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# Quality Assurance Plan

For Alcotest® 6810 DOT (hereinafter referred to as the “6810”).

The following Quality Assurance Plan (QAP) provides general guidelines for operating the Alcotest® 6810 in conformance with and the purpose of the U.S. Department of Transportation Regulations as set forth in 49 CFR, Part 40 (as part of the Omnibus Transportation Employee Testing Act of 1991).

## **External Calibration (accuracy verification):**

The 6810 must be checked for accuracy at least every 30 days, as specified by NHTSA's QAP-guidelines. The 6810 employs a 30 day timer which is reset after completion of a successful accuracy verification.

## **Calibration Device:**

The 6810 accepts either a vapor standard from any Calibrating Unit for Breath Alcohol Testers (“CU”) or a dry-gas standard as listed on NHTSA's Conforming Product List (“CPL”). Follow the operating instructions for proper use of vapor or dry-gas standards.

## **Alcohol Standard - Concentration and Tolerance**

The accuracy verification must be performed with certified and non expired alcohol standards (wet-bath or dry-gas) that have an alcohol concentration equivalent to 0.040 grams per 210 liters of breath with a tolerance of  $\pm 0.002$  grams per 210 liters of breath, as recommended by NHTSA's QAP guidelines.

## **Accuracy Verification - 6810 pre test settings**

Prior to performing an accuracy verification, the 6810 must be set for the standard used:

**For dry-gas:** “Dry-Gas” must be selected and the “Altitude” must be set to the relevant altitude where the test is performed. The altitude can be entered either in feet above sea level or meters above sea level. The 6810 will automatically compensate the measurement for the effect caused by atmospheric pressure changes according to the altitude entered. Follow NHTSA's guidelines for use of dry gas standards as outlined in the “Model Specifications for Calibrating Units”.

**For wet-bath:** “Wet-Bath” must be selected. The altitude setting has no bearing on the integrity of a wet-bath based accuracy verification. Follow NHTSA's guidelines for use of wet-bath standards as outlined in the “Model Specifications for Calibrating Units”.

These settings will remain and don't need to be reentered or changed unless the type of standard changes and/or if the altitude changes (if dry-gas is used).

## **Accuracy Verification**

Make sure the alcohol standard is ready for the test. Please refer to the operator manual for proper CU operation and accuracy verification procedure.

## **Measurement Tolerance**

The accuracy verification is acceptable if the instrument reveals a test result between 0.035 and 0.045 grams per 210 liters of breath, consistent with NHTSA's Model Specifications for Evidential Breath Test Devices set forth in 58 FR 48705, Sec. 4.1. If the accuracy verification result is outside the mentioned acceptable range, the 6810 will automatically disable itself and no breath test can be performed. In such a case it is recommended that the alcohol standards be checked for proper set-up and operation and to repeat the accuracy verification procedure. If the test result continues to be outside the acceptable range, the instrument must be re-calibrated.

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### **Internal Calibration (calibrate):**

The 6810 must be calibrated once every 12 months or whenever the accuracy verification procedure as explained above has failed. The 6810 employs a 365 days timer which is reset after completing the calibration procedure described herein.

### **Calibration device:**

The 6810 accepts either a vapor standard from any Calibrating Unit for Breath Alcohol Testers ("CU") or a dry-gas standard as listed on NHTSA's Conforming Product List ("CPL"). Follow the operating instructions for proper use of vapor or dry-gas use.

### **Alcohol Standard - Concentration and Tolerance**

The 6810 must be calibrated with certified, non expired alcohol standards (wet-bath or dry-gas) that have an alcohol concentration equivalent to and between the range of 0.080 and 0.120 grams per 210 liters of breath with a tolerance of  $\pm 0.002$  grams per 210 liters of breath, as recommended by NHTSA's QAP guidelines.

### **Calibration - 6810 pre test settings**

Prior to calibrating the 6810, the instrument must indicate the following settings:

**For dry-gas use:** "Dry-Gas" must be selected and the "Altitude" must be set to the relevant altitude where the procedure is performed. The altitude can be entered either in feet above sea level or meters above sea level. The 6810 will automatically compensate for the effect caused by atmospheric pressure changes according to the altitude entered. Follow the Operating Manual and NHTSA's guidelines for use of dry gas standards as outlined in the "Model Specifications for Calibrating Units".

**For wet-bath use:** "Wet-Bath" must be selected. The altitude setting has no bearing on the integrity or a wet-bath based calibration. Follow the guidelines in the Operating Manual and NHTSA's guidelines for use of wet-bath standards as outlined in the "Model Specifications for Calibrating Units".

These settings will remain and do not need to be reentered or changed unless the type or concentration of the standard changes and/or if the altitude changes (if dry-gas is used).

### **Calibrating the 6810**

Make sure the alcohol standard is ready for the test. Please refer to the operator manual for proper CU operation and calibration procedure.

### **Inspection and Maintenance**

The 6810 incorporates highly sophisticated self-diagnostic features. If the instrument detects an internal error, the 6810 does not allow operation, and a corresponding message is displayed indicating the error condition. Please observe the Operator Manual for the cause and its remedy.

Any repair of the 6810 must be performed by the Draeger Service Department or a factory certified technician.

**This QAP is subject to change and should neither be considered to be a final requirement nor a contractual term in any agreement to purchase the Alcotest® 6810 DOT.**

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