For example on the DTX-40, if the CCW reading is 50.30 and CW reading is 50.50

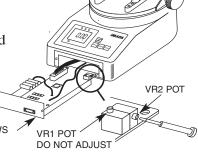
- Step 1 Determine actual deviation.  $(50.50 50.30) \div 2 = 0.10$  (which is smaller than the allowable tolerance of 0.25).
- Step 2 Calculate target calibration value, which is capacity less actual deviation calculated above. 50.00 0.10 = 49.90.
- Step 3 Determine calibration direction (only one direction calibration is required). Take the smaller number's direction, which in this case is CCW (50.30).
- Step 4 Zero the display. Rehang the calibration weight (2.5 kg only for DTX-40) and calibrate in the CCW direction.

### **Making Adjustments**

- 1. Remove the 2 screws in the front cover and the warranty seal.\*
- 2. Gently pull the front cover forward to expose the PC board.

Note: The PC board is mounted on the front cover and cables are connected to it. Do not force.

SCREWS

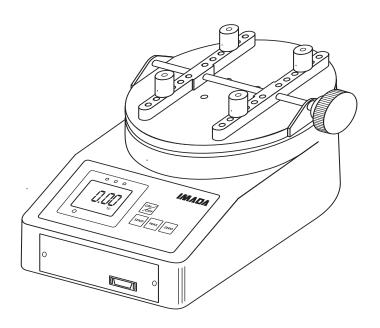


- Using a small flathead screwdriver adjust the VR2 pot adjustment screw to the appropriate setting (screw faces right).
   Do not adjust VR1 (screw faces top).
- 4. After adjustment, slide the PC board back and replace the screws.

\*Note: Removing the warranty seal automatically voids the warranty.

## CALIBRATION MANUAL

# Cap Torque Tester



Models: DTX and DTX2

# Digital Cap Torque Tester CALIBRATION PROCEDURE

Conditions: Temperature: 72° (±15°F) Humidity: 10 - 60%

CLAMP TABLE

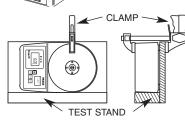
### List of Equipment

- (1) Calibration arm (20 cm radius)
- (2) Small Screwdriver
- (3) Clamp
- 4 Calibration weight



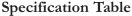
### **Calibration Setup**

- 1. Verify the temperature is within the allowable range (32°-100°F) and record it.
- Pull up to remove clamp table from cap torque tester.
   Do Not Twist or Jerk! Permanent damage may result, whether the unit is on or off.
- 3. Place the cap torque tester against the vertical wall of the test stand and clamp it to the wall as shown.



- 4. Place the calibration arm on the cap torque tester with the 2 wires hanging down, engage the coupling and press in firmly (make sure the calibration arm doesn't touch the clamp and allow clearance to hang the calibration weight).
- 5. Connect AC adapter/charger, plug into 115VAC outlet and turn on the cap torque tester, select Real Time Mode (not Peak Mode) and change units to kg-cm (press unit switch and hold for 4 seconds to select units).
- 6. Press the Zero switch to zero the display.

Before hanging the calibration weight, refer to the following table to be sure the *correct weight* is used to prevent overload. (kgf-cm)

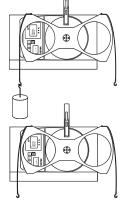


MODEL	DTX/DTX2-15	DTX/DTX2-40	DTX/DTX2-85
CAPACITY (kgf-cm)	20.00	50.00	100.0
ALLOWABLE RANGE (kgf-cm)	19.90~20.10	49.75~50.25	99.5~100.5
ALLOWABLE TOLERANCE (kgf-cm)	0.10	0.25	0.5
*WEIGHT (kg)	1	2.5	5

<sup>\*</sup>Weight is appropriate for 20 cm radius calibration arm

#### **CCW** Calibration

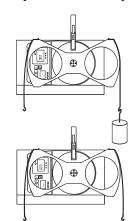
- 6. Hang the *correct weight* (see Specification Table above) on the left hook and record the torque value (make sure the wire stays on the edge of the calibration arm, use scotch tape if necessary).
- 7. Remove the weight and see if the display returns to zero.
- 8. If not, repeat from steps 7 9 until it does.



#### CW Calibration

- 9. Zero the display.
- 10. Hang the weight on the right hook and record the torque value.
- 11. Remove the weight and see if the display returns to zero.
- 12. If not, repeat from steps 11 13 until it does.

Check the table to make sure the CCW & CW readings are within the allowable range before making adjustments.



- 13. Subtract the smaller from the larger reading, and divide the result by 2 to determine actual deviation. If actual deviation is larger than allowable tolerance (see Specification Table), the unit needs repair before calibration.
  - If actual deviation is smaller than allowable tolerance, the unit can be calibrated by the following procedure.

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