

Alaska Scientific Crime Detection Laboratory

DataMaster Repair Form

Effective: 3/20/2025

Version: 2.0

Instrument #: 100402

Analyst(s): Derek Walton

Start Date: 10/21/25

Reason for Repair

Communication error

Troubleshooting/Repair

Found sample chamber connector at controller board to have one disconnected wire; however, chamber still heated. Existing controller board is not updated and was missing multiple detector connection screws. Replaced controller board. Repaired sample chamber connection to fully seat wire. This resolved the communication error and the sample chamber temperature readout appears as normal. VOC completed normally. Attempted to run subject test; however, the instrument shut off. Turning switch on/off had no effect. Tried replacing power cord with no effect. Observed filter wheel solenoid wire to be very hot with thermal camera. Sparking occurred where the wires met the solenoid. Shut off instrument. Replaced filter wheel solenoid which resolved sparking (previous wires were no longer coated). Ran filter test - zero errors in 9 cycles. 10/22 - Zero filter errors in 25 cycles. Tank change VOC produced Tank interference and blank error. Locking pin is noisy when in locked position. (See next repair page 2).

☒ VOC (attached)

☒ VOC Internal Standard value $\leq 3.00\%$

☒ Verify software version

☐ Non-Drinking Subject Test (attached)

Not completed

☐ Ready for Adjustment

☐ Ready for Calibration

☐ Further Repair Needed

☐ Return to Factory

☐ Proceed to Close Out

End Date: _____

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Approved by: Chemistry Supervisor

100402-2025-10-22-Repair DJW 10/31/2025

Alaska Scientific Crime Detection Laboratory

DataMaster Repair Form

Effective: 3/20/2025

Version: 2.0

Instrument #: 100402

Analyst(s): Derik Walton

Start Date: 10/21/25

Reason for Repair

Communication error

Troubleshooting/Repair

Increased spring tension and adjusted solenoid mounting position to elevate locking pin stroke more. 1 error in 22 cycles. Instrument produced various status messages after this. Unable to complete VOC and thus any further testing. Recommend adjustment.

☒ VOC (attached)

☒ VOC Internal Standard value $\leq 3.00\%$

☒ Verify software version

☒ Non-Drinking Subject Test (attached) NA

☒ Ready for Adjustment

☐ Further Repair Needed

☐ Proceed to Close Out

☐ Ready for Calibration

☐ Return to Factory

End Date: 10/22/25

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Approved by: Chemistry Supervisor

100402-2025-10-22-Repair DJW 10/31/2025

VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100402

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 10/21/2025

External Standard Test Values

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 29.26: 0.078
LOT #: AG335202
EXPIRATION: 12/18/2025
TANK PRESSURE: 302 psi

BLANK TEST	0.000	11:44
INTERNAL STANDARD	✓ VERIFIED	11:44
Xq = 0.078 (2.74%)		
EXTERNAL STANDARD	0.077	11:44
X[1] = 0.0766 (-0.0028) (-0.0016)		
BLANK TEST	0.000	11:45
EXTERNAL STANDARD	0.076	11:45
X[1] = 0.0756 (-0.0030) (-0.0009)		
BLANK TEST	0.000	11:46
EXTERNAL STANDARD	0.076	11:46
X[1] = 0.0757 (-0.0033) (-0.0007)		
BLANK TEST	0.000	11:47
EXTERNAL STANDARD	0.076	11:47
X[1] = 0.0757 (-0.0034) (-0.0005)		
BLANK TEST	0.000	11:48
EXTERNAL STANDARD	0.076	11:48
X[1] = 0.0756 (-0.0039) (-0.0011)		
BLANK TEST	0.000	11:49

Average = 0.0762
Std Dev = 0.0004

Diagnostic Check

VERSIONS

DMT: 3.02 ✓
PIC: 3.02
Modem: 2.6
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.7°C	PASSED
(44.0°C - 52.0°C)	
Breath Tube = 44.2°C	PASSED
(38.0°C - 50.0°C)	

SETTINGS

Lamp Voltage = 1.82 V	PASSED
(1.13 V - 2.63 V)	
Cooler Voltage = 1.89 V	PASSED
(1.12 V - 2.62 V)	
Bias Voltage = 80 V	PASSED
(48 V - 112 V)	
Chopper Freq = 509 Hz	PASSED
(475 Hz - 575 Hz)	
Barometer = 29.2 in	

PUMP INFO

Flow Rate = 4.743 L/M	PASSED
(3.500 L/M - 6.500 L/M)	

DETECTOR INFO

PUMP ON	PASSED
(0.003 V <= 0.010 V)	
PUMP OFF	PASSED
(0.003 V <= 0.010 V)	

FILTER INFO

Filter 1	PASSED
Filter 2	PASSED
Filter 3	PASSED

INTERNAL STANDARD ✓	PASSED
Xq = 0.078 2.51% (0.00% - 4.00%)	

VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100402

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 10/22/2025

External Standard Test Values

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 28.57: 0.076
LOT #: AG335202
EXPIRATION: 12/18/2025
TANK PRESSURE: 278 psi

BLANK TEST	0.000	10:41
INTERNAL STANDARD	VERIFIED	10:41
EXTERNAL STANDARD	0.073	10:42
BLANK TEST	0.000	10:43
EXTERNAL STANDARD	INTERFERENCE	10:43

Blank Error

Diagnostic Check

VERSIONS

DMT: 3.02
PIC: 3.02
Modem: 2.6
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.8°C	PASSED
Breath Tube = 46.7°C	PASSED

PUMP INFO

Flow Rate = 4.514 L/M	PASSED
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DETECTOR INFO

PUMP ON	PASSED
PUMP OFF	PASSED

FILTER INFO

Filter 1	PASSED
Filter 2	PASSED
Filter 3	PASSED

INTERNAL STANDARD

PASSED

VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100402

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 10/22/2025

External Standard Test Values

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 28.51: 0.076
LOT #: AG335202
EXPIRATION: 12/18/2025
TANK PRESSURE: 274 psi

BLANK TEST 0.000 13:01
INTERNAL STANDARD ERROR 13:01

Internal Standard Error

Diagnostic Check

VERSIONS

DMT: 3.02
PIC: 3.02
Modem: 2.6
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.7°C PASSED
Breath Tube = 46.6°C PASSED

PUMP INFO

Flow Rate = 4.566 L/M PASSED

DETECTOR INFO

PUMP ON PASSED
PUMP OFF PASSED

FILTER INFO

Filter 1 PASSED
Filter 2 PASSED
Filter 3 PASSED

INTERNAL STANDARD PASSED

VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100402

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 10/22/2025

External Standard Test Values

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 28.51: 0.076
LOT #: AG335202
EXPIRATION: 12/18/2025
TANK PRESSURE: 273 psi

BLANK TEST	0.000	13:08
INTERNAL STANDARD	VERIFIED	13:08
EXTERNAL STANDARD	0.074	13:08

Detector Overflow

Diagnostic Check

VERSIONS

DMT: 3.02
PIC: 3.02
Modem: 2.6
Questions: 2.2

TEMPERATURES

Sample Chamber = 48.7°C	PASSED
Breath Tube = 45.3°C	PASSED

PUMP INFO

Flow Rate = 4.526 L/M	PASSED
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DETECTOR INFO

PUMP ON	PASSED
PUMP OFF	PASSED

FILTER INFO

Filter 1	PASSED
Filter 2	PASSED
Filter 3	PASSED

INTERNAL STANDARD	PASSED
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VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100402

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 10/22/2025

External Standard Test Values

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 28.52: 0.076
LOT #: AG335202
EXPIRATION: 12/18/2025
TANK PRESSURE: 270 psi

BLANK TEST 0.000 13:24
INTERNAL STANDARD VERIFIED 13:24
Xq = 0.078 (3.31%)
EXTERNAL STANDARD 0.074 13:25
X[1] = 0.0740 (-0.0020) (0.0014)
BLANK TEST 0.000 13:26
EXTERNAL STANDARD 0.074 13:26
X[1] = 0.0740 (-0.0021) (0.0010)

Detector Overflow

Diagnostic Check

VERSIONS

DMT: 3.02 ✓
PIC: 3.02
Modem: 2.6
Questions: 2.2

TEMPERATURES

Sample Chamber = 49.8°C PASSED
(44.0°C - 52.0°C)
Breath Tube = 45.2°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.82 V PASSED
(1.13 V - 2.63 V)
Cooler Voltage = 1.84 V PASSED
(1.12 V - 2.62 V)
Bias Voltage = 80 V PASSED
(48 V - 112 V)
Chopper Freq = 525 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 28.5 in

PUMP INFO

Flow Rate = 4.699 L/M PASSED
(3.500 L/M - 6.500 L/M)

DETECTOR INFO

PUMP ON PASSED
(0.003 V <= 0.010 V)
PUMP OFF PASSED
(0.003 V <= 0.010 V)

FILTER INFO

Filter 1 PASSED
Filter 2 PASSED
Filter 3 PASSED

INTERNAL STANDARD

Xq = 0.078 3.31% (0.00% - 4.00%) PASSED