

SAFETY COMPLIANCE TESTING FOR FMVSS No. 218 MOTORCYCLE HELMETS

Brand: VOSSDOT
Model: HF-701DV
Tested Size: L (59-60 cm)



27 June 2019

Final Report No.: 1065.0006.001

Tested By:

Taicang ACT Sporting Goods Testing Co., Ltd.

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Ludu Town, Taicang City, Suzhou,
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PURPOSE OF COMPLIANCE TEST

Purpose:

The purpose of this test was to determine if the motorcycle helmets supplied by:

VOSSDOT

Met the requirements of

Federal Motor Vehicle Safety Standard No. 218: Motorcycle Helmets effective May 13, 2013.

All samples received were in good condition and appropriate for these tests.

Test Procedure:

This test was performed following TP-218-07 and ACT Lab Helmet Cadex Testing Manual 2.3

HELMET DATA

HELMET BRAND NAME: VOSSDOT

HELMET MODEL DESIGNATION: HF-701DV

HELMET MANUFACTURER: _____

HELMET SIZE: L (59-60 cm)

HELMET COVERAGE: Partial - _____; Full - _____; Complete Facial - X

HELMET POSITIONING INDEX: 52 mm

SHELL MATERIAL: ABS/Fiberglass

LINER MATERIAL: Polyester Resin and Polystyrene

BUCKLE DESCRIPTION: Quick Release Ratchet Type

HELMET	A Ambient	B Low Temp	C High Temp	D Water Immersed	E Spare
Shell Color/Pattern	Black	Black	Black	Black	Black
Weight (grams)	1251	1253	1250	1258	1436
Month & Year of Manufacture	06/19	06/19	06/19	06/19	06/19

Reviewed by: John Bogler 

COMMENTS:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. Weights listed above for helmets A-D are as tested with all attachments removed.
3. Weight for helmet E is complete with all components in place.
4. ACT determined the HPI information prior to testing.

SUMMARY OF TEST RESULTS

INDICATE - Pass or - Fail

HELMET	A	B	C	D	COMMENTS
TEST	AMBIENT	LOW TEMP	HIGH TEMP	WATER IMMERSED	
IMPACT	Pass	Pass	Pass	Pass	
PENETRATION	Pass	Pass	Pass	Pass	
RETENTION	Pass	Pass	Pass	Pass	

TEST	PASS	FAIL
PERIPHERAL VISION	Pass	
PROJECTIONS	Pass	
LABELING	*Pass	

COMMENT:

- S5.6 Labeling: *Client has supplied digital artwork for section 5.6. ACT has only evaluated that the required content is present, additional formatting, appearance and permanency requirements unable to be evaluated.

SELECTION OF APPROPRIATE HEADFORM

Paragraph S6.1 - If the helmet size designation falls into more than one of three size ranges, it shall be tested on each appropriate headform.

HELMET SIZE DESIGNATION	HEADFORM SIZE
Less than or equal to 6-3/4 (European Size 54)	SMALL
Greater than 6-3/4, but less than or equal to 7-1/2 (European Size 60)	MEDIUM
Greater than 7-1/2 (European 60)	LARGE

COMMENTS:

The manufacturer marked the helmet with its corresponding discrete size: L (59-60 cm).

Discrete Size: 59-60 cm, Headform Size: DOT MEDIUM

CONDITIONING FOR TESTING — Paragraph S6.4 — The protective headgear shall be conditioned for not less than 4 hours and no more than 24 hours, in the specified environmental condition shown below, prior to test.

Ambient Conditions	16°C to 26°C (61°F to 79°F); 30% to 70% Relative Humidity
Low Temperature	-15°C to -5°C (5°F to 23°F)
High Temperature	45°C to 55°C (113°F to 131°F)
Water Immersion	16°C to 26°C (61°F to 79°F)

The maximum time during which the protective headgear may be out of the conditioning environment shall not exceed 4 minutes. It must then be returned to the conditioning environment for a minimum of 3 minutes for each minute or portion of a minute in excess of 4 minutes out of the conditioning environment or 12 hours, whichever is less, prior to resumption of testing.

AVERAGE LAB TEMPERATURE : 22 °C ; AVERAGE LAB HUMIDITY : 57 %



IMPACT ATTENUATION

Helmet ID	Condition	Impact #	Impact Location	Anvil	Drop Height (cm)	Velocity (m/sec)	Duration at 150G (ms)	Duration at 200G (ms)	Peak Acc. (g)	Pass/Fail
1065.0006.001-A	Ambient	1	LF SIDE	FLAT	192.0	6.0435	0.99	0.00	156.0	Pass
1065.0006.001-A	Ambient	2	LF SIDE	FLAT	192.0	6.0586	2.77	0.00	194.3	Pass
1065.0006.001-A	Ambient	3	REAR	FLAT	192.0	5.9887	0.00	0.00	146.1	Pass
1065.0006.001-A	Ambient	4	REAR	FLAT	192.0	5.9860	1.91	0.00	164.3	Pass
1065.0006.001-A	Ambient	5	FRONT	HEMI	145.0	5.2108	0.00	0.00	87.1	Pass
1065.0006.001-A	Ambient	6	FRONT	HEMI	145.0	5.2198	0.00	0.00	85.6	Pass
1065.0006.001-A	Ambient	7	RT SIDE	HEMI	145.0	5.2160	0.00	0.00	112.7	Pass
1065.0006.001-A	Ambient	8	RT SIDE	HEMI	145.0	5.2185	0.00	0.00	122.5	Pass
1065.0006.001-B	Cold	1	LF SIDE	FLAT	192.0	6.0666	0.00	0.00	146.1	Pass
1065.0006.001-B	Cold	2	LF SIDE	FLAT	192.0	6.0554	2.68	0.00	186.0	Pass
1065.0006.001-B	Cold	3	REAR	FLAT	192.0	6.0074	0.00	0.00	148.1	Pass
1065.0006.001-B	Cold	4	REAR	FLAT	192.0	6.0241	2.20	0.00	166.3	Pass
1065.0006.001-B	Cold	5	FRONT	HEMI	145.0	5.2288	0.00	0.00	85.1	Pass
1065.0006.001-B	Cold	6	FRONT	HEMI	145.0	5.2269	0.00	0.00	99.4	Pass
1065.0006.001-B	Cold	7	RT SIDE	HEMI	145.0	5.2172	0.00	0.00	99.4	Pass
1065.0006.001-B	Cold	8	RT SIDE	HEMI	145.0	5.2250	0.00	0.00	101.4	Pass
1065.0006.001-C	Hot	1	LF SIDE	FLAT	192.0	6.0200	0.34	0.00	155.5	Pass
1065.0006.001-C	Hot	2	LF SIDE	FLAT	192.0	6.0158	2.99	0.00	183.0	Pass
1065.0006.001-C	Hot	3	REAR	FLAT	192.0	5.9992	0.00	0.00	92.0	Pass
1065.0006.001-C	Hot	4	REAR	FLAT	192.0	6.0202	0.00	0.00	146.6	Pass
1065.0006.001-C	Hot	5	FRONT	HEMI	145.0	5.2159	0.00	0.00	76.8	Pass
1065.0006.001-C	Hot	6	FRONT	HEMI	145.0	5.2187	0.00	0.00	95.9	Pass
1065.0006.001-C	Hot	7	RT SIDE	HEMI	145.0	5.2618	0.00	0.00	102.3	Pass
1065.0006.001-C	Hot	8	RT SIDE	HEMI	145.0	5.2627	0.00	0.00	110.2	Pass
1065.0006.001-D	Wet	1	LF SIDE	FLAT	192.0	6.0330	0.35	0.00	152.0	Pass
1065.0006.001-D	Wet	2	LF SIDE	FLAT	192.0	6.0058	2.78	0.00	179.1	Pass
1065.0006.001-D	Wet	3	REAR	FLAT	192.0	6.0109	0.00	0.00	124.0	Pass
1065.0006.001-D	Wet	4	REAR	FLAT	192.0	6.0147	0.00	0.00	135.3	Pass
1065.0006.001-D	Wet	5	FRONT	HEMI	145.0	5.2326	0.00	0.00	71.8	Pass
1065.0006.001-D	Wet	6	FRONT	HEMI	145.0	5.2143	0.00	0.00	90.0	Pass
1065.0006.001-D	Wet	7	RT SIDE	HEMI	145.0	5.2246	0.00	0.00	88.1	Pass
1065.0006.001-D	Wet	8	RT SIDE	HEMI	145.0	5.2572	0.00	0.00	139.7	Pass

Contract File No.: 1065.0006

Test File: 001

Control Document Rev.6 CN Official ACT DOT TP-07 Report Template 3 JAN 2018

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Technician: Edward Wong

Test Date: 27 June 2019

PENETRATION

Paragraph S5.2 and S7.2

WEIGHT OF STRIKER: 6 pounds 10 ± 2 ounces (2.95 ± 0.05 kg)

POINT OF STRIKER: Tip angle of 60 ± 0.5°, Cone height of 1.5 ± 0.015 in. (3.8 ± 0.038 cm), Tip radius of 0.02 ± 0.004 inch (0.5 ± 0.1 mm), and a minimum hardness of 60 Rockwell, C-scale.

HEIGHT OF FALL: 118.1 ± 0.6 in (3 ± 0.015 m), as measured from striker point to the impact point on the outer surface of the test helmet.

FAILURE CRITERION: When tested, the protective headgear shall be failed if the striker has made an indentation in the headform.

TEST	HELMET	TEST LOCATION	PASS	FAIL	CONDITIONS
1	A	Crown	X		AMBIENT
2	A	Rear Left	X		AMBIENT
3	B	Crown	X		LOW TEMPERATURE
4	B	Rear Left	X		LOW TEMPERATURE
5	C	Crown	X		HIGH TEMPERATURE
6	C	Rear Left	X		HIGH TEMPERATURE
7	D	Crown	X		IMMERSED
8	D	Rear Left	X		IMMERSED

RETENTION SYSTEM

Paragraph S5.3 and S7.3

REQUIREMENTS:

READING	APPLIED LOAD
INITIAL	22.68 kg, + 4.54 kg, - 0 kg (50.0 lbs., + 10 lbs., - 0 lbs.)
FINAL	136 kg, + 0 kg, - 2.3 kg (300.0 lbs., + 0 lbs., - 5 lbs.)

ELONGATION NOT TO EXCEED 2.54 cm (1.0 INCH) AFTER LOAD INCREASE

HELMET	CONDITIONS	ELONGATION (cm)
A	AMBIENT	1.40
B	LOW TEMPERATURE	1.23
C	HIGH TEMPERATURE	1.66
D	WATER IMMersed	1.45

PERIPHERAL VISION

Paragraph S5.4 - Helmet shall provide a minimum peripheral vision of 105° to each side of the mid-sagittal plane. The brow opening shall be at least 2.54 cm above all points in the basic plane that are within the angles of peripheral vision.

	REQUIREMENTS	RESULTS
DEGREE EACH SIDE M.S. PLANE	> 105°	Pass
BROW OPENING	> 2.54 cm	Pass

PROJECTIONS

Paragraph S5.5

REQUIREMENTS:

PROJECTION	REQUIREMENT
Internal rigid	None
External rigid	Operational, shall not protrude more than 5 mm

TEST RESULTS:

PROJECTION	PRESENT?	HEIGHT (mm)
Internal	None	Not Applicable
External	Vent Cover Operation Switch	6.2 mm

COMMENT: The vent cover operation switch is greater than 5 mm in height but is loosely attached to the shell and therefore deemed non-rigid.

LABELING

S5.6.1 *Labeling* - Each helmet shall be permanently and legibly labeled, in a manner such that the label(s) can be easily read without removing padding or any other permanent part, with the following:

Required Information	Content/Format	Permanent
Manufacturer's name	Pass	*Pass
Discrete size	Pass	*Pass
Month and year of manufacture	Pass	*Pass
Instructions to the purchaser as follows:	-----	-----
"Shell and liner constructed of (identify type(s) of materials)."	Pass	*Pass
"Helmet can be seriously damaged by some common substances without damage being visible to the user."	Pass	*Pass
"Apply only the following: (Recommended cleaning agents, paints, adhesives, etc., as appropriate.)"	Pass	*Pass
"Make no modifications."	Pass	*Pass
"Fasten helmet securely."	Pass	*Pass
"If helmet experiences a severe blow, return it to the manufacturer for inspection, or destroy it and replace it."	Pass	*Pass

COMMENT:

- S5.6 Labeling: *Client has supplied digital artwork for section 5.6.1. ACT has only evaluated that the required content is present, additional formatting, appearance and permanency requirements unable to be evaluated.

LABELING

S5.6.2 Certification. Each helmet shall be labeled permanently and legibly with a label, constituting the manufacturer's certification that the helmet conforms to the applicable Federal motor vehicle safety standards, that is separate from the label(s) used to comply with S5.6.1, and complies with paragraphs (a) through (c) of this section. (a) Content, format, and appearance. The label required by paragraph S5.6.2 shall have the following content, format, and appearance:

Required Certification Information	Content/ Format	Permanent
The symbol "DOT," horizontally centered on the label, in letters not less than 0.38 inch (1.0 cm) high.	*Pass	*Pass
The term "FMVSS No. 218," horizontally centered beneath the symbol DOT, in letters not less than 0.09 inches (0.23 cm) high.	*Pass	
The word "CERTIFIED," horizontally centered beneath the term "FMVSS No. 218," in letters not less than 0.09 inches (0.23 cm) high.	*Pass	
The precise model designation horizontally centered above the symbol DOT, in letters and/or numerals not less than 0.09 inch (0.23 cm) high.	*Pass	
The manufacturer's name and/or brand, horizontally centered above the model designation, in letters and/or numerals not less than 0.09 inch (0.23 cm) high.	*Pass	
All symbols, letters and numerals shall be in a color that contrasts with the background of the label.	*Pass	
No information, other than the information specified in subparagraph (a), shall appear on the label.	*Pass	
The label shall appear on the outer surface of the helmet and be placed so that it is centered laterally with the horizontal centerline of the DOT symbol located a minimum of 1 inch (2.5 cm) and a maximum of 3 inches (7.6 cm) from the bottom edge of the posterior portion of the helmet.	*Pass	

COMMENT:

- S5.6 Labeling: *Client has supplied digital artwork for section 5.6.2. ACT has only evaluated that the required content is present, additional formatting, appearance and permanency requirements unable to be evaluated.

TEST DATA

Uni-Axial Calibration

Helmet Manufacturer :
Address :

Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town,
Taicang City, Suzhou, Jiangsu Province,
China 215412

Laboratory Technician name: Edward

M.E.P. Pad Model: 1 MEP

Laboratory Temperature: 22 deg C

Laboratory Humidity: 57 %

Selected Filter Frequency: 1000 Hz

Acc. sensitivity (axis Z) : 9.92 mV/G

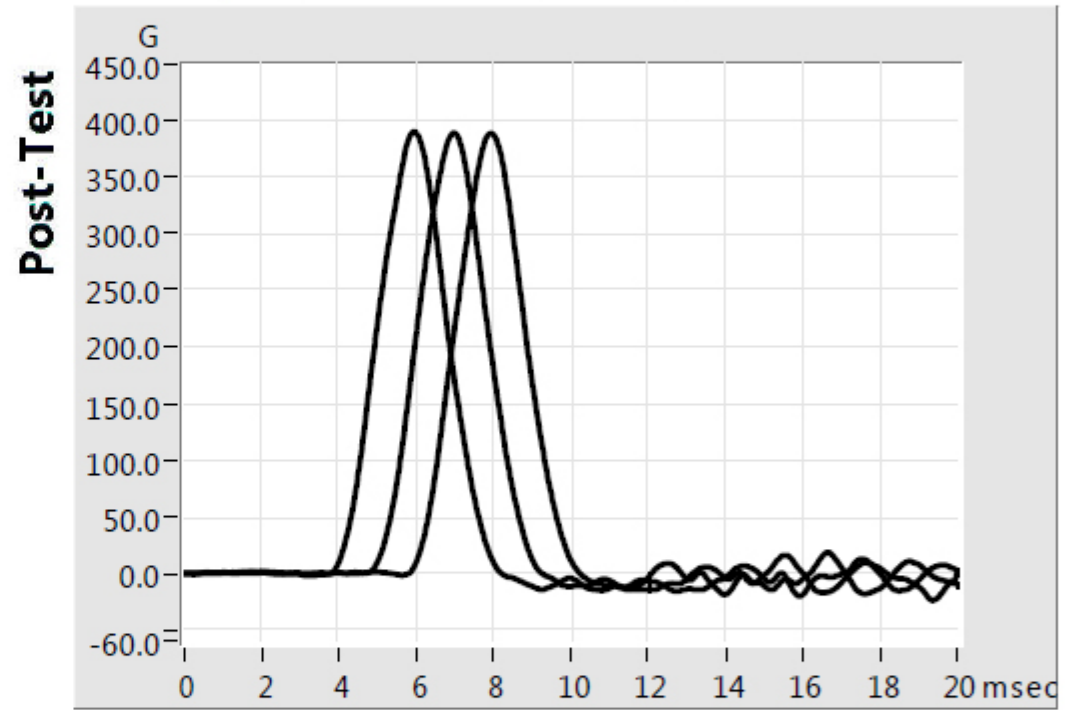
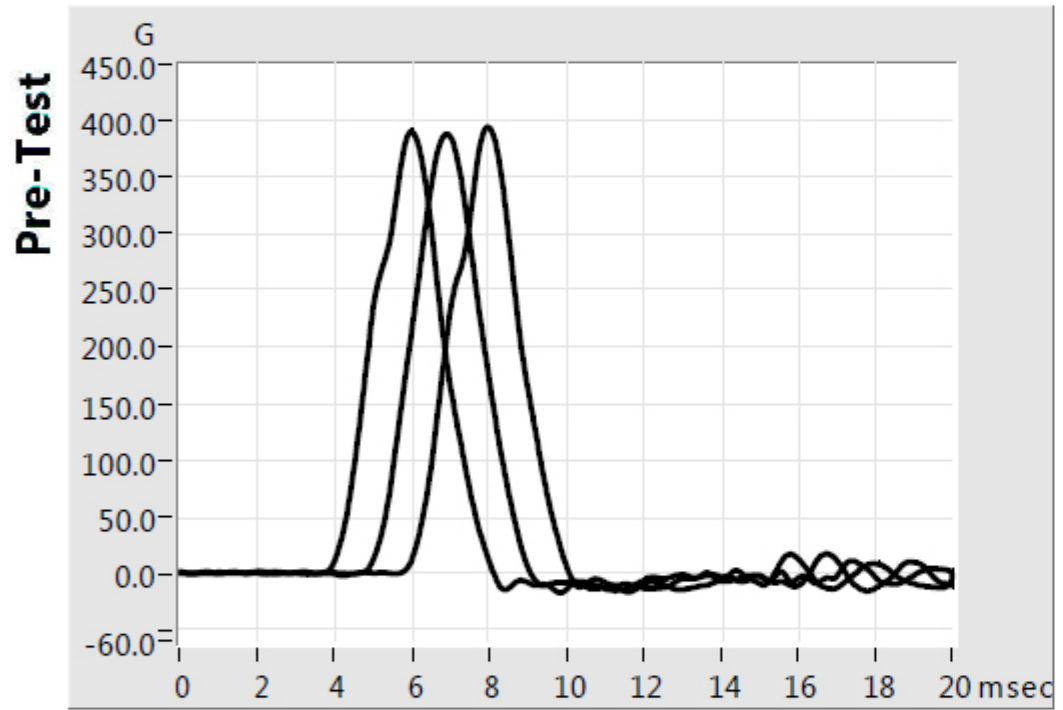
Acc. sensitivity (axis X) : 10.31 mV/G

Acc. sensitivity (axis Y) : 10.31 mV/G

Drop Device : Spherical Impactor (Uni-Axial)

Drop mass assembly : 5.000 kg Time gate flag height : 25.40 mm

Calibration peak : 400.0 G +/- 25.00 G



Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
Pre-Test	1	4.3537	100.0	MEP PAD	2.36	1.97	0/0	2019-06-26	08:51:24	1.7	Pass
	2	4.4215	100.0	MEP PAD	2.36	1.94	0/0	2019-06-26	08:52:31	0.2	Pass
	3	4.3869	100.0	MEP PAD	2.37	1.96	0/0	2019-06-26	08:53:39	0.9	Pass
Post-Test	1	4.4491	100.0	MEP PAD	2.35	1.95	0/0	2019-06-26	10:22:13	-0.5	Pass
	2	4.4332	100.0	MEP PAD	2.34	1.96	0/0	2019-06-26	10:23:09	-0.1	Pass
	3	4.4346	100.0	MEP PAD	2.34	1.95	0/0	2019-06-26	10:24:08	-0.1	Pass

Curve impact #2 : shift of 1ms
Curve impact #3 : shift of 2ms

Impact Uni-Axial

Testing Laboratory : Taicang ACT Lab

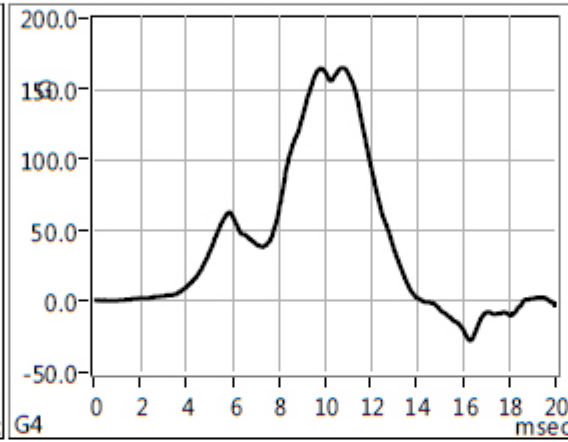
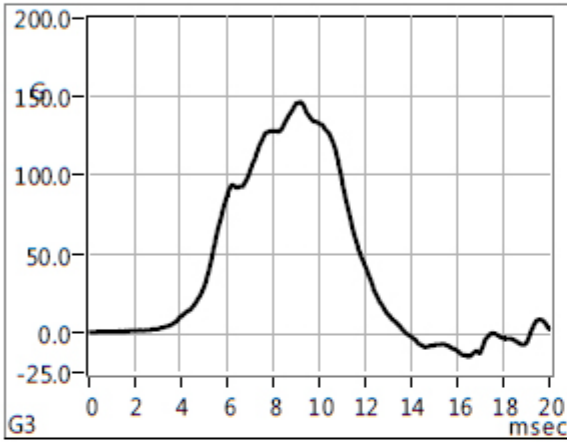
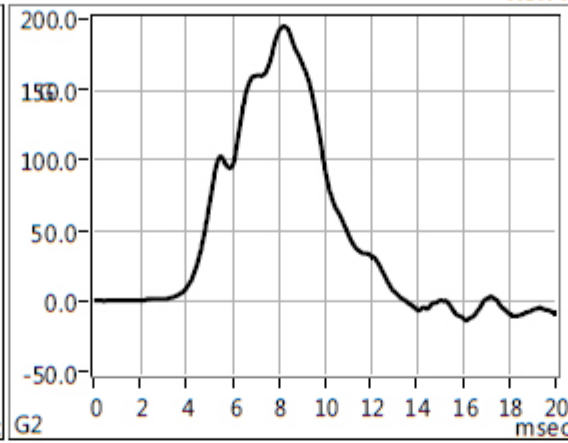
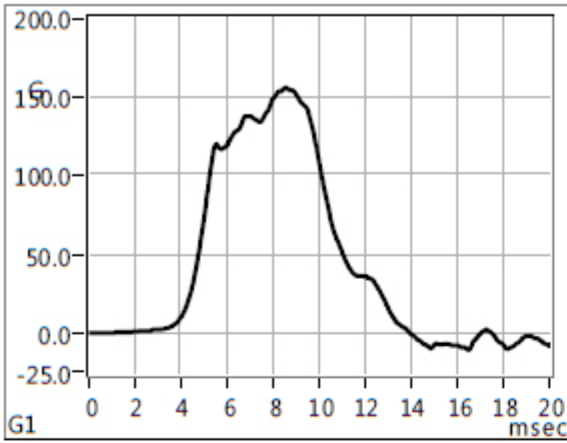
Address : No.35 Zhenghe Road, Ludu Town,
Taicang City, Suzhou, Jiangsu
Province, China 215412

Helmet Manufacturer :
Address :

Laboratory Technician name : Edward

Batch Number :

Ref. P.O. Number :



Model : HF-701DV
Color : Black
Size : L(59-60CM)
Weight : 1251.00 g
Manufacturing Date : 25 Jun 2019
Standard Request : FMVSS218
Identification Code : 1065.0006.001-A
Headform Model : D.O.T.
Headform Size : C D.O.T
Conditioning : Ambient
Laboratory Temperature : 22 deg C
Laboratory Humidity : 57 %
Selected Filter Frequency : 1650 Hz
Maximum Peak G's authorized : 400 G
Maximum Peak m/s² authorized : 3923 m/s²
Drop mass assembly : 5.000 kg
Time gate flag height : 25.40 mm
Acc. sensibility (axis Z) : 9.92

Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
1	156.0	6.0435	192.0	FLAT	0.99	0.00	LF SIDE	2019-06-26	09:55:09	1.5	Pass
2	194.3	6.0586	192.0	FLAT	2.77	0.00	LF SIDE	2019-06-26	09:55:25	1.3	Pass
3	146.1	5.9887	192.0	FLAT	0.00	0.00	REAR	2019-06-26	10:02:33	2.4	Pass
4	164.3	5.9860	192.0	FLAT	1.91	0.00	REAR	2019-06-26	10:02:51	2.5	Pass

Impact Uni-Axial

Testing Laboratory : Taicang ACT Lab

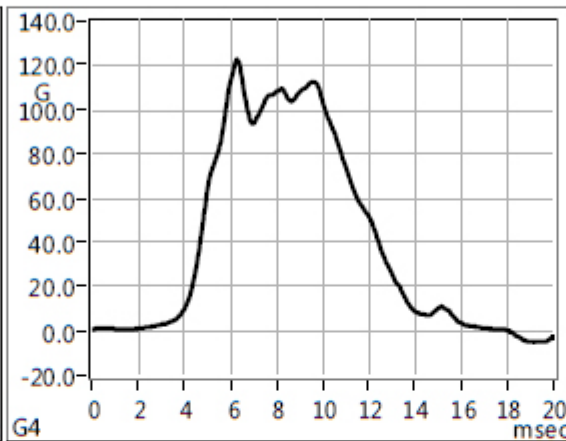
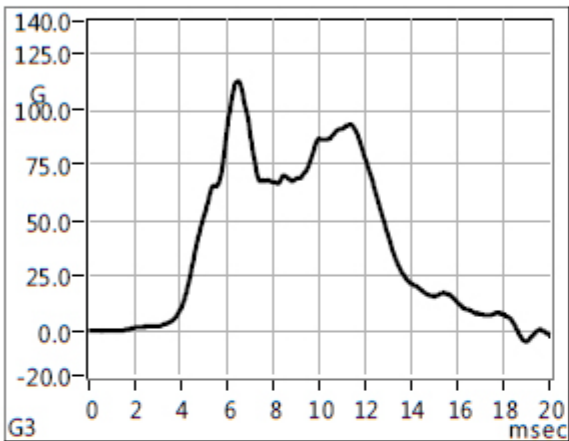
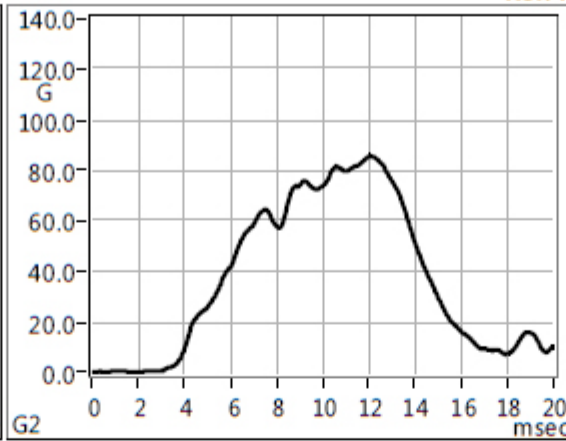
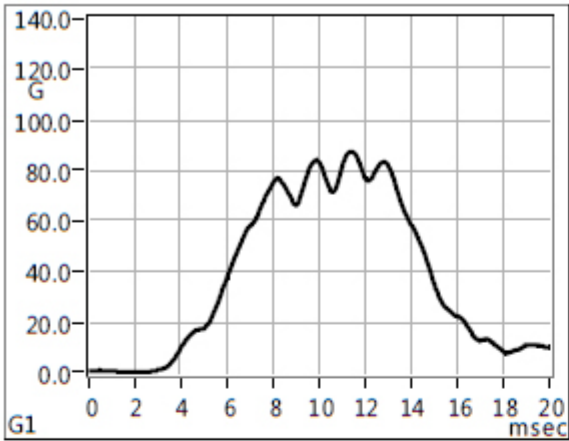
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Helmet Manufacturer :
Address :

Laboratory Technician name : Edward

Batch Number :

Ref. P.O. Number :



Model : HF-701DV
Color : Black
Size : L(59-60CM)
Weight : 1251.00 g
Manufacturing Date : 25 Jun 2019
Standard Request : FMVSS218
Identification Code : 1065.0006.001-A
Headform Model : D.O.T.
Headform Size : C D.O.T
Conditioning : Ambient
Laboratory Temperature : 22 deg C
Laboratory Humidity : 57 %
Selected Filter Frequency : 1650 Hz
Maximum Peak G's authorized : 400 G
Maximum Peak m/s² authorized : 3923 m/s²
Drop mass assembly : 5.000 kg
Time gate flag height : 25.40 mm
Acc. sensibility (axis Z) : 9.92

Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
5	87.1	5.2108	145.0	HEMI	0.00	0.00	FRONT	2019-06-26	10:10:01	2.3	Pass
6	85.6	5.2198	145.0	HEMI	0.00	0.00	FRONT	2019-06-26	10:10:17	2.1	Pass
7	112.7	5.2160	145.0	HEMI	0.00	0.00	RT SIDE	2019-06-26	10:15:33	2.2	Pass
8	122.5	5.2185	145.0	HEMI	0.00	0.00	RT SIDE	2019-06-26	10:15:48	2.1	Pass

Impact Uni-Axial

Testing Laboratory : Taicang ACT Lab

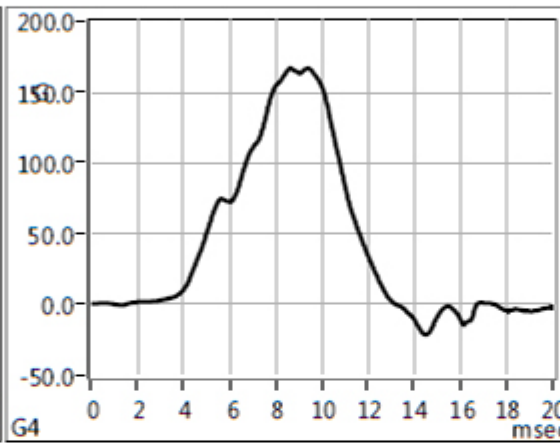
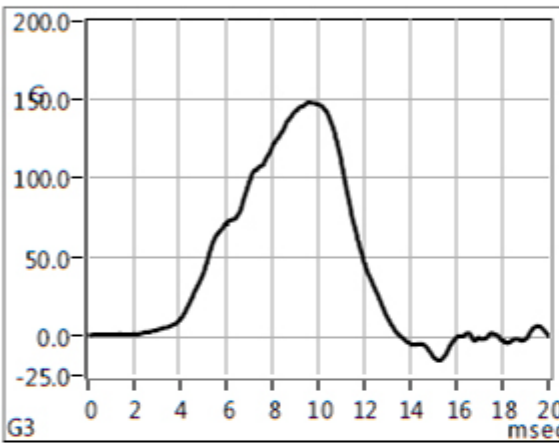
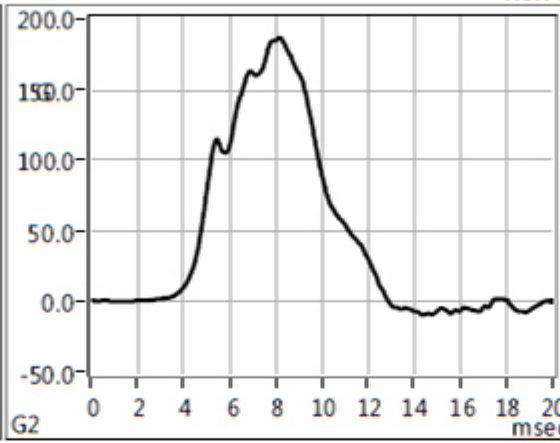
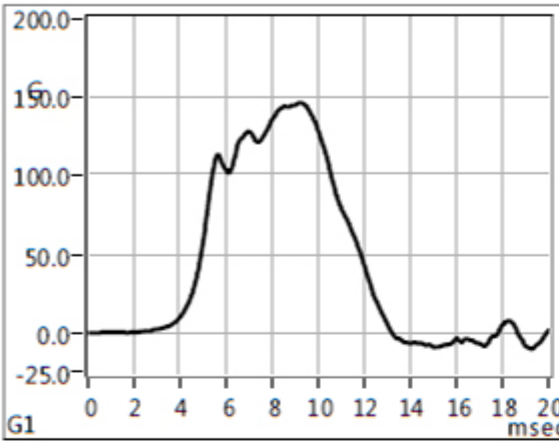
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Helmet Manufacturer :
Address :

Laboratory Technician name : Edward

Batch Number :

Ref. P.O. Number :



Model : HF-701DV
Color : Black
Size : L(59-60CM)
Weight : 1253.00 g
Manufacturing Date : 25 Jun 2019
Standard Request : FMVSS218
Identification Code : 1065.0006.001-B
Headform Model : D.O.T.
Headform Size : C D.O.T
Conditioning : Cold
Laboratory Temperature : 22 deg C
Laboratory Humidity : 57 %
Selected Filter Frequency : 1650 Hz
Maximum Peak G's authorized : 400 G
Maximum Peak m/s² authorized : 3923 m/s²
Drop mass assembly : 5.000 kg
Time gate flag height : 25.40 mm
Acc. sensibility (axis Z) : 9.92

Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
1	146.1	6.0666	192.0	FLAT	0.00	0.00	LF SIDE	2019-06-26	09:56:38	1.1	Pass
2	186.0	6.0554	192.0	FLAT	2.68	0.00	LF SIDE	2019-06-26	09:57:04	1.3	Pass
3	148.1	6.0074	192.0	FLAT	0.00	0.00	REAR	2019-06-26	10:04:36	2.1	Pass
4	166.3	6.0241	192.0	FLAT	2.20	0.00	REAR	2019-06-26	10:04:52	1.8	Pass

Impact Uni-Axial

Testing Laboratory : Taicang ACT Lab

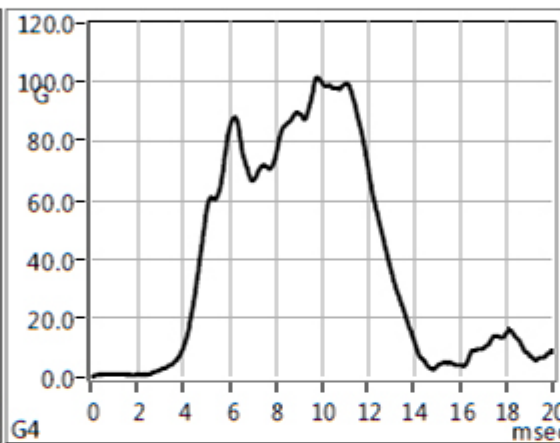
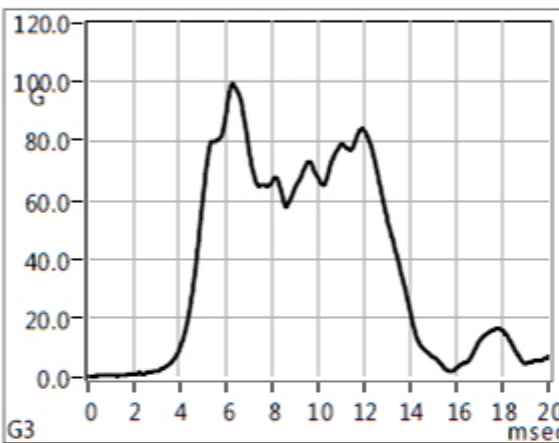
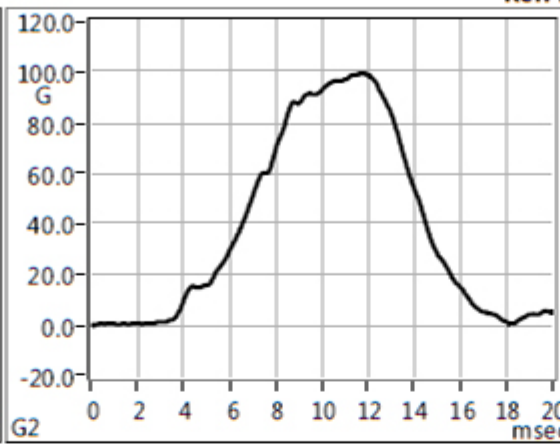
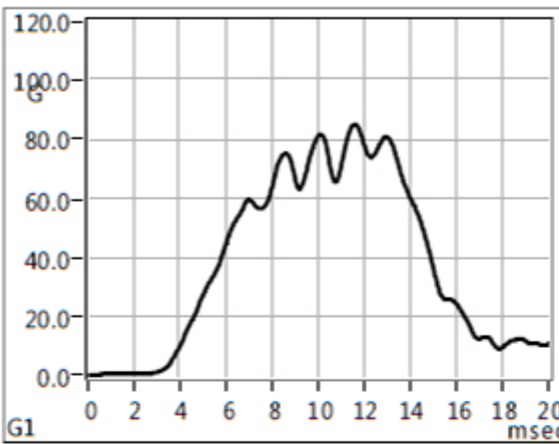
Address : No.35 Zhenghe Road, Ludu Town,
Taicang City, Suzhou, Jiangsu
Province, China 215412

Helmet Manufacturer :
Address :

Laboratory Technician name : Edward

Batch Number :

Ref. P.O. Number :



Model : HF-701DV
Color : Black
Size : L(59-60CM)
Weight : 1253.00 g
Manufacturing Date : 25 Jun 2019
Standard Request : FMVSS218
Identification Code : 1065.0006.001-B
Headform Model : D.O.T.
Headform Size : C D.O.T
Conditioning : Cold
Laboratory Temperature : 22 deg C
Laboratory Humidity : 57 %
Selected Filter Frequency : 1650 Hz
Maximum Peak G's authorized : 400 G
Maximum Peak m/s² authorized : 3923 m/s²
Drop mass assembly : 5.000 kg
Time gate flag height : 25.40 mm
Acc. sensibility (axis Z) : 9.92

Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
5	85.1	5.2288	145.0	HEMI	0.00	0.00	FRONT	2019-06-26	10:12:03	2.0	Pass
6	99.4	5.2269	145.0	HEMI	0.00	0.00	FRONT	2019-06-26	10:12:20	2.0	Pass
7	99.4	5.2172	145.0	HEMI	0.00	0.00	RT SIDE	2019-06-26	10:17:57	2.2	Pass
8	101.4	5.2250	145.0	HEMI	0.00	0.00	RT SIDE	2019-06-26	10:18:14	2.0	Pass

Impact Uni-Axial

Testing Laboratory : Taicang ACT Lab

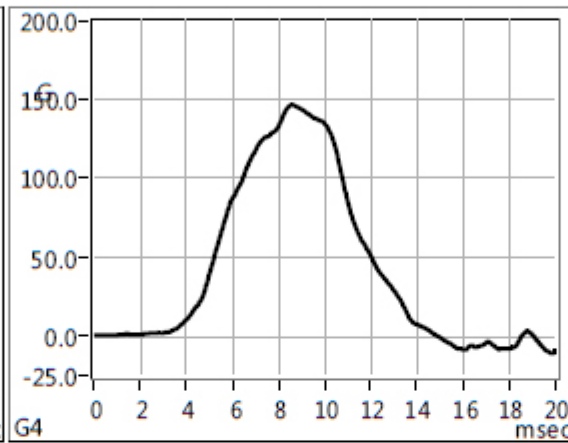
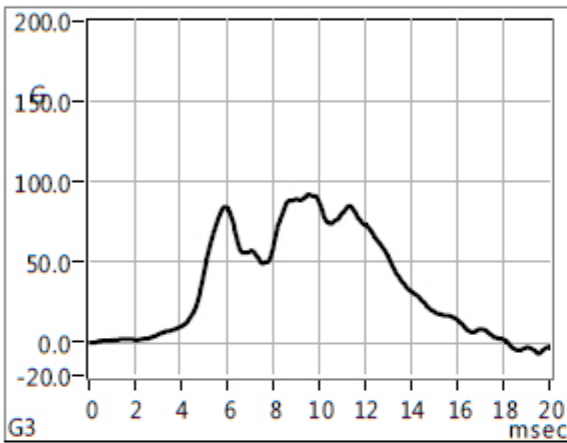
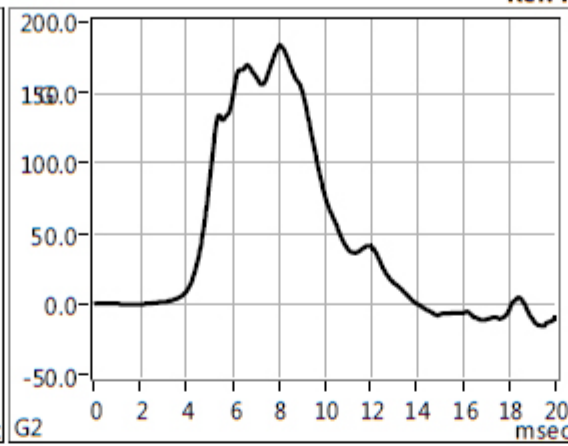
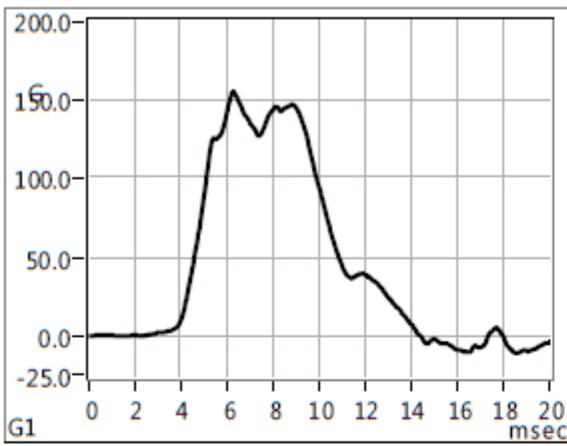
Address : No.35 Zhenghe Road, Ludu Town,
Taicang City, Suzhou, Jiangsu
Province, China 215412

Helmet Manufacturer :
Address :

Laboratory Technician name : Edward

Batch Number :

Ref. P.O. Number :



Model : HF-701DV
Color : Black
Size : L(59-60CM)
Weight : 1250.00 g
Manufacturing Date : 25 Jun 2019
Standard Request : FMVSS218
Identification Code : 1065.0006.001-C
Headform Model : D.O.T.
Headform Size : C D.O.T
Conditioning : Hot
Laboratory Temperature : 22 deg C
Laboratory Humidity : 57 %
Selected Filter Frequency : 1650 Hz
Maximum Peak G's authorized : 400 G
Maximum Peak m/s² authorized : 3923 m/s²
Drop mass assembly : 5.000 kg
Time gate flag height : 25.40 mm
Acc. sensibility (axis Z) : 9.92

Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
1	155.5	6.0200	192.0	FLAT	0.34	0.00	LF SIDE	2019-06-26	09:57:53	1.9	Pass
2	183.0	6.0158	192.0	FLAT	2.99	0.00	LF SIDE	2019-06-26	09:58:14	2.0	Pass
3	92.0	5.9992	192.0	FLAT	0.00	0.00	REAR	2019-06-26	10:05:41	2.3	Pass
4	146.6	6.0202	192.0	FLAT	0.00	0.00	REAR	2019-06-26	10:06:00	1.9	Pass

Impact Uni-Axial

Testing Laboratory : Taicang ACT Lab

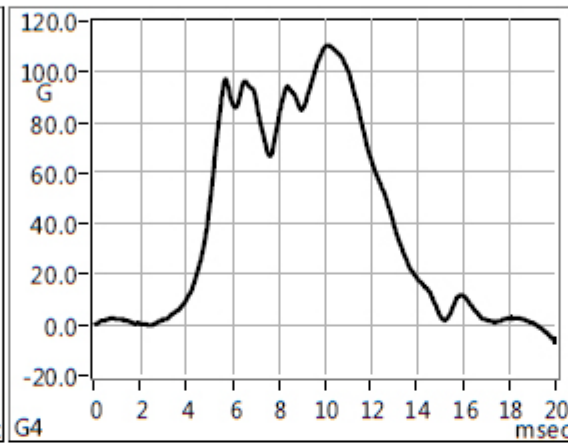
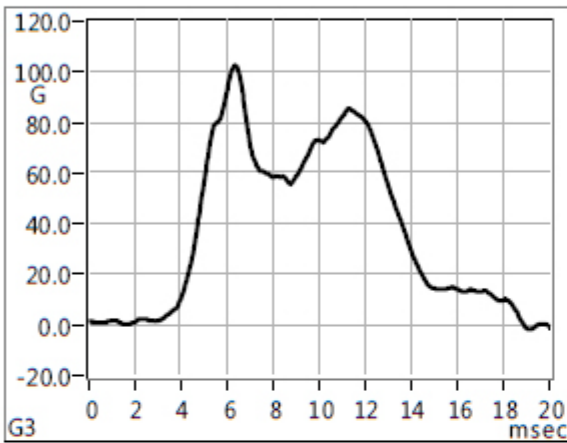
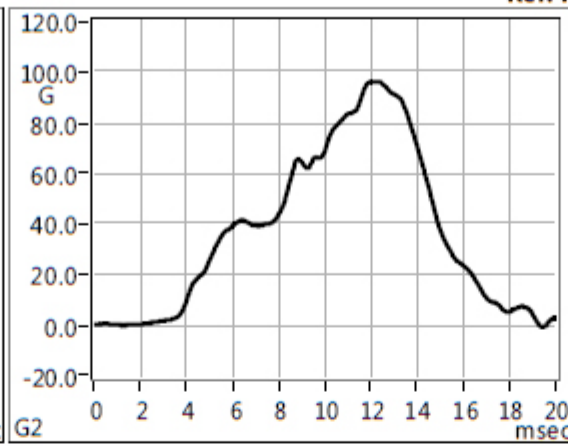
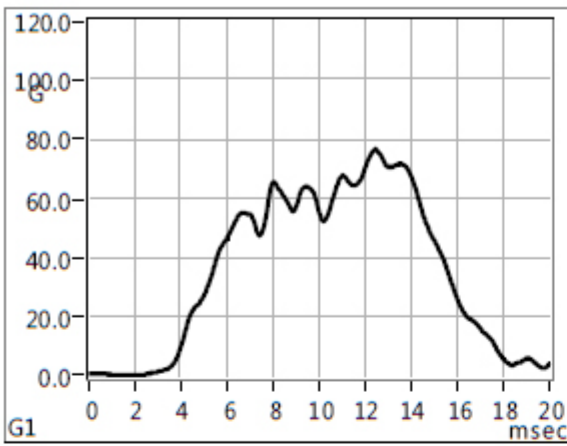
Address : No.35 Zhenghe Road, Ludu Town,
Taicang City, Suzhou, Jiangsu
Province, China 215412

Helmet Manufacturer :
Address :

Laboratory Technician name : Edward

Batch Number :

Ref. P.O. Number :



Model : HF-701DV
Color : Black
Size : L(59-60CM)
Weight : 1250.00 g
Manufacturing Date : 25 Jun 2019
Standard Request : FMVSS218
Identification Code : 1065.0006.001-C
Headform Model : D.O.T.
Headform Size : C D.O.T
Conditioning : Hot
Laboratory Temperature : 22 deg C
Laboratory Humidity : 57 %
Selected Filter Frequency : 1650 Hz
Maximum Peak G's authorized : 400 G
Maximum Peak m/s² authorized : 3923 m/s²
Drop mass assembly : 5.000 kg
Time gate flag height : 25.40 mm
Acc. sensibility (axis Z) : 9.92

Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
5	76.8	5.2159	145.0	HEMI	0.00	0.00	FRONT	2019-06-26	10:13:12	2.2	Pass
6	95.9	5.2187	145.0	HEMI	0.00	0.00	FRONT	2019-06-26	10:13:31	2.1	Pass
7	102.3	5.2618	145.0	HEMI	0.00	0.00	RT SIDE	2019-06-26	10:19:08	1.3	Pass
8	110.2	5.2627	145.0	HEMI	0.00	0.00	RT SIDE	2019-06-26	10:19:23	1.3	Pass

Impact Uni-Axial

Testing Laboratory : Taicang ACT Lab

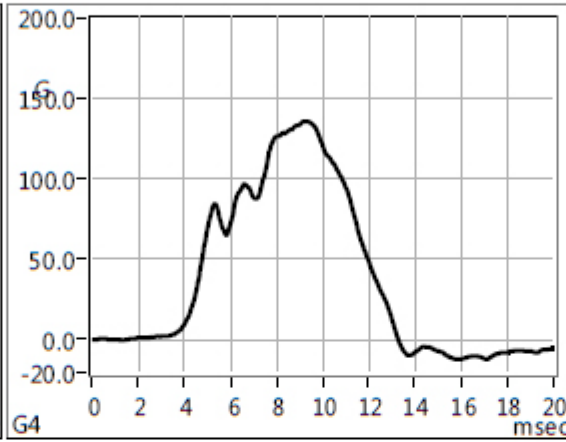
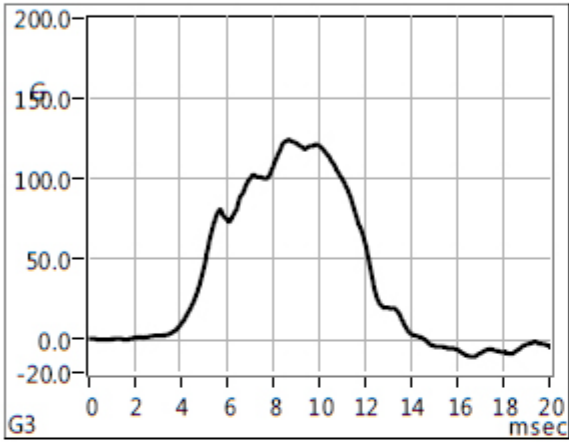
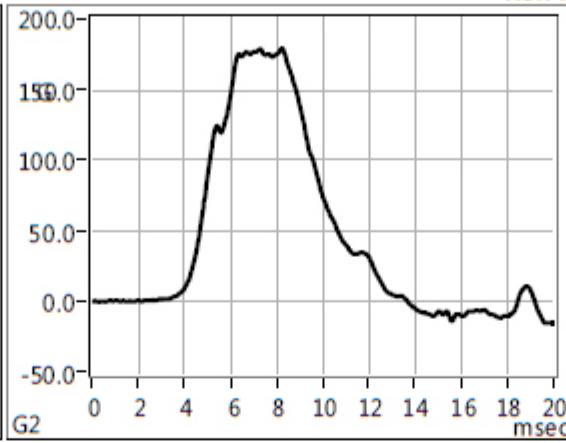
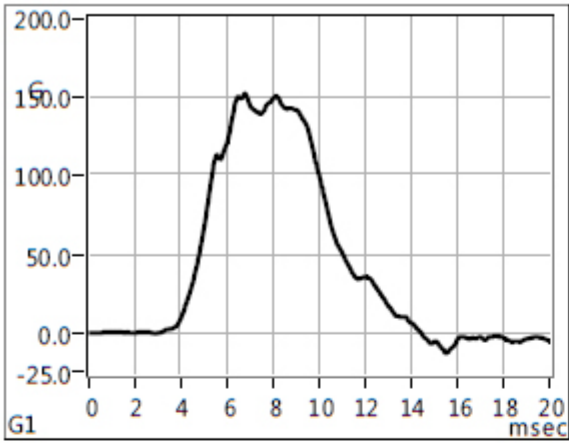
Address : No.35 Zhenghe Road, Ludu Town,
Taicang City, Suzhou, Jiangsu
Province, China 215412

Helmet Manufacturer :
Address :

Laboratory Technician name : Edward

Batch Number :

Ref. P.O. Number :



Model : HF-701DV
Color : Black
Size : L(59-60CM)
Weight : 1258.00 g
Manufacturing Date : 25 Jun 2019
Standard Request : FMVSS218
Identification Code : 1065.0006.001-D
Headform Model : D.O.T.
Headform Size : C D.O.T
Conditioning : Wet
Laboratory Temperature : 22 deg C
Laboratory Humidity : 57 %
Selected Filter Frequency : 1650 Hz
Maximum Peak G's authorized : 400 G
Maximum Peak m/s² authorized : 3923 m/s²
Drop mass assembly : 5.000 kg
Time gate flag height : 25.40 mm
Acc. sensibility (axis Z) : 9.92

Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
1	152.0	6.0330	192.0	FLAT	0.35	0.00	LF SIDE	2019-06-26	09:59:56	1.7	Pass
2	179.1	6.0058	192.0	FLAT	2.78	0.00	LF SIDE	2019-06-26	10:00:12	2.1	Pass
3	124.0	6.0109	192.0	FLAT	0.00	0.00	REAR	2019-06-26	10:03:35	2.0	Pass
4	135.3	6.0147	192.0	FLAT	0.00	0.00	REAR	2019-06-26	10:03:50	2.0	Pass

Impact Uni-Axial

Testing Laboratory : Taicang ACT Lab

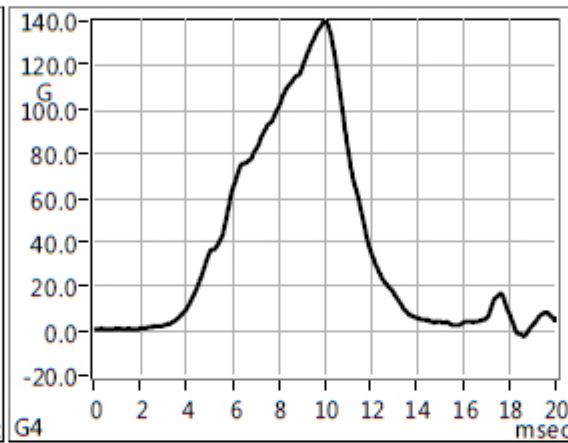
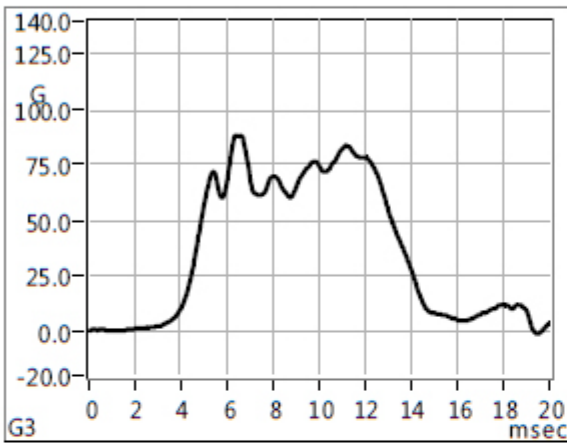
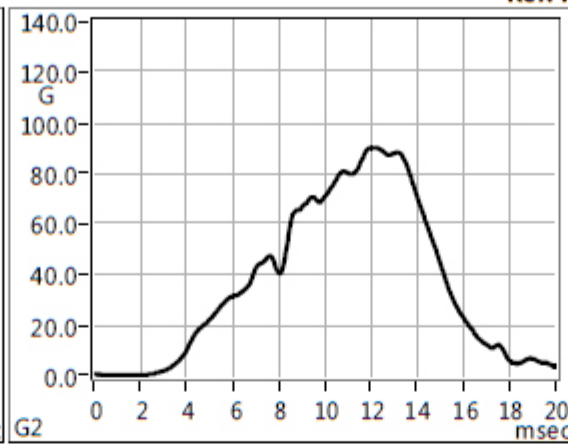
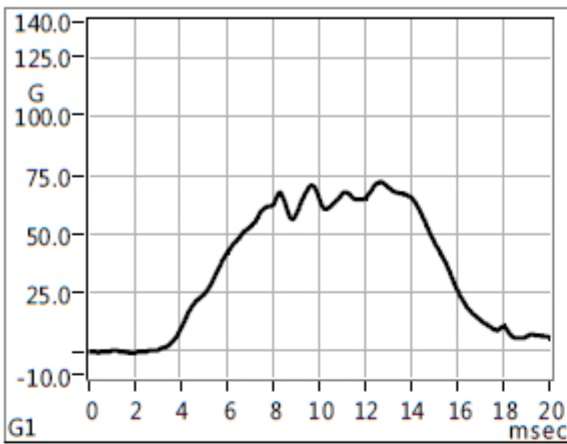
Address : No.35 Zhenghe Road, Ludu Town,
Taicang City, Suzhou, Jiangsu
Province, China 215412

Helmet Manufacturer :
Address :

Laboratory Technician name : Edward

Batch Number :

Ref. P.O. Number :



Model : HF-701DV
Color : Black
Size : L(59-60CM)
Weight : 1258.00 g
Manufacturing Date : 25 Jun 2019
Standard Request : FMVSS218
Identification Code : 1065.0006.001-D
Headform Model : D.O.T.
Headform Size : C D.O.T
Conditioning : Wet
Laboratory Temperature : 22 deg C
Laboratory Humidity : 57 %
Selected Filter Frequency : 1650 Hz
Maximum Peak G's authorized : 400 G
Maximum Peak m/s² authorized : 3923 m/s²
Drop mass assembly : 5.000 kg
Time gate flag height : 25.40 mm
Acc. sensibility (axis Z) : 9.92

Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
5	71.8	5.2326	145.0	HEMI	0.00	0.00	FRONT	2019-06-26	10:10:57	1.9	Pass
6	90.0	5.2143	145.0	HEMI	0.00	0.00	FRONT	2019-06-26	10:11:16	2.2	Pass
7	88.1	5.2246	145.0	HEMI	0.00	0.00	RT SIDE	2019-06-26	10:16:52	2.0	Pass
8	139.7	5.2572	145.0	HEMI	0.00	0.00	RT SIDE	2019-06-26	10:17:07	1.4	Pass

DOT Auto – Test results

Laboratory

Laboratory ACT Lab
 Technician Carry
 Temperature 22C°
 Humidity 57%

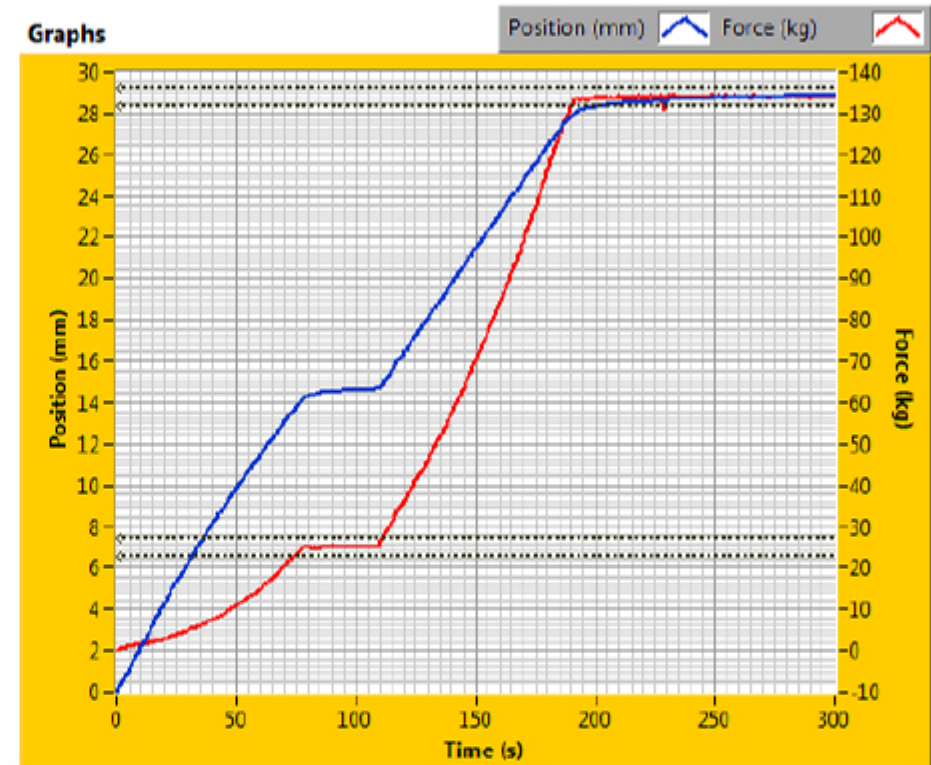
Sample

Model HF-701DV
 Color Black
 Size L
 Weight 1251
 Manufacturer
 Manuf. Date 06/19

Infos

Standard FMVSS No.218
 Comment 1065.0006.001-A

Graphs



Results

Test	Time Data D/M/Y h:mm	DL ?	Status	Tar1 (Kg)	Tar1 (S)	Tar2 (Kg)	Tar2 (S)	Delta(Del.1 to Del.2) (mm)	Pass/Fail
Test404	01/01/01 00:00:00	NO	Valid	22.7	30.0	136.0	120.0	14.0	Pass

DOT Auto – Test results

Laboratory

Laboratory ACT Lab
 Technician Carry
 Temperature 22C°
 Humidity 57%

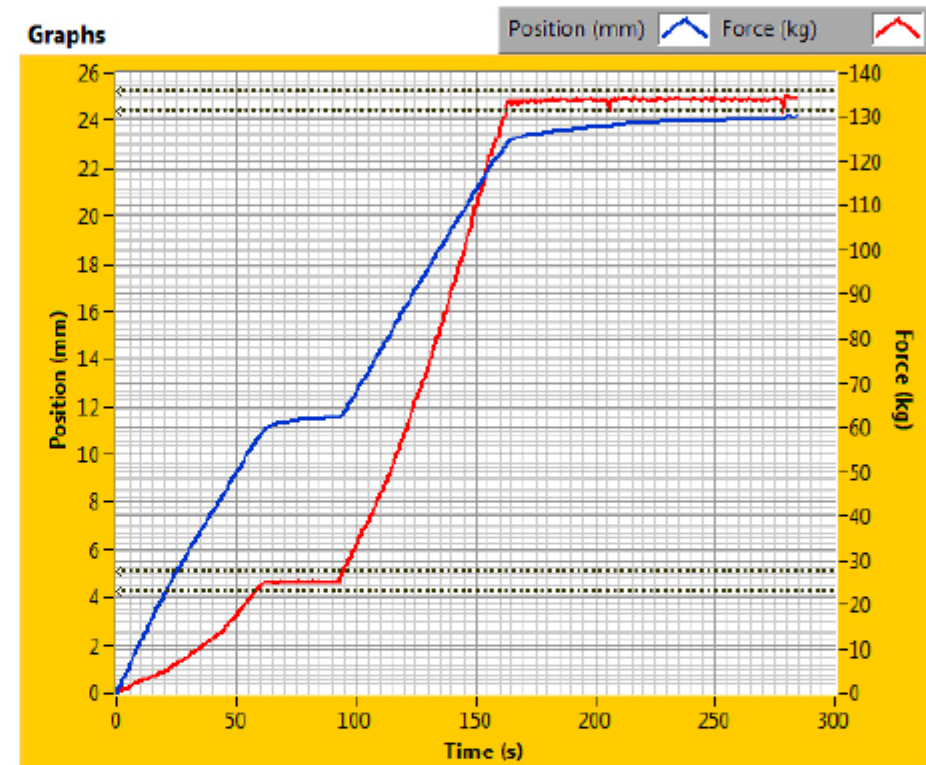
Sample

Model HF-701DV
 Color Black
 Size L
 Weight 1253
 Manufacturer
 Manuf. Date 06/19

Infos

Standard FMVSS No.218
 Comment 1065.0006.001-B

Graphs

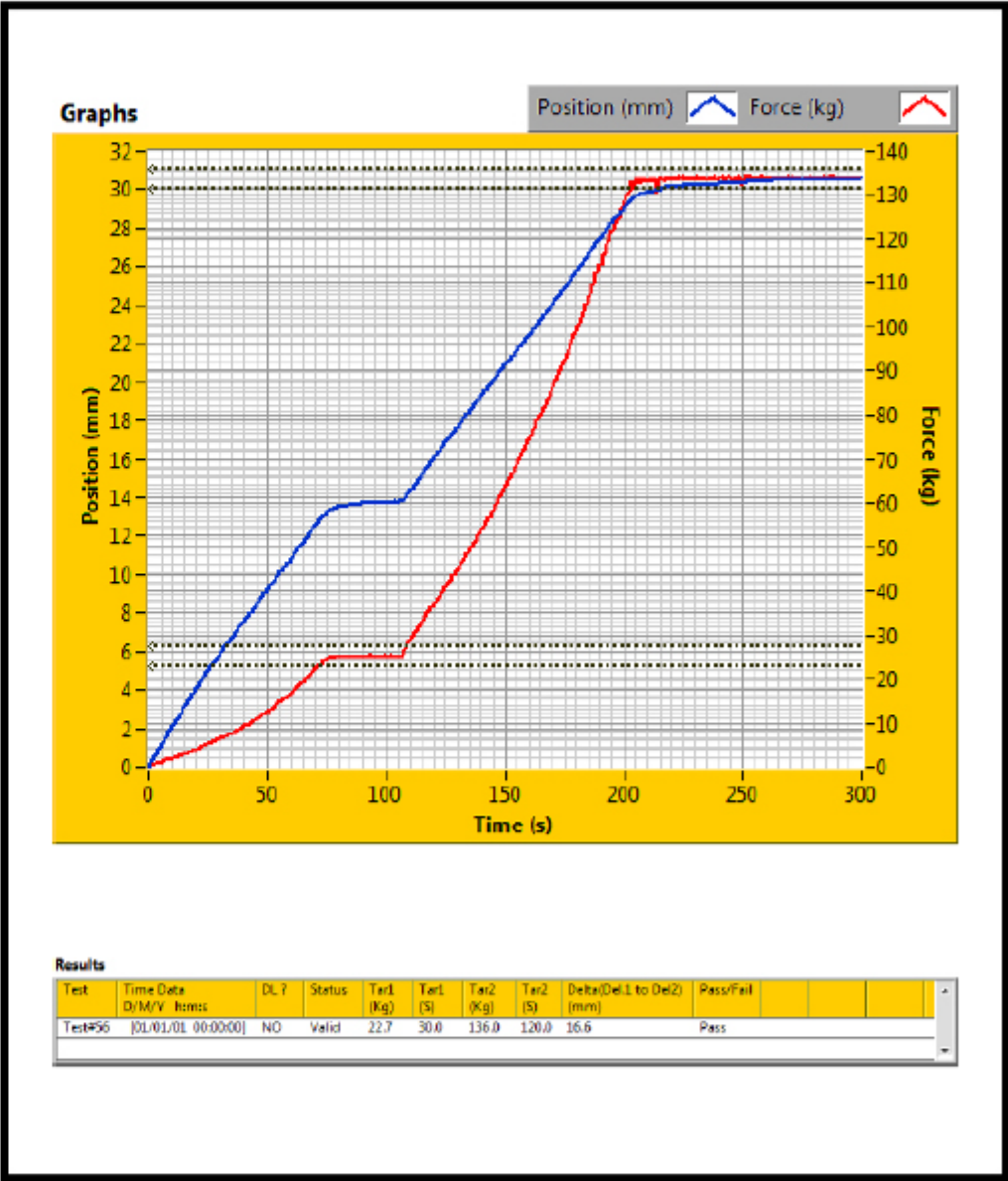


Results

Test	Time Data D/M/Y Items	DL ?	Status	Tar1 (kg)	Tar1 (S)	Tar2 (kg)	Tar2 (S)	Delta(Del.1 to Del2) (mm)	Pass/Fail
Test#55	[01/01/01 00:00:00]	NO	Valid	22.7	30.0	136.0	120.0	12.3	Pass

DOT Auto – Test results

Laboratory		
Laboratory	ACT Lab	
Technician	Carry	
Temperature	22C°	
Humidity	57%	
Sample		
Model	HF-701DV	
Color	Black	
Size	L	
Weight	1250	
Manufacturer		
Manuf. Date	06/19	
Infos		
Standard	FMVSS No.218	
Comment	1065.0006.001-C	



DOT Auto – Test results

Laboratory

Laboratory ACT Lab
 Technician Carry
 Temperature 22C°
 Humidity 57%

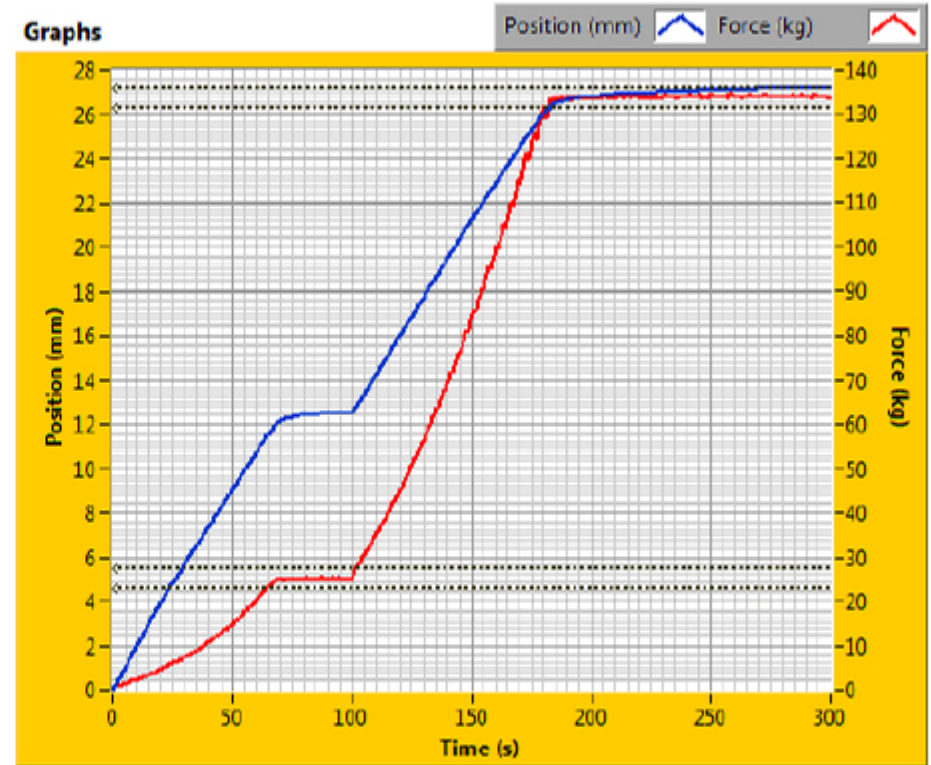
Sample

Model HF-701DV
 Color Black
 Size L
 Weight 1258
 Manufacturer
 Manuf. Date 06/19

Infos

Standard FMVSS No.218
 Comment 1065.0006.001-D

Graphs



Results

Test	Time Date D/M/Y Items	DL 1	Status	Tar1 (Kg)	Tar1 (S)	Tar2 (Kg)	Tar2 (S)	Delta(Del.1 to Del2) (mm)	Pass/Fail
Test#57	01/01/01 00:00:00	NO	Valid	22.7	30.0	136.0	120.0	14.5	Pass

APPENDIX A

INTERPRETATIONS OR DEVIATIONS FROM FMVSS 218

1. S5.6 Labeling: *Client has supplied digital artwork for section 5.6. ACT has only evaluated that the required content is present, additional formatting, appearance and permanency requirements unable to be evaluated.
2. Excess water on the water immersed sample was allowed to drip off before testing to prevent water damage to test equipment.

APPENDIX B

EQUIPMENT LIST AND CALIBRATION SCHEDULES

EQUIPMENT INFORMATION

General Information

Drop System: Monorail
Software: Cadex Impact Software v 6.4f

Item	Model	S/N
Computer	VD200PA#AB2	CNG9211DB1
Data Acquisition Board	187570H-01	13EC16A
Time Gate	Cadex	HVTG12009033-1
Control Box	PC4300	CCS120090331-1

Headforms

Item	Size	Model	Assembly Wt., grams
Uni-Axial	Headform Size DOT SMALL	Cadex	3573
Uni-Axial	Headform Size DOT MEDIUM	Cadex	5060
Uni-Axial	Headform Size DOT LARGE	Cadex	6185

Sensors

Item	Model	S/N
Uni-Axial Accelerometer	PCB 353B18	86079

EQUIPMENT LIST AND CALIBRATION SCHEDULES

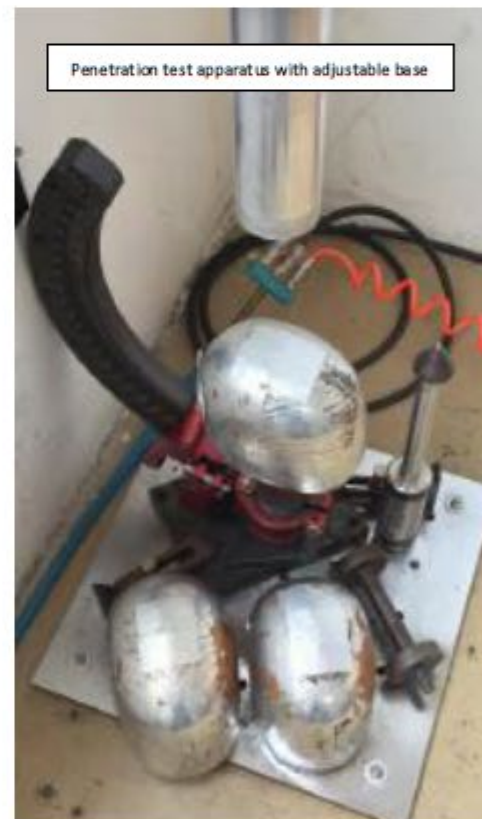
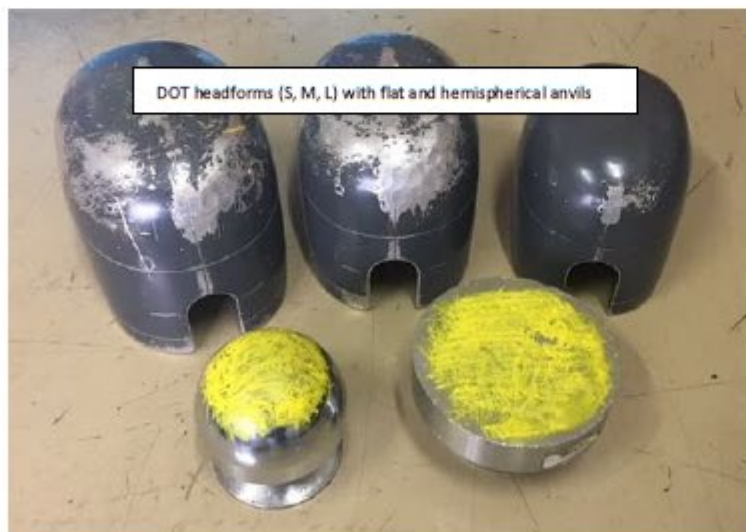
Testing Equipment					
Item No.	Description	Manufacture	Model	S/N	Date
H1002	Monorail	Cadex	Series 2000	None	N/A
H1001	Monorail/Tri-Axial	Cadex	1000_00_MIMAT	None	N/A
H1015	Positional Stability Fixture	Protec	N/A	None	N/A
H1017	Dynamic Strap Machine	Cadex	SB033	None	N/A
H1049	DOT Headform	Cadex	Small	3570	11 Sep 2018
H1050	DOT Headform	Cadex	Medium	5057	11 Sep 2018
H1051	DOT Headform	Cadex	Large	6182	11 Sep 2018
H1053	System Check MEP Pad	Cadex	345_08_MP60	30051201	N/A
H1060	Anvil	Cadex	Hemispherical	None	11 Sep 2018
H1062	Anvil	Cadex	Flat	None	11 Sep 2018
H1030	High Temp Cabinet	Shanghai Boxun	92*9240MBE	8285	26 Jun 2019
H1031	High Temp Cabinet	/	DHG-9426	1503338018	26 Oct 2018
H1032	Low Temp Cabinet	Haier	DW-25W300	BE062100NO OB29578VMO	26 Jun 2019
H1033	Low Temp Cabinet	Haier	DW-50W225	F8LMJ	26 Oct 2018
H1034	Water Conditioning Container	Rubbermaid	None	None	N/A
H1026	Laser Test Line Table	Cadex	SB005	TLTV2KB	N/A
—	Computer	DELL	Optiplex 5040	3K51LF2	N/A
H1010	Control Center System	Cadex	Pc4300	CCS120090331-1	N/A
H1011	Impact Machine Control System	Cadex	DX3000	None	N/A
H1064	Control Center System	Cadex	CCS-PC 4400	CCS120120810-1	N/A
H1027	Peripheral Vision Apparatus	Hongtu	H-002	0.7°	26 Oct 2018
H1003	Velocity Gate Flag	Cadex	None	1.00mm	13 Nov 2018

Calibrated Measurement Equipment

Item No.	Description	Manufacture and Model	Serial No.	Accuracy	Calibration	
					Last	Next
H1003	Velocity Gate	Cadex	HVTG120120810-1	0.16msec	13 Nov 2018	12 Nov 2019
H1004	Velocity Gate	Cadex	HVTG120090331-1	0.16msec	02 Mar 2019	01 Mar 2020
H1006	Accelerometer	PCB - 353B18	131607	9.924 mV/g	04 Oct 2018	03 Oct 2019
H1007	Accelerometer	PCB - 353B18	86079	10.30 mV/g	04 Oct 2018	03 Oct 2019
H1014	LVDT	Volfa - LWE-200	2002572	0.01	26 Oct 2018	25 Oct 2019
H1012	LVDT Amplifier	Schaevitz - C20101007753	J72863	-	26 Oct 2018	25 Oct 2019
H1036	Environmental Monitoring	Anymeter TH-602F	3238	2%	27 Jun 2019	26 Jun 2020
H1025	Scale	Shanghai Yousheng BT-6	12230126	0.2g	26 Jun 2019	25 Jun 2020
H1008	Digital Tape	Starrett	5027526-B	0.1mm	28 Jun 2018	27 Jun 2019
H1009	Digital Tape	Starrett	5027526	0.1 mm	30 Oct 2018	29 Oct 2019
H1029	Height Gauge	Shanghai LR MC 130	9090053	0.01 mm	11 Sep 2018	10 Sep 2019

APPENDIX C

PHOTOGRAPHS





Low temperature conditioning cabinet



Water immersion equipment

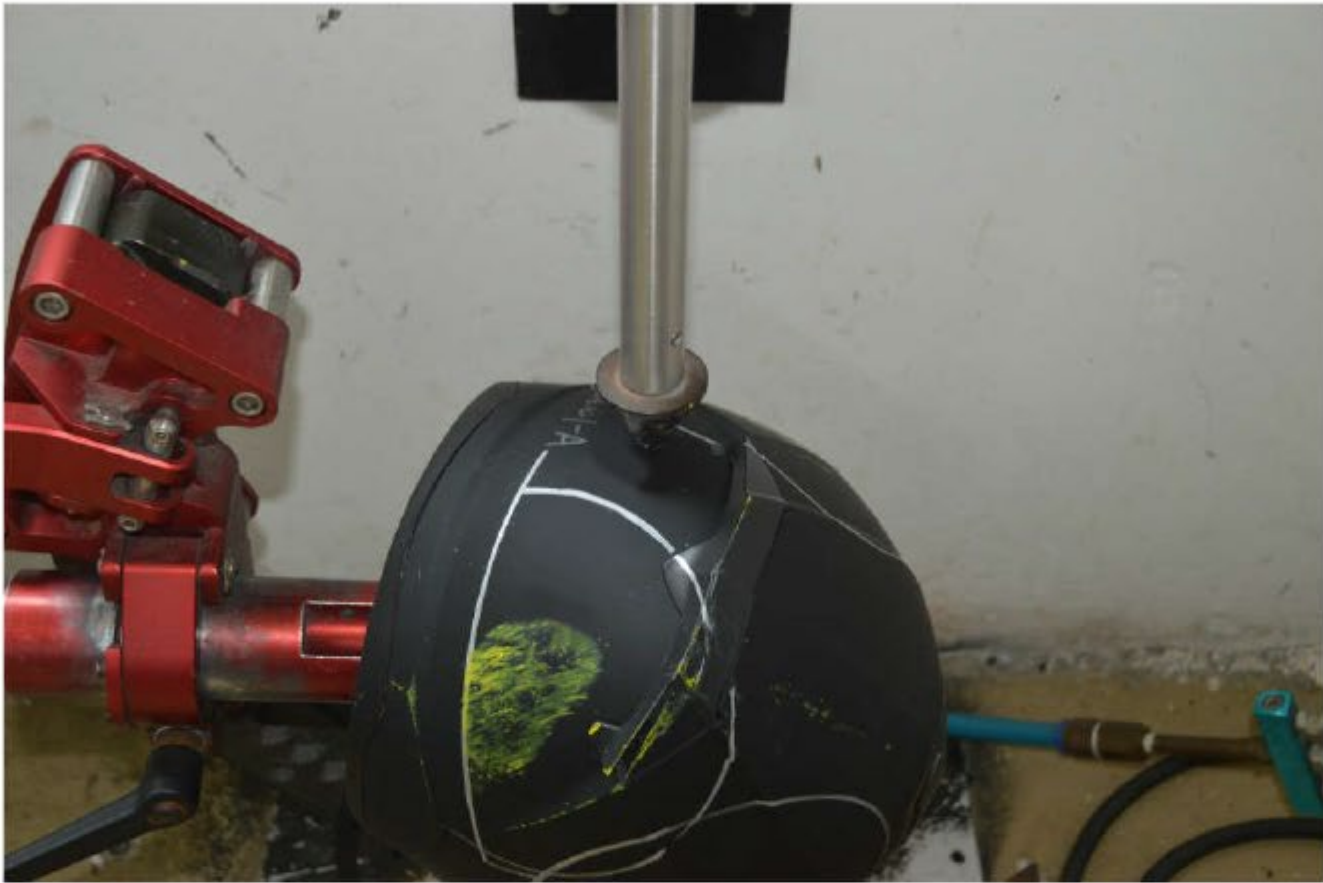


High temperature chamber









L
59-60

WARNING!

- SHELL CONSTRUCTED OF ABS/FIBERGLASS, POLYESTER RESIN AND POLYSTYRENE LINER RESPECTIVELY.
- NO HELMET CAN PROTECT THE USER AGAINST ALL FORESEEABLE IMPACTS.
- FOR MAXIMUM PROTECTION, THE HELMET MUST BE PROPERLY AND SECURELY FITTED AND SHOULD PROVIDE ADEQUATE PERIPHERAL VISION.
- ALL RETENTION STRAP(S) (CHIN STRAP) MUST BE SECURELY FASTENED.
- HELMET CAN BE SERIOUSLY DAMAGED BY MANY COMMON SUBSTANCES WITHOUT DAMAGE BEING VISIBLE TO THE USER.
- APPLY ONLY MILD SOAP AND WATER FOR CLEANING.
- DO NOT MAKE ANY MODIFICATIONS TO THIS HELMET.
- IF THE HELMET EXPERIENCES A SEVERE BLOW RETURN TO THE MANUFACTURER FOR INSPECTION OR DESTROY AND REPLACE IT.
- THIS HELMET IS FOR MOTORCYCLE USE ONLY.
- THIS HELMET IS NOT MEANT FOR USE AS A FIRE RETARDANT PRODUCT AND ALSO NOT CONTAIN ANY FIRE RETARDANT MATERIALS.

PRODUCTION DATE: June 22ND, 2019

