

# Smoke blocker - technical information - NOG

|                         |                                              |
|-------------------------|----------------------------------------------|
| New policy number:      | 967                                          |
| Old instruction number: |                                              |
| Issue date:             | 19 February 2021                             |
| Reviewed as current:    |                                              |
| Owner:                  | Assistant Director, Technical and Commercial |
| Responsible work team:  | Fleet Liaison Engineering and Equipment Team |

## Contents

|   |                              |   |
|---|------------------------------|---|
| 1 | Introduction .....           | 2 |
| 2 | Description .....            | 2 |
| 3 | Safety precautions.....      | 2 |
| 4 | Operating instructions ..... | 3 |
| 5 | Maintenance and testing..... | 6 |
| 6 | Defects.....                 | 6 |
| 7 | Associated material .....    | 7 |
|   | Document History .....       | 8 |

## 1 Introduction

- 1.1 This policy describes the smoke blocker carried on pump ladders and pumps, and explains its operation, maintenance and testing.
- 1.2 One smoke blocker is carried on each PL and pump.
- 1.3 The smoke blocker is designed to aid in keeping access and egress routes smoke free and reduce smoke damage.
- 1.4 Allows firefighters to open doors and gain access with firefighting media and equipment whilst limiting the spread of the products of combustion to unaffected parts of the building.
- 1.5 The smoke blocker allows the control of air flow for controlled ventilation.

## 2 Description

- 2.1 Designed to be installed quickly into a door or entrance opening by means of an adjustable metal frame.
- 2.2 The fabric curtain is fixed at the top to the metal frame and hangs freely at the bottom making it possible to pass through the smoke blocker in either direction.
- 2.3 The smoke blocker curtain is manufactured from silicone impregnated fibreglass.
- 2.4 The frame is constructed from 32mm aluminium square tubing with a telescopic bracing bar.
- 2.5 There are two versions currently in use:
  - Mk 1 with a ratchet latch and screw adjustment with a locking pin.
  - Mk 2 with a spring mechanism and screw adjustment.

### 2.6 Technical details:

- |                               |                   |
|-------------------------------|-------------------|
| • Manufacturer/supplier:      | BIG/Leader        |
| • Door width:                 | 70 – 115cm        |
| • Height:                     | 185cm             |
| • Dimensions in carrying bag: | 73cm x 54cm x 4cm |
| • Weight:                     | 4.8kg             |
| • Heat resistance:            | 600°C             |

- 2.7 The smoke blocker can be carried and easily fitted by one person. It is supplied with a carrying bag for easier transportation and stowage.

## 3 Safety precautions

- 3.1 Full structural firefighting PPE (and RPE if appropriate) to be worn when operating this equipment.
- 3.2 The smoke blocker is designed to keep back smoke originating from a fire. It is not intended to be used as a fire door. The fabric curtain must not be used as a fire blanket.



LFB image id:1155597

- 3.3 Direct contact of the smoke blocker with fire must be avoided. Use of the smoke blocker in temperatures in excess of 260°C will slowly degrade the fabrics protective coating.
- 3.4 The portable smoke blocker prevents propagation of smoke and heat through the door/wall opening to which is fitted. This may cause a build up of smoke and heat in the affected area.
- 3.5 Fire crews should take measures for cooling and venting the hot smoke gases after accessing the smoke-filled area.
- 3.6 When passing through a doorway fitted with a smoke blocker, personnel should take care to not hit the adjustable bar which will sit lower than the top of the door frame. Likewise, anyone being guided through the doorway should also be warned so as to not strike their head.

## 4 Operating instructions

### Mounting

- 4.1 Remove the smoke blocker from its bag and unfold.
- 4.2 Check the two spring clips for additional fixing at the top frame bar are fitted, otherwise reliable fastening of the curtain is not ensured at higher temperatures (see below).
- 4.3 On the Mk 1 ensure the bracing bar is fully unwound (otherwise when tightening, the frame may not secure correctly).
- 4.4 The Mk 1 and Mk 2 are shown below:

**Mk 1**



LFB image id:1153685

**Mk 2**



LFB image id:1332496

- 4.5 Position the smoke blocker at the top right in the door frame (see below left).



LFB image id:1155605



LFB image id:1155612

- 4.6 Slide the movable frame part of the smoke blocker to the left to adjust the smoke blocker to the door width (see above right).
- 4.7 **Note:** On the Mk 1, the latch (see below) of the bracing bar must engage.



LFB image id:1153672

- 4.8 The Mk 2 has a self-locking spring mechanism (see below).



LFB image id:1332490

- 4.9 Fasten the smoke blocker by pressing it firmly against the top of the door frame with your left hand and use your right hand to turn the bracing bar in the direction of the arrow to TIGHTEN (see right).
- 4.10 **Note:** Tighten in such a way that the smoke blocker is fastened reliably. Do not tighten beyond this level since overtightening will reduce the service life of the bracing bar and may cause it to fail.
- 4.11 On the Mk 1, lock the latch on the bracing bar, by pushing the safety-pin up.

## Removal

- 4.12 **Mk 1:** Reduce the tension by turning the bracing bar with your right hand in the direction of the arrow to LOOSEN it whilst holding the smoke blocker with your left hand. Unlock the safety pin, press the latch and slide the frame sections together.



LFB image id:1155613

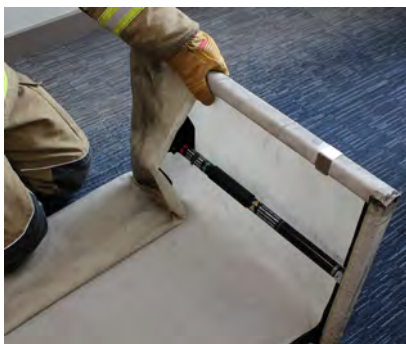


LFB image id:1155626

- 4.13 **Mk 2:** Reduce the tension by turning the bracing bar with your right hand in the direction of the arrow to LOOSEN it whilst holding the smoke blocker with your left hand. Once loose press the spring lever to the left and slide the frame sections together.

## Folding and packing

- 4.14 Turn the bracing bar completely in the direction of the arrow to RETRACT fully and fold the smoke blocker as shown below.



LFB image id:1155632



LFB image id:1155635

- 4.15 **Note:** The glass-fibre fabric of the smoke blocker curtain is susceptible to kinking and abrasion. When folding, make sure that the latch is flat on the fabric.
- 4.16 Insert the smoke blocker into its bag with the closed frame side first. The insertion direction according to the label attached (inside the bag flap) must be observed in order to avoid damage to the fabric during storage.

## Stowage

- 4.17 Stow the smoke blocker flat on the pump bay shelf.
- 4.18 **Note:** Do not store any other objects on the smoke blocker. Inappropriate storage may cause damage to the fabric.

## 5 Maintenance and testing

- On Acceptance.
- Before use.
- After use.
- Quarterly.
- Annually (Vehicle & Equipment (V&E) contractor).

- 5.1 Safety of use is only ensured if the portable smoke blocker is in good technical condition. Check this prior to mounting it.
- 5.2 The product is subject to wear, particularly the heat-resistant fabric and the bracing elements.
- 5.3 Inspect the condition of the smoke blocker, looking for wear, distortion or other damage. Check all movable parts work as designed. Ensure the two spring clip fasteners are in place and correctly fitted.
- 5.4 If any part of the smoke blocker is defective or damaged, it is to be taken off the run as defective.

### Cleaning

- 5.5 If necessary, clean the smoke blocker by hand using a mild detergent and rinse. **Note:** the fabric is not suitable for machine washing.
- 5.6 The fabric of the smoke blocker is fastened to the frame by means of velcro strips and two spring clips and can therefore be easily removed for cleaning.
- 5.7 Once cleaned, ensure the fabric is dry before re-attaching it to the frame in the same way.
- 5.8 **Note:** It is important to remount the two spring clips as additional fasteners after replacing the fabric.
- 5.9 Any contamination of the fabric with oil, grease, paint or other inflammable substances will increase the inflammability. Such contaminated fabrics must be replaced.
- 5.10 Ensure the fabric is dry before re-stowing.
- 5.11 Tests to be recorded on online standard test card.

## 6 Defects

- 6.1 The smoke blocker and its component parts are Category B items under the V&E contract.
- 6.2 Defects should be reported via POMS.
- 6.3 POMS id numbers as follows:
- |                              |       |
|------------------------------|-------|
| • Smoke blocker (complete)   | S8536 |
| • Smoke blocker carrying bag | S8537 |

## **7 Associated material**

7.1 To be read in conjunction with the following material where necessary:

- Policy number 540 – Manual handling operations procedure
- Policy number 617 – Personal protective equipment at work procedure
- Policy number 633 – High rise firefighting
- Policy number 707 – Control of infection and infectious diseases policy.
- Policy number 724 – Appliance inventories and operational readiness
- Policy number 803 – Search and rescue procedures within structures
- Policy number 907 – F.I.R.E. bag – technical information
- Policy number 985 – Operational safety management - knowledge skills and competence –  
NOG

## Document History

### Impact assessments

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

|     |            |      |            |       |            |    |  |
|-----|------------|------|------------|-------|------------|----|--|
| EIA | 20/03/2020 | SDIA | 01/04/2020 | HSWIA | 17/04/2020 | RA |  |
|-----|------------|------|------------|-------|------------|----|--|

### 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 6, para 7.1 | Cross reference links updated.                                        | 18/08/2022 |
| Throughout       | Information added about a second version (Mk 2) of the smoke blocker. | 28/07/2023 |
|                  |                                                                       |            |
|                  |                                                                       |            |
|                  |                                                                       |            |
|                  |                                                                       |            |
|                  |                                                                       |            |
|                  |                                                                       |            |

### Corporate subject list

You can find this policy under the following subjects.

| Level 1 | Level 2   |
|---------|-----------|
| Assets  | Equipment |
|         |           |
|         |           |

### Freedom of Information Act exemptions

This policy/procedure has been securely marked due to:

| Considered by:<br>(responsible work team) | FOIA exemption | Security marking<br>classification |
|-------------------------------------------|----------------|------------------------------------|
|                                           |                |                                    |
|                                           |                |                                    |