**INTRODUCTION**

In this chapter, we will focus on the correct use, testing and maintenance of respirators and personal protective equipment.

# RESPIRATORS

As a sales/service professional you will likely be required to wear a respirator in the course of performing your job. Respirators help protect you from following hazards:

* Inhaling hazardous fumes, mists, vapors, or gases
* Dust or debris
* Diseases such as Hantavirus or Histoplasmosis that can be associated with pest control work.

Respirator requirements fit and functionality tests and proper maintenance of the respirator will be covered in this section. You are expected to perform each procedure with the respirator you have been issued or with respirators provided by your Branch Manager or instructor

# TYPES OF RESPIRATORS

Men In Black only supplies one type of respirator, certified by the National Institute of Occupational Safety. The respirator type is:

* Cartridge-type respirators that filter out harmful vapors, dust and other material and provide protection up to 10 times the recommended exposure limits for workplace contaminants. These respirators may also be used in conjunction with High Efficiency Purifying Air (HEPA) cartridges.
* WARNING: Cartridge-type respirators discussed in this training program don’t protect against carbon monoxide or fumigant gases & do not supply oxygen.

# WHEN TO WEAR A RESPIRATOR

Associates are required to wear a properly fitted respirator when:

* Handling or applying a product when the label requires wearing a respirator.
* Cleaning up chemical spills
* Working in or around areas that contain large amounts of bird or rodent droppings.
* Attic and Crawl spaces
* Insulation work (both feeder and spreader)

# SELECTING A RESPIRATOR FOR PROPER FIT

Respirators that do not fit correctly will not work correctly. Proper fit begins with selecting the right respirator for you. It is important to:

* Follow manufacturers’ instructions for fit.
* Be clean-shaven in areas where the respirator meets your face.
* Ensure glasses and other protective equipment are worn in a way that does not interfere with the fit of the respirator.
* Consider the size and shape of your face when selecting a respirator.
* Once you have chosen a respirator that is likely to fit:
	+ Wear it for five minutes to assess its comfort. If it is not comfortable, choose another respirator.
	+ Adjust the straps several times to learn proper tension.
	+ Seal the respirator to your face by rapidly moving your head back and forth and up and down while taking several deep breaths.

**The respirator you select will be assigned to you. No one else should wear it!**

# FIT TEST PROCEDURE

You should fit test your respirator prior to initial use, whenever a new face piece is used and annually thereafter. There are three parts to testing a respirator to ensure proper fit and that it is functioning properly:

1. Quantitative
2. Qualitative
3. Negative Pressure Test
4. Positive Pressure Test
5. Controlled Negative Pressure REDON Test

# FIT-TESTING

Respirators rely on a face-to-mask seal for complete protection from hazardous atmospheres. Fit-testing is required to assure a proper fit.

There are many factors that can prevent a good, safe fit:

* Stubble
* Beards
* Low hairlines
* Glasses or goggles
* Weight loss

To begin fit-testing your respirator, put the unit on and tighten the straps so that they are not too tight. It is possible that you may need to try on several respirators before you find one that conforms to your facial structure. Two types of fit-testing are permitted: qualitative and quantitative. You must be fit-tested annually or more often as required by facial changes. Before you enter a hazardous atmosphere always:

* Check your respirator's fit.
* Perform a negative and positive pressure test
* Document Completion on the Fit Test Form

To make sure the face piece maintains a good seal in a variety of positions:

* Move your head up and down
* Turn side-to-side
* Breathe in and out deeply
* Move your jaw to speak

# QUALITATIVE

In qualitative testing, a challenge agent (vapor, smoke, or aerosol) is released around the respirator wearer. Fit is considered inadequate if the wearer detects the presence of the challenge agent through:

* Odor
* Taste
* Nasal irritation

# NEGATIVE PRESSURE

* Place your palms over the inhalation inlets or squeeze the breathing tube
* Inhale gently so the face piece collapses slightly
* Hold your breath for about ten seconds The respirator is considered a good fit if:
* The face piece holds the negative pressure or suction
* No leaks are felt

# POSITIVE PRESSURE

* Block off the exhalation valve with your palm
* Blow outward gently You have a good fit if:
* Positive pressure can be maintained inside the mask
* No leaks are detected

**ABILITY TO HOLD BREATH**

During fit testing you must demonstrate the ability to hold your breath for a minimum of 10 seconds.

# CONTROLLED NEGATIVE PRESSURE REDON TEST

The Controlled Negative Pressure REDON test is a mandatory, five-step testing process. This protocol detects additional respirator leaks and provides you with an increased margin of safety when selecting your respirator. It includes three test exercises, normal breathing, bending over, and head shaking, followed by taking off and putting the respirator back on two more times. Once your respirator has been properly fitted to your face, follow these procedures in the order as outlined:

* Stand and breathe normally, without talking, for 30 seconds. While facing forward, you must hold your breath for 10 seconds to test measurement.
* Bend at the waist, as if you are going to touch your toes, for 30 seconds. While facing parallel to the floor, you must hold your breath for 10 seconds for test measurement.
* Shake your head back and forth vigorously while shouting for about three seconds. Then, while facing forward, hold your breath for 10 seconds for test measurement.
* Next, remove your respirator mask; loosen all the face piece straps, and then redon the respirator mask. After redonning the respirator mask, face forward and hold your breath for 10 seconds for test measurement.
* And finally, we repeat the previous procedure. Remove your respirator mask, loosen all the face piece straps, then redon the respirator mask. After redonning the respirator mask, face forward and hold your breath for 10 seconds for test measurement.

***If this procedure fails because of leakage, refit your respirator and retest.***

# REPLACING RESPIRATOR CARTRIDGES

Cartridges are the working parts of the respirator that actually filter out dust, debris and pesticide contaminants. To remain effective, they must be replaced periodically.

 They should be replaced:

* If you detect any trace of an odor; or
* When breathing becomes difficult. Keep in mind that if you use your respirator in dusty conditions, you may need to replace the cartridges more often.

**WARNING**: Never wear air-purifying respirators in a hazardous environment where it is hard to breath, in confined spaces such as enclosed tanks, to fight fires or when wearing contact lenses or a beard.

# MAINTENANCE AND CARE OF YOUR RESPIRATOR

Proper maintenance and care of your respirator will help ensure that your respirator stays in good working order and functions properly.

# INSPECTION CHECKLIST

There is a spot on your monthly vehicle inspection form that must be signed off on monthly. When you sign off on the Respirator section you are stating that all of the following items are in compliance & do not need repair at the time of the inspection:

|  |  |  |
| --- | --- | --- |
| **COMPONENT**  | **EXAMINE FOR**  | **ACTION TO TAKE**  |
| Face-piece  | Cracks, tears, holes, melting or stiffening  | Replace  |
| Distortion  | Place face piece in shelf, free from restraints. If distortion is removed, the face-piece may be placed in service. If not, replace.  |
| Headband  | Breaks, frays, tears, loss of elasticity  | Replace  |
| Missing or bent hardware  | Obtain new hardware from distributor or manufacturer and replace  |
| Inhalation Valve  | Dust or dirt on valve or valve seat  | Clean  |
| Cracks or tears in valve, missing valve flap, distortion or stiffening  | Replace  |
| Exhalation Valve  | Dust or dirt on valve seat  | Clean  |
| * Missing valve flap
* Missing valve cover
* Cracks or tears in valve
* Distortion or stiffening
* Distortion, scratched or cracked valve
 | Replace  |
| Filter Cartridge  | Inappropriate for job  | Replace with the correct cartridge  |
| Damaged or caked with rust or dirt  | Replace  |

# CLEANING AND DISINFECTING YOUR RESPIRATOR

You should periodically clean and disinfect your respirator as recommended by the manufacturer. When doing so, be sure you follow the manufacturer’s instructions.

* Remove cartridges, filters or canisters.
* Disassemble according to manufacturer’s instructions. This normally includes speaking diaphragms, valve assemblies and hoses.
* Wash all components in warm water (110 degrees Fahrenheit maximum) in a mild detergent or cleaner recommended by the manufacturer. A bristle (not wire) brush may be used to remove dirt.
* If the detergent does not contain a disinfecting agent, immerse all components for two minutes in a bleach solution (one ounce of bleach to one gallon of warm water) or other disinfectant recommended by the manufacturer.
* Rinse, drain and hand dry with a clean, lint-free cloth.
* Reassemble and TEST.

**WARNING: Do not use a lubricant on any part of your respirator.**

# STORING YOUR RESPIRATOR

Properly storing your respirator will increase its life and effectiveness. Always store your respirator in its original container or inside a plastic bag, and then place it in a box in such a way as not to deform it. The respirator should be kept in the cab of the vehicle away from pesticide storage.

Your respirator should be protected from:

* Dust.
* Sunlight.
* Excessive heat and cold.
* Excessive moisture.
* Damaging chemicals.

# PERSONAL PROTECTIVE EQUIPMENT

Proper handling of chemicals and protecting yourself from them is essential if you are to conduct your job safely. By using good personal hygiene practices, wearing personal protective equipment and following proper procedures, you will limit your exposure to pesticides.

Men In Black shall provide all necessary safety equipment and provide for its cleaning, repair or replacement when necessary. Men In Black shall require that all personal protective equipment be maintained and kept in a clean, specially designated place or locker when not in use. This clothing and equipment shall remain the property of Men In Black if the employee ever leaves.

The employee must inform their Supervisor whenever their personal protective equipment becomes damaged or contaminated to such a degree that continued use would not provide the employee with necessary protection. Although it is Men In Black’s responsibility to provide the employee with necessary personal protective equipment and see that it is cleaned and repaired. It is the responsibility of the employee to use and care for the equipment that has been provided.

 **REQUIRED PERSONAL PROTECTIVE EQUIPMENT**

A service professional should have the following personal protective equipment:

* **Uniform** – provided by Men In Black.
* **Headgear** – bump hat or hardhat that can be washed.
* **Eye Protection** – goggles or safety glasses with brow and temple protection or face shield are required whenever you mix, load or apply pesticides. Vented eye protection should be worn when drilling or when splash-back is possible during application. Unvented eye protection should be worn when applying ultra-low volume (ULV) treatments or using products that emit strong vapors. Safety glasses rated Z87 also must be worn whenever there is risk of debris getting in eyes
* **Apron** – made of rubber or water-repellent material.
* **Gloves** – unlined and made of neoprene or other impervious material. Disposable plastic gloves are permissible when applying pesticides as long as a new pair is used with each treatment. Used disposable gloves must be stored in a plastic bag and kept in the vehicle trunk. They should never be thrown away at a customer’s home or business.
	+ It is the employee’s responsibility to replace or clean their gloves each day.
	+ When cleaning gloves they must be cleaned both inside and outside.
	+ Also, gloves are not to be worn when the label specifies they should not be worn (i.e. when handling Methyl bromide and Vikane)
* **Shoes** – leather boots or shoes only. SNEAKERS OR ATHLETIC SHOES SHALL NOT BE WORN. It is highly recommended that you purchase shoes with a high slip resistant rating as well to prevent slips and falls from wet, oily or icy surfaces you may encounter while working.
* **Ear Plugs** – use when drilling or during exposure to loud noises. To use ear protection, follow the instructions written on the package.
* **Coveralls** – should be worn when entering a crawl spaces, attics, or other areas where uniforms will get dirty. Disposable coveralls may also be worn.
* **Bee Suit** - to be worn whenever doing any work w/ bees, wasps, hornets, etc.
* **Knee Pads** - To be worn when crawling. Also very beneficial for termite techs who have to bend down to check stations all day.

# PERSONAL HYGIENE

Good personal hygiene is the key to avoiding chemical exposure when handling and applying pesticides. To help prevent harmful exposure to pesticides, follow these guidelines:

* Wash hands and arms thoroughly with soap and water as soon as possible after handling and applying chemicals.
* Protect cuts and scratches from pesticide exposure.
* Do not eat, drink, chew gum, smoke or use other tobacco products when mixing, applying or handling pesticides, or near where pesticides are being mixed or applied.
* Do not wipe your face or other areas of the skin with your hands or arms while handling pesticides.
* Never use your mouth to siphon pesticides, or any product, from its container.
* Shower as soon as possible after each day’s work, preferably at the branch if showers are available. If showers are not available, you should change clothes at the branch or work site before going home.

**CLOTHING**

Clothing is one of the most effective items in preventing exposure to pesticides. It is important to wear and care for clothing properly by following these guidelines:

* Wear only clean Men In Black uniforms every day.
* Wash gloves and boots daily with soap and water.
* Replace gloves as needed.
* Wear proper eye protection when mixing, loading and using pesticides.
* Do not take home uniforms contaminated by pesticides.
* Change clothing at the work site or branch, if possible.
* If changing at home, remove contaminated clothing in the garage or entry way.
* Place contaminated clothing in sealed plastic bags or buckets and store them in the garage or other uninhabited area of the home until time to be laundered.
* It is required that the employee keep a clean change of clothing in the vehicle at all times in order to have something to wear in the event their clothes become contaminated.

**ADDITIONAL REQUIREMENTS:**

* RESPIRATOR FACEPIECE FIT TEST RECORD

# Module 2 Respirator, SCBA & PPE

 Name (Print):

 TRUE FALSE

|  |  |  |
| --- | --- | --- |
|  |  | Associates who are required to wear a SCBA must annually undergo a medical examination by a licensed physician & have a pulmonary function test conducted.  |
|  |  | Fit tests are performed only in the event of physical changes to the face.  |
|  |  | You do not have to wash your hands after working with chemicals as long as you were wearing gloves.  |
|  |  | Use of personal protective equipment is optional and up to the associate’s discretion.  |
|  |  | Cartridge-type respirators are ok to use in an area where you are unsure of the oxygen content.  |
|  |  | An SCBA is used when oxygen levels are known.  |
|  |  | Only technicians have to wear safety glasses when working in the field.  |
|  |  | Employees are not required to keep a change of clothing in their vehicle at all times.  |
|  |  | A new Medical Evaluation Questionnaire for wearing a respirator should be completed online every 3 years.  |
|  |  | The maximum life expectancy of respirator cartridges is six (6) hours of continuous use.  |

Employee Signature:

Date:

Trainer Signature: Date:

SCORE: / 10

PASS FAIL