

**Specifications**  
**Pennsylvania Department of Transportation**

**I. SCOPE:**

The purpose of this document is to establish specifications for the approval, suspension and or revocation process and the installation, support, and removal of ignition interlock devices in the Commonwealth. If the Department approves a device, the Department shall notify the manufacturer and or the manufacturer's representative in writing. This written notice of approval is admissible in any civil or criminal proceeding in this Commonwealth. The Department may not be held liable in any civil or criminal proceeding arising out of the use of a device approved under this document.

**II. DEFINITIONS:**

- A. The following terms have the meanings indicated.
- B. Terms Defined.
  - 1. "Accuracy" means confirmation of device calibration.
  - 2. "Alcohol" Ethyl alcohol, also called Ethanol: (C<sub>2</sub>H<sub>5</sub>OH)
  - 3. "Alcohol concentration" means the amount of alcohol in a person's blood or breath determined by chemical analysis, which shall be measured by grams of alcohol per:
    - a. 100 milliliters of blood; or
    - b. 210 liters of breath

(BrAC) "Breath Alcohol Concentration" is expressed in percent weight by volume (%w/v) based upon grams of alcohol per 210 liters of breath. A BrAC of 0.10% w/v means 0.10 grams of alcohol per 210 liters of breath (similarly, the Blood Alcohol Concentration or BAC associated with a BrAC of 0.10% w/v means 0.10 grams of alcohol per 100 milliliters of blood; except for the difference in the referenced volume measure-210 liters of breath v. 100ml of blood-the referenced grams of ethanol are identical). For the purposes of these specifications, alcohol concentrations given in BrAC are equal to those given in BAC.

4. "Alcohol Set Point" means a pre-set alcohol concentration setting that requires the ignition interlock device to perform a specific operation.

5. "Alveolar air" (also called "deep lung air" or "alveolar breath") means an air sample, which is the last portion of a prolonged, uninterrupted exhalation and which gives a quantitative measurement of the alcohol concentration in the breath from which the blood alcohol concentration can be determined. "Alveolar" refers to the alveoli, which are the smallest air passages in the lungs, surrounded by capillary blood vessels and through which an interchange of gases occurs during respiration. A minimum volume of 1200 milliliters is required to represent alveolar air.

6. "Anti-circumvention feature(s)" means any feature or circuitry incorporated into the device that is designed to prevent human tampering which could cause the device not to operate as intended.

7. "BAC" means blood alcohol concentration, grams of alcohol per 100 milliliters of blood.

8. "Bogus breath sample" means any sample introduced into the ignition interlock device other than unaltered, undiluted and unfiltered alveolar breath delivered directly from the respiratory system of the driver of a vehicle equipped with an ignition interlock device.

9. "Breath alcohol analysis" means an analysis of a sample of a person's expired alveolar breath to determine breath alcohol concentration.

10. "BrAC" means Breath Alcohol Concentration, grams of alcohol per 210 liters of breath.

11. "Breath alcohol test" means the proper delivery and analysis of a person's expired alveolar breath to determine breath alcohol concentration.

12. "Calibration" means to test and adjust an ignition interlock device so that it accurately measures breath alcohol concentration.

13. "Calibration Stability" is the ability of a breath alcohol ignition interlock device to hold its accuracy over a defined time period.

14. "Camera" a device used in conjunction with an ignition interlock device to capture photos at the time of each sample, to be used to ensure proper interlock usage.

15. "Certification Tests" means tests performed to check the compliance of an ignition interlock device with these specifications.

16. "Circumvention" means an overt, conscious attempt to bypass the ignition interlock device whether providing samples other than the natural unfiltered breath of the driver, or by operating the vehicle without using the ignition interlock device, or any other act intended to operate the vehicle without first taking and passing a breath test, and thus permitting a driver with a BrAC in excess of the alcohol set point to operate the vehicle.

17. "Configuration profile" is a Vendor declaration regarding the programmable features of the ignition interlock device.

18. "Data storage system" means an internal, computerized (battery backed) recording of all events monitored by the installed device, which may be reproduced in the form of required reports.

19. "Declaration of Compliance" means vendor declaration of client compliance in the two months prior to being eligible for removal.

20. "Department" means the Commonwealth of PA, Department of Transportation.

21. "Early recall" is a condition, signaled by a visual and or audible indication on the device that requires the participant to return the vehicle to the service provider for an unscheduled monitoring check.

22. "Emergency Start" is a device feature that enables vehicle operation, without providing a breath sample.

23. "Emergency Service" means the repair and or replacement of an approved ignition interlock device resulting from the operation and or use of the device, and in response to an emergency reported on the appropriate 24 hour toll free phone number. This emergency service may be performed anywhere throughout the Commonwealth by one or more of the following - a manufacturer, a manufacturer's representative, a service provider, or a technician/installer.

24. "Filtered air samples" means any mechanism by which there is an attempt to remove alcohol from the human breath sample. Filters would include, but are not limited to, silica gel, drierite, cat litter, cigarette filters, water filters, or cotton.

25. "Ignition interlock device" means a device that is a breath alcohol analyzer that is connected to a motor vehicle ignition. In order to start the motor vehicle engine, a driver must blow an alveolar breath sample into the analyzer which measures the alcohol concentration. If the alcohol concentration exceeds the startup set point on the interlock device, the motor vehicle will be rendered inoperable.

26. "Illegal start" is an event wherein the ignition interlock device-equipped vehicle is operated without the requisite breath test having been taken and passed or is started when the device is in a lockout condition.

27. "Installation Service Center" means an enclosed stationary building with a separate waiting area for clients that meets state and local fire, safety, health ordinances and codes; complies with these specifications and is utilized to conduct ignition interlock device installations, removals, calibrations, regularly scheduled maintenance or other device services performed by one or more of the following - a manufacturer, a manufacturer's representative, a service provider, or a technician/installer.

28. "Installer" means an individual who has been trained to perform device installations, mobile installations, removals, calibrations, regularly scheduled maintenance, and emergency services or more of the following - a manufacturer, a manufacturer's representative or a service provider. The individual must also satisfactorily meet the requirements of these specifications. Also known as "technician."

29. "Interlock" means the mechanism which prevents a motor vehicle from operating when the breath alcohol concentration exceeds a preset value.

30. "Lockout condition" is a temporary condition in which the device will not permit a breath test to be conducted and thereby prevents the participant from operating the motor vehicle.

31. "Manufacturer" means the actual individual or entity that produces an approved ignition interlock device and agrees to comply with these specifications.

32. "Manufacturer's representative" means an individual and or entity designated by the manufacturer to act on behalf of or represent the manufacturer of a device in all matters related to these specifications. Also known as "Vendor".

33. "Mobile Installations" means the actual installation of an approved ignition interlock device performed by one or more of the following - a manufacturer, a manufacturer's representative, a service provider, and a technician/installer throughout the Commonwealth of Pennsylvania at a site other than an installation service center. Mobile installations shall be held to the same security and procedural standards as provided in these specifications; and during a mobile installation unauthorized personnel shall not witness the installation of the ignition interlock device and system. Mobile installation does not include regularly scheduled maintenance.

34. "Motor Vehicle" is a vehicle which is self-propelled except an electric personal assistive mobility device or a vehicle which is propelled solely by human power.

35. "Negative result" means a test result indicating that the alcohol concentration is less than the startup set point value.

36. "New device model" means an ignition interlock device that has never been approved by the Department. The new device model would be a technologically advanced device that determined by the Department has any or all of the following: a) new model name, number, and/or serial numbers; b) distinctive or different exterior casing in color, shape, size and dimension, and/or labeling; c) new, different, additional, enhanced and/or technologically advanced exterior and/or interior parts and/or components; d) new, different, additional and/or enhanced functions and capabilities related to technologically advanced performance; e) new, different, additional, enhanced, and/or technologically advanced data collection capabilities; and/or f) new, different, additional, enhanced and/or technologically advanced software and/or firmware that directly affects, alters, enhances device functions and/or capabilities related to performance, function and capability. A device determined by the Department to be a new device model would be subject to the New Device Approval Testing process described herein.

37. "PBT" means a Portable Breath Tester as used by law enforcement agencies.

38. "Permanent Lockout" is a condition in which the device will not permit a breath test to be conducted and thereby disables the operation of the vehicle until one or more of the following - manufacturer, manufacturer's representative, service provider or technician/installer conducts an inspection and servicing of the device.

39. "Program Participant" An individual who has either installed an ignition interlock device on a vehicle or has certified to the Department of Transportation that no vehicles are owned or operated, and has received their Ignition Interlock Restricted License.

40. "Positive result" means a test result indicating that the alcohol concentration equals or exceeds the startup set point value.

41. "Purge" means any mechanism by which a device cleanses or removes a previous breath test sample from the device and specifically removes residual alcohol.

42. "Random retest" means after passing the test allowing the engine to start, the device shall require a second test within a randomly variable interval.

43. "Random retest violation" means an event, recorded in the data storage system when the random retest requirement is not met.

44. "Reference sample device" is a device which simulates the breath alcohol concentration of an individual who has been drinking alcoholic beverages and whose alcohol concentration is reflected in an analysis of a breath sample.

45. "Regular scheduled monitoring appointment" means the 30 day and or 60 day servicing, inspection and monitoring of each device installed in a motor vehicle in accordance with these specifications and performed at an installation service center by one or more of the following - manufacturer, manufacturer's representative, service provider or technician/installer.

46. "Residual Mouth Alcohol" is alcohol found in the oral cavity that dissipates over a short period of time. (Commonly referred to as a "False Positive")

47. "Retest set point" means a preset or predetermined alcohol concentration setting, which is the same as the startup set point.

48. "Revocation" is the permanent removal of the approval of a manufacturer, service provider or both to install, maintain, calibrate or remove ignition interlock devices in Pennsylvania.

49. "Sample-free Restart" the time interval after the car is switched off during which the vehicle may be operated again without the delivery of another breath test. (Commonly known as stall protection)

50. "School Vehicle" means any vehicle that has been contracted with schools to transport students.

51. "Service Extension" a device feature that overrides a permanent lockout condition. Providing a passing breath sample below the set point is still necessary. (Commonly known as emergency override)

52. "Service provider" means the person or entity representing the manufacturer(s) of an approved device and or manufacturer's representative WHO IS responsible for the day-to-day operations of an installation service center and or provides mobile installation(s), regular scheduled maintenance and emergency services.

53. "Stand-by Feature" means a feature on a device installed on a tractor trailer which will not call for random retests while a truck is idling.

54. "Startup set point" means a preset or predetermined alcohol concentration, whereby the device will prevent the operation of a motor vehicle if the sample reading is at or above the predetermined alcohol concentration setting.

55. "Suspension" is the temporary removal of the approval of a manufacturer, service provider or both to install, maintain, calibrate or remove an ignition interlock device in Pennsylvania.

56. "Tampering" means an overt or conscious attempt to physically disable or otherwise disconnect the device from its power source or bypass the interlock components of the device and thereby allow the vehicle to be operated without taking and passing the requisite breath test.

57. "Upgraded device model" means an ignition interlock device that has been approved by the Department, but following such approval the manufacturer has changed, modified and/or altered any or all of the following: a) interior component layout and/or circuit board; b) actual wiring and/or circuitry; c) components (i.e. fuel cells, air flow sensors, microprocessors, valves, pumps, batteries, etc.); d) software and/or firmware programming that could affect the performance and function of the device (i.e. warm-up times, sampling rates, retest times, early recalls, service warnings, etc.); e) data collection capabilities; f) service and/or maintenance programs of the device; and/or g) exterior components (i.e. dimensions, color mouthpieces, labels, wires, lights, etc.). A device determined by the Department to be an upgraded device model could be subject to any and/or all of the following processes as described herein: Device Approval/Re-Evaluation Testing; Quality Assurance Pre-Screening Testing; and Revocation/Denial of Approval of Ignition Interlock Devices.

58. "Violation" means any of several events including but not limited to such things as high alcohol, whether from a violation set point or from a retest set point, a random retest violation, tampering or circumvention.

59. "Violation reset" means an unscheduled service of the device and download of the data storage system by the service center required due to an early recall condition.

### **III. DEVICE TECHNOLOGY and CONFIGURATION REQUIREMENTS:**

Approved ignition interlock devices for use in Pennsylvania must have, but are not limited to, the following:

A. The ignition interlock device shall have the ability to detect and record attempts to tamper, alter, or bypass the device and any violations such as an alcohol concentration equal to or above 0.025 grams of alcohol/210 liters of breath (BrAC) and 0.020 grams of alcohol/210 liters of breath for minors and school vehicle drivers.

B. The ignition interlock device shall have the ability to prevent normal operation of the motor vehicle by a participant who fails to retest or fails to appear at a scheduled monitoring appointment.

C. The ignition interlock device shall be equipped with a fully functional camera.

1. The camera must capture a photo during each initial start sample and during each random retest sample.

2. The device must have sufficient storage for all photos until the date of the next monitoring appointment.

3. Photos must provide a clear view of the individual that is providing the sample, that establishes the location of the person within the vehicle, to help ensure that the person taking the test is the driver of the vehicle. The camera must be installed in a position so that the photo captures the entire face.

4. It must be able to produce a photo that is identifiable verification of the driver in all lighting conditions including extreme brightness, darkness and low light conditions.

D. The ignition interlock device shall issue a warning, visual, audible, or both, of an impending lockout.

E. The ignition interlock device shall be able to analyze a specimen of alveolar breath for alcohol concentration.

F. The ignition interlock device shall indicate when a sufficient sample of breath has been collected and shall indicate this by audible or visual means or both.

G. The results of the test shall be noted through the use of pass/fail signals. There shall be no numerical BrAC level displayed.

H. If an alcohol level is detected during the initial test, which meets or exceeds the alcohol set point, the device will enter into a lockout condition. The initial lockout period for a high breath test shall be five minutes with each subsequent lockout lasting for a period of thirty minutes.

I. The ignition interlock device must be capable of random rolling re-testing. After passing the initial test, during vehicle operation the device shall require a second test within a randomly variable interval ranging from 5 to 15 minutes. Third and subsequent retests shall be required at random intervals between 15 and 45 minutes from the previously requested test for the duration of the travel. During the random retest, the retest set point shall be the same as the startup set point. In order to alert the driver that a retest is required a warning light, tone or both shall be activated inside the passenger compartment of the vehicle. The driver will then have 6 minutes to retest. If the engine is intentionally or accidentally shut down after or during the warning but before retesting, the retest clock shall not be reset. The failure to take a retest shall be recorded in the data storage system as a violation and the failure to successfully complete a retest shall cause the device to prevent normal operation of the motor vehicle by activating an audible signal inside the passenger compartment of the vehicle and entering into an early recall condition. Failure to take a random re-test or random re-tests resulting in BrACs equal to or exceeding the 0.025 grams of alcohol/210 liters of breath (0.020 grams of alcohol/210 liters for minors and school vehicle operators) must not sound the vehicle horn nor any type of siren, bell, whistle or any device emitting a similar sound or any unreasonably loud or harsh sound that is audible outside of the vehicle and must not cause the engine of the vehicle to shut off.

J. The startup set point value for the interlock device shall be an alcohol concentration of 0.025 grams of alcohol/210 liters of breath (0.020 grams of alcohol/210 liters for minors and school vehicle drivers). The accuracy of the device shall be plus or minus 0.005 grams of alcohol/210 liters of breath. The accuracy will be determined by analysis of an external standard generated by a reference sample device.

K. The device must operate between -20 degrees centigrade and +70 degrees centigrade.

L. The ignition interlock device shall operate at altitudes up to 2.5 KM above sea level.

M. The ignition interlock device operation shall not be significantly affected by humidity, dust, electromagnetic interference, radio frequency interference, or normal automobile vibration.

N. The ignition interlock device operation shall not be affected by normal fluctuations of power source voltage.

O. The ignition interlock device, after successful completion of a breath alcohol test, shall enable vehicle operation. The ignition interlock device shall allow three (3) minutes from the time the ignition is enabled to start the vehicle. The ignition interlock device shall allow the vehicle to continue operation within three (3) minutes of a stall without requiring an additional test.

P. The ignition interlock device must be capable of thwarting attempts at evasion or circumvention with the use of bogus or filtered breath.

Q. A test of alcohol-free samples shall not yield a positive result. Endogenously produced substances capable of being present in the breath shall not yield or significantly contribute to positive results.

R. The device shall have the following operational features:

1. The device shall be designed to permit a sample-free restart, by which a motor vehicle will allow operation within three minutes after the ignition has been shut off, without requiring a further alcohol analysis. The sample-free restart function shall be checked by the service provider during each service.

2. The device shall also automatically purge residual alcohol before allowing subsequent analyses.

3. The device shall have a data storage system of sufficient capacity to facilitate the recording and maintaining of all daily driving activities and all monitoring requirements for the period of time elapsed from one maintenance and calibration check up to the next seventy (70) days.

4. In addition to the operational features of these specifications, the Department may impose additional requirements, as needed, depending upon design and functional changes in device technology and or the law.

S. The device shall be designed so that anti-circumvention features will be difficult to bypass.

1. Anti-circumvention provisions shall include, but not be limited to, prevention or preservation of evidence of cheating by attempting to use bogus or filtered breath samples or bypassing the breath sampling requirements of the device electronically.



2. The device may use special seals or other methods that record attempts to bypass anti-circumvention provisions.

3. The device shall be checked for evidence of tampering during each monitoring service.

4. When evidence of tampering is discovered, the manufacturer/service provider headquarters shall be notified in writing by the service center and the records shall be made available immediately upon request to the Department or its designee(s).

T. A warning label containing the following language shall be affixed to each device: "Any individual tampering, circumventing, or otherwise misusing this device is guilty of a misdemeanor of the third degree, and, on conviction, will be subject to a fine and additional suspension and additional time in the ignition interlock program."

U. The device shall record any attempt to operate the vehicle without first taking the breath test, such as the use of an electrical bypass.

V. The device shall warn the driver of upcoming routine service appointments for five (5) days prior to the appointment. Should the participant fail to appear, the device shall enter into a permanent lockout condition after a five (5) day grace period and the vehicle shall not be operable until the service provider has reset the device. Service extensions and emergency starts are allowable options under the following guidelines;

1. Each device that is equipped with a service extension must adhere to the following:

- a. Should operate according to the Specifications.
- b. The device shall continue to require initial breath tests and random retests.
- c. Shall not exceed twenty-four (24) hours.
- d. Should be utilized to only allow the client to travel directly to an authorized service center for service.
- e. Be time stamped in the data report

2. Devices equipped with an Emergency Start must adhere to the following;

a. Vendors should only provide authorization during the following circumstances;

- i. A device issue that is not the fault of the participant.
- ii. A medical emergency that could result in serious health risks.
- iii. An instance where the safety of an individual(s) is in jeopardy.

- b. Be limited to one start.
- c. Be timestamped in the data report.
- d. Details must be documented in the client file.

W. The ignition interlock device must have a data storage system that does the following: (1) has sufficient capacity to facilitate the recording and maintaining of all daily driving activities and all monitoring requirements for the period of time elapsed from one maintenance and calibration check up to the next 70 days; (2) records any attempt to start the vehicle without first taking a breath test, such as the use of an electrical bypass; (3) has an internal memory that can store a minimum of three thousand five hundred (3500) events and shall enter a service reminder if the memory reaches ninety percent (90%) of capacity; and (4) warns the driver of an upcoming routine service appointment and if the driver fails to appear, the device enters into a permanent lockout condition after a five (5) day grace period and disables the vehicle until a service provider resets the device.

X. The ignition interlock device alcohol detection sensor shall be based upon electrochemical fuel cell technology or other advanced technology approved by the Department.

Y. The device must be capable of entering into an early recall condition. When the early recall condition is initiated, the participant will have five (5) days to return to the service center. If the participant does not return within this time period, the device will enter into a permanent lockout condition. Violations resulting in an early recall include any of the following: a) three (3) lockouts due to alcohol readings above the startup set point; b) one (1) random retest violation; c) one (1) event of tampering; d) one (1) circumvention violation; e) any equipment malfunctioning and f) any other violation of restrictions placed upon the offender. The data storage system must record and store all violations, attempts to tamper with or circumvent the system.

Z. Failure of one or more of the following - manufacturer, manufacturer's representative, service provider or technician/installer to abide by the terms and conditions contained within Section III may result in suspension or revocation of the approval of the device.

**IV. APPLICATION PROCEDURE FOR IGNITION INTERLOCK DEVICE APPROVAL:**

When a device is submitted for approval by a party other than the manufacturer of such device, the submitting party shall submit a notarized affidavit from the manufacturer of the device certifying that the submitting party is an authorized manufacturer's representative; and it is agreed and understood that any action taken by the Department or any cost incurred in accordance with the provisions of these specifications shall ultimately be the responsibility of the manufacturer.

A. The manufacturer or manufacturer's representative shall provide to the Department a signed statement that the manufacturer, manufacturer's representative, the service providers, installation service centers and technician/installers meet all of the specifications described in this document.

B. The manufacturer or manufacturer's representative shall provide to the Department for each device submitted for approval, a written precise set of specifications which describe the features of the device relevant to the evaluation of its performance, a written set of detailed operating instructions including installation and removal, a written copy of the program participants' reference and problem-solving guides, and the 24 hour toll free emergency service telephone number.

C. The manufacturer or manufacturer's representative of the device shall carry product liability insurance with minimum liability limits of 1 million dollars per occurrence, with 3 million dollars aggregate total; and provide proof of insurance to the Department at the time of application for approval of the device, or at any other time upon request by the Department, its designee or both. The liability covered shall include defects in product design and materials as well as in the work of manufacturing, calibrating, installing, and removing the devices. The proof of insurance shall include a statement from the insurance company that 30 days' notice will be given to the Department before cancellation of the insurance.

D. The manufacturer or manufacturer's representative shall provide a signed statement that the manufacturer or manufacturer's representative will indemnify and hold harmless the Commonwealth of Pennsylvania, the Department and its officers, employees and agents from all claims, demands and actions as a result of property damage and or injury or death to persons which may arise, directly or indirectly, out of any act or omission by the manufacturer or manufacturer's representative relating to the installation, service, repair, use and or removal of an ignition interlock device.

E. The manufacturer or manufacturer's representative shall provide to the Department, its designee or both and to program participants a Warranty of Performance to ensure responsibility of support for service within 48 hours after report of a problem. This support shall be available for the duration of the period during which the device is required to be installed in a program participant's vehicle(s).

F. The manufacturer or manufacturer's representative shall also provide to the Department, its designee or both a list of each of its service providers, installation service centers, and technician/installers operating within the Commonwealth of Pennsylvania, including the name, business address, phone number, fax number and email address. The manufacturer or manufacturer's representative shall immediately notify the Department, its designee or both of

any changes made to this list. Failure to notify the Department, its designee or both in a timely manner, not to exceed 30 days, may result in suspension, revocation, or denial of certification or approval of the device in Pennsylvania. The manufacturer or manufacturer's representative will be required to establish statewide installation and service (defined as the availability of service provision within fifty (50) miles or one (1) hour driving time from any location in the Commonwealth), prior to approval by the Department.

G. A manufacturer or manufacturer's representative must submit to the Department a written request for approval. The Department may decline to review requests for approval on ignition interlock devices that have been previously evaluated and found unacceptable. In the event of non-approval, subsequent and or additional requests for approval may be limited by the Department. The Department shall not get involved in research and development procedures of these devices.

H. Accompanying the request for approval for each device, there must be a notarized letter and or affidavit from an independent third party testing laboratory dated, subsequent to the release of these Specifications, specifically certifying that the submitted device by model and or class meets or exceeds all requirements set forth in these Specifications, and must at a minimum meet the National Highway Traffic Safety Administration (NHTSA) guidelines/specifications as published in the Federal Register Volume 57, Number 67, Tuesday April 7, 1992, pages 11772-11787 or any subsequent revisions to the Federal Register. This affidavit shall specifically and individually include each of the following:

1. The name and location of the independent testing laboratory.
2. The address and phone number of the testing laboratory.
3. The qualifications and experience of the testing laboratory and the names and qualifications of the individuals actually performing the tests.
4. A detailed list of all equipment used during the testing process including the following information:
  - a. Name of Equipment or Apparatus
  - b. Manufacturer or manufacturer's representative
  - c. Part Number
  - d. Serial Number
  - e. Calibration Date (when applicable)
5. Descriptions and explanations of the actual certified tests conducted and or completed, copies of the raw data from such tests and the results from such tests that verify the ignition interlock device accurately, regularly and reliably does each of the following:
  - a. Utilizes electro-chemical fuel cell technology or other advanced technology approved by the Department.

b. Detects and records attempts to tamper, alter, or bypass the device and any violations such as an alcohol concentration of above 0.025 grams of alcohol/210 liters of breath (BrAC).

c. Prevents normal operation of the motor vehicle by a participant who fails to retest or fails to appear at a scheduled monitoring appointment.

d. Issues a warning of an impending lockout.

e. Analyzes a specimen of alveolar breath for alcohol concentration.

f. Indicates by audible or visual means when a sufficient sample of breath has been collected.

g. Indicates the results of breath samples through the use of pass/fail signals; and there are no numerical BrAC levels displayed.

h. Locks out a driver when an alcohol concentration of 0.025 grams of alcohol/210 liters (0.020 grams for minors and school vehicle drivers) of breath or higher is detected.

i. Requests random re-testing: (1) After passing a test allowing the engine to start, the device requires a second test within a randomly variable interval ranging from 5 to 15 minutes; (2) Third and subsequent retests shall be required at random intervals between 15 and 45 minutes from the previously requested test for the duration of travel; (3) During the random retest, the retest set point remains the same as the start-up set point; (4) A warning light and or tone alerts the driver that a retest is required; (5) A driver has 6 minutes to retest; (6) If the vehicle's engine is intentionally or accidentally shut down after or during the warning but before retesting, the reset clock will not reset; (7) Failure to take a retest is recorded in the data storage system as a violation and causes the device to prevent normal operation of the vehicle by activating an audible tone inside the passenger compartment of the vehicle and entering into an early recall condition.

j. Has the startup set point value at an alcohol concentration of 0.025 grams of alcohol/210 liters of breath (0.020 grams of alcohol/210 liters of breath for minors and school vehicle drivers), and the accuracy is plus or minus 0.005 grams of alcohol/210 liters of breath and is determined by analysis of an external standard generated by a reference sample device.

k. Operates up to altitudes of 2.5KM above sea level.

l. Operates between -20 centigrade and +70 centigrade.

m. Operates and is not significantly affected by humidity, dust, electromagnetic interference, or normal automobile vibrations.

n. Operates and is not significantly affected by normal fluctuations of power source voltage.

o. Enables the ignition relay after successful completion of a breath test as follows: (1) Allows three minutes from the time the ignition is enabled to start the vehicle; and (2) Allows the vehicle to be restarted within three minutes of a stall without requiring an additional breath test.

p. Does not allow an additional attempt for five minutes if the initial breath test results in a lockout due to the operator's BrAC level being equal to or above the set point.

q. Remains in lockout for any subsequent failed initial breath test, for an additional thirty minutes if the operator's BrAC remains at or above the predetermined set point.

r. Enters into an early recall condition if there is one (1) start violation, one (1) failure to take a retest, an attempt to bypass or tamper with the device, three (3) high BrAC fails and or any device malfunction.

s. Thwarts attempts at evasion or circumvention with the use of bogus or filtered breath or bypassing of the breath sample requirements electronically.

t. Does not allow endogenously produced substances capable of being present in the breath, to yield or significantly contribute to positive results.

u. Permits a sample-free restart within three minutes after the ignition has been shut off without requiring further alcohol analysis.

v. Purges residual alcohol automatically before allowing subsequent analyses.

w. Has a data storage system that does the following: (1) has sufficient capacity to facilitate the recording and maintaining of all daily driving activities and all monitoring requirements for the period of time elapsed from one maintenance and calibration check up to the next seventy days; (2) records any attempt to start the vehicle without first taking the breath test, such as use of an electrical bypass; (3) has an internal memory of a minimum of three thousand five hundred (3500) events and enters a service reminder if the memory reaches ninety percent (90%) of capacity; and (4) warns the driver of upcoming routine service appointments for five days prior to the appointment and if the driver fails to appear, the device enters into a permanent lockout condition after a five day grace period and disables the vehicle until the device is reset by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or technician/installer.

I. The manufacturer or manufacturer's representative shall affix a warning label containing the following language to the device: "Any individual tampering, circumventing, or otherwise misusing this device is guilty of a misdemeanor of the third degree, and, on conviction, will be subject to a fine, additional suspension and additional time on the ignition interlock program."

J. The manufacturer or manufacturer's representative shall provide a serial number inventory of at least 50 devices from which the Department may select a minimum of two and as many as five for compliance testing conducted by the Department, its designee or both.

K. The manufacturer or manufacturer's representative assumes all costs and responsibilities for the application procedure for ignition interlock device approval, as described herein.

L. Only after the Department has received all the documentation described herein, will the Department determine the suitability and reliability of the submitted device and consider it for approval. The Department also reserves the right to request additional documentation as required.

M. Failure of the manufacturer or manufacturer's representative to meet the requirements contained within Section IV may result in rejection of the manufacturer's or manufacturer's representative application by the Department. The Department reserves the right to limit or restrict future applications for device approval by manufacturers or manufacturer's representatives (see X. Revocation/Denial of Approval of Ignition Interlock Devices, letter H).

## **V. DEVICE APPROVAL TESTING/RE-EVALUATION TESTING**

### **A. New Device Approval Testing:**

1. Manufacturer's or manufacturer's representative applying for approval on all new devices must follow the application process as described in the previous sections of these specifications. Prior to final approval, the Department reserves the right to conduct actual device testing by a Department specified designee and either approve or reject an ignition interlock device based upon the results of the testing.

2. No device may be leased, sold, serviced, repaired, installed or used unless the device has been approved, tested or both by the Department in accordance with PA Act 24 and these Specifications.

3. The Department will notify the manufacturer or manufacturer's representative of the two devices selected to be tested from the serial number inventory of 50 devices supplied with the manufacturer's or manufacturer's representative's application for approval. The manufacturer or manufacturer's representative will calibrate these devices at no cost to the Department or its designee. The manufacturer or manufacturer's representative will supply a list of its service providers' installation service center sites or technician/installers to the Department, its designee or both. The Department or its designee will collect such devices from one or more of the following - the manufacturer, the manufacturer's representative, the service provider, the installation service center or the technician/installer.

4. Upon this notification, at no cost to the Department, the manufacturer or the manufacturer's representative will also provide the Department, its designee or both with detailed operating, installation, and user instructions, as well as five (5) copies of the software and peripherals necessary to download all data stored in the data storage system.

5. Data in the storage system must be accessible and capable of being downloaded to a standard desktop or laptop computer via a standard interface. A standard interface shall include the following: serial cable, null modem, Category 5 network cable, USB cable [Specification 1.1 or 2.0] or parallel interface. In the event that the approved device has been previously

engineered to use a proprietary interface, the manufacturer or manufacturer's representative shall provide as many interface cables or devices as required by the Department, its designee or both. The manufacturer or manufacturer's representative shall ensure to the Department, its designee or both that data downloaded from the device(s) to be tested is in a convenient and usable form; and the data downloaded is capable of being imported into a Microsoft Excel or Wordperfect Quattro Pro spreadsheet and or a Microsoft Access database. At a minimum, the data should be able to be exported from the device as a text file with carriage returns.

6. The Department, its designee or both shall have access to the data recorded by the approved devices installed or having been removed from vehicles in the Commonwealth. This data shall include, but is not limited to illegal starts, positive results, attempted circumvention, internal diagnostic reports and any other relevant data recorded by the approved devices. This data shall not be filtered or selectively purged. This data shall be accessible by any duly appointed and or properly trained technician, supervisor or other agent authorized to do so by the Department. This data shall become the property of the Department and may be used for any purpose approved by the Department.

7. The Department reserves the right to test any device approved under previous specifications; and reserves the right to conduct re-evaluation testing of any and all such devices on either an annual basis or as deemed necessary by the Department. This testing may also be required in order for the continued approval status of all devices.

8. The Department reserves the right to review approval of any device(s) that generate a disproportionate number of performance complaints based upon the percentage of the market serviced by the device(s). If the decision is made by the Department to remove a device from the approved list (See Section X, Revocation of an Approved Device), the manufacturer or manufacturer's representative will have ten (10) business days to propose a plan to correct the identified performance problems, and if accepted by the Department, thirty (30) days thereafter to execute the planned corrective actions in their entirety.

#### B. Re-Evaluation Testing

1. The Department reserves the right to require that a manufacturer or manufacturer's representative submit an approved device for re-evaluation testing. Re-evaluation testing of the approval status of a device can be initiated by the Department due to any one or all of the following:

a. Revision or re-issuance of these specifications, regulation or the statute of the Commonwealth of Pennsylvania

b. Device failures discovered during Quality Assurance Pre-screening Field Testing (see Section IX)

c. Excessive program participant complaints received by the Department and or its designee

d. Evidence a device is deemed unsafe

e. Excessive reports pertaining to consistent device problems which are problematic to the user received by the Department and or its designee by means of the problem logs



f. Evidence a manufacturer or manufacturer's representative is not in compliance with the provisions of these specifications or the law

g. A modification or alteration (i.e. firmware and or software change or upgrades) to an approved device

h. Notification of disapproval of a manufacturer's or manufacturer's representative's device by another state or jurisdiction

2. The Department, its designee or both will notify the manufacturer or manufacturer's representative that its device has been selected for re-evaluation testing. The manufacturer or manufacturer's representative of the device(s) selected for re-evaluation testing will provide the Department with an up-to-date serial number inventory of at least 50 devices in the Commonwealth that are not installed. Within seven (7) days of this notification, the Department and or its designee will select and collect at least two calibrated devices from one or more of the following - the manufacturer, the manufacturer's representative, the service provider, the installation service center or the technician/installer.

3. Upon this notification, at no cost to the Department or its designee, the manufacturer or manufacturer's representative will also provide the Department, its designee or both with detailed operating, installation, and user instructions, as well as five (5) copies of the software necessary to download all data stored in the data storage system.

a. This data must be accessible and capable of being downloaded to a standard desktop or laptop computer via a standard interface. A standard interface shall include the following: serial cable, null modem, Category 5 network cable, USB cable [Specification 1.1 or 2.0] or parallel interface.

b. In the event that the approved device has been previously engineered to use a proprietary interface, the manufacturer or manufacturer's representative shall provide as many interface cables or peripheral devices as required by the Department, its designee or both.

c. The manufacturer or manufacturer's representative shall ensure to the Department, its designee or both that data downloaded from the device(s) to be tested is in a convenient and usable form; and the data downloaded is capable of being imported into a Microsoft Excel or Wordperfect Quattro Pro spreadsheet and or a Microsoft Access database.

d. At a minimum, the data should be able to be exported from the device as a text file with carriage returns.

4. The Department, its designee or both shall have access to the data recorded by the approved devices installed or having been removed from vehicles in the Commonwealth. This data shall include, but is not limited to illegal starts, positive results, attempted circumvention, internal diagnostic reports and any other relevant data recorded by the approved devices. This data shall not be filtered or selectively purged. This data shall be accessible by any duly appointed and or properly trained technician, supervisor or other agent authorized to do so by the Department. This data shall become the property of the Department and may be used for any purpose approved by the Department.

C. In general, such device approval testing and re-evaluation device testing could include, but is not limited to the following (See Breath Alcohol Ignition Interlock Testing Protocols for exact description of tests conducted and the expected outcome compliance):

1. Accuracy for BrAC Measurement: The devices will be tested to ensure accuracy of measuring 0.020 grams of alcohol/210L +/- 0.005 grams of alcohol and 0.025 grams of alcohol/210L +/- 0.005 BrAC.

2. Breath Sampling Accuracy: The devices will be tested to ensure delivery of 1200 ml of breath before sampling begins.

3. Calibration Stability: The devices will be re-evaluated using Accuracy Tests for BrAC Measurement and Accuracy for Utility Specification 70 days after last calibration.

4. Lockout Evaluation: The devices will be tested to ensure lockout capability under all circumstances as defined in these Specifications.

5. Power: The devices will be tested to ensure operational function at a range of 11 volts to 16 volts DC.

6. Temperature Range: The devices will be tested to ensure operational function at temperatures ranging from -20C to +70C.

7. Vibration: The devices will be subjected to varying types of vibrations, and then evaluated for operational function.

8. RFI/EMI: The devices will be exposed to varying levels of interference at various points of operation.

9. Power Loss: The devices will be tested to ensure recording and maintenance of data.

10. Tampering: The devices will be tested to ensure thwarting of circumvention attempts, recording of said attempts, and entry onto early recall mode as defined in these Specifications.

11. Bogus Breath Sample: The devices will be tested to ensure detection of bogus breath samples and ability to prevent ignition and passage of retests when the samples are presented.

12. Random Retest: The devices will be tested to ensure capabilities in initiating tests at intervals defined in these Specifications; allowing 6 minutes for re-test from initiation to breath sample delivery; disallowing reset of internal retest clock if engine is shut off.

13. Sample-free Restart: The devices will be tested to ensure ability to operate the vehicle within 3 minutes of a stall without additional breath analysis.

14. Data Storage System: The devices' data storage systems will be tested to ensure accurate recording and reporting of all events.

15. Accuracy with Utility Specifications: The devices will be tested to ensure consistent start performance with alcohol-free breath samples.

16. Clearance/Warm-up Rates: The devices will be time tested for duration of clearance and warm-up periods and accuracy.

17. Display: The devices will be observed in various modes for readability, feedback provided to the user, and display content.

18. Low Temperature Provisions: The devices will be tested using Manufacturers' recommendations for extreme temperature operation with Accuracy Tests for BrAC Measurement and Accuracy for Utility Specification.

19. Altitude: The devices will be tested to ensure operational function at altitudes up to 2.5km.

D. During the Device Approval Testing and the Re-evaluation Testing, the Department, its designee or both may need to have a selected device(s) installed into a motor vehicle(s). The Department reserves the right to select such motor vehicle(s), and the manufacturer or manufacturer's representative of the device shall arrange with its service provider, installation service center or technician/installer to have the selected device(s) installed into the vehicle and removed after testing, at no cost to the Department or its designee.

E. There will be no charge to the Department or its designee for any damage of a device incurred during any testing process.

F. Failure of one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer to abide by the terms and conditions contained within Section V may result in suspension or revocation of the approval of the device.

## **VI. REQUIREMENTS UPON DEVICE APPROVAL**

A. The manufacturer or manufacturer's representative shall notify the Department, its designee or both in writing if the certification and or approval of a device that is approved for use in Pennsylvania is or has ever been suspended, revoked or denied in another state, whether such action occurred before or after approval in Pennsylvania or if and when an appeal to the action(s) was made and the outcome of the appeal. This notification shall be made in a timely manner, not to exceed 30 days, after the manufacturer or manufacturer's representative has received notice of the suspension, revocation, or denial of certification or approval of the device, whether or not the action is or has been appealed. Failure to notify the Department may result in suspension, revocation, or denial of approval of the device in Pennsylvania.

B. The manufacturer or manufacturer's representative will provide installation and emergency service throughout the Commonwealth and will provide regular scheduled maintenance and other service within 50 miles or one hour driving time from any location in the Commonwealth. (Exception: Installation service centers which are established in individual Counties throughout the Commonwealth and operated by County Employees in response to Court Orders need not provide service to the entire Commonwealth as described above. These service centers must submit service plans to the Department which assure full service coverage of the entire County area. These service plans are subject to the approval or rejection of the Department.) The manufacturer or manufacturer's representative shall be responsible for providing uninterrupted service of installed devices as defined by these specifications regardless of the circumstances which could cause such interruption. Should the manufacturer or

the manufacturer's representative become unable to comply with any of these specifications or if certification is revoked for any other reason, the manufacturer or manufacturer's representative shall notify the Department, its designee or both in writing. Thereby, the manufacturer or manufacturer's representative shall be responsible for removing its devices from program participants' vehicles and shall bear the cost of having them replaced with an approved device from another manufacturer or manufacturer's representative.

C. Service centers shall only provide service for one manufacturer within the Commonwealth.

D. All ignition interlock services shall be performed at an installation service center or under extenuating circumstances as mobile services throughout the Commonwealth.

1. Emergency mobile services must be held to the same security and procedural standards as stationary service centers.

a. Within one business day after any emergency service, the Vendor must notify the Department or its designee. This notification must contain the name of the client and the reason for emergency service.

b. The participant's device, device wiring, and vehicle must be checked at the time of emergency service.

E. Ignition interlocks may not be shipped to a participant's residence or place of business under any circumstances.

F. The manufacturer or manufacturer's representative shall immediately notify and inform in writing the Department and its designee of any modifications or alterations to an approved device, its interior and exterior design, its parts, and or its operating firmware and or software.

G. In the event that a manufacturer or manufacturer's representative is introducing an upgrade or modification(s) to a currently approved device, the manufacturer or manufacturer's representative must provide the Department, its designee or both with a comprehensive plan of action for the mandatory phasing out of the use of the older device. This plan of action must be approved by the Department prior to the deployment of the action plan.

H. Failure of one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer to abide by the terms and conditions contained within Section VI may result in suspension or revocation of the approval of the device.

## **VII. DEVICE INSTALLATION REQUIREMENTS**

A. Prior to installation of a device:

1. All program participants in the interlock program seeking a restoration of operating privilege under 75Pa.C.S. Sec. 3805 shall submit a Self-Certification Form (DL-21SC) provided by the Department, listing any motor vehicles to be operated by the individual to one or more of the following-the

manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer.

a. The manufacturer's personnel or its designated service provider's personnel authorized by the signed PENNDOT Record Information Confidentiality Policy submitted to the Department will check and verify the accuracy of the facts contained on this form provided by the participant(s); and will compare the facts with the Department's motor vehicle records data system.

b. The manufacturer's personnel or its designated service provider's personnel authorized by the signed PENNDOT Record Information Confidentiality Policy submitted to the Department shall only use this system for the purpose of verifying owned or registered vehicles. This electronic verification with the Department shall be completed in the most expedient manner.

c. The manufacturer, service provider and or installation service center will not install any device(s) on a program participant's motor vehicle(s) prior to this electronic verification.

d. The Department may audit the motor vehicle records data system's access for any infractions. Access infractions may result in suspension of access or termination of access, and may result in the suspension or revocation of the approval of the device.

2. If the participant certifies and it is verified that he or she does not own or has registered a motor vehicle(s), device installation is not required. The DL-21SC and any other appropriate required information shall be forwarded to the Department by one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer. It is the responsibility of the interlock Provider to verify on a monthly basis that no vehicle has been purchased. In the event a vehicle has been purchased by an individual who had certified to the Department that no vehicle was owned/registered, the Department shall be contacted to verify that the device had not been installed by another Vendor. Upon verification that a device was not installed, the Department shall be notified with the designated Department form.

3. If the participant certifies and it is verified that a motor vehicle(s) owned or registered to the participant is inoperable, installation is not required on the inoperable vehicle. The DL-21SC and any other appropriate required information shall be forwarded to the Department by one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer.

4. Upon completion of an installation of a device(s), an installation certificate (DL-21SC), and/or any other appropriate required information shall be sent to the Department by one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center or technician/installer. The Department's Bureau of Driver Licensing shall process and issue the special license directly to the program participant.

#### B. Device Installation Requirements

1. Ignition interlock devices and accompanying camera units must be installed according to the following guidelines by one or more of the

following - the manufacturer, manufacturer's representative, service provider, installation service center or technician/installer:

a. All motor vehicles must be inspected prior to installation to determine that mechanical and electrical parts of the motor vehicle that are and will be affected by the ignition interlock device are in acceptable condition; and no device(s) shall be installed until the motor vehicle(s) is capable of such installation. A pre-inspection checklist shall be completed prior to installation, and they shall be kept in the client file.

i. If a vehicle presented for installation does not possess a valid state inspection sticker or registration, then no installation should occur.

b. Installations shall be made in a professional manner in accordance with acceptable industry standards. All electrical connections made between the device and the motor vehicle shall be made permanent, such as soldering or electrical connectors.

c. Each installation shall include all tamper resistant features required by the manufacturer/service provider and the Department which include, but which are not limited to the following:

i. A unique and identifiable covering such as seal, epoxy or resin at all exposed electrical connections for the device and all connections used to install the device, which are not inside a secured enclosure.

ii. Connections to the motor vehicle which shall be under the dash or in an inconspicuous area of the motor vehicle.

iii. A unique and easily identifiable tamper seal, epoxy, or resin at all openings (except the breath and exhaust openings) and on any portion of the handheld unit, control and support units that can be disconnected, except in cases where the design of the device allows for the removal of the hand-held unit.

2. Installations shall be conducted only by individuals trained by one or more of the following - the manufacturer, manufacturer's representative, or service provider.

3. The device shall be installed in such a way that it is required to be stowed out of the way before/while operating the motor vehicle, so as not to interfere in the safe operation of the vehicle.

4. Each camera shall be mounted so that it provides a clear unobstructed view of the driver. Yet it should be mounted in a way that it does not obstruct the driver's line of sight.

a. Wiring for the camera must be stowed neatly and out of sight where possible.

b. A reference picture must be taken at install and kept in the client's file.

c. Photos of the sky, driver's legs, or door handles are not acceptable.

5. Each device shall be calibrated using a "reference sample device" at a threshold determined by the concentrations level of either the premixed alcohol reference solution or a dry gas standard before the device is installed into a vehicle. Calibration materials must be stored in such a manner that they are not exposed to excessive heat or cold conditions which may compromise the integrity of the calibration process.

6. Manufacturers of approved devices or manufacturer's representatives shall disseminate to its service providers, installation service centers, and technician/installers copies of these specifications, Department of Transportation 67 PA. Code CH.88 Ignition Interlock Statement of Policy and any other appropriate information.

7. Manufacturers of approved devices or manufacturer's representatives shall develop and disseminate written instructions for the installation and removal of ignition interlock devices which one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer shall follow and keep on-site.

8. Each device shall be provided with disposable mouthpieces. The manufacturer or manufacturer's representative shall ensure the availability of additional mouthpieces, and an adequate inventory, which will be made available to the program participant(s), must be kept by one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer.

9. The "Stand-by" feature will allow the device to remain dormant and not prompt the operators of tractor trailers to deliver random retests while a truck is idling. The device will activate and immediately prompt the driver to deliver a breath sample when the driver begins to operate the vehicle and the engine's revolutions per minute (RPM's) reach double that of the engine's idling RPM's. To enable the "Standby" feature on a device for use in a tractor trailer prior to installation, specific written request from the Department must be obtained by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer. Permission is granted by the Department on a case by case basis. To be considered, the written request to the Department, its designee or both shall include the following:

(a) Operator Participant's name

(b) Operator Participant's address

(c) Operator Participant's driver's license number

(d) Motor Vehicle identification Number (VIN); and the name, address and contact person of the company that owns the motor vehicle in which the device will be installed.

10. To lower the air volume for a breath sample from 1.2 L to 1.0 L on a device for participant(s) with diminished lung capacity, specific written permission from the Department must be obtained by one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer. Permission is granted on

a case-by-case basis. To be considered, a written request to the Department, its designee or both shall include the following:

- (a) Approved Cover Sheet
- (b) Participant's name
- (c) Participant's address
- (d) Participant's driver's license number
- (e) Documentation from a licensed physician verifying and explaining the extent of the participant's diminished lung capacity and the need for a lowered air volume for a breath sample on the device.

#### C. User Orientation and Support

Efficient and effective service must be provided to the participants of the program according to the following guidelines by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or technician/installer:

1. An orientation on the use of the ignition interlock device shall be developed for program participants and any other persons who will operate the motor vehicle(s). All participants must sign that they have been trained how to use the device, these signed statements must be kept on file for review by the Department or its designee.
2. An orientation at the time of installation shall be conducted, and participants and any other persons who will drive the motor vehicle(s) shall be trained and provided a demonstration on the use of the ignition interlock device, as well as be given written instructions on how to clean and care for the ignition interlock device.
3. A reference and problem solving guide shall be developed and given to participants at the time of installation. The guide shall include information on the location of service centers, servicing procedures, emergency procedures and a strong warning that the device detects non-compliance. In addition, the guide should include the type of motor vehicle malfunctions or repairs that might affect the ignition interlock device and what to do when such repairs are necessary.
4. All questions shall be answered and any mechanical problems relating to the device in the motor vehicle or repair or replace an inoperable or malfunctioning ignition interlock device during normal business hours shall be handled.
5. A twenty-four (24) hour toll free phone number must be provided to all participants for emergencies resulting from the operation or use of the ignition interlock device.
6. All service inquiries shall be responded to within twenty-four (24) hours of the initial contact. Within forty-eight (48) hours of initial contact, repair or replacement of the ignition interlock device shall be completed. Furthermore, any changes or alterations to the device shall be reported to the Department within forty-eight (48) hours of its occurrence.



#### D. Service and Monitoring Requirements

Effective and efficient regularly scheduled maintenance to participant's motor vehicle(s) on which an ignition interlock system is installed and necessary information from the ignition interlock device to the Department, its designee or both according to the following guidelines must be provided by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer:

1. Servicing, inspection and monitoring of each device shall occur within thirty (30) days after the initial installation and no more than sixty (60) days thereafter at an installation service center(not including 5-day grace period).

2. The camera should be inspected at each service and routine monitoring appointment. Faulty cameras shall be replaced at the time of service, and suspicion of tampering or circumvention must be reported to the Department.

3. Should a participant require an early service appointment; the manufacturer shall not readjust the regularly scheduled monitoring appointment.

4. A calibration check of the device at each monitoring shall be performed to verify that the device measures an approved reference sample within plus or minus .005 grams of alcohol/210 liters of the known concentration of the reference sample. If a wet bath standard is utilized calibration solution(s) must be stored in an environment that protects the solution(s) from extremes in temperature. If the result of the calibration check is not within this tolerance range, the device must be re-calibrated or replaced at the time of monitoring.

5. Calibrations are performed utilizing wet bath or dry gas simulation.

##### A. Wet Bath

a. Simulators must be listed on the Conforming Products List

b. Tubing

i. The length of the tubing should not exceed 6 inches

ii. Connections should be secured and closed off.

c. Solution

i. Must be labeled with a lot number and an expiration date.

ii. Must be accompanied by a certificate of analysis.

iii. Must be stored and used in a climate controlled environment

iv. Must be used prior to expiration date

v. Must be replaced every 30 days or 30 tests

vi. The results of each calibration must be recorded in each clients' data report.

B. Dry Gas

a. Dry gas calibrating units must be listed on the Conforming Products List or approved for the next publication.

b. Tubing connections should be secured and closed off.

c. Dry Gas cylinder

i. Be labeled with a lot number and an expiration date.

ii. Must be accompanied by a certificate of analysis.

iii. Must be stored and used in a climate controlled environment.

iv. Must be used prior to expiration date.

v. The results of each calibration must be recorded in each clients' data report.

vi. The reference value should be adjusted for pressure changes due to elevation in which dry gas calibrating units are being used.

6. The technician is responsible for verifying the participant is in possession of the ignition interlock license at initial 30-day monitoring appointment.

a. If the individual is not in possession of the ignition interlock restricted license, the Vendor should immediately notify the Department or its designee.

7. Records on every participant including results of every monitoring check must be maintained by the Vendor. Records may be maintained electronically.

8. Within one (1) business day of performing the monitoring check, a report shall be sent to the Department, its designee or both, regarding any evidence of:

a. Altering, tampering with, bypassing, or unauthorized removal of the device.

b. Any failure to abide by the terms and conditions of the program, including failure to appear for the monitoring visit within the 5 day grace period.

c. Any indications of any non-compliance, such as failure to comply with regularly scheduled maintenance, failure to have the ignition interlock system installed on additional vehicles owned by or registered to the participant, etc.

d. In the event of an unscheduled service, service center technician or vendor personnel must examine the data, data logger, or both to verify that the early service recall was not the result of the client tampering or circumventing the device.

9. All computer hardware that is compatible with the established computer systems of the Department, its designee or both must be purchased and utilized.

#### E. Facility and Personnel Requirements

A manufacturer or manufacturer's representative must establish installation service centers and mobile installation and employ personnel according to the following guidelines:

1. Adequate security measures shall be taken to ensure that unauthorized personnel cannot gain access to secured materials.

2. Installation service centers and mobile installations shall be operated in such a manner that the program participant or any other unauthorized personnel cannot witness the installation and or servicing of the ignition interlock device.

3. Personnel who install, calibrate, perform tamper inspections or perform reporting duties may not have been convicted of a crime substantially related to the qualifications, functions, and duties related to the installation and inspection of the devices. This may include, but is not limited to, persons:

a. Convicted of any alcohol or drug-related offense within the last 3 years.

b. Convicted of more than one alcohol or drug-related offense overall.

c. Convicted of probation violation.

d. Convicted of perjury, forgery, sworn or unsworn falsification.

e. Convicted of tampering with an ignition interlock device.

4. An annual criminal record check through the Pennsylvania State Police database (PATCH), and or NCIC; and a driver's license record check of all personnel (as described above) employed in Pennsylvania. Appropriate reports shall be provided to the Department and or its designee no later than the first day of July. Such checks for newly hired personnel shall be conducted prior to the technician performing any interlock duties. The Department, its designee or both reserves the right to spot check such records in the event of any discrepancies.

a. In the event that a check comes back "Under Review", it is the Vendor's responsibility to recheck and/or submit the completed disposition immediately upon completion.

5. In the event that a relevant criminal history is discovered, the employee must be removed from any device installation, calibration and or removal, and data storage system downloading duties within 10 days. Failure to take this action may result in suspension or revocation of approval of a device in Pennsylvania.

6. Personnel shall be trained to install, calibrate, monitor, upload data and remove the device.

a. All service center personnel must be trained on these Specifications, and sign off that they were trained. Verification and proof of this training must be maintained by the Provider to have available upon request.

#### F. Evaluations, Reports and Information Dissemination

Information about a device requested by the Department, its designee or both regarding the program's participants, participants' usage of the device, device and or service complaints or concerns, technical problems encountered with the device, or any other information that is available must be provided by one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center or a technician/installer.

1. A written summary of all complaints received and corrective actions taken shall be provided to the Department, its designee or both on a quarterly basis. The actual reporting forms and or reporting format will be provided by the Department or its designee. Generally, the complaints shall be categorized by:

- (a) Customer error or operation.
- (b) Faulty automotive equipment other than the device.
- (c) Apparent misuse or attempts to circumvent the device.
- (d) Device failure due to material defect, design defect, workmanship errors in construction, installation, or calibration.

2. No later than the 10th day of each month, a written report to the Department, its designee or both of all devices installed and or removed at its installation service centers and installed by mobile installation during the previous month shall be provided. This report shall contain the program participant's name and address, date of birth, driver's license number, County of jurisdiction, date of device install and or removal, make and model of vehicle, and reason for removal, or any other pertinent information (such as, but not limited to, the total number of active program participants, installations, participants that have completed the program, participants that have voluntarily removed the device, miles driven, number of breath tests, tests resulting in BrACs equal to or higher than 0.025% and 0.020% for minors and school vehicle drivers, attempts to tamper and time of day when high BrACs occur) as requested.

3. The Department, its designee or both shall be informed in writing of any modifications or adjustments to the ignition interlock device, including changes or modifications to firmware or software.

4. The Department, its designee or both shall be provided proof of installation of the device in a participant's vehicle(s) and the results of servicing and monitoring of such devices.

5. The Department, its designee or both shall immediately be notified of a motor vehicle accident involving a vehicle equipped with an ignition interlock device. The name of the program participant, the jurisdiction in which the incident occurred, the name of the investigating officer(s), whether there is evidence of tampering or circumvention of the device, whether or not there is suspicion or evidence of alcohol or other substances involved in the incident, whether there is evidence that a device malfunction occurred and was a factor in causing the accident, if there is pending litigation due to injuries or death resulting from the accident and any other relevant information must be provided to the Department or its designee cooperation with the Department, its designee or both, and, a written report of any and all circumstances of such incidents must be provided in a timely manner.

6. Data Logs shall be compiled for each individual. It is the responsibility of the Vendor to review their customer data information including images, and report any circumvention, tamper, or device issues immediately to the Department or its designee.

a. The device calibration information shall be included in the report.

b. High BrAC readings, skipped/failed random retests, any circumvention must be displayed with a unique identifier.

c. Each event where a sample is provided needs to list the date and time of sample, as well as the result of that sample.

d. The events shall display in chronological order.

e. If the device reaches its violation limit it shall enter into early recall and it shall be recorded in the data report. All reset information should be displayed within the data report as well.

f. Aborted samples shall be indicated within the normal driving events.

g. Training shall be provided to the Department or its designee upon request.

#### G. Removal of the device

The removal of an approved ignition interlock device must be done by one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer of that device:

1. Prior to the removal of the device, the Vendor must submit a declaration of compliance to the Department certifying that no violations, as outlined in 3805 h.(2), have occurred in the last two months of the required interlock period.

a. Violations include;

- i. Any high BrAC over .08 unless followed by a subsequent attempt less than .08 within 10 minutes.
- ii. Failure to take or pass any retest.
- iii. Failure to report to the interlock Vendor for maintenance, calibration, repair, monitoring, inspection, or replacement as required

b. Once the Department has received the declaration of compliance the participant is eligible to receive their unrestricted driver's license.

2. The participant must present their unrestricted driver's license before the service center technician begins the device removal.

3. All device removals must be done in an expedient manner and the vehicle(s) returned to normal operating condition.

4. All electrical connectors associated with device installation must be removed and all severed wires must be permanently reconnected by soldering and insulated with heat shrink tubing.

5. No one shall remove another manufacturer's or manufacturer representative's device without written consent of that manufacturer or manufacturer's representative prior to the removal of the device.

6. If a program participant(s) removes an ignition interlock system, or directs a provider to remove an ignition interlock system, under circumstances not provided by the Department (per Department of transportation 67 pa. Code ch.88, ignition interlock statement of policy), the manufacturer, service provider, and or installation service center shall notify the Department of the program participant's noncompliance.

H. The use of a particular approved device either through purchase, lease agreement or rental agreement must be approved by the manufacturer or manufacturer's representative. No one may continue to install, maintain or remove ignition interlock devices if they have been so notified by the manufacturer.

I. Failure to abide by the terms and conditions contained within Section VII by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or a technician/installer may result in suspension or revocation of the approval of the device.

## **VIII. QUALITY ASSURANCE INSPECTIONS**

A. The Department and its designee reserve the right to conduct on-site inspections of one or more of the following - a manufacturer, manufacturer's representative, service provider, installation service center, mobile installation or technician/installer that provide services for approved devices.

B. Facilities:

1. An enclosed building must be available and utilized for device installations, calibrations and monitoring appointments, except as indicated herein for Mobile installations or Emergency services

2. The enclosed building must be considered safe as indicated by state and local Fire, Safety and Health ordinances and codes

3. The enclosed building must have a separate waiting area for clients, and Mobile installations or Emergency services must ensure that clients are not permitted to observe installation, monitoring, removal or service to a device

4. Security measures must be in place to prevent unauthorized access to secured materials (i.e. client files, tools, devices, calibration solutions, tamper seals, etc.)

5. Fact sheets, posters or other device advertising information may be in sight and made available to the public

C. Equipment:

1. There must be necessary and appropriate equipment and tools available for installation, removal and accurate calibration of the device and to download device data logger information

2. There must be an adequate supply of mouth pieces available to the clients

3. There must be an adequate supply of appropriate tamper seals

D. Documentation (written or electronic, except where indicated) to be kept on site by one or more of the following - the manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer:

1. Procedures for installation, removal and calibration, as set by the manufacturer and or manufacturer's representative

2. Procedures for the installation of tamper proof seals. (All electrical connections made to the motor vehicle shall be permanent, such as soldering or scotch lock clips, as well as, identifiable coverings such as seal, epoxy or resin used on all exposed electrical connections)

3. Procedures for the examination of device(s) for tampering at every service visit following installation

4. Procedures for processing device's data storage system

5. Records of installation, calibration and service visits

6. Copies of these Specifications and Bureau of Driver's Licensing Statements of Policy

7. Instructions for participants on how to use the device

8. Instructions for participants on how to clean and care for the device

9. Instructions for participants on what kind of motor vehicle malfunctions or repairs may affect the device and what to do when such repairs are necessary

10. Instructions for participants on how the device is affected by environment, altitude, moisture, and temperature

11. Instructions for participants for 24 hour toll free phone number for emergencies

E. Documentation (written or electronic, except where indicated) to be kept at the headquarters for one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer:

1. Procedures for installation, removal and calibration, as set by the manufacturer

2. Procedures for the installation of tamper proof seals

3. Procedures for the examination of device(s) for tampering at every service visit following installation

4. Procedures for service providers, installation service centers and or technicians/installers to report data storage system reports

5. Procedures for resolution of complaints within 48 hours

6. Records for installation, removal, servicing and tampering conducted throughout the Commonwealth for the previous three years by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or technician/installer

7. Records of calibrations of all devices in use throughout the Commonwealth

8. Records of all client service visits and missed visits; noncompliance, violations, and failure to report for service; and proof that the Department was notified of all non-compliance incidents

9. Records and Problem logs which include client complaints concerning service or equipment, including problems, resolutions and outcomes

10. Records of equipment failures, customer errors, customer misuse, and attempts to circumvent the device(s)

11. Records from the Department, any appropriate judicial authority or probation Department (if applicable)

12. Copies of all forms and or certifications sent to the Department (i.e. self certification, inoperable vehicle, non-owners and economic hardship forms)

13. Copies of all appropriate personnel/technician criminal background and motor vehicle checks



14. Proof that each technician has been appropriately trained
15. Samples of written instructions provided to the client on how to clean and care for the device
16. Samples of written instructions provided to the client on what kind of vehicle malfunctions or repairs may affect the device, and what to do when such repairs are necessary
17. Samples of written advice on how the device is affected by the environment, altitude, moisture, and temperature
18. Samples of warning labels that are to be affixed to each device ("Any individual tampering, circumventing, or otherwise misusing this device is guilty of a misdemeanor of the third degree offense, and on conviction, will be subject to a fine and additional suspension and time in the ignition interlock program.")
19. Documentation that demonstrates all clients and all persons authorized to use the vehicle were provided training and instruction, by video (In English and or Spanish), hands-on means, and or written instructions, on the proper use of the device
20. Copies of Department of Transportation Regulations and these specifications
21. Any other documents that the Department or its designee deem appropriate.

F. Failure to abide by the terms and conditions contained within Section VIII by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or technician/installer may result in suspension or revocation of the approval of the device.

**IX. QUALITY ASSURANCE PRE-SCREENING TESTING OF AN APPROVED DEVICE**

A. The Department, its designee or both reserves the right to perform periodic pre-screening in-vehicle field testing of an approved device(s), as is deemed necessary, to ensure continued suitability and reliability of the device. Costs for installation, calibration and removal of the device are the responsibility of the manufacturer.

B. Such in-vehicle field testing will consist of the following:

1. The Department, its designee or both will notify the selected Manufacturer or manufacturer's representative that its device has been selected for Device In-Vehicle Field Testing, and within 14 days of this notification a date will be selected for installation of the device into the testing entity's vehicle.

2. Each device selected to be tested will be installed into a Department or its designee's motor vehicle by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or technician/installer. The device must be installed by a

trained technician/installer (as defined in these Specifications); with the device selected randomly from inventory stock at such location.

3. The Manufacturer or manufacturer's representative will provide the Department its designee or both a complete set of operations manuals, technical specifications, schematics, computer hardware and software for downloading data logger, and installation and user instructions seven days prior to the installation of the device into a motor vehicle.

4. Installation of the device will be observed by the Department, its designee or both to ensure and verify compliance with these Specifications.

5. Each device tested will remain in the motor vehicle for a minimum of 65 days.

6. Each device will be tested to ensure the following capabilities:

a. Consistent start performance with alcohol-free breath samples

b. Consistent non-start performance with breath samples including and exceeding set point of 0.025% BrAC:

i. Drinking subject will be observed for twenty (20) minutes following consumption of alcohol

ii. Immediately prior to providing a breath sample, drinking subject will provide a breath sample to a calibrated PBT

c. Consistent "Random Retest" performance:

i. Initiate a "Call" for a second test within 5-15 minutes of the initial test

ii. Initiate a "Call" for subsequent tests within 15-45 minutes thereafter

d. Consistent early or immediate recall modes upon the device identifying violations as defined in PA Department of Transportation Ignition Interlock Specifications

e. Consistent documentation of all attempts to bypass the device, start the device without a breath sample, or introduce bogus breath samples

f. Consistent documentation of all power disconnects

7. Each device will be tested, at a minimum, on the installation date, day 30, and day 60 of each testing period to ensure device calibration stability (see In-Vehicle Field Testing Protocol for exact description of tests conducted and the expected outcome compliance).

8. Upon completion of Day 60 testing:

a. Tested device data storage system will be downloaded and compared to In-Vehicle Testing log maintained throughout the testing time period by the Department, its designee or both.

b. Tested device must enter Permanent Lockout five days after the calibration period ends.

c. The manufacturer or manufacturer's representative will be notified by the Department, its designee or both when testing is completed. Upon receiving a written request from the manufacturer or manufacturer's representative, a letter describing the test results will be provided to the manufacturer or manufacturer's representative from the Department or its designee. This letter will also include a statement ensuring nondisclosure of proprietary information and a statement that such information will be used for evaluation purposes only and will not be distributed to the public.

#### **X. REVOCATION/DENIAL OF APPROVAL OF IGNITION INTERLOCK DEVICES:**

A. The Department may deny, suspend or revoke approval of a device, and remove it from the list of acceptable devices, upon any of the following grounds:

1. Evidence of repeated device failures due to gross defects in design, materials, or workmanship during manufacture

2. Termination or cancellation of manufacturer's or manufacturer's representative's liability insurance along with failure of the manufacturer or manufacturer's representative to carry the specified amount of liability insurance.

3. Request of the manufacturer or manufacturer's representative to remove a device from the list of approved devices

4. Any finding that one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or technician/installer is not in compliance with the provisions of these specifications, regulations or the law

5. Provision of materially false or inaccurate information relating to a device's performance standards, by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer

6. Failure to submit reports to the Department, its designee or both

7. Discontinuance in the business of manufacturing devices

8. Any other reasonable cause to believe that the device was not accurately represented to meet the performance standard

9. Failure to notify and inform in writing the Department, its designee or both of any device modifications or alterations (i.e. firmware and or software changes or upgrades) by one or more of the following - manufacturer,

manufacturer's representative, service provider, installation service center or technician/installer

10. Failure to notify and inform in writing the Department, its designee or both when an approved device has been denied approval, has been revoked, or has been suspended in any other state by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or technician/installer

11. Failure of any device to pass Re-evaluation Testing procedures as defined in section V, B of these specifications.

12. Failure or refusal of the manufacturer to provide the Department and or its designee or both the signed PENNDOT Record Information Confidentiality Policy whenever required by the Department.

13. Infractions of the rules governing access to the Department's motor vehicle records data system by the manufacturer or its designated service provider.

B. The effective date of suspension or revocation shall be 30 days after notification is sent to the manufacturer or manufacturer's representative via certified mail, except in cases where the Department determines immediate suspension or revocation is necessary for the safety and welfare of the citizens of the Commonwealth.

C. Manufacturer or manufacturer's representative may request an appeal review of revocation. This request shall be submitted to the Department, in writing, within 30 days of the revocation. The Department retains the right to grant or deny this appeal review.

D. Upon suspension, revocation, or voluntary surrender of an approval, a manufacturer or manufacturer's representative shall notify each of its service providers, installation service centers or technician/installers to cease to install that model or class of device(s) in any and all program participant's motor vehicle(s) upon the effective date of the suspension, revocation, or voluntary surrender.

E. Upon revocation or voluntary surrender of an approval, one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer shall be responsible for removal of all affected like devices from program participant's motor vehicle(s). All reporting requirements concerning data recorded by the each of the affected like devices must be met and appropriate records forwarded to the Department, its designee or both.

F. The manufacturer or manufacturer's representative shall be responsible for any costs connected with removal of its revoked device(s) from program participant's motor vehicle(s) and the installation of a new device(s) from the Department's list of approved devices.

G. Upon notice of suspension or revocation of approval, one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer shall ensure minimal inconvenience to the affected customers by removing their device(s) during the customer's regularly scheduled monitoring appointments.

H. Upon notice of immediate suspension or revocation that involves severe device malfunction, gross negligence or any other situation that could potentially place program participants, other citizens of the Commonwealth or both in danger, the manufacturer or manufacturer's representative will notify all program participants in writing within 24 hours of receiving notice so that they may have the device removed by one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center or technician/installer.

I. In the event of revocation of a manufacturer's or manufacturer's representative's device, the Department has the right to deny or limit subsequent, additional and or new submissions for approval of any device from said manufacturer.

## **XI. OTHER PROVISIONS**

A. The Department, its designee or both reserves the right to observe the installation and service of any approved device(s). To ensure quality assurance of the interlock program, the Department, its designee or both shall perform site inspections of one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer and conduct quality assurance checks of interlock equipment, service and records.

B. The Department, its designee or both reserves the right to periodically request statistical data regarding driver/equipment performance, with the guarantee that individual drivers' names and addresses will not be specifically identified.

C. The Department reserves the right to modify these specifications based upon the needs of the Commonwealth, and as required by law.

D. The Department reserves the right, at any time, to request additional information from one or more of the following - manufacturer, manufacturer's representative, service provider, installation service center, or technician/installer concerning an approved device which may lead to re-evaluation of the approval of the device.