



# Preset Type Torque Wrench

	1/4" Sq. Drive	T2MC50	T2MC150		
Model	3/8" Sq. Drive	T3MC150	T3MC200	T3MC600	T3MC750
		T3MC1000	T3MF75		
	1/2" Sq. Drive	T4MC600	T4MC750	T4MC1200	T4MC1800
		T4MC2500	T4MF75	T4MF100	T4MF150
	3/4" Sq. Drive	T6MC2500	T6MF250		

## Instruction Manual No. 1604



- Read this instruction manual before use and operate wrench after full understanding of the contents.
- Preserve the instruction manual at designated place so that it may be referred again at any time upon necessity.

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Thank you for purchasing TONE preset-type Torque Wrench.

- TONE Preset-type Torque Wrenches are for tightening bolts and nuts.
- Mechanical digital indication device helps to reduce wrong torque setting.
- Tightening torque management is done easily by just checking setting torque.
- When reaching preset torque, the wrench makes a clicking sound as well as a light retroaction.
- Repeated operation is available at the same torque setting value.

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- Read the instruction manual carefully before use.
  - Keep the manual carefully for easy and quick reference.
  - If the manual is lost or becomes illegible, or if additional manuals are required, contact your distributor.

If you have any questions about the products or the contents of this instruction manual, contact your distributor.

## Safety Instruction

This manual specifies three (3) basic safety instructions.



- Instructions are classified by degree of risk and described as follows.



Danger is used to indicate threatening dangerous or unsafe practices which could immediately result in severe personal injury or death in the worst case.



Warning is used to indicate hazardous or unsafe practices which could result in severe personal injury or death in the worst occasion.



Caution is used to indicate hazardous or unsafe practices which could result in personal injury or product or property damage.

Even if the risk is classified as  , risk could become more serious result depending on conditions. Make sure to follow all instructions when using.

# Precautions for Use

TONE Preset-type Torque Wrench is a Torque Wrench only for tightening bolts and nuts.

## WARNING

● Use in clockwise direction only.

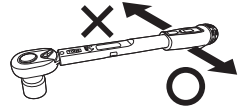
● Beware of fall down accidents when working at a high place.

● Never use the torque wrench on live lines.

● Never use the torque wrench with extension pipes.

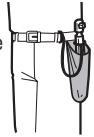
● Switch over the direction completely.

- The torque wrench is only for tightening. Never use the torque wrench for loosening operation.



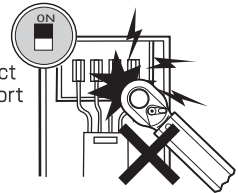
Failure to follow this instruction may result in malfunction and injury.

- Confirm that no one is underneath the working site before operation.



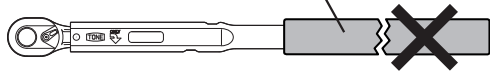
Failure to follow this instruction may result in fall down accidents.

- The torque wrench is not insulated. Be sure to disconnect power source to prevent short circuit or electric shock.



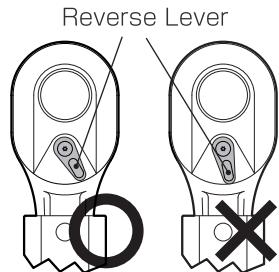
Failure to follow this instruction may result in electric shock.

extension pipes.



Failure to follow this instruction may result in malfunction and injury.

- Otherwise teeth of the gear may be broken or gearing system may be idled.



Failure to follow this instruction may result in malfunction and injury.

# Precautions for Use

## WARNING

● Maintain the torque wrench.

● Torque accuracy may not be precise as before if the torque wrench is not in service for a long time.

○ Keep wrench handle clean, dry and free of oil or grease when using.

Failure to follow this instruction may result in injury.

○ Recalibration is highly recommended before use.

Failure to follow this instruction may result in over torque or inadequate torque output.

## CAUTION

● Set torque value within specified torque range.

● Do not apply torque beyond maximum torque value.

● Apply torque slowly.

○ Scale of the torque wrench can be moved beyond specified torque range as backlash and play in a mechanical linkage, however, setting of preset torque can only be done within specified torque range.

**Example)** For T3MC150  
Specified torque range :  
30 ~ 150lb·in

For T6MF250  
Specified torque range :  
50 ~ 250lb·ft

below min **24**

below min **46**

beyond max **158**

beyond max **260**

Failure to follow this instruction may result in breakage.

○ Do not use the torque wrench beyond its rated specifications.

Over torque may invite malfunction and injury.

○ Never apply torque with quick motion or putting weight on the torque wrench.



Failure to follow this instruction may result in imprecise torque accuracy, malfunction of the wrench and/or injury.

# Precautions for Use

## ⚠ CAUTION

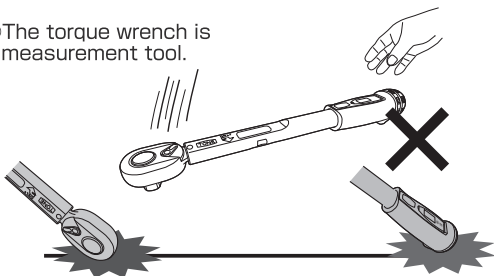
- Do not use the torque wrench for purposes not intended. Do not abuse the torque wrench.

- Do not use torque wrench in water, high-temperature and humidity condition, or nearby oil, chemical and solvent.

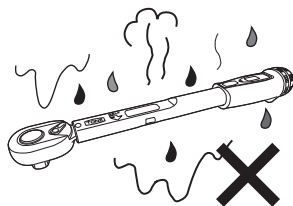
- Grip the handle at loading point marked on the handle.

- Do not use any adaptors.

- The torque wrench is measurement tool.

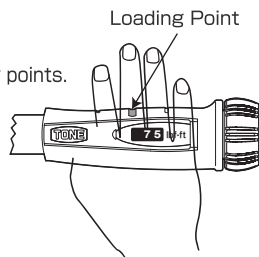


Failure to follow this instruction may result in imprecise torque accuracy, malfunction of the wrench and/or injury.



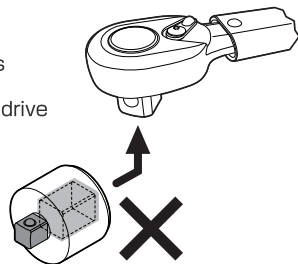
Failure to follow this instruction may result in imprecise torque accuracy, malfunction of the wrench and/or injury.

- Output torque value varies depending on loading points.



Failure to follow this instruction results in inadequate torque output.

- Never use adaptors especially the one has smaller output square drive than the square drive on the torque wrench.



Failure to follow this instruction may result in injury due to damage of the adaptors.

# Precautions for Use

## CAUTION

● Do not use any extension bars.

● Insert sockets to the square drive of the torque wrench completely.

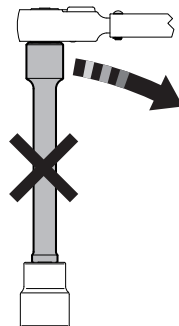
● Stop applying torque when click sound is heard.

● Do not disassemble or modify the torque wrench.

● Exercise the torque wrench before use.

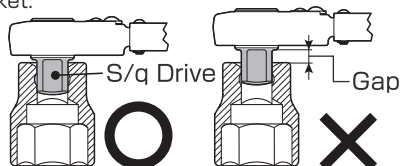
● Keep work area clean.

○ Never use extension bars as it is very dangerous when they are tilted or bended.



Failure to follow this instruction may result in breakage of the extension bar and torque fluctuations.

○ There should be no gap between the square drive and the socket.



The gap invites injury or breakage of the square drive.

○ Immediately stop applying torque when click sound is heard. Further tightening will end up with over torque.

Failure to follow this instruction may result in malfunction.



Failure to follow this instruction may result in malfunction or accidents.

○ Exercise before use is highly recommended for precise torque output especially when using brand new torque wrench.

Failure to follow this instruction may result in torque fluctuations.

○ Cluttered areas invite accident or injury.

Failure to follow this instruction may result in injury.

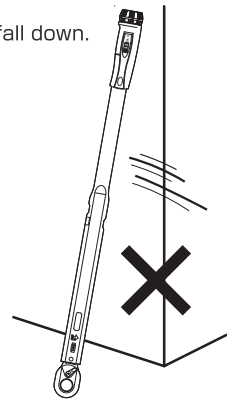
# Precautions for Use

## ⚠ CAUTION

● Do not lean the torque wrench on a wall or machines.

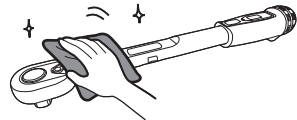
○ The torque wrench could fall down.

Failure to follow this instruction may result in injury.



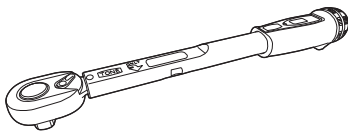
● After using, set torque value to the minimum and then store the torque wrench in a designated place.

○ Clean up the torque wrench after using and then store it in the case. The designated place should be dry location.

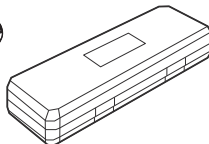


Failure to follow this instruction may result in torque fluctuations, malfunction or injury.

# Contents of Packing



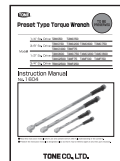
● Main Body



● Plastic Case



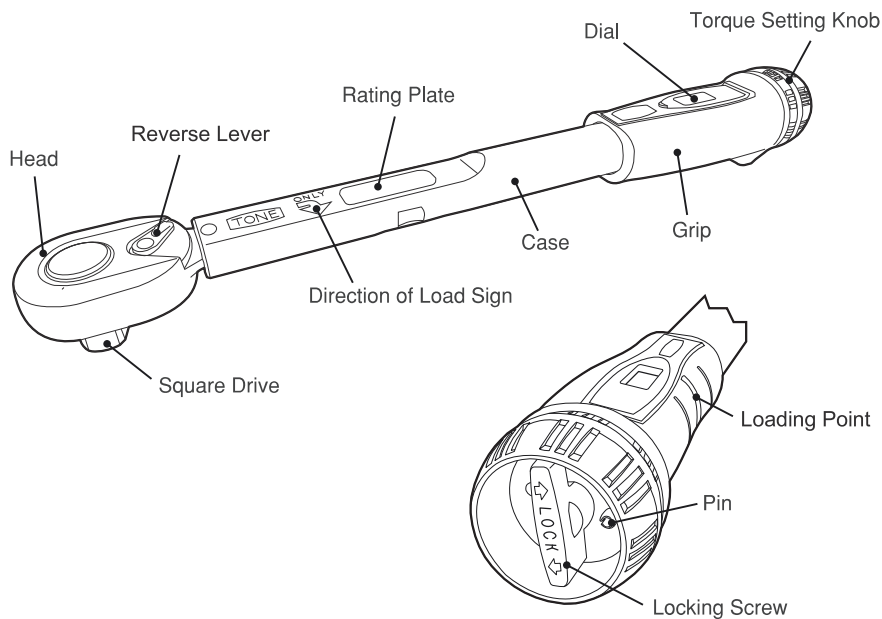
● Calibration Certificate



● Instruction Manual

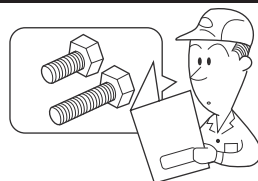


# Part Name



## Before Use

Confirm required torque value for the bolt/nut to be tightened. If torque value is not given, contact bolt manufacturers or calculate it with referring a formula below.

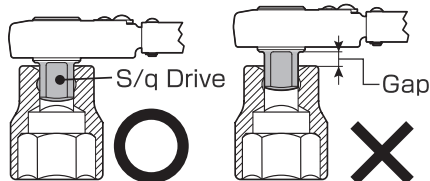


$$T = K \cdot D \cdot N$$

T: Tightening Torque (lbf-in, lbf-ft)  
 K: Torque Coefficient  
 D: Bolt Diameter (in, ft)  
 N: Bolt Tension (lbf)

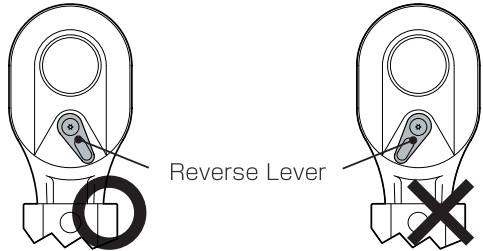
## Operating Procedure

- ① Insert sockets to the square drive of the torque wrench completely.



# Operating Procedure

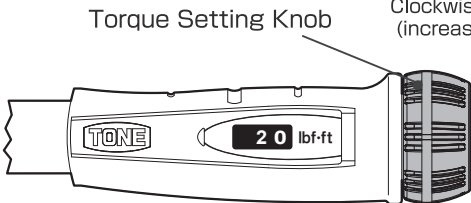
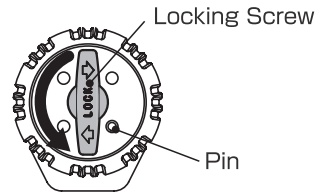
② Confirm the position of Reverse Lever as shown in the figures below.



③ Torque Setting

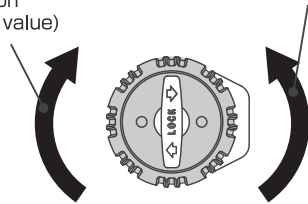
- Turn the locking screw in a counterclockwise direction until it hits the Pin.
- Set target torque with adjusting torque setting knob.

The target torque is visible at graduation.

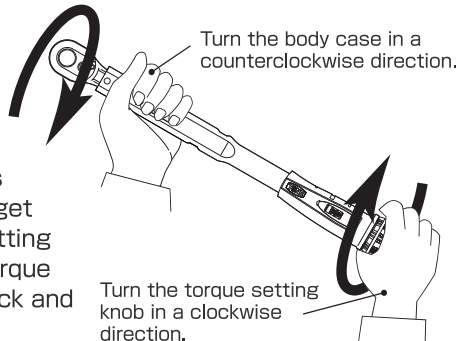


Clockwise direction  
(increase torque value)

Counterclockwise direction  
(decrease torque value)



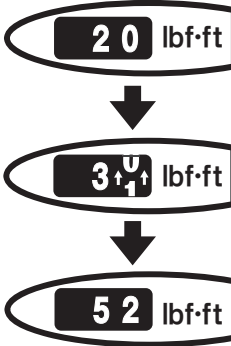
Turning the torque setting knob in a clockwise direction gradually becomes hard as the maximum torque approaches. In this case, according to the right side drawing, turning the torque setting knob and a body case as well make it much easier to set the target torque. In case of turning the torque setting knob at out of specified torque range, torque setting mechanism becomes to be stuck and breakdown.



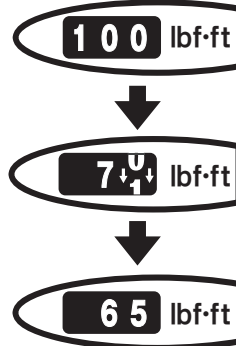
# Operating Procedure

## Torque Setting example by T4MF100

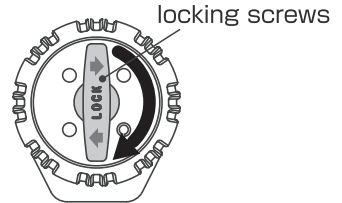
In case of setting target torque from 20lbf-ft to 52lbf-ft, keep turning the torque setting knob in a " clockwise direction " until 52lbf-ft is visible.



In case of setting target torque from 100lbf-ft to 65 lbf-ft, keep turning the torque setting knob in a " counterclockwise direction " until 65lbf-ft is visible.

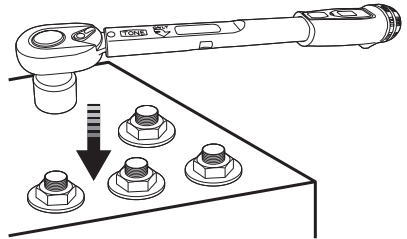


- Turn the locking screws in a clockwise direction and lock it.

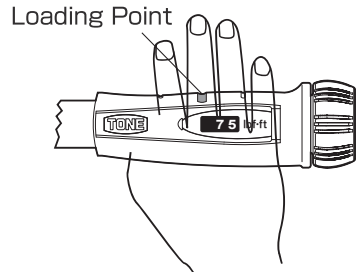


The torque setting is completed.

- ④ Slide the socket over the bolts and nuts to be tightened.

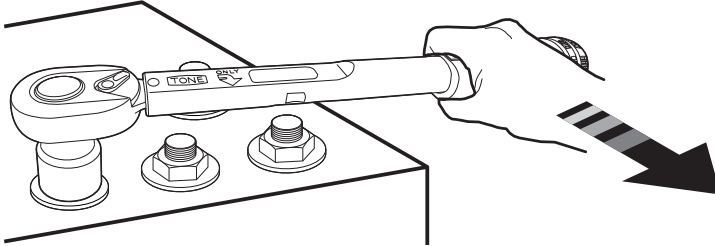


- ⑤ Grip at loading point and turn the torque wrench in a clockwise direction slowly.



## Operating Procedure

- ⑥ When reaching preset torque, the wrench makes a clicking sound as well as a light retroaction. Immediately stop applying torque when click sound is heard. Further tightening will end up with over torque.



### ⚠ CAUTION

- **Apply torque slowly. Never apply torque with quick motion or putting weight on the torque wrench.**  
Failure to follow this instruction may result in imprecise torque accuracy, malfunction of the wrench and /or injury.
- **Be aware that applying torque more than the preset torque may happen if the preset torque is low torque value. This is because a clicking sound or a light retroaction is hard to be detected.**
- **After using, set torque value to the minimum and store the torque wrench in a designated place.**  
Failure to follow this instruction may result in deterioration of torque accuracy and durability of the torque wrench.

## Repair & Maintenance

- The torque wrench needs to be repaired when the clicking sound and the light retroaction are lost.
- The precision of  $\pm 4\%$  comes up to the standard after repair.
- Accuracy might become inaccurate in case that the torque wrench is not in use for a long time or is not used properly. Contact your distributor periodically for maintenance to keep the accuracy of the torque wrench.
- Carry out overhaul once a year or 100,000 tightening, whichever comes first.
- Contact your distributor for details of handling the torque wrench.

# Expiry Date of the Calibration Certificate

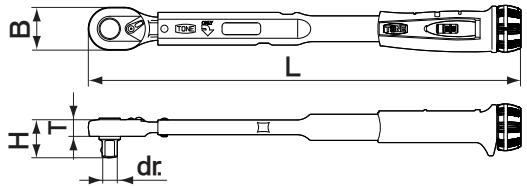
## 1. When not in use.

The calibration certificate expires 2 years from the date of calibration.

## 2. When coming into use less than 2 years from the date of calibration on the calibration certificate.

The calibration certificate expires 1 year from the date of coming into use, or up to 100,000 tightening that is mentioned in "Repair and Maintenance" section.

# Specifications

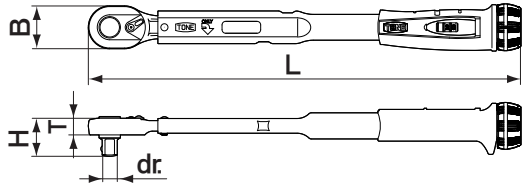


Model	Torque Range Max-Min lbf·ft	Incre- ments	Square Drive dr. mm	Head Width B mm	Head Height H mm	Head Thickness T mm	Over all Length L mm	Weight kg
T3MF75	15~ 75	1	9.5	36.0	26.4	14.0	387	0.75
T4MF75	15~ 75	1	12.7	36.0	30.4	14.0	387	0.77
T4MF100	20~100	1	12.7	36.0	30.4	14.0	450	0.82
T4MF150	30~150	2	12.7	45.2	34.0	17.8	526	1.40
T6MF250	50~250	2	19.0	45.2	41.5	17.8	716	1.89

Accuracy: +/-3%

Load Direction: Clockwise Direction only

# Specifications



Model	Torque Range Max-Min lbf·in	Incre- ments	Square Drive dr. mm	Head Width B mm	Head Height H mm	Head Thickness T mm	Ovar all Length L mm	Weight kg
T2MC50	10~ 50	1	6.3	24.0	18.3	10.4	222	0.26
T2MC150	30~ 150	2	6.3	24.0	18.3	10.4	253	0.29
T3MC150	30~ 150	2	9.5	24.0	21.5	10.4	253	0.30
T3MC200	40~ 200	2	9.5	24.0	21.5	10.4	253	0.30
T3MC600	100~ 600	5	9.5	36.0	26.4	14.0	308	0.52
T4MC600	100~ 600	5	12.7	36.0	30.4	14.0	308	0.55
T3MC750	150~ 750	10	9.5	36.0	26.4	14.0	387	0.75
T4MC750	150~ 750	10	12.7	36.0	30.4	14.0	387	0.77
T3MC1000	200~1000	10	9.5	36.0	26.4	14.0	387	0.75
T4MC1200	200~1200	10	12.7	36.0	30.4	14.0	450	0.82
T4MC1800	300~1800	20	12.7	45.2	34.0	17.8	526	1.40
T4MC2500	500~2500	20	12.7	45.2	34.0	17.8	716	1.88
T6MC2500	500~2500	20	19.0	45.2	41.5	17.8	716	1.89

Accuracy: +/-3%

Load Direction: Clockwise Direction only

MEMO

A series of 21 horizontal dashed lines for writing.

**TONE® TONE CO., LTD.**



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e-mail: [overseas@tonetool.co.jp](mailto:overseas@tonetool.co.jp)

● Specifications and the design are subject to change without notice. ●