



Designation: F2684 – 07

## Standard Test Method for Portable High Anchor Devices<sup>1</sup>

This standard is issued under the fixed designation F2684; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This test method applies to portable high anchor devices that may be used by rescue personnel during both training exercises and actual rescue operations.

1.2 This test method covers two mechanical tests, the Static Load Test and the Load Test for Failure.

1.3 Tests contained herein are destructive in nature. Portable high anchor devices subjected to any of these tests shall not be used in any way after testing except in evaluating the results of such testing.

1.4 The values stated in SI units are to be regarded as the standard.

1.5 This specification does not imply approval of any method of use of portable high anchor devices. In addition, the tests described are laboratory tests and do not duplicate field conditions. Furthermore, the test load values contained herein are not to be interpreted as the forces which a portable high anchor device may be subjected to, or may be expected to sustain, in actual field use.

1.6 See Section 6 on Hazards for safety warning.

### 2. Referenced Documents

2.1 *ANSI Standard*:<sup>2</sup>

Z359.1-2007 American National Standard Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

### 3. Terminology

3.1 *Definitions*:

3.1.1 *portable high anchor, n*—a manufactured device designed to support human loads. Examples include, but are not limited to; davits, A-frames, tripods, quadpods and cantilevered devices.

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee F32 on Search and Rescue and is the direct responsibility of Subcommittee F32.01 on Equipment, Testing, and Maintenance.

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<sup>2</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

### 4. Significance and Use

4.1 *Static Load Test*—This test verifies that the portable high anchor device can support the design load without permanent deformation and continue to function in a safe manner.

4.2 *Load Test for Failure*—This test determines the force at which the portable high anchor device fails.

### 5. Apparatus

5.1 For both tests, the portable high anchor device shall be positioned on a flat concrete surface in the manner described by the manufacturer's instructions for use.

5.1.1 Where portable high anchor devices are designed to be affixed to a base or structural member that is not part of the device, the manufacturer shall provide a test base that most closely resembles the structural element to which the device is designed to be affixed. This test base shall be completely stable and shall be permitted to be bolted down to prevent movement during the test.

5.1.2 Portable high anchors designed to be attached to flanged rims of vessel openings would require a test base to simulate the flanged portal to which the device is designed to be affixed.

5.1.3 Portable high anchors such as beam clamps that are designed to be attached to a structural element would require a compatible section of the beam to which the device is designed to be affixed.

### 6. Hazards

6.1 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

### 7. Sampling, Test Specimens, and Test Units

7.1 Two samples of each model of portable high anchor device shall be required.

7.1.1 Samples of each model of each portable high anchor device shall be selected randomly for testing.