

T E C H N I C A L B U L L E T I N

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FIT TESTING PRESSURE DEMAND SCBA AND SAR RESPIRATORS

This bulletin describes the equipment to be used, the parts which need to be removed, and the maintenance required to perform qualitative fit testing for pressure demand respirators.

All fit testing of pressure demand respirators must be performed by qualified personnel, as specified in the appropriate fit test standard. SURVIVAIR Fit Test Ampules (P/N 140098) can be used as the challenging agent when qualitative fit test protocols are being used.

PROCEDURES

A qualified person familiar with the respirator must ensure the regulator can operate in a negative pressure mode. Removal of some parts may be required.

*******WARNING*******

If parts have been removed, a SURVIVAIR-certified technician must return the respirator to the proper NIOSH configuration and perform a functional test before returning the respirator to service. A modified respirator cannot be used in any hazardous or potentially hazardous atmosphere until it has passed a complete functional test performed by a qualified person.

1. Fit testing requires a facepiece of the same manufacturer, model, and size as that used by the worker. A respirator used for fit testing can be personal issue of the employee, or it can be representative of the same MSHA/NIOSH configuration that the employee uses on the worksite.
2. Test the respirator before using it for fit testing on a person. Use a Portable Test Console (PTC) or a subjective breathing test.
 - a. When using the PTC, a SURVIVAIR-certified technician must test the respirator using the Breathing Apparatus Test Sheet, April 1992 edition or later. The respirator must pass tests 1, 3, 4, 9, and 11.

- b. When no PTC is available, any qualified person, designated by local authorities, can perform a subjective breathing test of the respirator. Special attention should be paid to the effort required to inhale and exhale. The respirator must be acceptable to the person conducting the test.
3. The respirator must be placed in the demand mode.
- a. **FIXED PRESSURE DEMAND RESPIRATORS.**
 - 1) A SURVIVAIR-certified technician must remove the safety pressure spring from the regulator. This spring applies pressure on the ambient side of the diaphragm. Removing this spring will place the regulator in a demand, i.e. negative pressure, mode. The procedures for removing this spring will differ for each model of respirator. The technician must be familiar with that model respirator before removing the spring.
 - 2) Reassemble the regulator, and place a large label or tag on the regulator in a highly visible spot. This tag must explain that the respirator shall not be used. It must also specify which parts have been removed.
 - b. **REGULATORS WITH SELECTOR SWITCHES.**

On regulators with Don/Use levers, (e.g. industrial model XL series SCBA), simply switch the Don/Use lever to the Don position. Do not remove any parts.
4. Perform a breathing test.
- a. When using the PTC and the breathing apparatus test sheet, the regulator must pass test 8 after the spring is removed.
 - b. When using the subjective breathing test, the inhalation and exhalation effort must be acceptable to the person conducting the test.

NOTE

If possible, avoid removing parts from a large number of regulators. If personal issue facepieces are used, the persons being fitted should use their own facepiece when practical. On respirators where the regulator can be detached using a quick connect or threaded fitting, modify only one regulator and switch the facepieces. For respirators using face mounted regulators with clamps holding the regulator to the facepiece, remove the spring from each regulator prior to the fit test.

5. Conduct qualitative fit tests as required.
6. When testing is completed, the respirator must be reassembled in the proper MSHA/NIOSH configuration.
- a. If parts were removed from the regulator, a SURVIVAIR-certified technician must conduct a performance test using the PTC (same as in step b.) or a subjective breathing test if the PTC is not available. Remove the warning tag, make records on the history cards, and return to service.

- b. If no parts were removed, any qualified person may perform a subjective breathing test and, if satisfied, return the respirator to service.