

Dial Torque Analyzer Operation & Calibration Instructions

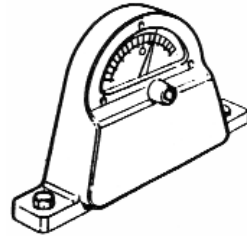
Rev 1.0

Dial Torque Analyzer

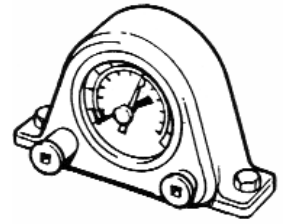
There are two different style Dial Torque Analyzers (TCA & DM). These torque analyzers are designed only for hand torque wrenches and screwdrivers. These torque testers are not suitable for power tools.

Mounting Dial Torque Analyzer

The Dial Torque Analyzer needs to be mounted securely on a level surface before operating. Immobilizing the torque tester is critical for the safety of the operator as well as for the accuracy of torque measurements during operation. A loose torque tester during utilization can impact the validity of torque readings.



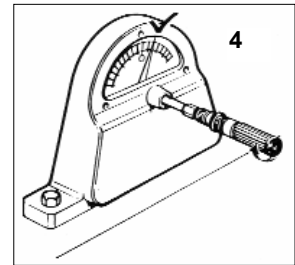
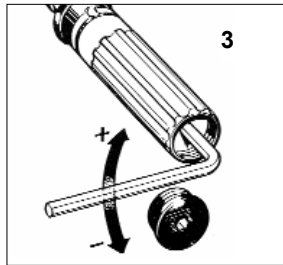
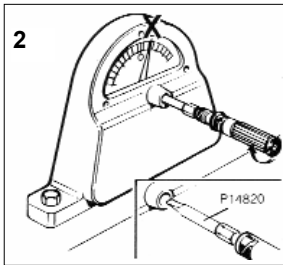
DM Model



TCA Model

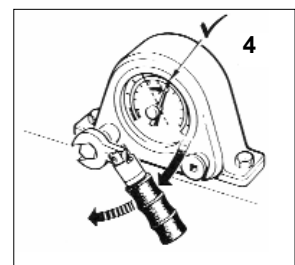
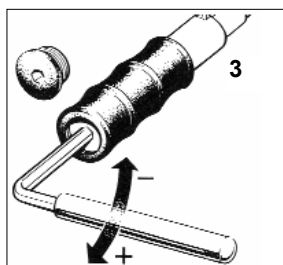
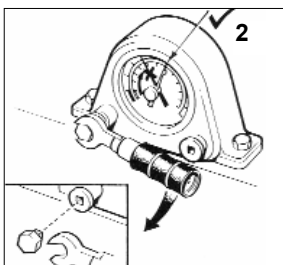
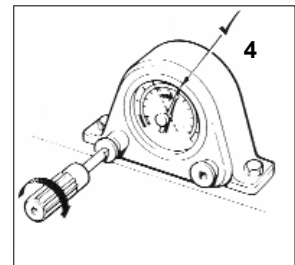
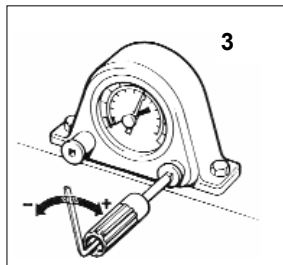
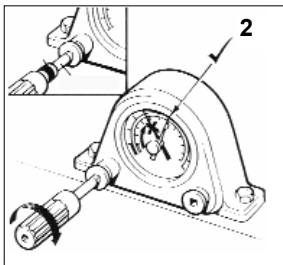
Operating DM Style Torque Analyzer

1. The DM style features 1/4" male hex drive. Attach an adapter into the drive (if needed).
2. Insert hand tool onto the drive and slowly apply torque clockwise or counterclockwise and note reading when screwdriver reaches maximum torque.
3. Adjust the torque setting of the hand tool (if needed).
4. Re-check torque setting of the hand tool.



Operating TCA Style Torque Analyzer

1. Attach any adapter into the drive of the TCA (if needed).
2. Insert hand tool onto the drive and slowly apply torque clockwise and note reading when screwdriver reaches maximum torque. (Note - TCA model can only be used in clockwise direction. A counterclockwise conversion kit is available please contact Mountz Customer Service).
3. Adjust the torque setting of the hand tool (if needed).
4. Re-check torque setting of the hand tool.



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Calibration Procedures

1. The accuracy of the dial torque analyzer should only be verified using an appropriate Calibration Beam and Weight Set traceable to national standards.
2. Mount the Dial Torque Analyzer on a suitable, level bench surface.
3. Load the analyzer using the Beam and Weight Set to give a torque equivalent to 20% of the full scale range and compare with indication on the analyzer dial. **Do not use the memory pointer during verification.**
4. Check the Dial Analyzer at all major graduations and adjust, if need, as described below until all values are within +/- 2% of reading or 1 graduation, whichever is greater.

Adjustments for DM model

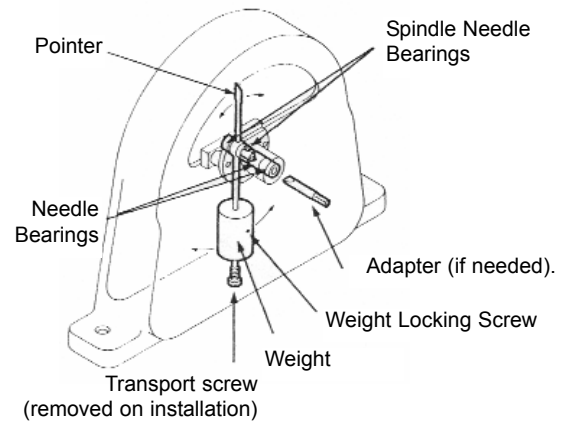
The DM model is a delicate instrument with a low torque range, therefore please contact the Mountz Service & Repair Department for calibration adjustments.

Adjustments for TCA model

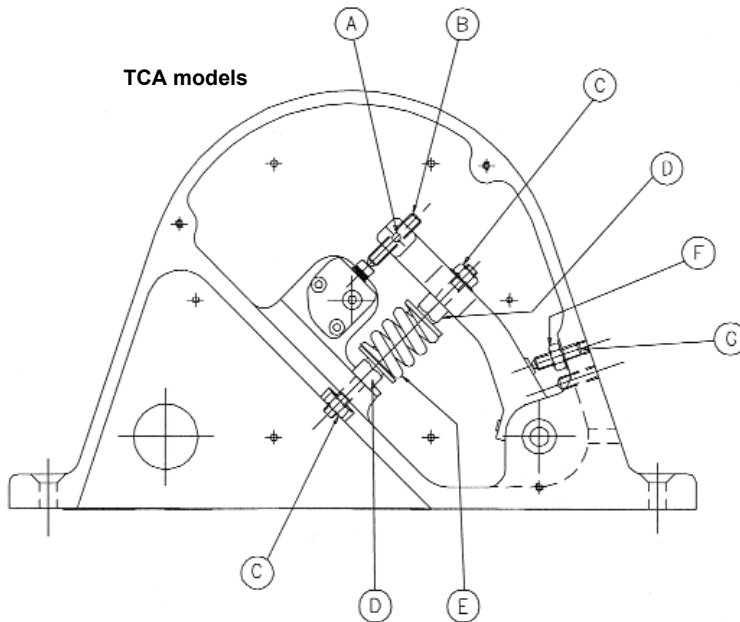
If the TCA model doesn't indicate the true torque applied within the stated tolerance, then calibration adjustments are required and performed as described.

1. Remove back plate from torque analyzer.
2. Perform the required calibration adjustment as follows:
 - i. To perform scale adjustment, adjust the main needle position by loosening the locking screw (A) and turning the adjusting screw (B). Turn adjusting screw CW to raise reading and CCW to lower reading. Check the analyzer at full scale.
 - ii. To perform linearity adjustment, loosen locking nuts (C) and rotate both Eccentric Spring Pivots (D) in the same direction. Moving the Spring (E) towards the main spindle will result in higher indicated torque value and vice versa. Once acceptable linearity is achieved, perform scale adjustment as needed.
3. Re-adjust the zero point as necessary by adjusting the lower stop set screw (F) and lock screw (G) that rests against the pivot arm so that the indicating needle is positioned in the center of the black area on the dial face.
4. Perform verification procedure to verify adjustments and repeat as necessary.
5. Fasten back plate to analyzer.

DM model



TCA models



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