

# CALSER CORPORATION

302 N. Belt East, Swansea, IL 62226

(618) 277-0329

## TESTING MACHINE CALIBRATION DATA AND REPORT

**Report #:**  
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**VN# 7693-001**

Customer	University of Arkansas		
Location	Civil Engineering		
	Fayetteville, AR 72701		
Manufacturer	TMI	Model	CM-5000GB2
Serial No.	100317	Capacity	500,000 lbf
Resolution	10 lbf / DIV		
Auxiliary Equipment:	w/ Admet GB2 Digital R/O #GB2-1004302		
	w/ Dvnisco P/T #04-08-10323273		

Date of Service	11/20/12
Customer Order No.	Verbal
Order Date	11/06/12
Temp.	59° F
Date Last Done	12/14/11
Method of Verification	Set the Force

[illegible]

**Notes:**

\*CALIBRATION EQUIPMENT

Calibration in accordance with ASTM E4-10,  
and Calser Corporation Procedure # 1-01, Rev 1.

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 Technology (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

## Verification Equipment

Capacity Range	Loading Range	Max. Error	Manufacturer and Serial #	* L/C	Range and uncertainty	Verification Agency and Date
Run 1						
500,000lbf Range	5,000 - 500,000	0.20 %	Interface	6C	112.40 - 10,000 lbf	Morehouse
			426017A		0.281 lbf	11/06/12
			Strainsense	7	8,655.27 lbf - 100,000 lbf	Morehouse
Run 2			090716(LO)		21.638 lbf	09/14/12
500,000lbf Range	5,000 - 500,000	0.15 %	Strainsense	8	39,291.24 - 400,000 lbf	Morehouse
			090716(HI)		98.228 lbf	09/14/12
			Strainsense	14	110,926.77 - 1,000,000 lbf	Morehouse
			870815A		277.317 lbf	07/27/12

**Calibration Technician** Jerry Parker

**This report shall not be copied except in its entirety  
without express written approval of Calser Corp.**

TESTING MACHINE CERTIFICATE OF CALIBRATION

Owner : University of Arkansas  
Location : Civil Engineering  
Fayetteville, AR 72701

Report # : VN# 7693-001  
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Date of Service: 11/20/12

Manufacturer: TMI Model: CM-5000GB2

Serial No. : 100317 Capacity: 500,000 lbf

Auxillary Equip: w/ Admet GB2 Digital R/O #GB2-1004302  
w/ Dynisco P/T #04-08-10323273

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 4-10.

Accuracy of all calibration devices is traceable to the National Institute of Standards and Technology (NIST)  
and all calculations have been corrected for temperature where applicable.

Capacity Range	Loading Range	Max. Error
<b>Run 1</b>		
500,000lbf Range	5,000 - 500,000	0.20 %
<b>Run 2</b>		
500,000lbf Range	5,000 - 500,000	0.15 %


VERIFICATION EQUIPMENT

Manufacturer & Serial #	Load Cell #	Range & Uncertainty	Verification Agency & Date	Digital Serial #
Interface 426017A	6C	112.40 - 10,000 lbf 0.281 lbf	Morehouse 11/06/12	GB-9911092
Strainsense 090716(LO)	7	8,655.27 lbf - 100,000 lbf 21.638 lbf	Morehouse 09/14/12	GB-9911092
Strainsense 090716(HI)	8	39,291.24 - 400,000 lbf 98.228 lbf	Morehouse 09/14/12	GB-9911092
Strainsense 870815A	14	110,926.77 - 1,000,000 lbf 277.317 lbf	Morehouse 07/27/12	GBC-0702261

This certificate is issued as a statement of the fact that on the above date the listed testing machine has an accuracy as indicated. It should not be construed or regarded as a Guarantee or Warranty of any kind (in favor of the client, the client's customers, or the public at large) that the testing machine will continue to retain the same percentage (%) of accuracy or efficiency as determined on the date when the calibration, and adjustments if required, was performed and reported by "Calser Corporation" since the calibrator has absolutely no control over the future operation, damage, maintenance, repairs, and overall condition of the testing machine and hereby expressly disclaims any and all liability for damage or loss sustained by all parties arising or resulting from the deterioration, obsolescence, malfunction or substandard performance of said testing machine; which shall remain the sole responsibility of the machine's regular custodian, owner, and/or user. This certificate shall not be reproduced except in full, without the written approval of Calser Corporation.

CALSER CORPORATION

Quality Control Director

  
Thomas R. Gagen

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

Report #: VN# 7693-002  
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Date of Service	11/20/12
Customer Order No.	Verbal
Order Date	11/06/12
Temperature	59° F
Date Last Done	12/14/11
Method of Verification	Set the Force

[illegible]

**Notes:**

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 Technology (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.

## VERIFICATION EQUIPMENT

Capacity Range	Loading Range	Max. Error
<b>Run 1</b>		
400,000lbf Range	5,000 - 400,000	0.30 %
<b>Run 2</b>		
400,000lbf Range	5,000 - 400,000	0.18 %
<b>Run 3</b>		
400,000lbf Range	5,000 - 400,000	0.20 %

[illegible]

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## TESTING MACHINE CERTIFICATE OF CALIBRATION

Owner : University of Arkansas  
 Location : Civil Engineering  
 Fayetteville, AR 72701

Report # : VN# 7693-002

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Manufacturer: Forney

Model: QC-400F-LC1

Date of Service: 11/20/12

Serial No. : 95037

Capacity: 400,000 lbf

Auxillary Equip : w/ Admet GB2 Digital R/O #GB2-107721-2  
 w/ Dynisco P/T

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 4-10.

Accuracy of all calibration devices is traceable to the National Institute of Standards and Technology (NIST)

and all calculations have been corrected for temperature where applicable.

Capacity Range	Loading Range	Max. Error
<b>Run 1</b> 400,000lbf Range	5,000 - 400,000	0.30 %
<b>Run 2</b> 400,000lbf Range	5,000 - 400,000	0.18 %
<b>Run 3</b> 400,000lbf Range	5,000 - 400,000	0.20 %


## Verification Equipment Used:

Manufacturer & Serial #	Load Cell #	Range & Uncertainty	Verification Agency & Date	Digital Serial #
Interface 426017A	6C	112.40 - 10,000 lbf 0.281 lbf	Morehouse 11/06/12	GB-9911092
Strainsense 090716(LO)	7	8,655.27 lbf - 100,000 lbf 21.638 lbf	Morehouse 09/14/12	GB-9911092
Strainsense 090716(HI)	8	39,291.24 - 400,000 lbf 98.228 lbf	Morehouse 09/14/12	GB-9911092

This certificate is issued as a statement of the fact that on the above date the listed testing machine has an accuracy as indicated. It should not be construed or regarded as a Guarantee or Warranty of any kind (in favor of the client, the client's customers, or the public at large) that the testing machine will continue to retain the same percentage (%) of accuracy or efficiency as determined on the date when the calibration, and adjustments if required, was performed and reported by "Calser Corporation" since the calibrator has absolutely no control over the future operation, damage, maintenance, repairs, and overall condition of the testing machine and hereby expressly disclaims any and all liability for damage or loss sustained by all parties arising or resulting from the deterioration, obsolescence, malfunction or substandard performance of said testing machine; which shall remain the sole responsibility of the machine's regular custodian, owner, and/or user. This certificate shall not be reproduced except in full, without the written approval of Calser Corporation.

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Quality Control Director

  
 Thomas R. Gagen