
From: Norton, Vince
Sent: Thursday, November 29, 2007 4:10 PM
To: Williams, Gary; Tipton, Don; Boyles, Derek; Vicars, Gerald
Cc: Lance, Kevin D.; James, Will
Subject: MODEL 770 TRIGGER
Attachments: 301756 Trigger.PDF; 301757 Trigger Blank.PDF

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I have looked at the issues discussed yesterday surrounding the new trigger and have made the following changes:

1. Moved datum target C closer to the engagement surface on the trigger blank and finished trigger print (from .313" to .800").
2. Removed the angularity refinement from the back profile tolerance on the engagement surface. Angularity within the profile tolerance should still ensure a clean break and ample separation between the sear and the trigger.
3. Removed the angularity refinement from the top profile tolerance on the engagement surface. If the angularity is held within the existing profile tolerance then the angularity at just the working area (.025 to .030") from the back edge of the trigger should be held to .0006" by default. This translates into a tolerance on the angle of +/-1.1 degree.

I looked at the connector print and the way it is dimensioned. It is dimensioned differently than the way the new trigger print is however it looks like the angular tolerance of +/-0.5 degrees and the linear tolerance of .075 +/- .025 translates into a profile tolerance of around .0035" over the engagement surface.

I did talk with Ronkainen about the specification on the X-mark pro trigger. They are holding a profile tolerance of .002 and the angularity refinement of .0005 on the X-mark pro trigger just fine in Ilion. However, they did have to invest a significant amount of money into machinery to get the tight tolerances. Tight tolerancing on the X-mark pro was necessitated by the position of the force vector from the sear contact near the trigger pivot and also to keep a neutral sear position during firing. In reviewing the 770 fire control and these two requirements I think that the design can withstand variations in the angle within the existing profile tolerance of .004".

I have revised the prints per the information above.

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