

## Prerequisite Training

Learners must have received basic instruction in the use of personal protective equipment, hose, nozzles, have developed basic proficiency in nozzle operation from a fixed position (see Hose & Nozzle Technique: Drill 1), movement of hoselines coordinated with nozzle operation (see Hose & Nozzle Technique: Drills 2 & 3), and Door Entry Procedures (see Hose and Nozzle Technique Drills 4 & 5).

*Note:* While this Hose and Nozzle Techniques Drill is sequenced seventh, it may be run concurrently with or prior to Drill 6.

## Learning Outcomes

1. Demonstrate the procedure used for safe entry into a compartment that is or may be involved in fire. This process must include:
  - a. Size-up (dynamic risk assessment)
  - b. Door control
  - c. Gas Cooling
2. Recognize conditions that preclude safe entry into the compartment, including (but not limited to):
  - a. Fully developed fire in the compartment
  - b. Indicators of potential for ventilation induced flashover or backdraft
  - c. Hazardous structural conditions (e.g., potential for collapse)
3. Demonstrate integration of indirect attack with door entry procedures to control a fully developed fire or backdraft conditions within a compartment.

## Reference

Grimwood, P., Hartin, E., McDonough, J., & Raffel, S. (2005). 3D Firefighting: Training, Techniques, & Tactics. Stillwater, OK: Fire Protection Publications.

## Resource Requirements

This drill requires a pumping apparatus and sufficient hose and nozzles to provide each team of learners with a hoseline. If possible teams should be limited to no more than five learners to maximize practice and minimize session duration. If possible, the same nozzles that will be used operationally should be used for this drill.

### **Training Prop**

Door entry may be practiced using any door where water may be applied (e.g., a burn building or training tower). However, a free-standing door entry prop is an effective aid in developing proficiency in door entry.

### **CFBT Instructors**

One instructor is required for each team of learners during this lesson.

### **Learners**

The maximum number of learners is dependent on the availability of resources and instructors.

### **Safety**

Inspect the training area prior to conducting this evolution to ensure that there are no walking or working surface hazards. Instruct the participants to use caution when directing water from hoselines.

### **Personal Protective Equipment**

Learners should wear structural firefighting clothing and self-contained breathing apparatus during this drill.

### **Scene Control**

Scene control will vary to some extent based on the specific training location. The immediate training area will be limited to participants and (accompanied) observers of the training activity.

If in-service apparatus is at the training location, position it to ensure ease of egress.

### **Instructional Activities**

This lesson involves the following instructional activities. Base your instructional approach on learners experience level and understanding as the lesson progresses.

Movement of a hoseline forward and backward in a straight line while operating the nozzle (Hose and Nozzle Technique: Drill 2) increased complexity from operating in a fixed position (Hose and Nozzle Technique: Drill 1). However, this was still a simple task in comparison to movement of a hoseline within a building and adjusting nozzle techniques to varied size compartment and changing conditions. This drill develops skill in these more complex tasks.

1. Review the sequence and technique for door entry procedures. Reinforce that these procedures must be adapted based on conditions and the configuration of the building.
  - a. Size-Up (approaching and at the door)
  - b. Control the door. Discuss use of a hose strap to control inward opening doors.
  - c. Two pulses above and open the door, assess conditions inside, and cool the gases inside the compartment (short or long pulses depending on the compartment and conditions)
  - d. Close the door and assess the risk of entry
  - e. Two pulses above the door and make entry if safe to do so.

It may be necessary to repeat this procedure multiple times to gain control of the space inside the door.

2. Provide a quick review of the purpose of indirect attack and both how and why this may be integrated with door entry procedures.
  - a. Indirect attack involves production of steam to cool the fire environment and inert the atmosphere in the compartment.
  - b. Water must be applied to hot compartment linings in order to generate the necessary volume of steam (note that this is different than applying long pulses to cool the hot gas layer prior to entry)
  - c. A narrow fog pattern is generally used to provide sufficient reach to apply water to the compartment linings from the doorway.
  - d. Water must be applied to surfaces having a temperature (well) in excess of 100° C (212° F).
  - e. Limit the door opening and use pulsed application to minimize introduction of air into the compartment.
  - f. Apply water until condensing steam provides evidence that the compartment has been completely filled.
  - g. Observation of Conditions
  - h. Door entry (inward and outward opening)
3. Have the learners practice indirect attack integrated with door entry procedures. Provide a verbal description (or use photo based flash cards for visual indicators) to allow the learners to practice door entry decision making (e.g., “you observe a pulsing air track from around the door” or “you observe a fully developed fire inside the compartment”).
4. Debrief all participants focusing on observations and conclusions.

### Integration

Hose and Nozzle Technique Drill 7 can be used as a stand-alone training exercise or elements of this drill can be integrated into other training activity. For example, when conducting hose evolutions (focused on deployment of supply and attack lines), elements of Hose and Nozzle Technique Drill 7 can be integrated with deployment of attack lines. As learner proficiency develops, learners should be presented with different conditions any time they encounter a door when practicing structural firefighting skills. In some of these instances, fire conditions should not be favorable for entry (indicating a need to mitigate the hazard by extended gas cooling or indirect attack). ***It is critical to avoid developing mindless habit regarding entry!***