

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
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2		Engineer:	Ronkainen			Project #:	241285		TLW #:	2358							
3																	
4		Date Submitted:	8/29/2007				Requested Completion Date:	9/14/2007									
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7		Test Description:	Audit XMP (X-Mark Pro) trigger pull forces for marketing on approximately 50														
8			production firearms from OHL utilizing two different methods: (1) using a														
9			production spring scale and (2) the Dvorak TriggerScan unit.														
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11		Test Procedure:	Trigger Pull Audit Plan														
12			<ul style="list-style-type: none"> Verify calibration of the Dvorak TriggerScan per the User Manual's procedure. (<i>DONE</i>) 														
13			<ul style="list-style-type: none"> Verify calibration of the production spring scale prior to starting the audit and as needed during the course of the audit. 														
14																	
15			<u>Trigger Pull Measurement Process</u>														
16			1. Unpack guns from multi-packs one gun at a time.														
17			2. Have no more than two guns unpacked at any one time to minimize the possibility of parts getting lost or mixed up.														
18			3. <i>Handle the guns with extreme care as they are salable product and will be returned to the warehouse after completion of the trigger pull force audit.</i>														
19			4. Assemble the gun's bolt to the action. After verifying the action is clear of ammunition, manually verify trigger function by dry firing the rifle several times in a safe direction.														
20			5. Record the appropriate information for the gun on the datasheet (SKU, S/N, etc.) prior to conducting any testing.														
21			6. Mount the gun securely in a non-marring gun vise or cradle.														
22			7. Measure and record trigger pull of the gun with the spring scale per the current production process indicated in the process records. <i>This measurement will be made by someone from Ilion using a production spring scale from Ilion.</i>														
23			8. Carefully remove the gun from the gun vise or cradle.														
24			9. Carefully disassemble the action from the stock setting aside the stock and trigger guard components so that they will not be damaged.														
25			10. Mount the action in the Dvorak TriggerScan fixture with the barrel bracket tight against the front surface of the V-block and with the top clamp's hold down screw tip approximately aligned with the rearmost scope plug screw on the front receiver bridge. Ensure the trigger's shoe is centered on the V-roller on the TriggerScan arm so that both sides of the roller's V contact the trigger and then tighten the clamping screw.														
26			<i>Make sure the clamp's screw does not contact the top of the receiver or it may mar it.</i> When properly secured in the TriggerScan fixture, the action cannot move with respect to the fixture.														
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audit.

4. Assemble the gun's bolt to the action. After verifying the action is clear of ammunition, manually verify trigger function by dry firing the rifle several times in a safe direction.
5. Record the appropriate information for the gun on the datasheet (SKU, S/N, etc.) prior to conducting any testing.
6. Mount the gun securely in a non-marring gun vise or cradle.
7. Measure and record trigger pull of the gun with the spring scale per the current production process indicated in the process records. *This measurement will be made by someone from Ilion using a production spring scale from Ilion.*
8. Carefully remove the gun from the gun vise or cradle.
9. Carefully disassemble the action from the stock setting aside the stock and trigger guard components so that they will not be damaged.
10. Mount the action in the Dvorak TriggerScan fixture with the barrel bracket tight against the front surface of the V-block and with the top clamp's hold down screw tip approximately aligned with the rearmost scope plug screw on the front receiver bridge. Ensure the trigger's shoe is centered on the V-roller on the TriggerScan arm so that both sides of the roller's V contact the trigger and then tighten the clamping screw. ***Make sure the clamp's screw does not contact the top of the receiver or it may mar it.*** When properly secured in the TriggerScan fixture, the action cannot move with respect to the fixture.

	A	B	C	L	M	N	O	P	Q
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q							
36																								
37	Special Requirements:			Handle the guns with extreme care as they are salable product and will be returned to the warehouse after completion of the trigger pull force audit.																				
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41																								
42	Supplies Availability:			Guns for this test will be ordered by marketing from OHL for delivery to E'town. I will provide the exact delivery date(s) as soon as they are available.																				
43																								
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47	Results Required:			Data Only																				
48																								
49	*****This section to be completed by Test Lab Manager*****																							
50																								
51	Assigned To:			Wade, Steve			Start Date:																	
52																								
53	Assigned Date:			8/30/2007			Completion Date:																	
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55	Comments:																							
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	A	B	C	D	E	F	G	H
1	Trigger Pull Audit Procedure (cont'd).							
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4	11. Enter the appropriate firearm information for the rifle into TriggerScan							
5	program (fill in <u>all</u> fields on the computer screen).							
6	12. With the safety in the ON or SAFE position, close the bolt and gently							
7	move the safety to the OFF or FIRE position. Make 5 trigger pull							
8	measurements cycling the safety between each pull. Take care to lower							
9	the safety in the same manner each time to maintain uniform							
10	measurements.							
11	13. Save the TriggerScan results for each gun as a separate *.trg file using the							
12	gun's S/N as the unique file identifier. Save the file in the directory							
13	associated with this TLW on the server.							
14	14. Also save the TriggerScan results for each gun as a separate *.csv file							
15	using the gun's S/N as the unique file identifier. Save the file in the							
16	directory associated with this TLW on the server (same directory as							
17	previous step).							
18	15. Trigger pull force data should be copied and pasted from the *.csv file							
19	directly into the data form supplied with this TLW. Do not transcribe and							
20	enter the measurement data into the datasheet manually.							
21	16. Carefully remove the action from the TriggerScan fixture and visually							
22	verify that no damage was done to the action. If the scope plug screw is							
23	visibly damaged, replace it.							
24	17. Reassemble the action to the stock. Verify that the magazine and trigger							
25	guard are properly seated. Cycle the action to verify it functions							
26	properly.							
27	18. Have two qualified gun handlers verify the gun is unloaded before							
28	repacking the rifle in its shipping box.							
29	19. Remove the bolt from the action and place it in the appropriate location							
30	inside the packing box.							
31	20. Repack the gun in its original packing box. Verify the firearm's serial							
32	number is the same as that shown on the box end label before sealing the							
33	box with fiberglass reinforced packing tape. Place a sticker on the box							
34	end label to identify the firearm as having had its trigger pull force							
35	checked.							
36	21. Repack and rescal the multi-pack of guns after all guns from the pack							
37	have been measured.							
38	22. After all of the guns in a multi-pack have been measured, get another							
39	multi-pack of guns and continue the test.							
40	23. Repeat this procedure from step 1 again until all firearms have been							
41	measured.							
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17. Reassemble the action to the stock. Verify that the magazine and trigger guard are properly seated. Cycle the action to verify it functions properly.
18. Have two qualified gun handlers verify the gun is unloaded before repacking the rifle in its shipping box.
19. Remove the bolt from the action and place it in the appropriate location inside the packing box.
20. Repack the gun in its original packing box. Verify the firearm's serial number is the same as that shown on the box end label before sealing the box with fiberglass reinforced packing tape. Place a sticker on the box end label to identify the firearm as having had its trigger pull force checked.
21. Repack and reseal the multi-pack of guns after all guns from the pack have been measured.
22. After all of the guns in a multi-pack have been measured, get another multi-pack of guns and continue the test.
23. Repeat this procedure from step 1 again until all firearms have been measured.

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2	Gun #	1	2	3	4	5	6	7	8	9	10	11	12	13
3	SKU													
4	Description													
5	S/N													
6														
7	Tester													
8	TP1													
9	TP2													
10	TP3													
11	Avg	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
12	SD	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
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14	Tester													
15	TP1													
16	TP2													
17	TP3													
18	TP4													
19	TP5													
20	Avg	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
21	SD	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
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2	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
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	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
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