



SOUTHWEST RESEARCH INSTITUTE®

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Institute Calibration Laboratory
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Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer / Model: SNAP-ON / QDRIVER2

Description: TORQUE SCREWDRIVER

Serial No: 1001200319

Asset No: 010443

Procedure: TORQUE HAND TOOLS - 19 SEP 06

Work Order: 303074246

Date Issued: Apr 27, 2007

Calibration Date: Apr 27, 2007

***Calibration Due:** Oct 27, 2007

Calibration Location: Bldg. 64

Environment: Temp. 68.0°F Hum. 38 %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/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: Calibrated Clockwise Only

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
007010	08803	CDI	1001-0-TTTP	TORQUE TRANSDUCER	May 02, 07

Scott Kutz

Reviewed by: () wgh (X) srk () jrg () blt () pwc

Metrology Technician

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

Perry Carpenter

Measurements by: Perry Carpenter

Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303074246	Mfr:	Snap-On	Technician:	PWC
Asset No:	010443	Model:	QDRIVER2	Cal Date:	27-Apr-07
Serial No:	1001200319	Type:	Torque Screwdriver		
Remarks:	Cal'd 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
	19.8	20.0	0.2	1.2	0.061	Pass
	19.7	20.0	0.3	1.2	0.061	Pass
	20.3	20.0	-0.3	1.2	0.061	Pass
	19.3	20.0	0.7	1.2	0.061	Pass
	19.8	20.0	0.2	1.2	0.061	Pass
	19.0	20.0	1.0	1.2	0.061	Pass
	19.2	20.0	0.9	1.2	0.061	Pass
	20.2	20.0	-0.2	1.2	0.061	Pass
	19.7	20.0	0.4	1.2	0.061	Pass
	19.4	20.0	0.6	1.2	0.061	Pass
	19.1	20.0	0.9	1.2	0.061	Pass
	18.9	20.0	1.1	1.2	0.061	Pass
	58.4	60.0	1.6	3.6	0.18	Pass
	59.4	60.0	0.6	3.6	0.18	Pass
	60.8	60.0	-0.8	3.6	0.18	Pass
	58.8	60.0	1.2	3.6	0.18	Pass
	58.2	60.0	1.9	3.6	0.18	Pass
	59.9	60.0	0.1	3.6	0.18	Pass
	60.1	60.0	-0.1	3.6	0.18	Pass
	59.5	60.0	0.5	3.6	0.18	Pass
	59.1	60.0	0.9	3.6	0.18	Pass
	59.1	60.0	0.9	3.6	0.18	Pass
	60.2	60.0	-0.2	3.6	0.18	Pass
	60.2	60.0	-0.2	3.6	0.18	Pass
	102.2	100.0	-2.2	6.0	0.30	Pass
	101.5	100.0	-1.5	6.0	0.30	Pass
	102.2	100.0	-2.2	6.0	0.30	Pass
	102.4	100.0	-2.4	6.0	0.30	Pass
	101.1	100.0	-1.1	6.0	0.30	Pass
	101.6	100.0	-1.6	6.0	0.30	Pass
	102.2	100.0	-2.2	6.0	0.30	Pass
	101.7	100.0	-1.7	6.0	0.30	Pass
	101.7	100.0	-1.7	6.0	0.30	Pass
	102.1	100.0	-2.1	6.0	0.30	Pass
	101.6	100.0	-1.6	6.0	0.30	Pass
	101.7	100.0	-1.7	6.0	0.30	Pass

END OF REPORT