SAFETY COMPLIANCE TESTING FOR ASTM F-1492-22
HELMETS USED IN SKATEBOARDING AND TRICK ROLLER SKATING

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: JR/XS (50-54 cm)
Stock / Model Number	: Not Specified
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Yes

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.005

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 17025:2017. 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 April 2017.) 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.

HELMET DATA

HELMET BRAND NAME: LEATT

HELMET MODEL DESIGNATION: LT2323-MTB URBAN 2.0

HELMET MANUFACTURER: DONGDUAN YIYANG SPORTS Co., Ltd.

HELMET SIZE: JR/XS (50-54 cm)

DATE OF MANUFACTURE: 03/23

AGE GRADING: 5 and older

EPS COLOR: Black

BUCKLE TYPE: Nx/A

LOT NUMBER: TBD

PURCHASE ORDER #: 217667

HELMET COVERAGE: Partial X Full: Complete:

TEST HEADFORM SIZE: EN960 E

HELMET POSITIONING INDEX: 12 mm

Helmet Number:	Weight (g):	Helmet Number:	Weight (g):
1.Ambient	437	**3.Cold**	438
2.Hot	436	**4. Wet**	437

Conditioning Temperatures	
Lab Humidity:	59%
Ambient:	23°C
Hot:	50°C
Cold:	-15°C
Wet:	23°C

TEST SUMMARY

Test Requirements	Pass/Fail
Peripheral Vision	Pass
Projections	Pass
Positional Stability	Pass
Dynamic Strength Retention	Pass
Impact Attenuation	Pass
Labels and Warnings	Pass

Reviewed by: John Bogler

Tested By: Terry Liu

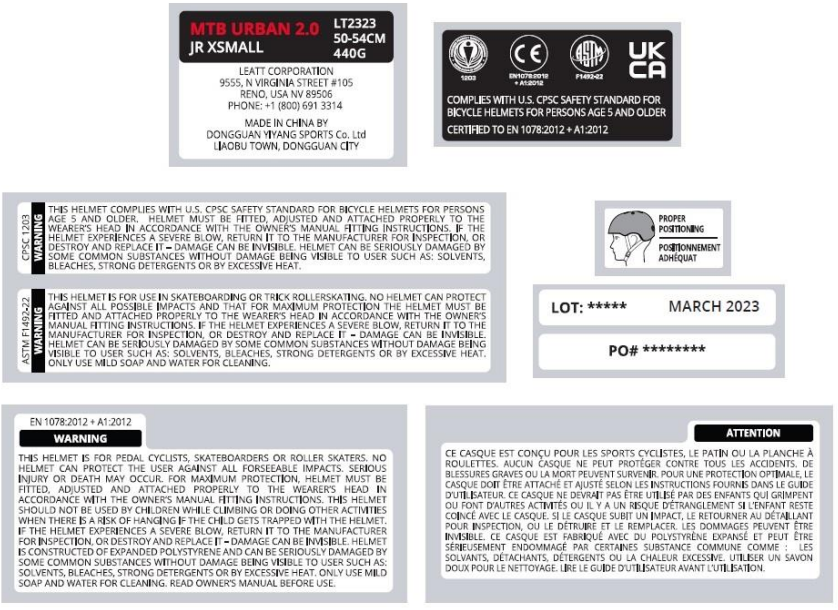
Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. These helmets appear to be constructed of materials that are not known to cause skin irritation or disease.
4. Weights listed above for helmets 1-4 are as tested, with no attachments included.
5. This helmet met all requirements for ASTM F1492.

LABELING

Section	**Labeling -** Each helmet shall be marked with durable labeling so that the following information is legible and easily visible to the user:	**Present on Helmet?** Yes / No
F1446: Standard Test Methods for Equipment and Procedures Used in Evaluating the Performance Characteristics of Protective Headgear		
12.4	Each helmet shall contain labels with at least the following information, using terms and symbols commonly known and easily visible to users. The label(s) should be likely to remain on the helmet and legible throughout the intended design life of the helmet.	Yes
12.4.1	The number of the standard specification which the manufacturer certifies that it meets, including the two-digit version year appended to the number.	Yes
12.4.2	Model designation	Yes
12.4.3	Name of manufacturer	Yes
12.4.4	Month and year of manufacture	Yes
12.4.5	A label that warns the user that no helmet can protect against all possible impacts and that for maximum protection the helmet must be fitted and attached properly to the wearer's head in accordance with the manufacturer's fitting instructions.	Yes
12.4.6	A label that warns the user that the helmet may, after receiving an impact, be damaged to the point that it is no longer adequate to protect the head against further impacts, and that this damage may not be visible to the user. This label should also state that a helmet that has sustained an impact should be returned to the manufacturer for competent inspection or be destroyed and replaced.	Yes
12.4.7	A label that warns the user that the helmet can be damaged by contact with common substances (for example, certain solvents, cleaners, hair tonics, etc.) and that this damage may or may not be visible to the user. This label should also list any recommended cleaning agents or procedures, or both.	Yes
12.4.8	Any other warnings, cautions, or instructions specified in the individual standard specification.	Yes
12.4.9	Each helmet shall have accompanying fitting and positioning instructions including graphic representation of proper positioning.	Yes
Section	**Labeling -** Each helmet shall be marked with durable labeling so that the following information is legible and easily visible to the user:	**Present on Helmet?** Yes / No
F1492-22 Standard Test Methods for Equipment and Procedures Used in Skateboarding and Trick Roller Skating		
4.2	Shall have the words "For skateboarding or trick roller skating".	Yes

904.14204.005 – LT2323-MTB URBAN 2.0



904.14204.005 – Labels

SUMMARY REPORT

HELMET ID	Condition	Brand Name	Model	Date of Manufacture	Helmet Size	Headform Size
1	Ambient	LEATT	LT2323-MTB URBAN 2.0	03/23	JR/XS (50-54 cm)	EN960 E
2	Hot	LEATT	LT2323-MTB URBAN 2.0	03/23	JR/XS (50-54 cm)	EN960 E
3	Cold	LEATT	LT2323-MTB URBAN 2.0	03/23	JR/XS (50-54 cm)	EN960 E
4	Wet	LEATT	LT2323-MTB URBAN 2.0	03/23	JR/XS (50-54 cm)	EN960 E

POSITIONAL STABILITY (ROLL OFF) TEST

HELMET ID	Condition	Drop Mass (kg)	Drop Height (m)	REQUIREMENT	TEST RESULTS
1	Ambient	4.0	0.6	Face Up	Pass
				Face Down	Pass

Comment:

1. Test Criteria: The helmet shall not come off the test headform or excessively displace past the coronal plane.

RETENTION SYSTEM STRENGTH TEST

HELMET ID	Model	Headform Size	Condition	Maximum Elongation (mm)	Residual Elongation (mm)	Pass/Fail
2	LT2323-MTB URBAN 2.0	EN960 E	Hot	21	10	Pass
3	LT2323-MTB URBAN 2.0	EN960 E	Cold	18	9	Pass
4	LT2323-MTB URBAN 2.0	EN960 E	Wet	19	9	Pass

Comment:

1. Test Criteria: The retention system shall remain intact without elongating more than 30 mm.

SYSTEM CHECK – IMPACT ATTENUATION

SYSTEMS CHECK	TEST RECORD	HEADFORM POSITION	DROP (meters)	VEL. (m/s)	PEAK (g)
PRETEST	Pre 1	Crown	1.550	5.39	385
	Pre 2	Crown	1.550	5.35	383
	Pre 3	Crown	1.550	5.38	384
PRETEST AVERAGE		XXXX	XXXX	XXXX	384
POSTTEST	Post 1	Crown	1.550	5.36	385
	Post 2	Crown	1.550	5.39	384
	Post 3	Crown	1.550	5.34	383
POSTTEST AVERAGE		XXXX	XXXX	XXXX	384

IMPACT TEST SUMMARY

Helmet ID	Impact Site #	Impact Location	Anvil	Condition	Velocity (m/sec)	Peak Acc. (g)	Pass/ Fail
1	1	LF Side	Flat	Ambient	4.57	193	Pass
1	2	LF Side	Flat	Ambient	4.65	242	Pass
1	3	LF Side	Flat	Ambient	4.63	270	Pass
1	4	Rear	Flat	Ambient	4.64	187	Pass
1	5	Rear	Flat	Ambient	4.62	221	Pass
1	6	Rear	Flat	Ambient	4.59	243	Pass
1	7	Front	Cylindri	Ambient	4.60	127	Pass
1	8	RT Side	Hazard	Ambient	4.61	124	Pass
2	1	LF Side	Flat	Hot	4.62	164	Pass
2	2	Rear	Flat	Hot	4.62	178	Pass
2	3	Front	Cylindri	Hot	4.65	132	Pass
2	4	RT Side	Hazard	Hot	4.64	125	Pass
3	1	LF Side	Flat	Cold	4.71	179	Pass
3	2	Rear	Flat	Cold	4.65	154	Pass
3	3	Front	Cylindri	Cold	4.64	127	Pass
3	4	RT Side	Hazard	Cold	4.68	116	Pass
4	1	LF Side	Flat	Wet	4.67	179	Pass
4	2	Rear	Flat	Wet	4.63	151	Pass
4	3	Front	Cylindri	Wet	4.66	132	Pass
4	4	RT Side	Hazard	Wet	4.70	132	Pass

Comment:

1. Impact Attenuation: The peak acceleration of any impact shall not exceed 300 g.

EQUIPMENT LIST AND CALIBRATION SCHEDULES

EQUIPMENT LIST						
Asset Tag	**Location**	**Description of part**	**Model Number**	**Serial Number**	**Verification Interval**	**Next Verification**
H1001	Helmet Room	Fixture	Yellow Tower - 1000_00_MIMAT	NA	NA	NA
H1002	Helmet Room	Fixture	Green Tower - Series 2000	NA	NA	NA
H1011	Helmet Room	Instrument	Impact Machine System DX3000 - Green tower	NA	NA	NA
H1013	Helmet Room	Instrument	CPSC/ASTM Dynamic Strength Charge Amplifier - ATA2001 (Backup)	J72863	Yes	Daily
H1015	Helmet Room	Fixture	CPSC/ASTM Positional Stability Fixture	NA	Yes	4/27/2024
H1017	Helmet Room	Fixture	DOT Retention System Machine - SB033	NA	Yes	4/27/2024
H1034	Helmet Room	Environmental chamber	Water Immersion Container	NA	NA	NA
H1043	Helmet Room	Headform	ISO/EN960 A Partial Headform (Impact)	4272	Yes	5/5/2024
H1044	Helmet Room	Headform	ISO/EN960 C Partial Headform (Impact)	6938	Yes	5/5/2024
H1045	Helmet Room	Headform	ISO/EN960 E Partial Headform (Impact)	4146	Yes	5/5/2024
H1046	Helmet Room	Headform	ISO/EN960 J Partial Headform (Impact)	4148	Yes	5/5/2024
H1047	Helmet Room	Headform	ISO/EN960 M Partial Headform (Impact)	4131	Yes	5/5/2024
H1048	Helmet Room	Headform	ISO/EN960 O Partial Headform (Impact)	4151	Yes	5/5/2024
H1049	Helmet Room	Headform	DOT Small (Impact)	5178	Yes	5/5/2024
H1050	Helmet Room	Headform	DOT Medium (Impact)	5179	Yes	5/5/2024
H1051	Helmet Room	Headform	DOT Large (Impact)	5190	Yes	5/5/2024
H1052	Helmet Room	Drop Mass	CPSC/ASTM Spherical Impactor	NA	Yes	5/5/2024
H1054	Helmet Room	Drop Mass	ASTM/SNELL Chin Bar Impactor	NA	Yes	5/5/2024
H1055	Helmet Room	Anvil	CurbStone - CPSC/ASTM	NA	Yes	5/5/2024
H1056	Helmet Room	Anvil	Cylindrical	NA	Yes	5/5/2024
H1059	Helmet Room	Anvil	Triangular Hazard	NA	Yes	5/5/2024
H1060	Helmet Room	Anvil	Hemispherical - Yellow tower	NA	Yes	5/5/2024
H1062	Helmet Room	Anvil	Flat - Yellow tower	C240812-01	Yes	5/5/2024
H1066	Helmet Room	Fixture	Penetration Magnetic Carriage	NA	Yes	6/25/2024
H1091	Helmet Room	Fixture	40° Up Vision Angle Block	NA	Yes	5/6/2024
H1092	Helmet Room	Clamp	Split Ring Clamp - 119g	NA	Yes	5/6/2024
H1093	Helmet Room	Clamp	Split Ring Clamp - 210g	NA	Yes	5/6/2024
H1094	Helmet Room	Clamp	Split Ring Clamp - 378g	NA	Yes	5/6/2024
H1095	Helmet Room	Clamp	Split Ring Clamp - 451g	NA	Yes	5/6/2024
H1096	Helmet Room	Clamp	Split Ring Clamp - 505g	NA	Yes	5/6/2024
H1097	Helmet Room	Clamp	Split Ring Clamp - 597g	NA	Yes	5/6/2024
H1098	Helmet Room	Clamp	Split Ring Clamp - 1158g	NA	Yes	5/6/2024
H1099	Helmet Room	Anvil	Flat - Green tower	NA	Yes	5/6/2024
H1100	Helmet Room	Anvil	Hemispherical - Green tower	NA	Yes	5/6/2024
H1101	Helmet Room	Headform	DOT Small (Reference)	NA	Yes	4/27/2024
H1102	Helmet Room	Headform	DOT Medium (Reference)	NA	Yes	4/27/2024
H1103	Helmet Room	Headform	DOT Large (Reference)	NA	Yes	4/27/2024
H1105	Helmet Room	Drop Mass	Aluminum Ball Stem - Green tower	NA	Yes	5/6/2024
H1106	Helmet Room	Drop Mass	Steel Ball Stem	NA	Yes	5/6/2024
H1107	Helmet Room	Drop Mass	Magnesium Ball Stem	NA	Yes	5/6/2024
H1123	Helmet Room	Fixture	CPSC/ASTM Roll Off Headform Base Fastened Plate	NA	NA	NA
H1126	Helmet Room	Drop Mass	Complete Pistol Grip - Green tower	NA	Yes	5/6/2024
H1127	Helmet Room	Headform	ISO/EN 960 C Full Headform (Reference)	6947	Yes	4/27/2024
H1128	Helmet Room	Headform	DOT Small (Penetration)	NA	Yes	4/27/2024
H1129	Helmet Room	Headform	DOT Medium (Penetration)	NA	Yes	4/27/2024
H1130	Helmet Room	Headform	DOT Large (Penetration)	NA	Yes	4/27/2024
H1143	Helmet Room	Fixture	DOT Brow Opening 1 Inch Block	NA	Yes	4/28/2024
H1146	Helmet Room	Fixture	DOT Penetration Height Stick	NA	Yes	6/25/2024
H1149	Helmet Room	Mass	Testing Area Preload Ballast	NA	Yes	4/28/2024
H1150	Helmet Room	Drop Mass	10kg Positional Stability Drop Mass	NA	Yes	4/28/2024
H1178	Helmet Room	Drop Mass	Complete Pistol Grip - Yellow tower	NA	Yes	5/6/2024
H1179	Helmet Room	Drop Mass	Aluminum Ball Stem - Yellow tower	NA	Yes	5/6/2024
H1189	Helmet Room	Drop Mass	DOT Penetration Striker Tip	070622-03	Yes	6/25/2024
H1196	Helmet Room	Fixture	DOT Retention Machine Static Load - SB033 (New)	NA	Yes	4/28/2024
H1197	Helmet Room	Fixture	DOT Retention LVDT Calibration Block	NA	Yes	Pending
H1204	Helmet Room	Drop Mass	Complete Pistol Grip - Yellow tower (Backup)	120122-07	Yes	5/6/2024
H1205	Helmet Room	Drop Mass	Ball Stem - Yellow tower (Backup)	NA	Yes	5/6/2024
H1213	Helmet Room	Fixture	CPSC/ASTM Dynamic Retention Strength Fixture	NA	Yes	4/28/2024
H1229	Helmet Room	Fixture	Penetration Tube	NA	Yes	6/25/2024
H1230	Helmet Room	Fixture	Penetration Headform Mount Holder	NA	NA	NA

CALIBRATED MEASUREMENT DEVICES							
Asset Tag	Description of part	Model Number	Measuring Range	Accuracy	Serial Number	Last Calibrated On	Calibration Due On
H1003	Instrument	Velocity Gate - Yellow tower	0-8.5m/s	±0.0001m/s	HVTG120120810-1	10/6/2022	10/5/2023
H1004	Instrument	Velocity Gate - Green tower	0-6.5m/s	±0.0001m/s	HVTG120090331-1	1/26/2023	1/25/2024
H1006	Instrument	Accelerometer PCB 353B18 - Yellow & Green tower	±500g	≤1%	131607	1/26/2023	1/25/2024
H1007	Instrument	Accelerometer PCB 353B18 - Green tower	±500g	≤1%	86079	10/5/2022	10/4/2023
H1009	Fixture	Digital Tape 16' - Yellow tower	0-5.5m	±0.1cm	5027526	11/24/2022	11/23/2023
H1010	Instrument	CCS PC4300 - Green tower	±500g	≤1%	CCS120090331-1	1/26/2023	1/25/2024
H1012	Instrument	CPSC/ASTM Dynamic Strength LVDT - C20101007753 (Backup)	0-50mm	±0.1mm	C20101007753	11/22/2022	11/21/2023
H1014	Instrument	DOT Retention System LVDT - LWE-200	0-100mm	±0.1mm	2002572	11/22/2022	11/21/2023
H1025	Fixture	Electronic Scale - BT-6	0-6kg	±0.1g	12230126	6/26/2023	6/25/2024
H1026	Fixture	Laser Table - SB005	0-450mm, 0-20°	±1mm, ±1°	TLTV2KB-20090403-1	11/22/2022	11/21/2023
H1030	Conditioning	Oven #1 - 92*9240MBE	0-200℃	±0.1℃	8285	6/26/2023	6/25/2024
H1031	Conditioning	Oven #2 - DHG-9426	0-200℃	±0.1℃	1503338018	11/22/2022	11/21/2023
H1032	Conditioning	Freezer #1 - DW-25W300	-30~-10℃	±0.1℃	BE062100N00B29578VMO	6/26/2023	6/25/2024
H1033	Environmental chamber	Freezer #2 - DW-50W225	-30~-10℃	±0.1℃	F8LMJ	11/22/2022	11/21/2023
H1036	Fixture	Hygrothermograph #1 - TH-602F	-30~60℃, 0-100%	±1℃	3238	6/28/2023	6/27/2024
H1057	Anvil	Edge	NA	NA	NA	10/27/2020	10/26/2023
H1058	Anvil	Equestrian Hazard	NA	NA	NA	10/27/2020	10/26/2023
H1061	Anvil	Skate Blade	NA	NA	NA	10/27/2020	10/26/2023
H1063	Fixture	Digital tape - 5m	0-5m	±0.1mm	78223	11/24/2022	11/23/2023
H1064	Instrument	CCS PC4400 - Yellow tower	±500g	≤1%	CCS120120810-1	1/26/2023	1/25/2024
H1070	Instrument	DOT Retention System Load Cell - 9363-B10-300-20T1	0-300lb	±0.1kg	80310843	6/26/2023	6/25/2024
H1072	Fixture	Hygrothermograph #4 - TH600B	-20~100℃, 0-100%	±1℃	Q/MDS001-2017-2	6/27/2023	6/26/2024
H1073	Fixture	Height Gauge	0-500mm	±0.01mm	8811213838273610	11/22/2022	11/21/2023
H1074	Fixture	Digital Vernier Caliper - SJ-455615	0-150mm	±0.01mm	455615	11/22/2022	11/21/2023
H1075	Fixture	Digital Level - SPI TRONIC Pro 360	0-360°	±0.1°	31-038-3	11/24/2022	11/23/2023
H1076	Instrument	Calorifier - CN-111	18-35℃	±0.1℃	NA	11/25/2022	11/24/2023
H1077	Fixture	ACT Tape	0-1.5m	±1mm	NA	11/24/2022	11/23/2023
H1117	Fixture	Helmet Internal Circumference Measure Tool	49-62cm	±1mm	NA	11/24/2022	11/23/2023
H1172	Fixture	Height Measurement Rod #6	600±5mm	±1mm	032216-02	6/24/2022	6/23/2025
H1174	Anvil	MEP Pad	NA	NA	021921-01	2022 yearly report	2023 yearly report
H1180	Instrument	CPSC/ASTM LVDT & Sensor Box	2 Inch	±0.1mm	04140748-001	11/22/2022	11/21/2023
H1184	Instrument	Accelerometer PCB 353B18 - Yellow tower	±500g	≤1%	LW226664	10/5/2022	10/4/2023
H1190	Environmental chamber	Oven - KH-120A	5-250℃	±0.1℃	2201-020	11/22/2022	11/21/2023
H1193	Fixture	I-square	150*100mm	±1mm	SJT-43008	11/24/2022	11/23/2023
H1194	Fixture	Triangular Ruler	190mm	±1mm	SJT-43111	11/25/2022	11/24/2023
H1198	Instrument	LVDT Volfa LWE-200 (Head) - DOT Retention	0-150mm	±1mm	NA	3/10/2023	3/9/2024
H1199	Instrument	LVDT Volfa LWE-200 - DOT Retention Machine	0-150mm	±1mm	NA	3/10/2023	3/9/2024
H1200	Instrument	VPG load cell - 9363-B10-500-20T1 - DOT Retention Machine	0-500lb	±0.1kg	90139705	3/10/2023	3/9/2024
H1210	Fixture	Peripheral Vision	105° Both sides	105°	NA	4/27/2023	4/26/2026
H1214	Instrument	DOT Retention System LVDT (Head) - LWE-200	0-50mm	±0.1mm	27008-10	4/28/2023	4/27/2024
H1216	Fixture	Digital Vernier Caliper - GLA13S	0-300mm	±0.03mm; ±0.04mm	K23D014332	5/17/2023	5/16/2024

Contract File No.: 904.14204
Test File: 005
Technician: Terry Liu
Test Date: 18 July 2023

NOTICE

1. The report is not effective without the signature of the person(s) authorizing the report (ACT Lab's authorized signatory is John A. Bogler (President)).
2. The report is not valid if altered.
3. Claims have to be made within 15 days after receipt of this report.
4. The results of this test report relate only to the items tested.
5. The results apply to the samples as received.
6. For reports that contain results from external test service providers: Results from external test service providers are supplied by the customer and can affect validity of results.
7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

END OF REPORT

SAFETY COMPLIANCE TESTING FOR ASTM F-1492-22
HELMETS USED IN SKATEBOARDING AND TRICK ROLLER SKATING

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: S (51-55 cm)
Stock / Model Number	: Not Specified
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Not Specified

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.009

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 17025:2017. 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 April 2017.) 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.

HELMET DATA

HELMET BRAND NAME: LEATT

HELMET MODEL DESIGNATION: LT2323-MTB URBAN 2.0

HELMET MANUFACTURER: DONGDUAN YIYANG SPORTS Co., Ltd.

HELMET SIZE: S (51-55 cm)

DATE OF MANUFACTURE: 03/23

AGE GRADING: 5 and older

EPS COLOR: Black

BUCKLE TYPE: Nx/A

LOT NUMBER: TBD

PURCHASE ORDER #: 217667

HELMET COVERAGE: Partial X Full: Complete:

TEST HEADFORM SIZE: EN960 J

HELMET POSITIONING INDEX: 18 mm

Helmet Number:	Weight (g):	Helmet Number:	Weight (g):
1.Ambient	437	**3.Cold**	437
2.Hot	436	**4. Wet**	439

Conditioning Temperatures	
Lab Humidity:	59%
Ambient:	23°C
Hot:	50°C
Cold:	-15°C
Wet:	23°C

TEST SUMMARY

Test Requirements	Pass/Fail
Peripheral Vision	Pass
Projections	Pass
Positional Stability	Pass
Dynamic Strength Retention	Pass
Impact Attenuation	Pass
Labels and Warnings	Pass

Reviewed by: John Bogler

Tested By: Terry Liu

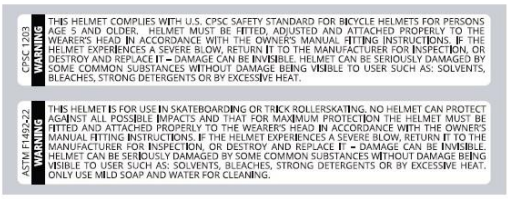
Comments:

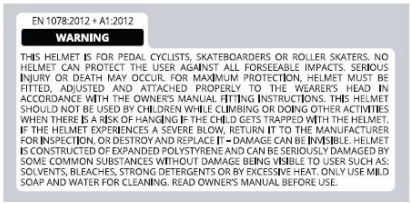
1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. These helmets appear to be constructed of materials that are not known to cause skin irritation or disease.
4. Weights listed above for helmets 1-4 are as tested, with no attachments included.
5. This helmet met all requirements for ASTM F1492.

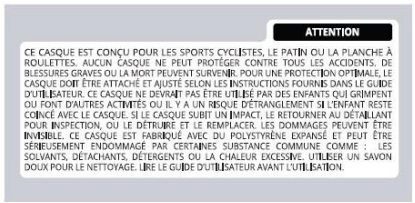
LABELING

Section	**Labeling -** Each helmet shall be marked with durable labeling so that the following information is legible and easily visible to the user:	**Present on Helmet?** Yes / No
F1446: Standard Test Methods for Equipment and Procedures Used in Evaluating the Performance Characteristics of Protective Headgear		
12.4	Each helmet shall contain labels with at least the following information, using terms and symbols commonly known and easily visible to users. The label(s) should be likely to remain on the helmet and legible throughout the intended design life of the helmet.	Yes
12.4.1	The number of the standard specification which the manufacturer certifies that it meets, including the two-digit version year appended to the number.	Yes
12.4.2	Model designation	Yes
12.4.3	Name of manufacturer	Yes
12.4.4	Month and year of manufacture	Yes
12.4.5	A label that warns the user that no helmet can protect against all possible impacts and that for maximum protection the helmet must be fitted and attached properly to the wearer's head in accordance with the manufacturer's fitting instructions.	Yes
12.4.6	A label that warns the user that the helmet may, after receiving an impact, be damaged to the point that it is no longer adequate to protect the head against further impacts, and that this damage may not be visible to the user. This label should also state that a helmet that has sustained an impact should be returned to the manufacturer for competent inspection or be destroyed and replaced.	Yes
12.4.7	A label that warns the user that the helmet can be damaged by contact with common substances (for example, certain solvents, cleaners, hair tonics, etc.) and that this damage may or may not be visible to the user. This label should also list any recommended cleaning agents or procedures, or both.	Yes
12.4.8	Any other warnings, cautions, or instructions specified in the individual standard specification.	Yes
12.4.9	Each helmet shall have accompanying fitting and positioning instructions including graphic representation of proper positioning.	Yes
Section	**Labeling -** Each helmet shall be marked with durable labeling so that the following information is legible and easily visible to the user:	**Present on Helmet?** Yes / No
F1492-22 Standard Test Methods for Equipment and Procedures Used in Skateboarding and Trick Roller Skating		
4.2	Shall have the words "For skateboarding or trick roller skating".	Yes

904.14204.009 – LT2323-MTB URBAN 2.0







904.14204.009 – Labels

SUMMARY REPORT

HELMET ID	Condition	Brand Name	Model	Date of Manufacture	Helmet Size	Headform Size
1	Ambient	LEATT	LT2323-MTB URBAN 2.0	03/23	S (51-55 cm)	EN960 J
2	Hot	LEATT	LT2323-MTB URBAN 2.0	03/23	S (51-55 cm)	EN960 J
3	Cold	LEATT	LT2323-MTB URBAN 2.0	03/23	S (51-55 cm)	EN960 J
4	Wet	LEATT	LT2323-MTB URBAN 2.0	03/23	S (51-55 cm)	EN960 J

POSITIONAL STABILITY (ROLL OFF) TEST

HELMET ID	Condition	Drop Mass (kg)	Drop Height (m)	REQUIREMENT	TEST RESULTS
1	Ambient	4.0	0.6	Face Up	Pass
				Face Down	Pass

Comment:

1. Test Criteria: The helmet shall not come off the test headform or excessively displace past the coronal plane.

RETENTION SYSTEM STRENGTH TEST

HELMET ID	Model	Headform Size	Condition	Maximum Elongation (mm)	Residual Elongation (mm)	Pass/Fail
2	LT2323-MTB URBAN 2.0	EN960 J	Hot	20	10	Pass
3	LT2323-MTB URBAN 2.0	EN960 J	Cold	19	9	Pass
4	LT2323-MTB URBAN 2.0	EN960 J	Wet	20	9	Pass

Comment:

1. Test Criteria: The retention system shall remain intact without elongating more than 30 mm.

SYSTEM CHECK – IMPACT ATTENUATION

SYSTEMS CHECK	TEST RECORD	HEADFORM POSITION	DROP (meters)	VEL. (m/s)	PEAK (g)
PRETEST	Pre 1	Crown	1.550	5.39	385
	Pre 2	Crown	1.550	5.35	383
	Pre 3	Crown	1.550	5.38	384
PRETEST AVERAGE		XXXX	XXXX	XXXX	384
POSTTEST	Post 1	Crown	1.550	5.36	385
	Post 2	Crown	1.550	5.39	384
	Post 3	Crown	1.550	5.34	383
POSTTEST AVERAGE		XXXX	XXXX	XXXX	384

IMPACT TEST SUMMARY

Helmet ID	Impact Site #	Impact Location	Anvil	Condition	Velocity (m/sec)	Peak Acc. (g)	Pass/ Fail
1	1	LF Side	Flat	Ambient	4.69	222	Pass
1	2	LF Side	Flat	Ambient	4.62	255	Pass
1	3	LF Side	Flat	Ambient	4.68	277	Pass
1	4	Rear	Flat	Ambient	4.62	178	Pass
1	5	Rear	Flat	Ambient	4.62	216	Pass
1	6	Rear	Flat	Ambient	4.61	243	Pass
1	7	Front	Cylindri	Ambient	4.68	212	Pass
1	8	RT Side	Hazard	Ambient	4.61	115	Pass
2	1	LF Side	Flat	Hot	4.63	178	Pass
2	2	Rear	Flat	Hot	4.61	167	Pass
2	3	Front	Cylindri	Hot	4.70	121	Pass
2	4	RT Side	Hazard	Hot	4.62	117	Pass
3	1	LF Side	Flat	Cold	4.63	189	Pass
3	2	Rear	Flat	Cold	4.61	177	Pass
3	3	Front	Cylindri	Cold	4.69	133	Pass
3	4	RT Side	Hazard	Cold	4.66	107	Pass
4	1	LF Side	Flat	Wet	4.63	178	Pass
4	2	Rear	Flat	Wet	4.63	175	Pass
4	3	Front	Cylindri	Wet	4.70	124	Pass
4	4	RT Side	Hazard	Wet	4.62	120	Pass

Comment:

1. Impact Attenuation: The peak acceleration of any impact shall not exceed 300 g.

EQUIPMENT LIST AND CALIBRATION SCHEDULES

EQUIPMENT LIST						
Asset Tag	**Location**	**Description of part**	**Model Number**	**Serial Number**	**Verification Interval**	**Next Verification**
H1001	Helmet Room	Fixture	Yellow Tower - 1000_00_MIMAT	NA	NA	NA
H1002	Helmet Room	Fixture	Green Tower - Series 2000	NA	NA	NA
H1011	Helmet Room	Instrument	Impact Machine System DX3000 - Green tower	NA	NA	NA
H1013	Helmet Room	Instrument	CPSC/ASTM Dynamic Strength Charge Amplifier - ATA2001 (Backup)	J72863	Yes	Daily
H1015	Helmet Room	Fixture	CPSC/ASTM Positional Stability Fixture	NA	Yes	4/27/2024
H1017	Helmet Room	Fixture	DOT Retention System Machine - SB033	NA	Yes	4/27/2024
H1034	Helmet Room	Environmental chamber	Water Immersion Container	NA	NA	NA
H1043	Helmet Room	Headform	ISO/EN960 A Partial Headform (Impact)	4272	Yes	5/5/2024
H1044	Helmet Room	Headform	ISO/EN960 C Partial Headform (Impact)	6938	Yes	5/5/2024
H1045	Helmet Room	Headform	ISO/EN960 E Partial Headform (Impact)	4146	Yes	5/5/2024
H1046	Helmet Room	Headform	ISO/EN960 J Partial Headform (Impact)	4148	Yes	5/5/2024
H1047	Helmet Room	Headform	ISO/EN960 M Partial Headform (Impact)	4131	Yes	5/5/2024
H1048	Helmet Room	Headform	ISO/EN960 O Partial Headform (Impact)	4151	Yes	5/5/2024
H1049	Helmet Room	Headform	DOT Small (Impact)	5178	Yes	5/5/2024
H1050	Helmet Room	Headform	DOT Medium (Impact)	5179	Yes	5/5/2024
H1051	Helmet Room	Headform	DOT Large (Impact)	5190	Yes	5/5/2024
H1052	Helmet Room	Drop Mass	CPSC/ASTM Spherical Impactor	NA	Yes	5/5/2024
H1054	Helmet Room	Drop Mass	ASTM/SNELL Chin Bar Impactor	NA	Yes	5/5/2024
H1055	Helmet Room	Anvil	CurbStone - CPSC/ASTM	NA	Yes	5/5/2024
H1056	Helmet Room	Anvil	Cylindrical	NA	Yes	5/5/2024
H1059	Helmet Room	Anvil	Triangular Hazard	NA	Yes	5/5/2024
H1060	Helmet Room	Anvil	Hemispherical - Yellow tower	NA	Yes	5/5/2024
H1062	Helmet Room	Anvil	Flat - Yellow tower	C240812-01	Yes	5/5/2024
H1066	Helmet Room	Fixture	Penetration Magnetic Carriage	NA	Yes	6/25/2024
H1091	Helmet Room	Fixture	40° Up Vision Angle Block	NA	Yes	5/6/2024
H1092	Helmet Room	Clamp	Split Ring Clamp - 119g	NA	Yes	5/6/2024
H1093	Helmet Room	Clamp	Split Ring Clamp - 210g	NA	Yes	5/6/2024
H1094	Helmet Room	Clamp	Split Ring Clamp - 378g	NA	Yes	5/6/2024
H1095	Helmet Room	Clamp	Split Ring Clamp - 451g	NA	Yes	5/6/2024
H1096	Helmet Room	Clamp	Split Ring Clamp - 505g	NA	Yes	5/6/2024
H1097	Helmet Room	Clamp	Split Ring Clamp - 597g	NA	Yes	5/6/2024
H1098	Helmet Room	Clamp	Split Ring Clamp - 1158g	NA	Yes	5/6/2024
H1099	Helmet Room	Anvil	Flat - Green tower	NA	Yes	5/6/2024
H1100	Helmet Room	Anvil	Hemispherical - Green tower	NA	Yes	5/6/2024
H1101	Helmet Room	Headform	DOT Small (Reference)	NA	Yes	4/27/2024
H1102	Helmet Room	Headform	DOT Medium (Reference)	NA	Yes	4/27/2024
H1103	Helmet Room	Headform	DOT Large (Reference)	NA	Yes	4/27/2024
H1105	Helmet Room	Drop Mass	Aluminum Ball Stem - Green tower	NA	Yes	5/6/2024
H1106	Helmet Room	Drop Mass	Steel Ball Stem	NA	Yes	5/6/2024
H1107	Helmet Room	Drop Mass	Magnesium Ball Stem	NA	Yes	5/6/2024
H1123	Helmet Room	Fixture	CPSC/ASTM Roll Off Headform Base Fastened Plate	NA	NA	NA
H1126	Helmet Room	Drop Mass	Complete Pistol Grip - Green tower	NA	Yes	5/6/2024
H1127	Helmet Room	Headform	ISO/EN 960 C Full Headform (Reference)	6947	Yes	4/27/2024
H1128	Helmet Room	Headform	DOT Small (Penetration)	NA	Yes	4/27/2024
H1129	Helmet Room	Headform	DOT Medium (Penetration)	NA	Yes	4/27/2024
H1130	Helmet Room	Headform	DOT Large (Penetration)	NA	Yes	4/27/2024
H1143	Helmet Room	Fixture	DOT Brow Opening 1 Inch Block	NA	Yes	4/28/2024
H1146	Helmet Room	Fixture	DOT Penetration Height Stick	NA	Yes	6/25/2024
H1149	Helmet Room	Mass	Testing Area Preload Ballast	NA	Yes	4/28/2024
H1150	Helmet Room	Drop Mass	10kg Positional Stability Drop Mass	NA	Yes	4/28/2024
H1178	Helmet Room	Drop Mass	Complete Pistol Grip - Yellow tower	NA	Yes	5/6/2024
H1179	Helmet Room	Drop Mass	Aluminum Ball Stem - Yellow tower	NA	Yes	5/6/2024
H1189	Helmet Room	Drop Mass	DOT Penetration Striker Tip	070622-03	Yes	6/25/2024
H1196	Helmet Room	Fixture	DOT Retention Machine Static Load - SB033 (New)	NA	Yes	4/28/2024
H1197	Helmet Room	Fixture	DOT Retention LVDT Calibration Block	NA	Yes	Pending
H1204	Helmet Room	Drop Mass	Complete Pistol Grip - Yellow tower (Backup)	120122-07	Yes	5/6/2024
H1205	Helmet Room	Drop Mass	Ball Stem - Yellow tower (Backup)	NA	Yes	5/6/2024
H1213	Helmet Room	Fixture	CPSC/ASTM Dynamic Retention Strength Fixture	NA	Yes	4/28/2024
H1229	Helmet Room	Fixture	Penetration Tube	NA	Yes	6/25/2024
H1230	Helmet Room	Fixture	Penetration Headform Mount Holder	NA	NA	NA

CALIBRATED MEASUREMENT DEVICES							
Asset Tag	**Description of part**	**Model Number**	**Measuring Range**	**Accuracy**	**Serial Number**	**Last Calibrated On**	**Calibration Due On**
H1003	Instrument	Velocity Gate - Yellow tower	0-8.5m/s	±0.0001m/s	HVTG120120810-1	10/6/2022	10/5/2023
H1004	Instrument	Velocity Gate - Green tower	0-6.5m/s	±0.0001m/s	HVTG120090331-1	1/26/2023	1/25/2024
H1006	Instrument	Accelerometer PCB 353B18 - Yellow & Green tower	±500g	≤1%	131607	1/26/2023	1/25/2024
H1007	Instrument	Accelerometer PCB 353B18 - Green tower	±500g	≤1%	86079	10/5/2022	10/4/2023
H1009	Fixture	Digital Tape 16' - Yellow tower	0-5.5m	±0.1cm	5027526	11/24/2022	11/23/2023
H1010	Instrument	CCS PC4300 - Green tower	±500g	≤1%	CCS120090331-1	1/26/2023	1/25/2024
H1012	Instrument	CPSC/ASTM Dynamic Strength LVDT - C20101007753 (Backup)	0-50mm	±0.1mm	C20101007753	11/22/2022	11/21/2023
H1014	Instrument	DOT Retention System LVDT - LWE-200	0-100mm	±0.1mm	2002572	11/22/2022	11/21/2023
H1025	Fixture	Electronic Scale - BT-6	0-6kg	±0.1g	12230126	6/26/2023	6/25/2024
H1026	Fixture	Laser Table - SB005	0-450mm, 0-20°	±1mm, ±1°	TLTV2KB-20090403-1	11/22/2022	11/21/2023
H1030	Conditioning	Oven #1 - 92*9240MBE	0-200℃	±0.1℃	8285	6/26/2023	6/25/2024
H1031	Conditioning	Oven #2 - DHG-9426	0-200℃	±0.1℃	1503338018	11/22/2022	11/21/2023
H1032	Conditioning	Freezer #1 - DW-25W300	-30~-10℃	±0.1℃	BE062100N00B29578VMO	6/26/2023	6/25/2024
H1033	Environmental chamber	Freezer #2 - DW-50W225	-30~-10℃	±0.1℃	F8LMJ	11/22/2022	11/21/2023
H1036	Fixture	Hygrothermograph #1 - TH-602F	-30~60℃, 0-100%	±1℃	3238	6/28/2023	6/27/2024
H1057	Anvil	Edge	NA	NA	NA	10/27/2020	10/26/2023
H1058	Anvil	Equestrian Hazard	NA	NA	NA	10/27/2020	10/26/2023
H1061	Anvil	Skate Blade	NA	NA	NA	10/27/2020	10/26/2023
H1063	Fixture	Digital tape - 5m	0-5m	±0.1mm	78223	11/24/2022	11/23/2023
H1064	Instrument	CCS PC4400 - Yellow tower	±500g	≤1%	CCS120120810-1	1/26/2023	1/25/2024
H1070	Instrument	DOT Retention System Load Cell - 9363-B10-300-20T1	0-300lb	±0.1kg	80310843	6/26/2023	6/25/2024
H1072	Fixture	Hygrothermograph #4 - TH600B	-20~100℃, 0-100%	±1℃	Q/MDS001-2017-2	6/27/2023	6/26/2024
H1073	Fixture	Height Gauge	0-500mm	±0.01mm	8811213838273610	11/22/2022	11/21/2023
H1074	Fixture	Digital Vernier Caliper - SJ-455615	0-150mm	±0.01mm	455615	11/22/2022	11/21/2023
H1075	Fixture	Digital Level - SPI TRONIC Pro 360	0-360°	±0.1°	31-038-3	11/24/2022	11/23/2023
H1076	Instrument	Calorifier - CN-111	18-35℃	±0.1℃	NA	11/25/2022	11/24/2023
H1077	Fixture	ACT Tape	0-1.5m	±1mm	NA	11/24/2022	11/23/2023
H1117	Fixture	Helmet Internal Circumference Measure Tool	49-62cm	±1mm	NA	11/24/2022	11/23/2023
H1172	Fixture	Height Measurement Rod #6	600±5mm	±1mm	032216-02	6/24/2022	6/23/2025
H1174	Anvil	MEP Pad	NA	NA	021921-01	2022 yearly report	2023 yearly report
H1180	Instrument	CPSC/ASTM LVDT & Sensor Box	2 Inch	±0.1mm	04140748-001	11/22/2022	11/21/2023
H1184	Instrument	Accelerometer PCB 353B18 - Yellow tower	±500g	≤1%	LW226664	10/5/2022	10/4/2023
H1190	Environmental chamber	Oven - KH-120A	5-250℃	±0.1℃	2201-020	11/22/2022	11/21/2023
H1193	Fixture	I-square	150*100mm	±1mm	SJT-43008	11/24/2022	11/23/2023
H1194	Fixture	Triangular Ruler	190mm	±1mm	SJT-43111	11/25/2022	11/24/2023
H1198	Instrument	LVDT Volfa LWE-200 (Head) - DOT Retention	0-150mm	±1mm	NA	3/10/2023	3/9/2024
H1199	Instrument	LVDT Volfa LWE-200 - DOT Retention Machine	0-150mm	±1mm	NA	3/10/2023	3/9/2024
H1200	Instrument	VPG load cell - 9363-B10-500-20T1 - DOT Retention Machine	0-500lb	±0.1kg	90139705	3/10/2023	3/9/2024
H1210	Fixture	Peripheral Vision	105° Both sides	105°	NA	4/27/2023	4/26/2026
H1214	Instrument	DOT Retention System LVDT (Head) - LWE-200	0-50mm	±0.1mm	27008-10	4/28/2023	4/27/2024
H1216	Fixture	Digital Vernier Caliper - GLA13S	0-300mm	±0.03mm; ±0.04mm	K23D014332	5/17/2023	5/16/2024

Contract File No.: 904.14204
Test File: 009
Technician: Terry Liu
Test Date: 18 July 2023

NOTICE

1. The report is not effective without the signature of the person(s) authorizing the report (ACT Lab's authorized signatory is John A. Bogler (President)).
2. The report is not valid if altered.
3. Claims have to be made within 15 days after receipt of this report.
4. The results of this test report relate only to the items tested.
5. The results apply to the samples as received.
6. For reports that contain results from external test service providers: Results from external test service providers are supplied by the customer and can affect validity of results.
7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

END OF REPORT

SAFETY COMPLIANCE TESTING FOR ASTM F-1492-22
HELMETS USED IN SKATEBOARDING AND TRICK ROLLER SKATING

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: M (55-59 cm)
Stock / Model Number	: Not Specified
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Not Specified

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.002

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 17025:2017. 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 April 2017.) 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.

HELMET DATA

HELMET BRAND NAME: LEATT

HELMET MODEL DESIGNATION: LT2323-MTB URBAN 2.0

HELMET MANUFACTURER: DONGDUAN YIYANG SPORTS Co., Ltd.

HELMET SIZE: M (55-59 cm)

DATE OF MANUFACTURE: 03/23

AGE GRADING: 5 and older

EPS COLOR: Black

BUCKLE TYPE: Nx/A

LOT NUMBER: TBD

PURCHASE ORDER #: 217667

HELMET COVERAGE: Partial X Full: Complete:

TEST HEADFORM SIZE: EN960 M

HELMET POSITIONING INDEX: 17 mm

Helmet Number:	Weight (g):	Helmet Number:	Weight (g):
1.Ambient	463	**3.Cold**	458
2.Hot	467	**4. Wet**	460

Conditioning Temperatures	
Lab Humidity:	59%
Ambient:	23°C
Hot:	50°C
Cold:	-15°C
Wet:	23°C

TEST SUMMARY

Test Requirements	Pass/Fail
Peripheral Vision	Pass
Projections	Pass
Positional Stability	Pass
Dynamic Strength Retention	Pass
Impact Attenuation	Pass
Labels and Warnings	Pass

Reviewed by: John Bogler John D Bogler

Tested By: Wille Wang Wille Wang

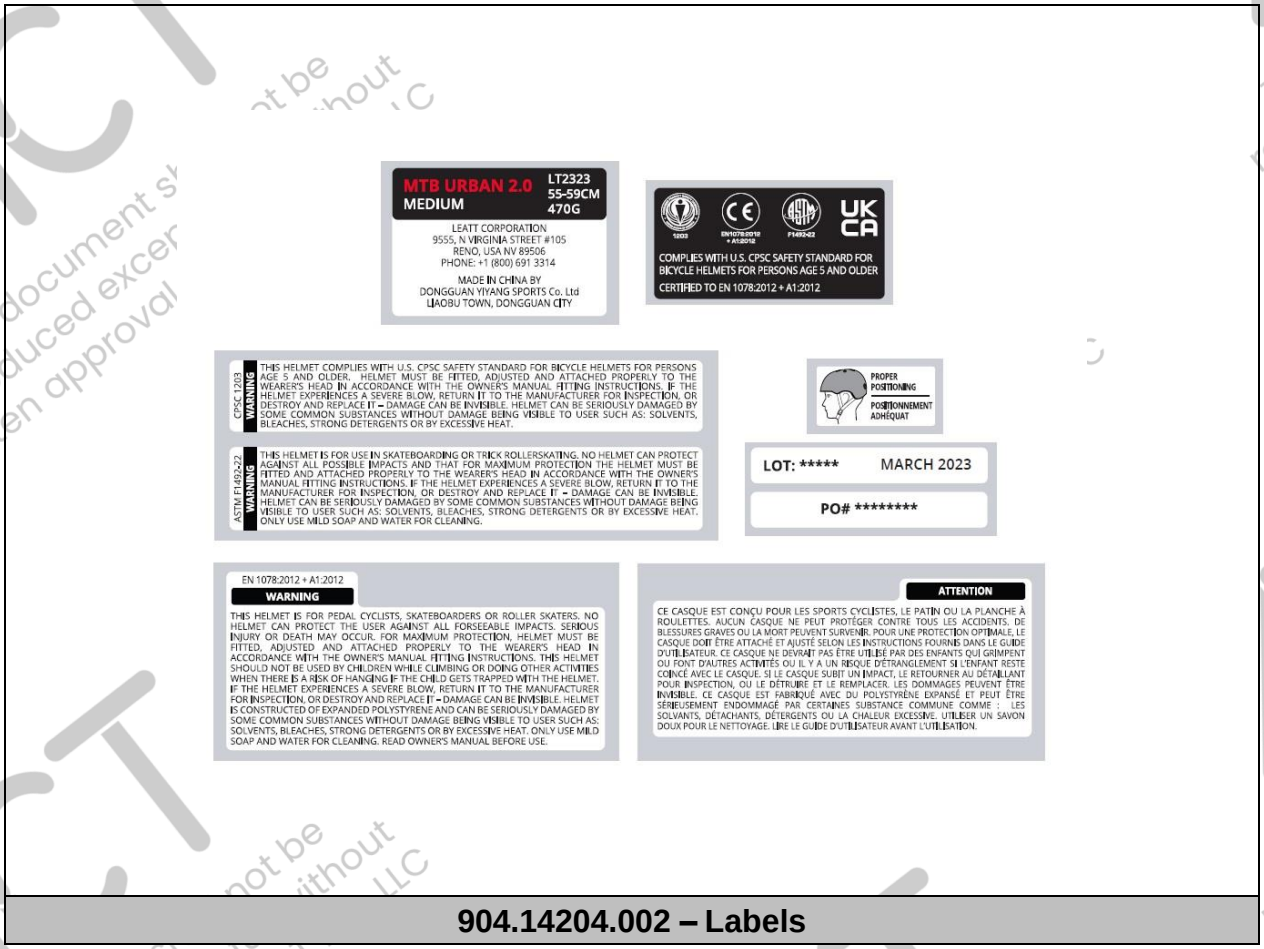
Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. These helmets appear to be constructed of materials that are not known to cause skin irritation or disease.
4. Weights listed above for helmets 1-4 are as tested, with no attachments included.
5. This helmet met all requirements for ASTM F1492.

LABELING

Section	**Labeling -** Each helmet shall be marked with durable labeling so that the following information is legible and easily visible to the user:	**Present on Helmet?** Yes / No
F1446: Standard Test Methods for Equipment and Procedures Used in Evaluating the Performance Characteristics of Protective Headgear		
12.4	Each helmet shall contain labels with at least the following information, using terms and symbols commonly known and easily visible to users. The label(s) should be likely to remain on the helmet and legible throughout the intended design life of the helmet.	Yes
12.4.1	The number of the standard specification which the manufacturer certifies that it meets, including the two-digit version year appended to the number.	Yes
12.4.2	Model designation	Yes
12.4.3	Name of manufacturer	Yes
12.4.4	Month and year of manufacture	Yes
12.4.5	A label that warns the user that no helmet can protect against all possible impacts and that for maximum protection the helmet must be fitted and attached properly to the wearer's head in accordance with the manufacturer's fitting instructions.	Yes
12.4.6	A label that warns the user that the helmet may, after receiving an impact, be damaged to the point that it is no longer adequate to protect the head against further impacts, and that this damage may not be visible to the user. This label should also state that a helmet that has sustained an impact should be returned to the manufacturer for competent inspection or be destroyed and replaced.	Yes
12.4.7	A label that warns the user that the helmet can be damaged by contact with common substances (for example, certain solvents, cleaners, hair tonics, etc.) and that this damage may or may not be visible to the user. This label should also list any recommended cleaning agents or procedures, or both.	Yes
12.4.8	Any other warnings, cautions, or instructions specified in the individual standard specification.	Yes
12.4.9	Each helmet shall have accompanying fitting and positioning instructions including graphic representation of proper positioning.	Yes
Section	**Labeling -** Each helmet shall be marked with durable labeling so that the following information is legible and easily visible to the user:	**Present on Helmet?** Yes / No
F1492-22 Standard Test Methods for Equipment and Procedures Used in Skateboarding and Trick Roller Skating		
4.2	Shall have the words "For skateboarding or trick roller skating".	Yes

904.14204.002 – LT2323-MTB URBAN 2.0



904.14204.002 – Labels

SUMMARY REPORT

HELMET ID	Condition	Brand Name	Model	Date of Manufacture	Helmet Size	Headform Size
1	Ambient	LEATT	LT2323-MTB URBAN 2.0	03/23	M (55-59 cm)	EN960 M
2	Hot	LEATT	LT2323-MTB URBAN 2.0	03/23	M (55-59 cm)	EN960 M
3	Cold	LEATT	LT2323-MTB URBAN 2.0	03/23	M (55-59 cm)	EN960 M
4	Wet	LEATT	LT2323-MTB URBAN 2.0	03/23	M (55-59 cm)	EN960 M

POSITIONAL STABILITY (ROLL OFF) TEST

HELMET ID	Condition	Drop Mass (kg)	Drop Height (m)	REQUIREMENT	TEST RESULTS
1	Ambient	4.0	0.6	Face Up	Pass
				Face Down	Pass

Comment:

1. Test Criteria: The helmet shall not come off the test headform or excessively displace past the coronal plane.

RETENTION SYSTEM STRENGTH TEST

HELMET ID	Model	Headform Size	Condition	Maximum Elongation (mm)	Residual Elongation (mm)	Pass/Fail
2	LT2323-MTB URBAN 2.0	EN960 M	Hot	20	9	Pass
3	LT2323-MTB URBAN 2.0	EN960 M	Cold	21	12	Pass
4	LT2323-MTB URBAN 2.0	EN960 M	Wet	19	9	Pass

Comment:

1. Test Criteria: The retention system shall remain intact without elongating more than 30 mm.

SYSTEM CHECK – IMPACT ATTENUATION

SYSTEMS CHECK	TEST RECORD	HEADFORM POSITION	DROP (meters)	VEL. (m/s)	PEAK (g)
PRETEST	Pre 1	Crown	1.550	5.43	390
	Pre 2	Crown	1.550	5.45	389
	Pre 3	Crown	1.550	5.46	387
PRETEST AVERAGE		XXXX	XXXX	XXXX	388
POSTTEST	Post 1	Crown	1.550	5.40	389
	Post 2	Crown	1.550	5.43	388
	Post 3	Crown	1.550	5.43	384
POSTTEST AVERAGE		XXXX	XXXX	XXXX	387

IMPACT TEST SUMMARY

Helmet ID	Impact Site #	Impact Location	Anvil	Condition	Velocity (m/sec)	Peak Acc. (g)	Pass/ Fail
1	1	LF Side	Flat	Ambient	4.63	171	Pass
1	2	LF Side	Flat	Ambient	4.63	218	Pass
1	3	LF Side	Flat	Ambient	4.63	252	Pass
1	4	Rear	Flat	Ambient	4.60	145	Pass
1	5	Rear	Flat	Ambient	4.59	174	Pass
1	6	Rear	Flat	Ambient	4.59	193	Pass
1	7	Front	Cylindri	Ambient	4.63	110	Pass
1	8	RT Side	Hazard	Ambient	4.62	113	Pass
2	1	LF Side	Flat	Hot	4.58	179	Pass
2	2	Rear	Flat	Hot	4.60	139	Pass
2	3	Front	Cylindri	Hot	4.62	127	Pass
2	4	RT Side	Hazard	Hot	4.61	152	Pass
3	1	LF Side	Flat	Cold	4.62	176	Pass
3	2	Rear	Flat	Cold	4.65	147	Pass
3	3	Front	Cylindri	Cold	4.68	132	Pass
3	4	RT Side	Hazard	Cold	4.59	102	Pass
4	1	LF Side	Flat	Wet	4.61	177	Pass
4	2	Rear	Flat	Wet	4.60	145	Pass
4	3	Front	Cylindri	Wet	4.64	124	Pass
4	4	RT Side	Hazard	Wet	4.66	107	Pass

Comment:

1. Impact Attenuation: The peak acceleration of any impact shall not exceed 300 g.

EQUIPMENT LIST AND CALIBRATION SCHEDULES

EQUIPMENT LIST						
Asset Tag	**Location**	**Description of part**	**Model Number**	**Serial Number**	**Verification Interval**	**Next Verification**
H1001	Helmet Room	Fixture	Yellow Tower - 1000_00_MIMAT	NA	NA	NA
H1002	Helmet Room	Fixture	Green Tower - Series 2000	NA	NA	NA
H1011	Helmet Room	Instrument	Impact Machine System DX3000 - Green tower	NA	NA	NA
H1013	Helmet Room	Instrument	CPSC/ASTM Dynamic Strength Charge Amplifier - ATA2001 (Backup)	J72863	Yes	Daily
H1015	Helmet Room	Fixture	CPSC/ASTM Positional Stability Fixture	NA	Yes	4/27/2024
H1017	Helmet Room	Fixture	DOT Retention System Machine - SB033	NA	Yes	4/27/2024
H1034	Helmet Room	Environmental chamber	Water Immersion Container	NA	NA	NA
H1043	Helmet Room	Headform	ISO/EN960 A Partial Headform (Impact)	4272	Yes	5/5/2024
H1044	Helmet Room	Headform	ISO/EN960 C Partial Headform (Impact)	6938	Yes	5/5/2024
H1045	Helmet Room	Headform	ISO/EN960 E Partial Headform (Impact)	4146	Yes	5/5/2024
H1046	Helmet Room	Headform	ISO/EN960 J Partial Headform (Impact)	4148	Yes	5/5/2024
H1047	Helmet Room	Headform	ISO/EN960 M Partial Headform (Impact)	4131	Yes	5/5/2024
H1048	Helmet Room	Headform	ISO/EN960 O Partial Headform (Impact)	4151	Yes	5/5/2024
H1049	Helmet Room	Headform	DOT Small (Impact)	5178	Yes	5/5/2024
H1050	Helmet Room	Headform	DOT Medium (Impact)	5179	Yes	5/5/2024
H1051	Helmet Room	Headform	DOT Large (Impact)	5190	Yes	5/5/2024
H1052	Helmet Room	Drop Mass	CPSC/ASTM Spherical Impactor	NA	Yes	5/5/2024
H1054	Helmet Room	Drop Mass	ASTM/SNELL Chin Bar Impactor	NA	Yes	5/5/2024
H1055	Helmet Room	Anvil	CurbStone - CPSC/ASTM	NA	Yes	5/5/2024
H1056	Helmet Room	Anvil	Cylindrical	NA	Yes	5/5/2024
H1059	Helmet Room	Anvil	Triangular Hazard	NA	Yes	5/5/2024
H1060	Helmet Room	Anvil	Hemispherical - Yellow tower	NA	Yes	5/5/2024
H1062	Helmet Room	Anvil	Flat - Yellow tower	C240812-01	Yes	5/5/2024
H1066	Helmet Room	Fixture	Penetration Magnetic Carriage	NA	Yes	6/25/2024
H1091	Helmet Room	Fixture	40° Up Vision Angle Block	NA	Yes	5/6/2024
H1092	Helmet Room	Clamp	Split Ring Clamp - 119g	NA	Yes	5/6/2024
H1093	Helmet Room	Clamp	Split Ring Clamp - 210g	NA	Yes	5/6/2024
H1094	Helmet Room	Clamp	Split Ring Clamp - 378g	NA	Yes	5/6/2024
H1095	Helmet Room	Clamp	Split Ring Clamp - 451g	NA	Yes	5/6/2024
H1096	Helmet Room	Clamp	Split Ring Clamp - 505g	NA	Yes	5/6/2024
H1097	Helmet Room	Clamp	Split Ring Clamp - 597g	NA	Yes	5/6/2024
H1098	Helmet Room	Clamp	Split Ring Clamp - 1158g	NA	Yes	5/6/2024
H1099	Helmet Room	Anvil	Flat - Green tower	NA	Yes	5/6/2024
H1100	Helmet Room	Anvil	Hemispherical - Green tower	NA	Yes	5/6/2024
H1101	Helmet Room	Headform	DOT Small (Reference)	NA	Yes	4/27/2024
H1102	Helmet Room	Headform	DOT Medium (Reference)	NA	Yes	4/27/2024
H1103	Helmet Room	Headform	DOT Large (Reference)	NA	Yes	4/27/2024
H1105	Helmet Room	Drop Mass	Aluminum Ball Stem - Green tower	NA	Yes	5/6/2024
H1106	Helmet Room	Drop Mass	Steel Ball Stem	NA	Yes	5/6/2024
H1107	Helmet Room	Drop Mass	Magnesium Ball Stem	NA	Yes	5/6/2024
H1123	Helmet Room	Fixture	CPSC/ASTM Roll Off Headform Base Fastened Plate	NA	NA	NA
H1126	Helmet Room	Drop Mass	Complete Pistol Grip - Green tower	NA	Yes	5/6/2024
H1127	Helmet Room	Headform	ISO/EN 960 C Full Headform (Reference)	6947	Yes	4/27/2024
H1128	Helmet Room	Headform	DOT Small (Penetration)	NA	Yes	4/27/2024
H1129	Helmet Room	Headform	DOT Medium (Penetration)	NA	Yes	4/27/2024
H1130	Helmet Room	Headform	DOT Large (Penetration)	NA	Yes	4/27/2024
H1143	Helmet Room	Fixture	DOT Brow Opening 1 Inch Block	NA	Yes	4/28/2024
H1146	Helmet Room	Fixture	DOT Penetration Height Stick	NA	Yes	6/25/2024
H1149	Helmet Room	Mass	Testing Area Preload Ballast	NA	Yes	4/28/2024
H1150	Helmet Room	Drop Mass	10kg Positional Stability Drop Mass	NA	Yes	4/28/2024
H1178	Helmet Room	Drop Mass	Complete Pistol Grip - Yellow tower	NA	Yes	5/6/2024
H1179	Helmet Room	Drop Mass	Aluminum Ball Stem - Yellow tower	NA	Yes	5/6/2024
H1189	Helmet Room	Drop Mass	DOT Penetration Striker Tip	070622-03	Yes	6/25/2024
H1196	Helmet Room	Fixture	DOT Retention Machine Static Load - SB033 (New)	NA	Yes	4/28/2024
H1197	Helmet Room	Fixture	DOT Retention LVDT Calibration Block	NA	Yes	Pending
H1204	Helmet Room	Drop Mass	Complete Pistol Grip - Yellow tower (Backup)	120122-07	Yes	5/6/2024
H1205	Helmet Room	Drop Mass	Ball Stem - Yellow tower (Backup)	NA	Yes	5/6/2024
H1213	Helmet Room	Fixture	CPSC/ASTM Dynamic Retention Strength Fixture	NA	Yes	4/28/2024
H1229	Helmet Room	Fixture	Penetration Tube	NA	Yes	6/25/2024
H1230	Helmet Room	Fixture	Penetration Headform Mount Holder	NA	NA	NA

CALIBRATED MEASUREMENT DEVICES							
Asset Tag	**Description of part**	**Model Number**	**Measuring Range**	**Accuracy**	**Serial Number**	**Last Calibrated On**	**Calibration Due On**
H1003	Instrument	Velocity Gate - Yellow tower	0-8.5m/s	±0.0001m/s	HVTG120120810-1	10/6/2022	10/5/2023
H1004	Instrument	Velocity Gate - Green tower	0-6.5m/s	±0.0001m/s	HVTG120090331-1	1/26/2023	1/25/2024
H1006	Instrument	Accelerometer PCB 353B18 - Yellow & Green tower	±500g	≤1%	131607	1/26/2023	1/25/2024
H1007	Instrument	Accelerometer PCB 353B18 - Green tower	±500g	≤1%	86079	10/5/2022	10/4/2023
H1009	Fixture	Digital Tape 16' - Yellow tower	0-5.5m	±0.1cm	5027526	11/24/2022	11/23/2023
H1010	Instrument	CCS PC4300 - Green tower	±500g	≤1%	CCS120090331-1	1/26/2023	1/25/2024
H1012	Instrument	CPSC/ASTM Dynamic Strength LVDT - C20101007753 (Backup)	0-50mm	±0.1mm	C20101007753	11/22/2022	11/21/2023
H1014	Instrument	DOT Retention System LVDT - LWE-200	0-100mm	±0.1mm	2002572	11/22/2022	11/21/2023
H1025	Fixture	Electronic Scale - BT-6	0-6kg	±0.1g	12230126	6/26/2023	6/25/2024
H1026	Fixture	Laser Table - SB005	0-450mm, 0-20°	±1mm, ±1°	TLTV2KB-20090403-1	11/22/2022	11/21/2023
H1030	Conditioning	Oven #1 - 92*9240MBE	0-200℃	±0.1℃	8285	6/26/2023	6/25/2024
H1031	Conditioning	Oven #2 - DHG-9426	0-200℃	±0.1℃	1503338018	11/22/2022	11/21/2023
H1032	Conditioning	Freezer #1 - DW-25W300	-30~-10℃	±0.1℃	BE062100N00B29578VMO	6/26/2023	6/25/2024
H1033	Environmental chamber	Freezer #2 - DW-50W225	-30~-10℃	±0.1℃	F8LMJ	11/22/2022	11/21/2023
H1036	Fixture	Hygrothermograph #1 - TH-602F	-30~60℃, 0-100%	±1℃	3238	6/28/2023	6/27/2024
H1057	Anvil	Edge	NA	NA	NA	10/27/2020	10/26/2023
H1058	Anvil	Equestrian Hazard	NA	NA	NA	10/27/2020	10/26/2023
H1061	Anvil	Skate Blade	NA	NA	NA	10/27/2020	10/26/2023
H1063	Fixture	Digital tape - 5m	0-5m	±0.1mm	78223	11/24/2022	11/23/2023
H1064	Instrument	CCS PC4400 - Yellow tower	±500g	≤1%	CCS120120810-1	1/26/2023	1/25/2024
H1070	Instrument	DOT Retention System Load Cell - 9363-B10-300-20T1	0-300lb	±0.1kg	80310843	6/26/2023	6/25/2024
H1072	Fixture	Hygrothermograph #4 - TH600B	-20~100℃, 0-100%	±1℃	Q/MDS001-2017-2	6/27/2023	6/26/2024
H1073	Fixture	Height Gauge	0-500mm	±0.01mm	8811213838273610	11/22/2022	11/21/2023
H1074	Fixture	Digital Vernier Caliper - SJ-455615	0-150mm	±0.01mm	455615	11/22/2022	11/21/2023
H1075	Fixture	Digital Level - SPI TRONIC Pro 360	0-360°	±0.1°	31-038-3	11/24/2022	11/23/2023
H1076	Instrument	Calorifier - CN-111	18-35℃	±0.1℃	NA	11/25/2022	11/24/2023
H1077	Fixture	ACT Tape	0-1.5m	±1mm	NA	11/24/2022	11/23/2023
H1117	Fixture	Helmet Internal Circumference Measure Tool	49-62cm	±1mm	NA	11/24/2022	11/23/2023
H1172	Fixture	Height Measurement Rod #6	600±5mm	±1mm	032216-02	6/24/2022	6/23/2025
H1174	Anvil	MEP Pad	NA	NA	021921-01	2022 yearly report	2023 yearly report
H1180	Instrument	CPSC/ASTM LVDT & Sensor Box	2 Inch	±0.1mm	04140748-001	11/22/2022	11/21/2023
H1184	Instrument	Accelerometer PCB 353B18 - Yellow tower	±500g	≤1%	LW226664	10/5/2022	10/4/2023
H1190	Environmental chamber	Oven - KH-120A	5-250℃	±0.1℃	2201-020	11/22/2022	11/21/2023
H1193	Fixture	I-square	150*100mm	±1mm	SJT-43008	11/24/2022	11/23/2023
H1194	Fixture	Triangular Ruler	190mm	±1mm	SJT-43111	11/25/2022	11/24/2023
H1198	Instrument	LVDT Volfa LWE-200 (Head) - DOT Retention	0-150mm	±1mm	NA	3/10/2023	3/9/2024
H1199	Instrument	LVDT Volfa LWE-200 - DOT Retention Machine	0-150mm	±1mm	NA	3/10/2023	3/9/2024
H1200	Instrument	VPG load cell - 9363-B10-500-20T1 - DOT Retention Machine	0-500lb	±0.1kg	90139705	3/10/2023	3/9/2024
H1210	Fixture	Peripheral Vision	105° Both sides	105°	NA	4/27/2023	4/26/2026
H1214	Instrument	DOT Retention System LVDT (Head) - LWE-200	0-50mm	±0.1mm	27008-10	4/28/2023	4/27/2024
H1216	Fixture	Digital Vernier Caliper - GLA13S	0-300mm	±0.03mm; ±0.04mm	K23D014332	5/17/2023	5/16/2024

Contract File No.: 904.14204
Test File: 002
Technician: Wille Wang
Test Date: 12 July 2023

Control Document: Official ACT ASTM Helmet Report Template CN 05 July 2023 Rev.15
SharePoint/GlobalResourceLibrary/Reporting/ReportTemplates/Helmets/ASTM

NOTICE

1. The report is not effective without the signature of the person(s) authorizing the report (ACT Lab's authorized signatory is John A. Bogler (President)).
2. The report is not valid if altered.
3. Claims have to be made within 15 days after receipt of this report.
4. The results of this test report relate only to the items tested.
5. The results apply to the samples as received.
6. For reports that contain results from external test service providers: Results from external test service providers are supplied by the customer and can affect validity of results.
7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

END OF REPORT

SAFETY COMPLIANCE TESTING FOR ASTM F-1492-22
HELMETS USED IN SKATEBOARDING AND TRICK ROLLER SKATING

Brand	: LEATT
Model	: LT2323-MTB URBAN 2.0
Tested Size	: L (59-63 cm)
Stock / Model Number	: Not Specified
Country of Origin	: China
Age Grading	: 5 and older
Children's Product	: Not Specified

Prepared For:

Leatt Corporation
12 Kiepersol Crescent,
Atlas Gardens Business Park,
Cape Farms, Cape Town,
7550, ZA

Issue Date: 19 July 2023

Final Report: 904.14204.012

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 17025:2017. 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 April 2017.) 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.

HELMET DATA

HELMET BRAND NAME: LEATT

HELMET MODEL DESIGNATION: LT2323-MTB URBAN 2.0

HELMET MANUFACTURER: DONGDUAN YIYANG SPORTS Co., Ltd.

HELMET SIZE: L (59-63 cm)

DATE OF MANUFACTURE: 03/23

AGE GRADING: 5 and older

EPS COLOR: Black

BUCKLE TYPE: Nx/A

LOT NUMBER: TBD

PURCHASE ORDER #: 217667

HELMET COVERAGE: Partial X Full: Complete:

TEST HEADFORM SIZE: EN960 O

HELMET POSITIONING INDEX: 21 mm

Helmet Number:	Weight (g):	Helmet Number:	Weight (g):
1.Ambient	510	**3.Cold**	510
2.Hot	511	**4. Wet**	508

Conditioning Temperatures	
Lab Humidity:	59%
Ambient:	23°C
Hot:	50°C
Cold:	-15°C
Wet:	23°C

TEST SUMMARY

Test Requirements	Pass/Fail
Peripheral Vision	Pass
Projections	Pass
Positional Stability	Pass
Dynamic Strength Retention	Pass
Impact Attenuation	Pass
Labels and Warnings	Pass

Reviewed by: John Bogler

Tested By: Terry Liu

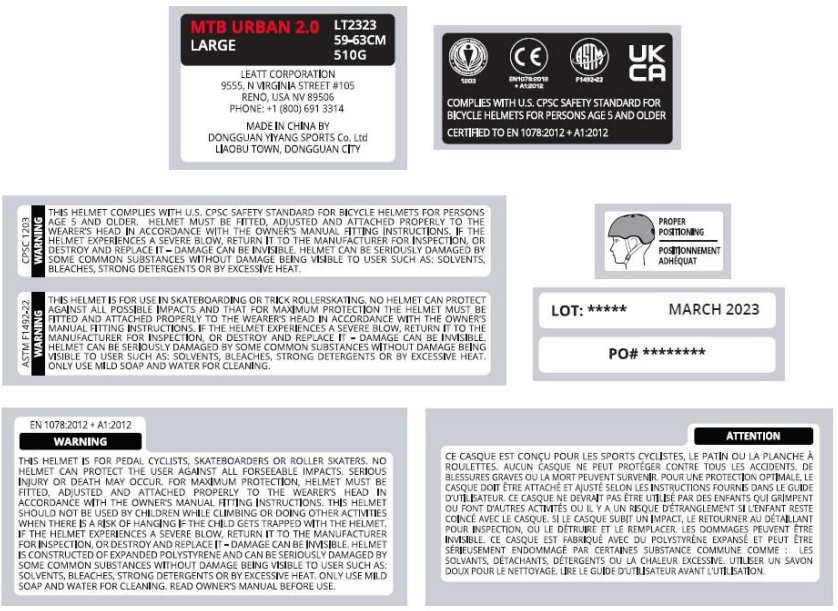
Comments:

1. All helmets were received in undamaged condition and were appropriate for testing.
2. The accompanying helmet labels were submitted independently from the test samples and thus could not be checked for any characteristics except for the containing information.
3. These helmets appear to be constructed of materials that are not known to cause skin irritation or disease.
4. Weights listed above for helmets 1-4 are as tested, with no attachments included.
5. This helmet met all requirements for ASTM F1492.

LABELING

Section	**Labeling -** Each helmet shall be marked with durable labeling so that the following information is legible and easily visible to the user:	**Present on Helmet?** Yes / No
F1446: Standard Test Methods for Equipment and Procedures Used in Evaluating the Performance Characteristics of Protective Headgear		
12.4	Each helmet shall contain labels with at least the following information, using terms and symbols commonly known and easily visible to users. The label(s) should be likely to remain on the helmet and legible throughout the intended design life of the helmet.	Yes
12.4.1	The number of the standard specification which the manufacturer certifies that it meets, including the two-digit version year appended to the number.	Yes
12.4.2	Model designation	Yes
12.4.3	Name of manufacturer	Yes
12.4.4	Month and year of manufacture	Yes
12.4.5	A label that warns the user that no helmet can protect against all possible impacts and that for maximum protection the helmet must be fitted and attached properly to the wearer's head in accordance with the manufacturer's fitting instructions.	Yes
12.4.6	A label that warns the user that the helmet may, after receiving an impact, be damaged to the point that it is no longer adequate to protect the head against further impacts, and that this damage may not be visible to the user. This label should also state that a helmet that has sustained an impact should be returned to the manufacturer for competent inspection or be destroyed and replaced.	Yes
12.4.7	A label that warns the user that the helmet can be damaged by contact with common substances (for example, certain solvents, cleaners, hair tonics, etc.) and that this damage may or may not be visible to the user. This label should also list any recommended cleaning agents or procedures, or both.	Yes
12.4.8	Any other warnings, cautions, or instructions specified in the individual standard specification.	Yes
12.4.9	Each helmet shall have accompanying fitting and positioning instructions including graphic representation of proper positioning.	Yes
Section	**Labeling -** Each helmet shall be marked with durable labeling so that the following information is legible and easily visible to the user:	**Present on Helmet?** Yes / No
F1492-22 Standard Test Methods for Equipment and Procedures Used in Skateboarding and Trick Roller Skating		
4.2	Shall have the words "For skateboarding or trick roller skating".	Yes

904.14204.012 – LT2323-MTB URBAN 2.0



904.14204.012 – Labels

SUMMARY REPORT

HELMET ID	Condition	Brand Name	Model	Date of Manufacture	Helmet Size	Headform Size
1	Ambient	LEATT	LT2323-MTB URBAN 2.0	03/23	L (59-63 cm)	EN960 O
2	Hot	LEATT	LT2323-MTB URBAN 2.0	03/23	L (59-63 cm)	EN960 O
3	Cold	LEATT	LT2323-MTB URBAN 2.0	03/23	L (59-63 cm)	EN960 O
4	Wet	LEATT	LT2323-MTB URBAN 2.0	03/23	L (59-63 cm)	EN960 O

POSITIONAL STABILITY (ROLL OFF) TEST

HELMET ID	Condition	Drop Mass (kg)	Drop Height (m)	REQUIREMENT	TEST RESULTS
1	Ambient	4.0	0.6	Face Up	Pass
				Face Down	Pass

Comment:

1. Test Criteria: The helmet shall not come off the test headform or excessively displace past the coronal plane.

RETENTION SYSTEM STRENGTH TEST

HELMET ID	Model	Headform Size	Condition	Maximum Elongation (mm)	Residual Elongation (mm)	Pass/Fail
2	LT2323-MTB URBAN 2.0	EN960 O	Hot	22	12	Pass
3	LT2323-MTB URBAN 2.0	EN960 O	Cold	21	11	Pass
4	LT2323-MTB URBAN 2.0	EN960 O	Wet	22	11	Pass

Comment:

1. Test Criteria: The retention system shall remain intact without elongating more than 30 mm.

SYSTEM CHECK – IMPACT ATTENUATION

SYSTEMS CHECK	TEST RECORD	HEADFORM POSITION	DROP (meters)	VEL. (m/s)	PEAK (g)
PRETEST	Pre 1	Crown	1.550	5.39	385
	Pre 2	Crown	1.550	5.35	383
	Pre 3	Crown	1.550	5.38	384
PRETEST AVERAGE		XXXX	XXXX	XXXX	384
POSTTEST	Post 1	Crown	1.550	5.36	385
	Post 2	Crown	1.550	5.39	384
	Post 3	Crown	1.550	5.34	383
POSTTEST AVERAGE		XXXX	XXXX	XXXX	384

IMPACT TEST SUMMARY

Helmet ID	Impact Site #	Impact Location	Anvil	Condition	Velocity (m/sec)	Peak Acc. (g)	Pass/ Fail
1	1	LF Side	Flat	Ambient	4.60	168	Pass
1	2	LF Side	Flat	Ambient	4.61	212	Pass
1	3	LF Side	Flat	Ambient	4.60	241	Pass
1	4	Rear	Flat	Ambient	4.67	163	Pass
1	5	Rear	Flat	Ambient	4.66	198	Pass
1	6	Rear	Flat	Ambient	4.62	223	Pass
1	7	Front	Cylindri	Ambient	4.67	117	Pass
1	8	RT Side	Hazard	Ambient	4.78	118	Pass
2	1	LF Side	Flat	Hot	4.64	169	Pass
2	2	Rear	Flat	Hot	4.62	160	Pass
2	3	Front	Cylindri	Hot	4.66	119	Pass
2	4	RT Side	Hazard	Hot	4.68	112	Pass
3	1	LF Side	Flat	Cold	4.65	168	Pass
3	2	Rear	Flat	Cold	4.60	148	Pass
3	3	Front	Cylindri	Cold	4.69	105	Pass
3	4	RT Side	Hazard	Cold	4.67	108	Pass
4	1	LF Side	Flat	Wet	4.59	166	Pass
4	2	Rear	Flat	Wet	4.64	162	Pass
4	3	Front	Cylindri	Wet	4.64	124	Pass
4	4	RT Side	Hazard	Wet	4.71	188	Pass

Comment:

1. Impact Attenuation: The peak acceleration of any impact shall not exceed 300 g.

EQUIPMENT LIST AND CALIBRATION SCHEDULES

EQUIPMENT LIST						
Asset Tag	**Location**	**Description of part**	**Model Number**	**Serial Number**	**Verification Interval**	**Next Verification**
H1001	Helmet Room	Fixture	Yellow Tower - 1000_00_MIMAT	NA	NA	NA
H1002	Helmet Room	Fixture	Green Tower - Series 2000	NA	NA	NA
H1011	Helmet Room	Instrument	Impact Machine System DX3000 - Green tower	NA	NA	NA
H1013	Helmet Room	Instrument	CPSC/ASTM Dynamic Strength Charge Amplifier - ATA2001 (Backup)	J72863	Yes	Daily
H1015	Helmet Room	Fixture	CPSC/ASTM Positional Stability Fixture	NA	Yes	4/27/2024
H1017	Helmet Room	Fixture	DOT Retention System Machine - SB033	NA	Yes	4/27/2024
H1034	Helmet Room	Environmental chamber	Water Immersion Container	NA	NA	NA
H1043	Helmet Room	Headform	ISO/EN960 A Partial Headform (Impact)	4272	Yes	5/5/2024
H1044	Helmet Room	Headform	ISO/EN960 C Partial Headform (Impact)	6938	Yes	5/5/2024
H1045	Helmet Room	Headform	ISO/EN960 E Partial Headform (Impact)	4146	Yes	5/5/2024
H1046	Helmet Room	Headform	ISO/EN960 J Partial Headform (Impact)	4148	Yes	5/5/2024
H1047	Helmet Room	Headform	ISO/EN960 M Partial Headform (Impact)	4131	Yes	5/5/2024
H1048	Helmet Room	Headform	ISO/EN960 O Partial Headform (Impact)	4151	Yes	5/5/2024
H1049	Helmet Room	Headform	DOT Small (Impact)	5178	Yes	5/5/2024
H1050	Helmet Room	Headform	DOT Medium (Impact)	5179	Yes	5/5/2024
H1051	Helmet Room	Headform	DOT Large (Impact)	5190	Yes	5/5/2024
H1052	Helmet Room	Drop Mass	CPSC/ASTM Spherical Impactor	NA	Yes	5/5/2024
H1054	Helmet Room	Drop Mass	ASTM/SNELL Chin Bar Impactor	NA	Yes	5/5/2024
H1055	Helmet Room	Anvil	CurbStone - CPSC/ASTM	NA	Yes	5/5/2024
H1056	Helmet Room	Anvil	Cylindrical	NA	Yes	5/5/2024
H1059	Helmet Room	Anvil	Triangular Hazard	NA	Yes	5/5/2024
H1060	Helmet Room	Anvil	Hemispherical - Yellow tower	NA	Yes	5/5/2024
H1062	Helmet Room	Anvil	Flat - Yellow tower	C240812-01	Yes	5/5/2024
H1066	Helmet Room	Fixture	Penetration Magnetic Carriage	NA	Yes	6/25/2024
H1091	Helmet Room	Fixture	40° Up Vision Angle Block	NA	Yes	5/6/2024
H1092	Helmet Room	Clamp	Split Ring Clamp - 119g	NA	Yes	5/6/2024
H1093	Helmet Room	Clamp	Split Ring Clamp - 210g	NA	Yes	5/6/2024
H1094	Helmet Room	Clamp	Split Ring Clamp - 378g	NA	Yes	5/6/2024
H1095	Helmet Room	Clamp	Split Ring Clamp - 451g	NA	Yes	5/6/2024
H1096	Helmet Room	Clamp	Split Ring Clamp - 505g	NA	Yes	5/6/2024
H1097	Helmet Room	Clamp	Split Ring Clamp - 597g	NA	Yes	5/6/2024
H1098	Helmet Room	Clamp	Split Ring Clamp - 1158g	NA	Yes	5/6/2024
H1099	Helmet Room	Anvil	Flat - Green tower	NA	Yes	5/6/2024
H1100	Helmet Room	Anvil	Hemispherical - Green tower	NA	Yes	5/6/2024
H1101	Helmet Room	Headform	DOT Small (Reference)	NA	Yes	4/27/2024
H1102	Helmet Room	Headform	DOT Medium (Reference)	NA	Yes	4/27/2024
H1103	Helmet Room	Headform	DOT Large (Reference)	NA	Yes	4/27/2024
H1105	Helmet Room	Drop Mass	Aluminum Ball Stem - Green tower	NA	Yes	5/6/2024
H1106	Helmet Room	Drop Mass	Steel Ball Stem	NA	Yes	5/6/2024
H1107	Helmet Room	Drop Mass	Magnesium Ball Stem	NA	Yes	5/6/2024
H1123	Helmet Room	Fixture	CPSC/ASTM Roll Off Headform Base Fastened Plate	NA	NA	NA
H1126	Helmet Room	Drop Mass	Complete Pistol Grip - Green tower	NA	Yes	5/6/2024
H1127	Helmet Room	Headform	ISO/EN 960 C Full Headform (Reference)	6947	Yes	4/27/2024
H1128	Helmet Room	Headform	DOT Small (Penetration)	NA	Yes	4/27/2024
H1129	Helmet Room	Headform	DOT Medium (Penetration)	NA	Yes	4/27/2024
H1130	Helmet Room	Headform	DOT Large (Penetration)	NA	Yes	4/27/2024
H1143	Helmet Room	Fixture	DOT Brow Opening 1 Inch Block	NA	Yes	4/28/2024
H1146	Helmet Room	Fixture	DOT Penetration Height Stick	NA	Yes	6/25/2024
H1149	Helmet Room	Mass	Testing Area Preload Ballast	NA	Yes	4/28/2024
H1150	Helmet Room	Drop Mass	10kg Positional Stability Drop Mass	NA	Yes	4/28/2024
H1178	Helmet Room	Drop Mass	Complete Pistol Grip - Yellow tower	NA	Yes	5/6/2024
H1179	Helmet Room	Drop Mass	Aluminum Ball Stem - Yellow tower	NA	Yes	5/6/2024
H1189	Helmet Room	Drop Mass	DOT Penetration Striker Tip	070622-03	Yes	6/25/2024
H1196	Helmet Room	Fixture	DOT Retention Machine Static Load - SB033 (New)	NA	Yes	4/28/2024
H1197	Helmet Room	Fixture	DOT Retention LVDT Calibration Block	NA	Yes	Pending
H1204	Helmet Room	Drop Mass	Complete Pistol Grip - Yellow tower (Backup)	120122-07	Yes	5/6/2024
H1205	Helmet Room	Drop Mass	Ball Stem - Yellow tower (Backup)	NA	Yes	5/6/2024
H1213	Helmet Room	Fixture	CPSC/ASTM Dynamic Retention Strength Fixture	NA	Yes	4/28/2024
H1229	Helmet Room	Fixture	Penetration Tube	NA	Yes	6/25/2024
H1230	Helmet Room	Fixture	Penetration Headform Mount Holder	NA	NA	NA

CALIBRATED MEASUREMENT DEVICES							
Asset Tag	**Description of part**	**Model Number**	**Measuring Range**	**Accuracy**	**Serial Number**	**Last Calibrated On**	**Calibration Due On**
H1003	Instrument	Velocity Gate - Yellow tower	0-8.5m/s	±0.0001m/s	HVTG120120810-1	10/6/2022	10/5/2023
H1004	Instrument	Velocity Gate - Green tower	0-6.5m/s	±0.0001m/s	HVTG120090331-1	1/26/2023	1/25/2024
H1006	Instrument	Accelerometer PCB 353B18 - Yellow & Green tower	±500g	≤1%	131607	1/26/2023	1/25/2024
H1007	Instrument	Accelerometer PCB 353B18 - Green tower	±500g	≤1%	86079	10/5/2022	10/4/2023
H1009	Fixture	Digital Tape 16' - Yellow tower	0-5.5m	±0.1cm	5027526	11/24/2022	11/23/2023
H1010	Instrument	CCS PC4300 - Green tower	±500g	≤1%	CCS120090331-1	1/26/2023	1/25/2024
H1012	Instrument	CPSC/ASTM Dynamic Strength LVDT - C20101007753 (Backup)	0-50mm	±0.1mm	C20101007753	11/22/2022	11/21/2023
H1014	Instrument	DOT Retention System LVDT - LWE-200	0-100mm	±0.1mm	2002572	11/22/2022	11/21/2023
H1025	Fixture	Electronic Scale - BT-6	0-6kg	±0.1g	12230126	6/26/2023	6/25/2024
H1026	Fixture	Laser Table - SB005	0-450mm, 0-20°	±1mm, ±1°	TLTV2KB-20090403-1	11/22/2022	11/21/2023
H1030	Conditioning	Oven #1 - 92*9240MBE	0-200℃	±0.1℃	8285	6/26/2023	6/25/2024
H1031	Conditioning	Oven #2 - DHG-9426	0-200℃	±0.1℃	1503338018	11/22/2022	11/21/2023
H1032	Conditioning	Freezer #1 - DW-25W300	-30~-10℃	±0.1℃	BE062100N00B29578VMO	6/26/2023	6/25/2024
H1033	Environmental chamber	Freezer #2 - DW-50W225	-30~-10℃	±0.1℃	F8LMJ	11/22/2022	11/21/2023
H1036	Fixture	Hygrothermograph #1 - TH-602F	-30~60℃, 0-100%	±1℃	3238	6/28/2023	6/27/2024
H1057	Anvil	Edge	NA	NA	NA	10/27/2020	10/26/2023
H1058	Anvil	Equestrian Hazard	NA	NA	NA	10/27/2020	10/26/2023
H1061	Anvil	Skate Blade	NA	NA	NA	10/27/2020	10/26/2023
H1063	Fixture	Digital tape - 5m	0-5m	±0.1mm	78223	11/24/2022	11/23/2023
H1064	Instrument	CCS PC4400 - Yellow tower	±500g	≤1%	CCS120120810-1	1/26/2023	1/25/2024
H1070	Instrument	DOT Retention System Load Cell - 9363-B10-300-20T1	0-300lb	±0.1kg	80310843	6/26/2023	6/25/2024
H1072	Fixture	Hygrothermograph #4 - TH600B	-20~100℃, 0-100%	±1℃	Q/MDS001-2017-2	6/27/2023	6/26/2024
H1073	Fixture	Height Gauge	0-500mm	±0.01mm	8811213838273610	11/22/2022	11/21/2023
H1074	Fixture	Digital Vernier Caliper - SJ-455615	0-150mm	±0.01mm	455615	11/22/2022	11/21/2023
H1075	Fixture	Digital Level - SPI TRONIC Pro 360	0-360°	±0.1°	31-038-3	11/24/2022	11/23/2023
H1076	Instrument	Calorifier - CN-111	18-35℃	±0.1℃	NA	11/25/2022	11/24/2023
H1077	Fixture	ACT Tape	0-1.5m	±1mm	NA	11/24/2022	11/23/2023
H1117	Fixture	Helmet Internal Circumference Measure Tool	49-62cm	±1mm	NA	11/24/2022	11/23/2023
H1172	Fixture	Height Measurement Rod #6	600±5mm	±1mm	032216-02	6/24/2022	6/23/2025
H1174	Anvil	MEP Pad	NA	NA	021921-01	2022 yearly report	2023 yearly report
H1180	Instrument	CPSC/ASTM LVDT & Sensor Box	2 Inch	±0.1mm	04140748-001	11/22/2022	11/21/2023
H1184	Instrument	Accelerometer PCB 353B18 - Yellow tower	±500g	≤1%	LW226664	10/5/2022	10/4/2023
H1190	Environmental chamber	Oven - KH-120A	5-250℃	±0.1℃	2201-020	11/22/2022	11/21/2023
H1193	Fixture	I-square	150*100mm	±1mm	SJT-43008	11/24/2022	11/23/2023
H1194	Fixture	Triangular Ruler	190mm	±1mm	SJT-43111	11/25/2022	11/24/2023
H1198	Instrument	LVDT Volfa LWE-200 (Head) - DOT Retention	0-150mm	±1mm	NA	3/10/2023	3/9/2024
H1199	Instrument	LVDT Volfa LWE-200 - DOT Retention Machine	0-150mm	±1mm	NA	3/10/2023	3/9/2024
H1200	Instrument	VPG load cell - 9363-B10-500-20T1 - DOT Retention Machine	0-500lb	±0.1kg	90139705	3/10/2023	3/9/2024
H1210	Fixture	Peripheral Vision	105° Both sides	105°	NA	4/27/2023	4/26/2026
H1214	Instrument	DOT Retention System LVDT (Head) - LWE-200	0-50mm	±0.1mm	27008-10	4/28/2023	4/27/2024
H1216	Fixture	Digital Vernier Caliper - GLA13S	0-300mm	±0.03mm; ±0.04mm	K23D014332	5/17/2023	5/16/2024

Contract File No.: 904.14204
Test File: 012
Technician: Terry Liu
Test Date: 18 July 2023

NOTICE

1. The report is not effective without the signature of the person(s) authorizing the report (ACT Lab's authorized signatory is John A. Bogler (President)).
2. The report is not valid if altered.
3. Claims have to be made within 15 days after receipt of this report.
4. The results of this test report relate only to the items tested.
5. The results apply to the samples as received.
6. For reports that contain results from external test service providers: Results from external test service providers are supplied by the customer and can affect validity of results.
7. The results of this test report apply ASTM E29:2022 - Rounding Method, unless otherwise requested or noted within the report.
8. Decision rule applied according to "ILAC-G8:09/2019 - Guidelines on the Reporting of Compliance with Specification".

END OF REPORT