HUMBERSIDE FIRE AND RESCUE SERVICE

Emergency Response

Breathing Apparatus and Associated Equipment Policy

Owner	**Executive Director of Service Delivery**
Responsible Person	**Head of Fleet & Estates**
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EIA Completed	

What we must do well

How we support our communities

We value and support the people we employ

We efficiently manage the Service

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1. INTRODUCTION

Humberside Fire and Rescue Service (HFRS) will use Respiratory Protective Equipment (RPE) to ensure the safety of employees when the risk to staff from irrespirable or hazardous atmospheres cannot be mitigated by other means. Since RPE will be incorporated in the Safe System of Work for many types of incidents and working practices, HFRS is committed to the provision of suitable and sufficient information, instruction and training in the use and maintenance of this equipment.

Core Code of Ethics

HFRS has adopted the Core Code of Ethics for Fire and Rescue Services. The Service is committed to the ethical principles of the Code and strives to apply them in all we do, therefore, those principles are reflected in this Policy.

National Guidance

Any National Guidance which has been adopted by HFRS, will be reflected in this Policy.

2. EQUALITY AND INCLUSION STATEMENT

HFRS has a legal responsibility under the Equality Act 2010, and a commitment, to ensure it does not discriminate either directly or indirectly in any of its functions and services nor in its treatment of staff, in relation to race, sex, disability, sexual orientation, age, pregnancy and maternity, religion and belief, gender reassignment or marriage and civil partnership. It also has a duty to make reasonable adjustments for disabled applicants, employees, and service users.

3. AIM AND OBJECTIVES

To provide working procedures and to ensure safe operation of the Self-Contained Breathing Apparatus (Interspiro S11) and ancillary equipment. And to ensure that all staff have the necessary information, instruction, and training to enable then to test and operate the equipment effectively.

4. ASSOCIATED DOCUMENTS

- Equality Impact Analysis

- Legal References
  - Health and Safety at Work Act 1974
  - PUWER 1998
  - The Pressure Systems Safety Regulations 2000
  - Control of Substances Hazardous to Health 2002

- National Operational Guidance Reference
  - Foundation for Breathing Apparatus

5. USE OF RESPIRATORY PROTECTIVE EQUIPMENT

Selection of Respiratory Protective Equipment

RPE will be incorporated into many Safe Systems of Work for differing incidents and working practices, therefore the correct selection RPE is essential.

Within the hierarchy of control measures, RPE is considered as being the last control measure to be introduced. RPE should only be considered after all other reasonably practicable control measures have been considered and following a suitable and sufficient Risk Assessment to identify the risks involved.

Where a Risk Assessment fails to identify an appropriate level of RPE required or where insufficient information is available to enable the completion of a suitable risk assessment, staff attending operational incident should default to wearing Self Contained Breathing Apparatus (SCBA).

For general working practices, works should not commence until such time as the correct level of RPE can be identified.

All Risk Assessments should be completed and recorded in accordance with NOG Foundation of Breathing Apparatus.

6. INTERSPIRO SII SCBA

Introduction

The compressed air breathing apparatus set currently in service with HFRS is the Interspiro SII.

Description and Use

A detailed description and use of the BA set can be found in the BA Equipment Manual on SharePoint.

Note: Any other sets received into the Service and officially approved for loan or evaluation purposes must be used, tested, and maintained in accordance with the particular set manufacturer's instruction manual.

Standard Testing

Testing will be in accordance with HFRS' standard test schedule.

Routine Maintenance and Repairs

All repairs and routine maintenance will be carried out by ESFM Equipment Technicians, trained Stores staff or Interspiro Service trained technicians.

7. STATION ISSUE SMALL INTERSPIRO FACE MASK

Introduction

HFRS may from time to time employ firefighters who, due to differing facial contours, may be unable to obtain a satisfactory face seal with the standard sized facemask currently fitted to the Interspiro SII set. To overcome this, station issued small facemasks are provided for individuals as required to enable these individuals to obtain a satisfactory face seal.

Identification

The facemask will be identified with:

- An ‘S’ or ‘L’ on the face seal rubber.
- A visor label identifying the NUMBER of the mask.

Check Procedure

- On taking over a BA set, the wearer should remove the existing facemask and bag then place them in a suitable location (e.g. BA Room, Watch Office).
- Connect a station issue facemask to the demand valve and carry out a general check in accordance with the test schedule for Breathing Apparatus - Interspiro SII. This general test should be recorded in the log books of both the station issue face mask and the BA set it is tested alongside.
- At the end of the shift, disconnect the station issue facemask from the BA set demand valve and reconnect the original facemask to the BA set demand valve in readiness for the oncoming Watch.
- Secure the station issue facemask in a suitable location after being dismissed from duty.

Monthly Test

To ensure that station issue facemasks are subjected to a monthly test, the wearers should:

- select a BA set that has already had a monthly test carried out,
- disconnect the original facemask from the demand valve,
- attach a station issue facemask to the demand valve,
- Carry out part of the General check, as described in test schedule for Interspiro SII Breathing Apparatus, which refers to facemask checks.

- Record the result in the relevant log books and disconnect the mask from the demand valve, reconnect the original facemask to the demand valve.

Annual test

It is the responsibility of the Watch Management teams to ensure that the station issue facemasks are available for annual testing as required.

Facemask Faults

Should any faults or defects occur to facemasks, the individual must inform the Officer in Charge (OIC) that they are unavailable to wear BA until a replacement mask can be sourced. Spare small facemasks are kept on station or can be obtained from Stores for loan periods.

All repairs and routine maintenance will be carried out by ESFM Equipment Technicians, Stores staff and/or Interspiro Service trained technicians only.

8. EASE PACK

Introduction

The EASE pack has been developed for use in an emergency situation where a breathing apparatus wearer is in distress, a malfunction of their BA set occurs, or extending the working duration of a BA wearer due to decontamination.

Description and Use

A detailed description and use of the EASE pack can be found in the BA Equipment Manual on the Service Sharepoint portal.

Standard Testing

Testing will be in accordance with HFRS standard test schedule.

Faults

Should any faults or defects occur to an EASE pack, the individual must inform the Officer in Charge (OIC) that the EASE pack is unavailable to allow them to make an informed risk assessment on placing BA wearers within the risk area. A replacement pack should be sourced. Spare EASE packs can be obtained from Stores.

Routine Maintenance and Repairs

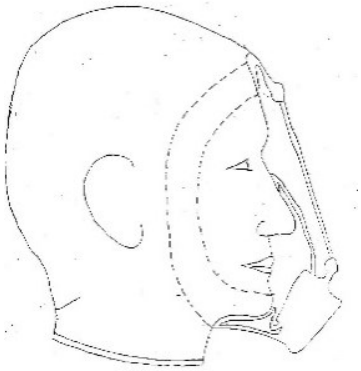
All repairs and routine maintenance will be carried out by ESFM Equipment Technicians, Stores, or Interspiro Service trained technicians.

9. BREATHING APPARATUS PROCEDURES

Facial Hair

'Firefighters required to wear BA must maintain the area of the seal free from hair (facial or head). Failure to do so will impair the efficiency of the seal and create an avoidable safety hazard to the BA wearer.

The area of the face to be maintained free from hair is outlined in Facial Hair section below.



A good seal will only be obtained if the skin in the region of the face seal is smooth and without hair, this includes beard stubble.
All staff who are required to wear BA should ensure that the area of the face seal is kept smooth at all times.

For additional information please consult the Standards of Dress Policy.

New BA wearers

All new BA wearers must be subjected to a quantitative face fit test by a trained person prior to carrying out BA duties.

New BA wearers are considered to be new employees, inter-service transfers, staff returning to operational duties following long term absence. Staff whose facial features have altered significantly through weight change, dental work or similar should request a subsequent quantitative face fit test to ensure they can achieve an adequate face seal. In addition, face fit test should be carried out when the Service's BA supplier changes.

Malfunctions of Breathing Apparatus

(a) Paragraph 9 of Schedule 2 Part 1 of the 'Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013', ( ), describes the circumstances in which malfunctions of breathing apparatus are reportable to the Health and Safety Executive as follows:

Any breathing apparatus malfunction should be reported provided that the malfunction occurred whilst the set:

- was in use; or
- during testing immediately prior to use in such a way, that had the malfunction occurred whilst the apparatus was in use it would have posed a danger to the health and safety of the user.

Malfunctions which arise during routine maintenance or testing of BA sets are not reportable under RIDDOR. The term 'malfunction' does not include leakage into the face mask due to poor face fit or a failure arising from an external source, such as falling debris or entanglement.

(b) When a RIDDOR reportable malfunction occurs, the following procedure must be carried out:

- The apparatus and any other relevant equipment and records must be impounded.

  Note: The BA Tally and BA set log book must be included.

- THE CYLINDER VALVE OF THE APPARATUS SHOULD BE FULLY CLOSED AND THE NUMBER OF COMPLETE AND THEN PARTIAL TURNS REQUIRED TO CLOSE IT NOTED.

The impounded equipment must be sealed appropriately, labelled, and transported directly by the duty FDS officer to the BA Manager in the Fleet & Equipment Section of the Service Delivery Support Directorate, Service Headquarters, for urgent investigations.

Note: Under no circumstances must any person interfere with the BA set, equipment, or log book without approval from the Health and Safety Executive inspector.

The occurrence must be investigated and reported in accordance with HFRS Health and Safety Policy Statement.

(c) If a BA set malfunction occurs during any use not falling within the definition in paragraph (a), or where a BA wearer suffers illness or injury, then:

- The BA set and relevant equipment must be impounded.

- THE CYLINDER VALVE OF THE APPARATUS SHOULD BE FULLY CLOSED AND THE NUMBER OF COMPLETE AND THEN PARTIAL TURNS REQUIRED TO CLOSE IT NOTED.
- the impounded equipment must be sealed in bags, labelled, and transported directly by FDS officer to the BA Officer in the Fleet &

Equipment Section of the Service Support Directorate, Service Headquarters.

The BA officer in the Fleet & Equipment Section, ESFM workshops and the Health and Safety Section must be informed so that the relevant investigations and reporting procedures can be carried out using the RIVO reporting tool.

(d) Where the investigations described in paragraphs (b) and (c) above are to be carried out, the BA manager in the Fleet & Equipment Section will arrange for the set to be returned to the manufacturer for inspection.

Breathing Apparatus Control Procedures for Over the Border Incidents

When attending over the border incidents involving the use of breathing apparatus by HFRS staff, the following control measures will apply:

On entering the risk area, the BA tallies of HFRS breathing apparatus wearers will only be inserted into a BA entry control board used and controlled by staff from HFRS using current Service procedures.

10. BREATHING APPARATUS ANCILLARY EQUIPMENT

Introduction

Breathing Apparatus Ancillary Equipment in use within the Service will comply with , NOG Foundation of Breathing Apparatus guidance. All other breathing apparatus ancillary equipment must be used, tested, and maintained in accordance with the Service Inspection and Testing schedule of Operational Equipment.

Breathing Apparatus Tallies

BA Tallies have been designed to comply as closely as practicable to the requirements of NOG Foundation of Breathing Apparatus. They are to be used in line with the procedures within that document.

Breathing Apparatus Stage One, Two and Rapid Deployment

Combined Entry Control Boards in Service have been designed to comply with NOG Foundation of Breathing Apparatus.

- The Equipment Manual relating to the Combined Entry Control Board and its use can be found on the Fleet & Equipment area on the portal, here.
- The nominated Breathing Apparatus Entry Control Officer (BAECO) of the crew, must examine the board and verify the clocks are serviceable at the start of every shift.

- Due to the intrinsic nature of the wiring contained within the boards, batteries will be replaced at regular intervals or when required by ESFM. On no account should individuals attempt to change them.
- Only chinagraph pencils should be used for writing on boards, cleaning should be done with a suitable dry cloth. Under no circumstances must solvents be used to clean the writing surface.
- When used under Stage 1 or 2, the information at the top/centre must be completed i.e. BAECO name, location, start time and stage.

Breathing Apparatus Retractable Personal Lines

Fitted to the Spiroguide II BA set is a retractable personal line. This is fitted to the right-hand side of the BA set and is 6 metres in length split into 1.25m and 4.75 m lengths.

To utilise the 1.25m length the user needs to pull the karabiner away from the housing. This will stop automatically when the 1.25m length is fully deployed.

To deploy the personal line greater than 1.25 metres the red button should be depressed to allow the line to pay out further

When housing the line the red button should be depressed to allow the 1.25m to house correctly into the mechanism.

When the line has been re-housed completely staff should ensure karabiner is clipped into the “D” ring provided.

11. BREATHING APPARATUS COMMUNICATIONS EQUIPMENT

Introduction

The following is a description of the BA Communications Equipment, general check, and donning procedure.

Description

Each set consists of:

- One Motorola radio with battery
- One radio pouch
- Spirocom Voice Communication System (one per BA mask).
- Generic’ voice communication system radio adapter (one per team leader radio)

Attaching the Equipment to the BA Set

The radio pouch is attached onto the right-hand side of the BA set waist belt using the two securing loops.

General Check

A communications general check should be carried out by each crew member nominated as the BA wearer.

This should be done in conjunction with the general check for the breathing apparatus set.

The check must include the following:

- Visually examine the radio and all accessories for wear and tear, e.g. damaged insulation or end caps missing from antenna.
- Ensure that all components are secure, and the radio pouch is correctly attached to the BA set waist belt.
- Ensure the Spirocom unit is secured to the BA facemask.
- Further information on the Spirocom and adaptor can be found within the BA Equipment manual stored within the Service Sharepoint portal.

Recommended Donning Procedure

- Open the radio pouch and ensure channel 3 has been selected. Switch on the radio and set the volume control to three quarters of maximum.
- Don the BA set without starting up and adjust the straps.
- Re-seal the radio pouch.
- Ensure connection is established to the Spirocom unit.
- Before being committed to the incident, the team leader should make a test call to BAECO.

Note: A reasonable distance should be kept between radios to avoid feedback on transmission.

Incident Ground Communications

For further guidance on B.A. communications procedures please refer to NOG Foundation for Breathing Apparatus.

12. BA COMPRESSORS

Introduction

Breathing Air Compressors in HFRS comply with the relevant legislation and guidance and are distributed around the Service as follows.

Location	Charging Rate	Max Charging Pressure
Service Headquarters	1100 1/min	300 bar
Clough Road (H 02)	1100 1/min	300 bar
Calvert Lane (H 03)	680 l/min	300 bar
Beverley (H 04)	680 l/min	300 bar
Bridlington (H 10)	680 l/min	300 bar
Peaks Lane (H 17)	680 l/min	300 bar
Immingham West (H 32)	1100 1/min	300 bar
Scunthorpe (H 23)	680 l/min	300 bar
Goole (H 24)	680 l/min	300 bar
Melton (BA Service)	680 l/min	300 bar

Use of Compressors

The BA Manager Fleet & Equipment is responsible for ensuring the maintenance and testing of HFRS Breathing Air Compressors.

Emergency Response Managers must ensure that a suitable and sufficient Risk Assessment has been completed for the use of compressors and is displayed at each compressor location.

Staff who use compressors to charge breathing apparatus cylinders must be competent in their use. Operating instructions must be displayed at each compressor location.

Compressor Maintenance.

All cylinders must be Inspected for any signs of damage prior to charging. If damage is suspected the cylinder must not be charged.

When charging cylinders always ensure that the minimum number of cylinders are charged at once.

On completion of cylinder charging all details must be recorded on the compressor log sheet. Completed log sheets must be retained on the station and available for inspection. (See Appendix A)
Filter change and clean of filter units will be carried out by ESFM; all details are recorded on analox gas analyser

WARNING:

UNDER NO CIRCUMSTANCES ARE CYLINDERS TO BE CHARGED ON COMPRESSORS WITH OUTLET PRESSURES RATED HIGHER THAN THE MAXIMUM CHARGING PRESSURE OF THE CYLINDER.

Annual Service and Other Repairs

HFRS' compressors undergo an annual service carried out by specialist engineers. If a fault develops with the compressor, report via the Service Tranman system, this will create a log for ESFM and then they will make arrangements for any necessary repairs to be carried out.

On completion of the annual service or any repairs **ALL** service reports left by the service engineer must be forwarded to the **ESFM Equipment Technicians.**

Storage of Breathing Apparatus in Compressor Rooms

Breathing Apparatus and spare rubber and neoprene components for breathing apparatus must not be stored in the same enclosure as an air compressor powered by an electric motor due to the additional risk from fire.

Recharging of Non-Fire Brigade Cylinders

Non–Service / Private Cylinders **must not** be charged / re-charged on Service compressors.

Air Purity Tests

The quality of compressed air produced by the Service's compressors must conform to EN132 and is to be tested monthly. The purity of air will also be tested following a change of filters **this will be done by the ESFM Equipment Technicians.**

The Management and recording of Air Purity Testing will be the responsibility of ESFM Technicians.

If anyone requires any further guidance / information regarding this document, please contact the Fleet & Equipment Section

APPENDIX A

Cylinder Charging Log

Date	Cylinder Numbers Charged / Daily Test Record	Service No