

Dismantling/Depressurising Procedure for AAE 91x 'Mini'-Beacons

Introduction

This note covers the following models: 919, 916, 915, 915H. All references to a 'beacon' include these four models.

To ensure that there can be no possibility of pressure build up inside one of the above models, or to relieve any possible pressure build up, the following procedure should be followed.

Please read this whole procedure and ensure that it is fully understood prior to undertaking any action.

The aim of this procedure is to remove the lower (connector) end-cap, thus relieving any possible internal pressure and allowing any unwanted gasses to disperse.

Note:

In the event of misuse or an unforeseen circumstance, there may be the potential for pressure to be built up inside the beacon because of heat or by venting of the battery pack. However unlikely, we will therefore assume that, for the purposes of this procedure, the beacon is: 1) Pressurised and 2) That the gasses may be ignited by a flame or spark.

Procedure

- 1) The beacon should be removed to a place free of electrical apparatus where the beacons can be disassembled.
- 2) In order to contain any possible rapid pressure relief, precautions should be taken to minimise the effect of any rapid ejection of one or other end-cap.
- 3) If any safety clothing or shatter proof mask is available, it should be worn. It is advisable that hand protection be worn when unscrewing the main securing screw.

Note

There is a possibility that a small amount of pressure will be inside the beacon simply due to the change in the volume of air as the temperature changes. For example if a beacon is assembled in a cold environment and it is subsequently taken to a warm room a small amount of pressure will exist. This very small amount of pressure is entirely normal and will be of no consequence or significance whatsoever.

- 4) To avoid the possibility of creating a spark inside the unit, the beacon should NOT be switched on.
- 5) The beacon should not point to any person or object which might be hurt or damaged from one or both of the end-caps of the beacon being expelled at high speed.
- 6) The central securing screw which is located on the lower (connector) end-cap should be unscrewed 2 or 3 times at which time it should be checked that the LOWER end-cap is being driven away from the beacon tube (cylindrical pressure housing) and that the transducer TOP end-cap remains close to the tube. The transducer TOP end-cap should be pushed onto the tube at this time if it has been seen to come away.
- 7) The LOWER end-cap securing screw may now be undone further. After a total of around 16 turns, the LOWER end-cap will have been driven away from the tube sufficiently for the two O rings to be free of the tube, thus allowing any pressure to escape.
- 8) The LOWER end-cap securing screw may now be unscrewed completely (about 7 - 8 turns) and the LOWER end-cap withdrawn from the body tube by a few centimetres. The LOWER end-cap is connected to the electronics inside the remaining beacon body by a grey ribbon cable which may now be disconnected from the LOWER end-cap circuit board.

Note

We would also suggest that the ribbon cable be pulled away from the circuit board inside the tube of the beacon so that there is no potential for this cable to be damaged whilst connected to the electronics and battery pack inside the beacon.

- 9) The beacon has now been separated thereby completely eliminating the possibility of any pressure build up inside the unit. Furthermore, any unwanted gasses are now free to disperse. These gasses, if present at all, are sufficiently small in volume that we do not suggest the need for any room ventilation.

The three beacon parts; Lower end-cap, main body and ribbon cable, can now be packed or stored as required.

Finally, it should be noted that, historically, hundreds of these beacons have been manufactured and used extensively in the field. This procedure has been written after just one beacon caused injury for reasons we do not yet know. As stated above, the chances of any operator experiencing a problem are very small, but until the cause of the problem is known, the above procedure should be followed to ensure the utmost safety.

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