

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[NHTSA Docket No. 2008-0030]

Highway Safety Programs; Model Specifications for  
Screening Devices to Detect Alcohol (ASD's)

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DATES: Effective Date: Revisions to these Model  
Specifications become effective on March 31, 2008.

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**4. Test Methods and Requirements**

Testing will be performed according to the instructions that normally accompany the submitted device and under the conditions specified in the tests below.

**4.1 Test 1. Precision and Accuracy.**

Perform 40 trials under normal laboratory conditions including 20 trials at 0.008 BAC and 20 trials at 0.032 BAC. Use a calibrating unit for this test for breath devices and preparations of bodily fluids or scientifically acceptable substitutes for non-breath devices. Perform tests using a VNTSC investigator.

*To conform at 0.008 BAC, not more than one positive result. To conform at 0.032 BAC, not more than one non-positive result.*

**4.2 Test 2. Blank Reading.**

Perform 20 trials under normal laboratory conditions at 0.000 BAC. Use non-alcoholic human breath for breath devices and non-alcoholic bodily fluids or scientifically acceptable substitutes for non-breath devices. Perform tests using a VNTSC investigator.

*To conform: no positive results. If the device is capable of providing a reading of greater than 0.000 BAC and less than 0.020 BAC, not more than one such result.*

**4.3 Test 3. Cigarette smoke interference**

Perform five trials at 0.000 BAC. Select an alcohol-free person who smokes cigarettes for this test. Ask

the person selected to smoke approximately one half of a cigarette. Within one minute after smoking, or after a waiting period specified in the manufacturer's instructions, administer the alcohol screening device test according to the manufacturer's instructions. Then ask the person to take another smoke and repeat the test to produce a total of five trials.

*To conform: no positive results.*

#### **Test 4.4.1. Low Ambient Temperature.**

Perform 40 trials at 10 degrees Centigrade (C), including 20 trials at 0.008 BAC and 20 trials at 0.032 BAC. Use a calibrating unit for this test for breath devices and preparations of bodily fluids or scientifically acceptable substitutes for non-breath devices.

*To conform at 0.008 BAC, not more than one positive result. To conform at 0.032 BAC, not more than one non-positive result.*

#### **Test 4.4.2 High Ambient Temperature.**

Perform 40 trials, including 20 trials at 0.008 BAC and 20 trials at 0.032 BAC. Use a calibrating unit for this test for breath devices and preparations of bodily fluids or scientifically acceptable substitutes for non-breath devices.

*To conform at 0.008 BAC, not more than one positive result. To conform at 0.032 BAC, not more than one non-positive result.*

#### **4.5. Test 5. Vibration.**

Perform 40 trials, including 20 trials at 0.008 BAC and 20 trials at 0.032 BAC. Use a calibrating unit for this test for breath devices and preparations of bodily fluids or scientifically acceptable substitutes for non-breath devices.

Mount the screening device on a shake table and vibrate the table in simple harmonic motion through each of its three major axes, as specified below. Sweep through each frequency range in 2.5 minutes, then reverse the sweep to the starting frequency in 2.5 minutes. Disposable testers may be placed in a suitable box mounted on the shake table. Test after vibration.

*To conform at 0.008 BAC, not more than one positive result. To conform at 0.032 BAC not more than one non-positive result.*

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**NO FURTHER TESTS**

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