3248 NORTHWESTERN DR – SAN ANTONIO, TX 78238 – TEL: 800-779-8488 – WWW. TAPRITE.COM

General Information

- Use an NIST (National Institute for Standards and Technology) reference thermometer to calibrate the carbonation tester thermometer at or near the sample testing temperature.
- Use an NIST certified dead weight tester or an NIST certified pressure gauge calibrator
- The hex nut immediately below the head of the thermometer is used to hold the thermometer while turning the thermometer head to calibrate. **Do not turn the hex nut when calibrating the thermometer.**

Calibration – Thermometer

- Submerge both the carbonation tester thermometer and the NIST reference thermometer in an insulated ice cold bath of water. Allow the ice cold bath to reach thermal equilibrium by gently stirring the water bath until the temperature readings do not change.
- If the two thermometer readings differ by any detectable amount, the carbonation tester thermometer must be calibrated. Adjust the tester thermometer by securing the hex nut immediately under the head of the thermometer. DO NOT TURN THE HEX NUT WITH THE WRENCH. While holding the thermometer hex nut securely, turn the head of the thermometer with your hand until its reading matches the NIST reference thermometer.

Calibration – Pressure Gauge

Pressure gauge calibration can be verified by either the use of an NIST certified dead weight tester or an NIST certified electronic pressure gauge calibrator.

Dead weight tester – accuracy less than 0.5%

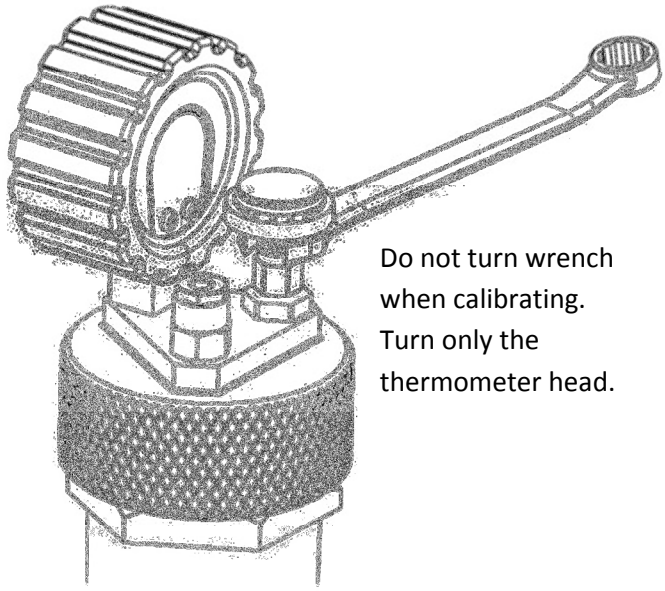
- Install the pressure gauge per manufacturer instructions and pressurize the gauge.
- Carefully rotate the disc several times while gently tapping the pressure gauge.
- The pressure gauge is to be calibrated at 10, 15, 20, 25, and 30 psig.

Electronic pressure gauge calibrator – accuracy less than 0.5%

- Install the pressure gauge per manufacturer instructions and pressurize the gauge with compressed air.
- As the pressure gauge is pressurized allow for the pressure to stabilize. Compare the electronic calibrator reading to the pressure gauge and adjust as needed
- The pressure gauge is to be calibrated at 10, 15, 20, 25, and 30 psig.

Note:

- Gauge readings may not be equal, but variation throughout the entire range of the scale of the gauge should be uniform. If the gauge pressure readings are not equal and variation is uneven throughout the pressure range, replace the gauge.



Do not turn wrench when calibrating. Turn only the thermometer head.

Carbonation Tester Operating Instructions

- Ensure that the pressure gauge and thermometer are both calibrated prior to conducting any carbonation test.
- Chill both halves of the carbonation tester in an ice cold water bath. Do not submerge the pressure gauge or thermometer.
- Empty the contents of the carbonation tester.
- Tilt the canister at a 45° angle and fill the canister with the fountain drink up to the scribed line on the inside of the canister. The fountain drink should flow steadily down the side of the canister to minimize any foaming.
- Place the canister on a horizontal surface and carefully screw on the cap.
- Once the cap bottoms out, tighten one quarter turn more.
- Release any excess pressure by pushing the pressure relief valve button.
- Gently swirl the tester until a pressure of 5 ±1 psig is indicated on the gauge.
- Purge the carbonation gas by pressing the pressure relief valve button. Pressure gauge should return to 0 psig.
- Vigorously shake the tester for 30 seconds
- Determine the volume (%) of carbonation from the canister chart by cross referencing the temperature and pressure readings on the chart.
- Wash the tester in a warm, mild detergent and dry thoroughly.