

**Sea-Bird Electronics, Inc.**

13431 NE 20th Street
Bellevue, WA 98005 United States

(Do Not Send Payments To This Physical Address – See Remit to Information)

Phone

+1-425-643-9866

www.seabird.com

SERVICE REPORT**Service Request****1005520964****Date**

02-JUL-2024

Sales Order

321000969

CUSTOMER INFORMATION

Name: NOAA - PMEL PACIFIC MARINE ENVIRO LAB

Account : 40279844

DAVID STRAUZ

DAVID.STRAUSZ@NOAA.GOV

206-526-4510

PO Number:

EA-133M-15-CQ-0039/1333MJ24F0016

Bill To Address

NOAA - PMEL PACIFIC MARINE ENVIRO LAB
7600 SAND POINT WAY NE

SEATTLE,WA,98115-6349,US

Ship To Address

NOAA - PMEL PACIFIC MARINE ENVIRO LAB
SUPPLY CENTER / RECEIVING
7600 SAND POINT WAY NE, BLDG 8
SEATTLE,WA,98115,US

PRODUCT INFORMATION

Item: 16.LEGACY

Item Description: (LEGACY) SBE 16 CT(D)

Serial: 194208-0655

Special Notes

Services Requested:

SBS-SVC-16

CUSTOMER NOTES: Clock failed during last deployment. Note that this instrument has a digiquartz pressure sensor.

Services Performed:

Perform initial diagnostic evaluation.

Performed pressure calibration.

Performed "POST" cruise calibration.

Installed NEW AF24173 Anti-foulant cylinder(s).

Item	Item Description	Qty
SERVICE16	Confirm / recertify SBE 16/16plus/16plusV2. Complete External Inspection. Test All Functions and input channel responses. Calibrate C & T. C&P and recal if necessary. Replace 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
REPLACEAF	Extra charge to install one antifoulant device, includes one 801542.1.	1
REPLACEAF	Extra charge to install one antifoulant device, includes one 801542.1.	1
PCAL16	Charge to calibrate SBE 16/16plus/16plusV2 pressure channel	1

Unbilled Items

Item	Item Description	Qty
22009	Lithium back-up battery (BR-2/3A-T2SP)	2

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PRODUCT INFORMATION**Item:** 16P.LEGACY**Item Description:** (LEGACY) SBE 16Plus (V1/V2) CT(D)**Serial:** 19P68701-6902**Special Notes**

Services Requested:

SBS-SVC-16

CUSTOMER NOTES: Connector for pump/comms is broken and needs replacing

Problems Found:

Connector J3 was non-operational.

The conductivity cell was found to require cleaning and re-platinization.

Services Performed:

Perform initial diagnostic evaluation.

Replaced connector J3.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Performed "POST" cruise calibration.

Cleaned and replatinized the conductivity cell.

Performed a "Final" Calibration.

Item	Item Description	Qty
SERVICE16	Confirm / recertify SBE 16/16plus/16plusV2. Complete External Inspection. Test All Functions and input channel responses. Calibrate C & T. C&P and recal if necessary. Replace 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
REPLACEAF	Extra charge to install one antifoulant device, includes one 801542.1.	1
REPLACEAF	Extra charge to install one antifoulant device, includes one 801542.1.	1

Unbilled Items

Item	Item Description	Qty
17628	Bulkhead connector, 6-pin Standard, AG-306-HP-SS	1
801542.1	AF24173 ANTI-FOULANT, SINGLE CYLINDER, V2	2
22009	Lithium back-up battery (BR-2/3A-T2SP)	3



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PRODUCT INFORMATION

Item: 16P.LEGACY

Item Description: (LEGACY) SBE 16Plus (V1/V2) CT(D)

Serial: 163611-0521

Special Notes

Services Requested:

SBS-SVC-16

CUSTOMER NOTES: Instrument clock failed during the last deployment.

Problems Found:

Battery bulkhead is corroded.

We are no longer able to repair this make and model of SBE 16.

The instrument will be returned "AS IS".

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SERVICE REPORT**Service Request****1005520964****Date**

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PRODUCT INFORMATION

Item: FAA-015257

Item Description: ECO-Triplet-BBFL2-WB (700,CHL,CDOM)(25,50,375)

Serial: BBFL2WB-7201

Special Notes

Services Requested:

SBS-SVC-ECOTRIPLE

CUSTOMER NOTES: Instrument read really high on the last deployment, appears to be out of spec.

ECO Calibration and Repairs

Diagnosis: Evaluated instrument (BBFL2WB-7201) and found it required a head replacement.

Repairs and Modifications: Replaced head, tuned, calibrated, and standard service performed.

Comments: New Device file and characterization sheets included.

ECO Standard Service:

The instrument bulkhead connector, pressure housing and window\optics are inspected for damage. Instrument is checked to determine proper functionality. Incoming settings and memory are collected if incoming condition allows.

If applicable, a pre-service characterization is performed. Data is analyzed and Instrument is rescaled.

The head is inspected for cracks in detector and motor bores. Case seals, shaft, shaft seal, faceplate, wiper, desiccant pack, and batteries (if equipped) are replaced. Noise, stability, and live pressure test performed.

Final calibration and characterization is completed. Including calibration of thermistor and pressure sensor (if equipped). A device file, repair sheet, and new characterization sheets are provided to customer via USB.

Item	Item Description	Qty
SRVECOTRIPLET	Standard service includes evaluation, minor repairs, firmware updates, board modifications, calibration, and testing. This pricing does not include major repairs or shipping costs. Any additional repairs that are not listed will be quoted on an individual basis and provided with a revised service order after the technician examines the instrument.	1

Unbilled Items

Item	Item Description	Qty
EXA-ZX0064	BATTERY, 9v, Lithium	6
MAA-230330	FACEPLATE, Triplet-S, ECO	1
BAA-537894	ASSY, motor, wiper, Triplet-W	1
BAA-537894	ASSY, motor, wiper, Triplet-W	1
AXA-BX0067	BRD, Processor G4, ECO	1



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KAA-015250	BBFL2W(700,CHL,CDOM),OptHd	1
BAA-251671	ASSY, power plug mount, ECO Trip-W	1
BAA-251621	ASSY, WIPER, TRIP-W or ECO-V2	1



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PRODUCT INFORMATION

Item: 39.LEGACY

Item Description: (LEGACY) SBE 39 Temperature (Depth) Recorder

Serial: 3965436-5474

Special Notes

Services Requested:

SBS-SVC-39

CUSTOMER NOTES: These all have pretty old cals

Problems Found:

The thermistor guard is damaged.

Services Performed:

Perform initial diagnostic evaluation.

Replaced the thermistor guard.

Performed "POST" cruise calibration.

Replaced battery.

Item	Item Description	Qty
SERVICE39	Complete External Inspection. Test All Functions. Calibrate temperature channel, 11 points (-1 to 31 deg C). Replace end cap O-rings and Hydrostatic pressure test. Install new batteries. Includes typical repairs. (Does not include: Major electronic board replacement. Instruments deemed "Damaged Beyond Repair". Missing/damaged mounts or cables. Upgrades or modifications. Spares.)	1

Unbilled Items

Item	Item Description	Qty
233062	SBE39 THERMISTOR GUARD, V2, DN 233062	1
22074	SBE 39 lithium battery, UltraLife U9VL, 9V (spare)	1

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PRODUCT INFORMATION**Item:** 39.LEGACY**Item Description:** (LEGACY) SBE 39 Temperature (Depth) Recorder**Serial:** 3935165-1423**Special Notes**

Services Requested:

SBS-SVC-39

CUSTOMER NOTES: These all have pretty old cals

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Replaced the battery.

Item	Item Description	Qty
SERVICE39	Complete External Inspection. Test All Functions. Calibrate temperature channel, 11 points (-1 to 31 deg C). Replace end cap O-rings and Hydrostatic pressure test. Install new batteries. Includes typical repairs. (Does not include: Major electronic board replacement. Instruments deemed "Damaged Beyond Repair". Missing/damaged mounts or cables. Upgrades or modifications. Spares.)	1

Unbilled Items

Item	Item Description	Qty
22074	SBE 39 lithium battery, UltraLife U9VL, 9V (spare)	1

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PRODUCT INFORMATION**Item:** 39.LEGACY**Item Description:** (LEGACY) SBE 39 Temperature (Depth) Recorder**Serial:** 3935165-1420**Special Notes**

Services Requested:

SBS-SVC-39

CUSTOMER NOTES: These all have pretty old cals

Problems Found:

The connector is missing a pin.

Services Performed:

Perform initial diagnostic evaluation.

Replaced the connector.

Replaced the O-rings.

Performed a hydrostatic pressure test.

Performed "POST" cruise calibration.

Replaced the battery.

Item	Item Description	Qty
SERVICE39	Complete External Inspection. Test All Functions. Calibrate temperature channel, 11 points (-1 to 31 deg C). Replace end cap O-rings and Hydrostatic pressure test. Install new batteries. Includes typical repairs. (Does not include: Major electronic board replacement. Instruments deemed "Damaged Beyond Repair". Missing/damaged mounts or cables. Upgrades or modifications. Spares.)	1

Unbilled Items

Item	Item Description	Qty
17654	Bulkhead connector, 4-pin Standard, XSG-4-BCL-HP-SS	1
22074	SBE 39 lithium battery, UltraLife U9VL, 9V (spare)	1

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PRODUCT INFORMATION**Item:** 39.LEGACY**Item Description:** (LEGACY) SBE 39 Temperature (Depth) Recorder**Serial:** 3935165-1424**Special Notes**

Services Requested:

SBS-SVC-39

CUSTOMER NOTES: These all have pretty old cals

Services Performed:

Perform initial diagnostic evaluation.

Performed "POST" cruise calibration.

Replaced the battery.

Item	Item Description	Qty
SERVICE39	Complete External Inspection. Test All Functions. Calibrate temperature channel, 11 points (-1 to 31 deg C). Replace end cap O-rings and Hydrostatic pressure test. Install new batteries. Includes typical repairs. (Does not include: Major electronic board replacement. Instruments deemed "Damaged Beyond Repair". Missing/damaged mounts or cables. Upgrades or modifications. Spares.)	1

Unbilled Items

Item	Item Description	Qty
22074	SBE 39 lithium battery, UltraLife U9VL, 9V (spare)	1

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PRODUCT INFORMATION

Item: 39.LEGACY

Item Description: (LEGACY) SBE 39 Temperature (Depth) Recorder

Serial: 3935165-1638

Special Notes

Services Requested:

PCAL39

SBS-SVC-39

CUSTOMER NOTES: This is the only one with a pressure sensor

Services Performed:

Perform initial diagnostic evaluation.

Performed pressure calibration.

Performed "POST" cruise calibration.

Replaced the battery.

Item	Item Description	Qty
SERVICE39	Complete External Inspection. Test All Functions. Calibrate temperature channel, 11 points (-1 to 31 deg C). Replace end cap O-rings and Hydrostatic pressure test. Install new batteries. Includes typical repairs. (Does not include: Major electronic board replacement. Instruments deemed "Damaged Beyond Repair". Missing/damaged mounts or cables. Upgrades or modifications. Spares.)	1
PCAL39	Extra charge for pressure calibration	1

Unbilled Items

Item	Item Description	Qty
22074	SBE 39 lithium battery, UltraLife U9VL, 9V (spare)	1