

NATIONAL TECHNICAL SYSTEMS
BLUNT IMPACT TEST

Date Received: 10/15/18
 Via: USPS
 Returned Via: UPS

Report No.: HHV18001-3
 Test Date: 10/16/18
 Customer: Hard Head Veterans

PO No.: N/A
Test Spec.: AR/PD 10-02 Rev A with Change 6, 16 December 2013
Test Type: Blunt Impact Test
Requirements: 3.11
Procedure: 4.9.13
Equipment: Cadex Uni-Axial Monorail Impact Machine
 Model: 1000_00_MIMA
 Anvil Type: Hemispherical
DAQ Software: Version 6.9b, Last Updated Nov. 3, 2011

Sample Information:	Test Procedure:
Manufacturer: Hard Head Veterans	Conditioning: Ambient
Configuration: Finished Helmet	Pre-Conditioning: 24 hours @ 20 +/- 5 degrees C and 50 +/- 20% RH
Color / Size: Black / L / XL	Duration: N/A
Model: HHV ATE BALLISTIC	Re-Conditioning: N/A
Sample No.: Helmet #3	Impacts (14): 2 impacts at each of 7 locations \geq 1 min. but \leq 2 min. apart
Lot No.: N/A	HPI: 2.30" (Large)
Weight (lbs.): 3.00	Velocity: 10.0 ft/sec (+/- 0.3 ft/sec)
Condition: Ambient	

Test Results:

Impact #	Meets Time Req. (Y/N)	Impact Location	Headform Orientation	Velocity (ft/s)	Velocity (m/sec)	Peak Acceleration (G)	Pass / Fail
1	Y	Front	35° off vertical	9.895	3.0159	63.8	PASS
2	Y	Front	35° off vertical	9.982	3.0424	72.2	PASS
3	Y	Back	20° off vertical	10.269	3.1300	66.9	PASS
4	Y	Back	20° off vertical	9.963	3.0368	65.6	PASS
5	Y	Left	30° off vertical	9.954	3.0341	59.8	PASS
6	Y	Left	30° off vertical	10.069	3.0692	61.5	PASS
7	Y	Right	30° off vertical	10.004	3.0491	58.9	PASS
8	Y	Right	30° off vertical	10.010	3.0510	61.1	PASS
9	Y	Crown	90° off horizontal	10.338	3.1511	56.6	PASS
10	Y	Crown	90° off horizontal	10.007	3.0502	54.4	PASS
11	Y	Left Nape	0° off vertical, rolled 25° left	10.004	3.0493	68.2	PASS
12	Y	Left Nape	0° off vertical, rolled 25° left	10.091	3.0758	68.2	PASS
13	Y	Right Nape	0° off vertical, rolled 25° right	10.057	3.0654	65.1	PASS
14	Y	Right Nape	0° off vertical, rolled 25° right	10.045	3.0618	67.3	PASS

This test was performed in accordance with the specification requirements listed above. Test results properly reflect the performance of the listed sample.

Observations: YES NO
 Physical Damage (i.e. paint chipping, cracking): X

Notes:
 •Anvil positioned in-line with the lowest point of the ball-arm/accelerometer.

•Helmet tested **with** pads, suspension / retention system and chinstrap
***3-Hole NVG Shroud and side rails were removed prior to testing**