

21 December 2017

JTIC
700 N. Frederick Ave
Bldg. 181 Rm 1L30
Gaithersburg, MD 20879

Attention: Mr. Tate Groghan, Equipment Testing Technician

Subject:

Model VGNIJ3A-2, Test ID MC02911, tested in accordance with *Ballistic Resistance of Body Armor, NIJ Standard-0101.06* by NTS – Chesapeake Testing on 27 November through 15 December 2017

Dear Mr. Groghan:

On 27 November through 15 December 2017, NTS – Chesapeake Testing tested Great Int Trade Co., Ltd Body Armor, Model VGNIJ3A-2. The tests were conducted in accordance with the requirements outlined in the *Ballistic Resistance of Body Armor, NIJ Standard-0101.06*, dated July 2008. The Compliance Test Report (CTR) No. 3604-023 and appropriate photographs to support the conclusions of the test are enclosed.

NTS – Chesapeake Testing is not empowered to issue or deny the compliance status of Body Armor Model VGNIJ3A-2; however, the attached CTR No. 3604-023 indicates that the threat level IIIA requirements of the referenced NIJ standard were satisfied.

If you have any questions related to this testing, please call Mr. Craig Thomas at (410) 297-8154 or contact him via e-mail at craig.thomas@nts.com.

Sincerely,



Craig Thomas
Range Operations Manager, NTS – Chesapeake Testing
Enc. a/s

NIJ BA CTP Compliance Test Report



Report Identification Number: 3604-023
Issue/Revision Number:
Report Date: 12/19/2017

200820-0
NVLAP Lab Code

Test Laboratory Name: NTS-Chesapeake Testing
Address: 4603B Compass Point Rd
Belcamp MD, 21017

Address: Rm1005 Nailun Building
Liuliqiao West, Fengtai District,

Conditioning Laboratory Name: NTS-Chesapeake Testing
Address: 4603B Compass Point Rd
Belcamp MD, 21017

Prospective Model Designation: VGNIJ3A-2

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: Craig Thomas
Function/Position: Range Operations Manager

Signature: *C Thomas*
Date: 12/21/2017

NVLAP Lab Code: 200820-0

Test Laboratory Name: NTS-Chesapeake Testing
Report Identification Number: 3604-023
Issue / Revision Number:

COMPLIANCE TESTING INFORMATION

Test Start Date: 11/27/17 Report Date: 12/19/17 Observers:

RANGE INFORMATION:

Range Length: 17.2 ft. Velocity 1: 5 ft. 1.524 m Velocity Measurement Units: time
Velocity 2: 4.333 ft. 1.320698 m Chronographs will report the time of flight.

ARMOR DESCRIPTION:

Manufacturer: Beijing V-Great Int Trade Co., Ltd

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

Date Rec'd: 11/21/17 Test ID: MC02911 NIJ Armor Type: 3A
Style: Male

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: 30 Number of Layers:

Individual Layer Description: Layers 1-27 and 30: Flex aramid film.
Layer 28: 2 Ply laminated flex aramid film.
Layer 29: 5mm White foam.

Description of Stitching: Layers 1-28: 3" bar tack at bottom and top center. 3.5" bar tack at armpit.
Layers 29 and 30: 3" bar tack at bottom and top center. 3.5" bar tack at armpit.

Remarks and Revision History: Strapping: Two vertical and three horizontal

Use this space to enter any necessary supplemental information

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NVLAP Lab Code: 200820-0																	Test Laboratory Name: NTS-Chesapeake Testing												
																	Report Identification Number: 3604-023												
																	Issue / Revision Number:												
Sample Information and Description																													
Armors in "As-New" Condition																													
Test ID: MC02911																	NIJ Type: 3A												
Penetration-Backface Signature (P-BFS) Test Samples																	Spare Samples												
Sample 1		Sample 2		Sample 3		Sample 4		Sample 5		Sample 6		Sample 7		Sample 8		Sample 9		Sample 10		Sample 11		Sample 12		Sample 13		Sample 14			
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
Size: C-2	C-2	C-2	C-2	C-5	C-5	C-5	C-5	C-2	C-2	C-2	C-2	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	
Panel Serial Number: VGNL3A-2 C5B10	VGNL3A-2 C5B11	VGNL3A-2 C5B09	VGNL3A-2 C5B12	VGNL3A-2 C5B10	VGNL3A-2 C5B16	VGNL3A-2 C5B16	VGNL3A-2 C5B16	VGNL3A-2 C5B10	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	VGNL3A-2 C5B05	
Plate Serial Number: NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lot Number: 181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710
Gross Weight (lb.): 2.07	2.12	2.06	2.1	4.6	4.54	4.55	4.55	2.07	2.11	2.07	2.11	4.53	4.56	4.51	4.55	4.56	4.53	4.49	4.54										
TEST DESCRIPTION																													
Test Condition: Wet																													
Threat Ammunition: .357 SIG																													
Bullet (grain/type): 125/FMJ																													
Test Velocity (ft/s): 1470																													
Angle at Location #4: 30																													
THREAT DESCRIPTION																													
Bullet Manufacturer: Speer																													
Bullet Lot/Product Number: A27R																													
Test Barrel Manufacturer: Wiseman																													
Test Barrel Length (in): 10 inch																													

Test ID: MC02911																	NIJ Type: 3A												
Baseline Ballistic Limit - Threat 1																	Baseline Ballistic Limit - Threat 2												
Sample 11		Sample 12		Sample 13		Sample 14		Sample 15		Sample 16		Sample 17		Sample 18		Sample 19		Sample 20		Sample 21		Sample 22		Sample 23		Sample 24			
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
Size: 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	
Panel Serial Number: VGNL3A-2 C5B10	VGNL3A-2 C5B09	VGNL3A-2 C5B09	VGNL3A-2 C5B14	VGNL3A-2 C5F14	VGNL3A-2 C5B10	VGNL3A-2 C5F12	VGNL3A-2 C5B12	VGNL3A-2 C5F13	VGNL3A-2 C5B13	VGNL3A-2 C5F03	VGNL3A-2 C5B03	VGNL3A-2 C5F04	VGNL3A-2 C5B04	VGNL3A-2 C5F05	VGNL3A-2 C5B05	VGNL3A-2 C5F06	VGNL3A-2 C5B06	VGNL3A-2 C5F07	VGNL3A-2 C5B07	VGNL3A-2 C5F07	VGNL3A-2 C5B07	VGNL3A-2 C5F07	VGNL3A-2 C5B07	VGNL3A-2 C5F07	VGNL3A-2 C5B07	VGNL3A-2 C5F07	VGNL3A-2 C5B07	VGNL3A-2 C5F07	
Plate Serial Number: NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lot Number: 181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	
Gross Weight (lb.): 4.55	4.6	4.56	4.54	4.66	4.6	4.52	4.61	4.58	4.6	4.54	4.57	4.57	4.57	4.53	4.62	4.57	4.54	4.58	4.56	4.57	4.58	4.56	4.57	4.57	4.57	4.57	4.57	4.56	
TEST DESCRIPTION																													
Test Condition: Dry																													
Threat Ammunition: .357 SIG																													
Bullet (grain/type): 125/FMJ																													
Test Velocity (ft/s): 1470																													
Shots on Panel: 12																													
THREAT DESCRIPTION																													
Bullet Manufacturer: Speer																													
Bullet Lot/Product Number: A27R																													
Test Barrel Manufacturer: Wiseman																													
Test Barrel Length (in): 10 inch																													

Environmental Conditioned Armors																													
Test ID: MC02911																	NIJ Type: 3A												
Penetration-Backface Signature (P-BFS) Test Samples																	Ballistic Limit					Spare Samples							
Sample 21		Sample 22		Sample 23		Sample 24		Sample 25		Sample 26		Sample 27		Sample 28		Sample 29		Sample 30		Sample 31		Sample 32		Sample 33		Sample 34			
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
Size: C-2	C-2	C-5	C-5	C-2	C-2	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	
Panel Serial Number: VGNL3A-2 C5B10	VGNL3A-2 C5B03	VGNL3A-2 C5F17	VGNL3A-2 C5B17	VGNL3A-2 C5F04	VGNL3A-2 C5B04	VGNL3A-2 C5F15	VGNL3A-2 C5B15	VGNL3A-2 C5F18	VGNL3A-2 C5B18	VGNL3A-2 C5F21	VGNL3A-2 C5B21	VGNL3A-2 C5F20	VGNL3A-2 C5B20	VGNL3A-2 C5F22	VGNL3A-2 C5B22	VGNL3A-2 C5F22	VGNL3A-2 C5B22	VGNL3A-2 C5F22	VGNL3A-2 C5B22	VGNL3A-2 C5F22	VGNL3A-2 C5B22	VGNL3A-2 C5F22	VGNL3A-2 C5B22	VGNL3A-2 C5F22	VGNL3A-2 C5B22	VGNL3A-2 C5F22	VGNL3A-2 C5B22	VGNL3A-2 C5F22	
Plate Serial Number: NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lot Number: 181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	181710	
Gross Weight (lb.): 2.09	2.11	4.6	4.55	2.08	2.12	4.55	4.59	4.58	4.59	4.55	4.57	4.56	4.55	4.55	4.57														
TEST DESCRIPTION																													
Test Condition: Dry																													
Threat Ammunition: .357 SIG																													
Bullet (grain/type): 125/FMJ																													
Test Velocity (ft/s): 1410																													
Angle at Loc #4/ Shots on Panel: 30																													
THREAT DESCRIPTION																													
Bullet Manufacturer: Speer																													
Bullet Lot/Product Number: A27R																													
Test Barrel Manufacturer: Wiseman																													
Test Barrel Length (in): 10 inch																													

NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

NVLAP Lab Code: 200820-0

Test Laboratory Name: NTS-Chesapeake Testing
 Report Identification Number: 3604-023
 Issue / Revision Number: _____

Penetration and BFS Summary Data

Test ID: MC02911

Report Date: 12/19/17

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-2				Sample 2 Size: C-2											
	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	1448	0	22.9		1445	0	20.2		1474	0	15.4		1441	0	19.2	
2	1489	0	25.5		1475	0	15.3		1487	0	20.6		1472	0	16.5	
3	1485	0	21.6		1482	0	20.6		1478	0	21.6		1509	0	20.1	
4	1479	0			1478	0			1485	0			1499	0		
5	1487	0			1482	0			1490	0			1496	0		
6	1499	0			1480	0			1490	0			1494	0		
7																
8																
Summary:		Perforations: 0 (Pass) Maximum BFS: 25.5 mm Pass - No BFS greater than 44 mm				BFS Statistics: Count: 12				Average: 19.96 mm St. Dev: 3.0252 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	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	1490	0	13		1456	0	18.6		1442	0	20.3		1472	0	19	
2	1500	0	16.6		1497	0	16.2		1501	0	16.5		1494	0	17	
3	1494	0	17.6		1496	0	12.2		1493	0	13.6		1498	0	16.1	
4	1495	0			1503	0			1483	0			1500	0		
5	1493	0			1489	0			1494	0			1489	0		
6	1478	0			1473	0			1472	0			1481	0		
7																
8																
Summary:		Perforations: 0 (Pass) Maximum BFS: 20.3 mm Pass - No BFS greater than 44 mm				BFS Statistics: Count: 12				Average: 16.39 mm St. Dev: 2.4463 mm						

NATIONAL INSTITUTE OF JUSTICE COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP

Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 5 Size: C-2				Sample 6 Size: C-2											
	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	1421	0	33.9		1434	0	28.6		1414	0	34.1		1428	0	29.7	
2	1446	0	34.6		1436	0	31.2		1428	0	36.1		1438	0	31.2	
3	1442	0	39.3		1431	0	28.3		1426	0	33.5		1425	0	30.5	
4	1445	0			1438	0			1422	0			1436	0		
5	1428	0			1438	0			1408	0			1438	0		
6	1441	0			1450	0			1424	0			1431	0		
7																
8																
Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 32.58 mm Maximum BFS: 39.3 mm St. Dev: 3.263 mm Pass - No BFS greater than 44 mm																

Shot Number	Sample 7 Size: C-5				Sample 8 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	1419	0	31.3		1421	0	28.6		1421	0	31.5		1450	0	29.9	
2	1414	0	36.3		1408	0	30.9		1433	0	33.6		1445	0	38.2	
3	1438	0	36.9		1442	0	31.5		1424	0	37.5		1435	0	41.9	
4	1432	0			1445	0			1438	0			1448	0		
5	1429	0			1442	0			1436	0			1444	0		
6	1427	0			1417	0			1405	0			1447	0		
7																
8																
Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 34.01 mm Maximum BFS: 41.9 mm St. Dev: 4.0623 mm (Pass - No BFS greater than 44 mm)																

NATIONAL INSTITUTE OF JUSTICE 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-2				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	1429	0	22.5		1419	0	20.1		1432	0	21.1		1387	0	15.8	
2	1426	0	21.7		1431	0	18.1		1426	0	22.4		1423	0	23.4	
3	1433	0	21.9		1431	0	17.3		1427	0	21.3		1409	0	20.2	
4	1424	0			1434	0			1447	0			1413	0		
5	1426	0			1436	0			1420	0			1418	0		
6	1430	0			1415	0			1421	0			1416	0		
7																
8																
Summary:		Perforations: 0 (Pass) Maximum BFS: 22.5 mm (no requirement)				Perforations: 0 (Pass) Maximum BFS: 23.4 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-2				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	1338	0	29.1		1346	0	32.4		1337	0	32.1		1336	0	26.6	
2	1339	0	32.7		1332	0	32.5		1340	0	28.6		1337	0	25.4	
3	1346	0	34.3		1330	0	28.3		1345	0	34		1336	0	30.6	
4	1322	0			1333	0			1337	0			1350	0		
5	1333	0			1334	0			1344	0			1335	0		
6	1332	0			1329	0			1344	0			1325	0		
7																
8																
Summary:		Perforations: 0 (Pass) Maximum BFS: 34.3 mm (no requirement)				Perforations: 0 (Pass) Maximum BFS: 34 mm (no requirement)										

Overall P-BFS Summary																
Perforations: This requirement is for all P-BFS tested samples - New and Conditioned 0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.																
Backface Signature: This requirement is for New armors only Maximum BFS: 41.9 mm This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.																

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		
	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	1448	0		1455	0		1443	0		1475	0		1475	0	
2	1593	0		1595	0		1610	0		1585	0		1595	0	
3	1727	0		1723	0		1719	0		1698	0		1741	0	
4	1827	0		1784	0		1808	0		1843	0		1808	0	
5	1906	0		1885	1		1901	0		1883	0		1911	0	
6	2024	1		1826	0		1975	1		1991	1		2012	1	
7	1944	0		1874	0		1919	1		1925	0		1908	0	
8	1994	0		1959	0		1888	0		1973	1		1956	0	
9	2006	0		1988	0		1924	0		1921	0		2017	1	
10	2050	1		2020	1		1948	0		1959	0		1951	0	
11	2031	1		1973	1		1998	1		1999	1		2021	1	
12	1965	0		1912	0		1918	0		1973	0		1955	0	
13															
14															
15															

Shot Number	Sample 13			Sample 14			Sample 14			Sample 15			Sample 15		
	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	1471	0		1497	0		1491	0		1464	0		1460	0	
2	1599	0		1606	0		1607	0		1616	0		1585	0	
3	1729	0		1729	0		1722	0		1726	0		1677	0	
4	1814	0		1798	0		1912	0		1789	0		1785	0	
5	1908	0		1913	1		1969	1		1906	1		1897	0	
6	2021	1		1862	0		1873	1		1814	0		1979	0	
7	1924	1		1921	0		1858	0		1875	0		2078	1	
8	1830	0		1955	1		1891	0		1921	0		1962	0	
9	1912	0		1910	0		1926	0		1960	0		2015	0	
10	1944	0		1944	1		1962	1		2015	1		2033	1	
11	2008	1		1906	0		1915	0		1992	1		1995	1	
12	1950	0		1945	0		1981	1		1890	0		1976	1	
13															
14															
15															

Summary: Total Usable Shots: 120 Acceptable
 Perforations (Complete Penetrations): 32 Acceptable
 Stops (Partial Penetrations): 88 Acceptable

Perforations below 1500 ft/s: 0 Acceptable

Regression Analysis

Regression Model: Logistic

Estimated V50: 1968 ft/s

Estimated V05: 569.2 m/s (1868) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): 0.00% Acceptable

Test Data and Regression Model

Legend:

- ◆ Test Data
- V Ref.
- V Test +30
- Est. V50
- Est. V05
- Est. Response

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

Shot Number	Sample 16			Sample 16			Sample 17			Sample 17			Sample 18			Sample 18		
	Panel A	Panel B	Remarks	Panel A	Panel B	Remarks	Panel A	Panel B	Remarks	Panel A	Panel B	Remarks	Panel A	Panel B	Remarks	Panel A	Panel B	Remarks
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	
1	1428	0		1422	0		1435	0		1435	0		1439	0		1439	0	
2	1550	0		1536	0		1540	0		1570	0		1574	0		1574	0	
3	1661	0		1679	0		1646	0		1669	0		1670	0		1670	0	
4	1765	1		1747	0		1756	0		1765	0		1733	0		1733	0	
5	1679	0		1842	1		1835	1		1847	1		1824	1		1824	1	
6	1723	0		1787	0		1787	1		1766	1		1750	0		1750	0	
7	1781	1		1787	0		1713	0		1707	0		1829	1		1829	1	
8	1727	1		1834	1		1745	0		1741	0		1774	1		1774	1	
9	1684	0		1814	1		1777	1		1804	1		1731	1		1731	1	
10	1723	0		1768	0		1743	1		1721	0		1673	0		1673	0	
11	1766	0		1814	0		1702	1		1790	0		1697	0		1697	0	
12	1769	0		1841	1		1674	0		1816	0		1789	1		1789	1	
13																		
14																		
15																		

Shot Number	Sample 18			Sample 19			Sample 19			Sample 20			Sample 20		
	Panel B	Panel A	Remarks	Panel A	Panel B	Remarks	Panel B	Panel A	Remarks	Panel A	Panel B	Remarks	Panel B	Panel A	Remarks
	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	
1	1433	0		1436	0		1423	0		1431	0		1425	0	
2	1564	0		1555	0		1590	0		1562	0		1537	0	
3	1658	0		1657	0		1664	0		1653	0		1657	0	
4	1746	0		1732	1		1764	1		1749	1		1741	1	
5	1863	1		1677	1		1675	0		1695	0		1675	0	
6	1769	1		1615	0		1720	0		1720	1		1737	0	
7	1705	0		1647	0		1791	0		1682	0		1784	0	
8	1740	0		1694	0		1805	1		1725	0		1804	1	
9	1826	1		1752	1		1775	0		1771	0		1777	0	
10	1780	0		1707	0		1768	0		1812	1		1797	0	
11	1813	1		1760	0		1877	1		1775	0		1825	0	
12	1801	1		1787	0		1810	1		1767	0		1910	1	
13															
14															
15															

Summary: Total Usable Shots: 120 Acceptable
 Perforations (Complete Penetrations): 38 Acceptable
 Stops (Partial Penetrations): 82 Acceptable

Perforations below 1460 ft/s: 0 Acceptable

Regression Analysis
 Regression Model: Logistic

Estimated V50: 1780 ft/s
 Estimated V05: 506.8 m/s (1663) ft/s
 Probability of perforation at NIJ reference velocity (1430 ft/sec): 0.01% Acceptable

Test Data and Regression Model

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

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	1428	0		1383	0	
2	1520	0		1517	0	
3	1656	0		1649	0	
4	1740	0		1756	0	
5	1835	0		1846	0	
6	1931	0		1935	1	
7	2021	1		1828	1	
8	1957	0		1782	0	
9	1994	1		1866	1	
10	1964	1		1808	0	
11	1912	1		1871	0	
12	1848	1		1928	1	
13						
14						
15						

Summary:

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

Estimated V50: 1880 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	1347	0		1360	0	
2	1509	0		1479	0	
3	1541	0		1588	0	
4	1640	0		1681	0	
5	1751	1		1759	0	
6	1679	0		1819	0	
7	1720	1		1992	1	
8	1658	1		1923	1	
9	1615	0		1873	1	
10	1677	0		1843	0	
11	1741	0		1897	0	
12	1763	1		1881	1	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	8	
Stops (PP):	16	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1805 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: 0.01%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.



Test ID: MC02911

Model: VGNIJ3A-2

Level: IIIA

Job #: 3604-023

Post

Pre

Test ID: MC 02911

Model: VGNIJ3A-2

Level: IIIA

Job #: 3604-023

Post

Rec



Test ID: MC02911

Model: VGNIJ3A-2

Level: IIIA

Job #: 3604-023

Post

Pre



Test ID: MC02911

Model: VGNI33A-2

Level: III A

Job #: 3604-023

Post

PC