

NIJ BA CTP Compliance Test Report



Report Identification Number: OBL_SLD_MC02954

Issue/Revision Number: Initial Issue

Report Date: 8/21/2019

200826-0

NVLAP Lab Code

Test Laboratory Name: Oregon Ballistic Laboratories

Address: 2873 22nd Street SE

Salem, OR 97302

Customer: Safe Life Defense

Address: 5725 S Valley View Drive Unit #4

Las Vegas, NV 89118

Conditioning Laboratory Name: Oregon Ballistic Laboratories

Address: 2873 22nd Street SE

Salem, OR 97302

Prospective Model Designation: SLD-PLUS

This test report and the results herein are to be used solely for the purpose of determining compliance to the NIJ 0101.06 Body Armor Standard. The test data should not be used to compare the relative performance characteristics between different models of body armor.

Reproduction of this test report is prohibited except in full.

This test report may not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the Federal Government.

Test results relate only to the items tested.

Authorized Signatory: Brandon Bertsch

Function/Position: Ballistic Test Director

Signature:

Date:

8/21/19

NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

NVLAP Lab Code: 200826-0

Test Laboratory Name: Oregon Ballistic Laboratories
Report Identification Number: OBL_SLD_MC02954
Issue / Revision Number: Initial Issue

COMPLIANCE TESTING INFORMATION

Test Start Date: 07/12/19 Report Date: 08/21/19 Observers: _____
End Date: 08/16/19

RANGE INFORMATION:

Range Length: 15 ft. Velocity 1: 5 ft. 1.524 m Velocity Measurement Units: time
Velocity 2: 5 ft. 1.524 m Chronographs will report the time of flight.

ARMOR DESCRIPTION:

Manufacturer: Safe Life Defense

Data should be entered in μs (10^{-6} s).

Date Rec'd: 06/24/19

Test ID: MC02954
Style: Side Opening

NIJ Armor Type: 3A

SHOT-TO-EDGE REQUIREMENTS:

Threat 1: 2 Inches
Threat 2: 3 Inches

Labels legible and adhered after wear tests? Yes (Yes/No)

Labels legible and adhered after conditioning protocol: Yes (Yes/No)

Labels meet the requirements of 4.1.5.3

ARMOR CONSTRUCTION:

Panel A Information shall represent the front panel in two-panels designs, and all panels in single-panel designs.

Panel B Information shall represent the back panel in two-panels designs. Completion not necessary for single-panel designs.

Front Closure (Y/N): No

Single Panel Design (Y/N): Yes

Armor Test Configuration: Planar

Armor Test Configuration: _____

Number of Layers: 37

Number of Layers: _____

Individual Layer Description: Layer 1-36: Aramid Film
Layer 37: Approx. 4.25mm Foam

Description of Stitching: Layer 1-36: Held together with 2 horizontal and 1 vertical wrap of tape

Remarks and Revision History:

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COMPLIANCE TEST REPORT**

Use this space to enter any necessary supplemental information

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COMPLIANCE TEST REPORT

NVLAP Lab Code: 200826-0																	Test Laboratory Name: Oregon Ballistic Laboratories																			
																	Report Identification Number: OBL_SLD_MC02954																			
																	Issue / Revision Number: Initial Issue																			
Sample Information and Description																																				
Armors in "As-New" Condition																																				
Manufacturer: Safe Life Defense																	Test ID: MC02954										NIJ Type: 3A									
Penetration-Backface Signature (P-BFS) Test Samples																																				
Spare Samples																																				
SAMPLE DESCRIPTION																																				
Size:	Sample 1		Sample 2		Sample 3		Sample 4		Sample 5		Sample 6		Sample 7		Sample 8		Sample 9		Sample 10		Sample 10		Sample 10		Sample 10		Sample 10									
Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B							
Panel Serial Number:	C-1	C-1	C-1	C-1	C-5	C-5	C-5	C-5	C-5	C-1	C-1	C-1	C-1	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5							
Plate Serial Number:	PLUS-06	PLUS-05	PLUS-29	PLUS-34	PLUS-35	PLUS-39	PLUS-56	PLUS-43	PLUS-33	PLUS-31	PLUS-30	PLUS-32	PLUS-45	PLUS-46	PLUS-51	PLUS-50	PLUS-38	PLUS-37	PLUS-40	PLUS-36																
Lot Number:	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01							
Gross Weight (lb.):	1.74	1.76	1.81	1.76	5.99	6	6.01	6.06	1.79	1.81	1.81	1.82	6.02	5.91	5.92	5.99	5.99	6.07	5.96	5.9																
TEST DESCRIPTION																																				
Test Condition:	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet							
Threat Ammunition:	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag							
Bullet (grain/type):	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP							
Test Velocity (ft/s):	1470	1470	1470	1470	1470	1470	1470	1470	1470	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430							
Angle at Location #4:	30	45	45	30	30	45	45	30	45	30	45	45	30	30	45	45	30																			
THREAT DESCRIPTION																																				
Bullet Manufacturer:	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer							
Bullet Lot/Product Number:	4362	4362	4362	4362	4362	4362	4362	4362	4362	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453							
Test Barrel Manufacturer:	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman							
Test Barrel Length (in):	10"	10"	10"	10"	10"	10"	10"	10"	10"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"							
Manufacturer: Safe Life Defense																	Test ID: MC02954										NIJ Type: 3A									
Baseline Ballistic Limit - Threat 1																																				
Baseline Ballistic Limit - Threat 2																																				
SAMPLE DESCRIPTION																																				
Size:	Sample 11		Sample 12		Sample 13		Sample 14		Sample 15		Sample 16		Sample 17		Sample 18		Sample 19		Sample 20		Sample 20		Sample 20		Sample 20		Sample 20									
Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B							
Panel Serial Number:	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5							
Plate Serial Number:	PLUS-48	PLUS-44	PLUS-52	PLUS-47	PLUS-41	PLUS-54	PLUS-42	PLUS-49	PLUS-55	PLUS-53	PLUS-16	PLUS-11	PLUS-10	PLUS-14	PLUS-18	PLUS-20	PLUS-19	PLUS-25	PLUS-24	PLUS-27																
Lot Number:	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01								
Gross Weight (lb.):	5.94	6	5.97	5.99	5.9	5.97	5.99	5.95	5.91	5.97	5.86	5.89	5.9	5.82	5.84	5.87	5.86	5.86	6.04	5.85																
TEST DESCRIPTION																																				
Test Condition:	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry								
Threat Ammunition:	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag								
Bullet (grain/type):	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	125/FMJ	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP								
Test Velocity (ft/s):	1470	1470	1470	1470	1470	1470	1470	1470	1470	1470	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430								
Shots on Panel:	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12								
THREAT DESCRIPTION																																				
Bullet Manufacturer:	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer								
Bullet Lot/Product Number:	4362	4362	4362	4362	4362	4362	4362	4362	4362	4362	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453								
Test Barrel Manufacturer:	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman								
Test Barrel Length (in):	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"	15"								
Manufacturer: Safe Life Defense																	Test ID: MC02954										NIJ Type: 3A									
Penetration-Backface Signature (P-BFS) Test Samples																																				
Ballistic Limit																																				
Spare Samples																																				
SAMPLE DESCRIPTION																																				
Size:	Sample 21		Sample 22		Sample 23		Sample 24		Sample 25		Sample 26		Sample 27		Sample 28		Sample 28		Sample 28		Sample 28		Sample 28		Sample 28		Sample 28									
Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B	Panel A	Panel B							
Panel Serial Number:	C-1	C-1	C-5	C-5	C-1	C-1	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5	C-5								
Plate Serial Number:	PLUS-04	PLUS-01	PLUS-15	PLUS-26	PLUS-02	PLUS-03	PLUS-09	PLUS-22	PLUS-13	PLUS-08	PLUS-21	PLUS-07	PLUS-23	PLUS-12	PLUS-28	PLUS-11																				
Lot Number:	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01	SLD-01								
Gross Weight (lb.):	1.79	1.78	5.99	5.94	1.77	1.82	5.96	5.99	5.96	6.00	6.04	5.88	5.86	5.91	5.72	5.9																				
TEST DESCRIPTION																																				
Test Condition:	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry								
Threat Ammunition:	.357 SIG	.357 SIG	.357 SIG	.357 SIG	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.357 SIG	.357 SIG	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag	.44 Mag									
Bullet (grain/type):	125/FMJ	125/FMJ	125/FMJ	125/FMJ	240/SJHP	240/SJHP	240/SJHP	240/SJHP	125/FMJ	125/FMJ	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP	240/SJHP									
Test Velocity (ft/s):	1410	1410	1410	1410	1340	1340	1340	1340	1410	1410	1340	1340	1410	1410	1340	1340	1410	1410	1410	1410	1410	1410	1410	1410	1410	1410	1410									
Angle at Loc #4/Shot on Panel:	30	45	45	30	30	45	45	30	12	12	12	12																								
THREAT DESCRIPTION																																				
Bullet Manufacturer:	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer	Speer									
Bullet Lot/Product Number:	4362	4362	4362	4362	4453	4453	4453	4453	4362	4362	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453	4453									
Test Barrel Manufacturer:	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman	Wiseman									
Test Barrel Length (in):	10"	10"	10"	10"	15"																															

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COMPLIANCE TEST REPORT

NVLAP Lab Code: 200826-0

Test Laboratory Name: Oregon Ballistic Laboratories
Report Identification Number: OBL_SLD_MC02954
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: MC02954
Manufacturer: Safe Life Defense

Report Date: 08/21/19
NIJ Armor Type: 3A

Ammunition: .357 SIG 125/FMJ Threat 1 - New Armor Test Velocity: 1470 ± 30 ft/s Conditioning: New

Shot Number	Sample 1 Size: C-1				Sample 2 Size: C-1				
	Panel A		Panel B		Panel A		Panel B		
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	
1	1477	0	23.8		1463	0	23.7		
2	1475	0	21.7		1479	0	23.3		
3	1468	0	22.7		1477	0	21.3		
4	1469	0			1467	0			
5	1465	0			1459	0			
6	1467	0			1472	0			
7									
8									
Summary:				Perforations: 0 (Pass)	BFS Statistics: Count: 12				Average: 22.21 mm
				Maximum BFS: 23.8 mm					St. Dev: 1.3425 mm
				Pass - No BFS greater than 44 mm					

Shot Number	Sample 3 Size: C-5				Sample 4 Size: C-5				
	Panel A		Panel B		Panel A		Panel B		
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	
1	1446	0	22.3		1442	0	20.5		
2	1448	0	21.1		1490	0	21.7		
3	1470	0	21		1486	0	22.4		
4	1467	0			1488	0			
5	1473	0			1499	0			
6	1497	0			1486	0			
7									
8									
Summary:				Perforations: 0 (Pass)	BFS Statistics: Count: 12				Average: 21.2 mm
				Maximum BFS: 22.4 mm					St. Dev: 1.3026 mm
				Pass - No BFS greater than 44 mm					

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Ammunition: .44 Mag 240/SJHP Threat 2 - New Armor Test Velocity: 1430 ± 30 ft/s Conditioning: New

Shot Number	Sample 5 Size: C-1				Sample 6 Size: C-1				Sample 6 Size: C-1			
	Panel A		Panel B		Panel A		Panel B		Panel A		Panel B	
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1445	0	34.7		1440	0	35.4		1442	0	33.3	
2	1455	0	33.3		1447	0	32.7		1424	0	34.5	
3	1421	0	31.8		1442	0	39		1437	0	28.7	
4	1453	0			1444	0			1448	0		
5	1435	0			1444	0			1452	0		
6	1444	0			1445	0			1430	0		
7												
8												
Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 34.55 mm Maximum BFS: 43.1 mm St. Dev: 3.6962 mm Pass - No BFS greater than 44 mm												

Shot Number	Sample 7 Size: C-5				Sample 8 Size: C-5				Sample 8 Size: C-5			
	Panel A		Panel B		Panel A		Panel B		Panel A		Panel B	
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1460	0	34.9		1444	0	37		1447	0	34.1	
2	1438	0	39.5		1450	0	32.3		1453	0	34.5	
3	1450	0	32.8		1438	0	32		1460	0	38.1	
4	1438	0			1449	0			1447	0		
5	1426	0			1450	0			1439	0		
6	1428	0			1445	0			1435	0		
7												
8												
Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 34.43 mm Maximum BFS: 39.5 mm St. Dev: 2.5226 mm (Pass - No BFS greater than 44 mm)												

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COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor
 Ammunition: .357 SIG 125/FMJ Test Velocity: 1410 ± 30 ft/s Conditioning: Conditioned

Shot Number	Sample 21 Size: C-1				Sample 22 Size: C-5											
	Panel A		Panel B		Panel A		Panel B									
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1412	0	21.5		1397	0	20.6		1431	0	21.6		1391	0	19.7	
2	1443	0	22.1		1427	0	23.3		1436	0	21.9		1427	0	22	
3	1413	0	20.7		1407	0	21.2		1421	0	22		1412	0	20	
4	1406	0			1397	0			1434	0			1437	0		
5	1407	0			1414	0			1406	0			1432	0		
6	1428	0			1411	0			1416	0			1423	0		
7																
8																
Summary:		Perforations: 0 (Pass) Maximum BFS: 23.32 mm (no requirement)				Perforations: 0 (Pass) Maximum BFS: 22 mm (no requirement)										

Threat 2 - Conditioned Armor
 Ammunition: .44 Mag 240/SJHP Test Velocity: 1340 ± 30 ft/s Conditioning: Conditioned

Shot Number	Sample 23 Size: C-1				Sample 24 Size: C-5											
	Panel A		Panel B		Panel A		Panel B									
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1346	0	36.8		1345	0	36.3		1314	0	30.4		1357	0	30.3	
2	1339	0	32.9		1360	0	32.6		1314	0	31		1362	0	29.6	
3	1370	0	33.3		1382	0	30.8	a	1368	0	32.9					
4	1349	0			1353	0			1340	0			1349	0		
5	1345	0			1341	0			1358	0			1363	0		
6	1331	0			1374	0		a	1350	0			1353	0		
7																
8																
Summary:		Perforations: 0 (Pass) Maximum BFS: 36.84 mm (no requirement)				Perforations: 0 (Pass) Maximum BFS: 32.91 mm (no requirement)										

Overall P-BFS Summary																
Perforations: <u>This requirement is for all P-BFS tested samples - New and Conditioned</u>																
0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.																
Backface Signature: <u>This requirement is for New armors only</u>																
Maximum BFS: <u>43.1 mm</u>																
This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.																

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Ammunition: .357 SIG 125/FMJ Threat 1 - New Armor Test Velocity: 1470 ± 30 ft/s Conditioning: New

Shot Number	Sample 11			Sample 11			Sample 12			Sample 12			Sample 13		
	Panel A			Panel B			Panel A			Panel B			Panel A		
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1469	0		1480	0		1439	0	V out of Range	1430	0	V out of Range			
2	1566	0		1596	0		1565	0		1588	0				
3	1634	0		1678	0		1647	0		1681	0		1462	0	
4	1721	0		1796	0		1635	0		1759	0		1538	0	
5	1788	0		1830	0		1740	0		1852	0		1655	0	
6	1929	0		1893	1		1814	0		1927	1		1769	0	
7	1988	1		1848	0		1879	0		1881	1		1858	0	
8	1945	1		1900	1		1939	0		1816	0		1936	0	
9	1909	0		1845	0		1998	1		1831	0		2006	0	
10	1934	0		1913	0		1916	1		1900	0		2012	1	
11	1961	0		1947	0		1911	1		1958	1		1935	0	
12	2054	1		1983	1		1873	0		1931	1		1972	1	
13													1911	1	
14													1874	1	
15															

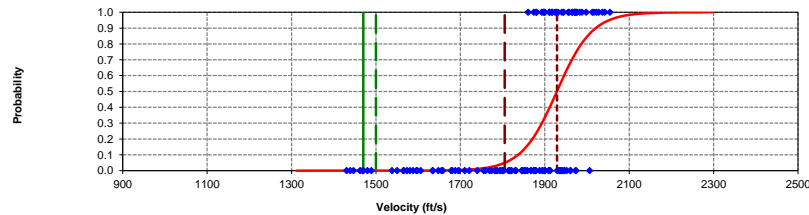
Shot Number	Sample 13			Sample 14			Sample 14			Sample 15			Sample 15		
	Panel B			Panel A			Panel B			Panel A			Panel B		
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1469	0		1447	0		1470	0		1489	0		1469	0	
2	1606	0		1598	0		1573	0		1580	0		1550	0	
3	1658	0		1710	0		1696	0		1696	0		1688	0	
4	1755	0		1781	0		1784	0		1773	0		1821	0	
5	1878	0		1879	1		1867	0		1875	0		1897	1	
6	1960	0		1794	0		1943	0		1971	1		1803	0	
7	2042	1		1861	1		2022	1		1900	0		1899	1	
8	1974	1		1800	0		1841	1		1951	0		1821	0	
9	1894	0		1855	0		1878	0		2028	1		1899	0	
10	1973	0		1895	0		1924	1		1973	0		1977	1	
11	2016	1		1966	1		1867	0		2036	1		1888	0	
12	1971	1		1910	0		1918	1		1984	1		1955	1	
13															
14															
15															

Summary: Total Usable Shots: 120 Acceptable
 Perforations (Complete Penetrations): 36 Acceptable
 Stops (Partial Penetrations): 84 Acceptable
 Perforations below 1500 ft/s: 0 Acceptable

Test Data and Regression Model

Regression Analysis
 Regression Model: **Logistic**

Estimated V50: 1929 ft/s
 Estimated V05: 550.3 m/s (1805) ft/s
 Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.00%** Acceptable



Legend:
 ♦ Test Data
 — V Ref.
 - - - V Test +30
 - - - Est. V50
 — Est. Response
 - - - Est. V05

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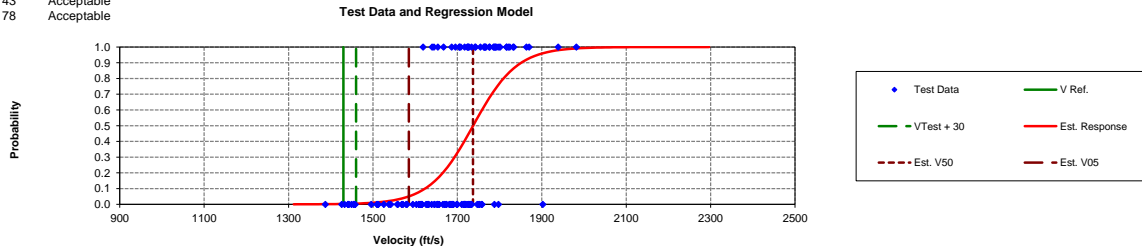
Ammunition: .44 Mag 240/SJHP Threat 2 - New Armor Test Velocity: 1430 ± 30 ft/s Conditioning: New

Shot Number	Sample 16 Panel A			Sample 16 Panel B			Sample 17 Panel A			Sample 17 Panel B			Sample 18 Panel A			Sample 18 Panel B		
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1433	0		1454	0		1458	0		1449	0		1441	0				
2	1559	0		1578	0		1581	0		1538	0		1542	0				
3	1614	0		1654	1		1632	0		1640	1		1609	0				
4	1790	1		1594	0				No Velocity Reading	1568	0		1734	0				
5	1673	0		1639	0		1776	1		1619	1		1790	1				
6	1743	1		1719	0		1657	0		1571	0		1801	1				
7	1723	1		1768	1		1727	1		1614	0		1691	0				
8	1652	0		1728	0		1674	0		1645	0		1765	1				
9	1705	1		1785	1		1695	1		1689	0		1700	0				
10	1629	0		1726	1		1654	0		1747	0		1759	0				
11	1710	0		1666	0		1733	1		1821	1		1798	1				
12	1704	1		1725	0		1667	1		1717	0		1757	0				
13							1726	0										
14																		
15																		

Shot Number	Sample 18 Panel B			Sample 19 Panel A			Sample 19 Panel B			Sample 20 Panel A			Sample 20 Panel B					
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks			
1	1455	0		1441	0		1443	0		1426	0		1387	0	Insufficient Velocity V out of Range			
2	1496	0		1526	0		1511	0		1509	0		1512	0				
3	1616	0		1644	1		1626	0		1603	0		1609	0				
4	1717	1		1558	0		1716	0		1708	1		1686	1				
5	1631	0		1616	0		1788	0		1670	0		1646	0				
6	1681	0		1652	0		1902	0		1730	0		1741	1				
7	1751	0		1725	1		1982	0		1688	0		1685	0				
8	1793	1		1717	0		1939	1		1698	0		1714	0				
9	1730	0		1787	1		1864	1		1870	1		1754	1				
10	1777	1		1684	0		1832	1		1834	1		1720	0				
11	1733	0		1765	1		1763	1		1816	1		1752	0				
12			No Velocity Reading	1683	0		1763	1		1824	1		1817	1				
13	1797	0											1735	0				
14																		
15																		

Summary: Total Usable Shots: 121 Acceptable
 Perforations (Complete Penetrations): 43 Acceptable
 Stops (Partial Penetrations): 78 Acceptable
 Perforations below 1460 ft/s: 0 Acceptable

Regression Analysis
 Regression Model: **Logistic**
 Estimated V50: 1737 ft/s
 Estimated V05: 483 m/s (1585) ft/s
 Probability of perforation at NIJ reference velocity (1430 ft/sec): **0.27% Acceptable**



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Threat 1 - Conditioned Armor

Ammunition: 357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 25			Sample 25		
	Panel A Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Panel B Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1445	0	V out of Range	1406	0	
2	1567	0		1499	0	
3	1675	0		1626	0	
4	1719	0		1722	0	
5	1834	1		1812	0	
6	1766	0		1902	0	
7	1827	1		2009	1	
8	1788	1		1948	1	
9	1741	0		1851	1	
10	1773	0		1768	1	
11	1746	1		1680	0	
12	1696	1		1726	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	9	
Stops (PP):	15	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1794 ft/s

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 26			Sample 26		
	Panel A Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Panel B Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1378	0	V out of Range	1378	0	V out of Range
2	1459	0		1454	0	
3	1545	0		1563	1	
4	1656	0		1509	0	
5	1740	1		1543	0	
6	1667	1		1596	0	
7	1616	0		1644	0	
8	1681	1		1686	1	
9	1580	1		1639	0	
10	1534	0		1683	0	
11	1602	0		1715	1	
12	1644	1		1664	1	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	9	
Stops (PP):	15	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1640 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: **0** This requirement is for all Ballistic Limit tested samples - New and Conditioned
This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only
Threat 1: 0.00%
Threat 2: 0.27%
This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.