

From:
Trace Analytics, LLC
15768 Hamilton Pool Road
Austin, Texas 78738

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To:
Mr. Mike Cotrone
5 Lake Bluff Court
Greensboro, NC 27410

TRACE ANALYTICS, LLC ANALYSIS CERTIFICATE



Report 12-05000, Sampled on

2/4/2012

Sample Listed As Verification; Due Date

Unspecified

MIKE COTRONE

IS IN COMPLIANCE WITH THE AIR/GAS QUALITY PORTION OF THE SPECIFICATION:

CGA G-7.1-2004 GRADE E

AS ANALYZED AND REPORTED ON THIS CERTIFICATE

FOR THE SAMPLE DESCRIBED UNDER SECTION "SAMPLE & REPORT INFORMATION"



American Assn for Laboratory Accreditation
1991: Certificate No. 322.01 Chemical Field of Testing

R.A. Smith
Richard A. Smith, C.I.H., Laboratory Director

| Analytical Test Methods | Media Sampled | Estimate of Uncertainty |
|--|-----------------------|--|
| Gases & Vapors CAT-A-01 Gas Chromatography/Mass Spectrometry | Source Bottle: 732855 | The average analytical uncertainty (k=2) is 98.8±2.4% (relative) at the specification limit for the ten compounds normally reported. For uncertainty information for a specific compound, contact Trace. |
| Oil & Particulate CAT-A-03 Analytical Gravimetry | Ambient Bottle: N/A | |
| Particle Size CAT-A-04 Optical Microscopy | Source Filter: 147174 | |

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Sample & Report Information

Results of Test: PASS

| Sampled For | Mike Cotrone | Analytes | Source Results | Ambient Results | Specification ¹ Allowable Limits |
|-------------------|-------------------------------|---|----------------|-----------------|---|
| Sampled By | Michael Cotrone | Oxygen, Volume % | 21.1 | N/A | 20-22 |
| Sampled On | 2/4/2012 | Nitrogen, Volume % | 78.0 | N/A | N/A |
| Received On | 2/27/2012 | Argon, Volume % | 0.9 | N/A | N/A |
| Analyzed On | 2/27/2012 | Nitrogen Plus Argon, Volume % | 78.9 | N/A | N/A |
| Sampled From: | Compressor | Carbon Monoxide (CO), ppmv | <0.3 | N/A | 10 |
| | | Carbon Dioxide (CO ₂), ppmv | 202 | N/A | 1000 |
| Make: | Nuair | Water Content (H ₂ O), ppmv/Dewpoint, °F | <3.4 / <-91 | N/A | 24 / -65 (W) |
| Model: | MCH 13 Minitech | Atmospheric Dew Point, °F (DT) | N/A | N/A | N/A |
| Serial No.: | 18769-0311-3688 | TVHC (including CH ₄), ppmv | 2.3 | N/A | 25 |
| Cylinder(s): | 220/60hz/22.5 Amp | Methane (CH ₄) ppmv | 2.3 | N/A | N/A |
| Other ID: | 5.5 HP Electric Motor | TVHC (excluding CH ₄), ppmv | <0.7 | N/A | N/A |
| Hours: | 3.5 | Oil (condensed) & Particulate, mg/m ³ | <0.02 | N/A | 5 |
| Customer Comments | 1st Sample OCA Hyperfilter | Odor (provided by customer) | None/Slight | N/A | None/Slight |
| | | Other | N/A | N/A | N/A |
| | | Other | N/A | N/A | N/A |
| | | Other | N/A | N/A | N/A |

(W) Dew point is expressed in °F at one atmosphere pressure absolute.

Report Number 12-05000

Customer ID 26344

Date Reported 2/28/2012

Frequency Verification

Next Sample Due Approx. Unspecified

PASS



Trace Analytics, LLC

15768 Hamilton Pool Road
Austin, Texas 78738
800-AIR-1024 or 512-263-0000 • Fax: 512-263-0002
E-mail: ServiceTeam@AirCheckLab.com

Routine AirCheck✓ DataSheet™

Last Report No.: 12-05000

Last Sample Date: 2/4/2012

SOME INFORMATION BELOW IS PREPRINTED FROM YOUR PREVIOUS AIR TEST.

IF ANY OF THE INFORMATION HAS CHANGED OR IS INCORRECT, PLEASE MARK ONE LINE THROUGH IT AND CAREFULLY PRINT THE CORRECT INFORMATION.

1 Contact Information

| | | | | | | | |
|--|------------------|---------------|------------------------|---------|----------------|-----|----------------|
| Customer ID | 26344 | Customer Name | Mike Cotrone | Country | USA | | |
| Contact | Mr. Mike Cotrone | E-mail | mikec@confianceinc.com | Phone | (336) 908-0605 | Fax | (336) 389-4508 |
| Alternate | Ms. Sara Cotrone | E-mail | saracotrone@gmail.com | Phone | (336) 908-5985 | Fax | (336) 389-4508 |
| <input type="checkbox"/> Please check box to the left if you'd like the AirCheck✓ Report sent to the person below (fill in information). | | | | | | | |
| Contact | | E-mail | | | | | |

2 Rush Analysis Request

IMPORTANT: PLEASE CALL 1-800-247-1024 (ext. 2) or 1-512-263-0000 (ext. 2) TO SCHEDULE

RUSH ☐ By marking this box, I understand that I am authorizing Same Day Analysis & Reporting for an additional \$100 per sample. Initial here:

3 Purchase Order Information (if applicable)

5 Customer Comments (use back if needed)

PO Number: PO Valid Thru:

4 System Information

6 Sampled By and Sample Date

| | |
|--|---|
| System ID: | 119237 |
| Sampled For: | Mike Cotrone |
| Testing Schedule: | <input type="radio"/> 45 Days <input type="radio"/> Monthly <input type="radio"/> Semi-Annual <input type="radio"/> 120 Days <input type="radio"/> Other <input type="radio"/> Startup <input type="radio"/> Annual <input type="radio"/> Quarterly <input checked="" type="radio"/> Verification <input type="radio"/> Bimonthly <input type="radio"/> Random Sample <input type="radio"/> Weekly |
| Air Spec: | IANTD Oxygen Compatible Air-2003(I) |
| If above is incorrect, indicate air spec below: <input type="radio"/> OSHA 1910.134-Cylinders <input type="radio"/> OSHA 1910.134-Compressor <input type="radio"/> OSHA 1910.430-Com. Diving <input type="radio"/> Fire - NFPA 1989 <input type="radio"/> CGA Grade D-SCBA <input type="radio"/> CGA Grade D2-not SCBA <input type="radio"/> Sport Diving - CGA Grade E <input type="radio"/> Other _____ <input type="radio"/> CSA(>2216 psig) <input type="radio"/> CSA(15-2216 psig) <input type="radio"/> CSA<15 psig | |
| Make: | Nuvair |
| Model: | MCH 13 Minitech |
| Serial No: | 18769-0311-3688 |
| Cylinder: | 220/60hz/22.5 Amp |
| Other ID: | 5.5 HP Electric Motor |
| Pressure: | <input checked="" type="radio"/> High Pressure (1,000-6,000 psi) <input type="radio"/> Low Pressure (less than 1,000 psi) |
| Air used for: | <input type="checkbox"/> SCBA <input type="checkbox"/> Airline Respirator <input checked="" type="checkbox"/> SCUBA <input type="checkbox"/> Other |
| Purification: | <input type="checkbox"/> Molecular Sieve/Desiccant <input type="checkbox"/> No Purification <input type="checkbox"/> Refrigerated Dryer <input type="checkbox"/> Unknown <input type="checkbox"/> No Dryer |
| Sampled From: | <input type="radio"/> Compressor <input type="radio"/> Source <input type="radio"/> Other <input type="radio"/> Stored Air <input type="radio"/> Outlet <input type="radio"/> Not Provided <input type="radio"/> Comp. & Storage <input type="radio"/> Breather Box |
| Comp. Hours: | |

(Lowest temp, low pressure breathing air may be exposed to during the year)

Lowest Temp: °F °C

NFPA 1989 Only: ☐ Before Filter Change ☐ After Filter Change ☐ Routine

SIGNATURE _____ PRINT Name (Person taking the test sample) _____
Date Sample Taken
MONTH DAY YEAR

Submission of this air sample authorizes Trace Analytics, LLC to provide services. If a purchase order number is required by your company, please attach it to this data sheet or write it in the spaces provided in section "3". I attest that all information provided on this datasheet is truthful and accurate to the best of my knowledge.

7 Sample Information

Is this sample a Retest taken within 30 days of a failed test? ☐ Yes ☐ No

A Source Bottle, Filter, and Data Sheet MUST BE RETURNED for a complete analysis.

| | | | | | | |
|------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|
| Filter Number (red or green label) | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | |
| Flowrate (liters per minute) | <input type="text"/> | | | | | |
| Sample Time (minimum of 10 min.) | <input type="text"/> | | | | | |

Detector Tube (OMIT data if sampling media does not include Detector Tube)

| | | | |
|-------------------------------------|----------------------|-----------------------|----------------------|
| Tube Reading (0 - 200) | <input type="text"/> | Total Minutes Sampled | <input type="text"/> |
| Source Bottle Number (blue label) | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Ambient Bottle Number (white label) | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Odor is REQUIRED. It's determined by sniffing the air from the side port of the Bottle Holder. **MARK ONLY ONE.** ☐ None/Slight ☐ Pronounced

PLEASE NOTE:

Sample Shelf Life

Once a sample is taken, it must be received by our laboratory within 60 days. **NO EXCEPTIONS.**

Shelf Life

Sampling media must be used or returned for free replacement within 2 years of shipment date. See expiration date on return box.

— For TRACE Use Only - CPPDS

DT Reading: Red / Gray

Receiving I.D.

Receiver's Initials

We Do One Thing - Test Compressed Air

www.AirCheckLab.com

Next Sample Due Approx: Unspecified

Sampling Notes for Water Vapor Detector Tube


1: Break BOTH tips of detector tube before inserting. Arrow on tube points away from Fitting. 50 LPM for 10 minutes.

2: The DT is filled with yellow filler material that reacts to the presence of water by changing color from yellow to a grayish/reddish brown. At any time during the 10 minute test if color change reaches 200 mark, remove tube and note elapsed time on data sheet.

Reading the Detector Tube for High Pressure Air Used for SCBA

The purpose of providing a detector tube for onsite testing is to allow you the opportunity to correct a problem without having to wait for the complete report. To determine if your sample passes; identify the farthest color change on the tube between 0 and 200; locate that number on chart below; identify the flowrate you took your sample on the left hand side of chart between 40 and 60; where the two readings intersect is the approximate result in °F. For example: If tube showed color change to 50, and flowrate was 50 LPM, the result would be -49°F. The number between 0 and 200 should be written on the data sheet not the dew point from the chart below.



|  Flowrate Reading | Det. Tube Reading, mg/m ³ | 2.5 | 5 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | 175 | 200 |
|--|--------------------------------------|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 60 | -93 | -84 | -75 | -66 | -60 | -56 | -52 | -49 | -47 | -45 | -43 | -42 | -38 | -33 | -31 |
| | 55 | -92 | -83 | -74 | -65 | -58 | -54 | -51 | -48 | -45 | -44 | -42 | -40 | -36 | -31 | -29 |
| | 50 | -90 | -81 | -72 | -62 | -56 | -52 | -49 | -46 | -44 | -42 | -40 | -38 | -34 | -29 | -27 |
| | 45 | -88 | -79 | -70 | -60 | -54 | -50 | -47 | -44 | -41 | -39 | -38 | -36 | -32 | -26 | -24 |
| | 40 | -86 | -77 | -68 | -58 | -52 | -47 | -44 | -41 | -39 | -36 | -35 | -33 | -29 | -23 | -21 |
| | | PASS | | | | FAIL | | | | | | | | | | |

Above area marked "Pass" is for high pressure air used for SCBA; with a -65°F limit per CGA Grade D/NFPA 1989. See AirCheck Notebook Instructions for complete range of flowrates and further details.

If your detector tube reading indicates that you have a problem (anything outside of the PASS area in chart above); go through the following checklist; take corrective action; then retake your sample to see if the problem has been corrected. The 2nd test is free. Submit both samples for analysis to Trace's laboratory.

Troubleshooting Checklist

| | |
|---|--|
| Purification filters/ Depressurized filters | High ambient air temperatures (above 70°F) affect the operating life of the cartridge. Chemicals used in purification filters begin to degrade as soon as they are installed. Is it time to change the filters? |
| Manual/auto drain or priority valve | If not working properly can be source for excess water and reduce filter life. |
| Remote fill or hose reel | Long lengths (>25 ft) of hose are notorious for accumulating and retaining water. A short 1-2 minute purge WILL NOT be sufficient. It is best to take sample from a short fill hose (5-10 ft) or directly from containment fill station. - View our resource videos at www.AirCheckLab.com |
| Recent hydrostat | Bottles must be properly dried after hydrostat and should be immediately pressurized with dry air. |
| Valves left open | Ambient air can easily have 10,000 - 50,000 ppm of water. Purge sufficiently to remove water accumulated from ambient air. |
| Sample taken from storage | Take sample from compressor to identify if compressor is producing dry air. If yes, storage banks may contain excess water. Drain and refill with dry air. This may require 2-3 fills to drive off water from inside cylinders. You can request extra detector tubes (\$10 ea) to do several checks for water without doing a complete air sample. |
| Detector tube cracked | Only the tips of the tube should be broken. If a crack runs down the main body of the tube, results will not be dependable. |
| Tube fitting wet | If multiple samples are taken consecutively, excess water may pool inside the fitting. Dry fitting between uses. |
| Other | Keep in mind that 1 milliliter (which is about 20 drops from an eyedropper) in a 1.7 cubic ft cylinder at 4500 psig would be 90 ppm of water vapor. It doesn't take much to fail. |