

# 15 Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE)

## Contents

- 15.1 Introduction
- 15.2 Roles and Responsibilities
- 15.3 Prescription Safety Eyewear Provision
- 15.4 RPE Specific Roles and Responsibilities
- 15.5 Retention of Records
- 15.6 Related Documents

*Annex A – Guide to Formal Fit Testing of Respiratory Protective Equipment (RPE)*

## Introduction

15.1.1 This chapter sets out the procedures and guidance for the management, assessment, selection, maintenance and use of Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE) required to be worn by staff and/or visitors etc where hazardous activities are undertaken.

15.1.2 This chapter does not cover the supply, quality or specification of PPE or RPE for:

- diving (see JSP 433);
- fire fighting (see JSP 426 Volume 3 Leaflet 1, or for on-board ships afloat see BRd 2170 series);
- tactical police/combat body armour (CBA)<sup>1</sup>;
- use at petroleum installations (see JSP 375 Volume 3 Chapter 5 –Annex D);
- Compressed Breathable Natural Air (CBNA) for which specification and assessment is contained in JSP 319.

15.2.1 The PPE at Work Regulations and the Merchant Shipping and Fishing Vessels PPE Regulations requires the MOD to provide suitable and sufficient PPE to protect its staff (both Service and civilian) and where necessary visitors (including trainees and students) from hazardous activities undertaken on the MOD estate or by MOD staff. PPE is not provided for contractors (includes self employed, manpower substitution and agency staff unless terms of engagement gives them employee status). MOD does have a duty to provide suitable and sufficient information to allow contractors to select suitable PPE for the activity they are undertaking and ensure that PPE is being worn.

15.1.3 The term PPE refers to all equipment which is intended to be worn or held by staff in the workplace which protects them against one or more risks to their health and

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<sup>1</sup> The PPE Regs do not apply to items of CBA which has been specifically designed and manufactured for the Armed Forces and advice can be found in Defence Council Instruction 298/04 – Policy for the issue of Enhanced Combat Body Armour. However, the PPE Regs do apply to items of CBA which has been designed and manufactured for the commercial market, even if it is procured and used by the Armed Forces.

safety (environmental, biological, radiological, chemical and physical hazards) e.g. foul weather clothing, safety helmets, harnesses, goggles, RPE, etc.

15.1.4 RPE is worn to protect staff from a respiratory hazard e.g. dust, mists, metal fumes, gases and vapours. There are two classifications of RPE (guidance on management of RPE and RPE Fit testing can be found at Section 5):

- **FILTRATION** – this may be:
  - passive respirators relying on the lung function to draw air through the filter which removes the contaminants from the air before it is inhaled and fit tight to the face; or
  - powered respirators which pump air through a filter which is supplied at positive pressure to the helmet or hood to prevent the surrounding contaminated air to leak in (**Note:** these systems may not be suitable for use by personnel who have facial hair, or other attributes that affect the fit of a mask to the face);
- **BREATHING APPARATUS (BA)** which provides the wearer with a supply of breathable air from an independent source (airline or self contained) in accordance with JSP 319.

## Roles and Responsibilities

### Procurement or Acquisition Teams

15.2.1 Local Purchase procedures and Procurement or Acquisition Teams must ensure that all PPE supplied is safe to use; reduce the risks from the hazard to as low as is reasonably practicable, and be compliant with any relevant product specific legislation.

15.2.2 Where the need for specific PPE for the end user of equipment/platform is identified; procurement/acquisition teams must ensure that the PPE requirement is communicated to Defence Clothing to ensure that the item is available to the end user when the equipment/platform is introduced into service and that the end user is informed and consulted of the need. The equipment/platform maintenance documentation must specify the PPE which is required.

15.2.3 Where appropriate PPE shall carry a Conformité Européenne (CE) mark and be accompanied by the relevant certificates or declarations and instructions for its safe use and maintenance; ensuring that all risks are identified and information forwarded to the user or relevant duty holder.

### Top Level Budget Holders

15.2.4 The TLB Holder must ensure that sufficient resources are made available and procedures put in place for the provision of PPE identified by risk assessment.

### Commanding Officers (CO)/Head of Establishment (HoE)

15.2.5 The CO/HoE must seek assurance that suitable and sufficient risk assessments have been conducted by competent persons<sup>2</sup> for the activities for which they are

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<sup>2</sup> Someone who has sufficient training and experience or knowledge and other qualities to enable them to properly to assist in undertaking the measures; (a) an understanding of relevant current best practice; (b) an awareness of the limitations of their own experience and knowledge; and (c) the willingness and ability to supplement existing experience and knowledge, when necessary by obtaining external help and advice.

responsible and procedures put in place for the provision of testing, inspection, maintenance and storage, and where appropriate training, for the use of PPE

15.2.6 Where the wearing of PPE or RPE is mandated in a specific work area, suitable signage (see JSP 375, Part 2, Volume 1, Chapter 6) must be provided. This provision may be through the Infrastructure Provider or through local provision. Whichever route is used the signage must be maintained.

## **Managers**

15.2.7 Managers are responsible for ensuring that a suitable and sufficient risk assessment has been performed by a competent person ( the risk assessment should identify all the required engineering/management controls for a process/activity and where a significant residual risk remains), for the use of PPE. It is the managers' responsibility to ensure that all of the controls have been implemented and that such use of PPE is justified as the control measure of last resort and may dictate the wearing of PPE by location rather than by activity to protect defence personnel and or visitors working or transiting an area e.g. the wearing of high visibility vests/safety helmet anywhere on a building site. However PPE should not be provided for contractors who should have their own PPE for the activity that they are contracted to undertake; the manager should monitor that the PPE is appropriate and used.

**Note: Turban wearing Sikhs are exempt from the need to wear safety helmets unless it is necessary to protect the Sikh from risk of injury whilst on military operations or training for such military operations (e.g. bomb disposal work).**

15.2.8 Activities that are of an operational imperative or for response to an emergency, the use of PPE is permitted as part of a control strategy to safeguard personnel where it is the only practical short term solution until such time as adequate control is achieved by other means. This solution is to be time limited.

**Note: PPE only protects the wearer and the protection it offers is dependent on the PPE being suitable for the task; correctly fitted; maintained; and properly used.**

15.2.9 The manager should consult each individual, and where practical make reasonable adjustments, when selecting the most suitable PPE for a particular activity/process. Care must be taken to ensure that the benefits provided by PPE do not outweigh the restrictions that its use may place on the user which may lead to it being used incorrectly. PPE, where required, shall be provided to staff at no cost to them.

15.2.10 When selecting PPE consideration must be given to, but is not limited to the following (this list is not exhaustive):

- PPE being appropriate for the specific hazards and conditions (e.g. eye protection, gloves or respirator selected offer protection against the impacts, chemicals, toxins involved, etc);
- compatibility with other PPE/RPE or other clothing, hoods etc (e.g. ear defenders fit correctly under safety helmets; safety goggles can be worn over prescription glasses);
- requirements for high visibility clothing (e.g. proximity to vehicular traffic, construction sites, remote or isolated working);

- requirements for communications and emergencies (e.g. hearing protection and/or respiratory protection can reduce ability to hear alarms/instructions or talk clearly);
- the required field of vision for the task (goggles/face masks can reduce the wearers' field of vision);
- the fit of the PPE to the user;
- the physiological burden placed on those required to use it and the demands of the task (stress, heat, comfort, etc);
- persons suffering from an existing health problem (PPE may exacerbate the condition);
- the need for mobility or dexterity when wearing PPE (e.g. increased physical effort required to overcome restrictions caused by the use of PPE);
- whether the use of PPE could cause allergies in the wearer (e.g. latex);
- revision of working practices to accommodate the use of PPE (e.g. environmental conditions in which it is worn - temperature, humidity, air movement, comfort breaks);
- duration of wear must not exceed any breakthrough times the PPE offers against the substance (e.g. chemical gloves may only offer protection for 15 minutes of submersion).

15.2.11 All PPE should be sourced in accordance with Defence Clothing Catalogue (Trading Fund Agencies may use their own PPE systems, supplier routes, forms etc. but these must offer at least an equivalent level of protection).

15.2.12 All PPE supplied within the European Community must comply with the CE mark requirements. If PPE is sourced outside of the European Community or does not carry a CE mark, a risk assessment must be conducted with advice from a competent source on the items fitness for purpose. The assessment must be recorded along with any evidence e.g. certificate of conformance with defence/International standards.

15.2.13 If the wearing of PPE required for a task is not a practical option (e.g. latex allergy) for an individual, and an alternative acceptable form of PPE which offers the same level of protection can not be identified, the individual should be re-assigned to a task and/or to an area where the use of the PPE is not required.

15.2.14 Managers must ensure that suitable training (including suitable refresher training), instruction and information (the extent of any information, instruction and training will vary with the risk and complexity of the PPE being used) is provided to defence personnel and if necessary to visitors. It is the manager's responsibility to ensure that the need for MOD supplied PPE is understood and worn correctly by the personnel using it. The training should incorporate manufactures' instructions and may include:

- why the PPE is needed
- how the PPE is to be used;
- the limitations of the PPE;
- visual inspection to identify defects (pre-use);
- the arrangements for loss/defect reporting;
- fitting and removing of the equipment correctly;
- testing before use;
- cleaning and correct storage.

15.2.15 When personnel are provided with their PPE, managers should also provide them with User Inspection Instructions (MOD Form 5031) detailing the periodicity and the checks required to be carried out on their PPE.

15.2.16 Managers should ensure that all PPE issued to defence personnel on a permanent/ semi-permanent basis is regularly inspected/audited to ensure that it is maintained in a serviceable condition and all identified corrective actions (repairs, replacement of lost or defective items) are immediately carried out. Such inspections/audits should be conducted at a frequency based on risk and use of the PPE. It should be conducted at least on an annual basis. (MOD Form 5030 provides a suggested template for recording of such inspections/audits).

15.2.17 Appropriate facilities and services will be provided for the safe use, storage, maintenance and management of PPE (including PPE for visitors) when not in use. The storage and services must:

- protect the PPE from contamination, loss, or damage (e.g. harmful substances, damp, or sunlight);
- provide for the cleaning of PPE (e.g. disinfection where necessary for shared PPE or hygiene purposes)
- allow for examination or test to check for faults, damage to ensure that the PPE is operating correctly and defect reporting system - the frequency and depth of inspection/testing required will vary depending on the type of PPE, and/or manufacturer's instructions;
- ensure that equipment ready for use must be clearly segregated and labelled from PPE awaiting repair, maintenance or cleaning;
- ensure that any RPE can only be connected to a breathable air supply in accordance with JSP 319.

**Note: personne must not take home any PPE. This is to prevent cross contamination of private households and their residents from any product or substances which the PPE has been exposed to.**

15.2.18 PPE will often end up contaminated at the end of its life. The extent and type of any contamination should be locally assessed and precautions taken to either thoroughly clean the PPE through local arrangements or to dispose of it in accordance with local instructions via the appropriate waste stream.

## **All Personnel**

15.2.19 All personnel must use any PPE supplied to them in accordance with the manufacturer's instructions and information, instruction and training provided by their manager

15.2.20 The PPE supplied must not be altered or modified and only repaired or replaced in accordance with manufacturers' instructions. All personnel should be provided with adequate information for the maintenance of the issued (User Inspection Instruction - MOD Form 5031) PPE, which will detail the periodicity and user checks required.

15.2.21 Personnel who have an existing medical condition (e.g. latex allergy, facial scarring) which may affect their use of PPE or for practical reasons can not use the PPE selected must inform their manager. An alternative acceptable form of PPE which offers the same level of protection should be considered. If no alternative PPE can be identified,

personnel should be reassigned to tasks where the use of PPE is not required. Personnel do not have to disclose the exact details of their medical condition to their manager unless they chose to.

15.2.22 Personnel may also be required to attend an appointment with the relevant occupational health provider (DBS(CHR) for civilians or local Medical Facility/local medical officer for Service personnel for a work suitability assessment.

15.2.23 All PPE must be inspected prior to use to confirm it is in serviceable condition (this can include visual inspection and user fit assessment; if defective, the PPE must not be used and a replacement obtained. Any defects or loss of PPE must be reported in accordance with local procedures/instructions. All personnel must ensure that the PPE is cleaned and correctly stored in accordance with the manufacturers' instructions when not in use.

15.2.24 Defence personnel whose activities require a degree of visual precision which could be affected by the use of standard eye shields (e.g. engineering workshops) which require provision of prescription safety lenses, frames and side shields should approach their manager if they require this equipment. Personnel can contribute to the cost of basic frames and/or lenses if they wish to upgrade to designer frames etc., but they must ensure that the frames and lenses still meet the required standards to protect against the hazards associated with task(s) and be compatible with any other PPE to be worn.

15.2.25 Personnel must not take home any item of PPE which may have become contaminated with any product or substance likely to pose a risk to health. PPE must be left in the workplace where suitable storage and cleaning facilities for PPE are provided.

## **Prescription Safety Eyewear**

15.3.1 The MOD has signed up to a cross-government Corporate Eyecare Scheme (CES) which also caters for the provision of prescription safety eyewear. Where the provision of prescription safety eyewear is justified (e.g. work requiring a high degree of visual clarity that may be affected by standard eye shields) TLB/business units should have in place procedures for the use of the CES to provide personnel with prescription safety eyewear where they are required. If personnel choose not to use the CES as a matter of preference, they will not be eligible to reclaim any costs for prescription safety eyewear.

15.3.2 The CES is accessed through a pre-pay electronic on-line voucher system which enables the selection for an appropriate pair of prescription safety glasses in accordance with the activity risk assessment:

- Safety Eyewear eVoucher (CR39 plastic lens conforms to standard BSEN166 Grade S).
  - one eVoucher provides one pair of Specsavers' safety glasses, fitted with single vision lenses.
  - two eVouchers provide one pair of Specsavers' safety glasses with bifocal or varifocal lenses.
- Safety Eyewear Lens Options eVoucher is used with the eVouchers above to upgrade the lens material or coating in accordance with the activity risk assessment recommendation e.g polycarbonate (Grade F/optical class 1)

lenses, UV treatments or anti-reflective coating. One Lens Option eVoucher is used per option e.g if a coating was required in addition to polycarbonate lenses, two Lens Option eVouchers would be required.

- Glasses only eVoucher is used to provide a pair of single vision prescription lenses for used with respirator/breathing apparatus. Where a bifocal or varifocal lens is required the additional cost will be by reimbursement using MOD Form 1108.

**Note: If the individual wishes to further upgrade from bi-focal to varifocal lenses or to a more expensive frame design, then they will be required to cover any further costs themselves.**

15.3.3 To order the safety eyewear vouchers an account must first be opened by telephoning Specsavers on 0115 933 0800. Ordering of the vouchers is done online by accessing the account and entering the number of vouchers and type required and paid by GPC card or BACS transfer. Alternatively a pro-forma invoice for payment can be made by email (uk.corporateeyecare@specsavers.com) or fax (0115 986 1983).

15.3.4 The CES vouchers for safety eyewear only covers the provision of the frame and the prescription lenses (on the basis that the individual should already have their prescription details). Should the individual need an eye-sight test then a VDU voucher will need to be purchased at the same time.

## RPE Specific Roles and Responsibilities

**Note: The duties described in this section are in addition to the Roles and Responsibilities detailed in Section 3.**

15.4.1 This Section only covers the use, fit, storage and maintenance of RPE which is worn over the face or over the head (e.g. hood or mask) and the filters attached directly or via a pump worn on the person.

15.4.2 The RPE covered in this section fall into two specific types:

- **Tight Fitting** - these can be half mask, or full face for which a fit test is required at initial selection;
- **Loose Fitting** – these can be hood (including air fed) or visor. No fit testing is required.

### Commanding Officer/Head of Establishment (CO/HoE)

15.4.3 CO/HoE will seek assurance that risk assessments have been carried to identify the activities on site which require tight fitting RPE and that there are procedures in place for the correct selection and fit testing of tight fitting RPE by a competent person for personnel who are required to use it.

### Managers

15.4.4 RPE is to be provided to all personnel who are required to work in an environment which exposes them to a significant risk from a respiratory hazard e.g. dust, mists, metal fumes, gases and vapours after suitable and sufficient risk assessments (e.g. COSHH) have been completed and all other control measures implemented.

15.4.5 If the wearing of RPE required for a task is not a practical option (e.g. latex allergy, facial scarring, asthmatic or claustrophobic) for an individual, and an alternative acceptable form of RPE which offers the same level of protection can not be identified, the individual should be referred to the relevant occupational health provider (DBS(CHR) for civilians or local Medical Centre/local medical officer for Service personnel) for a work suitability assessment and/or reassigned to tasks where the use of RPE is not required.

15.4.6 The manager must ensure that selection of appropriate RPE (Guidance on the selection, use and maintenance of adequate and suitable RPE can be found in HSG 53 and BS EN 529) is made by a person competent to answer the following questions (not exhaustive):

- what is/are the hazardous substance(s) present (e.g. gas, mist, fume, dust, solvent;) that require protecting against (identified by the COSHH risk assessment);
- is there sufficient oxygen in the atmosphere to breathe;
- Is the hazardous substance explosive/flammable in air;
- what type of RPE and filter will be needed for protection against the hazardous substance;
- will the duration of the task exceed the breakthrough times for the RPE filter of the substance being protected against;
- does the wearer have facial hair, dentures or other attributes (e.g. facial scarring) etc that may prevent a positive face fit; or does the wearer use spectacles (spectacles cannot normally be worn with full face RPE however prescription lenses/inserts can be provided);
- will the RPE selected limit visibility of the wearer;
- are there any restrictions on mobility (e.g. space to move around);
- is there any additional weight to carry (e.g. a pump);
- is the RPE selected compatible with other PPE which is to be worn (e.g. hard hat, hearing protection);
- are there any issues with communication from wearing of the RPE;
- what is the humidity in the area the task is to be performed;
- is the wearer of the RPE physically fit;
- is the RPE acceptable to the wearer;
- is the equipment CE marked.

15.4.7 Managers must ensure that all personnel required to wear RPE, complete MOD Form 5032 – Self Assessment for RPE. Personnel with respiratory disorders such as asthma may find difficulty with respirators which rely on lung power (passive) to draw air through filters and alternative RPE selection may need to be considered. If the manager is advised by an individual that they have answered “yes” to one or more questions, the manager must refer them to occupational health for assessment for civilians to DBS(People Services) or local medical facility for Service Personnel.

15.4.8 Managers who have personnel who are required to wear tight fitting RPE as part of their duties, (Fig. 1, 2 & 3) must ensure that appropriate fit testing (see Annex A) is conducted by a competent person and the assessment is recorded.



## Examples of Tight Fitting RPE



Fig. 1 Full face mask



Fig. 2 Half mask



Fig.3 Filtering facepiece (FFP)

## Examples of Loose Fitting RPE



Fig 4. Hood



Fig 5. Helmet/visor

15.4.9 Loose fitting RPE (Fig. 4 & 5) are better suited to personnel who wear spectacles with side arms and people with facial hair in the region of the face-seal of a tight-fitting mask. This type of RPE relies on a sufficient airflow through the facepiece to protect the wearer and do not require fit testing. However, personnel should be provided with the correct size, and type to ensure adequate protection against the hazard. In the vast majority of scenarios loose fitting alternatives to tight-fitting masks are available and should be selected where necessary.

15.4.10 The manager must ensure that RPE fit testing is conducted by a competent person having adequate knowledge, instruction and training (details can be found on the British Safety Industry Federation [‘Fit2Fit’ website](#)).

15.4.11 A repeat fit test will be required if there is a significant change of the individuals’ face or head which may affect the seal of the RPE this will often be due to:

- significant gains or loss of weight;
- substantial dental work; or
- facial changes (e.g. scars, moles etc.).

15.4.12 RPE fit test certificates must be kept by the manager for at least five years from the date of the test. Fit test records must be made available to the wearer and to the HSE on request, and summaries of the results to Trade Union and safety representatives.

15.4.13 If the manager is informed that there has been a failure of correctly fitted RPE (e.g. smells inside the mask).The incident must be investigated as to the reason for the failure. If necessary the manager must refer individual to occupational health for medical

advice (DBS(CHR) for civilians or Local Medical Centre/Medical Officer for Service Personnel). Any failure of RPE should be recorded as an incident in accordance with TLB accident/Incident reporting procedures and JSP 375, Part 2, Volume 1, Chapter 16.

## All Personnel

15.4.14 Personnel who are required to wear RPE must complete a MOD Form 5032 – RPE Self Assessment. If a positive response to one or more questions is obtained, the manager must be immediately informed (the manager does not need to be shown the form or given any details other than advise that a positive response was obtained). The manager will then refer the individual to occupational health DBS(People Services) for civilians or local medical facility for Service Personnel, for assessment.

15.4.15 If an individual loses or gains weight significantly, have substantial dental work carried out or notice any new moles or scarring to their head or face, the effectiveness of the seal to the face of the RPE may be compromised and could put them at risk. The manager should be advised of the change and will then arrange for a fit test to be conducted to confirm whether the RPE supplied is still suitable.

15.4.16 Personnel must use any RPE provided for their use in accordance with the manufacturer's instructions and the training they have received. They must not tamper or make unauthorised modifications to the equipment as this could put their own health at risk.

15.4.17 Personnel must conduct a wearer pre-use fit check in accordance with the training received at the fit test to ensure that the facepiece seals adequately to their face. Any suspected or known defects prior to or during use (e.g. the user can smell paint/fumes whilst wearing the facepiece) of RPE must be reported to the manager who will investigate and if necessary refer the individual to occupational health for possible exposure assessment.

## Retention of Records

15.5.1 Records (risk assessments, action plans, health records, training records, maintenance records etc) must be retained in accordance with JSP 375, Part 2, Volume 2, Chapter 39.

## Related Documents

15.6.1 The following documents should be consulted in conjunction with this chapter:

### JSP 375 Part 2, Volume 1:

- Chapter 08 – Health and Safety Risk Assessment;
- Chapter 11 – Management of Hazardous Substances
- Chapter 14 – Health Surveillance and Health Monitoring;
- Chapter 22 – The Purchase and Safe Use of Work Equipment;
- Chapter 25 – Control of Noise;
- Chapter 26 – Control of Vibration;
- Chapter 36 – Management of Asbestos;
- Chapter 39 – Retention of Records.

## Other MOD Guidance

- Defence Clothing Catalogue;
- JSP 569 - Working at Height Personal Protective Equipment;
- BRd 2170 series - SHIP CBRNDC Manual;
- JSP 319 - Safety Regulations for the Storage and Handling of Gases;
- DBR 2000(89) Compressed Gas System Design and Engineering Practices.

## Legislation and Guidance

- [Legislation.Gov.UK – Management of Health and Safety at Work Regulations](#);
- [Legislation.Gov.UK – Personal Protective Equipment Regulations](#)
- [Legislation.Gov.UK – Merchant Shipping and Fishing Vessels \(Personal Protective Equipment\) Regulations](#)
- [HSE – ACOP - L25 – Personal Protective Equipment at Work Regulations](#);
- [HSE – ACOP L5 - Control of Substances Hazardous to Health Regulations](#);
- [HSE – ACOP- L108 - Controlling Noise at Work Regulations](#);
- [HSE – ACOP - L23 - Manual Handling Operations Regulations](#);
- [HSE – ACOP - L143 –Managing and Working with Asbestos](#);
- [HSE – ACOP L121 - Work with Ionising Radiation](#);
- [HSE – ACOP L132 - Control of Lead at Work Regulations](#);
- [HSE – HSG 53 – Respiratory Protection at Work – A Practical Guide](#);
- [HSE – Operational Circular 282/28 – Fit Testing of Respiratory Protective Equipment Facepieces](#);
- [HSE – Guidance note EH40 - Workplace Exposure Limits 2nd Edition](#);
- [British Safety Industry Federation ‘Fit2Fit’](#) .

## British Standards

- British Standards<sup>3</sup> – EN 529: 2005 Respiratory Protective Devices – Recommendations for Selection, Use, Care and Maintenance – Guidance Document.

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<sup>3</sup> access to British Standards is via the Dstan site - <http://dstan.uwh.diif.r.mil.uk/sol/index.html>

## Guide to Formal Fit Testing of Respiratory Protective Equipment (RPE)

**This Section only covers the use and fit, of RPE that is worn over the face or over the head (e.g. hood or mask) and the filters attached directly or via a pump worn on the person.**

### MOD Form 5032 – Self Assessment

1.A.1 If the wearer has completed a MOD Form 5032 and has answered “No” to all the questions, there should be no medical reasons why they can not undertake a Fit Test. The fit tester should explain the test procedure to the wearer and verbally confirm the findings of MOD Form 5032 before undertaking the fit test.

### The Competent Person

2.A.1 RPE fit testing must be conducted by a competent person having adequate knowledge, instruction and training in the following:

- examination of RPE and the ability to identify poorly maintained facepieces;
- ability to train a wearer how to correctly fit a facepiece and perform a wearer pre-use fit check;
- the purpose and applicability of fit testing and use of appropriate method;
- purpose of fit test exercises;
- preparation of facepieces for fit testing;
- capabilities and limitations of the fit test equipment;
- how to perform a correct test with the chosen method;
- be aware of, and know how to, prevent and correct problems during fit testing;
- interpretation of fit test results;
- an understanding of the differences between fit factor, workplace protection factor, assigned protection factor and nominal protection factors; and
- HSE Regulations, Approved Code of Practice and HSE Operational Circular 282/28 relating to fit testing.

### Fit Testing

3.A.1 Fit testing is required for each type of tight-fitting RPE used by an individual. The purpose of fit testing is twofold:

- to ensure that a correctly fitting facepiece is selected that matches the person's facial features and provides an adequate seal; and
- to provide the wearer with instruction on how to fit RPE correctly including how to perform a wearer pre-use fit check.

3.A.2 There are 2 methods for undertaking fit testing:

- Qualitative fit testing - (QLFT) - relies on the wearer's senses to determine if there is a gap in the seal between the RPE and the wearer's face by the detection of a sweet or bitter aerosol. QLFT is suitable for testing half masks and FFPs (commonly referred to as disposable masks) kits available through MOD Stores on NATO stock numbers:
  - QLFT Kit (Sweet) – NSN 4240012488146;
  - QLFT Kit (Bitter) – NSN 4240993711434.
- Quantitative fit testing - (QNFT) - uses specialist instrumentation to measure and calculate the leakage at the seal between the RPE and the wearer's face.

Full face RPE has to be tested using QNFT. Half masks and FFPs can also be tested using this method.

3.A.3 RPE fit testing is conducted to a standard HSE protocol, consisting of 7 exercises each lasting a minute in duration:

- For QNFT fit testing these exercises are performed whilst the wearer is either stepping; cycling on an exercise bike or walking on a treadmill to induce a physical workload on the wearer.

3.A.4 The wearer should not eat, drink (except plain water), or chew gum for at least 15 minutes before the test. Smokers are to refrain from smoking for at least an hour prior to the fit test.

3.A.5 The wearer must be tested as soon as the RPE is issued using their actual facepiece and a repeat test carried out on a risk based approach dependent on the substance being protected against. If the wearers' actual facepiece is not available then an identical type shall be used (model, size, material etc). Each fit testing is applicable to that make, model, type and size only and further fit tests will be required if a wearer uses more than one type.

3.A.6 A repeat test will be required if the wearer:

- significantly gains or loses weight;
- undergoes substantial dental work;
- develops facial changes (e.g. scars, moles etc);
- suspects that the seal may have been compromised;
- Has not used the RPE for a period of time.

## Fit Testing Certificate

4.A.1 On completion of the fit testing the wearer should receive a fit test certificate which will include a pass/fail notification which should be shown to the manager and should include the following details:

- name of the person fit tested;
- make, model, type and size of the facepiece;
- whether the wearer's own mask, company pool mask or a service provider's test mask was used;
- fit test method employed;
- the test exercises performed during the test;
- measured fit factor values for each exercise and the average for the test as a whole (if applicable);
- pass level used and date of the test;
- the details of the fit test service provider; and
- where possible, the serial number or other means of identifying the equipment employed in the fit test.

## 5. Records

5.A.1 A copy of the fit test certificate document must be kept by the manager for at least five years from the date of the test. Fit test records must be made available to the HSE on request, and to the wearer. Trade Union and staff safety representatives may also request to see summaries of the results.