



RESPIRATORY PROTECTION PROGRAM

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How to Select a Respirator

There are different respirators for different contaminants. To obtain respiratory protection, select only a respirator designed to provide such protection against the inhalation of the specific contaminant or contaminants in the atmosphere. In order to select a respirator properly, it is essential to have the following information:

- Knowledge of the contaminant substance(s) to be protected against.
- The permissible exposure level of each contaminant, or mixture of contaminants.
- The concentration or potential concentration of each contaminant in the atmosphere.
- The concentration or potential minimum concentration of oxygen in the atmosphere in the place where the respirator will be worn.

NOTICE: Before selecting a respirator to be worn, a qualitative or quantitative fit test must be performed.

Selection and Use of Respirators

1. The type of airborne hazard you, as an employee, are potentially exposed to dictates the kind of respirator to be used.
 - Dust - Use a non-air-purifying facemask.
 - Chemicals - Use a half-mask or full-face piece, air-purifying respirator. These may be either single or double cartridge.

CAUTION: Do not use air-purifying respirators when any of the following conditions apply:

- The contaminant has poor warning properties; that is, when the contaminant cannot be recognized by taste, smell or irritation.
- In oxygen deficient atmospheres.
- In atmospheres in which a short exposure would cause death, injury or delayed reaction.
- When the contaminant concentration exceeds the maximum use concentration of the respirator.

Instruction and Training

1. Proper Fit - A respirator cannot be effective without the proper fit. Fit checks are to be performed when the respirator is issued and before each use. Your superintendent will provide you with the necessary instructions and assist you in performing this fit check.
2. Training - Instruction manuals will be included with each respirator issued. All employees must read and follow the instructions provided.

Maintenance and Care

- Inspect the condition of the mask before and after each use.
- Examine the condition of the mask, straps, valves and filter elements.
- Each respirator must be either NIOSH or MSHA approved. Check for the approval code display.
- As needed, wash in a mild soap solution and air dry.
- Store respirator in a re-sealable plastic bag.
- Replace filter cartridges as necessary and according to manufacturer's recommendation.

Procedure for Placing Mask on Face

A respirator must be inspected before each use to insure that it is complete and in good operating

condition. Prior to donning the respirator, the wearer must examine it to verify:

- That the rubber exhalation valve flap is firmly secured to the exhalation valve seat; that the flap and seat are clean and undamaged; and that the valve is free to operate;
- That the proper air-purifying elements are properly inserted and attached to the respirator;
- That the plastic adapters are properly aligned so as not to interfere with visibility. Align improperly positioned adapters by rotating them in the face piece and adapters for best position.

The respirator is designed to be worn so that the narrow, upper portion of the rubber face piece covers the nose and the wide lower portion of the rubber face piece is under the chin.

To Place Respirator with Cradle Headband Assembly on Face:

1. Remove protective eyewear (if worn). Loosen the elastic straps. Then grasp the front of the face piece with one hand and the upper plastic strap (cradle suspension) with the other hand. Position the respirator on the face so that the inside portion of the face piece (containing the exhalation valve) is under the chin and the narrow portion of the face piece is over the nose.
2. Place the plastic headband straps (cradle suspension) on the head so the top plastic strap rests across the top of the head and the bottom plastic strap rests above the ears on the back of the head. Then hook the bottom elastic headband straps behind the neck and below the ears.
3. Adjust the position of the face piece on the face for best fit and comfort. If the elastic straps are too tight, remove the respirator from the face and loosen the straps. The length of the elastic straps is adjustable. Wiggle the elastic strap through the slot of the headband yoke to lengthen it. Do this on the four slots of the headband yoke as necessary. Replace the respirator on the face according to Steps 1 and 2.
4. Adjust the face piece in position on the face for best fit or comfort. Hold the respirator body with one hand. With the other hand tighten the upper elastic straps on both sides by pulling in an upward direction away from the face piece (tighten just enough so the respirator is securely in place on the nose).
5. Then, tighten the bottom elastic straps on both sides by pulling in the appropriate direction. Tighten enough to secure the respirator under the chin.

☞ CAUTION: DO NOT OVERTIGHTEN! Tighten only enough to eliminate leakage. Over tightening may cause distortion and cause dangerous leakage. For a comfortable fit, the headband straps must be adjusted equally on both sides of the respirator.

NOTE: For a comfortable fit the headband straps must be adjusted equally on both sides of the respirator.

6. To produce a comfortable tight seal, readjust the tightness of the upper straps and then the tightness of the bottom straps maintaining equal adjustment on both sides of the respirator.
7. To secure the elastic headband straps in place while wearing the respirator, slide the four (one on each side) small headband slides in an upward direction.
8. To verify face fit and check functioning valves, before entering a contaminated area, the wearer must obtain a satisfactory face fit in both a positive and negative pressure test as described under Qualitative Fit Test Procedures.

To Place Respirator with Hook & Catch Headband Assembly on Face:

1. Loosen the elastic straps. Position the respirator on the face so that the inside portion of the face piece (containing the exhalation valve) is under the chin and the narrow portion of the face piece is over the nose.
2. Using both hands, grasp the top elastic headband straps and fasten it around the head above the ears. Then hook the bottom elastic headband straps behind the neck and below the ears.
3. Adjust the position of the face piece on the face for best fit and comfort. If the elastic straps are too tight, remove the respirator from the face and loosen the straps. The length of the elastic straps is adjustable. Wiggle the elastic strap through the slot of the headband yoke to lengthen it. Do this on the four slots of the headband yoke as necessary. Replace the respirator on the face according to Steps 1 and 2.
4. Adjust the face piece in position on the face for best fit or comfort. Hold the respirator body with one hand. Tighten the upper elastic straps on both sides by pulling in an upward direction away from the face piece (tighten just enough so the respirator doesn't slide down on the nose).
5. Then tighten the bottom elastic straps on both sides by pulling in the appropriate direction. Tighten enough to secure the respirator under the chin. NOTE: For a comfortable fit the headband straps must be adjusted equally on both sides of the respirator.
6. To produce a comfortable tight seal, readjust the tightness of the upper straps and then the tightness of the bottom straps maintaining equal adjustment on both sides of the respirator.
7. To secure the elastic headband straps in place while wearing the respirator, slide the four (one on each side) small headband slides in an upward direction.
8. To verify face fit and check functioning of valves, before entering a contaminated area, the wearer must obtain a satisfactory face fit in both a positive and negative pressure test as described under Qualitative Fit Test Procedures.

☞ CAUTION: DO NOT OVERTIGHTEN! Tighten only enough to eliminate leakage. Over tightening may cause distortion and cause dangerous leakage. For a comfortable fit, the headband straps must be adjusted equally on both sides of the respirator.

Respirator Face Piece Fit

A respirator will only be effective if there is a good seal between the face piece and the wearer's face. Since different people have faces of different shapes and sizes, respirators are available in a variety of sizes and models. Each individual who wears a respirator must be fit tested. A wearer will have to be re-tested after weight loss or gain, changes in dentures, dental work or facial injury. These factors may change the size or shape of the face and cause the person to require a different size or model respirator.

Routine Fit Tests

Two types of testing, positive and negative pressure tests should be done each time a respirator is donned to check the face seal. They do not replace yearly fitting or provide assessment as to whether or not the fit is still adequate.

Negative Pressure Field Face Fit Test

Purpose: To check the face piece-to-face seal.

Method: Wearer places hand over cartridges and inhales. No outside air should be felt leaking into the face piece and the face piece should slightly collapse.

Requirements: This test should be done before each use.

Positive Pressure Field Face Fit Test

Purpose: The purpose of the positive pressure test is to test the face seal. A slight positive pressure should be built up inside the face piece and there should be no evidence of outward leakage.

Method: The wearer covers the exhalation valve with hand and blows out. Air should only escape from the seal around the face piece.

Requirements: This test should be done before each use.

Positive and negative pressure tests can be done quickly and easily in the field. They do, however, rely on the wearer's ability to detect leaks.

Medical Fitness to Wear a Respirator

Before an employee receives clearance to wear a respirator, a licensed physician must perform a medical examination. Some medical conditions that may prevent an individual from wearing a respirator include:

- Lung disease
- Severe high blood pressure
- Heart disease

Checklist for Medical Evaluation

Check that:

- All employees have been evaluated to determine their ability to wear a respirator prior to being fit tested for or wearing a respirator for the first time in your workplace.
- A physician or other licensed health care professional (PLHCP) has been identified to perform the medical evaluations.
- Employees are provided follow-up medical exams if they answer positively to any of the questions or if their initial medical evaluation reveals that a follow-up exam is needed.
- Medical evaluations are administered confidentially during normal work hours, and in a manner that is understandable to employees.
- Employees are provided the opportunity to discuss the medical evaluation results with the PLHCP.

Facial Hair and Respiratory Protection

“Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be growth of beard, sideburns, a skull cap that projects under the face piece or temple pieces on glasses. To assure proper protection, the face piece fit shall be checked by the wearer each time he/she puts on the respirator.”

Repairs

Only a trained person with proper tools and replacement parts should repair respirators. **No** one should ever attempt to replace respirator parts, make adjustments or repairs beyond the manufacturer's recommendations.

Make repairs as follows:

- Replace all faulty or questionable parts or assemblies. Only use parts specifically designed and approved for the particular respirator.
- Reassemble the entire respirator and visually inspect the completed assembly.
- Insert new filters, cartridges or canisters as required. Make sure that gaskets or seals are in place and tightly sealed.

Storage

Manufacturers provide cleaning, maintenance and storage instructions with new respirators. The following instructions may be helpful as well:

- After respirators have been inspected, cleaned and repaired, store them in a location that will protect them against dust, excessive moisture, damaging chemicals, extreme temperatures and direct sunlight.
- Do not store respirators in clothes lockers, bench drawers or tool boxes. Place them in wall compartments at work stations or in a work area designated for emergency equipment. Store respirators in the original carton or carrying case when possible.
- When called for, the superintendent will make random inspections to assure proper selection, maintenance and use of the respirators.

Send to the office for replacement, repair or new issue.

Recordkeeping Checklist

- Records of medical evaluations have been retained.
- Fit testing records have been retained.
- A copy of the current respiratory protection program has been retained.
- Access to these records is provided to affected employees.

Checklist for Fit Testing

- Employees who are using tight fitting respirator face pieces have passed an appropriate fit test prior to being required to use a respirator.
- Fit testing is conducted with the same make, model, and size that the employee will be expected to use at the worksite.
- Fit tests are conducted annually and when different respirator face pieces are to be used.
- Provisions are made to conduct additional fit tests in the event of physical changes in the employee that may affect respirator fit.
- Employees are given the opportunity to select a different respirator face piece, and be retested, if their respirator fit is unacceptable to them.
- Fit tests are administered using QNFT or QLFT protocols.
- QLFT is only used to fit test PAPRs, SCBAs, or negative pressure APRs that must achieve a fit factor of 100 or less.
- QNFT is used in all situations where a negative pressure respirator is intended to protect workers from contaminant concentrations greater than 10 times the PEL.
- When QNFT is used to fit negative pressure respirators, a minimum fit factor of 100 is achieved for tight-fitting half-face pieces and 500 for full-face pieces.

For tight-fitting atmosphere-supplying respirators and powered air-purifying respirators:

- Fit tests are conducted in the negative pressure mode.
- QLFT is achieved by temporarily converting the face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure APR.
- QNFT is achieved by modifying the face piece to allow for sampling inside the mask midway between the nose and mouth. The face piece is restored to its NIOSH approved configuration before being used in the workplace.

Referral for Medical Evaluation

Dear Dr. _____:

We have discussed respirator use with Mr./Ms. _____ and we feel that before he/she can wear respiratory protection on the job, a medical examination is prudent. Attached is a description of the type of work performed, the respirator used, and other relevant information.

Upon completion of your examination, please complete the following and return to this office.

Sincerely yours,

Based on my opinion and evaluation, Mr./Ms. _____

- Has a condition that makes respirator use inadvisable.

- Is approved for respirator fit testing and assignment subject to the following limitations:

Doctor's Signature: _____ Date: _____