

# Breathing Apparatus (BA) Procedures

## Objectives

- 1 This guidance will enable:
  - (a) Fire service personnel to carryout the search of known or unknown premises or dwellings in a safe, efficient and methodical manner.
  - (b) Fire service personnel to carryout correct door entry procedures.
  - (c) Fire service personnel to safely move from compartment to compartment.
  - (d) Fire service personnel to safely deal with staircases and upper floor structures.

## Notes on search procedures

2. Search procedures will always be dictated by the information available on arrival at the scene of operations (the greatest known point of danger, last known location of occupants), the Dynamic Risk Assessment (DRA) conducted by the Oi/c, the number of BA teams available and finally the brief given to and recorded on the Entry Control Board (ECB). Entry will always be tasked on either a left hand or right hand search pattern, for whatever floor level or area is to be searched. The left hand or right hand search will normally be accompanied by the statement 'compartment by compartment', This added statement signifies BA teams **will clear each compartment before moving on to the next**, unless briefed other wise.

## Prior to Entry

2. The following will be conducted prior to entry to the risk area:
  - (a) Teams will consist of two or more wearers.
  - (b) Will carryout donning and start-up procedures in fresh air.
  - (c) Teams will carryout a quick appraisal of the risk layout with reference to building plans if available.
  - (d) Report to BAECO.

## Door Procedures

3. Personnel will adopt the following Door procedures:
  - (a) Be alert to the risk of 'Backdraught' and 'rapid fire spread'.
  - (b) Check branch setting is appropriate to the following actions

- (c) Be alert to the signs of fire in and around the door and door frame. Wet test door spray/paint this inerts the fire gases.
- (d) Establish door opening i.e. inwards / outwards / sliding.
- (e) Adopt a safe position prior to opening the door in accordance with flashover backdraught procedures:
  - i) Branch man (Number 1) adopts a position on both knees in the opening of the door to a compartment. (Fig 1.24)
  - ii) **Door opens towards the team** - Number 2 to adopt a position on one knee with his body behind the door for protection. The knee nearest the door is to be in the uppermost position to support the door when opening. (Fig 1.24)



Fig 1.24

- iii) **Door opens away from the team** - Number 2 to adopt a position on opposite side of the hinges to the door so he is fully protected by the wall when opening the door. (Fig 1.25)



Fig 1.25

(f) The procedure detailed in para 3 (e i) may change in the following circumstances; In event the BA Team Leader risk assesses the situation and believes that placing both knees on the floor constitutes a greater risk to the team from personal injury through debris (glass etc). It is then acceptable for the team to stay low, with both knees off the floor (Fig 1.26)

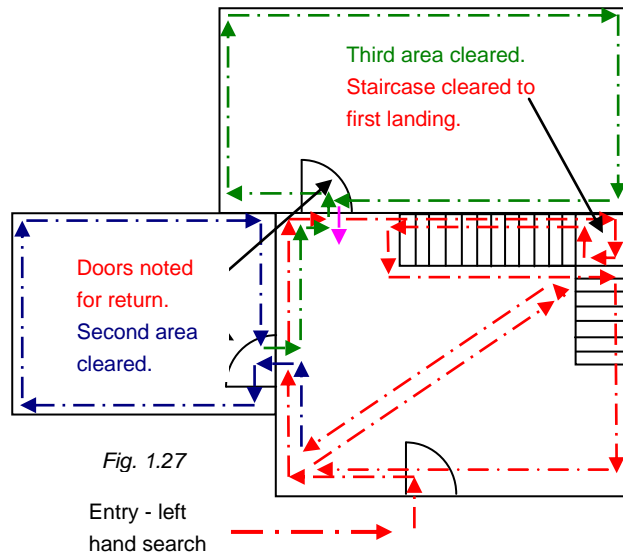


**Fig 1.26**

- (g) Open door and carry out DRA by observing the conditions.
- (h) If necessary apply water (in accordance with flashover backdraught procedures) to cool fire gases inside, close door, to allow water to do its work. Wait for 2-5 seconds after water application, before checking for reduction of temperature inside compartment. **Important** -Do not enter directly after water application, risk of scalding. Repeat process until safe to enter.
- (i) Observe colour of or changes to the colour of fire gases.
- (j) Keep low on entry and once inside check door furniture. Carry out gas cooling and other firefighting actions as conditions dictate.

### Search Patterns

4. Persons are to conduct the following when tasked to conduct a left or right hand search:
  - (a) Use BA shuffle; sweep the area in front and test the areas with your outside leg (leg furthest away from a fixed wall). Weight is to be kept on the inside leg (Leg nearest the fixed wall). BA wearers are to move methodically constantly checking the security of the area in front before moving forward.
  - (b) Team is to move around the compartment side by side searching as they move forward, noting (but not entering) all doors located within the area, until compartment is cleared → (fig. 1.27).



**Fig. 1.27**

- (c) Team will return to the first door located → (fig. 1.27) and after ensuring that any hot fire gases in their area of operations are neutralised, carryout door procedures as covered and move into the next compartment. Inform ECO that the compartment is cleared; declare cylinder contents (radio communications).
- (d) Work as a team.
- (e) Use the back of hands when searching.
- (f) Ensure sufficient gauge checks are taken and inform ECO (radio communications).
- (g) Allow sufficient air for withdrawal turn round times.
- (h) All BA team members should take responsibility for route memorisation, making a mental note of the direction and any landmarks or landmark features encountered on route.
- (i) Where the return path with a casualty is over a long distance, adequate gauge checks should be taken to ensure that rotation of crew members maintain an equality of cylinder contents.

### Searching a room

5. The following procedures should be adopted when searching rooms:
  - (a) On entry check behind the door and test door furniture to prevent lock in.
  - (b) On entry to a room, the team are to spread out and size compartment where possible
  - (c) Make a complete circuit of the room as conditions dictate whilst conducting gas cooling, if applicable (Fig 1.28).
  - (d) Use Thermal Image Camera to:

- (i) Identify any superheated fire gases,
  - (ii) Locate seat of the fire,
  - (iii) Assist in finding casualties.
- (e) Search under:
- (i) Windows
  - (ii) Tables
  - (iii) Chairs
  - (iv) Beds
- (f) Search in:
- (i) Wardrobes
  - (ii) Cupboards
  - (iii) Baths
  - (iv) Chests
  - (v) Fridges
- (g) Search behind:
- (i) Doors
  - (ii) Furniture
- (h) If the compartment is large and a complete circuit fails to clear the area, cross the room diagonally and back to cover the central area.

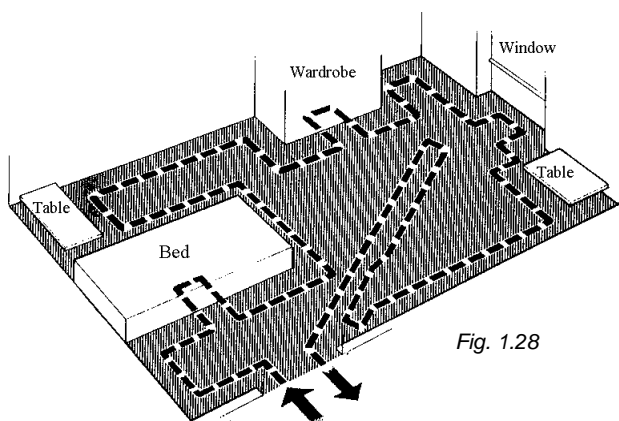


Fig. 1.28

### Brief Specific Search Pattern

6. The following procedures should be adopted when conducting brief specific search patterns:

- (a) Brief specific search patterns should only be carried out where a good prior knowledge of / or plans exist for that building / dwelling. It can also be used where a member of the public or the building custodian has given the I/C sufficient information regarding the premise to undertake brief specific search patterns.

(b) Team is to be briefed as to their route to area of operation i.e. location of casualty or the fire and search requirements on arrival. Example of brief specific searches:

- (i) 'Enter through the main entrance picking up the left hand wall; locate the SECOND door on the Left and carryout a left hand search within this room'; or 'from this point onwards'.
- (ii) 'Enter through the main entrance picking up the right hand wall; locate the THIRD (Living room) door on the right and extinguish the fire within the compartment'.

### Staircases

7. The following procedures should be adopted in relation to ascending /descending and managing casualties on staircases:

- (a) When carrying out a left or right hand search of the ground floor, staircases are to be included and should be searched up to the first landing only (1 metre sweep of the landing area) Inform ECO of location and cylinder contents (radio communications)
- (b) Keep to the wall side of the staircase.
- (c) When descending / ascending test each stair by:
  - (i) Keep your weight on the inside leg (leg nearest wall).
  - (ii) Sweep and test each stair with the outside leg. (Fig 1.29 / 1.30)
  - (iii) Descend staircases backwards, sweeping and testing each stair below, with the outside leg, ensuring weight is on the front leg.(Fig 1.29 / 1.30)
  - (iv) Make a count of the number of stairs, note any damage and inform other BA team members.

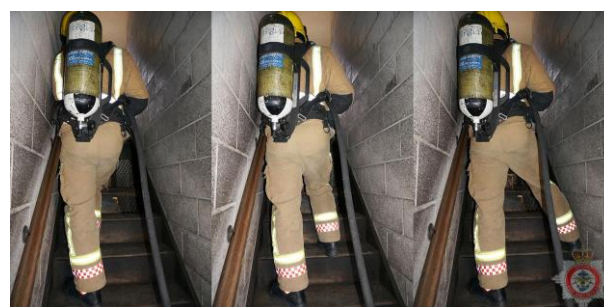


Fig 1.29



**Fig 1.30**

(d) Heavily damaged staircases should be bridged with ladders.

(e) Only one person on a staircase at anytime unless bringing down a casualty.

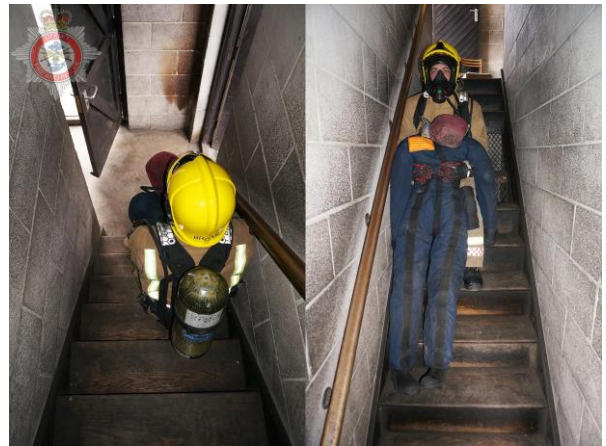
(f) Do not use standard fire fighter lift for casualties when wearing BA.

(g) Casualties should be supported under the arms and brought down head first dragging the feet (Fig 1.31).



**Fig 1.31**

(h) When ascending staircases with a casualty, BA team should assess the condition of the staircase, then check their gauges to determine who has the greater air and take the casualty. The fire fighter then adopts a seated position on the stair tread with the BA set towards the stairs. The casualty is likewise seated on a stair tread below and between the fire fighter's legs; the casualty is then supported under the arms. The fire fighter then raises their self and the casualty and ascends 'stair tread' by 'stair tread', using their legs to provide a lifting motion (Fig 1.32)



**Fig 1.32**

(i) When ascending or descending a staircase the decision to take the media first or last must follow a dynamic risk assessment by the BA team leader, who will decide on the greatest point of danger (fire upstairs or downstairs).

(j) When searching on upper floors, where concerns may exist as to the integrity of the structure, keep close to the walls and bridge suspect areas.

#### Disorientation

8. In the event persons become disorientated, they should use the following procedures:

(a) Retrace Hose

(b) Make use of thermal image camera to ascertain layout

(c) Moving forward until a wall is located (be aware of open stairwells).

(d) Follow the direction of floor boards or rows of seating.

(e) Move towards obvious sounds outside the building, i.e. road noise, sirens and operating pumps.

(f) Be aware of reflection from windows and mirrors.

(g) Do not panic.

(h) If totally lost, instigate entrapped procedures.

(i) Inform Entry Control Operative and declare cylinder contents (radio communications).

(j) Fire fighters may indicate their location or summon assistance with loud, slow and regular handclaps, though this is not to be used as a distress signal.

## Distress Signal Unit

9. Distress signals heard, BA teams should:
- (a) Team leader checks air (sufficient to investigate).
  - (b) Make for the source of the distress signal.
  - (c) Assistance to distressed wearer takes precedence over current task.
  - (d) Maintain escape routes.
  - (e) If not needed, check air and return to previous task.
  - (f) Be aware of freezer and smoke alarms.

## Discovering Casualties

10. In the event BA Teams discover casualties, they should:
- (a) Search area around each casualty (1 Metre sweep).
  - (b) Complete gauge check
  - (c) Use quickest known route to fresh air.
  - (d) Ensure the casualty is kept low and below fire gases where possible when moving them to safety.
  - (e) If obviously un-saveable life, follow procedures below.
  - (f) Assist conscious casualties to safety or remain with them in a safe haven until fire operations or ventilation has been completed. Inform ECO (radio communications).

## Fatalities

11. When BA teams come across fatalities, they should:
- (a) Not move bodies unless it is absolutely necessary.
  - (b) Report discovery to ECO (radio communications)
  - (c) If required to be moved, record where found and the position of the deceased inform the police
  - (d) Ensure protective gloves are worn.
  - (e) Wrap the deceased in a blanket or other suitable covering.
  - (f) If any skin to skin contact occurs, apply disinfectant and visit hospital ASAP.

## Gauge Checks

12. The following procedures should be adopted in relation to Gauge Checks.
- (a) Team leader is responsible for periodic checks which should be conducted:
    - (i) On first entry inside the risk, to check for rapid air loss.
    - (ii) Change of direction or level.
    - (iii) Prior to entry, through doors.
    - (iv) Before and after hazards, i.e. tunnels.
    - (v) Location of casualty.
  - (b) BA Wearers are responsible for frequent gauge checks and for informing the BA team leader.
  - (c) In the event BA Wearers notice a problem with BA set, i.e. pressure relief valve operates, they are to:
    - (i) Inform team leader and team as a whole to withdraw.

## Emergency Evacuation Signal

13. The following procedures are to be adopted in relation to implementing the Emergency Evacuation Signal:
- (a) Brought into operation at first sign of danger to wearers within the risk. It is instigated, by repeated short blasts on the 'Acme Thunder' type whistle supplied with entry control board, or carried by all 'crew mangers'.
  - (b) BA Wearers on the sound of the Emergency Evacuation Signal are to withdraw from the risk area and inform ECO of withdrawal. In addition, once withdrawn they are to report to the BA entry Control Officer.