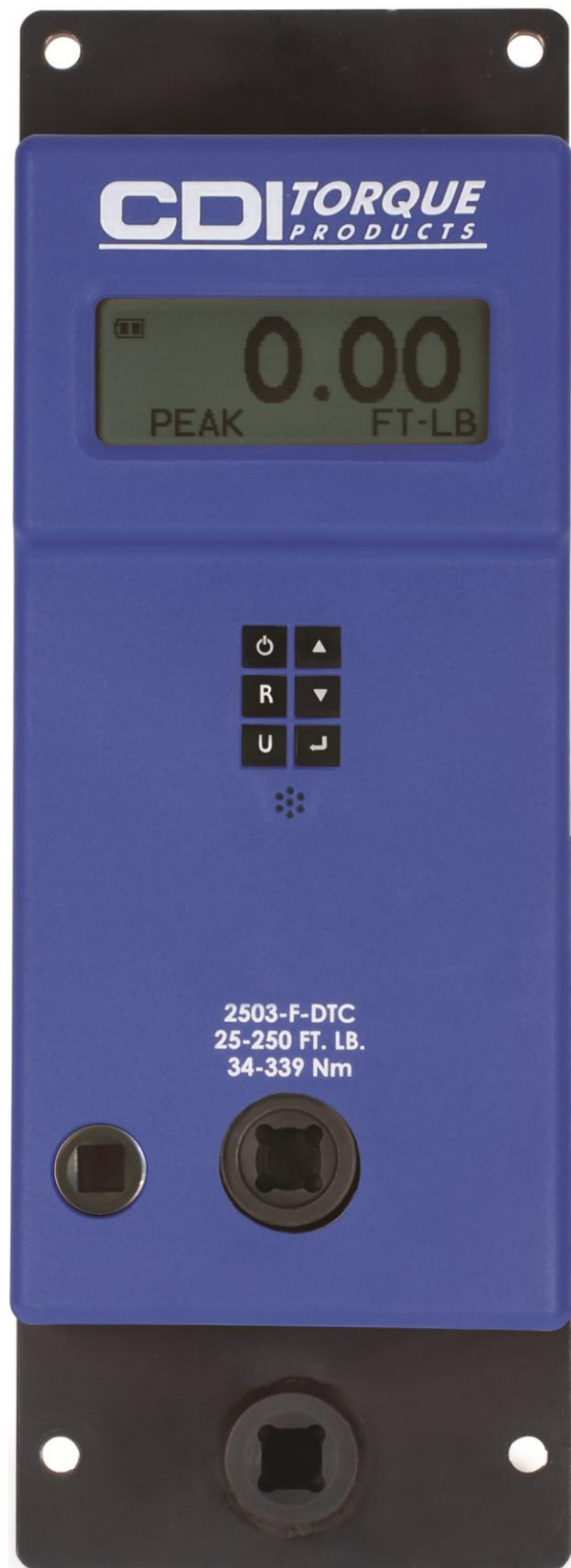


## DTC DIGITAL TORQUE CHECKER



# **IMPORTANT SAFETY INSTRUCTIONS**



## **WARNING *Risk of flying particles.***

### **Do not apply torque above rated capacity of DTC.**

Over-torquing can cause breakage. Force against flex stops on flex head can cause head breakage. An out of calibration DTC can cause part or tool breakage. Broken hand tools, sockets or accessories can cause injury. Excess force can cause crowfoot or flare nut wrench slippage.




- Read **this manual completely** before using DTC.
- For personal safety and to avoid DTC damage, follow good professional tool and fastener installation practices.
- Periodic recalibration is necessary to maintain accuracy.
- Wear safety goggles, user and bystanders.**
- Be sure all components, including all adaptors, extensions, drivers and sockets are rated to match or exceed torque being applied.



- Observe all equipment, system and manufacturer's warnings, cautions and procedures when using this checker.
- Use correct size adapter for torque wrench.
- Do not use sockets showing wear or cracks.
- Replace fasteners with rounded corners.
- To avoid damaging DTC:** Never use checker with power off. Always turn ON DTC so applied torque is being measured.



- Do not press **POWER**  while torque is applied.
- Never use this checker to calibrate torque wrenches.
- Do not use extensions, such as a pipe, on handle of wrench.
- Check that DTC capacity matches or exceeds each application before proceeding.
- Verify calibration if dropped.
- Never attempt to test an impact tool or pulse type tool on this checker.
- Make sure ratchet direction lever is fully engaged in correct position.
- Verify calibration of DTC if you know or suspect its capacity has been exceeded.
- Always adjust your stance to prevent a possible fall should something give while checking torque wrench.
- Do not attempt to recharge Alkaline cells.
- Store DTC in dry place.
- Remove batteries when storing checker unused for periods longer than 3 months.



## **WARNING *Electrical Shock Hazard.***

Electrical shock can cause injury. Do not use on live electrical circuits.

## **SAVE THESE INSTRUCTIONS**

### **Disclaimer**

Operation of DTC is not warranted in an EU member state if operating instructions are not in that State's language. Contact CDI Torque Products if a translation is needed.

# Specifications

## Socket Type

- ½" Female Square Drive

## Display

- DISPLAY TYPE: Dot Matrix LCD (192 x 65 Resolution)
- VIEWING DIRECTION: 6:00
- BACKLIGHT: WHITE (LED)

## Sealed Button Pad



**POWER** - ON/OFF and torque re-zero



**ENTER** - measurement mode select and menu entry



**UP** – increments settings and menu navigation



**DOWN** - decrements settings and menu navigation



**UNITS** - units select (ft-lbs, in-lbs, Nm)



**RECALL** – Recalls last applied peak torque

## Functions

- Track - real time display of torque
- Peak Hold – 5 sec. flashing of peak torque on release of torque
- First Peak – 5 sec. flashing of peak torque after initial drop off in torque
- Peak Torque Recall – 5 sec. flashing display last peak torque measurement

## Accuracy

- Temperature: @ 22°C (72°F)

CW CCW

- Torque: { ±1% ±1% of reading, 10% to 100% of full scale }

## Dimensions: Length / Weight

Model	Length	Width	Depth	Weight
2503-F-DTC	13.2 in.	4.75 in.	2.2 in.	4.9 lbs.

## DTC Range

- TORQUE: (Display Range and Resolution as shown below)

Model	Square Drive	ft-lb	in-lbs	Nm	overload (ft-lb)
2503-F-DTC	½ in.	25.0-250.0	300-3000	34.0-339.0	312.5

**Operating Temperature:** 0°F to 130°F (-18°C to 54°C)

**Storage Temperature:** 0°F to 130°F (-18°C to 54°C)

**Measurement Drift:** TORQUE: +0.01% of reading per Degree C

**Humidity:** Up to 90% non-condensing

**Battery:** Three "AA" Alkaline Cells, up to 40 hours continuous operation

**A/C Adapter (Not included)** A/C Adapter transformer, Voltage Input: 90 to 240VAC, 50-60 Hz, 0.8A  
P/N: (DTS8269) Voltage Output: 9VDC, Current 2.2A

**D/C Cigarette Lighter Receptacle (Not Included)** D/C Adapter Cigarette, Voltage Input: 12V  
P/N: (3325-0320-01) Voltage Output: 12V, Current 5A

**Default Auto Shut-off:** After 5 minutes idle – (Adjustable, see Settings)

# User Instructions

## • Basic Functions (Quick Start)

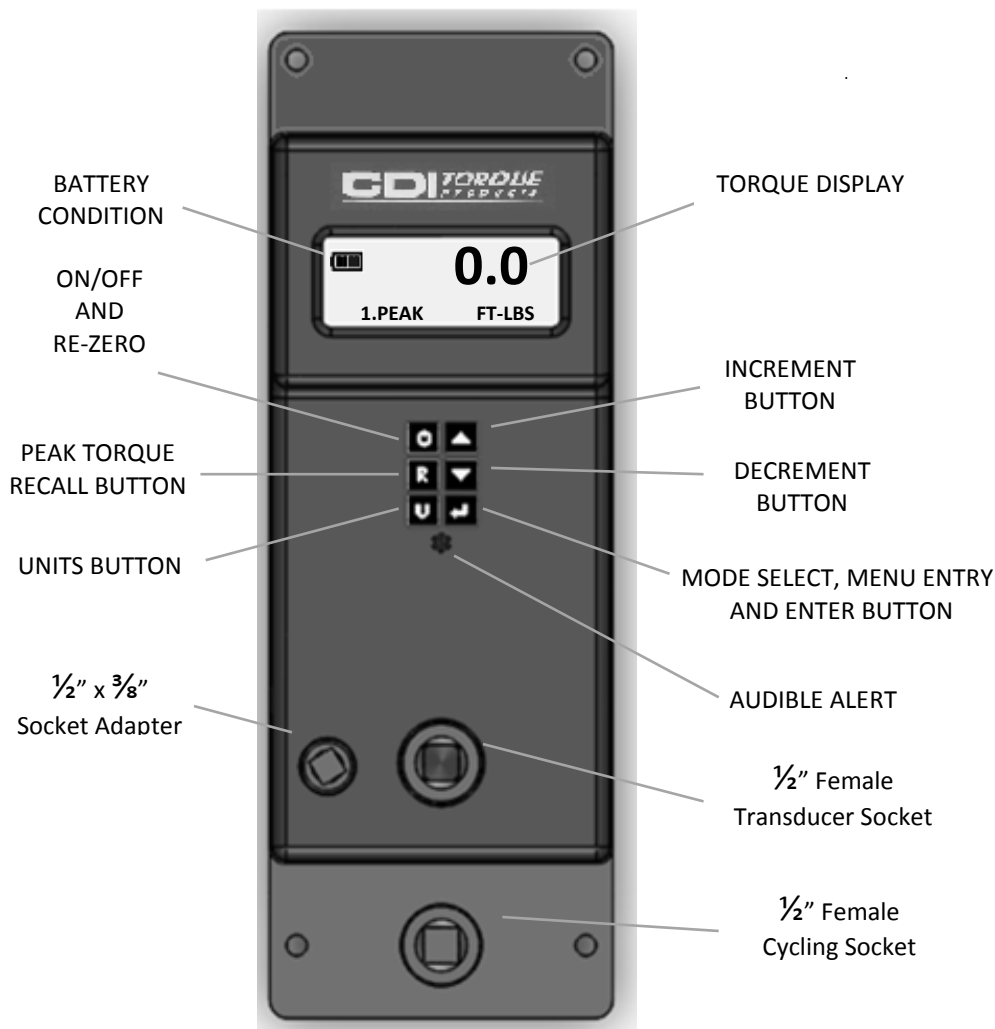




Figure 1

**Install three fresh "AA" cells into battery holder.**

### DTC Power On Sequence

*Note: Do not turn on DTC while torque wrench is mounted to checker, otherwise torque zero offset will be incorrect and DTC will indicate a torque reading when torque is removed. If this occurs, remove torque wrench from DTC and re-zero by momentarily pressing **POWER**  button.*

#### 1. Turn On DTC.


Momentarily press **POWER**  button. CDI logo is displayed followed by torque re-zeroing screen. After re-zeroing, the torque screen is displayed.

#### 2. Select Mode Of Operation.

Toggle between PEAK, 1.PEAK and TRACK by repeatedly pressing **ENTER**  button.

- PEAK = Used to check Dial and or Electronic Torque Wrenches
- 1.Peak = Used to check Click Style Torque Wrenches
- Track = Can be used to check Dial and Electronic Torque Wrenches

#### 3. Select Units Of Measure.





Toggle between IN-LBS, FT-LBS and NM by repeatedly pressing **UNITS**  button.

#### 4. Peak Torque Recall.

Recall last peak torque applied by pressing and holding **RECALL**  button.


### Main Menu

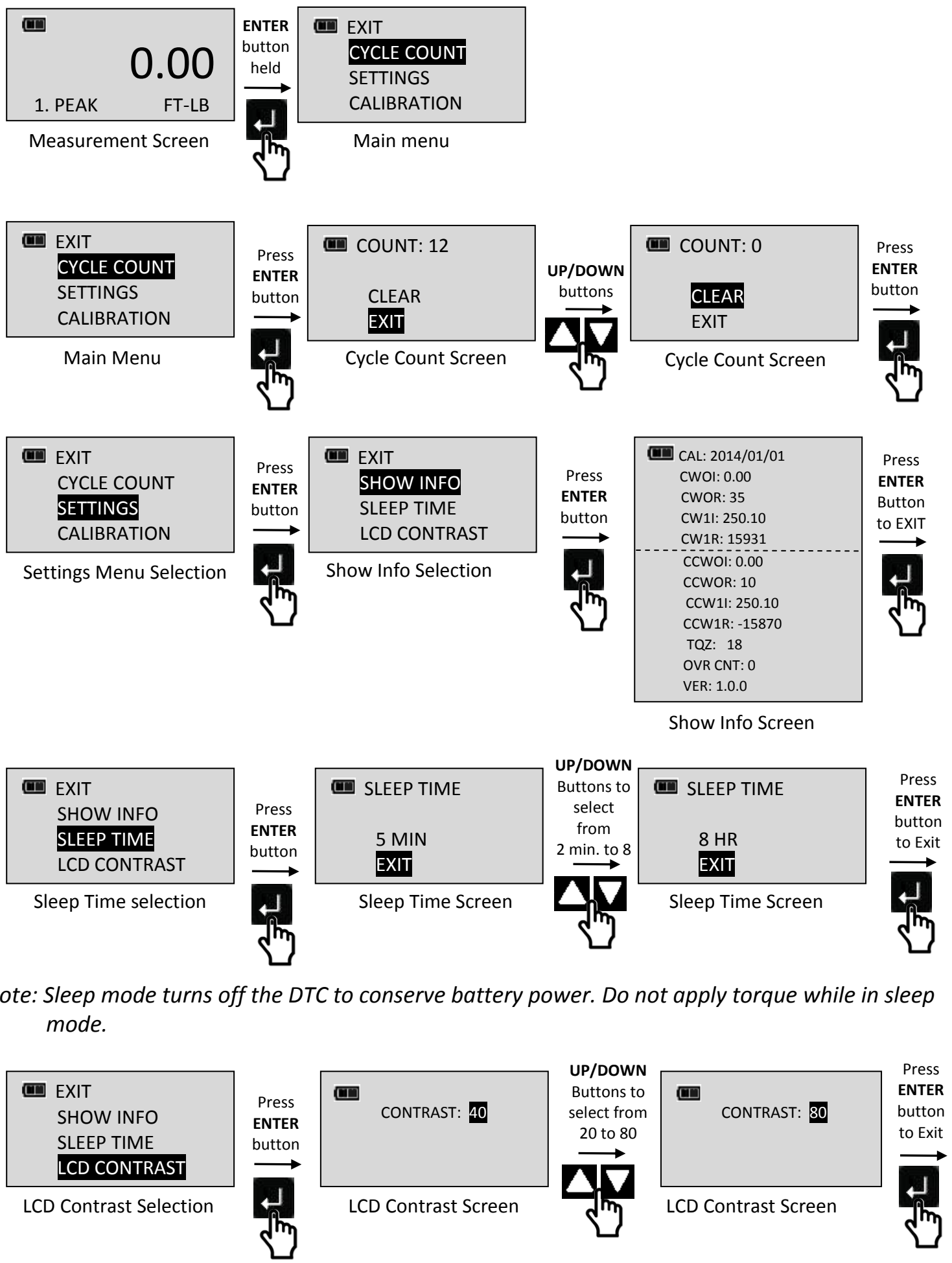
Main menu displays DTC operational information.

1. From torque measurement screen, press and hold **ENTER**  button for 3 seconds.
2. Use **UP** /**DOWN**  buttons to highlight menu selection then press **ENTER**  button.

Menu Selections:

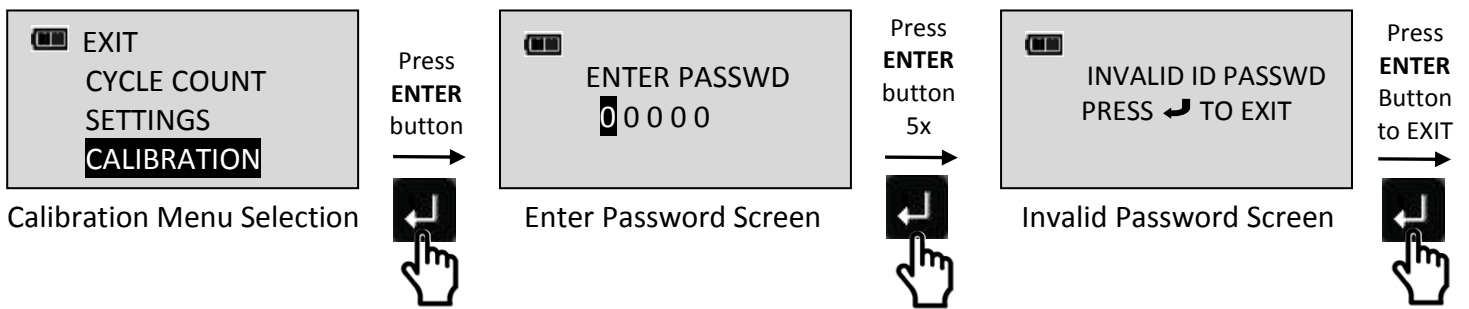
- EXIT - Exits Main menu and returns to torque screen.
- CYCLE COUNT - Displays torque cycle count screen.
- SETTINGS - Displays DTC settings menu.
- CALIBRATION – Displays password screen (see Calibration manual).

3. To exit Main menu and return to torque measurement screen, press **ENTER**  button while **EXIT** menu selection is highlighted.



*Note: Sleep mode turns off the DTC to conserve battery power. Do not apply torque while in sleep mode.*

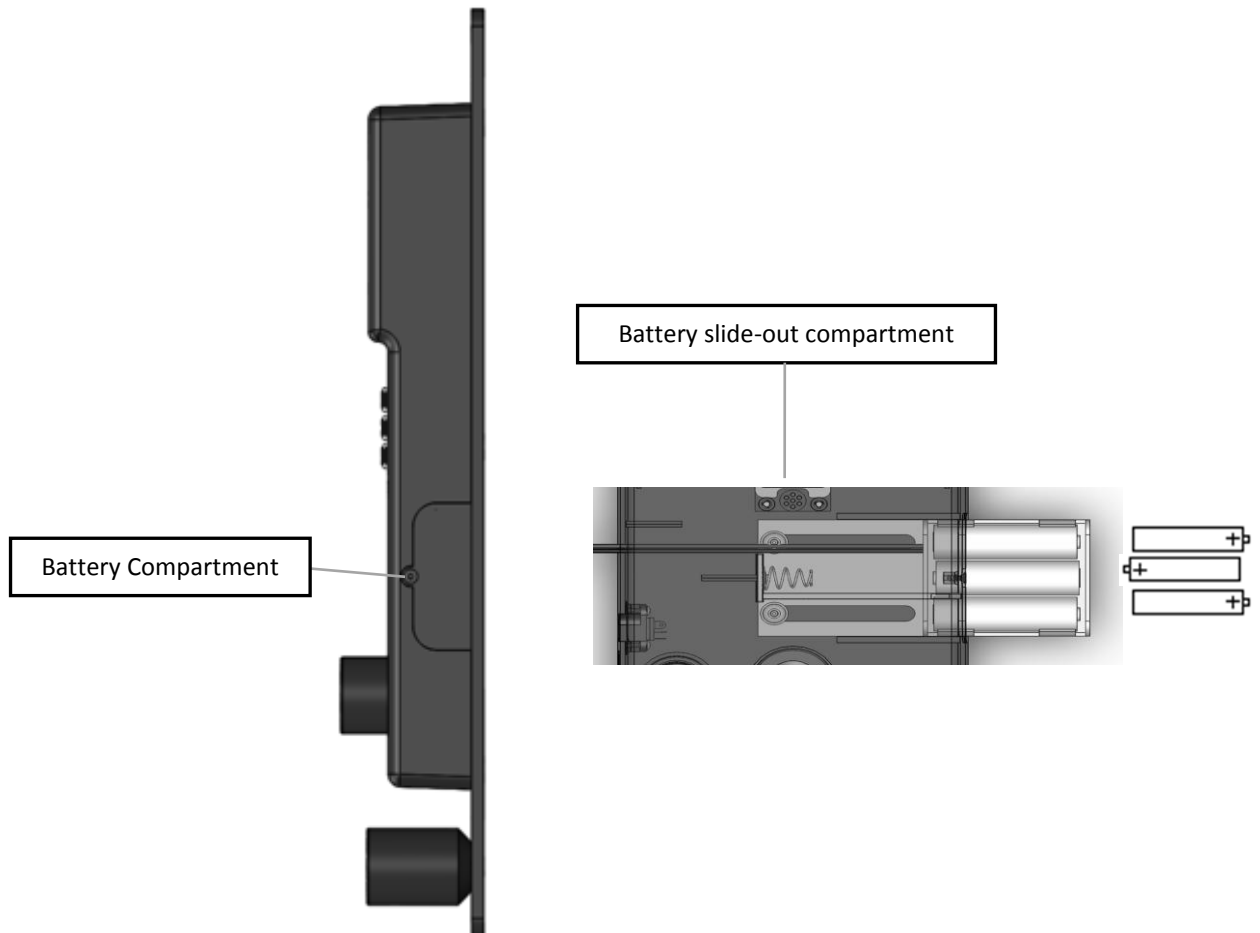
*Note: Calibration menu is password protected. Contact the CDI Repair Center regarding Calibration.*




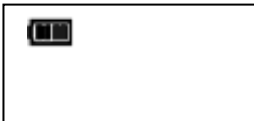
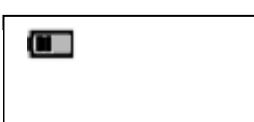
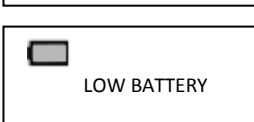
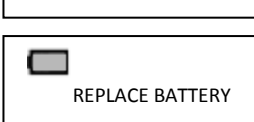
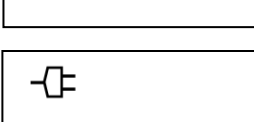
## • Battery Replacement

### Replace with three "AA" cells only.

- Do not attempt to recharge alkaline cells.
- Do not mix different battery types.
- Replace all batteries at same time.
- Store DTC in dry place.
- Remove batteries when storing DTC unused longer than 3 months.



*Note: When Replace Battery screen is displayed DTC will no longer operate until batteries are replaced. Only **POWER**  button functions which immediately turns off DTC.*

100% BATTERY	
50% BATTERY LEVEL	
LOW BATTERY	
REPLACE BATTERY	
A/C Power	

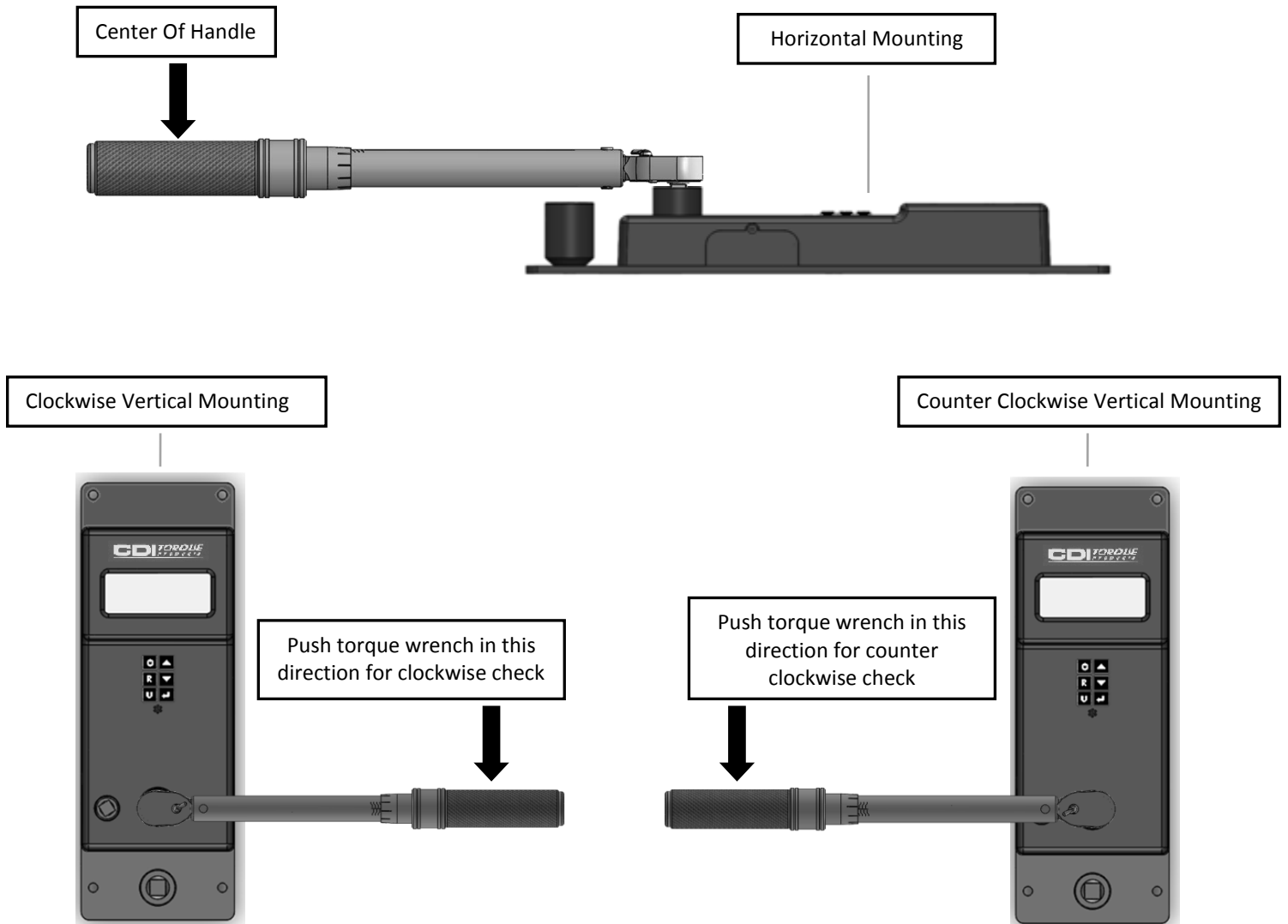
*Optional Power Adapters.*

When A/C or D/C power Adapters are used, A plug symbol will appear In LCD screen and checker does not enter sleep mode.

## DTC Orientation

### Proper Use

- Have a solid balanced stance.
- Push torque wrench at center of handle.
- When torque wrench reaches audible click or buzz release torque wrench.
- Push torque wrench slowly and evenly.



## ● CERTIFICATION

This DTC was calibrated at factory using torque calibration system that is traceable to National Institute of Standards and Technology (N.I.S.T.). Testing parameters comply with ISO 6789:2003 and ASME B107:300-2010 (B107.29).

**IMPORTANT!** Calibration events are recorded in wrench memory which provides evidence to void factory certification of compliance.

## ● MAINTENANCE / SERVICE

Clean DTC by wiping with a damp cloth. DO NOT use solvents, thinners or carburetor cleaners. DO NOT immerse in anything.

Service, repair and calibration are to be done by CDI Service Center only. Contact your CDI Torque Products representative.

## ● CALIBRATION

Contact your CDI sales representative for calibration services.

**This page intentionally left blank.**



**This page intentionally left blank.**

**This page intentionally left blank.**

## EC Declaration of Conformity

The undersigned representing the following supplier:

Snap-On Specialty Tools  
19220 San Jose Ave.  
City of Industry, CA 91748  
USA

Herewith declare that the Products:

Series: DTC (Digital Torque Checker)  
Models: 2503-F-DTC

Powered by battery or by AC Adapter.

These products are in conformity with the provisions of the following EC directives when installed in accordance with the installation instructions contained in the product documentation.

2009/19/EC - EMC Directive  
2011/65/EU - Restriction of certain hazardous substances (RoHS).  
2012/19/EU - Waste electrical and electronic equipment (WEEE).



And that the standards referenced below have been applied:

EN 61326-1:2013	Electrical equipment for measurement, control and laboratory use. EMC requirements - General requirements.
EN 55011; Ed. 5.1:2010	Industrial, scientific and medical equipment. Radio-frequency disturbance characteristics. Limits and methods of measurement - Radiated Emissions.
EN 61000-4-2:2008-12	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test.
EN 61000-4-3; Ed. 3-2:2010-04	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test
EN 61000-4-4;2012-04	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques – Electrical Fast Transient
EN 61000-4-5; Ed. 2.0:2005-11	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Electrical Surge Test
EN 61000-4-6; Ed. 3.0:2008-10	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Conducted Immunity
EN 61000-4-8; 2009-09	Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test
EN 61000-4-11; Ed. 2.0:2004-03	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Line Voltage Drop-Out

Year of CE marking: 2014

Company Authorized to Compile the Technical File:

Snap-on Tools Company  
2801 80<sup>th</sup> Street  
Kenosha, WI 53141-1410, U.S.A.

The authorized representative located within the community is:

Matthew Law  
Snap-on Tools LTD.  
Telford Way Industrial Estate  
Kettering, Northants  
NN16 8SN  
United Kingdom

Director, Engineering: Nathan Lee  
Snap-on Specialty Tools  
19220 San Jose AVENUE  
City of Industry CA, 91748  
August 2014

Signature: 



19220 San Jose Ave.  
City of Industry, CA 91748  
Phone: 626-965-0668  
Fax: 626-965-2410  
Email: sales@cditorque.com  
Website: www.cditorque.com

**Made in USA with US and Global Components**

**IMPORTANT ENVIRONMENTAL NOTES:**



1. THIS EQUIPMENT MAY CONTAIN HAZARDOUS MATERIALS WHICH CAN BE HARMFUL TO THE ENVIRONMENT.
2. DO NOT DISPOSE OF THIS EQUIPMENT AS MUNICIPAL WASTE. RETURN IT TO DISTRIBUTOR OR A DESIGNATED COLLECTION CENTER

**THANK YOU FOR CARING ABOUT OUR ENVIRONMENT!**

**Snap-on Tools Company**  
Kenosha, WI 53141-1410 USA

20-3325-CDI REV. -



**Printed in USA**  
14-10