Snedeker, Jim

From: Danner, Dale
Sent: Monday, December 11, 2000 11:07 AM
To: Golemboski, Matt R.; Bristol, II Ronald H.; Russo, Al; Keeney, Mike; Diaz, Danny; Franz, Scott; Snedeker, Jim
Subject: Interim M/710 Test Status -- Series C

Everyone,
Results of testing Dec. 10 as follows:

1) Drop testing -- All work is complete except Drop with the scope. Jar and Rotation passed in both configurations (with and without scope).

2) Box Bottoms -- 3 of 10 guns lost their bottoms during the 100 rnd test. Specifically, at round levels 49, 74, and 90. We have another 14 guns to put 100 rnds on so additional info will be available to base a go/nogo decision. (Marketing call)

3) Guns Swapped -- 2 guns were swapped in their boxes -- aka serial numbers on the box did not match the serial number on the gun. From a BATF point of view we have the correct guns based on the serial number list -- they did not however come in the correct box.

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4) Boxes Difficult to Remove -- This continues to be a complaint by the technicians. Personally, I believe it to be a fairly low risk issue. May be related to box bottoms falling off due to increased force required to get the box out of the gun. (Marketing call)

5) Firing Pin Heads Loose - 12 of 30 guns had the firing pin head loose. Locktight issue???

6) Trigger Pull at Minimum - Several of the guns now have trigger pulls below process minimum (slightly). Average pull on 30 guns was 3.99 lbs. in the stock -- 4.17 lbs. out of the stock.

Dale

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From: Danner, Dale
Sent: Thursday, November 30, 2000 10:50 AM
To: Golemboski, Matt R.
Cc: Bristol, II Ronald H.; Russo, Al; Keeney, Mike; Diaz, Danny; Franz, Scott; Snedeker, Jim
Subject: M/710 T&P Status Review - 11/27/00

Matt,
I thought it would be worthwhile to document our discussion/path forward on the various M/710 issues from our meeting on 11/27/00 as follows - please let me know if I've misstated your position:

1) Box Bottom Falling Off - I understand that we have potentially some 8000 box stampings in process of the current design. We will continue to use this level of design until stampings with the extended tab are available. You will alter your process with the current stamping to include pressing the stamping down firmly into the box bottom as the tab is forced forward into the retaining slot. The next test will be conducted with boxes assembled to the new process. Should box bottoms fall off in the next test Etown will report the round level and acceptability will be a Marketing call. Keeney will provide design criteria for the lengthening of the tab.

2) Difference in Engagement Etown vs. Mayfield -- Investigation of this problem has indicated that the issue is measurement error - principally due to the lack of proper fixturing in Etown. You will make no process change to address this issue. Etown will use our measurement means to adjust to process minimum for SAAMI drop testing.

3) Trigger Pull / Return Force -- This issue remains under investigation.

4) Bolt Stop Breakage - Mayfield will build product for the next test employing stops which are non-heat-treated and have the "full radius". Etown understands and agrees that deformation of the stop under normal use is acceptable as long as the deformation does not affect the proper function and removal/retention of the bolt.

5) Bolt Stop Freedom - Etown observed that during the last test several bolt stops became loose during test in that no significant force was required to rotate the stop into the "release" position. This is principally a function of the degree

of interference between the stop and stock. Etown understands that no design or process change will occur prior to the next test. Etown will attempt to better quantify when the loss of interference occurs (aka round count or stock takedown) and report that number. Acceptability will be a Marketing call.

6) Bolt Handle Breakage - Etown understands that Mayfield will build future bolt product to the new braze process and that product onhand will be scrapped/reworked to eliminate assemblies with poor braze. Etown will during the next test include a resumption of the "slam" test but all parties should understand that should bolt handle failure occur during this abusive test it will not be negatively counted against the product. The objective will be to demonstrate elimination of bolt handle failure during normal use.

7) Stock Takedown Screws - Based on an investigation by Mayfield the consensus is that the takedown screws do not rotate/backout but rather the stock itself takes a "set" to reduce screw torque. Mayfield will alter its process to include a "re-torqueing" of the screws just prior to boxing the product. Long term the stock tool should be modified to increase the strength of the stock to compressive load around the screw hole area. Etown will mark the takedown screws prior to the start of the next test to confirm that the screws themselves do NOT rotate during normal use.

8) Diaz Bracket Screw Loose - During the last test the Diaz bracket screw appeared to have loosened. Indications are that the screw may not have been tightened to sufficient torque during assembly. Keeney will provide a torque specification and Mayfield will alter the process to include a removable locktight on this screw.

9) Magazine Follower Binding - Mayfield will rework all existing product to include a modified magazine box follower. The modification will consist of removing material from the side of the existing plastic part. Keeney will provide the amount to be removed. The long term solution will be to modify the tool for the plastic part (weld up to reduce width).

10) Bore Sight - Etown has reported an increase in both average and maximum POI vs POA between T&P test #1 and #2. Mayfield will review the boresight process and verify integrity of the boresight apparatus. Etown does not plan to repeat this test during test #3 - but can if Mayfield/Marketing have value for the information. Please let me know prior to test #3 start.

11) Grip Cap - Mayfield will address the issue of the grip cap falling off by applying an adhesion promoter to the surface prior to the gluing/locktight application. Long term solution will be to return to the original plan of having a grip cap which snaps into place which will entail mold modifications to the stock tool as well as investment in a unique grip cap mold for the M/710.

12) Scopes - Etown has reported two issues around the Bushnell scope product - first, two of the scopes under test have had the reticule rotate during test and second, several of the scopes have a "fuzzy" image which cannot be adjusted out with the focus adjustment. The first issue will definitely result in a customer action. If these scopes were a Remington produced product in a standalone test Marketing should be aware that they would RESOUNDINGLY fail. Having two scopes fail based on a tested quantity of sixty (2 groups of 30 guns each) would not be considered acceptable exit criteria. Etown understands the issues around the product and the customer expectation associated with a low-end scope however we do suggest that Consumer Service have a plan in place handle scope complaints.

13) ISS System Issue - During test #2 Etown found one firearm where the ISS could be unlocked sometimes by using a tool other than the ISS key. This issue is still under investigation and must be understood with appropriate action prior to test #3.

14) Scope Rail Deformation - During test #2 Etown observed deformation of the scope rail greater than what was observed during DAT. On further investigation it was determined that the deformation was caused by a very heavy high-end scope which was mounted on the product to do the accuracy evaluation. No further action is planned.

15) Pillar Bedding on Hang Tag - Mayfield will obtain new tags to correct this claim.

16) Magazine Box Removal - During test #2 Etown continued to observe on some product that the magazine box became more difficult to remove as rounds were put on the product. There is general agreement that this is a result of deformation of the magazine box in excess of 200 rounds. Etown does not consider this a continuing issue and there are no plans to change the design or process. Marketing has the final call on acceptability.

17) Extractor Sticking - During test #2 Etown had one firearm which demonstrated a sticking extractor very early in test (28 rnds). This bolt has been returned to Mayfield for evaluation. Analysis and resultant actions will be required prior to test #3.

18) Safety in Fire State - One firearm received for test #2 had the safety in the fire state out-of-box. Mayfield will review process and inspect as required.

Please let me know of any issues / disagreements / omissions as soon as possible.
Regards,
Dale