

# **TYPE 1 PBE USER MANUAL FOR P/N: 6408-005**

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### 0. REVISIONS REGISTER

Revision A	2016-12-08	Initial Revision
Revision B	2019-01-22	Added Table of Content, Contact information update

## 1. EQUIPMENT OVERVIEW

### 1.1. Product Description

The Type 1 protective breathing equipment (PBE) is designed to feel and operate like the real device in order to train for emergencies in a safe, controlled classroom environment. The training PBE includes a simulated pull cord, nose cone, head band, and weighted pouch for realism. The hood is similar in shape, colour, and weight to the OEM PBE.

This PBE is designed with durable materials in order to withstand the wear and tear it will experience during repeated use in a training environment. The device can be completely dismantled for easy cleaning between uses or for replacement of parts. Tulmar Safety Systems is also able to provide repairs to the textile portion of the PBE and replace parts that experience wear through repeated use.

The neck seal for this unit is available in latex free EPDM material or latex based variants.

### 1.2. Parts and Features

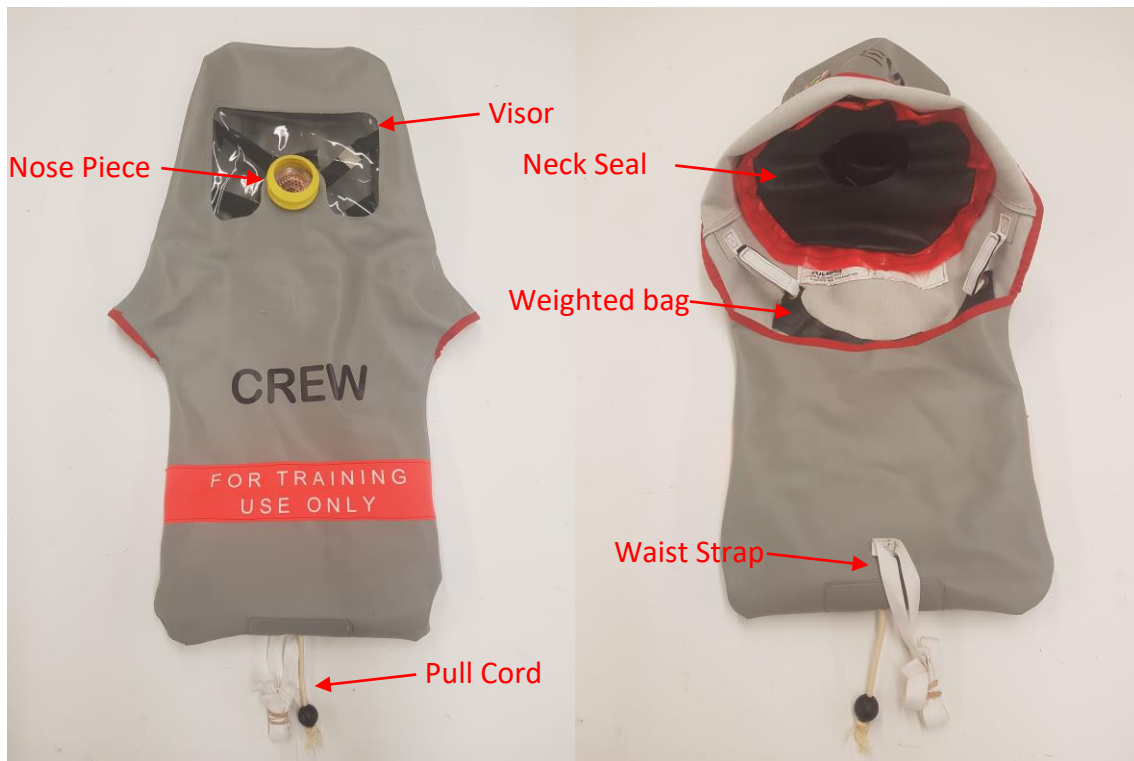


Figure 1: PBE Type 1 6408-005 front and rear views

## 2. SAFETY PRECAUTIONS

This device is intended for training and simulation purposes under the supervision of a trainer knowledgeable in its use only, and will not provide protection from smoke inhalation or toxic gases in the event of a real emergency. Do not block or cover ventilation holes during training exercises.

## 3. OPERATION

### 3.1. Removal from Storage and Donning

1. If the PBE is stored in a box assembly, open the box by pulling outwards on the longer end of the metal latch and remove the PBE from the box (Figure 2).



Figure 2: Removal of latch on box assembly

2. If the PBE is in the re-useable pouch, open the pouch by pulling the white 'PULL' label on the Velcro strip along the top of the pouch, then remove the hood.



Figure 3: Opening re-useable pouch

3. Hold the smoke hood in front of you, stretching the neck seal open with both hands (Figure 4).



Figure 4: Neck seal stretched open

4. Pull the hood over your head, making sure to align the nose cone with your nose and mouth.
5. Tie the waist strap around your torso to hold the front portion in place.
6. The pull cord at the bottom of the hood can be used to simulate activation of a functional PBE.

## 3.2. Operation

1. Once the user is wearing the hood, you can follow your standard training procedure.
2. After your training exercise is complete, undo the waist strap and remove the device by grabbing the back of the hood and pulling forwards off your head.

## 4. CARE AND BASIC MAINTENANCE

### 4.1. Care after Use

#### 4.1.1. Disinfection

The nose cone, neck seal, and facial contact area in the front of the hood should be disinfected with alcohol between uses to ensure the health of the trainees.

#### 4.1.2. Storage

The PBE should be stored in a protective container to prevent damage when not in use. If you have the re-useable pouch and/or the box assembly, the device can be stored within by following the instructions below. If your kit does not include the re-useable packaging, the PBE can be folded in half and stored in a 16" by 20" re-sealable plastic bag.

1. Place the device on a flat surface with the rear facing upwards.
2. Fold the sides of the device inwards (Figure 5).



**Figure 5: Folding PBE to proper width**

3. Roll the bottom of the PBE upwards (Figure 6) in order to match the size of the re-usable pouch and box assembly (Figure 7).



**Figure 6: Rolling PBE upwards**



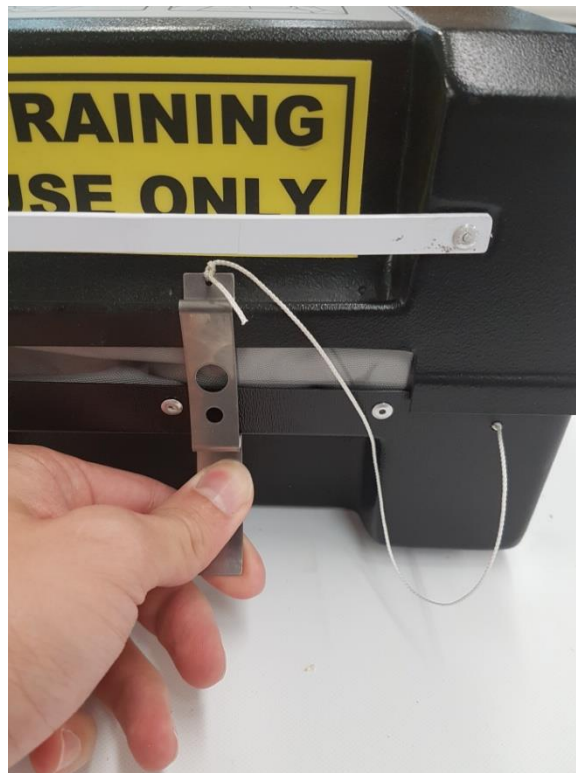
**Figure 7: Completely folded PBE**

4. Insert the folded hood into the re-useable pouch and seal the Velcro strip (Figure 8).



**Figure 8: Inserting folded hood into re-useable pouch**

5. Insert the hood and pouch into the box assembly and close the lid. Fasten the lid by pushing the metal latch on to the front edge (Figure 9).



**Figure 9: Closing latch on box assembly**



## 4.2. Cleaning

### 4.2.1. Disassembly

1. Remove the neck seal by undoing the Velcro strip used to fasten it in place.
2. Hold the PBE with the opening facing upwards. Grasp the front of the nose cone firmly in one hand and unscrew the black retaining ring (Figure 10) on the inside of the nose cone assembly counter-clockwise. Remove the rubber nose protector.
3. Carefully undo the 4 snaps attached to the plastic nose cone and remove the remainder of the nose cone components.

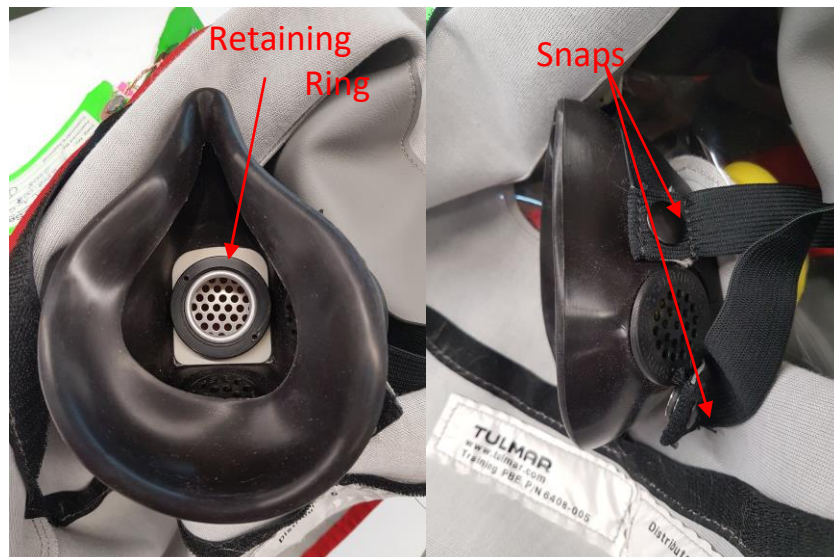


Figure 10: Fastening mechanisms for nose cone

4. Remove the weighted bag from the unit by unfastening the two Velcro straps holding it in place (Figure 11).
5. Undo the bowline knot in the pull cord and detach the pull cord.



Figure 11: Fastening mechanisms for weighted bag

### 4.2.2. Cleaning and Drying

1. If any stains, oil, or grease are present, treat the affected area with a concentrated solution of wash detergent to remove the stain. Thoroughly rinse with water before cleaning the entire unit.
2. All components can be cleaned by hand with a solution of mild soap and water, rinsing thoroughly with water. If necessary, the main body of the hood can be washed in a standard washing machine on delicate cycle.
3. Allow components to air dry fully. The main body of the hood can be dried in a dryer on delicate cycle.

### 4.2.3. Reassembly

Once completely dry, the unit can be reassembled.

1. Reassemble the nose cone on to the smoke hood in the order shown below, with the yellow voice transmitter boot and the metal voice transmitter on the outside of the hood, and all other components on the inside (Figure 12). With the voice transmitter assembled into the yellow rubber boot, insert the threaded end of the voice transmitter into the opening of the smoke hood.



Figure 12: Nose cone components ordered left to right from outermost to innermost components

2. Slide the plastic nose cone over the threaded end of the voice transmitter, ensuring the nose cone is oriented correctly.
3. Fasten the four snaps holding the nose cone in place.
4. Insert the rubber nose protector onto the threaded end of the voice transmitter, aligned with the orientation of the plastic nose cone.
5. Slide the metal washer onto the threaded end of the voice transmitter and fasten the black retaining ring.
6. Hand tighten the retaining ring while firmly holding the base of the plastic nose cone.
7. Reattach the weighted bag using the two Velcro straps.
8. Thread the pull cord through the grommet at the bottom of the PBE, tying it to the weighted bag.
9. Place the smoke hood upside down with the front (face) pointed towards you. Position the neck seal over the opening with the **red strip facing up towards you and the hole of the neck seal nearest the rear of the smoke hood**. The Velcro strip on the neck seal

perimeter should be facing in towards the smoke hood. Working around the perimeter, firmly mate the hook and loop fastener together. Note: Installing the neck seal in the wrong direction can cause it to detach during operation (Figure 13).



Figure 13: Latex free neck seal oriented with opening closest to rear of hood and Velcro strip facing downwards

#### 4.2.4. Repairs

More thorough cleaning and/or repairs of the PBE are handled by Tulmar Safety Systems. Please contact our customer service department for more information. Contact details can be found on the cover of this manual.

## 5. COMPONENTS

The following table lists components available for the Type 1 PBE. If you are looking to replace a part that is not listed below, please contact Tulmar Safety Systems.

Part No.	Description	Image
6412-NP	Latex neck seal	Not pictured, similar to 6412-001
2144	Pull cord	Figure 14, item 1
5667-001	Plastic nose cone	Figure 14, item 2
6423-302	Re-Useable Pouch. PBE Type 1	Figure 14, item 3
6423-300	Box Assembly, PBE Type 1	Figure 14, item 4
6408-203	Voice transmitter, training only	Figure 14, item 5
6408-201	Rubber voice transmitter boot	Figure 14, item 6
6408-200	Rubber nose protector, black	Figure 14, item 7
6412-001	Non-latex neck seal	Figure 14, item 8

Table provided for reference only, information may change without notice



Figure 14: PBE Components

## 6. WARRANTY

### 6.1. Warranty Policy

Tulmar training PBEs are guaranteed for 90 days from the date of shipment to the customer against defects in materials or workmanship. If a product is found to be defective within the warranty period, the product will be repaired or replaced without charge for parts or labour.

### 6.2. Limitations

The warranty is limited to the original purchaser of a new product, and is valid only if the product was purchased from Tulmar or an authorized distributor. This warranty does not cover routine maintenance or damage resulting from the failure to maintain the product in accordance with instructions provided in the User Manual. This warranty also does not cover damage during transport of the product, ordinary wear and tear arising from use of the product, or damage that may arise from accidental or intentional misuse or abuse, alteration or customization, or repair by unauthorized persons.

### 6.3. Remedy

If a defect arises within the warranty period, contact Tulmar customer service at +1 (613) 632-1282 or by email to [aviation@tulmar.com](mailto:aviation@tulmar.com) with the details of the issue and a copy of the original purchase order. Product may only be returned after a Return Material Authorization (RMA) number is issued.

The cost and liability of delivering the damaged product to Tulmar or an authorized Tulmar repair facility are the responsibility of the customer. The documentation, packaging and the enclosed item must be clearly identified with the RMA number. Tulmar, at its sole discretion, will either repair or replace the product with one of functional equivalence. Repaired or replacement products will be returned to the customer's original order destination on a carrier and service of Tulmar's choice.