



National Association for Proficiency Testing

A Non-Profit Organization Dedicated to Excellence in Metrology and Test Measurement

PRELIMINARY REPORT: NAPT-TORQ-201

This Preliminary Report documents the results for the ILC/PT listed below, covering all data presented to NAPT for evaluation by your organization. For tests with an established history, a Final Report will be issued after the 30 day review period expires. The Final Report will include a graphical representation of participants' values compared to the artifact mean and the values reported by the other participants.

Preliminary Results Reported To: **Digital Measurement Metrology Inc**
Attention: Raj Sharma
26 Automatic Road, Unit 4
Brampton, ON L6S 5N7

Date Of Preliminary Report: June 18, 2003
Date Of Participation in ILC/PT: March 27, 2003

ILC/PT NAME: NAPT-TORQ-201
Torque Wrench Set
Discipline: Physical/Mechanical: Torque/Measure
Artifact Type: Torque Wrench
Manufacturer: Sturtevant Richmond
Model Number: 3SDR-150,#SDR-600,M-100
Serial Number: 588816,586625,965310

Data analysis of your reported values indicates that your organization performed **9 out of 9 measurements satisfactorily**. If any data reported in this Preliminary Report is incorrect or if you would like to submit any revisions/corrections of your reported data, please contact us within 30 days

All NAPT programs are conducted in accordance with ISO/IEC Guide 43-1 and ILAC G13:2000 requirements for proficiency testing providers. Please contact NAPT with any questions regarding this Preliminary Report.

Preliminary analysis of the data your organization submitted to NAPT is shown below. Reported values are compared against the reference value only. In the Final Report, your reported values will also be analyzed against the values reported by other participants enrolled in this ILC/PT.

Measurement Description	Reported Value Reference Value	Reported Uncertainty Reference Uncertainty	En	S/U	I/W/O
Torque					
30 lbf in - 1) 3SDR-150I - 30 lbf in	31.061 lbf in 30.687	1.155 0.333	0.31	S	W
74 lbf in - 2) 3SDR-150I - 74 lbf in	73.620 lbf in 73.949	1.156 0.829	0.23	S	I
134 lbf in - 3) 3SDR-150I - 134 lbf in	136.060 lbf in 134.960	1.158 0.964	0.73	S	W
120 lbf in - 4) 3SDR-600 - 120 lbf in	123.760 lbf in 121.827	2.888 1.719	0.58	S	W
300 lbf in - 5) 3SDR-600 - 300 lbf in	305.620 lbf in 302.341	2.889 3.492	0.72	S	W
540 lbf in - 6) 3SDR-600 - 540 lbf in	556.200 lbf in 552.242	2.89 8.23	0.45	S	W
20 lbf ft - 7) M-100 - 20 lbf ft	20.350 lbf ft 20.227	0.289 0.265	0.31	S	I
50 lbf ft - 8) M-100 - 50 lbf ft	50.800 lbf ft 50.474	0.289 0.373	0.69	S	W
90 lbf ft - 9) M-100 - 90 lbf ft	90.750 lbf ft 90.293	0.291 0.486	0.81	S	W

NOTES:

1. Values may be rounded. Rounding does not affect data analysis and is for reporting purposes only
2. All uncertainties are at (or normalized to) K=2 (coverage factor associated with a 2-sigma, 95%, normal distribution)
3. $En = (\text{participant's reported value} - \text{reference value}) / \text{SQRT}(\text{participant's reported uncertainty}^2 + \text{reference uncertainty}^2)$
4. S/U: S (Satisfactory) = participant's computed En is within range of ± 1 ; U (Unsatisfactory) = participant's computed En is outside range of ± 1
5. I/W/O: I (In Range) = participant's reported value falls in artifact uncertainty interval (reference value \pm reference uncertainty); W (Within Range) = participant's uncertainty interval (reported value \pm reported uncertainty) overlaps artifact uncertainty interval; O (Out of Range) = participant's uncertainty interval is outside artifact uncertainty interval