Operating the DataMaster DMT

Version 1.0

Division of Criminal Investigation
Alcohol Section
July 2009
The DataMaster DMT
Operating the DataMaster DMT

• The DataMaster DMT is a scientific instrument designed to analyze a sample of a person’s breath and determine the Breath Alcohol Concentration (BrAC) in that sample.

• The DataMaster analyzes the breath sample using infrared absorption spectrometry.
Operating the DataMaster DMT

- The checks that the DataMaster performs of itself, the surroundings, and the breath sample are done to ensure that the testing is performed under the most favorable conditions possible.
## Operating the DataMaster DMT

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DataMaster DMT Features
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DataMaster DMT features

- **Heated breath hose** – if the breath hose temperature is not within pre-set temperature range the test will not be allowed to proceed.

- **RFI antenna** – the antenna is external and part of the breath hose

- **Three (3) IR filters** – the DataMaster DMT has multiple filters to ensure that only ethyl alcohol is being analyzed
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DataMaster DMT features (cont.)

• **Slope Detector** – helps with detecting a negative-going alcohol concentration and with assuring that a deep lung sample was provided by the subject

• **Memory** – the DMT has a great deal more memory than the cdm and also allows for SD card expansion

• **Checklist** – the DataMaster DMT automatically fills out an operational checklist based on the results of a test
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**DataMaster DMT features (cont.)**

- **External calibration check** – The DMT uses an ethanol dry gas tank to check the calibration with every “RUN” test.
  - The tested value of the external standard has to be within 0.004 or 5%, whichever is greater, of the expected value in order for the test to continue.
  - If the tested value is outside that range, the DMT will indicate a “Standard out of Range” status message.
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DataMaster DMT features (cont.)

- **Internal Calibration check** – The DMT also performs an internal calibration check with every test.
  - The internal standard value must be within +/- 4% of the value found on the certification report in order for the test to proceed.
  - If this value is outside that range, the test will abort and a status message of “Internal Standard Error” will appear.
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DataMaster DMT features (cont.)

• Diagnostic test – The DMT performs a diagnostic check with every test.

  – If the diagnostic tests fails, the test will abort and the printout will indicate what part of the diagnostic test was outside the parameters set by the manufacturer.
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**DataMaster DMT features (cont.)**

- **Pop-up boxes** – The DataMaster DMT has several “pop-up” boxes advising the operator how to proceed. Some of these messages include: instructing the subject how to provide a breath, replacing the mouthpiece, and collecting an alternate sample when a completed test is not obtained.
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Main Screen
Operating the DataMaster DMT
Operating the DataMaster DMT

• “RUN”
  – Pressing this on the screen initiates the testing procedure (or re-starts it as the case may be).
  
  – You can also press the “F1” key on the keyboard or use the “Subject Test” in the start menu.

  – This should be used in cases that an evidential breath test is required.
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- “Non-Memory Test”

  - This testing procedure can be used for: work release, verification of a subject’s breath alcohol level is below a facility-set limit for release, routine practice, etc.

  - An operator does not need to be certified on the DataMaster DMT in order to use the “Non-Memory Test” procedure.
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• “COPY”
  – Pressing this on the screen provides the operator with an additional copy of the last test performed.
  – This is the same as the “CPY” button on the DataMaster cdm.
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- “Reprint test in memory”
  - Pressing this on the screen allows the operator to retrieve a previous test that has been stored in the memory of the DataMaster.
  - Tests will remain in the DMT’s memory for a period of approximately one (1) year.
  - If the test is no longer in the DMT’s memory, it may have been uploaded to the DCI server. Please contact the DCI Crime Lab for assistance with retrieving a specific test.
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• “PBT Check”

  – Pressing this on the screen allows the operator to check the calibration of a handheld PBT device or calibrate the PBT if necessary.

  – **Note** - depending on how many PBTs your department has, it may be more practical to use a stand-alone PBT tank to perform these tasks.
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- **Passwords**
  - The DataMaster DMT has three levels of password protection.
  - The general-use password for most applications is _________.
  - The “Change Dry Gas Tank” password will be provided to assigned personnel during installation of the DMT.
  - DCI Lab personnel use the third password to perform their technical tasks.
  - The “COPY” key is not password protected.
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• **Passwords** (cont.)

  – If the operator is in a restricted area and enters an incorrect password, the DataMaster will prompt the operator that they do not have high enough security.

  – Press ‘OK’ to exit.
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![Image of DataMaster DMT interface]

- Serial Number: 08/04/2009 09:48:55
- 145006

Error message: You don't have a high enough security level!

Buttons:
- Reprint test in memory
- PBT Check
- Copy

Ready <Push Run> 244 PSI
Operating the DataMaster DMT

Performing a PBT check
Operating the DataMaster DMT

• **“PBT Check”**

  – The DataMaster DMT allows the operator to check the calibration of preliminary breath testing devices (PBTs) or to calibrate the device if necessary.

  – Press “PBT Check” on the screen.

  – The DataMaster DMT will prompt the operator to enter his/her name, the model/unit type of the PBT and the serial/ID number of the PBT.
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Operating the DataMaster DMT

• “PBT Check” (cont.)

  – The DataMaster will prompt the officer with the expected target value of the tank. Press “OK” to continue.

  – The DataMaster will instruct the operator to connect the PBT and tubing to the PBT port on the back of the DataMaster. Press “OK” when this is completed.
Operating the DataMaster DMT

PBT Check

IOWA DEPT. OF PUBLIC SAFETY
DATAMASTER dmt: 145006

---

Date: 06/01/2023
Time: 10:10:00

OPERATOR
BLESKACER

UNIT TYPE
UNIT ID:

UNITS EXPRESSED IN g/210UL

---

Attention

External Standard Target Value: 0.075

OK
Operating the DataMaster DMT

UNIT TYPE: INTOXIMETERS FST
UNIT ID: 038625

Connect tubing and pbt to PBT port on back of DMT.
Operating the DataMaster DMT
Operating the DataMaster DMT

• “PBT Check” (cont.)

  – The DataMaster will turn the dry gas on for a set period of time (8 seconds).

  – When prompted (depending on which model of PBT you are checking), press the manual acceptance on the PBT if the PBT has not locked in on its own. **It is extremely important to accept the sample while the gas is still on.**
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PBT Check

UNIT TYPE: INTOXIMETERS FST
UNIT ID: 0789080A2

EXTERNAL
SUPPLIER:
CONCENTRATION:
LOT #: 07
EXP. DATE:

External Standard Nominal = 0.006
External Standard Target = 0.075

GAS ON 0.072

Attention
Manually accept sample on PBT

OK
Operating the DataMaster DMT

• “PBT Check” (cont.)
  – The DataMaster will instruct the operator to remove the tubing from the PBT port on the back of the DataMaster.
  
  – Disconnect the tubing from the back of the DataMaster. Press “OK”.
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UNIT TYPE: INTOXIMETERS FST
UNIT ID: 0789080A2

UNIT VERIFY
EXTERNAL SUPPLIER/CONCENTRATOR
LOT #: 0789080A2 EXP. DATE:

External Standard Nominal = 0.006
External Standard Target = 0.075

Attention
Disconnect tubing from back of DMT.

OK
Operating the DataMaster DMT

• “PBT Check” (cont.)

  – The DataMaster will prompt the operator to enter the value obtained on the PBT.

  – If the operator is calibrating the PBT, it is recommended to type “CALIBRATED” within the box.

  – The value entered will be part of the final report.
Operating the DataMaster DMT

UNIT TYPE: C
UNIT ID: C

UNITS EXPRESSED IN g/210L

EXTERNAL STANDARD INFO:

SUPPLIER/MANUFACTURER
CONCENTRATION:
LOT #: 078090802
EXP. DATE: 06/08

PBT Result

PBT Result:

0.075

OK  Cancel
Operating the DataMaster PBT

UNIT TYPE: INTOXIMETERS FST
UNIT ID: 0789080A2

UNITS EXPRESSED IN g/210L

EXTERNAL STANDARD

SUPPLIER/MANUFACTURER
CONCENTRATION: 0.080
LOT #: 07809080A
EXP. DATE: 06/01

External Standard Nominal = 0.080
External Standard Target = 0.075

PBT Result:
CALIBRATED
OK  Cancel
Operating the DataMaster DMT

• **“PBT Check”** (cont.)
  
  – Prior to the operator entering the PBT result, the DataMaster will purge the alcohol out of the sample chamber.

  – The DataMaster will prompt the operator for his/her signature. Sign the screen and press “Accept” to continue.
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Operator Signature

Clear

Accept
Operating the DataMaster DMT

• “PBT Check” (cont.)

  – The DataMaster will generate a single page report indicating the operator’s name, the date, the model/unit type of the PBT, the serial/ID number of the PBT, the dry gas tank information, and the expected target value of the dry gas tank.

  – The DataMaster will also print the result from the PBT, entered by the operator, on the report.
### PBT Test

---

**IOWA DEPT. OF PUBLIC SAFETY**  
**DATAMASTER dmt: 149106**  
---

**Date:** 08/04/2009  
**Time:** 13:24:33

**OPERATOR NAME:**  
**JIM**  
**KJIIUJIIUH**

**UNIT TYPE:** FST  
**UNIT ID:** ODDF54

**UNITS EXPRESSED IN g/210L**

**EXTERNAL STANDARD INFO:**

**SUPPLIER/MANUFACTURER:** ILMO  
**CONCENTRATION:** 0.080  
**LOT #:** 07709080A2  
**EXP. DATE:** 06/01/2011

**External Standard Nominal = 0.076**  
**External Standard Target = 0.076**

**PBT Result:** 0.076
Operating the DataMaster DMT

• “PBT Check” (cont.)

  – If it is necessary to re-calibrate the PBT, do so according to the owners manual of the PBT.

  – If the PBT is calibrated, it is suggested that after a short waiting period, re-run the procedure to ensure the PBT was calibrated properly.
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• “PBT Check” (cont.)

  – Please maintain this report. These reports will be accessible to operators through the “Reprint test in memory” box for a period of one year.

  – It is very important to focus on the DataMaster during a PBT check. By not following the prompts, you may obtain an inaccurate reading.
“PBT Check” (cont.)

- The DCI will enter the corrected tank value compensating for altitude when the DMT is installed (external standard nominal value).

- The DataMaster will automatically correct for barometric pressure.

- The external standard target value is the value of the tank compensating for both altitude and barometric pressure.

- If the instrument is moved or transferred to a different agency and the altitude changes by more than 250 feet, please contact the DCI Crime Lab Breath Alcohol Section.
Operating the DataMaster DMT

Reprinting Tests in Memory
Operating the DataMaster DMT

• “Reprinting tests in memory”
  – The DataMaster DMT allows operators to retrieve previous subject tests.
  – Press “Reprint test in memory” on the screen.
  – Double-click “Breath Records”.
  – Double-click the date of the test to be retrieved.
Operating the DataMaster DMT

• “Reprinting tests in memory” (cont.)

  – Double-click the time of the test.

  – Press “Print” on the screen.

  – If you need additional copies, continue to press “Print”.

  – **Note** – If your test is no longer in the memory, it may have been uploaded to the DCI server and you will have to contact a member of the Breath Alcohol Section of the DCI Crime Lab to obtain a copy.
Operating the DataMaster DMT
Operating the DataMaster DMT
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- **“Reprinting tests in memory” (cont.)**
  
  - Follow the same procedure to reprint a PBT report. The PBT reports will be found within the PBT records folder.

  - PBT reports will **not** be uploaded by the DCI. After a period of one year, the test will automatically be deleted from the memory of the DataMaster.
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Non-completed tests
Operating the DataMaster DMT

• **Visual Results**

  – The DCI *does not* recommend the use of “visual” DataMaster test results as evidence. Safeguards are built into the software to prevent the operator from obtaining the alcohol results on any test other than a completed test.

  – If a test is obtained that does not result in a completed test, it is recommended that the operator re-run the test or collect an alternative sample from the suspect.
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• **Non-completed tests**

  – A non-completed test is considered to be any test that results in a status message, Incomplete, or Refusal.

  – On tests that do not end in a completed test, the alcohol and breath pattern will appear on the printout. However, there will be **no** scale associated with the alcohol pattern on the graph section of the printout that could be used to interpret the subject’s alcohol level. In addition, the alcohol concentration will not appear in the results section of the printout.
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• “NV” key

– The DataMaster DMT does not have an “NV” key or any other officer-controlled override key. Therefore, it is very important to either obtain a completed breath test on the subject or collect an alternative sample.
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Running a test
Operating the DataMaster DMT

- **Running an evidential breath test**
  - Press ‘**RUN**’ on the screen or initiate the test through TraCS.

  If running the DataMaster without the TraCS interface, the DataMaster will ask you to input the following questions:

  - **SUBJECT’S NAME:** (first, middle initial, last)
  - **DATE OF BIRTH:** (month/day/year)
  - **SEX (M/F):** (M/F)
  - **DRIVER’S LICENSE:** (letters, numbers or both)
  - **STATE OF ISSUE:** (two letter designation only)
  - **INSTRUMENT LOCATION:** (ex. – S.O., P.D., ISP District)
  - **OPERATOR’S NAME:** (first, middle initial, last)
  - **CASE NUMBER:** (letters, numbers or both)
  - **DEPRIVATION TIME:** (enter time based on 24 hr clock)
Operating the DataMaster DMT

• **Running an evidential breath test** (cont.)

  – Please enter all the information known at the time of the test. If the subject information is not known, the test will be allowed to proceed leaving the fields blank.

  – The ‘Instrument Location’ will automatically default to a specific location but can be changed if the instrument is moved to a different location.
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- **Running an evidential breath test** (cont.)

  - ‘DEPRIVATION TIME’ will be the time when the operator began the **required 15-minute deprivation period**. The data entered is to be in the form of a 24-hour clock (ex. – 1 a.m. = 0100, 4 p.m. = 1600). Do **not** enter the time displayed on the DataMaster.

  - The subject may not eat, drink, smoke, or place foreign objects into the mouth during the minimum 15-minute deprivation period.
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Deprivation time less than 15 minutes.
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• Running an evidential breath test (cont.)

“Deprivation Period” (cont.)

– If the operator were to observe that the subject has tobacco, chewing gum or any other foreign matter that can be easily removed, the operator must have the subject remove the item.

– Re-start the 15-minute deprivation period once the item is removed.
Operating the DataMaster DMT

• Running an evidential breath test (cont.)

“Deprivation Period” (cont.)

– Dentures – It is not required that the subject to remove dentures prior to submitting a breath sample. However, if the subject wishes to remove dentures, please start the 15-minute deprivation period from the time the dentures are removed.

– Tongue rings - It is not necessary to remove tongue rings or any other dental or facial jewelry prior to submitting a test on the DataMaster. If removed, please begin the deprivation period from the time they are removed.
Operating the DataMaster DMT

• **Running an evidential breath test** (cont.)

  “Deprivation Period” (cont.)

  – **Belching** – belching or burping does not require a re-start of the deprivation period.

  – **Vomiting/regurgitating** - If the subject should vomit/regurgitate during the deprivation time the operator may allow the subject to rinse his/her mouth with water and **must** re-start the 15-minute deprivation period from that point.
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• Running an evidential breath test (cont.)

“Deprivation Period” (cont.)

– Inhalers – The use of an inhaler prior to a breath test is allowed. Re-start the 15 minute deprivation period from the completion of the use of the inhaler then test the subject on the DataMaster after the deprivation period has elapsed.
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Operating the DataMaster DMT

• **Running an evidential breath test** (cont.)

**Normal Test sequence when using “RUN”:**

- Enter the information
- Blank Test
- Diagnostic Check
- Internal Standard
- External Standard
- Blank Test
- Subject Sample
- Subject Sample
- Blank Test
Operating the DataMaster DMT

- **Running an evidential breath test** (cont.)

  - The DCI recommends that the officer instruct the subject to “provide a long and steady breath through the mouthpiece”. However, other instructions given to the individual on how to provide a breath will not bias a test against the subject.

  - **Note** – the mouthpiece can be placed onto the breath hose at any time prior to the subject providing a breath into the instrument.
Operating the DataMaster DMT

Instruct the subject to blow long and steady through the mouthpiece.
Operating the DataMaster DMT

• **Running an evidential breath test** (cont.)

  – The “Instruct the subject to blow long and steady…” box will remain on the screen for two minutes or until the officer presses ‘OK’.

  – Press the ‘OK’ on the screen prior to the subject beginning their breath.

  – After two minutes without a response from the operator to the prompt noted above, the DataMaster will automatically go to the next step and will begin the two minute breath phase.
Operating the DataMaster DMT

• **Running an evidential breath test** (cont.)

  – When it is ready, the DataMaster will prompt the subject with a flashing ‘PLEASE BLOW’ on the display and beeping tone.

  – When the subject is blowing correctly, the flashing ‘PLEASE BLOW’ and beeping tone become a solid ‘PLEASE BLOW’ and a solid tone.

  – If this is not occurring, it is permissible to instruct the subject to ‘blow harder’ in an effort to inform the subject that his/her breath sample flow must be at a flow rate considered acceptable by the DataMaster.
• **Running an evidential breath test** (cont.)

  – A solid ‘PLEASE BLOW’ and continuous tone must be maintained throughout the delivery of the breath sample in order to satisfy one of the sample requirements.

  – A ‘break’ in the continuous flow of a breath sample will result in the return of the flashing ‘PLEASE BLOW’ and beeping tone and restarts the minimum volume and time requirements.

  – The subject has approximately two minutes from the beginning of the breath phase to provide an adequate breath sample.
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• **Running an evidential breath test** (cont.)

**Breath Profile Screen**

– The DataMaster DMT allows the operator to view the breathing pattern of the subject’s breath delivered into the instrument as the person is providing a breath (or not providing a breath).

– The breath pattern will be **blue** in color on the screen.

– **Note** – the alcohol graph will not be displayed while the subject is providing a breath but will be part of the final printout.
Operating the DataMaster DMT
Operating the DataMaster DMT

• **Running an evidential breath test** (cont.)

  Breath Profile Screen (cont.)

  – The subject has reached the necessary volume requirement when the green bar graph has passed the designated line.

  – However, the goal is still to have the subject provide a steady breath for as long as they can.
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• Running an evidential breath test (cont.)

Breath Profile Screen (cont.)

– The subject does not need to blow for the entire two minutes; only long enough to satisfy the DataMaster’s requirements as to an acceptable sample. This may take several seconds though the time will vary from subject to subject.
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- Running an evidential breath test (cont.)

Breath Profile Screen (cont.)

- The DataMaster has four requirements for the acceptance of a breath sample: a continuously delivered breath for a minimum time of 4 seconds, a minimum volume of 1.3 Liters, a minimum flow rate of 3-4 L/min, and satisfaction of the slope detector requirements.
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• Running an evidential breath test (cont.)

Breath Profile Screen (cont.)

– Once all four requirements are met, the DataMaster will accept the breath once the subject has stopped blowing into the instrument (see note below).

– Note – the DataMaster DMT will automatically accept the breath sample when the subject delivers a continuous breath of approximately 3.0 Liters.
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- Running an evidential breath test (cont.)

  - When the DataMaster has accepted a sample, the display will read:
    
    **ANALYZING**

  - The DataMaster will prompt the officer to remove the mouthpiece – press “OK” when complete. (Note – the mouthpiece may have already been removed prior to the prompt by the DataMaster)
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- **Running an evidential breath test** (cont.)
  
  – The DataMaster will analyze the sample twice and then perform its final checks. After the completion of its final checks, the DataMaster will prompt the operator to sign the screen and will then print out the results.
  
  – If there is a difference between the test results then the **lower** of the two test results is to be used.
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Operating The DataMaster DMT

• **Running an evidential breath test** (cont.)

  – Three (3) copies of the results should print; one for the county attorney, one for the operator performing the test, and one for the subject. (The number of copies may vary depending on departmental request)

  – Two (2) copies of the checklist should print. If additional copies of the checklist are needed, please make a photocopy of the original or press the “COPY” key.

  – For those utilizing the TraCS system, only one copy will be printed by the DataMaster. Press the “COPY” key on the DataMaster if additional copies are needed.
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• Running an evidential breath test (cont.)

Operational Checklist

– The DataMaster DMT has an operational checklist that is filled out by the DataMaster every time a "RUN" test is performed.

– Please ensure that the checklist is filled out properly based on the test sequence that was performed.
Operating the DataMaster DMT

OPERATIONAL CHECKLIST
for the Direct Breath Testing Instrument
DATAMASTER DMT
This list is prepared in accordance with Iowa Administrative Code
061-157.2(1) (321)J Direct Breath Testing

Section 1
X 1. Initiate the test through TraCS or press “RUN” on the screen. (F1 or alternative method acceptable also)
   Enter data as prompted, and review data if desired.
   Instruct subject to blow a long, steady breath into the mouthpiece.
2. If the instrument does not accept the initial breath, instruct the subject to continue to provide breaths
   until the instrument accepts the breath
   OR
   When prompted with a STATUS MESSAGE, proceed to Section 3.
   OR
   When prompted “Did the subject refuse? YES/NO”, proceed to Section 2.

Section 2
Part A. In the opinion of the operator, the subject refused to provide an adequate breath sample.
   When prompted “Did the subject refuse? YES/NO”, press ‘YES’. Remove the mouthpiece.
   Printout will read “SUBJECT SAMPLE REFUSED.”

Part B. In the opinion of the operator, the subject was unable to provide an adequate breath sample.
   When prompted “Did the subject refuse? YES/NO”, press ‘NO’. Remove the mouthpiece.
   Printout will read “SUBJECT SAMPLE INCOMPLETE”
   OR
   Offer the subject another opportunity to provide a breath sample
   OR
   Collect an alternative sample.

Section 3 --- USE ONLY IF TEST IS ABORTED DUE TO A STATUS MESSAGE.
X 1. The instrument aborted a test at any time due to a STATUS MESSAGE. If necessary review the
   applicable status code in the “Operating the DataMaster DMT” and follow those directions if indicated.
   OR
   Offer the subject another opportunity to provide a breath sample
   OR
   Collect an alternative sample.

CASE INFORMATION:
Subject: J. INNION
Operator: J. NLNLN
Date: 06/10/2009
Iowa Department of Public Safety
DCI – Criminalistics Laboratory
Ankeny, IA 50023
Operating the DataMaster DMT
Operating the DataMaster DMT
Operating the DataMaster DMT

• Running an evidential breath test (cont.)

Incomplete or Refusal

- “Did the subject refuse? (YES/NO)” will be asked if the DataMaster has been allowed to go through the 2-minute breath-sampling period without an adequate sample having been provided.

- If this question is answered with a “YES” the printout will indicate “SUBJECT SAMPLE REFUSED”.

- If this question is answered with a “NO” the printout will indicate “SUBJECT SAMPLE INCOMPLETE”. 
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Did the subject refuse?

Yes   No
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Performing a Non-Memory Test
Operating the DataMaster DMT

• **Non-Memory Test**
  
  – Pressing this on the screen starts the procedure appropriate to performing a test that will not be used as evidence in court.

  – The test is **not** stored in the memory of the instrument. Only one (1) printout is generated.

  – This test procedure should **not** be used on 0.02 violators or boating while intoxicated.
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Attention

This is not to be used for evidential tests.

OK  Cancel

Reprint test in memory  PBT Check  Copy

Ready <Push Run>  557 PSI
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• **Non-Memory Test** (cont.)

  – You **must** enter the subject’s first and last name.

  – The test will continue **with or without** the rest of the information entered in each field.

  – If the operator presses the “Enter/Return” key on the keyboard – the DataMaster will prompt the operator to ensure that all the data was entered that was intended to be.
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Subject Information
Name(F/M/L) JOE
License #
Date of Birth MM/dd/yyyy

General Information
Operator(F/M/L)
Inst. Local
Cash

Verify Data
Would you like to review the entered data?
Yes
No

Cancel
OK
Operating the DataMaster DMT

• **Non-Memory Test** (cont.)

Normal test sequence when using “Non-Memory Test”

– Enter desired information (Subject’s name is required)
– Blank
– Diagnostic check
– Internal Standard
– Subject Sample
– Blank
Operating the DataMaster DMT

IOWA DEPT. OF PUBLIC SAFETY
DATAMASTER dmt: 145006

Date: 06/29/2009
Time: 10:07:50

NON-MEMORY TEST

SUBJECT NAME:
SMITH JOE

UNITS EXPRESSED IN g/210L

BLANK TEST 0.000 10:08
DIAGNOSTIC CHECK PASSED 10:08
Operating the DataMaster DMT

Status Messages
Operating the DataMaster DMT

• **STATUS MESSAGES** (the most common)

  – “RADIO INTERFERENCE”
  – “INVALID SAMPLE”
  – “INTERFERENCE”
  – “AMBIENT FAIL”
  – “PUMP ERROR”

  ** There are several other status messages. **
“RADIO INTERFERENCE”

- Refers to the detection of excessive radio frequency energy. Most likely caused by transmissions from handheld radios or vehicle microphones being used near the instrument.

- It is recommended to retest the individual and if subsequent tests result in “RFI Detected”, test the subject on a different DataMaster, or collect an alternative specimen from the subject.
Operating the DataMaster DMT

Breath Test

INSTRUMENT LOCATION:
YG

CASE NUMBER: YG
Deprivation Time: 08:00

UNITS EXPOSED

EXTERNAL SUPPLIER/CONCENTRATION
LOT #: 07
EXP. DATE:

External Standard Nominal = 0.000
External Standard Target = 0.075

Breath Test stopped for following reason:

RFI Detected

OK
“INVALID SAMPLE”

– Refers to a situation that the DataMaster recognized a negative-going slope or alcohol concentration during the delivery of the breath sample.

– If subsequent tests continue to result in an “INVALID” sample, it is recommended to test the individual on a different DataMaster, or collect an alternative sample from the individual.
Operating The DataMaster DMT

• STATUS MESSAGES (cont.)

“INVALID SAMPLE”

– The operator is required to re-start the 15 minute deprivation period after an “INVALID” test is obtained when running a subsequent test on the same subject.

– After an “INVALID” sample when prompted “Run another test Yes/No?”, answering ‘Yes’ will prompt the DataMaster to begin a 15 minute wait before allowing an additional test of the subject.
Operating the DataMaster DMT
Operating the DataMaster DMT

Replace the mouthpiece before running another test.

Options:
- Reprint test in memory
- PBT Check
- Copy

Serial Number: 145006
Date: 06/29/2009
Time: 11:05:34

Ready <Push Run> 554 PSI
Operating the DataMaster DMT
Operating the DataMaster DMT

• **STATUS MESSAGES** (cont.)

  “INVALID SAMPLE”

  – If the operator presses ‘OK’, the DataMaster will begin an automatic re-start of the 15-minute deprivation period before allowing another test.

  – After the mandatory waiting period has expired, the DataMaster will prompt the operator to continue to the testing procedure with “Press ‘OK’ to continue”.
Operating the DataMaster DMT

Since the previous test on this subject resulted in an INVALID test, an automatic re-start of the 15 minute deprivation period has begun.

Please Wait 14:45
Operating the DataMaster DMT

Since the last test was a Breath Test, please wait 15 minutes before proceeding.

The test is ready to proceed.

Please Wait 00:01
Operating the DataMaster DMT

• **STATUS MESSAGES** (cont.)

  “INVALID” Sample
  – ‘ABORT’ – by pressing the ABORT button on the screen the operator will be prompted if they are sure that they wish to abort the test.
    • Answering ‘YES’ will pop-up a box indicating the test was not completed… and pressing ‘OK’ will proceed to the Main screen.
    • If another test is performed on the same subject after an “INVALID” sample, 15 minutes must elapse before re-testing the subject.
Operating the DataMaster DMT

Since the test is currently in an INACTIVE state, after 15 minutes...

Attention

Are you sure you wish to abort?

Yes  No

Please Wait 14:20
Operating the DataMaster DMT

Serial Number: 145006

Test was not a completed test

It is recommended to collect an alternate sample or use a different Datamaster.

OK

Reprint test in memory

PBT Check

Copy

Ready <Push Run> 248 PSI
“INTERFERENCE”

– Refers to the situation in which the sample submitted could contain a substance other than alcohol or a combination of alcohol and an interfering substance.

– Re-start the test. If subsequent tests continue to conclude with an “INTERFERENCE” result, it is recommended that an alternative sample be collected from the individual.
Operating the DataMaster DMT

• STATUS MESSAGES (cont.)

“AMBIENT FAIL”
– Refers to the situation that the DataMaster was unable to establish a ‘zero’ alcohol reference utilizing the air around the instrument.

– Possible sources of this could be a poorly ventilated room, the breath hose pointed near the subject, room deodorizers, or hand sanitizers, etc.

– Re-start the test. If subsequent tests continue to result in an “AMBIENT FAIL”, it is recommended to test the individual on a different DataMaster, or collect an alternative sample from the individual.
Operating the DataMaster DMT

• **STATUS MESSAGES** (cont.)

  **“PUMP ERROR”**
  – This refers to the situation wherein the DataMaster did not detect proper air flow through the instrument. Check the mouthpiece connector for debris – if debris is present, remove it and run the test again.

  – If the DataMaster continues to give “Pump Error” messages, contact the DCI Laboratory for assistance.
Operating the DataMaster DMT

• **ALL STATUS MESSAGES**

  – If a status message is obtained during a breath test, it does not mean that there is something wrong with the DataMaster. The DataMaster has many safeguards built in to ensure a non-biased result is obtained based on the sample provided.
Operating the DataMaster DMT

- **ALL STATUS MESSAGES** (cont.)

  – If the operator obtains a test that results in a status message, try running the test again.

  – An operator can attempt to obtain a completed test as many times as the operator feels is necessary.

  – If subsequent tests do not end in a completed test, it is recommended to collect an alternate sample from the subject or try a different DataMaster.
Operating the DataMaster DMT

• **ALL STATUS MESSAGES** (cont.)

  – If a *status message* appears on the display and/or printout or the officer indicates the test was an “INCOMPLETE” or “REFUSAL”, the DataMaster will not print out a subject’s alcohol result. In addition, the graphic display will not include the alcohol scale.
Operating the DataMaster DMT

Running another test
On the same individual
Operating the DataMaster DMT

- **Running another test**
  - If the test performed on a subject does not produce a completed test, the DataMaster is programmed to run an additional test on the same subject.
  
  - The DataMaster will prompt the operator to "Run another test? Yes/No"
Operating the DataMaster DMT
Operating the DataMaster DMT

• **Running another test** (cont.)

  – A “**YES**” will prompt the DataMaster to proceed to the data entry screen, make any changes if necessary and press “**OK**” to begin another test sequence.

  – A “**NO**” will prompt the DataMaster to advise the operator to obtain an alternate sample from the subject or to use a different DataMaster.
Operating the DataMaster DMT

Test was not a completed test

It is recommended to collect an alternate sample or use a different Datamaster.

OK

Reprint test in memory

PBT Check

Copy

Ready <Push Run>  248 PSI
• **Replacing the mouthpiece**

  – If the subject fails to deliver an adequate breath sample during the two-minute breath period or a status message appears during the breath test and the operator re-starts the test procedure in an attempt to obtain an adequate breath sample from the subject, it is recommended that a new mouthpiece be utilized at that time.

  – The DataMaster will advise the operator to replace the mouthpiece.

  – **Note** – An operator is **not** required to replace the mouthpiece in situations including multiple stops-and-starts during a single breath test phase.
Operating the DataMaster DMT

Serial Number
145006

06/29/2009
11:05:34

Attention

Replace the mouthpiece before running another test.

OK

Reprint test in memory
PBT Check
Copy

Ready <Push Run> 554 PSI
Operating the DataMaster DMT

Changing the Dry Gas Tank
Operating the DataMaster DMT
Operating the DataMaster DMT

• **Changing the dry gas tank**
  
  – The DCI recommends that each DataMaster site assign a few individuals to be responsible for replacing the dry gas tank.
  
  – The “Dry Gas Tank Change” procedure is password protected to limit access to assigned personnel only.
  
  – Prior to inserting the tank into the housing, it is recommended to write down the Manufacturer/Supplier, the Lot number, the Concentration (around 0.080), and the Expiration date.
Operating the DataMaster DMT

• **Changing the dry gas tank** (cont.)

  – The DataMaster is programmed to inform the operator that the dry gas external standard is running low (200 PSI or 1 month prior to expiration of the tank).

  – It is recommended that once “Ready – Change Dry Gas Soon” is seen on the screen that arrangements be made to obtain a replacement tank.
Operating the DataMaster DMT
Operating the DataMaster DMT

• **Changing the dry gas tank** (cont.)

  – The DataMaster **will not** perform a test if the dry gas tank pressure is **below** 30 PSI.

  – The DataMaster **will not** perform a test if the dry gas tank is past the expiration date entered during a “**Dry Gas Tank Change**” procedure.
Operating the DataMaster DMT

- **Changing the dry gas tank** (cont.)

  - To change the tank, open the door which houses the tank.
  
  - Spin the tank in a counter-clockwise motion until it is free from the regulator.
  
  - Remove the tank from the housing.
  
  - Place a new tank within the housing.
Operating the DataMaster DMT

• **Changing the dry gas tank** (cont.)

  – Spin the tank in a clockwise motion until it is securely connected to the regulator.

  – Ensure that the DMT recognizes the tank pressure by observing the value on the lower right hand corner of the DMT screen. A full tank should read around 1200-1300 PSI (based on an ILMO 110L tank).

  – Close and secure the door
Operating the DataMaster DMT

- **Changing the dry gas tank** (cont.)
  - The DMT will prompt the operator to perform a ‘Dry Gas Tank Change’ analytical procedure.
  - At the prompt, enter the password and press “OK”
  - At the data entry screen, enter:
    - Supervisor’s Name (person changing the tank)
    - Tank manufacturer/distributor
    - Tank concentration (in g/210, not in PPM) (should be around 0.080)
    - Lot #
    - Expiration Date
  - Press “OK” when complete
Operating the DataMaster DMT
Operating the DataMaster DMT

**Changing the dry gas tank** (cont.)

- Once the data is entered, the DataMaster will perform a “Dry Gas Tank Change” verification test.

- The DataMaster will verify that the tank is within the acceptable range of its target value (compensating for barometric pressure).

- A “RUN” test will not work until this is completed.
• **Changing the dry gas tank** (cont.)

  – If the ‘Dry Gas Tank Change’ fails ("Standard Out of Range"), verify the tank is properly screwed into its housing and re-run the procedure.

  – If you continue to experience problems, please contact the DCI Crime Lab and ask for a member of the Breath Alcohol Section.

  – Please fax ‘Dry Gas Tank Change’ printouts to the DCI Lab, care of the Breath Alcohol Section.)
Operating the DataMaster DMT
Operating the DataMaster DMT

Correcting the Date/Time
Operating the DataMaster DMT

“Correcting the Date or Time”

- To correct the date or time, press the NPAS Icon on the top left of the display.

- In ‘Functions’ - an operator may correct the date or time to the correct time.

  - Press ‘Set Date/Time’, highlight the area(s) to be corrected, correct that area(s) accordingly.

  - Press ‘Apply’ and then ‘OK’ when the date/time is corrected.
Operating the DataMaster DMT
Operating the DataMaster DMT
Operating the DataMaster DMT

TraCS
(Traffic and Criminal Software)
Operating the DataMaster DMT

• “TraCS”
  
  – The DataMaster DMT works in a similar fashion to the DataMaster cdm in how it interfaces with the Iowa DOT TraCS program.
  
  – Utilizing the TraCS interface in no way effects the analytical integrity of the DataMaster DMT. The interface is simply a tool to permit data sharing between the DataMaster and the TraCS software.
Operating the DataMaster DMT

• “TraCS” (cont.)

– The operator may have to respond to the pop-up boxes on the DMT as they occur in order for the test to proceed.

– When using TraCS, only 1 printout of the breath test will be printed by the DataMaster.
Operating the DataMaster DMT

Frequently asked questions
Operating the DataMaster DMT

• The DataMaster appears to have “locked up”, what should I do?
  
  – The DataMaster, just like a computerized device, may occasionally “lock up”. There is an On/Off switch located on the back of the unit in the center. Turn the unit off and on again. You will have to wait a minimum of 5 minutes before you will be allowed to run a test.

  – Verify that the date and time are correct – if not reset the date/time per instructions in the manual.
Operating the DataMaster DMT

• I need to transport the DMT to Ankeny for repairs, should I remove the dry gas tank?

  – If you are **driving** the DataMaster to the lab then **No**, it is not necessary. It is secured within the housing.

  – If **shipping** the DMT to the lab then **YES**, the tank **MUST** be removed prior to sending. Keep the tank at your location for re-installation after the DataMaster is returned.
Operating the DataMaster DMT

• Do I have to wait 15 minutes before I can administer a test?
  – Yes, the 15 minute time period is necessary to eliminate mouth alcohol which could affect a breath test result.

• The subject has dentures, do they need to be removed prior to running a test?
  – No, dentures do not have to be removed prior to running a test on an individual.
Operating the DataMaster DMT

• The subject has asthma, can this affect the breath test?

– Asthma will not affect the breath alcohol results although someone with asthma may have a more difficult time meeting the volume requirements of the DataMaster. If the subject needs to use an inhaler, the operator must insure that the individual has not used it within 15 minutes of the breath test.
Operating the DataMaster DMT

• The subject regurgitated before the breath test, what should I do?
  – You may have the subject rinse their mouth with water (not required), re-start the 15 minute deprivation period, and when complete, test the individual.

• The subject has a tongue ring, does it need to be removed prior to testing?
  – No, a tongue ring will not affect the breath test as long as the deprivation period has been maintained.
Operating the DataMaster DMT

• The subject is “huffing and puffing” and got an “INVALID” status message, is this common?

  – Yes, the instrument is programmed to give an “INVALID” response when the instrument sees a negative-going alcohol value. This can occur when a subject blows, introducing alcohol into instrument, pauses, takes a fresh breath of air and blows in again. The fresh air may have a lower alcohol concentration than what is in the instrument already and this then can cause an “INVALID” response. This is why it is important for the individual to provide a long, continuous, steady breath into the instrument.
Operating the DataMaster DMT

• The test resulted in an “INVALID” status message, do I need to re-start the 15 minute deprivation period?

  – Yes, the DataMaster DMT software was written to virtually eliminate “INVALID” samples because of ‘starting and stopping’, therefore, to ‘err on the side of caution’, a 15 minute wait was added to force the operator to wait an additional 15 minutes before running another test on the subject.
Operating the DataMaster DMT

- Other than an “INVALID” sample, is a re-start of the 15 minute deprivation period necessary or can I re-run the test right away?
  - You can re-run the test right away. Status messages, other than an “INVALID” sample, observed on the DataMaster do not require a re-start of the deprivation period.
Operating the DataMaster DMT

• The subject blew a result higher/lower on the DataMaster compared to my PBT, is there something wrong with either instrument?

  – No, breath instruments (PBT’s and DataMasters) are very accurate at measuring the amount of alcohol on a subject’s breath, however, it is the quality (how well the subject provides a breath or how consistent the subject blows into the units) of the breath provided by the individual that can have the greatest effect on the outcome on the results obtained. Another factor to consider is the time difference between the two breath tests; this can also play a role on why the breath tests do not agree.
Operating the DataMaster DMT

• Can the volume of breath delivered into the instrument affect the test results?

  – Yes, subjects that provide a low volume of breath that meets the breath requirements may test lower than what they would have had they provided a higher volume of breath. This benefits the subject but is still a good test. (see graph)
Operating the DataMaster DMT
Operating the DataMaster DMT

• Can I re-test the subject if the test results are lower than I expected and I believe that the subject did not provide a good breath sample?

  – Once the DataMaster has accepted the sample, analyzed it and produced a valid result, the subject is no longer under any obligation to provide another breath sample.
Operating the DataMaster DMT

• The DataMaster “clicked” while the subject was still providing a breath, why?

  – The DataMaster has a breath volume requirement of 1.3 - 3.0 Liters of breath. Once the DataMaster obtains approximately 3.0 Liters of continuously delivered breath, it will automatically accept the breath even though the subject is still blowing.
Operating the DataMaster DMT

• When do I need to put on the mouthpiece?

  – The mouthpiece can be put on the breath hose at any time prior to the subject blowing into the instrument.

• I lost the printout, how do I get another one?

  – If your test was the last one run, press the “COPY” button, otherwise use the “Reprint test in memory” to obtain a copy of tests that are less than 1 year old.
Operating the DataMaster DMT

- I have not been trained to operate the DataMaster, but have seen it done several times, can I run a test on a suspected individual?
  - No, only certified operators on the DataMaster DMT may run an evidential test using the DataMaster. Non-memory tests can be performed by non-certified personnel.

- There is a switch box connected to the DataMaster, am I supposed to use it?
  - The switch box is used in combination with TraCS. It is not needed when running a test when you press the “RUN” key and enter the information traditionally.
Operating the DataMaster DMT

• I am not certified on the DataMaster, how do I get trained?
  – Contact the DCI Lab and arrange for training at the lab in Ankeny.

• The DataMaster is susceptible to static electricity, what can I do to prevent a static discharge from damaging the DataMaster?
  – The best thing you can do is always touch the metal case of the DataMaster before touching the keyboard. Anti-static mats and/or removing carpeting or carpet mats may also help.
Operating the DataMaster DMT

- The subject is diabetic and on insulin, can this affect the breath test?

  - Unlikely. Insulin itself has no impact on a breath alcohol instrument. However, if the subject is in ketoacidosis, their body may be generating ketones. The DataMaster has interference filters specifically designed to detect compounds that are not ethanol. If these compounds are present in sufficiently high quantities, the DataMaster will abort the test and indicate a “INTERFERENCE” status message.
Operating the DataMaster DMT

- The subject burped aloud during the deprivation period, do I need to re-start the 15 minutes?
  
  - No, a burp is only a gas and will not significantly effect a test. The DataMaster analyzes the end-expiratory air from a subject.
Operating the DataMaster DMT

• ** These instructions are furnished to the DataMaster DMT operator during training that the operator may comply with Iowa Administrative Code 661-157.2 (321J).