

GULF COAST CALIBRATION

7999 Hansen, Suite 321
Houston, TX 77061
(713) 944-3139

Certificate Of Calibration

Customer SOUTHWEST RESEARCH INSTITUTE Date 3-27-1991

6220 CULEBRA SAN ANTONIO, TX Expires 9-27-1991

Customer P.O. _____

Type and Size of Gauge Proto 10-200inlb torque wrench

Serial No. A90687

Test Reading Charts

WRENCH SET	AS RECEIVED	FINAL READING
10inlb	13	11
25inlb	28	25
50inlb	53	50
75inlb	78	75
100inlb	104	101
150inlb	155	152
200inlb	207	203

This is to certify that the calibration above meets the requirements for accuracy of applicable per Federal Specification. GGG W 686D

Our Test Equipment used for calibration is traceable to the NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY and maintained in accordance with conditions as noted under MIL. STD. 45662A.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY No. 179355-225713

Technician Michael Ho

SOUTHWEST RESEARCH INSTITUTE

POST OFFICE DRAWER 28510 • 6220 CULEBRA ROAD • SAN ANTONIO, TEXAS, USA 78284 • (512) 684-5111 • TELEX 76-7357

Division 05 – Instrument Repair and Calibration Laboratory Calibration Record

ITEM PRONTO TORQUE WRINGER
MODEL 6062-5 S/N A90687 SWRI NO. _____
PLUG-INS, ETC. NONE
TOLERANCE MFGRS SPEC'S

STANDARDS

Standard No.	MFGR Model	Description	S/N	Cal. Due	Cal. Rec. No.
*		See Certificate of Calibration,			Gulf Coast Calibration

* ENVIRONMENT: Temperature _____ Humidity _____
Location _____

PROCEDURE

* Essentially as outlined in MFGRS Service Manual _____

CONCLUSION

* Item within tolerance _____
 Item out of tolerance _____
 Item ADJ/repared to tolerance _____

Calibration was in accord with requirements of MIL-STD-45662A, MIL-Q-9858A, and MIL-I-45208A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

RECORD NUMBER: 0007621 SIGNED: [Signature]
DATE: 3-27-91
NEXT CALIBRATION DUE: 9-27-91

Division 05 - Instrument Repair and Calibration Laboratory
CERTIFICATE OF CALIBRATION

ISSUED TO: DIV 20 CWRA MURHAWSKI
MFGR/MODEL PRONTO / 6062-5
ITEM DESCRIPTION TORQUE WRENCH
MODEL 6062-5 S/N A 90687 SWRI NO. _____
PLUG-INS, ETC. NONE
TOLERANCE SEE MFG SPEC'S

STANDARDS

Standard No.	MFGR Model	Description	S/N	Cal. Due	Cal. Rec. No.
*		See Certificate of Calibration, Half Coast Calibration		#179355/225713	

* ENVIRONMENT: Temperature _____ Humidity _____
Location _____

PROCEDURE

* Essentially as outlined in MFGRS Service Manual _____

CONCLUSION

* Item within tolerance _____
 Item out of tolerance _____
 Item ADJ/repaired to tolerance _____

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

SIGNED Jan A. Webb
DATE 15 Aug 91
NEXT CALIBRATION DUE: 15 FEB 92

RECORD NUMBER: 0008167

GULF COAST CALIBRATION

7999 Hansen, Suite 321
Houston, TX 77061
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Certificate Of Calibration

Customer SOUTHWEST RESEARCH INSTITUTE Date 8-15-1991
6220 CULEBRA, SAN ANTONIO, TEXAS Expires 2-15-1992
Customer P.O. _____
Type and Size of Gauge PROTO 10-200 IN. LB. TORQUE WRENCH
Serial No. A 90687

Test Reading Charts

WRENCH SETTING	AS RECEIVED	FINAL READING
10in.lb.	14	10
25in.lb.	29	25
50in.lb.	52	50
75in.lb.	77	76
100in.lb.	101	102
150in.lb.	153	152
200in.lb.	200	203

TEST EQUIPMENT: GCC-105

DUE: 09-21-1991

This is to certify that the calibration above meets the requirements for accuracy of applicable per Federal Specification GGG-W-686D.

Our Test Equipment used for calibration is traceable to the NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY and maintained in accordance with conditions as noted under MIL. STD. 45662A.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY No. 179355/225713

Technician *Michael Ho*

GULF COAST CALIBRATION

7999 Hansen, Suite 321
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Certificate Of Calibration

Customer SOUTHWEST RESEARCH INSTITUTE Date 02-14-1992
6220 CULEBRA, SAN ANTONIO, TEXAS Expires 08-14-1992

Customer P.O. SWRI #806631

Type and Size of Gauge PROTO 10-200 IN. LB. TORQUE WRENCH

Serial No. A90687

TOLERANCE: $\pm 4\%$

Test Reading Charts

WRENCH SETTING	AS RECEIVED	FINAL READING
10in.lb.	8	10
25in.lb.	23	25
50in.lb.	47	51
75in.lb.	73	76
100in.lb.	96	101
150in.lb.	145	152
200in.lb.	192	199

TEST EQUIPMENT: GCC-105

DUE: 09-06-1992

This is to certify that the calibration above meets the requirements for accuracy of applicable per Federal Specification. GCG-W-686D

Our Test Equipment used for calibration is traceable to the NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY and maintained in accordance with conditions as noted under MIL. STD. 45662A. TEMP. DURING CALIBRATION: 70°F

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY No. 179355/225713

Technician Michael Ho

Division 05 - Instrument Repair and Calibration Laboratory
CERTIFICATE OF CALIBRATION

ISSUED TO: DIV 20, CNWRA, N. SRIDHAR
MFGR/MODEL PRONTO 6062-5
ITEM DESCRIPTION TORQUE WRENCH
MODEL 6062-5 S/N A90687 SWRI NO. _____
PLUG-INS, ETC. NONE

TOLERANCE ± 4% OF READING

STANDARDS

Standard No.	MFGR Model	Description	S/N	Cal. Due	Cal. Rec. No.
*		SEE CERTIFICATE OF CALIBRATION, GULF COAST CALIBRATION			

* ENVIRONMENT: Temperature _____ Humidity _____
Location _____

PROCEDURE

* Essentially as outlined in MFGRS Service Manual _____

CONCLUSION

* Item within tolerance _____
 Item out of tolerance _____
 Item ADJ/repared to tolerance _____

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

RECORD NUMBER: 0008919 SIGNED: [Signature]
DATE: 14 FEB 92
NEXT CALIBRATION DUE: 14 AUG 92

OUT OF CALIBRATION NOTICE

DATE: 25 FEB 92

TO: DIV 20, SNWRA, ATTN: N SRIDHAR

FROM: CAL. LAB., SWRS

The following instrument was found to be out of its specified tolerances when submitted for calibration. Adjustments and/or repairs were necessary to bring the instrument within specifications.

INSTRUMENT: TORQUE WRENCH

S/N: A90687

Specified Tolerance ± 4% OF READINGS

Deviation 10 IN/LB READ 8 = -20%

25 IN/LB READ 23 = -12%

50 IN/LB READ 47 = -6%

Adjustments/Repairs to specifications

Date of previous valid calibration _____

Calibration interval 6 MONTHS

GULF COAST CALIBRATION

7999 Hansen, Suite 321
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Certificate Of Calibration

Customer SOUTHWEST RESEARCH INSTITUTE Date 07-20-1992
6220 CULEBRA, SAN ANTONIO, TEXAS Expires 01-20-1993

Customer P.O. SWRI REQ#828068
Type and Size of Gauge PROTO 10-200 IN. LB. TORQUE WRENCH
Serial No. A90687

Test Reading Charts

TOLERANCE: $\pm 4\%$

WRENCH SETTING	AS RECEIVED	FINAL READING
10in.lb.	10	10
25in.lb.	27	25
50in.lb.	55	50
100in.lb.	105	99
150in.lb.	160	151
200in.lb.	214	203

TEST EQUIPMENT: GCC-105

DUE: 04-20-1993

DONE IN ACCORDANCE WITH Q.A. MANUAL, REV-2; DATED 01-03-1992.
10CFR21 APPLIES.

This is to certify that the calibration above meets the requirements for accuracy of applicable per Federal Specification. GGG-W-686D

Our Test Equipment used for calibration is traceable to the NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY and maintained in accordance with conditions as noted under MIL. STD. 45662A. TEMP. DURING CALIBRATION: 72°F

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY No. 39569/40093
179355/241548/1

Michael Ho
Technician _____

S O U T H W E S T R E S E A R C H I N S T I T U T E

Department of Quality Assurance
Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B168 NARASI SRIDHAR

Device No: 1442

Manufacturer: PRONTO

Model: 6062-5

Nomenclature: TORQUE WRENCH

Serial Number: A90687

SwRI No: NONE

Remarks

Accuracy: MFGR SPECS

Procedure: MFGR

ENVIRONMENT

Temperature: 72 Humidity: 0 Location: GULF COAST CALIBRATION

CONCLUSION

Tolerance/Remarks: Received out of tolerance, adjusted to specifications

Out of tolerance, calibrated by Gulf Coast. Dated 07-20-92.

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

Signed _____

Calibration Date: 07/20/92

Record Number: 00009450

Next Calibration Due: 01/20/93

S O U T H W E S T R E S E A R C H I N S T I T U T E

Department of Quality Assurance
Calibration Laboratory

OUT OF TOLERANCE NOTICE

Date: 07/21/92

The following instrument was out of tolerance when submitted for calibration.

Issued to: DIV20 B168 NARASI SRIDHAR

Device No: 1442

Manufacturer: PRONTO

Model: 6062-5

Nomenclature: TORQUE WRENCH

Serial Number: A90687

SwRI No: NONE

Remarks

Accuracy: MFGR SPECS

Calibration Interval: 6 months

DEVIATION

Entry Date: 07/21/92

Last Valid Calibration: 02/14/92

Remarks

Out of tolerance:

Tolerance: +/- 4%

Wrench Setting

10 in.lb.

25 "

50 "

100 "

150 "

200 "

As Received

10

27

55

105

160

214

Final Reading

10

25

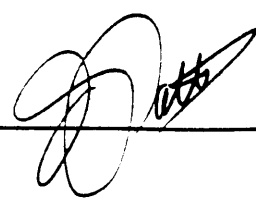
50

99

151

203

Signed



cc: Manager, QA

GULF COAST CALIBRATION

7999 Hansen, Suite 321
Houston, TX 77061
(713) 944-3139

Certificate Of Calibration

Customer SOUTHWEST RESEARCH INSTITUTE Date 01-25-1993

6220 CULEBRA, SAN ANTONIO, TEXAS

Expires 07-25-1993

Customer P.O. SWRI REQ. #848826

Type and Size of Gauge PROTO 10-200 IN. LB. TORQUE WRENCH

Serial No. A 90687

TOLERANCE: $\pm 4\%$

Test Reading Charts

WRENCH SETTING	AS RECEIVED	FINAL READING
10in.lb.	10	10
25in.lb.	25	25
50in.lb.	50	50
75in.lb.	76	76
100in.lb.	99	99
150in.lb.	152	152
200in.lb.	203	203

TEST EQUIPMENT: GCC-105
DUE: 04-20-1993

DONE IN ACCORDANCE WITH Q.A. MANUAL, REV-2; DATED: 01-03-1992.
10CFR21 APPLIES.

This is to certify that the calibration above meets the requirements for accuracy of applicable per Federal Specification. GGG W 686D

Our Test Equipment used for calibration is traceable to the NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY and maintained in accordance with conditions as noted under MIL. STD. 45662A. TEMP. DURING CALIBRATION: 70°F.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY No. 39569/40093

179355/241548/1

Technician Michael Ho

S O U T H W E S T R E S E A R C H I N S T I T U T E

Department of Quality Assurance
Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B57 NARASI SRIDHAR

Device No: 1442

Manufacturer: PRONTO

Model: 6062-5

Nomenclature: TORQUE WRENCH

Serial Number: A90687

SwRI No: NONE

Remarks

Accuracy: MFGR SPECS

Procedure: MFGR

ENVIRONMENT

Temperature: 70 Humidity: 0 Location: GULF COAST CAL, HOUSTON, TX

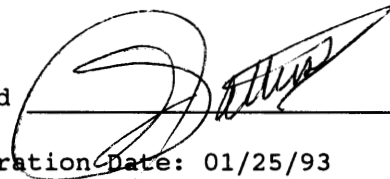
CONCLUSION

Tolerance/Remarks: Received in tolerance, no adjustments made

Calibrated by Gulf Coast Cal, Houston, Tx. Cal Cert # PO60014

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

Signed

A handwritten signature in black ink, appearing to be 'D. Sridhar', written over a horizontal line.

Calibration Date: 01/25/93

Record Number: 00010520


Next Calibration Due: 07/25/93

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

MEMORANDUM

May 26, 1993

To: Jim Patterson, SwRI Instrument Calibration and Repair Facility

From: Narasi Sridhar, CNWRA 

Subject: Withdrawal of Torque Wrench from Quality Affecting Tests

Reference: CNWRA Audit 93-1, Memorandum by B. Mabrito (May 24, 1993)

This is in reference to Proto Torque Wrench, Serial No. A90687, which has been found to be out of tolerance in a couple of calibration cycles, but within tolerance in others. Currently we do not understand why this wrench goes out of tolerance because it has not been used in any tests to our knowledge since the inception of the project. The other torque wrench which we have been using routinely has not been subject to these instabilities. However, because of this we wish to discontinue the usage of Proto Torque Wrench Serial No. A90687 in any quality-affecting work (we may use it to perform other non-quality affecting tasks such as tightening autoclaves etc. the parameters of which will not enter in any data interpretation).

By this memorandum, I request that this wrench be removed from your calibration logs immediately (perhaps you can also supply us a suitable label to mark the wrench so that it is not used in any quality-affecting work accidentally). If you have any questions, please feel free to contact me.

Thank you.

cc: P. Nair
D. Dunn
B. Mabrito
G. Cragolino
B. Sagar
W. Patrick