CALSER CORPORATION

302 N. Belt East, Swansea, IL 62226 (618) 277-0329

TESTING MACHINE CALIBRATION DATA AND REPORT

Report #: **VN# 6664-001**

Customer	University of Arkansas
Location	Civil Engineering
	Fayetteville, AR 72701
Machine	Forney 400,000lbf Model F-400F-LC1
Serial No.	95037
Auxillary Equipment:	w/ Admet Gage Buster II Digital R/O #GB2-100721-2
	w/ Dynisco P/T

Date of Service	08/23/11
Cust Order No.	Verbal
Order Date	07/25/11
Temp.	81˚ F
Date Last Done	08/12/10

Applied Force	*	Indicated Force	Error	%	*	Indicated Force	Error	%	*	Indicated Force	Error	%
Run #1		Run #1	"As Found" Condition			Run #2	"As Left" Condition			Run #3	"As Left" Condition	
400,000lbf Range	*	10lbf / DIV			*				*			
0	10C	0	0	0.00	10C	0	0	0.00	10C	0	0	0.00
5,000	10C	5,000	0	0.00	10C	5,000	0	0.00	10C	5,000	0	0.00
10,000	11	10,000	0	0.00	11	10,000	0	0.00	11	9,990	-10	0.10
20,000	11	19,980	-20	0.10	11	19,980	-20	0.10	11	19,920	-80	0.40
40,000	11	39,980	-20	0.05	11	39,940	-60	0.15	11	39,870	-130	0.33
60,000	12	60,050	50	0.08	12	59,930	-70	0.12	12	59,900	-100	0.17
80,000	12	80,080	80	0.10	12	79,900	-100	0.13	12	79,860	-140	0.18
100,000	12	100,080	80	0.08	12	99,800	-200	0.20	12	99,840	-160	0.16
125,000	12	125,050	50	0.04	12	124,780	-220	0.18	12	124,750	-250	0.20
150,000	12	150,060	60	0.04	12	149,740	-260	0.17	12	149,670	-330	0.22
175,000	12	175,110	110	0.06	12	174,670	-330	0.19	12	174,620	-380	0.22
200,000	12	200,030	30	0.02	12	199,540	-460	0.23	12	199,500	-500	0.25
250,000	12	250,110	110	0.04	12	249,480	-520	0.21	12	249,350	-650	0.26
300,000	12	299,770	-230	0.08	12	299,180	-820	0.27	12	299,240	-760	0.25
400,000	12	399,430	-570	0.14	12	398,600	-1,400	0.35	12	398,780	-1,220	0.31
0	12	0	160	0.00	12	0	140	0.00	12	0	40	0.00

Notes:

Calibration in accordance with ASTM E4-09,
and Calser Corporation Procedure # 1-01, Rev 1.

***CALIBRATION EQUIPMENT**

All verification equipment-including dead weights, proving rings, load cells, etc, is calibrated and traceable to the latest procedures stipulated by the National Institute of Standards and Test'ing (NIST) and ASTM E74-06. All equipment is traceable under guidelines set forth in ISO/IEC 17025 . All instrument readings have been corrected for temperature where necessary.

ACCURACY SUMMARY

Capacity Range	Loading Range	Max. Error
Run 1		
400,000lbf Range	5,000 - 400,000	0.14 %
Run 2		
400,000lbf Range	5,000 - 400,000	0.35 %
Run 3		
400,000lbf Range	5,000 - 400,000	0.40 %

VERIFICATION EQUIPMENT

Manufacturer & Serial #	* L/C	Class A Range (in LBs) and Uncertainty (LBF)	Agency & Date
Interface	10C	227.26 - 10,000 lbf	Morehouse
71145		0.568 lbf	12/14/10
Strainsense	11	9,132.57 - 100,000 lbf	Morehouse
30429		22.831 lbf	11/18/09
Strainsense	12	59,870.58 - 600,000 lbf	Morehouse
990921		149.676 lbf	11/18/09

Calibration Technician Ronnie Agne

CALSER CORPORATION 302 N. BELT EAST SWANSEA, IL 62226 (618)277-0329

TESTING MACHINE CERTIFICATE OF CALIBRATION

Owner : University of Arkansas
Location : Civil Engineering
Fayetteville, AR 72701
Machine : Forney 400,000lbf Model F-400F-LC1
Serial No. : 95037
w/ Admet Gage Buster II Digital R/O #GB2-100721-2

Report # : VN# 6664-001

Date of Service: 08/23/11

This is to certify that the testing machine listed above has been calibrated by Calser Corporation personnel. The method of verification and listed data are in accordance with ASTM E 4-09. Accuracy of all calibration devices is traceable to the National Institute of Standards and Testing (NIST) and all calculations have been corrected for temperature where applicable.

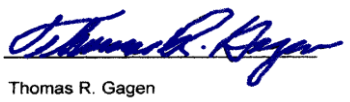
Capacity Range	Loading Range	Max. Error
Run 1 400,000lbf Range	5,000 - 400,000	0.14 %
Run 2 400,000lbf Range	5,000 - 400,000	0.35 %
Run 3 400,000lbf Range	5,000 - 400,000	0.40 %

Verification Equipment Used:

Manufacturer & Serial #	Load Cell #	Range & Uncertainty	Verificiation Agency & Date	Digital Serial #
Interface 71145	**10C**	227.26 - 10,000 lbf 0.568 lbf	Morehouse 12/14/10	GB-9908261
Strainsense 30429	**11**	9,132.57 - 100,000 lbf 22.831 lbf	Morehouse 11/18/09	GB-9908261
Strainsense 990921	**12**	59,870.58 - 600,000 lbf 149.676 lbf	Morehouse 11/18/09	GB-9908261

CALSER CORPORATION

Quality Control Director



Thomas R. Gagen

CALSER CORPORATION

302 N. Belt East, Swansea, IL 62226 (618) 277-0329

TESTING MACHINE CALIBRATION DATA AND REPORT

Report #: **VN# 6664-002**

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Customer	University of Arkansas
Location	Civil Engineering
	Fayetteville, AR 72701
Machine	TMI 500,000lbf Model CM-5000-GB2
Serial No.	100317
Auxillary Equipment:	w/ Admet Gage Buster II Digital R/O #GBP-1004302
	w/ Dynisco P/T #04-08-10323273

Date of Service	08/23/11
Cust Order No.	Verbal
Order Date	07/25/11
Temp.	75˚ F
Date Last Done	08/12/10

Applied Force	*	Indicated Force	Error	%	*	Indicated Force	Error	%	*	Indicated Force	Error	%
Run #1		Run #1	"As Found" Condition			Run #2	"As Left" Condition			Run #3	"As Left" Condition	
500,000lbf Range	*	10lbf / DIV			*				*			
0	10C	0	0	0.00	10C	0	0	0.00	10C	0	0	0.00
5,000	10C	5,000	0	0.00	10C	5,000	0	0.00	10C	5,000	0	0.00
10,000	11	10,000	0	0.00	11	10,000	0	0.00	11	9,990	-10	0.10
20,000	11	19,970	-30	0.15	11	19,960	-40	0.20	11	19,930	-70	0.35
40,000	11	39,930	-70	0.18	11	39,910	-90	0.23	11	39,900	-100	0.25
60,000	12	59,810	-190	0.32	12	59,900	-100	0.17	12	59,890	-110	0.18
80,000	12	79,680	-320	0.40	12	79,860	-140	0.18	12	79,850	-150	0.19
100,000	12	99,520	-480	0.48	12	99,870	-130	0.13	12	99,860	-140	0.14
125,000	12	124,380	-620	0.50	12	124,880	-120	0.10	12	124,870	-130	0.10
150,000	12	149,240	-760	0.51	12	149,860	-140	0.09	12	149,850	-150	0.10
175,000	12	173,930	-1,070	0.61	12	174,850	-150	0.09	12	174,810	-190	0.11
200,000	12	198,860	-1,140	0.57	12	199,850	-150	0.08	12	199,630	-370	0.19
300,000	12	297,950	-2,050	0.68	12	299,660	-340	0.11	12	299,730	-270	0.09
400,000	12	397,320	-2,680	0.67	12	399,790	-210	0.05	12	400,170	170	0.04
500,000	12	496,740	-3,260	0.65	12	499,930	-70	0.01	12	499,930	-70	0.01
0	12	0	-10	0.00	12	0	-10	0.00	12	0	-40	0.00

Notes:

Calibration in accordance with ASTM E4-09,
and Calser Corporation Procedure # 1-01, Rev 1.

***CALIBRATION EQUIPMENT**

All verification equipment-including dead weights, proving rings, load cells, etc, is calibrated and traceable to the latest procedures stipulated by the National Institute of Standards and Test'ing (NIST) and ASTM E74-06. All equipment is traceable under guidelines set forth in ISO/IEC 17025 . All instrument readings have been corrected for temperature where necessary.

ACCURACY SUMMARY

Capacity Range	Loading Range	Max. Error
Run 1		
500,000lbf Range	5,000 - 500,000	0.68 %
Run 2		
500,000lbf Range	5,000 - 500,000	0.23 %
Run 3		
500,000lbf Range	5,000 - 500,000	0.35 %

VERIFICATION EQUIPMENT

Manufacturer & Serial #	* L/C	Class A Range (in LBs) and Uncertainty (LBF)	Agency & Date
Interface	10C	227.26 - 10,000 lbf	Morehouse
71145		0.568 lbf	12/14/10
Strainsense	11	9,132.57 - 100,000 lbf	Morehouse
30429		22.831 lbf	11/18/09
Strainsense	12	59,870.58 - 600,000 lbf	Morehouse
990921		149.676 lbf	11/18/09

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Serial No. : 100317
w/ Admet Gage Buster II Digital R/O #GBP-1004302
w/ Dynisco P/T #04-08-10323273

Report # : VN# 6664-002

Page : 2 of 2

Date of Service: 08/23/11

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Capacity Range	Loading Range	Max. Error
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Run 2 500,000lbf Range	5,000 - 500,000	0.23 %
Run 3 500,000lbf Range	5,000 - 500,000	0.35 %

Verification Equipment Used:

Manufacturer & Serial #	Load Cell #	Range & Uncertainty	Verificiation Agency & Date	Digital Serial #
Interface 71145	**10C**	227.26 - 10,000 lbf 0.568 lbf	Morehouse 12/14/10	GB-9908261
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Quality Control Director

Thomas R. Gagen

Form # 104-01-Rev 3