[redacted]

0925

UNCLASSIFIED

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
DOWNGRADING OR DECLASSIFICATION STAMP
CLASSIFICATION CHANGED TO: U
AUTHORITY: R.B. Craner
PERSON CHANGING MARKING & DATE: Emelda Sejah 9/30/98
RECORD ID: 98SN4472
PERSON VERIFYING MARKING & DATE: W Chaney 9/30/98
DATED: 9/28/98

T-29158 December 16, 1964 File: MC1855
3-2

ENVIRONMENTAL TESTING OF TWO-HUNDRED-FORTY-FIVE MC1855 TOOL-MADE SAMPLE THERMAL BATTERIES (MANUFACTURED BY EAGLE-PICHER CO.)

Organization 7300 Environmental Test Report

CENTRAL TECHNICAL FILE
MC 1855
3-2

J. G. Brooks - 7332-2

Approved by: M. A. Richter
M. A. Richter - 7332-2

RECEIVED
DEC 15 1964
CENTRAL TECH FILE

Distribution:
D. S. Bliss, 2562
Attn: B. C. Coats
R. D. Wherle, 1323
C. S. Williams, Jr., 1442
C. L. Johnson, 2123
J. T. Risse, 7332
Central Technical File, 3428-1

[redacted]

[redacted]

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
1st Review Date: 9/28/98
Authority: ADC ADD W Layne
Name:
2nd Review Date: 9/28/98
Authority: R.B. Craner
Name:
Determination (Circle Numbers):
1 Classification Retained
2 Classification Changed to: U
3 Contains No DOE Classified Information
4 Coordinate With:
5 Contains UCNI
6 Comments: OK for Release

TCG-SAFF-1
TCG-NNT-1

UNCLASSIFIED

[redacted]

TABLE OF CONTENTS

	Page
Introduction	3
Summary	3
Procedure and Results	3-7
Tables I - IX -- Performance Data	8-16
Figure 1 - Axis Identification for Vibration and Linear Acceleration	17
Figure 2 - Axis Identification for Mechanical Shock	18

T-29158

ENVIRONMENTAL TESTING OF TWO-HUNDRED-FORTY-FIVE MC1855 TOOL-MADE SAMPLE THERMAL BATTERIES (MANUFACTURED BY EAGLE-PICHER CO.)

Introduction

This test was requested by Division 2562 as a part of the Tool-made sample evaluation of the MC1855 Thermal Batteries.

The test was a planned sequence and was performed in accordance with PS-311807, Issue K.

This test was requested by B. C. Coats, 2562-2, on September 23, 1964. The test items were received October 20, 1964 and the test was completed on December 1, 1964.

Summary

Two-hundred-forty-five MC1855, Tool-made sample, Thermal Batteries were received for complete environmental and performance testing. The tests were performed in accordance with PS-311807, Issue K. Only one-hundred-four batteries were actually tested as enough information had been obtained at this point and the consultant stopped any further testing at this time.

All of the batteries that were activated met the requirements of PS-311807, Issue K, except four units serially numbered 432, 700, 620, and 487. The monitors in these units did not open during linear acceleration at 200g, in the A1 direction. The material was returned to Dave Poll, 1323.

Procedure and Results

Two-hundred-forty-five MC1855 Tool-made sample Thermal Batteries were received for environmental and performance testing for TMS evaluation. Only one-hundred-four of the batteries were actually tested because enough information had been obtained at this point. The remaining one-hundred-forty-one batteries were returned to Dave Poll, 1323, untested. The results and serial numbers of the units tested are shown in Tables I through IX.

Initial Tests

1. Insulation Resistance.
   The insulation resistance was measured on all units. This was accomplished by applying a potential of 500 VDC for a minimum of six seconds

between the MC1855 case and the following terminals:

(a) Positive terminal

(b) Negative Terminal

(c) Monitor terminals in parallel

All terminals not being tested were grounded to the case. The leakage current was less than 10 microamperes.

2. Monitor Resistance

The resistance between the monitor terminals was measured with a current of 10 milliamperes flowing through the circuit. The resistance ranged from .04 to .12 c ns for all units.

Linear Acceleration

Nineteen batteries were mounted on the Schaevitz B-F-8 centrifuge, one at a time, and subjected to an acceleration force of 200g's in the longitudinal (A_1) axis. The batteries were activated after the 200g level was reached. The monitor circuit failed to open on units serially numbered 432, 700, 620, and 487. The test results and the remaining serial numbers are shown in Table VIII.

Twenty-two units were then mounted on the centrifuge, one at a time, and subjected to an acceleration force of 40g's with the acceleration force in the lateral (B_1) axis. The units were activated when the acceleration force reached 40g's. There were no results obtained for units serially numbered 574, 585, and 758 due to test equipment failure. The units did fire. The results and the serial numbers are shown in Table IX.

Mechanical Shock (Unactivated)

Five MC1855 batteries were cemented to one 7" x 7" x 1" plate. They were then mounted on SM No. 6 and subjected to three shocks in both directions along each of three major mutually perpendicular axes. The amplitudes ranged from 111 to 112g's with durations ranging from 4.8 to 4.9 milliseconds. The shock signatures approximated a half-sine wave shape.

After the shock tests were completed, the units were activated. The results and serial numbers are shown in Table I.

Mechanical Shock (Activated)

Twelve units were mounted, one at a time, on SM-5. The batteries were fired and approximately 350 milliseconds after firing were subjected to one shock with the acceleration force in the D_1 direction (see Figure 2). The amplitudes ranged from 270 to 285g's. The durations were 15 milliseconds. The shock signatures approximated a half-sine wave shape. There was no data obtained for unit No. 470 due to tester failure.

The results and serial numbers are shown in Table III.

Five units were mounted on SM-5, one at a time. The units were activated and approximately 800 milliseconds after activation the shock was applied with the applied force in the D_1 direction as shown in Figure 2. The amplitudes ranged from 270 to 285g's with a fifteen millisecond duration. The shock signatures approximated a half-sine wave shape. The results and the serial numbers are shown in Table V.

High Temperature Cycle

The units were placed in Environmental Test Chamber No. 10 and exposed to thirty twenty-four hours of temperature cycling as is specified in PS-311807, Issue K, paragraph 4.3.3.4a. After the units were stabilized at room temperature, they were activated. The serial numbers and the results are shown in Table IV.

High Temperature Soak

Five units were placed in Environmental Test Chamber No. 16 and exposed to a temperature of +200°F for a period of six hours. At the end of this time and while still at +200°F the units were activated. There was no data obtained for units serially numbered 509 and 630 due to malfunction of the tester. The results and serial numbers are shown in Table II.

Low Temperature Soak

Five batteries were placed in Environmental Test Chamber No. 16 and exposed to a temperature of -65°F for a period of six hours. At the end of this period and while still at -65°F the units were activated. The results and the serial numbers are shown in Table I.

Temperature Shock

Ten units were exposed to three cycles of temperature shock as specified in PS-311807, Issue K, paragraph 4.3.3.5. During the last cycle five batteries were activated at a temperature of +200°F and the other five were activated while at a temperature of -65°F. The results and serial numbers are shown in Tables II and I respectively.

Humidity

Four units were placed in Environmental Test Chamber No. 17 and exposed to ten cycles of humidity as specified in PS-311807, Issue K, paragraph 4.3.3.7. At the conclusion of the humidity test the units were activated. The results and serial numbers are shown in Table VI.

Vibration (Unactivated)

Five batteries were cemented to one 7" x 7" x 1" plate and mounted on VM-4. They were then subjected to a critical frequency search in each of three major mutually perpendicular axes at frequencies ranging from 10-2000-10 cps. The frequency range and the inputs used were as follows:

Frequency Range (cps)	Constant Acceleration or Double Amplitude
10-73	.018 DA
73-2000	20g

The most critical frequency to be found was 2000 cps with 20g input. The units were vibrated for one hour at 2000 cps with a constant acceleration of 20g's, in each of three major mutually perpendicular axes.

The batteries were then subjected to one hour of vibration cycling, in 20 minute cycles, in each of three major mutually perpendicular at frequencies ranging 10-2000-10 cps. The frequency range and the inputs used were as follows:

Frequency Range (cps)	Constant Acceleration or Double Amplitude
10-73	0.072 DA
73-2000	20g

After the vibration cycling had been completed, the batteries were activated. The serial numbers and the results are shown in Table IV.

Vibration (Activated)

Five batteries were mounted, one at a time, on VH-4 and vibrated at 500 cps with a constant acceleration of 10g's, in the A axis. While being vibrated at 500 cps with a 10g input the batteries were activated. The serial numbers and results are shown in Table IV.

All of the batteries were returned to Dave Toli, 1323.

The definition of the axes and directions of applied force are shown in Figures 1 and 2.

JGB:7332-2:sib

TABLE-I

At -65° After Thermo Shock

At -65 [redacted]

0932

T-29158

DATA FORM

ISS. NO. 04

PS 311807

UNCLASSIFIED

TEST DATE

SERIAL NUMBER	RISE TIME A TO 3 VOLTS X 4.3.3.12 a ≤ 150 MILLISECONDS	RISE TIME C 16 TO 22 V 4.3.3.12 c ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 b MILLISECONDS	PEAK VOLTAGE X 4.3.3.12 VOLTS	ACTIVATED LIFE 4.3.3.12 e ≥ 25 SECONDS	VOLTAGE AT ACTIVATED LIFE X 4.3.3.12 e ≥ 25 VOLTS	MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ	Voltage Sw. Cont.
At -65°F After Thermo Shock (4.3.3.5-low)										
633	110.		2	116.	30.7	6.1	30.7	✓		5.9
518	88.		2	107	30.4	7.8	30.4	✓		6.0
443	84.		4	104	30.7	8.7	30.6	✓		5.0
769	120.		2	140	30.8	6.7	30.8	✓		5.8
665	97.		3	107	30.5	7.5	30.5	✓		5.8
At -65° (4.3.3.6)										
771	118.		5	136	29.8	6.2	29.8	✓		5.0
444	107.		5	127.	30.2	9.0	30.2	✓		5.0
636	126.		2	144.	29.9	5.5	29.9	✓		5.5
672	95.		4	115.	30.3	6.6	30.3	✓		5.0
519	104.		4	128.	30.0	5.9	30.0	✓		5.0
AT ROOM TEMP. AFTER MECHANICAL Shock 3 (4.3.3.9.1)										
762	84.		8	100.	30.2	11.5	30.2	✓		
508	80.		8	92.	30.0	9.9	29.8	✓		
661	80.		7	90.	30.0	11.2	30.0	✓		
629	84.		7	98.	30.2	11.4	30.0	✓		
439	T.E.F.									

REMARKS: T.E.F. = Test Equip. Failure.

UNCLASSIFIED

[redacted]

8

CONFIDENTIAL [redacted]

TABLE-II

At 200° 0933 (2)

T-29158

At 200° - After thermo Shock

[redacted]

DATA FORM

311807-004 | ISS. NO. 04

SHEET 1 OF 1

[redacted]

MC1855 | PS 311807 | "D" TEST | X

UNCLASSIFIED

TEST DATE: MONTH | DAY | YEAR

CHECK APPROPRIATE TEST BLOCK

	TEST	IBM
AFTER HI-TEMP, PAR 4.3.3.4b	✓	AC
AFTER LO-TEMP, PAR 4.3.3.6b		AD

851 | SER NO | ISS/SUF | PT 851-15 | SER NO | PT 851-18 | SER NO

SERIAL NUMBER	RISE TIME A TO 3 VOLTS 4.3.3.12 a MILLISECONDS	NKP RISE TIME C 16 TO 22 V 4.3.3.12 c ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 b MILLISECONDS	PEAK VOLTAGE 4.3.3.12 a VOLTS	ACTIVATED LIFE 4.3.3.12 e SECONDS	VOLTAGE AT ACTIVATED LIFE 4.3.3.12 e VOLTS	NKP MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ	Voltage
At 200°		(4.3.3.4b)								
662	72.		4	88.	29.5	7.7	29.1	✓		5.
440	70.		2	85.	29.6	7.3	29.2	✓		5.
763	56.		3	77.	29.3	6.1	29.0	✓		6.
509	No	data		T.E.F.						
630	No	data		T.E.F.						
At 200° - After Thermo Shock						(4.3.3.5 - high)				
516	72.		2	92.	29.1	7.9	29.0	✓		6.
664	60.		4	78.	29.5	8.9	29.3	✓		5.
632	73.		2	88.	29.9	8.3	29.7	✓		6.5
768	67.		4	83.	30.0	8.9	29.9	✓		5.
442	74.		2	90.	29.9	7.9	29.4	✓		

MARKS:

8

[redacted]

UNCLASSIFIED

[redacted]

TABLE-III

0934 (3)

T-29158

[redacted]

DATA FORM

311807-004 | ISS. NO. 04

SHEET 1 OF 1

[redacted]

MC1855 | PS 311807 | TEST | SAMPLING | "D" TEST | X

SLOT | SERIAL NUMBER | TEST DATE MONTH DAY YEAR

UNCLASSIFIED

CHECK APPROPRIATE TEST BLOCK	TEST	IBM
AFTER HI-TEMP, PAR 4.3.3.4b		AC
AFTER LO-TEMP, PAR 4.3.3.6b		AD

851 | SER NO | ISS/SUF | PT 851-15 | SER. NO | PT 851-18 | SER NO

SERIAL NUMBER.	RISE TIME A TO 3 VOLTS 4.3.3.12 a MILLISECONDS	NKP RISE TIME C 16 TO 22V 4.3.3.12 c ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 b MILLISECONDS	PEAK VOLTAGE 4.3.3.12 d VOLTS	ACTIVATED LIFE 4.3.3.12 c SECONDS	VOLTAGE AT ACTIVATED LIFE 4.3.3.12 e VOLTS	NKP MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ	Volt
Mech	Shock	-	At	350.	milliseconds	(approx)	(4.3.3.9.2)	Shock Point		
750	73.		7	90.	30.0	10.5	30.0	✓	270	4.
627	68.		8	87.	29.9	9.8	29.6	✓	230	4.
699	72.		6	88.	29.8	9.7	29.6	✓	340	4.
506	68.		5	82.	29.6	9.8	29.4	✓	330	4.
651	70.		2	88.	29.3	9.3	29.2	✓	340	6.
618	80.		7	98.	29.8	10.5	29.7	✓	340	4.
681	76.		3	102.	29.9	10.7	29.8	✓	340	7.
485	72.		8	87.	29.8	9.7	29.4	✓	340	4
711	79.		7	93.	29.8	9.9	29.6	✓	340	4
530	67.		5	81.	29.9	9.9	29.8	✓	340	4.
558	76.		7	90.	29.7	10.0	29.6	✓	340	4
470	No	test	-	Tester did not apply first load						

REMARKS:

UNCLASSIFIED

12

[redacted]

10

[redacted]

TABLE-IV

[redacted] Activated Vibration and Unactivated and After High Temp Cycle

0935 (3)

T-2915

DATA FORM

311807-004 SHEET 1 OF 1	ISS. NO. 04

[redacted]

ITEM MC1855	PS 311807	"D" TEST	X

TRIG LOT / SERIAL NUMBER	TEST DATE MONTH	DAY	YEAR	CHECK APPROPRIATE TEST BLOCK	TEST	ITEM
UNCLASSIFIED				AFTER HI-TEMP, PAR 4.3.3.4b		AC
				AFTER LO-TEMP, PAR 4.3.3.6b		AD

T 851	SER NO		ISS/SUF		PT 851-15	SER NO		PT 851-18	SER NO		

SERIAL NUMBER	RISE TIME A TO 3 VOLTS ✓ 4.3.3.12 a MILLISECONDS	NKP RISE TIME C 16 TO 22 V 4.3.3.12 c ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 b MILLISECONDS	PEAK VOLTAGE 4.33.. ✓ VOLTS	ACTIVATED LIFE 4.3.3.12 d SECONDS	VOLTAGE AT ACTIVATED LIFE 4.3.3.12 e ✓ VOLTS	NKP MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ
Activated dur.		(4.3.3.8.2)							
776	73.		3	82	30.1	9.0	30.1	✓	
523	70.		3	94	30.0	10.7	29.9	✓	
451	70.		4	89	29.8	8.5	29.5	✓	
676	72.		4	91	29.9	10.9	29.9	✓	
639	84.		1	116	30.0	11.0	30.0	✓	
Unactivated		(4.3.3.8.1)							
521	85.		4	105.	29.8	9.9	29.7	✓	
638	74.		3	93.	29.9	9.5	29.8	✓	
775	80.		3	99.	30.1	11.7	30.0	✓	
674	99.		3	115.	30.0	10.9	29.9	✓	
450	96.		3	114.	29.8	8.0	29.6	✓	
After high temp cycle		(4.3.3.4 a)							
420	78		3	98.	29.8	9.0	29.7	✓	
417	77.		4	96.	30.0	9.4	29.9	✓	
406	107		4	123.	29.3	8.2	29.2	✓	
426	83.		3	100.	29.0	9.1	29.7	✓	
402	77		3	97.	29.9	8.1	29.3	✓	

MARKS:

UNCLASSIFIED

[redacted]

15

[redacted]

TABLE-V

0936 (3)

T-2915

[redacted]

DATA FORM

311807-004 | ISS. NO. 04

1 OF 1

[redacted]

MC1833 | PS 311807 | "B" TEST X

UNCLASSIFIED

TEST DATE: MONTH | DAY | YEAR

CHECK APPROPRIATE TEST BLOCK | TEST | IBM

AFTER HI-TEMP, PAR 4.3.3.4b | AC

AFTER LO-TEMP, PAR 4.3.3.6b | AD

T 851 | SER NO | ISS/SUF | PT 851-15 | SER. NO | PT 851-18 | SER NO

SERIAL NUMBER	RISE TIME A TO 3 VOLTS 4.3.3.12 a MILLISECONDS	NKP RISE TIME C 16 TO 22 V 4.3.3.12 c ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 b MILLISECONDS	PEAK VOLTAGE 4.33.. VOLTS	ACTIVATED LIFE 4.3.3.12 e SECONDS	VOLTAGE AT ACTIVATED LIFE 4.3.3.12 e VOLTS	NKP MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ
Mech Shock - At 800 milliseconds (4.3.3.9.2 Special)									
712	78.		7	96.	30.9	11.2	30.8	✓	
539	65.		5	80.	30.6	10.5	30.2	✓	
452	67.		6	81.	30.0	4.4	28.8	✓	
724	67.		8	84.	30.4	11.2	30.3	✓	
628	86.		2	109.	29.9	9.7	29.8	✓	

MARKS:

[redacted]

UNCLASSIFIED

[redacted]

TABLE-VI After Humidity

0937 (3)

T-291

DATA FORM

[redacted]

311807-004 | ISS. NO. 04

SHT 1 OF 1

MC1855 | PS 311807 | TEST | SAMPLING | "D" TEST | X

UNCLASSIFIED

SERIAL NUMBER	RISE TIME A TO 3 VOLTS 4.3.3.12 a MILLISECONDS	NKP RISE TIME C 16 TO 22 V 4.3.3.12 c ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 b MILLISECONDS	PEAK VOLTAGE 4.3.3.12 d VOLTS	ACTIVATED LIFE 4.3.3.12 e SECONDS	VOLTAGE AT ACTIVATED LIFE 4.3.3.12 e VOLTS	NKP MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ
After Humidity				(4.3.3.7)					
429	65.		2	85.	29.9	8.5	29.7	✓	
407	90.		3	106.	29.9	9.1	29.7	✓	
403	75.		4	95.	TEF	TEF	TEF	✓	
427	74.		3	89.	29.7	8.4	29.4	✓	

MARKS:

4

[redacted]

UNCLASSIFIED

TABLE-VII

0938 (3)

[redacted]

T-29158

DATA FORM

311807-004 | ISS. NO. 04

[redacted]

801855 | PS 311807 | TEST | "B" TEST | X

SLOT | SERIAL NUMBER | TEST DATE MONTH DAY YEAR

UNCLASSIFIED

CHECK APPROPRIATE TEST BLOCK | TEST ITEM

AFTER HI-TEMP, PAR 4.3.3.4b | AC

AFTER LO-TEMP, PAR 4.3.3.6b | AD

851 | SER NO | ISS/SUF | PT 851-15 | SER. NO | PT 851-18 | SER NO

ERIAL UMBER	RISE TIME A TO 3 VOLTS 4.3.3.12 a MILLISECONDS	NKP RISE TIME C 16 TO 22 V 4.3.3.12 c ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 b MILLISECONDS	PEAK VOLTAGE 4.3.3.12 d VOLTS	ACTIVATED LIFE 4.3.3.12 e SECONDS	VOLTAGE AT ACTIVATED LIFE 4.3.3.12 e VOLTS	NKP MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ	Voltage Switch Pa
Ambient Test										
528	70.		6	85.	29.8	No Data	29.5	✓		4.5
666	72.		2	92.	30.0	No Data	29.9	✓		6.0

ARKS:

[redacted]

2

UNCLASSIFIED

CO[redacted]

TABLE-VII

09394

T-29158

[redacted]

DATA FORM

311507-004 | ISS. NO. 04

[redacted]

MC1855 | PS 311507 | "D" TEST | %

SLOT | NUMBER | TEST DATE MONTH DAY YEAR

UNCLASSIFIED

CHECK APPROPRIATE TEST BLOCK	TEST	IBM
AFTER HI-TEMP, PAR 4.3.3.4b		AC
AFTER LO-TEMP, PAR 4.3.3.6b		AD

851 | SER NO | ISS/SUF | PT 851-15 | SER. NO | PT 851-18 | SER NO

SERIAL NUMBER	RISE TIME A TO 3 VOLTS 4.3.3.12 a MILLISECONDS	NKP RISE TIME C 16 TO 22 V 4.3.3.12 c ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 b MILLISECONDS	PEAK VOLTAGE 4.3.3.12 d VOLTS	ACTIVATED LIFE 4.3.3.12 e SECONDS	VOLTAGE AT ACTIVATED LIFE 4.3.3.12 e VOLTS	NKP MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ	Voltage Switch Drop
Longitudinal Acceleration - 200.g (4.3.3.10.2)										
432	73.		4	100.	27.8	5.1	27.4		✓	7.0
715	80.		2	102.	29.9	8.7	29.5	✓		7.4
557	67.		3	91.	29.5	9.0	29.5	✓		7.2
774	63.		6	84.	29.8	7.9	29.1	✓		5.0
700	70.		2	95.	29.3	7.6	29.1		✓	8.0
529	60.		4	87.	29.0	6.2	27.0	✓		6.8
911	67.		6	95.	29.7	9.2	29.5	✓		6.4
620	65.		3	91.	29.2	7.8	29.0		✓	6.8
787	73.		2	95.	29.3	7.2	29.0	✓		7.0
657	69.		3	94.	29.9	8.4	29.6	✓		7.0
766	74.		2	96.	29.9	8.7	29.5	✓		7.0
500	68.		5	98.	30.0	7.5	29.6	✓		6.7
548	78.		1	100.	30.2	8.6	30.1	✓		7.8
735	80.		3	105.	30.6	9.3	30.1	✓		7.0
569	67.		3	94.	30.2	8.3	30.0	✓		7.2
624	75.		1	100.	30.2	8.2	30.0	✓		7.6
~~546~~	~~53.~~		~~4~~	~~94.~~	~~30.0~~	~~7.0~~	~~29.6~~	✓		~~7.5~~
~~487~~	~~111.~~		~~4~~	~~142.~~	~~29.0~~	~~5.7~~	~~28.0~~		✓	~~7.0~~
~~722~~	~~107.~~		~~3~~	~~134.~~	~~30.~~	~~8.7~~	~~30.0~~	✓		~~7.0~~

MARKS

[redacted]

UNCLASSIFIED

[redacted]

TABLE-IX

0940 5

OG Lateral Accel.

T-29158

DATA FORM [redacted]

311807-004 | ISS. NO. 04

1 OF 1

[redacted]

MC1855 | PS 311807 | SAMPLING | "D" TEST | X

SLOT | SERIAL NUMBER | TEST MONTH | DAY | APPROPRIATE TEST BLOCK | TEST ITEM

UNCLASSIFIED

TEST HI-TEMP. PAR 4.3.3.4b | AC

TEST LO-TEMP. PAR 4.3.3.6b | AD

851 | SER NO | ISS/SUF | PT 851-18 | SER NO

SERIAL NUMBER	RISE TIME A TO 3 VOLTS 4.3.3.12 a MILLISECONDS	NKP RISE TIME C 16 TO 22V 4.3.3.12 c MILLISEC ACC	REJ	RISE TIME B TO 22 VOLTS 4.3.3.12 MILLISECONDS	PE VOLTAGE 4.3.3.12 d VOLTS	ACTIVATED LIFE 4.3.3.12 e SECONDS	VOLTAGE AT ACTIVATED TIME 4.3.3.12 e VOLTS	NKP MONITOR CIRCUIT RES. 4.3.3.13 ACC	REJ	Voltage Switch Point
573	94.		2	127	28.0	3.4	26.5	✓		10.5
457	72.		9	92	28.2	6.0	28.0	✓		5.0
719	83.		7	103	29.4	8.5	29.1	✓		5.0
533	80.		7	100	28.1	4.2	27.2	✓		5.0
574	Test	Equip		Failure	—	Battery OK		✓		
767	79.		3	104	28.9	7.6	28.8	✓		8.0
541	69.		8	85	27.6	3.0	26.1	✓		5.0
492	73.		8	92	28.0	5.6	27.7	✓		5.0
434	73.		6	90	27.7	3.8	26.6	✓		5.0
683	65.		8	84	28.0	3.8	26.8	✓		5.0
682	78.		8	98	29.0	6.3	28.5	✓		5.0
586	76.		3	100.	29.0	6.1	28.2	✓		7.5
687	75.		3	81.	28.0	4.5	27.5	✓		6.0
607	77.		5	102.	28.8	6.7	28.4	✓		7.0
538	73.		12	95.	29.0	6.9	28.2	✓		4.3
602	65		10	85.	28.2	4.8	27.9	✓		5.0
612	83		10	104.	28.2	4.3	27.4	✓		5.0
566	76		4	101.	28.0	4.8	27.6	✓		7.5
611	75.		8	94.	29.2	5.0	27.7	✓		5.0
463	73.		9	103.	28.6	6.8	28.2	✓		5.0
585	No data			T.E.F.						
758	No data			T.E.F.						

REMARKS:

4.3.3.10.1

20

[redacted]

UNCLASSIFIED

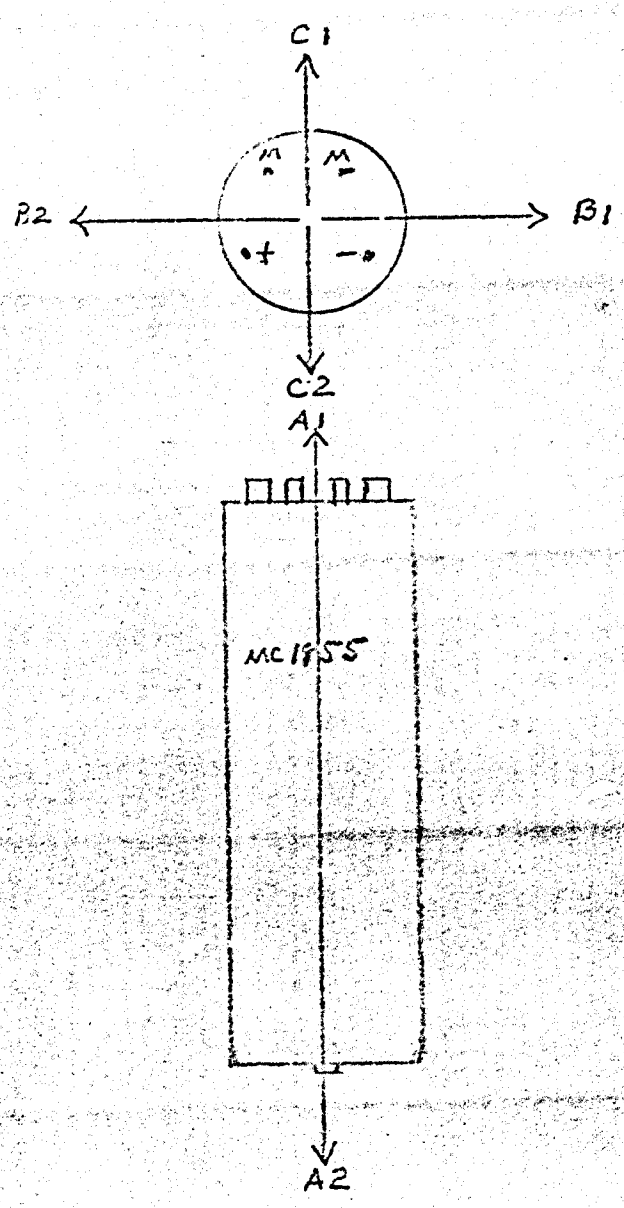
T.E.F. — Test equipment Failure.

[redacted]

FIGURE 1

UNCLASSIFIED

DEFINITION OF THE AXES AND DIRECTIONS USED FOR APPLIED FORCE FOR VIBRATION AND LINEAR ACCELERATION.



UNCLASSIFIED

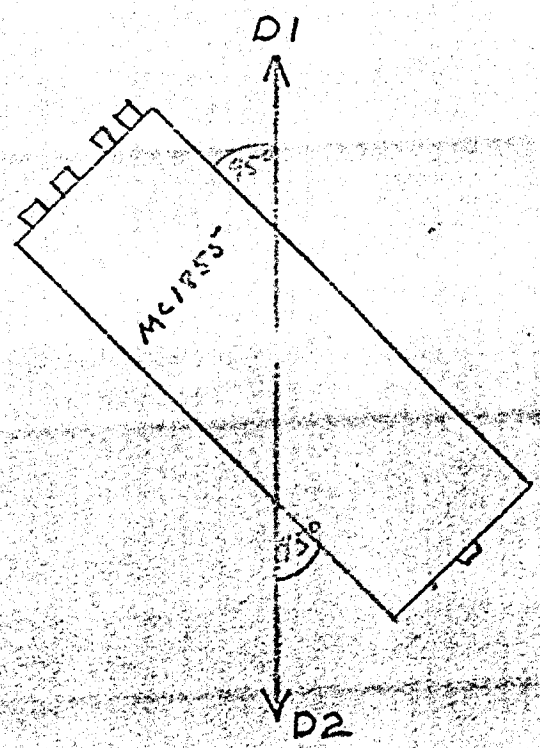
[redacted]

T-29156

UNCLASSIFIED

FIGURE 2

DEFINITION OF THE AXIS AND THE DIRECTION OF APPLIED FORCE USED FOR MECHANICAL SHOCK.



UNCLASSIFIED

[redacted]