

**SEA-BIRD ELECTRONICS, INC.**

13431 NE 20th Street
Bellevue, Washington 98005 USA

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

SERVICE REPORT

Service Request 1005501085
Date 21-FEB-2017

CUSTOMER INFORMATION

Name: ATLANTIC MARINE CENTER
Account : 40280367
RICH HOLLEY
RICHARD.N.HOLLEY@NOAA.GOV
757 441 6424

PO Number:
EA-133M-15-CQ-0039.D0038

Bill To Address

439 WEST YORK STREET;
NORFOLK,VA,23510,US

Ship To Address

1050 REGISTER ST.;C/O NOAA PORT OFFICE;ATTN;;
NORTH CHARLESTON,SC,29405,US

PRODUCT INFORMATION

Item: 03P.LEGACY

Item Description: (LEGACY) SBE 03Plus Temperature Sensor

Serial: 03P4925

Special Notes

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

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

Item	Item Description	Qty
CAL_3	SBE 3 TEMPERATURE SENSOR CALIBRATION; 11 POINTS -1 TO 31DEG.C (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT

Service Request
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PRODUCT INFORMATION

Item: 43.LEGACY

Item Description: (LEGACY) SBE 43 Oxygen Sensor

Serial: 430684

Special Notes

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_43	SBE 43 DISSOLVED OXYGEN SENSOR CALIBRATION (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT**Service Request****1005501085****Date**

21-FEB-2017

PRODUCT INFORMATION**Item:** 43.LEGACY**Item Description:** (LEGACY) SBE 43 Oxygen Sensor**Serial:** 430702**Special Notes**

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Problems Found:

The SBE 43 Anode Assembly was found to have failed.

Services Performed:

Perform initial diagnostic evaluation.

Replaced the SBE 43 Anode sub assembly.

Replaced the lid and membrane assembly (0.5 mil).

Replaced the electrolyte with new fluid.

Performed a "Final" Calibration.

Item	Item Description	Qty
CAL_43	SBE 43 DISSOLVED OXYGEN SENSOR CALIBRATION (FRRF)	1

Unbilled Items

Item	Item Description	Qty
801686	SBE43 SPAR SUB-ASSEMBLY, VERSION 4	1
41099T	TESTED SBE43 OXYGEN INTERFACE /DWG 41099K	1
801230	SBE43 ANODE SUB-ASSEMBLY / DWG 41092	1

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SERVICE REPORT

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PRODUCT INFORMATION

Item: 05T.LEGACY

Item Description: (LEGACY) SBE 5T Submersible Pump

Serial: 053671

Special Notes

Services Requested:
Evaluate/Repair Instrumentation.

Services Performed:
Perform initial diagnostic evaluation.
Replaced the O-rings.
Performed a hydrostatic pressure test.

Item	Item Description	Qty
BASERV/P	BASE SERVICE CHARGE FOR PUMP, COVERS HANDLING & INSPECTION, REPLACING THRUST WASHERS AND O-RINGS, AND IS ADDED TO OTHER (FRRF)	1

Unbilled Items

Item	Item Description	Qty



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SERVICE REPORT

Service Request 1005501085
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PRODUCT INFORMATION

Item: 05T.LEGACY
Item Description: (LEGACY) SBE 5T Submersible Pump
Serial: 054784

Special Notes

Services Requested:
Evaluate/Repair Instrumentation.

Services Performed:
Perform initial diagnostic evaluation.
Replaced the O-rings.
Performed a hydrostatic pressure test.

Item	Item Description	Qty
BASERV/P	BASE SERVICE CHARGE FOR PUMP, COVERS HANDLING & INSPECTION, REPLACING THRUST WASHERS AND O-RINGS, AND IS ADDED TO OTHER (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT**Service Request****1005501085****Date**

21-FEB-2017

PRODUCT INFORMATION**Item:** 03P.LEGACY**Item Description:** (LEGACY) SBE 03Plus Temperature Sensor**Serial:** 03P4175**Special Notes**

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_3	SBE 3 TEMPERATURE SENSOR CALIBRATION; 11 POINTS -1 TO 31DEG.C (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT

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PRODUCT INFORMATION

Item: 38.LEGACY

Item Description: (LEGACY) SBE 38 Digital Temperature Sensor

Serial: 380258

Special Notes

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_38	SBE 38 TEMPERATURE SENSOR CALIBRATION (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT

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PRODUCT INFORMATION

Item: 38.LEGACY

Item Description: (LEGACY) SBE 38 Digital Temperature Sensor

Serial: 3841178-0265

Special Notes

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Item	Item Description	Qty
CAL_38	SBE 38 TEMPERATURE SENSOR CALIBRATION (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT

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PRODUCT INFORMATION

Item: 04C.LEGACY

Item Description: (LEGACY) SBE 04C Conductivity Sensor

Serial: 043407

Special Notes

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Services Performed:

Perform 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 P (FRRF))	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT**Service Request****1005501085****Date**

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PRODUCT INFORMATION**Item:** 04C.LEGACY**Item Description:** (LEGACY) SBE 04C Conductivity Sensor**Serial:** 042767**Special Notes**

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Services Performed:

Perform 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 P (FRRF))	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT

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PRODUCT INFORMATION

Item: 18.LEGACY

Item Description: (LEGACY) SBE 18 pH Sensor

Serial: 180217

Special Notes

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Replace the instruments "O"-rings.

Perform hydrostatic pressure test.

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Performed a "Final" Calibration.

Item	Item Description	Qty
CAL_PH	SBE 18 OR SBE 27 PH ONLY CALIBRATION (4, 7, 10 PH) (FRRF)	1
CONCERT/S	CONFIRM AND RECERTIFY MODULAR SENSOR (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT

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PRODUCT INFORMATION

Item: 18.LEGACY

Item Description: (LEGACY) SBE 18 pH Sensor

Serial: 180523

Special Notes

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Replace the instruments "O"-rings.

Perform hydrostatic pressure test.

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Performed a "Final" Calibration.

Item	Item Description	Qty
CAL_PH	SBE 18 OR SBE 27 PH ONLY CALIBRATION (4, 7, 10 PH) (FRRF)	1
CONCERT/S	CONFIRM AND RECERTIFY MODULAR SENSOR (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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SERVICE REPORT**Service Request****1005501085****Date**

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PRODUCT INFORMATION**Item:** 21.LEGACY**Item Description:** (LEGACY) SBE 21 Thermosalinograph**Serial:** 2141177-3269**Special Notes**

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Item	Item Description	Qty
CAL21	EXTRA CHARGE TO CALIBRATE C, T, C&P CELL AND RECAL IF NECESSARY. (FRRF)	1
CONCERT21	CONFIRM AND RECERTIFY SBE 21. COMPLETE EXTERNAL INSPECTION. TEST ALL FUNCTIONS AND INPUT CHANNEL RESPONSES. REPLACE MAIN (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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PRODUCT INFORMATION

Item: 45.LEGACY

Item Description: (LEGACY) SBE 45 Micro TSG

Serial: 4540569-0155

Special Notes

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Replace the instruments "O"-rings.

Perform hydrostatic pressure test.

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Item	Item Description	Qty
CAL45	EXTRA CHARGE TO CALIBRATE C, T, C&P CELL AND RECAL IF NECESSARY. (FRRF)	1
CONCERT45	CONFIRM AND RECERTIFY SBE 45. COMPLETE EXTERNAL INSPECTION. TEST ALL FUNCTIONS AND INPUT CHANNEL RESPONSES. REPLACE MAIN (FRRF)	1

Unbilled Items

Item	Item Description	Qty

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PRODUCT INFORMATION

Item: 19.LEGACY

Item Description: (LEGACY) SBE 19 CTD

Serial: 192523-0355

Special Notes

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Replace the instruments "O"-rings.

Perform hydrostatic pressure test.

Services Performed:

Perform initial diagnostic evaluation.

Performed pressure calibration.

Performed "POST" cruise calibration.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Item	Item Description	Qty
SERVICE19	CONFIRM / RECERTIFY SBE 19/19PLUS/19PLUSV2. COMPLETE EXTERNAL INSPECTION. TEST ALL FUNCTIONS AND INPUT CHANNEL RESPONSES (FRRF)	1

Unbilled Items

Item	Item Description	Qty



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SERVICE REPORT

Service Request **1005501085**
Date **21-FEB-2017**

PRODUCT INFORMATION

Item: 05T.LEGACY

Item Description: (LEGACY) SBE 5T Submersible Pump

Serial: 054907

Special Notes

Services Requested:
Evaluate/Repair Instrumentation.

Services Performed:
Perform initial diagnostic evaluation.

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SERVICE REPORT**Service Request****1005501085****Date**

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PRODUCT INFORMATION**Item:** 19.LEGACY**Item Description:** (LEGACY) SBE 19 CTD**Serial:** 198671-1448**Special Notes**

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Replace the instruments "O"-rings.

Perform hydrostatic pressure test.

Services Performed:

Perform initial diagnostic evaluation.

Performed pressure calibration.

Performed "POST" cruise calibration.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Item	Item Description	Qty
SERVICE19	CONFIRM / RECERTIFY SBE 19/19PLUS/19PLUSV2. COMPLETE EXTERNAL INSPECTION. TEST ALL FUNCTIONS AND INPUT CHANNEL RESPONSES (FRRF)	1

Unbilled Items

Item	Item Description	Qty



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SERVICE REPORT

Service Request **1005501085**
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PRODUCT INFORMATION

Item: 05T.LEGACY

Item Description: (LEGACY) SBE 5T Submersible Pump

Serial: 051480

Special Notes

Services Requested:
Evaluate/Repair Instrumentation.

Services Performed:
Perform initial diagnostic evaluation.

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SERVICE REPORT**Service Request****1005501085****Date**

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PRODUCT INFORMATION**Item:** 09P.LEGACY**Item Description:** (LEGACY) SBE 09Plus CTD**Serial:** 09P32146-0731**Special Notes**

Services Requested:

Evaluate/Repair Instrumentation.

Perform Routine Calibration Service.

Replace the instruments "O"-rings.

Perform hydrostatic pressure test.

Services Performed:

Perform initial diagnostic evaluation.

Performed pressure calibration.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Item	Item Description	Qty
CONCERT9B	CONFIRM AND RECERTIFY SBE 9PLUS. INCLUDES OPENING MAIN HOUSING, REPLACING END CAP "PISTON" O-RINGS AND MAKING MINOR INTE (FRRF)	1

Unbilled Items

Item	Item Description	Qty