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Field Service Bulletin 24 **January 2012**

SBE 43, 43I, and 43F Dissolved Oxygen Sensors

Equipment Affected

This field service bulletin applies to the following SBE 43 Dissolved Oxygen Sensors **manufactured or serviced in 2011**:

- SBE 43
- SBE 43I
- SBE 43F

For brevity, these instruments are all referred to as *SBE 43* below.

Description of Problem

These SBE 43s manufactured in 2011 are experiencing corrosion of the anode wire where it passes through a rubber seal that separates the electrolyte reservoir from the sensor electronics. The corrosion allows a small amount of electrolyte to penetrate to the sensor electronics, causing the sensor to fail. The corrosion is caused by sulfur left behind in the curing process of the rubber seal.

SBE 43s serviced in 2011, where the servicing required replacement of components in the electrolyte reservoir, are also affected by this problem.

The typical time to failure is greater than 6 months; efforts to track this failure mode in sensors returned for repair have revealed no increase in failures in 2011.

Solution

Specification of a peroxide-curing process in the manufacturing of the seal has eliminated this problem on sensors produced or serviced from mid-December 2011 going forward.

Warranty Policy for Affected Sensors

For SBE 43s purchased or serviced (where the servicing required replacement of components in the electrolyte reservoir) in 2011:

Scenario	Sea-Bird Response
SBE 43 installed / deployed on recoverable instrument package	Sea-Bird will grant an additional free refurbishment of the SBE 43 at the owner's convenience
SBE 43 installed on non-recoverable instrument package, but not yet deployed	Sea-Bird will repair or replace SBE 43 at Sea-bird's discretion
SBE 43 installed and deployed on non-recoverable, instrument package	Sea-Bird will replace SBE 43