



# SEA-BIRD ELECTRONICS, INC.

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SBE P/N 60053

DATE	REV	REVISION RECORD	AUTH	DR	CHK
06/02/10	A	Changed title to reflect plastic housing	DB	PC	

## SBE 37MSM with Plastic Housing Spare Hardware and O-Ring Kit

### KIT CONTENTS

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
30544	Mach Screw, 8-32 x 1/2" FH Ti	For securing cell guard to housing	2
30633	Washer, 1/4" Split ring lock, Ti	For mounting clamps	4
30634	Washer, 1/4" flat, Ti	For mounting clamps	4
30857	Parker, 2-033E515-70	Battery endcap O-rings	2
30858	O-ring, Parker 2-133 N674-70	Battery pack end cap O-ring	1
30860	Mach screw, 6-32 x 1/2" FH Ti	Hold cable clamp half to flat area of sensor endcap	1
30900	Bolt, 1/4-20 x 2" Hex Ti	Secure mount clamps to housing	2
31019	O-ring, Parker, 2-008	Retains mounting hardware	4
31040	Screw, 8-32 x 1" FH, Ti	Secure cable guide base to sensor endcap	3
31322	O-ring, Parker 2-130 N674-70	Battery pack housing O-ring	2
31516	Hex Key, 9/64" Long Arm, DoAll AHT58010	Tool for servicing cap screw	1
31749	Hex Key, 7/64" Long Arm, DoAll BDH12106	Tool for securing battery pack	1
31755	Cap Screw, 8-32 X 1/4" SH, Titanium	Secures battery endcap to housing	2

### Removing and Replacing Cable Mount Clamps

#### A. At the Connector Endcap

1. Install the clamp onto clamp mount
  - a. Insert one lock washer (30633) and one flat washer (30634) onto each of the two bolts (30900).
  - b. Insert the screws from the flat side of the block
  - c. Slide one o-ring (31019) onto each bolt.
  - d. Secure the clamp to base with these bolts.
    - *The o-rings sit in internal countersinks on the blocks.*
2. Install the assembly onto the connector endcap
  - a. The assembly secures to the endcap so that the clamp end points to the side opposite the cell guard.
  - b. Secure with 3 screws (31040)
    - *Use Never-Seez on the screws.*

#### B. At the Sensor Endcap

1. Install the hardware into the upper clamp part
  - a. Insert one lock washer (30633) and one flat washer (30634) onto each of the two bolts (30900).

SBE DRAWING:

TITLE: SBE 37 SM V2 Battery Pack Replacement

REV:

### Sea-Bird Electronics Procedure

PROCEDURE NUMBER: 67206

TITLE: **SBE 37MSM V2 with Plastic Housing Spare Hardware & O-Ring Kit**

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- b. Insert the screws from the flat side of the block.
- c. Slide one o-ring (31019) onto each bolt.
- d. Secure the clamp to the base with these bolts.
  - *The o-rings sit in internal countersinks on the blocks.*
2. Install lower clamp part onto microcat
  - a. Lower clamp seats into endcap notch, and is secured with one screw (30860).
  - b. It is not necessary to use lubricant. DC-4 may be applied.
3. Assemble clamp parts
  - a. Screw upper part into lower part.
  - b. It is not necessary to use lubricant. DC-4 may be applied.

### Removing and Replacing Battery Endcap

#### **A. Removing the Battery Endcap**

1. Remove the two titanium screws (31755) that secure the endcap to the housing using the hex key (31516).
2. Carefully pull the endcap free.
  - *Endcaps are often very difficult to remove.*
  - *You may want to wear gloves for a better grip.*
  - *Under NO CIRCUMSTANCES should you use anything, especially anything metal, to pry the endcap off of the housing.*

#### **B. Re-Installing the Battery Endcap**

1. Make sure o-rings (30857) are properly lubricated, and don't show any signs of damage.
  - a. Replace any bad o-rings at this time.
2. Slide the endcap carefully onto the housing.
  - a. **DO NOT TILT OR OFFSET ENDCAP**, as it will bind during installation.
  - b. Make sure the screw holes on the endcap line up with the screw holes on the sensor guard.
3. Secure the endcap with the two Flathead titanium screws.

### Removing and Installing Battery Pack

#### **A. Removing battery pack assembly from SBE 37**

1. Unscrew the cap screw in the center of the battery pack using a 7/64" hex key (31749)
2. Use handle to slide battery pack out of housing.

#### **B. Re-Installing battery pack into SBE 37**

1. Look inside the battery pack chamber to see how to align the pack.
2. Carefully slide the pack into the housing.

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3. When the pack “bottoms out,” make sure it is aligned properly, and that the pins on the underside of the pack are all firmly seated into the receiving plate in housing.
4. Secure the pack with the cap screw in the center of the battery pack.
5. Re-secure the endcap with the two titanium screws.

### **Installing and Replacing Batteries in the Pack**

#### **A. Install the Batteries**

1. Unscrew the battery pack end cap using a 7/64 hex key (31749) and set it aside.
2. If unit has previously been in service, it is a good idea to use the spare kit to replace the endcap (30858) and housing (31322) o-rings.
  - *Always check the o-rings carefully for any damage and replace any that are worn.*
  - *Never use an o-ring that shows any signs of any damage.*
  - *Lubricant is not required for any of the o-rings on the battery pack.*
3. Install the batteries one-by-one into the slots in the battery pack.
  - *Following the stickers on the battery pack housing, the positive terminal of each battery should face the “bottom” of the pack.*
4. Mate the ground return pin on the battery pack endcap with the ground return in the battery pack housing.
5. Gently screw the end cap into the housing using the handle.
6. Tighten the end cap down using a 7/64” hex key (31749)

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