

Alco-Sensor FST® Operator Manual For British Columbia Users

NOTICE

This manual has been prepared by the British Columbia Association of Chiefs of Police (BCACP), Impaired Driving Advisory Committee (IDAC) with representation from RCMP National Forensic Laboratory Services. The manual has been created from materials provided by Intoximeters Inc., the manufacturer of the **Alco-Sensor FST®**. This manual conforms to British Columbia provincial standards and legislation and is provided to police officers undertaking **Alco-Sensor FST®** operator training in British Columbia.

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1.0 INTRODUCTION

Impaired driving is the leading cause of criminal death in Canada. With over 1,200 deaths (twice as many as all homicides combined) and well over 75,000 injuries, it is the most prevalent and costly crime in our society.

Detecting alcohol impairment among drivers can present significant challenges even for experienced police officers. A study conducted in Florida demonstrated even senior and motivated officers missed 2/3 of all impaired drivers at a check stop because of the wide range of tolerance to alcohol and because officers have only a brief observation and limited interaction with the stopped drivers.

An Approved Screening Device (ASD) is identified in the *Criminal Code* of Canada and approved by the Attorney General of Canada to give police a scientific and reliable tool for quickly determining if a person's ability to operate a motor vehicle is impaired by alcohol.

The Alco-Sensor FST® was approved for use as a screening device in 2012. It is distributed in Canada by DAVTECH Analytical Services and is manufactured by Intoximeters Inc. of St. Louis, Missouri. Upon successful completion of this course, you will be qualified to use this ASD to investigate impaired driving offences.

2.0 SCIENCE OF BREATH TESTING

Physiology and Pharmacology of Alcohol

When an alcoholic beverage is consumed, it passes from the mouth and esophagus to the stomach and small intestine where the alcohol is absorbed into the bloodstream. The absorption of alcohol is quite rapid, generally taking 20 to 40 minutes after consumption to reach a maximum blood alcohol concentration. The absorption time may be affected by the type and amount of food in the stomach and the type of beverage consumed.

Elimination of the alcohol begins immediately after it has entered the blood and most of it (approximately 95%) is eliminated by metabolism in the liver. The remainder (5%) is excreted unchanged through breath and other body fluids. Unlike absorption, the elimination process is slow. The elimination rate ranges between 10 - 20 mg% per hour for most of the population.

Once in the bloodstream, the alcohol is distributed to all parts of the body including the lungs, brain and liver. The depressant action of alcohol on the brain causes impairment and intoxication.

Blood Breath Ratio

There is a fixed and known relationship between the amount of alcohol in the breath and the amount of alcohol in the blood. Breath testing is based upon the principal that 2,100 parts of deep lung air contain the same amount of alcohol as one part of blood. Using this ratio, it is possible to collect a measured volume of breath, analyze it for alcohol and convert the result to a blood alcohol content. This principle is used in all breath test instruments and screening devices operated in North America, including the Alco-Sensor FST®. It should be noted that this ratio is lower than the actual ratio (2,300:1) and so the results obtained through breath testing tend to underestimate the actual blood alcohol concentration.

Mouth Alcohol

Mouth alcohol is residual alcohol remaining in the mouth from the recent consumption of an alcoholic beverage, regurgitation of stomach contents containing alcohol from a burp, belch or vomit, or recent use of mouthwash or breath fresheners containing alcohol. The concentration of alcohol in beverage alcohol or breath fresheners is much higher than in the breath of a person who has consumed alcohol.

When mouth alcohol is present, it adds more alcohol to the breath sample and produces a false high result. However mouth alcohol diminishes rapidly, disappearing in 15 minutes or less and the risk of a falsely high ASD result can be minimized by ensuring there are at least 15 full minutes from the last drink to the ASD test.

Theory of Fuel Cells

The Alco-Sensor FST® analyzes the amount of alcohol in a sample of breath by means of a fuel cell. A fuel cell is similar to a battery except that it requires a fuel (like alcohol) to make it produce a current. The current is produced by a chemical reaction that occurs when alcohol comes in contact with the fuel cell:



The current is produced when electrons are generated in the above reaction. The more alcohol there is in a breath sample, the more electrons are produced causing a stronger current and subsequently, a higher reading.

3.0 ASD DEMAND

Police may stop a driver to check the license, registration, insurance, mechanical condition of the vehicle, or to check the sobriety of the driver. An ASD is an important tool police can use to help evaluate driver sobriety.

In Canada, peace officers may make an ASD demand when they have reasonable grounds to suspect that a person has alcohol in their body and that person has, within the preceding three hours, operated or had the care or control of a motor vehicle. (Reference: Section 254(2) of the *Criminal Code*).

Do not confuse the grounds for the ASD demand with the grounds for an evidentiary breath demand. A peace officer may make a demand for an evidentiary breath sample after developing reasonable grounds to believe a person's ability to operate a motor vehicle is impaired by alcohol and the person operated (or had care or control) of a motor vehicle within the previous three hours (Reference: Section 254(3) of the *Criminal Code*). Reasonable grounds for impairment are a much higher standard than a suspicion of alcohol in the body, and are generally formed with observations of intoxication (slurred speech, poor balance, staggering gait, confusion, disorientation, etc.) or of poor driving (excessively slow, fast or variable speeds, wide or narrow turns, weaving within and outside of the lane of travel, driving errors, etc.).

Reasonable Suspicion:

"Reasonable grounds to suspect" usually include either an odor of liquor on the breath and/or an admission of recent drinking.

An odor of liquor coming from the breath of a driver is the most common reasonable grounds to support the suspicion of alcohol in the body. The odor should be localized to the driver's breath rather than the vehicle, especially if there are passengers or open alcohol in the vehicle. Ask the driver to exit the car if you need to confirm the odor is from the breath. If there are circumstances that make it impossible or difficult to detect an odor of alcohol, then you should make note of and describe them. Perhaps the driver has consumed mints or was smoking recently, or perhaps you have a cold and your sense of smell is diminished. The basis for your 'reasonable suspicion' should always be included in your Report to Crown Counsel (RCC) or Report to Superintendent (IRP).

Where an odor of liquor is absent it will be necessary to determine if and how recently alcohol has been consumed, and, based on the answer, to form a suspicion alcohol is still present in the

body. A good practice is to ask the driver if alcohol has been consumed recently and to make further inquiries if the driver is vague about the timing, or amount, of alcohol consumption.

A suspicion not based on an odor of liquor, an admission of drinking or witness observations of drinking will be unusual, but may be supported by other observations such as slurred speech, poor balance, poor driving or a driver leaving a bar. Documentation is essential.

Articulation in Court:

Since you can expect to be required to articulate the basis of your reasonable suspicion in court, you should remember this is a two step process. First you must observe some evidence such as an odor of liquor and recent driving. Then you form the suspicion the driver has alcohol in the body and was driving within the previous 3 hours. You should not say: "I demanded a sample because there was an odor of liquor on the breath of Mr. Blank". Instead, you should say: "I demanded a sample because I detected an odor of liquor coming from Mr. Blank's breath and this led me to suspect he had alcohol in his body."

It is a good practice to use this two step process when describing your reasonable suspicion in a RCC or IRP.

Making the Demand and Administering the ASD Test:

There is no specific time restriction for making the demand, though the test must be taken "forthwith" and this does place a time constraint on the officer. Although some flexibility may be granted in the circumstances, "forthwith" connotes a prompt demand and an immediate response. The best practice is to ensure you have an ASD with you when you stop a driver, read the demand very soon after forming the reasonable suspicion, and take the test immediately afterwards.

Section 254(2)(b) of the *Criminal Code* authorizes you to remove the driver from the vehicle or to move a short distance if required for testing or safety reasons, and you may find it desirable to seat the driver in the police car while you do the test. It is not advisable to remove the driver from the roadside to another distant location, such as a police office, unless you provide Section 10(b) rights before the test.

A delay in the test may be permitted for the following reasons. Firstly, if you have reason to believe the driver consumed alcohol, or a substance that contains alcohol (eg mouthwash), burped, belched, regurgitated or vomited in the 15 minutes before the time

of the test you should delay the test an appropriate number of minutes so that there are at least 15 full minutes. This will allow any mouth alcohol to dissipate and give an accurate ASD test. Secondly, if the driver has smoked recently you should delay the test so there are at least 5 full minutes after the smoking. If you delay the ASD test for recent drinking or smoking, you should inform the driver of the reason for the delay.

Ask drivers when they finished their last drink or sip, rather than when they had their last drink, so that it is clear the time refers to the end of the subjects drinking. If a driver is vague or unclear in the recency of the drinking you should probe further to try to determine when the last drink was finished. The absence of drinking in the 15 minutes before the ASD test is crucially important information if the ASD test is used to issue an Immediate Roadside Prohibition (IRP). Ensure this question is asked and the answer recorded in your notes.

If you must wait for an ASD to be brought to your location, it is best to read the demand and once the device arrives, you can proceed with the test forthwith. However, lengthy delays may be problematic and require that the driver be advised of his *Charter* rights. In general, be prepared to explain any delay in performing the ASD test.

Both the times of the demand and of the ASD test should be recorded in your notes. Read the demand from your demand card rather than from memory, and it is a good practice to include a copy of the demand (from your demand card) in your RCC or IRP. Ensure the driver understands the demand and ensure a verbal response rather than a nod of the head in agreement. Record the response in your notes.

It is not advisable for one officer to form the reasonable suspicion and another officer to read the demand and to administer the ASD test. If you proceed this way you will have to advise the second officer of your grounds and this officer will need to form the same suspicion before reading the demand. Also, where one officer makes the demand and a second one administers the test, it is the demanding officer that must declare any refusal. This is often overlooked when the demanding officer is not a trained ASD operator.

You should record in your notes and RCC or IRP the identification and serial number of the ASD you used for the test. When you indicate in court the name of the approved screening device you must use the description as it appears in the *Criminal Code*: **Alco-Sensor FST®**

4.0 OPERATIONAL OVERVIEW OF THE ALCO-SENSOR FST®

It is imperative all ASD operators are able to adequately articulate how the device functions and to describe the correct sequence of messages displayed by the device, if called upon to give testimony in court. Although some messages are displayed only very briefly, failure to identify and articulate these messages can raise concerns about the proper operation of the device.

Commence a test by attaching a clean mouthpiece to the device. Insert the closed end of the mouthpiece into the mouthpiece channel, with the flat side of the mouthpiece downward and press the mouthpiece into position. The two holes on the underside of the mouthpiece will naturally align and attach to the appropriate ports of the Alco-Sensor FST®.

Press the ON button (labeled with an “I” symbol within a diamond shape) located opposite the display for about one second so the display illuminates and an audible beep sounds.

The backlight of the display is normally green for all functions but turns an amber color when displaying a **WARN** result, or a red color when displaying a **FAiL** result.

The test sequence starts by briefly indicating the device temperature and battery strength. The acceptable operating temperature of the device is -12°C to 55°C but the test sequence will automatically end if the temperature is not in the acceptable range or if the batteries are too weak to complete the test. There is no need to record this temperature.

Following the temperature and battery check, the display will show **BLNK** and perform a blank test to demonstrate the alcohol free status of the device. A blank result other than 0 mg% will generate a status message **NULL FAiL** and end the test sequence automatically, so there is no need to record the blank reading. A 0 mg% blank will allow the sequence to continue with **WAIT** appearing on the display while the sequence progresses automatically.

A double beep will sound when the device is ready to accept a sample of breath and there will be a small flashing icon of a person’s head in the upper left corner of the display and the message **Blow**. The ASD operator should instruct the subject to **“take a normal breath in, seal your lips around the mouthpiece, and blow continuously through the mouthpiece until I tell you to stop”**.

The Alco-Sensor FST® has an automatic sampling system designed to ensure that a sample of deep lung air is obtained and analyzed. In order to trigger automatic sampling the subject must blow with a minimum flow rate, must produce a minimum breath volume and blow for a minimum duration.

When the minimum flow rate is met a continuous tone will sound, the head icon will stop flashing, the message **Blow** will disappear, and one of three progressive dashes will appear to the right of the icon. If the subject continues to blow while exceeding the minimum flow rate two more dashes will appear to the right of the head icon.

If the subject stops blowing before the sampling requirements have been met, one of the four flow messages will appear and the device will re-cycle to allow a second attempt to provide a sample. After a very short wait the flashing head icon will reappear and the subject should be directed to blow again. The device will allow up to three attempts to provide a breath sample for each test sequence.

When all the sampling requirements are met there will be an audible click and the sample will be accepted and analyzed. The analysis of the breath sample usually takes less than 10 seconds to complete and there are three possible results:

Result displayed on screen	BAC Level
Digital Numerical Reading	0 to 59 mg%*
WARN	60 to 99 mg%
FAIL	100 mg% or higher

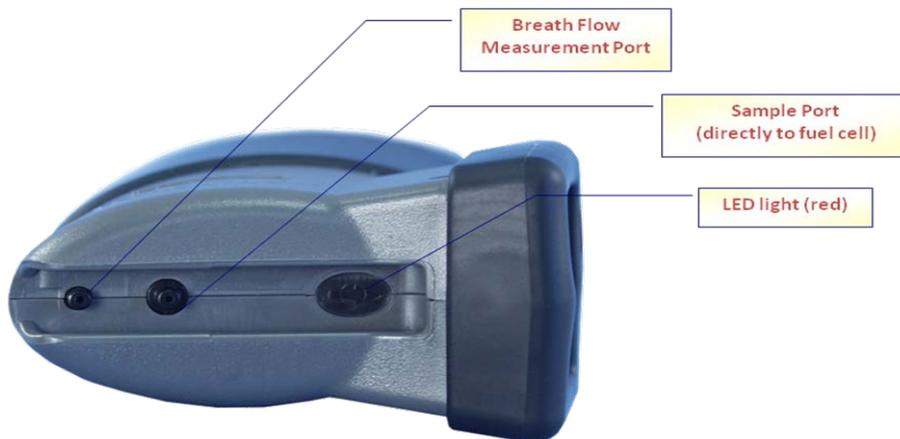
The test result will be displayed for about ten seconds and then the device will power off automatically. Show the reading to the subject. You can recall the test result using the menu function, LAST (see Alco-Sensor FST® Menu Functions on page 22).

*Note: mg% means milligrams of alcohol in 100 millilitres of blood.

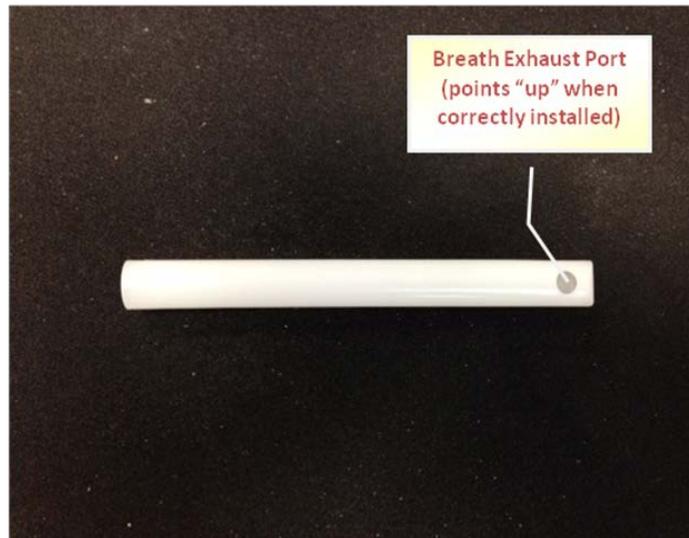
FST - Structure



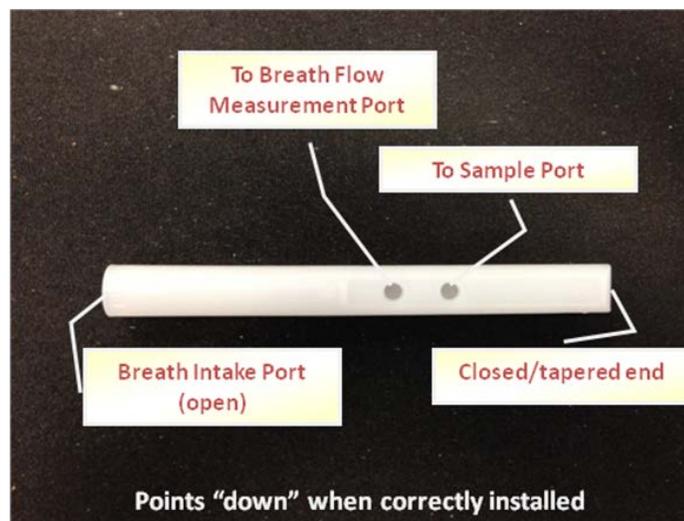
FST - Structure



FST - Mouthpiece



FST - Mouthpiece



5.0 OPERATIONAL PROCEDURE

1. Check Calibration and Service Tags:

ASDs require a service check every year and a calibration check every 4 weeks (28 days). Operators should check both the service and calibration tags on the device before any intended use. If the current date is beyond the Service Expiry Date or the Calibration Expiry Date, you must not use the screening device. **Record the device serial number and expiry dates in your notebook.**

2. Check for Recent Smoking and Consumption of Alcohol Containing Substances:

A test is taken forthwith unless the officer believes that the subject has recently consumed or placed in their mouth a substance containing alcohol (alcoholic beverage, mouth wash, breath fresheners, hand sanitizer etc.). A test on a subject shall not be conducted until 15 full minutes after the time the officer believes an alcohol containing substance has last been consumed or placed in the mouth. This is to ensure the elimination of any possible “mouth alcohol” effect.

A test on a subject shall not be conducted until 5 full minutes after the subject last smoked. Under no circumstances should raw cigarette smoke be blown directly into the Alco-Sensor FST®, as it may shorten the life of the fuel cell sensor. **Record delays for recent drinking or smoking in your notebook.**

Check the subject’s mouth and ask for the removal of any foreign materials. Do not ask them to remove dentures or piercings. **Record this in your notebook.**

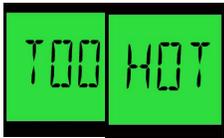
3. Insert Mouthpiece and Check Temperature:

Install a clean, unused Alco-Sensor FST® mouthpiece from a sealed bag. This mouthpiece is specifically designed to be used with the Alco-Sensor FST®. The mouthpiece should be protected from direct touching while it is inserted by using the plastic wrap as a shield. You may wish to retain this wrapper to remove the mouthpiece once the subject test is completed, and then dispose of the two items together.

Depress the Power ON button. A single beep will be heard and the display will show temperature and battery strength.



The Battery Strength Indicator and Temperature in °C (e.g. 27c) will be displayed momentarily after the device is powered ON. If battery power is too weak to perform a test either the device will not power ON or **BAT** will be displayed and testing will be disabled.

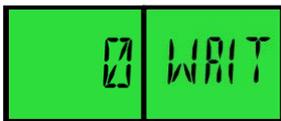


The Alco-Sensor FST® is designed to operate when the device temperature (not the ambient temperature) is between -12°C and 55°C. If the temperature is outside of the proper operating range, the device will indicate a temperature out of range condition (see Alco-Sensor FST® Status Messages on page 23; TOO HOT or TOO CoLD) and power OFF automatically. If you must perform a test with the device, place it in an environment that will bring it to within the operating temperature range. There is no need to record the temperature.

4. Perform an Air Blank Test:



An air blank test (**BLNK**) is run automatically by the device to ensure that there is no alcohol present from a previous test.



The automatic blank test must result in a zero (**0**) reading before the device will advance to the next step in the testing protocol. After the zero (**0**) is displayed, the device will prompt the operator to WAIT for the next prompt.

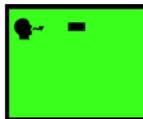


If the result of the blank test is not zero, a status message of **NULL/FAIL** will be generated. The test sequence will be aborted. If the mouthpiece is in place, remove and replace with a new mouthpiece. Wait a few moments before initiating another test.

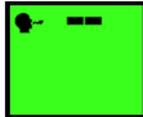
5. Breath Sampling:



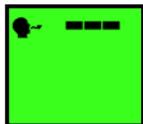
When ready for a sample of breath, the display shows the icon of a person's head flashing and **Blow**. A double beep will be heard when this appears on the display. Instruct the subject to **"take a normal breath in, seal your lips around the mouthpiece, and blow continuously through the mouthpiece until I tell you to stop"**.



Once the subject starts to blow with sufficient flow, the icon of the head will stop flashing and a dash will appear to the right of the head. Additional dashes will appear as the subject continues to provide a sample. A continuous tone will be heard as the subject is blowing.



Once three dashes appear a sample will be taken. It is not necessary for the subject to blow hard, but rather a steady and continuous sample is best for successful sample collection. The subject has up to three (3) minutes and/or three (3) attempts in which to provide a suitable sample once the **Blow** message is displayed.



In order for the device to accept a sample, the breath test subject must blow with a minimum flow rate, produce a minimum volume of breath, and blow over a minimum period of time. Once these criteria have been met by the breath test subject, the sample will be accepted and analyzed by the device.

6. Insufficient Blowing or No Blowing:

If the subject stops blowing before the minimum sampling requirements are met no sample will be taken for analysis. This will be indicated by beep warnings and one of four possible alternating messages on the display. Each one of these four messages will cause the device to re-cycle in preparation to give the subject another opportunity to provide a sample of breath. This re-cycling process can occur two times within each test sequence and so the subject can have up to three opportunities to blow for each test sequence. The Alco-Sensor FST® has no Manual button to override the sample acceptance parameters.

After re-cycling, when flashing head icon and **Blow** appears on the display, you may proceed by telling the subject to blow again.

The following four status messages may be displayed with inadequate samples of breath:

A green square with a black border containing the text "Flow LOW" in a black, monospaced font.

Flow LOW indicates the subject did not provide a constant breath flow greater than the minimum flow rate.

A green square with a black border containing the text "LOW" in a black, monospaced font.

Solution: Instruct the subject to “take a normal breath in, seal your lips around the mouthpiece, and blow continuously through the mouthpiece until I tell you to stop”.

A green square with a black border containing the text "Flow INS" in a black, monospaced font.

Flow INS indicates that the subject’s breath flow rate is inconsistent.

A green square with a black border containing the text "INS" in a black, monospaced font.

Solution: Instruct the subject to “take a normal breath in, seal your lips around the mouthpiece, and blow continuously through the mouthpiece until I tell you to stop”.

A green square with a black border containing the text "Flow CUT" in a black, monospaced font.

Flow CUT tells the operator the subject provided enough breath flow to capture a sample, but the breath flow stopped too abruptly or there was suck back as the sample was taken for analysis.

A green square with a black border containing the text "CUT" in a black, monospaced font.

Solution: Instruct the subject to “take a normal breath in, seal your lips around the mouthpiece, and blow continuously through the mouthpiece until I tell you to stop”.

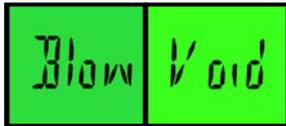
A green square with a black border containing the text "Flow HIGH" in a black, monospaced font.

Flow HIGH indicates that the subject’s breath flow exceeded the maximum allowable flow rate.

A green square with a black border containing the text "HIGH" in a black, monospaced font.

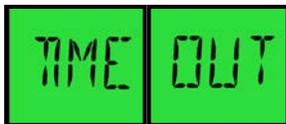
Solution: Instruct the subject to “take a normal breath in, seal your lips around the mouthpiece, and blow continuously through the mouthpiece until I tell you to stop”.

Following three (3) unsuccessful attempts to provide an adequate sample, the test sequence is aborted, **Blow Void** appears on the display, and the Alco-Sensor FST® turns off. If you wish to give the subject another opportunity to provide a sample you will need to replace the mouthpiece and start a new test sequence by turning on the Alco-Sensor FST®. Consider retaining the used first mouthpiece for evidence.



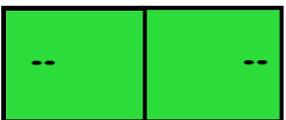
Blow Void – Indicates that the subject has not met the minimum breath flow requirements after 3 opportunities to provide a sample.

If no breath sample is provided during the 3 minute blowing window, the message **Time Out** will appear on the display, the test sequence will abort, and the device will turn off.



Time Out - No breath sample has been provided within the 3-minute time interval to provide a sample. The device powers off automatically.

7. Record Results:



As soon as a successful breath sample has been captured, the analyzing signal will appear. This signal is a display segment (--) scrolling horizontally across the center of the display. At the end of the analysis a result will be displayed for 10 seconds before the device auto-powers OFF.

Show the test result to the driver and record the result and time of the test in your notebook.



Digital results will be displayed for concentrations from 0 to 59 mg%. In this example, the result is 41.



The background colour will change to amber and **WARN** will be displayed in the range of 60 to 99 mg%.



The background colour will change to red and **FAiL** will be displayed at a BAC of 100 mg% or more.

The result will be displayed for 10 seconds before the device will auto-power **OFF**.

8. Mouthpiece Disposal and Power Off:

After taking the subject's alcohol reading you should remove and discard the mouthpiece. For your own hygiene, you may wish to place the wrapper over the blowing end before touching the used mouthpiece with your fingers. Discard the used mouthpiece properly.

Depress and release the **OFF** button. This is located below the display screen. The device will auto power down after 10 seconds after the result has been displayed. If a result is not obtained, the device will switch itself off automatically after three (3) minutes.

6.0 ASD REFUSALS

For unequivocal refusals, record in your notes the words of the subject indicating the refusal. If a driver is indecisive in a refusal and says something like; “yeah, I guess I won’t blow”, you should press for a clear refusal and a response like; “no, I will not blow”.

For equivocal refusals where a driver pretends to comply in providing a breath sample but does not blow long enough or hard enough to cause sample acceptance, you must document why you concluded the subject was refusing. You should record in your notes some of the details of the refusal such as how many times the driver attempted to blow, if the cheeks puffed out, if air blew around the mouthpiece, and the display messages for the device while the subject was blowing. It may be necessary to demonstrate to the subject how to provide a proper sample into the ASD and to ask if the instructions have been understood. You may have to explain to the subject several times and in different ways how to provide a proper sample.

If a driver demands to speak to a lawyer before blowing, do not declare a refusal until after you advise there is no right to a lawyer before the test, and non-compliance will result in a refusal charge. You should explain to the driver the jeopardy faced by failing or refusing to provide a suitable sample, such as “You may be charged with a criminal offence which carries the same penalties as an impaired driving conviction, and which may include losing your license for a year or more, and significant financial penalties and possible jail time”.

In refusal cases, it is a good practice to visually inspect the mouthpieces for obstructions after they have been used and to retain them as evidence.

After an equivocal refusal, insert a new mouthpiece into the ASD and provide a sample yourself to demonstrate the device is capable of accepting a breath sample. **Record this information in your notes and report it in the RCC or IRP.**

ASD refusals are to be handled via the IRP Refusal Process **or** the *Criminal Code* process, which will include issuing a 24 hour prohibition (Section 215 BC *Motor Vehicle Act* (MVA)) and an Administrative Driving Prohibition (Section 94.1 MVA), and an Appearance Notice.

7.0 ASD TEST RESULTS

Fail Result:

A **FAiL** result will give you reasonable grounds to make an evidentiary breath demand under section 254 of the *Criminal Code* and may be the primary grounds for the evidentiary demand. You should read the breath demand as soon as practicable, arrest or detain the driver, provide a Section 10 Charter notification, and a police caution. **Record the times of the demand, charter, and police caution in your notes.**

In court, you will be asked what the **FAiL** result means and you should respond that it indicates the driver's blood alcohol concentration was 100 mg% or more and therefore the driver's ability to operate a motor vehicle was impaired by alcohol.

At this point you may decide to issue the driver an IRP under the BC *Motor Vehicle Act* (MVA) rather than proceed with the *Criminal Code* investigation. However, if you choose to issue an IRP you must inform the driver of the right to a second breath test on a different ASD and that the lower of the two results will prevail:

“I have reasonable grounds to believe: Based on the result of your approved screening device test that your ability to drive is affected by alcohol. I therefore direct you to surrender your driver's licence.

You are now prohibited from driving.

In accordance with the Motor Vehicle Act, I am informing you that you have the right to a second test by providing a second sample of breath into a different Approved Screening Device. You must request the second test forthwith and prior to the service of your Notice of Prohibition. By legislation the lower of the two test results will prevail.

Do you understand? Would you like to provide a second breath sample? “

If a second ASD is not available you will not be able to proceed with an IRP and should consider proceeding criminally, or issuing a 24 hour prohibition pursuant to Section 215 of the MVA.

Following the second ASD test (and provided it is a **WARN** or **FAIL**):

1. Seize the individual's driver's licence even if it is from another jurisdiction.
2. Complete the Notice of Prohibition (MV2723) and serve it on the driver.
3. Complete the Report to Superintendent (MV2724) and the IRP narrative together with other relevant information including civilian and police witness reports.
4. Ensure the Report to Superintendent is sworn.
5. Fax all forms including the Certificates of a Qualified ASD Calibrator (form ED6126) and Vehicle Impoundment documents (if applicable) to RoadSafetyBC before going off shift.

Warn Result:

A **WARN** reading has no criminal consequence and does not contravene the *Criminal Code*. However, an officer must issue a 3, 7, or 30 day IRP under section 215.41 of the MVA if the driver is advised of the right to a second ASD test, and if a second ASD is available. If no second ASD is available an officer may issue a 24 hour driving prohibition under section 215 of the MVA.

ASD Readings of 51 – 59 mg%:

An IRP cannot be issued where the BAC is in the digital reading range of 59 mg% or less. However, a 24 hour prohibition pursuant to section 215 MVA may be issued where the BAC is in the range of 51 – 59 mg%. Complete MV2634 when issuing a 24 hour prohibition.

ASD Readings of 0 – 50 mg%:

If a digital result in the range of 0 – 50 mg% is obtained and you have no other reason to believe the driver is affected by alcohol you should take no action. However, "L" or "N" drivers must have no alcohol in their bodies, and for readings of 5 - 50 mg% you may issue a 12 hour suspension under Section 90.3 MVA. Complete MV2906 when issuing a 12 hour suspension. A violation ticket for driving contrary to restrictions of licence may also be issued.

8.0 ALCO-SENSOR FST® MENU FUNCTIONS

The MENU/OFF button (labeled with an “O” symbol) is located on the Alco-Sensor FST® case beneath the display. Depressing it and holding it down for two seconds, during normal operation, will manually turn the device off. The device will also automatically power down after completing a test sequence and after a period of inactivity.

Display Last Test:

The last test recall feature is activated using the MENU button located immediately below the display screen. Power the device on by first pressing and holding the MENU button, and simultaneously pressing the ON button. You will then need to scroll through the MENU functions and select **LAST** to recall the previous test result.

1. Press MENU button first, then press the start ON button.
2. Press the ON button repeatedly to scroll through the entire menu.
3. Press the MENU button to select the option you want when it appears.

You will see the entire menu of functions (**LAST, PAS, RBL, ACC, CAL, CoDE, TIME, locK**) however, **LAST** is the only function you should access and all the others will not be covered on this course.



The display will show the **LAST** message, which is the first option in the function Menu.

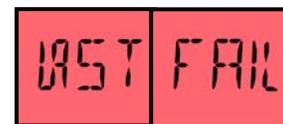
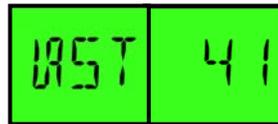
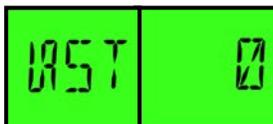
The result of the last test will be displayed briefly (10 seconds) and then device will automatically turn off.

FOR EXAMPLE:

OR

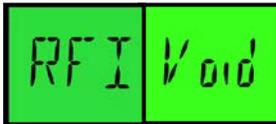
OR

OR

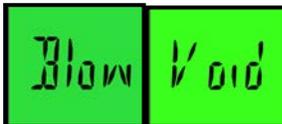


9.0 ALCO-SENSOR FST® STATUS MESSAGES

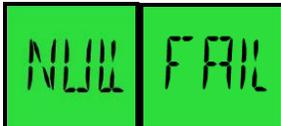
The Alco-Sensor FST® has a number of status messages that may be displayed during the test sequence and the following list are the most common ones. When these messages occur take corrective action if possible or use a different device. Report any unfamiliar messages to your ASD Calibrator.

A digital display showing the text "RFI Void" in a green, segmented font. The text is split across two adjacent rectangular segments.

The Alco-Sensor FST® has been designed to be immune to RFI, however if Radio Frequency Interference (RFI) is detected the test sequence will be aborted. If this happens remove the source of the interference and start a new test sequence.

A digital display showing the text "Blow Void" in a green, segmented font. The text is split across two adjacent rectangular segments.

Indicates that the subject has not met the minimum breath flow requirements after 3 opportunities to provide a sample.

A digital display showing the text "NUL FAIL" in a green, segmented font. The text is split across two adjacent rectangular segments.

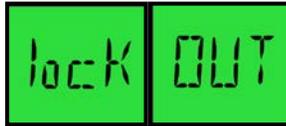
The blank test was not zero and the test sequence has been aborted. Replace the mouthpiece and wait a few moments before initiating another test.

A digital display showing the text "TOO HOT" in a green, segmented font. The text is split across two adjacent rectangular segments.

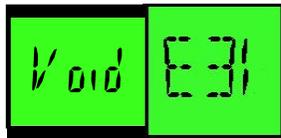
Device temperature **TOO HOT** for test type being performed.

A digital display showing the text "TOO Cold" in a green, segmented font. The text is split across two adjacent rectangular segments.

Device temperature **TOO Cold** for test type being performed.



The device has not had a successful accuracy check within the designated lock out number of days. No further testing can be performed until a successful accuracy check has been conducted by a qualified Alco-Sensor FST® calibrator.



The result of the sample analysis is higher than the device maximum reading.



No sample has been provided within the 3-minute time interval.



If the Alco-Sensor FST® does not have sufficient battery power to perform a test, either the display will not power on or **BAT** will be displayed and testing will be disabled. The battery strength indicator has three bars

10.0 ASD POLICY & PRECAUTIONS

Smoking:

Do not allow the subject to blow smoke into the device. Wait 5 full minutes after smoking by the subject before taking a breath sample. The presence of smoke in a breath sample can damage the fuel cell.

Mouth Alcohol:

Alcohol present in the subject's mouth as a result of recent consumption of alcoholic beverages or belching/ burping/ vomiting can cause falsely high test results. If you have reason to believe alcohol has been consumed in the 15 minutes before you wish to perform an ASD test you must wait an appropriate time to ensure there are 15 full minutes before asking the subject to provide a sample of breath. You should explain to the driver the reason for the delay. If there is no reason to suspect mouth alcohol contamination you should take the breath sample forthwith.

Manual Button:

There is no Manual button for the Alco-Sensor FST®.

Radio Frequency Interference (RFI):

If radio frequency interference affects the device **RFI Void** will appear on the display and the test sequence will be aborted. If this happens, remove the source of the interference and start a new test sequence.

Alco-Sensor FST® Operating Temperature:

The Alco-Sensor FST® has an acceptable operating temperature range of -12°C to 55°C. If the device temperature is not in the correct temperature range, it will provide a status message and abort the test sequence.

Materials in the Mouth:

Check the driver's mouth before the test. Studs, piercings, and dentures can remain in the mouth during the breath test, but all other foreign materials should be removed before breath testing commences. Removed materials such as food, candies, mints, and cough drops that do not contain alcohol, do not require a wait period. If materials are removed, this should be documented.

Alco-Sensor FST® Battery:

If the device battery voltage is too low to perform a test sequence, the display will show **BAT** and testing will be disabled, or the device will not turn on. Return the unit to a qualified ASD calibrator for battery replacement.

Service and Repair:

The Alco-Sensor FST® requires a yearly service check. For annual service and all repairs (other than battery replacement) ship the unit to the authorized service agency: DAVTECH Analytical Services Inc.