



Training Solutions, Delivered!

# THE TOTAL FALL DISTANCE CALCULATION

**Leader's Guide, Fact Sheet  
& Quiz**

**Item Number: 5195**  
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*This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.*

## **PREPARING FOR THE MEETING**

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes before the quiz itself, which is on the final page.

## **CONDUCTING THE PRESENTATION**

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

## **5195 THE TOTAL FALL DISTANCE CALCULATION FACT SHEET**

**LENGTH: 1:31 MINUTES**

### **PROGRAM SYNOPSIS:**

Performing work on an elevated surface is inherently dangerous due to the risk of falling. When proper guardrails or other means of fall protection are not installed, a personal fall arrest system is usually required. A personal fall arrest system, consisting of a full body harness, a connecting device and anchor point, is designed to reduce the amount of force exerted on a worker during a fall and to prevent the falling worker from striking a lower level or hitting the ground below. Various OSHA standards require an employer to ensure that each employee is trained in the proper use of a fall arrest system before he or she uses the equipment. As part of such training, this program explains how to calculate the total fall distance that is critical when determining the necessary height of an anchor point and for selecting an appropriate connecting device.

### **PROGRAM OBJECTIVES:**

After watching the program, the participant should be able to explain the following:

- Which factors to add when calculating the total fall distance;
- What should be used to reduce the fall distance so that a worker won't contact the ground during a fall.

### **INSTRUCTIONAL CONTENT:**

#### **THE TOTAL FALL DISTANCE CALCULATION**

- The total fall distance calculation is used to determine the maximum distance through which a worker will fall while using a personal fall arrest system. This calculation is critical when determining the necessary height of an anchor point and for selecting an appropriate connecting device.
- The total fall distance is determined by adding the worker's height, the length of the lanyard or connecting device and the amount of elongation or stretch in the system.
- For example, a six-foot tall worker, using a six-foot shock-absorbing lanyard that will elongate an additional 3½ feet during a fall, has an initial fall distance of 15½ feet. Once we add in a three-foot safety factor, we arrive at a total fall distance of 18½ feet or about 5.7 meters.
- In this situation, the anchor point must be located at least 18½ feet or 5.7 meters above the ground to ensure the worker won't contact the ground during a fall. If this is not possible, a shorter lanyard or a fall-limiting device may be used to reduce the fall distance.
- Do not perform elevated work unless you have done this total fall distance calculation and have determined that your fall arrest system will prevent you from hitting the ground or a lower level should you fall.

**THE TOTAL FALL DISTANCE CALCULATION**

**ANSWERS TO THE REVIEW QUIZ**

1. a

2. c

3. b

**THE TOTAL FALL DISTANCE CALCULATION**  
**REVIEW QUIZ**

Name \_\_\_\_\_ Date \_\_\_\_\_

*The following questions are provided to determine how well you understand the information presented in this program.*

1. The total fall distance calculation is critical when determining the necessary height of an anchor point and for selecting an appropriate connecting device.
  - a. True
  - b. False
  
2. When calculating the total fall distance, you should add a \_\_\_\_\_ safety factor.
  - a. 1-foot
  - b. 2-foot
  - c. 3-foot
  
3. If it is not possible to locate an anchor point that will ensure you won't contact the ground during a fall, you should use a shorter lanyard or a \_\_\_\_\_.
  - a. Fall-restraint device
  - b. Fall-limiting device
  - c. Positioning device