

AIR PRESSURE METER (TYPE B) VERIFICATION PROCEDURE #43

February 12, 2002

Equipment Checked: AIR PRESSURE METER TYPE B (AASHTO T 152)

Purpose:

This method provides instructions for calibrating an air pressure meter (Type B).

Inspection Equipment Required:

1. Water source
2. Rubber syringe
3. Short straight tube
4. Curved Tube
5. 5% External calibration vessel

Tolerance:

The tolerance is found in test method AASHTO T 152

Procedure:

1. Fill container with water.
2. Screw the short piece of straight tubing into the threaded petcock hole on the underside of the cover. Clamp the cover on the base with the tube extending down into the water.
3. With both petcocks open, add water with the syringe through the petcock having the pipe extending below, until all air is forced out the opposite petcock. Leave both petcocks open.
4. Pump up the air pressure to a little beyond the predetermined initial pressure line on the gauge. Wait a few seconds for the compressed air to cool to normal temperature and then stabilize the gauge hand at the proper initial pressure line by pumping or bleeding off air as needed.
5. Close both petcocks and immediately press down on the thumb lever exhausting air into the base. Wait a few seconds until the gauge is stabilized. If all the air was eliminated and the initial pressure line was correctly selected, the gauge should read 0%. If two or more tests show a consistent variation from 0% in the result, then change the initial pressure line to compensate for the variation. Use the newly established initial pressure line for subsequent tests.
6. Screw the curved tube into the outer end of the petcock and by pressing on the thumb lever and controlling the flow with the petcock lever, fill the 5% calibrating vessel (345 ml) level full with water from the base.
7. Release the air at the free petcock. Open the other petcock and let the water in the curved pipe run back into the base. There is now 5% air in the base.

8. With the petcocks open, pump the air pressure in the exact manner as outlined in paragraph 4. Close the petcocks and immediately press the thumb lever. Wait a few seconds for the needle to stabilize. The dial should now read 5%.
9. If two or more readings show that the gauge reads incorrectly at 5% air in excess of 0.2%, then remove the gauge glass and readjust the gauge to 5% by turning the recalibrating screw located just below the center of the dial.
10. When the gauge reads correctly at 5%, additional water may be withdrawn in the same manner to check results at 10%, 15%, 20%, etc.

EQUIPMENT CALIBRATION RECORD

Calibration Procedure No. 43 Air Meter Pressure Type B (AASHTO T 152)

Date:	Calibrated by:
Previous Calibration Date:	Next Due:
Frequency: Independent Assurance: 3 Mo. Acceptance Testing: Prior to use on project	
Action Recommended: Repair_____ Replace_____ None_____ Other	
Calibration Equipment	Serial Number
Water source used to fill measure:	