

COMMON MISTAKES IN EVIDENTIAL

Department of Transportation (DOT) mandated Evidential Breath Tests (EBTs) are conducted by thousands of Breath Alcohol Technicians (BATs) each year. The work of Breath Alcohol Technicians goes largely unrecognized by the general public and in the industries they serve. Yet without them, our places of employment and ways of transportation would be hazardous. It is not easy work; providing

rigorous training is only the beginning. Close attention to detail, policies, procedures, rules and regulations are their everyday work, not to mention their responsibility, to safeguard the rights of their customers, employers, and those they test.

This article addresses the more frequent errors and sources of confusion that occur in Evidential Breath Testing. We hope it is instructive to current and prospective BATs and their trainers.



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& MISCONCEPTIONS BREATH TESTING



Confusing a Calibration with a Calibration Check

The steps required to perform a calibration check (also known as a “verification,” “cal check,” “external calibration check,” or “accuracy check”) can be similar to the steps of an Evidential Breath Tester calibration. It is not uncommon for an inexperienced or flustered BAT to inadvertently or unknowingly perform a calibration after a positive test. This is the fastest

way to discredit an otherwise properly conducted positive confirmation test. Here's why:

Calibrating an evidential breath tester sets the BAC measurement of the instrument to a known alcohol concentration from a dry gas mixture of alcohol and nitrogen, or from a wet bath solution of alcohol and water. Calibrating an EBT is comparable to setting your watch to the time you know to be correct from an independent source.



In the case of EBT calibration, the independent source is the dry gas cylinder of a known alcohol concentration. In the above comparison, the alcohol concentration of the dry gas cylinder and official United States time are both traceable back to the standards of the National Institute of Standards and Technology.

Understanding that calibration is a process of resetting the testing instrument, makes it easy to see why performing a calibration immediately following a positive confirmation test makes it impossible to verify that the instrument was reading correctly when the test was taken.

A calibration check verifies that the EBT is reading correctly but does not reset it. “Cal checking” an EBT is similar to verifying that your watch’s time is accurate by comparing its time to an accurate source. In keeping with our earlier analogy, a watch may drift out of time just as an EBT may drift out of calibration due to factors not immediately apparent to the user.

It is a best practice to perform a calibration check after a positive confirmation test, to demonstrate that the EBT is reading accurately. If the calibration check passes, this confirms the instrument is measuring accurately and the positive test is acceptable, according to DOT regulations.

The next time you hear a BAT indiscriminately use the word “calibration” to refer to “calibration verifications” (cal checks), it may be time for some refresher training.

2 Not Adhering to Breath Alcohol Technician Training Requirements

According to 49 CFR Part 40, specific training requirements must be met to become a Breath Alcohol Technician. The DOT has specified a Model BAT Course, which must be followed to help ensure students receive the necessary training. It may seem counter intuitive that the DOT places the burden on the trainee and not the trainer, to ensure that the BAT training they receive meets or

exceeds the DOT requirements. Best practice is to ensure that your BAT training is conducted by the instrument manufacturer or a trainer who can trace their training back to the manufacturer of the EBT about which they are training. The BAT instructor must also be qualified on the specific device(s) that the BAT intends to use. BAT documentation of equipment proficiency is specific to the manufacturer and model of the device(s) being used. Ensure that your BAT instructor is qualified and that their documentation is current for the specific device(s) for which training is required.

3 Lapses in Breath Alcohol Technician Refresher Training

A BAT must receive refresher Breath Alcohol Technician training no less than once every five years. There are no exceptions to this rule. The DOT will likely consider invalid any evidential breath tests performed by BATs who are overdue for refresher training.

Refresher training covers the same course content as first time BAT training but can normally be completed more quickly as the student is already familiar with the material. Once again, it is the responsibility of the BAT to ensure that they maintain documentation to support their compliance with the five-year refresher training requirement. BAT trainers and instrument manufacturers are not required to keep copies of BAT and instrument training, however it is an industry best practice for them to do so.

Further refresher training must pertain to the instrument model the BAT will be using. If your company acquires new breath testing equipment of a different model in the five-year period (even if the manufacturer is the same as the one already in use), your BAT proficiency training must be undertaken on the new model before it can be used for DOT mandated breath tests.

4 Timing of a Confirmation Test

Confirmation testing must be performed in the window between 15-30 minutes after a positive screening test. There are no exceptions, and a confirmatory test performed sooner than the 15-minute waiting period or after the 30 minutes will be cancelled. If the confirmation test is not completed within 30 minutes, a new screening test and Alcohol Testing Form (ATF) must begin. Most commonly, errors are made by failing to wait the full 15 minutes.

One way to help avoid the problem of improperly timed confirmation tests is to use only ONE instrument for time measurement. Your watch and the EBT counting down the 15-minute wait period are not necessarily in sync and it’s easy to see how this can inadvertently lead to conducting confirmation tests too early. For example, the screening test time on the EBT might read 11:15 while the confirmation test time reads 11:29 because a watch that read 11:30 prompted the EBT that it was time.

A testing device with a countdown timer or a continuously displayed real time clock will help prevent this error. A best practice is to check the time of the screening test on the instrument and verify that at least 15 minutes have passed on the EBT clock before taking the confirmation test.

5 Failing to Change the Mouthpiece

Residual condensation, saliva or other contaminants in a used mouthpiece can easily affect the confirmation test results. Using the same mouthpiece for both the screening test and the confirmation test will cause the confirmation test to be cancelled. We recommend EBT users get into the habit of removing and discarding a spent mouthpiece immediately after every test. If this error occurs, the confirmatory test must be cancelled and noted on the ATF, and a new confirmatory test undertaken.



Potential Errors on the ATF

The ATF records test results from an alcohol testing device. It is important that the four steps required by the ATF are completed correctly. Failure to do so or to recognize and correct errors after a test may invalidate it.

Step 1 of ATF completion is straightforward: Complete the subject's information, the DER's contact info and the reason for the test. This can be completed before the test.

The most common errors in ATF completion arise in steps two, three and four of the ATF:

ATF Step 2: Neglecting to have the test subject sign and date this section on the ATF before conducting the screening test. In Step 2, the subject signs the form to confirm they a) received the test instruc-

tions printed on the back of the ATF, b) had the opportunity to read the instructions if they so chose, and c) consented to the screening test. Logically, this must be done *before* submitting to the test.

ATF Step 3: Prematurely checking the 15-minute wait box and/or checking this box when only a screening test has been performed. Do not check this box unless it is time to do so.

ATF Step 4: Having the subject sign the ATF in Step 4 when they don't need to. When the subject signs the ATF, they are agreeing not to drive or perform any safety sensitive duties. Subject signature is only required after the subject has had a positive confirmation test. It is both unnecessary and incorrect for the subject to sign the ATF after a negative confirmation test.



Correctly completing the Alcohol Test Form is critical to proper Evidential Breath Testing

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The DOT puts the onus on the trainee to ensure their BAT training meets or exceeds DOT requirements.

These common errors are considered “correctable” by the DOT—even if they go unnoticed by the BAT until after the ATF copies have been distributed. “Correctable” means the errors can be remedied by sending the Designated Employee Representative (DER) a signed affidavit or memorandum addressing the mistake. However, because the BAT who made the errors may be unlikely to notice them, it is best to get it right the first time. If the extra time and effort to correct these errors isn’t sufficient motivation, remember that errors like these are quickly noticed in an audit and likely to result in questioning by the auditors.

It is very important that the DER has a copy that mirrors the subject’s copy. Even if you realize an error has occurred before sending or transmitting the DER’s copy, you must create a memorandum/affidavit for the DER rather than merely adding a remark to their copy.

Error Correction Training

If a BAT makes an error in the alcohol testing process, causing a test to be cancelled (i.e. a fatal or uncorrected error), the BAT must undergo error correction training. The most common mistakes leading to correction training are those mentioned above: not waiting the 15 minutes and using the same mouthpiece on the screening and confirmation test.

Error correction training must occur within 30 days from the date the BAT is notified

of errors, or the errors are discovered by the BAT him/herself. During this 30-day period, the BAT can continue DOT breath testing. Once the 30-day time-period has passed, however, the BAT will be deemed to be out of compliance and can no longer act as a Breath Alcohol Technician until the error correction training has been successfully completed.

Error correction training is only required to cover the subject matter area(s) in which the error(s) that caused the test to be cancelled occurred. Error training is not required if an alcohol test is cancelled due to equipment malfunction, unless the failure was due to failure of the BAT to properly maintain the equipment. However, error training is required if the BAT does not attempt to accomplish the test following the equipment failure using another EBT—provided that an additional unit was reasonably available.

Residual Mouth Alcohol

Some common products use alcohol as an ingredient and this alcohol will register on an EBT for a short period of time after being consumed. This effect is known as “residual mouth alcohol.” Examples include mouthwash, cough syrup, liquid cold medicine, breath sprays, some chewing tobacco and inhalers. Certain foods we consume have very low levels of alcohol. Although not required under DOT guidelines, it is a good practice for the BAT to ask the subject to remove any product from their mouth prior to a breath test to reduce the risk of residual mouth alcohol.

Unknown to the BAT, a positive screening test may occur because the subject used an alcohol-infused product such as a breath spray, cough syrup and even some types of chewing tobacco, immediately prior to an alcohol screening test. This could have been done innocently or as an attempt to mask the smell of drinking. Fifteen minutes later the confirmation test may show no alcohol or a much lower BAC than found in the screening test. In this situation the BAT should immediately be on the alert that “residual mouth alcohol” may be present.

In situations like this, where the confirmatory test registers none or much lower BAC than expected, the BAT should refrain from remarks suggesting that perhaps a “false” positive was received or otherwise question the EBT results in front of the subject, as this will only serve to cast doubt about the validity of the test results.

If the subject has used the above-mentioned products correctly and is not using them to mask the smell of alcohol from drinking, they will dissipate during the 15-minute wait time between the screening and confirmation test. If the subject has truly consumed alcohol, they will have a positive confirmation test result demonstrating their accurate BAC.

Conclusion

It is almost impossible to identify every possible error or unique situation that may arise in DOT Evidential Breath Testing. The errors highlighted in this article are relatively common. Prospective BATs will benefit from reviewing these errors and the testing experiences of seasoned BATs and BAT trainers. We hope that you will freely share this DATIA article. ■

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