SAFETY COMPLIANCE TESTING FOR FMVSS No. 218 MOTORCYCLE HELMETS

Brand: BELL
Model: SRT MODULAR (P429)
Tested Size: M (57-58 cm)

Prepared For:

Zhejiang Vista Sports Goods Co., Ltd.
Haitian East Road, Southeast Industrial Zone,
Songmen Town, Wenling City,
Zhejiang, China

04 January 2018

Final Report No.: 540.0028.003

Tested By:

Taicang ACT Sporting Goods Testing Co., Ltd.
No. 35 Zhenghe Road,
Ludu Town, Taicang City, Suzhou,
Jiangsu Province, China 215412
www.act-lab.com

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009.) The Joint Communiqué is available on publications and resources page of the ILAC website at http://www.ilac.org. Accreditation listing and certificate can be found at http://www.iasonline.org.

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PURPOSE OF COMPLIANCE TEST

Purpose:

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

Zhejiang Vista Sports Goods Co., Ltd.

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: BELL

HELMET MODEL DESIGNATION: SRT MODULAR (P429)

HELMET MANUFACTURER: Zhejiang Vista Sports Goods Co., Ltd.

HELMET SIZE: M (57-58 cm)

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

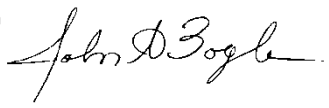
HELMET POSITIONING INDEX: 52 mm

SHELL MATERIAL: Composite Material and Polyester Resin

LINER MATERIAL: Expanded Polystyrene

BUCKLE DESCRIPTION: Double D-Rings

HELMET	A Ambient	B Low Temp	C High Temp	D Water Immersed	E Spare
Shell Color/Pattern	Black	Black	Black	Black	Black
Weight (grams)	1575	1567	1572	1581	1727
Month & Year of Manufacture	12/17	12/17	12/17	12/17	12/17

Reviewed by: John Bogler 

COMMENTS:

- ☑ All helmets were received in undamaged condition and were appropriate for testing.
- ☑ Weights listed above for helmets A-D are as tested with all attachments removed.
- ☑ Weight for helmet E is complete with all components in place.
- ☑ This is a complete coverage helmet with modular flip up chin bar.

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	

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: M (57-58 cm) .
Discrete Size: 57-58 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 ºC ; 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
540.0028.003-A	Ambient	1	LF SIDE	FLAT	195.0	6.0435	0.00	0.00	134.3	Pass
540.0028.003-A	Ambient	2	LF SIDE	FLAT	195.0	6.0363	0.65	0.00	155.9	Pass
540.0028.003-A	Ambient	3	REAR	FLAT	195.0	6.0724	0.00	0.00	106.2	Pass
540.0028.003-A	Ambient	4	REAR	FLAT	195.0	6.0865	0.00	0.00	136.2	Pass
540.0028.003-A	Ambient	5	FRONT	HEMI	145.0	5.2175	0.00	0.00	90.0	Pass
540.0028.003-A	Ambient	6	FRONT	HEMI	145.0	5.1917	0.00	0.00	102.3	Pass
540.0028.003-A	Ambient	7	RT SIDE	HEMI	145.0	5.1933	0.00	0.00	104.3	Pass
540.0028.003-A	Ambient	8	RT SIDE	HEMI	145.0	5.1968	0.00	0.00	93.4	Pass
540.0028.003-B	Cold	1	LF SIDE	FLAT	195.0	6.0515	1.52	0.00	160.3	Pass
540.0028.003-B	Cold	2	LF SIDE	FLAT	195.0	6.0343	0.64	0.00	153.0	Pass
540.0028.003-B	Cold	3	REAR	FLAT	195.0	6.0868	0.00	0.00	116.1	Pass
540.0028.003-B	Cold	4	REAR	FLAT	195.0	6.0832	0.00	0.00	136.7	Pass
540.0028.003-B	Cold	5	FRONT	HEMI	145.0	5.2050	0.00	0.00	90.5	Pass
540.0028.003-B	Cold	6	FRONT	HEMI	145.0	5.1780	0.00	0.00	97.4	Pass
540.0028.003-B	Cold	7	RT SIDE	HEMI	145.0	5.1788	0.00	0.00	103.3	Pass
540.0028.003-B	Cold	8	RT SIDE	HEMI	145.0	5.1846	0.00	0.00	97.4	Pass
540.0028.003-C	Hot	1	LF SIDE	FLAT	195.0	6.0394	0.00	0.00	132.3	Pass
540.0028.003-C	Hot	2	LF SIDE	FLAT	195.0	6.0340	1.36	0.00	157.4	Pass
540.0028.003-C	Hot	3	REAR	FLAT	195.0	6.0622	0.00	0.00	114.1	Pass
540.0028.003-C	Hot	4	REAR	FLAT	195.0	6.0849	0.00	0.00	137.2	Pass
540.0028.003-C	Hot	5	FRONT	HEMI	145.0	5.1856	0.00	0.00	82.1	Pass
540.0028.003-C	Hot	6	FRONT	HEMI	145.0	5.1896	0.00	0.00	95.9	Pass
540.0028.003-C	Hot	7	RT SIDE	HEMI	145.0	5.1860	0.00	0.00	97.4	Pass
540.0028.003-C	Hot	8	RT SIDE	HEMI	145.0	5.1879	0.00	0.00	93.0	Pass
540.0028.003-D	Wet	1	LF SIDE	FLAT	195.0	6.0408	0.00	0.00	131.3	Pass
540.0028.003-D	Wet	2	LF SIDE	FLAT	195.0	6.0530	0.00	0.00	147.5	Pass
540.0028.003-D	Wet	3	REAR	FLAT	195.0	6.0758	0.00	0.00	111.6	Pass
540.0028.003-D	Wet	4	REAR	FLAT	195.0	6.0705	0.00	0.00	125.9	Pass
540.0028.003-D	Wet	5	FRONT	HEMI	145.0	5.2037	0.00	0.00	67.4	Pass
540.0028.003-D	Wet	6	FRONT	HEMI	145.0	5.1993	0.00	0.00	96.4	Pass
540.0028.003-D	Wet	7	RT SIDE	HEMI	145.0	5.1924	0.00	0.00	91.0	Pass
540.0028.003-D	Wet	8	RT SIDE	HEMI	145.0	5.1744	0.00	0.00	81.6	Pass

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	Right Rear	X		AMBIENT
3	B	Crown	X		LOW TEMPERATURE
4	B	Right Rear	X		LOW TEMPERATURE
5	C	Crown	X		HIGH TEMPERATURE
6	C	Right Rear	X		HIGH TEMPERATURE
7	D	Crown	X		IMMERSED
8	D	Right Rear	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	1.4
B	LOW TEMPERATURE	1.6
C	HIGH TEMPERATURE	1.5
D	WATER IMMERSED	1.4

PERIPHERAL VISION

Paragraph S5.4 - Helmet shall provide a minimum peripheral vision of 105º 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	> 105º	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	4.5 mm

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	Pass/Fail	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:

☑ Labels were determined to be both easily read and permanent based on the TP-218-07, Section 12.5.4.

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	Pass/Fail	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:

☑ Labels were determined to be both easily read and permanent based on the TP-218-07, Section 12.5.4.

TEST DATA

Uni-Axial Calibration

M.E.P. Pad Model : 1 MEP

Helmet Manufacturer : Vista

Address :

Laboratory Temperature : 22 deg C

Laboratory Humidity : 57 %

Selected Filter Frequency : 1000 Hz

Acc. sensitivity (axis Z) : 9.93 mV/G

Acc. sensitivity (axis X) : 10.32 mV/G

Acc. sensitivity (axis Y) : 10.32 mV/G

Drop Device : Spherical Impactor (Uni-Axial)

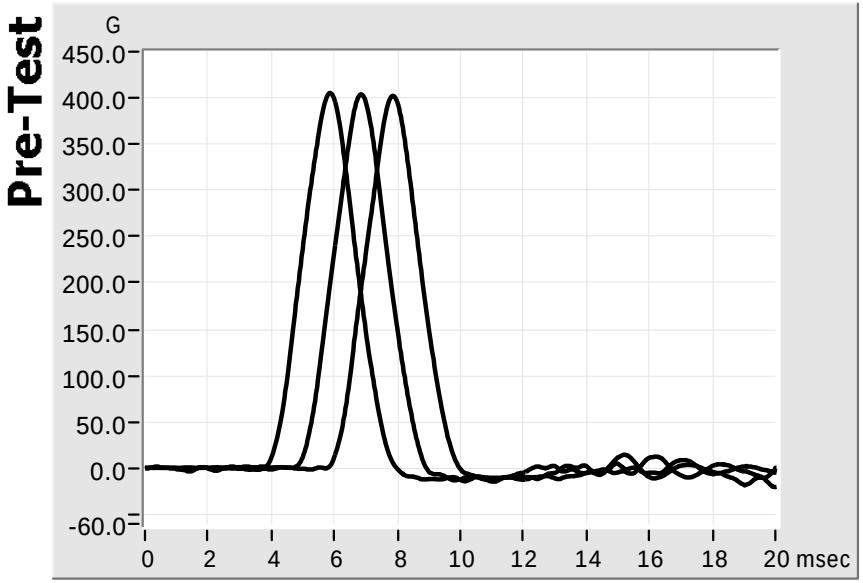
Drop mass assembly : 5.000 kg Time gate flag height : 25.40 mm

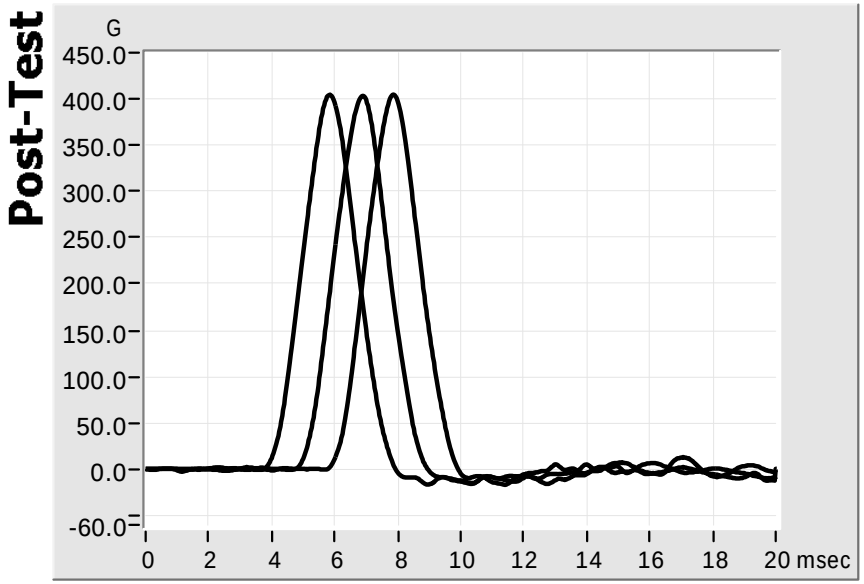
Calibration peak : 400.0 G +/- 25.00 G

Testing Laboratory : Taicang ACT Lab

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

Laboratory Technician name : Edward





	Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
Pre-Test	1	404.8	4.3853	100.0	2.30	1.93	0/0	2018-01-03	10:29:30	1.0	Pass
	2	403.8	4.3563	100.0	2.31	1.93	0/0	2018-01-03	10:30:32	1.6	Pass
	3	401.8	4.3673	100.0	2.32	1.93	0/0	2018-01-03	10:31:33	1.4	Pass
Post-Test	1	404.3	4.3694	100.0	2.30	1.93	0/0	2018-01-03	14:19:34	1.3	Pass
	2	402.8	4.3362	100.0	2.30	1.92	0/0	2018-01-03	14:20:35	2.1	Pass
	3	404.3	4.4214	100.0	2.29	1.92	0/0	2018-01-03	14:21:38	0.2	Pass

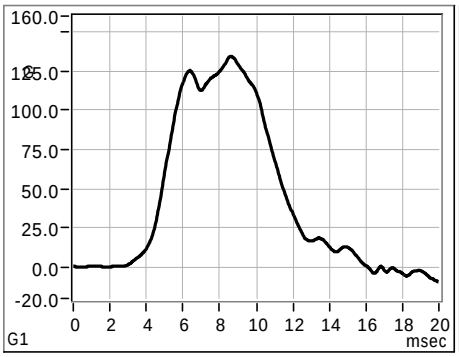
Curve impact #2 : shift of 1ms
Curve impact #3 : shift of 2ms

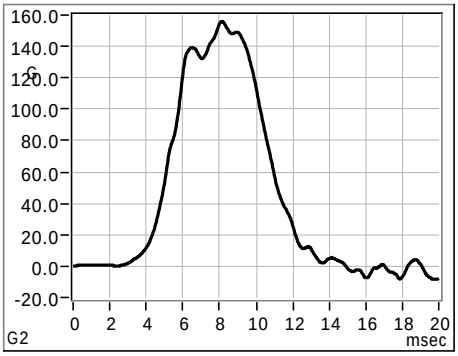
Impact Uni-Axial

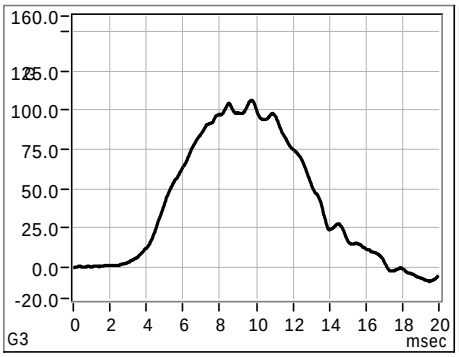
Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town, Taicang City, Suzhou,Jiangsu Province,China 215412

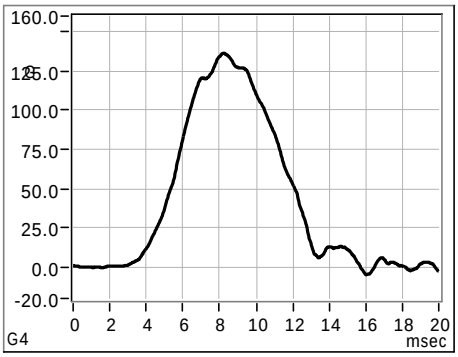
Helmet Manufacturer : Vista
Address :

Laboratory Technician name : Edward
Batch Number :
Ref. P.O. Number :









Model : SRT MODULAR
Color : Black
Size : M
Weight : 1575.00 g
Manufacturing Date : 03 Jan 2018
Standard Request : FMVSS218
Identification Code : 540.0028.003-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) : 9.93

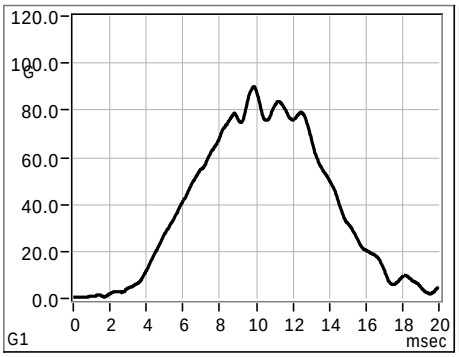
Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
1	134.3	6.0435	195.0	FLAT	0.00	0.00	LF SIDE	2018-01-03	10:39:51	2.3	Pass
2	155.9	6.0363	195.0	FLAT	0.65	0.00	LF SIDE	2018-01-03	10:40:02	2.4	Pass
3	106.2	6.0724	195.0	FLAT	0.00	0.00	REAR	2018-01-03	10:52:30	1.8	Pass
4	136.2	6.0865	195.0	FLAT	0.00	0.00	REAR	2018-01-03	10:52:41	1.6	Pass

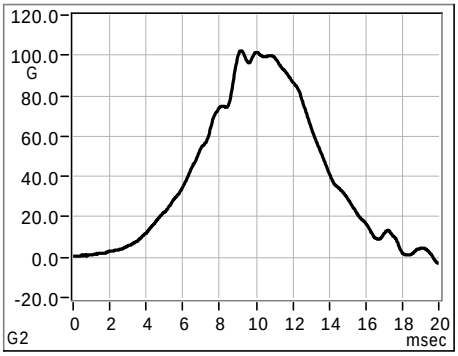
Impact Uni-Axial

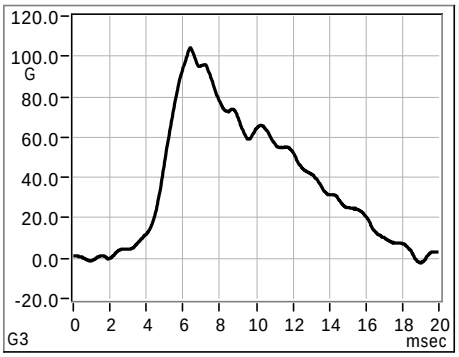
Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town, Taicang City, Suzhou,Jiangsu Province,China 215412

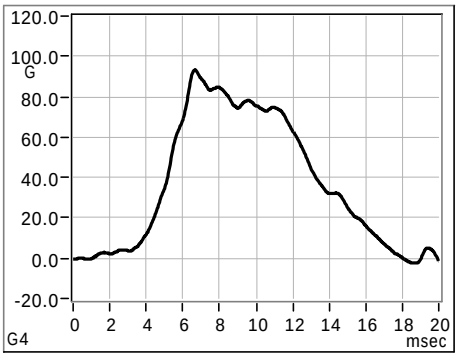
Helmet Manufacturer : Vista
Address :

Laboratory Technician name : Edward
Batch Number :
Ref. P.O. Number :









Model : SRT MODULAR
Color : Black
Size : M
Weight : 1575.00 g
Manufacturing Date : 03 Jan 2018
Standard Request : FMVSS218
Identification Code : 540.0028.003-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) : 9.93

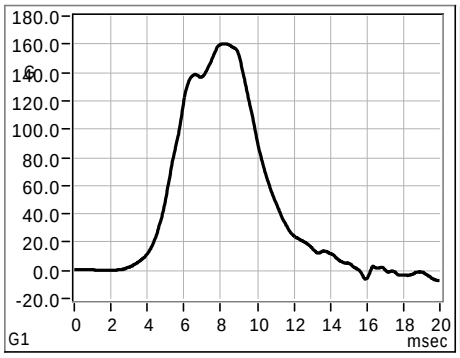
Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
5	90.0	5.2175	145.0	HEMI	0.00	0.00	FRONT	2018-01-03	11:03:38	2.2	Pass
6	102.3	5.1917	145.0	HEMI	0.00	0.00	FRONT	2018-01-03	11:03:46	2.6	Pass
7	104.3	5.1933	145.0	HEMI	0.00	0.00	RT SIDE	2018-01-03	11:13:07	2.6	Pass
8	93.4	5.1968	145.0	HEMI	0.00	0.00	RT SIDE	2018-01-03	11:13:16	2.6	Pass

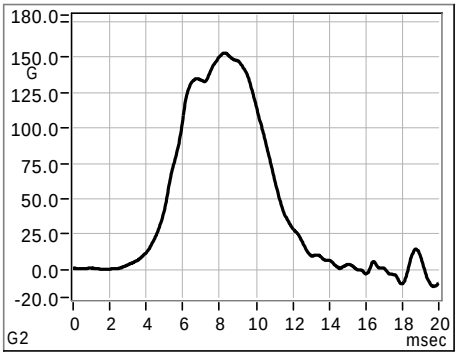
Impact Uni-Axial

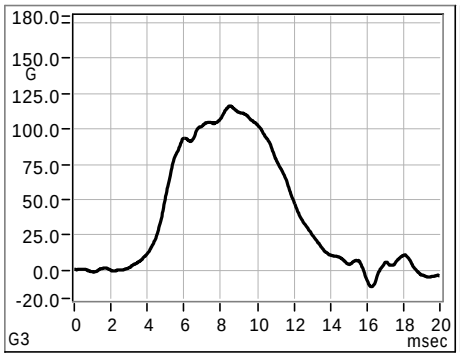
Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town, Taicang City, Suzhou,Jiangsu Province,China 215412

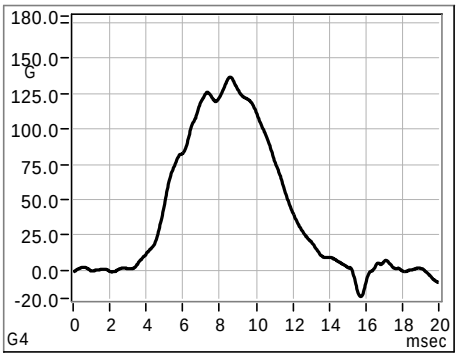
Helmet Manufacturer : Vista
Address :

Laboratory Technician name : Edward
Batch Number :
Ref. P.O. Number :









Model : SRT MODULAR
Color : Black
Size : M
Weight : 1567.00 g
Manufacturing Date : 03 Jan 2018
Standard Request : FMVSS218
Identification Code : 540.0028.003-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) : 9.93

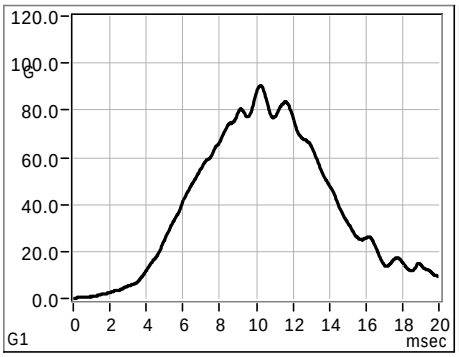
Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
1	160.3	6.0515	195.0	FLAT	1.52	0.00	LF SIDE	2018-01-03	10:42:10	2.1	Pass
2	153.0	6.0343	195.0	FLAT	0.64	0.00	LF SIDE	2018-01-03	10:42:21	2.4	Pass
3	116.1	6.0868	195.0	FLAT	0.00	0.00	REAR	2018-01-03	10:55:51	1.6	Pass
4	136.7	6.0832	195.0	FLAT	0.00	0.00	REAR	2018-01-03	10:56:01	1.6	Pass

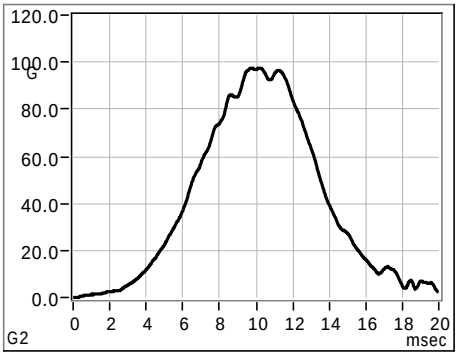
Impact Uni-Axial

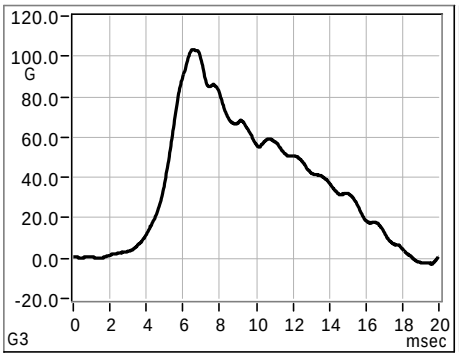
Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town, Taicang City, Suzhou,Jiangsu Province,China 215412

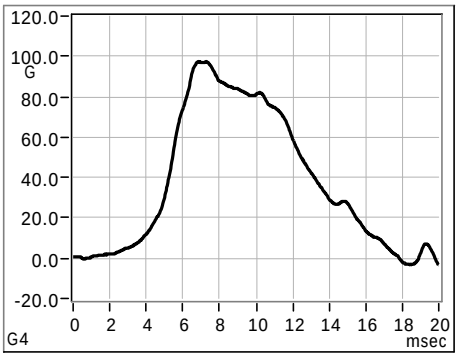
Helmet Manufacturer : Vista
Address :

Laboratory Technician name : Edward
Batch Number :
Ref. P.O. Number :









Model : SRT MODULAR
Color : Black
Size : M
Weight : 1567.00 g
Manufacturing Date : 03 Jan 2018
Standard Request : FMVSS218
Identification Code : 540.0028.003-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) : 9.93

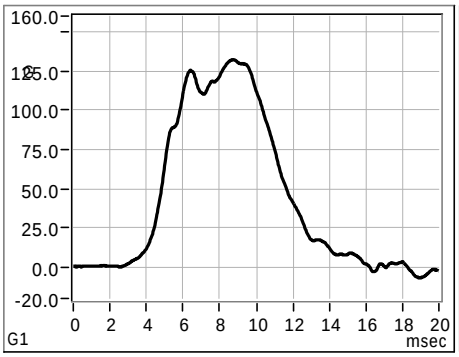
Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
5	90.5	5.2050	145.0	HEMI	0.00	0.00	FRONT	2018-01-03	11:07:44	2.4	Pass
6	97.4	5.1780	145.0	HEMI	0.00	0.00	FRONT	2018-01-03	11:07:55	2.9	Pass
7	103.3	5.1788	145.0	HEMI	0.00	0.00	RT SIDE	2018-01-03	11:16:43	2.9	Pass
8	97.4	5.1846	145.0	HEMI	0.00	0.00	RT SIDE	2018-01-03	11:16:53	2.8	Pass

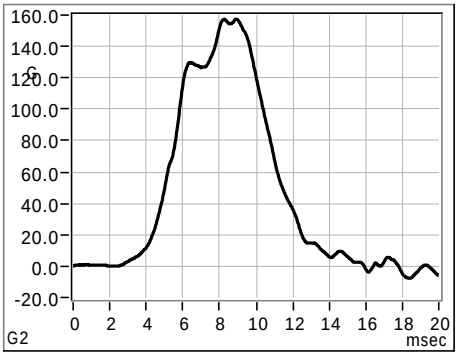
Impact Uni-Axial

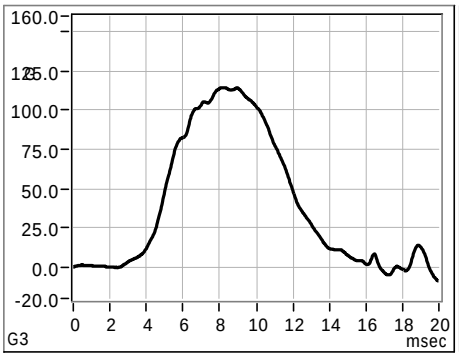
Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town, Taicang City, Suzhou,Jiangsu Province,China 215412

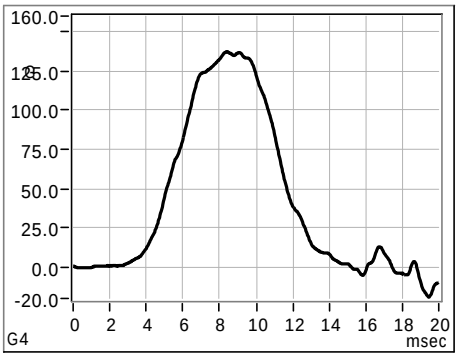
Helmet Manufacturer : Vista
Address :

Laboratory Technician name : Edward
Batch Number :
Ref. P.O. Number :









Model : SRT MODULAR
Color : Black
Size : M
Weight : 1572.00 g
Manufacturing Date : 03 Jan 2018
Standard Request : FMVSS218
Identification Code : 540.0028.003-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) : 9.93

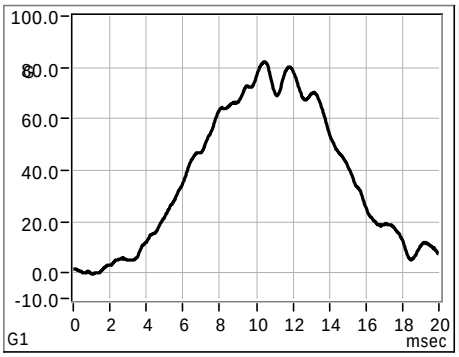
Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
1	132.3	6.0394	195.0	FLAT	0.00	0.00	LF SIDE	2018-01-03	10:44:22	2.3	Pass
2	157.4	6.0340	195.0	FLAT	1.36	0.00	LF SIDE	2018-01-03	10:44:32	2.4	Pass
3	114.1	6.0622	195.0	FLAT	0.00	0.00	REAR	2018-01-03	10:57:52	2.0	Pass
4	137.2	6.0849	195.0	FLAT	0.00	0.00	REAR	2018-01-03	10:58:14	1.6	Pass

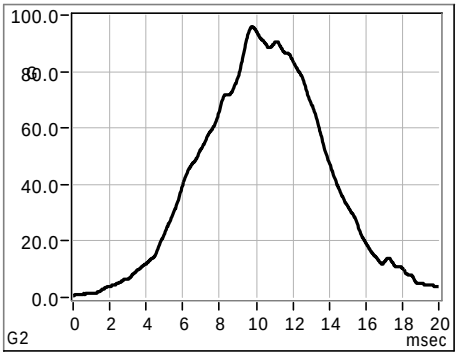
Impact Uni-Axial

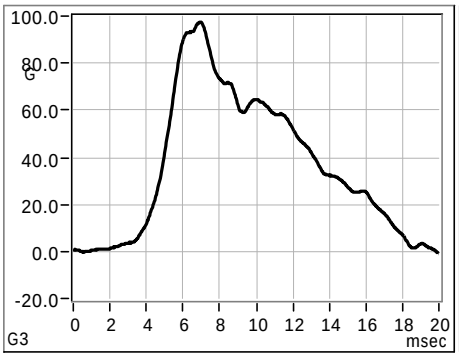
Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town, Taicang City, Suzhou,Jiangsu Province,China 215412

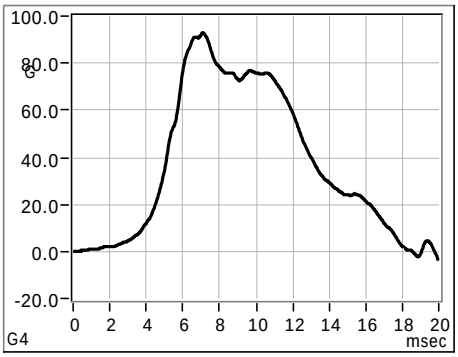
Helmet Manufacturer : Vista
Address :

Laboratory Technician name : Edward
Batch Number :
Ref. P.O. Number :









Model : SRT MODULAR
Color : Black
Size : M
Weight : 1572.00 g
Manufacturing Date : 03 Jan 2018
Standard Request : FMVSS218
Identification Code : 540.0028.003-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) : 9.93

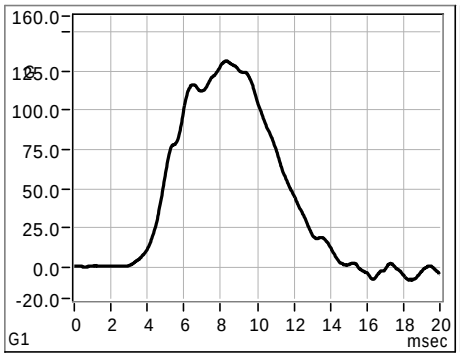
Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
5	82.1	5.1856	145.0	HEMI	0.00	0.00	FRONT	2018-01-03	11:09:31	2.8	Pass
6	95.9	5.1896	145.0	HEMI	0.00	0.00	FRONT	2018-01-03	11:09:41	2.7	Pass
7	97.4	5.1860	145.0	HEMI	0.00	0.00	RT SIDE	2018-01-03	11:18:32	2.8	Pass
8	93.0	5.1879	145.0	HEMI	0.00	0.00	RT SIDE	2018-01-03	11:18:45	2.7	Pass

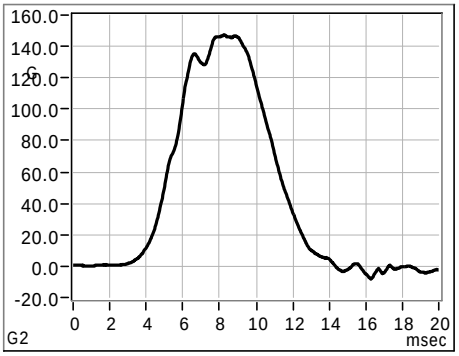
Impact Uni-Axial

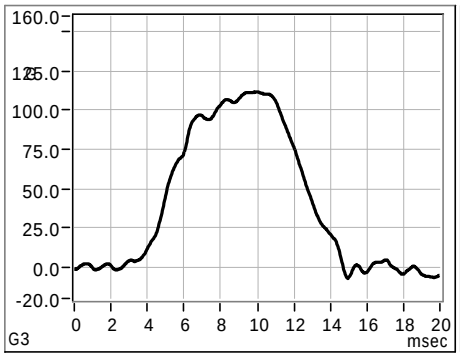
Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town, Taicang City, Suzhou,Jiangsu Province,China 215412

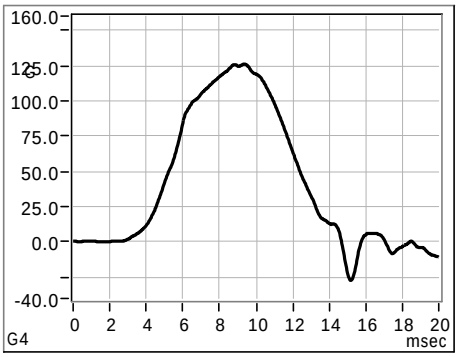
Helmet Manufacturer : Vista
Address :

Laboratory Technician name : Edward
Batch Number :
Ref. P.O. Number :









Model : SRT MODULAR
Color : Black
Size : M
Weight : 1581.00 g
Manufacturing Date : 03 Jan 2018
Standard Request : FMVSS218
Identification Code : 540.0028.003-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) : 9.93

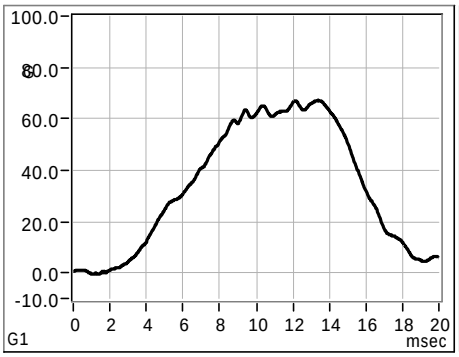
Impact #	Peak Acc.(G)	Velocity IN (m/sec)	Drop Height (cm)	Anvil type	Delta T 150G (msec)	Delta T 200G (msec)	Position	Test Date	Test Time	Friction (%)	PASS or FAIL
1	131.3	6.0408	195.0	FLAT	0.00	0.00	LF SIDE	2018-01-03	10:48:02	2.3	Pass
2	147.5	6.0530	195.0	FLAT	0.00	0.00	LF SIDE	2018-01-03	10:48:12	2.1	Pass
3	111.6	6.0758	195.0	FLAT	0.00	0.00	REAR	2018-01-03	10:53:12	1.8	Pass
4	125.9	6.0705	195.0	FLAT	0.00	0.00	REAR	2018-01-03	10:53:21	1.8	Pass

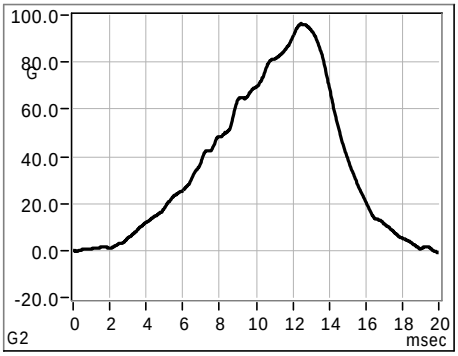
Impact Uni-Axial

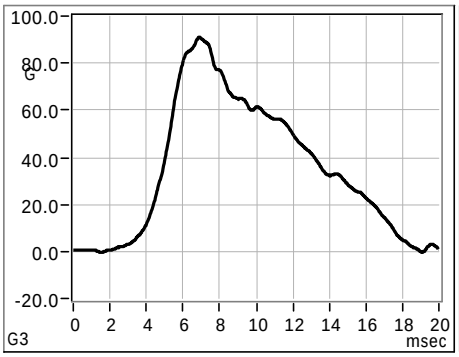
Testing Laboratory : Taicang ACT Lab
Address : No.35 Zhenghe Road, Ludu Town, Taicang City, Suzhou,Jiangsu Province,China 215412

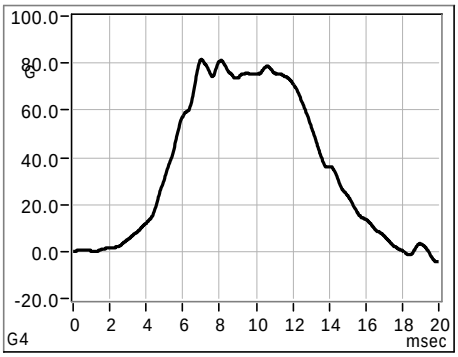
Helmet Manufacturer : Vista
Address :

Laboratory Technician name : Edward
Batch Number :
Ref. P.O. Number :









Model : SRT MODULAR
Color : Black
Size : M
Weight : 1581.00 g
Manufacturing Date : 03 Jan 2018
Standard Request : FMVSS218
Identification Code : 540.0028.003-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) : 9.93

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	67.4	5.2037	145.0	HEMI	0.00	0.00	FRONT	2018-01-03	11:05:50	2.4	Pass
6	96.4	5.1993	145.0	HEMI	0.00	0.00	FRONT	2018-01-03	11:05:59	2.5	Pass
7	91.0	5.1924	145.0	HEMI	0.00	0.00	RT SIDE	2018-01-03	11:14:57	2.6	Pass
8	81.6	5.1744	145.0	HEMI	0.00	0.00	RT SIDE	2018-01-03	11:15:08	3.0	Pass

DOT Auto – Test results

Laboratory

Laboratory	ACT Lab
Technician	Carry
Temperature	22℃
Humidity	57%

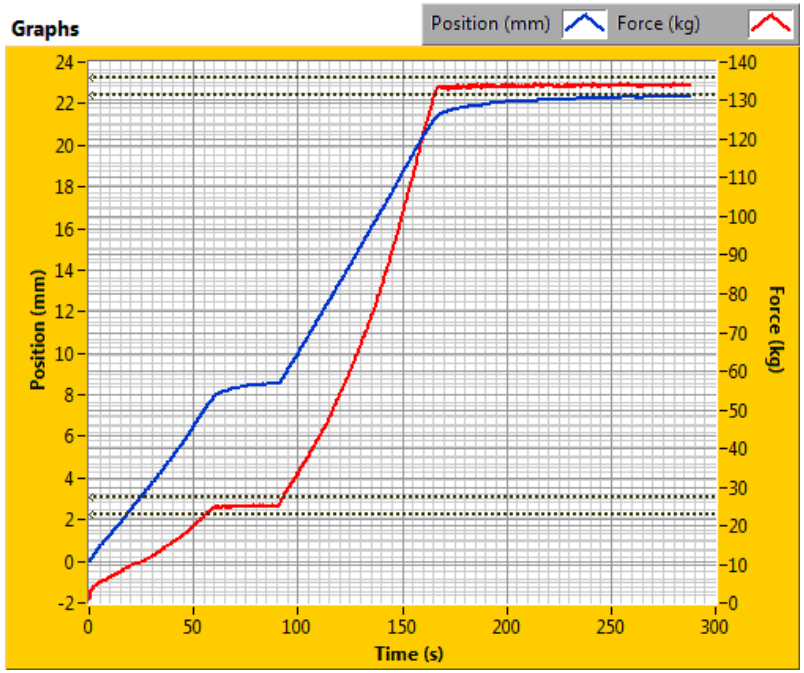
Sample

Model	SRT MODULAR
Color	Black
Size	M
Weight	1575
Manufacturer	Vista
Manuf. Date	12/17

Infos

Standard	FMVSS No.218
Comment	540.0028.003-A

Graphs



Results

Test	Time Data D/M/Y h:m:s	DL ?	Status	Tar1 (Kg)	Tar1 (S)	Tar2 (Kg)	Tar2 (S)	Delta(Del.1 to Del2) (mm)	Pass/Fail
Test#2	[04/01/18 09:28:25]	NO	Valid	22.7	30.0	136.0	120.0	13.7	Pass

DOT Auto – Test results

Laboratory

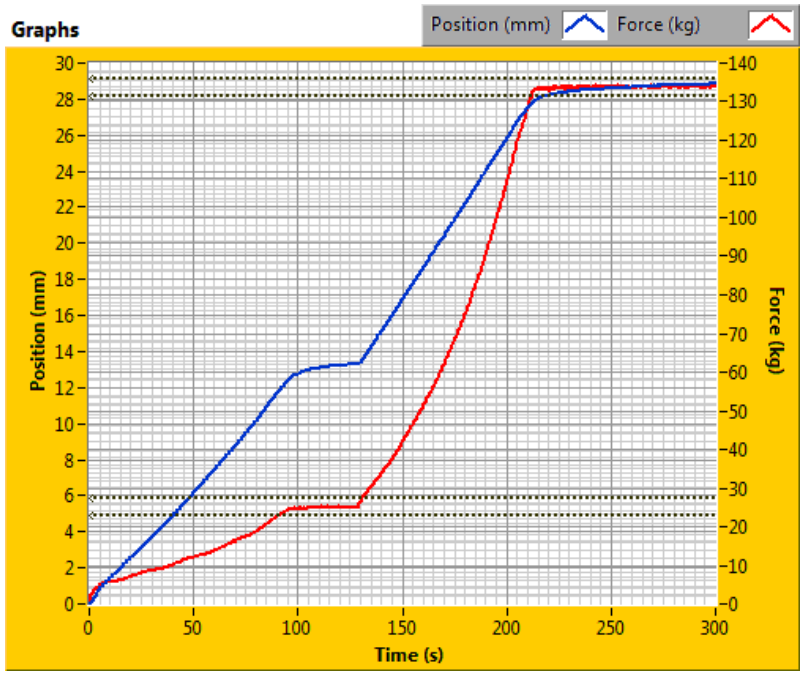
Laboratory	ACT Lab
Technician	Carry
Temperature	22C°
Humidity	57%

Sample

Model	SRT MODULAR
Color	Black
Size	M
Weight	1567
Manufacturer	Vista
Manuf. Date	12/17

Infos

Standard	FMVSS No.218
Comment	540.0028.003-B



Results

Test	Time Data D/M/Y h:m:s	DL ?	Status	Tar1 (Kg)	Tar1 (S)	Tar2 (Kg)	Tar2 (S)	Delta(Del.1 to Del2) (mm)	Pass/Fail
Test#3	[04/01/18 09:37:24]	NO	Valid	22.7	30.0	136.0	120.0	15.5	Pass

DOT Auto – Test results

Laboratory

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

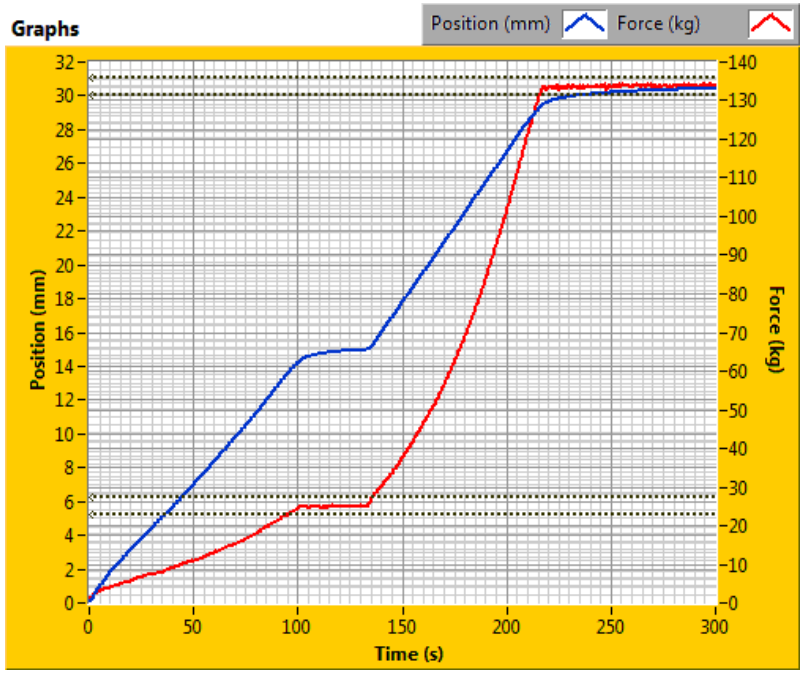
Sample

Model	SRT MODULAR
Color	Black
Size	M
Weight	1572
Manufacturer	Vista
Manuf. Date	12/17

Infos

Standard	FMVSS No.218
Comment	540.0028.003-C

Graphs



Results

Test	Time Data D/M/Y h:m:s	DL ?	Status	Tar1 (Kg)	Tar1 (S)	Tar2 (Kg)	Tar2 (S)	Delta(Del.1 to Del2) (mm)	Pass/Fail
Test#4	[04/01/18 09:46:55]	NO	Valid	22.7	30.0	136.0	120.0	15.3	Pass

DOT Auto – Test results

Laboratory

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

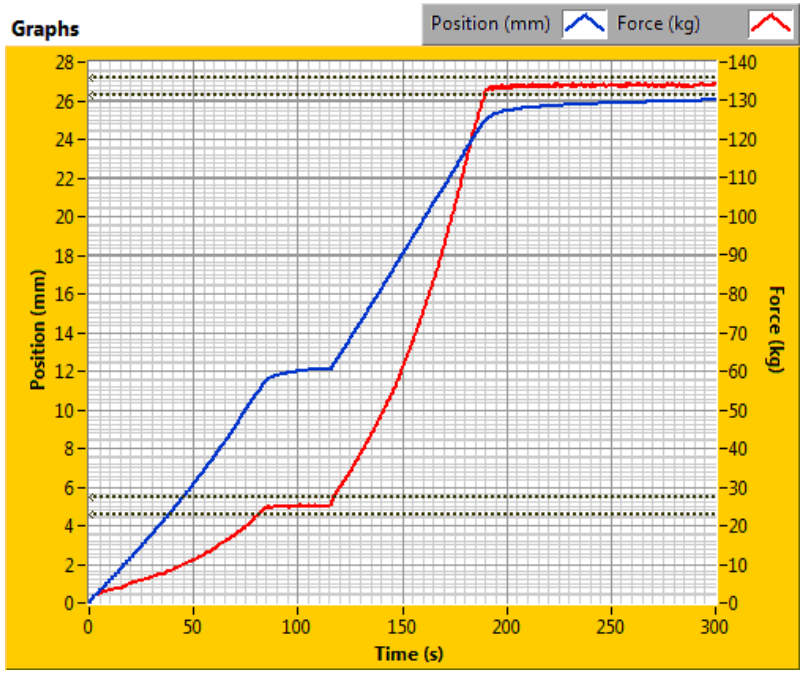
Sample

Model	SRT MODULAR
Color	Black
Size	M
Weight	1581
Manufacturer	Vista
Manuf. Date	12/17

Infos

Standard	FMVSS No.218
Comment	540.0028.003-D

Graphs



Results

Test	Time Data D/M/Y h:m:s	DL ?	Status	Tar1 (Kg)	Tar1 (S)	Tar2 (Kg)	Tar2 (S)	Delta(Del.1 to Del2) (mm)	Pass/Fail
Test#5	[04/01/18 09:57:02]	NO	Valid	22.7	30.0	136.0	120.0	13.8	Pass

APPENDIX A

INTERPRETATIONS OR DEVIATIONS FROM FMVSS 218

None

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**	**Dimensional Check**
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	11 Sep 2017
H1049	DOT Headform	Cadex	Small	3570	11 Sep 2017
H1050	DOT Headform	Cadex	Medium	5057	11 Sep 2017
H1051	DOT Headform	Cadex	Large	6182	11 Sep 2017
H1053	System Check MEP Pad	Cadex	345_08_MP60	30051201	N/A
H1060	Anvil	Cadex	Hemispherical	None	11 Sep 2017
H1062	Anvil	Cadex	Flat	None	11 Sep 2017
H1030	High Temp Cabinet	Shanghai Boxun	92*9240MBE	8285	N/A
H1031	High Temp Cabinet	/	DHG-9426	1503338018	N/A
H1032	Low Temp Cabinet	Haier	DW-25W300	BE062100NO OB29578VMO	N/A
H1033	Low Temp Cabinet	Haier	DW-50W225	F8LMJ	N/A
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°	28 Oct 2017
---	Velocity Gate Flag	Cadex	None	1.00mm	11 Sep 2017

Calibrated Measurement Equipment						
Item No.	Description	Manufacture and Model	Serial No.	Accuracy	Calibration	
					Last	Next
H1003	Velocity Gate	Cadex	HVTG120120810-1	0.16msec	06 Nov 2017	06 Nov 2018
H1004	Velocity Gate	Cadex	HVTG120090331-1	0.16msec	31 May 2017	30 May 2018
H1006	Accelerometer	PCB - 353B18	131607	9.928 mV/g	04 Oct 2017	03 Oct 2018
H1007	Accelerometer	PCB - 353B18	86079	10.30 mV/g	04 Oct 2017	03 Oct 2018
H1014	LVDT	Volfa - LWE-200	2002572	0.01	27 Oct 2017	26 Oct 2018
H1012	LVDT Amplifier	Schaevitz - C20101007753	J72863	-	27 Oct 2017	26 Oct 2018
H1036	Environmental Monitoring	Anymeter TH-602F	3238	2%	04 Jul 2017	03 Jul 2018
H1025	Scale	Shanghai Yousheng BT-6	12230126	0.2g	15 Jun 2017	14 Jun 2018
H1008	Digital Tape	Starrett	5027526-B	0.1mm	15 Jun 2017	14 Jun 2018
H1009	Digital Tape	Starrett	5027526	0.1 mm	27 Oct 2017	26 Oct 2018
H1029	Height Gauge	Shanghai LR MC 130	9090053	0.01 mm	11 Sep 2017	10 Sep 2018

APPENDIX C

PHOTOGRAPHS


Monorail Apparatus


Retention System
Strength Test Apparatus


Penetration test apparatus
with adjustable base

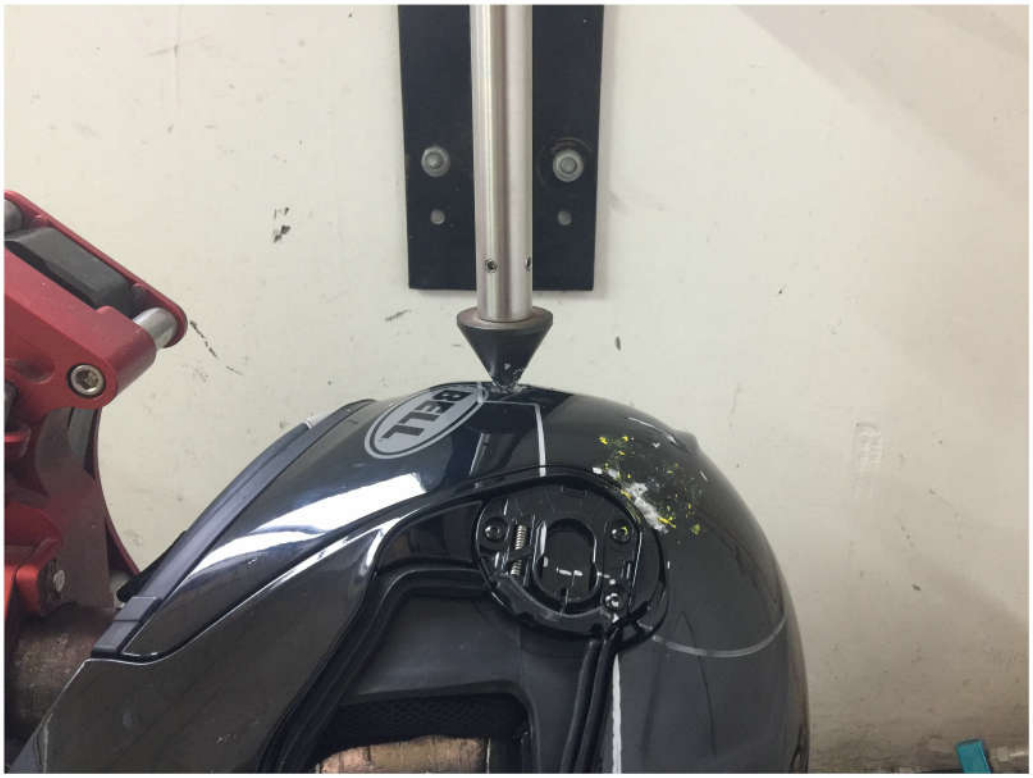

Data Acquisition


High Temperature Chamber


Low Temperature
Conditioning Cabinet

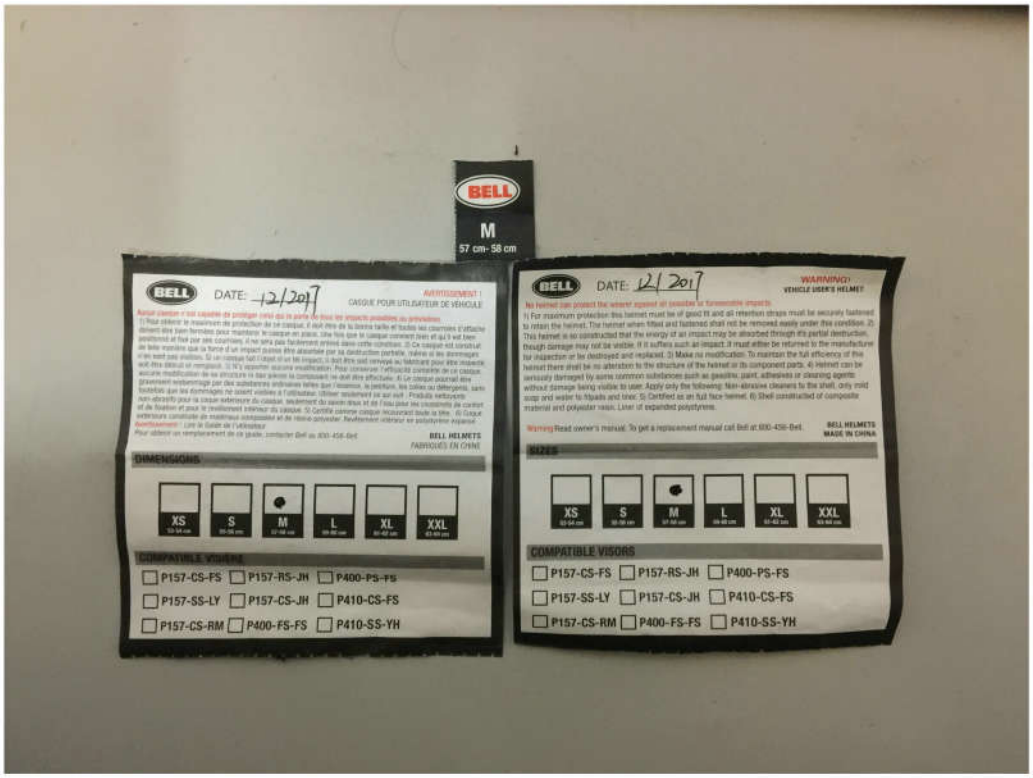

Water Immersion
Equipment


BELL


BELL


BELL


F1
F2
BELL


BELL
M
57 cm- 58 cm
BELL
DATE: 12/2017
CASQUE POUR UTILISATEUR DE VÉHICULE
BELL HELMETS
FABRIQUÉS EN CHINE
DIMENSIONS
XS
S
M
L
XL
XXL
COMPATIBLE VISORS
P157-CS-FS
P157-RS-JH
P400-PS-FS
P157-SS-LY
P157-CS-JH
P410-CS-FS
P157-CS-RM
P400-FS-FS
P410-SS-YH
BELL
DATE: 12/2017
WARNING!
VEHICLE USER'S HELMET
BELL HELMETS
MADE IN CHINA
SIZES
XS
S
M
L
XL
XXL
COMPATIBLE VISORS
P157-CS-FS
P157-RS-JH
P400-PS-FS
P157-SS-LY
P157-CS-JH
P410-CS-FS
P157-CS-RM
P400-FS-FS
P410-SS-YH


BELL
SRT
MODULAR
DOT
FMVSS NO. 218
CERTIFIED