Aircheck Report and Certificate

From:
Trace Analytics, LLC
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To:
Total Diving
6356 Sherbrooke West
Montreal, QC H4B 1M9
CANADA

TRACE Analytics LLC Analysis Certificate

Report 16-07993, Sampled on
3/17/2016

Next Sample Due Quarterly, Approximately
6/17/2016

Total Diving

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

CSA Standard Z275.2-2011 Occupational Safety Code for Diving Operations (H)

AS ANALYZED AND REPORTED ON THIS CERTIFICATE

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

A2LA ACCREDITED
American Assn for Laboratory Accreditation
1991: Certificate No. 322.01 Chemical Field of Testing

Richard A. Smith, Laboratory Director

Analytical Test Methods			Media Sampled		Estimate of Uncertainty
Gases & Vapors	CAT-A-01	Gas Chromatography/Mass Spectrometry	Source Bottle:	772085	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:	432922	
Particle Size	CAT-A-04	Optical Microscopy	Source Filter:	3656	

Sample & Report Information

Sampled For	Total Diving
Sampled By	Sebastien Savignac
Sampled On	3/17/2016
Received On	3/21/2016
Analyzed On	3/21/2016
Sampled From	Stored Air
Make	Jordair
Model	K15-3EV
Serial No.	82/23/6/01
Cylinder(s)	4
Customer Comments	
Report Number	16-07993
Customer ID	2292
Date Reported	3/22/2016
Frequency	Quarterly
Next Sample Due Approx.	**6/17/2016**

Results of Test: PASS

Analytes	*Source Results*	*Ambient Results*	Specification[1] Allowable Limits
Oxygen, Volume %	20.9	20.9	20-22
Nitrogen, Volume %	78.2	78.3	N/A
Argon, Volume %	0.9	0.8	N/A
Nitrogen Plus Argon, Volume %	79.1	N/A	78-80
Carbon Monoxide (CO), ppmv	<0.3	<0.3	3
Carbon Dioxide (CO_2), ppmv	419	375	600
Water Content (H_2O), ppmv/Dewpoint, °F	<3.4 / <-91	N/A	27 / -63 (W)
Atmospheric Dew Point, °F (DT)	-86	N/A	N/A
TVHC (including CH_4), ppmv	2.3	8.2	15
Methane (CH_4) ppmv	2.3	2.5	10
TVHC (excluding CH_4), ppmv	<0.7	5.7	5
Oil (condensed) & Particulate, mg/m^3	0.06	N/A	0.1
Odor (provided by customer)	None/Slight	N/A	None/Slight
Halogenated Hydrocarbons, ppmv	<0.1	N/A	5
Atmospheric Dewpoint, °C	<-68	N/A	-53
Pressure Dewpoint, °C	-53	N/A	-5

PASS

(H) Compressed breathing air in cylinders and piping ≥ 15.3 MPa (2216 psig) shall have an atmospheric dew point ≤-53°C (-63°F) or water vapor ≤ 27 mL/m^3 (ppm) and SHOULD have a pressure dew point ≤ 5°C (9°F) below the lowest temperature to which the cylinder or piping can be exposed during any time of the year at that geographic location. If an operating pressure is not provided, we will use 20.7 MPag (3000 psig) with the Greenspan water vapour enhancement factor applied.

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

(DT) Dew point is calculated at 1 atmosphere pressure (14.7 psia) from the detector tube reading.