



ENGINEERING REPORT
Ebsray Models C860200, C860201 and C860202 Diaphragm Replacement Instructions

WARNING: Carefully read these instructions *BEFORE* attempting to replace diaphragms. If this procedure is not followed or the same type diaphragm and o-ring are not installed, the warranty is voided.

1. Remove the weathertight cap and use a 1/8" hex allen wrench to relieve range spring pressure by adjusting the screw counterclockwise (out). *Failure to relieve range spring pressure may cause personal injury to the disassembler.* Failure to relieve range spring pressure before disassembly may also damage internal parts.
2. Position the switch with the high-pressure process connection vertically upward and place in a vise. Loosen the 4 bolts that secure the low-pressure cavity, diaphragm and high-pressure cavity together. Carefully remove the high-pressure port without disturbing the orientation of the high-side diaphragm plate, which rests upon the diaphragm. Mark the exposed surface of this diaphragm plate with a felt tip pen or grease pencil to identify proper orientation for reassembly and set aside.
3. Remove and discard the diaphragm. Mark the exposed surface of the low-side diaphragm plate to identify proper orientation for reassembly and set aside. Inspect the diaphragm and piston sealing o-rings for degradation. Remove the piston sealing o-ring by carefully grasping the piston and extract from the low-pressure cavity. Insert the replacement o-ring into the piston sealing land and reinsert the piston. **CAUTION:** The piston is mechanically linked to the snap switch assembly and its travel is limited by the seating of the low-side diaphragm plate, which has been removed. **DO NOT** apply force to the piston as damage to the linkage may occur.
4. If required, clean the low pressure cavity with a quick drying solvent that leaves no residue and will not chemically attack the Buna-N piston o-ring. Clean and inspect the low-side diaphragm plate for damage. Pay particular attention that there are no nicks or burrs on the circumference of the side that will seat against the diaphragm (previously marked side). Also replace the plate if it shows any indication of over pressurisation (warping, indentations at seating lands, etc.). Reposition the low-side diaphragm plate and a new diaphragm sealing o-ring into the low-side port.
5. Place the new diaphragm with through holes aligned.
6. Clean and inspect the high-side diaphragm plate for damage. Pay particular attention that there are no nicks or burrs on the circumference of the side that will seat against the diaphragm (previously unmarked side). Reposition the high-side diaphragm plate and a new diaphragm sealing o-ring into the high-side port.
7. If required, clean the high-pressure cavity with a quick drying solvent that leaves no residue. Reassemble the high-side pressure port and evenly tighten bolts to 30 in-lbs of torque.
8. Recalibrate the switch by screwing the adjusting nut inward. Follow the calibration procedure from the general instructions that were supplied with the instrument and the attached diagrams.

