HEADQUARTERS: 914 WEST PATAPSCO AVENUE • BALTIMORE, MARYLAND 21230 • PHONE (410) 354-3300 • FAX (410) 354-3313

LG Electronics, Inc.
22 Digital-ro 10-gil
Geumcheon-gu, Seoul 153-801

April 30, 2019

Dear Seungjee Lee,

Enclosed are the test data and photographs obtained from the testing of the LG Electronics, Inc., LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max. The LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max was subjected to Environmental Testing in accordance with MIL-STD-810G, October 2008, and LG Electronics, Inc. Order Number LGE_STD190306.

Thank you for using the services of Eurofins MET Labs. If you have any questions regarding these results or if MET can be of further service to you, please feel free to contact me.

Sincerely yours,
EUROFINS MET LABS

Jesse Trawinski
Documentation Department

Reference: (\LG Electronics, Inc.\ESL102896-MIL REV 1)

HEADQUARTERS: 914 WEST PATAPSCO AVENUE • BALTIMORE, MARYLAND 21230 • PHONE (410) 354-3300 • FAX (410) 354-3313

Test Report

For the

LG Electronics, Inc.
LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max

Tested under

MIL-STD-810G

MET Report: ESL102896-MIL REV 1

April 30, 2019

Prepared For:

LG Electronics, Inc.
22 Digital-ro 10-gil
Geumcheon-gu, Seoul 153-801

Prepared By:
Eurofins MET Labs

914 West Patapsco Ave.
Baltimore MD 21230

Test Data

For the

LG Electronics, Inc.
LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max

Tested under

MIL-STD-810G

Eurofins MET Labs Report: ESL102896-MIL REV 1

Ulugbek Nadjimov
Project Engineer

Jesse Trawinski
Documentation Department

Johnnie Evans,
Manager, ESL

Report Status Sheet

Revision	Report Date	Reason for Revision
Ø	April 30, 2019	Initial Issue.
1	April 30, 2019	Editorial Corrections, Correction to EUT Name

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Executive Summary

Eurofins MET Laboratories, Inc. was contracted by LG Electronics, Inc. to perform acceptance testing to MIL-STD-810G criteria on the LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max under the LG Electronics, Inc. purchase order number LGE_STD190306.

The tests were based on MIL-STD-810G. The results obtained relate only to the item(s) tested.

MIL-STD-810G Test Method	Test Name	Test Conditions	Test Status
Method 501.5 High Temperature	Procedure I - Storage (High Temp)	Storage : with the EUT not operating, continuously 24 hours at 63℃	Compliant
Method 501.5 High Temperature	Procedure II - Operation (High Temp)	Operation : with the EUT operating, continuously 24 hours at 43℃	Compliant
Method 502.5 Low Temperature	Procedure I - Storage (Low Temp)	Storage : with the EUT not operating, continuously 24 hours at -33℃	Compliant
Method 502.5 Low Temperature	Procedure II - Operation (Low Temp)	Operation : with the EUT operating, continuously 24 hours at -21℃	Compliant
Method 503.5 Temperature Shock	Procedure I-C - Temperature Shock - Multi Shocks	Chamber temperature extreme set at -21 to 43 ℃ (a period of 8 hours, total of 3 cycles)	Compliant
Method 507.5 Humidity	Humidity – Procedure I, Natural Cycles (Cycle B3- 16 days per table 507.5-II, Figure 507.5-6)	Maintained for 24 hours, 16 cycles (Humidity 45 ~ 55 %, Temperature 21 ~ 25℃)	Compliant
Method 514.6 Vibration	Procedure I - Vibration – Category 4, Restrained Cargo (Wheeled), Table 514.6C-VI and Figures 514.6C-3	Vibration test in total of 3 hours(3-axis each 1 hour / 5 ~ 500Hz)	Compliant
Method 516.6 Shock	Procedure IV - Transit Drop	Drop test at 48 inches in 10 direction with each of 5 cell phones, total drops 50	Compliant

Equipment Configuration

Overview

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform an Acceptance Test of the LG Electronics, Inc., LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max. The tests were based on MIL-STD-810G. The tests described in this document were formal tests as described with the objective of the testing was to verify compliance of the Equipment Under Test (EUT) to the requirements of the aforementioned specifications.

Model(s) Tested:	LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max
Model(s) Covered:	LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max
Analysis:	The results obtained relate only to the item(s) tested.
Evaluated by:	Ulugbek Nadjimov
Report Date:	April 30, 2019

References

ISO 1012-1: 1992 (E)	Quality Assurance Requirements for Measuring Equipment
MIL-STD-810G, 15 April 2014	Department of Defense Test Methods Standard For Environmental Engineering Considerations and Laboratory Tests

Test Site

All testing was performed in a limited access test laboratory facility located at Eurofins MET Laboratories, Inc., 914 West Patapsco Ave., Baltimore MD 21230. All testing performed at Eurofins MET Laboratories, Inc. was conducted in the Environmental Simulation Lab. All equipment used in making physical determinations is accurate and bears recent traceability to the National Standards and Technology.

Modifications

a) Modifications to the EUT

No modifications to the EUT were required.

b) Modifications to the Test Standard

No modifications to the Test Standard were necessary.

Disposition of EUT

The test sample including all support equipment (if any), submitted to the Environmental Simulation Lab for testing was returned to LG Electronics, Inc. upon completion of testing.

Equipment Details

Model(s) Tested:	LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max
Model(s) Covered:	LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max
EUT Specifications:	**Voltage:** 3.4 ~ 4.4V **AC or DC:** DC 4.4V MAX, Charging Battery **Frequency:** 50~60 Hz **Number of phases**: 1 **Amperage**: 1.0~1.8A **Uses an external AC/DC adapter:** Yes **Additional comments**: none
	Size: (HxWxD): 6.35 x 3.03 x 0.34 inches **Weight:** 0.37 lbs
Description of EUT:	LG LG Q60, LG K12 Prime, LG X6 2019, LG K50, LG K12 Max Smartphone
Number of Samples Tested:	13 samples
Mode of Operation:	EUT followed standard MIL-STD-810G test procedures.
Monitoring Method - Pass/Fail Criteria:	Operational During and after Testing
Configuration:	All of 13 sample units were the same.

Test Data

Method 501.5 High Temperature Test Methods

High Temperature, Procedure I - Storage (MIL-STD-810G, Method 501.5)

Test Requirement(s): The equipment **shall not** sustain any damage or deteriorate in functional performance as a result of being exposed to the High Temperature test as described in MIL-STD-810G Method 501.5, Procedure I.

Test Procedure:

A. The EUT was placed in the chamber in its storage configuration.

B. The chamber environment to the appropriate test conditions (63°C) for the start of the test period.

C. For constant temperature storage, the test temperature of 63°C was maintained for 24 hours following EUT temperature stabilization.

D. At the completion of the constant temperature, the chamber air temperature was adjusted to standard ambient conditions and maintained until the EUT temperature stabilized.

E. A visual examination and operational checkout of the EUT was performed and the results were recorded for comparison with pretest data.

Test Results: The EUT was **compliant** with this test requirement.

Test Engineer(s): Ulugbek Nadjimov

Test Date(s): 03/18/19 – 03/19/19

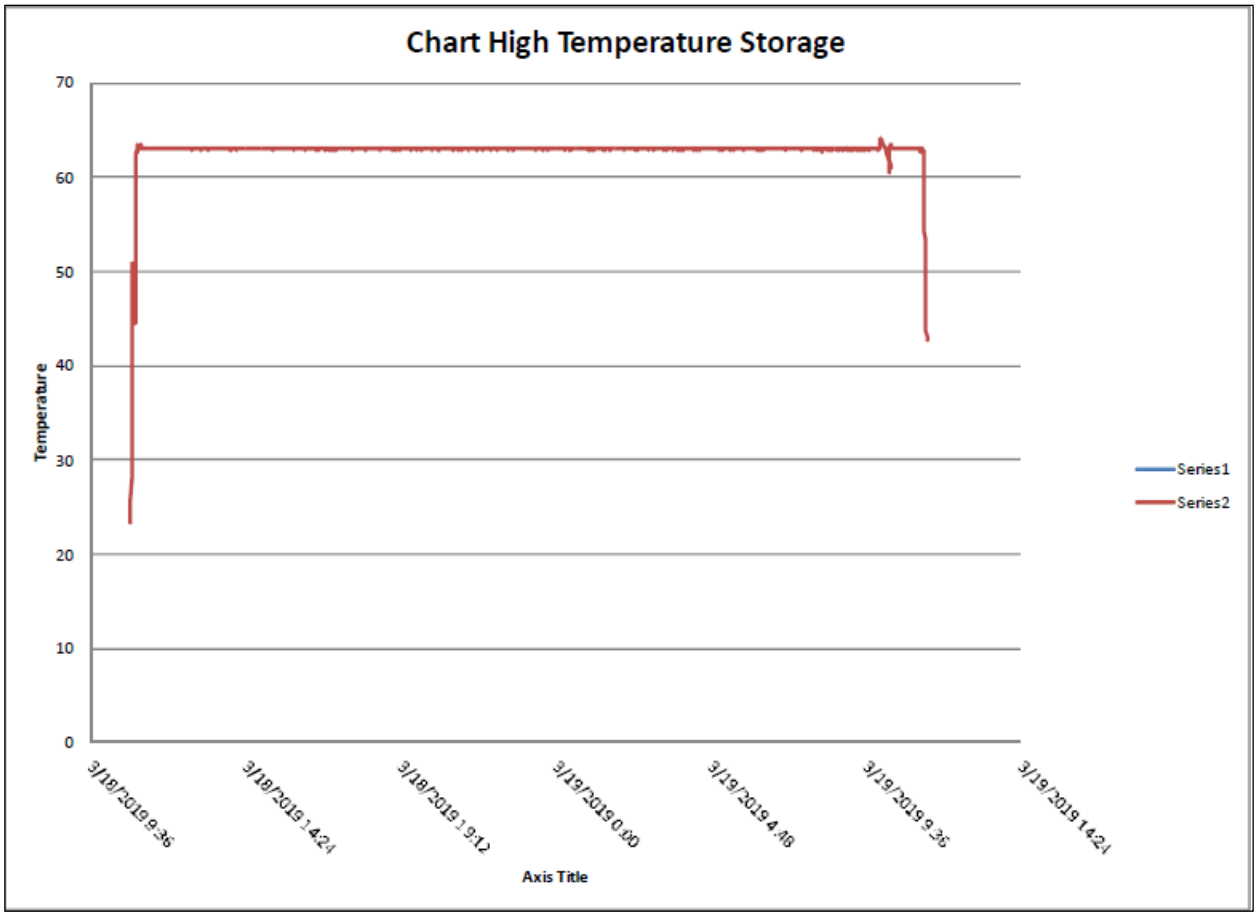


Figure 1: High Temperature, Procedure I – Storage, Profile

Figure 2: High Temperature, Procedure I – Storage, Setup

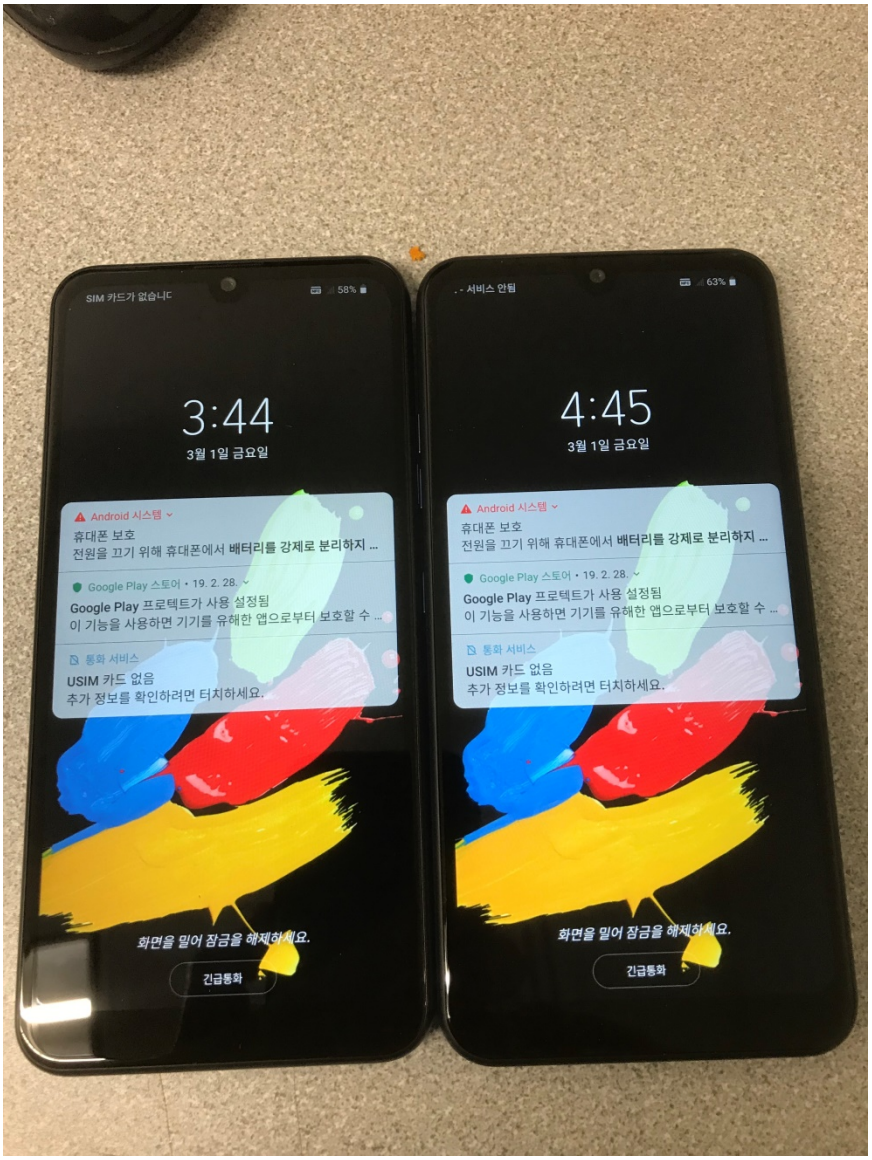


Figure 3: High Temperature, Procedure I – Storage, Post Test

High Temperature, Procedure II - Operation (MIL-STD-810G, Method 501.5)

Test Requirement(s): The equipment **shall not** sustain any damage or deteriorate in functional performance as a result of being exposed to the High Temperature test as described in MIL-STD-810G Method 501.5, Procedure II.

Test Procedure:

A. The EUT functionality was evaluated at ambient temperature and humidity level (25°C +/-5°C, 55%RH).

B. With the EUT placed in the chamber in its operational configuration, any additional temperature sensors necessary were installed to measure the maximum temperature response of the EUT, ensuring the functioning components are included.

C. The chamber air conditions were adjusted to the required steady state temperature of 43°C.

D. The chamber conditions were maintained for 24 hours following the EUTs temperature stabilization.

E. A visual examination of the EUT was performed and the results were documented for comparison with pretest data.

F. The EUT was operated and temperature was allowed to restabilize. The EUT was functionally evaluated.

G. With the EUT non-operational, the chamber temperature was adjusted to controlled ambient conditioned and maintained until the EUT was stabilized.

H. The EUT was functionally evaluated and visually inspected.

Test Results: The EUT was **compliant** with this test requirement.

Test Engineer(s): Ulugbek Nadjimov

Test Date(s): 03/19/19 – 03/20/19

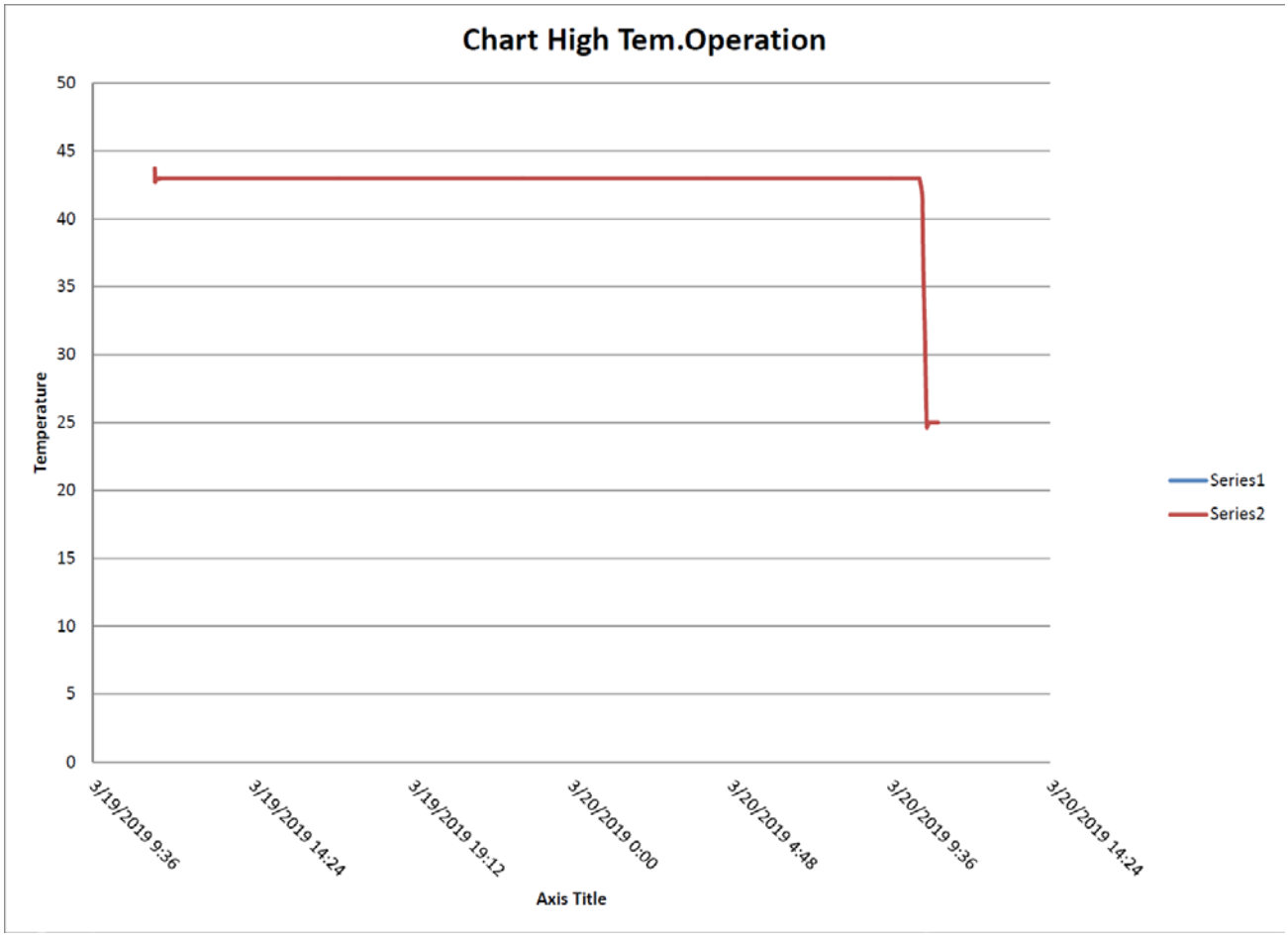


Figure 4: High Temperature, Procedure II – Operation, Profile

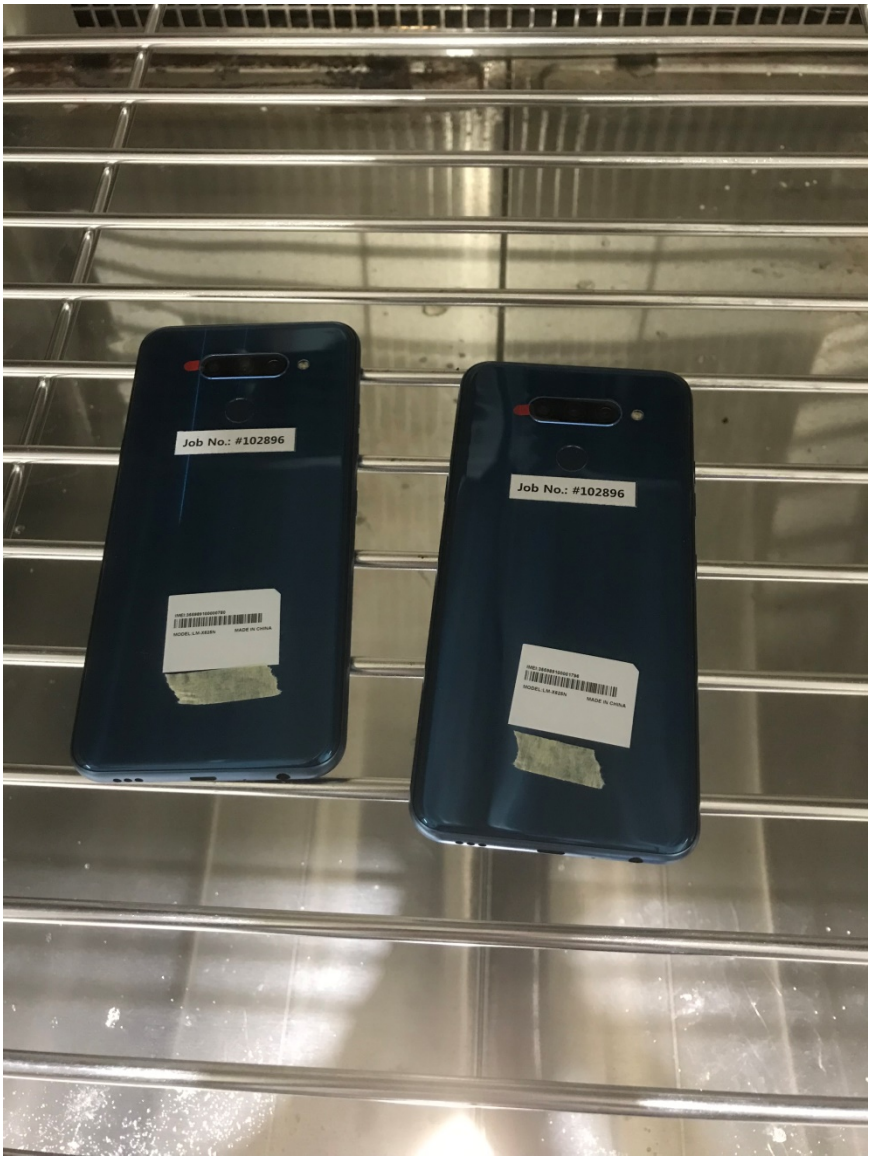


Figure 5: High Temperature, Procedure II – Operation, Setup

Figure 6: High Temperature, Procedure II – Operation, Post Test

Method 502.5 Low Temperature Test Methods

Low Temperature, Procedure I - Storage (MIL-STD-810G, Method 502.5)

Test Requirement(s): The equipment **shall not** sustain any damage or deteriorate in functional performance as a result of being exposed to the Low Temperature test as described in MIL-STD-810G Method 502.5, Procedure I.

Test Procedure:

A. The EUT functionality was evaluated at ambient temperature and humidity level (25°C +/-5°C, 55%RH).

B. With the EUT non-operating, the chamber temperature was decreased to -33°C at a rate not exceeding 3°C/min (5°F/min).

C. The chamber temperature was held at -33°C for 24 hours.

D. At the conclusion of the test, the chamber temperature was increased to ambient conditions at a rate not exceeding 3°C/min (5°F/min).

E. The EUT was visually inspected and functionally evaluated.

Test Results: The EUT was **compliant** with this test requirement.

Test Engineer(s): Ulugbek Nadjimov

Test Date(s): 03/20/19 – 03/21/19

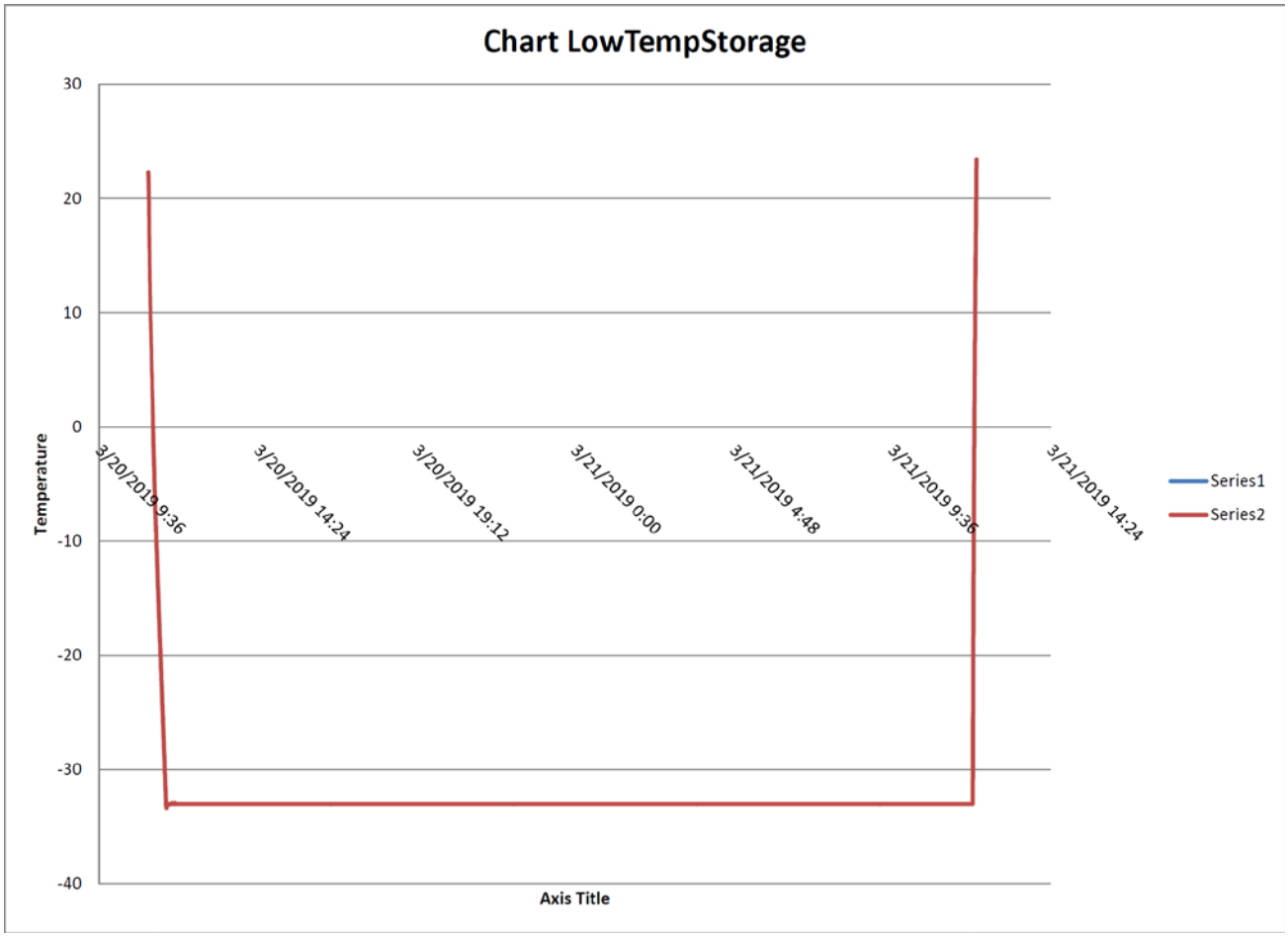


Figure 7: Low Temperature, Procedure I – Storage, Profile

Figure 8: Low Temperature, Procedure I – Storage, Setup

Figure 9: Low Temperature, Procedure I – Storage, Post Test

Low Temperature, Procedure II - Operation (MIL-STD-810G, Method 502.5)

Test Requirement(s): The equipment **shall not** sustain any damage or deteriorate in functional performance as a result of being exposed to the low temperature test as described in MIL-STD-810G Method 502.5, Procedure II.

Test Procedure:

A. The operational EUT was installed in the test chamber and the chamber air temperature was adjusted to -23°C at a rate not exceeding 3°C/min (5°F/min).

B. This temperature was maintained for at least two hours following the temperature stabilization of the EUT.

C. The EUT was visually inspected and functionally evaluated.

D. The chamber air temperature was adjusted to standard ambient and maintained until temperature stabilization of the EUT was achieved.

E. The EUT was visually inspected and functionally evaluated.

Test Results: The EUT was **compliant** with this test requirement.

Test Engineer(s): Ulugbek Nadjimov

Test Date(s): 03/21/19 – 03/22/19

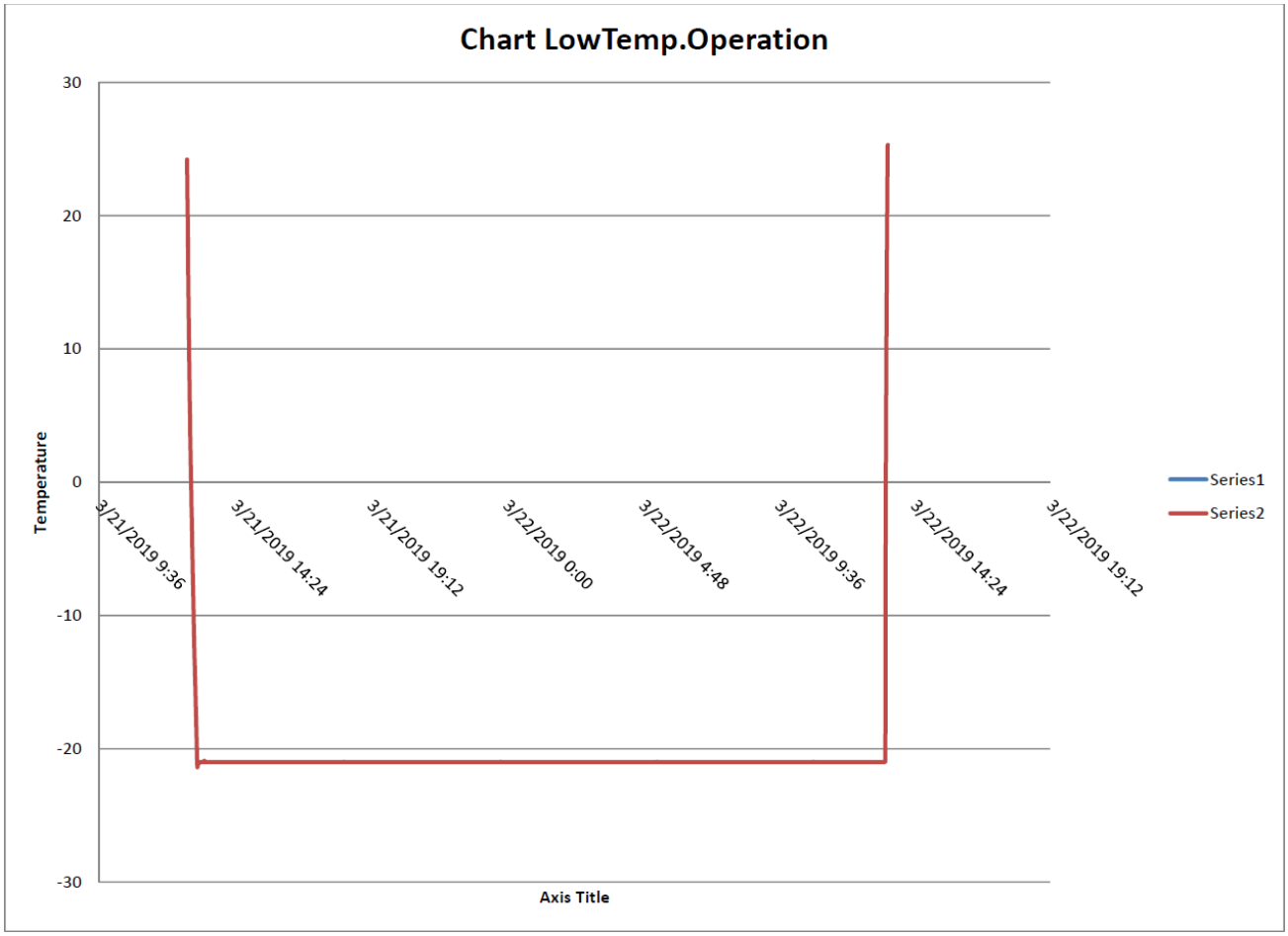


Figure 10: Low Temperature, Procedure II – Operation, Profile

Figure 11: Low Temperature, Procedure II - Operation, Post Test

Figure 12: Low Temperature, Procedure II – Operation, Setup

Method 503.5 Temperature Shock Test Methods

Temperature Shock, Procedure I-C Multi-cycle shocks from constant extreme temperature (MIL-STD-810G, Method 503.5)

Test Requirement(s): The equipment **shall not** sustain any damage or deteriorate in functional performance as a result of being exposed to the temperature shock test as described in MIL-STD-810G Method 503.5, Procedure I-C.

Test Procedure: **Procedure I-C. Multi-cycle shocks from constant extreme temperature (Figure 503.5-3)**

A With the EUT in the chamber, the air temperature was adjusted to the high temperature 43°C at a rate not to exceed 3°C/min (5°F/min)**.** This temperature was maintained for a period as determined in the test plan (a-b).

B. The EUT temperature was adjusted to -21°C in no more than 1 minute. This temperature was maintained for a period as determined in the test plan (a-b).

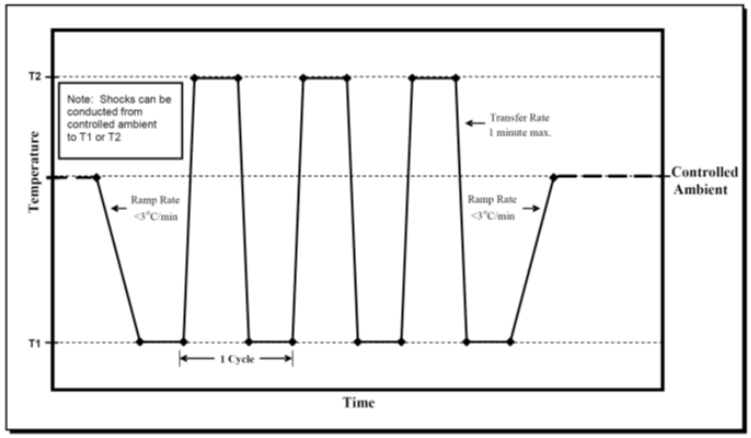


Figure 503.5-3. Multi-cycle shocks.

Figure 13: Multi-cycle shocks (Figure 503.5-3)

C. The EUT was visually inspected and functionally evaluated.

D. Steps A - C were repeated for a total of **3** cycles

E. The EUT was returned to standard ambient conditions.

F. The EUT was visually inspected and functionally evaluated.

Test Results: The EUT was **compliant** with this test requirement.

Test Engineer(s): Ulugbek Nadjimov

Test Date(s): 03/21/19 – 03/22/19

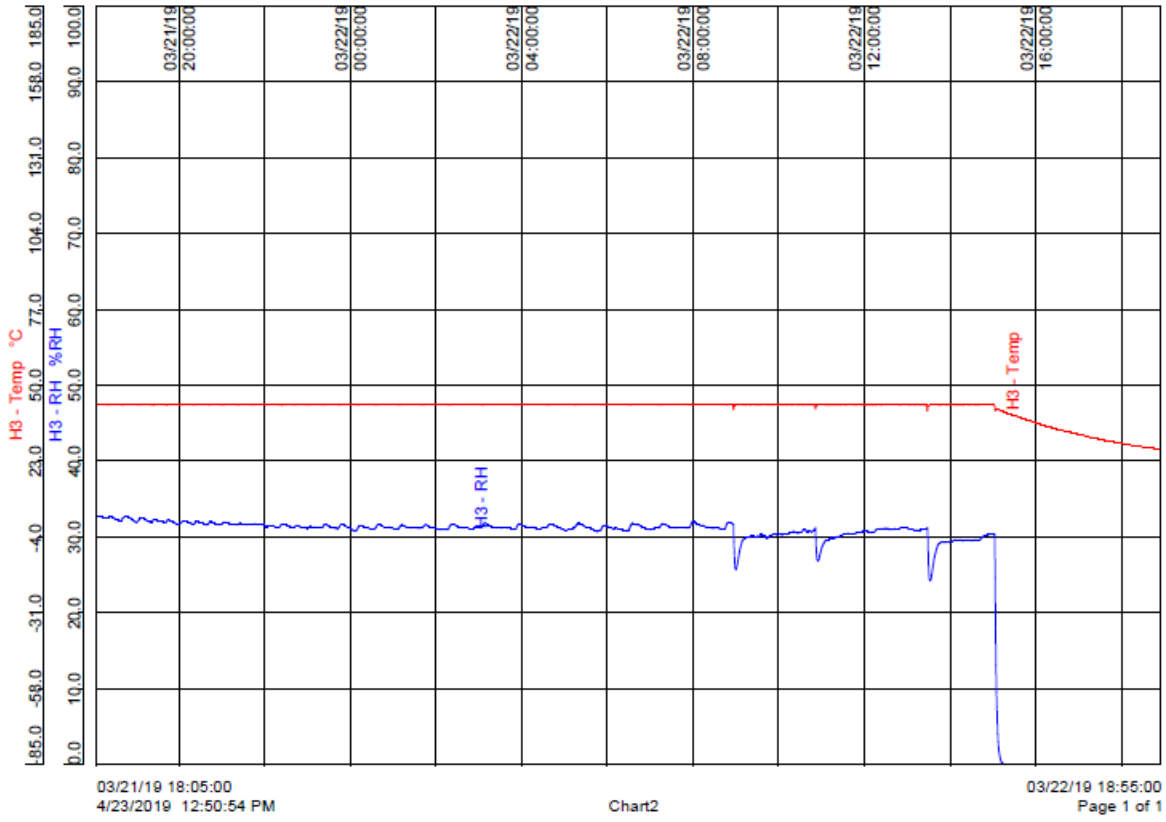


Figure 14: Temperature Shock, Procedure I-C, Profile, Chamber H3, 43°C

Figure 15: Temperature Shock, Procedure I-C, Setup In Chamber H3, 43°C

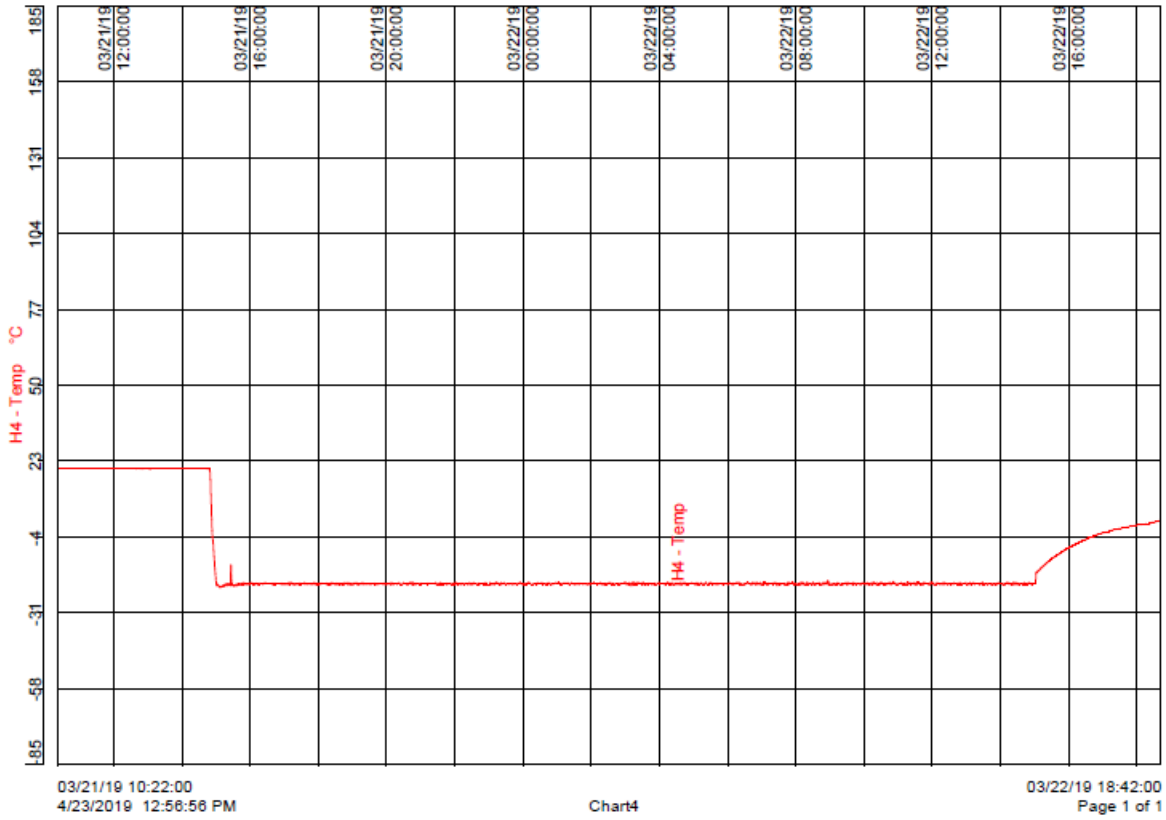


Figure 16: Temperature Shock, Procedure I-C, Profile, Chamber H4, -21°C

Figure 17: Temperature Shock, Procedure I-C, Setup In Chamber H4, -21°C

Figure 18: Temperature Shock, Procedure I-C, Post Test

Method 507.5 Humidity Test Methods

Humidity, Procedure I - Storage & Transit Cycles (MIL-STD-810G, Method 507.5)

Test Requirement(s): The equipment **shall not** sustain any damage or deteriorate in functional performance during or after it has been exposed to the environment described in MIL-STD-810G, Method 507.5, Procedure I.

Test Procedure:

A. The operational EUT was functionally evaluated at ambient temperature and humidity levels (25°C ± 5°C, 55%RH). The EUT was tested to Category B3.

B. With the test item installed in the test chamber in its required configuration, the temperature was adjusted to 23 ± 2°C and 50 ± 5% RH, and maintained for 24 hours.

C. The temperature and relative humidity were adjusted to those shown in the appropriate induced (storage and transit) category of Table 507.5-I.

D. The EUT was subjected to the appropriate amount of cycles by category shown in Table 507.5-II or from customer test plan. Near the end of the fifth and tenth cycles, a EUT performance check was conducted. If the test item fails to operate as intended, stop the test and go to Step F below. Otherwise, continue with Step E.

Table 507.5-II. Test Cycles (days).

MATERIEL CATEGORY	NATURAL			INDUCED (STORAGE & TRANSIT)		
	Cycle B1	Cycle B2	Cycle B3	Cycle B1	Cycle B2	Cycle B3
Hazardous Items Normal Test Duration	90	90	30	180	180	30
Non-Hazardous Items Normal Test Duration [1]	45	45	15	90	90	15

[1] Perform operational checks at least once every five days; more frequent checks may provide early detection of potential problems.

Figure 19: Humidity – Test Cycles (Table 507.5-II)

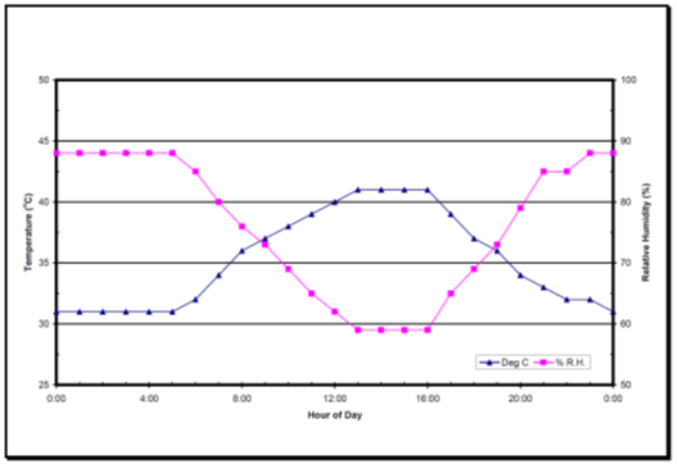


Figure 507.5-6. Natural Cycle B3 - Hot humid.

Table 507.5-VIII. Hot Humid – Natural Cycle B3.

Time	Temp. °F	Temp. °C	RH %	Time	Temp. °F	Temp. °C	RH %
0000	88	31	88	1300	105	41	59
0100	88	31	88	1400	105	41	59
0200	88	31	88	1500	105	41	59
0300	88	31	88	1600	105	41	59
0400	88	31	88	1700	102	39	65
0500	88	31	88	1800	99	37	69
0600	90	32	85	1900	97	36	73
0700	93	34	80	2000	94	34	79
0800	96	36	76	2100	91	33	85
0900	98	37	73	2200	90	32	85
1000	100	38	69	2300	89	32	88
1100	102	39	65	2400	88	31	88
1200	104	40	62				

Figure 20: Humidity – Natural Cycle B3

E. The EUT was operational through testing.

F. The temperature and humidity was adjusted to standard ambient conditions.

G. The EUT was visually inspected and functionally verified.

Test Results: The EUT was **compliant** with this test requirement.

Test Engineer(s): Ulugbek Nadjimov

Test Date(s): 03/24/19 – 04/09/19

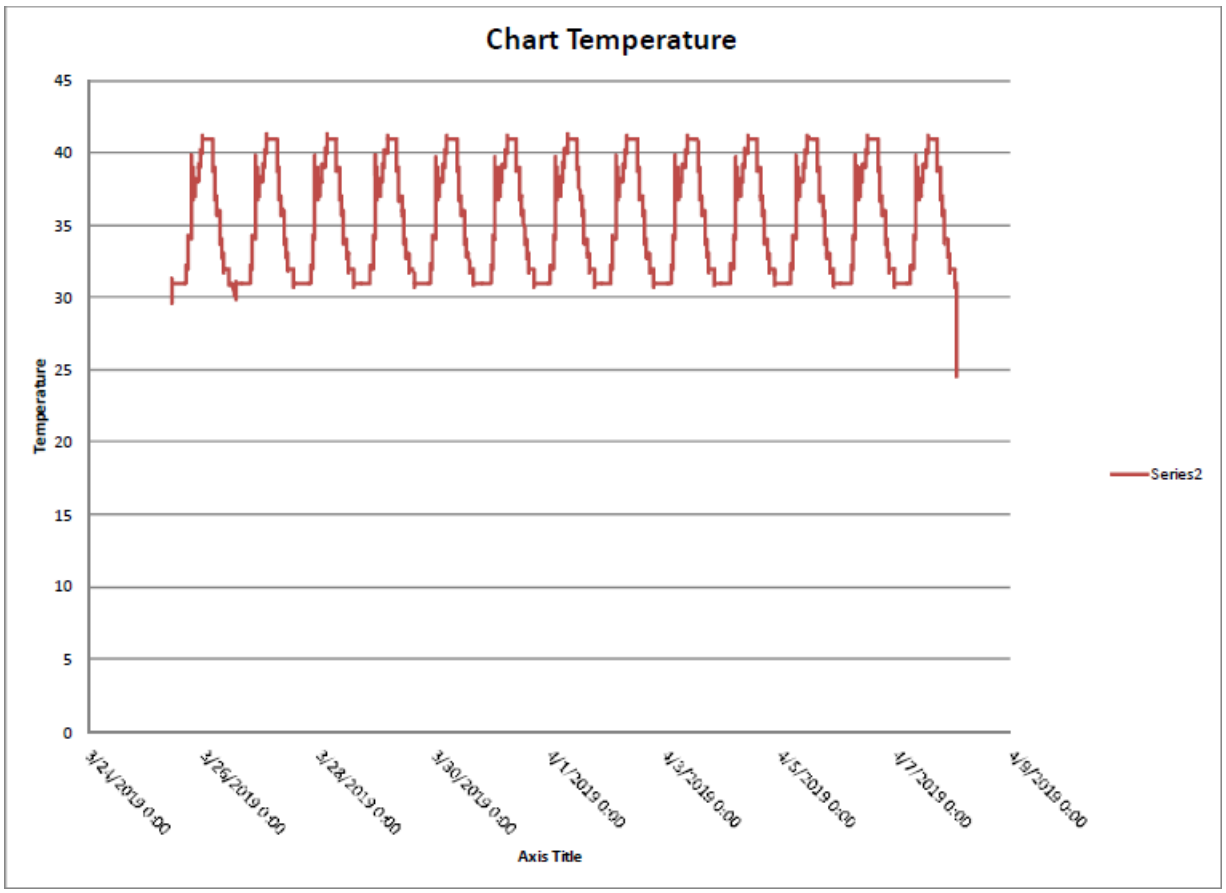


Figure 21: Humidity, Procedure I, Temperature Profile

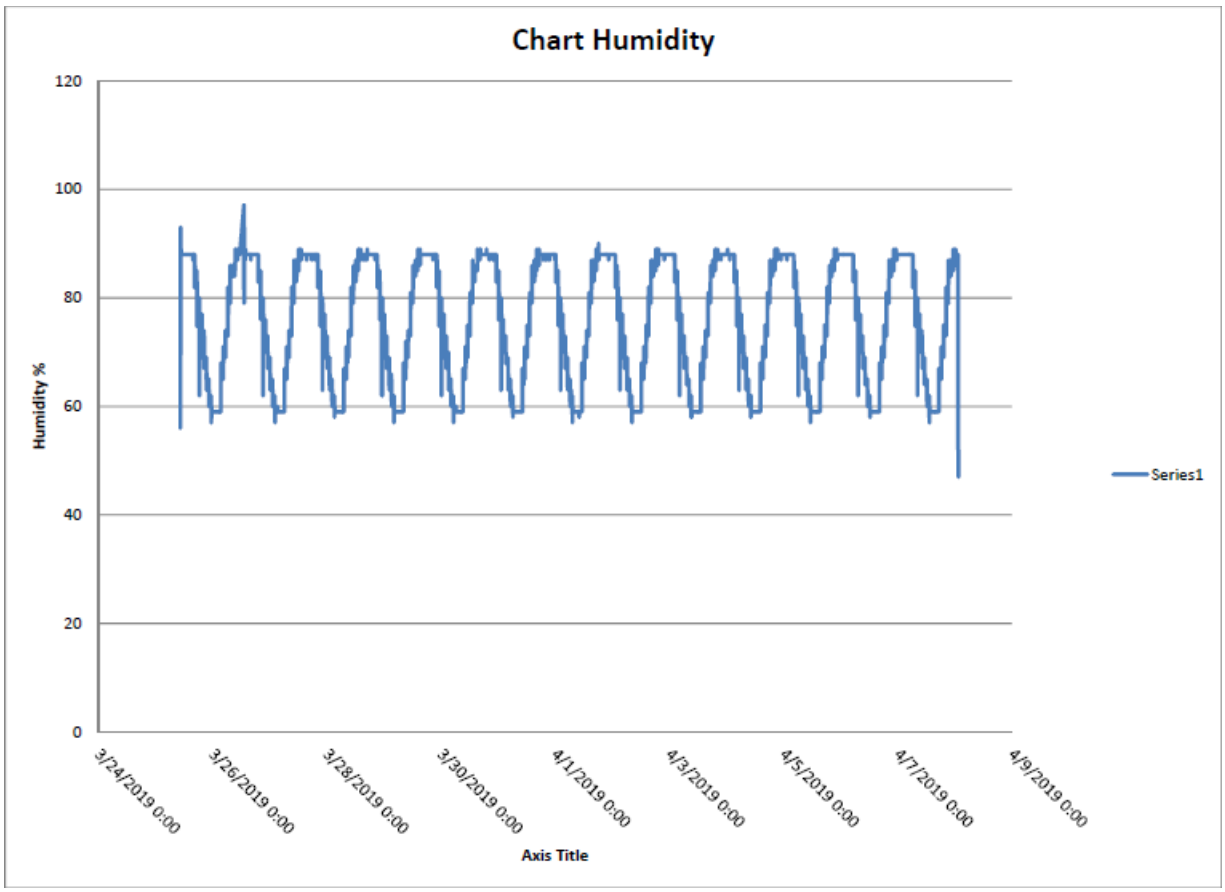


Figure 22: Humidity, Procedure I, Humidity Profile

Figure 23: Humidity, Procedure I, Pretest

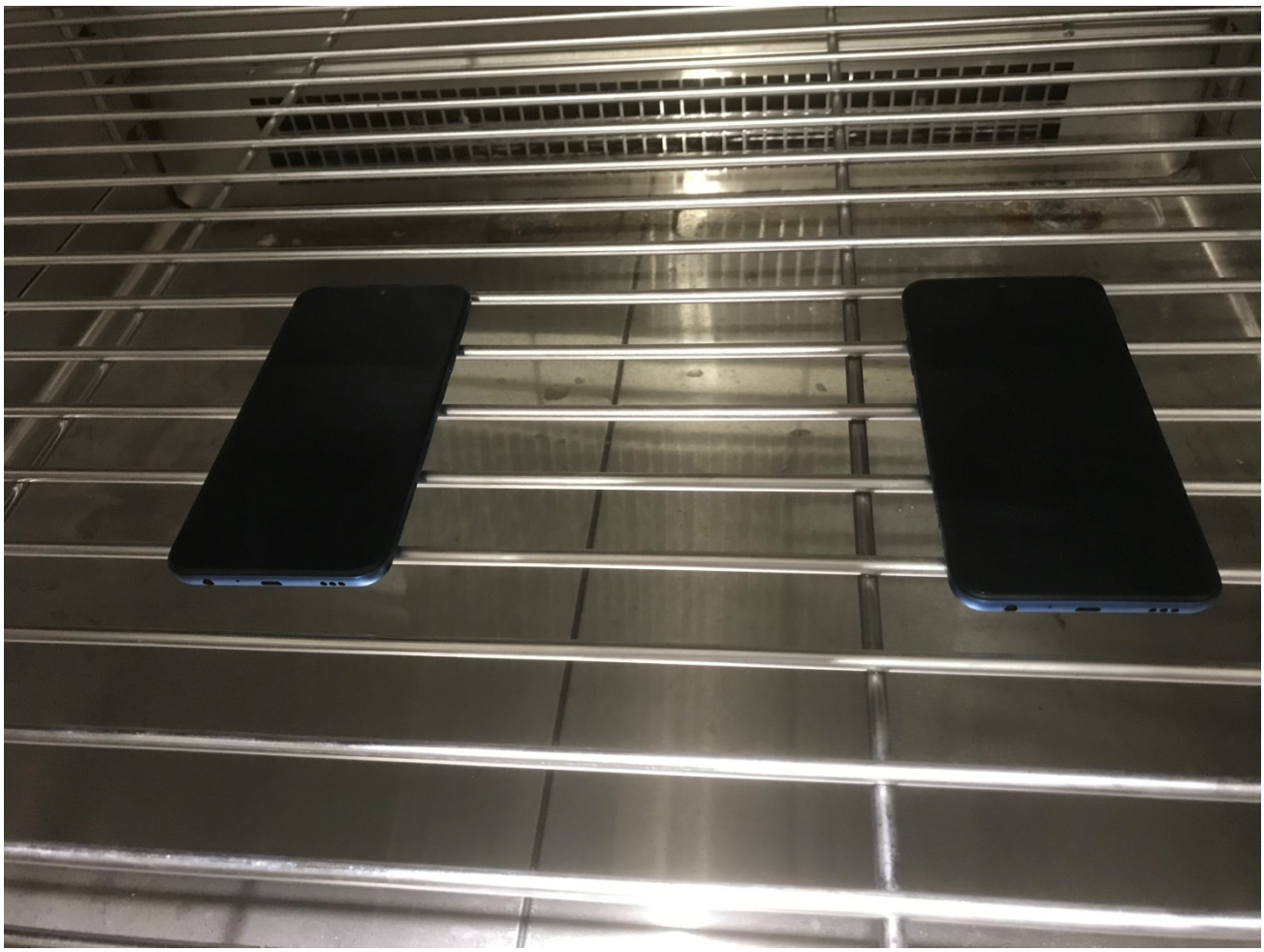


Figure 24: Humidity, Procedure I, Setup

Figure 25: Humidity, Procedure I, Post Test

Method 514.6 Vibration Test Methods

Category 4 - Truck/Trailer - Composite Wheeled Vehicle Vibration Exposure

Test Requirement(s): The equipment **shall not** sustain any damage or deteriorate in functional performance during or after it has been exposed to the environment described in MIL-STD-810G Method 514.6.

Test Procedure:

A. The EUT was installed on the vibration test fixture in the vertical axis.

B. An input (control) accelerometer was mounted to the base of the test fixture as near as possible to the attachment point of the EUT.

C. A monitor accelerometer was mounted to each box.

D. The EUT was subjected to the vibration profile below for 120 minutes.

E. The performance of the EUT was evaluated before, and after all axes of vibration were completed.

F Steps A through E were repeated for the longitudinal and transverse axes.

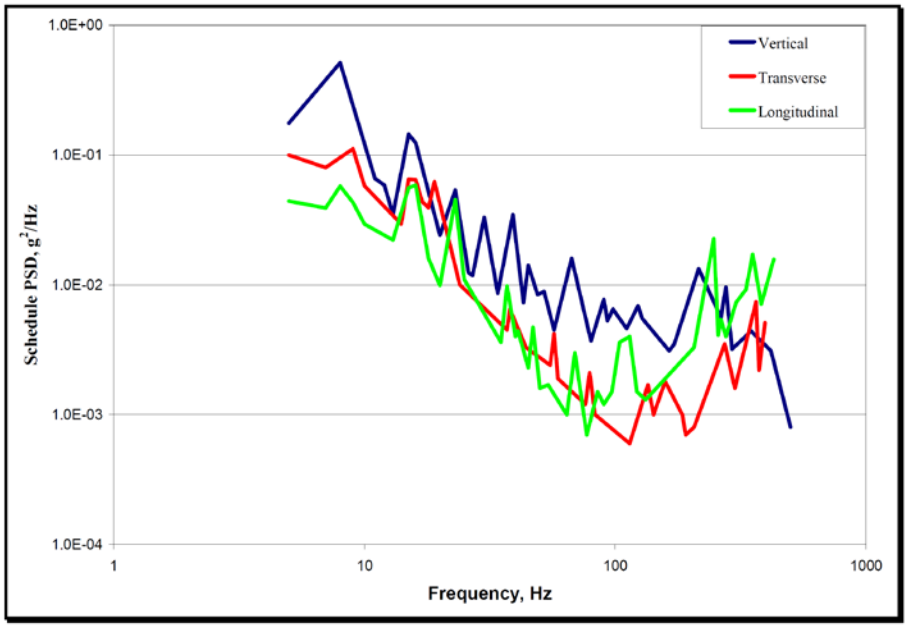


Figure 514.6C-3 – Category 4 - Composite wheeled vehicle vibration exposure.

Figure 26: Composite Wheeled Vehicle Vibration Exposure

Table 514.6C-VI. Category - 4 - Composite wheeled vehicle vibration exposure. (Break points for curves of Figure 514.6C-3.)

Vertical		Transverse		Longitudinal	
Frequency, Hz	PSD, g^2/Hz	Frequency, Hz	PSD, g^2/Hz	Frequency, Hz	PSD, g^2/Hz
5	0.1759	5	0.0998	5	0.0441
8	0.5120	7	0.0799	7	0.0390
11	0.0660	9	0.1115	8	0.0576
12	0.0585	10	0.0577	9	0.0430
13	0.0348	14	0.0294	10	0.0293
15	0.1441	15	0.0651	13	0.0221
16	0.1237	16	0.0646	15	0.0558
20	0.0241	17	0.0436	16	0.0585
23	0.0536	18	0.0393	18	0.0160
26	0.0124	19	0.0622	20	0.0099
27	0.0118	24	0.0100	23	0.0452
30	0.0331	37	0.0045	25	0.0110
34	0.0086	38	0.0065	35	0.0036
39	0.0347	44	0.0033	37	0.0098
43	0.0073	55	0.0024	40	0.0040
45	0.0141	57	0.0042	41	0.0044
49	0.0084	59	0.0019	45	0.0023
52	0.0089	76	0.0012	47	0.0047
57	0.0045	79	0.0021	50	0.0016
67	0.0160	83	0.0010	54	0.0017
80	0.0037	114	0.0006	64	0.0010
90	0.0077	135	0.0017	69	0.0030
93	0.0053	142	0.0010	77	0.0007
98	0.0065	158	0.0018	85	0.0015
99	0.0063	185	0.0010	90	0.0012
111	0.0046	191	0.0007	97	0.0015
123	0.0069	206	0.0008	104	0.0036
128	0.0055	273	0.0035	114	0.0040
164	0.0031	300	0.0016	122	0.0015
172	0.0035	364	0.0074	132	0.0013
215	0.0133	374	0.0022	206	0.0033
264	0.0056	395	0.0051	247	0.0226
276	0.0096	500	0.0012	257	0.0041
292	0.0032	rms = 1.48 g		264	0.0054
348	0.0044			276	0.0040
417	0.0031			303	0.0073
500	0.0008			332	0.0092
rms = 2.24 g				353	0.0172
				382	0.0071
				428	0.0157
				500	0.0016
				rms = 1.90 g	

Figure 27: Vibration Profile, Category 4, Composite Wheeled Vehicle Vibration Exposure

Test Results: The EUT was **compliant** with this test requirement.

Test Engineer(s): Ulugbek Nadjimov

Test Date(s): 03/26/19

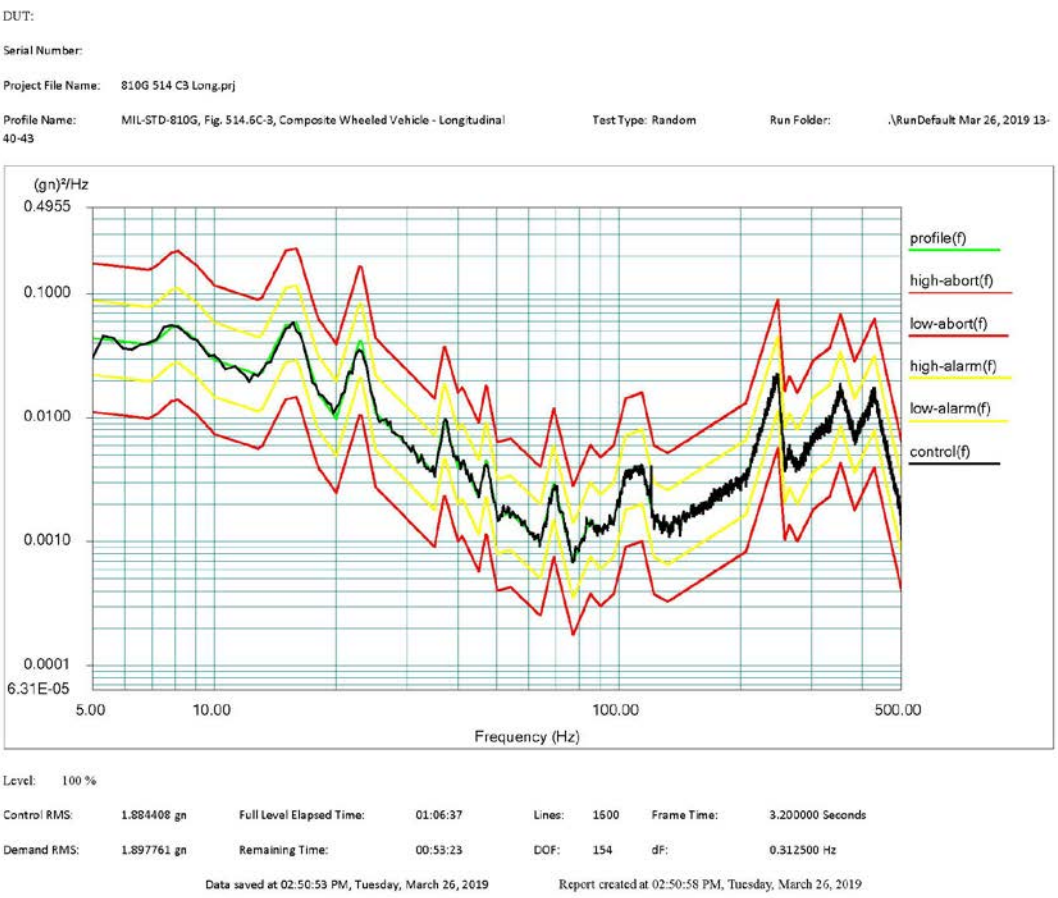


Figure 28: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Longitudinal Axis, 1

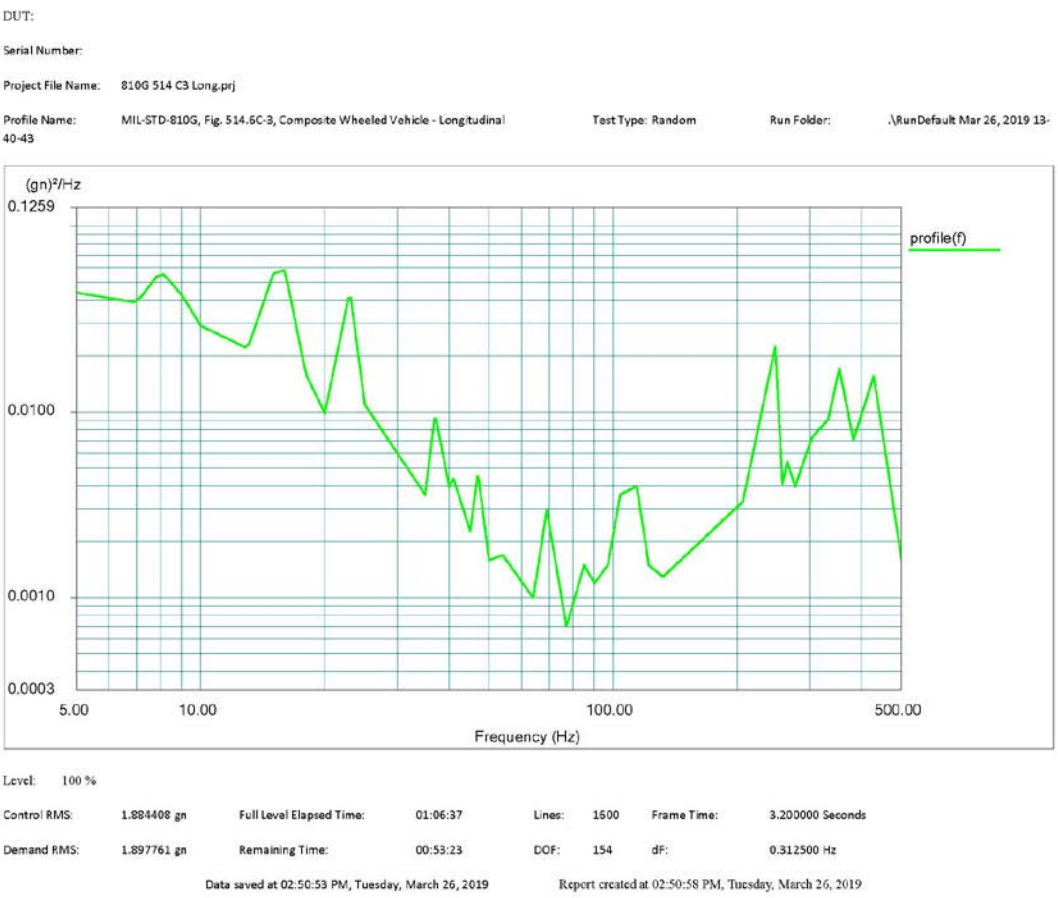
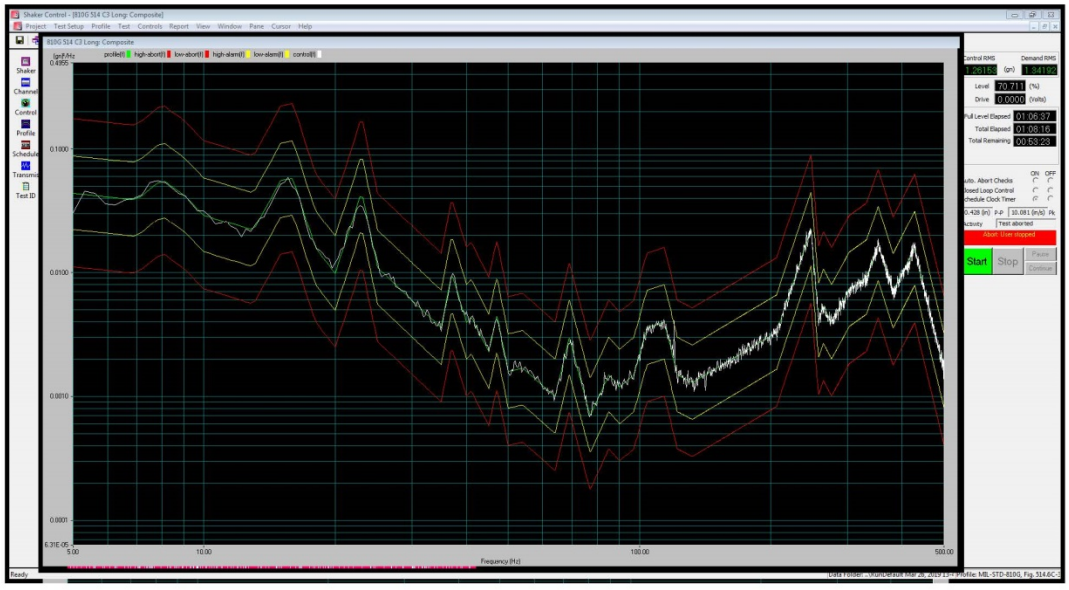


Figure 29: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Longitudinal Axis, 2

Project File Name: 810G 514 C3 Long.prj



Data saved at 02:50:54 PM, Tuesday, March 26, 2019 Report created at 02:50:58 PM, Tuesday, March 26, 2019

Figure 30: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Longitudinal Axis, 3

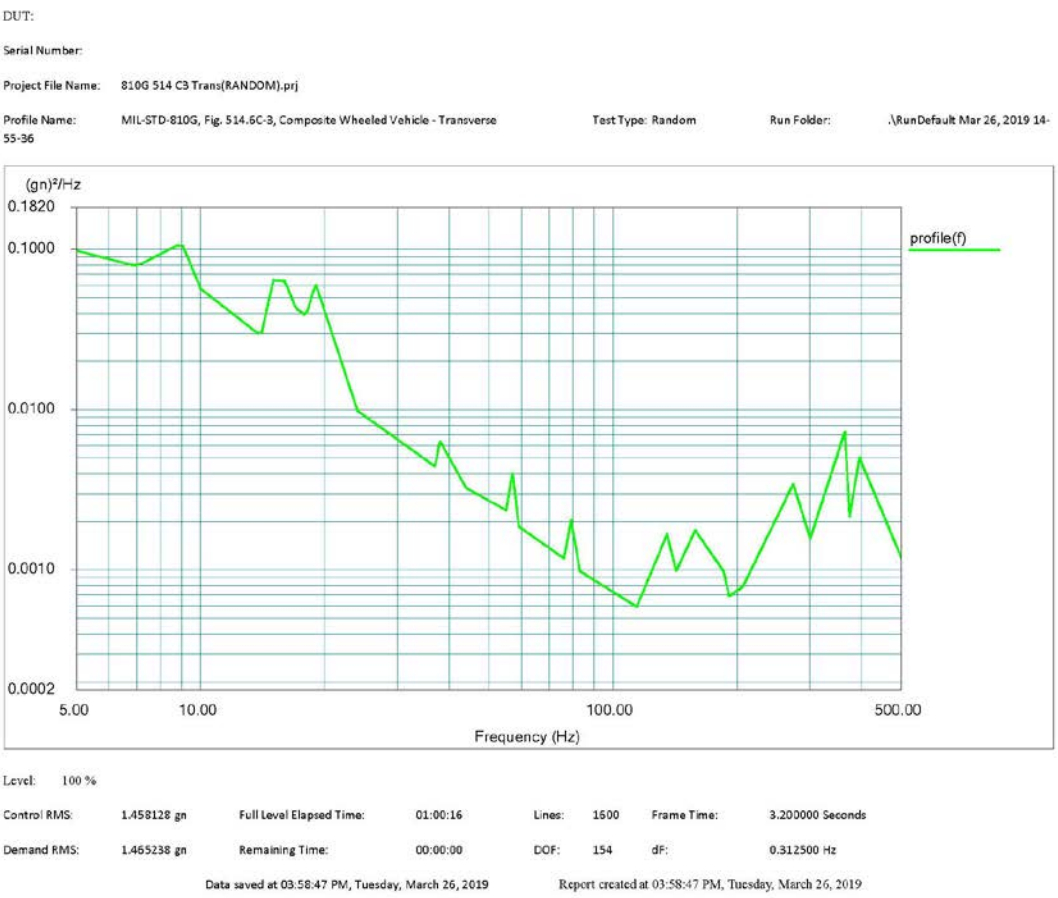


Figure 31: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Transverse Axis, 1

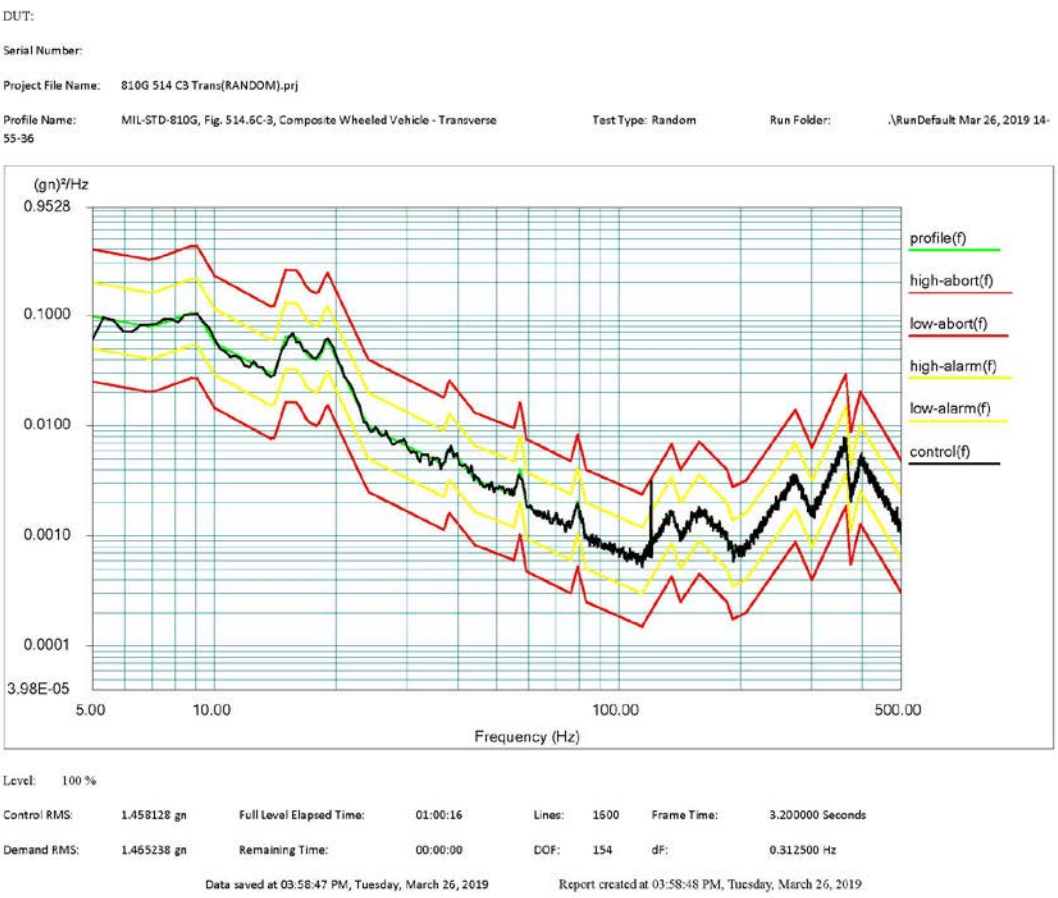


Figure 32: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Transverse Axis, 2

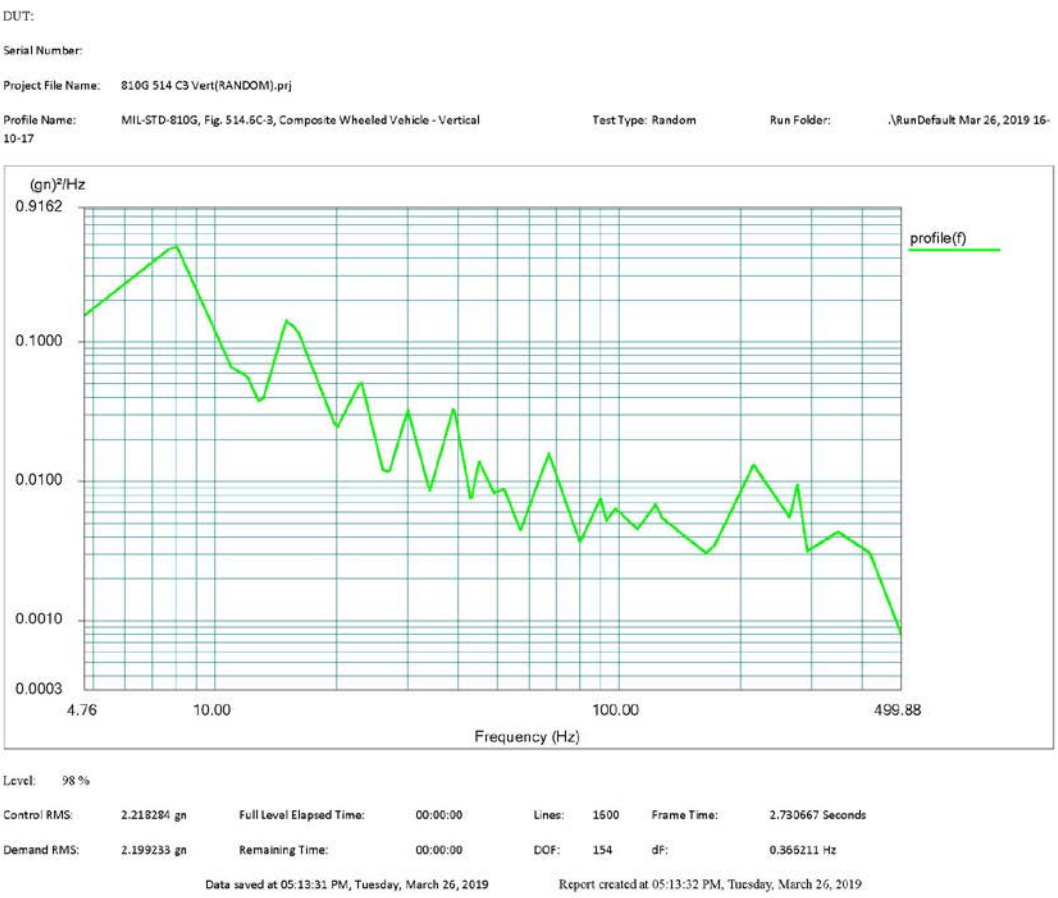


Figure 33: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Vertical Axis, 1

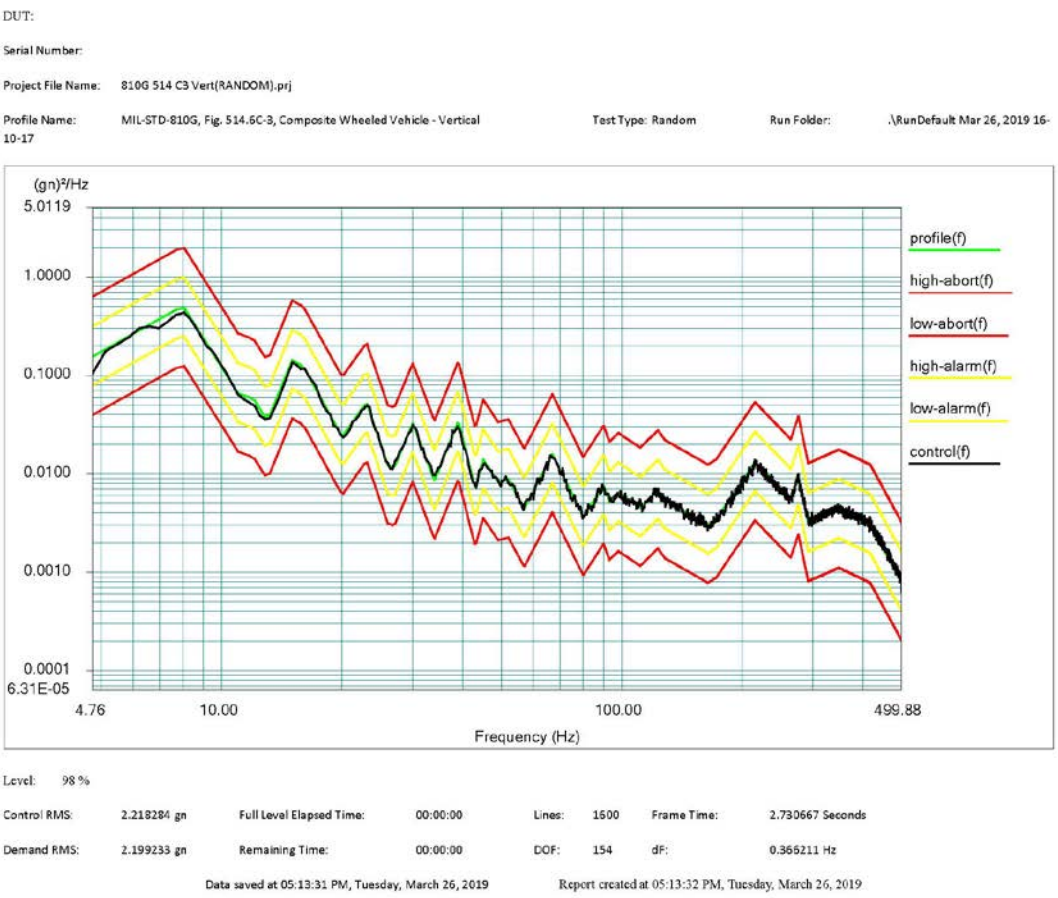


Figure 34: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Vertical Axis, 2

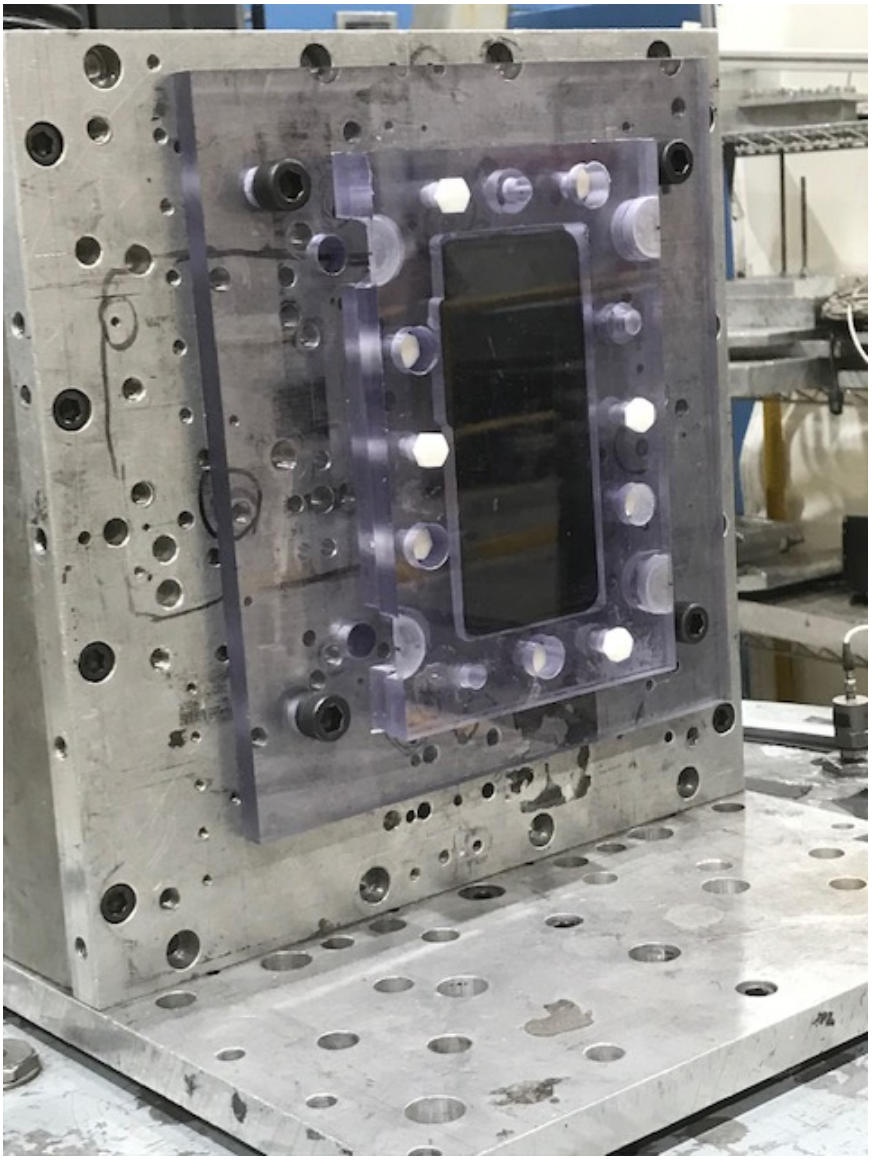


Figure 35: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Setup, Longitudinal Axis

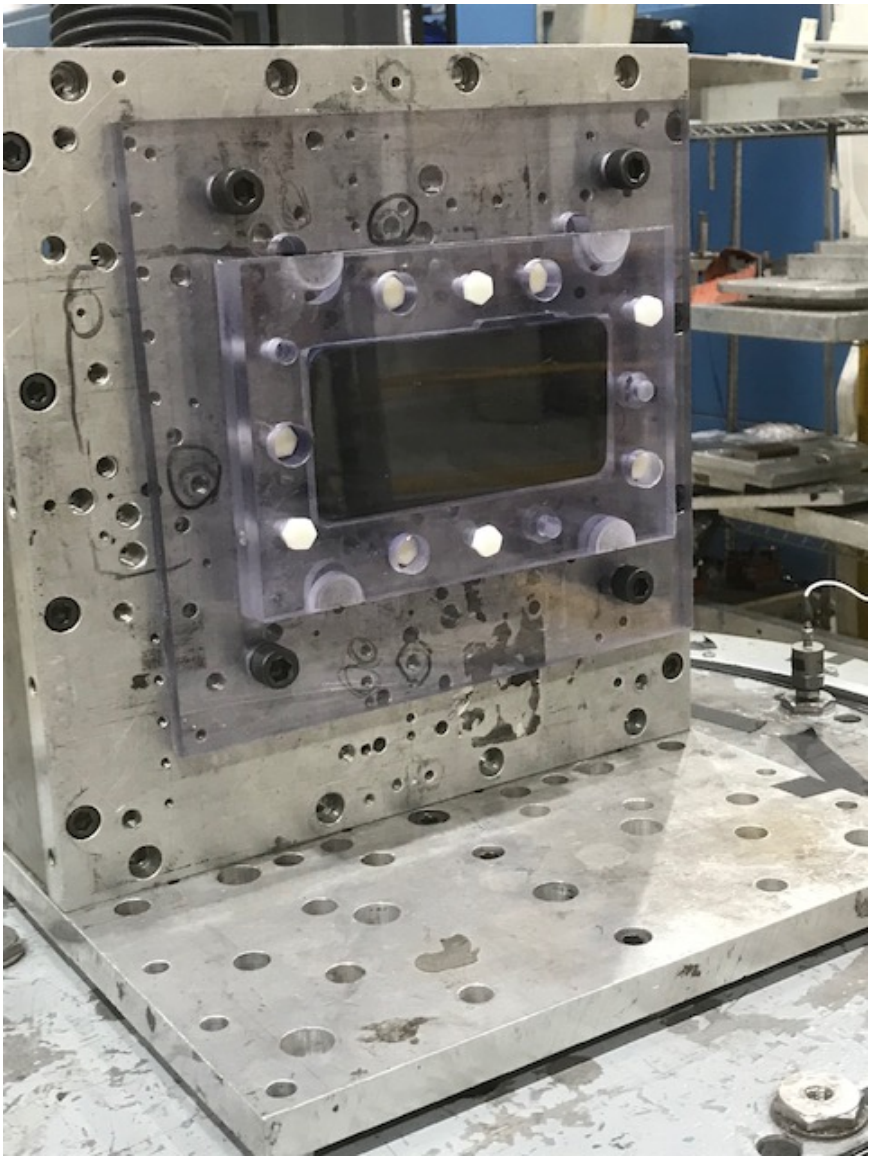


Figure 36: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Setup, Transverse Axis

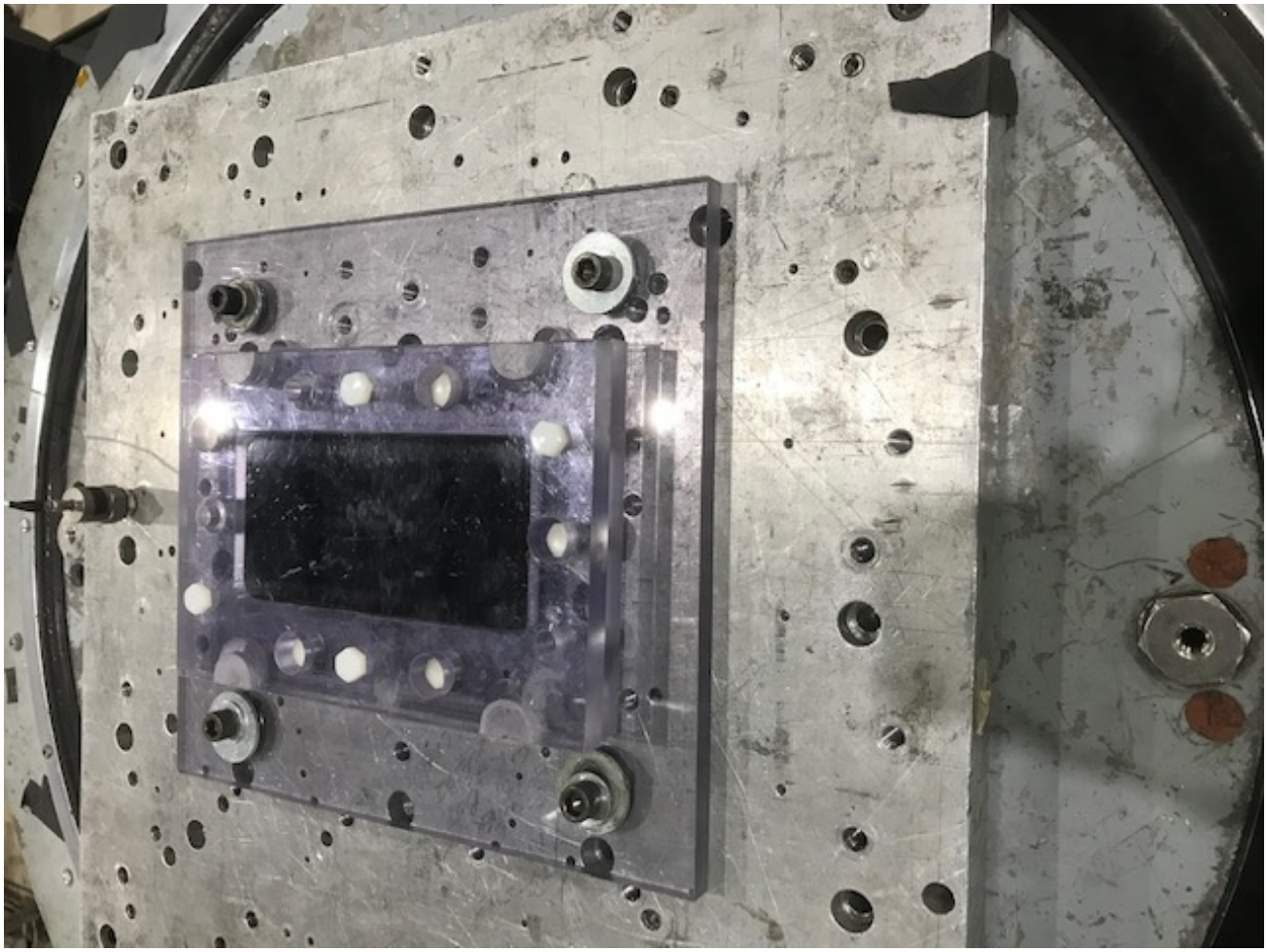


Figure 37: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Setup, Vertical Axis

Figure 38: Vibration, Procedure I, Category 4 - Truck/Trailer - Composite Wheeled Vehicle, Post Test Evaluation

Method 516.6 Mechanical Shock Test Methods

Shock, Procedure IV - Transit Drop (MIL-STD-810G Method 516.6)

Test Requirements The equipment **shall not** sustain any damage or deteriorate in functional performance during or after it has been exposed to the environment described in MIL-STD-810G.

Test Procedure

A. The test was performed on an unpackaged EUT.

B. The EUT was subjected to drops heights specified below.

C. The EUT was drop onto a 2-inch plywood backed by concrete.

D. The EUT was dropped from a hand held method.

E. A visual and functional inspection was performed after the test.

Table 516.6-VI. Transit drop test.

Weight of Test Item & Case kg (lbs)	Largest Dimension, cm (in)	Notes	Height of Drop, h cm (in)	Number of Drops
Under 45.4 (100) Manpacked or man-portable	Under 91 (36)	A/	122 (48)	Drop on each face, edge and corner; total of 26 drops D/
	91 & over	A/	76 (30)	
45.4 - 90.8 (100 – 200) inclusive	Under 91	A/	76 (30)	Drop on each corner; total of eight drops
	91 & over	A/	61 (24)	
90.8-454 (200 – 1000) inclusive	Under 91	A/	61 (24)	
	91 – 152 (36 – 60)	B/	61 (24)	
	Over 152	B/	61 (24)	
Over 454	No limit	C/	46 (18)	Drop on each bottom edge. Drop on bottom face or skids; total of five drops

NOTES:

A/ Perform drops from a quick-release hook or drop tester. Orient the test item so that, upon impact, a line from the struck corner or edge to the center of gravity of the case and contents is perpendicular to the impact surface.

B/ With the longest dimension parallel to the floor, support the transit, or combination case with the test item within, at the corner of one end by a block 13 cm (five inches) in height, and at the other corner or edge of the same end by a block 30 cm (12 inches) in height. Raise the opposite end of the case to the specified height at the lowest unsupported corner and allow it to fall freely.

C/ While in the normal transit position, subject the case and contents to the edgewise drop test as follows (if the normal transit position is unknown, orient the case so the two longest dimensions are parallel to the floor):

Edgewise drop test: Support one edge of the base of the case on a sill 13-15 cm (five to six inches) in height. Raise the opposite edge to the specified height and allow it to fall freely. Apply the test once to each edge of the base of the case (total of four drops).

D/ If desired, divide the 26 drops among no more than five test items (see paragraph 4.6.5.1).

Figure 39: Transit Drop Test Procedures

Test Results: The EUT was **compliant** with this test requirement.

Test Engineer(s): Ulugbek Nadjimov

Test Date(s): 03/14/19

Figure 40: Shock, Procedure IV - Transit Drop, Pretest 1

Figure 41: Shock, Procedure IV - Transit Drop, Pretest 2

Figure 42: Shock, Procedure IV - Transit Drop, Setup 1

Figure 43: Shock, Procedure IV - Transit Drop, Setup 2

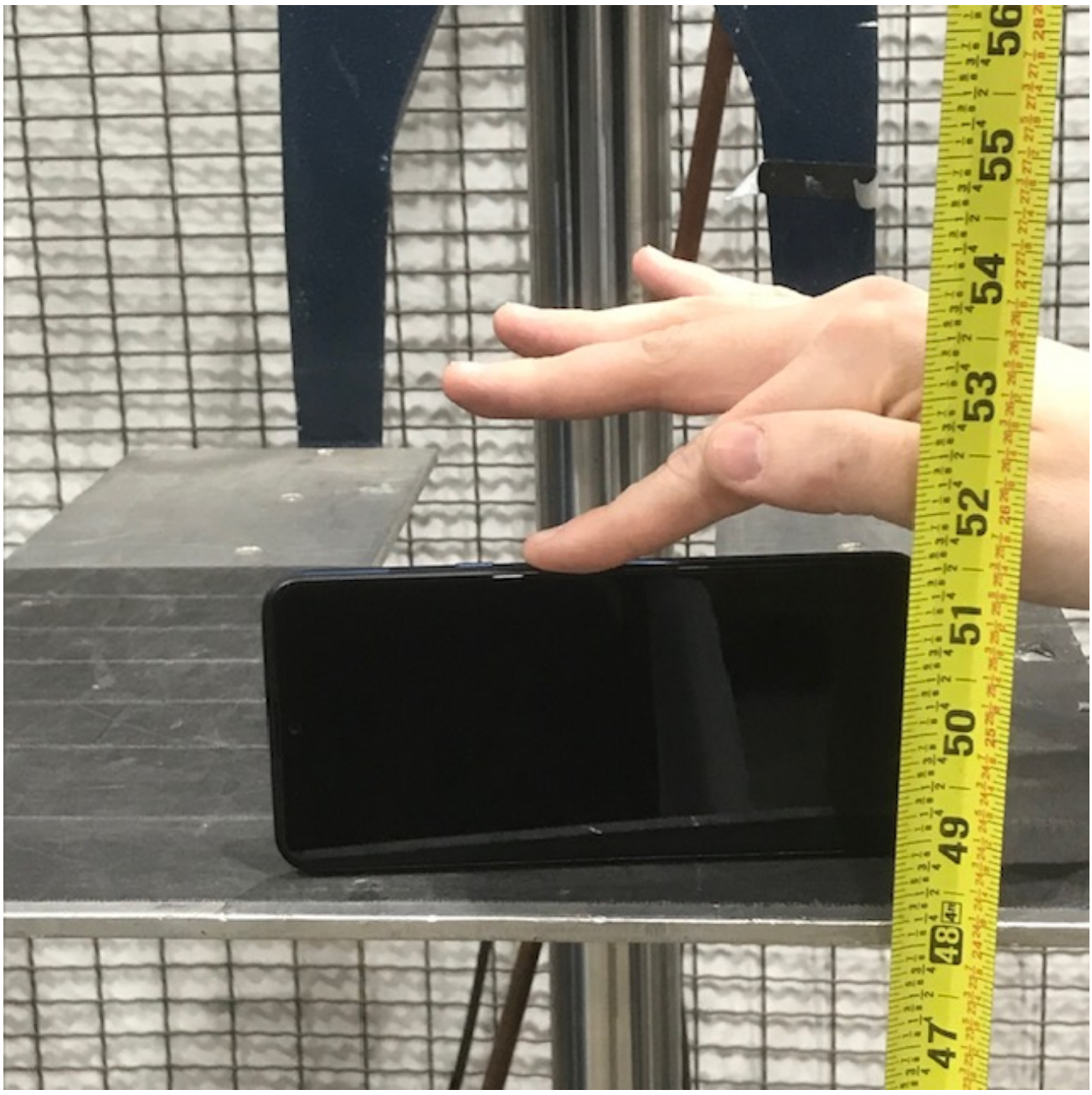


Figure 44: Shock, Procedure IV - Transit Drop, Setup 3

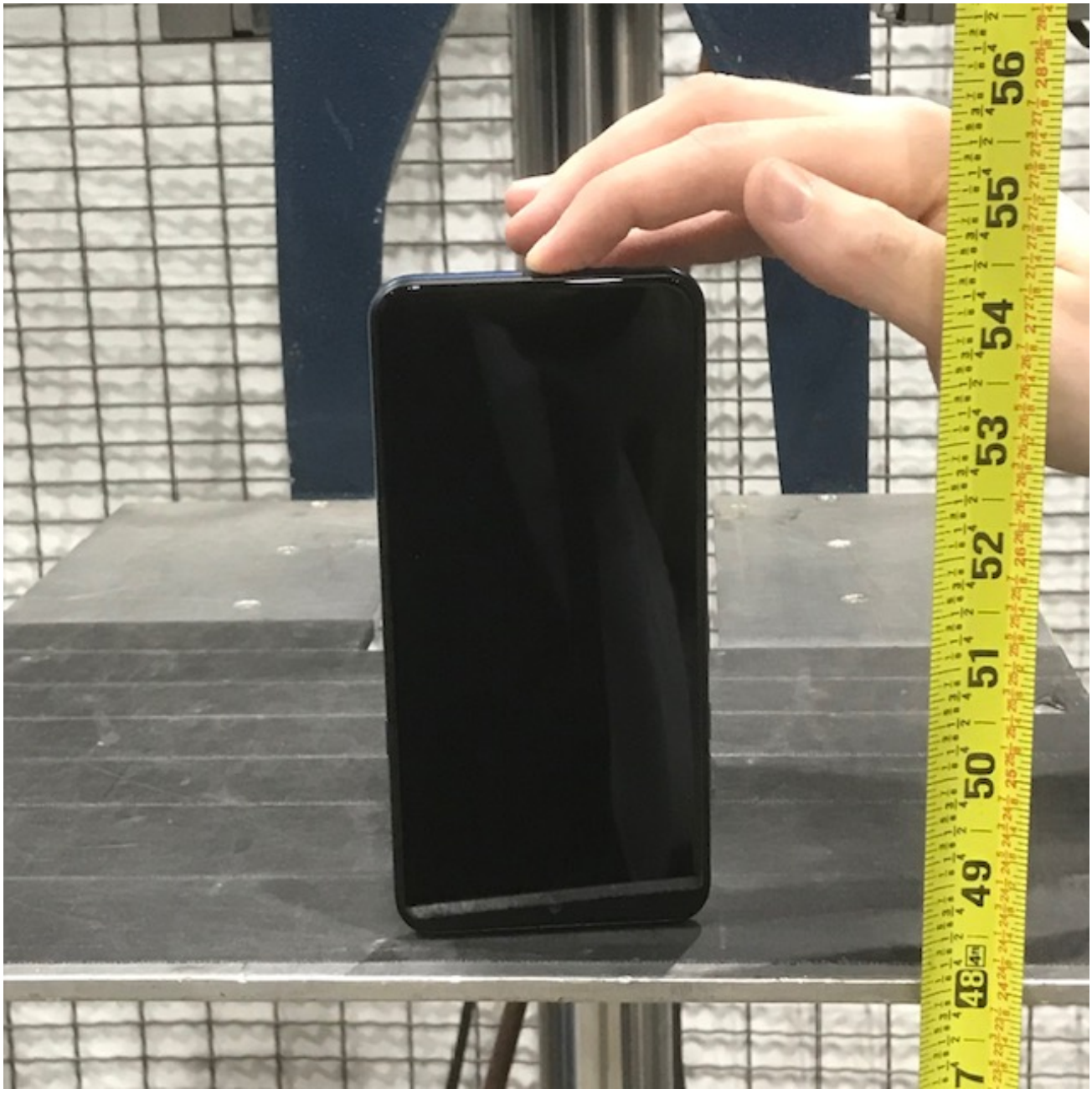


Figure 45: Shock, Procedure IV - Transit Drop, Setup 4

Figure 46: Shock, Procedure IV - Transit Drop, Setup 5

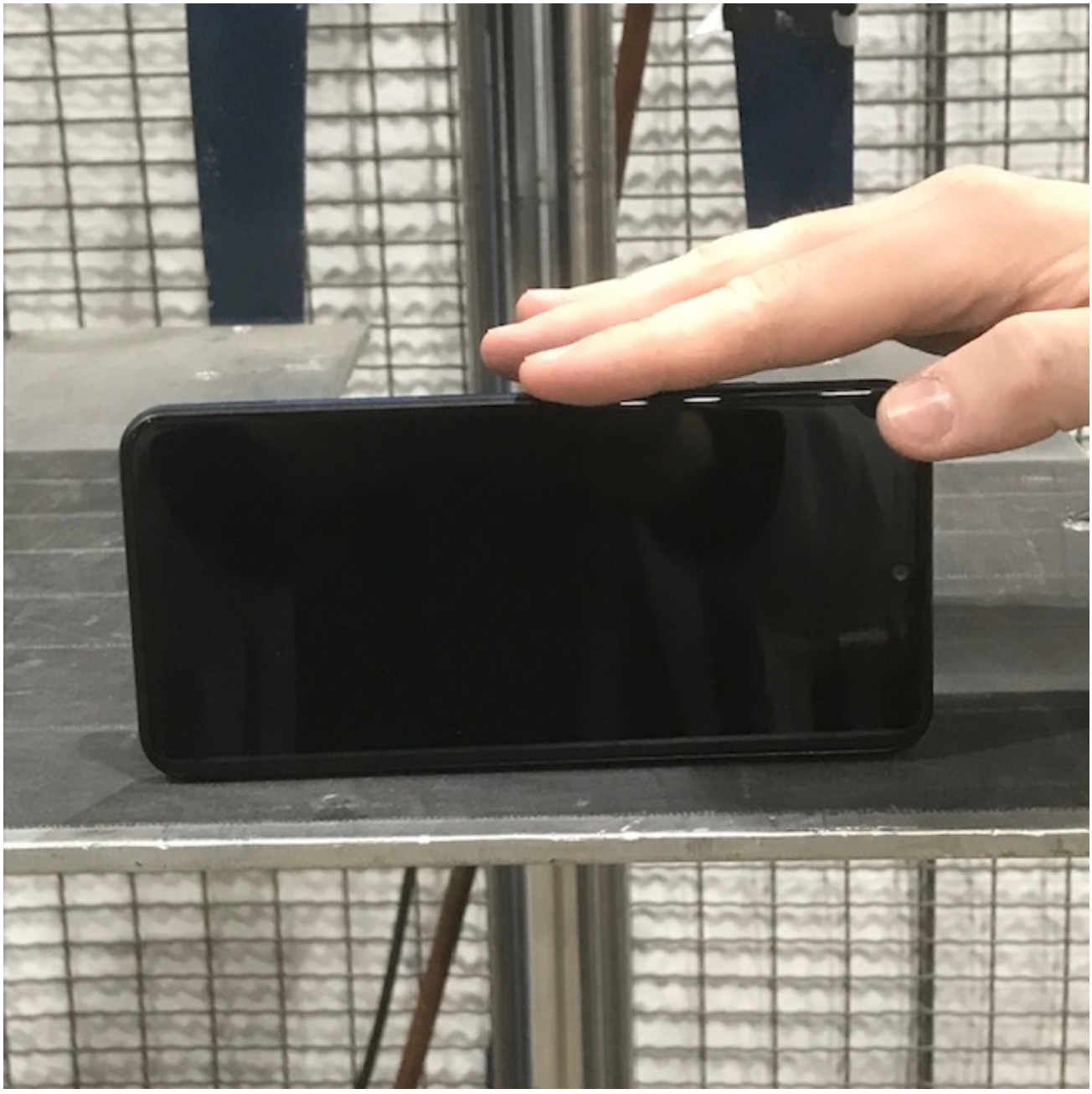


Figure 47: Shock, Procedure IV - Transit Drop, Setup 6

Figure 48: Shock, Procedure IV - Transit Drop, Setup 7

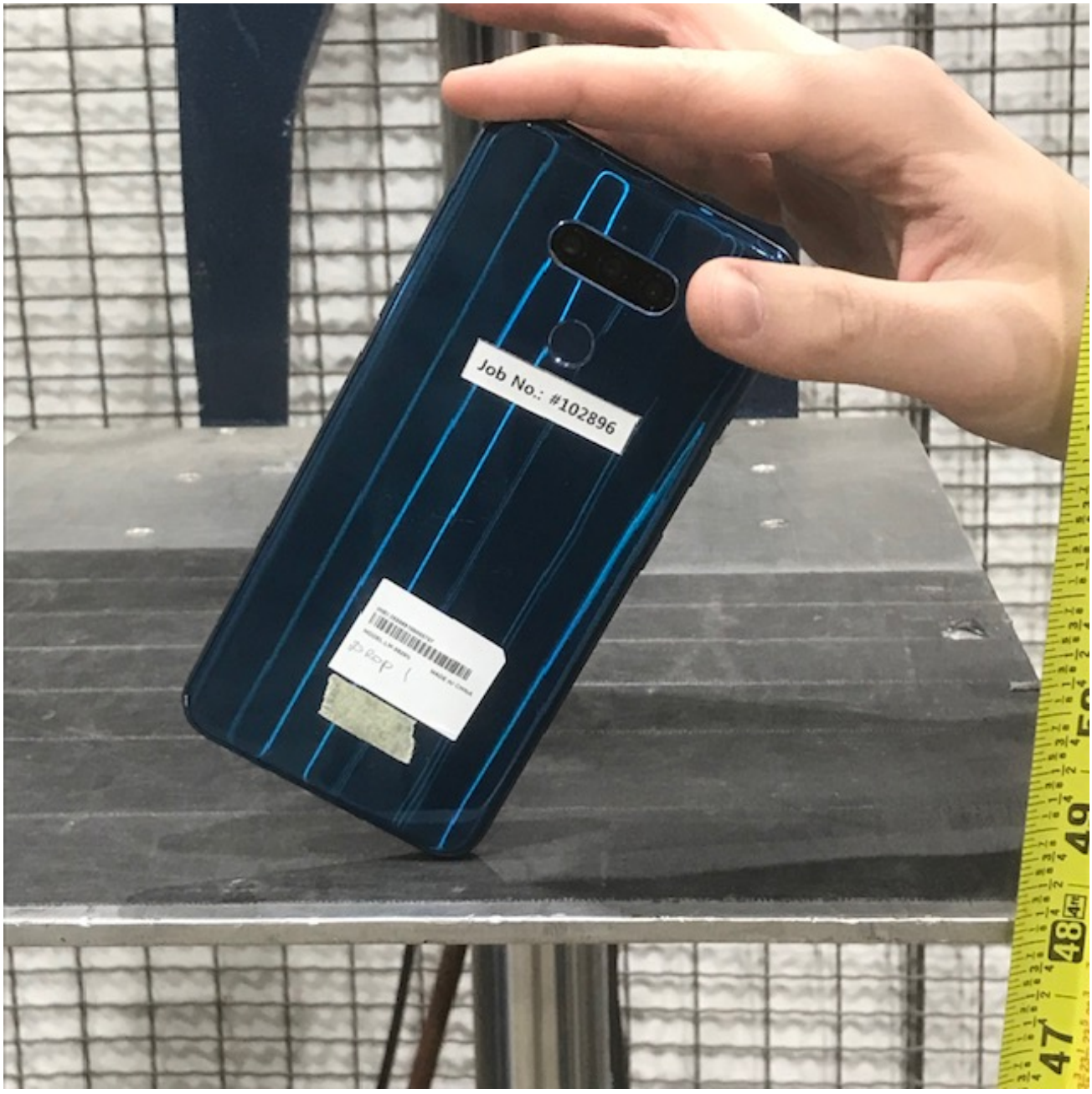


Figure 49: Shock, Procedure IV - Transit Drop, Setup 8

Figure 50: Shock, Procedure IV - Transit Drop, Setup 9

Figure 51: Shock, Procedure IV - Transit Drop, Setup 10

Figure 52: Shock, Procedure IV - Transit Drop, Setup 11

Figure 53: Shock, Procedure IV - Transit Drop, Drop On Plywood, 1

Figure 54: Shock, Procedure IV - Transit Drop, Drop On Plywood, 2

Figure 55: Shock, Procedure IV - Transit Drop, Post Test, 1

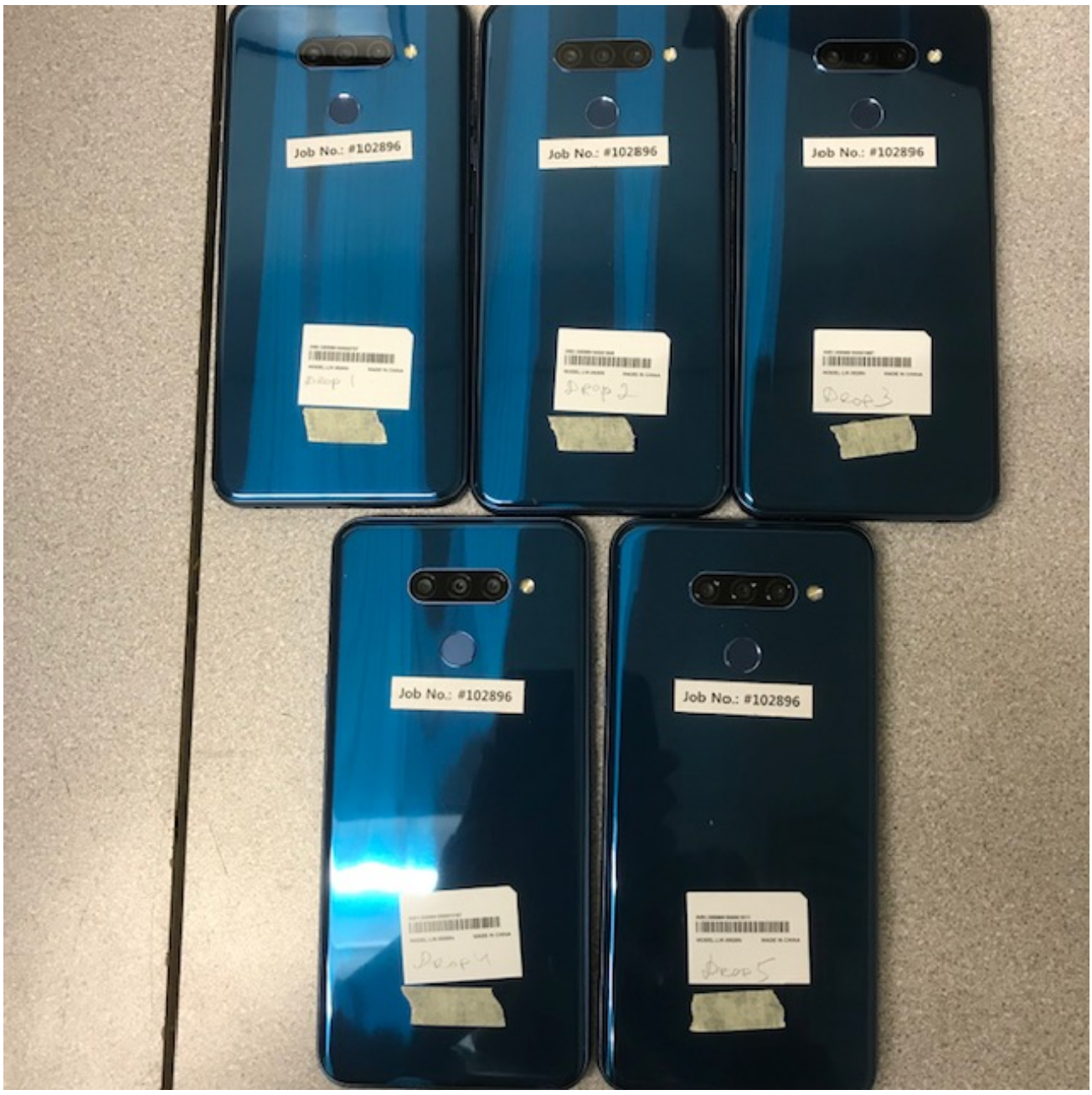


Figure 56: Shock, Procedure IV - Transit Drop, Post Test, 2

Test Equipment

MET #	EQUIPMENT	MANUFACTURER	MODEL	LAST CAL.	CAL DUE
Test Name: Method 501.5, High Temperature					
2T4001	TEMP/RH CHAMBER H11	ESPEC	EPX-4H	22-May-18	22-May-19
Test Name: Method 502.5, Low Temperature					
2T4001	TEMP/RH CHAMBER H11	ESPEC	EPX-4H	22-May-18	22-May-19
Test Name: Method 503.5, Temperature shock					
2T5566	Temp/RH Chamber (H3)	THERMOTRON	SM-32C	06/11/2018	06/11/2019
2T5888	Temperature RH Chamber (H4)	Thermotron	SM32C; 2800; 923494	07/11/2018	07/11/2019
Test Name: Method 507.5, Humidity					
2T8226	Temperature/Humidity Chamber	ESPEC	EPX-4H	01/11/2019	01/11/2020
Test Name: Method 514.6, Vibration					
2T5663	UD SHAKER SYSTEM	UNHOLTZ DICKIE	R24C	See Note	See Note
2T5871	Shaker Control System	LDS Dactron	Laser USB	05/21/2018	05/21/2019
Test Name: Method 516.6, Shock					
2T8179	PDT Drop Test System	Lansmont Corporation	PDT-56ED	See Note	See Note

Note: Functionally verified test equipment is verified using calibrated instrumentation at time of testing.