

## **Ferry Maintenance Report**

**Vessel: Queen of Alberni**

Date: March 14, 2014

Arrival: 12:45PM sailing to Tsawassen. We signed in at terminal supervisor at Duke Point.

Reporter: Chris Sundstrom

Staff: Chris Sundstrom, Akash Sastri

### **Reason for Visit**

Regular instrument servicing

### **Observations**

1. In the Instrument Box there were minor signs of moisture or leaks, likely from slightly loose fittings on the BBFL2.
2. The AADI optode had very little debris or sediment within the housing.
3. The BBFL2 had a minor partial layer of sediment in the housing and minor fouling on the sensing surface.
4. The Seabird 45 CT sensor was relatively clean, with almost some minor sediment within the sensor. There was apparent leakage within the Seabird electronics housing, but no corrosion evident on the boards. Some slight discolouration was apparent on the stainless steel housing internal surfaces. Some corrosion (green copper oxide) was evident on pin #5 of the Seabird connector.
5. The sea chest showed no signs of leaks.
6. The inline filter (sea strainer) was checked and showed no signs of debris.

### **Actions Taken**

1. Opened both boxes and observed function. Both were working well, no leaks anywhere.
2. Powered down and disassembled instruments in lower assembly.
3. Cleaned and checked over instruments in Engineering room.
4. Re-assembled the instruments in the lower box, tightening the fittings on the BBFL2 to reduce or remediate leakage. These fittings were tightened as far as possible without them interfering with the opening of the housing. All hoses were replaced as the old hoses were translucent with fouling, although performance was apparently unimpaired. Dried out the Seabird electronics housing, checked the gasket for leaks, added a desiccant pack to control moisture and tightened gasket fitting properly.

5. Checked over Sea chest and valves, no leaks apparent.
6. Checked the sea strainer.
7. Turned ON the system.
8. No leaks in instrument housing and checked flow output at sea strainer. Flow was good. Visually confirmed flow direction at the BBFL2 and confirmed the volume filled with water and began draining correctly.
9. Signed out at Engineering room.
10. Proceeded to meteorological station on #2 Bridge monkey's island. Visual inspection of the components and familiarization exercise for Akash Sastri. Noted a shadow being cast by a BC Ferries antenna directly over one instrument. BC Ferries representative (2<sup>nd</sup> officer) on site noted he would try to have this antenna cut down or removed.

#### **Future Actions**

1. Monitor BBFL2 fitting seals. Double check connections for leaks upon next servicing.
2. Check for possible corrections to shadowing antenna on met station.
3. Labels for all ONC boxes.

#### **PICTURES**



Figure 1: Corrosion evident on connector pin #5



Figure 2: Water collecting inside Seabird electronics housing

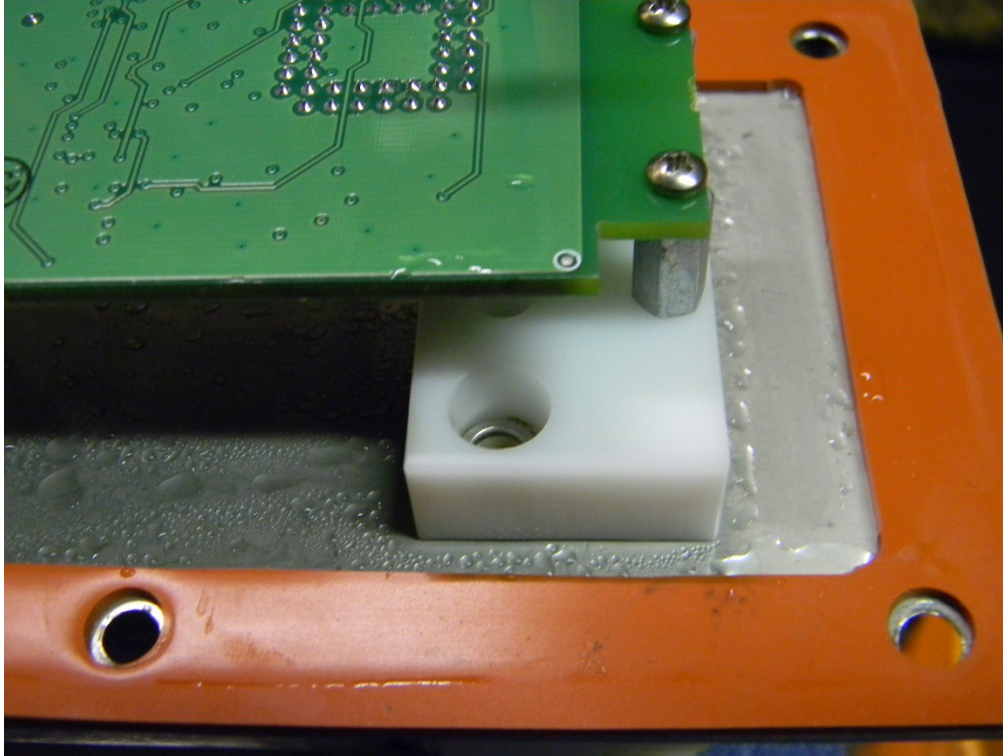


Figure 3: Water evident within housing and on boards



Figure 4: Sediment staining inside Seabird sensor





Figure 5: Interior of Optode housing prior to cleaning



Figure 6: Optode sensing face prior to cleaning



Figure 7: BBFL2 housing prior to cleaning. Note that sediment was NOT on the sensor face prior to removal from system. The housing cannot be kept level and the water must be agitated during removal



Figure 8: BBFL2 Post-Cleaning; note irregular surface of sensor



Figure 9: System as completed with new hoses and cleaned instruments





Figure 10: Met station overall view



Figure 11: Met station; note shadow cast by black BC Ferries antenna





Figure 12: Close-up of shadow cast by BC Ferries antenna