

January 27, 2017

RMA Armament, Inc. 1479 Gillespie St. Suite 303 Rock Island, IL 61201 ATTN: Blake Waldrop

Dear Mr. Waldrop:

In accordance with your instructions, Oregon Ballistic Laboratories conducted Ballistic Resistance (V₀) testing on fourteen samples.

The samples were tested in accordance with NIJ-STD-0101.06 Level IV (abbrev) (mod) in an indoor range with the muzzle of the test barrel mounted 50 feet away from the target and positioned to produce 0-degree obliquity impacts. Four infrared light screens, in conjunction with time-based frequency counters, were positioned such that projectile velocity was measured 8.25 feet from the target. Penetrations were determined by examination of a 5.5-inch clay block mounted behind the test sample. Results for all testing performed for this purpose are summarized in the following table.

Test Sample			Ballistic		Results			
OBL No.:	S/N.:	Weight (lbs.)	Projectile	Shots	Velocity (fps)	Penetrations	BFD (mm)	Pass/Fail
15875	003	7.96	.30 cal M2AP	1	2865	0	40.35	Pass
15876	004	7.95	.30 cal M2AP	1	2854	0	33.78	Pass
15877	014	8.09	.30 cal M2AP	1	2878	0	36.10	Pass
15878	001	7.99	.30 cal M2AP	1	2857	0	32.16	Pass
15879	002	8.07	.30 cal M2AP	1	2895	0	33.45	Pass
15880	005	7.97	.30 cal M2AP	1	2866	0	28.38	Pass
15881	006	8.02	.30 cal M2AP	1	2870	0	30.45	Pass
15882	007	8.00	.30 cal M2AP	1	2855	0	37.90	Pass
15883	008	7.97	.30 cal M2AP	1	2881	0	39.23	Pass





Test Sample			Ballistic		Results			
OBL No.:	S/N.:	Weight (lbs.)	Projectile	Shots	Velocity (fps)	Penetrations	BFD (mm)	Pass/Fail
15884	009	8.07	.30 cal M2AP	1	2868	0	26.27	Pass
15885	010	7.86	.30 cal M2AP	1	2873	0	31.99	Pass
15886	011	8.01	.30 cal M2AP	1	2899	0	33.86	Pass
15887	012	7.99	.30 cal M2AP	1	2864	0	33.22	Pass
15888	013	8.05	.30 cal M2AP	1	2867	0	34.00	Pass

The samples were subjected to a 24 hour static conditioning cycle at 65°C / 80% humidity followed by a 24 hour thermal shock cycle per Section 6.2.3.

Samples will be maintained at Oregon Ballistic Laboratories for 30 days and then discarded, unless other instructions are received. If you have any further questions or concerns, please contact us.

Sincerely,

Brandon Bertsch

Oregon Ballistic Laboratories

Bulbuth



RMA Armament Customer: OBL ID#: 15875 Test Date: 1/26/2017

Purchase Order:

TEST SAMPLE Model No.: Serial No.: 003

Lot No.: **OBL Test** Plies: N/A Hard Armor Plate Description:

Size: 10 x 12 Weight (lb.): 7.96 Thickness: N/A

Avg. Thk. (in):

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A Primary Vel. Location:

Range #: Temperature: Bar. Pressure: Rel. Humidity: 8.25 ft. from target Sample Temp. No Recorder:

Gunner:

66.9 °F 30.20 in. Hg 43.7 % Amb. °F **Darius Nuttbrock** Jared Curran

2

Pre Test: Clay Drops (mm): 19.27 Drop Avg (mm): 20.22 Clay Temp °F: 93.5 Clay Box #: Post Test: Clay Drops (mm): 16.64

17.68 20.12

20.22

21.94

19.85

19.84

Striking Velocity: Target to Witness: Witness Panel: Backing Material:

N/A 5.5" clay block w/ 3/4" plywood backing

Drop Avg (mm): 18.20 Clay Temp °F:

19.56 16.99

Obliquity: Barrel:

0 Degrees .30-06/1:10/33"

AMMUNITION Projectile: .30 cal. 160gr. M2 AP

REMARKS:

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

STANDARDS / PROCEDURES

Powder: N133

Required Velocity:

2880 fps ± 30 fps

NIJ-STD-0101.06 Level IV (abbrev) (mod)

WT. (gr.)

164.7

PROJECTILE POWDER

TIME 1 TIME 2 VELOCITY 1 WT. (gr.) μs (10⁻⁶) μs (10⁻⁶) 47.5 2865 1745

1746

VELOCITY 2 AVERAGE VELOCITY 2865 2864

PENET. CALIPER OBLIQUITY BFD 40.35 TEST RESULTS:

NOTES

Test sample satisfied the ballistic requirements given.



21.94

RMA Armament Customer: OBL ID#: 15876 Test Date: 1/26/2017 Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 004 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Size: 10 x 12 Weight (lb.): 7.95 Thickness: N/A

Avg. Thk. (in):

Clay Drops (mm):

Drop Avg (mm):

Clay Temp °F:

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A

Primary Vel. Location: 8.25 ft. from target Striking Velocity: No N/A Target to Witness:

Witness Panel: Backing Material: Obliquity: 0 Degrees .30-06/1:10/33"

Gunner: 5.5" clay block w/ 3/4" plywood backing

TIME 2

μs (10⁻⁶)

1752

Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

VELOCITY 1

2854

43.7 % Sample Temp. Amb. °F **Darius Nuttbrock** Recorder: Jared Curran

VELOCITY 2

2854

AVERAGE

VELOCITY

2854

2

66.9 °F

30.20 in. Hg

Clay Box #: Post Test: Clay Drops (mm): Drop Avg (mm):

Pre Test:

16.64 18.20 Clay Temp °F:

19.27

20.22

93.5

17.68 20.12

20.22

19.56 16.99

19.85

19.84

Barrel: AMMUNITION

Projectile: .30 cal. 160gr. M2 AP

Powder: N133

PENET.

Required Velocity:

OBLIQUITY

2880 fps ± 30 fps

NOTES

STANDARDS / PROCEDURES

164.8

NIJ-STD-0101.06 Level IV (abbrev) (mod)

47.5

1752

PROJECTILE POWDER TIME 1 WT. (gr.) WT. (gr.) μs (10⁻⁶)

REMARKS: P=Partial Penetration C=Complete Penetration UH=Unfair Hit

TEST RESULTS:

33.78 Test sample satisfied the ballistic requirements given.

CALIPER

BFD



50 ft.

BALLISTIC RESISTANCE TEST - V₀

RMA Armament Customer: OBL ID#: 15877 1/26/2017 Test Date: Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 014 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Size: 10 x 12 Weight (lb.): 8.09 Thickness: N/A

Avg. Thk. (in):

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A

Primary Vel. Location: 8.25 ft. from target Striking Velocity: No N/A Target to Witness:

Witness Panel: Backing Material: 5.5" clay block w/ 3/4" plywood backing Obliquity:

0 Degrees .30-06/1:10/33" Barrel:

Pre Test:

Clay Drops (mm): 19.27 Drop Avg (mm): 20.22 Clay Temp °F: 93.5 Clay Box #: Post Test:

Clay Drops (mm): 16.64 Drop Avg (mm): 18.20 Clay Temp °F:

17.68 20.12

21.94

19.56 16.99

19.85

19.84

AMMUNITION Projectile: .30 cal. 160gr. M2 AP

REMARKS:

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

STANDARDS / PROCEDURES

Powder: N133

2880 fps ± 30 fps

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER

TIME 1 TIME 2 WT. (gr.) WT. (gr.) μs (10⁻⁶) μs (10⁻⁶) 47.7 164.6 1737 1738

VELOCITY 1

Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

Sample Temp.

Recorder:

Gunner:

VELOCITY 2 2879 2877

2

66.9 °F

43.7 %

Amb. °F

Jared Curran

30.20 in. Hg

Darius Nuttbrock

AVERAGE VELOCITY 2878

PENET. OBLIQUITY TEST RESULTS: Test sample satisfied the ballistic requirements given.

Required Velocity:

CALIPER BFD 36.10

NOTES

20.22



RMA Armament Customer: OBL ID#: 15878 Test Date: 1/26/2017 Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 001 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Size: 10 x 12 Weight (lb.): 7.99 Thickness: N/A

Avg. Thk. (in):

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A Primary Vel. Location: Striking Velocity:

8.25 ft. from target No N/A

Target to Witness: Witness Panel: Backing Material: 5.5" clay block w/ 3/4" plywood backing

Obliquity: 0 Degrees .30-06/1:10/33" Barrel:

Pre Test:

Clay Drops (mm): 19.27 Drop Avg (mm): 20.22 Clay Temp °F: 93.5

Clay Box #: Post Test: Clay Drops (mm): 16.64 Drop Avg (mm): 18.20

17.68 20.12

21.94

20.22

19.56 16.99

19.85

19.84

AMMUNITION Projectile: .30 cal. 160gr. M2 AP

REMARKS:

Powder: N133

Required Velocity:

Clay Temp °F:

2880 fps ± 30 fps

NOTES

STANDARDS / PROCEDURES

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER WT. (gr.)

TIME 1 TIME 2 WT. (gr.) μs (10⁻⁶) μs (10⁻⁶) 47.7 164.3 1750 1750

VELOCITY 1 VELOCITY 2 AVERAGE VELOCITY 2857 2857 2857

2

66.9 °F

43.7 %

Amb. °F

Jared Curran

30.20 in. Hg

Darius Nuttbrock

PENET. OBLIQUITY

32.16 TEST RESULTS: Test sample satisfied the ballistic requirements given.

CALIPER

BFD

Sample was subjected to Armor Drop Test per section 6.2.3.4 Sample was subjected to Armor Submersion per section 7.8.2

Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

Sample Temp.

Recorder:

Gunner:



RMA Armament Customer: OBL ID#: 15879 Test Date: 1/26/2017 Purchase Order:

10 x 12

N/A

19.27

20.22

93.5

8.07

TEST SAMPLE Model No.:

Serial No.: 002 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Avg. Thk. (in): Pre Test:

Clay Drops (mm):

Drop Avg (mm):

Clay Temp °F:

Clay Box #:

Post Test:

Weight (lb.):

Thickness:

Size:

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A

Primary Vel. Location: 8.25 ft. from target Striking Velocity: No N/A Target to Witness: Witness Panel:

Backing Material:

5.5" clay block w/ 3/4" plywood backing

Rel. Humidity: 43.7 % Sample Temp. Recorder: Gunner:

VELOCITY 1

2897

Range #:

Temperature:

Bar. Pressure:

Amb. °F **Darius Nuttbrock** Jared Curran

2

66.9 °F

VELOCITY 2

2892

30.20 in. Hg

Clay Drops (mm): Drop Avg (mm):

AVERAGE

VELOCITY

2895

Clay Temp °F:

16.64 17.68 18.20

21.94

20.22

20.12

19.56 16.99

19.84

19.85

0 Degrees .30-06/1:10/33"

1726

TIME 2

μs (10⁻⁶)

1729

AMMUNITION Projectile: .30 cal. 160gr. M2 AP

Obliquity:

Barrel:

STANDARDS / PROCEDURES

Powder: N133

PENET.

2880 fps ± 30 fps

NOTES

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER TIME 1 WT. (gr.) WT. (gr.) μs (10⁻⁶)

47.7 164.5 REMARKS: P=Partial Penetration C=Complete Penetration UH=Unfair Hit

33.45 TEST RESULTS:

OBLIQUITY

Required Velocity:

Test sample satisfied the ballistic requirements given.

CALIPER

BFD



Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

Sample Temp.

VELOCITY 1

2867

Recorder:

Gunner:

TIME 2

μs (10⁻⁶)

1745

μs (10⁻⁶)

1744

2

66.9 °F

43.7 %

Amb. °F

Jared Curran

VELOCITY 2

2865

AVERAGE

VELOCITY

2866

30.20 in. Hg

Darius Nuttbrock

BALLISTIC RESISTANCE TEST - V₀

RMA Armament Customer: OBL ID#: 15880 Test Date: 1/26/2017 Purchase Order:

10 x 12

N/A

7.97

TEST SAMPLE Model No.:

Serial No.: 005 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Avg. Thk. (in):

Weight (lb.):

Thickness:

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A

Primary Vel. Location: 8.25 ft. from target Striking Velocity: No

N/A Target to Witness: Witness Panel: Backing Material: 5.5" clay block w/ 3/4" plywood backing

Obliquity: 0 Degrees .30-06/1:10/33" Barrel:

Pre Test:

Size:

Clay Drops (mm): 19.27 Drop Avg (mm): 20.22 Clay Temp °F: 93.5 Clay Box #:

Post Test: Clay Drops (mm): 16.64 Drop Avg (mm): 18.20

17.68 20.12

21.94

20.22

19.56 16.99

19.85

19.84

AMMUNITION Projectile: .30 cal. 160gr. M2 AP

STANDARDS / PROCEDURES

Powder: N133

Required Velocity:

OBLIQUITY

Clay Temp °F:

2880 fps ± 30 fps

NOTES

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER TIME 1

47.7

WT. (gr.) WT. (gr.) 164.2 REMARKS:

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

TEST RESULTS:

28.38 Test sample satisfied the ballistic requirements given.

CALIPER

BFD

PENET.



RMA Armament Customer: OBL ID#: 15881 Test Date: 1/26/2017 Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 006 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Weight (lb.): 8.02 Thickness: N/A

10 x 12

19.27

20.22

93.5

Avg. Thk. (in):

Drop Avg (mm):

Clay Temp °F:

Size:

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A

Primary Vel. Location: 8.25 ft. from target Striking Velocity: No N/A Target to Witness:

Witness Panel: Backing Material: 5.5" clay block w/ 3/4" plywood backing

Obliquity: 0 Degrees .30-06/1:10/33" Barrel:

Pre Test: Clay Drops (mm):

66.9 °F 30.20 in. Hg 43.7 %

Amb. °F **Darius Nuttbrock** Jared Curran

2

2870

Clay Box #: Post Test: Clay Drops (mm): Drop Avg (mm): Clay Temp °F:

16.64 17.68 18.20

21.94

19.56 16.99

19.84

19.85

AMMUNITION

Powder: N133

20.22

20.12

Projectile: .30 cal. 160gr. M2 AP

REMARKS:

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

STANDARDS / PROCEDURES

NIJ-STD-0101.06 Level IV (abbrev) (mod)

WT. (gr.)

165.4

PROJECTILE POWDER

WT. (gr.)

47.7

TIME 1

μs (10⁻⁶)

1743

TIME 2

μs (10⁻⁶)

1742

VELOCITY 1

2869

Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

Sample Temp.

Recorder:

Gunner:

Required Velocity:

2880 fps ± 30 fps

VELOCITY 2 AVERAGE PENET. CALIPER OBLIQUITY NOTES VELOCITY BFD 2870 30.45 TEST RESULTS: Test sample satisfied the ballistic requirements given.



RMA Armament Customer: OBL ID#: 15882 Test Date: 1/26/2017 Purchase Order:

10 x 12

TEST SAMPLE Model No.: Size:

Serial No.: 007 Weight (lb.): 8.00 Lot No.: **OBL Test** Thickness: N/A Plies: N/A Avg. Thk. (in):

Hard Armor Plate Description:

RANGE SET-UP Range #: 50 ft. 2 Pre Test:

Range to Target: Screen Dist. Vel. 1 (ft.): 66.9 °F Temperature: Clay Drops (mm): 21.94 20.22 19.84 19.85 19.27 Screen Dist. Vel. 2 (ft.): Bar. Pressure: 30.20 in. Hg Drop Avg (mm): 20.22

Screen 4 to target (ft): N/A Rel. Humidity: 43.7 % Clay Temp °F: 93.5 Primary Vel. Location: 8.25 ft. from target Sample Temp. Amb. °F Clay Box #: Striking Velocity: **Darius Nuttbrock** Post Test: No Recorder:

N/A Target to Witness: Gunner: Jared Curran Clay Drops (mm): 16.64 17.68 20.12 19.56 16.99 Witness Panel: Drop Avg (mm): 18.20

Backing Material: 5.5" clay block w/ 3/4" plywood backing Clay Temp °F:

Obliquity: 0 Degrees .30-06/1:10/33" Barrel:

AMMUNITION Projectile: .30 cal. 160gr. M2 AP Powder: N133

STANDARDS / PROCEDURES

NIJ-STD-0101.06 Level IV (abbrev) (mod) Required Velocity: 2880 fps ± 30 fps

PROJECTILE POWDER TIME 1 TIME 2 VELOCITY 1 VELOCITY 2 AVERAGE PENET. CALIPER OBLIQUITY NOTES WT. (gr.) WT. (gr.) μs (10⁻⁶) μs (10⁻⁶) VELOCITY BFD 47.7 2856 2855 37.90 165.0 1751 1752 2854 REMARKS: TEST RESULTS: Test sample satisfied the ballistic requirements given. P=Partial Penetration C=Complete Penetration UH=Unfair Hit Sample was subjected to Armor Drop Test per section 6.2.3.4 Sample was subjected to Armor Submersion per section 7.8.2





Customer: RMA Armament OBL ID#: 15883 Test Date: 1/26/2017 Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 800 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Size: 10 x 12 Weight (lb.): 7.97 Thickness: N/A

Avg. Thk. (in):

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A

Primary Vel. Location: 8.25 ft. from target Striking Velocity: No N/A Target to Witness:

Witness Panel: Backing Material: Obliquity: Barrel:

5.5" clay block w/ 3/4" plywood backing

TIME 2

μs (10⁻⁶)

1736

Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

Sample Temp.

VELOCITY 1

2882

Recorder:

Gunner:

2

66.9 °F

43.7 %

Amb. °F

Jared Curran

VELOCITY 2

2880

AVERAGE

VELOCITY

2881

30.20 in. Hg

Darius Nuttbrock

0 Degrees .30-06/1:10/33"

Pre Test:

Clay Drops (mm): 19.27 Drop Avg (mm): 20.22 Clay Temp °F: 93.5 Clay Box #:

Post Test: Clay Drops (mm): 16.64 Drop Avg (mm): Clay Temp °F:

17.68 18.20

19.56 16.99

19.84

19.85

21.94

20.22

20.12

AMMUNITION

REMARKS:

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

Projectile: .30 cal. 160gr. M2 AP

Powder: N133

Required Velocity:

OBLIQUITY

2880 fps ± 30 fps

NOTES

STANDARDS / PROCEDURES

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER

TIME 1 WT. (gr.) WT. (gr.) μs (10⁻⁶) 47.8 164.1 1735

TEST RESULTS:

PENET.

39.23 Test sample satisfied the ballistic requirements given.

CALIPER

BFD



Customer: RMA Armament OBL ID#: 15884 Test Date: 1/26/2017

10 x 12

Purchase Order:

Size:

TEST SAMPLE Model No.: Serial No.: 009 Lot No.: **OBL Test** Plies:

Weight (lb.): 8.07 Thickness: N/A N/A Avg. Thk. (in):

Hard Armor Plate Description:

RANGE SET-UP Range #: 50 ft. 2 Pre Test:

Range to Target: Screen Dist. Vel. 1 (ft.): 66.9 °F Temperature: Clay Drops (mm): 21.94 20.22 19.84 19.85 19.27 Screen Dist. Vel. 2 (ft.): Bar. Pressure: 30.20 in. Hg Drop Avg (mm): 20.22

Screen 4 to target (ft): N/A Rel. Humidity: 43.7 % Clay Temp °F: 93.5 Primary Vel. Location: 8.25 ft. from target Sample Temp. Amb. °F Clay Box #: Striking Velocity: **Darius Nuttbrock** Post Test: No Recorder:

N/A Target to Witness: Gunner: Jared Curran Clay Drops (mm): 16.64 17.68 20.12 19.56 16.99 Witness Panel: Drop Avg (mm): 18.20

Backing Material: 5.5" clay block w/ 3/4" plywood backing Clay Temp °F:

Obliquity: 0 Degrees .30-06/1:10/33" Barrel:

AMMUNITION Projectile: .30 cal. 160gr. M2 AP Powder: N133

STANDARDS / PROCEDURES NIJ-STD-0101.06 Level IV (abbrev) (mod) Required Velocity: 2880 fps ± 30 fps

PROJECTILE POWDER TIME 1 TIME 2 VELOCITY 1 VELOCITY 2 AVERAGE PENET. CALIPER OBLIQUITY NOTES WT. (gr.) WT. (gr.) μs (10⁻⁶) μs (10⁻⁶) VELOCITY BFD 47.8 2869 2868 165.2 1743 1744 2867 26.27 REMARKS: TEST RESULTS: Test sample satisfied the ballistic requirements given. P=Partial Penetration C=Complete Penetration UH=Unfair Hit Sample was subjected to Armor Drop Test per section 6.2.3.4 Sample was subjected to Armor Submersion per section 7.8.2





Customer: RMA Armament OBL ID#: 15885 Test Date: 1/26/2017 Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 010 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Size: 10 x 12 Weight (lb.): 7.86 Thickness: N/A

Avg. Thk. (in):

Clay Drops (mm):

Drop Avg (mm):

Clay Temp °F:

Pre Test:

RANGE SET-UP

Striking Velocity:

Witness Panel:

Obliquity:

Barrel:

Target to Witness:

Backing Material:

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A Primary Vel. Location:

8.25 ft. from target No

N/A

47.8

5.5" clay block w/ 3/4" plywood backing 0 Degrees .30-06/1:10/33"

Rel. Humidity: Sample Temp. Recorder: Gunner:

VELOCITY 1

2874

TIME 2

μs (10⁻⁶)

1741

1740

Range #:

Temperature:

Bar. Pressure:

Amb. °F **Darius Nuttbrock** Jared Curran

2

66.9 °F

43.7 %

VELOCITY 2

2872

30.20 in. Hg

AVERAGE

VELOCITY

2873

Clay Box #: Post Test: Clay Drops (mm): 16.64 Drop Avg (mm): 18.20 Clay Temp °F:

17.68

19.27

20.22

93.5

21.94

20.22

20.12

19.56

19.84

16.99

19.85

AMMUNITION

Powder: N133

Required Velocity:

OBLIQUITY

2880 fps ± 30 fps

NOTES

Projectile: .30 cal. 160gr. M2 AP

UH=Unfair Hit

STANDARDS / PROCEDURES

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER TIME 1 WT. (gr.) WT. (gr.) μs (10⁻⁶)

166.2 REMARKS: P=Partial Penetration C=Complete Penetration

TEST RESULTS:

PENET.

31.99 Test sample satisfied the ballistic requirements given.

CALIPER

BFD



Customer: RMA Armament OBL ID#: 15886 Test Date: 1/26/2017 Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 011 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Size: 10 x 12 Weight (lb.): 8.01 Thickness: N/A

Avg. Thk. (in):

RANGE SET-UP

Striking Velocity:

Witness Panel:

Obliquity:

Barrel:

Target to Witness:

Backing Material:

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A Primary Vel. Location:

8.25 ft. from target No N/A

Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

Sample Temp.

VELOCITY 1

2899

Recorder:

Gunner:

TIME 2

μs (10⁻⁶)

1725

1725

2

67.3 °F

43.7 %

Amb. °F

Jared Curran

VELOCITY 2

2899

AVERAGE

VELOCITY

2899

30.20 in. Hg

Darius Nuttbrock

5.5" clay block w/ 3/4" plywood backing 0 Degrees .30-06/1:10/33"

Pre Test:

Clay Drops (mm): 19.27 Drop Avg (mm): 20.22 Clay Temp °F: 93.5 Clay Box #: Post Test:

Clay Drops (mm): 16.64 Drop Avg (mm): 18.20 Clay Temp °F:

20.12 19.56 16.99

NOTES

19.84

19.85

20.22

AMMUNITION

Projectile: .30 cal. 160gr. M2 AP

Powder: N133

Required Velocity:

OBLIQUITY

2880 fps ± 30 fps

21.94

17.68

STANDARDS / PROCEDURES

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER TIME 1 μs (10⁻⁶)

WT. (gr.) WT. (gr.) 47.8 164.3 REMARKS:

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

TEST RESULTS:

PENET.

33.86 Test sample satisfied the ballistic requirements given.

CALIPER

BFD



Customer: RMA Armament OBL ID#: 15887 1/26/2017 Test Date: Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 012 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Size: 10 x 12 Weight (lb.): 7.99 Thickness: N/A

Avg. Thk. (in):

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A

Primary Vel. Location: 8.25 ft. from target Striking Velocity: No N/A Target to Witness:

Witness Panel:

Backing Material: 5.5" clay block w/ 3/4" plywood backing Obliquity: 0 Degrees .30-06/1:10/33" Barrel:

Pre Test:

Clay Drops (mm): 19.27 Drop Avg (mm): 20.22 Clay Temp °F: 93.5 Clay Box #:

Post Test: Clay Drops (mm): 16.64 Drop Avg (mm): 18.20 Clay Temp °F:

17.68

21.94

20.22

20.12

19.56 16.99

19.85

19.84

AMMUNITION

REMARKS:

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

STANDARDS / PROCEDURES

Powder: N133

Required Velocity:

OBLIQUITY

CALIPER

BFD

2880 fps ± 30 fps

NOTES

VELOCITY 2

2864

AVERAGE

2864

2

67.3 °F

43.7 %

Amb. °F

Jared Curran

30.20 in. Hg

Darius Nuttbrock

Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

Sample Temp.

VELOCITY 1

2864

Recorder:

Gunner:

Projectile: .30 cal. 160gr. M2 AP

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER

TIME 1 TIME 2 WT. (gr.) WT. (gr.) μs (10⁻⁶) μs (10⁻⁶) 47.8 164.2 1746 1746

50 ft.

VELOCITY TEST RESULTS:

PENET.

33.22 Test sample satisfied the ballistic requirements given.



Range #:

Temperature:

Bar. Pressure:

Rel. Humidity:

Sample Temp.

2867

Recorder:

Gunner:

2

67.3 °F

43.7 %

Amb. °F

Jared Curran

VELOCITY 2

2867

30.20 in. Hg

Darius Nuttbrock

BALLISTIC RESISTANCE TEST - V₀

Customer: RMA Armament OBL ID#: 15888 Test Date: 1/26/2017

10 x 12

N/A

8.05

Purchase Order:

TEST SAMPLE Model No.:

Serial No.: 013 Lot No.: **OBL Test** Plies: N/A

Hard Armor Plate Description:

Thickness: Avg. Thk. (in):

Weight (lb.):

Size:

RANGE SET-UP

Range to Target: Screen Dist. Vel. 1 (ft.): 50 ft. Screen Dist. Vel. 2 (ft.): Screen 4 to target (ft): N/A

Primary Vel. Location: 8.25 ft. from target Striking Velocity: No N/A Target to Witness:

Witness Panel: Backing Material:

5.5" clay block w/ 3/4" plywood backing Obliquity: 0 Degrees .30-06/1:10/33" Barrel:

Pre Test:

Clay Drops (mm): 19.27 Drop Avg (mm): 20.22 Clay Temp °F: 93.5 Clay Box #:

Post Test: Clay Drops (mm): 16.64 Drop Avg (mm): 18.20

17.68 20.12

21.94

19.56 16.99

19.85

19.84

AMMUNITION Projectile: .30 cal. 160gr. M2 AP

REMARKS:

P=Partial Penetration C=Complete Penetration UH=Unfair Hit

Powder: N133

PENET.

Required Velocity:

Clay Temp °F:

2880 fps ± 30 fps

STANDARDS / PROCEDURES

NIJ-STD-0101.06 Level IV (abbrev) (mod)

PROJECTILE POWDER

TIME 1 TIME 2 VELOCITY 1 WT. (gr.) WT. (gr.) μs (10⁻⁶) μs (10⁻⁶) 47.8 164.6 1744 1744

VELOCITY 2867 TEST RESULTS:

AVERAGE

CALIPER OBLIQUITY BFD 34.00 NOTES

20.22

Test sample satisfied the ballistic requirements given.