



SEA-BIRD ELECTRONICS, INC.

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SBE P/N 60035

| DATE | REV | REVISION RECORD | AUTH | DR | CHK |
|---------|-----|------------------------------------|------|-----|-----|
| 12.1.03 | A | Added 30243, 30544 to kit contents | CB | KLP | |
| 3.23.06 | B | Correct Description on 31040 | CB | MJ | |
| 5.9.06 | C | Correct Spelling Error on page 2 | ML | MJ | |

SBE 37MSM Spare Hardware and O-Ring Kit

KIT CONTENTS

| SBE P/N | Manufacturer P/N | Primary SBE Application | QTY |
|---------|----------------------------------|---|-----|
| 30149 | Mach Screw, 6-32 x 5/8" PH SS | Secures Battery Retainer Plate | 2 |
| 30243 | Washer, #6 Split Ring Lock, SS | For Battery Retainer Plate Screw | 2 |
| 30544 | Mach Screw, 8-32 x 1/2" FH Ti | For securing cell guard to housing | 2 |
| 30357 | Mach screw, 2-56 x 1/4" PH SS | Secure Battery Top board to Battery Pylon endplate | 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 |
| 30859 | Mach Screw, 8-32 x 3/8" FH Ti | Secures Battery endcap to Housing | 2 |
| 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 |
| 30986 | Washer, #2 Split Ring Lock | Used with Battery top plate retaining screws | 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 |

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).
 - 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.*

SBE DRAWING: 67063

TITLE: SBE 37 SM/IM Battery Pack Replacement

REV:

Sea-Bird Electronics Procedure

PROCEDURE NUMBER: 67092

TITLE: SBE 37MSM Spare Hardware & O-Ring Kit

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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 (30859) that secure the endcap to the housing.
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. Remove the large center screw (30149) and lock washer (30243) from end of battery pack, and set them aside with the endcap hardware.
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.
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 screw (30149) and lock washer (30243).
5. Re-secure the endcap with the two titanium screws.

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Installing and Replacing Batteries in the Pack

A. Remove the cover plate.

1. Remove the two 2-56 screws (30357) and lock washers (30986) from retainer assembly, and set them aside.
2. If there are no batteries installed, then the cover plate will fall off the battery pack. Otherwise, the plate will need to be pulled free with your hand.

B. Install the Batteries

1. *If unit has previously been in service, it is a good idea to use the spare kit to replace the endcap o-rings.*
 - a. Always check the o-rings carefully for any damage.
 - *Never use an o-ring that shows any signs of any damage.*
 - b. Always use a silicon-based lubricant on o-rings, like Parker Super-O.
 - *Never use petroleum-based lubricants.*
2. Batteries must be installed with the pins being inserted into the lower plate of the battery pack.
 - a. This is the part that is attached to the brass post.
3. Reinstall the upper retainer plate, making sure that all 3 screw holes are aligned properly.
4. Secure assembly with the 2 2-56 screws and lock washers.

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