SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington 98005 USA
Telephone: (425) 643-9866   Telex: 292915 SBEI UR
Fax: (425) 643-9954   email: seabird@seabird.com

SBE P/N 50024

DATE	SYM	REVISION RECORD	AUTH	DR	CHK

SBE9plus Universal Hardware Kit

Kit Contents

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
30110	Mach screw M3 x 8mm soc	**Al Pump**: Secure motor mount to motor	4
30112	Mach screw 2-56 x ¼ socket	**Al Pump:** Secure motor assembly to endcap assembly	8
30115	Mach screw 2-56 x ¼ FH SS	**SBE 32**: Secure actuator disk to trigger lever	4
30116	Mach screw 2-56 x 3/8 PH SS	**SBE 32**: Secure coil terminate PCB into actuator endcap; Pump Groundstrap screw	2
30117	Mach screw 2-56 x 5/16 PH SS	**Small sensors**: Mount boardset to endcap	4
30119	Mach screw 2-56 x ¾ PH SS	**Al Pump:** Secure endcap to housing	8
30120	Mach screw 2-56 x 7/8 PH SS	**SBE 4**: Secure endcap to housing	8
30126	Mach screw 4-40 x 3/8 PH SS	**Small sensors:** secure anodes to housings	12
30131	Mach screw 4-40 x 5/8 PH SS	**SBE 4**: Secure cell tray to endcap, housing	8
30137	Mach screw 6-32 x ¼ PH SS	**SBE 32**: Attach Groundstrap to coil/actuator endcap **SBE 11plus**: Secure power supply to support rail	8
30142	Mach screw 6-32 x 3/8 PH SS	**9plus**: Used to secure insulators to cage mounting straps **SBE 11plus**: Secure fan	8
30145	Mach screw 6-32 x ½ PH SS	**SBE 17**: Secure battery retainer to battery terminal posts	4
30148	Mach screw 6-32 x 5/8 FH SS	**9plus**: Hardware for special Cardfile retainer assembly	6
30154	Mach screw 8-32 x 3/8 PH SS	**9plus**: Attach CTD Groundstrap to connector endcap	4
30157	Mach screw 8-32 x ½ PH SS	**11plus:** Secure transformers to support rails	4
30158	Mach screw 8-32 x 5/8 PH SS	**9plus**: Secures retainer strap to sensor mount bar	2
30173	Mach screw 10-32 x 1 FH SS	**Frame**: Secure vertical bars to cage guards	4
30177	Mach screw 10-24 x 7/8 PH SS	**SBE 17**: Secure threaded ring to inside of battery endcap	14
30182	Mach screw 10-24 x 1-1/4 PH SS	**9plus**: (5 ea) secure endcaps to CTD housing	20
30194	Bolt 3-8-16 x 1-1/4 Hex SS	**9plus**: Fastens cage mounting straps around CTD housing	4
30196	Bolt 3/8-16 x 1-3/4 PH SS	**9plus**: CTD Eyelet screw	2
30226	Nut, ¼-28 Hex, SS	**SBE 3**: Secures Probe to endcap	2
30235	Washer, #2 nylon	**9plus**: Used with Coil Terminate securing screws (30116)	8
30236	Washer, #8 nylon	**9plus**: Used with CTD Grounding strap screws (30154)	2
30244	Washer, #6 int tooth	**SBE 4**: Used with cell guard securing screws (30131)	8
30248	Washer, #8 Split Ring Lock	**9plus**: Used with retainer strap screw (30158)	4
30257	Washer, 3/8 Flat SS	**SBE 32**: 8 ea with U-Bolts and flanges; 2 with CTD eyelet screw (30198)	4
30258	Washer, 3/8 Split ring lock	**9plus**: used with cage mounting screws (30194)	4
30262	Screw Insul #2 x 3/8	**Al Pump:** used with endcap securing screws (30119)	5
30270	Screw Insul #10 x ¾	**9plus**: Used with endcap to housing screws (5 per endcap)	20
30403	Mach screw 8-32 x 1-1/8 PH Al	**Al Pump**: Secure pump cover to endcap	8
30517	Bolt 3/8-16 x 2 Hex HD, AL	**9plus**: Secure TC mount bar to bottom endcap	4

Sea-Bird Electronics Procedure

PROCEDURE NUMBER: **67053**

TITLE: **SBE 9plus Universal Hardware Kit**

REVISION:

EFFECTIVE DATE: **11/11/2002**

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SBE

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APPLICATIONS:

SBE 5 Aluminum Pump

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
30110	Mach screw M3 x 8mm soc	Secure motor mount to motor	4
30112	Mach screw 2-56 x ¼ socket	Secure motor assembly to endcap assembly	8
30119	Mach screw 2-56 x ¾ PH SS	Secure endcap to housing	8
30262	Screw Insul #2 x 3/8	used with endcap securing screws (30119)	5
30403	Mach screw 8-32 x 1-1/8 PH Al	Secure pump cover to endcap	8

SBE 9plus CTD

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
30142	Mach screw 6-32 x 3/8 PH SS	Used to secure insulators to cage mounting straps	8
30148	Mach screw 6-32 x 5/8 FH SS	Hardware for special Cardfile retainer assembly	6
30154	Mach screw 8-32 x 3/8 PH SS	Attach CTD Groundstrap to connector endcap	4
30158	Mach screw 8-32 x 5/8 PH SS	Secures retainer strap to sensor mount bar	2
30173	Mach screw 10-32 x 1 FH SS	**Frame**: Secure vertical bars to cage guards	4
30182	Mach screw 10-24 x 1-1/4 PH SS	(5 ea) secure top and bottom endcaps to CTD housing	20
30194	Bolt 3-8-16 x 1-1/4 Hex SS	Fastens cage mounting straps around CTD housing	4
30196	Bolt 3/8-16 x 1-3/4 PH SS	CTD Eyelet screw	2
30235	Washer, #2 nylon	Used with Coil Terminate securing screws (30116)	8
30236	Washer, #8 nylon	Used with CTD Grounding strap screws (30154)	2
30248	Washer, #8 Split Ring Lock	Used with retainer strap screw (30158)	4
30258	Washer, 3/8 Split ring lock	used with cage mounting screws (30194)	4
30270	Screw Insul #10 x ¾	Used with endcap to housing screws (5 on each endcap)	20
30517	Bolt 3/8-16 x 2 Hex HD, AL	Secure TC mount bar to bottom endcap	4

SBE 3, 4 Temperature Conductivity Sensors

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
30117	Mach screw 2-56 x 5/16 PH SS	Mount boardsets to endcaps	4
30120	Mach screw 2-56 x 7/8 PH SS	Secure Conductivity endcap to housing	8
30126	Mach screw 4-40 x 3/8 PH SS	secure anodes to housings	12
30131	Mach screw 4-40 x 5/8 PH SS	Secure Conductivity cell tray to endcap, housing	8
30226	Nut, ¼-28 Hex, SS	Secures Temperature Probe to endcap	2
30244	Washer, #6 int tooth	Used with Conductivity cell guard screws (30131)	8

SBE 11plus Deck Unit

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
30137	Mach screw 6-32 x ¼ PH SS	Secure power supply to support rail	8
30142	Mach screw 6-32 x 3/8 PH SS	**SBE 11plus**: Secure fan	8
30157	Mach screw 8-32 x ½ PH SS	**11plus:** Secure transformers to support rails	4

SBE 17 SEARAM

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
30177	Mach screw 10-24 x 7/8 PH SS	**SBE 17**: Secure threaded ring to inside of battery endcap	14
30145	Mach screw 6-32 x ½ PH SS	**SBE 17**: Secure battery retainer to battery terminal posts	4

SBE 32 Carousel

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
30115	Mach screw 2-56 x ¼ FH SS	Secure actuator disk to trigger lever	4
30116	Mach screw 2-56 x 3/8 PH SS	Secure terminate PCB into actuator; Pump Groundstrap	2
30137	Mach screw 6-32 x ¼ PH SS	Attach Groundstrap to coil/actuator endcap	8
30257	Washer, 3/8 Flat SS	8 with U-Bolts / flanges; 2 with CTD eyelet screw (30198)	4

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