



Sea-Bird Electronics, Inc.
 13431 NE 20th Street
 Bellevue, WA 98005 United States

Phone
 Fax

+1-425-643-9866
 +1-425-643-9954
 www.seabird.com

Service Request
Date
Sales Order

1005506314
 25-FEB-2019

SERVICE REPORT

CUSTOMER INFORMATION

Name: ATLANTIC MARINE CENTER
 Account : 40280367

PO Number:
 EA-133M-15-CQ-0039 /
 1305M218FNMAN0066

STEVEN EYKELHOFF
 Chiefst.sette@noaa.gov
 808-306-9456

Bill To Address

439 WEST YORK STREET;NOAA/Marine Operations Center -
 Atlantic;
 NORFOLK,VA,23510,US

Ship To Address

NOAA Ship Oscar Elton Sette;1897 Ranger Loop;
 Honolulu,HI,96818,US

PRODUCT INFORMATION

Item: 21.LEGACY
Item Description: (LEGACY) SBE 21 Thermosalinograph
Serial: 2128586-3168

Special Notes

Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

Problems Found:

The conductivity cell was found to have been broken.

Services Performed:

Performed initial diagnostic evaluation.
 Performed "POST" cruise calibration.
 Replaced the conductivity cell.
 Replaced the O-rings.
 Performed a hydrostatic pressure test.
 Performed a "Final" Calibration.

Item	Item Description	Qty
SERVICE21	Complete External Inspection. Test All Functions. Calibrate C & T, C&P and recal if necessary. Replace end cap O-rings and Hydrostatic pressure test if necessary. Includes typical repairs. (Does not include: Major electronic board replacement. Instruments deemed "Damaged Beyond Repair". Missing/damaged mounts or cables. Upgrades or modifications. Spares or antifoulant replacement.)	1

Unbilled Items

Item	Item Description	Qty
233540	AF24173 ANTI-FOULANT CAP, NO BARB, BLACK	1



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233564	ANTIFOUL HOLDER, EXT IN-LINE, BLACK ACETAL	1
80888	TITANIUM SEACAT CELL ASSEMBLY, VERSION 2	1



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PRODUCT INFORMATION

Item: 04C.LEGACY
Item Description: (LEGACY) SBE 04C Conductivity Sensor
Serial: 043461

Special Notes

Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

No problems found.

Services Performed:
 Performed initial diagnostic evaluation.
 Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_4C	SBE 4C Conductivity Calibration for CTD sensors (includes 6-point 35 PSU post deployment cal., and C&P with 6-point 35 PSU re-cal, if necessary)	1

Unbilled Items

Item	Item Description	Qty



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PRODUCT INFORMATION

Item: 03P.LEGACY
Item Description: (LEGACY) SBE 03Plus Temperature Sensor
Serial: 03P2779

Special Notes

Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

No problems found.

Services Performed:
 Performed initial diagnostic evaluation.
 Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_3	SBE 3 Temperature sensor calibration; 11 points -1 to 31deg.C	1

Unbilled Items

Item	Item Description	Qty



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PRODUCT INFORMATION

Item: 03F.LEGACY
Item Description: (LEGACY) SBE 03F Temperature Sensor
Serial: 031556

Special Notes
 Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

No problems found.

Services Performed:
 Performed initial diagnostic evaluation.
 Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_3	SBE 3 Temperature sensor calibration; 11 points -1 to 31deg.C	1

Unbilled Items

Item	Item Description	Qty



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PRODUCT INFORMATION

Item: 04C.LEGACY
Item Description: (LEGACY) SBE 04C Conductivity Sensor
Serial: 042326

Special Notes
 Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

No problems found.

Services Performed:
 Performed initial diagnostic evaluation.
 Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_4C	SBE 4C Conductivity Calibration for CTD sensors (includes 6-point 35 PSU post deployment cal., and C&P with 6-point 35 PSU re-cal, if necessary)	1

Unbilled Items

Item	Item Description	Qty



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PRODUCT INFORMATION

Item: 38.LEGACY
Item Description: (LEGACY) SBE 38 Digital Temperature Sensor
Serial: 3841589-0266

Special Notes
 Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

No problems found.

Services Performed:
 Performed initial diagnostic evaluation.
 Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_38	SBE 38 temperature sensor calibration	1

Unbilled Items

Item	Item Description	Qty



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PRODUCT INFORMATION

Item: 45.LEGACY
Item Description: (LEGACY) SBE 45 Micro TSG
Serial: 4554924-0290

Special Notes

Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

Problems Found:

The conductivity cell output is displaying unacceptable drift. Recommend replacement.

Services Performed:

Performed initial diagnostic evaluation.
 Performed "POST" cruise calibration.
 Replaced the conductivity cell.
 Replaced the O-rings.
 Performed a "Final" Calibration.

Item	Item Description	Qty
SERVICE45	Complete External Inspection. Test All Functions. Calibrate C & T, C&P and recal if necessary. Replace end cap O-rings and Hydrostatic pressure test if necessary. Includes typical repairs. (Does not include: Major electronic board replacement. Instruments deemed "Damaged Beyond Repair". Missing/damaged mounts or cables. Upgrades or modifications. Spares or antifoulant replacement.)	1

Unbilled Items

Item	Item Description	Qty
801066.004	SBE41 ALACE CONDUCTIVITY CELL ASSEMBLY	1



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PRODUCT INFORMATION

Item: 09P.LEGACY
Item Description: (LEGACY) SBE 09Plus CTD
Serial: 09P13710-0414

Special Notes

Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

Problems Found:
 The power supply was found to be internally shorted.

Services Performed:
 Performed initial diagnostic evaluation.
 Replaced power supply.
 Performed pressure calibration.
 Replaced the O-rings.
 Performed a hydrostatic pressure test.
 Installed NEW anode(s)
 Performed complete system check and full diagnostic evaluation.

Item	Item Description	Qty
22109	POWER MODULE, TML 40115, 90-264VAC IN, 15VDC	1
CONCERT9B	Confirm and recertify SBE 9plus. Includes opening main housing, replacing end cap "piston" o-rings and making minor internal repairs or modifications. Complete external inspection. Test all functions and input channel responses. Replace anodes if necessary. Cross-check pressure sensor (room temperature comparison to SBE reference Digiquartz giving new slope/offset coefficients). Hydrostatic pressure test and water bath check following closure. Cost of sensor calibrations, major repairs or modifications is extra.	1

Unbilled Items

Item	Item Description	Qty
30044	SEACAT ANODE, 1" DIA., G1050	3



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PRODUCT INFORMATION

Item: 09P.LEGACY
Item Description: (LEGACY) SBE 09Plus CTD
Serial: 91660

Special Notes

Services Requested:
 Evaluate/Repair Instrumentation.
 Perform Routine Calibration Service.

Services Performed:
 Performed initial diagnostic evaluation.
 Performed pressure calibration.
 Installed NEW anode(s)
 Performed complete system check and full diagnostic evaluation.

Item	Item Description	Qty
CONCERT9A	Confirm and recertify SBE 9plus. Complete external inspection. Test all functions and input channel responses. Replace anodes if necessary. Cross-check pressure sensor (room temperature comparison to SBE reference Digiquartz giving new slope/offset coefficients.) Cost of sensor calibrations, major repairs or modifications is extra.	1

Unbilled Items

Item	Item Description	Qty
50029	PRESSURE SENSOR CAPILLARY ASSEMBLY, SPARE	1
30044	SEACAT ANODE, 1" DIA., G1050	3