



SEA -B I R D E L E C T R O N I C S , I N C .

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 50017

DATE	SYM	REVISION RECORD	AUTH	DR	CHK

Beckman DO Module Refurbishment Kit

Kit Contents

SBE P/N	Manufacturer P/N	Primary SBE Application	QTY
231004	Backup Ring for L-Seal LS021	Backup Ring for L-Seal	1
24017	DO Locate Tool	Use to Align O-Ring (1
24019	Seal Screw, 8-32NC-2A	Seals Oil Penetration Hole	1
24020	Mineral Oil, Squibb	Inject through Seal Screw Hole to Backfill Sensor Area	2 oz.
30074	O-Ring, Parker, 2-022N674-70	Seals DO Module / Plenum interface	1
30081	O-Ring, Parker, 18mm x 4mm-70	Pressure Balance O-Ring	1
30434	Disposable Syringe	Use to fill sensor with oil	1
30806	L-Seal, LS021	Main Sensor L-Seal, Connector Endcap	1

Procedure for DO Module Refurb

Drawing number 67031

This procedure intends to outline technique for refurbishing Beckman Sensors. Keep in mind that once a sensor is successfully refurbished it must be recalibrated. Refer to SBE Drawing 67031 "Beckman Dissolved Oxygen Sensor Assembly" for further details.

A. Draining The Sensor

1. Lay out a thick layer of paper towel. Do all our your work on this towel.
2. Remove the seal screw (24019).
3. Hold sensor upright and remove 30074 O-Ring. Use a cloth or other non-abrasive material to loosen and remove the Beckman Module. If module is too tight, use a CLOTH pipe wrench. *Never use any tools with teeth. Never apply any hard or abrasive materials directly to the module.*
4. Remove 2nd 30074 O-Ring and discard it. Drain existing oil into a trash can.

B. Cleaning The Sensor

1. After oil has drained, remove DO Diaphragm and retainer, Pressure Balance O-Ring (30081), and Module Housing (Clear Plastic Sheath).
2. Discard Pressure Balance O-Ring.
3. Clean each part carefully with a cloth or soft paper towel, and set aside. *Never use any solvents or abrasives on any DO Sensor parts.*
4. Reinstall DO Diaphragm and retainer onto Module Housing. Reinstall Module Housing onto Sensor.

Parent Part Number: 50017

SBE Drawings:

67031 Beckman DO Sensor Assembly

Sea-Bird Electronics Procedure

PROCEDURE NUMBER: **67031**

TITLE: **Beckman DO Module Refurbishment Kit**

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C. Re-Assembling And Backfilling The Sensor

1. Lubricate NEW Pressure Balance O-Ring (30081) with O-Lube or mineral oil. *Never lubricate O-Rings with any petroleum-based lubricants.* Press O-Ring into place on DO Receptacle using DO Locate Tool (24017).
2. Lubricate NEW smaller O-Ring (30074) and place on DO module, in groove where discarded one was.
3. Carefully place DO Module onto receptacle and tighten by hand. Never use a wrench. Crank it down hand tight.
4. Lube old, saved 30074 O-Ring and place onto module. Lay it in place against the module and module housing.
5. At this point, all but Seal screw should be installed. Lay sensor on paper towels, seal screw hole facing up.
6. Fill disposable syringe with mineral oil. Inject oil into module housing slowly, so that it fills up.
7. Let sensor stand about 30 minutes. Fill it some more.
8. Sensor will be mostly backfilled at this point.

D. Finishing The Backfill

1. Hold your thumb over the seal screw hole. Keep the hole facing up. Softly and slowly pump the diaphragm, looking for any bubbles to form or move inside module housing.
2. Work any bubbles to the top, and fill with oil again.
3. Let stand 10 to 30 minutes.
4. Repeat steps 1-4 until no bubbles appear.
5. Lube NEW seal screw and install into module housing.
6. If no more bubbles appear, sensor has been successfully refurbished.

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67031 Beckman DO Sensor Assembly

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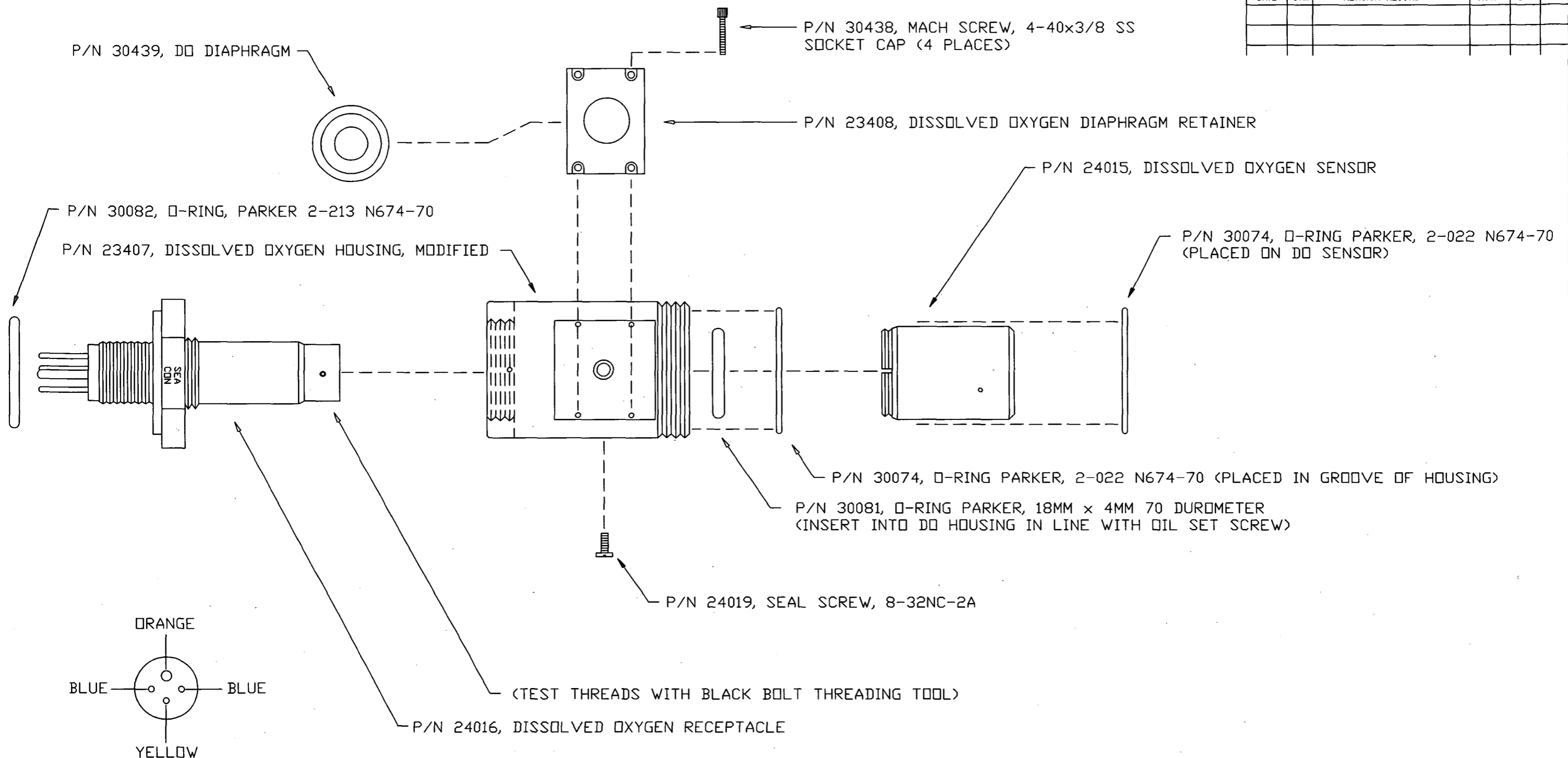
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CONNECTOR WIRING DIAGRAM

TOLERANCES	SEA-BIRD ELECTRONICS, INC				
FRACTIONAL	P/N	SCALE NTS	DRAWN BY CEG APPROVED BY		
DECIMAL	TITLE BECKMAN DISSOLVED OXYGEN SENSOR ASSEMBLY				
ANGULAR	DATE 4.14.98	DRAWING NUMBER 67031	REV		

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