

# Respiratory protective equipment – ancillary equipment – technical information

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# Introduction

## 1 Introduction

- 1.1 This policy describes respiratory protective equipment (RPE) ancillary equipment and explains its use, method of operation, maintenance and testing. It should be read in conjunction with Policy number 466 – RPE – breathing apparatus – operational procedures and Policy number 476 – RPE – breathing apparatus – MSA M1 – technical information.
- 1.2 This policy has been prepared by the RPE and Hazmat PPE Team. If personnel have any questions relating to this policy please email RPE and Hazmat PPE mailbox.

## Breathing apparatus retractable personal line

### 2 Description

- 2.1 The breathing apparatus (BA) retractable personal line is 6 metres long and is divided into two sections by a stop-knot which is tied into the line 1.25 m from the running end.
- 2.2 The line is made from 2.6 mm Aramid cord with a karabiner fitted to the running end of the line.
- 2.3 The line is stowed inside a permanent housing which contains the retracting spring mechanism. The personal line is permanently attached to the right hand side of the BA set waist belt.
- 2.4 The MSA M1 BA set has an attachment point at the bottom of the backplate above the shock buffer, and when not in use, the personal line karabiner should be attached to it.
- 2.5 The personal line must remain attached to the BA set when it is sent to Operations Support Group (OSG).

### 3 Method of use

- 3.1 The personal line may be used at the default setting of up to 1.25 m length, or by operating the stop-knot release button up to its maximum length of 6 m (see Policy number 466 – RPE – breathing apparatus – operational procedures for details of operational use).
- 3.2 The line is constantly under tension and will retract and extend as the wearer moves.

### 4 Cleaning

- 4.1 The housing should be cleaned using a 'Wypall' cloth and a prepared 4% solution of Diversey Oxivir Excel diluted in 10 litres of water. This measurement equates to 15 full squirts from the pump-action dispenser into 10 litres of water. Wipe away solution using cloth and clean water.
- 4.2 The line can be cleaned using a damp cloth and water. Dry with a clean cloth. Ensure the line is dry before re-housing. Do not use cleaning agents on the line.

### 5 Testing

#### Frequency

- On receipt.
- During the 'A' and 'B' test.
- After use.

## **'A' test details**

- 5.1 Examine the housing for signs of wear or damage.
- 5.2 Ensure that the karabiner is clipped onto the attachment point on the bottom of the BA set backplate.

## **'B' test details**

- 5.3 Examine the housing for signs of wear or damage, clean with Diversey Oxivir Excel solution if required. Check the housing is secured to the waist belt correctly and that no screws are missing.
- 5.4 Examine the karabiner and ensure it operates freely and that the gate returns to the closed position on its spring. Clean with Diversey Oxivir Excel solution if required.
- 5.5 Remove the line from the housing and examine the short length of line for signs of wear or damage. Ensure that the stop-knot prevents the line from extending more than the short line. Clean with damp cloth and water if required.
- 5.6 Operate the stop-knot release button to allow the knot past, ensure it operates correctly and returns to the open position on its spring. See image 1729527 below.
- 5.7 Remove the remaining line from the housing and examine the line for signs of wear or damage. Clean with damp cloth and water if required.
- 5.8 Allow the line to return into the housing until the stop-knot is reached and then operate the knot release button to allow the remaining line to be housed.
- 5.9 Ensure that the karabiner is clipped onto the attachment point of the BA set backplate with the gate opening towards the wearer's body (this prevents any snag hazard that may be caused by the karabiner gate), then operate the stop-knot release button to remove any slack in the line . See images 1678666 and 1729527 below.

**Note:** Whenever retracting the personal line ensure a counter tension is maintained onto the line. This is to prevent the line from retracting too quickly causing either damage to the line or causing injury when the karabiner is pulled towards the housing.

## **6 Allocation**

- 6.1 BA personal lines are allocated as follows:
  - One per BA set.

## **7 Defective equipment**

- 7.1 If the personal line becomes defective return the BA set to OSG as detailed in Policy number 476 – Respiratory protective equipment – breathing apparatus – MSA M1 – technical information.

## 8 BA retractable personal line images



LFB image 1678666



LFB image 1729527

## Breathing apparatus cable cutters

### 9 Description

- 9.1 The model of cable cutters used by the London Fire Brigade (LFB) is the Draper Expert Ergo Plus fully insulated cable cutter. The cable cutters are made of hardened, tempered steel and incorporate an ergonomic design which provides a high degree of leverage to be achieved with all hand sizes. An integrated opening spring reduces effort and fatigue when the cable cutters are in use.
- 9.2 The cable cutters are manufactured to the European standard and individually certified to EN 60900:2004 (the standard for all insulated and insulating hand tools used for working on live or close to live electrical parts at nominal voltages up to 1 000 V a.c. and 1 500 V d.c).
- 9.3 The cable cutters are specifically designed to cut all cables which are likely to be encountered on the "consumer's side" of an electrical installation within domestic and commercial premises.
- 9.4 The cable cutters have a safety mechanism fitted to the handles to prevent accidental opening and they should be stored in the closed and locked position to prevent injury or damage.
- 9.5 The cable cutter is stored in a purpose designed orange pouch attached to the waist belt of the BA set. The cable cutters are permanently attached to the pouch by a heat resistant safety lanyard, to assist in locating the cable cutters if they are dropped during use.
- 9.6 The cable cutter pouch is fitted to the left hand side (as worn) of the waist belt of the BA set and forms part of the BA ancillary equipment. Fitted to the rear of the cable cutter pouch is a Velcro attachment strap which enables ease of fitting as well as removal should the pouch become defective. Replacement cable cutter and/or pouch are ordered on POMS and exchanged via the day van service.

### 10 Method of attachment

- 10.1 The cable cutter and pouch are attached to the MSA M1 BA set as follows:
  - Hold the pouch upside down and above the left hand side of the BA set waist belt (between the waist belt anchor buckle and the waist pad 'D' ring loop).
  - Thread the pouch upper Velcro strap between the webbing and padding of the waist belt (see image 1729516).

- Bring the pouch lower Velcro strap up to meet the upper Velcro strap and attach (overlapping by approximately 50mm) (see image 1729518).
- Bring the pouch upper Velcro strap down and over the lower Velcro strap and attach (see image 1729519).
- Place pouch in upright position and open the pouch flap. The cable cutter safety lanyard is attached to the black anchor strap found inside. Thread the line through the anchor strap and tie a bowline knot (see image 1729520).

**NOTE:** The knot must be tight to the anchor strap to ensure a loop is not formed that could snag the cutter handle and prevent removal.

- Ensure the cable cutter safety catch is in the locked position and place inside the pouch, ensuring the blade follows the correct orientation with the pouch (see image 1729521).
- The safety lanyard should be wrapped around the wearers fingers to form coils and then placed between the handles of the cable cutter inside the pouch (see image 1729523).
- Ensure the safety lanyard and cable cutter are correctly stowed and that the pouch is securely closed (see image 1729524).

**NOTE:** when returning a BA set to OSG for inspection/repair, the cable cutter must be removed and transferred to the replacement BA set.

## 11 Method of use

- 11.1 The cable cutters should only be used when BA wearers have become entangled by fallen cables. They are not provided or designed for any other type of use. (see Policy number 466 – RPE – breathing apparatus – operational procedures - section 10 and appendix 5 for details of operational use).

## 12 Cleaning

- 12.1 Wipe with a damp cloth using a warm mild detergent solution and dry with a clean cloth. Ensure the safety lanyard is dry before restowing.

## 13 Testing

### Frequency

- On receipt.
- During the 'A' and 'B' test.
- After use.

### 'A' Test details

- 13.1 Examine the pouch for signs of wear or damage.
- 13.2 Ensure the cable cutter safety catch is in the locked position.
- 13.3 Ensure the cable cutter and safety lanyard are clean and stowed in the pouch correctly (see 'B' test below for details).
- 13.4 All testing of the cable cutter must be recorded within the relevant section of the BA set log book. Recently printed BA log books have a specific section for recording the cable cutter test. Older versions should be annotated to record the result of the test within the remarks column.



## **'B' test details**

- 13.5 Remove the cable cutter and safety lanyard from the pouch and examine the full length of safety lanyard for signs of wear or damage and security of attachment.
- 13.6 Examine the cable cutter for wear or damage and signs of contamination. Ensure handle insulation is free from cuts or abrasion which exposes the metal handle beneath.
- 13.7 Unlock the safety catch and ensure the cable cutter operates freely and that the spring action returns them to the open position.
- 13.8 Ensure the safety catch fitted to the handle is engaged in the closed position.
- 13.9 Examine the pouch for signs of wear or damage and security of attachment to BA set waist belt.
- 13.10 Restow the cable cutter in the pouch and ensure that the safety lanyard is securely housed in the pouch and that the pouch is securely closed.
- 13.11 The recording of all cable cutter tests should be as per 13.4 above.

## **14 Allocation**

- 14.1 Cable cutter and pouch are allocated as follows:
  - One per BA set.
  - One per RPE spares box.

## **15 Defective equipment**

- 15.1 The replacement cable cutter and/or pouch should be taken from the station RPE spares box which is kept in the RPE maintenance room.
- 15.2 Replacement BA cable cutter and/or pouch should be ordered via POMS. The cable cutter and pouch are listed as two separate items.
- 15.3 The defective item(s) must be labelled as defective and left at the designated point for collection by the day van service.
- 15.4 The exchange of the cable cutter and/or pouch are to be recorded in the remarks column of the BA log book.
- 15.5 On receipt of a POMS order Operational Support Group (OSG) will dispatch replacement cable cutter and/or pouch via the day van service.
- 15.6 On receipt the replacement cable cutter and/or pouch should be placed in the RPE spares box for future use.

## 16 BA cable cutter and pouch attachment images



LFB image 465282



LFB image 1729516



LFB image 17295189



LFB image 1729519



LFB image 1729520



LFB image 1729522



LFB image 1729523



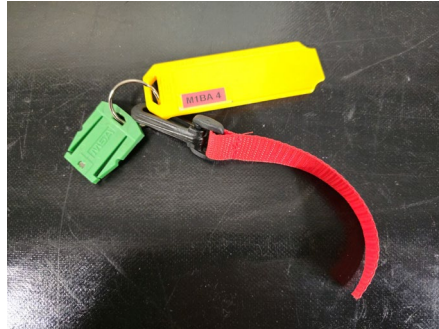
LFB image 1729524

# BA entry control telemetry tally

## 17 Description

17.1 Every breathing apparatus set is fitted with a detachable BA tally attached to the Control Module safety key by means of a split ring. The tallies are made from yellow plastic and are designed to fit into the slots of the BA entry control board.

- A yellow tally denotes an SDBA set.
- A yellow tally with a red EDDBA tether attached to the split ring denotes an EDDBA configured set (see image1686428).



LFB image 1686428

17.2 The front of the tally is marked with the following details:

- **NAME** (enter role and name below).
- **CYL.PRESS** (enter cylinder pressure below).
- **TIME IN** (enter entry time below).
- BA set number (label with unique asset number allocated to the BA set).



LFB image 1678532

17.3 The back of the tally is marked with the following details:

- **IN** (enter EPD reading on entry below).
- **OUT** (enter EPD reading on exit below).
- **SERIAL No** (label with the allocated Control Module serial number required for telemetry connection).



LFB image 1678531

17.4 Entries must be completed in black chinagraph pencil.

## 18 Cleaning

18.1 Tallies should be cleaned using a soft dry cloth stubborn stains can be removed using mild detergent. Abrasives must not be used.

## 19 Inspection

19.1 Tallies must be clean and unbroken, with the printed/engraved details clearly legible. The BA tally must be securely fixed to the Control Module safety key by means of the split ring.

19.2 Defective BA tallies can be replaced by ordering new ones from OSG via POMS order. The POMS order should include the station name, Control Module serial number and BA set number, so this information can be printed and programmed into the BA tally prior to dispatch.

19.3 Defective BA tallies should be returned to OSG.

**NOTE:** for detail on how to find the Control Module serial number see policy number 476 – Respiratory protective equipment – breathing apparatus – MSA M1 – technical information, section 12 Control Module service menu.

## Dräger Parat 5550h fire escape hood

### 20 Description

20.1 The Dräger Parat 5550h fire escape hood is a self-contained unit to be provided to members of the public who are unable to escape due to the fire and/or effects of smoke, or, for those who during the course of their evacuation are likely to be exposed to smoke.

20.2 The hood covers the entire head, and will help protect the eyes from dust, gases and splashes of liquid as well as heat, sparks and brief exposure to flame. It enables a clear view through the large visor.

#### Technical details

Weight	706g
Size (H - L - W)	110mm – 160mm – 130mm (one size fits all)
European standard (hood/filter)	EN 403:2004
European standard (pouch)	EN 137:2007 – 6.2, 6.10, 6.11, 6.24, 8, 9
Shelf life	8 years



20.3 The complete fire rescue hood unit consists of the following component parts:



LFB Image id: 961006

20.4 Hood with visor:

- Made from polyamide with a polyurethane coating.
- Hi-visibility neon yellow colour.
- Visor with wide field of vision, made from cellulose propionate with anti-fog coating.
- Fitted with an automatically adjusting internal head harness.
- Neck collar is made from polyester and elastane.
- Exhalation valve made from age resistant silicone.
- The hood does not contain easily flammable parts. At  $800 \pm 50^\circ\text{C}$  the hood is pulled through an open flame at  $6 \pm 0.5$  cm/sec. When removed from the flame, the hood stops burning (self-extinguishing).

20.5 Inner half-mask (integrated into the hood) with filter assembly:

- Made from ethylene propylene – M class rubber.
- Fits various face sizes.

20.6 Fire escape filter CO-P2:

- The filter housing is round and consists of filter pot and the filter cover. The filter cover has a round inlet and the filter pot has a round outlet.
- Both openings are closed by rubber plugs which are detachable via the red pull cord.
- The filter bed consists of Hopcalite and is fixed by the housing and internal sieves.
- Filter expiration date is marked on the filter casing.

20.7 Pouch:

- The pouch does not contain any easily flammable parts and as part of the EN 137 certification must have passed the flame engulfment test.
- It is attached to the breathing apparatus (BA) set via two straps located at the rear of the pouch.

- The flap to the pouch is secured via a strip of Velcro along its linear aspect and two Velcro discs on each flap.

20.8 Attached to the BA set, ready to be deployed by the BA wearer.



LFB Image id: 959559



LFB Image id:1342549



LFB Image id: 959561

20.9 The hood will provide the wearer with 15 minutes of respiratory protection against four of the main fire gases and one additional gas:

Carbon monoxide (CO)	2500 ppm (parts per million)
Hydrogen cyanide (HCN)	400 ppm
Hydrogen chloride (HCl)	1000 ppm
Hydrogen sulphide (H <sub>2</sub> S)	2500 ppm
Acrolein	100 ppm

## 21 Safety precautions

- 21.1 Upon locating a possible recipient for the fire escape hood, the hood must be offered by the BA wearer.
- 21.2 **No** attempt is to be made to force the potential recipient to wear the hood.
- 21.3 If the recipient is willing to wear the hood then, under supervision they should don the hood themselves.
- 21.4 Assistance by the BA wearer is permitted but consideration needs to be given to the potential for the recipient to panic during or after the hood is fitted.
- 21.5 Supplementary hoods must be obtained by BA operatives if the wear time is anticipated to extend beyond the 15 minute wear time.

## 22 Attaching the fire escape hood

### Attaching the fire escape hood to the BA set

22.1 The fire escape hood is attached to the BA set via the backplates carry handle on the **right hand side** (as worn). The pouch should be oriented upside down for easier deployment by the BA wearer.

**Note:** Do not attach the fire escape hood to the backplates carry handle on the left hand side (as worn). Doing so will impede deployment of the rescue hose in an emergency.

22.2 The attachment is achieved by utilising the two horizontal straps on the rear of the pouch.



## Attaching the fire escape hood to the Pheonix harness

- 22.3 The method for attaching the fire escape hood unit while working from an aerial appliance and not wearing BA is to attach it to the lower portion of the right hand shoulder strap of the Pheonix harness.



LFB image 1724509



LFB image 1724510

- 22.4 If BA is to be worn while working from an aerial appliance then the fire escape hood should be detached from the Pheonix harness and fitted to the BA set as described above (paragraph 22.1).



LFB image 1724512



LFB image 1724513

## 23 Deploying the hood

- 23.1 If a recipient has been identified by the BA wearer and they are willing to wear the hood, then the following deployment should be carried out:



23.2 Reach back with the right hand and locate the opening flap to the pouch.

23.3 Grasp the flap and pull out and up away from your body. Reach inside the pouch and remove the hood in the vacuum sealed plastic bag.



LFB image 1724505



LFB image 1724507

23.4 Locate the orange corner of the bag and tear line. Tear the strip along the top of the bag, reach in, grasp the hood firmly and pull out of the bag.



LFB Image id: 959550



LFB Image id: 959551

23.5 Remove both the inner and outer rubber filter plugs by pulling the red cords to which they are attached.

23.6 If the recipient is willing and able to don the hood themselves then this should be encouraged. Instruction and support can be offered at this time by the BA wearer.

23.7 Once the recipient has donned the hood, the filter assembly should be pulled slightly away from the face by the BA wearer and then gently allowed to reseat onto the hood wearer to ensure that the inner face mask is sitting correctly.



- 23.8 Either the recipient or the BA wearer should then check for a correct fitting by placing a hand over the filter inlet while the hood wearer breathes in.
- 23.9 If the fit is correct, negative pressure should be created within the inner face mask.
- 23.10 If negative pressure is not achieved, then further adjustment of the inner face mask should be carried out.



LFB Image id:959565



LFB Image id: 959566



LFB Image id: 959567

- 23.11 If the willing recipient is unable to don the hood themselves, or they are unconscious, the donning may be carried out by the BA wearer.

## 24 Assisted donning of the fire escape hood

- 24.1 Widen the neck seal.



LFB Image id: 959562

- 24.2 Bring the hood to the recipient, placing their chin into the bottom part of the inner face mask. Gently ease the rest of the the hood up and over their head.



LFB Image id: 959563



LFB Image id: 959564

- 24.3 Once the hood is fully over their head ensure that the neck seal is comfortably fitted.
- 24.4 Gently pull the outer filter casing away from the recipient and slowly return it to their face to ensure that the inner face mask is seated correctly.
- 24.5 Place a hand over the inlet hole to the filter, support the back of the head with the other hand and instruct the recipient to breath in. Confirm that negative pressure within the inner mask was created therefore indicating that a good fit has been achieved.
- 24.6 If no vacuum was achieved, gently pull the filter housing away from the recipients face again and allow to gently resettle. Repeat the negative pressure test.

## 25 Accidental damage

- 25.1 When the fire escape hood is delivered to the LFB within the pouch, it is oriented so that the metal filter is facing the outer panel of the pouch.



LFB image id: 959560

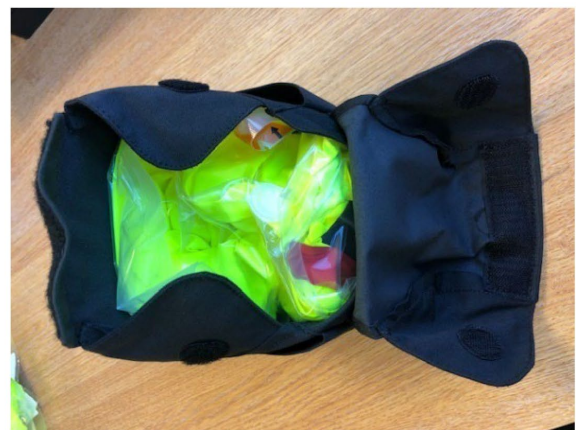
- 25.2 Having the fire escape hood oriented in this way while having the pouch attached to the BA set has shown to give rise to accidental damage to the metal filter housing.



25.3 Upon receipt, the fire escape hood must be checked to ensure that the filter housing is oriented towards the rear (re-enforced) panel of the pouch.



Front panel orientation



Rear (re-enforced) panel orientation

25.4 The protection afforded by the re-enforced panel should help reduce the incidence of accidental damage.

## 26 Maintenance and testing

26.1 An un-opened fire escape hood has an 8 year shelf life.

26.2 The fire escape hood must be inspected on every 'A' test of the BA set and upon the taking over as an aerial appliance commander.

26.3 Upon taking over the BA set and/or Pheonix harness, a visual external inspection of the carrying pouch is to be carried out.

26.4 Ensure that both yellow plastic buckles on the rear of the pouch are undamaged.

26.5 Inspect the external condition of the pouch flap and security of the Velcro fasteners.

26.6 Peel back the corner flap and note the condition of the vacuum sealed bag containing the hood.

26.7 Note if the vacuum is still in place within the plastic bag and if there appears to be any contaminants on it externally.



- 26.8 If contaminants or lack of vacuum are noted then the pouch is to be opened and the plastic bag containing the hood removed from the pouch.
- 26.9 A thorough inspection of the plastic bag is to be carried out looking for lacerations or punctures that may allow contaminants to enter.
- 26.10 If no damage to the bag is noted then remove any contaminants and gently squeeze the bag to re-establish vacuum.
- 26.11 The pouch and plastic bag can be fully cleaned using mild detergent.
- 26.12 The training hood is to be inspected before use for serviceability.
- 26.13 As the training hood is a reusable item, it is to be wiped clean with a BA face mask wipe prior to use.
- 26.14 If the training hood becomes dirty, it can be cleaned externally with mild detergent. Clean internally with BA face mask wipe.
- 26.15 Dry the hood thoroughly.

## **27 Allocation**

- 27.1 The Dräger Parat 5550h fire escape hood is allocated as follows:
- 1 per BA set.
  - 5 (in a grab bag) per FRU.

## **28 Defective equipment**

- 28.1 Defects to the pouch buckles will render the hood unit off the run (OTR), the complete unit is to be returned to Operations Support Group (OSG) and a replacement pouch ordered via POMS stating the reason for replacement. A tie-on label should be attached to the pouch indicating the station of origin.
- 28.2 If the security of the pouch flap is too weak due to wear on the Velcro fasteners then the unit could be placed OTR, the complete unit is to be returned to OSG and a replacement ordered via POMS stating the reason for replacement. A tie-on label should be attached to the pouch indicating the station of origin.
- 28.3 Any defect to the plastic bag will render the hood OTR. The complete unit is to be returned to OSG and a replacement ordered via POMS stating the reason for replacement. A tie on label should be attached to the pouch indicating the station of origin.
- 28.4 If during the weekly inspection it is noted that the expiry date stamped on the filter housing is within a month, a replacement hood in plastic bag is to be ordered.
- 28.5 The hood will stay on the run until the replacement has been received. Upon receipt of the replacement hood, the expired hood in the plastic bag must be returned to OSG.
- 28.6 After use, the hood is to be placed into a water-soluble bag and transported to the fire station of origin where, it is to be cut in half and disposed of locally.
- 28.7 The use of tough cut scissors is recommended to cut the hood in half.
- 28.8 A replacement hood is obtained through POMS. The order will require a reason or incident number.

- 28.9 The pouch that contained the hood should be returned to OSG for their inspection. A tag should be attached to denote the station of origin.
- 28.10 Should the training hood become unusable due to a defect, a replacement can be obtained via POMS.

## Emergency air supply equipment (EASE) bag

### 29 Description

- 29.1 The EASE bag is used to provide respiratory protection to a wearer who either: Has damage to the air supply of their BA set.
- Is low on air.
- 29.2 It provides a sufficient supply of air from another 6.8 litre cylinder to enable them to withdraw to safety. The EASE bag will be provided by a BA emergency team committed specifically for that task or by a decontamination operative during the decontamination of chemical protective clothing.
- 29.3 The EASE bag is a self-contained breathing apparatus operating independent of ambient air.
- 29.4 The bag houses a 6.8 litre cylinder and pneumatic system for air delivery accessed by a double zipped flap and handle for rapid deployment.
- 29.5 In addition, the bag has a separable carry handle, a deployable shoulder strap with buckles and a large snap hook for securing the bag when required (i.e. working at height etc.).
- 29.6 The bag has multiple pockets for stowing ancillaries such as BA emergency team armbands and the Control Module safety key and tally.
- 29.7 The EASE bag includes a pneumatic system incorporating a plate mounted pressure reducer with an approximately 1 metre length single line hose leading to the pressure gauge manifold assembly.
- 29.8 The pressure gauge manifold assembly consists of a pressure gauge, a pneumatic low pressure warning whistle and 2 QRC air connections.

### 30 Method of use

- 30.1 The EASE bag can augment air for a maximum of two BA wearers. When resources allow, BA emergency teams should be established at a ratio of 2:1. Therefore a standard two wearer BA team should be monitored by an emergency team of four as soon as resources allow.
- 30.2 BA wearers nominated as a BA emergency team **must** provide at least **one EASE bag for every two BA wearers being monitored by the BA emergency team.**
- 30.3 The cylinder of the EASE bag must have no less than **270** bar pressure.
- 30.4 Prior to committal by the BA emergency team, the EASE bag should be pressurised to ensure it contains a minimum pressure of **270** bar. The EASE bag is then to be turned off and the air discharged using the rescue hose of a BA set or if an LGDV is connected, pressing the flush button (additional flow).
- 30.5 Fully open the EASE bag cylinder valve before committing into the hazard zone.

- 30.6 When deploying the EASE bag to augment the air of a BA wearer. Fully open the EASE bag flap. The connection is made from the single line manifold and pressure gauge to the recipients rescue hose of their BA set.
- 30.7 The single line manifold assembly offers approximately 1 metre of hose which can be used in combination with the 1 metre of fully deployed rescue hose of the BA set.
- 30.8 The EASE bag manifold connections are fully compatible with the inline hose of the LGDV and G1 face mask if required in an emergency situation.

## 31 Cleaning

- 31.1 The EASE bag is to be washed in a warm mild detergent solution and rinsed in clean water, then allowed to dry naturally. Stubborn marks can be removed using a nail brush.
- 31.2 The cylinder and pneumatic system should be cleaned using a 'Wypall' cloth and a prepared 4% solution of Diversey Oxivir Excel diluted in water. This measurement equates to 15 full squirts from the pump-action dispenser into 10 litres of water.
- 31.3 Wipe off using a 'Wypall' cloth rinsed in clean water to remove any residual Diversey Oxivir Excel solution. Dry thoroughly.

**Note:** Do not submerge the pneumatic system.

## 32 Testing

### Frequency

- On acceptance.
  - After use.
  - Weekly.
- 32.1 See appendix 1 for EASE bag testing procedure aide memoire.

## 33 Allocation

- 33.1 The allocation is as follows:
- One EASE bag per FRU.
  - One EASE bag per PL.

## 34 Defective equipment

- 34.1 Defective EASE bags will be replaced by OSG on receipt of POMS order. When the POMS order is printed it should be attached to the defective bag and left in the designated point for collection by the day van service.
- 34.2 The EASE bag must be returned to OSG with the pneumatic system and log book only.
- 34.3 The:
- Cylinder.
  - Alphaclick adapter.
  - BA emergency team safety key.
  - BA emergency team wallet and armbands .

are to be retained on station and placed in the replacement EASE bag upon acceptance.

34.4 **NOTE:** If the cylinder has been consumed and requires replacing the Alphaclick adapter must be re-fitted to the cylinder when disconnected from the EASE bag pneumatic system, and the cylinder **must be labelled 'A/C'** (instead of 'M/T') on the black quadrant of the cylinder shoulder in chalk before being sent for recharging.

## 35 Replacing the cylinder

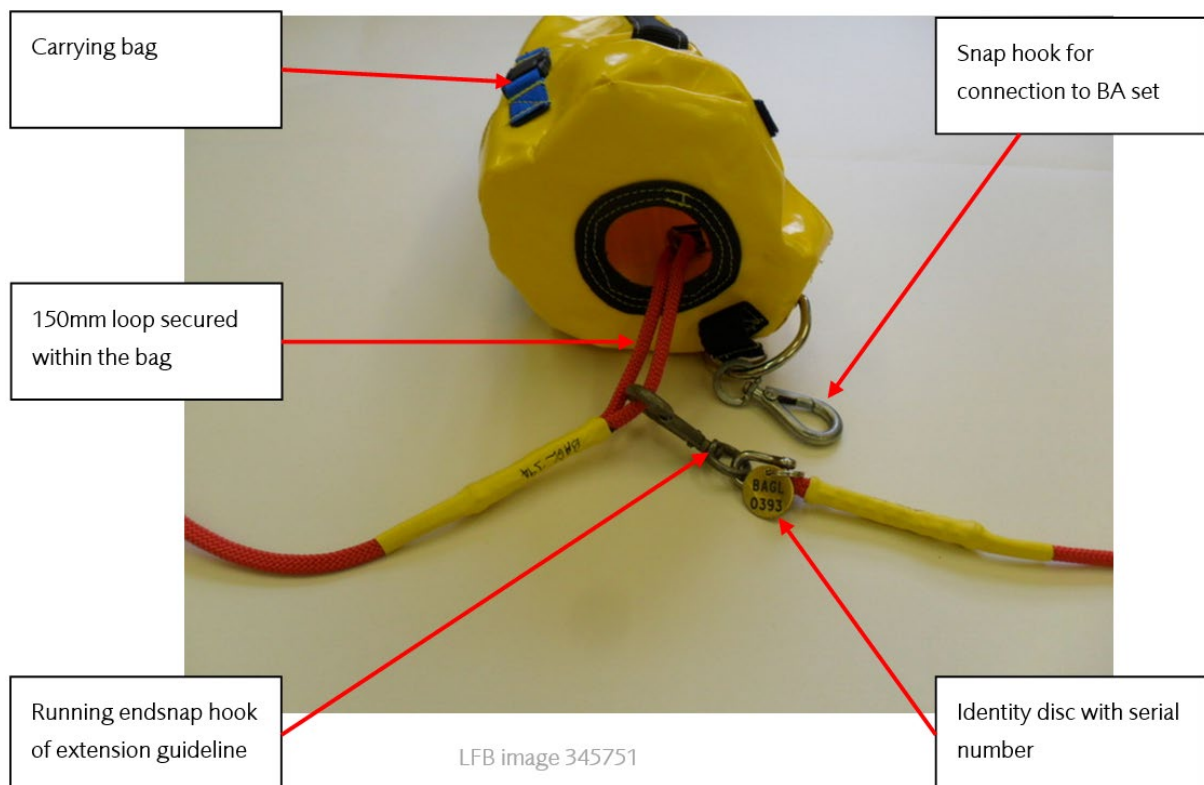
35.1 See appendix 1 for EASE bag cylinder replacement aide memoire.

## Breathing apparatus guideline and guideline tallies

### 36 Description

36.1 A guideline:

- Is 60 m long.
- Has a snap hook attached to the running end and a 150mm loop at the other end (see paragraph 43, figure 1). The loop has a plastic sleeve marked with the serial number of the line.
- A small identity disc is attached to the small snap hook of the running end of the line by means of a split ring. The disc is engraved with the serial number of the line and year of issue.
- Has along its length tabs permanently attached in pairs at regular 2.5 metre intervals. The tabs are approximately 150mm apart, one being unknotted and 125mm in length and the other is knotted and 50mm in length. When both tabs are held the short knotted tab will indicate the way out (see paragraph 43 figure 1).
- Is carried in the guideline bag. The bag has an internal snaphook for attachment of the guideline loop. The external snaphook is to enable the guideline bag to be attached to the BA set waist belt 'D' ring.



36.2 A guideline is identified by the use of tallies (see image 345753 below).

- Main guideline tallies are circular and approximately 75mm in diameter and marked with a 50mm 'A' or 'B'.
- Branch guideline tallies are rectangular measuring approximately 100mm x 50mm and have '1' to '4' holes drilled through the tally.
- Both types of tally are permanently fitted with a split ring to enable attachment to the guideline snap hook when in use.



LFB image 345753

## 37 Method of stowage

37.1 The method of stowage is as follows:

- The loop at the end of the line is attached to a snap hook which is permanently secured within the guideline bag.
- The line is fed into the bag 'hand over hand' in a random fashion.
- The snap hook at the running end of the line is passed out through the hole in the lid of the bag and attached to the 'split ring' on the nylon tab attached to the guideline bag lid.
- Ensure the lid is re-fastened securely.
- Guideline tallies are to be attached to the bag lids snap hook when stowed on the appliance.

## 38 Method of use

38.1 Further information on the use of guidelines can be found in Policy number 466.

- A guideline can be used either as a main guideline or as a branch guideline, in conjunction with main and branch guide line tallies.
- Guideline tallies are attached to the 'D' section part of the snap hook of a guideline by means of the split ring. (see paragraph 43 figure 2).



## 39 Cleaning

- 39.1 The guideline is to be washed in a cold mild detergent solution and rinsed in clean water, then allowed to dry naturally.
- 39.2 The guideline tallies and guideline bag are to be washed in a warm mild detergent solution and must be dried before restowing.

## 40 Testing

### Frequency

- On acceptance.
- After use.
- Six monthly.
- Annually (OSG will recall individual lines for testing).

### Test procedure

- 40.1 Remove the line from its carrying bag. Visually examine the bag for defects.
- 40.2 Visually examine the line for any signs of deterioration, burns or fraying.
- 40.3 Ensure the tab knots are secure and that the 'short' and 'long' tabs follow the correct sequence.
- 40.4 The snap hook operates freely and the gate returns to the closed position on its spring.

## 41 Allocation

- 41.1 BA guideline and bag are allocated as follows:
  - One per pump (P), pump ladder (PL) and fire rescue unit (FRU).
  - Three per OSU.
- 41.2 Main guideline tallies 'A' and 'B' are allocated as follows:
  - One set per P, PL and FRU.
  - One set per OSU (see BA control and service box).
- 41.3 Branch guideline tallies '1' to '4' are allocated as follows:
  - One set per FRU.
  - One set per OSU (see BA control and service box).

## 42 Defective equipment

- 42.1 Defective guidelines will be replaced by OSG on receipt of POMS order. The POMS order should include the identification number found on identification tally/plastic sleeve at each end of the guideline. When the POMS order is printed it should be attached to the defective guideline and left in the designated point for collection by the day van service.
- 42.2 The guideline should be sent to OSG in its carry bag with the POMS order attached.

### 43 BA main guideline and branch line tally images

Figure 1

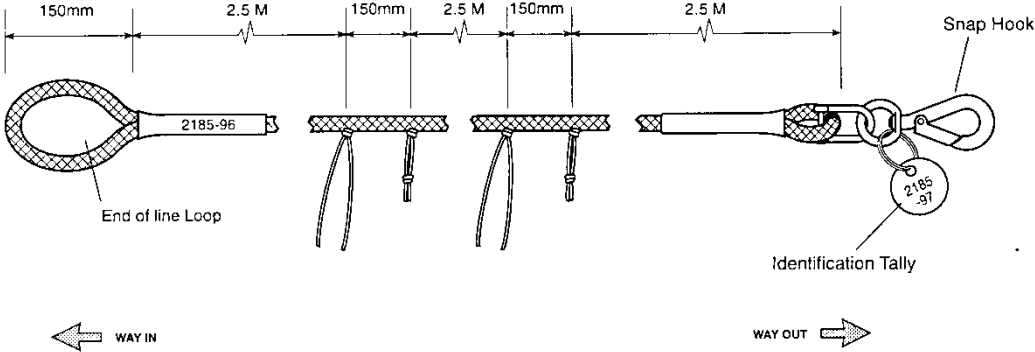
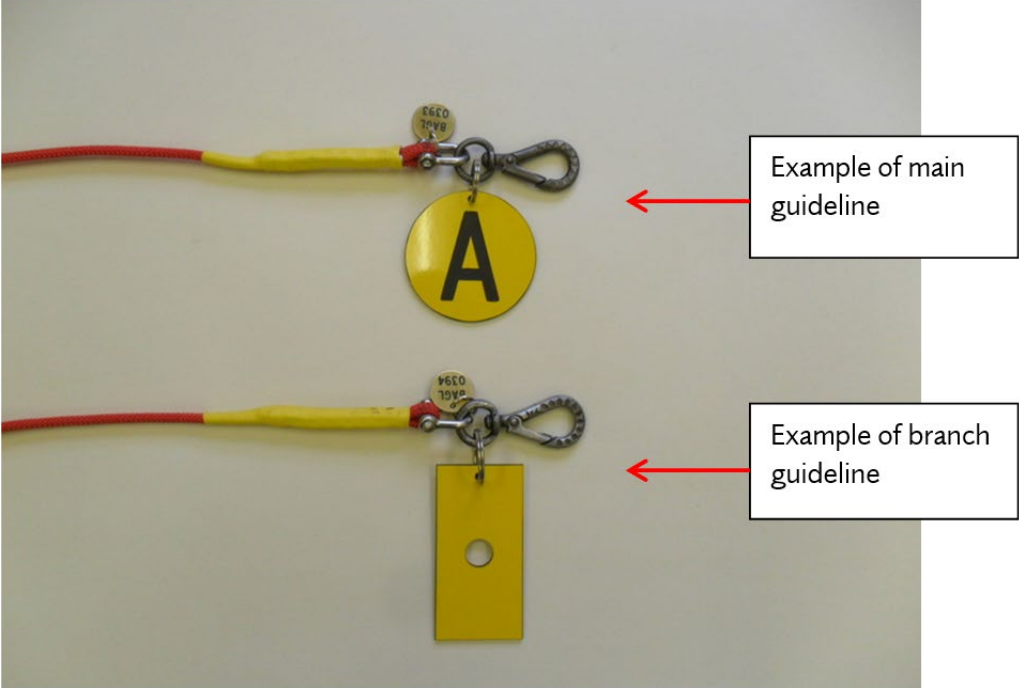
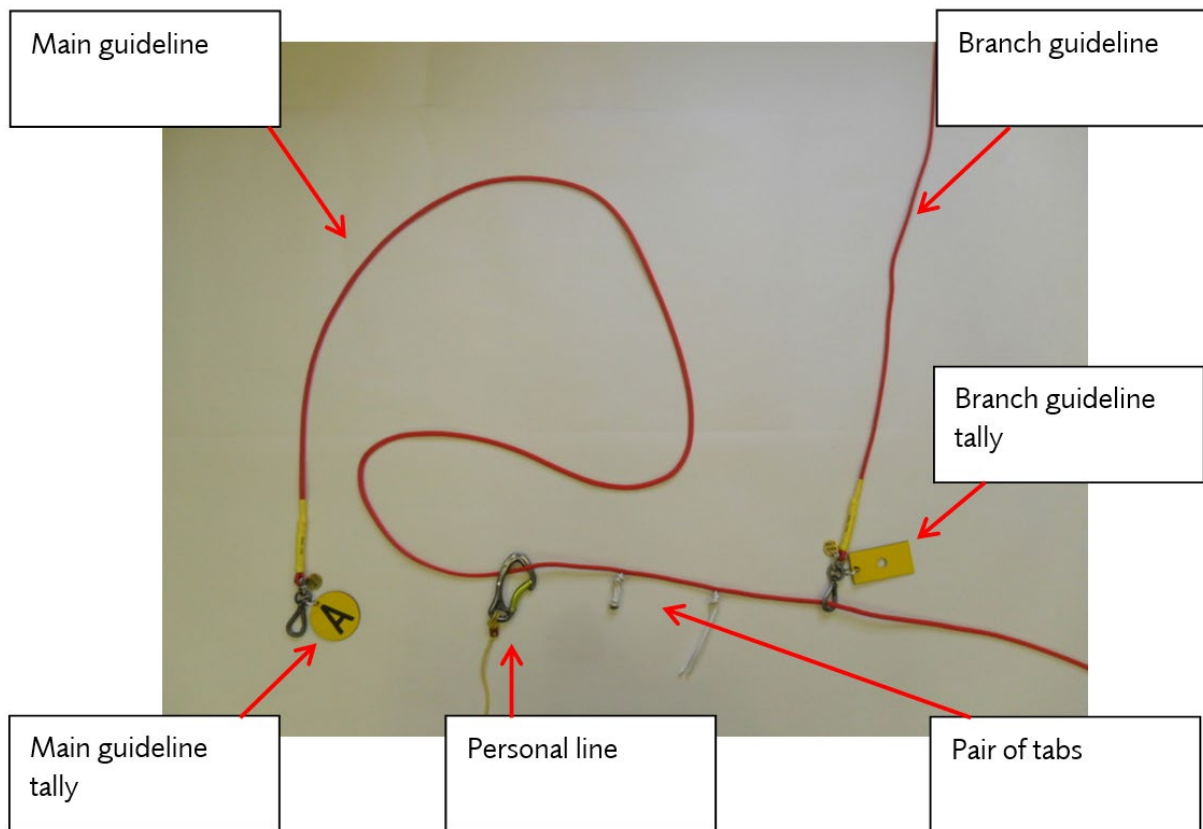


Figure 2



LFB image 345754

**Figure 3**



## Dräger Bodyguard 1000 automatic distress signal unit

### 44 Description

44.1 The Dräger Bodyguard 1000 automatic distress signal unit (ADSU) is for use with respirators and gas tight suits (GTS).



LFB image 268443

#### 44.2 Features:

1. Active LED – green.
2. Low battery LED – amber.
3. Right hand button – not used on this version.
4. Activation key.
5. Visual identification LED's – blue (normal), red (alarm mode).
6. Manual alarm button – yellow.
7. Left hand button – operation of radio frequency link (for OSG data download use only).

44.3 The Dräger Bodyguard 1000 is a battery powered ADSU that provides audible and visible alarm signals. The ADSU conforms to BS 10999:2010 specification for distress signal units for the fire and rescue service. The audible alarms use the activation key slots to amplify the sound. Visible signals are provided by red, blue, green and amber LED's on the casing.

44.4 During use the ADSU displays a flashing green LED that indicates active mode, and pulsating blue LED's that are used as a visual identification for fellow team members in poor visibility.

44.5 The ADSU is armed by the removal of the activation key.

44.6 The ADSU has a data logging facility which records testing history and any alarm actuations. This data will be downloaded by OSG during annual service and following any safety events.

## 45 Distress alarms

45.1 The main function of the ADSU is to provide automatic and manual distress alarms for personnel wearing RPE to summon assistance in the event of distress. The automatic distress alarm uses an internal motion sensor and timer to measure the time that the wearer has been motionless. The automatic distress alarm activates a pre-alarm and a full alarm at predetermined timed intervals when the wearer does not move in excess of normal breathing movement.

45.2 The manual alarm is operated by pressing the yellow button to allow the wearer to signal for help or attention without delay/immediately.

## 46 Modes and operating functions

46.1 The ADSU has the following operating modes and functions:

- **Sleep mode** – when the ADSU is switched off it enters a sleep mode (awaiting activation signal). The automatic alarms are disabled and all LED's are off. The manual distress alarm can be activated from sleep mode.
- **Active mode** – when the ADSU is switched on, and passes the self check, a start up signal occurs (four beeps, and a brief illumination of all LED's) and then the ADSU enters the active mode indicated by a flashing green LED (approximately every second). Automatic alarms are enabled and the blue LED's flash.
- **Pre-alert** – no movement sensed for approximately 30 seconds. Activates a repeating, increasing volume, triple beep alarm tone accompanied by alternating red and blue LED's.
- **Automatic distress alarm** – if no movement is sensed during the pre-alert period the pre alert alarm will sound for approximately 15 seconds before full alarm signal activates.
- **Manual distress alarm** – pressing the yellow button activates the full alarm signal.
- **Full alarm signal** – a high pitched pulsating alarm signal accompanied by alternating red and blue LED's.

- **Error alert** – if the ADSU fails the self check during start-up, or if a hardware failure occurs during use, the error alert activates (five beeps plus high frequency flash of the amber LED).
- **Low battery alert** – flashing amber LED and beep approximately every five seconds.
- **Radio frequency link** – for programming and data download (for OSG use only).

## 47 Magnetic flux fields

- 47.1 The ADSU may be affected by high intensity magnetic flux fields found in hospitals and research laboratories for use in body scanning, or if a magnet was in close proximity to the ADSU. The sensitivity of the motion sensor will be affected temporarily whilst in range of the magnetic field. However, the ADSU will not be damaged and will operate correctly once out of range of the magnetic field.
- 47.2 Policy number 112 - High intensity flux fields - magnetic resonance imagery (MRI) details the procedures to be adopted when they are encountered during LFB activities.

## 48 Similarity of sound of the ADSU to other alarm sounders

- 48.1 Other types of electrical equipment such as lift, fridge alarms have been found to generate similar sounds to that of an ADSU. Where doubt exists as to the source of an alarm the sound is to be treated as that of an ADSU actuating until confirmed otherwise.
- 48.2 Teams within the premises must inform the IC (and other BA teams) via the ECO if they locate a device that could be confused with the sound of an ADSU.
- 48.3 Personnel should also be aware that other Brigades/agencies may use distress signal units with different sounds to that used by the LFB.

## 49 Low battery warning signal

- 49.1 Once the ADSU is armed, a flashing amber LED and beep approximately every five seconds indicates a low battery charge.
- 49.2 Should a low battery warning signal occur while GTS/respirator is being worn, the wearer should inform the team leader who will consider whether to withdraw the team from the incident or continue the task following risk assessment. In either case the entry control officer (ECO) is to be informed immediately.

**Note:** The battery has sufficient power to operate the ADSU in full alarm for two hours after actuation of the low battery warning signal.

## 50 Method of attachment

- 50.1 The ADSU can either be attached to the ADSU loop on the outside of the GTS or the appropriate chest loop on the fire tunic. It is attached as follows (see images below):
- Lift the crocodile clip release plate found on the back of the ADSU, this will open the attachment clip jaws.
  - Pass the open jaws through the loop found on the outside of the GTS/fire tunic.
  - Close the crocodile clip release plate to secure.
- 50.2 The activation key has a snap hook to allow the key to be attached to the wearer's BA/respirator entry control tally.



LFB image 312056



LFB image 755601

## 51 Method of use

51.1 The ADSU is attached to either the fire tunic or the outside of a GTS and is armed by removing the key, the key is then attached to the entry control tally via the snap hook (see Policy number 502 – Chemical protective clothing and Policy number 759 – RPE – protection against particulates – operational procedures for details of operational use).

## 52 Cleaning

52.1 The ADSU should be wiped clean using a damp cloth and a warm mild detergent solution. Do not immerse the ADSU in water or cleaning fluids as this may damage the ADSU.

52.2 Organic solvents or abrasive materials **must not** be used to clean the ADSU. Products other than mild detergent solution may damage the ADSU.

## 53 Testing

53.1 At station level the only maintenance required is cleaning and see below for the ADSU function test.

53.2 OSG will recall all ADSU's on a bi-annual basis.

53.3 The batteries, which are expected to last a minimum of twenty four months before requiring replacement, will be replaced as part of the bi-annual test and are **not** to be changed at station level.

53.4 The ADSU should be tested:

- On receipt.
- Before use.
- Monthly.
- After use.

### ADSU function test

**Note:** Full alarm generates a high volume of noise and personnel testing the ADSU should wear suitable hearing protection if required for comfort purposes.

53.5 Check that the ADSU is clean and undamaged and that the snap hook is attached to the activation key split ring. Typical signs of damage that may affect the operation of the ADSU include impact, abrasion, cutting, corrosion and discolouration.

- 53.6 Remove the activation key to switch on the ADSU. Ensure start up signal occurs (four beeps, and brief illumination of all LED's) and then the green (active) LED and the blue visual LED's operate.
- 53.7 Immobilize the ADSU and check that the pre-alarm starts after approximately 30 seconds. Move the ADSU to cancel the alert.
- 53.8 Immobilize the ADSU again and ignore the pre-alarm, check that the full alarm starts approximately 15 seconds after the pre-alarm has actuated.
- 53.9 Cancel the alarm by insertion of the activation key.
- 53.10 Activate the full alarm by operating the yellow manual alarm button on the front of the ADSU.
- 53.11 Cancel the alarm by removal and reinsertion of the activation key.

## 54 Troubleshooting

Symptom	Fault	Remedy
ADSU fails to switch on	Low batteries/ADSU unserviceable.	Return to OSG under cover of POMS order.
Flashing amber LED and beep every five seconds.	Low batteries.	Return to OSG under cover of POMS order.
Five beeps plus high-frequency flashing of the amber LED.	Failed self check/hardware fault.	Return to OSG under cover of POMS order.
The green active LED is on for 10 seconds and then switches off.	The left hand button has been pressed for more than 3 seconds.	No action required. The ADSU has attempted to establish radio frequency link, which is normal.

## 55 Allocation

- 55.1 ADSU's are allocated one per BA set and are stowed in blue ADSU storage pouch when carried on operational appliances.
- 55.2 The allocation is as follows:
- Pouch of five ADSU's per PL and FRU.
  - Pouch of four ADSU's per P.
  - Pouch of two ADSU's per Aerial.
  - Pouch of 10 ADSU's per OSU.
  - One ADSU per RPE spares box.
- 55.3 One ADSU will also be issued on a personal basis to members of staff that are issued with a personal respirator.

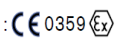
## 56 Defective equipment

- 56.1 Defective ADSU's will be replaced by OSG on receipt of POMS order. The POMS order should include the identification number found on the bar code label. When the POMS order is printed it should be attached to the defective ADSU and left in the designated point for collection by the day van service.
- 56.2 The replacement ADSU should be taken from the station RPE spares box which is kept in the RPE maintenance room. On receipt of POMS order OSG will dispatch a replacement ADSU via the day van service. On receipt the replacement ADSU should be placed back in the RPE spares box for future use (the replacement does not require receipt testing until unwrapped for use).

## 57 Technical data and approvals

### Approvals

57.1 The ADSU conforms to the followings approvals and certification:

- EC Council Directive 89/686/EEC. BS 10999: 2010 – specification for distress signal units for fire and rescue service.
- Approved for use with EN 137: 2006 (Type 2) breathing apparatus.
- ATEX (intrinsic safety) certification (94/9/EC) – EN 60079-0:2009, EN 60079-11:2007, EN60079-26:2007, EN 61241-11:2006, EN50303:2000, ITS10ATEX27071X.
-  II 1G Ex ia IIC T4 Ga (Ta-30°to+60°C), II 1D Ex ia IIIC T135 °C IP6X Da, I M1 Ex ia I Ma.
- R&TTE Directive 1999/05/EC.

### Technical data

- Weight 230 g (with batteries).
- Dimensions H x W x D 100 x 70 x 40 mm.
- Upper frequency 2900 (± 200) Hz.
- Alarm 102 – 112 LAeq,30s dBA.
- Pre-Alarm 86 – 102 LAeq,6s dBA.
- Battery CR123 Panasonic Lithium (2 batteries), replaced by OSG only.
- Operating time at least 12 months normal use (30 minutes per day in active mode).

## Breathing apparatus communications and main control boards (BA sector control boards)

### 58 Description

- 58.1 Both boards consist of a ply board back with Perspex cover that incorporate printed details as appropriate.
- 58.2 The rear of both boards have mounting points to enable the boards to be tripod mounted.
- 58.3 Both boards are fitted with a clock.
- 58.4 For images see paragraphs 61 and 62 below.

### 59 Allocation

- One communications board per OSU.
- One main control board per OSU.

### 60 Testing

- 60.1 Frequency:
- On receipt.
  - At each change of watch.
  - After use.

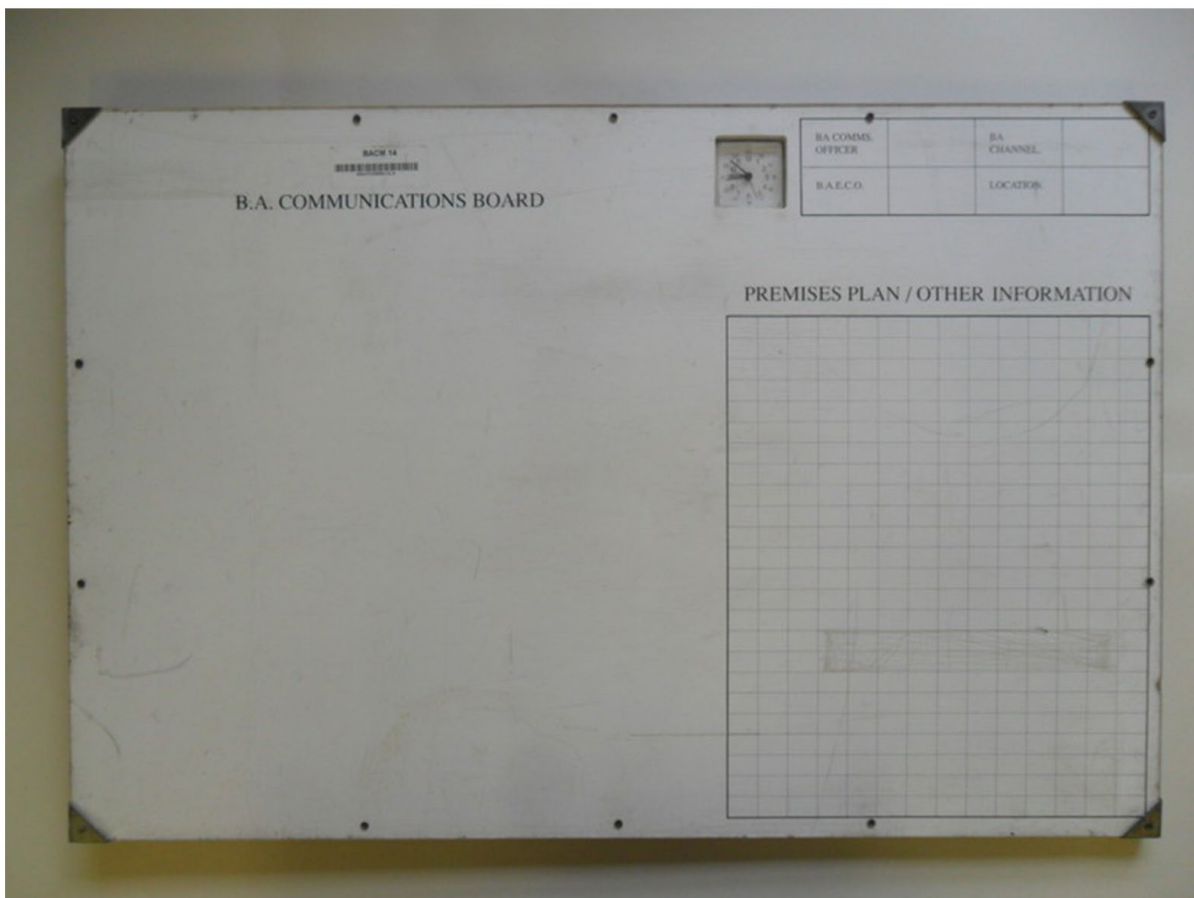


## Inspection detail

- (a) Ensure the board is clean. If necessary, clean the board using a soft dry cloth. Stubborn marks can be removed using a mild detergent. Do not use abrasive materials.
- (b) Examine the board and fittings.
- (c) The clock must be working and showing the correct time.
- (d) Ensure the board is correctly and securely stowed on the appliance.

**Note:** The main control boards will gradually be updated to show the new designation of BA sector control board.

## 61 BA communications board images



LFB image 345748



LFB image 345749

## 62 BA main control board image

BA MAIN CONTROL BOARD

MAIN CONTROL OFFICER  
RANK  
MAIN CONTROL STARTED  
INFORMATION UPDATED AT Hrs

Location

Entry Control	A	B	C	D	Total
Name of ECO					
Location / Sector					
ED / SD Emergency wearers (No.)					
ED / SD Currently Committed					

RELIEFS AT ENTRY CONTROLS	A	B	C	D	Total
SDBA required, Number / Time					
SDBA required, Number / Time					
SDBA required, Number / Time					
SDBA required, Number / Time					
EDBA required, Number / Time					
EDBA required, Number / Time					

INCIDENT INFORMATION	Number		Location
	ED	SD	
Wearers currently committed			
Reserve Officer / Team Leader Wearers			
Reserve Comms. Wearers			
Reserve Wearers			
Reserve Wearers (previously committed)			
Estd. reliefs for next hour (from last update time)			
Wearers Servicing Sets			
Guide Lines in use			

EQUIPMENT POINT LOCATION				COMMS
Guideline	CCPS	GTS	EASE	Radio
SD BA sets	SD Cyls	ED Sets	ED Cyls	Line
Wearers requested from IC				

NOTES:

LFB image 345755

## Breathing apparatus training visors

### 63 Description

63.1 BA training visors can be used with the MSA G1 face mask. When fitted they enable obscured vision during training. BA wearers can practice safe movement and searching techniques, whilst allowing safety officers to observe their actions.

63.2 The risks associated with lack of vision can be minimised by risk management.

### 64 Method of stowage

64.1 The visor covers should be kept in the station RPE maintenance room.

### 65 Method of use

- Visor covers should not be used as an alternative to heat and smoke training but an additional training option available to watch officers.

- Watch officer to carry out risk assessment of training area and should control and minimise risk accordingly.
- Each BA team should be allocated a suitably briefed safety officer and should not be left unsupervised at any time.
- Visor covers should be fitted after a BA wearer has reported to entry control, prior to entering training area and removed once the BA wearer has left the simulated risk area, although prior to reporting to entry control.
- Safety officers' duties shall include monitoring of cylinder pressure readings for each team member under their supervision.
- Wearers' briefing to include instruction to comply with BA procedures at all times including safe movement and to request regular cylinder pressure readings from their allocated safety officer as and when they would normally require them.
- Under **no circumstances** should BA wearers with visor covers fitted be instructed to ascend or descend ladders.

65.1 BA visor covers must not be used in real or simulated real fire training conditions.

## 66 Cleaning

66.1 A mild detergent solution can be used to clean the visor cover.

## 67 Testing

### Frequency

- On receipt.
- Before use.
- After use.

### Inspection detail

67.1 Check:

- Condition and operation of visor elastic fitting and Velcro fastening.
- Visually inspect the condition of visor fabric and stitching.

## 68 Allocation

- Two BA training visors per single appliance station.
- Four BA training visors per multi appliance station.

## 69 Defective equipment

69.1 Defective training visors should be disposed of locally and replacement ordered via POMS.

69.2 Search POMS description – BA TRAINING VISOR FPS 7000.

## 70 Breathing apparatus training visor fitted to face mask image



LFB image 1729526



LFB image 1729525

## RPE tool kit

### 71 Description

71.1 The box contains:

- One cylinder contents gauge EDDBA only.
- One telemetry repeater battery key EDDBA only.
- One spare Bodyguard key.

### 72 Method of stowage

72.1 The RPE tool box is kept in the RPE spares box.

### 73 Method of use

73.1 Provides clean and safe storage for cylinder contents gauge and other contents.

### 74 Cleaning

74.1 A mild detergent solution can be used to clean the box.

### 75 Testing

75.1 A weekly check should be made of:

- Condition of RPE tool box.
- Contents are all accounted for, missing items should have a corresponding POMS order to cover the shortfall, contact OSG for overdue item.

### 76 Allocation

76.1 Each station is allocated with one RPE tool kit which is to be kept in the RPE station spares box.

76.2 FRU stations are allocated two RPE tool kits one SDBA and one EDDBA.



## 77 Defective equipment

- 77.1 Contact OSG for replacement of RPE tool box, all other contents should be maintained by sending defective items away under cover of POMS order.

## 78 RPE tool kit and contents image



LFB image 896912

## RPE spares box

### 79 Description

- 79.1 The RPE spares box contains vital spares to place RPE and ancillary items of RPE back on the run prior to replacements being delivered via the day van service.
- 79.2 The contents of the box must be maintained to ensure equipment availability when required. Once a POMS order has been placed for defective item(s) the replacements will be issued automatically and delivered by the day van service.

The box contains:

- One SDBA or EDBA set.
- One ADSU.
- One BA personal line (these will be withdrawn when all BA sets are fitted with BA retractable personal lines).
- One cylinder cover SDBA or EDBA as appropriate.

### 80 Method of stowage

- 80.1 The RPE spare box is to be kept in the station RPE maintenance room.

## **81 Method of use**

81.1 The exchange procedure is as follows:

- (a) Defective item taken off the run.
- (b) Raise POMS order for defective item.
- (c) Place defective item in store/collection area for collection by day van service.
- (d) Replacement item taken from RPE spares box and used to place equipment back on the run following appropriate testing.
- (e) Exchange item of equipment delivered by the day van service and placed into box for future use.

## **82 Cleaning**

82.1 A mild detergent solution can be used to clean the box.

## **83 Testing**

83.1 A weekly check should be made of:

- Condition of RPE spares box.
- Contents are all accounted for, missing items should have a corresponding POMS order to cover the shortfall, contact OSG for overdue item.

## **84 Allocation**

84.1 Each station is allocated with one RPE station spares box.

84.2 FRU stations are allocated two boxes one SDBA and one EDDBA.

## **85 Defective equipment**

85.1 Contact OSG for replacement of RPE spares box, all other contents should be maintained by sending defective items away under cover of POMS order.

## 86 RPE spares box and contents image (SDBA example)



LFB image 896914

## 87 Policies affected

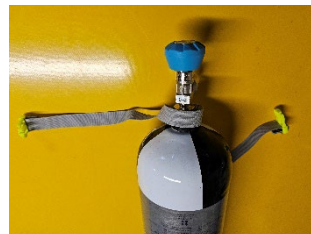
87.1 The following policies are incorporated into this policy and are now cancelled.





- PN446 – RPE – Breathing apparatus visor covers – training note.
- PN468 – RPE – Breathing apparatus second set carrying bag.
- PN469 – RPE – Breathing apparatus communications and main control boards.
- PN470 – RPE – Breathing apparatus guideline and guideline tallies.
- PN471 – RPE – Breathing apparatus personal line.
- PN474 – RPE – Firefly automatic distress signal unit.
- PN537 – RPE – Breathing apparatus tallies.
- PN763 – RPE – Dräger bodyguard 1000 automatic distress signal unit.
- PN934 – Fire escape hood (Dräger Parat 5550h) – technical information.



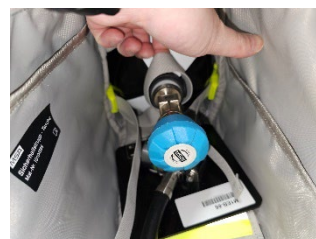
## Appendix 1 : Emergency air supply equipment bag cylinder replacement and testing aide memoire







Aide Memoire		MSA M1	
Name:	Pay No:	Base:	Date:
<b>EMERGENCY AIR SUPPLY EQUIPMENT BAG CYLINDER REPLACEMENT AND TESTING AIDE MEMOIRE</b>			
<b>CYLINDER REPLACEMENT</b>			
STEP	CHECK IN ORDER	P	NYP
1	<b>OPEN</b> EASE bag, <b>UNFASTEN</b> Velcro hose loop, <b>UNCLIP</b> cylinder securing strap and loop and remove cylinder and pneumatic system from the bag.		
2	<b>DISCONNECT</b> empty cylinder from EASE bag reducer and remove securing strap loop from cylinder neck.  <b>FIT</b> Alphaclick adapter to the empty cylinder valve outlet (finger tight).  <i><b>NOTE:</b> Alphaclick adapter is stowed in EASE bag inside zip pocket.</i>  <b>USING CHALK</b> label the empty cylinder ' <b>A/C</b> ' (instead of M/T) and send to OSG for charging.		
3	<b>CHECK</b> the next service date of the EASE bag (via log book) and replacement cylinder.		
4	<b>REMOVE</b> Alphaclick adapter from replacement cylinder and stow in the EASE bag inside zip pocket.		
5	<b>PLACE</b> cylinder securing strap loop over the cylinder valve and rest it on the cylinder shoulder.		





6	<p><b>CHECK</b> the reducer cylinder connection 'O' ring for damage.</p> <p><b>CONNECT</b> the EASE bag reducer to cylinder valve outlet ensuring that it is oriented with the single line hose facing away from the cylinder body.</p>			
7	<p><b>PLACE</b> cylinder into the EASE bag with the support plate oriented to the base of the bag with the single line hose oriented toward the opening flap.</p>			
8	<p><b>CONNECT</b> the cylinder securing strap and loop buckles to the EASE bag and adjust to secure the cylinder inside the bag.</p>			
9	<p><b>SECURE</b> the single line hose to the opening flap using the Velcro loop.</p>			
10	<p><b>CONDUCT</b> EASE bag weekly test and record results on test card/log book.</p>			
11	<p><b>RE-STOW</b> EASE bag on appliance.</p>			

EASE BAG WEEKLY TEST			
Testing the EASE bag requires the use of a BA set rescue hose.			
STEP	CHECK IN ORDER	P	NYP
1	<b>CHECK</b> that the EASE bag (via log book) and the cylinder are within their test dates.		
2	<p><b>CHECK</b> that the ancillaries are present in the pocket of the EASE bag.</p> <p><b>CHECK:</b></p> <ul style="list-style-type: none"> <li>The BA emergency team wallet and 5x BA emergency team armbands are included.</li> <li>The BA emergency safety key and tally.</li> <li>Alphaclick cylinder adapter.</li> </ul>		
3	<b>CHECK</b> the bag, straps, handles and snap hook for damage and clean with water and mild detergent if required.		
4	<b>CHECK</b> the cylinder securing loop and strap is fitted and adjusted correctly.		



5	<p><b>CHECK</b> that the reducer is connected correctly to the cylinder valve and:</p> <ul style="list-style-type: none"> <li>• The support plate, reducer and single line hose assembly are oriented correctly.</li> <li>• The single line hose is roved through the Velcro loop on the bags opening flap.</li> </ul>	  	
6	<p><b>CHECK</b> that the single line hose, pressure gauge, manifold, whistle assembly and protective cap are clean and free from damage.</p>	 	
7	<p><b>OPEN</b> the cylinder valve FULLY and observe a stable cylinder pressure.</p> <p><b>NOTE:</b> <i>Cylinder pressure is to be no less than 270 bar.</i></p>		
8	<p><b>CLOSE</b> the cylinder valve fully and <b>OBSERVE</b> the cylinder pressure for 1 minute.</p> <p><b>PASS:</b> Pressure drop is less than 10 bar.</p> <p><b>FAIL:</b> Pressure drop is more than 10 bar.</p> <p><b>NOTE:</b> <i>If the EASE bag fails 3 times, send up as defective with OSG.</i></p>		

9	<p><b>CONNECT</b> BA set rescue hose to the single line manifold connection and <b>OBSERVE</b> the EASE bag pressure gauge.</p> <p><b>NOTE:</b> <i>The BA sets pneumatic whistle will start to actuate which will purge the EASE bag and BA set at a rate of 5 LPM, cover the whistle flute opening of the BA set so that only the EASE bag whistle is audible.</i></p>			
10	<p><b>OBSERVE</b> the actuation of the pneumatic whistle between 50 and 60 bar (red quadrant of the gauge).</p>			
11	<p><b>PURGE</b> the EASE bag of air fully and <b>DISCONNECT</b> the rescue hose.</p>			
12	<p><b>CHECK</b> the 2<sup>nd</sup> EASE bag connection by connecting the rescue hose.</p> <p><b>DISCONNECT</b> the rescue hose and refit all protective caps.</p> <p><b>NOTE:</b> <i>Ensure that the BA set rescue hose is roved through the correct hose loops and that any <b>pneumatic whistle flutes are not covered/disabled in any way.</b></i></p>			
13	<p><b>COMPLETE</b> the log book, <b>PACK</b> and <b>RE-STOW</b> the EASE bag on the appliance.</p>			

# Document history

## Assessments

An equality, sustainability or health, safety and welfare impact assessment and/or a risk assessment was last completed on:

EIA	12/06/12	SDIA	H - 02/11/15	HSWIA	17/10/19	RA	17/10/19
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## Audit trail

Listed below is a brief audit trail, detailing amendments made to this policy/procedure.

Page/para nos.	Brief description of change	Date
Page 17, section 29	ADSU service schedule extended from 12 to 24 months and battery life extended from 12 to 24 months	03/08/2012
Page 32, part 10	BA training visor section transferred and updated from PN 446	02/05/2013
Page 27, section 46.3	Use white chinagraph for EDBA tally added.	22/08/2013
Page 33	Part 11- BA cable cutter and pouch part added.	18/11/2013
Page 12 Page 40	'Six monthly' bullet added to section 16 under 'frequency'. 'Subject list' table - template updated	09/12/2014
Page 34	Note added to the fourth bullet point down in paragraph 75.1.	05/02/2015
Page 36	Image 463483 replaced with image 651116.	24/08/2015
Page 08, section 10	Image of BA set wearer updated.	13/02/2017
Throughout	Policy updated due to the introduction of new chemical protective clothing. Text and images removed for the use of personal lines with GTS. Text and images updated for the use of ADSU with GTS.	13/02/2017
Page 20, section 40 Page 26, section 51.1, page 27, section 58, page 28, section 66	Second set images updated due to introduction of anti-entanglement cylinder cover.  Images and text updated due to the removal of the SDBA cylinder contents gauge by Protective Equipment Group.	27/10/2017
Throughout	This policy has been reviewed as current with changes made throughout. Please re-read to familiarise yourself with the content.	23/10/2019
Page 5, part 2 and page 34, part 12 Throughout	Removal of non-retractable BA personal line details from Part 2. Retractable BA personal line details moved from Part 12 to Part 2. Reference to PEG and BDC changed to OSG following name change.	18/09/2020

Page/para nos.	Brief description of change	Date
Page 15, Para 26.3	Corrected ADSU test schedule from 'annual' to 'bi-annual'.	29/07/2022
Page 19, Part 37	Added missing paragraph number 37.1.	29/07/2022
Page 26, Para 57.2	Removed reference to old personal line (blue pouch). Added reference to retractable BA personal line fitted to BA set. Added BA cable cutters to RPE spares box contents list.	29/07/2022
Page 31, Para 77.11	Corrected reference to para 77.4.	29/07/2022
Throughout	Major re-format of entire policy for ledgebility and ease in finding information. Incorporated PN934 – Fire escape hood (Dräger Parat 5550h) – technical information into this policy. Replaced second set bag section with EASE bag due to MSA RPE roll out. Updated BA tally section for the MSA BA telemetry tally. Update to personal line images to include MSA BA set. Update to cable cutter images to include MSA BA set. Update fire escape hood images to include MSA BA set. Updated BA training visor image to include G1 face mask. Removed references to Safetywash and replaced with Diversey Oxivir Excel where appropriate. Added appendix for EASE bag replacing cylinder and testing aide memoire. Added PN934 to the policies affected list of cancelled policies.	19/03/2024

## Subject list

You can find this policy under the following subjects.

ADSU	RPE
Assets	Equipment
Incident management	Incident type
Breathing apparatus	BA tallies
BA	Guidelines

## Freedom of Information Act exemptions

This policy/procedure has been securely marked due to:

Considered by: (responsible work team)	FOIA exemption	Security marking classification