



SOUTHWEST RESEARCH INSTITUTE®

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Certificate of Calibration

0972-01

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, MAR/05

Work Order: 303068636
Date Issued: Apr 4, 2006
Calibration Date: Apr 4, 2006
***Calibration Due:** Oct 4, 2006
Calibration Location: Bldg. 64
Environment: Temp. 68.0°F Hum. 44 %RH
****Data Type:** FOUND-LEFT

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, 1999, ANSI/NCSL 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: Cal'd clockwise only

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
007010	08803	CDI	1001-0-TTTP	TORQUE TRANSDUCER	May 22, 06

120
Q200604120003

Instrument calibration record for Proto Torque
Screwdriver, Model # 6104, Serial # 139072
(04/04/2006)

Reviewed by: blt () jrg () pwc (-) wgh ()
Metrology Technician

Measurements by: Joe Greagrey
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303068636	Mfr:	Proto	Technician:	JRG
Asset No:	009202	Model:	6104	Cal Date:	04-Apr-06
Serial No:	139072	Type:	Torque Screwdriver		
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Torque Clockwise	oz-in	oz-in	oz-in	oz-in	oz-in	Result
	20.0	20.3	0.3	1.2	0.20	Pass
	20.0	20.1	0.1	1.2	0.20	Pass
	20.0	20.7	0.6	1.2	0.20	Pass
	20.0	20.8	0.8	1.2	0.20	Pass
	20.0	20.0	0.0	1.2	0.20	Pass
	20.0	20.5	0.5	1.2	0.20	Pass
	20.0	19.2	-0.8	1.2	0.20	Pass
	20.0	19.9	-0.1	1.2	0.20	Pass
	20.0	19.4	-0.6	1.2	0.20	Pass
	20.0	20.0	0.0	1.2	0.20	Pass
	20.0	19.8	-0.2	1.2	0.20	Pass
	20.0	19.5	-0.5	1.2	0.20	Pass
	60.0	60.9	0.9	3.6	0.60	Pass
	60.0	59.6	-0.4	3.6	0.60	Pass
	60.0	59.7	-0.3	3.6	0.60	Pass
	60.0	61.7	1.7	3.6	0.60	Pass
	60.0	59.3	-0.7	3.6	0.60	Pass
	60.0	61.4	1.4	3.6	0.60	Pass
	60.0	61.0	1.0	3.6	0.60	Pass
	60.0	59.2	-0.8	3.6	0.60	Pass
	60.0	60.9	0.9	3.6	0.60	Pass
	60.0	59.9	-0.1	3.6	0.60	Pass
	60.0	59.1	-0.9	3.6	0.60	Pass
	60.0	59.4	-0.6	3.6	0.60	Pass
	100.0	100.0	0.0	6.0	1.0	Pass
	100.0	99.2	-0.8	6.0	1.0	Pass
	100.0	95.7	-4.3	6.0	1.0	Pass
	100.0	100.4	0.4	6.0	1.0	Pass
	100.0	95.0	-5.0	6.0	1.0	Pass
	100.0	95.2	-4.8	6.0	1.0	Pass
	100.0	99.9	-0.1	6.0	1.0	Pass
	100.0	97.9	-2.1	6.0	1.0	Pass
	100.0	101.3	1.3	6.0	1.0	Pass
	100.0	96.3	-3.7	6.0	1.0	Pass
	100.0	99.2	-0.8	6.0	1.0	Pass
	100.0	95.2	-4.8	6.0	1.0	Pass

END OF REPORT