

Proposed DataMaster DMT Operating Protocol

July 2006

Final Draft

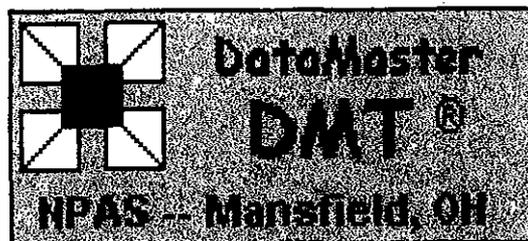


Table of Contents

Logos and Images	Page 2
Password Protected Options	Page 3
General Programming Notes	Page 4
Subject Test Sequences	Page 5
Calibration Protocol	Page 9
Certification Protocol	Page 11
Installation Protocol	Page 15
Annual Preventative Maintenance Protocol	Page 18
Routine Performance Check Protocol	Page 20
Simulator Solution Change Protocol	Page 23
Diagnostic Test	Page 25
Options Check Printouts	Page 26
Error Codes	Page 27
Law Enforcement Agencies List	Page 30
Alphabetical Town List	Page 31
County List	Page 33
Appendix A: Operating Flow Chart	Page 36



Department of Health logo. This should be on every report that the DataMaster DMT prints out. An electronic copy is available.



This is the Vermont Coat of Arms and should be on every subject test Evidence Report that the DataMaster DMT prints out. An electronic copy is available.

Password Protected Options

Operator Options (No Password)

- Run DUI, 0.02 or Check-In tests
- Reprint Evidence Report

Administrative Options

- Reprint Evidence Report
- Download/Export
 - Ethernet, USB or email, Memory should NOT be cleared once the information is exported.
- Discovery Archive
 - All data should be stored and available for retrieval. Error reports should be maintained. Discovery reports should have all entered information and results displayed spreadsheet style of tests performed. Graphs need not be displayed. Any report (such as Simulator Solution change/RPC etc) should be able to be reprinted in their entirety.

Supervisor Options

- All options available at Operator and Administrative levels
- Routine Performance Check
- Diagnostic Test
- Accuracy and Precision Check
- Print Calibration Factors
- Change Date Time
- Read-only diagnostic screen
- Sample Acceptance Test

Technician Options

- All options available at Operator, Administrator and Supervisor levels
- Calibration
- Certification
- Installation
- Annual Preventative Maintenance
- Diagnostic Screen

• timer

General Programming Notes

In the top left hand corner of the "Ready Push Run" screen there should be a hot button with access to a drop down menu. Each option is available under this menu. When an option is selected, a box stating "Enter Password" will pop-up for password protected options.

The Technician will have the ability to abort a protocol at any time during a sequence. They will have the option to save data and resume from where they left off at a later time. When the technician password is entered, and a subject test is selected, the fifteen minute observation period will be overridden.

Display all results while tests/protocols are running unless otherwise noted

If the instrument aborts a sequence due to a failure, all data obtained prior to the termination is printed on the corresponding report including the error.

During subject test sequence, when the "Continue" button is pressed, if the fifteen minute timer has not yet been started, the instrument will beep and display a message stating "Please Start Observation Timer". The operator will then use the current hot button "Press here to begin 15 min observation period".

When a subject test is selected, the operator will have 5 minutes to complete the data entry screen. If not completed in 5 minutes, the instrument should return to the "Ready Push Run" screen. When a choice is needed (ex. Edit or continue, Subject take test) 1 minute is allotted. When "Please Blow" is displayed, subject has 2 minutes to provide an adequate breath sample. Two additional opportunities will be given. If on the third try, the subject fails to provide a proper breath sample, the report will print with a message indicating "Incomplete Test". All attempts should be printed on the Evidence Report..

In the event of an "Invalid" sample during the DUI test, the 15 minute observation clock will be restarted before the next sample will be accepted.

All stored data available for the Administrator option should be read-only.

Each record needs to be flagged to save or to not save. We have not been given the final word as to whether or not the memory function will be on or not and how much we will be saving.

COLOR CODE KEY

HOT BUTTON

DMT ACTION

OPTIONAL FIELD

INFO NOT PRINTED ON EVIDENCE REPORT

DMT Operation Sequence

“Ready Push Run”	Press Here to begin 15 min observation period
<input type="radio"/> DUI	<input type="radio"/> Check-In Confirmation
Ø DUI	<Countdown clock MM:SS>
Subject Information:	Press here to restart clock
Subject Name <u>First (15)</u> <u>MI</u> <u>Last (20)</u>	Reason for restart:
DOB <u>mm/dd/yyyy</u> <Age years>	(40 Characters)
Sex <u>M/F</u>	<Pops up if restarted>
License # <u>(15 Characters)</u> <u>State</u>	
Guardian Present? <u>Y/N</u> ← Pops up if age <18	

Incident Information:

Case # (15 Characters)

Reason for test Crash Checkpoint
 Stop Other

Time of Operation HH:MM

Location of Incident (40)

Town: Drop down menu of towns (see page 33 for list)

County: Field automatically filled based on town (see page 35 for list)

Test Operator Information:

Name First (15) MI Last (20)

Agency Drop down menu of agencies (see page 32 for list)

VTC # (5)

Press “Okay” when complete
 <Information comes up for review>
 Press “Edit” or “Continue”

“Edit” will loop back to information entry page. “Continue” will begin test sequence and prompt for start of 15-minute timer if not already started.

Test Sequence:

Blank
 Internal Standard
 Simulator Vapor
 Blank

Reason: Simulator concentration must be within 5% of downstate as calculated using simulator solution change.

Subject take test? “Y” “N”
 If Y test sequence begins
 If N Reason for refusal? Refusal: (80) Incapable: (80)

<3 Copies of Refusal Evidence Report are printed>
 Please Blow

Will subject provide 2nd sample? “Y” “N”
 If N <3 Copies of Evidence Report are printed>
 If Y
 Blank
 Internal Standard
 Simulator Vapor
 Blank
 Please Blow

<3 Copies of Evidence Report are printed>

• Print final volume of air for each acceptable sample
 • Print start time of the sample and time of the fifteen minute observation period (HH:MM)
 • See Page 7 for Evidence Report format

Ø Check-In Confirmation

Subject Information:

Subject Name First (15) MI Last (20)
DOB mm/dd/yyyy <Age years>
Sex M/F
License # (15 Characters) State

Test Operator Information:

Name First (15) MI Last (20)
Agency Drop down menu of agencies (see page 32 for list)
VTC # (5)

Press "Okay" when complete
<Information comes up for review>
Press "Edit" or "Continue"

Edit will loop back to information entry page. Continue will begin test sequence.

Test Sequence:

- Blank
- Internal Standard
- Simulator Vapor
- Blank
- Please Blow

Internal Standard concentration must be within 5% of previous run as well as recording simulator solution.

<3 Copies of Evidence Report are printed>

Printed evidence report will be available in the printer tray.

DRAFT



Check-In Confirmation Test

State of Vermont

Location _____ DataMaster DMT
Certification Date: MM/DD/YYYY _____ Serial Number
Install Date: MM/DD/YYYY _____

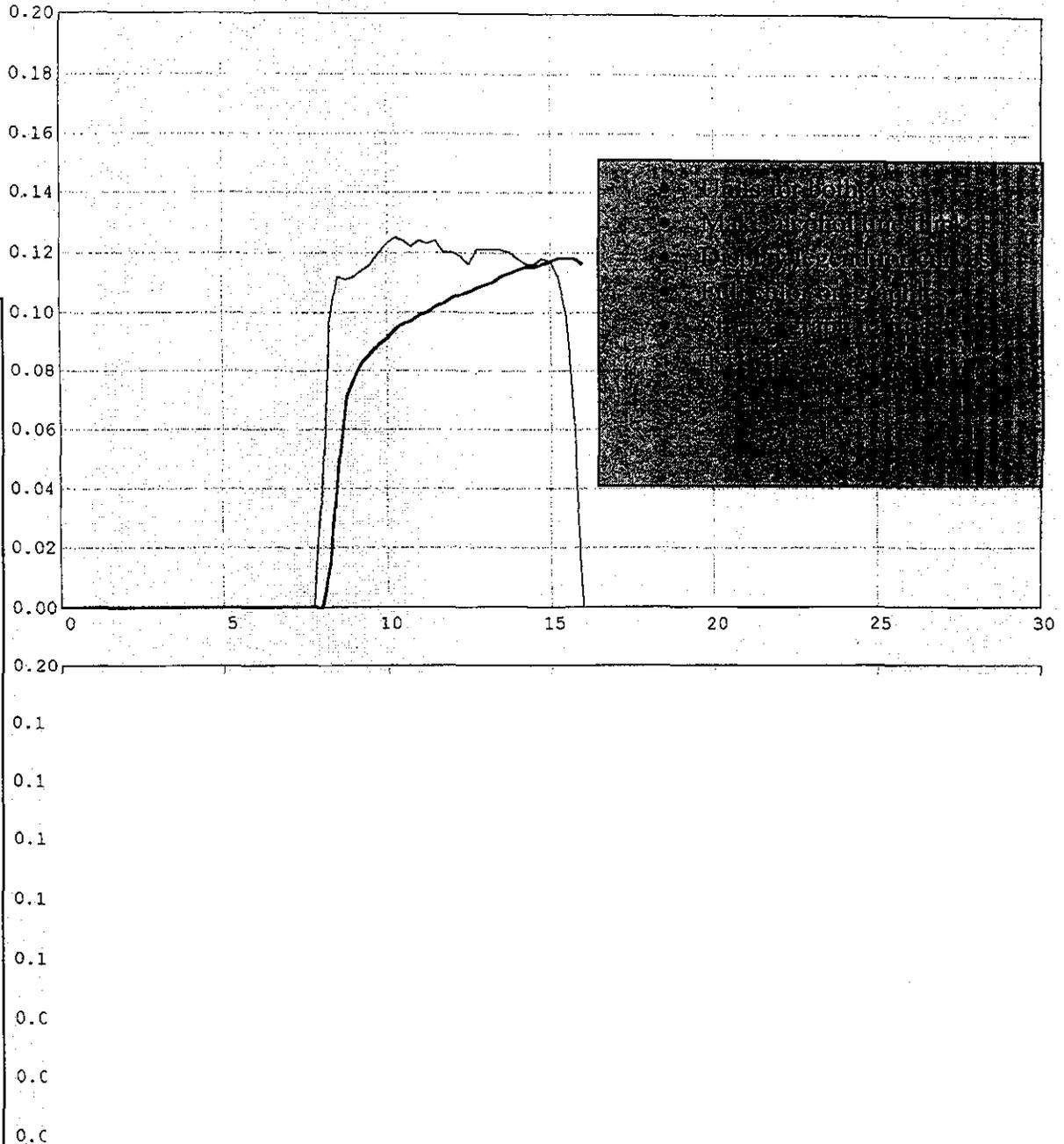
Date: MM/DD/YYYY
Time: HH:MM

Subject Name: First M Last
Date of Birth: MM/DD/YYYY Age: ##
Sex: M/F
License # _____ State _____

Test Operator Name: First M Last
Agency: _____

Blank Test 0.000
Internal Standard PASSED
Simulator Vapor 0.100 g/210L
Blank Test 0.000
Subject Sample x.xxx g/210L Vol X.XL HH:MM

Vapor Initial Concentration = 0.100 g/210L (5% Calculated Range)
Simulator Temperature T°C



Calibration Protocol for DataMaster DMT

This protocol will be available as an option under the DataMaster Technician level password.

DataMaster Technician will select the option for Calibration.

1) Enter Technician Name: First (15) MI Last (20)

2) Enter New Simulator Solution Information: 0.XXXg/210L Lot: XX-XX-XXX

Instrument will calculate a 5% acceptance range

3) Connect Water Simulator Press "Enter"

Sample is analyzed

Purge

4) Connect ~0.1g/210L EtOH Simulator Press "Enter"

Sample is analyzed

Purge

<Display Calibration factors with ranges> *(highlight values out of range)*

Capture Signature as "Performed By: _____"

CALIBRATION REPORT

DataMaster DMT: *Serial #*
 Calibration Date: *MM/DD/YYYY*
 Calibrated by: *First MI Last*



b1 = 0.0001149
 b2 = 0.009021
 b3 = 0.001504
 Xq = 0.115152
 Ca = 0.100000
 CAL = 1.026056
 a21 = 1.194209
 a31 = 0.639356



Performed by: _____ Date: _____

DRAFT

Certification Protocol for DataMaster DMT

This protocol will be available as an option under the DataMaster Technician level password.

DataMaster Technician will select the option for Certification

- 1) Enter Technician Name: First (15) MI Last (20)
- 2) <Run Diagnostic Check>
 <Print Diagnostic Test> (see page 24 for Diagnostic Test Print Out)
- 3) Begin Linearity Check: Attach External Simulator with EtOH free water
 Press "Enter" when complete
 Purge
 Blank
 7 replicates *Purge between each sample*
- 4) Linearity Check: Attach External Simulator with first EtOH concentration
 Enter Simulator Solution Information

0.XXXg/210L

Acceptance Range +/-0.XXXg/210L

Lot: XX-XX-XXX

 Purge
 Blank
 7 replicates *Purge between each sample*
- 5) Linearity Check: Attach External Simulator with second EtOH concentration
 Enter Simulator Solution Information

0.XXXg/210L

Acceptance Range +/-0.XXXg/210L

Lot: XX-XX-XXX

 Purge
 Blank
 7 replicates *Purge between each sample*
- 6) Linearity Check: Attach External Simulator with third EtOH concentration
 Enter Simulator Solution Information

0.XXXg/210L

Acceptance Range +/-0.XXXg/210L

Lot: XX-XX-XXX

 Purge
 Blank
 7 replicates *Purge between each sample*
- 7) Linearity Check: Attach External Simulator with fourth EtOH concentration
 Enter Simulator Solution Information

0.XXXg/210L

Acceptance Range +/-0.XXXg/210L

Lot: XX-XX-XXX

 Purge
 Blank
 7 replicates *Purge between each sample*

7 replicates of the simulator solution will be performed. Average concentration must be within 10% of the standard. Purge between each sample. Acceptable range will be 10% of the standard. Prompting technician to verify solution or abort certification process.

Instrument displays a graph of the known external simulator solution values vs the calculated external simulator value. The slope of the line must equal the nominal graph. If R² is not > 0.99, instrument will signal an error condition.

8) Acetone Interference Test:

Enter Acetone Solution Information

Lot: XX-XX-XXX

Purge

Blank

Please Blow Acetone through breath tube

“Interference detected” (If no interference detected restart Acetone Test or operator abort)

Purge

9) Begin Mouth Alcohol Test

Blank

Please Blow

“Invalid Sample” (if no mouth alcohol is detected, restart mouth alcohol test or operator abort)

Purge

10) Attach ~0.1g/210L Simulator Vapor

Enter New Simulator Solution Information:

0.XXXg/210L

Lot: XX-XX-XXX

Instrument will calculate a 5% acceptance range

11) RFI Interference Check

12) Begin Sample Acceptance Test

Press “Enter” when Ready

Blank

Purge

Please Blow

13) Provide Shallow Breath

14) Provide Intermittent Breath

15) Perform Suck Back Test

16) Provide valid Alcohol Breath Test

17) Did Instrument Pass All Sample Acceptance Checks?

Yes

No

Reason for Failure?

Ex) Instrument allowed shallow breath.

19) <Print 2 copies of Certification Report> (see next page for report format)

This box should respond immediately to the user's 15-20 character max.

CERTIFICATION REPORT

DataMaster DMT: Serial #
Calibration Date: MM/DD/YYYY
Certification Date: MM/DD/YYYY
Certified by: First MI Last

**Diagnostic Test Results****VERSIONS:**

DMT X.X

PIC X.X

Questions: X.X

Reports: X.X

TEMPERATURES

Sample Chamber = XX.XXC

Breath Tube = XX.XXC

Simulator Hoses = XX.XXC

(acceptable range XX.XX → XX.XX)

(acceptable range XX.XX → XX.XX)

(acceptable range XX.XX → XX.XX)

VOLTAGES

Lamp Voltage = X.XX V

Cooler Voltage = X.XX V

Bias Voltage = XXX.X V

Chopper Frequency = XXX.X Hz

(acceptable range X.XX → X.XX)

(acceptable range X.XX → X.XX)

(acceptable range X.XX → X.XX)

(acceptable range XX.XX → XXX.X)

PUMP TEST

Volume = 0.XXX L

Flow Rate = X.XXX L/M

FILTER TEST

Filter 1 0.XXX

zero=true

Filter 2 0.XXX

zero=true

Filter 3 0.XXX

zero=true

DETECTOR STABILITY TEST

PUMP ON OFF

MAX(V) 0.0XXX 0.0XXX

MIN(V) 0.0XXX 0.0XXX

INTERNAL STANDARD

Xq = X.XXXX 0.XX% (Xq value at Calibration)

Options**Printer:**

Number Copies: 3

Number Accuracy and Precision Check: 5

Tolerance Check: Yes

Data Collection: Yes

Units: g/210L

Simulator Check: Yes

Uses Wet Bath Simulator: Yes

Simulator Actual Value: 0.xxxxg/210L

Dry Gas PPM: XXXXXXXX

Digital Simulator: None

Simulator Before: Yes

Simulator Between: Yes

Simulator After: No

Number of Subject Tests: X

Ask Questions: Yes

Query Refusal: Yes

Alcohol Display: No

2 or 3 Digital Display: 3

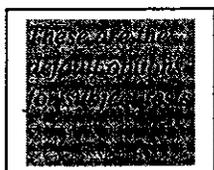
Volume Display: Yes

Number of Calibration Tests: 1

Calibrate with Wet Bath: Yes

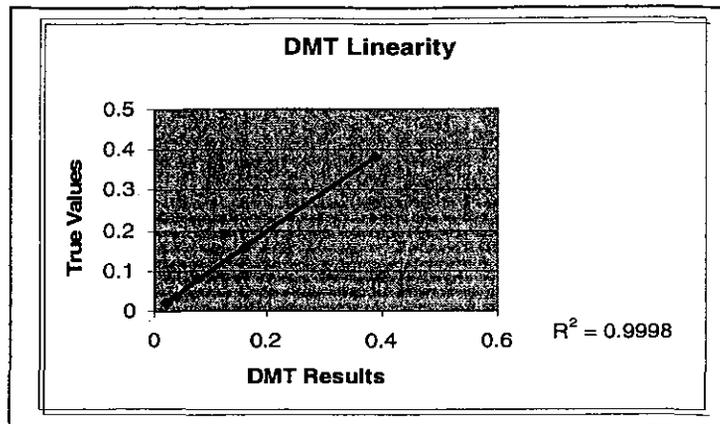
Calibration Actual Value: 0.1XXg/210L

Mandatory 15min wait time: Yes



Linearity Check Results

True Value	Reported Average	Std Dev
0.020g/210L	0.02g/210L	0.0002
Lot # XX-XX-XXX		
0.080g/210L	0.08g/210L	0.0002
Lot # XX-XX-XXX		
0.160g/210L	0.16g/210L	0.0002
Lot # XX-XX-XXX		
0.400g/210L	0.40g/210L	0.0002
Lot # XX-XX-XXX		



Acetone Interference Test

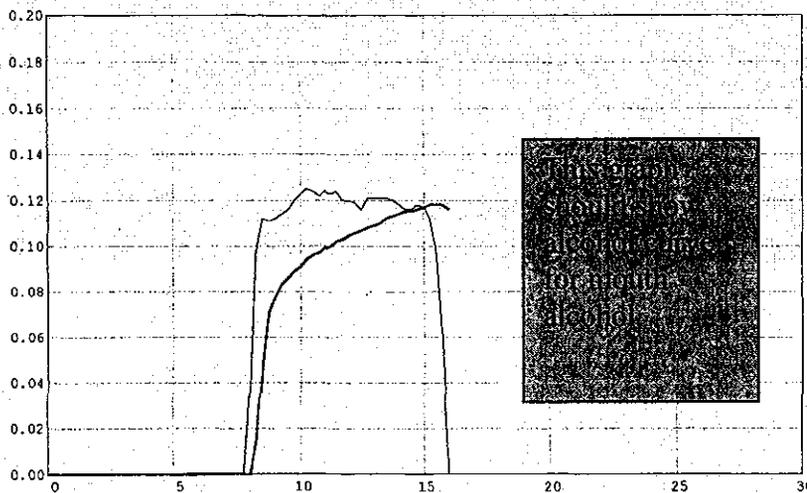
Lot # XX-XX-XXX
Interference Detected

Mouth Alcohol Test

Invalid Sample Detected

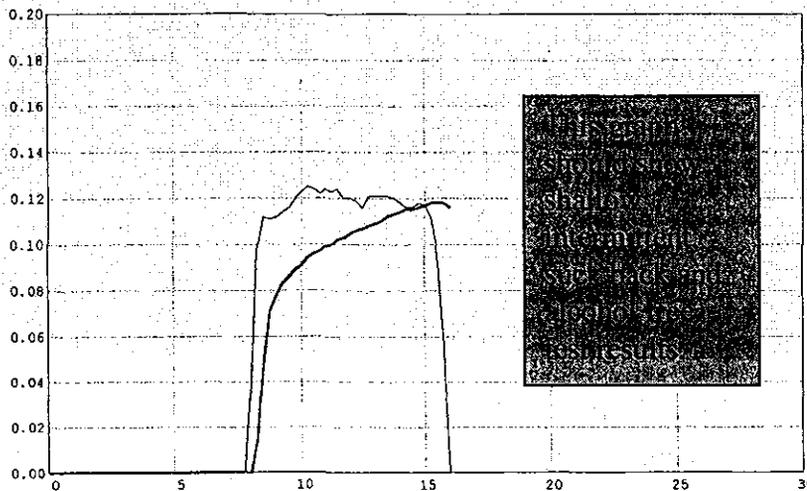
RFI Interference Test

RFI detected



Sample Acceptance Test

Passed



CERTIFICATION PASSED
or
CERTIFICATION FAILED

Performed by _____ Date _____

Reviewed by _____ Date _____

Installation Protocol for DataMaster DMT

This protocol will be available as an option under the Technician level password.

Technician will select the option for Installation

1) Enter Technician Name: First **(15)** _____ MI _____ Last **(20)** _____

2) Does site meet the specifications in doc P-Alc-210

Yes

No *Installation will abort if No is selected*

Reason for noncompliance:

3) Enter Location Identification:

4) Attach ~0.1g/210L Simulator Vapor
Enter Simulator Solution Information

Instrument will calculate a ±5% acceptance criteria from the actual value

Instrument will now remain idle while 30 minute timer counts down to zero

5) <Running Diagnostic Check>

6) <Running Accuracy and Precision Check>

7) RFI Interference Check

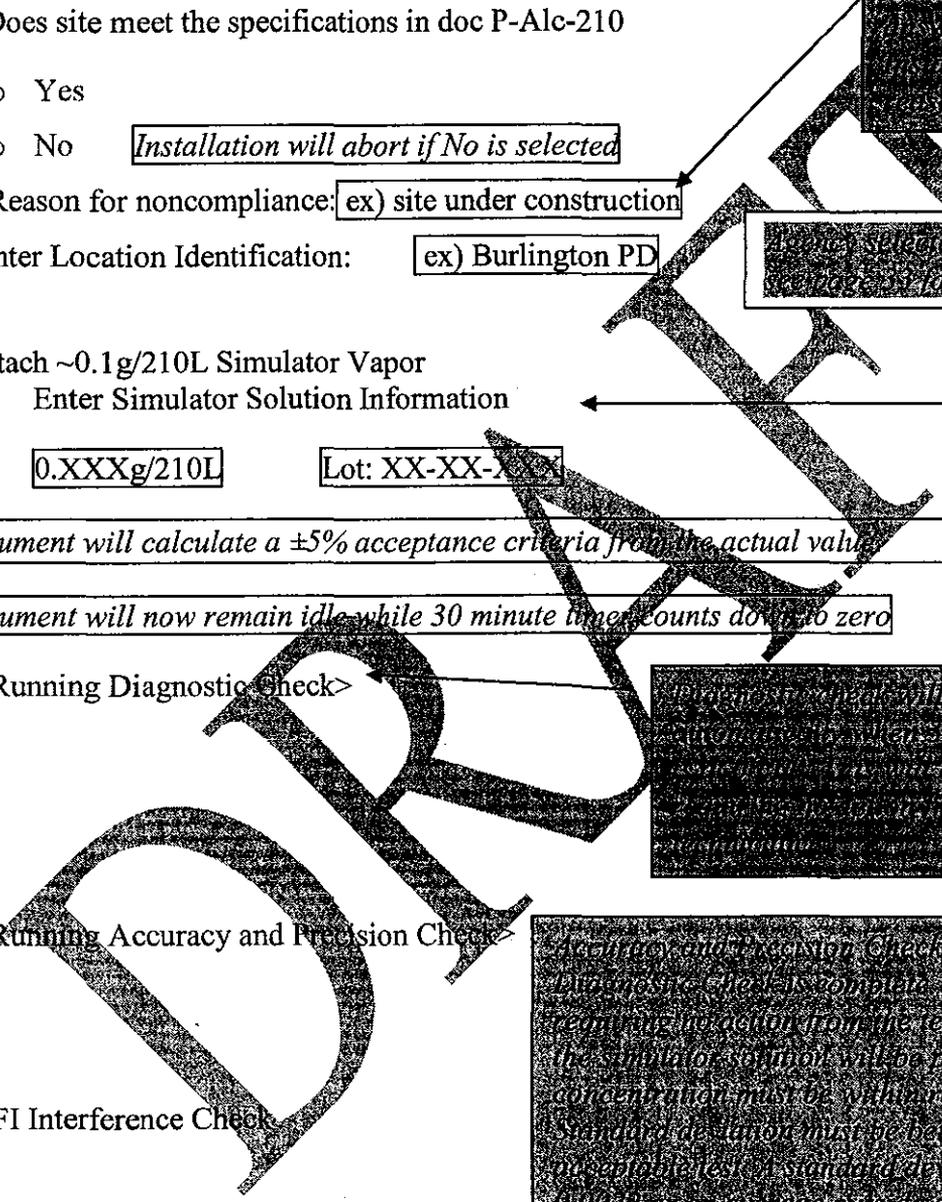
This 30 minute timer is used to ensure that the instrument is properly calibrated and that the simulator solution is stable before the diagnostic check is performed.

Selection of a simulator solution is required for the diagnostic check to proceed.

30 Minute Timer will begin countdown after information is entered. This clock will remain on screen until the timer reaches zero.

Diagnostic check will begin when the 30 minute timer reaches zero. The instrument will perform a series of diagnostic tests to ensure that the instrument is properly calibrated and that the simulator solution is stable before the diagnostic check is performed.

Accuracy and Precision Check will begin when the Diagnostic Check is complete. This is also a message requiring no action from the technician. Replicates of the simulator solution will be performed. Average concentration must be within range generated in step 3. Standard deviation must be between 1 and 0.002 for the replicate test. A standard deviation of greater than 0.002 or an average outside of acceptable range will result in a failed installation or abort will be aborted and the user indicate the reason.



8) Begin Sample Acceptance Test

- Press "Enter" when Ready
- Blank
- Purge
- Please Blow

Forcing the instrument to enter will ensure that the scale is ready.

9) Provide Shallow Breath

10) Provide Intermittent Breath

11) Perform Suck Back Test

12) Provide valid Alcohol Free Test

These instructions are for the instrument to accept a sample. The instrument will not accept a sample if the user does not follow these instructions.

The values must meet all requirements and the highest value generated is the value that will be displayed.

13) Did Instrument Pass All Sample Acceptance Checks?

- Yes
- No

Reason for Failure?

Ex) Instrument allowed shallow breath.

This box should be filled immediately if the user does not pass all sample acceptance checks.

14) <Print 2 copies of Installation Report> (See next page for report format)

DRAFT

INSTALLATION REPORT



DataMaster DMT: Serial #
Location: Agency
Calibration Date: MM/DD/YYYY
Certification Date: MM/DD/YYYY
Installation Date: MM/DD/YYYY
Installed By: First MI Last

Site meets specifications in doc P-Alc-210

Diagnostic Test Results

VERSIONS:

DMT X.X

PIC X.X

Questions: X.X

Reports: X.X

TEMPERATURES

Sample Chamber = XX.XXC

Breath Tube = XX.XXC

Simulator Hoses = XX.XXC

(acceptable range XX.XX → XX.XX)
(acceptable range XX.XX → XX.XX)
(acceptable range XX.XX → XX.XX)

VOLTAGES

Lamp Voltage = X.XX V

Cooler Voltage = X.XX V

Bias Voltage = XXX.X V

Chopper Frequency = XXX.X Hz

(acceptable range X.XX → X.XX)
(acceptable range X.XX → X.XX)
(acceptable range X.XX → X.XX)
(acceptable range XX.XX → XX.XX)

PUMP TEST

Volume = 0.XXX L

Flow Rate = X.XXX L/M

FILTER TEST

Filter 1 0.XXX zero=true

Filter 2 0.XXX zero=true

Filter 3 0.XXX zero=true

DETECTOR STABILITY TEST

PUMP ON

MAX(V) 0.XXX

MIN(V) 0.0XX

INTERNAL STANDARD

Xq = X.XXXX 0.XX% (Xq value at Calibration)

Accuracy and Precision Check

~0.1g/210L Lot# XX-XX-XX

Average 0.XXXg/210L

Std Dev = 0.0002

Sim Temp = 34°C

RFI Interference Test

RFI detected

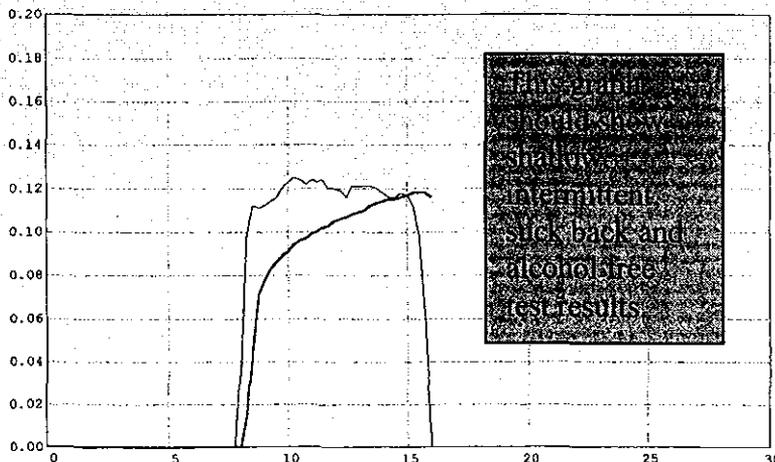
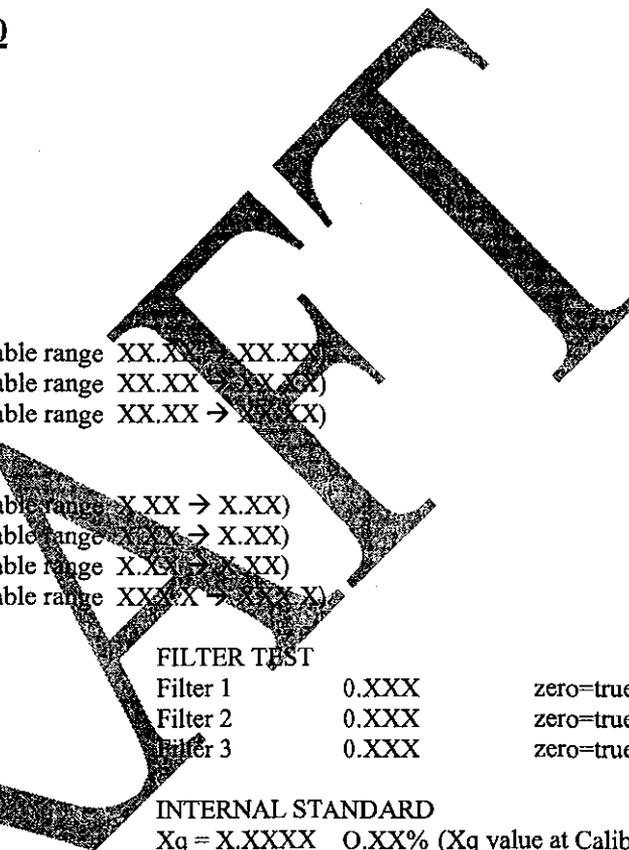
Sample Acceptance Test

Passed

INSTALLATION PASSED

or

INSTALLATION FAILED



Performed by _____ Date _____

Reviewed by _____ Date _____

Annual Preventative Maintenance Protocol for DataMaster DMT

This protocol will be available as an option under the Technician level password.

Technician will select the option for Annual Preventative Maintenance

1) Enter Technician Name: First (15) MI Last (20)

2) Does site still meet the specifications in doc #XXX?

Yes

No *Annual Preventative Maintenance will abort if No is selected.*

Reason for noncompliance: (ex) site under construction

4) <Running Diagnostic Check>

5) RFI Interference Test

6) Begin Sample Acceptance Test

Press "Enter" when Ready
Blank
Purge
Please Blow

7) Provide Shallow Breath

8) Provide Intermittent Breath

9) Perform Suck Back Test

10) Provide valid Alcohol Free

The valid test must be done with the instrument on a sealed sample. If the instrument reads a value of 0.05 or higher, should generate some noise indicating that the technician is blowing. If on the second test, the results are still not acceptable this will result in failed AEM and the protocol will abort with the reason displayed.

11) Did Instrument Pass All Sample Acceptance Checks?

Yes

No

Reason for Failure? (Ex) Instrument allowed shallow breath.

12) <Print 2 copies of Annual Preventative Maintenance Reports> (See next page for report format)

ANNUAL PREVENTATIVE MAINTENANCE REPORT

DataMaster DMT: Serial #
Location: Agency
Calibration Date: MM/DD/YYYY
Certification Date: MM/DD/YYYY
Installation Date: MM/DD/YYYY
APM Date: MM/DD/YYYY
Technician: First MI Last



Site meets specifications in doc P-Alc-210

Diagnostic Test Results

VERSIONS:
 DMT X.X
 PIC X.X
 Questions: X.X
 Reports: X.X

TEMPERATURES
 Sample Chamber = XX.XXC
 Breath Tube = XX.XXC
 Simulator Hoses = XX.XXC

(acceptable range XX.XX → XX.XX)
 (acceptable range XX.XX → XX.XX)
 (acceptable range XX.XX → XX.XX)

VOLTAGES
 Lamp Voltage = X.XX V
 Cooler Voltage = X.XX V
 Bias Voltage = XXX.X V
 Chopper Frequency = XXX.X Hz

(acceptable range X.XX → X.XX)
 (acceptable range X.XX → X.XX)
 (acceptable range X.XX → X.XX)
 (acceptable range XXX.X → XXX.X)

PUMP TEST
 Volume = 0.XXX L
 Flow Rate = X.XXX L/M

FILTER TEST
 Filter 1 0.XXX zero=true
 Filter 2 0.XXX zero=true
 Filter 3 0.XXX zero=true

DETECTOR STABILITY TEST
 PUMP ON OFF
 MAX(V) 0.0XXX 0.0XXX
 MIN(V) 0.0XXX 0.0XXX

INTERNAL STANDARD
 Xq = X.XXXX 0.XX% (Xq value at Calibration)

RFI Interference Test

RFI detected

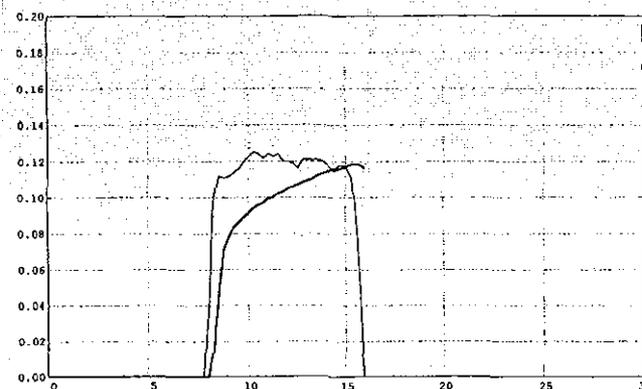
Sample Acceptance Test

Passed

APM PASSED or FAILED

Performed by _____ Date _____

Reviewed by _____ Date _____



Routine Performance Check Protocol for DataMaster DMT

This protocol will be a mandatory check to be performed by the end of the months of February, June and October. A box should pop-up across the top of the main screen stating "Routine Performance Check Now Due". This will remain on the screen until the supervisor has completed the RPC. If the supervisor does not complete the RPC by 24:00 on the last day of the required month, the DMT will become out of service until such time as the RPC is complete.

This protocol will be available as an option under the DataMaster Supervisor level password.

DataMaster Supervisor will select the option for Routine Performance Check

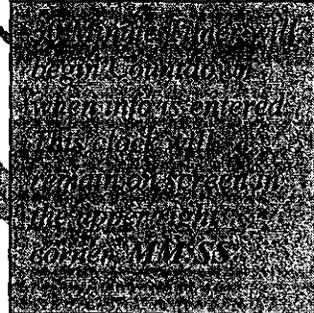
1) Enter Supervisor Name First (15) MI Last (20)

2) Replace Simulator Solution

Enter Simulator Solution Information

0.XXXg/210L

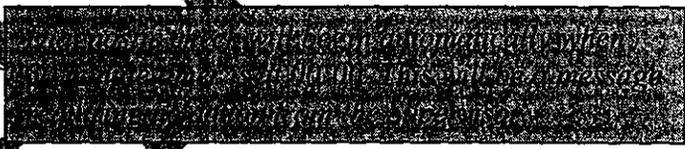
Lot: XX-XX-XXX



Instrument will calculate a ±5% acceptance criteria from the actual value.

Instrument will now remain idle while 30 minute timer counts down to zero

3) <Running Diagnostic Check>



4) <Running Accuracy and Precision Check>

Accuracy and Precision Check will occur when Diagnostic Check is complete. This is a 30 minute test with no alcohol on the simulator. The range of the simulator solution is 0.000g/210L. The standard deviation must be within range generated in Section 5. Standard deviation must be less than 0.0001g/210L. If the standard deviation is out of range, the protocol will be aborted with a message indicating the reason: standard deviation Out of Range.

5) RFI Interference Test

6) Begin Sample Acceptance Test

Press "Enter" when Ready
Blank
Purge
Please Blow

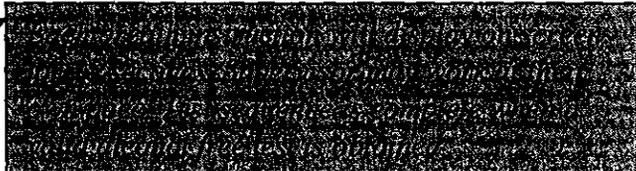
For every 20 minutes the supervisor will enter with a sure that they are ready to continue. If supervisor does not continue within 20 minutes, DMT will stop and log out supervisor and start from the beginning.

7) Provide Shallow Breath

8) Provide Intermittent Breath

9) Perform Suck Back Test

10) Provide valid Alcohol Free Test



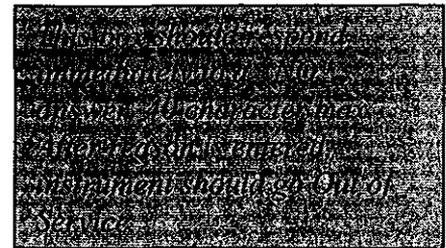
The values shown in the table are the sum of all values for the 10 breaths. The values shown in the table are the sum of all values for the 10 breaths. The values shown in the table are the sum of all values for the 10 breaths.

11) Did Instrument Pass All Sample Acceptance Checks?

Yes

No

Reason for Failure? Ex) Instrument allowed shallow breath.



12) Contact DM Tech Service?

Yes

No



13) <Print Routine Performance Check Report> (see next page for report format)

14) <Email Report to Alcohol Program address>

DRAFT

ROUTINE PERFORMANCE CHECK REPORT

DataMaster DMT: Serial #
Location: Agency
Calibration Date: MM/DD/YYYY
Certification Date: MM/DD/YYYY
Installation Date: MM/DD/YYYY
RPC Date: MM/DD/YYYY
Performed By: First MI Last



Diagnostic Test Results

VERSIONS:

DMT X.X

PIC X.X

Questions: X.X

Reports: X.X

TEMPERATURES

Sample Chamber = XX.XXC

Breath Tube = XX.XXC

Simulator Hoses = XX.XXC

(acceptable range XX.XX → XX.XX)
 (acceptable range XX.XX → XX.XX)
 (acceptable range XX.XX → XX.XX)

VOLTAGES

Lamp Voltage = X.XX V

Cooler Voltage = X.XX V

Bias Voltage = XXX.X V

Chopper Frequency = XXX.X Hz

(acceptable range X.XX → X.XX)
 (acceptable range X.XX → X.XX)
 (acceptable range X.XX → X.XX)
 (acceptable range XX.XX → XXX.X)

PUMP TEST

Volume = 0.XXX L

Flow Rate = X.XXX L/M

FILTER TEST

Filter 1 0.XXX zero=true

Filter 2 0.XXX zero=true

Filter 3 0.XXX zero=true

DETECTOR STABILITY TEST

PUMP ON OFF

MAX(V) 0.0XXX 0.0XXX

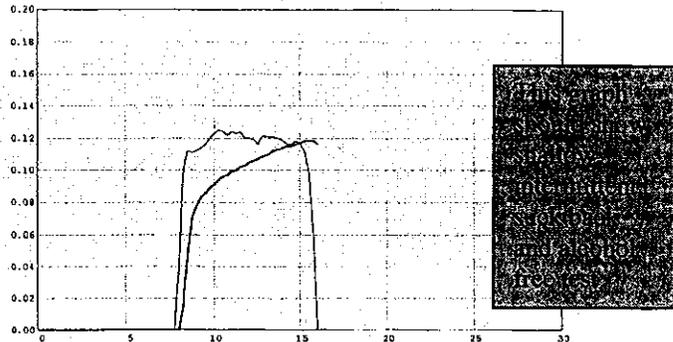
MIN(V) 0.0XXX 0.0XXX

INTERNAL STANDARD

Xq = X.XXXX 0.XX% (Xq value at Calibration)

Accuracy and Precision Check

~0.1g/210L Lot# XX-XX-XX
 Average = 0.XXXg/210L
 Std Dev = 0.0002
 Sim Temp = 34°C



RFI Interference Test

RFI detected

Sample Acceptance Test

Passed

Routine Performance Check Passed

OR

Routine Performance Check Failed

Service requested MM/DD/YYYY

Reason for failure:

Any failure messages, and the reasons for service as entered in "Reason Service Requested" box will be inserted here.

Please leave 2 lines below for supervisor to write in notes

Performed by _____ Date _____

Simulator Solution Change Protocol for DataMaster DMT

This protocol will be available as an option under the DataMaster Supervisor level password.

DataMaster Supervisor will select the option Change Simulator Solution

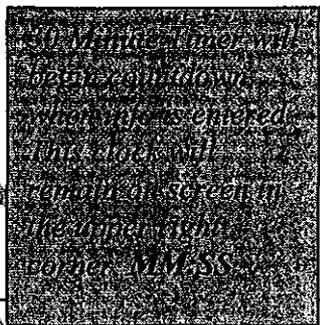
1) Enter Supervisor Name First (15) MI Last (20)

2) Replace Simulator Solution

Enter Simulator Solution Information

0.XXXg/210L

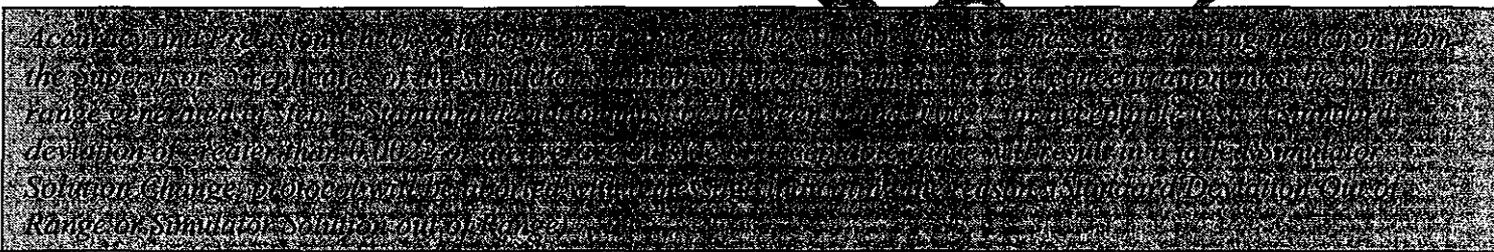
Lot: XX-XX-XXX



Instrument will calculate a $\pm 5\%$ acceptance criteria from the actual value.

Instrument will now remain idle while 30 minute timer counts down to zero

3) <Run Accuracy and Precision Check>



4) <Print Simulator Solution Change Report> (see next page for report format)

Performed by: _____ Date: _____

DRAFT

SIMULATOR SOLUTION CHANGE REPORT

DataMaster DMT: *Serial #*
Location: *Agency*
Date: *MM/DD/YYYY*
Performed By: *First MI Last*



Accuracy and Precision Check

0.100g/210L Lot# XX-XX-XXX
Average = 0.XXXg/210L
Std Dev = 0.0002

Simulator Temperature: 34°C

Performed by: _____ **Date:** _____

DRAFT

DIAGNOSTIC TEST RESULTS

DataMaster DMT: *Serial #*
Location *Agency*
Calibration Date: *MM/DD/YYYY*
Certification Date: *MM/DD/YYYY*
Installation Date: *MM/DD/YYYY*
Test Date: *MM/DD/YYYY*
Time: *HH:MM*

**VERSIONS:**

DMT X.X

PIC X.X

Questions: X.X

Reports: X.X

TEMPERATURES

Sample Chamber = XX.XXC (acceptable range XX.XX → XX.XX)

Breath Tube = XX.XXC (acceptable range XX.XX → XX.XX)

Simulator Hoses = XX.XXC (acceptable range XX.XX → XX.XX)

VOLTAGES

Lamp Voltage = X.XX V (acceptable range X.XX → X.XX)

Cooler Voltage = X.XX V (acceptable range X.XX → X.XX)

Bias Voltage = XXX.X V (acceptable range X.XX → XX)

Chopper Frequency = XXX.X Hz (acceptable range XXX.X → XXX.X)

PUMP TEST

Volume = 0.XXX L

Flow Rate = X.XXX L/M

DETECTOR STABILITY TEST

PUMP ON OFF

MAX(V) 0.0XXX 0.0XXX

MIN(V) 0.0XXX 0.0XXX

FILTER TEST

Filter 1 0.XXX zero=true

Filter 2 0.XXX zero=true

Filter 3 0.XXX zero=true

INTERNAL STANDARD

Xq = X.XXXX 0.XX% (Xq value at Calibration)

OPTIONS PRINT OUT

DataMaster DMT: *Serial #*
 Location *Agency*
 Calibration Date: *MM/DD/YYYY*
 Certification Date: *MM/DD/YYYY*
 Installation Date: *MM/DD/YYYY*



VERSIONS:

DMT X.X

PIC X.X

Questions: X.X

Reports: X.X

Printer: X
 Number Copies: 3
 Number Accuracy and Precision Check: 5
 Tolerance Check: Yes
 Data Collection: Yes
 Units: g/210L
 Simulator Check: Yes
 Uses Wet Bath Simulator: Yes
 Simulator *Actual Value*: 0.xxxg/210L
Dry Gas PPM: XXXXXXXX
 Digital Simulator: None
 Simulator Before: Yes
 Simulator Between: Yes
 Simulator After: No
 Number of Subject Tests: X
 Ask Questions: No
 Query Refusal: Yes
 Alcohol Display: No
2 or 3 Digital Display: 3
 Volume Display: Yes
 Number of Calibration Tests: 1
 Calibrate with Wet Bath: Yes
 Calibration *Actual Value*: 0.1XXXg/210L
Calibration PPM: XXXXXXXX
 Mandatory 15min wait time: Yes
 RFI Detection: ON

DRAFT

Only print if Dry Gas is selected

GENERATED ERROR MESSAGES

This list is not meant to be all inclusive. Any other error codes deemed necessary by NPAS will be included

AMBIENT FAIL

SIMULATOR VAPOR CONCENTRATION NOT IN ACCEPTABLE RANGE

The average concentration is not within the 5% range calculated during simulator solution change.

<Place instrument in OUT OF SERVICE mode.>

BLANK ERROR

Prior to each test, the DataMaster performs a blank test to verify a near zero reading. If this reading is .004 or higher, a "BLANK ERROR" is reported.

CALIBRATION ERROR

At the time of calibration, value of the quartz standard is stored in memory. This value is checked prior to each test sequence. If it is not found to be within 10% of the original value a calibration error will occur.

DETECTOR OVERFLOW

The detector output exceeds that readable by the instrument A/D converter. This error will usually happen during a subject or supervisor test.

DETECTOR TOO HIGH

This message will only be seen on a diagnostic test. High positive numbers will be seen using the diagnostic function.

DETECTOR TOO LOW

FILTER WHEEL ERROR

The instrument is unable to detect a difference in voltages at the time the optical filters are switched into the light path.

<Place instrument in OUT OF SERVICE mode.>

FLOW DETECTOR ERROR

INTERFERENCE DETECTED

The DataMaster is specific for ethanol and has determined by comparison of absorption at 3 optical filters that there is some substance other than ethanol (ethyl alcohol) present in the sample.

INVALID SAMPLE

The instrument has detected mouth alcohol or something that mimics mouth alcohol.

MEMORY FULL

The memory chip, which stores the test data, is full. NO FURTHER TESTS WILL BE STORED IN MEMORY. All tests performed after this message occurs will not be stored in memory, and therefore are unrecoverable if operational irregularity occurs. The instrument requires a download of stored data.

NOT CALIBRATED

The calibration factors have been lost.

<Place instrument in **OUT OF SERVICE** mode.>

NOT SET UP

The stored default options have not been established.

PRINTER ERROR

Communication error between DMT and printer.

PUMP ERROR

The flow sensor does not detect airflow. Any situation that stops the airflow while the pump should be working will create this condition. Look for obstructions that prevent air from coming into the breath tube, loose or disconnected tubing inside the DataMaster or possibly an inoperative or unplugged pump.

SIMULATOR TEMPERATURE ERROR

Appears when the monitoring system reports that the simulator temperature is outside of the acceptable range of 33.8°C to 34.2°C.

SYSTEM WON'T ZERO

Prior to each analysis for alcohol the instrument determines its zero reference point. Should it be unable to do this, a "SYSTEM WONT ZERO" message occurs.

TEMPERATURE HIGH

The sample chamber temperature has risen to 55°C or above.

<Place instrument in **OUT OF SERVICE** mode.>

TEMPERATURE LOW

The sample chamber temperature fails to reach 47°C or falls below 45°C. Normally this occurs if the instrument is in a cold environment and has just been powered up. If the proper temperature is not reached within the warm-up mode time, this message will be seen.

<Place instrument in **OUT OF SERVICE** mode.>

RFI INTERFERENCE DETECTED

DRAFT

Vermont Law Enforcement Agencies**Sheriffs**

Addison County Sheriff's Office
 Bennington County Sheriff's Office
 Caledonia County Sheriff's Office
 Chittenden County Sheriff's Office
 Essex County Sheriff's Office
 Franklin County Sheriff's Office
 Grand Isle Sheriff's Office
 Lamoille County Sheriff's Office
 Orange County Sheriff's Office
 Orleans County Sheriff's Office
 Rutland County Sheriff's Office
 Washington County Sheriff's Office
 Windham County Sheriff's Office
 Windsor County Sheriff's Office

State Police

Vermont State Police -Royalton
 Vermont State Police -Bradford
 Vermont State Police -Brattleboro
 Vermont State Police -Derby
 Vermont State Police -New Haven
 Vermont State Police -Middlebury
 Vermont State Police -Rockingham
 Vermont State Police -Rutland
 Vermont State Police -St Albans
 Vermont State Police -St. Johnsbury
 Vermont State Police -Shattsbury
 Vermont State Police -Williston

Local PDs

Barre City Police Department
 Barre Town Police Department
 Bellows Falls Police Department
 Bennington Police Department
 Berlin Police Department
 Brandon Police Department
 Brattleboro Police Department
 Bristol Police Department
 Burlington Police Department
 Castleton Police Department
 Chester Police Department
 Colchester Police Department
 Dover Police Department
 Essex Police Department
 Fair Haven Police Department
 Hardwick-Greensboro Police Department
 Hartford Police Department
 Hinesburg Police Department
 Ludlow Police Department
 Randolphville Police Department
 Manchester Police Department
 Middlebury Police Department
 Milton Police Department
 Montpelier Police Department
 Morristown Police Department
 Newport Police Department
 North Troy Village Police Department
 Northfield Police Department
 Norwich Police Department

Randolph Police Department
 Richmond Police Department
 Rutland City Police Department
 St Albans Police Department
 St Johnsbury Police Department
 Shelburne Police Department
 Springfield Police Department
 South Burlington Police Department
 Stowe Police Department
 Swanton Police Department
 Thetford Police Department
 UVM Police Department
 Vergennes Police Department
 Vernon Police Department
 Waterbury Police Department
 Weathersfield Police Department
 Williston Police Department
 Wilmington Police Department
 Windsor Police Department
 Winhall Police Department
 Winooski Police Department
 Woodstock Police Department

Alphabetic List of Towns

<u>Addison</u>	<u>Concord</u>	<u>Hubbardton</u>
<u>Albany</u>	<u>Corinth</u>	<u>Huntington</u>
<u>Alburgh</u>	<u>Cornwall</u>	<u>Hyde Park</u>
<u>Andover</u>	<u>Coventry</u>	<u>Ira</u>
<u>Arlington</u>	<u>Craftsbury</u>	<u>Irasburg</u>
<u>Athens</u>	<u>Danby</u>	<u>Island Pond</u>
<u>Averill</u>	<u>Danville</u>	<u>Isle La Motte</u>
<u>Bakersfield</u>	<u>Derby</u>	<u>Jamaica</u>
<u>Baltimore</u>	<u>Dorset</u>	<u>Jay</u>
<u>Barnard</u>	<u>Dover</u>	<u>Jericho</u>
<u>Barnet</u>	<u>Dummerston</u>	<u>Johnson</u>
<u>Barre Town</u>	<u>Duxbury</u>	<u>Killington</u>
<u>Barton</u>	<u>East Haven</u>	<u>Kirby</u>
<u>Belvidere</u>	<u>East Montpelier</u>	<u>Landgrove</u>
<u>Bennington</u>	<u>Eden</u>	<u>Leicester</u>
<u>Benson</u>	<u>Elmore</u>	<u>Lemington</u>
<u>Berkshire</u>	<u>Enosburg</u>	<u>Lewis</u>
<u>Berlin</u>	<u>Essex</u>	<u>Lincoln</u>
<u>Bethel</u>	<u>Fairfax</u>	<u>Londonderry</u>
<u>Bloomfield</u>	<u>Fairfield</u>	<u>Lowell</u>
<u>Bolton</u>	<u>Fair Haven</u>	<u>Ludlow</u>
<u>Bradford</u>	<u>Fairlee</u>	<u>Lunenburg</u>
<u>Braintree</u>	<u>Fayston</u>	<u>Lyndon</u>
<u>Brandon</u>	<u>Ferdinand</u>	<u>Maidstone</u>
<u>Brattleboro</u>	<u>Ferrisburgh</u>	<u>Manchester</u>
<u>Bridgewater</u>	<u>Fletcher</u>	<u>Marlboro</u>
<u>Bridport</u>	<u>Franklin</u>	<u>Marshfield</u>
<u>Brighton</u>	<u>Georgia</u>	<u>Mendon</u>
<u>Bristol</u>	<u>Glastenbury</u>	<u>Middlebury</u>
<u>Brookfield</u>	<u>Glover</u>	<u>Middlesex</u>
<u>Brookline</u>	<u>Goshen</u>	<u>Middletown Springs</u>
<u>Brownington</u>	<u>Grafton</u>	<u>Milton</u>
<u>Brunswick</u>	<u>Granby</u>	<u>Monkton</u>
<u>Burke</u>	<u>Grand Isle</u>	<u>Montgomery</u>
<u>Cabot</u>	<u>Granville</u>	<u>Moretown</u>
<u>Calais</u>	<u>Greensboro</u>	<u>Morgan</u>
<u>Cambridge</u>	<u>Groton</u>	<u>Morristown</u>
<u>Canaan</u>	<u>Guildhall</u>	<u>Mount Holly</u>
<u>Castleton</u>	<u>Guilford</u>	<u>Mount Tabor</u>
<u>Cavendish</u>	<u>Halifax</u>	<u>Newark</u>
<u>Charleston</u>	<u>Hancock</u>	<u>Newbury</u>
<u>Charlotte</u>	<u>Hardwick</u>	<u>Newfane</u>
<u>Chelsea</u>	<u>Hartford</u>	<u>New Haven</u>
<u>Chester</u>	<u>Hartland</u>	<u>Newport City</u>
<u>Chittenden</u>	<u>Highgate</u>	<u>Northfield</u>
<u>Clarendon</u>	<u>Hinesburg</u>	<u>North Hero</u>
<u>Colchester</u>	<u>Holland</u>	<u>Norton</u>

Norwich
Orange
Orwell
Panton
Pawlet
Peacham
Peru
Pittsfield
Pittsford
Plainfield
Plymouth
Pomfret
Poultney
Pownal
Proctor
Putney
Randolph
Reading
Readsboro
Richford
Richmond
Ripton
Rochester
Rockingham
Roxbury
Royalton
Rupert
Rutland (town)
Ryegate
St. Albans Town
St. George
St. Johnsbury
Salisbury
Sandgate

Searsburg
Shaftsbury
Sharon
Sheffield
Shelburne
Sheldon
Shoreham
Shrewsbury
Somerset
South Herot
Springfield
Stamford
Stannard
Starksboro
Stockbridge
Stowe
Strafford
Stratton
Sudbury
Sunderland
Sutton
Swanton
Thetford
Tinmouth
Topsham
Townshend
Troy
Tunbridge
Underhill
Vernon
Vershire
Victory
Waitsfield
Walden

Wallingford
Waltham
Wardsboro
Warren
Washington
Waterbury
Waterford
Waterville
Weathersfield
Wells
West Fairlee
Westfield
Westford
West Haven
Westminster
Westmore
Weston
West Rutland
West Windsor
Weybridge
Wheelock
Whiting
Whitingham
Williamstown
Williston
Wilmington
Windham
Windsor
Winhall
Wolcott
Woodbury
Woodford
Woodstock
Worcester

Towns Listed by County

Addison County

Addison
Bridport
Bristol
Cornwall
Ferrisburgh
Goshen
Granville
Hancock
Leicester
Lincoln
Middlebury
Monkton
New Haven
Orwell
Panton
Ripton
Salisbury
Shoreham
Starksboro
Vergennes
Waltham
Weybridge
Whiting

Bennington County

Arlington
Bennington
Dorset
Glastenbury
Landgrove
Manchester
Peru
Pownal
Readsboro
Rupert
Sandgate
Searsburg
Shaftsbury
Stamford
Sunderland
Winhall
Woodford

Caledonia County

Barnet
Burke
Danville
Groton
Hardwick
Kirby
Lyndon
Newark
Peacham
Ryegate
Sheffield
St. Johnsbury
Stannard
Sutton
Walden
Waterford
Wheelock

Chittenden County

Bolton
Burlington
Charlotte
Colchester
Essex
Hinesburg
Huntington
Jericho
Milton
Richmond
Shelburne
South Burlington
St. George
Underhill
Westford
Williston
Winooski

Essex County

Averill
Avery's Gore
Bloomfield
Brighton
Brunswick
Canaan
Concord
East Haven
Ferdinand
Granby
Guildhall
Island Pond
Lemington
Lewis
Lunenburg
Maidstone
Norton
Victory
Warner's Grant
Warren's Gore

Franklin County

Bakersfield
Berkshire
Enosburg
Fairfax
Fairfield
Fletcher
Franklin
Georgia
Highgate
Montgomery
Richford
Sheldon
St. Albans (city)
St. Albans (town)
Swanton

Grand Isle County

Alburgh
Grand Isle
Isle La Motte
North Hero
South Hero

Lamoille County

Belvidere
Cambridge
Eden
Elmore
Hyde Park
Johnson
Morristown
Stowe
Waterville
Wolcott

Orange County

Bradford
Braintree
Brookfield
Chelsea
Corinth
Fairlee
Newbury
Wells River
Orange
Randolph
Strafford
Thetford
Topsham
Tunbridge
Vershire
Washington
West Fairlee
Williamstown

Orleans County

Albany
Barton
Brownington
Charleston
Coventry
Craftsbury
Derby
Glover
Greensboro
Holland
Irasburg
Jay
Lowell
Morgan
Newport (city)
Newport (town)
Troy
Westfield
Westmore

Rutland County

Benson
Brandon
Castleton
Chittenden
Clarendon
Danby
Fair Haven
Hubbardton
Ira
Killington
Mendon
Middletown Springs
Mount Holly
Mount Tabor
Pawlet
Pittsfield
Pittsford
Poultney (town)
Proctor

Rutland County
(Cont'd)

Rutland town
Rutland City
Shrewsbury
Sudbury
Tinmouth
Wallingford
Wells
West Haven
West Rutland

Washington
County

Barre (City)
Barre (Town)
Berlin
Cabot
Calais
Duxbury
East Montpelier
Fayston
Marshfield
Middlesex
Montpelier
Moretown
Northfield
Plainfield
Roxbury
Waitsfield
Warren
Waterbury
Woodbury
Worcester

Windham County

- Athens
- Brattleboro
- Brookline
- Dover
- Dummerston
- Grafton
- Guilford
- Halifax
- Jamaica
- Londonderry
- Marlboro
- Newfane
- Putney
- Rockingham
- Somerset
- Stratton
- Townshend
- Vernon
- Wardsboro
- Westminster
- Whitingham
- Wilmington
- Windham

Windsor County

- Andover
- Baltimore
- Barnard
- Bethel
- Bridgewater
- Cavendish
- Chester
- Hartford
- Hartland
- Ludlow
- Norwich
- Plymouth
- Pomfret
- Reading
- Rochester
- Royalton
- Sharon
- Springfield
- Stockbridge
- Weathersfield
- West Windsor
- Weston
- Windsor
- Woodstock

Flow Chart Key

