



SEA-BIRD ELECTRONICS, INC.

13431 NE 20th St. Bellevue, Washington 98005 USA

Phone: (425) 643-9866 Fax: (425) 643-9954 www.seabird.com

Service

Report

RMA Number

78419

Customer Information:

Company The University of Hawaii

Date 4/3/2014

Contact Sarah Searson

PO Number CONTACT LEAH

Serial Number 43F0221

Model Number SBE 43F

Services Requested:

1. Evaluate/Repair Instrumentation.
2. Perform Routine Calibration Service.

Problems Found:

Services Performed:

1. Performed initial diagnostic evaluation.
2. Performed "Post Cruise" calibration of the oxygen sensor.
3. Performed full diagnostic evaluation.

Special Notes:

Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, WA 98005-2010 USA

Phone: (+1) 425-643-9866 Fax (+1) 425-643-9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 0221
CALIBRATION DATE: 01-Mar-14

SBE 43F OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 2.5603e-004 (DI)
Foffset = -828.84
Tau20 = 1.04

A = -4.1386e-003
B = 2.5344e-004
C = -3.8519e-006
E nominal = 0.036

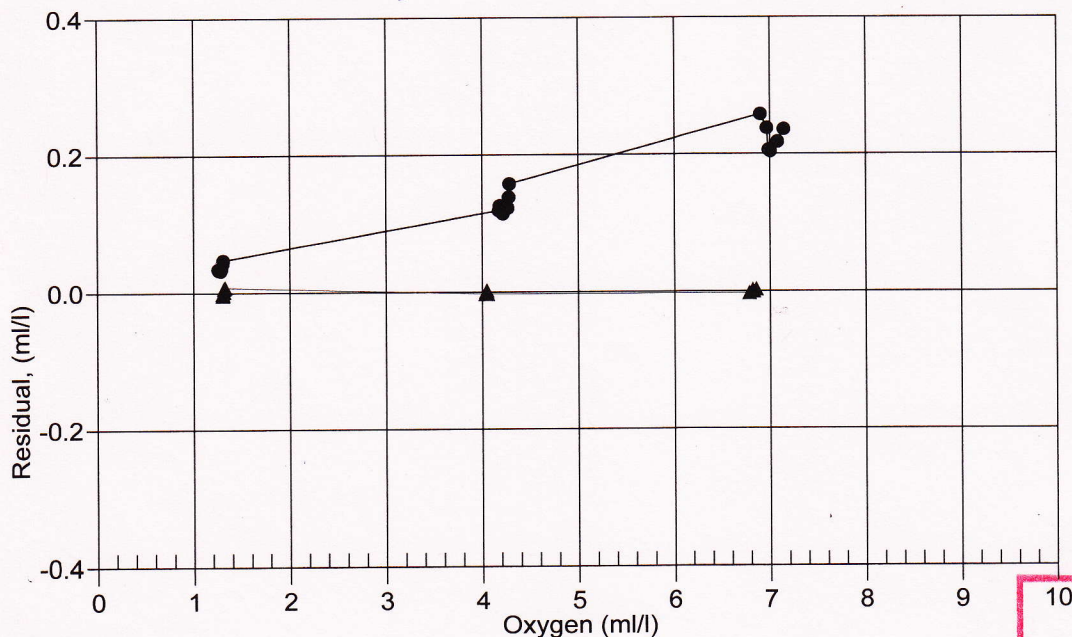
NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4 H1 = -3.30000e-2
D2 = -4.64803e-2 H2 = 5.00000e+3
H3 = 1.45000e+3

BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(Hz)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.30	2.00	0.00	1355.29	1.29	-0.00
1.30	12.00	0.00	1515.13	1.30	-0.00
1.30	6.00	0.00	1421.36	1.30	-0.00
1.31	20.00	0.00	1643.91	1.31	0.00
1.31	26.00	0.00	1737.81	1.32	0.01
1.33	30.00	0.00	1813.00	1.33	0.01
4.03	6.00	0.00	2666.63	4.03	-0.00
4.04	12.00	0.00	2965.87	4.04	0.00
4.05	26.00	0.00	3624.39	4.05	0.00
4.05	30.00	0.00	3820.23	4.05	0.00
4.05	2.00	0.00	2474.23	4.05	-0.00
4.05	20.00	0.00	3346.43	4.05	-0.00
6.78	26.00	0.00	5509.48	6.78	-0.00
6.79	30.00	0.00	5838.81	6.78	-0.00
6.82	20.00	0.00	5068.36	6.82	0.00
6.83	2.00	0.00	3604.86	6.83	0.00
6.83	12.00	0.00	4435.58	6.83	-0.00
6.85	6.00	0.00	3954.25	6.85	0.00

Oxygen (ml/l) = Soc * (F + Foffset) * (1.0 + A * T + B * T² + C * T³) * OxSol(T,S) * exp(E * P / K)
 F = frequency output from SBE43F, T = temperature [deg C], S = salinity [PSU] K = temperature [deg K]
 OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar]
 Residual = instrument oxygen - bath oxygen

Date, Delta Ox (ml/l)



**POST CRUISE
CALIBRATION**