

FEATURES

- ◆ Limits torque applied with reduced-friction release mechanism.
- ◆ Can be used with confidence in all automotive, aircraft, marine and industrial applications.
- ◆ Lock ring prevents accidental change of torque setting.
- ◆ Pliable handgrip of soft Thermoplastic rubber protects painted surfaces and simplifies use with greasy hands. Resistant to mechanical damage and impervious to automotive fluids such as gasoline, oil, kerosene, etc.
- ◆ Ratchet action requires only 10 degrees handle travel.
- ◆ Extra strength ratchet design for long life.
- ◆ May be used continually at maximum torque capacity.
- ◆ Wrench cannot be damaged by normal handling or dropping from workbench.
- ◆ Mechanism protected from routine contamination.
- ◆ Finished with tough, durable chromium-nickel plating.
- ◆ All parts corrosion proofed.
- ◆ Wrench made of highest quality CR-MOLY steel.

SUGGESTIONS

Proper use of this professional torque wrench will give you complete satisfaction in its performance and reliability. Following are some helpful tips:

1. Greater torque accuracy is assured by gripping it properly. Grasp the GRIP, not the SHAFT, and pull smoothly.
2. Each torque wrench is lubricated before leaving the factory. If it has not been used for some time, it should be operated several times to re-distribute the lubricant within the working mechanism.
3. Never attempt to turn the GRIP when the LOCK RING is in the "LOCK" position.
4. Never set for higher or lower torque values than those indicated on your wrench.
5. For greater accuracy, clean all thread surfaces and remove any burrs on the fasteners being used.
6. **WARNING-** Never use your torque wrench to apply more torque than its rated capacity.
7. It is not necessary to return this wrench to its lowest calibrated value after use unless it is to be stored for an extended period of time.

DO NOT OVERTORQUE

CERTIFICATION

This torque wrench is certified to be calibrated prior to shipment to accuracy of +/-4% in the right hand direction on readings 20% to 100% of capacity. On readings below 20% of capacity, the accuracy is +/- two scale increments.

LIMITED WARRANTY

If within 90 days from the date of purchase, this wrench fails due to defects in **materials** or **workmanship**, we will repair and recalibrate it free of charge. After 90 days and until one year from the date of purchase we will repair any defect in material or workmanship in the torque wrench free of charge. This warranty does not include recalibration.

PROOF OF PURCHASE MUST BE INCLUDED WITH EACH REQUEST FOR WARRANTY SERVICE.

For warranty service send the wrench to:

In the U.S.A.

Angle Repair & Calibration
175 Angle Drive
Beckley, WV 25801
www.anglerepair.com
972-864-6762

In Canada

ATG Torque Repair
7631 Bath Road
Mississauga, ON L4T3T1
1-866-691-6212

REPAIR AND CALIBRATION SERVICE

All torque wrenches should have periodic accuracy checks and recalibration as required. This should be done at least once a year or every 5000 torque application cycles, whichever comes first.

Recalibration is also recommended after any abnormal handling. For service send the wrench to one of the Warranty Centers listed above or contact our Customer Service department at (800)866-5287 for a list of additional Approved Repair Centers.

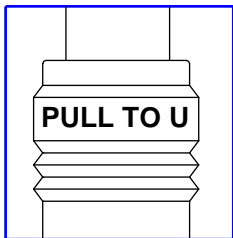
ATD-112 INDUSTRIAL DUTY MICRO-ADJUSTING TORQUE WRENCH

OPERATING INSTRUCTIONS

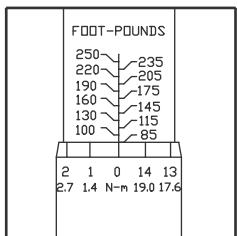
1. **STUDY THIS BOOKLET CAREFULLY BEFORE ATTEMPTING TO OPERATE THIS WRENCH.**
2. **NEVER APPLY MORE TORQUE THAN THE MAXIMUM SCALE SETTING.**
3. **This Torque Wrench is designed for manual tightening of threaded fasteners only. DO NOT USE IT AS A NUT-BREAKER OR FOR ANY OTHER PURPOSE.**
4. **Over torqued or defective fasteners and sockets may suddenly break. Ratchets on plain drives that are improperly engaged, worn out, damaged or over torqued, may slip or break. TO PREVENT INJURY, KEEP PROPER FOOTING AND BALANCE AT ALL TIMES. DO NOT USE THE WRENCH IN PLACES FROM WHICH YOU MAY FALL OR SLIP OR AROUND ROTATING MACHINERY.**
5. **This wrench will not prevent you from applying more torque than set, it is not a torque limiting tool. Learn how different amounts of torque "feel", so you will reduce the possibility of damage and/or injury due to accidental over torquing.**
6. **APPLY FORCE TO THE GRIP ONLY. DO NOT USE "CHEATER BARS" (A Piece of pipe placed over the hand grip for more leverage).**
7. **There are no user-serviceable components inside the wrench. Disassembling the wrench or making any adjustments will result in the loss of accuracy, and will void the warranty.**

ADJUSTING YOUR MICROMETER TORQUE WRENCH

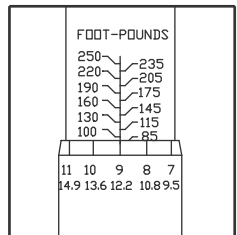
CAUTION- Do not turn the GRIP with the LOCK RING in the lock position. Damage to the adjusting mechanism may occur.



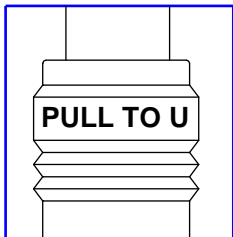
1. To UNLOCK, hold Handle GRIP with one hand and pull down LOCKING COLLAR in direction of arrow.



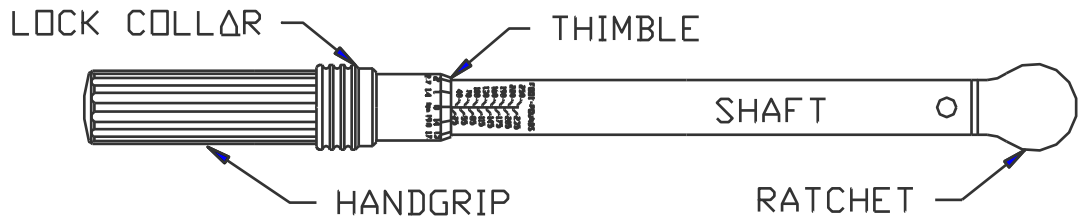
2. Rotate GRIP until the "0" on the THIMBLE SCALE reaches the primary number of the desired torque value on the SHAFT MAIN SCALE.



3. Continue rotating the GRIP if the desired torque value is between the primary numbers on the MAIN SCALE. Add the secondary number on the THIMBLE SCALE to the primary number on the MAIN SCALE to achieve the desired torque value.



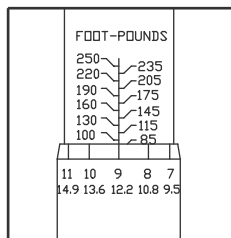
4. To lock wrench, release LOCK RING.



EXAMPLES OF TORQUE SETTINGS

NOTE: Many models have both American Standard and Metric scales on the same wrench.

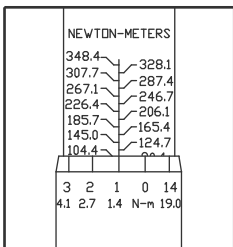
The MAIN SCALE **American** Standard graduations are on the front of the SHAFT and the THIMBLE SCALE graduations are closest to the beveled edge. The MAIN SCALE **Metric** graduations are on the reverse side of the SHAFT and the THIMBLE SCALE Metric graduations are below the American Standard graduations.



EXAMPLE - STANDARD

For a torque setting of 94 foot pounds, rotate GRIP until the "0" on the THIMBLE SCALE is aligned with the "90" on the "FT.LB." MAIN SCALE.

Continue rotating GRIP clockwise until the "4" on the THIMBLE SCALE is aligned with the center line on the "FT.LB." MAIN SCALE. The wrench is now set at 94 foot pounds. Put the LOCK RING in the lock position before using.



EXAMPLE - METRIC

For a torque setting of 105.8 Newton meters rotate the GRIP until the "0" on the THIMBLE SCALE is aligned with the 104.4 on the "N.m" MAIN SCALE.

Continue rotating the GRIP clockwise until the 1.4 on the Metric THIMBLE SCALE is aligned with the center line of the "N.m" MAIN SCALE.

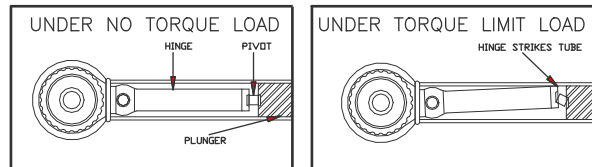
The wrench is now set at 105.8 N.m (104.4 + 1.4 = 105.8). Put the LOCK RING in the lock position before using.

HOW TO APPLY TORQUE

1. This Micrometer Adjustable Torque Wrench is designed so that when force is properly applied to the handgrip, an audible signal and/or impulse feel will indicate that the desired torque has been attained. **DO NOT** pull beyond this point.

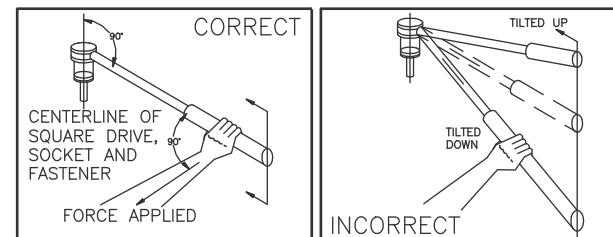
CAUTION: The audible signal and/or impulse feel is an indicator that the proper torque has been attained. Over torquing beyond these signals could cause fastener failure.

Additionally, when wrench is set at low end of the torque range, the degree of signal and impulse will be less than when set at the high end of the range. Therefore, care must be taken at low end of scale to hear signal or feel impulse.



2. To properly apply torque, attach socket securely on torque wrench square drive and position socket on the fastener so that tilting will not occur. Grasp the center of hand grip and apply a force perpendicular (90 degrees) to the torque wrench body and perpendicular (90 degrees) to the center line of the square drive, socket, and fastener.

NOTE: The common center line of the square drive, socket and fastener must be maintained while applying a steadily increasing force as shown in Figure in order to insure accurate torque readings via an audible signal or impulse feel.



WARNING: Do not tilt torque wrench handle during torquing operation. Tilting of torque wrench handle can result in inaccurate torque and/or over-torquing damage.

2. Turn the fastener down with a smooth and even force applied to the handle of the torque wrench (as described in fig.). As turning resistance increases pull more slowly. To assure accuracy, the fastener must be in motion when the torque measurement is made.

WARNING: USE OF NON-AXIAL EXTENSIONS THAT CHANGE THE EFFECTIVE LENGTH OF THE TORQUE WRENCH SUCH AS CROWFOOT ATTACHMENTS OR UNIVERSAL JOINTS WILL CHANGE THE TORQUE BEING APPLIED. DO NOT USE UNTIL YOU KNOW THE CONSEQUENCES.