



SEA-BIRD ELECTRONICS, INC.

13431 NE 20th St., Bellevue, Washington 98005 USA
 Telephone: (425) 643-9866 Telex: 292915 SBEI UR
 Fax: (425) 643-9954 Email: seabird@seabird.com

SBE P/N 50288/50288.1

DATE	SYM	REVISION RECORD	AUTH	DR	CHK
06.03	B	PN 231071 Usage revised	DB	MJ	
09.04	C	Added AF24173 Anti-Foulant Cylinders	DB	MJ	
09.04	D	AF24173 is Optional	MJ	KH	
09.06	E	Update AF24173 Part Number	MJ	CB	
11.9.11	F	Removed temp probe retainer	CB	PC	
11FEB13	G	Updated Pictures and P/N's	CB	AD	

SBE19plus Moored Mode Conversion Kit w/ or w/o Anti-Foulant

Kit Contents

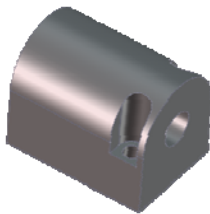
SBE P/N	Description	Primary SBE Application	QTY
233538.01	Anti-Foulant Device Cap, with Barb	For both ports, when pump is installed	2
233540	Anti-Foulant Device Cap, No Barb	For exhaust port, when no pump is installed	1
233544	SeacatPLUS TC-Duct/ Anti-Foulant Device Cup	For use when AF24173 Anti-Foulant Devices are installed	1
233545	SeacatPLUS Exhaust/ Anti-Foulant Device Cup	For use when AF24173 Anti-Foulant Devices are installed	1
30389	Cable Tie, 4" Richco wIT-18R	Secure Tygon [®] tubing to barbs	8
30579	Tygon [®] Tube, 3/8" ID 1/2" OD, 63010-122	Tubing used for plumbing	3 inch
31450	Tygon [®] Tube, Black Vinyl, 3/4" x 1/2"	Tubing used for plumbing	1 foot
801542*	AF24173 Anti-Foulant Device	Anti-Foulant cylinders installed in cup parts	1 pair

*optional item

The SBE 19plus is intended primarily for use as a profiling instrument, and does not come standard with anti-foulant device cups and caps. Some customers, finding that they are using the 19plus in moored mode on occasion, choose to install anti-foulant device cups and caps. This procedure addresses retrofitting a 19plus with anti-foulant device cups and caps.

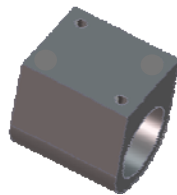
Note: This procedure can also be used to replace existing anti-foulant device cups and caps on an SBE 16plus.

Intake anti-foulant device cup



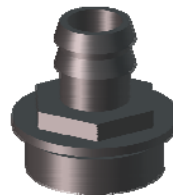
P/N 233544

Exhaust anti-foulant device cup



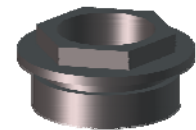
P/N 233545

Exhaust anti-foulant device cap (barbed) for pumped applications



P/N 233538.01

Intake anti-foulant device cap for all applications and exhaust cap for non-pumped applications



P/N 233540

Note:

- The larger diameter of the intake cap / exhaust cap for non-pumped applications helps maintain good flow through the conductivity cell and reduces growth of biological material. Do not use the barbed cap in its place.

SBE DRAWING: 67114

TITLE: SeacatPLUS Moored Mode Conversion Kit

REV: E

Sea-Bird Electronics Procedure

PROCEDURE NUMBER: 67114

TITLE: **SBE PN 50288, SeacatPLUS Moored Mode Kit**

REVISION: G

EFFECTIVE DATE: 11 FEB 2013

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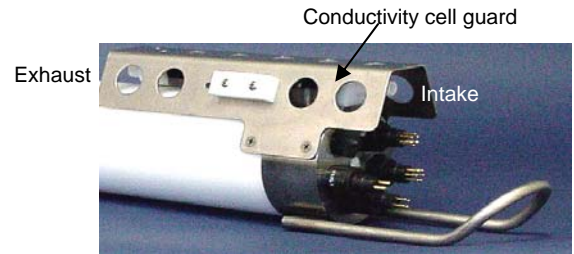
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1) On pumped applications, remove the Tygon tubing from the existing conductivity cell exhaust duct.

2) Remove the four Phillips-head screws attaching the conductivity cell guard to the instrument. Carefully remove the conductivity cell guard. (**Note**, the screws are different lengths. The long screws goes through the cell guard and housing into the end cap and the short screws go through the guard directly into the end cap)



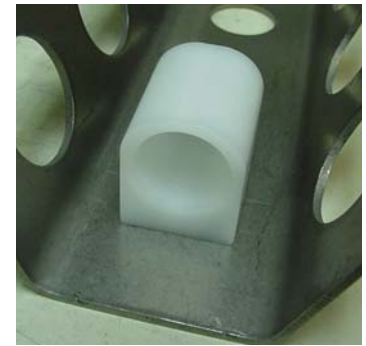
3) Exhaust

a) On the conductivity cell guard, remove the two small screws attaching the exhaust duct to the guard.

b) Remove the existing exhaust duct and replace with the exhaust anti-foulant device cup, reinstalling the two screws.

c) See the SBE 19*plus* or 16*plus* manual (as applicable) for details on handling and installing the AF24173 Anti-Foulant Device.

d) Install the Anti-Foulant device cap to secure the Anti-Foulant Device in the cup.



Exhaust anti-foulant device cup

4) Intake

a) Remove the two hex head screws attaching the existing intake duct to the end cap.

b) Remove the existing intake duct, pulling it straight up to avoid damaging the temperature probe.

c) Check to ensure that the o-ring at the end of the conductivity cell is still in place.

d) Place the intake anti-foulant device cup over the temperature probe and reinstall the hex head screws.

e) See the SBE 19*plus* or 16*plus* manual (as applicable) for details on handling and installing the AF24173 Anti-Foulant Device, or dummy.

f) Install the Anti-Foulant device cap to secure the Anti-Foulant Device in the cup.

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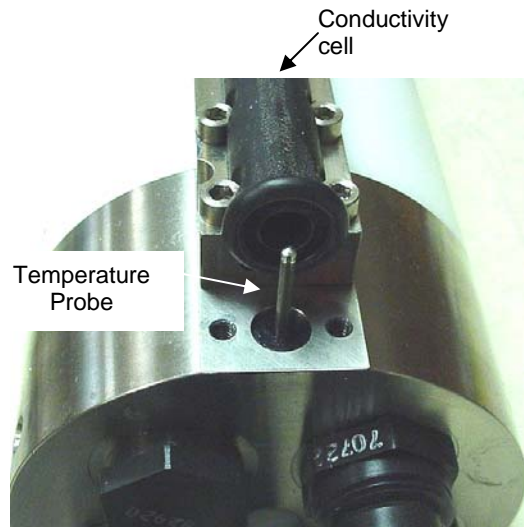
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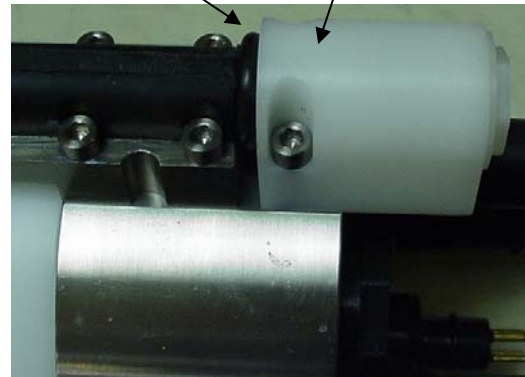
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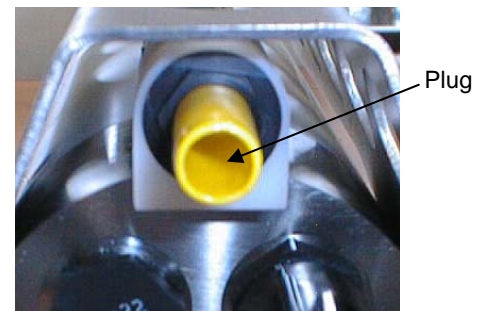


O-ring (typical both ends of conductivity cell)

Intake anti-foulant device cup



- 5) Check the exhaust end of the conductivity cell to ensure that the o-ring is still in place.
- 6) Reinstall the conductivity cell guard on the housing and end cap using the four Phillips-head screws.
- 7) If not deploying immediately, install a protective plug in the intake cap, and (for a non-pumped application) In the exhaust cap.



- 8) (for a pumped application) Reconnect the plumbing to the exhaust. Note that the barbed exhaust cap has a smaller diameter than the standard exhaust cap on the SBE 19*plus* (which does not accommodate Anti-Foulant Devices). When reconnecting the plumbing, place a 25 mm (1/2 inch) long piece of Tygon tubing, 9.5 mm (0.375 inch) ID, 1.59 mm (0.0625 inch) wall on the barbed cap. Then install the existing plumbing over the Tygon.

NOTE: When the instrument is returned to profiling applications it is recommended that the original intake and exhaust be reinstalled. If the unit will be used in both applications frequently the Anti-Foulant cups may be left installed, but should always either have P/N AF24173 Anti-Foulant devices or P/N 231515 Anti-Foulant Dummies installed to optimize the flow through the cell.

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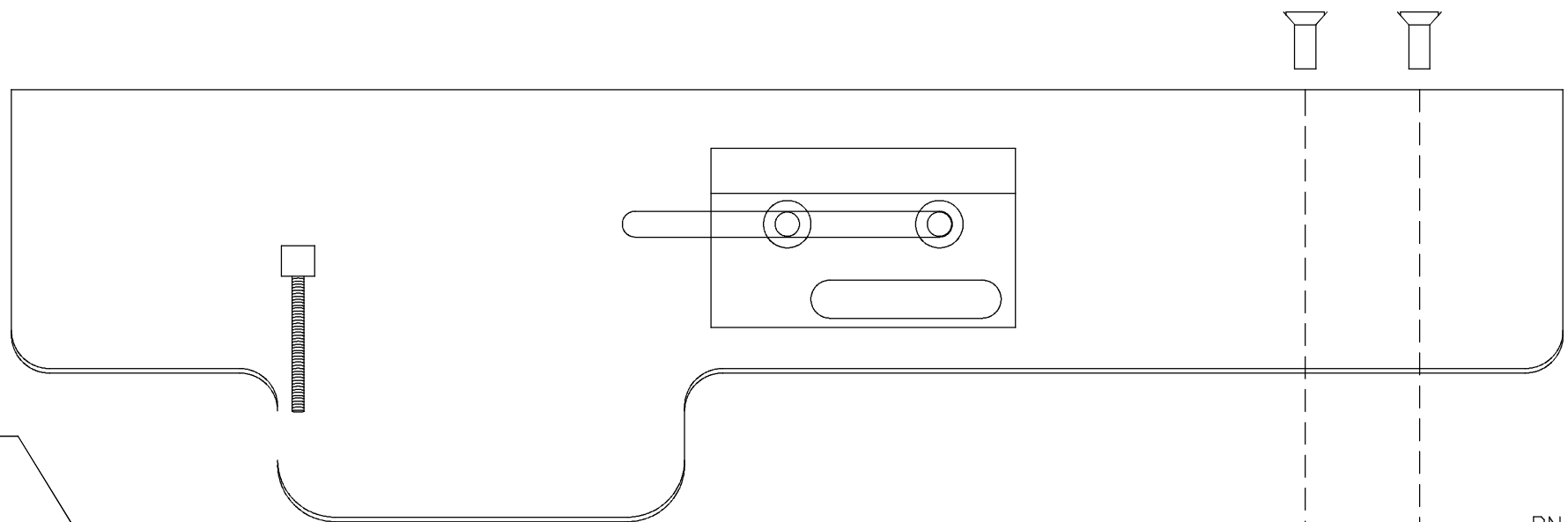
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REVISION: G

EFFECTIVE DATE: 11 FEB 2013

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Date	Rev	Description	Auth.	DR.	CK.
06.03	B	CORRECT DEVICE CAPS	DB	MJ	
07.23.07	C	ECN1111: BLACK ACETAL PARTS	CB	PC	
11.10.11	D	REMOVE TMP PROBE RETAINER	CB	PC	
2.11.13	E	ECN 1438: 233538.01	CB	CB	



PN 231790, SeacatPLUS TC Duct

PN 233544, TC Duct, Anti-Foulant Device Cup, Black

PN 233540, Anti-Foulant Device Cap, No Barb, Black

PN 231791, SeacatPLUS EXHAUST DUCT

NO PUMP, NO AF24173 Anti-Foulant Devices
INSTALL NOTHING

PUMP, NO AF24173 Anti-Foulant Devices
INSTALL 231791 ONLY

NO PUMP, WITH AF24173 Anti-Foulant Devices
INSTALL 233545 & 233540

PUMP, WITH AF24173 Anti-Foulant Devices
INSTALL 233545, 233538

PN 233545, SeacatPLUS Exhaust Duct, Anti-Foulant Device Cup, Black

PN 233540, Anti-Foulant Device Cap, No Barb, Black

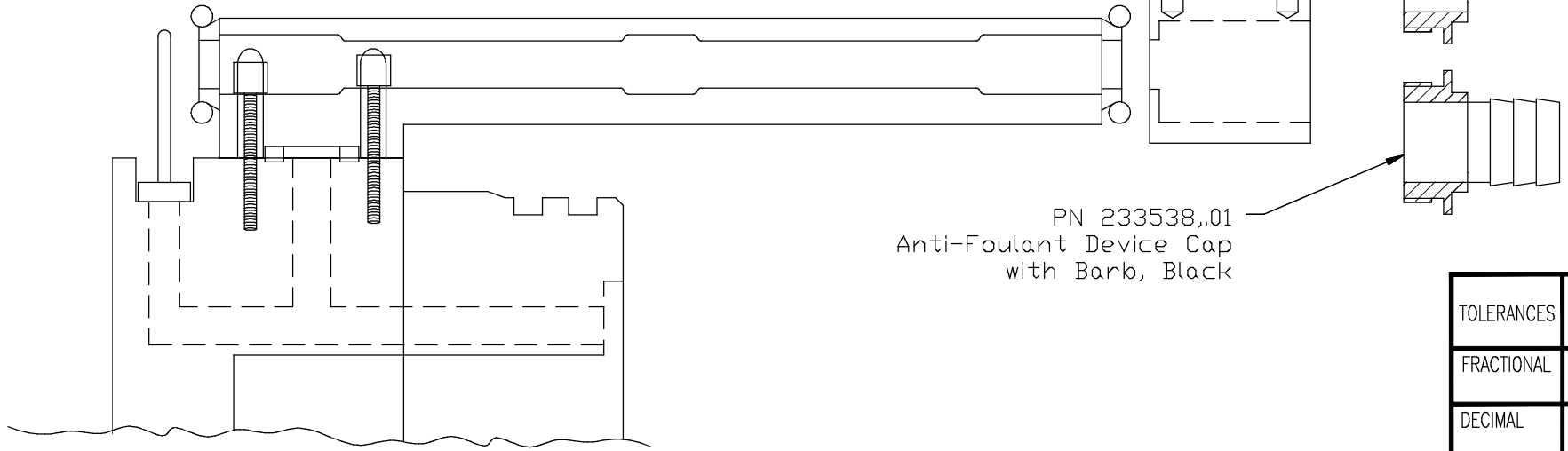
PN 233538,.01 Anti-Foulant Device Cap with Barb, Black

NO PUMP, NO AF24173 Anti-Foulant Devices
INSTALL NOTHING

PUMP, NO AF24173 Anti-Foulant Devices
INSTALL 231790 ONLY

NO PUMP, WITH AF24173 Anti-Foulant Devices
INSTALL 233544, 233540

PUMP, WITH AF24173 Anti-Foulant Devices
INSTALL 233544 233540



TOLERANCES	SEA-BIRD ELECTRONICS, INC			
FRACTIONAL	P/N 50288	SCALE N.T.S.	DRAWN BY MJ	
DECIMAL	TITLE SeacatPlus Moored Mode Sensor Endcap Conversion Kit			
ANGULAR	DATE 07.12.01	DRAWING NUMBER 67114	REV E	