

Certificate of Calibration

**THIS IS TO CERTIFY THAT THE FOLLOWING DESCRIBED EQUIPMENT HAS BEEN
CALIBRATED IN ACCORDANCE WITH UNITED TESTING SYSTEMS CANADA LTD.,
PROCEDURE SOP- 9134 - Rev XX - XXXX.**

CALIBRATION IS VALID FROM 1000 lbf TO 10000 lbf AND HAS BEEN FOUND
TO BE WITHIN 1% OF READING UNLESS OTHERWISE NOTED.

CERTIFICATE NUMBER: CR#0013
CERTIFICATE ISSUED: June 5, 2019

CALIBRATION DATE: June 5, 2019
REQUESTED DUE DATE: June 5, 2020

CALIBRATION & CUSTOMER INFORMATION:

COMPANY: ANY COMPANY
ADDRESS: 123 ANY STREET
CITY/PROVINCE: ANY CITY, ANY PROVINCE
SYSTEM LOCATION: UTS CANADA LTD. FORCE LAB
SYSTEM CALIBRATED: MARK-10 FORCE MEASURING SYSTEM
LOAD CELL/TRANSDUCER: MARK-10 MODEL SS10000 S/N XXXXX
ASSET NUMBER(S): AAA (INDICATOR), BBB (LOADCELL)
DIRECTION: COMPRESSION & TENSION
CALIBRATION RANGE(S): 10000 lbf
INDICATOR / RESOLUTION: MARK-10 MODEL BGI S/N XXXX / 5 lbf
TEMPERATURE / HUMIDITY: 23.0 °C | 45%
METHOD: FOLLOW THE FORCE
EQUIPMENT CONDITION: GOOD
READINGS AS FOUND: IN TOLERANCE
READINGS AS LEFT: IN TOLERANCE
CALIBRATION TECHNICIAN: TECHNICIAN

THE FOLLOWING NIST / PTB TRACEABLE STANDARDS WERE USED:

READOUT: HBM AD 101B S/N 101335.

STANDARD FILE:	V10K#9C	V10K#9T	HOBO
STANDARD S/N:	114555A-298	114555A-298	615410-286
MANUFACTURER:	HBM	HBM	HOBO
DATE CALIBRATED:	Month Day, Year	Jan 27, 2017	Month Day, Year
DATE DUE:	Month Day, Year	Jul 27, 2018	Month Day, Year
CERTIFIED BY:	UTS CAN STD LAB	UTS CAN STD LAB	ALPHA
TRACEABILITY NO.:	CR#22993-C	CR#22993-T	2016002513
CAPACITY:	11241 lbf	11241 lbf	100 °C / 100 %RH
MODE:	COMPRESSION	TENSION	UNCERTAINTY
CLASS A LIMIT:	334 lbf	456 lbf	0.2 °C / 2 %RH

UNCERTAINTY:

THE EXPANDED UNCERTAINTY OF THE FORCE MEASUREMENTS IS CERTIFIED TO BE LESS
THAN 0.25% USING A COVERAGE FACTOR OF $k = 2$ FOR A CONFIDENCE LEVEL OF 95%.
EXPANDED UNCERTAINTIES ARE VALID FOR A TEMPERATURE RANGE OF 23°C +/- 5°C.

CALIBRATED BY

United Testing Systems Canada Limited

21 - 225 Bradwick Drive, Concord, Ontario L4K 1K7

Tel.: (905) 669-5327 Fax: (905) 738-5051

E-mail: service@utscanada.com

AUTHORIZED SIGNATORY

ISO/IEC 17025

ANSI/NCSL Z540-1-1994; Part 1

Accredited by:

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NVLAP Lab Code: 200311-0

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UNITED CALIBRATION GROUP

Calibration Report

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CALIBRATION RESULTS:

OBSERVED DATA: MULTIPLE RUNS ARE SHOWN SERIALLY. UNLESS OTHERWISE NOTED, THE DATA SHOWN IS 'AS FOUND / AS LEFT' WITH NO ADJUSTMENT MADE. COMPUTED FORCES HAVE BEEN TEMPERATURE CORRECTED AS NECESSARY.

STANDARD I.D.	STANDARD lbf	READING lbf	ERROR lbf	ERROR % READING	Un (k=2) % READING
FIRST RUN (0 DEGREES ROTATION) / COMPRESSION					
V10K#9C	999.4	1000	0.6	0.06	0.41
V10K#9C	1998.8	2000	1.2	0.06	0.21
V10K#9C	3997.2	4000	2.8	0.07	0.12
V10K#9C	5997.0	6000	3.0	0.05	0.084
V10K#9C	7997.9	8000	2.1	0.03	0.065
V10K#9C	9997.7	10000	2.3	0.02	0.053
V10K#9C	0.0	0	0.0		
SECOND RUN (120 DEGREES ROTATION) / COMPRESSION					
V10K#9C	999.6	1000	0.4	0.04	0.41
V10K#9C	1998.9	2000	1.1	0.06	0.21
V10K#9C	3997.2	4000	2.8	0.07	0.12
V10K#9C	5996.9	6000	3.1	0.05	0.084
V10K#9C	7997.2	8000	2.8	0.04	0.065
V10K#9C	9996.6	10000	3.4	0.03	0.053
V10K#9C	0.0	0	0.0		
THIRD RUN (240 DEGREES ROTATION) / COMPRESSION					
V10K#9C	999.4	1000	0.6	0.06	0.41
V10K#9C	1998.6	2000	1.4	0.07	0.21
V10K#9C	3997.5	4000	2.5	0.06	0.12
V10K#9C	5996.4	6000	3.6	0.06	0.084
V10K#9C	7997.7	8000	2.3	0.03	0.065
V10K#9C	9996.1	10000	3.9	0.04	0.053
V10K#9C	0.0	0	0.0		

NOTES:

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LOAD CELL/TRANSDUCER: MARK-10 MODEL SS10000 S/N XXXXX

CALIBRATION RESULTS:

OBSERVED DATA: MULTIPLE RUNS ARE SHOWN SERIALLY. UNLESS OTHERWISE NOTED, THE DATA SHOWN IS 'AS FOUND / AS LEFT' WITH NO ADJUSTMENT MADE. COMPUTED FORCES HAVE BEEN TEMPERATURE CORRECTED AS NECESSARY.

STANDARD I.D.	STANDARD lbf	READING lbf	ERROR lbf	ERROR % READING	Un (k=2) % READING
FIRST RUN (0 DEGREES ROTATION) / TENSION					
V10K#9T	999.9	1000	0.1	0.01	0.42
V10K#9T	1999.4	2000	0.6	0.03	0.22
V10K#9T	3998.7	4000	1.3	0.03	0.12
V10K#9T	5997.4	6000	2.6	0.04	0.082
V10K#9T	7997.6	8000	2.4	0.03	0.066
V10K#9T	9996.7	10000	3.3	0.03	0.056
V10K#9T	0.0	0	0.0		
SECOND RUN (120 DEGREES ROTATION) / TENSION					
V10K#9T	999.2	1000	0.8	0.08	0.42
V10K#9T	1999.1	2000	0.9	0.05	0.22
V10K#9T	3998.6	4000	1.4	0.04	0.12
V10K#9T	5997.5	6000	2.5	0.04	0.082
V10K#9T	7997.9	8000	2.1	0.03	0.066
V10K#9T	9996.7	10000	3.3	0.03	0.056
V10K#9T	0.0	0	0.0		
THIRD RUN (240 DEGREES ROTATION) / TENSION					
V10K#9T	999.1	1000	0.9	0.09	0.42
V10K#9T	1999.8	2000	0.2	0.01	0.22
V10K#9T	3998.4	4000	1.6	0.04	0.12
V10K#9T	5997.3	6000	2.7	0.05	0.082
V10K#9T	7997.5	8000	2.5	0.03	0.066
V10K#9T	9996.9	10000	3.1	0.03	0.056
V10K#9T	0.0	0	0.0		

NOTES:

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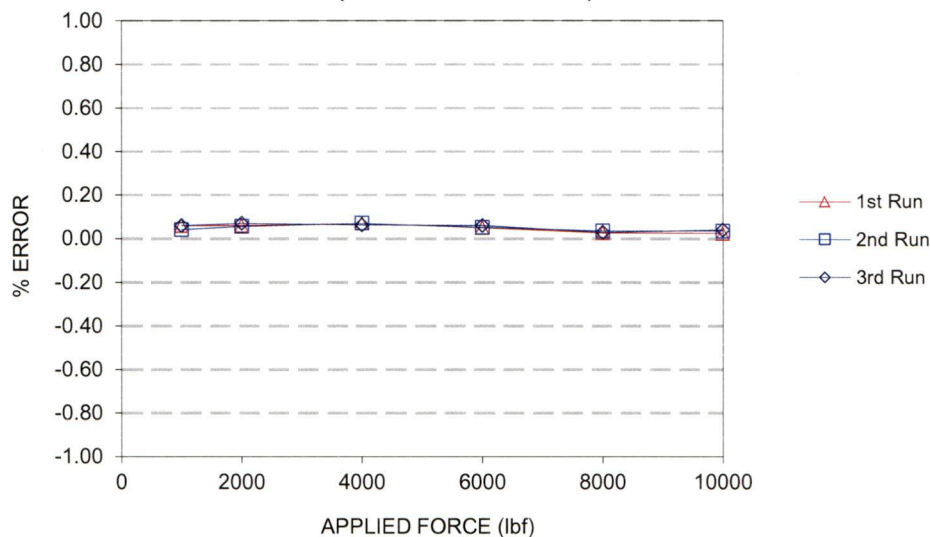
CALIBRATION DATE: June 5, 2019
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CALIBRATION & CUSTOMER INFORMATION:

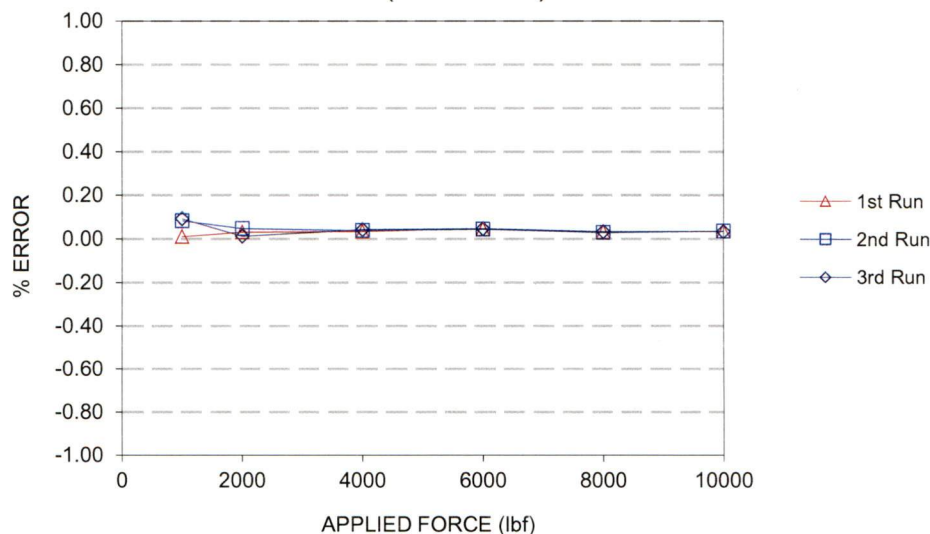
COMPANY:	ANY COMPANY
SYSTEM CALIBRATED:	MARK-10 FORCE MEASURING SYSTEM
LOAD CELL/TRANSDUCER:	MARK-10 MODEL SS10000 S/N XXXXX

CALIBRATION RESULTS:

DEVIATION OF CALIBRATION RUNS (COMPRESSION)



DEVIATION OF CALIBRATION RUNS (TENSION)



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