OPERATING INSTRUCTIONS FOR 300 SERIES ANALOG FASTENER TESTERS

GENERAL INFORMATION:
The tester utilizes a hydraulic gauge cell for establishing force. Operator-convenient capstan hand drive rotates the combination power nut and piston as the tensile force is applied against the fastener. The power nut drives the power screw to apply the tensile load on the cell. Pressure is transmitted to a Bourdon tube gauge which gives actual pounds or kilograms of cell pressure created. A maximum reading hand records the maximum force for reference.

CALIBRATION & MEASUREMENT ACCURACY:
Each tester is tested and calibrated accurate within ±2% of gauge capacity when reading the middle 50% of full scale at 73.4°F. COMTEN builds testing machines that conform to ASTM (American Society for Testing and Materials) standards, are traceable to NIST (National Institute of Standards and Technology). A continual monitoring of product quality and of the customer's response to the product are essential. COMTEN conducts periodic quality audits and customer surveys to verify that the quality goals and the above standards are met.

OPERATION:
The tester is positioned over the stud or pin with appropriate foot or clamp fastened to the power screw. Make sure that the black pointer is at zero and set the red maximum pointer to zero before starting the test. The stud or pin is then gripped by the holder and pressure is applied by continuously turning the capstan handle in a clockwise motion to apply tensile pull on the fastener. Each full turn of the handle moves the power screw .10" on Models 301 & 302. Apply continuous force to the fastener until it reaches a maximum point and the black pointer drops off. The resulting force is measured in pounds or kilograms on the gauge. The red maximum pointer on the gauge records the maximum yield, or break point. Reset the maximum pointer to zero following each test. NOTE: It is important to use the gauge in the middle 50% of its range. Consistent usage outside this range is not recommended and could, over time, damage the tester. Running the tester all the way up can cause the gauge to be overforced and will damage the gauge. This is not covered under the warranty.

TO CHANGE LIFTER-FOOT, GRIP, OR CLAMP:
The grips are fastened to the power screw connector by the use of a lock pin. Removing the pin disconnects the grip being used and allows connecting a different grip. In some cases, especially with large headed fasteners, the task will be made easier by connecting the lifter foot or grip to the fastener before connecting to the power screw connector of the tester.

WARNING:
Lifting or carrying the tester by the gauge can result in a change in calibration and create a reading error. Do not use the tester to finish removing the fastener as this may cause severe damage. Please handle carefully.

WARRANTY:
COMTEN will repair or replace any part which fails and is returned, prepaid, within one years of purchase. Damage due to accident or abuse is not covered.

CALIBRATION:
Com-Ten can provide you with factory NIST traceable calibration at a reasonable cost. ASTM recommends that this be done at least annually. Remove the gauge cell per the instructions on the reverse side and return to the factory. Please call for current price and packing instructions.

MAINTENANCE:
The power screw and power nut must be lubricated with grease at least once every month.

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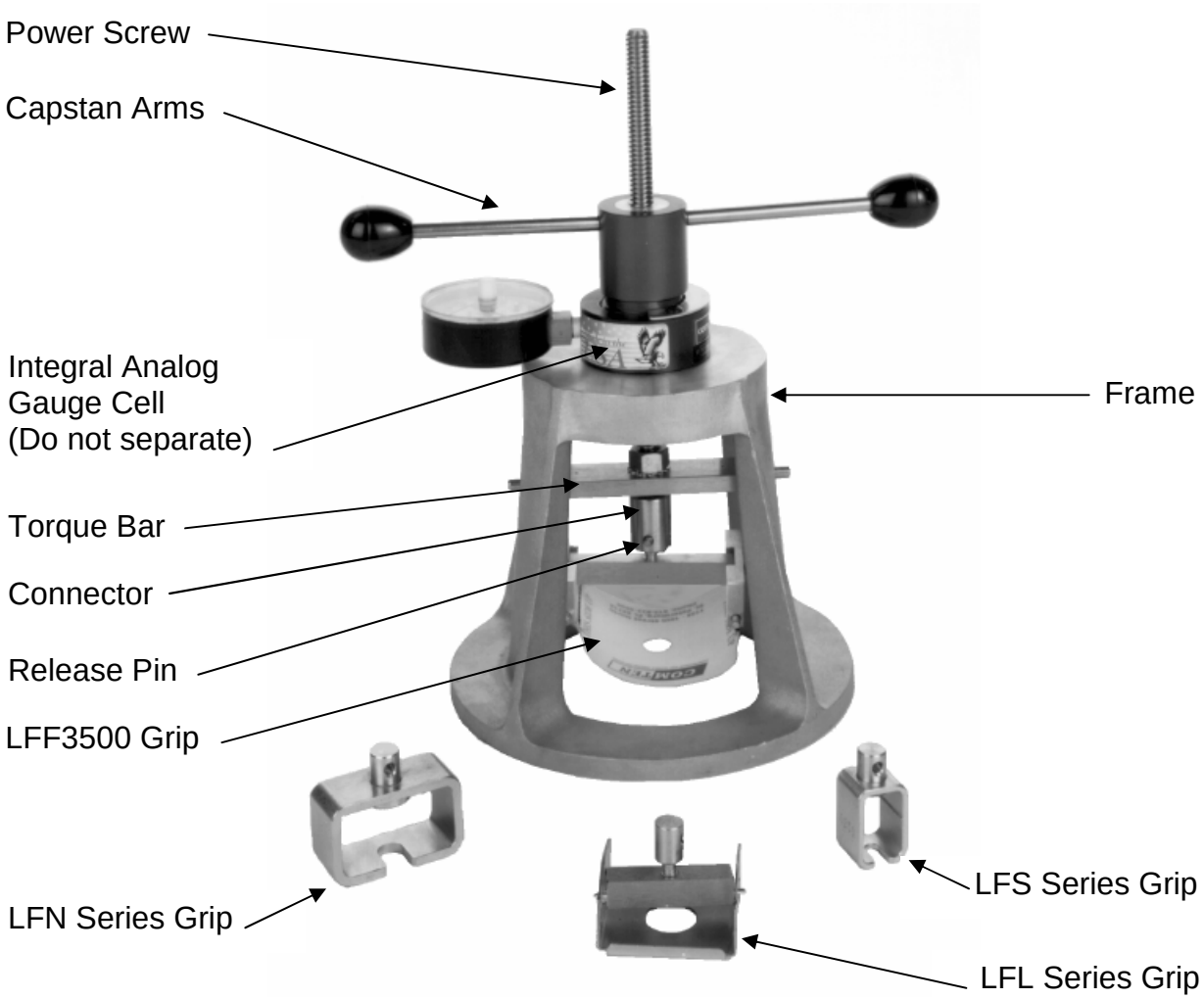
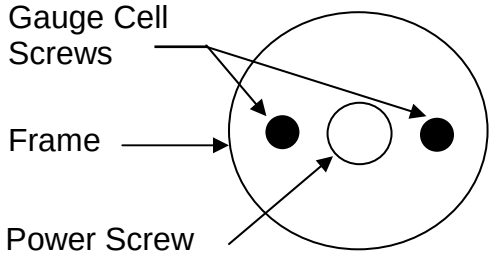
COM-TEN INDUSTRIES

TESTER NOMENCLATURE



To remove or replace the gauge cell, first remove the two (2) gauge cell screws with the tee-handle Allen wrench provided. Next, while holding the torque bar firmly, rotate the gauge cell off the power screw by turning the capstan arms counterclockwise. To replace a different gauge, put the capstan arms on the new gauge and turn it on to the power screw clockwise and replace the two (2) gauge cell screws.

Some models may equipped with thumb screws.



Bottom view of Tester

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