vince N
8	What is the purpose of the .060" hole on the side plate?	Leave hole for now. Possibly remove it or move it applying black max to threads post setting. Hole moved and another one added for application of black max to the threads after setting. Brainin has completed tool design work and is ready to begin tool modification.	Mayfield
9	Issues with tamper evident material applied to the trigger block screw.	Look at shortening the trigger block screw to recess the head in the trigger block and provide a pocket for black max.	Vince N