



Sturtevant Richmond

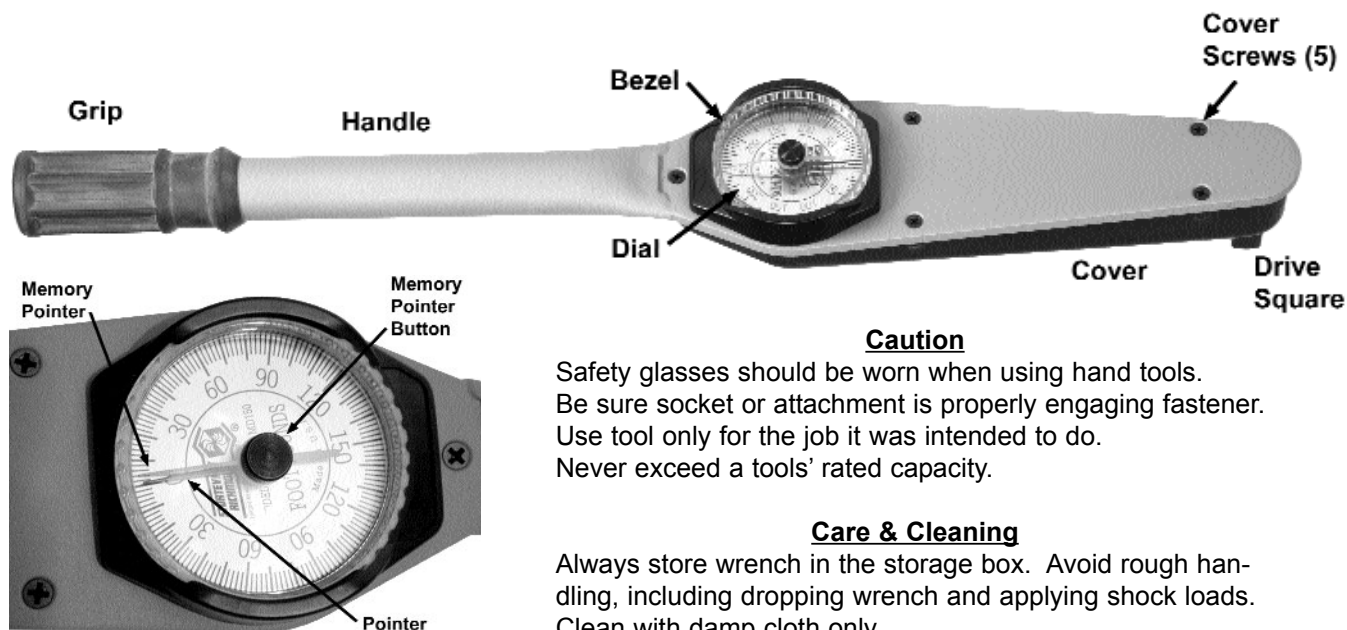
Global Reach. Local Support.

Operating Instructions Direct Reading Dial Wrenches - MD Series

S/R Dial Torque Wrenches are designed, manufactured, and certified to meet or exceed ASME B107.14M and ISO 6789. This series of wrenches are accurate, in both directions, to $\pm 3\%$ on readings at or above 20% of the maximum torque capacity of the tool. Accuracy below 20% of capacity is $\pm 0.8\%$ of full capacity.

Tool Operation

1. On MD-Series tools with a Handle Extension, attach Handle Extension to torque wrench.
 - A. Depress Release Button on Handle Extension.
 - B. Slide into Handle of torque wrench until hole in Handle aligns with pin on Handle Extension.
 - C. Release the Release Button on Handle Extension to lock components together.
2. Attach desired socket or attachment to Square Drive.
3. Set Pointer to zero by turning bezel. For best accuracy, this should be performed while wrench is held in orientation such that no torque is applied to square drive by socket or extension.
4. Bring the Memory Pointer into position next to, but not touching, the Pointer. This is done by turning the center button on the dial.
5. Engage the item to have torque applied with the engagement device while gripping the center of the Grip or marked position on the Handle Extension. Pull the handle with a slow, steady force in the direction desired until the pointer reaches the desired torque value, then stop pulling.



Caution

Safety glasses should be worn when using hand tools. Be sure socket or attachment is properly engaging fastener. Use tool only for the job it was intended to do. Never exceed a tools' rated capacity.

Care & Cleaning

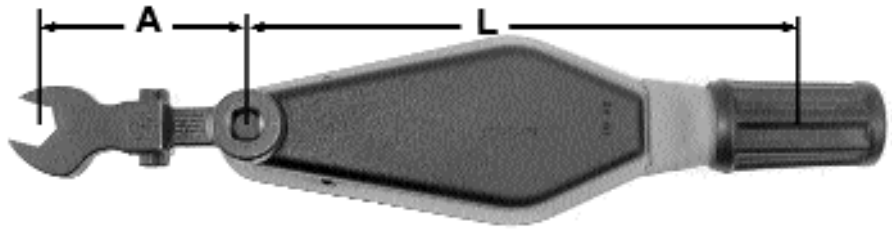
Always store wrench in the storage box. Avoid rough handling, including dropping wrench and applying shock loads. Clean with damp cloth only.

Repair, Service, and Calibration

Repair parts can be ordered from your local S/R distributor. For the name of a distributor in your area, or to obtain repair and/or NIST-traceable certification, please contact us. We may be reached via phone, fax, or e-mail at the numbers and addresses on the reverse.

Use of Extensions and Adapters

Use of extensions or adapters affects the torque applied to the fastener, so is necessary to calculate the actual applied torque rather than simply read the dial. Calculate the torque applied using the definitions and formulae supplied below.



Formula for Auditing [Single use after reading]

$$T_a = \frac{T_w \times (L+A)}{L}$$

T_a = Torque exerted on object (actual torque)

T_w = Wrench dial reading

L = Lever length of wrench

A = Length of adapter

Formula for Assembly (Conversion constant for repeat use)

$$C = \frac{L}{L+A}$$

C = Conversion constant for wrench and adapter assembly

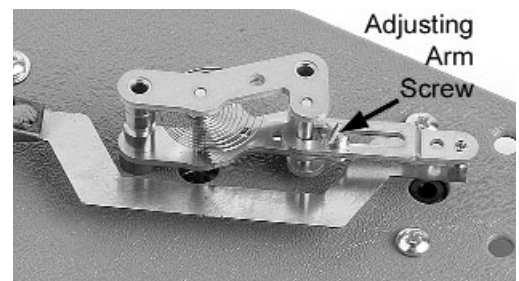
L = Lever length of wrench

A = Length of adapter

Calibration Instructions

All torque wrenches should be checked periodically for accuracy. Accuracy tests on MD-Series torque wrenches must be performed using a tester certified to +/-0.5% Indicated Value accuracy or better.

1. Test the wrench at 20%, 60%, and 100% of capacity.
2. Compare readings to +/-3% tolerance.
 - A. If in tolerance, no adjustment is needed. If cover was removed, reinstall cover.
 - B. If out of tolerance, adjust the wrench.
 1. Remove the rubber O-ring from around the drive square, if so equipped
 2. Loosen and remove the 5 Cover Screws holding the Cover to the frame.
 3. Turn wrench drive side up and remove the Cover.
 4. Loosen the Adjusting Arm Screw.
 - a. Slide the Adjusting Arm towards the square drive end to increase torque reading on wrench.
 - b. Slide the Adjusting Arm towards the handle end to reduce the torque reading on the wrench.
 - c. Retighten Adjusting Arm Screw.
 - d. Return to Step 1 of this procedure.



For further support, repairs, calibration, or parts diagram, contact:

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