

BLUNT IMPACT PROTECTION

NTS-Chesapeake Testing 4603B Compass Point Road Belcamp, MD 21017	Client: Diamond Age Technologies Job No.: 3731-032-1 Test Date: 10/29/2020 Page No.: 1 of 8
Manufacturer: Diamond Age Technologies	Sample ID: DA-001

Sample		
Size: M/L Weight: 3.18 lbs Color: Green	Model: ACH Mfg. Date: NA Lot No.: NA	Date Received: 10/26/2020 Via: UPS Returned: UPS

Setup		
Impact Type: Impact Uni-Axial Drop Mass: 6.424 kg Mount Size: C D.O.T Mount Type: FMVSS218	Time Gate Flag : 25.32 mm Temperature: 65.9 °F Humidity: 57 % Conditioning: Ambient	Tester: Johnathan Harris Recorder: Johnathan Harris Filtering: CFC 1000 1650Hz Sensitivity: 10.041 mV/G

Applicable Standards or Procedures

- (1) AR/PD 10-02 Rev A with Change 7
- (2) Customer request

Requirement Number	Inspection Pass/Fail	Inspection Requirement
1	Pass	There shall be no physical damage to the helmet shell such as shell fracture, defined as a separation/split of the ballistic material through the entire thickness of the helmet shell, or indentation depth in excess of 0.15 inches present after impact testing (delamination and ply separation are permitted).
2	Pass	There should be no damage to any part of the retention system or pad system.

Impact Number	Impact Location	Pass/Fail Criteria <150 G	Peak Acc. (G)	Impact Velocity (ft/s)	Drop Height (in)	Strike Energy (J)	Head Injury Criteria (HIC)	Severity Index (SI)	Impact Deformation (in)
1	Crown	Pass	77.3	10.1	19.9	30.5	84.0	132.0	0.013
2	Crown	Pass	86.1	10.1	19.9	30.3	85.0	154.0	
3	Front	Pass	109.9	10.1	19.9	30.1	213.0	311.0	0.006
4	Front	Pass	104.1	10.1	19.9	30.2	234.0	308.0	
5	Back	Pass	92.9	10.0	19.9	29.9	153.0	188.0	0.008
6	Back	Pass	104.6	10.0	19.9	29.9	195.0	269.0	
7	Left	Pass	90.9	10.1	19.9	30.5	126.0	168.0	0.004
8	Left	Pass	28.7	10.1	19.9	30.4	24.0	28.0	
9	Right	Pass	68.1	10.1	19.9	30.2	89.0	116.0	0.005
10	Right	Pass	45.2	10.1	19.9	30.4	39.0	52.0	
11	Left Nape	Pass	71.0	10.1	19.9	30.2	115.0	135.0	0.003
12	Left Nape	Pass	78.3	10.0	19.9	30.0	146.0	182.0	
13	Right Nape	Pass	75.4	10.0	19.9	30.1	139.0	162.0	0.004
14	Right Nape	Pass	71.0	10.0	19.9	30.1	119.0	144.0	

Remarks:

The Head Positioning Index (HPI) was defined at 2.30 in and measured from the brim of the helmet to the basic plane on the headform for all impacts.

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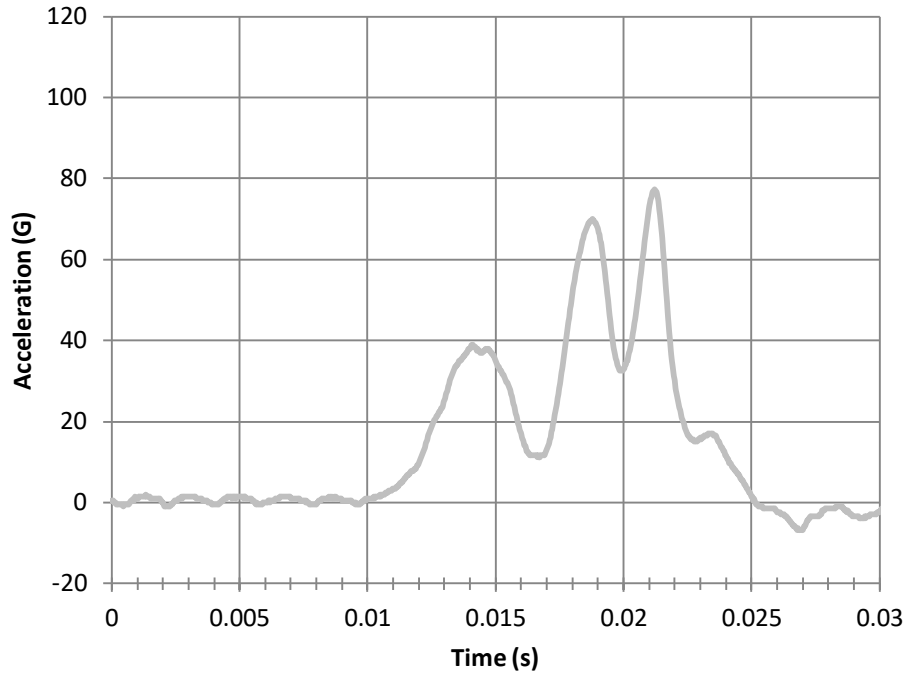
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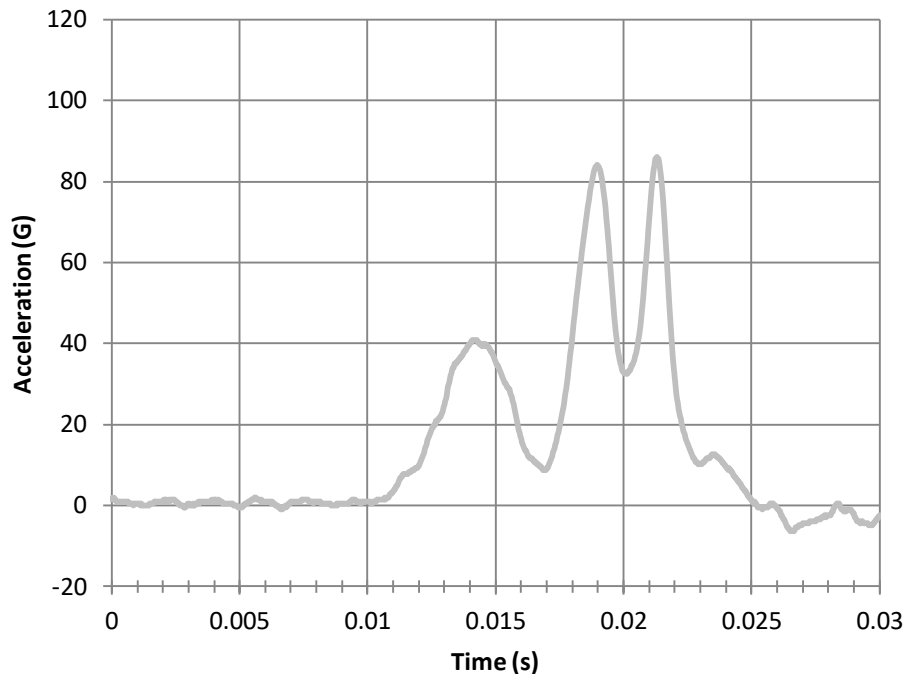
Manufacturer: Diamond Age Technologies

Sample ID: DA-001



Impact Number:	1
Impact Time:	08:24 AM
Impact Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Crown
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	77.3
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:



Impact Number:	2
Time:	08:25 AM
Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Crown
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	86.1
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:

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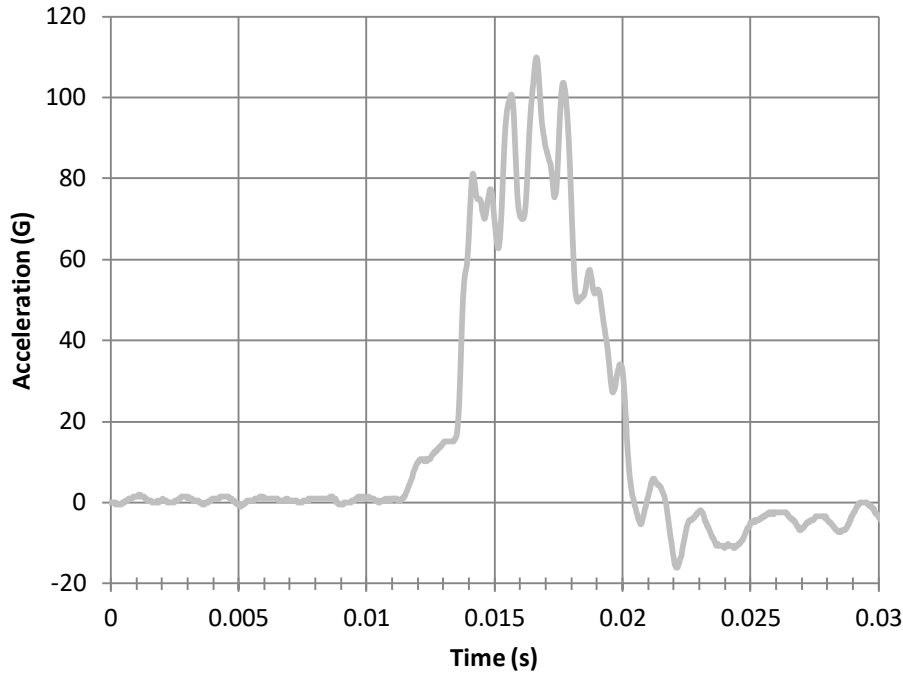
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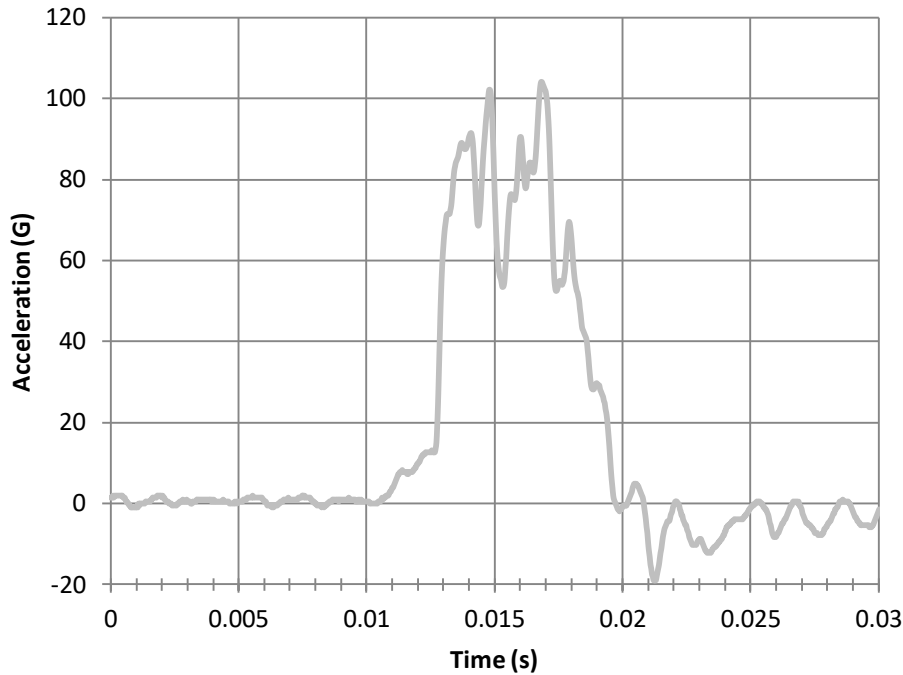
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Impact Number:	3
Impact Time:	08:37 AM
Impact Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Front
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	109.9
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0
Comments:	



Impact Number:	4
Time:	08:39 AM
Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Front
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	104.1
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0
Comments:	

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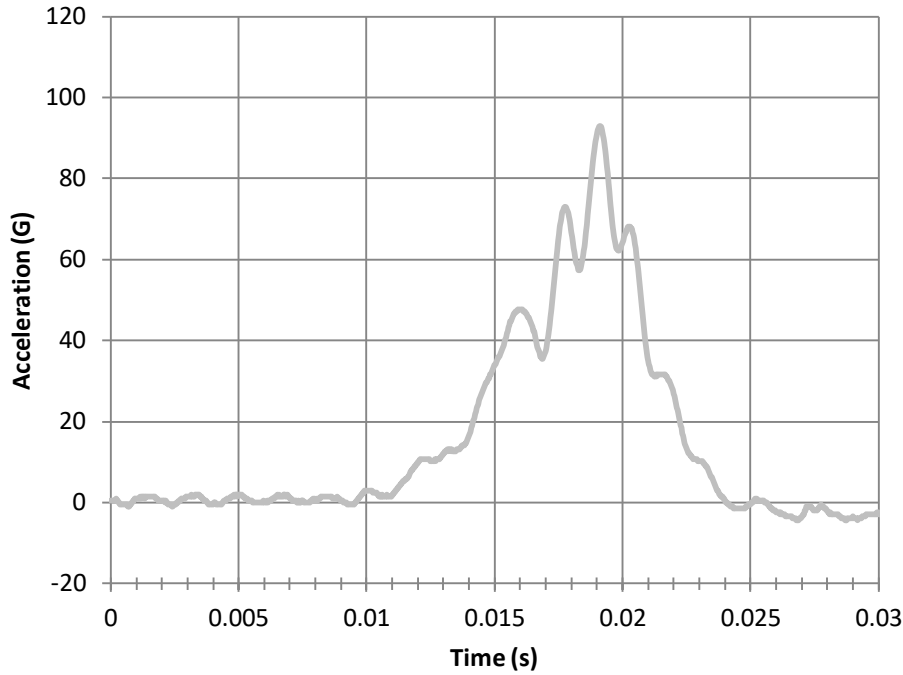
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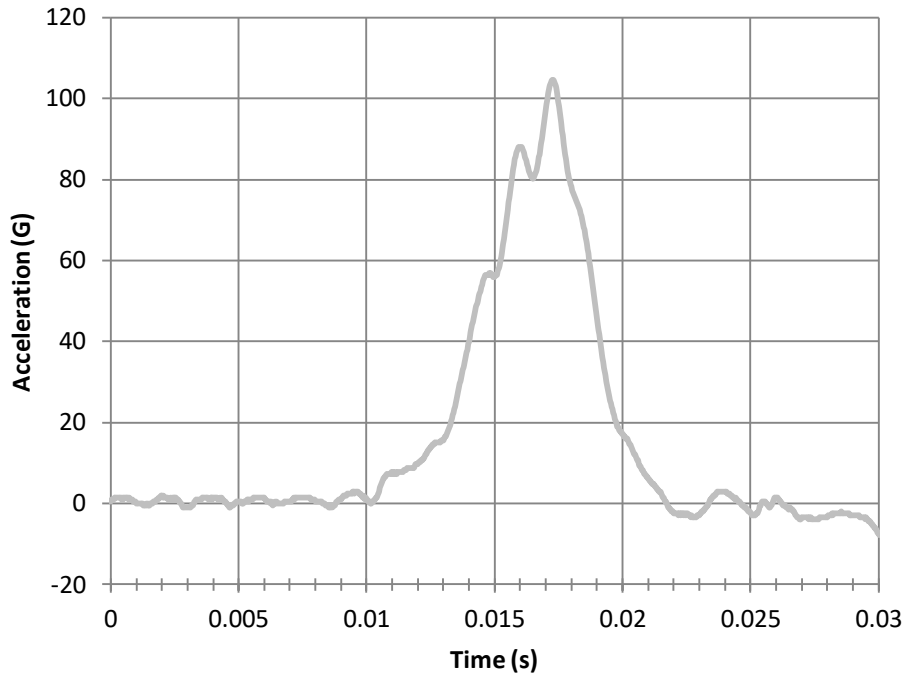
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Impact Number:	5
Impact Time:	08:51 AM
Impact Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Back
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.0
Peak Acc. (G):	92.9
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:



Impact Number:	6
Time:	08:53 AM
Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Back
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.0
Peak Acc. (G):	104.6
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:

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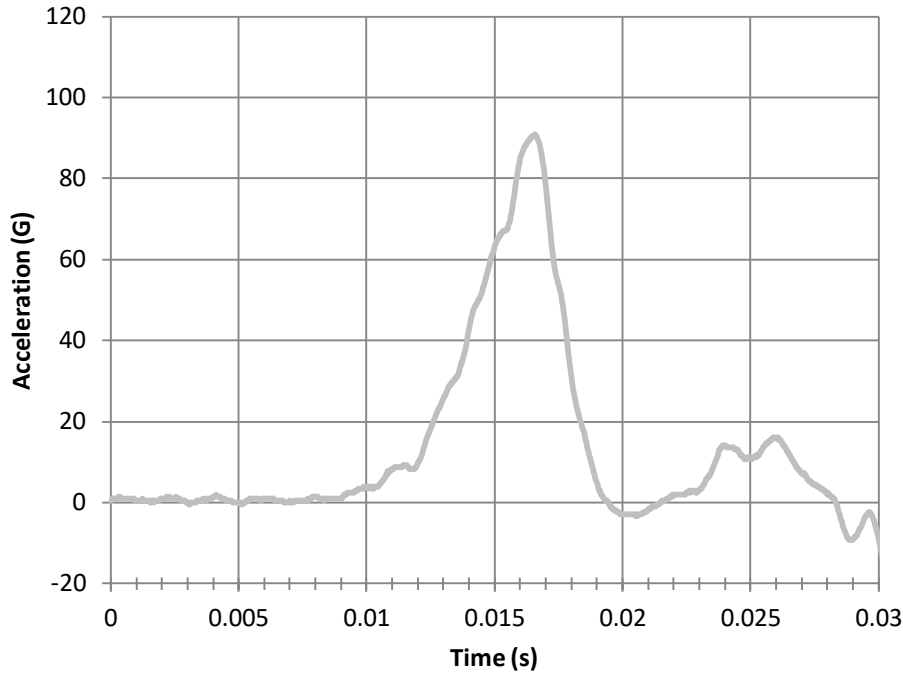
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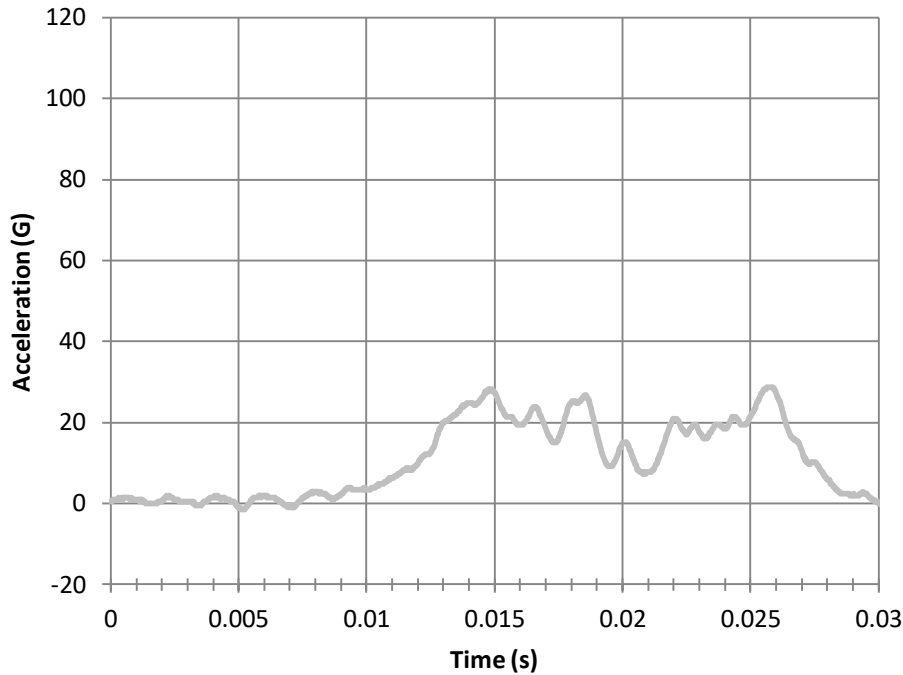
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Impact Number:	7
Impact Time:	09:13 AM
Impact Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Left
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	90.9
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:



Impact Number:	8
Time:	09:17 AM
Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Left
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	28.7
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:

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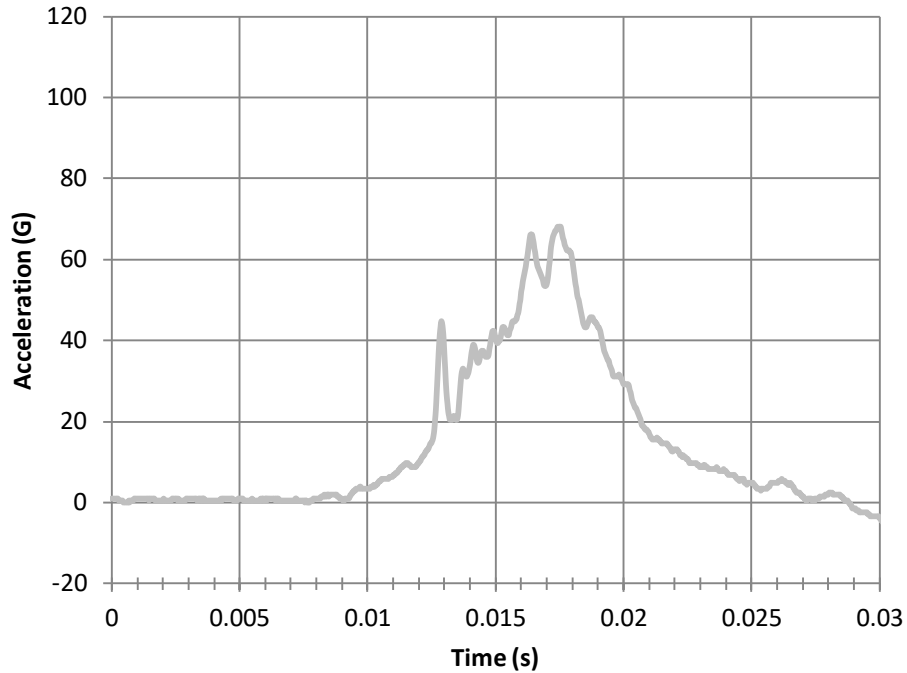
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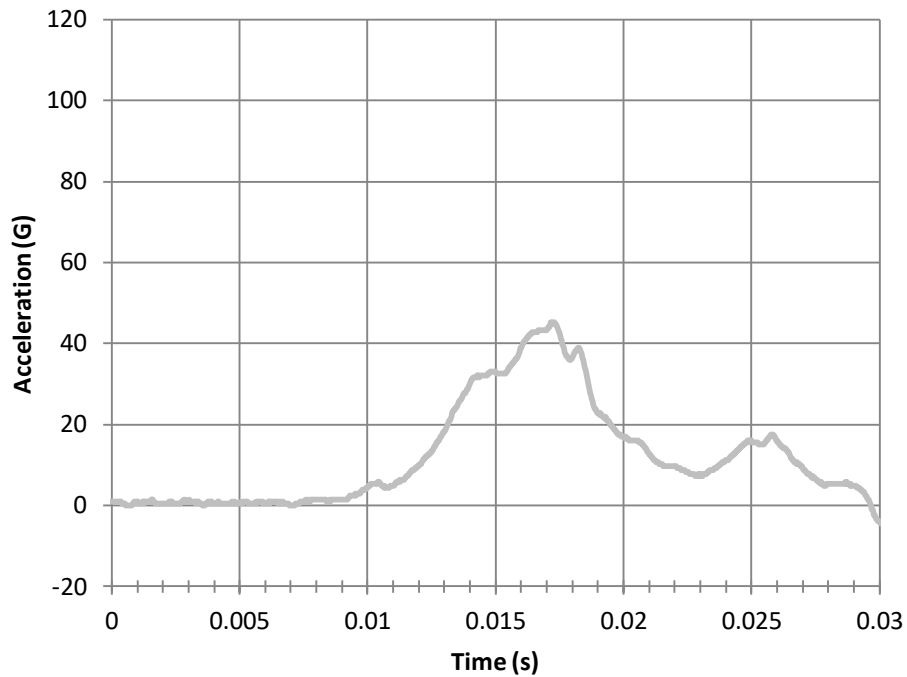
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Impact Number:	9
Impact Time:	10:01 AM
Impact Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Right
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	68.1
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:



Impact Number:	10
Time:	10:02 AM
Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Right
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	45.2
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:

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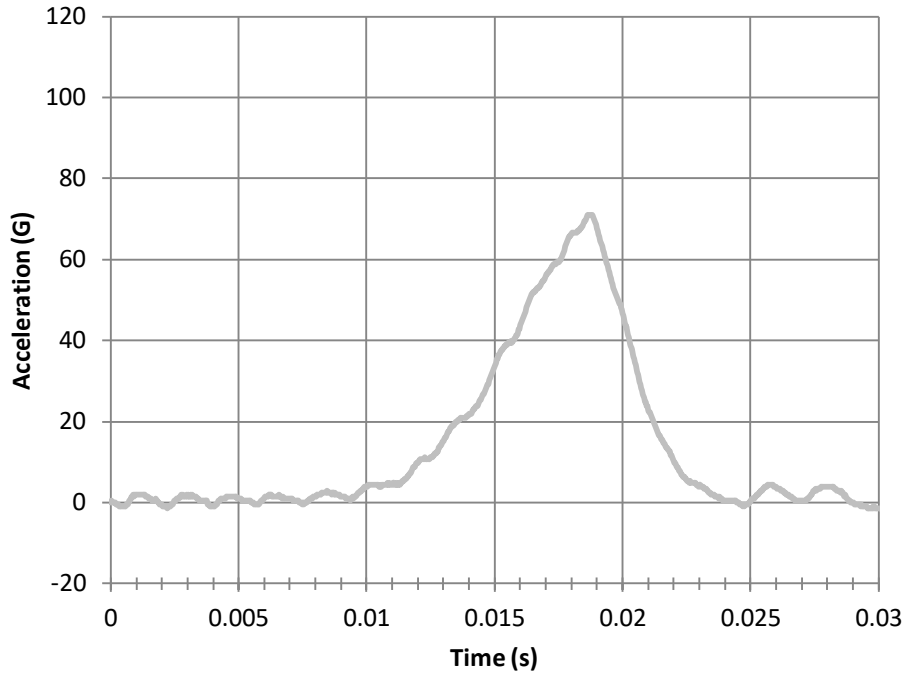
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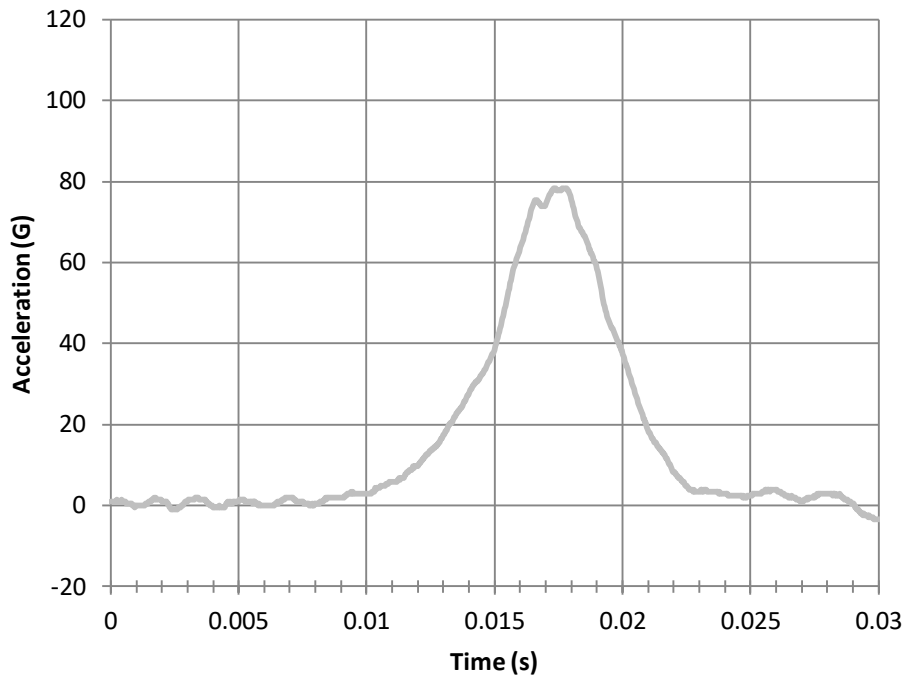
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Impact Number:	11
Impact Time:	10:19 AM
Impact Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Left Nape
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.1
Peak Acc. (G):	71.0
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:



Impact Number:	12
Time:	10:21 AM
Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Left Nape
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.0
Peak Acc. (G):	78.3
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:

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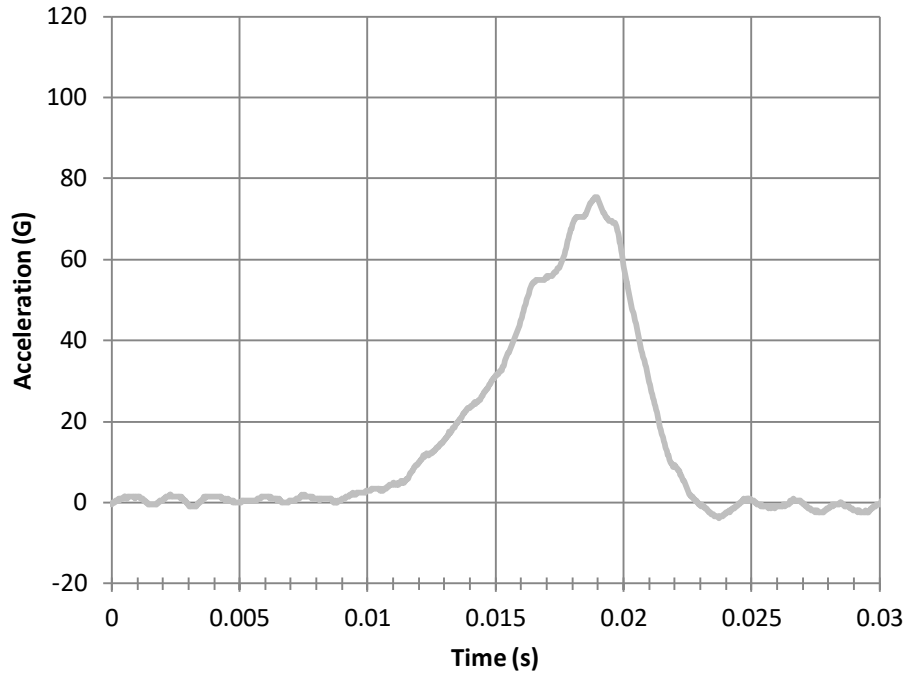
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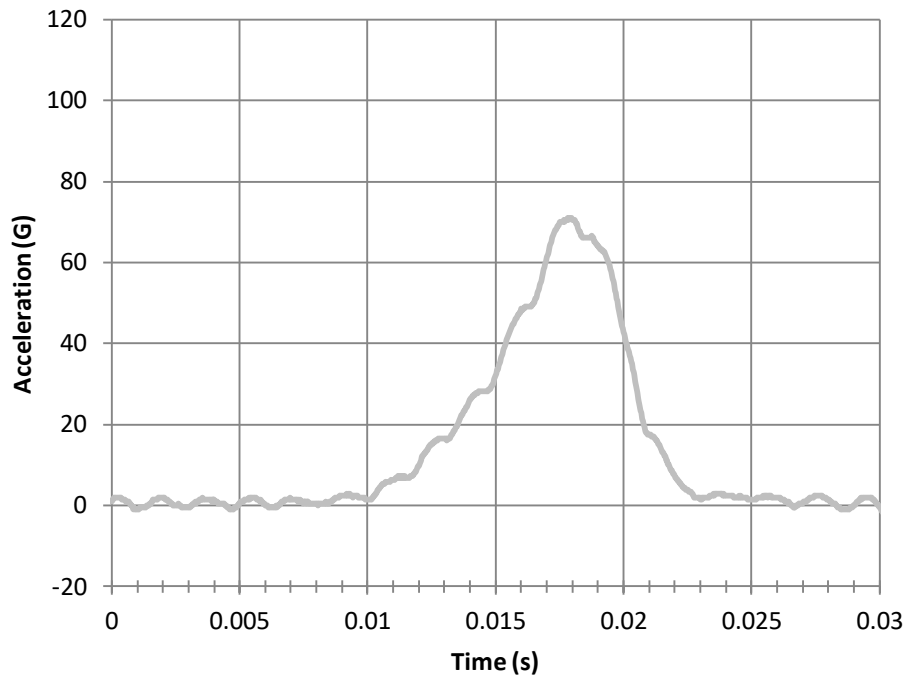
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Impact Number:	13
Impact Time:	10:33 AM
Impact Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Rear Rig
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.0
Peak Acc. (G):	75.4
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments:



Impact Number:	14
Time:	10:34 AM
Date:	10/29/2020
Conditioning:	Ambient
Impact Location:	Right Nape
Anvil Type:	Hemi
Impact Velocity (ft/s):	10.0
Peak Acc. (G):	71.0
Dwell Time over 150 G (ms):	0
Dwell Time over 200 G(ms):	0

Comments: