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EXTERNAL FEATURES OF THE DATAMASTER DMT

LCD touch screen: Identifies each part of the test procedure as it occurs and provides information to the instrument operator to complete the test.

Keyboard: Used for data entry.

Stylus: Used on the touch screen to select options in the software.

Power ON/OFF Switch: Located on the back of the instrument. The normal mode for the instrument is to have the power on, the ON/OFF Switch is only to be used under special circumstances.

Breath Tube: The breath tube is electrically heated and provides a path for the breath sample from the mouth piece to the sample chamber. The breath tube also contains a radio frequency antenna.

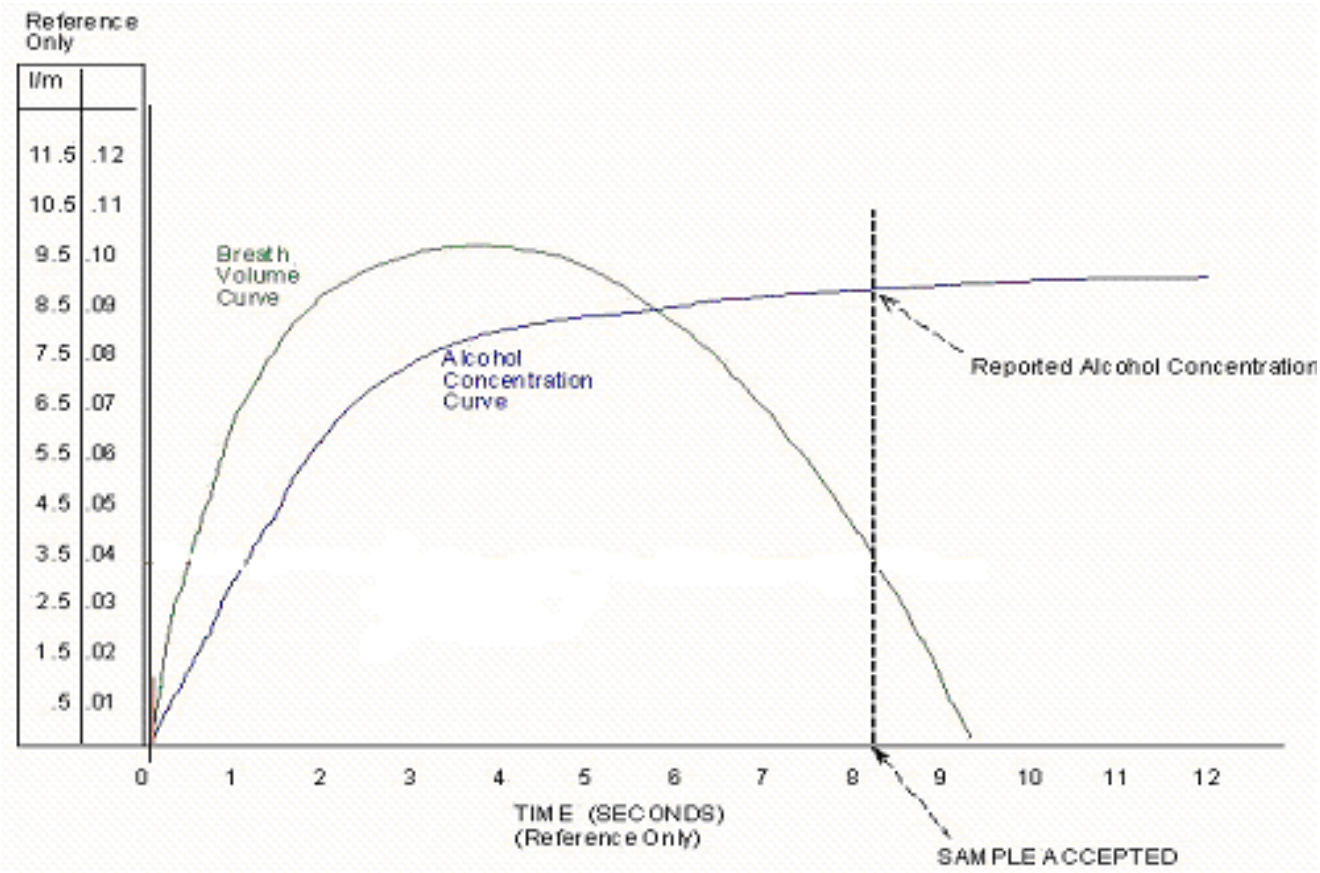
Simulator: An external attachment used to simulate a breath sample containing a known amount of alcohol; used as a quality control check.

Figure 1: DataMaster DMT

DATAMASTER DMT OPERATIONAL PRINCIPLES OVERVIEW

The DataMaster DMT breath testing instrument is designed to undergo a number of processing steps to ensure a fair and accurate analysis of a breath sample introduced to it. These steps include checking components for function, monitoring heated zones, adjusting a measurement baseline to ambient air, checking detector response, introducing a simulated breath containing alcohol vapor, ensuring sample cross-contamination is prevented, and measuring the quality of breath sample.

The figure below is a graphic example of the monitoring of a breath sample to ensure that measurements meet the minimum criteria. As a sample is introduced into the instrument the flow rate is continually monitored. When the minimum flow rate is achieved it must remain at or above that rate for enough time to account for delivery of at least 1.5 liters of breath. Simultaneously the alcohol concentration in the sample is monitored four times per second. A valid breath sample is expected to show a sharp rise and eventual plateau in the alcohol curve as breath continues to flow. Once collected, the sample is evaluated to ensure it is free from chemical contamination. If these criteria are met the instrument will report a breath alcohol concentration.



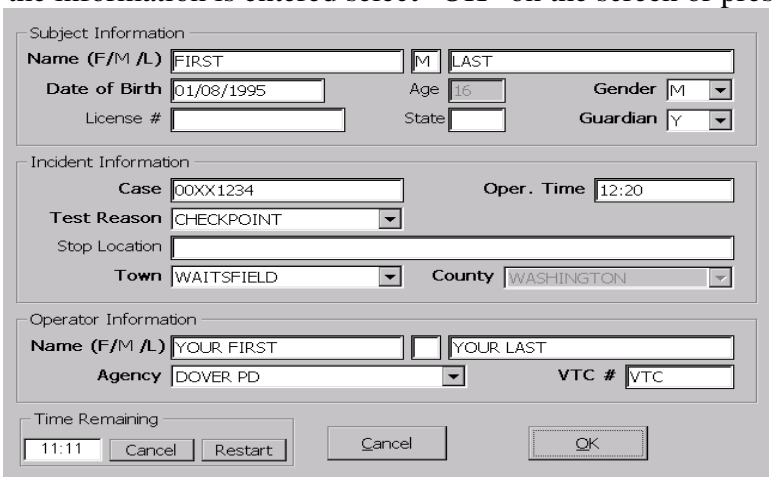
PROCESS FOR OBTAINING AN EVIDENTIAL DUI SUBJECT TEST

Preparation:

- If the screen saver is active, touch the screen to remove the DataMaster DMT from standby mode.
- Confirm that the DataMaster DMT displays "READY, PUSH RUN." If the instrument is turned off, or if it displays "NOT IN SERVICE" proceed to a different DataMaster site.
- Visually observe the subject for any evidence of food, gum, tobacco or any other foreign matter in the mouth. Ask the subject if he/she has anything in their mouth. Anything in the mouth must be removed prior to starting the next step. Tongue piercings and dentures may remain in the mouth.
- The DataMaster DMT is programmed with a mandatory 15 minute timer for the observation period. The 15 minute timer must be satisfied before a subject test is allowed. Press the "START TIMER" button to start the timer.
- Observe the subject for 15 uninterrupted minutes. The subject must be within visual and audio proximity for the entire 15 minutes preceding the test. If at any time the subject burps, belches, or vomits, the observation period must be restarted. If at any time the subject puts something into or removes something from their mouth, the item must be removed and the observation period restarted.

Operating the Instrument:

- Push "RUN" to begin the test process.
- From the "TYPE OF TEST? DUI or CHECK-IN" window select "DUI."
- Enter information in the boxes as requested.
  - All boxes in which the command is bold are required fields.
  - Use [TAB] on the keyboard to move between fields.
  - Once all of the information is entered select "OK" on the screen or press [ENTER].



- Review the information entered for accuracy.
  - A box will pop up prompting "Would you like to review your data? YES or NO". Select "YES".

- Once all data is correct select "OK" or press [ENTER]. The box requesting data review will pop up again. Select "NO" once you have reviewed your data and you wish to proceed to the test sequence.

- If the 15 minute timer was not started prior to pressing the "RUN" button, the DataMaster DMT will now prompt "START TIMER?" Press "OK" to start the timer.
- The instrument will begin its quality control checks once the fifteen minute timer is satisfied. If any of the checks fail, the test will be aborted.
- Upon the successful completion of the quality control checks, the DMT will prompt "SUBJECT TAKE TEST? YES or NO".
  - If the subject refuses to provide a breath sample, select "NO".
    - The instrument will then prompt "REFUSAL or INCAPABLE?"
      - If the subject is physically incapable of providing a sample, select "INCAPABLE".
      - If the subject refuses to provide a sample, select "REFUSAL".
    - In both instances a text box will pop up asking for a reason.
      - Type in a reason why the subject did not provide a sample.
    - The breath testing sequence will end and the evidence reports will print.
  - If the subject consents to provide a breath test select "YES"
  - When "YES" is selected, the display will flash "PLEASE BLOW" and an intermittent tone will be heard.
    - Insert a new mouthpiece into the breath tube. For sanitary purposes avoid directly touching the mouthpiece.
    - Instruct the subject to provide a slow, continuous breath sample.
    - The officer should hold the breath tube during delivery of the breath sample.
    - When the subject provides an adequate breath sample the words "PLEASE BLOW" will stop flashing and remain steady on the screen. A constant tone will be heard.
    - An individual should be allowed to deliver a sample for as long as they are able. The internal electronics of the instrument determine when an adequate sample has been obtained.
    - After the breath sample is accepted, the officer should immediately remove the mouthpiece and discard it.
  - The instrument will display the subject's alcohol result. The officer should inform the subject of the result and ask the subject if they wish to have a second test.
  - The instrument will then prompt "SUBJECT TAKE SECOND TEST? YES or NO"
    - If the subject declines the second test, the officer should select "NO" and an evidence report will be printed. The evidence report will indicate the result of the evidentiary test and will show "SECOND TEST NOT REQUESTED".
    - If the subject requests a second test, the officer should select "YES". The instrument will again perform the quality control checks.
    - Following successful completion of the quality control checks, the instrument will again display "SUBJECT TAKE SECOND TEST? YES or NO"

- If the subject has decided not to take a second test, select "NO". The evidence report will show "SECOND TEST NOT REQUESTED".
- If the subject again consents to a second test, the officer should select "YES". The instrument will display "PLEASE BLOW"
- The officer should insert a new mouthpiece into the breath tube and instruct the subject to provide a breath sample as before.
- Once the breath sample is accepted the officer should immediately remove the mouthpiece and discard it.

- The evidence report is printed in triplicate at completion of the test sequence.
  - One copy of the report should go with the rest of the case paperwork.
  - One copy of the report is retained by the arresting officer.
  - One copy of the report should be given to the subject.
- Make entries regarding the test in the DataMaster Operators' Log (ALC_F200_13), if one is maintained.

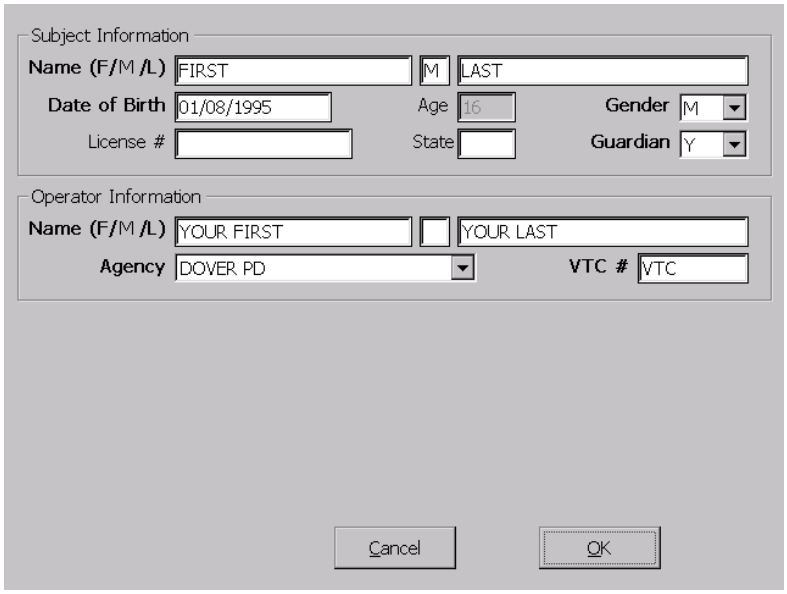
PROCESS FOR OBTAINING A CHECK-IN CONFIRMATION TEST

Preparation:

- If the screen saver is active, touch the screen to remove the DataMaster DMT from standby mode.
- Confirm that the DataMaster DMT displays "READY, PUSH RUN". If the instrument is turned off, or if it displays "NOT IN SERVICE," proceed to a different DataMaster site.
- Visually observe the subject for any evidence of food, gum, tobacco or any other foreign matter in the mouth. Ask the subject if he/she has anything in their mouth. Anything in the mouth must be removed prior to starting the next step. Tongue piercings and dentures may remain in the mouth.

Operating the Instrument:

- Push "RUN" to begin the test process.
- The instrument will prompt "TYPE OF TEST? DUI or CHECK-IN". Select "CHECK-IN".
- Enter information in the boxes as requested.
  - All boxes in which the command is bold are required fields.
  - Use [TAB] on the keyboard to move between fields.
  - Once all of the information is entered select "OK" on the screen or press [ENTER] on the keyboard.



- Review the information entered for accuracy.
  - A box will pop up prompting "Would you like to review your data? YES or NO". Select "YES" and review all data entered.
  - Once all data is correct select "OK" or press [ENTER]. The box requesting data review will pop up again. Select "NO" once you have reviewed your data and you wish to proceed to the test sequence.

- The instrument will begin its quality control checks. If any of the checks fail, the test will be aborted.
- Upon the successful completion of the quality control checks the DataMaster DMT will then flash "PLEASE BLOW" and an intermittent tone will be heard.
  - Insert a new mouthpiece into the breath tube. For sanitary purposes, avoid directly touching the mouthpiece.
  - Instruct the subject to provide a slow, continuous breath sample.
  - The officer should hold the breath tube during delivery of the breath sample.
  - When the subject provides an adequate breath sample the words "PLEASE BLOW" will stop flashing and remain steady on the screen. A constant tone will be heard.
  - An individual should be allowed to deliver a sample for as long as they are able. The internal electronics of the instrument determine when an adequate sample has been obtained.
  - After the breath sample is accepted, the officer should immediately remove the mouthpiece and discard it.
- The evidence report is printed in triplicate at completion of the test sequence.
  - One copy of the report should go with the rest of the case paperwork.
  - One copy of the report is retained by the arresting officer.
  - One copy of the report should be given to the subject.
- Make entries regarding the test in the DataMaster Operators' Log (ALC_F200_13), if one is maintained.

TIME RESTRICTIONS ON DATA ENTRY AND PROCESSING

- Once the 15 minute observation timer is satisfied, the DataMaster DMT will allow an additional ten (10) minutes to press the "RUN" button and begin data entry. If the "RUN" button is not pressed in this time, the 15 minute observation timer will need to be restarted.

- When prompted to enter data five (5) minutes is allotted. If data entry is not finished within the five (5) minutes the instrument will return to "READY, PUSH RUN".

- When prompted to make a decision such as "SUBJECT TAKE TEST? YES or NO" or "USE PREVIOUS DATA," one (1) minute is allotted.

- When prompting "PLEASE BLOW" the subject will have two (2) minutes to provide an adequate breath sample. If at the end of this time an adequate breath sample has not been provided the instrument will prompt "SUBJECT TAKE TEST? YES or NO." After three (3) failures to obtain an adequate breath sample the instrument will rerun its quality control checks. It will then allow the subject up to three (3) more two (2) minute opportunities to provide an adequate sample. All completed and/or attempted breath tests will be documented on the evidence report.

EXAMPLES OF SUBJECT TEST REPORTS

DUI SUBJECT TEST

STATE OF VERMONT

DataMaster DMT: 103206
Location: VFL
Certification Date: 07/27/2012
Installation Date: 07/27/2012

Date: 08/06/2015
Time: 14:12:04

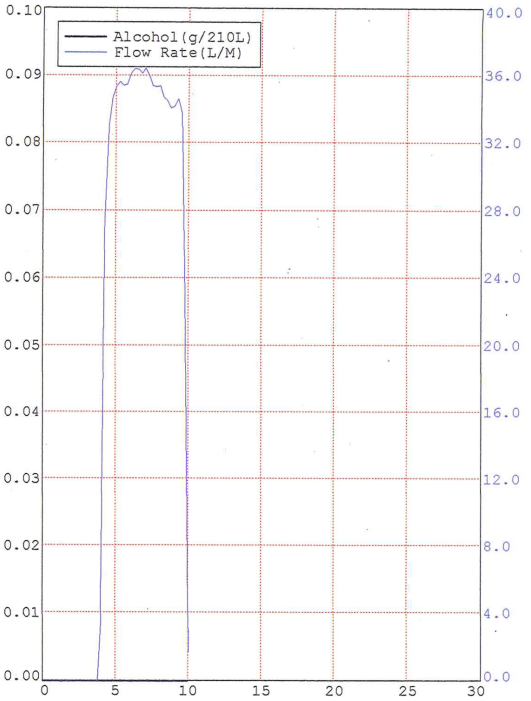
SUBJECT NAME:
TEST TEST
DOB: 01/01/1990 AGE: 25
GENDER: M
LICENSE #: 123456 VT

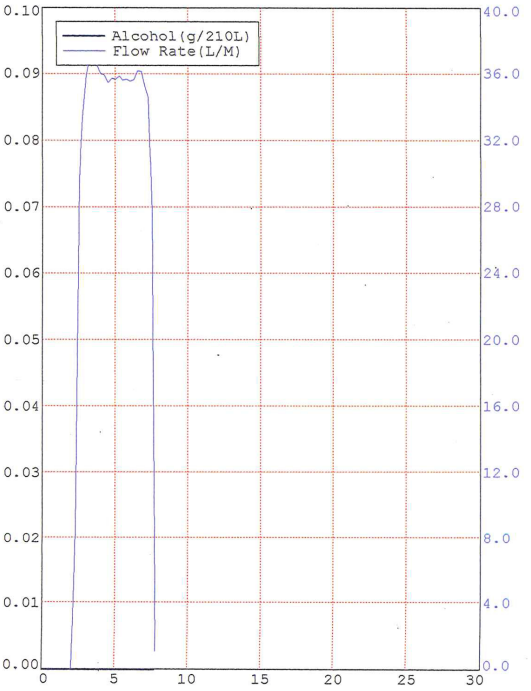
CASE #: 123456
TIME OF OPERATION: 12:00
LOCATION OF INCIDENT:
MAIN STREET
TOWN: WATERBURY
COUNTY: WASHINGTON

TEST OPERATOR NAME:
ROBERT DRISCOLL
AGENCY: VFL

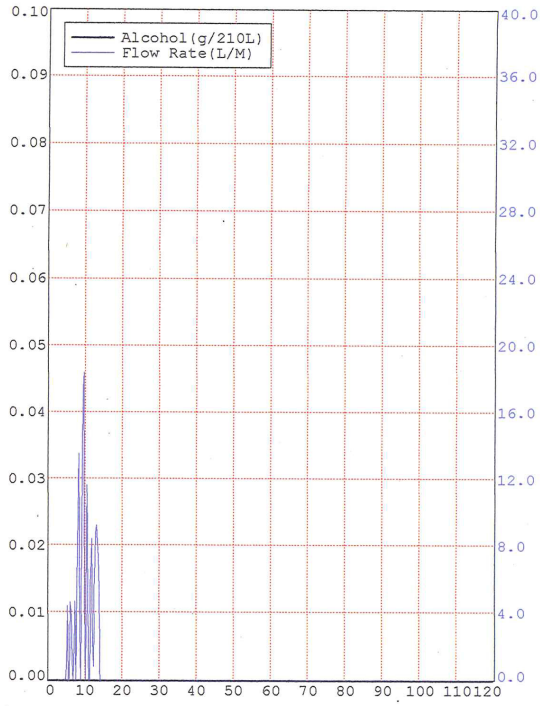
Obs. Period Start:		13:57
BLANK TEST	0.000	14:12
CALIBRATION CHECK	PASSED	14:13
SIMULATOR VAPOR 34.1°C	0.098	14:13
BLANK TEST	0.000	14:14
SUBJECT SAMPLE (Vol=3.3L)	0.000	14:14
BLANK TEST	0.000	14:15
CALIBRATION CHECK	PASSED	14:15
SIMULATOR VAPOR 34.0°C	0.098	14:15
BLANK TEST	0.000	14:16
SUBJECT SAMPLE (Vol=3.1L)	0.000	14:16

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Lot #: 15-06-100





DMT Serial Number #103206 Page 1 of 1 08/10/2015 8:01 AM



DUI SUBJECT TEST

STATE OF VERMONT

DataMaster DMT: 103206
Location: VFL
Certification Date: 07/27/2012
Installation Date: 07/27/2012

Date: 08/06/2015
Time: 14:35:06

SUBJECT NAME:
TEST TEST
DOB: 01/01/1990 AGE: 25
GENDER: M
LICENSE #: 123456 VT

CASE #: 123456
TIME OF OPERATION: 12:00
LOCATION OF INCIDENT:
MAIN STREET
TOWN: WATERBURY
COUNTY: WASHINGTON

TEST OPERATOR NAME:
ROBERT DRISCOLL
AGENCY: VFL

Obs. Period Start:		14:20
BLANK TEST	0.000	14:36
CALIBRATION CHECK	PASSED	14:36
SIMULATOR VAPOR 34.1°C	0.098	14:36
BLANK TEST	0.000	14:37
SUBJECT SAMPLE	INCOMPLETE	14:39
BLANK TEST	0.000	14:40
SUBJECT SAMPLE	REFUSED	14:40

Subject incapable of providing sample.
Reason: could not provide valid sample

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Lot #: 15-06-100

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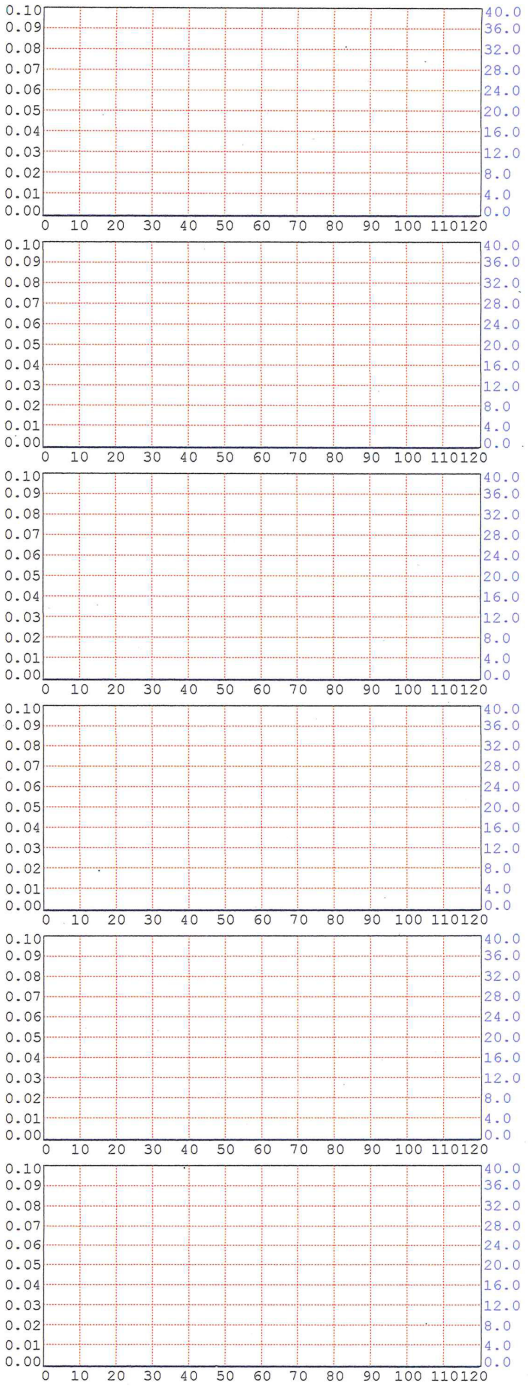

DUI SUBJECT TEST

STATE OF VERMONT

DataMaster DMT: 103206
Location: VFL
Certification Date: 07/27/2012
Installation Date: 07/27/2012

Date: 08/10/2015
Time: 08:18:32

SUBJECT NAME:
TEST TEST
DOB: 01/01/1990 AGE: 25
GENDER: M
LICENSE #: 0123456 VT

CASE #: 01234
TIME OF OPERATION: 12:00
LOCATION OF INCIDENT:
MAIN STREET
TOWN: WATERBURY
COUNTY: WASHINGTON

TEST OPERATOR NAME:
ROBERT DRISCOLL
AGENCY: VFL

Obs. Period Start:		08:03
BLANK TEST	0.000	08:19
CALIBRATION CHECK	PASSED	08:19
SIMULATOR VAPOR 34.0°C	0.097	08:19
BLANK TEST	0.000	08:20
SUBJECT SAMPLE	INCOMPLETE	08:22
BLANK TEST	0.000	08:23
SUBJECT SAMPLE	INCOMPLETE	08:25
BLANK TEST	0.000	08:26
SUBJECT SAMPLE	INCOMPLETE	08:28
BLANK TEST	0.000	08:29
CALIBRATION CHECK	PASSED	08:29
SIMULATOR VAPOR 34.1°C	0.099	08:29
BLANK TEST	0.000	08:30
SUBJECT SAMPLE	INCOMPLETE	08:32
BLANK TEST	0.000	08:33
SUBJECT SAMPLE	INCOMPLETE	08:35
BLANK TEST	0.000	08:36
SUBJECT SAMPLE	INCOMPLETE	08:38

Subject declined second test after previously requesting one.

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Lot #: 15-06-100

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DUI SUBJECT TEST

STATE OF VERMONT

DataMaster DMT: 103206
Location: VFL
Certification Date: 07/27/2012
Installation Date: 07/27/2012

Date: 08/10/2015
Time: 10:04:50

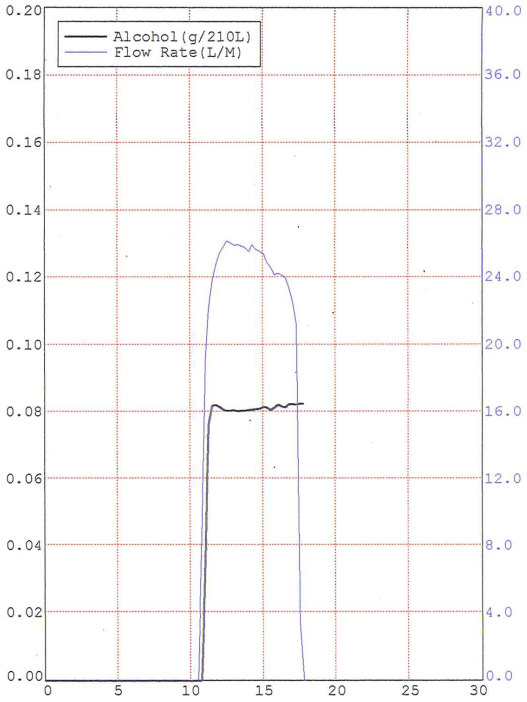
SUBJECT NAME:
TEST TEST
DOB: 01/01/1990 AGE: 25
GENDER: M
LICENSE #: 0123456 VT

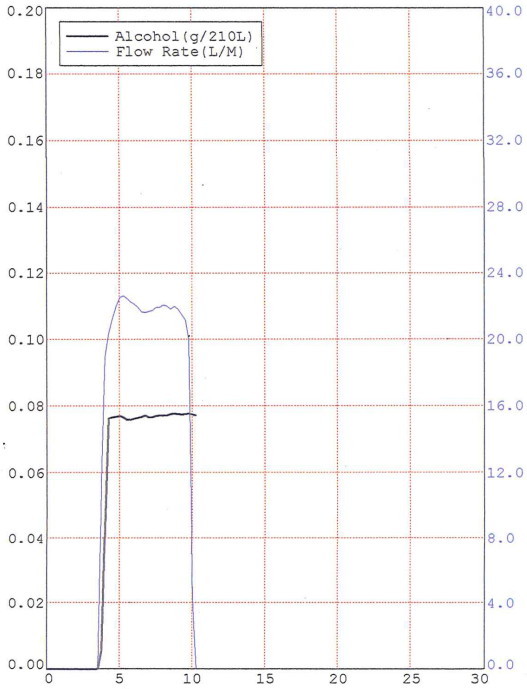
CASE #: ABC123
TIME OF OPERATION: 12:00
LOCATION OF INCIDENT:
MAIN STREET
TOWN: WATERBURY
COUNTY: WASHINGTON

TEST OPERATOR NAME:
ROBERT DRISCOLL
AGENCY: VFL

Obs. Period Start:		09:49
BLANK TEST	0.000	10:05
CALIBRATION CHECK	PASSED	10:05
SIMULATOR VAPOR 34.1°C	0.098	10:06
BLANK TEST	0.000	10:07
SUBJECT SAMPLE	INTERFERENCE	10:07
BLANK TEST	0.000	10:08
CALIBRATION CHECK	PASSED	10:08
SIMULATOR VAPOR 34.1°C	0.098	10:08
BLANK TEST	0.000	10:09
SUBJECT SAMPLE (Vol=2.2L)	0.077	10:10

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Lot #: 15-06-100





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CHECK-IN CONFIRMATION TEST

STATE OF VERMONT

DataMaster DMT: 103206
Location: VFL
Certification Date: 07/27/2012
Installation Date: 07/27/2012

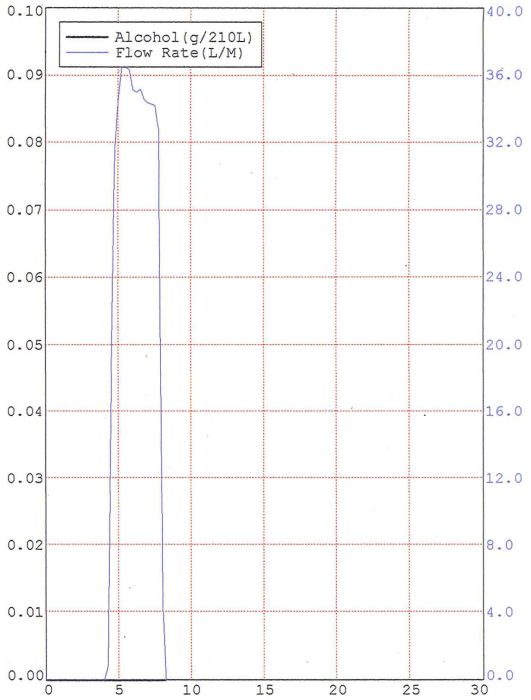
Date: 08/10/2015
Time: 07:56:56

SUBJECT NAME:
TEST TEST
DOB: 01/01/1990 AGE: 25
GENDER: M
LICENSE #: 0123456 VT

TEST OPERATOR NAME:
ROBERT DRISCOLL
AGENCY: VFL

BLANK TEST	0.000	07:57
CALIBRATION CHECK	PASSED	07:57
SIMULATOR VAPOR 34.0°C	0.098	07:58
SUBJECT SAMPLE (Vol=2.0L)	0.000	07:58
BLANK TEST	0.000	07:59

All alcohol values reported in g/210L
Sim. Vapor Concentration 0.100
Sim. Vapor Range 0.095 - 0.105
Lot #: 15-06-100



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COMMON ERROR MESSAGES AND RESPONSES

Some error messages may require a DataMaster DMT Supervisor or the VFL DataMaster Technical Services to inspect and/or service an instrument. When receiving an error message it is permissible to retry the test. If the second attempt results in a passing test, the subject results are acceptable.

DataMaster DMT Supervisors should be made aware of any errors. Any and all reports generated during a testing sequence including those displaying errors should be retained with the case file.

The following are examples of the most common errors and possible remedies. This list is not the complete list of all errors which may be encountered. The remedies listed are not mandatory actions. When encountering error messages that cannot be remedied, post "OUT OF SERVICE" on the DataMaster DMT and leave a **detailed** message for your DataMaster DMT Supervisor.

Subject Sample → INTERFERENCE

Have the subject provide another sample. It is NOT necessary to wait an additional 15 minutes. If the error occurs a second time, take the subject for a BLOOD TEST. This message indicates that there may be a chemical other than ethanol present in the sample and the DataMaster DMT cannot report an ethanol result.

Subject Sample → INVALID

Have the subject provide another sample. It is REQUIRED that you wait another 15 minutes during which you ensure the subject does not burp, belch, or vomit. Remind the subject to provide one steady, continuous breath. Huffing and puffing while delivering a breath can cause an INVALID result.

Subject Sample → INCOMPLETE

If the subject PHYSICALLY CANNOT provide a sample, a blood test may be requested. If the subject WILL NOT provide an adequate sample, a refusal may be considered.

RADIO FREQUENCY DETECTED

Ensure all radio transmitters in or around the processing room are not in use and try the test again.

BLANK ERROR or AMBIENT FAIL

Move the subject away from the instrument, draw fresh air into the room, then try the test again.

SIMULATOR OUT OF RANGE

Move the subject away from the instrument, draw fresh air into the room, then try the test again.

DOCUMENT HISTORY			
DATE	**VERSION**	**APPROVED BY**	**ACTIVITY OR REVISION**
08/26/2015	1	Lab Director	Updated to new format; minor changes made throughout document