

Douro-Dummer Fire Services Policy

Policy 1.02H

DATE: May 2020

Original: 01/01/07

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Section: Protective Clothing & Equipment

Subject: Fit Testing – SCBA & N95 Face Masks

Purpose:

To establish a departmental policy for Quantitative Fit Testing (QNFT) on approved MSA SCBA masks, as well as N95 medical masks, to ensure compliance with CSA Z94.4 & NFPA 1981, care and selection of respirators.

Scope: Applies to all personnel

Policy:

Douro-Dummer Fire Services will use quantitative fit testing to determine the ability of a user to obtain a satisfactory fit and an effective seal when using a tight-fitting facepiece (SCBA) or an N95 mask.

Fit Testing will be conducted in accordance with the Section 21 Guidance Note #4-9 (41).

Procedure:

A user seal check shall not be used as a substitute for a quantitative fit test.

The results of the fit test shall be used to select the specific model of N95 and or size of SCBA facepiece for individual users.

It is the policy of DDFS that a fit test shall be carried out:

- a. prior to initial use,
- b. at least every 2 years,
- c. whenever there is a change in respiratory facepiece (eg. brand, model, or size) or
- d. whenever changes to the user's physical condition could affect the respirator fit.

Under no circumstances shall a person use a tight-fitting respirator until a satisfactory quantitative fit test has been achieved.

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The person conducting the fit test shall not perform the test unless the person undergoing the test is clean-shaven where the facepiece seals to the skin.

A sufficient variety of respirator facepiece sizes and N95 models shall be provided to ensure a satisfactory fit for each respirator user.

When other personal protective equipment, such as eye, face, head and hearing protectors are required to be worn, they shall be worn during the respirator fit tests to ensure that they are compatible with the respirators and do not break the facial seal.

A satisfactory fit test using QNFT is achieved when the resulting fit factor meets the criteria as per the appropriate CSA standard.

Quantitative Fit Testing (QNFT)

DDFS will, use Quantitative fit testing using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a facepiece to quantify the respirator fit.

The employer shall ensure that person(s) administering QNFT are able to calibrate equipment, perform tests, recognize invalid tests, calculate fit factors, and ensure that test equipment is in working order. The employer shall ensure that QNFT equipment is maintained, calibrated, and operated according to the manufacturer's instructions.

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Introduction of QNFT to Respirator Users:

The person conducting the QNFT shall address the following topics with the test subject:

- a. an explanation of the QNFT procedure, the reasons why it is required and the importance
- b. method of using a respirator that provides an effective, reproducible face-to-facepiece seal.
- c. explanation of the importance of the test to ensure that the test subject to co-operate fully in the QNFT
- d. a description of the challenge agent (negative pressure) used in the QNFT
- e. selection by the test subject of a properly fitting and comfortable respirator from those that are appropriate to the application
- f. the respirator being equipped with the appropriate adapters, filters, and/or chemical cartridges for the QNFT being used
- g. the necessity for the test subject to successfully complete the positive or negative pressure user seal check with the selected respirator prior to proceeding with the QNFT
- h. review proper donning of the respirator in accordance with the manufacturer's instructions
- i. the necessity, during the QNFT, to wear other personal protective equipment that the test subject may be required to use on the fire ground that may affect the face-to-facepiece seal
- j. an explanation of the QNFT exercises and how to perform them during the fit test
- k. the importance of using, on the fire ground, the specific brand, model and size of facepiece that was used to pass the QNFT
- l. the necessity to always inspect a respirator before using it in order to ensure that it is in proper working condition

SCBA masks have a size S, M, L indicated on it. There are different models of N95 masks. The test subject shall select the correct size facepiece or correct N95 from available models.

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The test subject chooses the right size SCBA mask or N95 model that provides the best fit. The fit test subject can refer to previous fit testing results to make their section on size of SCBA mask or N95 respirator model. The test subject holds the SCBA facepiece against their face and performs a negative and positive pressure check. The test subject shall be shown how to don a SCBA mask and or N95 respirator, how to position it on the face, how to set strap tension and how to assess a comfortable fit. If the appropriate SCBA mask or N95 mask for the application cannot be found, a protective alternative shall be made available.

The *correct size* facepiece is recorded, donned, and worn at least 5 minutes to assess comfort.

Assessment of comfort shall include reviewing the following points with the test subject:

- a. proper placement of the chin
- b. fit and position of the facepiece
- c. strap tension
- d. accommodation of spectacles and/or eye protection, without adversely affecting the face-to-facepiece seal
- e. intelligible speech without an obvious break in the face-to-facepiece seal
- f. tendency for the facepiece to slip (stability)
- g. full contact of the sealing surface of the face to facepiece
- h. time for assessment of comfort in relation to the face-to-facepiece seal

The test subject shall be told to seat the facepiece by rapidly moving the head side-to-side and up and down, within a comfortable speed range and motion. The test subject shall perform the positive-pressure and/or negative pressure user seal check. Failure of the user seal check may require the selection of a different size SCBA mask or an alternative N95 respirator.

Upon obtaining a successful user seal, check that the subject is ready for fit testing and begin the QNFT test.

After passing the fit test, the test subject shall be questioned again regarding the

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comfort of the SCBA mask or N95 respirator.

The user shall be given the opportunity to select a different size SCBA mask or N95 respirator to be retested on if during the on the job use the chosen facepiece becomes increasingly uncomfortable or there is a continual failure of the QNFT.

Sampling adapters used with the user's respirator for QNFT shall be completely removed and the facepiece restored to its original configuration before the respirator is returned for use on the fire ground.

Permanently probed facepieces used for QNFT shall not be used for respiratory protection in the workplace.

Fit Test Records:

The Program Administrator shall ensure that procedures are established to ensure the fit test records are effectively maintained. The records shall include, but not limited to:

- a. name of the person tested
- b. date of test(s)
- c. specific make, model, and size of SCBA mask and or N95 respirator
- d. type of fit test and test agent used
- e. pass/fail criteria and results of the fit test
- f. list of additional personal protective equipment worn during the fit test
- g. comments on unusual facial features, dentures, corrective eyewear, facial jewelry, facial hair, cosmetics, or any particular fitting difficulties
- h. name of the person conducting the fit test