

Alaska Scientific Crime Detection Laboratory

DataMaster Evaluation Form

Issued: 05/15/2020
Effective: 05/15/2020

Version: DMEF 2020 R0
Status: Active

Instrument # 100359

Start Date: 09/15/20

Analysts: Dereen Walton

Reason for instrument evaluation

DMW 08/10/20
Failed pump on ~~during~~ ^{during} diagnostic and VOC

Visual Inspection

- Clean
- Cermetex Box is secure
- Gas Valve upright or secured to wall
- O-ring inspection and ensure 2 O-rings in replacement bag
- Replace missing screws
- Ensure modem cable present
- All tubing and connections are secure

Troubleshooting/Repair

Adjusted lamp and cooler voltages. Detector voltage is fluctuating somewhat. Filter wheel locking mechanism may be sticking.
Ran filter test - completed 12 cycles with no errors.

Ran an additional 51 cycles with no errors.

Still producing pump on/off errors - replaced pump. This did not resolve the issue. Also produced Detector overflow.

Replaced detector. Adjusted lamp and cooler voltages.

- VOC (attached)
- Internal Standard value $\leq 3.00\%$ *Internal Std $> 3.00\%$ DMW 12/17/20*
- Verify software version

- Return to Factory for Repair
- Ready for Certification
- Ready for Calibration
- Proceed to Close Out

End Date: 12/17/20

VERIFICATION OF CALIBRATION REPORT

of DataMaster dmt Breath Test Instrument

State of Alaska

Serial #: 100359

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 09/16/2020

External Standard Test Values

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 29.74: 0.080
LOT #: AG923401
EXPIRATION: 08/22/2021
TANK PRESSURE: 1216 psi

BLANK TEST	0.000	15:41
INTERNAL STANDARD	VERIFIED	15:41
EXTERNAL STANDARD	INTERFERENCE	15:41

Interference Detected

Diagnostic Check

VERSIONS

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

TEMPERATURES

Sample Chamber = 49.1°C	PASSED
Breath Tube = 44.7°C	PASSED

PUMP INFO

Flow Rate = 4.532 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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External Standard Test Values

Diagnostic Check

VERSIONS

DMT: 3.02

PIC: 3.02

Modem: 2.6

Questions: 2.2

TEMPERATURES

Sample Chamber = 48.7°C

PASSED

Breath Tube = 43.3°C

PASSED

PUMP INFO

Flow Rate = 4.563 L/M

PASSED

DETECTOR INFO

PUMP ON

FAILED

PUMP OFF

PASSED

FILTER INFO

Filter 1

PASSED

Filter 2

PASSED

Filter 3

PASSED

INTERNAL STANDARD

PASSED

Diagnostic Check Failed

VERIFICATION OF CALIBRATION REPORT

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State of Alaska

Serial #: 100359

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 12/15/2020

External Standard Test Values

EXTERNAL STANDARD INFORMATION

NOMINAL: 0.080
TARGET AT 29.22: 0.078
LOT #: AG923401
EXPIRATION: 08/22/2021
TANK PRESSURE: 1081 psi

BLANK TEST	0.000	15:49
INTERNAL STANDARD	VERIFIED	15:50
EXTERNAL STANDARD	0.077	15:50

Detector Overflow

Diagnostic Check

VERSIONS

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

TEMPERATURES

Sample Chamber = 48.9°C	PASSED
Breath Tube = 43.9°C	PASSED

PUMP INFO

Flow Rate = 4.268 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

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State of Alaska

Serial #: 100359

Scientific Crime Detection Laboratory - Statewide Breath Alcohol Program

Date: 12/17/2020

External Standard Test Values

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 = 40.4°C PASSED
(38.0°C - 50.0°C)

SETTINGS

Lamp Voltage = 1.71 V PASSED
(0.90 V - 2.10 V)
Cooler Voltage = 1.58 V PASSED
(0.89 V - 2.07 V)
Bias Voltage = 80 V PASSED
(48 V - 112 V)
Chopper Freq = 525 Hz PASSED
(475 Hz - 575 Hz)
Barometer = 29.0 in

PUMP INFO

Flow Rate = 4.292 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
(0.002 V <= 0.010 V)

FILTER INFO

Filter 1 PASSED
Filter 2 PASSED
Filter 3 PASSED

INTERNAL STANDARD

Xq = 0.082 19.15% (0.00% - 4.00%) FAILED

Diagnostic Check Failed