

For Sturtevant Richmond Micrometer Adjustable Wrenches (Up To 250 Ft. Lb.)

Calibration Process

Use a mechanical loader with a tester possessing an accuracy of at least +/-1%. A more accurate tester is always preferable.

Procedure

1. Determine current performance to standard.
 - Test wrench on torque analyzer/tester.
 - Cycle wrench at 100% of capacity a minimum of three times.
 - Set wrench to 20% of capacity, cycle three (3) times and record readings.
 - Set wrench to 60% of capacity, cycle three (3) times and record readings.
 - Set wrench to 100% of capacity, cycle three (3) times and record readings.
 - Compare readings to tolerance for each torque level.
 - If wrench is within tolerance, it may be returned to service.
 - If wrench is out-of-tolerance, go to next step.
2. Calibrate wrench.
 - a. Remove tang access screw.
 - b. Remove griplock control knob and hex stem lock.
 - c. Rotate aluminum grip to 100% of capacity (highest graduation + 0 on increment).
 - d. Place wrench on torque analyzer/tester, click several times, note values obtained.
 - e. Adjust wrench.
 - If readings are above tolerance, turn tang adjustment screw slightly CW, then repeat step 2d.
 - On the models highlighted on the last page there is a second set screw that is used as a jam nut. That (jam nut) set screw needs to be removed in order to make the calibration adjustment.
 - If readings are below tolerance, turn tang adjustment screw slightly CCW, then repeat step 2d.*
 - If readings are in tolerance, go to next step.
 - f. Rotate grip and adjust torque to 20% of capacity (lowest graduation + 0 on increment).
 - g. Place wrench on torque analyzer/tester, click several times, note values obtained.
 - If out-of-tolerance, go to next step.
 - If in tolerance, check at 60% and 100% of capacity.
 - h. Rotate grip CW or CCW enough clicks to bring into tolerance at 20% of scale.
 - i. Lock load screw by rotating internal 5/32" internal hex screw in the CCW direction.
 - j. Use 5/16" hex key to remove lock plug by rotating in the CCW direction.
 - k. Rotate grip until it aligns with lowest graduation + 0 increment (20% of capacity).
 - l. Replace lock plug using torque wrench, torque lock plug to 15 Ft. Lb.
 - m. Return to step 2c.
 - n. Replace hex stem, lock control knob and lock control knob set screws. Tighten to 12.5 In. Lb.
 - o. If necessary, tighten setscrew in lock control knob until it lightly touches bottom, then back off 1/4 to 1/3 turn.
 - p. Replace tang access screw and grip.

Required Tools

Work Gloves

7/64", 3/32", 5/32", and 5/16" hex key

Internal Straight Tip Ring
Pliers (3/8"-1" or 10-25 mm)

Torque Wrench for 15 Ft. Lb.
5/16 hex bit socket

Hex head screwdriver

Loctite®

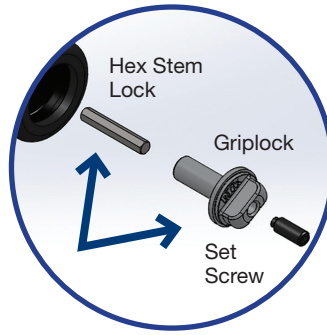
Process Overview

The old griplock must be removed prior to removing the rubber grip and installing the new handle.



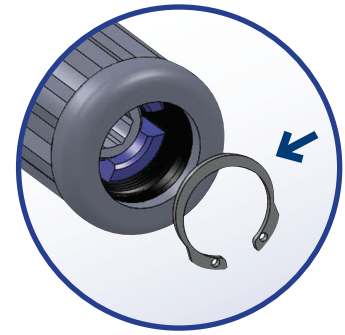
STEP ONE

Turn handle to minimum torque position and lock the handle



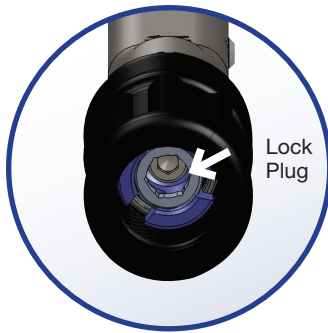
STEP TWO

Loosen the set screw using the 3/32 hex key in the back of the griplock eight turns. To release tension gently tap griplock.



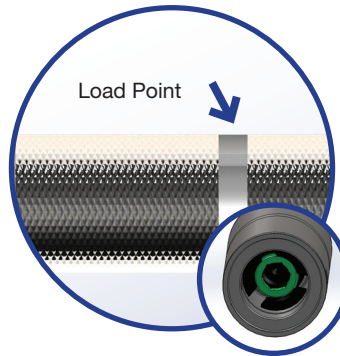
STEP THREE

Using an internal straight tips retainer ring pliers, (3/8"-1" or 10-25 mm) squeeze and remove the snap ring, griplock and hex stem lock.



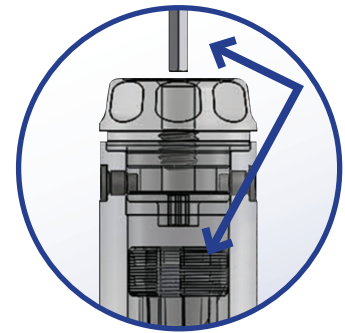
STEP FOUR

Using 5/16 hex bit socket to remove lock plug. Pull the handle straight back and remove from wrench.



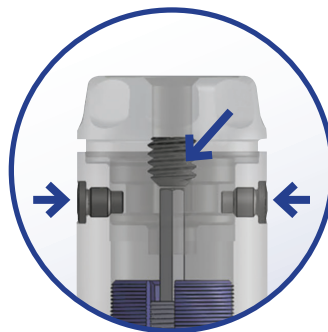
STEP FIVE

Slide the new handle on to the wrench. Be sure to align the handle with the "0" slightly to the left of the scale center line. Using the torque wrench set to 15 Ft. Lb. and the 5/16 hex bit socket, torque lock plug to 15 Ft. Lb. Check calibration and if necessary recalibrate wrench. Please note that the new load point for both usage and calibration is here.



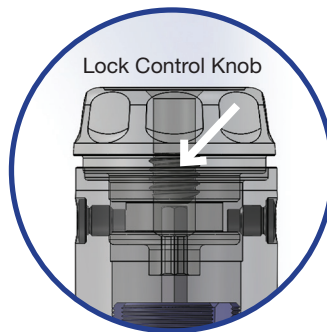
STEP SIX

Select the correct hex stem lock from the retrofit kit parts bag. Hold wrench in a vertical position as shown. Insert the hex stem lock into the hex opening in the lock control knob. Gently rotate knob with inserted hex key to complete engagement with locking screw inside of the load screw assembly. NOTE: It is important that you DO NOT unlock the handle during this process.



STEP SEVEN

Torque griplock set screws using 7/64 hex key to 12.5 In. Lb. or until snug. To test lock after full assembly: Place in vertical position with handle facing upwards. If the set screw is sticking out of the lock knob, or the hex is too short, replace the hex stem lock with the other supplied hex stem lock in the grip kit.



STEP EIGHT

Apply "Locktite® 222" threadlocker to the 5/16"-18 x 5/16" set screw thread. Tighten set screw into the lock knob using 5/32 hex key so it contacts, or stops with the top face of the hex key, then rotate it back 1/4-1/3 of one turn. Let the Locktite® dry for 12 hours.

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