GENERAL DESCRIPTION

The Micrometer Adjusting Torque Wrench indicates when the preset torque value has been reached by releasing the handle for a few degrees of free travel. This release or ‘give’ is usually accompanied by an audible ‘click’ sound and tells the operator to stop applying pressure.

On all models except 1/4” drive, the torque is adjusted by unlocking and turning the grip. The amount of torque is shown on two separate micrometer scales—one in English units, and the other in Metric units.

On 1/4” drive models, the torque is adjusted by pulling back, and turning the adjusting knob. The amount of torque is shown directly in English units only—two viewing windows—and for English settings, the other for Metric.

The wrench is equipped with a reversible ratchet head or a plain non-reversing head and may be used in both right and left hand modes. For safety, the ratchet mechanism is automatically disengaged in reverse, preventing damage to the user or the tool.

In addition, the wrench has a built-in torque display that can be calibrated to the manufacturer’s specifications. Other accessories that fit a multitude of fasteners are available, including ratchets, sockets, drive adapters, and other adapters to fit a multitude of fasteners. It can be used in automotive, marine, industrial, and other applications, both English and Metric.

The internal torque control mechanism is mounted on ball bearings and represents an improvement over the belt-type arrangement employed by other manufacturers. It has the ability to absorb backlash between the tee and the bearing, by shifting the collar slightly, and by the necessity of ‘breaking’ the wrench in after storage to ensure proper accuracy.

The ball bearings help to reduce these problems thus giving you a torque wrench which is more accurate, more consistent, and which stays in calibration longer than other torque wrenches.

The wrench housing is made from precision drawn steel which is heat treated for hardness and strength, polished, and chrome plated for corrosion protection and superior appearance. On 3/8” and smaller drive size models molded plastic grip is contoured to fit comfortably and securely into the hand.

EXAMPLES OF TORQUE SETTINGS

<table>
<thead>
<tr>
<th>English Scales</th>
<th>Metric Scales**</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-125 ft-lbs</td>
<td>55-170 Nm</td>
</tr>
<tr>
<td>25-100 ft-lbs</td>
<td>34-135 Nm</td>
</tr>
<tr>
<td>15-50 ft-lbs</td>
<td>20-68 Nm</td>
</tr>
<tr>
<td>10-25 ft-lbs</td>
<td>13-34 Nm</td>
</tr>
</tbody>
</table>

*Various models and accessories of wrenches are illustrated. Though they might be different in a particular wrench, the principles of following are the same.

**By necessity, metric scales are not calibrated in even numbers. Consequently, whereas English scales, tell the wrench at a reading closest to the desired value.

WARNING 1: Do not attempt to turn this grip while it is locked.

WARNING 2: Do not turn the grip more than one revolution—either below the lowest scale reading or above the highest scale reading.

TO SET TORQUE — ALL MODELS EXCEPT 1/4” DRIVE

1. Place the lock collar back to unlock the mechanism.
2. While holding the clockwise side in an unlocked position, turn the grip clockwise until a slight backlash is felt, and counterclockwise to the desired torque scale reading is indicated on the micrometer scale.
3. Lock the setting by releasing the lock collar.

TO SET TORQUE — 1/4” DRIVE

1. Put the adjusting knob out to unlock the mechanism.
2. While holding the adjusting knobs unlocked, turn it clockwise to increase the torque, and counterclockwise to decrease the torque. Counterclockwise is the desired torque scale reading is indicated on the micrometer scale.
3. Lock the setting by releasing and, if necessary, pushing the adjusting knob in. The locks might be turned slightly tight and then released to assure a proper engagement of teeth in the locking mechanism.

TO APPLY TORQUE

1. Attach the proper socket or other attachment to the drive. Set the reversing lever for the proper direction of operation.

2. Insert the socket or attachment onto the fastener to be torqued.

3. Utilizing the ratcheting head, you may ‘spinsmith’ the fastener until resistance is felt (ratchet head models only).

4. Holding the wrench by the GRIP ONLY, apply SLOW AND STEADY pull until a momentary release impulse is felt. Release tightening pressure right at this moment.

WARNING: At low torque settings the release is gentler and this usually gives a ‘hop’ back to the lock position. Keep the release as tight as possible BEFORE you try to avoid accidental over-tightening in damage. When using larger sockets or concentric wrenches, the wrench may be supported at the head (only) at the handle with no adverse effect to accuracy.

IMPORTANT SUGGESTIONS

1. Threads on bolts, nuts and other mating components should be clean and smooth. A lube applied to the threads and under the head of the bolt will produce more accurate and consistent results.

2. Never torque a fastener that is already tightened. Loose it first, then set to the desired value. The same applies to fasteners that were accidentally over-torqued.

3. When tightening many fasteners hold one component (engine head, plug, flanges, etc.) while tightening the other. This will help to maintain pressure on the mating surfaces.

4. Do NOT apply more torque than the rated capacity of the torque wrench. Do not use it as a pull-breaker!
CARE AND MAINTENANCE

1. A torque wrench must be used as an instrument and should be handled and stored with care. Do not throw it around, hammer it with, or use it as a pry bar.

2. The wrench is lubricated for life and should not be oiled. The only exception is the hex head which may be lubricated for smoother operation.

3. The plastic grip is not affected by petroleum products, but may be damaged by contact with industrial solvents. It may be cleaned with water and mild detergents. Do not immerse the wrench or ANY PORTION OF IT IN ANY LIQUID.

4. All torque wrenches should be periodically checked for accuracy. This should always be done after the wrench is subjected to abnormal handling or storage.

GENERAL TORQUE SPECIFICATION CHART FOR SIMILARLY MANUFACTURED TOOLS

<table>
<thead>
<tr>
<th>Inch Pounds</th>
<th>New</th>
<th>Old</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>11</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td>18</td>
<td>12</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td>24</td>
<td>16</td>
<td>20</td>
<td>25%</td>
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<tr>
<td>30</td>
<td>16</td>
<td>20</td>
<td>25%</td>
</tr>
<tr>
<td>36</td>
<td>20</td>
<td>25</td>
<td>25%</td>
</tr>
<tr>
<td>45</td>
<td>25</td>
<td>30</td>
<td>25%</td>
</tr>
</tbody>
</table>

GENERAL TORQUE SPECIFICATION CHART FOR IMPACT TORCH WRENCHES

<table>
<thead>
<tr>
<th>Inch Pounds</th>
<th>New</th>
<th>Old</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>11</td>
<td>12</td>
<td>9%</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>13</td>
<td>8%</td>
</tr>
<tr>
<td>18</td>
<td>12</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td>24</td>
<td>15</td>
<td>20</td>
<td>33.3%</td>
</tr>
<tr>
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<td>33.3%</td>
</tr>
<tr>
<td>36</td>
<td>20</td>
<td>25</td>
<td>25%</td>
</tr>
<tr>
<td>45</td>
<td>20</td>
<td>30</td>
<td>50%</td>
</tr>
</tbody>
</table>

LIMITED WARRANTY

If within 90 days from the date of purchase, this instrument fails due to defects in materials or workmanship we will repair or replace it at no charge. After 90 days, we will only replace it for one year from the date of purchase. Any defects in materials or workmanship in the torque wrench itself will be repaired or replaced at no charge. This warranty does not include recalibration.

PROOF OF PURCHASE MUST BE INCLUSIVE WITH ALL RETURNED TOOLS.

For warranty service and the wrench to:

In the U.S.A.
ATG Torque Repair
3000 West Kingsley Road
Garland, TX 75041
972-998-6585

In Canada
ATG Torque Repair
3000 West Kingsley Road
Mississauga, ON L4T 3T1
1-866-947-6212

ADJUSTING INSTRUCTIONS

1. STUDY THIS BOOKLET CAREFULLY BEFORE ATTEMPTING TO OPERATE THIS WRENCH.

2. NEVER APPLY MORE TORQUE THAN THE MAXIMUM RECOMMENDED.

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. Overloaded or defective fasteners and sockets may suddenly break. Ratchets or plain drivers that are improperly engaged may suddenly slip. Moreover, a fastener 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 AREARING OR 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,” will reduce the possibility of damage and/or injury due to accidental over-torquing.

6. APPLY FORCE TO THE GRIP ONLY AND NOT TO THE TAIL BAR (A partial application of hand grip).

7. There are no serviceable components inside the wrench. Disassembling the wrench or making any adjustments will result in the loss of accuracy and will void the warranty.

REPAIR AND CALIBRATION SERVICE
All torque wrenches, including those used on oilfield applications, must be checked periodically for accuracy handling and calibration 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 authorized Calibrators listed at end of manual.