

## Quick Reference Guide for System Verification Rec4 Open



To be performed Daily before any testing!

### **SYSTEM START-UP:**

Air and Water should be off at this time.

1. Press the **ON** button for the computer.
2. Enter Login and password.

### **SYSTEM VERIFICATION:**

#### **Scale:**

1. Remove cover, slide Bowl to the side.
2. Press **ZERO** and when the scale reads 0.0, place a 1 Kg weight on the platform. The scale should read between 999.7 - 1000.3 grams. (If using two 50g weights, scale should read between 99.7 – 100.3.)
3. Return the bowl and cover to testing position.

**NOTE:** Air flow and temperature changes can affect this reading, therefore, air cooling or fans may need to be shut off for an accurate reading.

Turn on shop AIR to the system. Verify that control air pressure gauge reads 90-100 psi.

Turn on the WATER to the system.

#### **Bleed Air from Lines:**

1. Load the calibrated cylinder into the test jacket. The Hoses should NOT be connected at this time. Make sure the Jacket is full; if necessary fill using the Jacket/Bowl Fill Valve.
  2. Connect Master Gauge to the Test Head and the Black Hose to the Master Gauge. Connect the Blue Hose to the Test Head.
  3. Turn the Drain/Hold/Expansion Valve to **EXPANSION**.
  4. Turn the Bowl/Jacket Fill Valve for approximately 15 – 20 seconds, filling the bowl approximately 2/3 full, thus eliminating air from the Jacket lines. Return the valve to the neutral position.
  5. Turn the Drain/Hold/Expansion Valve to Drain, allowing the water level to return to approximately 1/2" above the bottom of the probe.
  6. Turn the Drain/Hold/Expansion Valve to **EXPANSION**.
  7. Repeat steps 4-6, two or three times to allow trapped air to escape the lines.
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## PRESSURE VERIFICATION

1. Confirm that both Hoses and the Master Gauge are still connected.

**NOTE:** The Master Gauge must have a current calibration date marking within one year of calibration.

2. After starting the testing program, enter the Diagram screen. Enter maximum pressure of calibrated cylinder into the “Target Pressure” text box.
3. The Drain/Hold/Expansion Valve should be in the **EXPANSION** position.
4. Click “Pressurize” on the screen to manually pressurize the cylinder. Use the Pump Fast Speed Control and the Pump Slow Speed Control for adjustments to the speed of the pump.
5. After the pump stops at the target pressure check the Master Gauge reading, making sure to lightly tap with finger 2-3 times for an accurate reading. This reading should be compared to the Master Gauge Calibration sheet. The transducer reading on the screen should match within 1% of the gauge reading. Click “Bleed” to release the system pressure.
6. After pressing “Bleed”, the scale should read 0.0. If 0.0 is not achieved, repeat steps 4-5. Do not let it sit more than 30 seconds between pressurizations.  
If all pressures have read accurately proceed to the Calibration Screen to record Calibration Verification data per DOT requirements.

## CALIBRATION VERIFICATION

**NOTE:** This **MUST** be performed DAILY to comply with DOT regulations!

1. Verify the highest pressure point for the cylinders to be tested that day.
  2. Select “Calibration” on the computer screen.
  3. Select the Calibrated Cylinder serial number from the list.
  4. Choose the highest pressure point for the cylinders to be tested that day. This should be within 500 psi at test pressures greater than 3,000psi or within 10% of pressures below 3,000psi. These requirements are stated in CGA pamphlet C-1.
  5. Click the “1 Jacket Ready” on the text line, next click on “Start”. Run the test and verify that the cylinder passes within the 1% expansion and pressure tolerances. The Test Disposition field should read PCAL. If a reading of FCAL (or red text) appears the test can be immediately run again, unless a problem has been found.
  6. Repeat steps 4-5, for each calibration point on the calibrated cylinder.
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