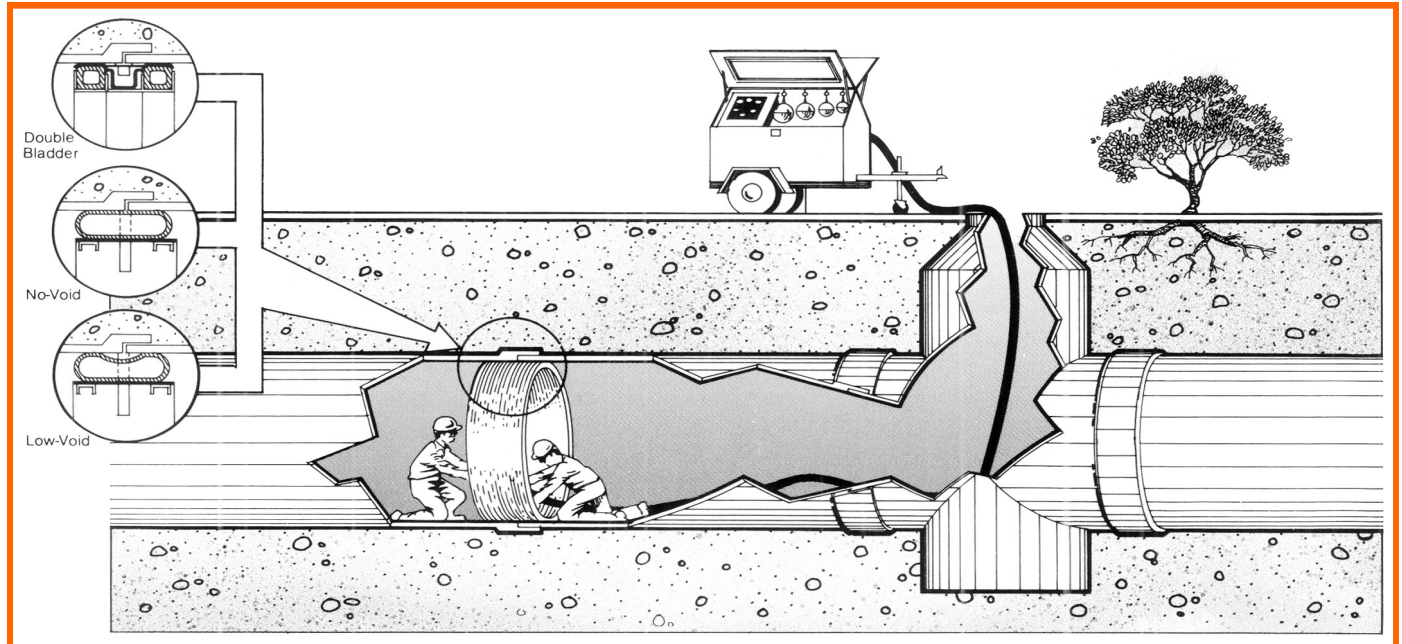


# LANSAS Products

## LANSAS DOUBLE-BLADDER JOINT TESTER

### OPERATION AND MAINTENANCE MANUAL



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**lan sas**®  
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## **OPERATION AND MAINTENANCE MANUAL** **(Low and High Pressure Double-Bladder Joint Testers)**

**INTRODUCTION:** LANSAS Products Double-Bladder Low and High Pressure Joint Testers are designed to complete acceptance testing on the joints of various types of pipe. These complete units are everything needed except for an air compressor or water source to inflated the bladder and introduce into the test area as the test medium. Refer to the currently accepted ASTM Standard for the testing specifications in each case.



**DOUBLE-BLADDER JOINT TESTER - Complete**

### **SAFETY:**

Users must read and understand the LANSAS Operation and Maintenance Manual for Single Bladder or Double Bladder Joint Testers prior to attempting to operate the equipment or perform the test. Please visit the LANSAS website or contact LANSAS directly for additional copies and the most up to date information.

### **! WARNING**

Before attempting to complete this test or when using any pipe plugs or pipeline testing equipment, be sure to follow all local, state, and federal guidelines including, but not limited to Confined Space Safety Regulations.

**CHECK TO ENSURE THERE ARE NO DAMAGES TO THE UNIT OR MISSING PARTS DUE TO FREIGHT HANDLING.**

**JOINT TESTER FRAME, BLADDER, AND FITTINGS:**



(2) Ea. - Joint Tester Frame Assy. Halves



Frame Assembly Fittings (All a 1/2" in size)  
 (12) Ea. - 1/2" Nut - 1/2" x 1" Bolt  
 - 1/2" Lock Washer - 1/2" Flat Washer

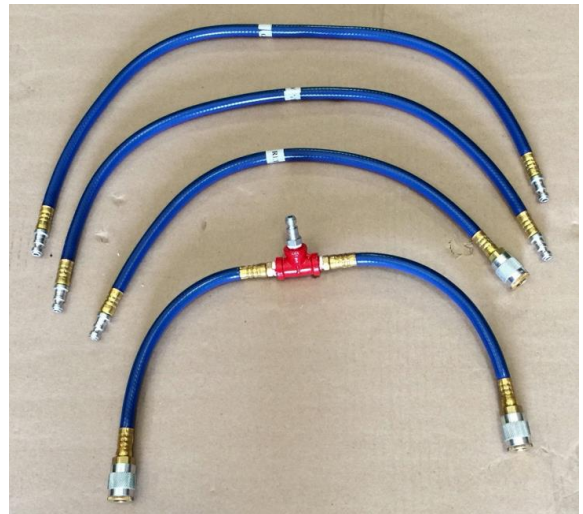


(1) Ea. - JOINT TEST Bladder

**INNER FRAME FITTINGS AND HOSE ASSEMBLIES:**



- (2) Ea. **RED** – Joint Tester Bladder Inflation Pipe Assy.
- (1) Ea. **YELLOW** – JT Void (Test Area) Release Pipe Assy.
- (1) Ea. **GREEN** – JT Test (Test Area) Inflation Pipe Assy.



Inner Frame Hose Assemblies (4) TOTAL

**WHEEL ASSEMBLY PARTS (NEW STYLE):**



Wheel Kit Assembly Fittings (All are 3/4" in size)

- (4) Each - 3/4" Bolt
- (4) Each - 3/4" Nut
- (2) Each - Wheel Rail Assemblies
- (4) Each - 3/4" Flat Washer

## JOINT TESTER CONTROL PANEL AND HOSE ASSEMBLY:



- (1) Ea. - Joint Tester Control Panel in a Heavy Duty Pelican Case and 50 ft. Joint Tester Triple Test Air Hose Assembly with Color Coded Hose. **RED GREEN YELLOW**

## JOINT TESTER ASSEMBLY: Step 1 - Assemble the Frame

Line up the bolt pattern of each half moon Frame assembly as show in picture 1A. Make sure that the color coded hose ports on the Frame Assembly are facing the same side. Bolt the Frame assemblies together with (12) 1" x 1/2" bolts, (12) 1/2" flat washers, (12) 1/2" lock washers, and (12) 1/2" nuts. 1 of each fitting for each bolt holes as shown in picture 1B. You will use a Bolt, Flat Washer on one side with Lock Washer and Nut on the other side. Tighten all fittings to secure and move on to Step 2.



**Picture 1A**



**Picture 1B**

## Step 2 - Install the Bladder

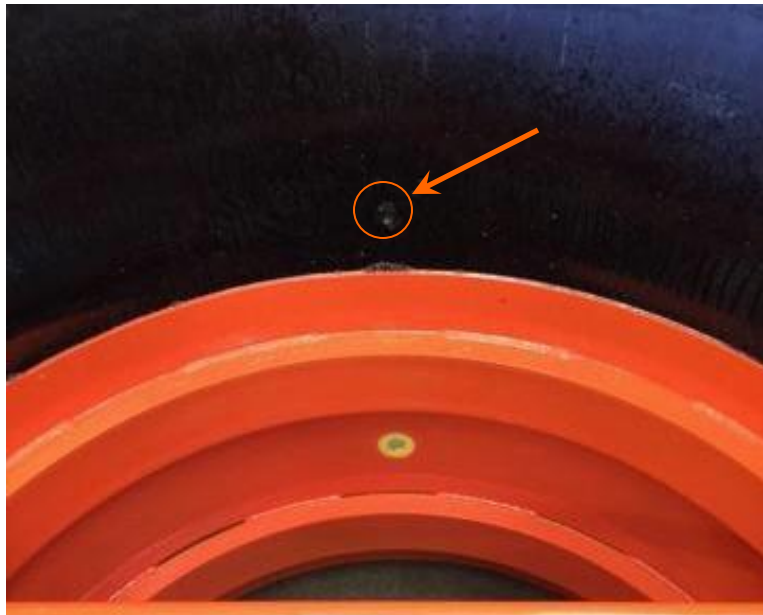
The LANSAS Double-Bladder Joint Test Bladder will have four holes in the inside of the bladder. One hole for the **YELLOW** Void Release or Return Port on one side and three holes directly opposite on the other side for the Inflation Ports (qty. 2) **RED** and Test Area Port (qty. 1) **GREEN**. With the Frame or "CAN" assembly laid flat on the side, carefully line the three holes in the bladder up on the top of the Frame Assembly that has the three corresponding holes through the Frame assembly. These will be the **RED** and **GREEN** port holes. (See picture 2A) The other side of the bladder with one hole should line up vertically with the corresponding **YELLOW** hole on the other side of the Frame Assembly. (See picture 2 B)

If they don't line up at all holes, you may need to try flipping the Bladder over.

- You can either use baby powder as a dry lubricant or a soap and water solution from a spray bottle as a wet lubricant. Different people have different thoughts about which of these is more efficient or useful for a successful installation.
- Sprinkle baby powder or the soap and water solution on the inside of the Bladder and the outside edge of the Frame assembly to act as lubricant to help the Bladder slide onto the Frame. (See Pictures 2C and 2D)



**Picture 2A**



**Picture 2B**



**Picture 2C**



**Picture 2D**

- Slowly begin working the edge of the Bladder onto the Frame assembly until you have it started all the way around.
- Once started, continue by pushing down on the bladder and working all the way around the Frame assembly. (See Picture 2E)



**Picture 2E**



**Picture 2F**

- Once the entire bladder is evenly on the Frame Assembly or "CAN", you can move on to Step 3. (See Picture 2F)

### Step 3 – Install the Air Fitting Pipe Assemblies (Color Coded for simplification)

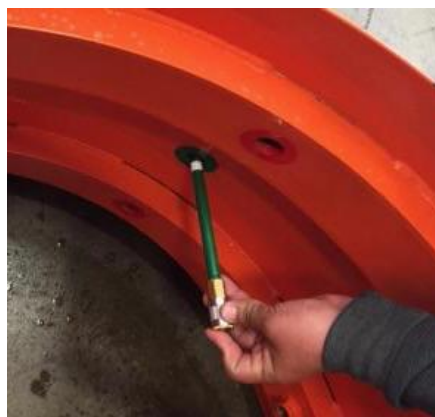
Install the Red, Green and Yellow Air Fitting Pipe Assemblies: Thread the **YELLOW** Void Release or Return Port Assembly through the **YELLOW** Frame or “CAN” opening and into the threaded nipple on the bladder. Repeat the same procedure for both the **RED** Bladder Inflation and **GREEN** Test Area Air Fitting Pipe Assemblies. (See pictures 3A, 3B and 3C) Move on to Step 4.



**\*\*\*\*\* THESE ARE ALUMINUM THREADS! PLEASE TIGHTEN CAREFULLY SO THEY DO NOT CROSS-THREAD! \*\*\*\*\***



**Picture 3A**



**Picture 3B**



**Picture 3C**

### Step 4 – Install the Wheel Kit Assembly (New and Improved)

Stand the Joint Tester Assembly with the Bladder now installed upright on the side so you can see through the unit. The Joint Tester Frame or “CAN” assembly has (4) 3/4” Nuts welded into the frame (See picture 4A) to mount the Wheel Kit rails. (2) nuts each on either side of the **RED** and **GREEN** port holes. (See picture 4B)

Position the Frame or “CAN” assembly so these nuts are on at bottom of the Joint Tester or closest to the ground. Lay the Wheel Rail assemblies, wheels down toward the ground, over the nuts so the holes in the Wheel Rail Assemblies line up with the nuts holes. One Wheel Rail Assembly goes on each side of the **RED** and **GREEN** port holes. (See picture 4C)

Using the (4) 3/4” Wheel Kit Assembly bolts, nuts, and washers, assemble all (4) in this order - “Bolt, Nut threaded on almost all the way and Flat Washer then thread each of these fitting assemblies through the Wheel Rail Assembly hole into the 3/4” Nuts welded to the Joint Tester Frame (Shown in picture 4A) until tight.

To secure the wheel assemblies, thread each of the (4) Nuts back down to secure the Flat Washers and Nuts snug against the Wheel Rail Assemblies. (See picture 4D)



**Picture 4A**



**Picture 4B**



**Picture 4C**



**Picture 4D**

Tighten all (4) bolt assemblies as described above. The Joint Tester Assembly with the Wheel Kit installed should look as pictured below. (See picture 4E)

Once this has been completed you can move on to Step 5.



***Picture 4E***

## Step 5 – Install the Inner Frame Hose Assemblies



There are (4) Inner Frame Hose Assemblies which securely connect the **RED**, **YELLOW** and **GREEN** bladder port assemblies to the Joint Tester Frame for a simple and easy set-up.

- (1) Splitter Hose Assembly with a **RED** TEE with a 1/4" Male Quick Disconnect fitting coming off the TEE and splitting out to two hose lengths both with 1/4" Female Quick Disconnect Fittings (Automotive Style) which attach to **RED** the allow you to fill both bladders to the Required Inflation Pressure simultaneously. Low Pressure Bladders have a Required Inflation Pressure of 60 psi (Testing at Pressures up to 20 psi) and High Pressure Bladders have a Required Inflation Pressure of 160 psi (Testing at Pressures up to 100 psi).
- (1) Splitter Hose Assembly to Frame Inflation Extension hose which has one 1/4" Female Quick Disconnect Fitting which attaches to the **RED** TEE with a 1/4" Male Quick Disconnect fitting of the Splitter Hose Assembly previously mentioned and a 1/4" Male Quick Disconnect fitting which attaches to the **RED** Bladder Inflation hose port on the Frame Assembly Fittings on the inside of the Joint Tester Frame.
- (2) Extension Hose Assemblies each with 1/4" Male Quick Disconnect fittings on both ends. These are to connect the **YELLOW** Void Release or Return Port Pipe Assembly Fitting and the **GREEN** Test Area Pipe Assembly Fitting to the respective Frame Assembly Fittings on the inside of the Joint Tester Frame. When the Inner Frame Hose assemblies are securely installed, you can move on to Step 6.

## Step 6 – Attaching the Triple Hose Assembly to the Joint Test Unit and Joint Test Control Panel



Attach the Quick Disconnect fittings from one end of the 50 ft. Triple Test Air Hose Assembly to the top of the Joint Test Control Panel matching the color coding of the hose assembly to the correct color coding of the fittings on top of the Panel. Attach the Quick Disconnect fittings from the other end of the 50 ft. Triple Test Air Hose Assembly to the correct connections on the outside or front facing side of the Joint Tester Frame Assembly, again matching the color coding of the Triple Test Air Hose assembly to the color of the Quick Disconnect fittings on the Joint Tester Frame.

The **YELLOW** Void Release or Return Port Assembly hose should attach to the matching **YELLOW** Frame Quick Disconnect fitting named "RETURN" at approximately the 10 O'clock position. The **RED** Bladder Inflation and **GREEN** Test Area hoses should attach to the matching **RED** and **GREEN** Frame Quick Disconnect fittings at approximately the 7 or 8 O'clock position according to the correct color coding of hose to Frame Quick Disconnect fittings.

## FULLY ASSEMBLED JOINT TEST UNIT



### Double-Bladder Low or High Pressure Joint Tester – Complete

Complete unit comes with all the following components:

- (1) Joint Tester Frame with Wheel Kit
- (1) Joint Tester Bladder
- (1) Joint Tester Control Panel
- (1) 50 ft. Joint Test Triple Test Air Hose Assembly
- Misc. Fittings as outlined above to completely assemble and use for testing

## PRE-TEST SETUP – AIR TEST

### LOW OR HIGH PRESSURE DOUBLE-BLADDER JOINT TESTER

- WITH THE JOINT TESTER COMPLETELY ASSEMBLED, ROLL THE UNIT INTO THE BARREL OF THE CORRECT SIZE PIPE FOR THE UNIT.
- **DO NOT CONNECT THE AIR SOURCE TO THE JOINT TEST CONTROL PANEL AT THIS TIME.**
- TURN BOTH VALVES ON THE JOINT TEST CONTROL PANEL TO THE “**CLOSED**” POSITION.
- UNLOCK (PULL GENTLY UNTIL IT CLICKS) AND CLOSE BOTH REGULATORS BY TURNING COUNTER-CLOCKWISE UNTIL THEY STOP. (DO NOT FORCE THEM)

### SET YOUR BLADDER PRESSURE REGULATOR

- CONNECT YOUR REGULATED AIR SOURCE TO THE “**AIR/WATER INLET**” ON THE LOWER RIGHT SIDE OR **RED** SIDE OF THE JOINT TEST CONTROL PANEL.
- TURN THE **RED** BLADDER INFLATION VALVE ON THE RIGHT SIDE OR **RED** SIDE OF THE JOINT TEST CONTROL PANEL TO THE “**OPEN**” POSITION.
- SLOWLY OPEN THE **RED** BLADDER INFLATION REGULATOR BY TURNING CLOCKWISE UNTIL YOU GET TO THE CORRECT OR REQUIRED INFLATION PRESSURE FOR THE BLADDER ON THE JOINT TESTER. WHEN THE BLADDER INFLATION GAUGE READS 60 PSI FOR THE LOW PRESSURE UNIT (160 PSI FOR HIGH PRESSURE JOINT TESTERS ONLY), STOP TURNING THE **RED** BLADDER INFLATION REGULATOR AND ALLOW THE PRESSURE TO STABILIZE. ADJUST THE REQUIRED INFLATION PRESSURE USING THE **RED** BLADDER INFLATION REGULATOR BY TURNING CLOCKWISE TO ADD MORE AIR OR COUNTER-CLOCKWISE TO BLEED AIR OFF THE BLADDER TO GET TO THE REQUIRED INFLATION PRESSURE OF 60 PSI.
- AFTER ADJUSTING TO THE REQUIRED INFLATION PRESSURE USING THE **RED** BLADDER INFLATION REGULATOR, “LOCK” THE **RED** BLADDER INFLATION REGULATOR BY PRESSING THE KNOB IN UNTIL IT CLICKS. THIS WILL LOCK IN THAT REQUIRED INFLATION PRESSURE MAKING SUBSEQUENT TESTING SETUPS GO FASTER. NOW YOU WILL ONLY NEED TO OPEN THE VALVE AS THE REQUIRED INFLATION PRESSURE IS SET AND LOCKED INTO THE JOINT TEST CONTROL PANEL ON THE **RED** BLADDER INFLATION REGULATOR.
- ONCE THE **RED** BLADDER INFLATION REGULATOR HAS BEEN LOCKED, TURN THE **RED** BLADDER INFLATION VALVE TO THE “**CLOSED**” POSITION. THE JOINT TESTER BLADDER SHOULD REMAIN INFLATED AT THE CORRECT OR REQUIRED INFLATION PRESSURE.



## WARNING

DO NOT EXCEED THE REQUIRED INFLATION PRESSURE OF THE BLADDER!

### SET YOUR TEST AREA PRESSURE REGULATOR

- DISCONNECT YOUR REGULATED AIR SOURCE FROM THE “**AIR/WATER INLET**” ON THE LOWER RIGHT SIDE OR **RED** SIDE OF THE JOINT TEST CONTROL PANEL AND RE-CONNECT IT TO THE “**TEST MEDIA INLET**” ON THE LOWER LEFT SIDE OR **GREEN** SIDE OF THE JOINT TEST CONTROL PANEL.
- TURN THE **GREEN** TEST AREA PRESSURE VALVE ON THE LEFT SIDE OR **GREEN** SIDE OF THE JOINT TEST CONTROL PANEL TO THE “**OPEN**” POSITION.
- SLOWLY OPEN THE **GREEN** TEST AREA REGULATOR BY TURNING CLOCKWISE. THE TEST AREA WILL BEGIN TO PRESSURIZE. ALLOW THE PRESSURE TO REACH THE CORRECT OR REQUIRED TEST PRESSURE AS INDICATED BY THE SPECIFICATIONS OR DIRECTED BY THE INSPECTOR. **DO NOT EXCEED THE MAXIMUM TEST PRESSURE OF 20 PSI.** (100 PSI FOR HIGH PRESSURE JOINT TESTERS OR PERHAPS HIGHER FOR CUSTOM BUILT UNITS) ADJUST THE TEST AREA PRESSURE ON THE **GREEN** TEST AREA REGULATOR BY TURNING CLOCKWISE TO ADD MORE AIR OR COUNTER-CLOCKWISE TO BLEED AIR OFF THE TEST AREA TO GET TO THE CORRECT OR REQUIRED TEST AREA PRESSURE AS INDICATED BY THE JOB SPECIFICATION OR AS DIRECTED BY THE INSPECTOR.
- AFTER ADJUSTING THE TEST AREA PRESSURE USING THE **GREEN** TEST AREA REGULATOR, “LOCK” THE **GREEN** TEST AREA REGULATOR BY PRESSING THE KNOB IN UNTIL IT CLICKS. THIS WILL LOCK IN THAT SPECIFIC TEST AREA PRESSURE MAKING SUBSEQUENT TESTING SETUPS GO FASTER. NOW YOU WILL ONLY NEED TO OPEN THE VALVE AS THE TEST AREA PRESSURE IS SET AND LOCKED INTO THE JOINT TEST CONTROL PANEL WITH THE **GREEN** TEST AREA REGULATOR.
- ONCE THE **GREEN** TEST AREA REGULATOR HAS BEEN LOCKED, TURN THE **GREEN** TEST AREA PRESSURE VALVE TO THE “**CLOSED**” POSITION. THE TEST AREA PRESSURE SHOULD MAINTAIN AND REMAIN AT THE PRESSURE LOCKED INTO THE **GREEN** TEST AREA REGULATOR.
- EXHAUST ALL TEST AREA PRESSURE BY TURNING THE **GREEN** TEST AREA PRESSURE VALVE TO THE “**EXHAUST**” POSITION. WAIT UNTIL THE TEST AREA PRESSURE VALVE READS ZERO BEFORE PROCEEDING.
- ONCE THE TEST AREA PRESSURE HAS BEEN COMPLETELY EXHAUSTED (TEST AREA PRESSURE VALVE READS ZERO), EXHAUST THE BLADDER INFLATION PRESSURE BY TURNING THE **RED** BLADDER INFLATION VALVE TO THE “**EXHAUST**” POSITION.
- TURN BOTH THE **RED** BLADDER INFLATION VALVE AND THE **GREEN** TEST AREA PRESSURE VALVE TO THE “**CLOSED**” POSITIONS.

## COMPLETING THE JOINT TEST – AIR TEST

### LOW OR HIGH PRESSURE DOUBLE-BLADDER JOINT TESTER

- CENTER THE JOINT TESTER BLADDER OVER A JOINT OF PIPE TO BE TESTED WITH ONE OF THE BLADDERS ON EACH SIDE OF THE JOINT OF THE PIPE.
- ONCE CENTERED MOVE THE JOINT TESTER CONTROL PANEL WITH TRIPLE TEST AIR HOSE ASSEMBLY CONNECTED BETWEEN THE PANEL AND THE JOINT TESTER UNIT AND ALL PERSONNEL AT LEAST 40 FEET AWAY FROM THE JOINT TEST UNIT FOR SAFETY.
- DISCONNECT YOUR REGULATED AIR SOURCE FROM THE "**TEST MEDIA INLET**" ON THE LOWER LEFT SIDE OR **GREEN** SIDE OF THE JOINT TEST CONTROL PANEL AND RE-CONNECT IT TO THE "**AIR/WATER INLET**" ON THE LOWER RIGHT SIDE OR **RED** SIDE OF THE JOINT TEST CONTROL PANEL.
- USING THE CONTROLS ON THE JOINT TESTER CONTROL PANEL, INFLATE THE BLADDER BY TURNING THE **RED** BLADDER INFLATION VALVE TO THE "**OPEN**" POSITION. BECAUSE YOU SET AND LOCKED THE **RED** BLADDER INFLATION REGULATOR TO THE CORRECT AND REQUIRED INFLATION PRESSURE DURING THE **PRE-TEST SETUP PHASE**, THIS IS ALL YOU NEED TO DO TO INFLATE THE BLADDER.
- ONCE THE BLADDER HAS BEEN PROPERLY INFLATED TO THE REQUIRED INFLATION PRESSURE, TURN THE **RED** BLADDER INFLATION VALVE TO THE "**CLOSED**" POSITION
- DISCONNECT YOUR REGULATED AIR SOURCE FROM THE "**AIR/WATER INLET**" ON THE LOWER RIGHT SIDE OR **RED** SIDE OF THE JOINT TEST CONTROL PANEL AND RE-CONNECT IT TO THE "**TEST MEDIA INLET**" ON THE LOWER LEFT SIDE OR **GREEN** SIDE OF THE JOINT TEST CONTROL PANEL.
- PRESSURIZE THE TEST AREA TO THE CORRECT OR REQUIRED TEST AREA PRESSURE AS INDICATED BY THE SPECIFICATIONS OR DIRECTED BY THE INSPECTOR BY TURNING THE **GREEN** TEST AREA PRESSURE VALVE TO THE "**OPEN**" POSITION. AGAIN, BECAUSE YOU SET AND LOCKED THE **GREEN** TEST AREA PRESSURE REGULATOR DURING THE **PRE-TEST SETUP PHASE**, THIS IS ALL YOU NEED TO DO TO PRESSURIZE THE TEST AREA.
- ONCE THE **GREEN** TEST AREA REGULATOR HAS BEEN LOCKED, TURN THE **GREEN** TEST AREA PRESSURE VALVE TO THE "**CLOSED**" POSITION.
- WHEN THIS VALVE HAS BEEN CLOSED YOU WILL START YOUR TIMER FOR THE ACTUAL JOINT TEST.

**TEST REQUIREMENT:** Please refer to the currently accepted ASTM Standard for the testing specifications in each case. The county or city engineer or inspector for the job will determine the exact test criteria or requirement.

- THE TEST IS CONSIDERED A PASSED TEST IF THE TIME FOR THE TEST EXPIRES AND NOT MORE THAN 1 PSI HAS LEAKED FROM THE JOINT BEING TESTED. IF MORE THAN 1 PSI LEAKED FROM THE JOINT, THIS IS A FAILED TEST AND JOINT SHOULD BE RE-TESTED.
- IF THE TEST PASSED, YOU WOULD EXHAUST ALL TEST AREA PRESSURE BY TURNING THE **GREEN** TEST AREA PRESSURE VALVE TO THE “**EXHAUST**” POSTION. WAIT UNTIL THE TEST AREA PRESSURE VALVE READS ZERO BEFORE PROCEEDING.
- ONCE THE TEST AREA PRESSURE HAS BEEN COMPLETELY EXHAUSTED (TEST AREA PRESSURE VALVE READS ZERO), EXHAUST THE BLADDER INFLATION PRESSURE BY TURNING THE **RED** BLADDER INFLATION VALVE TO THE “**EXHAUST**” POSITION.
- TURN BOTH THE **RED** BLADDER INFLATION VALVE AND THE **GREEN** TEST AREA PRESSURE VALVE TO THE “**CLOSED**” POSITIONS.
- MOVE ON TO THE NEXT JOINT TO TEST AND CAREFULLY FOLLOW THE INSTRUCTIONS STARTING ON PAGE 15 TITLED **COMPLETING THE JOINT TEST – AIR TEST**.

