

Electric Fuel[®]

Epsilor-Electric Fuel Ltd.

Western Industrial Park, 1, HaSolela St.,
Bet Shemesh, 99054 Israel

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The conditions and test required for TSO approval of this article are minimum performance standards. It is the responsibility of those desiring to install the article either on or within a specific type or class of aircraft to determine that the aircraft installation conditions are within the TSO standards, the article may be installed only if further evaluation by the applicant documents an acceptable installation and is approved by the local aviation authority.

1. Purpose

This Manual is intended to provide descriptive information of the Survivor Locator Light WAB-H12, information for its maintenance and overhaul, instruction concerning the proper mounting of the light on the life vests or life rafts to ensure continued compliance with prescribed minimum performance standards and pertinent operating instructions and limitations for the device.

2. Description of Device

The Survivor Locator Light WAB-H12 is a single-use product that consists of a water-activated battery and a light assembly, connected by an electrical wire.

The battery consists of a cuprous chloride cathode flanked by magnesium alloy anodes in an injection-molded plastic case. The case contains two holes, one on the bottom and one on the side near the top. The holes allow water to enter the cavities between the cathode and flanking anodes and act as an electrolyte.

The holes are covered with a water-soluble film, which allows automatic activation in less than 60 seconds when the battery is immersed in fresh water or seawater.

The light assembly consists of a 1.5-Volt miniature incandescent lamp mounted in a plastic bulb holder and covered by a clear plastic lens.

3. Operating Instructions

The Survivor Locator Light WAB-H12 is activated automatically within 60 seconds of immersion of the battery in fresh water or seawater, and the light will light automatically

4. Maintenance and Overhaul Information

1. Periodic overhaul is not required. Overhaul at end of life is not possible. Defective units (see Para. 8.3) must be returned to the manufacturer or otherwise disposed of.
2. No maintenance is required, except as noted in paragraph. 8.3.

5. Instructions for Mounting on Life Vests

1. The recommended method for mounting the WAB-H12 on life vests is:
 - a) Attach light assembly to vest at the fabric attachment point ring provided on vest, by first inserting lens through fabric attachment point ring and then pushing upper ring on plastic bulb holder through fabric attachment ring.
 - b) Attach battery firmly to vest harness by wrapping around several times with adhesive strip or other attachment means recommended by vest manufacturer.

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2. An alternative method for mounting the WAB-H12 on life vests is:
 - a) Sew light assembly to vest light attachment point, attaching at any four of eight holes provided in lower ring of plastic bulb holder.
 - b) Continue as 5.1.b.
3. Other methods of mounting the WAB-H12 on life vests may be used by the life vest manufacturer but the method should be in such a way that it will not damage the battery. The battery case should not be exposed to high pressure or mechanical abuse.

NOTE: If the battery is supplied with plugs which will be used once the battery is installed, they must be rigged in such a way so as to be automatically removed from the battery upon removal of the host equipment from its primary packaging or upon inflation of the buoyancy chambers.

The battery must be positioned so as to be totally immersed in water.

Epsilon-Electric Fuel disclaims any warranty or responsibility in the event of any failure to follow these installation instructions exactly.

6. Instructions for Mounting on Life Rafts

1. The recommended method for mounting the WAB-H12 on life rafts is:
 - a) Insert light assembly in raft light holder.
 - b) Insert battery in battery holder opposite the light holder.
2. Other methods of mounting the WAB-H12 on life vests may be used by the life vest manufacturer but the method should be in such a way that it will not damage the battery. The battery case should not be exposed to high pressure or mechanical abuse.

NOTE: If the battery is supplied with plugs which will be used once the battery is installed, they must be rigged in such a way so as to be automatically removed from the battery upon removal of the host equipment from its primary packaging or upon inflation of the buoyancy chambers.

The battery must be positioned so as to be totally immersed in water.

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7. Storage Instructions

1. The WAB-H12 should be kept in unopened boxes with desiccant until needed. It is preferable that the boxes remain in the original packing cartons until required for use.
2. Cartons should not be stored directly on a floor or anywhere else where there is a concern that they might get wet.
3. Batteries, when in cartons and after removed from cartons, should be kept in **dry** and **temperate** conditions at all times. It is very important to avoid humidity above 60% RH.

4. Batteries should not be left without protection from moisture for more than 24 hours (in total) above 60% RH. (i.e. use battery plugs, sealed containers, desiccant).
5. For best storage results, it is recommended to use plugs on the batteries. Plugs should remain attached to the batteries at all times. If they are removed, they should be replaced as quickly as possible. If they are removed for attachment to the lifevest or liferaft, they should be removed immediately prior to attachment.
6. Lifevest or liferaft assembly should be packaged as soon as possible after battery is installed and not left open to the environment. Please note that even when packed in the life jacket bag the WAB-H12 should still be protected from high humidity (not above 60%).
7. Epsilon-Electric Fuel disclaims any warranty or responsibility in the event of any failure to follow these installation instructions exactly.

8. Limitations of the Device

1. The single-use Survivor Locator Light WAB-H12 is designed to provide light intensity of at least one (1.0) candlepower (cd) in all of the directions required by TSO-C85, for a minimum of twelve (12) hours after activation.
2. Once activated by immersion in water or any other conductive liquid, even if subsequently removed and dried, the battery should not be used again as a safety appliance under TSO-C85 or equivalent.
3. The Survivor Locator Light WAB-H12 is considered usable as a safety appliance, under TSO-C85, as long as the light bulb is operative and the battery does not show signs of swelling. Inspection is recommended at the same inspection intervals of the life vest or life raft. Inspection as follows:
 - a) Light bulb electrical Test:
 - i) Pierce the electric wire with two pins connected to a 1.5 VDC power supply. A zinc alkaline battery may be used in place of the power supply.
 - ii) Check that the lamp lights up. An inoperative light should be rejected and the light assembly replaced.
 - b) Battery test:

Replace the battery if the battery thickness exceeds 15.2 mm at any point in the area of the markings.