From: Perniciaro, Stephen
Sent: Monday, October 13, 2008 11:56 AM
To: Sietsema, Glen D.
Cc: Gross, Joseph; Dwyer, John; Rabbia, James A.; Parkhurst, James L.; Franz, Scott; Ronkainen, Jim; Jiranek, Marlin R.; Becker, Craig; Wright, MaryAnn
Subject: RE: Minutes from X-Mark Pro Adjustable Trigger Meeting

Thanks for the clarification.

Steve

From: Sietsema, Glen D.
Sent: Monday, October 13, 2008 11:46 AM
To: Perniciaro, Stephen
Cc: Gross, Joseph; Dwyer, John; Rabbia, James A.; Parkhurst, James L.; Franz, Scott; Ronkainen, Jim; Jiranek, Marlin R.; Becker, Craig; Wright, MaryAnn
Subject: RE: Minutes from X-Mark Pro Adjustable Trigger Meeting

Steve,
One update;
In item 3 below we tested six triggers per SAAMI (40 lbs in 4 directions). All six passed.

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From: Perniciaro, Stephen
Sent: Monday, October 13, 2008 10:29 AM
To: Franz, Scott; Ronkainen, Jim; Jiranek, Marlin R.; Sietsema, Glen D.; Becker, Craig; Wright, MaryAnn
Cc: Gross, Joseph; Dwyer, John; Rabbia, James A.; Parkhurst, James L.
Subject: Minutes from X-Mark Pro Adjustable Trigger Meeting

These are the notes and action items from the X-Mark Pro Adjustable Trigger Meeting broken trigger meeting, 10-13-08.

I will set up a follow-up meeting Tuesday, 10-21-08 to review the items below and make final recommendations.

1. Craig Becker checked the trigger pull device force in the Ilion proof test fixtures and one measured 75#. The other fixtures were below 30#.

Action – Jim Parkhurst will reduce the air pressure and get the pull force down to about 32# at 40 psi.

2. The Test Lab measured 2 triggers and it takes approximately 60# of force to break the trigger by pulling back on the trigger bow.

Action – Glen Sietsema will have 20 more triggers pulled and record the force necessary to break the trigger.

3. The Test Lab measured **2 6** triggers and they did not break using the SAMMI 40# load applied to the trigger in 4 different directions.

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4. The Test Lab measured 2 triggers and even 100# did not break the triggers when pushed from the sides and the back..

5. These new triggers are heat treated and plated using the same processes and the existing XMP trigger.

6. Glen verified that the broken triggers were done by two different platers and each plater indicated that the triggers had gone through a 24 hour bake cycle to eliminate any hydrogen embrittlement.

7. A material change to 17-4 MIM material was discussed as a stronger alternative but it was agreed that the 17-4 would not get hard enough for the trigger sear surface interface.

8. The present MIM tool is a 4 cavity tool.

9. MaryAnn Wright has completed a density check of the existing triggers. Her email response is attached.

10. Can the density of the part be increased to increase its strength?

Action – MaryAnn will provide a timeline on when higher density parts can be made.

11. Increasing the cross sectional area of the trigger around the adjusting screw hole would strengthen the part. This change would require a rebalancing of the trigger and subsequent SAAMI and other testing.

Action – Jim Ronkainen will have E-Town do a FEA analysis to see what geometry changes would be required to increase the breaking force.

Steve

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