



# SOUTHWEST RESEARCH INSTITUTE®

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Calibration Laboratory  
Certificate #0972-01

## Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer / Model: PROTO / 6104

Description: TORQUE SCREWDRIVER

Serial No: 139072

Asset No: 009202

Procedure: TORQUE HAND TOOLS - 19 SEP 06

Work Order: 303076282

Date Issued: Sep 5, 2007

Calibration Date: Sep 5, 2007

\*Calibration Due: Mar 5, 2008

Calibration Location: Bldg. 64

Environment: Temp. 68.0°F Hum. 40 %RH

\*\*Data Type: FOUND-LEFT

DivID/Location: N/A

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 2005, ANSI/NCCL Z540-1-1994 and relevant requirements of the ISO 9000-2000 standard. This certificate shall not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. This certificate shall not be used to claim product endorsement by Southwest Research Institute, American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government. Results of this calibration relate only to the instrument described above at the time of calibration and does not imply any long term stability of the instrument.

\*Determined by the customer, does not imply the instrument will remain within tolerance as any number of factors may cause an out-of-tolerance condition before this date. \*\*Found/Left = adjustment and/or repair was not required, As Left = adjusted and/or repaired was required. The client has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance. See Remarks or attached Measurement Report with the same Work Order number for data.

Reported uncertainty calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM) and represents an expanded uncertainty with a coverage factor of k=2 to approximate a 95% confidence level.

Remarks: Calibrated Clockwise Only

### Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
012699	0207806	CDI	2000-5-02	TORQUE TRANSDUCER 15 - 200 INOZ	May 02, 08

Reviewed by: ( ) wgh ( ) jrk ( ) jrg ( ) blt ( ) pwc

Metrology Technician

m:\a2la1.rpt Rev date August 15, 2005

Measurements by: Perry Carpenter

Metrology Technician

Southwest Research Institute  
Calibration Laboratory  
Measurement Report

Work Order:	303076282	Mfr:	Proto	Technician:	PWC
Asset No:	009202	Model:	6104		
Serial No:	139072	Type:	Torque Screwdriver	Cal Date:	05-Sep-07
Remarks:	Calibrated Clockwise Only.				

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Torque Clockwise	oz/in	oz/in	oz/in	oz/in	oz/in	Result
	19.36	20.00	0.64	1.20	0.06	Pass
	19.78	20.00	0.22	1.20	0.06	Pass
	19.77	20.00	0.23	1.20	0.06	Pass
	19.38	20.00	0.62	1.20	0.06	Pass
	20.01	20.00	-0.01	1.20	0.06	Pass
	19.49	20.00	0.51	1.20	0.06	Pass
	19.67	20.00	0.33	1.20	0.06	Pass
	19.43	20.00	0.57	1.20	0.06	Pass
	19.61	20.00	0.39	1.20	0.06	Pass
	62.27	60.00	-2.27	3.60	0.18	Pass
	62.92	60.00	-2.92	3.60	0.18	Pass
	62.26	60.00	-2.26	3.60	0.18	Pass
	61.27	60.00	-1.27	3.60	0.18	Pass
	62.92	60.00	-2.92	3.60	0.18	Pass
	62.50	60.00	-2.50	3.60	0.18	Pass
	60.73	60.00	-0.73	3.60	0.18	Pass
	61.15	60.00	-1.15	3.60	0.18	Pass
	62.54	60.00	-2.54	3.60	0.18	Pass
	104.44	100.00	-4.44	6.00	0.30	Pass
	103.32	100.00	-3.32	6.00	0.30	Pass
	102.63	100.00	-2.63	6.00	0.30	Pass
	103.05	100.00	-3.05	6.00	0.30	Pass
	103.16	100.00	-3.16	6.00	0.30	Pass
	103.85	100.00	-3.85	6.00	0.30	Pass
	103.23	100.00	-3.23	6.00	0.30	Pass
	102.11	100.00	-2.11	6.00	0.30	Pass
	103.40	100.00	-3.40	6.00	0.30	Pass

END OF REPORT