



SABRE



ELSA DASH

Jacket-mounted Escape Breathing Apparatus

User Instructions



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Jacket-mounted Escape Breathing Apparatus

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Sabre Breathing Apparatus is a division of **Scott Health and Safety Limited**.
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WARNINGS

Please Read Carefully and Fully Understand

If you need to use this apparatus you will be in an unusual, possibly life threatening situation. Poor visibility and toxic fumes may add to your difficulties.

Prepare for that situation:

- Learn the location of escape apparatus and how to gain access to it.
- Learn to use the escape apparatus, as detailed in these instructions.
- Be aware of the protection limits provided by ELSA DASH. Exceeding these limits may cost you your life, or result in injury.
- Be fully aware of workplace hazards.
- Become familiar with planned escape routes.

If the situation arises:

- Remain calm and remember what you must do to survive.
- Don and activate the apparatus. Leave the hazard area immediately.
- Do not enter a hazard area unless it is part of the escape route.

General and Managerial:

- Check apparatus daily when issued to wearers or deployed in ready-use lockers, or monthly if held in stores.
- ELSA DASH is an escape apparatus. **DO NOT** use for other purposes, such as fire fighting or cargo handling.
- Ensure wearers are fully trained in the use of the apparatus, advised of work place hazards and planned escape routes.
- Ensure ELSA DASH provides respiratory protection for workplace hazards and has duration for planned escape routes.

Refer to BS 4275: 1997 - *Guide to implementing an effective respiratory protective device programme.*

This manual is for use by personnel trained in the use and care of compressed air escape apparatus, and **MUST NOT** be used as a self-teaching guide by untrained users.

DISCLAIMER

Failure to comply with these instructions or misuse of the apparatus may result in death, injury or material damage, and invalidate any resulting warranty or insurance claims.

Scott Health and Safety Limited have taken great care to ensure that the information in this manual is accurate, complete and clear. However, **Training & Technical Support Services** will be pleased to clarify any points in the manual and answer questions on **Sabre** breathing apparatus.

1. INTRODUCTION

1.1 IMPORTANT

Please read carefully and understand.

The instructions for the use, care and maintenance of the apparatus given in this manual must be carefully read and understood prior to using the equipment.

All users of the apparatus **MUST** receive adequate training in the operation of the equipment.

Ensure that the selection of the apparatus is sufficient with regard to both the duration and the hazards likely to be encountered during the process of escape.

Due to the fully charged weight of the 15 minute apparatus exceeding 5.0 kg, it is not permissible to wear the apparatus for a full shift in accordance with the EEC manual handling regulations and the apparatus approval.

For further details, please refer to local guidelines and regulations.

In the UK further guidance can be found within the Health and Safety Executive publication, HS-(G)3 - *Respiratory Protective Equipment, A Practical Guide For Users*.

To ensure correct functioning of the apparatus, it must be regularly maintained and serviced in accordance with the appropriate instructions. Please refer to notes under *Training & Servicing* for details.

Air used to charge this apparatus must meet the requirements of EN 132, 1990 for breathing air. See below for details.

1.2 POTENTIALLY EXPLOSIVE ATMOSPHERES

Where emergency escape apparatus is to be worn in readiness by personnel entering potentially explosive atmospheres, anti-static jackets must be worn.

ELSA apparatus that are strategically located within close proximity to operational personnel for use in an emergency are not necessarily required to be anti-static.

1.3 BREATHABLE AIR

Air used to charge or supply breathing apparatus may be natural or synthetic. A typical composition of breathable air is given below:

COMPONENT	MASS % (Dry Air)	VOLUME% (Dry Air)
Oxygen	23.14	20.95
Nitrogen	75.52	78.08
Argon	1.288	0.934
Carbon Dioxide	0.048	0.031
Hydrogen	0.000 003	0.000 05
Helium	0.000 073	0.000 52
Neon	0.001 2	0.000 18
Krypton	0.000 33	0.000 11
Xenon	0.000 04	0.000 009

There may be an increased fire risk when the oxygen content is above the level shown.

Breathable air must meet the following standards of purity:

- i) If not specified, the contaminants shall be kept to a minimum and shall not exceed the minimum permissible exposure limit.

- ii) The mineral oil content shall be such that the air is without the odour of oil. The odour threshold is within the region of 0.3 mg/m^3 .
- iii) The water content shall not exceed 50 mg/m^3 for 200 bar apparatus.

Scott Health and Safety Limited recommend that the air supply is tested periodically in accordance with national regulations to ensure compliance with the above.

1.4 TRAINING & SERVICING

This instruction manual is for guidance only and must only be used in conjunction with a training course in the correct use and maintenance of the apparatus.

It will be necessary to test and service this apparatus in accordance with the **ELSA Dash** Service Schedule on an annual basis to ensure that the apparatus is in full working condition. This is a legal requirement.

Copies of the Servicing Schedule and instructions are only available to persons who have successfully completed a training course in the servicing of the apparatus and who hold a current certificate.

Scott Health and Safety Limited can offer training courses in the above or alternatively a complete mobile testing and servicing facility whereby a trained technician can service your **Sabre** breathing apparatus on-site.

Please contact **Training & Technical Support Services** at **Scott Health and Safety Limited** for further information on training or servicing matters.

1.5 APPARATUS DESCRIPTION

The **ELSA Dash** is a short duration, compressed air breathing apparatus designed for ESCAPE purposes only.

The apparatus has been approved and certified to the latest European Standard and has been issued with a 'CE' mark.

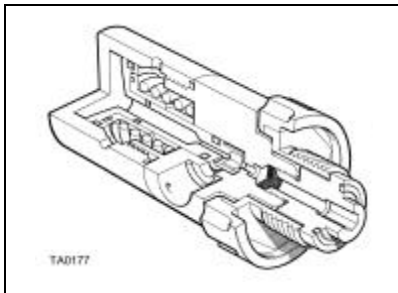
The apparatus is worn in the form of a waistcoat with back mounted compressed air cylinder and valve with an air hood stowed in a pocket on the front.

The **ELSA Dash-J** is available in both 10 and 15 minute duration in either a high visibility, flame retardant jerkin or a black anti-static type.

Standard versions feature a Velcro closure whereas anti-static apparatus feature a dual buckle feature.

The air cylinder is manufactured from alloy steel and is available in two sizes, a 2 litre, 200 bar cylinder providing 400 litres of air for 10 minute apparatus or a 3 litre, 200 bar cylinder providing 600 litres of air for 15 minute apparatus.

The cylinder valve is brass and features a safety locking handwheel valve and a bourdon tube pressure indicator.



The pressure reducer screws directly into the cylinder valve outlet. The connector is fitted with a sintered bronze filter to prevent dirt and debris from entering the system. The piston type reducer valve mechanism is automatic in operation and is fitted with a pressure relief valve.

Medium pressure air from the reducer is supplied through a length of hose to the high performance air hood.

A restrictor fitted to the hose ensures that the air supply is maintained at an average constant flow rate of 38 litres/minute. A noise suppression filter is fitted to the hood connector.

The hood is fabricated from a uni-directional stretch, flame retardant material with a polyurethane visor and an elastomeric neckseal for a comfortable and secure fit.

The ori-nasal inner mask reduces re-breathed CO₂ levels with a semi-rigid cup preventing distortion and allowing for the hood to be tensioned away from the face.

An exhale valve allows waste gases to be expired directly to atmosphere.

2. ROUTINE CHECKS

2.1 DAILY CHECKS

2.1.1 Check Pressure



Check the gauge to ensure that the cylinder is FULL i.e. within the green sector. If cylinder is not full, return apparatus for charging. If the apparatus has been stored at low temperatures, the reading may be low.

2.1.2 Check Apparatus



Remove hood from pouch to ensure that it is clean and undamaged. Carefully re-pack hood upon completion, (please refer to Section 4.12 for further details).

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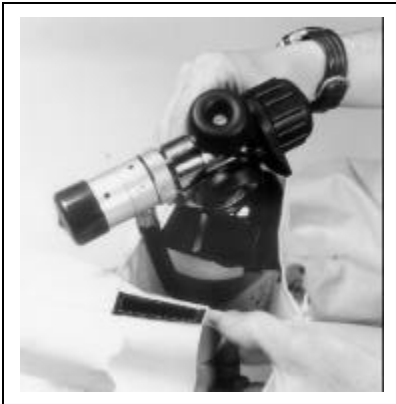
2.2 MONTHLY CHECKS

2.2.1 Check Apparatus



Carefully inspect apparatus to ensure that it is clean and undamaged. In particular, check hood for any cuts or holes. Ensure that the supply hose is securely affixed to the hood.

2.2.2 Check Cylinder



Check that the cylinder is firmly secured within the pouch. Check cylinder valve and pressure gauge for damage. If apparatus fails checks, **DO NOT USE**. Attach explanatory note to equipment and return for servicing.

2.2.3 Record Details of Checks

Details of the monthly checks must be recorded with the results kept for future inspection. In the UK this is a legal requirement.

Information to be recorded should be as follows:

- The name and address of the employer responsible for the apparatus.
- Details of the equipment i.e. manufacturer, model and type, serial number together with a description sufficient for it to be clearly identified.
- The date of examination plus the name and signature, or unique identification mark of the person conducting the test.
- The condition of the apparatus with details of any faults found plus any remedial action taken.
- Confirmation that the cylinder is FULL.

2.2.4 Stow Apparatus



Re-pack apparatus carefully. Place hood into pouch and close flap to secure (please refer to Section 4.12 for further details). Apparatus must be stowed in a clean, dry atmosphere, protected from the extremes of temperature and direct sunlight or heat.

3. DONNING & OPERATING PROCEDURE

WARNINGS:

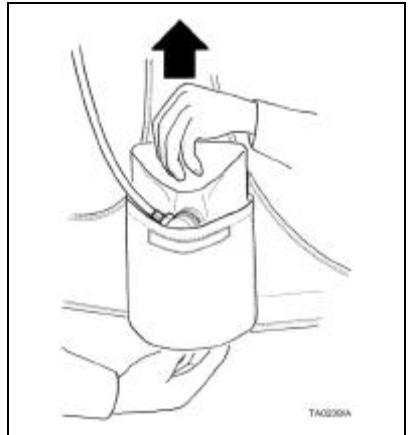
- This apparatus is designed for ESCAPE purposes only.
- DO NOT use this apparatus to ENTER areas containing toxic or oxygen deficient atmospheres.

3.1 DON APPARATUS



Place arms through arm-holes and close sides of waistcoat right over left. Pass Velcro strap around waist and press to secure for a comfortable fit.

3.2 WITHDRAW HOOD



1. Grasp the lower edge of the jacket below the pocket.
2. Open the pocket lid and pull hood in an upward direction.

3.3 OPEN CYLINDER VALVE



Open cylinder valve fully and ensure that air is flowing into the hood.

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3.4 DON HOOD



Place hands, palms together inside hood and gently stretch out neckseal.



Pull hood over head from front to back. Position mask for a comfortable fit.

3.5 ESCAPE



Breathe normally and proceed to escape promptly from the hazard area.

4. AFTER USE CLEANING & TESTING

4.1 APPARATUS WORN BUT NOT OPERATED



1. Clean the apparatus exterior where necessary.
2. Open out the apparatus and thoroughly examine for signs of wear or damage. Check hood to ensure that it is clean and undamaged.
3. Check that the cylinder is still FULL.
4. Once satisfied, re-pack apparatus and return to stowage point, ready for use.

If apparatus fails checks DO NOT USE. Attach an explanatory note and return equipment for servicing.

4.2 CLEANING & TESTING

ALWAYS use the following procedures to clean the apparatus.

DO NOT use solvents to clean any part of the equipment.

DO NOT use direct heat to dry apparatus.

NEVER stow away an apparatus whilst still wet.

Ensure that water does not enter the cylinder valve or pressure reducer connections.

4.3 REMOVE & RE-CHARGE CYLINDER

1. Ensure that the cylinder valve is turned OFF.



2. Unscrew the pressure reducer from the cylinder valve outlet.
3. Release the buckle to remove the cylinder from the pouch.
4. Charge the cylinder in accordance with the appropriate procedure.

4.4 CLEAN HOOD



1. Remove the clip-on plastic cover from the exhale valve housing on the hood.



2. Remove the metal clip that secures the supply hose connector.
3. Remove the exhale valve and immerse in a hand-hot solution of **TriGene™** cleansing and disinfecting fluid, followed by a thorough rinse in clean water.
4. Refer to label for instructions. Allow valve to dry thoroughly prior to refitting to hood.

5. Wipe the hood with a hand hot solution of **TriGene™** cleansing and disinfecting fluid, particularly around the inner mask.

Note:

TriGene™ cleansing and disinfecting fluid is available from **Scott Health and Safety Limited** in both 1 litre and 5 litre containers under Article Numbers 2008247 and 2008248 respectively.

Pump dispensers are available for use with the above under Article Numbers 1017672 (1 litre) and 1017670 (5 litres).

TriGene™ disinfecting wipes are available from **Scott Health and Safety Limited** under Article Number 2004225 (pack of 20).

Exxene™ de-misting wipes are available from **Scott Health and Safety Limited** under Article Number 2011081 (pack of 10).

4.5 DRYING HOODS

1. Shake excess water from hood and allow to dry naturally at ambient temperature.
2. When dry, wipe the seals of the inner mask with **TriGene™** disinfectant wipes.

4.6 CLEAN & DE-MIST VISOR

1. When the hood is dry, apply an **Exxene™** de-misting wipe to the inside of the visor.
2. Polish the visor, inside and out using a clean, lint-free cloth.

4.7 TALC. NECKSEAL

Apply talcum powder to the dry neckseal to prevent sticking in humid conditions.

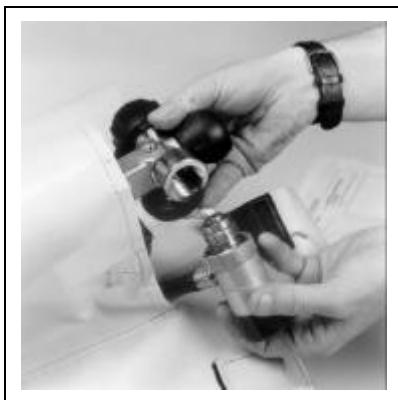
4.8 CLEAN & EXAMINE APPARATUS

1. Remove any dirt and debris by wiping with a warm water and soap solution.
2. Carefully examine apparatus for any signs or wear or damage.

4.9 FIT FULLY CHARGED CYLINDER



1. Insert fully charged cylinder into pouch and secure using buckle fitted behind cylinder valve i.e. towards wearer's back.



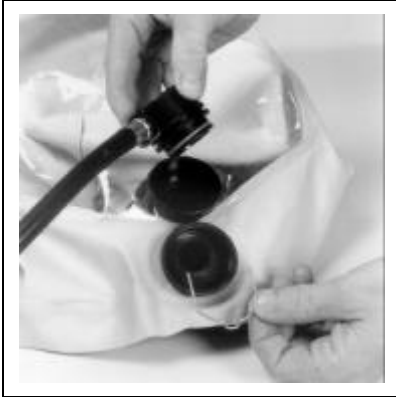
2. Inspect the O-ring on the pressure reducer connector to ensure that it is clean and undamaged.



3. Screw the pressure reducer connector into the cylinder valve outlet - DO NOT over-tighten.
4. Ensure that the green protective cap is fitted over the reducer and that the sleeve is fitted around the reducer assembly.

NOTE: All aluminium components must be shrouded to comply with the approval requirements.

4.10 FIT CLEAN HOOD



1. Check that the O-ring on the hood connector is clean and in good condition prior to fitting into the hood front fitting. Secure with the metal clip



2. Check that the O-ring on the exhale valve is clean and in good condition prior to pushing into the hood front fitting.
3. Fit the clip-on plastic cover over the exhale valve to secure.

4.11 CHECK APPARATUS

1. Check the apparatus in accordance with the Daily and Monthly Checks stated in Section 2 of this Manual.
2. Record the details of the above inspection in the appropriate register and retain a copy for future inspection.

A breathing apparatus log book, (Article Number 1034745), is available from **Scott Health and Safety Limited** for this purpose.

4.12 RE-PACKING HOOD

4.12.1 Notes on Re-packing Hood

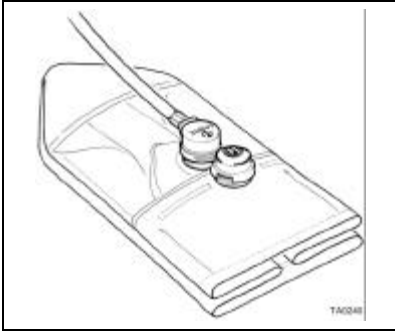
- DO NOT use excess force when packing the hood into the pocket.
- Ensure that the hood does not snag on sharp objects.
- You may find it easier to pack the hood while wearing the jacket.

4.12.2 Before Re-packing Hood

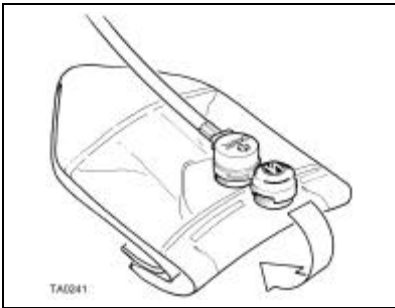
Check that:

- The hood is complete and clean.
- There are no splits or damage to the fabric of the hood or neck seal.
- The visor is free from blemishes that might impair visibility.
- The breathing hose and exhale valve cover are firmly attached to the hood.

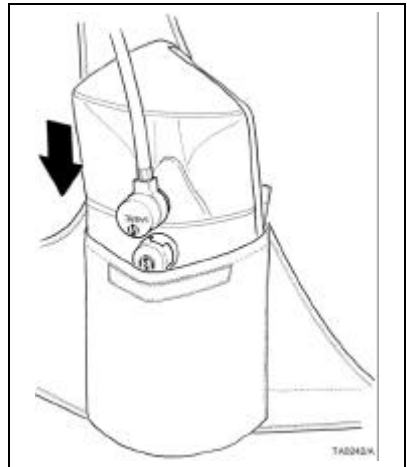
4.12.3 Re-pack Hood



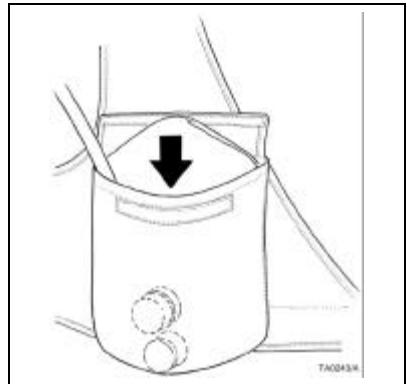
1. Fold the hood flat with the sides of the hood between the front and rear panels.



2. Fold back the lower hood and neck seal so that it lies under the hood.
3. Insert the lower edge of the hood into the pocket.
4. Work the edge of the pocket carefully over the sides of the hood and front fitting.



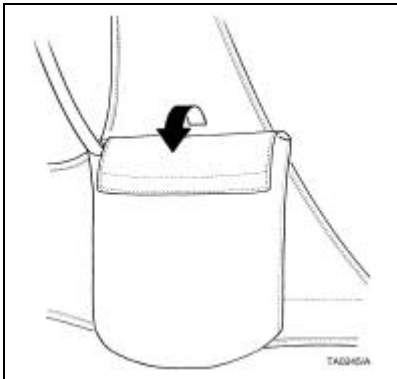
5. Ensure that the exhale valve retaining cover does not become unclipped



6. Insert the hood to the full depth of the pocket. Ensure that the breathing hose is positioned at either side of the pocket so that it does not foul the closed pocket lid.



7. Fold the top of the hood toward the back of the pocket and press down until the hood is completely enclosed within the pocket.



8. Close the lid of the pocket.

4.13 STOW APPARATUS

1. Once satisfied with the equipment, place the apparatus in its correct stowage position.
2. The equipment should be stowed in a position such that it is readily accessible and yet protected from direct sunlight or heat.
3. Recommended storage and operating temperature for the equipment is between -30° and $+70^{\circ}\text{C}$.

5. PERIODIC MAINTENANCE SCHEDULE

5.1 MONTHLY

The apparatus must be examined at least once a month in accordance with the *Monthly Checks* stated in Section 2.2 of this Manual.

Details of such checks must be recorded in the appropriate register and a copy kept for future inspection. In the UK this is a legal requirement.

5.2 ANNUALLY

The apparatus must be tested and serviced in accordance with the **ELSA Dash** Service Schedule on at least an annual basis.

Copies of this schedule and Service Instructions are only available to personnel who have successfully completed a training course in the servicing of the apparatus and who hold a current certificate.

Please refer to notes under *Training and Servicing* in Section 1.4 for further details.



Sabre Breathing Apparatus

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