

LX-183 USER MANUAL

## ATTENTION

Please read and understand entire manual, including all safety information, before using torque wrench. This tool is a precision measuring instrument. Handle with care and store properly. Do not attempt to increase leverage of this wrench with any other device. Failure to follow all instructions could result in damage to torque wrench, property damage, or injury.

Wrench is shipped ready to use, calibrated and tested to an accuracy of $+/-4 \%$. To maintain this accuracy, it is important that wrench is stored at lowest torque setting, 10 ft .-lb. ( 13.6 Nm ). This setting relieves extra tension on the internal spring, reducing fatigue that can adversely affect accuracy.

## INTRODUCTION

A. Square Ratchet Head
B. Handle Body
C. Main Scale
D. Micrometer Scale
E. Knurled Handle
F. Lock Nut


This is a dual-range torque wrench marked with feet pounds (ft.-lb.) and Newton meters ( Nm ) on opposite sides of handle.

## SETTING TORQUE READING

Foot Pounds (Example of setting 95 ft -lb)

1. Locate lock nut on the end of handle. Unlock knurled handle by turning lock nut counterclockwise.

2. Turn knurled handle until its top edge is even with the horizontal "90" mark on main scale and the " 0 " mark on micrometer scale is centered on vertical line of main scale.

3. The micrometer scale divides the main scale markings into 10 divisions. Every micrometer scale marking equals 1 ft . lb .
To increase torque from 90 to 95, turn micrometer handle clockwise until "5" mark is centered on vertical

FOOT POUNDS
 line of main scale.
90 ft .lb. (main scale) +5 ft.-lb. (micrometer scale) $=$ 95 ft . -lb.
4. Lock torque setting by turning lock nut clockwise until snug. Wrench is now set to measure 95 ft .-lb. of torque and ready to use.

## NEWTON METERS

## (Example of setting 80.0Nm)

Setting desired torque on the Nm scale uses the same procedure described above for ft.-lb. scale. The micrometer scale divides the main scale markings into 10 divisions. Every micrometer scale marking equals 1.36 Nm .
To set a torque value of 80.0 Nm , turn knurled micrometer handle until top is aligned with "67.8" mark on main scale and the " 0 " mark on micrometer scale is centered on vertical line of main scale. To increase torque from 67.8 Nm to 80.0 Nm , turn micrometer handle clockwise until the "9" mark is centered on vertical line of main scale. 80.0 Nm - 67.8 $\mathrm{Nm}=12.2 \mathrm{Nm} .12 .2 \mathrm{Nm}$ / 1.36 = 9 micrometer scale markings. Wrench is now set to measure 80.0 Nm of torque and ready to use.


## WRENCH OPERATION

1. Install proper socket/attachment on the square drive and apply to nut/bolt. Make sure to keep your tightening hand centered on the knurled handle for accurate results.

2. Operate the wrench to tighten nut/bolt and slow operation when they became snug to a smooth and steady pull. When a 'CLICK' or 'IMPULSE' is heard or felt, stop pulling wrench and release pressure on handle.

3. Wrench will automatically reset for next operation after pressure is released.

## 4. IMPORTANT OPERATION NOTICE:

Operating wrench too quickly or with too much force may cause you to miss the exact torque setting.
Do not continue to pull after torque setting is reached. Doing so will damage wrench internal mechanism.
At low torque settings, click can be subtle. Use wrench in a quiet environment.
Do not use torque wrench to loosening fasteners.
Torque is measured in CLOCKWISE direction only!
Tighten/adjust lock nut and knurled handle by hand only.

## MAINTENANCE AND STORAGE

1. If wrench has not been used for a long period of time, operate it several times at a low torque setting. This will allow internal lubricant to recoat internal components.
2. Keep the Torque Wrench Scale at the lowest setting when not in use. The lowest setting: 10 ft .-lb. mark on the main scale and ' 0 ' mark on the micrometer scale. DO NOT turn handle below lowest
 torque setting.
3. This wrench is a precision measuring instrument. Take care to operate wrench correctly. Store in a clean, dry environment.
4. Clean wrench by wiping with a clean, dry, lint-free cloth. Do not immerse in any type of liquid or cleaner. This may damage the internal components of the wrench.

| FOOT <br> POUNDS <br> (ft.-lb.) | $\begin{aligned} & \text { INCH } \\ & \text { POUNDS } \\ & \text { (in.-Ib.) } \end{aligned}$ | NEWTO METER |  | NEWTON METERS ( Nm ) |
| :---: | :---: | :---: | :---: | :---: |
| 5 | 60 | 6.78 |  | 10 |
| 10 | 120 | 13.55 |  | 20 |
| 15 | 180 | 20.33 |  | 30 |
| 20 | 240 | 27.11 |  | 40 |
| 25 | 300 | 33.89 |  | 50 |
| 30 | 360 | 40.67 |  | 60 |
| 35 | 420 | 47.45 |  | 70 |
| 40 | 480 | 54.23 |  | 80 |
| 45 | 540 | 61.01 |  | 90 |
| 50 | 600 | 67.79 |  | 100 |
| 55 | 660 | 74.56 |  | 110 |
| 60 | 720 | 81.34 |  | 120 |
| 65 | 780 | 88.12 |  | 130 |
| 70 | 840 | 94.90 |  | 140 |
| 75 | 900 | 101.68 |  | 150 |
| 80 | 960 | 108.46 |  | 160 |
| 85 | 1020 | 115.24 |  | 170 |
| 90 | 1080 | 122.02 |  | 180 |
| 95 | 1140 | 128.80 |  | 190 |
| 100 | 1200 | 135.58 |  | 200 |
| 105 | 1260 | 142.36 |  | 210 |
| 110 | 1320 | 149.13 |  |  |
| 115 | 1380 | 155.91 |  |  |
| 120 | 1440 | 162.69 |  |  |
| 125 | 1500 | 169.47 |  |  |
| 130 | 1560 | 176.25 |  |  |
| 135 | 1620 | 183.03 |  |  |
| 140 | 1680 | 189.81 |  |  |
| 145 | 1740 | 196.59 |  |  |
| 150 | 1800 | 203.37 |  |  |
| CONVERSIONS |  |  |  |  |
| 1 ft .-lb. $=$ | $1 \mathrm{in} .-\mathrm{lb}$ |  |  | $\mathrm{m}=$ |
| $0.138 \mathrm{~m}-\mathrm{kg}$ | 0.0833 | ft.-lb. |  | 7 ft .-lb. |
| 12.0 in.-lb. | 0.113 |  |  | in.-lb. |
| 1.35 Nm | 0.0115 | m-kg |  | $2 \mathrm{~m}-\mathrm{kg}$ |
| 13.8 cm-kg | 1.15 cm | -kg |  | $\mathrm{cm}-\mathrm{kg}$ |

## CAUTION:

PRECISION TOOL - Do not use for extreme operation like breaking loose stuck fasteners. PRACTICE FIRST - Try wrench on a non-critical fastener first to learn how it works.

| INCH <br> POUNDS <br> (in.-lb.) | FOOT <br> POUNDS <br> (ft.-Ib.) | NEWTON <br> METERS <br> (Nm) |
| :---: | :---: | :---: |
| 100 | 8.34 | 11.29 |
| 150 | 12.50 | 16.94 |
| 200 | 16.67 | 22.59 |
| 250 | 20.83 | 28.24 |
| 300 | 25.00 | 33.89 |
| 350 | 29.17 | 39.54 |
| 400 | 33.33 | 45.19 |
| 450 | 37.50 | 50.84 |
| 500 | 41.67 | 56.49 |
| 500 | 45.83 | 62.14 |
| 600 | 50.00 | 67.79 |
| 650 | 54.16 | 73.44 |
| 700 | 58.33 | 79.09 |
| 750 | 62.50 | 84.73 |
| 800 | 66.67 | 90.38 |
| 850 | 70.83 | 96.03 |
| 900 | 75.00 | 101.68 |
| 950 | 79.16 | 107.33 |
| 1000 | 83.33 | 112.98 |
| 1050 | 87.50 | 118.63 |
| 1100 | 91.67 | 124.28 |
| 1150 | 95.83 | 129.93 |
| 1200 | 100.00 | 1358 |
| 1250 | 104.16 | 141.23 |
| 1300 | 108.33 | 146.88 |
| 1350 | 112.50 | 152.53 |
| 1400 | 116.67 | 158.17 |
| 1450 | 120.83 | 163.82 |
| 1500 | 125.00 | 169.47 |
| 1550 | 129.16 | 175.12 |
| 1600 | 133.33 | 180.77 |
| 1650 | 137.50 | 186.42 |
| 1700 | 141.67 | 192.07 |
| 1750 | 145.83 | 197.72 |
| 1800 | 150.00 | 203.37 |
|  |  |  |

OPERATE SLOWLY - Wrench "clicks" to notify when torque value is reached. Wrench does not stop applying force automatically.
LISTEN AND FEEL - At low torque settings clicks is subtle. Learn to hear and feel the click. STORE AT LOWEST SETTING - To maintain calibration, set wrench to lowest torque value before storage.
MEASURES IN ONE DIRECTION - Wrench only measures torque in right hand (clockwise) direction.

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