

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

NONCONFORMANCE REPORT

Project No. 20.06002.01.322

NCR No. 2005-19

PART 1: DESCRIPTION OF NONCONFORMANCE:

Torque Screwdriver (Model: Snap-On QDRIVER2, Serial Number: 1001200319, Asset Number: 010443) was found to be out of tolerance during a normally scheduled calibration.

Initiated by: Darrell S. Dunn

Date: 5/9/2005

PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION

Disposition:

Accept data obtained in tests using this torque screwdriver as is.

Basis of Disposition:

The torque screwdriver is used to torque assembly hardware on crevice corrosion test specimens. Under the applied torque, the polytetrafluoroethylene crevice washers deform to match the specimen surfaces. The applied torque is typically 50 in-oz. At the 60 in-oz test point, the torque screwdriver was found to have one break point that was out of tolerance. The limit is ± 3.6 in-oz and the torque screwdriver had a difference of -3.8 in-oz. An error of 3.8 in-oz is unlikely to affect the results of crevice corrosion tests.

Action to Correct Nonconformance:

The torque screwdriver was repaired and recalibrated. Parts replaced include the cam which suggests the out of tolerance condition was a result of wear from normal use. The torque screwdriver will continue to be included on the calibration recall list.



Target date for completion: 5/18/2005

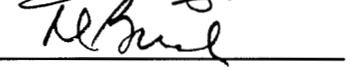
Proposed by: Darrell S. Dunn

Date: 5/9/2005

PART 3: APPROVAL

Element Manager: 

Date: 5/9/2005

Director of QA: 

Date: 5/9/2005

Comments/Instructions:

PART 4: CLOSE OUT

Comments:

No additional action needed

Distribution:

Dunn
JPM
Mohanty
Ekstrand

Verified by: 

Date: 5/9/05

SOUTHWEST RESEARCH INSTITUTE®

6220 CULEBRA ROAD • POST OFFICE DRAWER 28510 • SAN ANTONIO, TEXAS, 78228-0510 • TEL (210) 522-5215 • FAX (210) 522-369

To: Darrell Dunn, Div 20

From: Walt Hill, Group Leader
Institute Calibration Laboratory

Date: May 4, 2005

Subject: Out-of-tolerance Notice

The as-found condition of the equipment listed below may have caused erroneous measurements affecting safety or quality of services your organization provides customers. The attached measurement report is provided for your evaluation to determine the impact and if further action is required.

When the as-found results are near the test point limits, +/- the measurement uncertainty, it is not possible to state in-tolerance or out-of-tolerance with a 95% level of confidence. Institute Calibration Laboratory policy is to notify the customer because there is a risk the instrument may not meet measurement requirements.

Your evaluation should be conducted in accordance with your organization's quality policy and procedural requirements. If you have any question or need additional assistance, please contact the Institute Calibration Laboratory at 522-5215.

Manufacturer: Snap-On

Model: QDRIVER2

Description: Torque Screwdriver

Serial Number: 1001200319

Asset Number: 010443

User ID Number:

Last Calibration: Enter MMM,dd,yyyy or Unknown

Date Received for Service: Apr 8, 2005 **Work Order Number:** 303063649

Service Requested: Scheduled calibration

Remarks: Unit was reading out of tolerance at different points. See as found data.

OUT OF TOLERANCE

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303063649	Mfr.	Snap-On	Technician	WCL
Asset No.	010443	Model	QDriver2	Cal Date.	11-Apr-05
Serial No.	1001200319	Type.	Torque Screwdriver		
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found
Torque Clockwise	oz-in	oz-in	oz-in	oz-in	oz-in	Result
	20.0	19.1	-0.9	1.2	0.61	Pass
	20.0	20.6	0.6	1.2	0.61	Pass
	20.0	22.4	2.4	1.2	0.61	Fail
	20.0	18.8	-1.2	1.2	0.61	Pass
	20.0	19.4	-0.6	1.2	0.61	Pass
	20.0	20.1	0.1	1.2	0.61	Pass
	20.0	21.1	1.1	1.2	0.61	Pass
	20.0	18.4	-1.6	1.2	0.61	Fail
	20.0	19.6	-0.4	1.2	0.61	Pass
	20.0	19.4	-0.6	1.2	0.61	Pass
	20.0	20.4	0.4	1.2	0.61	Pass
	20.0	18.5	-1.5	1.2	0.61	Fail
	60.0	59.4	-0.6	3.6	0.83	Pass
	60.0	58.0	-2.0	3.6	0.83	Pass
	60.0	58.3	-1.7	3.6	0.83	Pass
	60.0	58.5	-1.5	3.6	0.83	Pass
	60.0	58.1	-1.9	3.6	0.83	Pass
	60.0	58.1	-1.9	3.6	0.83	Pass
	60.0	56.2	-3.8	3.6	0.83	Fail
	60.0	57.3	-2.7	3.6	0.83	Pass
	60.0	58.0	-2.0	3.6	0.83	Pass
	60.0	57.9	-2.1	3.6	0.83	Pass
	60.0	56.6	-3.4	3.6	0.83	Pass
	60.0	57.8	-2.2	3.6	0.83	Pass
	100.0	103.8	3.8	6.0	1.2	Pass
	100.0	102.8	2.8	6.0	1.2	Pass
	100.0	100.8	0.8	6.0	1.2	Pass
	100.0	105.0	5.0	6.0	1.2	Pass
	100.0	105.9	5.9	6.0	1.2	Pass
	100.0	103.8	3.8	6.0	1.2	Pass
	100.0	102.6	2.6	6.0	1.2	Pass
	100.0	105.3	5.3	6.0	1.2	Pass
	100.0	101.0	1.0	6.0	1.2	Pass
	100.0	103.2	3.2	6.0	1.2	Pass
	100.0	102.8	2.8	6.0	1.2	Pass
	100.0	104.2	4.2	6.0	1.2	Pass

END OF REPORT



SOUTHWEST RESEARCH INSTITUTE®

6220 Culebra Road, P.O. Drawer 28510
Institute Quality Systems
Institute Calibration Laboratory
Phone: 210-522-5215 Fax 210-522-4834



Certificate of Calibration

0972-01

Submitted By: DIV20
Address: B57
Contact: DARRELL DUNN
Manufacturer Model: SNAP-ON QDRIVER2
Description: TORQUE SCREWDRIVER
Serial No: 1001200319
Asset No: 010443
Procedure: TORQUE HAND TOOLS, MAR/03

Work Order: 303063649
Date Issued: May 4, 2005
Calibration Date: May 4, 2005
****Calibration Due:** Nov 4, 2005
Calibration Location: Bldg. 64
Environment: Temp. 68.0°F Hum. 42 %RH
***As Found:** OUT OF TOLERANCE
***As Left:** IN TOLERANCE

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 and ANSI/NCCL Z540-1-1994 which are equivalent to relevant requirements of the ISO 9000-1994 series of standards. This certificate may not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. The results of this calibration relate only to the individual instrument described above. This certificate shall not be used to claim product endorsement by the American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government.

Uncertainty evaluation includes the item under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor of k=2 to approximate a 95% confidence level. See Remarks or attached Calibration Report with the same Work Order number for calibration data.

*The client has sole responsibility for determination of in/out of tolerance or compliance/noncompliance. An in/out of tolerance opinion is provided for your convenience based only on the Test Instrument (TI) reading(s) and limits as reported. The reported uncertainty relates only to the results at the time of calibration and does not imply any short or long term stability of the TI.

**Calibration interval is determined by the client and does not assure the instrument will remain within tolerance until this date. Any number of factors may cause the instrument to be out of tolerance before the next calibration date.

Remarks: None

Standards Used

Asset	Serial Number	Manufacturer	Model	Description	Cal Due
007010	08803	CDI	1001-0-TTTP	TORQUE TRANSDUCER	Jul 08, 05

Approved by: Walt Hill
Manager

Measurements by: Curtis Laurence
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303063649	Mfr.	Snap-On	Technician	WCL
Asset No.	010443	Model	QDriver2	Cal Date.	04-May-05
Serial No.	1001200319	Type.	Torque Screwdriver		
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Left
Torque Clockwise	oz-in	oz-in	oz-in	oz-in	oz-in	Result
	20.0	20.2	0.2	1.2	0.61	Pass
	20.0	21.2	1.2	1.2	0.61	Pass
	20.0	20.4	0.4	1.2	0.61	Pass
	20.0	19.5	-0.5	1.2	0.61	Pass
	20.0	19.9	-0.1	1.2	0.61	Pass
	20.0	20.2	0.2	1.2	0.61	Pass
	20.0	20.1	0.1	1.2	0.61	Pass
	20.0	20.1	0.1	1.2	0.61	Pass
	20.0	20.3	0.3	1.2	0.61	Pass
	20.0	19.7	-0.3	1.2	0.61	Pass
	20.0	19.9	-0.1	1.2	0.61	Pass
	20.0	20.7	0.7	1.2	0.61	Pass
	60.0	58.9	-1.1	3.6	0.83	Pass
	60.0	61.4	1.4	3.6	0.83	Pass
	60.0	61.4	1.4	3.6	0.83	Pass
	60.0	58.6	-1.5	3.6	0.83	Pass
	60.0	59.5	-0.5	3.6	0.83	Pass
	60.0	60.7	0.7	3.6	0.83	Pass
	60.0	60.9	0.9	3.6	0.83	Pass
	60.0	60.1	0.1	3.6	0.83	Pass
	60.0	59.9	-0.1	3.6	0.83	Pass
	60.0	61.8	1.8	3.6	0.83	Pass
	60.0	60.2	0.2	3.6	0.83	Pass
	60.0	60.7	0.6	3.6	0.83	Pass
	100.0	105.3	5.3	6.0	1.2	Pass
	100.0	105.1	5.1	6.0	1.2	Pass
	100.0	103.5	3.5	6.0	1.2	Pass
	100.0	105.8	5.8	6.0	1.2	Pass
	100.0	104.4	4.4	6.0	1.2	Pass
	100.0	105.0	5.0	6.0	1.2	Pass
	100.0	105.0	5.0	6.0	1.2	Pass
	100.0	102.8	2.8	6.0	1.2	Pass
	100.0	104.6	4.6	6.0	1.2	Pass
	100.0	104.0	4.0	6.0	1.2	Pass
	100.0	103.5	3.5	6.0	1.2	Pass
	100.0	103.0	3.0	6.0	1.2	Pass

END OF REPORT